

Hudson Yards **Demand and Development Study**

Prepared for: Hudson Yards Infrastructure Corporation

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1.A. EXECUTIVE SUMMARY

The Hudson Yards Infrastructure Corporation (HYIC) engaged Cushman & Wakefield, Inc. (Cushman & Wakefield or C&W) to analyze real estate market fundamentals and development over a 30-year period (2006-2035) for the Hudson Yards redevelopment area and to review the reasonableness of the projected real estate related revenues from this development. Based on an economic and demographic forecast provided by Moody's Economy.com, Cushman & Wakefield developed a forecast for real estate demand which together with a tax revenue calculation model provided by the New York City Department of Finance, the City's Office of Management and Budget (OMB) and the Hudson Yards Development Corporation (HYDC) was used to project real estate related revenues.

Overview

New York City is the business capital of the nation. It is home to more global corporate headquarters than any other city, and is the premier location for numerous industries, including finance, media, law, fashion and telecommunications. Key to retaining its position as one of the world's premier business capitals is the ability to provide high-quality office space that would attract new and expanding businesses. The redevelopment of Hudson Yards offers a prime opportunity to do so by extending existing Midtown Manhattan's commercial boundaries.

The City has developed a master plan for Hudson Yards, reflecting collaboration with the State of New York, the Metropolitan Transportation Authority (MTA), and the Port Authority of New York and New Jersey. The Hudson Yards Special District zoning ordinance¹ provides for a mix of commercial and residential uses, with major office and commercial corridors in the south and west of the redevelopment area, and a mix of residential and lower-density commercial uses to the north and east, building upon existing residential concentrations in the West 42nd Street corridor and between Ninth and Tenth Avenues. Eleventh Avenue and West 33rd Street are specifically zoned to accommodate large commercial sites.

Critical to the redevelopment is the mass transit connection of Hudson Yards to the rest of Manhattan. The City and the MTA plan to extend the Number 7 Subway line west to Eleventh Avenue and then south to West 34th Street. A system of new streets and parks, most prominently a new Mid-Block Boulevard between Tenth and Eleventh Avenues from West 33rd Street to West 42nd Street, is expected to provide an improved image and high quality



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¹ Special Hudson Yards District, Zoning Amendment as adopted by City Council, January 19, 2005

amenities to the district. The Javits Center and an adjacent 1,000-plus room headquarters hotel are planned to be constructed. Neighborhood parks are planned, and a platform is assumed to cover the open Eastern Rail Yard.

Within the 30-year demand forecast period, the planned infrastructure improvements are expected to support the transformation of Hudson Yards from an industrial district to a vital mix-use community with approximately 25 million square feet (msf) of office space, 15,000 new housing units, and 3,000 new hotel rooms.²

Significant public investment in Hudson Yards by the HYIC indicates the City's commitment to the Hudson Yards plan. The HYIC infrastructure expenditures would be funded through the financing plan, which would be backed by the dedicated revenues generated by development in Hudson Yards. Revenues dedicated to repay HYIC bonds consist primarily of payments in lieu of taxes (PILOT), property tax equivalency payments (referred to herein as TEP or PTE) from the City, and payments into the District Improvement Fund Bonus (DIB), as highlighted within this report in the applicable chapters. The revenues associated with real property development are governed by the City's amendment to the Uniform Tax Exemption Policy (UTEP) and other tax programs³.

As shown in Exhibit 1-1, revenues dedicated to HYIC from new real estate development are expected to total \$38.9 billion under the Base (trend growth) scenario, growing from \$13.2 million in 2007 to \$2.2 billion in 2050. Under the Cyclical scenario, revenues are expected to total \$34.4 billion, growing from \$13.2 million in 2007 to \$2.0 billion in 2050. The revenues are contingent on the realization of all the economic, demographic, and real estate assumptions, analyses, limiting conditions, and completion of the aforementioned key infrastructure, that are detailed in the subsequent chapters.

³ Amendment to Uniform Tax Exemption Policy (UTEP) for Hudson Yards Commercial Construction Projects, adopted by New York City Industrial Development Agency, August 8, 2006, New York State Real Property Tax Law Section 421-a, Intro No. 530 adopted by City Council February 16, 2005, and Preconsidered Res. No. 1214 adopted by City Council October 27, 2005, Preconsidered Res. No. 760 adopted by City Council January 19, 2005.



² The demand forecast for office use focused on the 14 large sites that are detailed later in this chapter. The retail spatial demand is included within the office and residential square footage and is also detailed in the subsequent text.

Exhibit 1-1. Hudson Yards Annual Revenues, 2007-2050

Date	Base	Cyclical
2007	\$13,237,443	\$13,237,511
2008	\$10,191,886	\$10,232,833
2009	\$92,040,670	\$55,884,201
2010	\$98,304,950	\$54,915,847
2011	\$106,086,304	\$61,094,613
2012	\$125,767,091	\$84,285,557
2013	\$153,091,645	\$104,475,530
2014	\$216,363,530	\$174,495,831
2015	\$244,448,420	\$206,445,413
2016	\$270,073,085	\$221,575,298
2017	\$267,361,577	\$267,303,320
2018	\$253,138,000	\$310,173,317
2019	\$271,135,717	\$267,010,774
2020	\$311,913,853	\$269,840,920
2021	\$345,638,026	\$258,078,066
2022	\$376,144,814	\$287,170,543
2023	\$411,397,507	\$338,070,549
2024	\$463,571,134	\$435,934,482
2025	\$518,974,636	\$471,611,712
2026	\$576,254,790	\$503,213,224
2027	\$635,999,202	\$552,647,194
2028	\$704,335,691	\$637,437,801
2029	\$741,525,183	\$655,165,886
2030	\$799,716,482	\$718,880,816
2031	\$876,794,689	\$740,919,049
2032	\$960,924,550	\$811,045,969
2033	\$1,027,751,332	\$889,076,013
2034	\$1,102,076,437	\$956,852,473
2035	\$1,171,663,306	\$1,049,906,152
2036	\$1,237,193,824	\$1,109,984,841
2037	\$1,302,115,564	\$1,165,326,669
2038	\$1,357,824,210	\$1,211,293,330
2039	\$1,421,403,225	\$1,264,811,017
2040	\$1,486,375,705	\$1,320,675,986
2041	\$1,554,488,770	\$1,378,912,990
2042	\$1,625,037,871	\$1,444,027,161
2043	\$1,698,314,681	\$1,510,893,660
2044	\$1,771,958,930	\$1,583,548,123
2045	\$1,847,425,339	\$1,656,673,987
2046	\$1,924,300,196	\$1,731,547,621
2047	\$2,003,716,878	\$1,803,628,878
2048	\$2,082,549,615	\$1,875,752,804
2049	\$2,164,216,495	\$1,947,787,062
2050	\$2,245,734,213	\$2,023,114,899
Total	\$38,868,577,466	\$34,434,959,925



Report Summary

A Growing Threat to New York City's Long-Term Growth

The continued success and prominence of New York City's economy is dependent upon Manhattan retaining its distinction as a premier office location regionally, nationally and internationally. In the New York region, Manhattan's Midtown⁴ office market is preeminent in comparison to Downtown and competing suburban markets. It consistently maintains higher rents and lower vacancy rates over the course of the business cycle. Office tenants in Midtown are typically willing to pay a premium. Midtown is uniquely accessible to workers commuting from all the major residential concentrations within the region: New York City's five boroughs; Long Island; New Jersey; the southern New York suburbs and southern Connecticut.

Over the past 20 years, Manhattan has gradually lost office-using employees to smaller markets within the region, and has experienced an associated drop in its share of occupied office space. This is due to both tight Manhattan real estate market fundamentals where in spite of high rents there has been limited new construction due to a lack of large available sites, which has made development of new office buildings increasingly infeasible. Based on the analysis presented herein, Manhattan has a shortage of development sites to meet the 100 msf office space demand forecast between 2006 and 2035 as shown in Exhibit 1-2. Current development capacity addresses less than 40 percent of this future demand.

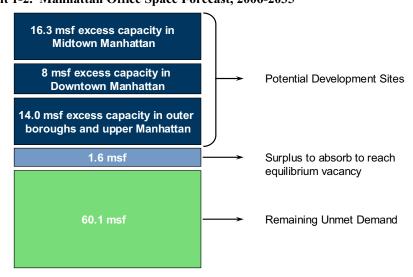


Exhibit 1-2. Manhattan Office Space Forecast, 2006-2035

Source: Cushman & Wakefield Inc.



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⁴ For purposes of this report, Midtown is defined as the area north of Canal Street to 72nd Street.

The redevelopment of Hudson Yards can help to ensure that the City is prepared to meet this future demand. It offers a unique opportunity to significantly expand the economic capacity of Midtown, building on the success of the Times Square commercial corridor.

Expanding Midtown via the Hudson Yards

The Hudson Yards Redevelopment Plan, approved by the City Council on January 19, 2005, provides for the creation of an expanded Midtown office district. Hudson Yards, along with Downtown Manhattan and emerging office markets such as Downtown Brooklyn, and Long Island City, would accommodate the City's growth in office-using employment over the next three decades. These rezoned sites targeted for new office space would help to solidify New York City's competitive advantage in the coming years.

The redevelopment plan has five key elements: zoning, public access and transportation improvements, new parks and open space, development of large commercial sites, and the Jacob K. Javits Convention Center expansion. Each element would play an important role in the development of the area. In addition, Hudson Yards would also benefit from other potential developments on the West Side, such as the proposed redevelopment of the Farley Post Office into the Moynihan Station.

Hudson Yards Finance District

Hudson Yards had been zoned as a manufacturing district, so large scale commercial development was prohibited by law. The new zoning, along with the existing government incentive programs, is expected to catalyze the private development of this primarily privately owned area of Midtown Manhattan. The Hudson Yards Finance District is shown in Exhibit 1-3.



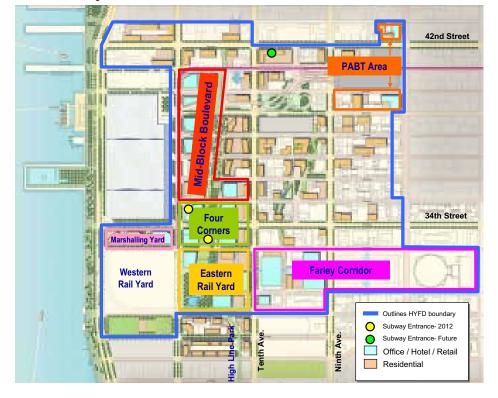


Exhibit 1-3. Special Hudson Yards Finance District

Source: Hudson Yards Development Corporation

As part of the study C&W was asked to evaluate the development potential of 18 large sites in Hudson Yards. Fourteen of these sites were found to be well suited for class A office development and four were found to be better suited for hotel use. Certain of the sites allow residential use for a portion of the new development. The prime commercial development sites lie along West 33rd Street, beginning at Pennsylvania Station, and north along Eleventh Avenue, directly east of the Javits Convention Center.

The largest commercial sites surround the planned West 34th Street subway station, an area referred to in the study as the Four Corners. The four sites can accommodate 1.4 msf, 1.7 msf, 2.2 msf and 2.5 msf, respectively.

The densities allowable on the sites north of the Four Corners, along the Mid-Block Boulevard, are moderately lower than those on the Four Corners and as they are farther from the initial West 34th Street subway station, these sites are expected to be developed after the Four Corners sites.



Inner blocks flanked by Ninth and Tenth Avenues preserve the low and medium density of the existing residential neighborhood, and the West 34th Street and West 42nd Street corridors permit mixed uses with slightly increased densities.

Public Access and Transportation

The most important of the planned public infrastructure improvements is the extension of the number 7 subway line along West 41st Street and then south on Eleventh Avenue to West 34th Street. As the 7 line crosses all major north-south subway lines in Manhattan, Hudson Yards would be accessible from virtually anywhere in the City, with no more than one transfer, much like Midtown Manhattan. The subway station at West 34th Street is included in the planed infrastructure improvements.



Exhibit 1-4. Midtown Manhattan Subway Map with #7 Line Extension

Source: New York City Economic Development Corporation, City Planning Commission.

New Parks and Open Space

Currently, Hudson Yards has no public parkland or any significant open spaces, unlike most other Manhattan neighborhoods. A crucial element of the future success of Hudson Yards is to create such amenities, with the goal of increasing the livability and desirability of the area. To address this need, a Mid-Block Boulevard and Park is planned, and would run between Tenth and Eleventh Avenues, from West 33rd to West 42nd Streets, framing the commercial corridor and providing a transitional open space between the office and residential areas. The



first section, from West 33rd Street to West 36th Street is included in the planned infrastructure improvements. This park system would connect to the proposed High Line Park extending north from West Chelsea.

A large public open space amenity is also planned as part of any development over the Eastern Rail Yard. Additional parks would likely be created between Ninth and Tenth Avenues through zoning incentives available to developers.

Large Commercial Sites

The Hudson Yards has a number of large commercial sites that would accommodate office, hotel and retail uses. In this analysis, 14 of the sites are expected to be developed primarily as office properties. The attractiveness of these sites includes the ability to facilitate large floor plates which is expected to increase their marketability. Likewise the sites would have excellent access to mass transit and visibility within the new office corridors of Hudson Yards. Four of these sites, however, would require partial or total platform coverage to permit development similar to the Park Avenue platform built over the storage tracks north of Grand Central Terminal decades ago. In the Hudson Yards, it is assumed that the platforms would be built and that the sites would be developed to the maximum FAR.

Jacob K. Javits Convention Center Renovation and Expansion

On April 5, 2006, the New York Convention Center Development Corporation proposed a draft general project plan for the renovation and expansion of the Jacob K. Javits Convention Center (Javits). Under the General Project Plan (GPP)⁵ Phase I, adopted in July 2006, the Javits would be fully renovated and upgraded to meet current standards.

As proposed, the Convention Center would expand northward to West 40th Street, including creation of a new upper level of exhibition space, adding approximately 340,000 sf of high-quality exhibition space and 180,000 sf of new meeting space. A flexible 60,000 sf ballroom would be constructed at the northern end of Javits, served by an approximately 40,000 sf outdoor public plaza near West 40th Street. The current vehicle access "moat" would be removed to allow greater connections between the Javits and the adjacent district. Other improvements would be made to ensure a lively and attractive streetscape. A 580,000 sf truck screening and marshalling facility would be constructed at the northern edge of the site to replace the current truck Marshalling Block at West 34th Street and Eleventh Avenue, which will be sold pursuant to the GPP.

⁵ General Project Plan Phase I, July 18, 2006, Jacob K. Javits Convention Center Expansion and Renovation Civic Project and Land Use Improvement Project, Issued by the Convention Center Development Corporation.



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A headquarters hotel is also planned and would be connected under Eleventh Avenue by a pedestrian walkway to the Javits, and would be constructed on the plaza at Eleventh Avenue between West 35th and West 36th Streets. The headquarters hotel is expected to have a minimum of 1,000 rooms and significant ballroom and meeting space.

Real Estate Demand Forecasts and Revenue Projections

It is the opinion of Cushman & Wakefield, Inc., that market demand can reasonably be expected to support new development in the Hudson Yards, given the conservative assumptions⁶ used to derive these projections. Indeed, since new zoning for the area was adopted in early 2005, significant progress to support these projections has already been made. For example, several property sales have taken place, and new residential development is already underway. In addition, plans for the Javits Center expansion are complete, with construction expected to begin in the near future and plans for the extension of the Number 7 subway line are moving ahead.

In forecasting the future demand for real estate and in projecting building completions over the 30-year forecast period, C&W relied upon a number of variables and assumptions. These include, but are not limited to, the economic and demographic forecasts provided by Moody's Economy.com, and the projected completion of major public sector investments, particularly the extension of the number 7 subway line, and the West 34th Street station, as well as the Mid-Block Boulevard and Park between West 33rd and West 36th Streets by 2013. Any delay or failure to complete these infrastructure improvements, particularly the subway, would likely delay office property development along Eleventh Avenue.

The projected demand assumes that the existing zoning legislation⁷ regarding building FAR and DIB bonus remains in place throughout the analysis period. It is also assumed that future changes to City zoning will not materially affect Manhattan's overall development potential. Significant changes to City zoning, by creating competitive markets to Hudson Yards other than those identified in this report, could potentially result in lower demand than forecast.

⁷ Special Hudson Yards District, Zoning Amendment adopted by City Council N040500(A) ZRM, 19 January 2005.



⁶ Real estate analysis and assumptions are provided in Chapters 3-6.

Under the Base scenario, assumed to be steady long-term economic growth, continual development pacing is forecast to total 45.0 msf as follows:

25.7 msf of office 2.3 msf of hotel

15.6 msf of residential 1.4 msf of retail

The Cyclical scenario reflects market variability over the course of multiple business cycles and consequently development would be slightly reduced to 40.9 msf:

24.0 msf of office 2.1 msf of hotel

13.4 msf of residential 1.3 msf of retail

These demand projections were used in turn to determine the real estate tax revenues associated with development for each property type. The primary sources of revenues are Payments in Lieu of Taxes (PILOT) for commercial office development and Property Tax Equivalent (PTE) payments for residential and hotel development. Because retail development is assumed to take place within office and residential, retail development results in both PILOT and PTE revenues. The sale of air rights and other payments related to taxes on financing is expected provide additional revenues.

On the basis of the real estate variables provided by Cushman & Wakefield and analysis of the other available data provided by third parties (which are relied upon and assumed to be reasonable and accurate), including forecasts provided by Moody's Economy.com and a tax revenue calculation model 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 believes the revenue projections to be reasonable as presented in the following pages.

The revenue projections are predicated on the realization of all underlying assumptions as described in the report, and are further subject to the limitations identified therein and in Chapter 1B. All assumptions and descriptions should be read in their entirety, within the appropriate text and exhibits of the report. Because such assumptions are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by the report.

Office

Demand

The projections for office-using employment provided by Moody's Economy.com for the New York region are the primary driver of demand and absorption of office space. Growth in office-using employment reflects structural changes in the regional (and City's) economy in which, over the long term, services employment has grown while industrial employment has



declined. This long-term growth trend is expected to continue well into the future, according to Moody's Economy.com.

These projections were used in the analysis of the region's competitive markets to determine the share of regional office space absorption that Midtown and, more specifically, Hudson Yards would capture as presented in Chapter 3. Because of its enduring advantages, Midtown is expected to retain a large share of this new office-using employment and therefore of new office space. A substantial share of Midtown's growth would likely be accommodated in the Hudson Yards redevelopment area, due to the current shortage of alternative sites.

Although C&W estimates there would be demand for 29 msf of new development in the Base scenario and 24 msf in the Cyclical scenario, as shown in Exhibit 1-2, the projected development in Hudson Yards was limited to the 25.7 msf that is available to be accommodated in the 14 large development sites that were evaluated and found to be well suited to office development.

Revenue Projections

The forecast for office completions was then used as an input to obtain the total property tax payments associated with office development. As an emerging market on the western fringes of existing Midtown, new office development in Hudson Yards would likely see rents that are at a significant discount to those prevalent in the established Midtown office corridors. Coupled with construction costs that would be essentially identical to Midtown, it is likely that in the absence of real estate tax incentives, office development in Hudson Yards would be infeasible. In order to ensure that development in Hudson Yards proceeds as quickly as possible the City has put in place an incentive program for office development in the area.

The City's Industrial Development Agency (IDA) has adopted an amendment to its Uniform Tax Exemption Policy (UTEP) that provides that eligible class A office developments in Hudson Yards will receive an exemption from real property taxes. If developers chose to participate in the program they will be required to make payments in lieu of taxes (PILOTs), which have been assigned to HYIC.

These PILOT payments are structured to reflect rent differentials (discounts) for those properties located further west from the existing Midtown and also recognize the fact that as the Hudson Yards market becomes more established, rent differentials with respect to Midtown would likely narrow.

Under the UTEP, property owners in Hudson Yards would be offered discounts ranging from 40 percent for the first developers located furthest from Eighth Avenue, to 25 percent for later developers who have benefited from a more established market, and to 15 percent for the late developers. The graduated PILOT discounts apply for a period of 15 years, after which payments revert to full taxes based on a four-year phase out. The total office revenues from PILOT payments are expected to total \$20.9 billion, growing from \$13.7 million in 2012 to



\$1.2 billion in 2050 under the Base scenario, and are expected to total \$18.4 billion, growing from \$5.7 million in 2012 to \$1.1 billion in 2050, under the Cyclical scenario as shown in Exhibit 1-5.



Exhibit 1-5. Office Sector Forecast of Completions and Revenues, 2006-2050

	Base Scenario		Cyclical Scenario	
Date	Completions SF	Revenues	Completions SF	Revenues
2006	0	\$0	0	\$0
2007	0	\$0	0	\$0
2008	0	\$0	0	\$0
2009	0	\$0	0	\$0
2010	0	\$0	0	\$0
2011	0	\$0	0	\$0
2012	1,193,379	\$13,662,482	500,000	\$5,724,287
2013	1,374,370	\$30,278,972	0	\$5,896,015
2014	1,394,620	\$47,979,920	0	\$6,072,896
2015	1,338,189	\$62,812,089	1,321,517	\$22,787,479
2016	1,446,136	\$79,603,761	2,521,031	\$54,820,929
2017	1,599,228	\$98,971,884	2,797,363	\$86,166,918
2018	1,661,895	\$120,115,783	2,617,598	\$117,378,381
2019	1,456,904	\$144,232,904	0	\$120,899,732
2020	984,851	\$162,842,897	0	\$124,526,724
2021	500,000	\$175,197,080	0	\$128,262,526
2022	500,000	\$188,145,955	0	\$132,110,402
2023	813,618	\$206,684,146	2,266,059	\$171,985,093
2024	1,421,953	\$236,095,101	0	\$177,144,645
2025	1,519,851	\$270,434,142	939,959	\$198,262,148
2026	1,496,002	\$306,180,514	596,144	\$214,533,443
2027	1,435,060	\$344,087,856	2,905,370	\$273,385,635
2028	1,310,911	\$383,244,493	2,658,482	\$334,296,199
2029	1,178,806	\$425,066,392	2,216,327	\$389,690,766
2030	1,058,561	\$469,178,635	0	\$403,748,299
2031	999,154	\$517,300,122	0	\$422,026,177
2032	1,010,535	\$570,035,505	0	\$446,517,941
2033	46,610	\$603,991,276	1,568,458	\$513,677,484
2034	0	\$638,387,453	0	\$547,764,234
2035	0	\$672,562,129	1,088,488	\$609,316,579
2036	0	\$705,398,588	0	\$641,038,228
2037	0	\$736,309,916	0	\$666,962,264
2038	0	\$765,403,527	0	\$690,701,049
2039	0	\$795,520,820	0	\$715,263,895
2040	0	\$827,159,720	0	\$742,320,268
2040	0	\$861,234,267	0	\$771,428,525
2041	0	\$897,809,404	0	\$806,997,616
2042	0	\$936,252,566	0	\$843,740,813
2043	0	\$974,789,678	0	\$885,447,080
2044	0	\$1,013,620,752	0	\$926,993,540
2045	0	\$1,052,658,932	0	\$968,992,866
2046	0	\$1,091,963,706	0	\$1,006,438,149
2047	0	\$1,130,419,415	0	\$1,043,329,081
2046	0		0	
	0	\$1,168,588,196 \$1,206,530,102	0	\$1,077,487,863
2050		\$1,206,539,192		\$1,114,289,848
Total	25,740,632 SF	\$20,930,760,170	23,996,795 SF	\$18,408,426,016



Residential

Demand

The underlying assumptions for new household formation in Manhattan provided by Moody's Economy.com were used as the primary demand driver to forecast new housing demand for Manhattan. A replacement factor to account for housing stock removed from inventory, and other demand not derived from household formation, was also incorporated in the forecast. The Hudson Yards forecast share of Manhattan housing demand was estimated based on historic experience prior to the Hudson Yards rezoning and the expected infrastructure improvements.

Over the forecast period, 15.6 msf of construction completions (15,972 units) is projected in the Base scenario, and 13.4 msf of construction completions (13,765 units), in the Cyclical scenario, as illustrated in Exhibit 1-6.

Revenue Projections

The taxes and revenues associated with residential development that would flow to HYIC as TEP assume developers would take advantage of an existing tax program, known as 421-a, which provides for significant tax abatements from full taxes for a period of 10 to 20 years depending on the property type, condominium or rental units⁸. Given the prolonged abatement structure provided by this program, revenues accumulate slowly during the first 10 years, reaching approximately \$50 million, but then almost double in the next five years and escalate thereafter. Revenues from residential development are expected to total \$14.4 billion, growing from \$2.1 million in 2007 to \$920.9 million in 2050, under the Base scenario, and are expected to total \$12.7 billion, growing from \$2.1 million in 2007 to \$795.5 million, under the Cyclical scenario, as shown in Exhibit 1-6.

⁸ For detailed information, refer to New York State Real Property Tax Law Section 421-a. The current 421-a program expires in December 2007. A Mayor Bloomberg appointed task force has recommended changes to the program but any such recommendations are pending legislative approval. For purposes of this analysis, the existing 421-program is used. The residential tax revenues are subject to an annual appropriation by the New York City Council.



Exhibit 1-6. Residential Sector Forecast of Completions and Revenues, 2006-2050

	Base Scenario		Cyclical Scenario	
Date	Completions SF	Revenues	Completions SF	Revenues
2006	0	\$0	0	\$0
2007	1,194,600	\$2,136,297	1,194,600	\$2,136,297
2008	715,338	\$6,187,768	734,560	\$6,228,373
2009	701,150	\$10,066,660	672,775	\$10,044,927
2010	881,015	\$12,763,342	763,393	\$12,487,725
2011	896,118	\$18,229,010	752,409	\$17,589,943
2012	956,988	\$22,293,309	822,433	\$21,239,553
2013	871,404	\$29,269,988	846,689	\$27,997,349
2014	1,004,433	\$35,008,642	940,359	\$33,338,329
2015	910,458	\$43,972,072	767,055	\$41,686,521
2016	854,927	\$51,229,355	717,016	\$48,208,244
2017	880,557	\$62,409,361	750,579	\$58,584,722
2018	794,515	\$71,650,732	687,115	\$66,935,035
2019	711,524	\$81,076,039	611,447	\$75,389,273
2020	640,738	\$92,606,613	524,795	\$85,747,987
2021	566,901	\$104,380,833	413,123	\$96,064,647
2022	470,485	\$118,518,304	338,676	\$108,555,611
2023	382,612	\$132,903,715	393,596	\$121,578,776
2024	245,921	\$149,737,179	223,343	\$136,655,612
2025	151,336	\$166,726,115	81,770	\$151,690,017
2026	79,329	\$186,663,146	10,374	\$169,290,694
2027	37,834	\$206,879,063	0	\$187,145,520
2028	68,345	\$230,695,558	0	\$208,029,249
2029	80,550	\$255,132,318	4,882	\$229,356,512
2030	96,416	\$281,357,614	12,815	\$251,850,273
2031	114,112	\$308,202,369	0	\$274,762,798
2032	167,812	\$336,505,610	95,806	\$298,952,903
2033	292,909	\$365,878,204	338,676	\$324,821,305
2034	374,679	\$396,683,315	378,951	\$351,543,999
2035	431,430	\$428,579,555	364,916	\$378,912,602
2036	0	\$458,193,810	0	\$404,053,268
2037	0	\$488,731,315	0	\$430,205,267
2038	0	\$518,638,792	0	\$455,493,085
2039	0	\$549,159,341	0	\$481,532,413
2040	0	\$579,139,226	0	\$506,668,228
2041	0	\$609,950,749	0	\$532,765,748
2042	0	\$640,290,957	0	\$558,086,381
2042	0	\$671,727,549	0	\$584,810,264
2043	0	\$703,027,168	0	\$611,071,900
2045	0	\$736,061,737	0	\$638,893,928
2046	0	\$769,721,559	0	\$667,095,344
2047	0	\$805,874,097	0	\$697,736,393
2047	0	\$842,240,906	0	\$728,478,301
2049	0	\$881,545,827	0	\$761,935,849
2050	0	\$920,875,185	0	\$795,508,489
Total	15,574,438 SF		13,442,153 SF	
ıotai	13,374,430 3F	\$14,382,920,303	13,442,133 3F	\$12,651,159,654



Hotel

Demand

The mixed-use development within Hudson Yards is expected to generate three primary sources of hotel room demand: the expansion of the Javits Center, business visitors to the new offices built in Hudson Yards, and leisure and business "inflow" visitors from other areas in Manhattan into Hudson Yards.

In both forecasts, the hotel construction schedule is dictated by cumulative room night demand as shown in Exhibit 1-7. Under the Base scenario, 2.3 msf (approximately 3,000 rooms) is projected, and under the Cyclical scenario, 2.1 msf (approximately 2,900 rooms) is projected. The revenue forecasts exclude the demand accommodated by the proposed 1,000 room Javits Center convention hotel⁹.

Revenue Projections

Hotel development in Hudson Yards is expected to be fully taxed based on the City's tax assessment mechanism. Hudson Yards' hotels are expected to pay taxes as TEP's comparable to existing hotels in Hudson Yards and Midtown. Full taxes are estimated at \$9.67 psf in 2006¹⁰. As noted, the Javits Center convention hotel is not included in the revenue projections. The resulting revenues are expected to total \$959.1 million, growing from \$0.5 million in 2007 to \$49.3 million in 2050, under the Base scenario, and are expected to total \$850.8 million, growing from \$0.5 million in 2007 to \$44.0 million in 2050, under the Cyclical scenario, as shown in Exhibit 1-7.



⁹ The proposed Javits hotel site, Site Block 707A, is owned by the New York Convention Center Development Corporation and is therefore not expected to pay taxes.

10 See Chapter 5 for comparables on current hotel taxes.

Exhibit 1-7. Hotel Sector Forecast of Completions and Revenues, 2006-2050

	Base Scenario	Cyclical Scenario		
Date	Completions SF	Revenues	Completions SF	Revenues
2006	0	\$0	0	\$0
2007	50,000	\$498,005	50,000	\$498,005
2008	0	\$512,945	0	\$512,945
2009	60,000	\$1,162,334	60,000	\$1,162,334
2010	0	\$1,197,204	0	\$1,197,204
2011*	900,000	\$1,233,120	900,000	\$1,233,120
2012	0	\$1,270,113	0	\$1,270,113
2013	0	\$1,308,217	0	\$1,308,217
2014	350,000	\$5,634,847	0	\$1,347,463
2015	0	\$5,803,892	420,000	\$6,687,093
2016	0	\$5,978,009	0	\$6,887,706
2017	0	\$6,157,349	0	\$7,094,337
2018	0	\$6,342,070	0	\$7,307,167
2019	0	\$6,532,332	0	\$7,526,382
2020	350,000	\$11,847,662	0	\$7,752,174
2021	0	\$12,203,091	0	\$7,984,739
2022	0	\$12,569,184	0	\$8,224,281
2023	0	\$12,946,260	0	\$8,471,009
2024	0	\$13,334,647	350,000	\$14,487,024
2025	150,000	\$16,278,147	0	\$14,921,635
2026	0	\$16,766,492	0	\$15,369,284
2027	0	\$17,269,487	0	\$15,830,363
2028	150,000	\$20,566,879	0	\$16,305,274
2029	0	\$21,183,886	0	\$16,794,432
2030	0	\$21,819,402	0	\$17,298,265
2031	0	\$22,473,984	180,000	\$21,461,643
2032	0	\$23,148,204	0	\$22,105,492
2032	0	\$23,842,650	0	\$22,768,657
2034	280,000	\$30,752,722	180,000	\$27,434,083
2035	0	\$31,675,304	0	\$28,257,106
	0		0	
2036	0	\$32,625,563 \$33,604,330	0	\$29,104,819 \$29,977,963
2038	0	\$33,604,330	0	
				\$30,877,302
2039	0	\$35,650,834	0	\$31,803,621
2040	0	\$36,720,359	0	\$32,757,730
2041	0	\$37,821,969	0	\$33,740,462
2042	0	\$38,956,628	0	\$34,752,676
2043	0	\$40,125,327	0	\$35,795,256
2044	0	\$41,329,087	0	\$36,869,114
2045	0	\$42,568,960	0	\$37,975,187
2046	0	\$43,846,029	0	\$39,114,443
2047	0	\$45,161,409	0	\$40,287,876
2048	0	\$46,516,252	0	\$41,496,512
2049	0	\$47,911,739	0	\$42,741,408
2050	0	\$49,349,091	0	\$44,023,650
Total	2,290,000 SF	\$959,108,474	2,140,000 SF	\$850,815,564



^{*}The Convention hotel is not included in the revenue estimates

Retail

Demand

The demand for retail space in Hudson Yards would likely be generated from the new office employees, residents, visitors to the Javits Convention Center, and other "inflow" visitors and residents to the Hudson Yards from elsewhere in Manhattan.

The cumulative demand results in 1.4 msf and 1.3 msf of construction completions in the Base and Cyclical scenarios respectively, as shown in Exhibit 1-8. Since retail development in Manhattan typically takes place within office and residential development, rather than stand-alone storefronts and shopping centers, it is assumed that retail demand would be accommodated in office and residential buildings. The office portion of retail would therefore be subject to PILOT payments while the residential component would make TEP payments to HYIC.

Revenue Projections

As new retail development is expected to be primarily located in office or residential buildings, the retail revenues are estimated as a percentage of the revenues derived from office and residential construction. The resulting retail revenues from development are based either on the PILOT schedule for retail usage within office development, or residential taxes. Total retail revenues are expected to total \$1.1 billion, growing from \$82,265 in 2007 to \$69.0 million in 2050, under the Base scenario, and are expected to total \$1.0 billion, growing from \$82,332 in 2007 to \$69.3 million in 2050, under the Cyclical Scenario, as shown in Exhibit 1-8.



Exhibit 1-8. Retail Sector Forecast Completions and Revenues, 2006-2050

	Base Scenario		Cyclical Scenario	
Date	Completions SF	Revenues	Completions SF	Revenues
2006	0	\$0	0	\$0
2007	21,013	\$82,265	21,013	\$82,332
2008	7,620	\$97,236	7,760	\$97,578
2009	7,487	\$153,669	7,016	\$153,083
2010	17,723	\$198,801	15,979	\$194,604
2011	39,806	\$340,568	38,155	\$332,436
2012	44,568	\$794,923	31,895	\$566,146
2013	43,749	\$1,393,435	12,379	\$693,222
2014	46,813	\$1,976,489	13,499	\$776,718
2015	44,800	\$2,546,155	41,099	\$1,401,065
2016	66,928	\$3,167,983	72,657	\$2,393,384
2017	185,315	\$4,268,956	196,378	\$3,788,478
2018	53,051	\$5,002,434	43,728	\$4,427,153
2019	51,483	\$5,972,247	47,945	\$4,869,757
2020	50,399	\$6,719,402	8,350	\$5,103,891
2021	49,173	\$7,478,906	54,702	\$5,677,906
2022	39,489	\$8,143,049	26,519	\$6,034,660
2023	33,491	\$9,137,700	36,776	\$7,171,130
2024	41,519	\$10,273,374	96,371	\$7,905,017
2025	42,163	\$11,727,435	0	\$8,569,641
2026	116,596	\$13,413,691	100,925	\$9,787,400
2027	37,702	\$15,014,043	65,994	\$11,754,895
2028	39,346	\$16,704,138	13,122	\$12,856,621
2029	41,012	\$18,827,472	0	\$13,964,081
2030	39,504	\$20,776,554	25,686	\$15,092,491
2031	38,249	\$23,219,680	105,550	\$17,069,899
2032	37,368	\$25,513,531	91,911	\$18,968,548
2033	38,519	\$28,191,624	41,141	\$21,960,989
2034	42,122	\$30,276,721	46,524	\$24,133,931
2035	40,708	\$32,738,616	48,543	\$27,312,162
2036	0	\$34,733,792	0	\$29,546,454
2037	0	\$37,090,605	0	\$31,801,778
2038	0	\$39,169,432	0	\$34,221,894
2039	0	\$41,072,231	0	\$36,211,088
2040	0	\$43,356,401	0	\$38,929,760
2041	0	\$45,481,784	0	\$40,978,256
2042	0	\$47,980,881	0	\$44,190,488
2043	0	\$50,209,239	0	\$46,547,327
2043	0	\$52,812,997	0	\$50,160,028
2044	0	\$55,173,891	0	\$52,811,332
2045	0	\$58,073,676	0	\$56,344,968
2040	0	\$60,717,664	0	\$59,166,460
2047	0	\$63,373,043	0	\$62,448,910
2049	0	\$66,170,732	0	\$65,621,942
2050	0	\$68,970,744	0	\$69,292,913
Total	1,357,715 SF	\$1,068,538,213	1,311,635 SF	\$951,412,818
Total	1,301,1 10 3 F	φ1,000,330, 2 13	1,311,033 3F	Ψ931,412,018



Non-Recurring Revenues

In addition to the recurring revenues associated with the four property types, additional revenues associated with the construction phase of development would also flow to HYIC. The sources of these revenues are payments that developers are expected to make for purchases of additional floor area ratio (FAR) and taxes associated with the financing of construction.

Additional Development Rights

In order to achieve the development potential within each commercial and residential site the zoning mechanism provides for additional FAR either through air rights purchases or transferable development rights (TDR) from the ERY or through a district improvement fund bonus (DIB) established in the zoning resolution. Combined a total of approximately 13 msf of TDR and DIB are expected to purchased in Hudson Yards based on the development forecast for all property types¹¹.

Per the Hudson Yards zoning resolution, the DIB purchase price currently at \$106.48 psf in 2006, is grown annually by the percent change in the Consumer Price Index published by the Bureau of Labor Statistics. The ERY surplus air rights are expected to be purchased at an equivalent rate as the DIB. Under the agreement between the City and the MTA, HYIC purchased a 50 percent interest in the ERY TDR for \$200 million. It will receive all proceeds of ERY TDR until it has recouped its \$200 million plus interest costs, and thereafter MTA will receive all proceeds. 12

Total ERY and DIB revenues are estimated at \$1.2 billion in the Base scenario, and a slightly higher \$1.3 billion in the Cyclical scenario due to later and consequently higher inflated prices.

Mortgage Recording Tax

Under the UTEP amendment, the applicable mortgage recording tax (2.75 percent) would flow to HYIC in the form of a Payment in Lieu of Mortgage Recording Tax (PILOMRT). Since the financing and construction phase predates completions, PILOMRT revenues are expected to accrue before estimated completions (a two-year construction period is assumed for residential and three years for office).

Exhibit 1-9 summarizes these two revenue sources.

of sites along the second phase Mid-Block Boulevard and Park that are therefore not included in the revenue model.

12 No. 7 Extension Memorandum of Understanding and Rail Yards Agreement: 28 September 2006, Agreement between Metropolitan Transportation Authority, NYC Transit Authority and MTA Capital Construction, and the City of New York, Hudson Yards Development Corporation and Hudson Yards Infrastructure Corporation.



¹¹ This figure excludes 111,000 sf of DIBs already purchased to date as well as approximately 850,000 sf of DIB that can be purchased from owners of sites along the second phase Mid-Block Bouleyard and Park that are therefore not included in the revenue model

Exhibit 1-9. Eastern Rail Yard, District Improvement Bonus Air Rights and PILOMRT Payments, 2007-2050

•	Base Scenario		Cyclical Scenario	
Date	ERY and DIB	PILOMRT	ERY and DIB	PILOMRT
2007	\$10,520,877	\$0	\$10,520,877	\$0
2008	\$3,393,936	\$10,432,296	\$3,393,936	\$4,370,908
2009	\$70,225,711	\$12,374,927	\$40,152,950	\$0
2010	\$71,770,677	\$12,933,974	\$12,682,329	\$0
2011	\$73,349,632	\$12,782,939	\$41,939,114	\$12,623,684
2012	\$74,963,324	\$14,228,515	\$42,861,774	\$24,775,993
2013	\$76,612,517	\$16,206,836	\$43,804,733	\$28,348,928
2014	\$109,556,796	\$17,347,167	\$104,611,497	\$26,970,305
2015	\$111,967,045	\$15,663,657	\$106,912,950	\$0
2016	\$114,430,320	\$10,906,111	\$109,265,035	\$0
2017	\$84,647,915	\$5,703,044	\$111,668,866	\$0
2018	\$44,323,937	\$5,874,135	\$114,125,581	\$0
2019	\$27,448,061	\$9,845,360	\$58,325,630	\$27,054,324
2020	\$28,051,918	\$17,709,054	\$19,655,820	\$0
2021	\$28,669,061	\$19,468,542	\$20,088,248	\$11,715,399
2022	\$29,299,780	\$19,781,311	\$20,530,189	\$7,882,688
2023	\$29,944,375	\$19,474,002	\$20,981,853	\$39,289,687
2024	\$34,656,831	\$18,389,516	\$60,452,496	\$36,385,819
2025	\$35,419,281	\$17,032,442	\$61,782,451	\$31,090,738
2026	\$36,198,505	\$15,753,882	\$63,141,665	\$0
2027	\$36,994,872	\$15,315,863	\$64,530,782	\$0
2028	\$37,808,759	\$15,955,020	\$65,950,459	\$0
2029	\$5,360,095	\$1,106,259	\$5,360,095	\$25,413,471
2030	\$5,478,017	\$0	\$5,478,017	\$0
2031	\$5,598,534	\$0	\$5,598,534	\$18,779,384
2032	\$5,721,701	\$0	\$5,721,701	\$0
2033	\$5,847,579	\$0	\$5,847,579	\$0
2034	\$5,976,225	\$0	\$5,976,225	\$0
2035	\$6,107,702	\$0	\$6,107,702	\$0
2036	\$6,242,072	\$0	\$6,242,072	\$0
2037	\$6,379,397	\$0	\$6,379,397	\$0
2038	\$0	\$0	\$0	\$0
2039	\$0	\$0	\$0	\$0
2040	\$0	\$0	\$0	\$0
2041	\$0	\$0	\$0	\$0
2042	\$0	\$0	\$0	\$0
2043	\$0	\$0	\$0	\$0
2044	\$0	\$0	\$0	\$0
2045	\$0	\$0	\$0	\$0
2046	\$0	\$0	\$0	\$0
2047	\$0	\$0	\$0	\$0
2048	\$0	\$0	\$0	\$0
2049	\$0	\$0	\$0	\$0
2050	\$0	\$0	\$0	\$0
Total	\$1,222,965,454	\$304,284,853	\$1,278,444,542	\$294,701,329



Other West Side Proposed Development

Three potential Hudson Yards area projects were not included in the quantitative analysis of the C&W study because they were, at the time the study was commissioned, insufficiently advanced in terms of program or legal approvals. As such any potential revenues that may result from these projects is not included in the projected revenues in this report. The development of some or all of these projects would likely result in additional revenues to HYIC.

Moynihan Station and Madison Square Garden

The former Farley Post Office, located between Eighth and Ninth Avenues, West 31st to West 33rd Streets is proposed to be redeveloped as Moynihan Station to serve New Jersey Transit and possibly other commercial uses.

The Moynihan Station is a majestic building on scale with Grand Central Station that was designed by McKim, Mead and White as a complementary public institution to the former Pennsylvania Station that was demolished in the 1960s. The 1.4 msf building, a national, state and city landmark, occupies a full city block west of Pennsylvania Station. Its redevelopment was a much-heralded dream of former Senator Patrick Moynihan, and the building was recently named in his honor, pending its agreed-upon sale by the U.S. Post Office to the State of New York.

The Moynihan Station Development Corporation, a subsidiary of the Empire State Development Corporation, selected the development team of Vornado Realty Trust and The Related Companies to enter into a 49-year master lease for the building's redevelopment. As planned, the Moynihan Station would be renovated and expanded by the Vornado/Related team for public and private uses – a train station, postal operations, and a new Madison Square Garden. In addition, a primarily residential building that uses surplus air rights transferred from the Moynihan Station would be developed nearby. Recently, however, the agreement appears to be on hold as the plan was not approved by the Public Authorities Control Board¹³. It is anticipated that another plan will surface after the November 2006 elections.

The other plan was also proposed by the Vornado/Related team and is being considered by the City and State to relocate the Madison Square Garden (MSG) sports facility into the Western Annex of Moynihan Station. This project would also facilitate new mixed-use development atop Pennsylvania Station on the current MSG site. If implemented, this development would result in a new commercial and transportation center. Development of the current MSG site

¹³ The Public Authorities Control Board is a state agency whose approval is necessary for partial funding of the Moynihan Station redevelopment.



would total approximately 5.0 msf. This proposal faces would likely require an environmental impact review and a lengthy permitting process.

Under a pending agreement between the Vornado/Related team and Cablevision Systems Corporation (owners of MSG), the existing arena would be demolished following completion of the new arena within the Moynihan Station, expected to be after 2010. In the event that the current MSG site is redeveloped real estate tax revenues in the form of TEP or PILOT revenues would flow to HYIC.

Western Rail Yard

The Western Rail Yard (WRY) is located between Eleventh and Twelfth Avenues. The City and MTA have recently announced a plan to jointly develop the site with HYDC acting as lead agency for planning. Under the current proposal HYDC would immediately commence a planning process for the WRY to create development and design guidelines for the site. MTA would then issue a RFP to select a developer for both the WRY and the ERY by September 30, 2007. As detailed in the agreement for the Rail Yards, all PILOTs or other real estate tax related revenues from any development would flow to the HYIC.

Port Authority Bus Terminal

The Port Authority Bus Terminal (PABT) has the capacity to build approximately 1.0 msf above its North Terminal. The Port Authority¹⁴ is undertaking a study to consider the highest and best use of their unused air rights above the terminal. The site is located across from 11 Times Square (designs are underway for a 1.0 msf commercial building) and is also near the New York Times building currently under construction, the North Terminal is a likely site for near-term development.

¹⁴ Development on property owned by the Port Authority of New York and New Jersey in the Hudson Yards Project Area will not, by operation of law, result in real property tax revenues to the City or PILOT revenues to the Corporation but could fill some of the demand projected by C&W for commercial and residential developments within the Project Area



Overview of Real Estate Report

The chapters that follow provide greater detail and analysis of the real estate demand generators, forecast development, related assumptions, and related revenue projections. Each chapter considers the following factors:

- Midtown Manhattan's current conditions and the dynamic relationships between Midtown, Hudson Yards, and the other competitive regional markets.
- Supply and demand characteristics, within a historic time frame, current environment, and expected future trends.
- Demographic and economic Base and Cyclical forecasts supplied by Moody's Economy.com, and the resultant Base and Cyclical demand forecasts for each property type and the likely demand for each property type to be captured in the Hudson Yards over the 30-year forecast period.
- Construction completions (in square feet) for each property type that would likely be captured in the Hudson Yards are provided on an annual basis over the 30-year forecast period.
- The reasonableness of all other real estate inputs and assumptions used in the revenue model and the reasonableness of the resulting projected future revenues that are estimated to result from the development of the Hudson Yards.
- Note that the real estate data used in the market analysis is preliminary to 2006 year-end results. The forecast of demand is therefore based on 2005 data consistent with the projections of economic data provided by Moody's Economy.com



HYIC Overall Revenues

Base Scenario Revenues

Dase	Base Scenario Revenues										
		PILOTS			PTEs			Other			
Year	Office Pilot's	Retail (Office) Pilot's	MRT	Residential Taxes	Hotel Taxes	Retail (Residential) Taxes	DIB	ERY TDRs	Total		
2006		T Hot s				Tures					
2007	\$0	\$0	\$0	\$2,136,297	\$498,005	\$82,265	\$10,520,877	\$0	\$13,237,443		
2008	\$0	\$0	\$0	\$6,187,768	\$512,945	\$97,236	\$3,393,936	\$0	\$10,191,886		
2009	\$0	\$0	\$10,432,296	\$10,066,660	\$1,162,334	\$153,669	\$56,841,009	\$13,384,702	\$92,040,670		
2010	\$0	\$0	\$12,374,927	\$12,763,342	\$1,197,204	\$198,801	\$58,091,511	\$13,679,166	\$98,304,950		
2011	\$0	\$0	\$12,933,974	\$18,229,010	\$1,233,120	\$340,568	\$59,369,525	\$13,980,107	\$106,086,304		
2012	\$13,662,482	\$409,874	\$12,782,939	\$22,293,309	\$1,270,113	\$385,049	\$60,675,654	\$14,287,670	\$125,767,091		
2013	\$30,278,972	\$908,369	\$14,228,515	\$29,269,988	\$1,308,217	\$485,066	\$62,010,518	\$14,601,998	\$153,091,645		
2014	\$47,979,920	\$1,439,398	\$16,206,836	\$35,008,642	\$5,634,847	\$537,092	\$40,628,871	\$68,927,925	\$216,363,530		
2015	\$62,812,089	\$1,884,363	\$17,347,167	\$43,972,072	\$5,803,892	\$661,793	\$41,522,706	\$70,444,339	\$244,448,420		
2016	\$79,603,761	\$2,388,113	\$15,663,657	\$51,229,355	\$5,978,009	\$779,870	\$42,436,205	\$71,994,115	\$270,073,085		
2017	\$98,971,884	\$2,969,157	\$10,906,111	\$62,409,361	\$6,157,349	\$1,299,800	\$43,369,802	\$41,278,113	\$267,361,577		
2018	\$120,115,783	\$3,603,473	\$5,703,044	\$71,650,732	\$6,342,070	\$1,398,961	\$44,323,937	\$0	\$253,138,000		
2019	\$144,232,904	\$4,326,987	\$5,874,135	\$81,076,039	\$6,532,332	\$1,645,260	\$27,448,061	\$0	\$271,135,717		
2020	\$162,842,897	\$4,885,287	\$9,845,360	\$92,606,613	\$11,847,662	\$1,834,116	\$28,051,918	\$0	\$311,913,853		
2021	\$175,197,080	\$5,255,912	\$17,709,054	\$104,380,833	\$12,203,091	\$2,222,994	\$28,669,061	\$0	\$345,638,026		
2022	\$188,145,955	\$5,644,379	\$19,468,542	\$118,518,304	\$12,569,184	\$2,498,670	\$29,299,780	\$0	\$376,144,814		
2023	\$206,684,146	\$6,200,524	\$19,781,311	\$132,903,715	\$12,946,260	\$2,937,176	\$29,944,375	\$0	\$411,397,507		
2024	\$236,095,101	\$7,064,247	\$19,474,002	\$149,737,179	\$13,334,647	\$3,209,126	\$34,656,831	\$0	\$463,571,134		
2025	\$270,434,142	\$8,032,308	\$18,389,516	\$166,726,115	\$16,278,147	\$3,695,127	\$35,419,281	\$0	\$518,974,636		
2026	\$306,180,514	\$9,102,278	\$17,032,442	\$186,663,146	\$16,766,492	\$4,311,413	\$36,198,505	\$0	\$576,254,790		
2027	\$344,087,856	\$10,135,214	\$15,753,882	\$206,879,063	\$17,269,487	\$4,878,829	\$36,994,872	\$0	\$635,999,202		
2028	\$383,244,493	\$11,304,290	\$15,315,863	\$230,695,558	\$20,566,879	\$5,399,847	\$37,808,759	\$0	\$704,335,691		



2029	\$425,066,392	\$12,553,156	\$15,955,020	\$255,132,318	\$21,183,886	\$6,274,316	\$5,360,095	\$0	\$741,525,183
2030	\$469,178,635	\$13,870,558	\$1,106,259	\$281,357,614	\$21,819,402	\$6,905,996	\$5,478,017	\$0	\$799,716,482
2031	\$517,300,122	\$15,308,059	\$0	\$308,202,369	\$22,473,984	\$7,911,621	\$5,598,534	\$0	\$876,794,689
2032	\$570,035,505	\$16,883,792	\$0	\$336,505,610	\$23,148,204	\$8,629,739	\$5,721,701	\$0	\$960,924,550
2033	\$603,991,276	\$18,464,982	\$0	\$365,878,204	\$23,842,650	\$9,726,642	\$5,847,579	\$0	\$1,027,751,332
2034	\$638,387,453	\$19,507,225	\$0	\$396,683,315	\$30,752,722	\$10,769,496	\$5,976,225	\$0	\$1,102,076,437
2035	\$672,562,129	\$20,543,133	\$0	\$428,579,555	\$31,675,304	\$12,195,483	\$6,107,702	\$0	\$1,171,663,306
2036	\$705,398,588	\$21,539,215	\$0	\$458,193,810	\$32,625,563	\$13,194,577	\$6,242,072	\$0	\$1,237,193,824
2037	\$736,309,916	\$22,477,873	\$0	\$488,731,315	\$33,604,330	\$14,612,733	\$6,379,397	\$0	\$1,302,115,564
2038	\$765,403,527	\$23,362,338	\$0	\$518,638,792	\$34,612,460	\$15,807,094	\$0	\$0	\$1,357,824,210
2039	\$795,520,820	\$24,275,931	\$0	\$549,159,341	\$35,650,834	\$16,796,299	\$0	\$0	\$1,421,403,225
2040	\$827,159,720	\$25,230,622	\$0	\$579,139,226	\$36,720,359	\$18,125,779	\$0	\$0	\$1,486,375,705
2041	\$861,234,267	\$26,258,345	\$0	\$609,950,749	\$37,821,969	\$19,223,440	\$0	\$0	\$1,554,488,770
2042	\$897,809,404	\$27,353,111	\$0	\$640,290,957	\$38,956,628	\$20,627,771	\$0	\$0	\$1,625,037,871
2043	\$936,252,566	\$28,503,389	\$0	\$671,727,549	\$40,125,327	\$21,705,850	\$0	\$0	\$1,698,314,681
2044	\$974,789,678	\$29,658,168	\$0	\$703,027,168	\$41,329,087	\$23,154,829	\$0	\$0	\$1,771,958,930
2045	\$1,013,620,752	\$30,826,870	\$0	\$736,061,737	\$42,568,960	\$24,347,021	\$0	\$0	\$1,847,425,339
2046	\$1,052,658,932	\$32,001,638	\$0	\$769,721,559	\$43,846,029	\$26,072,038	\$0	\$0	\$1,924,300,196
2047	\$1,091,963,706	\$33,193,437	\$0	\$805,874,097	\$45,161,409	\$27,524,227	\$0	\$0	\$2,003,716,878
2048	\$1,130,419,415	\$34,391,434	\$0	\$842,240,906	\$46,516,252	\$28,981,609	\$0	\$0	\$2,082,549,615
2049	\$1,168,588,196	\$35,583,091	\$0	\$881,545,827	\$47,911,739	\$30,587,641	\$0	\$0	\$2,164,216,495
2050	\$1,206,539,192	\$36,770,580	\$0	\$920,875,185	\$49,349,091	\$32,200,165	\$0	\$0	\$2,245,734,213
Total	\$20,930,760,170	\$634,111,121	\$304,284,853	\$14,382,920,303	\$959,108,474	\$434,427,092	\$900,387,318	\$322,578,135	\$38,868,577,466



Cyclical Scenario Revenues

•	chear Scenario	PILOTS			PTEs			Other		
	Office Pilot's	Retail (Office)	MRT	Residential	Hotel Taxes	Retail	DIB	ERY TDRs	Total	
		Pilot's		Taxes		(Residential)				
						Taxes				
2006										
2007	\$0	\$0	\$0	\$2,136,297	\$498,005	\$82,332	\$10,520,877	\$0	\$13,237,511	
2008	\$0	\$0	\$0	\$6,228,373	\$512,945	\$97,578	\$3,393,936	\$0	\$10,232,833	
2009	\$0	\$0	\$4,370,908	\$10,044,927	\$1,162,334	\$153,083	\$26,768,248	\$13,384,702	\$55,884,201	
2010	\$0	\$0	\$0	\$12,487,725	\$1,197,204	\$194,604	\$27,357,149	\$13,679,166	\$54,915,847	
2011	\$0	\$0	\$0	\$17,589,943	\$1,233,120	\$332,436	\$27,959,006	\$13,980,107	\$61,094,613	
2012	\$5,724,287	\$171,729	\$12,623,684	\$21,239,553	\$1,270,113	\$394,417	\$28,574,105	\$14,287,670	\$84,285,557	
2013	\$5,896,015	\$176,880	\$24,775,993	\$27,997,349	\$1,308,217	\$516,342	\$29,202,735	\$14,601,998	\$104,475,530	
2014	\$6,072,896	\$182,187	\$28,348,928	\$33,338,329	\$1,347,463	\$594,531	\$60,775,868	\$43,835,629	\$174,495,831	
2015	\$22,787,479	\$683,624	\$26,970,305	\$41,686,521	\$6,687,093	\$717,441	\$62,112,937	\$44,800,013	\$206,445,413	
2016	\$54,820,929	\$1,607,646	\$0	\$48,208,244	\$6,887,706	\$785,738	\$63,479,421	\$45,785,613	\$221,575,298	
2017	\$86,166,918	\$2,546,916	\$0	\$58,584,722	\$7,094,337	\$1,241,561	\$64,875,969	\$46,792,897	\$267,303,320	
2018	\$117,378,381	\$3,101,545	\$0	\$66,935,035	\$7,307,167	\$1,325,608	\$66,303,240	\$47,822,341	\$310,173,317	
2019	\$120,899,732	\$3,194,591	\$0	\$75,389,273	\$7,526,382	\$1,675,166	\$19,232,700	\$39,092,929	\$267,010,774	
2020	\$124,526,724	\$3,290,429	\$27,054,324	\$85,747,987	\$7,752,174	\$1,813,462	\$19,655,820	\$0	\$269,840,920	
2021	\$128,262,526	\$3,389,141	\$0	\$96,064,647	\$7,984,739	\$2,288,764	\$20,088,248	\$0	\$258,078,066	
2022	\$132,110,402	\$3,490,816	\$11,715,399	\$108,555,611	\$8,224,281	\$2,543,844	\$20,530,189	\$0	\$287,170,543	
2023	\$171,985,093	\$4,178,343	\$7,882,688	\$121,578,776	\$8,471,009	\$2,992,787	\$20,981,853	\$0	\$338,070,549	
2024	\$177,144,645	\$4,303,693	\$39,289,687	\$136,655,612	\$14,487,024	\$3,601,324	\$60,452,496	\$0	\$435,934,482	
2025	\$198,262,148	\$4,432,804	\$36,385,819	\$151,690,017	\$14,921,635	\$4,136,837	\$61,782,451	\$0	\$471,611,712	
2026	\$214,533,443	\$4,875,491	\$31,090,738	\$169,290,694	\$15,369,284	\$4,911,909	\$63,141,665	\$0	\$503,213,224	
2027	\$273,385,635	\$6,216,689	\$0	\$187,145,520	\$15,830,363	\$5,538,206	\$64,530,782	\$0	\$552,647,194	
2028	\$334,296,199	\$6,678,706	\$0	\$208,029,249	\$16,305,274	\$6,177,915	\$65,950,459	\$0	\$637,437,801	
2029	\$389,690,766	\$6,897,990	\$0	\$229,356,512	\$16,794,432	\$7,066,091	\$5,360,095	\$0	\$655,165,886	



2030	\$403,748,299	\$7,175,934	\$25,413,471	\$251,850,273	\$17,298,265	\$7,916,557	\$5,478,017	\$0	\$718,880,816
2031	\$422,026,177	\$7,571,778	\$0	\$274,762,798	\$21,461,643	\$9,498,121	\$5,598,534	\$0	\$740,919,049
2032	\$446,517,941	\$8,149,331	\$18,779,384	\$298,952,903	\$22,105,492	\$10,819,217	\$5,721,701	\$0	\$811,045,969
2033	\$513,677,484	\$9,788,695	\$0	\$324,821,305	\$22,768,657	\$12,172,294	\$5,847,579	\$0	\$889,076,013
2034	\$547,764,234	\$10,556,416	\$0	\$351,543,999	\$27,434,083	\$13,577,515	\$5,976,225	\$0	\$956,852,473
2035	\$609,316,579	\$12,137,872	\$0	\$378,912,602	\$28,257,106	\$15,174,291	\$6,107,702	\$0	\$1,049,906,152
2036	\$641,038,228	\$12,818,886	\$0	\$404,053,268	\$29,104,819	\$16,727,569	\$6,242,072	\$0	\$1,109,984,841
2037	\$666,962,264	\$13,315,261	\$0	\$430,205,267	\$29,977,963	\$18,486,517	\$6,379,397	\$0	\$1,165,326,669
2038	\$690,701,049	\$13,775,251	\$0	\$455,493,085	\$30,877,302	\$20,446,643	\$0	\$0	\$1,211,293,330
2039	\$715,263,895	\$14,250,857	\$0	\$481,532,413	\$31,803,621	\$21,960,231	\$0	\$0	\$1,264,811,017
2040	\$742,320,268	\$14,742,602	\$0	\$506,668,228	\$32,757,730	\$24,187,158	\$0	\$0	\$1,320,675,986
2041	\$771,428,525	\$15,283,192	\$0	\$532,765,748	\$33,740,462	\$25,695,064	\$0	\$0	\$1,378,912,990
2042	\$806,997,616	\$15,965,209	\$0	\$558,086,381	\$34,752,676	\$28,225,279	\$0	\$0	\$1,444,027,161
2043	\$843,740,813	\$16,624,248	\$0	\$584,810,264	\$35,795,256	\$29,923,079	\$0	\$0	\$1,510,893,660
2044	\$885,447,080	\$17,308,462	\$0	\$611,071,900	\$36,869,114	\$32,851,566	\$0	\$0	\$1,583,548,123
2045	\$926,993,540	\$18,018,767	\$0	\$638,893,928	\$37,975,187	\$34,792,565	\$0	\$0	\$1,656,673,987
2046	\$968,992,866	\$18,718,821	\$0	\$667,095,344	\$39,114,443	\$37,626,147	\$0	\$0	\$1,731,547,621
2047	\$1,006,438,149	\$19,302,931	\$0	\$697,736,393	\$40,287,876	\$39,863,529	\$0	\$0	\$1,803,628,878
2048	\$1,043,329,081	\$19,954,825	\$0	\$728,478,301	\$41,496,512	\$42,494,084	\$0	\$0	\$1,875,752,804
2049	\$1,077,487,863	\$20,628,461	\$0	\$761,935,849	\$42,741,408	\$44,993,482	\$0	\$0	\$1,947,787,062
2050	\$1,114,289,848	\$21,370,535	\$0	\$795,508,489	\$44,023,650	\$47,922,378	\$0	\$0	\$2,023,114,899
Total	\$18,408,426,016	\$366,877,552	\$294,701,329	\$12,651,159,654	\$850,815,564	\$584,535,266	\$940,381,477	\$338,063,065	\$34,434,959,925



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- forecasts, and other third parties for use within the C&W Report and/or any C&W Updated Reports. C&W assumes no liability resulting from errors, omissions or any other inaccuracies with respect to the information provided by Hudson Yards Infrastructure Corporation, Hudson Yards Development Corporation, The City of New York, Moody's Economy.com and any other third parties.
- 4. Tax data provided by the New York City Office of Management and Budget and the New York City Department of Finance are on a New York City Fiscal Year Basis. The City's Fiscal Year commences on July 1st of the preceding Calendar year and ends on June 30th of the Calendar Year. For example, the City's Fiscal Year 2007 commences on July 1, 2006 and ends on June 30, 2007. 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 Calendar Year basis, would fall within the corresponding City Fiscal Year ending as of June 30. Actual timing of completions, as well the operation and timing of the City's assessment mechanism, may negatively affect the revenue results.
- 5. In connection with the C&W Report and any C&W Updated Reports, 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 or any C&W Updated Report. Reported asking rates of properties, replacement cost rents or estimated replacement costs do not necessarily reflect the rental rates at which properties may actually be rented, actual rents required to support new development or the actual cost of replacement. In many instances, asking rents and actual rental rates differ significantly.
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- 7. Many of the figures presented in this report will be 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, these figures may be subject to rounding errors.
- 8. Hudson Yards Infrastructure Corporation engaged C&W to analyze the real estate market impact of economic scenarios, including a base case, and a cyclical recession (modest downside) economic scenarios. In the past 30-year period New York City has experienced several more dramatic economic swings. For the purposes of this report, however, C&W has not been asked to analyze a deep recession of the magnitude experienced in the 1970s nor a disaster scenario (i.e. a World Trade Center-like terrorist attack).
- 9. As the demand forecast is provided over a 30-year period and the revenue projections are provided over a 45-year period it is important to revisit all the assumptions and variables that are based on current market conditions and enabling legislation, zoning and tax programs as these variables have a greater probability of change the further out the forecast period.
- 10. Many of the variables associated with these forecasts, tax rates, incentive programs and legislation are policy driven. C&W is neither opining 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 the existence of other sites in the Hudson Yards Finance District owned by the state or Port Authority of NY and NJ will not materially reduce revenue to the Hudson Yards Infrastructure Corporation.
- 11. Among the assumptions on which projections of the revenues expected to be received by the Hudson Yards Infrastructure Corporation were based is the assumption that owners of commercial sites in the Hudson Yards will either enter into PILOT Agreements (as used in the C&W Report or any C&W Updated Reports) with the New York City Industrial Development Agency ("IDA"), the Convention Center Development Corporation ("CCDC") (relating to the Javits Marshalling Yard) or the Metropolitan Transportation Authority ("MTA") (relating to the Eastern Railyard and Western Railyard), or pay real property taxes to the City and will make certain amounts of DIB Payments (as used in the C&W Report or any C&W Updated Reports) in exchange for the right to increase the size of their buildings. In addition to the IDA, the New York State Urban Development Corporation ("UDC") (sometimes referred to as the Empire State Development Corporation) and its subsidiaries (including, but not limited to, the CCDC) have statutory powers that may be utilized in the Hudson Yards, which gives 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 Port Authority of New York and New Jersey in the Hudson Yards will not, by operation of law, result in real property tax revenues to the City or PILOT revenues to the Hudson Yards Infrastructure Corporation but could fill some of the demand projected by C&W for commercial and residential developments within the Hudson Yards and therefore could reduce the revenues payable to the Hudson Yards Infrastructure Corporation.

- 12. In assessing the reasonableness of the projected growth rates of taxes used in the revenue model, C&W examined the data from an historical perspective by comparing the projected growth rates in taxes with their historic average growth rate over the 1985 to 2005 period. 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 those incorporated in the forecast provided by Moody's Economy.com and assumes that growth is not expected to deviate significantly from the historic long-term trends.
- 13. 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 or any C&W Updated 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 The City of New York, and use of the C&W Report and any C&W Updated Reports by third parties shall be solely at the risk of such third parties.
- 14. 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 or assumptions or any manner in which the C&W revenue projections are used within such coverage projections.
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2.ECONOMIC OVERVIEW

The New York City Economic Outlook

The New York City economy has recovered from several difficult years. Just after the turn of the century, the City endured a major decline in the stock market, a string of corporate and Wall Street financial scandals, and the 9/11 terror attack.

The economic toll of these events is evident in the metro area's loss of jobs. Payroll employment in the New York metropolitan division is still nearly 130,000 below the peak in employment achieved five years ago. The job losses were broad-based across manufacturing, utilities, retail, information, and professional and financial services.

The New York City economy is back on track, however. Since the broad national expansion got under way in earnest in late 2003, the New York City economy has followed suit and has been adding jobs at a slow but steady pace ever since. Job growth has resumed in nearly every industry of the metro division's economy and the all-important financial activities industry has been hiring at a pace that far exceeds the national average. Wall Street profits have soared to near-record levels, with many of the Street's largest firms reporting record income and revenues in 2005. The leisure/hospitality industry in New York was the first to bounce back following the recession and 9/11 and continues to be one of the metro division's primary growth drivers. Tourists have returned and hotel occupancy and room rates reached post-recession highs last year. Broadway attendance also shattered records in 2005. The City's housing and condominium markets are booming with consistent double-digit price gains.

The economy's near-term prospects are solid. Providing a strong backdrop for growth is the City's propitious mix of businesses. Financial, health care, educational, professional and information services, which are key to New York's economy, are poised for healthy

growth. The industries will receive an ongoing boost from powerful demographic forces, including the changing age composition and rising wealth of the nation's population.

New York's long-term growth prospects will also be buoyed by the City's large and rapidly expanding links to the global economy. Trade and financial flows, foreign immigration, visits by overseas travelers and foreign investment will continue to expand as the global economy and financial system become increasingly integrated. As this nation's predominant global gateway economy, New York is well-positioned to benefit.

There remain significant constraints on the ability of the economy to grow rapidly, however. High business costs and low housing affordability will limit business development and population gains. New York also will face continued fierce competition from other global financial and cultural centers.

Despite these challenges, the New York economy's comparative advantages are substantial and will thus perform well throughout the first half of this century.

The report that follows describes New York City's recent economic performance,

performance, its near and long-term prospects, and the risks to this outlook. The report concludes with a discussion of various method-ological issues.

Recent performance. New York City has emerged from nearly three years of economic decline and is at the start of a sustainable economic expansion.

The economic downturn was debilitating. The metro division began losing jobs in January 2001 and by the time of the attack on the World Trade Center on September 11, New York had already lost nearly 100,000 jobs. By the time employment in the metro division bottomed out in mid-2003, New York had lost about 5% of its total employment base or roughly 270,000 jobs. Since then, however, just over half of the lost jobs have been recouped and metro division payrolls sit just 2% below their pre-recession peak (see Chart 1).

The New York City economy has decidedly turned for the better during the past two years. Job growth turned positive in 2004, and in 2005 payrolls grew at their fastest pace since 2000, albeit still slower than the nation. The unemployment rate at 4.9% in March, now sits just ten basis points above its pre-recession nadir (see Chart 2). Since the start of 2006, growth in New York's labor force has far outpaced the national average, indicating that discouraged workers are increasingly being drawn into the local job market as economic conditions look more sanguine.

Chart 1: New York City Employment Is on Its Way Back... Payroll employment, ths



Chart 2: ...And Unemployment Is Falling... Unemployment rate, 3 mo. MA



Key to the job market recovery is increased hiring in the financial services industry. Nearly all of Wall Street's firms sustained job losses just prior to and especially in the wake of 9/11. A whopping 64,000 jobs, or 12% of the metro area's financial services jobs, were lost during this period as firms established secondary sites away from the metro area for security purposes. Wall Street is hiring again and job growth in the industry last year was as strong as it has ever been. More importantly, hiring has been much stronger over the past year in the five boroughs of New York City than in northern New Jersey, where many firms had relocated. Still, industry employment is still about 6% below its pre-recession peak. The outlook for hiring this year is strong as well, with equity markets closing in on all-time highs and M&A activity strong through the first quarter of this year (see Tables 1-3).1

The financial condition of the financial services industry has also sharply improved, allowing for the strong hiring seen over the past year. Wall Street profits have soared in the past two years, and are back to record levels. This was reflected in the largest bonus payout in Wall Street's history in January. Bonuses for 2005 came in at a whopping \$21.5 billion, bringing the average bonus of a Wall Street analyst to \$125,000.

The rediscovered success on Wall Street is likely playing a key role in hiring in support industries like legal and accounting. These two industries account for about 20% of all professional/business services jobs and both are at or near their prerecession peak payroll levels. Law firms, in particular, have been aggressive in

their hiring and many have substantially bumped up starting salaries for first-year associates in the City.

The City's economy has also benefited from a measurable increase in tourism. The leisure and hospitality industry was the first to bounce back after the recession and regained all lost jobs by early 2003. These gains reflect in part an improved national and global economy, and a weaker U.S. dollar. Smith Travel Research reports that hotel occupancy rates and average daily room rates hit their highest levels on record last year. At the same time, the number of hotel rooms in the City has been fast declining as hotels were bought up by residential real estate developers and turned into condominiums. In a major development for Manhattan commercial real estate, the first mid-town hotel project since 2000 was announced in early February. The project signals the transition from residential to commercial construction as mortgage interest rates rise.

The Port Authority of New York and New Jersey also reported record visitor traffic through New York's three major airports last year. Retailers are also benefiting from the pickup in tourism, much of which has come from overseas tourists taking advantage of the weaker U.S. dollar. As the dollar is expected to weaken again in the second half of this year, international visitor traffic is likely to pick up again.

The health and educational services industries remain steady sources of job

growth, adding 16,000 jobs over the past year and accounting for five of the top ten employers in the metro division. The City's well-respected institutions and supportive demographic trends will continue to maintain ongoing gains in these industries.

The area's strengthening economy is lending substantial support to New York's housing market. Multifamily permitting levels are near record highs and prices continue to rise over the quarter and over the year. The average price of an apartment in New York surpassed \$1 million in the fourth quarter of 2005 according to Miller Samuel. Data for the first quarter of 2006 clearly reflect the effect of Wall Street bonuses. Sales and prices rose over the quarter and there was a shift from smaller, starter apartments and co-ops to larger homes. Once bonus effects taper off later this year, rising mortgage interest rates combined with record-high permitting levels should help to cool the market.

The commercial real estate market is also making its way back from a very difficult period. Growth in the broad measure of office-using employment has outpaced overall job growth in the metro division since late in 2004, and the New York City commercial real estate market is beginning to feel the strain. The vacancy rate in Midtown commercial office buildings stood at 7.8% at the end of March according to Cushman & Wakefield and rents are expected to rise by as much as 10% to 20% by the end of the year. Availability is very low and outside of lower Manhattan, there are virtually no plans for new space to come on line this year

While the metro area's economy is clearly on the mend, growth remains somewhat tepid. A persistent weight on growth is the steady net out-migration of the population, which totaled over 104,000 in 2005 according to the Census Bureau. The median income of out-migrants is also substantially greater than the incomes of those moving in according to IRS data. In 2005, the slowdown in net international migration coupled with increased out-migration of domestic residents caused population in the New York metro division to decline for the first time since 1989. On a county-by-county basis, population contracted in three out of five of New York City's counties, with gains only in Manhattan and Staten Island. In

¹ Recent economic performance tables for Manhattan are available in Tables 1-2 of the Appendix of this study.

Table 1: New York-Wayne-White Plains, NY-NJ Metropolitan Division Monthly Economic Performance Statistics

	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05	Jan 06	Feb 06	Mar 06
Establishment Employment (Ths, SA)													
Total Employment	5.043.8	5.068.6	5.063.2	5.068.5	5.067.6	5.076.0	5.091.1	5.089.8	5.094.1	5.084.3	5.105.4	5.109.6	5.113.7
% change year ago	0.9	1.3	1.1	1.1	0.7	0.9	1.2	1.2	1.2	0.9	1.1	1.2	1.4
Construction	174.0	175.4	175.4	175.5	176.0	177.0	177.9	178.1	178.1	177.9	178.9	178.8	179.1
% change year ago	(0.3)	0.5	0.3	(0.1)	(0.8)	0.7	1.4	1.5	1.5	0.9	1.7	1.9	2.9
Manufacturing	228.4	227.6	226.1	225.0	224.0	223.2	222.4	221.4	220.6	218.0	217.5	217.3	217.0
% change year ago	(4.4)	(4.1)	(4.5)	(4.8)	(5.0)	(4.8)	(4.6)	(4.6)	(4.6)	(5.6)	(6.3)	(5.4)	(5.0)
Trade, Transportation, & Utilities	869.Ó	874.Ó	873.9	873.9	872.4	873.2	874.5	876.2	876.6	873.2	877.8	880.3	879.6
% change year ago	0.8	1.3	1.0	0.8	0.2	0.3	0.6	0.6	0.6	0.1	1.0	1.2	1.2
Retail Trade	447.7	450.4	450.1	449.8	449.3	449.8	449.4	450.5	450.2	447.8	452.7	455.4	454.7
% change year ago	2.2	2.5	2.0	1.7	1.0	1.1	0.7	0.9	0.7	0.0	1.2	1.7	1.6
Wholesale Trade	241.5	242.4	242.6	242.3	242.3	242.5	243.1	243.6	243.6	243.7	244.2	244.0	243.9
% change year ago	(0.1)	(0.1)	0.0	(0.5)	(1.0)	(0.5)	0.0	0.1	0.1	0.3	1.0	0.8	1.0
Transportation & Utilities	179.8	181.3	181.2	181.8	180.8	180.8	181.9	182.1	182.8	181.7	180.9	181.0	181.0
% change year ago	(1.2)	0.2	0.0	0.3	(0.3)	(0.5)	1.0	0.4	0.9	0.2	0.4	0.5	0.7
Information Services	202.7	203.2	202.5	205.0	204.8	204.4	205.4	205.4	204.2	205.3	206.9	205.2	206.1
% change year ago	0.3	0.3	0.9	2.5	1.9	1.4	1.5	1.8	1.4	2.2	2.1	1.3	1.7
Financial Services	551.4	556.9	555.5	557.0	558.3	559.3	560.1	561.3	561.4	559.8	565.3	566.6	566.9
% change year ago	2.2	3.0	2.7	2.9	2.6	2.6	2.7	2.2	2.1	1.5	2.9	3.0	2.8
Professional & Business Services	753.0	759.9	758.9	759.4	760.4	762.4	763.6	764.2	763.6	761.5	760.7	762.1	762.7
% change year ago	1.1	1.9	1.6	1.6	1.7	1.9	2.2	2.2	1.8	1.0	0.2	0.8	1.3
Education & Health Services	903.5	907.8	906.9	907.0	909.0	912.2	916.9	913.2	916.9	916.5	925.1	925.0	924.5
% change year ago	1.4	2.0	1.6	1.6	1.6	1.9	2.5	1.8	2.1	1.8	2.6	2.4	2.3
Leisure & Hospitality Services	376.2	376.2	376.2	376.7	374.8	375.6	377.9	378.5	379.1	378.9	381.6	381.9	382.9
% change year ago	3.0	2.8	2.3	2.3	0.2	0.6	0.7	1.7	1.7	1.4	2.0	1.9	1.8
Other Services	215.0	215.5	215.3	216.0	216.6	217.4	219.3	219.8	220.6	221.0	221.0	220.6	221.2
% change year ago	2.6	2.0	1.3	1.3	1.4	1.6	2.1	3.6	4.0	3.9	2.9	2.6	2.9
Government	768.5	770.0	770.2	770.6	768.9	769.1	770.8	769.3	770.7	769.9	768.4	769.5	771.4
% change year ago	(0.3)	0.0	0.0	0.2	0.0	0.1	0.1	0.1	0.4	0.8	(0.1)	0.0	0.4
Unemployment Rate, (%, SA)	4.8	5.3	5.4	5.0	5.4	5.1	5.7	5.4	5.4	5.3	4.9	5.0	4.9
Labor Force (Ths)	5,365.5	5,411.3	5,429.1	5,412.9	5,441.0	5,426.3	5,479.2	5,463.4	5,464.1	5,460.0	5,473.6	5,491.8	5,493.5
% change year ago	(0.6)	0.6	1.0	0.3	0.4	0.2	1.5	1.2	1.0	0.8	2.0	1.8	2.4
Number of Unemployed (Ths)	256.4	284.2	292.6	272.0	291.5	275.2	312.4	292.4	295.9	290.9	265.8	274.6	270.9
% change year ago	(32.3)	(21.1)	(15.2)	(24.6)	(18.0)	(19.7)	(4.0)	(6.7)	0.8	(7.0)	(2.5)	(8.4)	5.7
Number of Employed (Ths)	5,109.0	5,127.1	5,136.5	5,140.9	5,149.5	5,151.1	5,166.8	5,171.0	5,168.2	5,169.1	5,207.8	5,217.2	5,222.5
% change year ago	1.8	2.2	2.2	2.1	1.7	1.6	1.8	1.7	1.0	1.2	2.2	2.4	2.2
Total Residential Permits, (# of units YTD, NSA)	7,756.0	11,440.0	15,223.0	20,425.0	24,352.0	27,853.0	31,453.0	33,720.0	38,345.0	41,966.0	3,046.0	5,933.0	9,416.0
% change year ago	36.4	40.3	35.6	39.4	32.7	27.6	27.3	22.8	23.6	20.8	28.0	22.9	21.4
Single-family, (# of units YTD, NSA)	727.0	1,336.0	1,858.0	2,113.0	2,554.0	2,919.0	3,364.0	3,693.0	4,035.0	4,327.0	247.0	585.0	926.0
% change year ago	(24.5)	(2.1)	18.4	10.7	7.9	(0.4)	5.9	6.5	6.7	4.4	29.3	22.1	27.4
Multifamily, (# of units YTD, NSA)	7,029.0	10,104.0	13,365.0	18,312.0	21,798.0	24,934.0	28,089.0	30,027.0	34,310.0	37,639.0	2,799.0	5,348.0	8,490.0
% change year ago	48.8	48.9	38.4	43.7	36.3	32.0	30.4	25.1	25.9	23.1	27.9	23.0	20.8
Average Daily Room Rate (\$, YTD)	175.6	181.7	187.3	191.4	191.1	189.9	196.0	201.2	206.6	211.6	188.2	189.7	195.1
% change year ago	8.6	10.0	10.3	11.2	11.7	11.4	12.8	13.2	13.6	13.7	12.4	11.3	11.1
Occupancy Rate (%, YTD)	77.1	79.2	80.5	81.7	82.2	82.2	82.8	83.1	83.2	82.9	70.2	72.1	75.4

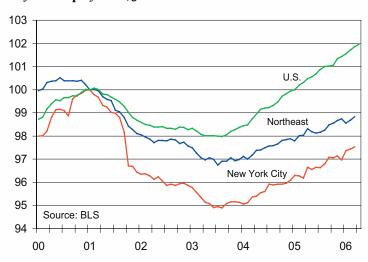
Table 2: New York-Wayne-White Plains, NY-NJ Metropolitan Division Quarterly Economic Performance Statistics

	03Q1	03Q2	03Q3	03Q4	04Q1	04Q2	04Q3	04Q4	05Q1	05Q2	05Q3	05Q4	06Q1
Gross Metro Product (Bil. Constant\$, SAAR)	524.0	526.9	532.8	539.8	545.8	553.5	561.6	568.4	575.1	581.1	587.4	598.6	609.0
% change year ago	1.8	2.6	3.4	3.7	4.1	5.1	5.4	5.3	5.4	5.0	4.6	5.3	5.9
Establishment Employment (Ths, SA)													
Total Employment	5,011.0	4,984.5	4,980.2	4,989.6	4,991.2	5,008.7	5,029.5	5,033.6	5,047.2	5,066.8	5,078.2	5,089.4	5,109.6
% change year ago	(0.8)	(1.1)	(1.0)	(0.8)	(0.4)	0.5	1.0	0.9	1.1	1.2	1.0	1.1	1.2
Construction % change year ago	177.2 (2.3)	177.2 (0.6)	175.8 (1.4)	173.5 (2.5)	173.4 (2.2)	175.0 (1.2)	176.2 0.2	175.8 1.4	175.1 1.0	175.4 0.3	177.0 0.4	178.1 1.3	178.9 2.2
Manufacturing	254.2	247.5	242.9	240.7	240.3	236.9	234.5	231.4	230.1	226.2	223.2	220.0	217.3
% change year ago	(6.8)	(8.0)	(8.2)	(7.2)	(5.5)	(4.3)	(3.5)	(3.9)	(4.2)	(4.5)	(4.8)	(4.9)	(5.6)
Trade, Transportation, & Utilities	869.9	862.8	862.2	860.6	860.4	864.9	870.3	871.6	869.4	873.9	873.3	875.3	879.2
% change year ago	0.1	(0.8)	(0.5)	(0.9)	(1.1)	0.2	0.9	1.3	1.0	1.0	0.4	0.4	1.1
Retail Trade	438.4	436.6	436.3	436.4	436.7	441.0	445.4	447.1	447.6	450.1	449.5	449.5	454.3
% change year ago	0.3	(0.5)	(0.8)	(1.2)	(0.4)	1.0	2.1	2.5	2.5	2.1	0.9	0.5	1.5
Wholesale Trade	246.2	243.9	243.3	242.1	241.8	242.9	243.8	243.2	241.8	242.4	242.7	243.6	244.0
% change year ago	(0.7)	(0.9)	(0.2)	(0.7)	(1.8)	(0.4)	0.2	0.5	0.0	(0.2)	(0.5)	0.2	0.9
Transportation & Utilities	185.3	182.3	182.7	182.1	181.9	181.1	181.0	181.3	180.0	181.4	181.2	182.2	181.0
% change year ago Information Services	0.7 209.0	(1.4) 205.8	(0.2) 204.5	(0.3) 204.4	(1.9) 201.8	(0.7) 201.1	(0.9) 201.6	(0.5) 201.3	(1.0) 202.6	0.2 203.6	0.1 204.9	0.5 205.0	0.5 206.0
% change year ago	(8.2)	(8.7)	(5.6)	(4.8)	(3.5)	(2.3)	(1.4)	(1.5)	0.4	1.2	1.6	1.8	1.7
Financial Services	543.4	539.3	537.8	538.3	539.1	540.9	544.9	550.2	550.4	556.5	559.3	560.8	566.3
% change year ago	(2.8)	(2.2)	(1.8)	(1.5)	(0.8)	0.3	1.3	2.2	2.1	2.9	2.6	1.9	2.9
Professional & Business Services	741.1	738.2	738.8	742.6	742.5	746.7	747.8	750.5	756.1	759.4	762.1	763.1	761.8
% change year ago	(2.3)	(2.0)	(1.3)	(1.0)	0.2	1.1	1.2	1.1	1.8	1.7	1.9	1.7	0.8
Education & Health Services	878.2	879.6	882.9	885.9	888.3	891.5	894.8	898.6	902.7	907.2	912.7	915.5	924.8
% change year ago	2.8	2.1	1.6	1.6	1.2	1.4	1.3	1.4	1.6	1.8	2.0	1.9	2.5
Leisure & Hospitality Services	356.4	356.1	358.8	361.5	364.2	367.4	374.2	372.8	374.9	376.4	376.1	378.8	382.1
% change year ago	3.7	2.0	1.9	1.5	2.2	3.2	4.3	3.1	2.9	2.4	0.5	1.6	1.9
Other Services	208.7	207.7	208.7	209.5	209.1	212.3	214.1	212.4	215.0	215.6	217.8	220.5	220.9
% change year ago Government	0.4	(0.1)	0.4	0.2	0.2 770.0	2.2 769.7	2.6 768.9	1.4 766.7	2.8 768.9	1.5	1.7 769.6	3.8 770.0	2.8
% change year ago	770.5 (0.5)	768.1 (0.7)	765.5 (1.2)	770.5 (0.5)	(0.1)	0.2	0.4	(0.5)	(0.1)	770.3 0.1	0.1	0.4	769.8 0.1
Unemployment Rate, (%, SA)	7.5	7.6	7.6	7.1	7.0	6.6	6.3	5.7	5.1	5.2	5.4	5.4	4.9
Labor Force (Ths)	5,406.6	5,399.5	5,371.1	5,367.0	5,386.1	5,383.3	5,411.5	5,409.5	5,375.3	5,417.8	5,448.9	5,462.5	5,486.3
% change year ago	0.5	(0.2)	(0.7)	(0.8)	(0.4)	(0.3)	0.8	0.8	(0.2)	0.6	0.7	1.0	2.1
Number of Unemployed (Ths)	405.5	408.9	408.8	381.9	377.3	355.4	341.2	306.6	276.3	282.9	293.0	293.1	270.4
% change year ago	4.4	2.5	6.1	(5.5)	(7.0)	(13.1)	(16.5)	(19.7)	(26.8)	(20.4)	(14.1)	(4.4)	(2.1)
Number of Employed (Ths)	5,001.0	4,990.6	4,962.4	4,985.1	5,008.8	5,027.9	5,070.3	5,103.0	5,099.0	5,134.9	5,155.8	5,169.4	5,215.8
% change year ago	0.1	(0.4)	(1.2)	(0.4)	0.2	0.7	2.2	2.4	1.8	2.1	1.7	1.3	2.3
Total Residential Permits, (# of units YTD, NSA)	5,212.0	12,249.0	19,702.0	27,346.0	5,686.0	14,652.0	24,717.0	34,726.0	7,756.0	20,425.0	31,453.0	41,966.0	9,416.0
% change year ago	23.9	3.9	2.9	7.1	9.1	19.6	25.5	27.0	36.4	39.4	27.3	20.8	21.4
Single-family, (# of units YTD, NSA)	822.0	2,057.0	3,246.0	4,515.0	963.0	1,909.0	3,178.0	4,143.0	727.0	2,113.0	3,364.0	4,327.0	926.0
% change year ago Multifamily, (# of units YTD, NSA)	(19.0) 4,390.0	(6.1) 10,192.0	(1.7) 16,456.0	1.0 22,831.0	17.2 4,723.0	(7.2) 12,743.0	(2.1) 21,539.0	(8.2) 30,583.0	(24.5) 7,029.0	10.7 18,312.0	5.9 28,089.0	4.4 37,639.0	27.4 8,490.0
% change year ago	37.5	6.2	3.8	8.4	7.6	25.0	30.9	34.0	48.8	43.7	30.4	23.1	20.8
Existing Single-Family Home Sales (Ths) % change year ago	48.9 (8.7)	45.7 (4.1)	51.7 8.1	52.8 10.3	47.6 (2.6)	43.3 (5.3)	55.3 7.1	44.6 (15.6)	52.9 11.3	50.0 15.5	60.7 9.7	48.1 7.8	47.8 (9.6)
Home Price Index (Index 1995Q1 = 100, NSA) % change year ago	177.5 11.3	180.6 9. <i>4</i>	183.7 8.0	194.4 11.8	198.2 11.7	204.8 13.4	219.3 19.4	224.4 15.4	230.7 16.4	242.0 18.1	250.5 14.2	259.2 15.6	265.7 15.2
Madian Eviating Hama Calca Drice /The CA)	376.6	377.3	390.1	397.9	409.7	421.2	438.5	458.5	472.7	504.8	509.9	546.0	559.6
Median Existing Home Sales Price, (Ths., SA) % change year ago	18.6	9.7	11.8	8.0	8.8	11.6	12.4	15.2	15.4	19.9	16.3	19.1	18.4
Personal Income (Mil. \$)	444,158.7	452,223.3	456,721.2	463,144.3	475,678.3	480,039.0	488,994.0	503,722.9	507,694.6	511,195.6	517,460.0	525,997.7	546,315.2
% change year ago	(0.5)	0.4	1.9	3.8	7.1	6.2	7.1	8.8	6.7	6.5	5.8	4.4	7.6
Wages & Salaries (Mil. \$)	284,921.9	291,269.1	293,620.2	297,548.7	305,323.0	305,934.8	315,132.9	323,408.2	327,375.7	327,095.0	332,676.8	336,255.5	357,458.7
% change year ago	(2.0)	0.1	1.5	3.9	7.2	5.0	7.3	8.7	7.2	6.9	5.6	4.0	9.2
Nonwage Income (Mil. \$) % change year ago	159,236.8 2.2	160,954.2 1.0	163,101.0 2.5	165,595.5 3.7	170,355.3 7.0	174,104.2 8.2	173,861.1 6.6	180,314.8 8.9	180,318.9 5.8	184,100.6 5.7	184,783.2 6.3	189,742.2 5.2	188,856.5 4.7
Personal Bankruptcies (#12-Month Ending, SAAR) % change year ago	36,294.0 8.5	37,289.0 13.0	37,781.0 11.0	38,266.0 7.9	39,418.0 8.6	40,286.0 8.0	40,653.0 7.6	40,203.0 5.1	40,659.0 3.1	42,601.0 5.7	47,678.0 17.3	58,292.0 45.0	12,456.3 (69.4)
Average Daily Room Rate (\$, YTD)	157.1	157.6	157.3	164.8	158.9	169.0	171.8	181.9	171.2	186.8	192.3	206.5	191.0
% change year ago	(5.8)	(7.2)	(5.8)	(4.1)	1.2	7.2	9.2	10.4	7.7	10.5	12.0	13.5	11.6
Occupancy Rate (%, YTD)	63.0	67.9	72.0	74.6	68.5	77.0	79.4	80.9	73.2	80.5	82.4	83.1	72.6

Table 3: New York-Wayne-White Plains, NY-NJ Metropolitan Division Annual Economic Performance Statistics

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	5 Yr. Average Annual % Change
Gross Metro Product (Bil. Constant\$, SAAR) % change year ago	401.3 2.3	419.7 4.6	445.4 6.1	462.6 3.9	483.6 4.5	514.2 6.3	525.4 2.2	516.1 (1.8)	530.9 2.9	557.3 5.0	585.6 5.1	2.7
Establishment Employment (Ths, SA)												
Total Employment	4,685.0	4,730.2	4,827.1	4,947.1	5,064.0	5,193.6	5,168.9	5,037.9	4,991.3	5,015.8	5,070.4	(0.5)
% change year ago	0.5	1.0	2.1	2.5	2.4	2.6	(0.5)	(2.5)	(0.9)	0.5	1.1	
Construction	133.4	136.4	141.9	153.5	169.4	180.6	184.7	179.0	175.9	175.1	176.4	(0.5)
% change year ago Manufacturing	2.1 371.2	2.2 360.7	4.0 360.7	8.2 351.8	10.3 337.3	6.6 323.1	2.3 294.3	(3.1) 266.4	(1.7) 246.3	(0.5) 235.8	0.7 224.9	(7.0)
% change year ago	(2.3)	(2.8)	(0.0)	(2.5)	(4.1)	(4.2)	(8.9)	(9.5)	(7.5)	(4.3)	(4.6)	(7.0)
Trade, Transportation, & Utilities	856.1	857.3	864.8	876.3	893.5	910.3	897.0	868.4	863.9	866.8	873.0	(0.8)
% change year ago	0.9	0.1	0.9	1.3	2.0	1.9	(1.5)	(3.2)	(0.5)	0.3	0.7	
Retail Trade	405.2	410.9	416.8	428.0	439.7	455.0	443.2	439.4	436.9	442.5	449.2	(0.2)
% change year ago	2.1	1.4	1.4	2.7	2.7	3.5	(2.6)	(0.9)	(0.6)	1.3	1.5	
Wholesale Trade	260.1	256.5	257.5	257.9	259.9	257.7	257.9	245.4	243.8	243.0	242.6	(1.2)
% change year ago	(0.3) 190.8	(1.4) 189.9	0.4 190.4	0.1 190.4	0.8 193.9	(0.8) 197.7	0.1 195.9	(4.9) 183.7	(0.6) 183.1	(0.4) 181.3	(0.1) 181.2	(4.7)
Transportation & Utilities % change year ago	0.1	(0.5)	0.3	(0.0)	193.9	197.7	(0.9)	(6.2)	(0.3)	(1.0)	(0.1)	(1.7)
Information Services	194.4	201.3	206.5	211.1	217.7	234.6	248.2	221.1	205.9	201.5	204.0	(2.6)
% change year ago	1.2	3.6	2.6	2.2	3.2	7.7	5.8	(10.9)	(6.9)	(2.2)	1.3	(2.0)
Financial Services	561.8	559.0	565.9	577.7	584.7	597.1	581.6	551.1	539.7	543.8	556.8	(1.4)
% change year ago	(0.8)	(0.5)	1.2	2.1	1.2	2.1	(2.6)	(5.2)	(2.1)	0.8	2.4	
Professional & Business Services	617.1	648.1	683.0	725.1	757.7	794.3	793.7	752.6	740.2	746.9	760.2	(0.8)
% change year ago	1.9	5.0	5.4	6.2	4.5	4.8	(0.1)	(5.2)	(1.7)	0.9	1.8	
Education & Health Services	735.5	754.1	768.9	790.0	812.9	831.6	841.3	864.1	881.7	893.3	909.5	1.8
% change year ago	3.0 292.4	2.5 300.4	2.0 311.8	2.7 321.9	2.9 331.2	2.3 346.5	1.2 352.7	2.7 350.3	2.0 358.2	1.3 369.7	1.8 376.6	1.7
Leisure & Hospitality Services % change year ago	3.1	2.7	3.8	3.2	2.9	4.7	1.8	(0.7)	2.3	3.2	1.9	1.7
Other Services	174.2	178.8	184.1	189.6	199.5	206.7	207.7	208.2	208.7	212.0	217.2	1.0
% change year ago	1.4	2.7	3.0	3.0	5.2	3.6	0.5	0.2	0.2	1.6	2.5	
Government	746.7	731.8	737.2	748.0	758.0	766.5	765.4	774.4	768.7	768.8	769.7	0.1
% change year ago	(2.6)	(2.0)	0.7	1.5	1.3	1.1	(0.1)	1.2	(0.7)	0.0	0.1	
Unemployment Rate (%)	7.6	7.9	8.1	6.9	6.1	5.1	5.5	7.3	7.5	6.4	5.3	0.4
Labor Force (Ths)	4,875.2 0.4	4,989.9 2.4	5,148.8 3.2	5,193.0 0.9	5,252.6 1.2	5,332.5	5,329.6	5,403.8 1.4	5,386.0	5,397.6 0.2	5,426.1 0.5	0.4
% change year ago Number of Unemployed (Ths)	371.2	394.2	416.4	355.6	320.9	1.5 274.3	(0.1) 292.9	394.1	(0.3) 401.3	345.1	286.3	2.4
% change year ago	(6.0)	6.2	5.6	(14.6)	(9.8)	(14.5)	6.8	34.6	1.8	(14.0)	(17.0)	2.7
Number of Employed (Ths)	4,504.0	4,595.7	4,732.4	4,837.5	4,931.8	5,058.1	5,036.7	5,009.7	4,984.8	5,052.5	5,139.8	0.3
% change year ago	1.0	2.0	3.0	2.2	2.0	2.6	(0.4)	(0.5)	(0.5)	1.4	1.7	5 Yr. Average
Total Residential Permits (# of units)	5,121.0	9,386.0	10,040.0	12,869.0	13,989.0	17,713.0	17,914.0	21,055.0	22,831.0	30,583.0	37,639.0	26,004.4
% change year ago	12.6	83.3	7.0	28.2	8.7	26.6	1.1	17.5	8.4	34.0	23.1	7
Single-family, (# of units YTD, NSA)	3,857.0	4,447.0	4,442.0	4,892.0	5,617.0	5,028.0	4,935.0	4,472.0	4,515.0	4,143.0	4,327.0	4,478.4
% change year ago	(5.5)	15.3	(0.1)	10.1	14.8	(10.5)	(1.9)	(9.4)	1.0	(8.2)	4.4	
Multifamily, (# of units YTD, NSA)	5,121.0	9,386.0	10,040.0	12,869.0	13,989.0	17,713.0	17,914.0	21,055.0	22,831.0	30,583.0	37,639.0	26,004.4
% change year ago	12.6	83.3	7.0	28.2	8.7	26.6	1.1	17.5	8.4	34.0	23.1	5 Yr. Average Annual % Change
Existing Single-Family Home Sales (Ths)	38.5	43.0	43.9	49.1	49.3	48.3	49.5	49.2	49.8	47.7	52.9	onange
% change year ago	5.0	11.6	2.2	11.8	0.4	(2.0)	2.3	(0.5)	1.1	(4.2)	11.0	1.9
Home Price Index (Index 1995Q1 = 100)	101.9	104.4	106.5	112.4	121.0	135.1	149.6	167.2	184.1	211.7	245.6	
% change year ago	0.1	2.4	2.0	5.5	7.7	11.6	10.7	11.8	10.1	15.0	16.0	12.7
Median Existing Home Sales Price, (Ths.)	188.1	196.0	202.2	209.8	216.1	252.8	302.4	344.7	385.5	432.0	508.3	
% change year ago	(1.1)	4.2	3.2	3.7	3.0	17.0	19.6	14.0	11.8	12.1	17.7	15.0
Personal Income (Mil. \$)	325,805.3	345,387.4	364,094.8	389,343.7	409,017.2	440,480.0	450,822.4	447,834.2	454,061.8	487,108.6	515,587.0	2.0
% change year ago Wages & Salaries (Mil. \$)	6.5 199,579.1	6.0 213.486.4	5.4 228.044.8	6.9 247,915.0	5.1 264,378.2	7.7 294.583.0	2.4 300,800.2	(0.7) 289.342.7	1.4 291,840.0	7.3 312.449.7	5.9 330.850.8	3.2
% change year ago	5.5	7.0	6.8	8.7	6.6	11.4	2.1	(3.8)	0.9	7.1	5.9	2.4
Nonwage Income (Mil. \$)	126,226.1	131,901.0	136,050.1	141,428.7	144,639.0	145,897.0	150,022.3	158,491.4	162,221.9	174,658.8	184,736.2	2:4
% change year ago	8.2	4.5	3.2	4.0	2.3	0.9	2.8	5.7	2.4	7.7	5.8	4.9
Personal Bankruptcies	24,173.3	27,806.0	34,344.8	38,789.0	37,640.8	31,171.3	32,474.5	33,992.5	37,407.5	40,140.0	47,307.5	
% change year ago	0.7	15.0	23.5	12.9	(3.0)	(17.2)	4.2	4.7	10.1	7.3	17.9	8.8
Population (Ths.)	10,811.5	10,897.5	10,996.3	11,104.3	11,218.5	11,314.1	11,394.0	11,436.9	11,467.0	11,505.6	11,482.6	
% change year ago	0.8	0.8	0.9	1.0	1.0	0.9	0.7	0.4	0.3	0.3	(0.2)	0.3 5 Yr. Average
Net Migration (Ths.)	(48.8)	(46.2)	(39.1)	(42.4)	(40.4)	ND	(23.8)	(53.0)	(67.5)	(92.8)	(104.0)	(68.2)

Chart 3:... But It Has Much More Ground to Make Up Payroll employment, Jan 01=100



Northern New Jersey, population rose in Bergen and Passaic Counties and fell in Hudson County. Weak population gains are constraining growth throughout the metro area's economy.

The area's manufacturing base also continues to shrink. Although small, manufacturing has suffered a disproportionately large number of job losses in recent years. Employment is down by a startling one-third since the start of the decade. Manufacturing has been pummeled by stiff global competition that remains fierce. Apparel manufacturing is now the area's largest manufacturing activity, although it too has suffered substantial job losses since the lifting of import quotas on Chinese goods at the start of 2005.

Despite the New York City economy's clear turn for the better, it will likely take at least another two and one half years before it recoups all of the jobs lost during the recession (see Chart 3).

Near-term outlook. New York City's recent economic rebound is expected to persist in the near-term. In the baseline, most likely outlook, average annual job growth during the next several years is expected to be near 1% (See Table 4).² Unemployment will continue to decline throughout this period.

Key to this sanguine near-term outlook is expected further improvement in the City's large financial services industry. Activity on Wall Street is reviving with the steadily improving stock market. Indicative of this is the recent substantial increase in mergers and acquisitions. The value of global M&A deals last year were near peak levels and this year is poised to be even stronger.

Employment in the City's financial services industry is also expected to

benefit from the end of the significant outflow of back-office activities. Cost considerations, technology, and the impact of 9/11 have induced a substantial movement of these activities from the City. While this process will continue, the bulk of the job losses are now over and there is even evidence of a reverse flow of jobs back into Manhattan. Also supporting the City's financial services industry is the winding down of the consolidation of the commercial banking industry. The nationalization of the industry during the past more than a decade has resulted in substantial job losses. With most of this process now complete, the recent merger of J.P. Morgan Chase and Bank One being perhaps one of the last large combinations affecting the City, commercial banking job losses

should abate. The firmer

financial services industry will support gains throughout the City's economy, as the large incomes earned on Wall Street will drive gains in retailing and housing. While employment in the City's broad financial services industry accounts for about 11%

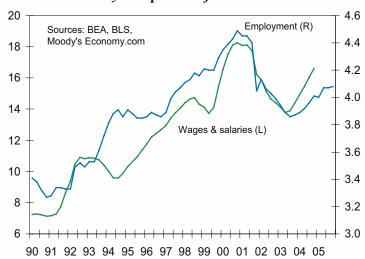
of total employment, incomes earned in financial services account for well over one-quarter of personal total income. When comparing employment and income in the sub-industry group of the securities industry, the difference is even starker (see Chart 4).

Another substantial beneficiary of growth in the financial services industry will be New York's important professional services industries. Legal, accounting and advertising services heavily rely on Wall Street. The media industry also gains when Wall Street is expanding.

Tourism and business travel to New York City is also expected to steadily improve. Judging by recent strong Broadway attendance, traffic through the region's airports, and hotel occupancy and room rates, the industry has made its way back from the downturn immediately following the recession. Global visitors to New York are expected to be a particularly important source of growth to the leisure and hospitality industry. Not only is the global economy much improved, but the U.S. dollar continues to fall in value. The dollar's decline against the euro, British pound and Canadian dollar has been substantial, making New York a measurably cheaper place to visit.

Another source of measurable near-term growth will be the City's large media and entertainment industries. Global advertising revenues are now rising after falling sharply earlier in the decade. Corporate profits and cash flow

Chart 4: Securities Income Outshadows Jobs Securities industry as a percent of metro division totals

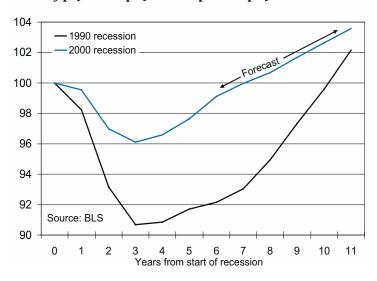


² Baseline forecast tables for Manhattan are available in Table 3 of the Appendix of this study.

Table 4: New York-Wayne-White Plains, NY-NJ Metropolitan Division Baseline Economic Outlook

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg. Annual Growth 2016-2025	Avg. Annual Growth 2026-2034
Establishment Employment (Ths, SA)												
Total Employment	5,136.5	5,176.6	5,213.1	5,265.8	5,317.3	5,365.7	5,410.4	5,449.7	5,488.7	5,523.9	0.4	0.1
% change year ago	1.3	0.8	0.7	1.0	1.0	0.9	0.8	0.7	0.7	0.6		
Construction	174.2	172.8	171.1	169.5	170.5	171.5	172.5	173.5	174.0	173.8	(1.4)	(1.6)
% change year ago	(1.2)	(0.8)	(1.0)	(0.9)	0.6	0.6	0.6	0.6	0.3	(0.1)		
Manufacturing	219.2	217.8	216.3	216.2	215.9	215.4	214.9	214.3	213.7	213.0	(0.5)	(1.1)
% change year ago	(2.5)	(0.7)	(0.7)	(0.1)	(0.1)	(0.3)	(0.2)	(0.3)	(0.3)	(0.3)		
Trade, Transportation, & Utilities	882.2	884.7	884.3	888.1	891.9	895.3	896.0	895.2	894.0	892.4	(0.2)	(0.3)
% change year ago	1.1	0.3	(0.1)	0.4	0.4	0.4	0.1	(0.1)	(0.1)	(0.2)		
Retail Trade	455.4	457.3	456.2	457.4	458.9	460.4	459.5	457.6	455.3	452.9	(0.4)	(0.4)
% change year ago	1.4	0.4	(0.3)	0.3	0.3	0.3	(0.2)	(0.4)	(0.5)	(0.5)		
Wholesale Trade	244.4	245.8	247.6	250.4	253.1	255.5	257.9	260.0	262.0	263.9	0.5	0.2
% change year ago	0.7	0.6	0.7	1.1	1.1	1.0	0.9	0.8	0.8	0.7		
Transportation & Utilities	182.5	181.6	180.6	180.3	179.9	179.4	178.6	177.6	176.7	175.6	(0.7)	(1.2)
% change year ago	0.7	(0.5)	(0.6)	(0.2)	(0.2)	(0.3)	(0.5)	(0.6)	(0.5)	(0.6)		
Information Services	204.1	206.0	207.9	210.4	212.3	214.4	216.6	218.8	220.9	223.1	0.9	1.0
% change year ago	0.0	0.9	0.9	1.2	0.9	1.0	1.0	1.0	1.0	1.0		
Financial Services	571.1	573.5	575.8	579.4	583.2	586.5	589.5	591.9	594.6	596.9	0.3	0.6
% change year ago	2.6	0.4	0.4	0.6	0.7	0.6	0.5	0.4	0.4	0.4		
Professional & Business Services	775.9	788.6	801.8	818.5	835.0	852.3	869.7	887.4	906.0	924.1	1.0	0.5
% change year ago	2.1	1.7	1.7	2.1	2.0	2.1	2.1	2.0	2.1	2.0		
Education & Health Services	930.9	950.0	966.1	984.8	1,002.7	1,018.6	1,034.6	1,048.2	1,061.6	1,074.5	1.0	0.3
% change year ago	2.4	2.1	1.7	1.9	1.8	1.6	1.6	1.3	1.3	1.2		
Leisure & Hospitality Services	381.9	385.5	389.8	394.9	400.1	404.9	409.3	413.3	417.3	420.7	0.6	0.2
% change year ago	1.4	0.9	1.1	1.3	1.3	1.2	1.1	1.0	1.0	0.8		
Other Services	221.9	221.6	222.3	223.6	225.1	226.3	227.1	227.8	228.4	228.9	0.3	(0.2)
% change year ago	2.2	(0.1)	0.3	0.6	0.6	0.5	0.4	0.3	0.3	0.2		` '
Government	772.8	773.7	775.5	778.2	778.3	778.2	777.8	777.1	776.0	774.2	(0.3)	(0.4)
% change year ago	0.4	0.1	0.2	0.4	0.0	(0.0)	(0.1)	(0.1)	(0.1)	(0.2)	(* * *)	(-)
Unemployment Rate (%)	5.4	5.5	5.5	5.3	5.2	5.3	5.3	5.3	5.3	5.3	0.5	0.4
Labor Force (Ths)	5,491.5	5,536.9	5,562.0	5,588.5	5,638.1	5,691.8	5,739.1	5,782.1	5,823.8	5,863.7	0.5	0.4
` '	1.3	0.8	0.5	0.5	0.9	1.0	0.8	0.8	0.7	0.7	0.5	0.3
% change year ago Number of Unemployed (Ths)	295.7	305.0	304.5	294.6	293.7	299.1	303.1	306.7	308.3	310.7	1.1	0.7
	3.0	3.1	(0.1)	(3.3)	(0.3)	1.9	1.3	1.2	0.5	0.8	1.1	0.7
% change year ago		5.231.9	5.257.5	5.293.9		5,392.7	5.435.9	5.475.5	5,515.5	5.553.0	0.5	0.2
Number of Employed (Ths)	5,195.8 <i>1.2</i>	0.7	0.5	0.7	5,344.5 1.0	0.9	0.8	0.7	0.7	0.7	0.5	0.3
% change year ago	1.2	0.7	0.5	0.7	1.0	0.9	0.0	0.7	0.7	0.7		
Total Residential Permits (# of units)	28,669.1	23,431.4	21,491.9	20,955.2	21,017.5	21,212.8	21,819.3	21,389.4	20,389.4	19,291.9	(3.6)	(0.7)
% change year ago	(32.8)	(18.3)	(8.3)	(2.5)	0.3	0.9	2.9	(2.0)	(4.7)	(5.4)		
Multifamily	24,671.5	18,732.4	16,989.7	16,488.5	16,659.7	16,904.1	17,453.2	17,011.8	15,991.1	15,082.0	(3.7)	(0.7)
% change year ago	(35.1)	(24.1)	(9.3)	(3.0)	1.0	1.5	3.3	(2.5)	(6.0)	(5.7)		
Personal Income (Mil. \$)	533,805.4	550,010.7	570,780.6	594,600.1	618,642.7	642,989.3	666,881.4	690,473.9	714,234.9	738,369.5	3.2	3.1
% change year ago	4.4	3.0	3.8	4.2	4.0	3.9	3.7	3.5	3.4	3.4		
Wages & Salaries (Mil. \$)	340,154.3	353,233.6	370,114.9	388,581.1	407,241.7	426,291.9	444,996.8	463,642.2	482,579.9	500,499.3	3.5	3.5
% change year ago	4.3	3.9	4.8	5.0	4.8	4.7	4.4	4.2	4.1	3.7		
Population (Ths.)	11,519.4	11,538.3	11,560.6	11,584.5	11,606.8	11,625.4	11,633.5	11,636.9	11,639.4	11,637.2	(0.1)	0.0
% change year ago	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	(0.0)		
Households (Ths.)	4,302.4	4,316.3	4,331.9	4,349.9	4,368.9	4,387.6	4,403.4	4,417.2	4,429.4	4,441.1	0.0	(0.0)
% change year ago	0.5	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.0	(0.0)
Net Migration (Ths.)	(43.2)	(64.5)	(63.5)	(63.0)	(66.4)	(70.9)	(83.5)	(90.9)	(92.7)	(98.3)	(109.6)	(93.0)

Chart 5: New York City's Job Market Will Recover Slowly Ratio of payroll employment to peak employment



are as strong as they have ever been, and after years of cost-cutting, businesses are increasingly looking for ways to stimulate revenue growth. Increased advertising will be one of those ways. Sturdy advertising growth is expected to continue at least for the next several years.

While the near-term prospects for New York City's economy are positive, there will be a number of constraints on growth. Indeed, payroll employment in the metro division is not expected to achieve a new high until 2008, nearly a decade after achieving its previous peak. This is very comparable to the slow job recovery experienced after the early 1990s recession (see Chart 5).

A potential constraint on growth will be New York City government's fiscal situation. Although revenue growth is improving with the better economy and stock market—all told the securities industry directly contributes nearly one-fifth of the City's tax revenues through corporate and personal income taxes—the City still faces the prospect of large future budget shortfalls.

The prospects for modestly rising interest rates will also weigh on housing demand and house-price growth in the region. House and condominium prices have risen sharply in recent years, and are at risk of going flat or even declining somewhat, depending on how high and quickly mortgage rates increase. This risk is evident in the fact that median existing house prices in the metro division have more than doubled since the start

of the decade, while household incomes have risen by only 14% (see Chart 6). House prices and household incomes are closely linked in the long run, and housing markets will require a period of little or no price gains to restore balance.

New York City's economy will

also continue to struggle with lackluster population gains. Continued net domestic out-migration and modest foreign immigration, at least for the next several years until various immigration issues are settled, will limit population gains. This will constrain growth in retailing, housing, and a wide range of personal service industries.

Long-term outlook. New York City's long-term economic prospects are solid. In the baseline outlook, per annum job gains over the next thirty years are expected to be 0.4% (see Table 4). Personal income is projected to expand at a 3.4% per annum pace. Population and the number of households are not expected to change significantly.

The key source of long-term growth

is New York City's position as the nation's premier global gateway city. The City's global links are evident in its status as a global financial center, through trade and tourism, as home to the headquarters of large multinational corporations, through foreign direct investment, and strong foreign immigration.

New York City will remain the nation's and the global economy's preeminent financial center, with most major global financial institutions maintaining a sizable presence in the City. Nearly 7% of the nation's financial services employment is located in the New York City metro division, and a whopping 16% of the income earned in the industry nationwide accrues to those working in New York City.

Underpinning the City's dominance as a global financial center is the continued preeminence of the New York based stock and bond markets. The stock market capitalization of companies listed and traded in New York totals an estimated two-thirds of the market capitalization of all globally traded stocks. European stock exchanges are a distant second. While this gap is likely to close in coming years, the size and openness of the U.S. financial system will ensure that New York will remain the dominant center of global finance.

New York will also remain a key link between the U.S. and global economies through international trade. The New York Customs District, which includes the states of New York and New Jersey, easily handles a greater value of traded goods than any other custom district save Los Angeles (see Chart 7). Moreover, whether measured by tonnage or container traffic, the volume of trade through New York ports has doubled in the past just over a decade and similar growth is expected in the next decade.

Chart 6: New York City Incomes Lag House-Price Growth Index, 2000Q1=100

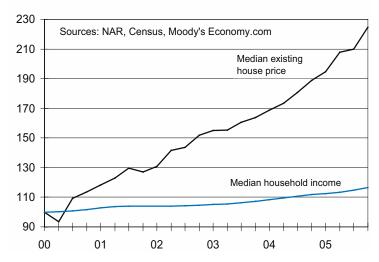


Chart 7: U.S.'s Largest Ports 2005, \$ bil, includes land, sea, and air cargo by Customs District

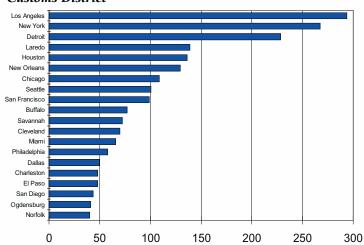
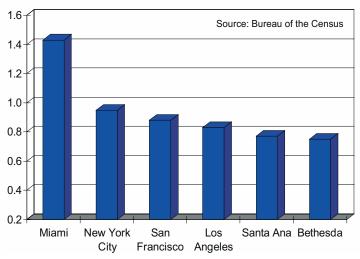


Chart 8: Still a Gateway to the World Net international migration, % of total population, 2005



The Port Authority of NY/NJ is the key port on the eastern seaboard, with inland and coastal feeder routes throughout the region. Additionally, goods coming into the ports of New York and New Jersey can reach a population of 80 million in a single driving day.

New York City will also remain a gateway for international migration. No other metro area in the U.S. receives as large a net inflow of international migrants in a given year, although the share of international migrants in the total population is greater in Miami (see Chart 8). This gives New York City a key link to the world's labor markets, providing local firms an edge in attracting skilled workers that might be in short supply domestically. Post 9/11 immigration restrictions have slowed immigration flows, but these restrictions are ultimately expected to lift. Pending immigration legislation which would criminalize illegal entrance to the U.S. poses some downside risk for the New York economy, where many industries rely on foreign-born labor.

Foreign direct investment also generally follows immigration flows. Foreign businesses draw upon the contacts and labor pool created by their expatriates. The states of New York and New Jersey are the beneficiaries of some \$100 billion in FDI each year. Much of this investment occurs in the New York City area. This includes investment in everything from factories, to investment banks, to commercial real estate.

Despite New York City's solid long-term economic prospects, job and household growth is expected to measurably lag that experienced in the rest of the nation. The aging of the large baby boom generation into their retirement years will support out-migration from the City, as retirees move to Southern and Western destinations. There is already a steady migration of older New York City residents to Southern and Western destinations that will accelerate in coming decades. Slower population gains will weigh on job and house-hold growth.

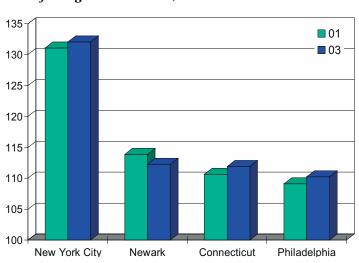
Also constraining New York City's long-term growth prospects are its very high relative business costs. Business

costs, as measured by the cost of labor. electricity, office rents, and tax burdens. are more than one-third higher than the national average (see Chart 9). Relative costs have risen substantially in recent years, and are well above costs in surrounding competing

economies in New Jersey and Connecticut. While New York City's costs relative to surrounding areas are not expected to worsen considerably over the forecast, they are not expected to improve, either, preventing stronger growth through increased competitiveness.

Recent tax increases have contributed to the higher costs. That the state is currently running a surplus and Governor Pataki is proposing a series of tax cuts, presents some near-term relief for businesses. However, this is unlikely to be a long-term solution to the state's high level of indebtedness and fiscal strain is expected to continue in the mid-term outlook, constraining future business expansions in the City.

Chart 9: Business Costs Rising
Cost of doing business index, U.S.=100



Manhattan's long-term economic outlook is for somewhat faster growth than for the broader New York City metro division. Manhattan's very high cost structure will continue to induce less productive businesses and industries to expand and re-locate elsewhere. Given Manhattan's size, it is still expected to account for the majority of job gains in the metro division over the next thirty years.

Cyclical scenario. The cyclical scenario is constructed assuming that there will be a national recession approximately once a decade. This is consistent with recent economic history, with national recessions beginning at the start of the 1980s, 1990s and 2000s. The future national recessions, which begin in 2008, 2018, and 2028, are assumed to be similar in cause, severity and length as the recession that began in 1990.

The cyclical scenario is designed to introduce some cyclicality into both office and housing markets and, as such, are fluctuations around the long-term baseline scenario, and is thus not a low-growth scenario (see Table 5).³

Additionally, this scenario is based on recessions at the national level that are then used to derive alternative forecasts down to the county level, based on the influence of the national recession on the regional economy. While the national economy is clearly an important determinant of local business cycles, other factors play a large role. The impacts of 9/11 on New York City are the most obvious example, having turned a rather mild downturn into something much more severe.

The first recession occurs in 2008, before the Manhattan economy recovers to the pre-9/11 employment peak. The first recession results in a job loss of about 1% from peak to trough in New York City, leaving total employment about 200,000 lower than the baseline scenario by 2011. About 50% of the job losses occur in Manhattan. Subsequent recessions are similar in their effect relative to the baseline.

Each recession is then followed by a weak recovery period before stronger growth returns the economy to long-term growth trends. By the end of the forecast period, most measures of economic activity for both Manhattan and New York City are lower than they are in the baseline scenario. However, this has to do with the ongoing recovery from the third and final recession in the scenario. If the scenario were carried further into the future, New York City would eventually recover to a growth path similar to the baseline scenario.

Unlike employment, population and household projections in the cyclical scenario are slightly lower that in the baseline by the end of the forecast period. The distribution of growth is more varied due to the impact of periods of recession and recovery on personal income growth and, hence, migration and household formation trends. Periodic recessions tend to increase domestic outmigration without a sufficient offset in net international in-migration during the downturns. Additionally, the increase in the number of households during the expansions, although greater than during the recessions, is not enough to fully offset the slowdown produced by the recession, resulting in an overall decline in demographic measures by the end of the forecast period.

Forecast methodology. The forecasts presented in this study are based on simulations of the Moody's Economy. com model system of the national, state and metropolitan area economies. This section of the study describes this model system in detail.

Estimation. All the stochastic variables in the Moody's Economy. com model system are estimated using ordinary least squares. While simultaneous equation estimation techniques are available for estimating models of the type specified in this proposal, most large scale econometric models are estimated using OLS. According to most of the academic literature, the parameters of models estimated using more advanced techniques seldom differ substantially from those estimated using OLS. Moreover, re-estimating or respecifying existing equations or adding new equations may occur frequently enough to make simultaneous equation techniques cumbersome. Cross-section, time-series estimation techniques are also used for the estimation of certain regional variables in order

to capture regional level variations as well as time series variations in the data.

Specification. The Moody's Economy.com model system has a number of important characteristics, including:

- The model system is employment and income based. At the regional level, employment data are the most reliable, consistent, timely, and detailed source of economic information.
 Moreover, data analogous to the National Income and Product Accounts are unavailable at the regional level.
- The model system has a wide range of variables beyond the standard economic, demographic, and financial variables measuring activity in construction markets, loan and deposit activity, and credit quality.

A description of the national and regional submodels of the model system will be presented in the discussion that follows.

National model. In the broadest sense, aggregate economic activity is determined by the intersection of the economy's aggregate demand and supply functions. In the short-run, fluctuations in economic activity are primarily determined by shifts in aggregate demand. The level of resources and technology available for production are taken as given. Prices and wages adjust slowly to equate aggregate demand and supply.

In the longer-term, changes in aggregate supply determine the economy's growth potential. The rate of expansion of the resource and technology base of the economy is the principal determinant of economic growth. The national model is specified to reflect the interaction between aggregated demand and supply, placing it squarely in the neo-Keynesian tradition.

The discussion that follows describes the national-state level linkages and how the model measures and captures the interrelationships between aggregate demand, aggregate supply, and the price adjustment process.

National and state linkages. An important feature of the national model is that national economic, demographic, and financial variables in the model system are in part determined by state level variables

³ Cyclical scenario forecast tables for Manhattan are available in Table 4 of the Appendix of this study.

Table 5: New York-Wayne-White Plains, NY-NJ Metropolitan Division Cyclical Economic Outlook

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg. Annual Growth 2016-2025	Avg. Annual Growth 2026-2034
Establishment Employment (Ths, SA)												
Total Employment	5,137.2	5,177.6	5,203.0	5,189.1	5,140.5	5,195.8	5,325.5	5,410.0	5,462.2	5,510.2	0.4	0.3
% change year ago	1.3	0.8	0.5	(0.3)	(0.9)	1.1	2.5	1.6	1.0	0.9		
Construction	174.2	172.9	170.2	162.0	154.0	154.2	163.7	173.2	176.4	175.4	0.4	(0.0)
% change year ago	(1.2)	(0.8)	(1.5)	(4.8)	(4.9)	0.2	6.2	5.8	1.9	(0.6)		
Manufacturing	220.0	219.1	217.3	213.4	205.7	204.2	210.2	212.6	212.3	212.6	(0.3)	(0.8)
% change year ago	(2.2)	(0.4)	(0.8)	(1.8)	(3.6)	(0.7)	2.9	1.1	(0.1)	0.1		
Trade, Trans., & Utilities	882.5	885.2	882.5	873.9	860.4	871.0	892.1	897.1	893.9	892.5	(0.1)	(0.0)
% change year ago	1.1	0.3	(0.3)	(1.0)	(1.6)	1.2	2.4	0.6	(0.4)	(0.2)		
Retail Trade	455.3	457.2	455.2	451.8	447.7	453.1	459.4	459.7	456.4	453.5	(0.3)	(0.1)
% change year ago	1.4	0.4	(0.5)	(0.7)	(0.9)	1.2	1.4	0.1	(0.7)	(0.6)		
Wholesale Trade	244.8	246.4	247.8	247.0	242.8	245.9	255.2	259.3	261.0	263.7	0.7	0.5
% change year ago	0.9	0.7	0.6	(0.3)	(1.7)	1.3	3.8	1.6	0.7	1.0		
Transportation & Utilities	182.4	181.5	179.6	175.2	169.9	172.0	177.5	178.0	176.5	175.3	(0.6)	(0.9)
% change year ago	0.7	(0.5)	(1.1)	(2.5)	(3.0)	1.3	3.2	0.3	(0.9)	(0.7)		
Information Services	204.1	206.0	207.6	208.0	206.6	208.4	212.5	217.1	220.2	222.4	1.0	1.0
% change year ago	0.0	0.9	0.8	0.2	(0.6)	0.8	2.0	2.2	1.5	1.0		
Financial Services	571.0	573.3	573.8	568.9	561.2	563.7	572.7	577.8	582.6	589.8	0.1	0.5
% change year ago	2.6	0.4	0.1	(0.9)	(1.3)	0.4	1.6	0.9	0.8	1.2		
Prof. & Business Services	775.8	788.5	799.7	804.4	802.1	813.6	839.8	868.8	896.2	919.1	0.9	0.4
% change year ago	2.1	1.6	1.4	0.6	(0.3)	1.4	3.2	3.5	3.2	2.6		
Ed. & Health Services	930.7	949.6	963.2	966.6	960.6	983.5	1,027.0	1,049.9	1,061.4	1,074.3	1.2	0.8
% change year ago	2.3	2.0	1.4	0.4	(0.6)	2.4	4.4	2.2	1.1	1.2		
Leisure & Hospitality Svcs	381.9	385.4	389.2	390.7	390.6	397.0	405.8	412.1	416.6	420.3	0.6	0.3
% change year ago	1.4	0.9	1.0	0.4	(0.0)	1.6	2.2	1.5	1.1	0.9		
Other Services	221.9	221.6	221.8	220.6	218.7	221.5	226.6	228.4	228.4	228.9	0.4	0.1
% change year ago	2.2	(0.1)	0.1	(0.5)	(0.9)	1.3	2.3	0.8	0.0	0.2		
Government	772.8	773.7	775.4	778.2	778.2	776.3	772.9	770.7	771.8	772.6	(0.3)	(0.4)
% change year ago	0.4	0.1	0.2	0.4	-	(0.2)	(0.4)	(0.3)	0.1	0.1		
Personal Income (Mil. \$)	533,979.2	550,181.4	569,240.5	584,162.1	595,754.9	620,817.8	654,825.5	684,704.6	711,320.3	736,226.3	3.2	3.2
% change year ago	4.4	3.0	3.5	2.6	2.0	4.2	5.5	4.6	3.9	3.5		
Population (Ths.)	11.517.3	11.535.7	11.557.5	11.580.6	11.600.7	11.619.1	11.629.9	11.634.9	11.638.4	11.637.4	(0.1)	0.0
% change year ago	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	(0.0)	(0.1)	0.0
Households (Ths.)	4.294.3	4.306.8	4.318.9	4.332.1	4,345.0	4.361.8	4,377.7	4.389.5	4.399.3	4.408.4		(0.1)
% change year ago	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.2	-	(0.1)
70 Grange year ago	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.2	0.2		
Net Migration (Ths.)	(44.5)	(66.9)	(64.7)	(65.1)	(69.9)	(73.5)	(83.0)	(90.3)	(93.2)	(99.1)	(110.7)	(93.8)

Personal income, which is largely determined at the state level, in turn drives the consumption equations of the National Income and Product Accounts, a purely national level measure of economic activity.

The other components of the NIPA are either determined exogenously (e.g. government spending), or are modeled as a function of consumption and investment.

Monetary and fiscal policy, international economic conditions, and financial market conditions are also determined at the national level.

The most important national level variables that in turn influence state level economic conditions include interest rates, federal government spending and tax policy, consumer and producer prices, and corporate profitability.

Regional submodel. The major sectors to each regional submodel include a labor market sector, a personal income sector, a demographic sector and a housing sector. Each of these is discussed below.

Labor market sector. The labor market sector determines payroll employment, household employment, the labor force, the number of unemployed, and the rate of unemployment. Payroll employment is modeled at the 1-digit and 2-digit NAICs level. The employment equations are specified differently depending on whether the sectors are export or locally-oriented activities.

Export-oriented sectors. The export-oriented sectors include those businesses that sell goods and/or services outside the state. For many states, the manufacturing, mining, and agricultural sectors are generally export based. In certain states (e.g., New York and California) financial and business services are export based, as are the transportation and communication sectors. Those businesses considered to be export based are more closely linked to national level variables. The income generated from these businesses provides an important source of demand for the state's locallyoriented sectors.

Although manufacturing activity has become increasingly less important in determining state economic fortunes, it remains a predominant export-oriented sector for many states. Employment in each 2-digit NAICs level manufactur-

ing sector is modeled as a function of a variable reflecting intermediate demand for the goods produced by the sector, a variable reflecting final demand for the goods produced by the sector, a measure of labor productivity, and the relative costs of doing business in each state.

Some two-digit NAICs level manufacturing industries are more dependent on final demand than on intermediate demand. A variable proxying for final demand, usually real personal income and/or population, is included in the manufacturing equations.

To capture the impact of labor productivity growth on manufacturing employment levels, a state weighted national level output per hour term is also included in the manufacturing equations. Although manufacturing output levels may be increasing, employment gains may be limited given strong manufacturing productivity growth.

Over the past quarter century, an increasing number of service businesses have become more export oriented. These sectors vary substantially across states. In New Jersey and New York, for example, financial services, business services, transportation services, and communication services are sold throughout the United States and overseas. In Connecticut, insurance services are export oriented. In Florida and Texas, tourism is a large and important export-based sector. Activity in these sectors relies on national and international economic conditions.

Depending on the state, certain service industries are modeled as export-oriented sectors. In these cases, activity in these industries is modeled as a function of a national level variable that will proxy for national demand for the state's services.

Local-oriented sectors. The local sector in most states is generally composed of service-oriented businesses. Local sectors can include construction, wholesale and retail trade, business and health services, state and local government, and utilities. These are oftentimes support services, providing the necessary infrastructure for the export sectors and the local population. These equations are modeled as a function of a demand proxy (e.g., real personal income, population, relevant export sector activity), and a wage term to capture labor substitution effects.

Real personal income is the most commonly used proxy, either alone or in combination with population, for the level of demand for local services. It is one of the best measures of aggregate economic activity at the state level, reflecting wages and salaries, transfer payments, and nonwage income. Since employment levels in the local economy are an important determinant of wages and salaries in a region, this introduces an important simultaneity into the state models. In other words, personal income is a function of employment, and certain employment categories are a function of income. Population levels are also an important determinant of the demand for certain local services including government services and transportation services. This adds another degree of simultaneity in the model system given that migration flows (which influence population growth) are influenced by employment opportunities, and certain employment categories are modeled as a function of population.

Household employment is modeled as a function of total payroll employment and the ratio of national household-topayroll employment. The two measures of employment can vary over the business cycle given changes in the number of people holding multiple jobs and the number of self employed. These differences should be captured in the national level variable. The labor force is determined by the working age population and the rate of labor force participation. The working age population is determined through an identity based on total population. The rate of labor force participation is determined by the national labor force participation rate and relative employment growth. The latter term captures the impact of economic conditions on participation rates. The number of unemployed and the unemployment rate are determined as identities from the household employment and labor force projections.

Personal income sector. The personal income sector is comprised of eight different components. Wages and salaries, the largest income category, is divided into manufacturing, private service producing, and construction and mining. Each category is modeled as a function of employment and a wage rate. State real wage rates for each of the

categories are estimated as a function of national real wage rates, relative unemployment rates, which will capture the impact of relative labor market tightness on wage growth, and a measure of relative labor productivity growth.

Other labor income is estimated as a function of wages and salaries. To reflect the rapid growth in this category of income over the past two decades due to rising medical costs and nonwage benefits, a variable representing the national ratio of other labor income to total wages and salaries is added as an explanatory variable in the equation.

The remaining income components are modeled primarily as a function of national level variables. Given that the Bureau of Economic Analysis derives state historical income estimates from shared national totals, this provides an accurate specification for the equations of many of the smaller income categories. State level variables are included in several of these equations, such as business proprietor's income, since most unincorporated businesses are heavily dependent on local activity.

Demographic sector. The demographic sector of the state models plays an integral role in the model structure. Population growth is an important determinant of local economic conditions as well as construction and consumer spending activity. Population growth is in turn dependent on economic activity as the availability of job opportunities influences migration flows between states.

The economic explanation of regional migration flows is that labor will move from low wage, less-developed areas to high wage areas where economic opportunities are greater. The relationship between migration and regional economic development is oftentimes less certain, however, as households often prefer to maintain present family and social ties. In periods of slack national economic activity, mobility generally declines as people are less willing to risk a move and as businesses reduce the number of employee transfers. Migration flows also respond to non-pecuniary factors such as a more pleasant climate.

Net migration is modeled as a function of relative unemployment rates, relative consumer prices, relative home prices, and a measure of national housing turn-

over. The relative unemployment rate term captures differences in job opportunities across states. Instead of using the national unemployment rate in this term, a weighted jobless rate that reflects historical migration patterns from each state is used. Gross migration flow data available from IRS records are used in the construction of this variable. As such, migration flows from a state like New Jersey, for example, are more dependent on economic conditions in Florida, Georgia, and the Carolinas, than on conditions in California. This introduces another important linkage between state economic conditions in the Moody's Economy.com model system.

The relative consumer price and home price terms will measure state differentials in living costs. High home prices can be a significant impediment to migration flows, as was demonstrated in New England during the late 1980s. Labor shortages in the region were severe, but in-migration was never substantial, primarily due to the region's unaffordable housing and high living costs. The national housing turnover term will measure the level of migration flows. As home sales increase, migration flows rise, and conversely, as home sales wane, migration flows abate.

Births, deaths, population, and the number of households are also determined in the demographic sector. State birth and death rates are available from the National Center for Health Statistics. Projections of birth and death rates by state will depend on national level projections provided by the Census Bureau. State population is treated as an identity, determined by the sum of birth, deaths, and net migration.

The change in the number of households by state is determined by population growth, a national household-to-population ratio, and a relative unemployment rate term. The national variable captures the impact of social factors such as divorce rates on household formations, while the unemployment rate variable captures the impact of economic conditions on the rate of household formations.

County forecasts. The forecasting system is also used to provide county forecasts for a wide range of economic and demographic variables. These variables include net migration, population,

households, labor force, unemployment rate, wages and salaries, nonwage personal income, single and multifamily residential permits, office, commercial and industrial permit values, and retail sales.

Projections of these county level variables are intended to provide accurate structural or long-term projections. The county forecasts are benchmarked to the Moody's Economy.com model system for the nation, states, and metro areas. Although regional analysts examine each metro area and state forecast, individual company or other non-systematic forecast shocks are not individually accounted for at the county level. Note also that in general, historical data are sparser and less accurate at the county level.

For all variables, the basic forecast methodology for county-level concepts is to extend past county vs. metro growth trends to the metro-level projections obtained from Moody's Economy.com model system. In general, the difference between growth rates at the county- and metro-level are dampened to allow mean reversion in approximately twenty years and all county projections are constrained to add up to the metro totals. When the county is not contained within a metro area, the summation constraints are imposed at the state-level.

Data notes. The definition and source data for the principal variables in the model system are described in the discussion that follows.

Gross product. Gross product is the gross market value of goods and services produced in an economy. Gross regional product is the analogue to gross domestic product or GDP at the national level and is calculated to be the sum of 1) compensation of employees; 2) farm and nonfarm proprietors' income with inventory valuation adjustment and capital consumption allowances; 3) indirect business taxes and nontax liability; and 4) capital charges, primarily corporate profits with inventory valuation adjustments and capital consumption adjustments. Available for the nation and all regions. Source: Bureau of Economic Analysis, Moody's Economy.com

Establishment employment.Monthly employment data collected from survey of payroll records of business establishments. The data relate to all workers, full or part-time, who receive

pay during the payroll period which includes the 12th day of the month. Available for the nation and all regions. *Source: Bureau of Labor Statistics*

Unemployment rate. The unemployment rate represents the number of unemployed as a percent of the civilian labor force. Data are compiled from the CPS each month. The criteria for defining an individual as unemployed require that the person be actively seeking employment or has been laid off and is waiting to be called back to a job, or is waiting to report to a new job scheduled to start within 30 days. Available for the nation and all regions. *Source: Bureau of Labor Statistics*

Personal income. Personal income includes wage & salary disbursements, dividends, interest, rents and royalties, transfer payments, other labor income, and proprietors' income. The data represent income on a place-of-residence basis. Available for states and metropolitan areas. Real personal income is the chained 2000 dollar value of personal income. Available for the nation and all regions. *Source: Bureau of Economic Analysis*

Population. Data represent estimated July 1 resident population in noncensus years and actual April 1 resident population during a census year. Age cohort data are published annually for states and for census years for metro areas (estimates of intercensal years for metro areas derived from state information). The age cohort of 25-44 is considered to be primary home buying years. Source: U.S. Bureau of Census, Moody's Economy.com

Net migration. Net migration represents the difference between the number of individuals moving to a state and the number of individuals leaving the state. The net migration data include both domestic residents and legal foreign migrants to a state. Net migration data are also available from the Internal Revenue Service. *Source: U.S. Bureau of Census*

Households. A household consists of all the persons who occupy a housing unit. A house, apartment or other group of rooms, or a single room, is regarded as a housing unit when it is occupied or intended for occupancy as separate living quarters. That is, when the occupants do not live and eat with any other persons in the structure and there is direct access from the outside or through a common hall. A household includes the related family members and all the unrelated persons, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit is also counted as a household. Available for states and metropolitan areas. Source: U.S. Bureau of Census

Office-using employment. The definition of office-using employment used in this study is based on those industries that, in the aggregate, tend to employ most or all of their employees in office settings. It is certainly possible, if not likely, that what is true for the industry as a whole is not applicable (or may be more applicable) to the specific functions of an industry located in a particular region, whether it be a metro area or a county.

This is especially true for Manhattan, which is unique among counties in the U.S. Manhattan has a concentration of office-space and an economic environment that generates economies of scope and scale with relation to officeusing tasks. Thus, for example, the publishing industry in Manhattan contains a much higher concentration of editors, management and other office-using functions and a much lower concentration of physical output than would be true anywhere else in the country. As a result, it is likely that our generic definition of office-using employment is not appropriate for Manhattan and that another definition of office-using employment that is based on expert knowledge of local office markets will produce a more accurate and relevant measure for this study.

NAICS conversion. The Current Employment Statistics program converted all of its published employment, hours, and earnings series from a 1987 SIC basis to a North American Industry Classification System basis (NAICS 2002) in 2003. For State and metropolitan area data, all employee published series were reconstructed back to January 1990. There was no reconstruction of the hours and earnings series, which start in January 2001. In order to generate a full history of these series, Moody's Economy.com used our forecasting models to estimate employment and wage data prior to 1990. The estimated historical data are included in this study along with the data obtained from the Bureau of Labor Statistics.

Appendix Table 1: Manhattan Quarterly Economic Performance Statistics

	03Q1	03Q2	03Q3	03Q4	04Q1	04Q2	04Q3	04Q4	05Q1	05Q2	05Q3	05Q4	06Q1
Establishment Employment (Ths, SA)													
Total Employment	2,299.5	2.291.3	2.288.1	2.290.1	2.292.1	2.294.1	2.298.0	2.304.0	2.310.0	2.315.9	2.323.0	2.331.5	2.339.8
% change year ago	(2.9)	(1.9)	(1.2)	(0.8)	(0.3)	0.1	0.4	0.6	0.8	1.0	1.1	1.2	1.3
Construction	32.0	31.7	31.3	30.7	30.1	29.4	29.2	29.3	29.5	29.6	29.6	29.4	29.1
% change year ago	(5.5)	(3.8)	(3.4)	(4.7)	(5.9)	(7.2)	(6.7)	(4.4)	(1.9)	0.6	1.4	0.1	(1.2)
Manufacturing	49.4	48.0	47.1	46.9	46.6	46.3	45.9	45.2	44.5	43.9	43.4	43.1	42.8
% change year ago	(11.1)	(11.0)	(9.9)	(7.9)	(5.7)	(3.5)	(2.7)	(3.6)	(4.5)	(5.4)	(5.5)	(4.7)	(4.0)
Trade, Transportation, & Utilities	243.8	244.2	244.1	243.4	242.8	242.1	241.9	242.2	242.4	242.6	243.1	243.7	244.2
% change year ago	(1.5)	(0.1)	0.4	2-101	(0.4)	(0.9)	(0.9)	(0.5)	(0.2)	0.2	0.5	0.6	0.8
Retail Trade	125.0	124.9	125.3	126.2	127.2	128.1	128.7	129.0	129.3	129.5	129.9	130.4	131.0
% change year ago	(1.2)	(0.6)	0.1	0.9	1.7	2.6	2.7	2.2	1.6	1.1	0.9	1.1	1.3
Wholesale Trade	86.4	86.7	86.8	86.7	86.7	86.6	86.4	86.1	85.8	85.5	85.4	85.5	85.6
% change year ago	(2.0)	0.3	1.3	0.8	0.4	(0.1)	(0.5)	(0.7)	(1.0)	(1.2)	(1.1)	(0.7)	(0.3)
Transportation & Utilities	32.5	32.6	32.0	30.4	28.9	27.4	26.8	27.1	27.3	27.6	27.7	27.7	27.7
% change year ago	(0.9)	0.9	(0.6)	(5.8)	(10.9)	(15.9)	(16.2)	(11.1)	(5.6)	0.5	3.4	2.4	1.5
Information Services	139.7	138.6	137.7	137.0	136.4	135.7	135.7	136.4	137.1	137.8	138.1	138.1	138.0
% change year ago	(8.5)	(5.1)	(3.0)	(2.7)	(2.4)	(2.1)	(1.4)	(0.4)	0.6	1.5	1.8	1.2	0.6
Financial Services	362.1	359.8	358.4	358.1	357.7	357.4	358.4	360.8	363.1	365.4	367.9	370.6	373.2
% change year ago			(2.3)			(0.7)	(0.0)	0.8	1.5	2.3	2.7	2.7	2.8
% change year ago Professional & Business Services	<i>(5.7)</i> 450.1	(3.7) 448.9	448.7	(1.7) 449.7	(1.2) 450.7	451.6	453.0	455.0	457.0	458.9	461.2	463.8	466.4
		(2.2)	(0.8)	(0.3)	450.7 0.1	451.6 0.6	453.0	455.0	457.0	458.9	1.8	403.8	2.1
% change year ago	(4.3)												
Education & Health Services	281.8	282.3	282.9	283.8	284.7	285.5	286.4	287.2	288.1	288.9	290.2	291.8	293.4
% change year ago	2.2	1.2	0.7	0.9	1.0	1.2	1.2	1.2	1.2	1.2	1.3	1.6	1.9
Leisure & Hospitality Services	182.3	183.7	185.4	187.6	189.8	192.0	193.3	193.7	194.1	194.4	194.9	195.5	196.1
% change year ago	(0.4)	1.9	3.3	3.7	4.1	4.5	4.2	3.2	2.2	1.3	0.9	1.0	1.1
Other Services	93.4 0.1	93.4	93.7 0.4	94.2 1.0	94.8	95.3 2.0	95.8 2.2	96.2	96.6 2.0	97.0	97.6	98.2 2.1	98.8 2.2
% change year ago		0.1			1.5			2.1		1.8	1.9		
Government	464.7	460.7	458.6	458.6	458.6	458.6	458.4	457.9	457.5	457.0	457.0	457.4	457.8
% change year ago	(1.7)	(2.8)	(3.0)	(2.2)	(1.3)	(0.5)	(0.1)	(0.2)	(0.3)	(0.3)	(0.3)	(0.1)	0.1
Unemployment Rate (%)	7.5	7.5	7.6	7.3	6.6	6.4	6.1	5.7	4.9	5.0	5.1	5.4	5.3
Labor Force (Ths)	880.6	870.8	866.7	872.0	876.3	869.8	869.9	878.1	877.9	874.2	873.4	881.0	881.7
% change year ago	-	(0.6)	(0.5)	(0.7)	(0.5)	(0.1)	0.4	0.7	0.2	0.5	0.4	0.3	0.4
Number of Unemployed (Ths)	65.7	65.5	65.7	63.5	58.2	55.9	53.4	50.4	43.0	43.5	44.2	47.4	46.3
% change year ago	4.1	(3.1)	(2.0)	(11.0)	(11.4)	(14.7)	(18.8)	(20.7)	(26.1)	(22.2)	(17.2)	(5.8)	7.8
Number of Employed (Ths)	814.9	805.3	801.0	808.5	818.1	813.9	816.5	827.7	834.9	830.7	829.2	833.6	835.4
% change year ago	(0.3)	(0.4)	(0.4)	0.2	0.4	1.1	1.9	2.4	2.1	2.1	1.6	0.7	0.1
Total Residential Permits (# of units)	5,301.8	5,200.2	5,366.2	5,059.8	3,842.0	4,730.7	4,383.4	5,264.0	5,819.8	6,576.8	5,488.0	4,930.9	4,627.5
% change year ago	(1.4)	(10.9)	(3.9)	4.7	(27.5)	(9.0)	(18.3)	4.0	51.5	39.0	25.2	(6.3)	(20.5)
Multifamily	5,300.4	5,199.2	5,365.5	5,059.0	3,841.0	4,729.8	4,382.4	5,262.8	5,818.8	6,575.6	5,486.7	4,929.9	4,626.4
% change year ago	(1.3)	(10.9)	(3.9)	4.7	(27.5)	(9.0)	(18.3)	4.0	51.5	39.0	25.2	(6.3)	(20.5)
Personal Income (Mil. \$)	128,540.8	129.512.0	131.314.1	133.996.5	136.664.5	139,318.0	141.526.9	143.271.0	144.996.1	146.711.7	148.305.7	149,759.3	151.197.1
% change year ago	(1.0)	1.7	3.7	5.0	6.3	7.6	7.8	6.9	6.1	5.3	4.8	4.5	4.3
Wages & Salaries (Mil. \$)	170.274.1	170.144.8	172.318.8	176.950.3	181.557.2	186.139.0	189.784.0	192,449.8	195,086.5	197.708.8	199.574.3	200.616.6	201.647.2
% change year ago	(4.0)	(1.6)	1.1	3.8	6.6	9.4	10.1	8.8	7.5	6.2	5.2	4.2	3.4
Personal Bankruptcies	4.210.0	4.409.0	4.504.0	4.586.0	4.749.0	4.908.0	5.062.0	5.004.0	5.150.0	5.597.0	6.368.0	8.139.0	8,511.3
% change year ago	13.5	19.4	19.1	14.1	12.8	11.3	12.4	9.1	8.4	14.0	25.8	62.7	65.3
Population (Ths.)	1,574.6	1,578.4	1,582.2	1,585.8	1,587.8	1,590.9	1,592.9	1,593.5	1,593.9	1,593.2	1,593.2	1,595.4	1,597.5
% change year ago	0.6	0.8	1.0	1.0	0.8	0.8	0.7	0.5	0.4	0.1	0.0	0.1	0.2
Net Migration (Ths.)	5.7	5.6	5.3	4.7	(2.3)	2.5	(2.3)	(7.5)	(8.5)	(13.0)	(10.0)	(1.3)	(1.8)
Vacancy Rates													
Vacancy rate, Midtown (%)	9.6	10.0	9.9	9.3	9.2	9.3	9.3	8.7	8.9	7.7	7.1	6.5	6.3
Vacancy rate, Downtown (%)	13.7	13.3	13.0	12.4	15.6	12.8	11.9	13.1	13.3	12.2	11.5	12.2	10.5

Appendix Table 2: Manhattan Annual Economic Performance Statistics

Total Residential Permits (# of units) 1,129.0 3,369.0 3,762.0 3,823.0 3,791.0 5,110.0 6,109.0 5,407.0 5,232.0 4,555.0 5,703.9 % change year ago 163.8 198.4 11.7 1.6 (0.8) 34.8 19.6 (11.5) (3.2) (12.9) 25.2 Multifamily 1,127.0 3,369.0 3,762.0 3,822.0 3,791.0 5,110.0 6,105.0 5,404.0 5,231.0 4,554.0 5,702.7 % change year ago 163.3 198.9 11.7 1.6 (0.8) 34.8 19.5 (11.5) (3.2) (12.9) 25.2 Median Existing Home Sales Price, (Ths.) 354.0 385.0 414.3 447.6 481.5 586.5 722.3 824.0 907.2 1,020.6 1,240.5 % change year ago 1.8 8.7 7.6 8.0 7.6 21.8 23.2 14.1 10.1 12.5 21.6 Personal Income (Mil. \$) 93,264.5 100,501.9		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	5 Yr. Average Annual % Change
% schangey para gap (0.4) 1.77 2.4 3.1 2.6 3.6 (1.4) (4.4) (1.7) 0.2 1.0 Construction 22.2 2.8 27.6 3.11 3.5 3.6 3.2.8 3.1 20.5 5.5 Schangey and part of the control of	Establishment Employment (Ths, SA)												
Construction	Total Employment	2,169.7	2,206.7		2,328.8	2,388.6	2,474.6	2,439.3	2,332.1	2,292.2		2,320.1	(1.3)
Construction	% change year ago	(0.4)	1.7	2.4	3.1	2.6	3.6	(1.4)	(4.4)	(1.7)	0.2	1.0	
We change year ago 19 16.6 3.1 12.6 8.7 8.6 (2.1) 17.8 (4.3) 6.0 New Amendacturing 8.0		27.2	26.8	27.6	31.1	34.1	36.3				29.5	29.5	(4.0)
Manufachring 89.1 86.5 84.9 80.5 76.3 72.1 60.7 53.2 47.8 46.0 43.7 % change year ago 4 Ullisians 12.4 1 % change year ago 1.1 0.6 0.0 0.8 10.8 12.3 12.8 12.8 12.8 12.8 12.8 12.8 12.8 12.8	% change year ago	(1.9)	(1.6)	3.1	12.6	9.7	6.6	(2.1)	(7.8)	(4.3)	(6.1)	0.0	, ,
6 shangay para ago (4.0) (3.0) (1.8) (5.3) (5.2) (5.5) (1.5) (10.0) (3.9) (5.0) Transitor, Transportion of Villetions 25.07 25.22 25.11 25.23 25.55 26.48 25.51 24.66 20.30 22.22 22.10 3 7 1.0 (6.0) (1.0)													(9.4)
Trade, Transportation, & Utilisies													()
# Achange year ago													(1.7)
Retail Trade													(1.17)
Kchange year ago 3.2 3.4 2.3 3.7 5.6 5.6 (5.3) (3.1) (2.2) 2.3 1.2 Wholesal Printing 96.7 95.5 95.1 94.6 93.6 91.7 86.6 86.6 86.6 86.2 86.7 86.6 86.6 86.6 86.6 86.6 86.6 86.6 86.6 86.6 86.7 10.7 10.7 10.0 10.													(1.0)
Wholesale Trade													(1.0)
Manage year ago													(4.0)
Transportation & Utilities													(1.8)
Ke hange year ago 0.3 (0.9) (3.7) (1.3) (1.8) 0.1 (4.6) (4.6) (1.6) (1.6) 1.73 1.13 1.13 1.15 1.64 1.64 1.36 1.31 1.33 4.83 0.6 4.6 (11.7) (4.9) (1.6) 1.13													
Information Services 125,7 128,7 132,7 137,1 143,7 157,5 164,7 145,4 138,2 136,1 137,8 % change year ago 1.0 2.4 3.1 3.3 4.8 9.6 4.6 (11,7 14,6) 16,6 1.3 Financial Services 397,6 395,4 396,7 407,4 410,2 419,2 407,0 37,2 395,6 398,8 398,8 386,8 38													(4.1)
M. Andrage year ago 1.0 2.4 3.1 3.3 4.8 9.6 4.6 (11.7) (4.9) (1.6) 1.3 1.5													
Financia Services 397,6 3995,4 3987,7 407,4 410,2 419,2 417,0 372,2 359,6 358,6 368,8													(2.5)
% change year ago (1.5) (0.6) 0.8 2.2 0.7 2.2 (2.9) (8.6) (3.4) (0.3) 2.3 Professionals A Business Services 37.6 398.2 42.5 45.51 47.4 50.6 (2.9) (7.4) (1.9) 0.7 1.7 Education & Health Services 22.85 29.8 24.8 25.09 25.8 26.8 26.9 27.9 1.0 1.7	% change year ago												
% change year ago (1.5) (0.6) 0.8 2.2 0.7 2.2 (2.9) (8.6) (3.4) (0.3) 2.3 Professionals A Business Services 37.6 398.2 42.5 45.51 47.4 50.6 (2.9) (7.4) (1.9) 0.7 1.7 Education & Health Services 22.85 29.8 24.8 25.09 25.8 26.8 26.9 27.9 1.0 1.7	Financial Services	397.6	395.4	398.7	407.4	410.2	419.2	407.0	372.2			366.8	(2.6)
Professional & Business Services 377.6 398.2 42.8 43.1 474.3 506.3 494.8 458.2 449.4 452.6 460.2													` '
Schange year ago 2.1 5.5 6.4 7.0 4.7 6.8 (2.3) (7.4) (1.9) 0.7 1.7 Education & Health Services 2.85 238.8 246.3 250.9 25.8 264.8 269.1 279.3 28.7 226.7 29.9 4.9 2.7 1.9 2.0 3.5 1.6 3.8 1.2 1.2 1.3 1.0 1.0 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.2 1.3 1.2 1.2 1.2 1.3 1.2 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.2 1.2 1.2 1.2 1.0 1.2 1.0 1.3 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.3 1.2 1.2 1.0 1.3 1.2 1.2 1.0 1.2 1.0 1.2 1.0 1.2 1.0 1.2 1.2 1.2 1.3				423.6	453.1	474.3	506.3						(1.8)
Education & Health Services													()
Schange year ago 24 4.9 2.7 1.9 2.0 3.5 1.6 3.8 1.2 1.2 1.3 Lesiure & Norphilatily Services 14.8 3 15.5 16.8 3.9 3.8 7.2 0.3 (4.0) 1.4 0 1.3 Other Services 78.7 81.2 3.2 2.5 4.0 4.2 3.8 (0.1) (0.2) 0.4 1.9 1.9 Government 446.1 444.2 446.6 440.0 4.2 3.8 (0.1) (0.2) 0.4 1.9 1.9 Government 446.1 444.2 445.4 460.6 440.0 4.2 3.8 (0.1) (0.2) 0.4 1.9 1.9 Schange year ago (4.7) (0.4) 0.3 3.4 2.0 0.4 (0.3) 0.4 (2.4) (0.5) (0.3) Labor Force (Ths) 780.0 860.0 839.6 853.4 868.8 855.4 862.9 876.6													1.8
Leisure A Hospitality Services 148.3 153.6 162.5 168.8 175.3 187.8 188.4 189.9 144.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 13.9 14.8 192.2 194.7 14.8 14.													1.0
% change year ago 4.9 3.6 5.8 8.3.9 3.8 7.2 9.3 (4.0) 2.1 4.0 1.3 Change year ago 1.3 3.2 2.5 4.0 4.2 3.8 (0.1) (0.2) 0.4 1.9 1.9 6 6.7 5.9 5.1 5.7 7.7 7.5 6.2 5.1 2.5 8.2 8.2 5.9 5.1 5.7 7.7 7.5 6.2 5.1 Labor Force (Ths) 780.0 806.0 89.96 85.3 85.5 4.8 6.7 7.5 6.2 5.1 5.7 7.7 7.5 6.2 5.1 2.5 7.7 7.5 6.2 5.1 2.5 7.7 7.5 6.2 5.1 2.5 8.5 4.8 6.7 5.9 5.1 5.7 7.7 7.5 6.2 5.1 2.7 2.5 6.2 5.1 2.2 4.1 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0													0.8
Other Services 78,7 81,7 81,2 83,2 83,5 90,2 93,6 93,5 93,3 93,7 95,5 97,3 96,5 86,3 86,5 90,2 93,6 93,5 93,3 93,7 95,5 97,3 96,5 97,3 96,5 97,3 96,5 97,3 96,5 97,3 96,5 97,3 96,5 97,3 96,5 97,3 96,5 97,3 96,5 97,3 97,5 97,3 97,5 97,5 97,5 97,5 97,5 97,5 97,5 97,5													0.0
% change year ago 1,3 3,2 2,5 4,0 4,2 3,8 (0,1) (0,2) 0,4 1,9 1,9 Government 446,1 446,2 45,4 460,6 470,0 471,8 470,2 472,1 460,6 458,4 457,2 60,0 20,0 471,8 470,2 472,1 460,6 458,4 457,2 60,0 20,0 471,8 470,2 472,1 460,6 458,4 457,2 472,1 460,6 458,4 457,2 472,1 460,6 458,4 457,2 472,1 460,6 458,4 457,2 472,1 460,6 458,4 457,2 472,1 460,6 458,4 457,2 48,4 160,0 9,16 60,5 10,0 10,4 44,4 44,2 44,4 45,2 49,4 67,2 65,1 54,4 44,4 44,5 44,4 47,2 4,8 40,6 71,6 60,5 91,1 44,4 44,5 44,4 44,5 44,6 44,2 43,4													0.0
Covernment A46.1 A44.2 A45.4 460.6 A70.0 A71.8 A70.2 A72.1 A60.6 A58.4 A57.2 A57.2 A60.6 A58.4 A57.2 A57.2 A60.6 A58.4 A57.2													8.0
## change year ago ## change yea													
Number of Unemployment (Parle (%) 7.0 7.4 7.8 8.7 5.9 5.1 5.7 7.7 7.5 6.2 5.1													(0.6)
Labor Force (Ths)	% change year ago	(4.7)	(0.4)	0.3	3.4	2.0	0.4	(0.3)	0.4	(2.4)	(0.5)	(0.3)	
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Number of Unemployed (Ths) 54.5 59.9 65.8 57.4 51.2 42.5 49.4 67.2 65.1 54.4 44.5 44.6 % change year ago 7.3 9.8 10.0 (12.8) (10.8) (15.1) 13.7 36.0 (3.1) (16.4) (18.3) Number of Employed (Ths) 725.5 746.1 773.7 796.0 817.6 811.9 813.5 809.4 807.4 819.1 832.1 % change year ago 1.5 2.9 3.7 2.9 2.7 (0.7) 0.2 (0.5) (0.3) 1.5 1.6 52.4 (1.8) Number of Employed (Ths) 1.5 2.9 3.7 2.9 2.7 (0.7) 0.2 (0.5) (0.3) 1.5 1.6 52.4 (1.8) Number of Employed (Ths) 1.5 2.9 3.7 2.9 2.7 (0.7) 0.2 (0.5) (0.3) 1.5 1.6 52.4 (1.8) Number of Employed (Ths) 1.5 (1.8) Number of	% change vear ago	0.8	3.3	4.2	1.7	1.8	(1.6)	0.9	1.6	(0.5)	0.1	0.4	
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Wages & Salaries (Mil. \$) 115,148.1 125,860.0 136,811.8 150,353.0 161,249.5 183,760.2 186,124.3 172,776.4 172,440.0 187,502.4 198,265.3 % change year ago 6.8 9.3 8.7 9.9 7.3 14.0 1.3 (7.2) (0.2) 8.7 5.7 **esonal Bankruptcies 2,789.0 3,468.0 4,108.0 4,471.0 3,877.0 3,134.0 3,704.0 4,019.0 4,586.0 5,004.0 8,139.0 % change year ago (4.2) 24.4 18.5 8.8 (13.3) (19.2) 18.2 8.5 14.1 9.1 62.7 **pulation (Ths.) 1,514.2 1,521.4 1,527.4 1,531.1 1,535.6 1,580.0 1,565.2 1,578.4 1,590.9 1,593.2 % change year ago 0.7 0.5 0.4 0.2 0.3 0.3 1.3 0.3 0.8 0.8 0.1													
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5	/o unange year agu	0.7	0.5	0.4	0.2	0.3	0.3	1.3	0.3	0.0	0.0	0.1	E V. Au
et Migration (Ths.) 2.5 (0.5) (2.4) (4.9) (4.3) (6.5) 2.7 (10.3) (2.8) (3.9) (7.6)	() A 1		(0.5)	(0.1)	(4.0)	/4.00	(0.5)	0.7	(40.0)	(0.0)	(0.0)	(7.0)	5 Yr. Average (4.4)

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Appendix Table 3: Manhattan Baseline Economic Outlook

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg. Annual Growth 2016-2025	Avg. Annual Growth 2026-2034
Establishment Employment (Ths, SA)												
Total Employment	2,350.3	2,368.8	2,386.2	2,410.5	2,435.0	2,458.1	2,479.2	2,498.8	2,518.9	2,538.1	0.6	0.2
% change year ago	1.3	0.8	0.7	1.0	1.0	1.0	0.9	0.8	0.8	0.8		
Construction	28.9	28.5	28.1	27.7	27.8	28.0	28.1	28.2	28.2	28.1	(1.0)	(2.1)
% change year ago	(2.2)	(1.2)	(1.6)	(1.4)	0.6	0.5	0.5	0.4	(0.1)	(0.5)	. ,	, ,
Manufacturing	42.4	42.1	41.8	41.8	41.8	41.7	41.6	41.5	41.4	41.4	(0.2)	(1.0)
% change year ago	(2.9)	(0.7)	(0.7)	(0.1)	(0.0)	(0.2)	(0.2)	(0.3)	(0.2)	(0.2)	` ′	` ′
Trade, Transportation, & Utilities	245.0	245.9	246.0	247.3	248.8	250.1	250.4	250.4	250.2	250.0	0.1	(0.2)
% change year ago	0.8	0.4	0.0	0.5	0.6	0.5	0.1	(0.0)	(0.1)	(0.1)		, ,
Retail Trade	131.6	132.3	132.0	132.4	132.9	133.4	133.1	132.4	131.6	130.9	(0.3)	(0.4)
% change year ago	1.4	0.6	(0.2)	0.3	0.4	0.4	(0.3)	(0.5)	(0.6)	(0.6)	, ,	` '
Wholesale Trade	85.7	86.1	86.7	87.7	88.7	89.6	90.4	91.2	91.9	92.7	0.7	0.3
% change year ago	0.2	0.4	0.7	1.1	1.2	1.0	0.9	0.8	0.8	0.8		
Transportation & Utilities	27.7	27.5	27.3	27.2	27.2	27.1	26.9	26.8	26.6	26.5	(0.5)	(1.1)
% change year ago	0.4	(0.6)	(0.8)	(0.3)	(0.2)	(0.3)	(0.5)	(0.6)	(0.5)	(0.5)		
Information Services	138.1	139.7	141.1	143.0	144.5	146.1	147.7	149.4	151.0	152.7	1.1	1.1
% change year ago	0.3	1.1	1.0	1.3	1.1	1.1	1.1	1.1	1.1	1.1		
Financial Services	375.8	377.0	378.1	380.0	382.3	384.2	385.8	387.2	388.7	390.0	0.3	0.5
% change year ago	2.5	0.3	0.3	0.5	0.6	0.5	0.4	0.4	0.4	0.4		
Professional & Business Services	469.9	477.8	485.4	495.1	505.0	515.3	525.6	536.1	547.3	558.2	1.1	0.5
% change year ago	2.1	1.7	1.6	2.0	2.0	2.0	2.0	2.0	2.1	2.0		
Education & Health Services	295.8	302.1	307.3	313.3	319.5	324.8	330.2	334.8	339.6	344.3	1.3	0.4
% change year ago	2.1	2.1	1.7	2.0	2.0	1.7	1.7	1.4	1.4	1.4		
Leisure & Hospitality Services	196.9	198.4	200.3	202.6	205.1	207.3	209.3	211.2	213.1	214.8	0.7	0.2
% change year ago	1.1	0.8	1.0	1.1	1.2	1.1	1.0	0.9	0.9	0.8	· · ·	0.2
Other Services	99.3	98.9	99.1	99.6	100.2	100.6	100.9	101.2	101.4	101.7	0.4	(0.2)
% change year ago	2.0	(0.3)	0.2	0.5	0.6	0.5	0.3	0.2	0.2	0.2	0	(0.2)
Government	458.2	458.2	458.9	460.2	460.1	459.8	459.3	458.7	458.0	457.0	(0.2)	(0.4)
% change year ago	0.2	0.0	0.2	0.3	(0.0)	(0.1)	(0.1)	(0.1)	(0.2)	(0.2)	()	(211)
Unemployment Rate (%)	5.2	5.2	5.3	5.1	5.0	5.0	5.1	5.1	5.1	5.1	0.5	0.4
Labor Force (Ths)	882.9	890.0	897.9	904.1	913.2	924.5	934.8	944.1	953.2	962.2	0.8	0.4
% change year ago	0.7	0.8	0.9	0.7	1.0	1.2	1.1	1.0	1.0	1.0	0.0	0.4
Number of Unemployed (Ths)	45.9	46.6	47.4	46.4	45.8	46.5	47.3	48.0	48.5	48.9	1.3	0.8
% change year ago	3.0	1.6	1.8	(2.2)	(1.4)	1.5	1.9	1.5	1.0	0.9	1.0	0.0
Number of Employed (Ths)	837.0	843.3	850.5	857.7	867.5	878.0	887.5	896.1	904.7	913.3	0.7	0.4
% change year ago	0.6	0.8	0.8	0.9	1.1	1.2	1.1	1.0	1.0	1.0	0.1	0.4
Total Residential Permits (# of units)	3,831.4	2,973.1	2,650.2	2.562.6	2.585.1	2,621.9	2,707.9	2.647.6	2,490.3	2.356.8	(2.5)	(1.5)
% change year ago	(32.8)	(22.4)	(10.9)	(3.3)	0.9	1.4	3.3	(2.2)	(5.9)	(5.4)	(2.0)	(1.0)
Multifamily	3,830.5	2,972.0	2,649.2	2,561.5	2,584.1	2,620.8	2,706.8	2,646.6	2,489.3	2,355.8	(2.5)	(1.5)
% change year ago	(32.8)	(22.4)	(10.9)	(3.3)	0.9	1.4	3.3	(2.2)	(5.9)	(5.4)	(=,	(112)
Personal Income (Mil. \$)	153,038.8	156,778.3	161,522.8	167,023.1	173,268.7	179,448.0	185,262.1	190,760.4	196,247.2	201,779.5	2.6	2.5
% change year ago	3.8	2.4	3.0	3.4	3.7	3.6	3.2	3.0	2.9	2.8		
Wages & Salaries (Mil. \$)	203.478.2	209.942.9	218,774.1	228.307.3	238.504.2	248.715.4	258.386.3	267.720.5	277.049.3	286.499.9	3.0	2.7
% change year ago	2.6	3.2	4.2	4.4	4.5	4.3	3.9	3.6	3.5	3.4		
Population (Ths.)	1,600.3	1,606.6	1,614.4	1,622.1	1,630.0	1,636.7	1,641.6	1,645.8	1,650.1	1,653.8	0.1	0.2
% change year ago	0.4	0.4	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.2		
Households (Ths.)	770.0	773.8	778.6	783.5	788.7	793.5	797.6	801.3	804.8	808.5	0.2	0.1
% change year ago	0.5	0.5	0.6	0.6	0.7	0.6	0.5	0.5	0.4	0.5		
Net Migration (Ths.)	(2.9)	(3.6)	(2.5)	(3.0)	(3.1)	(5.3)	(7.2)	(7.4)	(7.8)	(8.7)	(10.7)	(9.4)

Appendix Table 4: Manhattan Cyclical Economic Outlook

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg. Annual Growth 2016-2025	Avg. Annual Growth 2026-2034
Establishment Employment (Ths, SA)												
Total Employment	2,350.2	2,368.5	2,380.3	2,372.4	2,348.9	2,365.8	2,416.3	2,461.6	2,499.1	2,527.0	0.6	0.3
% change year ago	1.3	0.8	0.5	(0.3)	(1.0)	0.7	2.1	1.9	1.5	1.1		
Construction	28.9	28.5	27.9	26.5	25.3	25.3	26.8	28.2	28.6	28.3	0.8	(0.5)
% change year ago	(2.2)	(1.2)	(2.1)	(5.0)	(4.6)	0.1	5.7	5.4	1.4	(1.0)		
Manufacturing	42.5	42.3	41.9	41.0	39.4	39.0	40.3	40.9	41.0	41.1	(0.1)	(0.8)
% change year ago	(2.7)	(0.6)	(0.9)	(2.0)	(4.1)	(1.0)	3.4	1.6	0.2	0.3		
Trade, Trans., & Utilities	245.0	245.9	245.5	243.7	240.5	243.3	248.9	250.5	249.8	249.8	0.2	0.1
% change year ago	0.8	0.4	(0.2)	(0.7)	(1.3)	1.1	2.3	0.6	(0.3)	(0.0)		
Retail Trade	131.6	132.3	131.8	131.2	130.6	132.3	133.6	133.3	132.1	131.1	(0.2)	(0.1)
% change year ago	1.4	0.6	(0.4)	(0.5)	(0.4)	1.3	1.0	(0.2)	(0.9)	(0.7)		
Wholesale Trade	85.7	86.1	86.5	86.1	84.2	85.0	88.5	90.3	91.2	92.2	0.8	0.6
% change year ago	0.2	0.5	0.5	(0.5)	(2.1)	0.9	4.1	2.1	0.9	1.2		
Transportation & Utilities	27.7	27.5	27.2	26.5	25.7	26.0	26.8	26.9	26.6	26.4	(0.4)	(0.8)
% change year ago	0.4	(0.6)	(1.3)	(2.6)	(2.9)	1.2	3.0	0.2	(0.9)	(0.7)		
Information Services	138.1	139.7	141.0	141.9	141.9	143.3	145.7	148.6	150.7	152.4	1.1	1.1
% change year ago	0.3	1.1	0.9	0.6	0.0	1.0	1.7	2.0	1.5	1.1		
Financial Services	375.7	376.9	376.8	373.1	368.2	368.9	373.6	376.1	379.1	384.2	(0.0)	0.3
% change year ago	2.4	0.3	(0.0)	(1.0)	(1.3)	0.2	1.3	0.7	0.8	1.4		
Prof. & Business Services	469.8	477.6	482.9	478.0	465.3	466.8	485.4	513.4	539.9	554.3	1.1	0.4
% change year ago	2.1	1.7	1.1	(1.0)	(2.7)	0.3	4.0	5.8	5.2	2.7		
Ed. & Health Services	295.8	302.0	306.5	308.2	307.8	315.3	328.3	335.6	339.7	344.4	1.5	0.7
% change year ago	2.1	2.1	1.5	0.6	(0.2)	2.4	4.2	2.2	1.2	1.4		
Leisure & Hospitality Svcs	196.8	198.4	200.0	200.8	201.5	205.3	209.8	211.8	213.1	214.7	0.7	0.4
% change year ago	1.1	0.8	0.8	0.4	0.4	1.9	2.2	1.0	0.6	0.8		
Other Services	99.3	98.9	99.0	98.8	98.7	99.7	101.1	101.6	101.6	101.7	0.5	0.0
% change year ago	2.0	(0.3)	0.0	(0.1)	(0.1)	1.0	1.4	0.4	(0.0)	0.2		
Government	458.2	458.2	458.9	460.2	460.2	458.9	456.5	454.9	455.4	456.0	(0.2)	(0.4)
% change year ago	0.2	0.0	0.2	0.3	0.0	(0.3)	(0.5)	(0.4)	0.1	0.1		
Personal Income (Mil. \$)	153,031.0	156,757.7	161,122.7	164,380.5	167,137.1	172,714.5	180,568.7	187,925.8	194,701.8	200,896.5	2.6	2.5
% change year ago	3.8	2.4	2.8	2.0	1.7	3.3	4.6	4.1	3.6	3.2		
Population (Ths.)	1,600.3	1,606.5	1,614.4	1,622.2	1,630.4	1,637.2	1,642.0	1,646.0	1,650.1	1,653.8	0.1	0.2
% change year ago	0.4	0.4	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.2		
Households (Ths.)	767.4	771.0	775.2	779.3	783.8	788.4	792.3	795.4	798.4	801.4	0.2	0.1
% change year ago	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.4	0.4	0.4		
Net Migration (Ths.)	(2.9)	(3.6)	(2.4)	(2.8)	(2.8)	(5.3)	(7.4)	(7.6)	(7.9)	(8.8)	(10.8)	(9.4)

3. OFFICE MARKET

Office Overview

Cushman & Wakefield, Inc. was asked to evaluate the development potential in Hudson Yards for four product types: Office, Retail, Hotel and Residential. Of these, Office is by far the largest, both in terms of square feet of potential development, 25.7 million (Base scenario) and potential revenues, \$20.9 billion (Base scenario).

Through a detailed competitive analysis, this chapter will answer the question: Why is it necessary to develop Hudson Yards when there are alternative locations available locally and regionally? The answer lies in the historic appeal of Midtown Manhattan as the premier business center.

Today, New York City is one of the world's business capitals and a focal point for many growing industries. Manhattan is one of a handful of cities along with London, Paris, Tokyo and Hong Kong, considered to be global capitals, with a vast range of international firms, cultural institutions and entertainment amenities that attract a global clientele and skilled employees. For the City to fully capture and benefit from this trend presupposes it can expand to accommodate the future demand for office space.

Although it remains the premier and largest central business district (CBD) in the nation, both in terms of inventory and occupied office space, Manhattan faces considerable competition, particularly from the surrounding region. In addition, Manhattan has relatively limited potential development sites in which to accommodate new or expanding large office users.

Hudson Yards would provide a much-needed venue for Midtown's future growth and expansion, ensuring that Manhattan captures its share of the regional office-using employment forecast by Moody's Economy.com.

Based on the analysis, C&W estimates, in the Base scenario, potential completions for 25.7¹ msf of new office development and 24.0 msf in the Cyclical scenario for Hudson Yards. Revenues associated with this development are forecast to total \$20.9 billion in the Base scenario, growing from \$13.7 million in 2012 to \$1.2 billion by 2050 and in the Cyclical scenario, totaling \$18.4 billion, growing from \$5.7 million in 2012 to \$1.1 billion in 2050.

¹ The forecast completions are limited to 25.7 million square feet based on the zoning FAR of 14 sites in Hudson Yards with the largest development potential.



Exhibit 3-1. Office Sector Forecast of Completions and Revenues, 2006-2050

	Base Scenario		Cyclical Scenario	
Date	Completions SF	Revenues	Completions SF	Revenues
2006	0	\$0	0	\$0
2007	0	\$0	0	\$0
2008	0	\$0	0	\$0
2009	0	\$0	0	\$0
2010	0	\$0	0	\$0
2011	0	\$0	0	\$0
2012	1,193,379	\$13,662,482	500,000	\$5,724,287
2013	1,374,370	\$30,278,972	0	\$5,896,015
2014	1,394,620	\$47,979,920	0	\$6,072,896
2015	1,338,189	\$62,812,089	1,321,517	\$22,787,479
2016	1,446,136	\$79,603,761	2,521,031	\$54,820,929
2017	1,599,228	\$98,971,884	2,797,363	\$86,166,918
2018	1,661,895	\$120,115,783	2,617,598	\$117,378,381
2019	1,456,904	\$144,232,904	0	\$120,899,732
2020	984,851	\$162,842,897	0	\$124,526,724
2021	500,000	\$175,197,080	0	\$128,262,526
2022	500,000	\$188,145,955	0	\$132,110,402
2023	813,618	\$206,684,146	2,266,059	\$171,985,093
2024	1,421,953	\$236,095,101	0	\$177,144,645
2025	1,519,851	\$270,434,142	939,959	\$198,262,148
2026	1,496,002	\$306,180,514	596,144	\$214,533,443
2027	1,435,060	\$344,087,856	2,905,370	\$273,385,635
2028	1,310,911	\$383,244,493	2,658,482	\$334,296,199
2029	1,178,806	\$425,066,392	2,216,327	\$389,690,766
2030	1,058,561	\$469,178,635	0	\$403,748,299
2031	999,154	\$517,300,122	0	\$422,026,177
2032	1,010,535	\$570,035,505	0	\$446,517,941
2033	46,610	\$603,991,276	1,568,458	\$513,677,484
2034	0	\$638,387,453	0	\$547,764,234
2035	0	\$672,562,129	1,088,488	\$609,316,579
2036	0	\$705,398,588	0	\$641,038,228
2037	0	\$736,309,916	0	\$666,962,264
2038	0	\$765,403,527	0	\$690,701,049
2039	0	\$795,520,820	0	\$715,263,895
2040	0	\$827,159,720	0	\$742,320,268
2041	0	\$861,234,267	0	\$771,428,525
2042	0	\$897,809,404	0	\$806,997,616
2043	0	\$936,252,566	0	\$843,740,813
2044	0	\$974,789,678	0	\$885,447,080
2045	0	\$1,013,620,752	0	\$926,993,540
2046	0	\$1,052,658,932	0	\$968,992,866
2047	0	\$1,091,963,706	0	\$1,006,438,149
2048	0	\$1,130,419,415	0	\$1,043,329,081
2049	0	\$1,168,588,196	0	\$1,077,487,863
2050	0	\$1,206,539,192	0	\$1,114,289,848
2000	U	ψ1,200,000,102	U	Ψ1,114,203,040

Source: New York City Office of Management and Budget and Department of Finance, Hudson Yards Development Corporation, Moody's Economy.com, Cushman & Wakefield, Inc.



Introduction

The analysis of the regional real estate office market is focused on the areas deemed competitive to Manhattan. As noted in the Economic Outlook (Chapter 2), the economic engine of the New York-New Jersey-Connecticut tri-state region is New York City, Manhattan in particular. During the historic time period reviewed by Cushman & Wakefield, from 1986-2006Q3, Manhattan has remained the largest market in terms of both office inventory and occupied office space, although its share of annual occupied space has declined. A number of factors have contributed to this downward trend, including a lack of available development sites and the high cost of land and construction in Manhattan. The redevelopment of Hudson Yards would likely help Manhattan retain its status as the largest and most significant commercial business district in the region. The objective herein is to present how Manhattan's share of the regional office market is expected to change, and why.

This chapter will examine specific real estate fundamentals and trends in the different office markets:

- The relationship between Manhattan and its competitive office markets will be assessed, focusing on the trends in net absorption and in the distribution of occupied space to assess the regional dynamics.
- The historic time frame included in this analysis is 1986 through 2006 Q3, though a more extensive review of the Manhattan market is provided. This 20-year period was chosen because it includes two economic cycles and consistent data for all markets is available in each of the years.
- For purposes of the regression analysis and forecast, however, the time period included data through 2005, as the 2006 real estate and economic data are still subject to revisions. This timeframe is also consistent with the forecast of economic data provided by Moody's Economy.com and used as in input in the real estate analysis.
- The resulting real estate analysis provides the data and information used to support the forecast of office demand for Hudson Yards for 2006 through 2035.

National Perspective

Manhattan is known throughout the world as the premier commercial business center of the United States. It is the largest central business district (CBD) in the nation and contains over 390 msf of office space², significantly more than two of the East Coast's top CBD's, Boston (approximately 60 msf) and Washington D.C. (approximately 93 msf). Manhattan typically maintains the lowest vacancy and highest rental rates among major CBDs. As of third quarter 2006, Manhattan's vacancy rate of 7.0 percent was the lowest in the nation (Exhibit 3-2), tied

² In comparing the CBDs, the 2006 Q3 inventory and statistics in Exhibits 3-1 and 3-2 are based on tenanted buildings only, not owner-occupied.



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with Washington D.C., whose economy has experienced one of the fastest growth rates in employment of all major metro areas in the nation. This was significantly below the national average rate of 11.0 percent. Manhattan's already low vacancy is expected to further decline in 2007 based on projected employment gains forecast by Moody's Economy.com.

30% 28.1% Dallas 25% 18.9% 20% 16.9% 15.5% Houston Los Angeles 15% Chicago 12.0% 11.0% 10.2% Francisco 10% 7.0% 7.0% Bostor Manhattar 5% San 0%

Exhibit 3-2. Top CBD Office Markets in the United States Overall Vacancy Rates, 2006 Q3

Source: Cushman & Wakefield, Inc.

In a pattern similar to the late 1990s and early 2000, when asking rents spiked upwards as vacancies fell to low single digits, Manhattan's overall asking rents have increased sharply over the past year rising by more than 10 percent to almost \$46 per square foot as of third quarter 2006. Manhattan's average asking rents are now 62 percent higher than the national average of \$28.21 psf and more than five percent higher than in Washington D.C., as shown in Exhibit 3-3. In addition, asking rents in many of Manhattan's prime class A buildings exceed \$90.00 psf, including asking rents in the Bank of America and New York Times buildings which are currently under construction. Asking rents are expected to continue to increase sharply in 2007 as vacancies continue to fall.



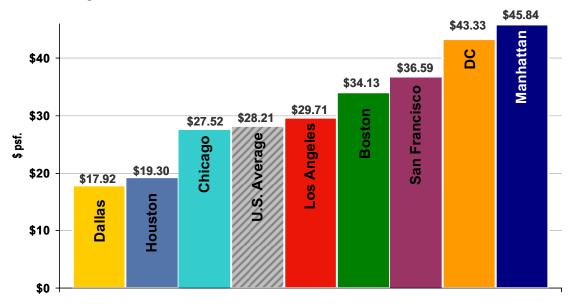


Exhibit 3-3. Top CBD Office Markets in the United States Overall Asking Rents, 2006 Q3

Source: Cushman & Wakefield, Inc.

In reviewing construction trends, Manhattan and Washington DC have the highest levels of activity with 4.8 msf and 4.6 msf, respectively, under construction. The remaining CBDs have generally less than 1.0 msf or none at all, as in the case of Houston and Los Angeles (Exhibit 3-4). Relative to the size of its 390 msf inventory, Manhattan, however, is expanding at a very modest rate. Almost all new construction is preleased to major firms, including Bank of America and the New York Times. These minimal amounts of construction still reflect the cautionary approach to new buildings that characterized the 1990s, even as supply tightens. Most recently, in this market of tightening vacancies and concomitant increases in asking rents, development, without pre-leasing from an anchor tenant, of an approximately 1 msf office building at 11 Times Square at the corner of West 42nd and 8th Avenue was announced.



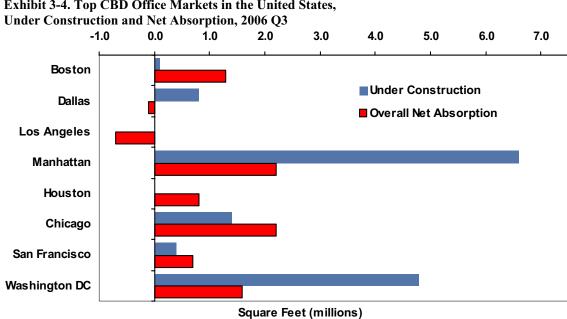


Exhibit 3-4. Top CBD Office Markets in the United States,

Source: Cushman & Wakefield, Inc.



New York Regional Competitive Office Markets

While Manhattan remains the nation's preeminent office market, it has faced increasing competition from the surrounding regional office markets in terms of attracting employees and providing development opportunities. As illustrated in the map below, the competitive market area is defined as 15 counties located in the tri-state area of New York, Connecticut and New Jersey, and comprises a total office inventory of approximately 695.1 msf³.



Exhibit 3-5. New York City Competitive Office Market Region

Source: Claritas, Cushman & Wakefield, Inc.

The counties surrounding New York City are primarily suburban in character although they contain several urban commercial centers including White Plains in Westchester County, Stamford and Greenwich in Fairfield County, and Newark in Essex County, among others. The City is the economic engine that has driven the development of the region and the corresponding expansion of much of the office uses found in these smaller cities and suburban campuses. In fact, Manhattan's share of Fortune 500 companies headquartered in the New York region is 57 percent, as shown in Exhibit 3-6 based on the latest available data for 2005. Overall, the New York region's 75 Fortune 500 companies represent 15 percent of the nation's total.

³ This total includes both tenant and owner-occupied space but does not include the over 30.0 msf of inventory in the emerging markets of outer boroughs of New York City since data prior to 1995 is unavailable or the submarkets were too small or non-existent to be sufficiently tracked. These overall office inventory figures, inclusive of owner occupied space, are used in the demand analysis for Hudson Yards



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Emerging NJ Tier I 3 NJ Tier II 12 Fairfield 9 Westchester 4 Long Island 3

Exhibit 3-6. Fortune 500 Headquarter Companies in the New York Region, 2005

Source: Fortune 500, Cushman & Wakefield, Inc.

These counties have ready access to New York City (considered to be a one and a half hour commute or less to the City via highway or mass transit), large skilled labor pools, and a strong connection to the City's economy. A summary table with recent measures of performance for these markets is provided in the Exhibit 3-7⁴. Midtown Manhattan in particular, remains the location of choice for many high-end businesses. This is reflected in the substantial cost premium that Midtown commands over the other markets and its low overall vacancy rate, indicative of strong demand for its office space.

Exhibit 3-7. Regional Office Markets Comparison, 2006 Q3

Submarket	Inventory (msf)	% of Competitive Market	Overall Vacancy	Avg. Asking Rent (psf)	U/C (msf)
Midtown	310.0	44.6%	6.4%	\$45.23	4.60
Downtown	94.4	13.6%	9.1%	\$36.18	2.00
New Jersey Tier 1	52.4	7.5%	14.5%	\$30.26	0.00
New Jersey Tier 2	119.3	17.2%	21.4%	\$29.01	0.60
Long Island	38.3	5.5%	10.8%	\$29.35	0.50
Westchester	36.0	5.2%	16.3%	\$29.63	0.00
Fairfield	44.6	6.4%	14.5%	\$28.90	0.00
Total	695.1	100%	11.2%	\$34.10	7.65

*Weighted Average

msf = million square feet, psf = per square foot Source: Cushman & Wakefield, Inc.

⁴ For a more detailed overview of each regional market, see Appendix A.



3-8

The concern is the changing pattern of the distribution of occupied office space within the New York region, as seen in Exhibit 3-12. Although Manhattan claims the lion's share of the occupied office space, at 61 percent as of third quarter 2006 this is down from almost 67 percent in 1986. New Jersey's share of occupied space has increased from 17.9 percent to 22.5 percent over the same time period.

These trends in occupied space are further evident in looking at the net absorption of office space data over the 21-year analysis period (1986 – 2006 Q3) as shown in Exhibit 3-8. Midtown, although the largest market with 47.1 percent of occupied space in 2006, captured only 35 percent of the region's net absorption between 1986 and 2006 Q3. New Jersey Tier II⁵ experienced the strongest increase, with 26.2 percent of the region's net absorption, and an increase in its share of the region's total occupied space to 15.2 percent by third quarter 2006, compared to only 13.1 percent in 1986.

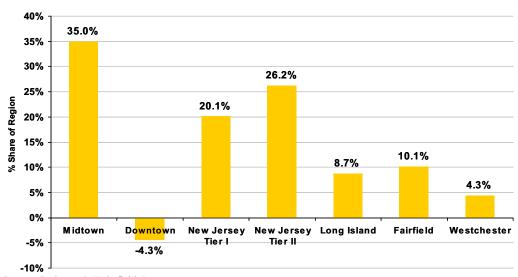


Exhibit 3-8. Share of New York Region's Total Net Absorption of Office Space Captured by Market, 1986 – 2006 Q3

⁵ New Jersey Tier I counties include Hudson and Essex, New Jersey Tier II includes Bergen, Morris, Middlesex and Somerset counties. The distinction among the two Tiers is explained in the text that follows.



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Source: Cushman & Wakefield, Inc.

Historic Overview of Manhattan and the Regional Office Markets

Three distinct building cycles in Manhattan (1950-1971, 1982-1992, and 1998-2006), are shown in Exhibit 3-9 and provide the historical context that frames the evolution of the office market and also helps illustrate the causes that explain Manhattan's declining share of the region's occupied office space.

1950-1971 25 125.7 msf 5.7 msf/ yr avg. 20 1982-1992 Millions Square Feet 67.8 msf 6.2 msf/ yr avg. 15 1998-2006 Q3 16.0 msf 1.8 msf/ yr avg. 10 5 78 Years 82 50 66 74 94 98 02 70

Exhibit 3-9. Manhattan Office Construction, 1950-2006 Q3 243.4 msf or 4.3 msf annual average

Source: Cushman & Wakefield, Inc.

The first of these cycles, 1950-1971, is characterized by almost uninterrupted growth in employment and a construction boom that resulted in more than 125 msf of new office space. At the height of this boom in 1970, the City's population reached 7.9 million people.

This period also coincided with a fundamental structural shift in the City's economy that saw manufacturing employment peak in 1953 and then commenced its secular decline as shown in Exhibit 3-10. Thereafter, employment⁶ in the service and finance sectors of the City's economy, the main occupiers of office space, would play an increasingly dominant role in the City's economy.

The shift in employment from a manufacturing base to the service sectors had tremendous implications for the City's real estate market as an increasing amount of office space became

⁶ Employment data prior to 2002 is on a Standard Industrial Classification (SIC) basis used prior to the development of the North American Industrial Classification System (NAICS), as defined by the U.S. Census.



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necessary to accommodate these new office workers. Employment in these two sectors grew at an annual rate of two percent per year from 1950 to 1970. In this climate of steady employment growth and increasing demand for new office space, plans to build the World Trade Center complex emerged. By the time it was completed in the early 1970s, however, conditions in the City's economy and real estate market had drastically deteriorated.

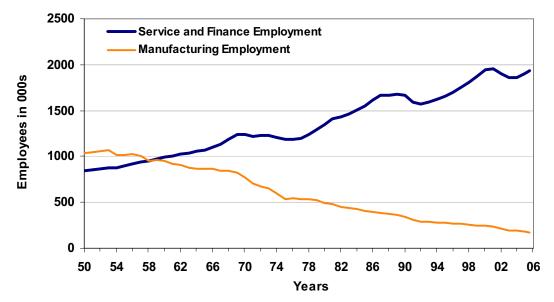


Exhibit 3-10. New York City Service and Manufacturing Employment, 1950-2006 Q3

Source: U.S. Bureau of Labor Statistics

Beginning in the 1970s a confluence of factors contributed to the sharp downturn in the City's economy that lasted for almost a decade. The national economic recession and accelerating inflation that followed the OPEC oil shocks wreaked havoc on financial markets and brought the first significant job losses in the service and finance sectors in 20 years, with almost 60,000 jobs lost between 1970 and 1977. In addition, poor financial planning in the public sector precipitated a fiscal crisis that forced the City to cut key services. As the quality of life deteriorated, residents increasingly moved to the suburbs, further eroding the City's tax base.

Flight to the suburbs and the continued relocation of manufacturing to the largely non-unionized South caused New York City's population to decline by 800,000 between 1970 and 1980. Although regional office markets were already in existence, the population shift to the suburbs created new incentives for corporations to be located outside the City. This solidified the foundation of the regional office markets which would begin to prosper and evolve over the three next decades. Aside from the buildings that were already under construction or in the advanced planning stages at the start of the decade, a total of 4.5 msf, less than 1.0 msf per year, were added over the 1975-1980 period in Manhattan, far less than the 5.7 msf built on average per year during the expansive 1950-1971 period.



New York City's economy staged a dramatic turnaround in the 1980s, paralleling the fortunes of Wall Street. The S&P 500 index more than doubled from 1980 to 1987. Over the same period, employment in finance and services, the main users of office space, grew by a remarkable four percent per year, adding almost 400,000 jobs. A development boom that added 67.8 msf from 1982 through 1992, or a yearly average of 6.2 msf, accommodated this demand. Since the amount of prime available space along the Fifth and Park Avenue corridors had already been developed during the previous expansions, construction moved to the outer corridors along Sixth and Third Avenues as illustrated in Exhibit 3-11.

The Eighth Avenue and Times Square areas began to garner some interest at the height of the 1980's boom, though the timing in the economic cycle would prove to be unfavorable to their development. In spite of the frenzied pace of new construction, conditions in Manhattan's real estate market remained tight. The regional markets continued to develop and serve as less expensive alternatives to Manhattan, and also benefited from the close proximity to many of the executives living outside the City, as evidenced in the initial expansion of Stamford, Connecticut.

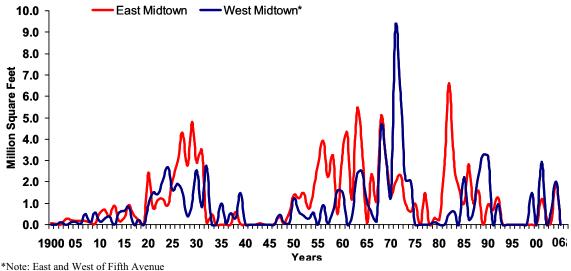


Exhibit 3-11. Midtown Manhattan Office Construction, 1900-2006 Q3

Source: Cushman & Wakefield, Inc.

The development boom of the late 1980s was also driven by lenient borrowing standards. Buildings were financed and built without tenants committed to occupying the building once completed. This speculative construction had a pronounced effect on the real estate market in the 1990s. The stock market crash in 1987 and the ensuing early 1990s recession slashed service and finance sector employment by 110,000 jobs from 1990 through 1993 and created a



surplus of space in Manhattan's office market. By 1994, vacancy rates had reached 15 percent in Midtown and 25 percent in Downtown⁷. Several speculative buildings were forced into bankruptcy. As a result, banks began to tighten their lending standards, instituting preleasing requirements to ensure that developers secured anchor tenants before new construction could take place.

Just as the recession and the recent spate of bankruptcies had ingrained a more cautious approach among developers and lenders alike, employment levels in the city began to grow dramatically. The stock market exuberance of the internet boom and a thriving national economy brought five years of sustained employment growth in the City between 1995 and 2000. Wall Street and the newly formed media industries created more than 300,000 jobs during these years, most of these in office-using sectors. Unlike the period from 1982 through 1992, when development rushed to meet this demand with an annual average of 6.2 msf new properties (Exhibit 3-9), only 13.1 msf, or an average annual 1.8 msf of new inventory came on line between 1998 and third quarter 2006, most of it in the newly revived area around Times Square.

Excessive caution on the part of lenders was not the only impediment to development. Although tax and other government incentives played a role in its development, Times Square was one of the few areas available for large scale development as there were minimal sites for large-scale office construction elsewhere in Manhattan. This lack of development sites was further exacerbated by the loss of office space to residential conversions in Downtown and by the conversion of former industrial sites to office space in southwest Midtown, which had largely run its course during the previous decade. These latter developments, however, had a greater effect on class B space than on class A space.

The scarcity of space, coupled with strong employment growth, caused Manhattan's overall vacancy rate to dip to a historic low of 3.7 percent in 2000 and class A asking rents to spike upwards to over \$60 psf, and almost \$70 psf in core Midtown. Tenants were effectively squeezed out of the Manhattan market, either by price or lack of available space, and forced to look elsewhere. Additionally, advances in communication technology enabled some firms, particularly in financial services, to reorganize and relocate back office operations, which had once been housed in main offices, to less expensive locations.

Although Manhattan's real estate market was thriving in terms of vacancy and rental rates going into 2001, its success was tempered by the regional markets which were progressively eating away at Manhattan's share of the region's occupied space. The events of September 11, 2001 compounded this effect as many firms were forced out of Downtown, although Midtown was the beneficiary of many of these moves. By third quarter 2006, Manhattan's

⁷ Midtown is defined as the area north of Canal Street to 72nd Street and Downtown is defined as the area south of Canal Street.



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share (Midtown and Downtown combined) of the region's occupied office space had declined from 66.9 percent in 1986 to 61.0 percent as seen in Exhibit 3-12.

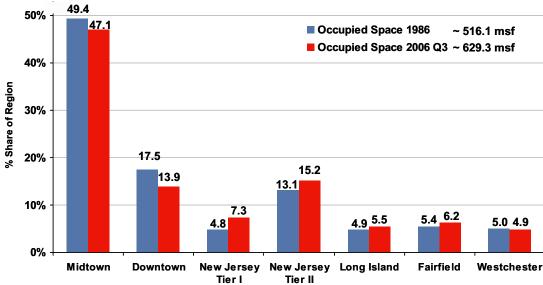


Exhibit 3-12. Total Regional Occupied Office Space Share by Market, 1986 vs. 2006 Q3

Source: Cushman & Wakefield, Inc.

Recent Performance Midtown vs. Downtown

In analyzing the performance of Manhattan's office market in the recent 1986-2005 period both the Midtown and Downtown submarkets have seen their share of the region's occupied space decline due to the increasing competition from the regional markets, as shown in the Exhibit 3-12 above. The effect on the Downtown market, however, has been particularly pronounced and the respective performance of these submarkets has diverged recently. The following discussion examines this performance more closely in order to determine the causes and to assess the factors that will likely shape these markets going forward.

From 1986 through 2001 (pre-September 11th) overall vacancy rates in Midtown have on average discounted Downtown vacancies by more than two percentage points as seen in Exhibit 3-13. Over the same period overall asking rents in Midtown have on average exceeded Downtown rents by almost \$7 psf. The performance gap between Midtown and Downtown widened even further following September 11th when rents in Downtown fell to almost \$12 psf lower than in Midtown, with overall vacancy rates close to six percentage points higher than Midtown.



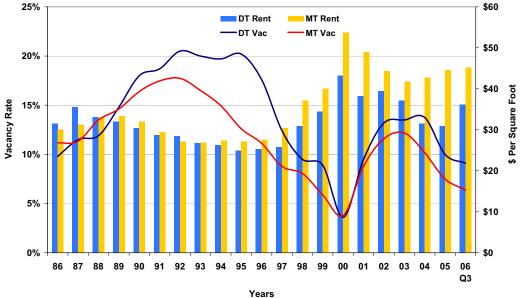


Exhibit 3-13. Office Rent and Vacancy Rates Midtown and Downtown Manhattan, 1986-2006 Q3

Source: Cushman & Wakefield, Inc.

Some of this differential between the two markets can be attributed to the performance of specific industries. Over 20 percent of office-using employment in Downtown is in the finance industry, compared to only 12.8 percent for Midtown (Exhibit 3-14). The trend to relocate back office space that occurred throughout the 1990s in the financial services industry to less expensive markets, particularly in New Jersey, therefore, had a much larger impact on Downtown than on Midtown. Downtown was also severely impacted by the September 11th devastation, as many firms were forced to relocate.



Exhibit 3-14. Employment by Industry, Downtown vs. Midtown Manhattan, 2005

Sector	Midtown	Downtown
Construction	1.5%	0.9%
Manufacturing	2.9%	0.6%
Wholesale	6.2%	1.2%
Retail	7.5%	3.4%
Transportation & Public Utilities	0.9%	1.4%
Information	6.1%	3.1%
Finance & Insurance	12.8%	20.2%
Real Estate	4.6%	2.4%
Professional & Scientific Services	16.4%	10.2%
Management	3.9%	1.6%
Administration	9.0%	6.0%
Education	2.6%	0.8%
Health Care	10.6%	5.8%
Arts	1.8%	0.3%
Accommodation	8.0%	3.6%
Other	4.5%	3.3%
Government	0.1%	26.3%
Unclassified	0.5%	0.4%
Not Disclosed	0.3%	8.5%
Total	100.2%	100.0%

Source: U.S Bureau of Labor Statistics.

Though industry composition accounts for some of the difference in the relative performances between Downtown and Midtown, the latter's central location contributed heavily to the premium rent tenants were willing to pay to be in Midtown. Even at the height of the last economic expansion in 2000, when vacancies in Downtown briefly dipped below those in Midtown, asking rents in Downtown were still \$10 psf lower than those for similar space in Midtown.

From 1986 to third quarter 2006, Downtown's share of the overall region's occupied space declined from 17.5 percent to 13.9 percent, although a large portion of this change is due to the loss of the World Trade Center and other buildings damaged in the September 11th terrorist attacks. Residential conversions have also accounted for some of this decline. As noted, however, in comparing the performance of these two markets, the draw to tenants from the availability of new Class A space and generous tax incentives in New Jersey was much more significant in Downtown than Midtown. During the same period Midtown's share declined by less from 49.4 to 47.1 percent.



Looking Forward

Midtown's status as the preferred market is unlikely to change in the future and the Downtown market is expected to benefit somewhat from recent legislation which provides significant tax incentives both to firms remaining in Downtown and to firms relocating to Downtown from other areas.

Rent differentials (excluding the aforementioned incentives) between Downtown and New Jersey have narrowed considerably, so there are fewer economic incentives for firms to relocate out of Downtown. Rental rates in New Jersey Tier I and II markets were approximately 40 percent lower than Downtown in 1987 and at the peak in 2000, but are now only 20 percent lower in third quarter 2006, (16 percent lower in the New Jersey Tier I market alone) as shown in Exhibit 3-15. Goldman Sachs' decision in 2005 to build a new headquarter office building in Battery Park City perhaps signifies a reversal of the past trend to move outside the City, and may be a harbinger of better times for the financial services industry in Downtown⁸.

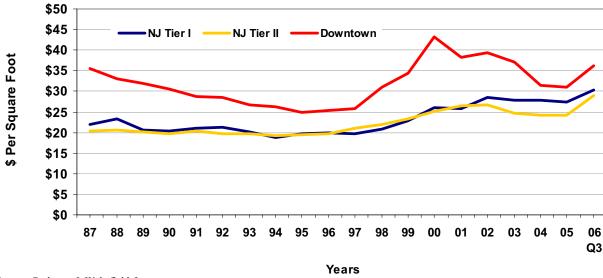


Exhibit 3-15. Rents in Downtown Manhattan vs. New Jersey Tier I and Tier II, 1986-2006 Q3

Source: Cushman & Wakefield, Inc.

Another trend that bodes well for Manhattan's future (both Midtown and Downtown) is the increasingly global nature of business. New York City is one of a handful of cities around the world, along with London, Paris, Tokyo and Hong Kong considered to be global "capitals," each with a vast range of international firms and cultural and entertainment attractions that

⁸ The forecast for employment in the City's finance industry is discussed in Chapter 2 by Moody's Economy.com. A more detailed analysis of the recent performance of the New Jersey office market is presented in Appendix A.



attract a global clientele. The rapid growth in the BRIC⁹ economies and increasing trade flows among countries stands to benefit these global cities that are already highly integrated into the world economy.

New York is a global leader in finance, fashion, media and the arts, and attracts companies that want world exposure and access to high levels of talent and capital. International firms establish a presence in New York City because of the ability to tap into a skilled and diverse labor force. Almost 36 percent of the City's residents or 2.9 million residents in 2000 are foreign born.

Some of these international presences are small, and may only be a sales office with half a dozen employees. Other companies, especially in finance and media, have very large operations in the City, such as Deutsche Bank, Credit Suisse, Bank of Tokyo-Mitsubishi, Barclays Bank PLC, CIBC, UBS, Reuters, and Bertelsmann. Virgin USA will base the headquarters for its new U.S. airline in Manhattan, and Overseas Shipholding Group, a large owner and lessor of ocean tankers, recently expanded its headquarters operations in New York. Many foreign designers and retailers that want to promote a global marketing image, including LVMH, H&M, Anne Fontaine, and Georg Jensen have also established a U.S. headquarters in Manhattan.

The benefits of being closer to industry clusters and attaining global recognition extends to domestic companies that have a presence in New York. Bank of America, although headquartered in Charlotte, will be occupying 1.6 msf or 77 percent of the new office tower under construction at One Bryant Park on Sixth Avenue. Jefferies Group Inc., an investment bank, moved their headquarter functions from Los Angeles to New York. CNN, which had previously broadcast from studios only in Atlanta, now has a major studio presence in Manhattan. Other firms that have a large New York presence, but are headquartered elsewhere, include Ford Motor Company, Booz Allen Hamilton and AON Consulting.

For the City to fully capture and benefit from these trends presupposes both that Manhattan can expand to accommodate the future demand for office space and also offer a product that is competitive with other markets in the region. The development potential of Manhattan and the regional markets are discussed in the following section.

Development Potential Manhattan and Region

Manhattan's future commercial development is constrained by a lack of large sites that are zoned for commercial (office) use¹⁰. Currently, only 15 msf of space could be developed as



⁹ BRIC = Brazil, Russia, India, China.

¹⁰ For additional recent information on office tenant trends in Manhattan see Appendix A

new office product based on analysis of potential development sites (greater than 100,000 sf) in Midtown. This amount does not include buildings under construction or buildings for which implementation plans are well underway. Future zoning changes, building conversions or replacement, and other factors that could augment Midtown's development potential in the future are also not included, as these cannot be reliably predicted.

Downtown can currently accommodate roughly 8.0 msf of new space within the former World Trade Center site. The last remaining large parcel available for development in Battery Park City (Site 26) is under construction as the new 2.2 msf headquarter building for Goldman Sachs. Like Midtown, the Downtown market likely has other development sites subject to many of the same possibilities stated above.

Exhibit 3-16 summarizes information for these Manhattan development sites as of third quarter 2006. Midtown in this context includes the area between 60th Street and Canal Street, east of Ninth Avenue, (excluding west of Ninth Avenue in the Hudson Yards). The building sizes shown are based on current, as-of-right zoning.¹¹

Midtown = 16.3 msf Million SF Extell/Carlisle Riverside South - Parcel N 60 E 55th St 0.2 0.2 1606 Broadway 45 E 45th St (Roosevelt Hotel) 1.0 42nd St 0.5 341-347 Madison Ave 315 West 42nd St 0.4 20 Times Square (Port Authority Bus Terminal) 1.0 11 Times Square 1.0 12-22 W 40th St 0.2 First Ave/41st St 0.8 First Ave & 30's 1.0 Midtown 34th St & 8th Ave (New Yorker Hotel) 0.7 13 435 Seventh Ave 0.2 401 Seventh Ave (Hotel Pennsylvania) 1.1 Penn Station 4.0 16 388 Hudson St 0.2 E. Houston 17 0.2 565 Greenwich St (7 Hudson Sq) 0.4 330 Hudson St (6 Hudson Sq) 4 Hudson Square 1.1 2 Hudson Square 0.3 Downtown = 8.0 msf Downtown World Trade Center Site 8.0

Exhibit 3-16. Potential Development Sites in Manhattan as of 2006 Q3

Source: Cushman & Wakefield, Inc., City of New York Department of Planning and Economic Development Corporation.

¹¹ Note that over time this list of sites will change due to alternative development scenarios and substitutions and additional sites.



In contrast to the City, the surrounding suburban markets, particularly New Jersey, have far more available sites that could accommodate future new development as shown in Exhibit 3-17. This is primarily due to the larger geographic size of these counties in contrast to Manhattan's 237 square miles. Currently Westchester and Fairfield counties have over 10 msf of development sites each, and Long Island a more modest 4 msf of development sites. The availability in these three markets combined is still far less than in New Jersey, largely due to more restrictive zoning regulations.

Midtown
Downtown
Outer boroughs
New Jersey Tier 1
New Jersey Tier 2
Westchester
Fairfield
Long Island
0 10 20 30
Millions Square Feet

Exhibit 3-17. New York Regional Office Markets Current Development Potential, 2006 Q3

Source: Cushman & Wakefield, Inc.

Hudson Yards Office Demand Forecast and Likely Construction

The preceding overview of Manhattan's office market performance within the region and the likely impact of the lack of development sites in Manhattan on this performance provide the necessary basis to analyze how development in the Hudson Yards is expected to affect New York City's share of the regional office market going forward.

The forecast for development and office completions in Hudson Yards addresses this question by analyzing the forecast demand for occupied space in the Region, the share of this demand captured by each of the competitive markets in the Region¹², and specifically with respect to

¹² For the purposes of this demand analysis the Region is defined as the six competitive markets defined as New Jersey Tier 1, New Jersey Tier II, Long Island, Westchester/ Fairfield, Midtown and Downtown.



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Hudson Yard's share, the development potential of Hudson Yards compared to Existing Midtown¹³.

This analysis, which relies on statistical regression to capture the underlying causal relationships among key economic variables, determines the total supportable construction completions in Hudson Yards. An estimated timeline of the completions of the large commercial sites within the Hudson Yards area is then determined and used as an input in the revenue model.

Office Demand

The main driver for the forecast of office space demand and completions are the projections of office-using employment (OUE) provided by Moody's Economy.com given that office space is occupied by office-using employees¹⁴.

Moody's Economy.com provided two sets of economic projections—a Base scenario and a Cyclical scenario (Chapter 2). Whereas the Base scenario shows a long term economic growth trend, the Cyclical scenario introduces deep recessions and strong recoveries at intervals of approximately 10 years that are intended to replicate the peaks and troughs of past business cycles. The level of OUE in each forecast scenario is shown below and summarized in Exhibit 3-19.

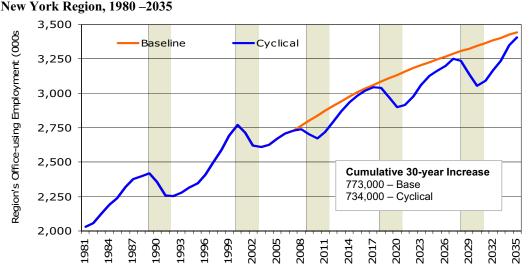


Exhibit 3-18. Total Office-Using Employment—Base and Cyclical Forecasts

Note that the shaded bars indicate periods of economic recession. Source: Moody's Economy.com, Cushman & Wakefield, Inc.

¹⁴ A definition of office-using employment and measurement issues related to it are contained in the Appendix A.



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¹³ Existing Midtown is the existing Midtown office market from Canal Street to 72nd Street, exclusive of Hudson Yards west of Ninth Avenue.

Over the 30-year forecast period, 2005-2035, OUE for the region is forecast to grow by 773,000 jobs or 0.9 per year on average in the Base scenario while the Cyclical scenario results in slightly lower job growth of 734,000 jobs or 0.8 percent on average per year. This projected growth for the region is lower than the average experienced during the previous cycle, when OUE grew by 1.3 percent per year (computed on trough to trough basis 1992-2003) and reflects a slowdown in population growth in the later years as projected by Moody's Economy.com.

For New York City, the OUE forecast growth in both scenarios of 0.7 percent on average over the 30-year forecast, is higher than the 0.6 percent growth rate experienced in the past cycle. This result is driven by two key aspects of the economic forecast provided by Moody's Economy.com. First, in contrast to the previous cycle when the relocation of many of the City's financial services sector jobs benefited the regional markets primarily at the expense of Downtown Manhattan, the City's financial services industry is expected to stabilize in this forecast. Second, Manhattan's growth is not constrained by the lack of development as was the case in the peak of 2000.

Exhibit 3-19. Total Office-Using Employment, Base and Cyclical Forecasts New York City vs. Region

Office Using Employment	2005q4	2035q4	2005-2035	
	000s	000s	Change 000s	CAGR
Base				
New York Region	2,672.1	3,445.2	773.1	0.9%
New York City	1,221.7	1,516.8	295.1	0.7%
Cyclical				
New York Region	2,670.9	3,405.4	734.5	0.8%
New York City	1,220.6	1,509.0	288.3	0.7%

Source: Moody's Economy.com, Cushman & Wakefield, Inc.

CAGR=Compound Annual Growth Rate

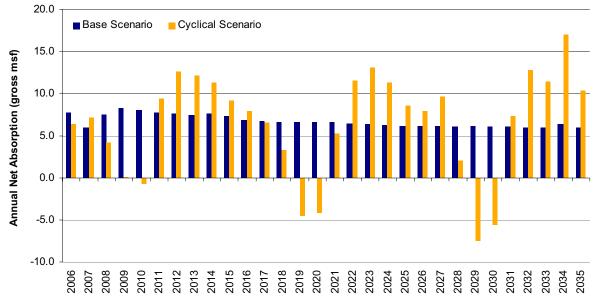
Using the projections for OUE, the forecast change in occupied space (or net absorption) for the region is derived by regressing net absorption on OUE as the primary independent variable. The regression equation also takes into account the fact that the relationship between OUE and office demand is not simultaneous, (i.e. changes in office using employment do not immediately cause firms to increase their demand for office space, and includes other explanatory variables, primarily a dummy variable to account for September 11th). A detailed description of the variables used and the regression results are provided in Appendix A. As noted, the time frame considered in the analysis includes only data through year-end 2005 as the 2006 real estate and economic data are still subject to revisions.

Based on this regression, the forecast net absorption for office space in the region from 2006 through 2035 totals 200.1 msf in the Base scenario and 195.7 msf in the Cyclical scenario.



This represents an average of approximately 5.0 msf per year over the 30-year period, or growth of 0.9 percent, similar to the growth rate in OUE. In the Base scenario, the pace of net absorption declines in the later years of the forecast, as expected, given the underlying economic assumptions. The Cyclical scenario has periods of strong absorption followed by steep declines as recessions take place in 2009-2010, 2018-2020, and 2028-2030. The regional economy, however, recovers to approximately the Base level after each downturn, and the aggregate difference between the two scenarios is less than 5.0 msf, or 2.0 percent, over the 30-year forecast period.

Exhibit 3-20. Annual Net Office Absorption Forecasts, Base vs. Cyclical Scenarios New York Analysis Region, 2006 – 2035 (Gross msf*)



Source: Moody's Economy.com, Cushman & Wakefield, Inc.

*Gross msf=Refers to the physical square feet and is roughly 12 percent lower than rentable square feet.



Exhibit 3-20. Annual Net Office Absorption Forecasts, Base vs. Cyclical Scenarios New York Analysis Region, 2006 – 2035 (Gross msf*)

	Annual Ne	egional Office t Absorption ss msf)
Year	Base Scenario	Cyclical Scenario
2006	7.7	6.3
2007	5.9	7.1
2008	7.5	4.2
2009	8.3	0.1
2010	8.0	-0.7
2011	7.7	9.3
2012	7.6	12.6
2013	7.4	12.1
2014	7.6	11.3
2015	7.3	9.2
2016	6.8	7.9
2017	6.7	6.5
2018	6.6	3.3
2019	6.6	-4.5
2020	6.6	-4.1
2021	6.6	5.2
2022	6.4	11.5
2023	6.3	13.1
2024	6.2	11.3
2025	6.1	8.6
2026	6.1	7.9
2027	6.1	9.6
2028	6.0	2.0
2029	6.1	-7.5
2030	6.0	-5.6
2031	6.0	7.3
2032	5.9	12.8
2033	5.9	11.4
2034	6.3	17.0
2035	5.9	10.3
Total	200.1	195.7

Source: Moody's Economy.com, Cushman & Wakefield, Inc.

Forecast Shares for the Competitive Office Submarkets

The forecast for the region's overall net absorption is then used to forecast net absorption for each of the six competitive markets in the region. These shares were also determined through a regression that captures the evolution of these markets within the region over time. A time series regression of each market's share of the overall regional occupied space was estimated



over the period 1986 Q4 to 2005 Q4 and used to forecast the share of the region's overall demand that each market is estimated to obtain going forward¹⁵. Since each competitive market's share is extrapolated from the historic data, the share of the total market remains the same in both scenarios (Base or Cyclical). A market's occupied office space in any quarter is calculated by multiplying the projected total Regional Office Net Absorption by its projected share. For each market the resulting total occupied office space, along with respective shares and net absorption between 2005 and 2035 is summarized in Exhibit 3-21 for both scenarios.

Exhibit 3-21. Office Market Shares of Occupied Space

	1986	Q4	2005	Q4	2035 Q4 (fo	orecast)	Forecast
Region/Market	Occupied Office Space (msf)	% of Analysis Region	Occupied Office Space (msf)	% of Analysis Region	Occupied Office Space (msf)	% of Analysis Region	Net Absorption (msf)
BASE SCENARIO							
New York (excl Upper)	345.0	66.9%	370.5	59.9%	470.7	57.5%	100.1
Downtown	90.1	17.5%	84.9	13.7%	108.6	13.2%	23.7
Midtown	254.9	49.4%	285.6	46.2%	362.1	44.3%	76.5
New Jersey (6 counties)	92.0	17.9%	143.9	23.3%	207.3	25.3%	63.3
New Jersey Tier 1	24.6	4.8%	45.1	7.3%	67.1	8.2%	22.0
New Jersey Tier 2	67.4	13.1%	98.8	16.0%	140.2	17.1%	41.3
Other Suburbs	79.1	15.3%	104.0	16.9%	140.6	17.2%	36.6
Fairfield/Westchester	53.9	10.4%	69.7	11.3%	93.1	11.4%	23.4
Long Island	25.2	4.9%	34.3	5.6%	47.5	5.8%	13.2
Regional Total	516.1	100.0%	618.4	100.0%	818.6	100.0%	200.1
CYCLICAL SCENARIO							
New York (excl Upper)	345.0	66.9%	370.5	59.9%	468.2	57.5%	97.7
Downtown	90.1	17.5%	84.9	13.7%	105.9	13.0%	21.0
Midtown	254.9	49.4%	285.6	46.2%	362.9	44.5%	77.3
New Jersey (6 counties)	92.0	17.9%	143.9	23.3%	206.1	25.3%	62.2
New Jersey Tier 1	24.6	4.8%	45.1	7.3%	66.7	8.2%	21.6
New Jersey Tier 2	67.4	13.1%	98.8	16.0%	139.4	17.1%	40.6
Other Suburbs	66.8	14.70%	87.2	16.40%	139.9	17.2%	35.9
Fairfield/Westchester	53.9	10.4%	69.7	11.3%	92.6	11.4%	22.9
Long Island	25.2	4.9%	34.3	5.6%	47.3	5.8%	13.0
Regional Total	516.1	100.0%	618.4	100.0%	814.	100.0%	195.7

Source: Moody's Economy.com, Cushman & Wakefield, Inc.

New York City's share of the region's occupied space stabilizes at 57.5 percent by the end of the forecast period. Within New York City, Midtown's net absorption over the forecast period in the Base scenario totals 76.5 msf, or 44.3 percent of the Region's net absorption by



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¹⁵ The results of this regression are detailed in Appendix A.

2035, down slightly from 46 percent in 2005. Downtown's share ¹⁶ stabilizes at 13.2 percent, allowing it to absorb 23.7 msf from 2005 to 2035. (The respective numbers in the Cyclical scenario are slightly lower). This contrasts with the trend from 1986 to 2005 when Downtown's share of the Region declined rapidly, by almost four percentage points. Given that Downtown's tenant mix is heavily weighted by the financial services industry, this result is consistent with the employment projections for this sector provided by Moody's Economy.com.

Development Potential and Net Absorption in Hudson Yards

The regression techniques used to determine each market's demand over the forecast period could not be used for Hudson Yards, since data for this market does not exist. The Hudson Yards share was instead derived from Existing Midtown's share on the assumption that Hudson Yards will act as an extension to the Existing Midtown market. Even though Hudson Yards, as an emerging market, is not expected initially to be competitive with the Existing Midtown market in terms of rents and tenant demand, the marketability of the development sites in Hudson Yards, along with the proposed investments in needed infrastructure, should enable this market to become competitive over time in the same way that the Times Square submarket has gradually evolved into a competitive submarket of Midtown. Over the long run, Hudson Yards' share of Overall Midtown's (Hudson Yards plus Existing Midtown) demand should therefore be determined by the proportion of available space in Hudson Yards relative to the available space in the Existing Midtown market.

The ratio of the potential available space in Hudson Yards and Existing Midtown used to distribute the demand between the two submarkets is shown below. Existing Midtown's share is 51.8 percent and the corresponding share for Hudson Yards is 48.2 percent.

Exhibit 3-22. Long Term Potential Net Absorption, Existing Midtown and Hudson Yards 2005 Q4 (Gross or Physical Million Square Feet)

	2005 Available Space per Vacancies		per Vacancies		Zoned for Future	Total Space	Submarket Share of
Office Market/ Submarket	2005 Office Inventory	Vacant Space	Less Frictional Vacancy	Available for Absorption	Available Space* *	Available over Time	Midtown Overall
Overall Midtown	271.7	20.4	10.9	9.5	38.7	48.2	
Existing Midtown	271.7	20.4	10.9	9.5	15.5	25.0	51.8%
Hudson Yards					23.2	23.2	48.2%

* Zoned office space less 4.0 percent frictional vacancy rate Source: Moody's Economy.com, Cushman & Wakefield, Inc.

¹⁶ Downtown's share includes Brooklyn and the other emerging markets. Since historic data for these markets does not exist a separate analysis of these markets is provided in Appendix A.



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These shares should be viewed as a long-term trend or target shares that reflect the future potential development in Hudson Yards and Existing Midtown. In order to account for Hudson Yards' emerging status and reflect other short-term market conditions in Hudson Yards and Existing Midtown, which would cause these shares to deviate from this long-term trend, additional adjustments and constraints were imposed and are further detailed in Appendix A.

Using these additional constraints to allocate the demand for new space between Midtown and Hudson Yards, results in Hudson Yards capturing 39.0 percent of Overall Midtown's total net absorption or 26.2 msf from 2010 through 2035. In the Cyclical scenario, Hudson Yards captures 23.0 msf, or 34.0 percent of Overall Midtown's net absorption, as Existing Midtown remains the preferred market in downturns.

Exhibit 3-23. Change in Net Absorption for Overall Midtown, Existing Midtown and Hudson Yards, 2006-2035 (in millions of square feet)

В	aseline Scenar	io	_	(Cyclical Scenario	
Midtown Overall	Existing Midtown	Hudson Yards	Year	Midtown Overall	Existing Midtown	Hudson Yards
1.3	1.3		2006	1.0	1.0	
1.3	1.3		2007	2.1	2.1	
2.0	2.0		2008	0.9	0.9	
2.3	2.3		2009	-0.7	-0.7	
2.2	2.2		2010	-1.1	-1.1	
2.1	2.1		2011	3.0	3.0	
2.0	1.0	1.0	2012	4.3	3.8	0.5
2.7	1.4	1.3	2013	4.6	4.6	0.0
2.8	1.5	1.4	2014	4.3	4.3	0.0
2.7	1.4	1.3	2015	3.5	2.2	1.3
2.5	1.3	1.2	2016	3.0	1.5	1.4
2.4	1.3	1.2	2017	2.4	0.0	2.4
2.4	1.3	1.2	2018	1.1	0.2	0.9
2.4	1.3	1.2	2019	-2.0	-3.1	1.1
2.4	1.3	1.2	2020	-1.8	-1.8	-0.0
2.4	1.3	1.2	2021	1.9	0.6	1.3
2.4	1.4	0.9	2022	4.4	3.9	0.5
2.3	1.5	0.8	2023	5.0	4.3	0.8
2.3	1.2	1.1	2024	4.3	2.9	1.4
2.2	1.2	1.1	2025	3.2	2.3	0.9
2.3	1.2	1.1	2026	2.9	2.4	0.6
2.2	1.2	1.1	2027	3.6	1.9	1.7
2.2	1.1	1.1	2028	0.6	0.3	0.3
2.2	1.2	1.1	2029	-3.1	-2.4	-0.7
2.2	1.1	1.1	2030	-2.4	-3.1	0.7
2.2	1.1	1.1	2031	2.7	-0.1	2.8
2.2	1.2	1.0	2032	4.9	2.5	2.4
2.2	1.2	1.0	2033	4.4	3.5	0.8
2.3	1.3	1.0	2034	6.6	5.6	1.0
2.2	1.2	0.9	2035	3.9	2.9	1.0
67.3	41.1	26.2		67.5	44.4	23.0



Forecast Office Building Completions

The forecast for net absorption and demand for new space in Hudson Yards and Existing Midtown is used to derive the likely pace of development. As in any market, the interaction between demand and supply will determine when and where new construction will occur. Developers typically initiate construction based on recent demand relative to the available supply. When vacancy rates are high and space is readily available, new construction is unlikely to occur. When the converse is true, new construction is more likely to occur. Specifically, within the Existing Midtown and Hudson Yards submarkets the maximum vacancy rate at which new construction is assumed to occur is based on historic construction patterns within Existing Midtown and the region's emerging markets¹⁷.

A summary for both Existing Midtown and Hudson Yards estimated completions, along with the implied year-end vacancy, is shown in Exhibits 3-24 through 3-27. For Existing Midtown, a total of 46.9 msf in the Base Scenario (44.7 msf in the Cyclical) of new completions are projected from 2005 to 2035, about 1.5 msf per year.

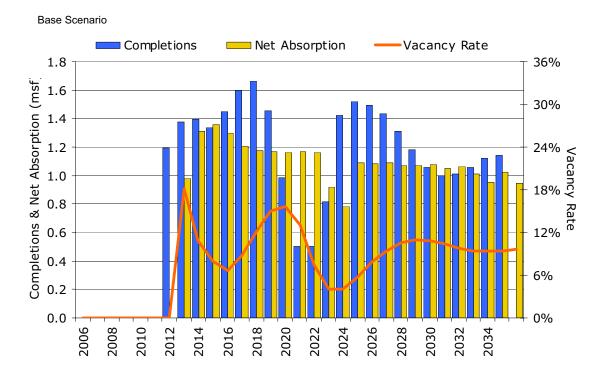
Similarly, for Hudson Yards, the results are a projected 29.0 msf (24.0 msf in the Cyclical) in likely construction completions from 2010 to 2035, or approximately 1.0 msf of new construction per year. In the Cyclical scenario, the pattern of construction completions follows the typical boom-bust behavior associated with real estate business cycles. By the end of the forecast period, however, the resulting total completions are similar to those in the Base scenario.



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¹⁷ These thresholds are discussed in more detail in Appendix A.

Exhibit 3-24. Completions and Net Absorption by Year, Base and Cyclical Forecasts Hudson Yards 2006 – 2035 (Gross Million Square Feet)



Cyclical Scenario

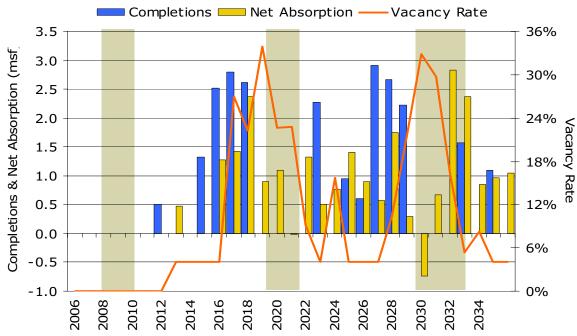


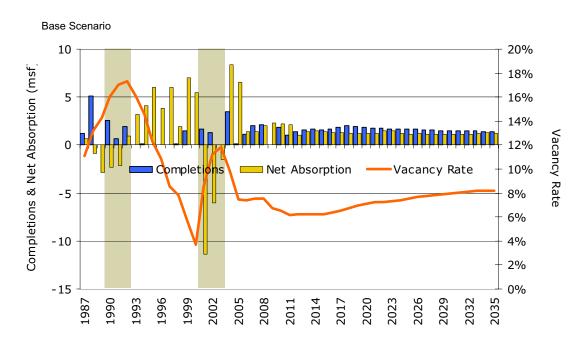


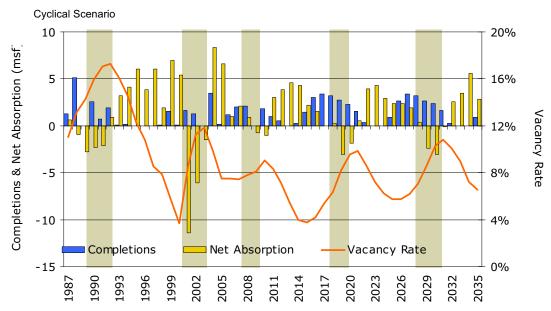
Exhibit 3-25. Annual Completions, Net Absorption and Vacancy Rate Hudson Yards Base and Cyclical Forecasts, 2006 – 2035 (Gross Million Square Feet)

Е	Base Scenario			Cyclical Scenario				
Likely Developer Construction Completions	Expected Tenant Net Absorption	Implied Year- end Vacancy Rate	Year	Likely Developer Construction Completions	Expected Tenant Net Absorption	Implied Year- end Vacancy Rate		
-	-	-	2006	-	-	-		
-	-	-	2007	-	-	-		
-	-	-	2008	-	-	-		
-	-	-	2009	-	-	-		
-	-	-	2010	-	-	-		
-	-	-	2011	-	-	-		
1.2	1.0	18.1%	2012	0.5	0.5	4.0%		
1.4	1.3	10.9%	2013	0.0	0.0	4.0%		
1.4	1.4	8.0%	2014	0.0	0.0	4.0%		
1.3	1.3	6.7%	2015	1.3	1.3	4.0%		
1.4	1.2	8.8%	2016	2.5	1.4	26.9%		
1.6	1.2	12.2%	2017	2.8	2.4	22.3%		
1.7	1.2	15.1%	2018	2.6	0.9	33.9%		
1.5	1.2	15.7%	2019	0.0	1.1	22.6%		
1.0	1.2	13.0%	2020	0.0	-0.0	22.8%		
0.5	1.2	7.4%	2021	0.0	1.3	9.2%		
0.5	0.9	4.0%	2022	0.0	0.5	4.0%		
0.8	0.8	4.0%	2023	2.3	0.8	15.8%		
1.4	1.1	5.8%	2024	0.0	1.4	4.0%		
1.5	1.1	7.8%	2025	0.9	0.9	4.0%		
1.5	1.1	9.4%	2026	0.6	0.6	4.0%		
1.4	1.1	10.5%	2027	2.9	1.7	10.3%		
1.3	1.1	11.0%	2028	2.7	0.3	21.3%		
1.2	1.1	10.9%	2029	2.2	-0.7	32.9%		
1.1	1.1	10.4%	2030	0.0	0.7	29.8%		
1.0	1.1	9.7%	2031	0.0	2.8	16.5%		
1.0	1.0	9.4%	2032	0.0	2.4	5.4%		
1.1	1.0	9.4%	2033	1.6	0.8	8.2%		
1.1	1.0	9.3%	2034	0.0	1.0	4.0%		
1.1	0.9	9.6%	2035	1.1	1.0	4.0%		
29.0	26.2			24.0	23.0			



Exhibit 3-26. Annual Completions, Net Absorption and Vacancy Rate, Existing Midtown Base and Cyclical Forecasts, 1987 – 2035 (Gross msf)





Shaded bars denote periods of economic recession.



Exhibit 3-27: Annual Completions, Net Absorption and Vacancy Rate, Existing Midtown Base and Cyclical Forecasts, 2006 – 2035 (Gross Million Square Feet)

	Base Scenario			Cyclical Scenario				
Likely Developer Construction Completions	Expected Tenant Net Absorption	Implied Year- end Vacancy Rate	Year	Likely Developer Construction Completions	Expected Tenant Net Absorption	Implied Year-end Vacancy Rate		
1.1	1.3	7.4%	2006	1.1	1.0	7.5%		
2.0	1.3	7.6%	2007	2.0	2.1	7.4%		
2.1	2.0	7.6%	2008	2.1	0.9	7.8%		
-	2.3	6.8%	2009	-	-0.7	8.1%		
1.8	2.2	6.6%	2010	1.8	-1.1	9.1%		
1.0	2.1	6.2%	2011	1.0	3.0	8.3%		
1.3	1.0	6.3%	2012	0.5	3.8	7.1%		
1.5	1.4	6.3%	2013	-	4.6	5.4%		
1.6	1.5	6.3%	2014	0.3	4.3	4.0%		
1.5	1.4	6.3%	2015	1.5	2.2	3.7%		
1.7	1.3	6.4%	2016	3.0	1.5	4.2%		
1.8	1.3	6.6%	2017	3.4	0.0	5.3%		
2.0	1.3	6.8%	2018	3.2	0.2	6.3%		
2.0	1.3	7.0%	2019	2.8	-3.1	8.2%		
1.8	1.3	7.1%	2020	2.2	-1.8	9.5%		
1.8	1.3	7.2%	2021	1.6	0.6	9.8%		
1.7	1.4	7.3%	2022	0.3	3.9	8.6%		
1.7	1.5	7.3%	2023	-	4.3	7.2%		
1.7	1.2	7.4%	2024	-	2.9	6.2%		
1.7	1.2	7.6%	2025	0.9	2.3	5.7%		
1.6	1.2	7.7%	2026	2.6	2.4	5.8%		
1.6	1.2	7.8%	2027	3.4	1.9	6.2%		
1.5	1.1	7.9%	2028	3.2	0.3	7.0%		
1.5	1.2	7.9%	2029	2.6	-2.4	8.6%		
1.5	1.1	8.0%	2030	2.4	-3.1	10.3%		
1.5	1.1	8.1%	2031	1.7	-0.1	10.8%		
1.5	1.2	8.1%	2032	0.2	2.5	10.1%		
1.4	1.2	8.2%	2033	-	3.5	8.9%		
1.4	1.3	8.2%	2034	-	5.6	7.2%		
1.4	1.2	8.2%	2035	0.9	2.9	6.5%		
46.9	41.1			44.7	44.4			



Conclusion

The forecast for new office completions in Overall Midtown totals 75.9 msf and 68.7 msf in the Base and Cyclical scenarios respectively. Combined with the approximately 8.0 msf expected to be completed on the World Trade Center site, this results in 83.9 msf (76.7 msf in the Cyclical) of new inventory that could potentially come on line based on demand in the major Manhattan office markets over the 2006 through 2035 forecast period.

On an annual basis this represents an additional 2.5 msf of inventory coming online per year in Manhattan, or annual growth of approximately 0.8 percent. This is consistent with Moody's Economy.com's projection of office-using employment growing at a slightly lower 0.7 percent annual rate over the forecast period. Furthermore, to put this forecast result in a historic context, the building completions estimated over the entire 30-year forecast period are comparable to the 74.1 msf built during the 10-year boom from 1960 to 1970 and to the 61.1 msf built between 1982 to 1990.

It is important to note that while the current zoning and available sites in Existing Midtown and Hudson Yards combined are estimated to support only 48.2 million square feet of commercial development, the overall forecast demand (75.9 msf Base, 68.7 msf Cyclical) could be accommodated through future zoning changes or through redevelopment of existing sites, which are currently not indicated as development sites. The forecast growth in office-using employment will continue to create demand for new development sites, of which, Hudson Yards is expected to be a substantial component given its location and proposed mass transit access adjoining the Existing Midtown market.



Development Scenarios

The focus of this section is an assessment of 14 large sites that have the best potential to be developed as class A office buildings. While certain of these sites still require assemblage and alternate configurations, such as smaller development parcels, are allowable under the Hudson Yards zoning, these sites offer the large floor plate configurations, making them desirable from a development perspective. Specifics on the lot sizes, zoning, bonuses and transfer mechanisms are detailed in the zoning resolution¹⁸. Development on these sites assumes that key elements of the proposed public infrastructure and amenities are in place. These include:

- Number 7 Subway line extended along West 42nd Street to West 34th Street
- West 34th Street subway station
- Platform over some large commercial sites
- First phase of the Mid-Block Boulevard and Park between West 33rd and 36th Streets

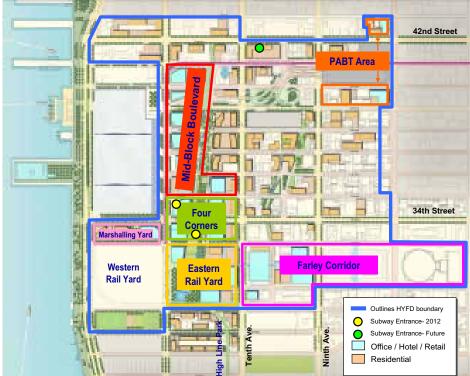


Exhibit 3-28. Special Hudson Yards Finance District

¹⁸ Special Hudson Yards District, Zoning Amendment adopted by City Council N040500(A) ZRM, 19 January 2005.



Source: New York Department of City Planning, NYC Economic Development Corporation.

Commercial Development Corridors

The premier commercial corridors in Midtown Manhattan such as Park and Sixth Avenues are built up and currently provide no real opportunities for further development. Few development sites exist either in Midtown or Downtown Manhattan¹⁹ as of year-end 2005. Over the last decade, large commercial development has generally occurred west of Sixth Avenue, and is anchored by the West 42nd Street corridor and Columbus Circle's new Time Warner building.

Based on the recent development trends seen in Midtown, commercial development of Hudson Yards is expected to occur initially around the Port Authority Bus Terminal (PABT) and just west of Pennsylvania Station along the Farley Corridor, proceed to the Four Corners nexus of the Eleventh Avenue corridor, and progress north to West 42nd Street. This expected pattern of commercial development follows the western expansion of Midtown that began with the redevelopment in the 1980s of Times Square and West 42nd Street and which today extends west of the PABT and Eighth Avenue. Combined, these 14 large sites in Hudson Yards can accommodate, per the zoning resolution, 25.7 msf of office development. It is important to note, however, that any delay or failure to complete the proposed number 7 subway extension could likely delay office development along Eleventh Avenue and other western sites in the Hudson Yards.

The new Hudson Yards office submarket will be adjacent to the existing office district at West 34th Street and Eighth Avenue, which has some of the best mass transit access in Midtown, due to the three railroad lines and five subway lines that converge in Pennsylvania Station. There is intense developer interest in sites around Madison Square Garden (MSG)/ Pennsylvania Station including, the Farley Post Office/Moynihan Station, located on the full block directly west of Pennsylvania Station between Eighth and Ninth Avenues. There are currently two development possibilities for this site depending on the future location of MSG as discussed later in this chapter.

Amenities, including retail stores, services and restaurants that are important to office users are encouraged within the Eleventh Avenue commercial corridor per the zoning resolution. The expansion of the Javits Convention Center and a planned convention hotel at West 36th Street and Eleventh Avenue would complement the commercial development in Hudson Yards and are expected to boost Manhattan's ability to host large-scale meetings. The Mid-Block Boulevard and Park, the nearby Hudson River Park, and other proposed cultural facilities will also contribute to the attractiveness of the Hudson Yards and further enhance the marketability of future development.

¹⁹ As previously discussed and shown in Exhibit 3-16.



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Zoning Support for Hudson Yards Redevelopment

While mass transit access is clearly a key determinant in the development of the Hudson Yards, other considerations critical to supporting new construction are discussed below.

Incentives to stimulate development are provided through the current zoning which enables sites to increase the allotted base Floor Area Ratio (FAR) through bonus mechanisms. These bonus mechanisms are designed to target specific types of development, both residential and commercial, within the geographic corridors envisioned by the zoning plan. Residential development along the Hell's Kitchen corridor should be spurred by enabling developers to purchase additional FAR in the form of a District Improvement Fund/Bonus (DIB) that provides for inclusionary housing²⁰. While not intended as an incentive, the DIB has that effect, since its current required payment of \$106.48²¹ psf of bonus space is a significant discount to what developers would otherwise have to pay for land based on recent land sales. The current zoning directs that the Tenth Avenue, 42nd Street and Hell's Kitchen mid-blocks are primarily for residential use.

With respect to commercial development, the large sites along the Four Corners and the Mid-Block Boulevard and Park can also obtain bonus FAR for commercial use through the DIB and transfer of air rights from the ERY. The DIB bonus for commercial use is similarly at \$106.48 psf, providing considerable opportunity to upzone these sites to the maximum FAR.

Additionally, per the zoning resolution, four of the sites along Tenth and Eleventh Avenues have the option of using up to six FAR initially for residential development. Sites with lot sizes in excess of 69,000 sf are allowed to build out this residential FAR prior to commercial development (with a plan that includes future commercial development) while sites on smaller lot sizes can only build the residential FAR in conjunction with commercial development. This option for mixed-use, commercial/ residential development could be important to the development of larger sites which would otherwise have to depend exclusively on large commercial anchor tenants to jump start their development. Some of the recent large, new properties, including the Bloomberg (731 Lexington Avenue) and Time Warner (10 Columbus Circle) buildings have successfully incorporated a mix of uses to maximize their development potential.

These large commercial sites potentially offer some of the largest lots for development in Manhattan. Although some of the sites are publicly owned and available for development, many are privately owned and need to be assembled. While a detailed assessment of each site is presented in Appendix A, the median lot size of the 14 commercial sites exceeds 65,000 sf.

²¹ The DIB bonus was initially set at a price of \$100 psf and is inflated annually by the New York Area CPI Index, as published by the Bureau of Labor Statistics.



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²⁰ A smaller bonus can be obtained through purchases of air rights from the Mid-Block Boulevard and Park. For detailed discussion refer to the Hudson Yards Zoning Resolution.

As a comparison, with the exception of 4 Times Square which has a lot size of 46,000 sf, the other new Times Square buildings have lot sizes under 30,000 sf.

The Hudson Yards sites could offer the advantage of both flexible and large floor plate commercial usage and can be built to suit. These characteristics are expected to be particularly marketable to tenants seeking large spaces to consolidate operations under one roof or for other tenant uses that require large floor plates. Based on tenant leasing data, C&W estimates that there are 21.1 msf of leases in excess of 100,000 sf set to expire between 2012 and 2015 as shown in Exhibit 3-29. While some tenants may choose to renew their existing leases, the availabilities in Hudson Yards could provide tenants with newer buildings and better amenities.

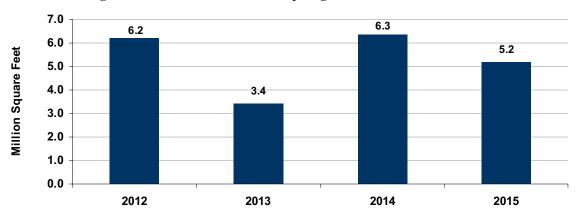


Exhibit 3-29. Large Office Leases in Manhattan Expiring Between 2012 and 2015

Source: COSTAR, Cushman & Wakefield, Inc.

Large Commercial Development Sites

The focus of future commercial development patterns are the Farley Corridor, Eastern Rail Yard, and Eleventh Avenue corridor. Even though the Madison Square Garden (MSG), the PABT, and any other commercial sites located east of Ninth Avenue fall within with the geographic boundaries of the Hudson Yards Finance District, and any real estate taxes or PILOTS associated with these will flow to Hudson Yards Infrastructure Corporation, these sites are generally considered to be within the Existing Midtown office market and therefore are assumed to be sites that can accommodate the forecast demand within Existing Midtown²².

Public sector incentives currently in place and planned actions are considered in assessing the strengths and weaknesses of the individual development sites. Site specific details with

²² As noted in the previous forecast section, these sites were not factored into Hudson Yards' long term share of overall demand and therefore are matched with Existing Midtown projected demand of 46.9 msf in the Base scenario and 44.7 msf in the Cyclical scenario.



respect to mass transit access, zoning allowances and usage, floor design, assemblage and ownership characteristics, and construction difficulties are provided in Appendix A. These assessments are used to determine an illustrative pacing of development sites. Exhibit 3-30 summarizes the 14 large commercial sites within six major sub-districts and an area map with site locations is provided in Exhibit 3-31.

Exhibit 3-30. Summary of Hudson Yards Large Commercial Sites

Site Number Corridor/Block Ide	entifier Lot Area (SF)	Max FAR	Max ZFA	ERY Transfer	Completed Assemblage	Residential FAR (1)	Residential SF (2)	Commercial SF (2)
Farley Corridor								
1 Site 729A	128,600	19.0	2,443,400	NA	Yes	4	591,560	2,218,350
2 Site 729B	80,729	19.0	1,533,851	NA	Yes	4	371,353	1,392,575
Eastern Rail Yard (3)								
3 Site 702/704- Towers	A, B, D 570,000	11.0	6,270,000	NA	Yes	2	1,311,000	5,439,500
Four Corners (4)								
4 Site 705A	40,116	33.0	1,323,828	15.0	Partial			1,481,268
5 Site 705B	71,203	33.0	2,349,699	15.0	Partial	6	491,301	2,518,669
6 Site 706A	46,634	33.0	1,538,922	15.0	Yes			1,728,626
7 Site 706B	67,452	33.0	2,225,916	15.0	Yes			2,169,719
Marshalling Yard								
8 Site 679C	158,000	7.9	1,248,200	NA	Yes			1,435,430
Mid-Block Boulevard								
9 Site 707B	64,205	24.0	1,540,920	6.0	No			1,772,058
10 Site 708A	57,694	21.6	1,246,190	3.6	Partial			1,433,119
11 Site 709A	63,819	21.6	1,378,490	3.6	Partial			1,585,264
12 Site 710A	69,547	20.0	1,390,940	2.0	Partial			1,599,581
13 Site 1069A	83,160	20.0	1,663,200	2.0	Yes	6	573,804	1,338,876
PABT Area								
14 1033B	25,587	14.0	358,218	NA	Partial	12		411,951
Total 14 Sites			26,511,775				3,339,018	26,524,987
Less Commercial Space devot	ed to Retail							(784,355
Total Estimated Office Space								25,740,632

¹⁾ Sites with floor plates exceeding 69,000 sf have the option to build residential FAR first.

Source: Special Hudson Yard District Zoning Resolution January 19, 2005, Hudson Yards Development Corporation, Cushman & Wakefield, Inc.



²⁾ Refers to gross or physical square feet inclusive of 15 percent added to Max ZFA for non-leaseable uses such as HVAC.

³⁾ Site's maximum FAR is 11, of which a maximum of 9 FAR may be used for commercial development, 3 FAR for residential development, and 2 FAR for a community facility; assume 200,000 sf for retail and 200,000 sf for cultural center.

⁴⁾ All Four Corner sites can not build to the Maximum FAR per zoning.

^{*} PABT= Port Authority Bus Terminal

Sites evaluated in Office Demand Study Sites likely for Hotel Development Potential Sites for Future Development Block Identifier-Primary owner where k 729A- Brookfield Eastern Rail Yard- MTA 705A- Extell 706A- Moinia 706B- Sherwood Equities 707B 708A- Witko 710A 69A- Mercedes-Benz USA ely Hotel Sites 728A- Extell 711A- Port Authorit

Exhibit 3-31. Large Commercial Sites within the Hudson Yards Finance District

Source: New York Department of City Planning, NYC Economic Development Corporation.

Potential Commercial Development Sites

Within the Hudson Yards, there are additional options for commercial development beyond the 14 sites evaluated in this study. The Madison Square Garden and Western Rail Yard sites described below, although not included as revenue sources, could be redeveloped over the next 30 to 40 years.

While the final development plan for these sites remains uncertain, they are part of the Hudson Yards Finance District and Hudson Yards is expected to receive the real estate tax or PILOT revenues associated with their development. As a result, these alternatives should not be viewed as competing sites, but as providing possible upside potential for the Hudson Yards revenues.

In addition to these two sites, development on the Port Authority of New York and New Jersey Bus Terminal (PABT) could fill some of the demand projected by C&W for commercial developments within the Project Area.²³

²³ Development on property owned by the Port Authority of New York and New Jersey in the Project Area will not, by operation of law, result in real property tax revenues to the City or PILOT revenues to the Corporation.



Madison Square Garden

The MSG site could become a premier commercial site due to its maximum zoning capacity of approximately 5.0 msf of commercial development. Although the present MSG site is occupied by the 1.0 msf arena, if the site were cleared, the full 19.5 allowable FAR could be built out. Due to the superior location of MSG over Pennsylvania Station and the direct mass transit access available on the site, office and hotel development are obvious future uses. The West 34th Street corridor is also a prime retail location, as it has the heaviest pedestrian traffic of any street in Manhattan. In fact, it is the most sought after location for mid-level national chain retailers.

The big "if" of any future development is focused on the current use of MSG and whether the owners will reconsider a move elsewhere in order to cash in on the site's development potential. Publicly, it has been announced that MSG may move to the western annex of the Moynihan Station, and the MSG site would be redeveloped. If this occurs, a newly configured MSG could result in a mix of office, hotel and retail uses that will augment the existing area uses, as well as upgrade Pennsylvania Station's overall character. In this scenario, commercial development on the designated large sites 728A and 729B in the Hudson Yards would likely occur after MSG's redevelopment, given the sizable amount of commercial space that could be accommodated there.

Alternatively, if MSG remains at its current site, the likely candidate for initial development are sites 729A and 729B, which together comprise a large area of roughly 4.8 acres with a maximum 19 FAR, or a total development potential of approximately 4.0 msf (of which 4 FAR or roughly 800,000 sf could be residential). The sites, like MSG, also require a platform in order to fully develop the sites. They are located directly west of Moynihan Station and are expected to benefit from the redevelopment of this landmark building.

Subsequently, development on the sites further west on Tenth and Eleventh Avenues would benefit from the extension of the number 7 subway and the new subway station at West 34th Street between Tenth and Eleventh Avenues, which are expected to be completed by 2013. The subway would provide further impetus for development of the Four Corners and the Eleventh Avenue corridor.

A second planned subway station at West 41st Street between Tenth and Eleventh Avenues and a northern extension of the Mid-Block Boulevard and Park is also planned as the development continues to the north and will provide key access to transportation at these northern sites. Initially, however, these sites would be situated furthest from public transportation, likely delaying their development in favor of sites further south.



Western Rail Yard

The Western Rail Yard (WRY), located directly west of the Eastern Rail Yard between Eleventh Avenue and the West Side Highway and West 30th and West 33rd Streets is approximately 13 acres in size. The City and the MTA have recently announced an agreement under which the City will take the lead in planning for and managing the development of the air rights above the active Long Island Rail Road tracks, which would remain in use on the site²⁴. Once this site is platformed and rezoned, it would provide another very large development site with direct views of the Hudson River and further enhance the evolution of Hudson Yards. According to the terms of the City/MTA agreement for the site, any real estate tax related revenues from the site, including PILOT, will flow to Hudson Yards.

Port Authority Bus Terminal

The North Terminal of the Port Authority Bus Terminal (PABT) has the capacity to support approximately 1.0 msf of new development atop the existing structure. Over the years, such development has been considered and is likely to become more focused as the area continues to develop around the PABT. It is anticipated that at some point over the 30-year forecast period, such a tower will be built. The eventual uses will likely complement the existence of the New York Times office tower (620 Eighth Avenue) now under construction, as well as other residential and hotel projects nearby.

Likely Development Pacing of the Large Commercial Sites

The basis for determining the pacing of the overall commercial development in the Hudson Yards is the underlying demand for office space summarized in Exhibit 3-27 for both the Base and Cyclical scenarios. The expected developer completions from 2012 to 2035 period are provided in Exhibits 3-32 and 3-33. Using this schedule of completions and the attributes and weaknesses of each site, a likely order of development of the 14 large commercial sites in Hudson Yards has been determined for the Base and Cyclical scenarios. This pacing is illustrative and sites are grouped in five-year increments, rather than on an annual basis, since the individual order of completions is difficult to determine. As noted development is contingent on assemblage for some of these sites and assumes that key infrastructure is in place. Development on some of the alternative sites included in the financing district such as MSG and the Western Railyards, could also affect the order of development of these 14 sites. The purpose of such pacing is to provide a counterpart to the demand forecast of office completions used in the revenue model to forecast future revenue projections.

²⁴ No. 7 Extension Memorandum of Understanding and Rail Yards Agreement: 28 September 2006, Agreement between Metropolitan Transportation Authority, NYC Transit Authority and MTA Capital Construction, and the City of New York, Hudson Yards Development Corporation and Hudson Yards Infrastructure Corporation.



Exhibit 3-32. Large Commercial Sites, Base Scenario Estimated Completion Dates in Five-Year Increments

Site	Total MSF	Site	Total MSF
2012-2016		2022-2026	
1033B 729B 729A 705A ERY Tower A Subtotal	0.4 1.4 2.2 1.5 1.8 7.3	679C 707B 708A ERY Tower D Subtotal	1.4 1.8 1.4 1.8 6.4
		2027-2031	
2017-2021 705B 706A ERY Tower B 706B	2.5 1.7 1.8 2.2	709A 710A 1069A Subtotal	1.6 1.6 1.3 4.5
Subtotal	8.2		
Total			26.5

Source: Cushman & Wakefield, Inc.

Note: Totals may not match Exhibit 3-30 due to rounding and include retail space.

Exhibit 3-33. Large Commercial Sites, Cyclical Scenario Estimated Completion Dates in 5-Year Increments

Site	Total MSF	Site	Total MSF
2012-2016		2022-2026	
1033B 729B 705A ERY Tower A Subtotal	0.4 1.4 1.5 1.8 5.1	706B ERY Tower B 679C Subtotal	2.2 1.8 1.4 5.4
2017-2021 729A 705B 706A Subtotal	2.2 2.5 1.7 6.4	2027-2031 707B 708A 709A 710A Subtotal 2032-2035 1069A Subtotal	1.8 1.4 1.6 1.6 6.4 1.3

Source: Cushman & Wakefield, Inc.

Note: Totals may not match Exhibit 3-30 due to rounding and includes retail space.



24.6

Total

Revenues from Office Development: Methodology and Assumptions

New development in Hudson Yards is expected to generate significant property tax-related revenues that will be used to pay the City bonds issued to finance the roughly \$3 billion of infrastructure necessary to catalyze development in the Hudson Yards. Revenues associated with office development are expected to account for over 50 percent of the overall revenues in both the Base and Cyclical scenarios. These projections are the result of two major inputs into the City's revenue model used to calculate the 45-year revenues from 2006 to 2050²⁵:

Projected Demand is defined in millions of square feet (msf) as derived in the previous section. The projections provided by C&W rely on underlying economic forecasts provided by Moody's Economy.com (Chapter 2) that were used as inputs along with key real estate and zoning variables and assumptions on infrastructure improvements.

Even though the 30-year demand forecast ends in 2035, the revenues from the development are projected and retained by HYIC for an additional 15 years, from 2036 through 2050. C&W incorporated the following assumptions and factors to support the revenues for new office development in the Hudson Yards.

Infrastructure: Projected demand assumes that key infrastructure improvements are competed. The completion of the number 7 subway by 2013 is critical to most office development in Hudson Yards, although development could initially proceed on some of the sites closer to Eighth Avenue. Delays in its completion would likely result in office development being postponed. The Mid-Block Park is planned in two sections, West 33rd to West 36th Streets, and West 37th to West 42nd Streets, and both are likely to be considered essential amenities to the office commercial corridors. Furthermore it is assumed that the transfer of air rights from the ERY under the agreement between the MTA and the City will occur in a timely manner in order to support the projected development.

Zoning: The projected demand assumes that the existing zoning legislation²⁶ regarding building FAR and DIB bonus remains in place throughout the analysis period. It is also assumed that future changes to City zoning will not materially affect Manhattan's overall development potential. Significant changes to City zoning, by creating competitive markets to Hudson Yards other than those identified in this report, could potentially result in lower demand than forecast.

Taxes or PILOTs Once the areas estimated development potential was identified, estimates of the likely real estate tax related revenues were calculated. For office development, these

²⁶ Special Hudson Yards District, Zoning Amendment adopted by City Council N040500(A) ZRM, 19 January 2005.



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²⁵ Unless otherwise noted all revenue data in this and subsequent chapters is on a City fiscal year basis. For modeling purposes it is assumed that any projected development would occur within the City's fiscal year. For the impact of this assumption and other timing issues refer to Chapter 1.B. Limiting conditions

revenues are assumed to be collected in the form of payments in lieu of taxes (PILOT) pursuant to New York City's Industrial Development Agency's (NYCIDA) Uniform Tax Exemption Program (UTEP)²⁷ amendment for Hudson Yards.

<u>Tax Programs</u>: C&W reviewed the assessment mechanism, tax policies²⁸ and incentive programs used to determine the tax rates and PILOT payments in the revenue model.

<u>Market Comparables:</u> C&W also provided relevant market comparables and the analysis of the PILOT discount to full taxes necessary to incentivize office development in Hudson Yards.

<u>Growth Rates:</u> To project the revenues over the forecast period, the revenue model assumes constant growth rates for taxes and PILOTS from 2006 through 2050.

On the basis of the real estate variables provided by Cushman & Wakefield and analysis of the other available data provided by third parties (which are relied upon and assumed to be reasonable and accurate), including forecasts provided by Moody's Economy.com and 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 believes the revenue projections to be reasonable.

The revenues are contingent on the realization of all the economic and real estate assumptions, analyses, zoning and completion of key infrastructure, and limiting conditions that are sourced or detailed herein and in Chapter 1.B. Limiting Conditions.

²⁸ In order to understand how the PILOT compares to market rate property taxes, an overview of New York City property taxes is provided in Appendix C.



²⁷ See pages 3-45--3-49

Uniform Tax Exemption Policy (UTEP) Tax Program

The revenue projections for Class 4 office properties in Hudson Yards assume that new building owners will make PILOT payments instead of paying property taxes based on billable assessed values²⁹. These PILOT payments are set in the New York City Industrial Development Agency (IDA) Hudson Yards UTEP amendment. The amount of the PILOT will be discounted from billable taxes in order to provide sufficient incentives to make development economically feasible³⁰. As structured, PILOT payments will extend for a 15-year period following construction and then are subject to phase-out to the equivalent of Hudson Yards full taxes over a five-year period.

Hudson Yards Full Class A Office Property Tax Analysis

Since market comparables for Hudson Yards are not available, C&W used office buildings in Existing Midtown as the basis for computing full taxes in Hudson Yards by determining projected land and building assessment differentials with respect to Midtown. Property taxes for land and building assessments for new buildings in Midtown are shown in the Exhibit 3-34 below.

Exhibit 3-34. Comparable Office Buildings Tax Assessment, 2006

	GBA	TRANSITION	AL			ACTUAL					
					LAND				LAND		TAXES
ADDRESS	SQ. FT.	LAND	BUILDING	TOTAL	% TOTAL	LAND	BUILDING	TOTAL	% TOTAL	TAXES	PSF
731 Lexington Avenue											
Bloomberg Space	539,643	\$24,028,758	\$75,537,169	\$99,565,927	24%	\$36,504,000	\$92,196,000	\$128,700,000	28%	\$11,256,924	\$20.86
Speculative Office Space	157,003	\$6,966,918	\$22,019,209	\$28,986,127	24%	\$10,584,000	\$26,856,000	\$37,440,000	28%	\$3,277,172	\$20.87
Total Office Space	696,646	30,995,676	97,556,378	128,552,054	24%	47,088,000	119,052,000	166,140,000	28%	\$14,534,095	\$20.86
300 Madison Avenue											
Total Office Space	1,142,417	\$22,851,000	\$98,019,000	\$120,870,000	19%	\$21,510,000	\$131,040,000	\$152,550,000	14%	\$13,665,562	\$11.96
Columbus Centre											
Time Warner Space	637,863	\$32,808,864	\$104,281,747	\$137,090,611	24%	\$36,616,950	\$104,782,127	\$141,399,077	26%	\$15,499,464	\$24.30
Office Space	96,743	\$4,609,540	\$10,200,779	\$14,810,319	31%	\$5,052,600	\$9,531,537	\$14,584,137	35%	\$1,648,883	\$17.04
Total Office Space	734,606	\$37,418,404	\$114,482,526	\$151,900,930	25%	\$41,669,550	\$114,313,664	\$155,983,214	27%	\$17,173,919	\$23.38
745 Seventh Avenue											
Total Office Space	1,020,000	\$37,413,000	\$115,627,000	\$153,040,000	24%	\$46,350,000	\$114,300,000	\$160,650,000	29%	\$17,302,702	\$16.96
383 Madison Avenue											
Total Office Space	1,174,988	\$24,039,000	\$143,461,000	\$167,500,000	14%	\$19,845,000	\$182,655,000	\$202,500,000	10%	\$18,937,550	\$16.12
Minimum					14%				10%		\$11.96
Maximum		\$37,418,404		\$167,500,000	31%	\$47,088,000		\$202,500,000	35%	\$18,937,550	\$24.30
Weighted Average	4,768,657	\$152,717,080		\$721,862,984	23%	\$176,462,550		\$837.823.214	25%	\$81,588,257	\$17.11

Source: New York City Department of Finance, Cushman and Wakefield, Inc.

³⁰ Hudson Yards Amendment to Uniform Tax Exemption Policy (UTEP), adopted by NYCIDA on August 8, 2006.



²⁹ Refer to Overview of City Taxes for a more detailed discussion of the City's real property tax assessment mechanism in Appendix C.

Property taxes for new class A office buildings in Hudson Yards were then calculated as follows:

Land Values

Recent land values for commercial properties in Hudson Yards are typically 50 percent lower than land values in Existing Midtown at \$100 to \$125 psf as compared to \$250 psf in Midtown³¹. Since land values account for approximately 20 percent of assessed values, this results in a 10 percent discount in Hudson Yards assessments due to land values, as shown in Exhibit 3-34.

Building Values

Given that buildings in New York City are assessed based on income and expenses, the projected rental income in Hudson Yards was determined by comparing rental rates across various Midtown submarkets and determining the expected rent differential for properties in Hudson Yards³². A survey of 340 class A leases signed in Midtown in 2005 was conducted by C&W and used for comparison purposes. Rental rates refer to the actual rents signed or face rents, but do not include tenant improvements.

i)Submarket Rental Rates

Since rent differentials reflect both physical characteristics of buildings in terms of amenities offered, as well as differences in location, these two components (location and physical characteristics) were analyzed by distinguishing between submarkets which are considered to be competitive to Hudson Yards and by further distinguishing the Top Tier rents within each submarket as summarized in Exhibit 3-35.

Development in Hudson Yards is expected to be highly competitive in terms of the building amenities offered, as the large floor plates and state of the art technology of these buildings are expected to command substantial rent premiums. The top 10 percent of leases, referred to as top-tier leases in each submarket (hence controlling for location), were used as a basis to compare the premiums commanded by the best buildings within each submarket.

To account for locational differences, the Midtown submarkets were separated into three groups: Comparable submarkets (Grand Central, East Side/UN, West Side and Sixth Avenue/Rockefeller Center), Pennsylvania Station-Times Square South, and Top Midtown submarkets. Development in Hudson Yards is not expected to compete with the Top Midtown submarkets (Park and Fifth Avenue) which comprise Manhattan's premier office corridor and were therefore excluded for comparative purposes. With respect to the other two submarkets,



³¹ Refer to the supporting tables in Appendix A.

³² Operating expenses are assumed to be the same as in Existing Midtown.

Hudson Yards is expected to be most comparable with the Pennsylvania Station-Times Square South submarket.

<u>ii)</u>Locational submarket differences

Comparing the top-tier rents in the Pennsylvania Station-Times Square South submarket with those in the comparable Midtown submarkets results in a 13.5 percent rent differential. An additional 5.0 percent rent discount is applied to properties in Hudson Yards west of Tenth Avenue to reflect the locational disadvantage of these compared to properties in Hudson Yards closer to the existing Midtown submarkets. Multiplying the two tiers of discounts, 13.5 and 18.5 percent respectively, by the 80 percent building weight in overall assessment, yields an 11.0 and 15.0 percent discount of Hudson Yards, east of 10th Avenue and Hudson Yards west of 10th Avenue, respectively, to Midtown building taxes.

Estimated Full Hudson Yards Class A Office Property Taxes

Combined with the 10.0 percent land discount, full taxes in Hudson Yards are estimated to be 21.0 percent and 25.0 percent lower than Midtown taxes of approximately \$17.00 psf. This equates to \$13.46 psf and \$12.78 psf in 2006, using a 13.5 and 18.5 percent rent differential, respectively.

Exhibit 3-35. Calculation of Rental Discount From Midtown

Markets to Hudson Yards Rental Comparison by Submarket, Calendar Year 2005 Leases

	Face Rents \$/	psf
	Average All Leases	Top Tier*
Comparable Markets		
Grand Central	\$45.94	\$70.86
East Side/UN	\$47.01	\$75.09
West Side	\$42.97	\$71.41
6th Avenue/Rockefeller	\$50.77	\$68.90
Average	\$46.70	\$72.86
Pennsylvania Station-Times Square South	42.07	\$63.00
Discount From Pennsylvania Station-Times Square To Comparable Midtown Markets	9.9%	13.5%
Hudson Yards @ additional 5 percent discount		18.5%
Additional Analysis of Top Tier Midtown Rents		
Top Midtown Submarkets		
Park Avenue	\$62.68	\$90.25
Madison/Fifth Avenue	\$63.67	\$109.46

Top Tier refers to the top 10 percent of leases signed.

Source: Cushman & Wakefield, Inc.



Hudson Yards Office PILOT Discount to Full Class A Property Taxes

The estimated rent discounts (18.5 percent and 13.5 percent) and estimated full taxes (\$12.78 psf and \$13.46 psf) were then used by C&W to determine the feasibility of new construction in Hudson Yards as shown in Exhibits 3-36 and 3-37. This analysis compares prospective building values and development costs to estimate the maximum land values (residuals) that support construction feasibility. Construction costs, developer's profits, rent concessions and tenant improvements were based on data from a sample of newly constructed Midtown office buildings.

Exhibit 3-36. Hudson Yards Office Building Construction Feasibility and Taxes, 18.5 percent Rent Discount to Midtown, 2006

New Construction, Existing Midtown	Midtown	Hudson Yards			
	Average 5 Comps	Estimated Full Taxes	Discounted @ 25% HY Taxes	Discounted @ 40% HY Taxes	
Prospective Value					
Gross Rental Income	\$74.05	\$60.32	\$60.32	\$60.32	
Less: PILOT or Full Taxes	\$17.00	\$12.78	\$9.58	\$7.67	
Less: Operating Expenses @ \$12.00/SF	\$12.00	\$12.00	\$12.00	\$12.00	
Net Operating Income	\$45.05	\$35.55	\$38.74	\$40.66	
Capitalization Rate	5.1%	5.8%	5.8%	5.8%	
Indicated Value (Rounded)	\$880.00	\$620.00	\$670.00	\$710.00	
Less: Development Costs					
Office Construction Costs	\$366.44	\$400.00*	\$400.00	\$400.00	
Developer's Profit @ 15%	\$54.97	\$60.00	\$60.00	\$60.00	
Free Rent @ 10 Months	\$61.71	\$50.27	\$50.27	\$50.27	
Tenant Improvements @ \$45.00	\$45.00	\$45.00	\$45.00	\$45.00	
Leasing Commissions @ 42%	\$31.10	\$25.34	\$25.34	\$25.34	
Subtotal	\$559.21	\$580.61	\$580.61	\$580.61	
Adjusted Residual Land Value	\$320.79	\$39.39	\$89.39	\$129.39	
Discount factor @ 8% for 3 Years	0.79	0.79	0.79	0.79	
Land Value by Residual Technique	\$255	\$31	\$71	\$103	
Actual Land Acquisition Costs	\$186	n/a	n/a	n/a	

^{*}Construction costs have significantly increased in Calendar Year 2005 and 2006 over 2004, and thus \$400 is used as a current estimate. Taxes of \$17.00 psf refer to 2006 Fiscal Year.

Source: Cushman & Wakefield, Inc.

As shown above, using current estimates of expenses and rental income, construction feasibility of office buildings in Hudson Yards would not be attained given that land values in Hudson Yards are currently \$100 to \$125 psf compared to the \$31 psf shown as feasible in this analysis.



Assuming an 18.5 percent rental discount, a 40 percent discount to estimated full taxes in Hudson Yards which results in a land residual of \$103 psf is necessary to meet the feasibility threshold.

Exhibit 3-37 shows a similar analysis using the 13.5 percent rental discount applicable to properties closer to Eighth Avenue. With a 13.5 percent rental discount and estimated Hudson Yards full taxes of \$13.46 psf and rents of \$64.03 psf, feasibility is reached at a 25 percent discount to estimated full taxes in Hudson Yards.

Exhibit 3-37. Hudson Yards Office Building Construction Feasibility and Taxes, 13.5 percent Rent Discount to Midtown, 2006

New Construction, Existing Midtown	Midtown	Hudson Yards			
	Average 5 Comps	Estimated Full Taxes	Discounted @ 25% HY Taxes	Discounted @ 40% HY Taxes	
Prospective Value					
Gross Rental Income	\$74.05	\$64.03	\$64.03	\$64.03	
Less: PILOT or Full Taxes	\$17.00	\$13.46	\$10.09	\$8.08	
Less: Operating Expenses @ \$12.00/SF	\$12.00	\$12.00	\$12.00	\$12.00	
Net Operating Income	\$45.05	\$38.57	\$41.93	\$43.95	
Capitalization Rate	5.1%	5.8%	5.8%	5.8%	
Indicated Value (Rounded)	\$880.00	\$670.00	\$730.00	\$760.00	
Less: Development Costs					
Office Construction Costs	\$366.44	\$400.00	\$400.00	\$400.00	
Developer's Profit @ 15%	\$54.97	\$60.00	\$60.00	\$60.00	
Free Rent @ 10 Months	\$61.71	\$53.36	\$53.36	\$53.36	
Tenant Improvements @ \$45.00	\$45.00	\$45.00	\$45.00	\$45.00	
Leasing Commissions @ 42%	\$31.10	\$26.89	\$26.89	\$26.89	
Subtotal	\$559.21	\$585.25	\$585.25	\$585.25	
Adjusted Residual Land Value	\$320.79	\$84.75	\$144.75	\$174.75	
Discount factor @ 8% for 3 Years	0.79	0.79	0.79	0.79	
Land Value by Residual Technique	\$255	\$67	\$115	\$139	
Actual Land Acquisition Costs	\$186	n/a	n/a	n/a	

Source: Cushman & Wakefield, Inc.

These assumptions on rent differentials among building locations in Hudson Yards and the necessary discounts to full taxes needed to make development economically feasible are consistent with the PILOT discounts provided in the Hudson Yards Amendment to the UTEP.

Under the UTEP, commercial construction projects³³ in Hudson Yards are divided into three development zones with a PILOT discount ranging from 40 percent of full taxes for initial



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³³ Designation of a commercial development project is at the sole discretion of the NYC IDA.

developers West of Tenth Avenue, to a 25 percent discount between Eighth and Tenth Avenues, to 15 percent for projects in later years throughout the district, and no discount in the case of properties east of Eighth Avenue.

In addition under the UTEP amendment 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 in the Hudson Yards Special District Zoning Resolution, to qualify for the program PILOT. The IDA retains discretion to qualify a project that does not meet the size and density requirement for PILOT payments. Projects less than 1.0 million zoning square feet will not be considered as eligible. As noted in the development pacing analysis, given the projected demand and the tax advantage offered by the PILOTs, it is assumed that developers will utilize the maximize zoning FAR.

A map of the Hudson Yards development zones and a summary table of the PILOT schedule associated with each zone, as set in the UTEP, are provided in Exhibits 3-38 and 3-39.

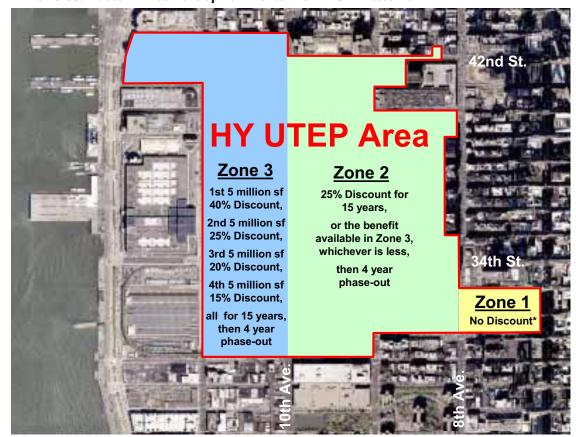


Exhibit 3-38. Hudson Yards Development Zones and PILOT Discounts

Program provides fixed 3 percent annual payment increase for 15 years Source: Hudson Yard Development Corp., NYC IDA.



Exhibit 3-39, Hudson Vards Development PILOT Schedule and Zones

	Exhibit 3-33. Hudson Tarus Development TLOT Schedule and Zones						
		Zone 1- (East	of Eighth Ave)				
	• Ye	ears 1-4 following build	ding completion - Full	taxes			
	 Year 	rs 5-19 - 3% increase	over previous year's p	ayment			
	Year 20 and thereafter - Full Taxes						
Zone 2- (Between 8th Ave and 10th Ave)							
Until 10 million SF has been autl	horized in	Once 10 million SF ha	as been authorized in	orized in Once a total of 15 million SF has been			
Zone 3 the following schedule shall apply:		Zone 3, and until a to	tal of 15 million SF	authorized in Zone 3 the following			
		has been authorized in Zone 3, the		schedule shall apply:			
		following schedule sh	all apply:				
Years 1-4 following building completion- Years 1-4 following building completion-		Years 1-4 following	 Years 1-4 following building completion- 		 Years 1-4 following building completion 		
		ŭ i		85% of Full Taxes			
Years 5-15 - 3% increase over previous		Years 5-15 - 3% increase over previous		• Years 5-15 - 3% increase over previous			
year's payment		year's payment		year's payment			
• Years 16-20 - 80% , 85% , 90% , 95% ,		• Years 16-20 - 84% , 88% , 92% , 96% ,		• Years 16-20 - 88% , 91% , 94% , 97% ,			
100% of Full Taxes respectively		100% of Full Taxes respectively		100% of Full Taxes respectively			
Too, war i am i and i capacianally		,					
Zone 3- (Between 10th Ave and 12th Ave)							
Category A Developments-	Category B Developments-		Category C Developments-		Category D Developments-		
1 st 5 million SF Authorized*	2 nd 5 million SF Authorized		3 rd 5 million SF Authorized		4 th 5 million SF Authorized		
Years 1-4 following building	 Years 1-4 following building 		Todio i Tionoving banding		 Years 1-4 following building 		
completion- 60% of full taxes	completion- 75% of full taxes		completion- 80% of full taxes		completion- 85% of full taxes		
• Years 5-15 - 3% increase	• Years 5-15 - 3% increase		• Years 5-15 - 3% increase		 Years 5-15 - 3% increase 		
over previous year's payment	over previous year's payment				over previous year's payment		
• Years 16-20 - 68% , 76% ,	1 ' ' '		' ' '		 Years 16-20 - 88%, 91%, 		
84%, 92%, 100% of	• Years 16-20 - 80% , 85% , 90% , 95% , 100% of				94%, 97%, 100% of		
Full Taxes respectively	Full Taxes respectively				Full Taxes respectively		
* The Agency shall reduce the 5 million SE eligible for treatment as Zone 3 Category A Developments or any remaining portion thereof by an							

^{*} 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 Corp, NYC IDA.

Projected Growth Rates in Property Taxes/PILOTS

In order to assess the growth rate assumed for Hudson Yards full property taxes, C&W conducted a survey of property taxes for 19 buildings in Midtown as shown in Exhibit 3-40. This shows an average growth rate in taxes of 3.7 percent annually over the period 1981 through 2002. More recent data through fiscal year 2006 that includes the effects of the 18.0 percent tax rate increase in 2002/2003 reflects an even greater annual increase of 4.1 percent. In both cases, these average growth rates have exceeded the 3.0 percent rate used to forecast revenue growth.



Exhibit 3-40. Select West Midtown Office Building Tax Survey, 1981-2002

	Year Built	Square Feet (GBA)	Low Taxes	High Taxes	Average Taxes	Total Percent Change	Annual Compounded Rate of Change
1177 Avenue of the Americas	1991	901,068	\$6.83	\$9.31	\$7.64	22%	2.1%
825 Eighth Avenue	1989	1,596,521	\$7.45	\$10.13	\$8.23	26%	2.4%
1325 Avenue of the Americas	1989	753,137	\$6.05	\$11.14	\$7.81	33%	3.2%
120 West 45th Street	1989	426,065	\$6.88	\$10.36	\$8.87	34%	3.2%
114 West 47th Street	1989	565,000	\$5.16	\$10.60	\$8.87	51%	5.7%
750 Seventh Avenue	1988	561,139	\$5.42	\$7.48	\$6.63	4%	0.4%
31 West 52nd Street	1986	711,791	\$8.41	\$11.95	\$10.64	27%	2.0%
787 Seventh Avenue	1985	1,638,637	\$3.87	\$10.90	\$8.86	59%	5.1%
1155 Avenue of the Americas	1984	734,668	\$6.70	\$11.14	\$8.95	29%	1.9%
1211 Avenue of the Americas	1973	1,800,000	\$4.18	\$9.13	\$6.66	54%	3.6%
1185 Avenue of the Americas	1972	1,041,350	\$3.57	\$7.97	\$6.45	55%	3.7%
1114 Avenue of the Americas	1971	1,513,117	\$2.72	\$7.08	\$5.78	62%	4.4%
1133 Avenue of the Americas	1969	1,039,529	\$3.25	\$6.52	\$4.78	50%	3.2%
1345 Avenue of the Americas	1969	1,500,000	\$4.65	\$12.88	\$8.37	64%	4.7%
1221 Avenue of the Americas	1969	2,508,386	\$4.35	\$7.60	\$6.24	43%	2.6%
1290 Avenue of the Americas	1963	1,897,471	\$3.19	\$10.60	\$7.86	70%	5.6%
1301 Avenue of the Americas	1963	1,482,208	\$5.04	\$12.12	\$8.49	58%	4.1%
1285 Avenue of the Americas	1960	1,300,000	\$2.40	\$13.89	\$9.77	82%	8.2%
1271 Avenue of the Americas	1957	1,962,900	\$3.88	\$9.48	\$7.20	59%	4.2%
Minimum	1957	426,065	\$2.40	\$6.52	\$4.78	4.2%	0.4%
Maximum	1991	2,508,386	\$8.41	\$13.89	\$10.64	82.5%	8.2%
Average	1977	1,259,631	\$4.95	\$10.01	\$7.79	46.5%	3.7%

Source: Cushman & Wakefield, Inc.



For certain time periods, particularly during the forecast economic downturns in the Cyclical scenario, full taxes are likely to grow by less than the projected rate of 3.0 percent. As shown in Appendix C, Exhibit C-2, billable assessed values for Class 4 properties declined on average by 2.9 percent from 1993 through 1998 as a result of the 1990s economic downturn.

Over the longer 21-year period, however, the growth rate in both Class 4 billable assessed values (4.5 percent from 1985 to 2006, Appendix C, Exhibit C-3) and market comparables (3.7 percent from 1981 to 2002, Exhibit 3-39) indicate that the projected difference between the 3.0 percent growth rate used in the revenue model and the average historic growth rates would likely provide a sufficient margin to compensate for these downturns³⁴.

Exhibit 3-41 provides an illustrative example of the projected difference in assessments between the 3.0 percent rate used in the model and the 3.7 percent growth rate from the Midtown Building survey. A 25 percent PILOT discount is used in this example and the building is assumed to come online in 2012. As shown over time, the difference between the projected PILOT, and the PILOT based on the historical average annual growth of 3.7 percent, widens from 4.0 percent in 2012 to 13.0 percent after 15 years in 2026 and 25 percent by 2050.

\$70.00 \$60.00 \$50.00 \$30.00 \$20.00 \$10.00 \$10.00 \$10.00

Exhibit 3-41. PILOT Comparison of Growth Rates

Source: New York City Department of Finance, Cushman & Wakefield, Inc.

³⁴ The effect of market downturns is further mitigated by the assumption that all development in Hudson Yards would take place with pre-leasing agreements as described in the demand forecast. Although tenant rollover has not been factored into the analysis, it is not expected to have a disproportionate effect on the Hudson Yards market relative to other submarkets.



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Hudson Yards Office PILOT Revenues

In order to determine the total PILOT revenues for office buildings in Hudson Yards, the annual forecast of expected completions, totaling 25.7 msf for the 14 large commercial sites³⁵ in Hudson Yards, is multiplied by the expected PILOT schedule.

A detailed calculation of the forecast completions, related PILOT payments, and phase out schedules based on the geographic boundaries in the PILOT schedule are provided in the supporting tables in Appendix A.

A summary of the resulting revenues on an annual basis is shown in Exhibit 3-42 for the Base and Cyclical scenarios. In the Base scenario, total PILOT revenues are expected to increase from \$13.7 million in 2012, with the completion of the first 1.1 msf of office development, to \$1.2 billion by 2050, when overall office completions reach 25.7 msf. In the Cyclical scenario, PILOT revenues are expected to increase from \$5.7 million in 2012 to \$1.1 billion in 2035 with overall office completions of 23.9 msf.

The pacing of commercial development and hence the resulting PILOT revenues differs significantly between the two scenarios. In the Base scenario, total PILOT revenues in the first 10 years (2012 to 2022) are forecast to increase to nearly \$187 million, almost \$50 million higher than the Cyclical scenario. During periods of market downturns, PILOT revenues in the Cyclical scenario remain flat as building completions are halted.

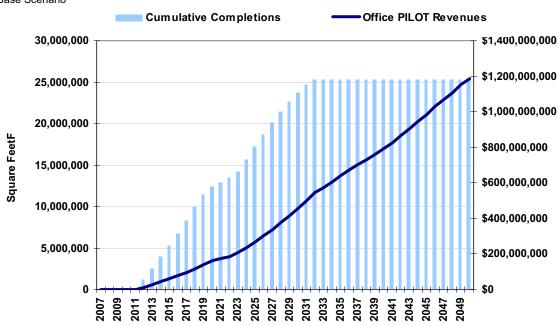
³⁶ The forecast completions of 25.7 msf are based on the zoning FAR of the 14 large sites that have the greatest development potential (Exhibit 3-30).

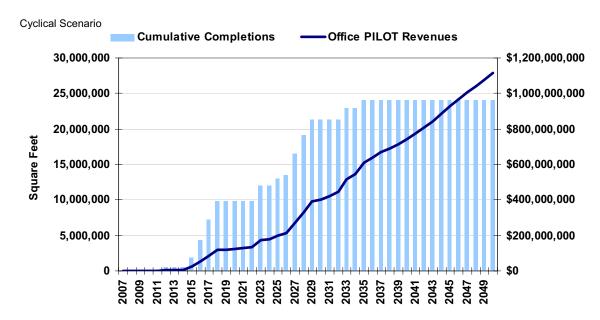


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³⁵ The Marshalling Yard Site 679C PILOT is assumed to flow to HYIC.

Exhibit 3-42: Hudson Yards Annual Office Buildings Completion and PILOT RevenuesBase Scenario





Source: New York City's Office of Management and Budget and Department of Finance, Hudson Yards Development Corporation, Moody's Economy.com, Cushman & Wakefield, Inc.



Office Revenues Forecast – Summary of Assumptions and Risks

<u>Development Pacing</u> - It is assumed that new office development is likely to begin near Eighth Avenue, proceed west to the Four Corners, and then north along Eleventh Avenue. If development were instead to occur from west to east, resulting PILOT revenues would likely be lower initially because of the steeper PILOT discounts for zone 3.

<u>Market Comparables</u> - C&W provided the real estate market comparables used in deriving the estimated rent differentials to Existing Midtown and the feasibility analysis used by HYDC to determine the PILOT discount necessary to sustain new development in the Hudson Yards.

<u>Rent Differentials</u> - The assumption that expected rent differentials between Hudson Yards and Midtown will dissipate as the Hudson Yards submarket becomes more established is consistent with the experience in other pioneering submarkets. For example, rent levels in the formerly emerging Times Square submarkets have converged to Top Tier Midtown levels as these submarkets have become more accepted.

Growth Rates – Given the conservative nature of the projected growth rates in PILOTs and assuming that the past performance of tax rates is indicative of future trends, the PILOT revenues associated with office development should be attainable, based on the realization of all the underlying economic and real estate variables. As noted previously, for certain time periods, particularly during the forecast economic downturns in the Cyclical scenario, full taxes are likely to grow by less than the projected rate of 3.0 percent. Over the longer 21-year period, however, the growth rate in both Class 4 billable assessed values (4.5 percent from 1985 to 2006, Appendix C, Exhibit C-3) and market comparables (3.7 percent from 1981 to 2002, Exhibit 3-41) indicate that the projected difference between the 3.0 percent growth rate used in the revenue model and the average historic growth rates would likely provide a sufficient margin to compensate for these downturns.

<u>Infrastructure</u> - The forecast for office development and resulting revenues is highly dependent on the completion of the subway extension projected by the City in 2013, as well as the construction of platforms over several large commercial sites. The agreement reached between the City and the MTA over development of the ERY and the transfer of air rights to the large commercial sites is expected to facilitate office development at the ERY and the other commercial sites in Hudson Yards. Delays in providing key infrastructure or protracted negotiations for air rights and development on the ERY could result in lower revenues than shown in the forecast.

Other Revenues - These revenue projections do not include tax revenues associated with the development of MSG, or the WRY. If developed, these sites are expected to provide additional revenues flowing to HYIC as these sites are within the Hudson Yards Financing District.



4. RESIDENTIAL MARKET

Overview

New York City's housing market reflects the broad social and demographic diversity of its 8.2 million residents. From luxury high-rise condominiums, single-family townhouses, prewar cooperative, and tenement buildings, to lofts and public housing, the City's housing inventory spans the full spectrum. Additionally, as one of the premier cities of the world, New York City accommodates a secondary market of many non-residents who use New York as an address for business and social purposes, but who are not counted as part of the City's population.

Like other parts of the country, New York City, particularly Manhattan, has experienced a remarkable housing boom since 2000 during which the citywide average home price has more than doubled and multi-million dollar transactions have become commonplace. These rates of growth are not assumed to be a trend that will continue and are not used as the basis for determining future demand. Even as recent data suggests the housing market cycle has peaked, demand is expected to remain high.

Housing demand is strong in New York City, with a vacancy rate of less than 4 percent, more than 50 percent lower than the national average. Despite this influx, there is still a scarcity of available development sites and the existing housing stock is aging. Availability is further impacted by other factors, including Manhattan's restrictive zoning, the density of buildings in general, and rapidly increasing land acquisition costs. Over the past few years the trend has been to build luxury housing because construction costs are so high, making affordable housing less feasible.

New housing in the Hudson Yards would help meet Manhattan's expected future demand. The residential buildings in Hudson Yards would also create a direct connection between the neighborhoods of Chelsea, Clinton and the Upper West Side. The zoning resolution allows residential development in areas primarily east of the Mid-Block Boulevard Park and also in areas designated as commercial in new mix-use buildings.

As the demand for housing in Manhattan increases, Hudson Yards is expected to capture an 18 percent share of the overall demand. Over the forecast period, 15.6 msf of construction completions or roughly 15,972 units is projected in the Base scenario, and 13.4 msf of construction completions or roughly 13,765 units, in the Cyclical scenario, as illustrated in Exhibit 4-1.



Taxes and revenues associated with residential development are expected to flow to HYIC in the form of tax equivalency payments (TEP or PTE). These assume that developers would take advantage of an existing tax program, known as 421-a¹, which provides for significant tax abatements from full taxes in Hudson Yards for a period of 10 to 20 years depending on the property type, condominium or rental units. Given the prolonged abatement structure provided by this program, revenues accumulate slowly during the first 10 years, but escalate thereafter. Revenues from residential development are expected to total \$14.4 billion, growing from \$2.1 million in 2007 to \$921 million in 2050, under the Base scenario, and totaling \$12.7 billion, growing from \$2.1 million in 2007 to \$796 million in 2050, under the Cyclical scenario, as shown in Exhibit 4-1.



¹ For an overview of the 421-a program and proposed changes to this program see page 19 and Appendix B.

Exhibit 4-1. Residential Sector Forecast of Completions and Revenues, 2006-2050

	Base Scenario		Cyclical Scenario	
Date	Completions SF	Revenues	Completions SF	Revenues
2006	0	\$0	0	\$0
2007	1,194,600	\$2,136,297	1,194,600	\$2,136,297
2008	715,338	\$6,187,768	734,560	\$6,228,373
2009	701,150	\$10,066,660	672,775	\$10,044,927
2010	881,015	\$12,763,342	763,393	\$12,487,725
2011	896,118	\$18,229,010	752,409	\$17,589,943
2012	956,988	\$22,293,309	822,433	\$21,239,553
2013	871,404	\$29,269,988	846,689	\$27,997,349
2014	1,004,433	\$35,008,642	940,359	\$33,338,329
2015	910,458	\$43,972,072	767,055	\$41,686,521
2016	854,927	\$51,229,355	717,016	\$48,208,244
2017	880,557	\$62,409,361	750,579	\$58,584,722
2018	794,515	\$71,650,732	687,115	\$66,935,035
2019	711,524	\$81,076,039	611,447	\$75,389,273
2020	640,738	\$92,606,613	524,795	\$85,747,987
2021	566,901	\$104,380,833	413,123	\$96,064,647
2022	470,485	\$118,518,304	338,676	\$108,555,611
2023	382,612	\$132,903,715	393,596	\$121,578,776
2024	245,921	\$149,737,179	223,343	\$136,655,612
2025	151,336	\$166,726,115	81,770	\$151,690,017
2026	79,329	\$186,663,146	10,374	\$169,290,694
2027	37,834	\$206,879,063	0	\$187,145,520
2028	68,345	\$230,695,558	0	\$208,029,249
2029	80,550	\$255,132,318	4,882	\$229,356,512
2030	96,416	\$281,357,614	12,815	\$251,850,273
2031	114,112	\$308,202,369	0	\$274,762,798
2032	167,812	\$336,505,610	95,806	\$298,952,903
2033	292,909	\$365,878,204	338,676	\$324,821,305
2034	374,679	\$396,683,315	378,951	\$351,543,999
2035	431,430	\$428,579,555	364,916	\$378,912,602
2036	0	\$458,193,810	0	\$404,053,268
2037	0	\$488,731,315	0	\$430,205,267
2038	0	\$518,638,792	0	\$455,493,085
2039	0	\$549,159,341	0	\$481,532,413
2040	0	\$579,139,226	0	\$506,668,228
2041	0	\$609,950,749	0	\$532,765,748
2042	0	\$640,290,957	0	\$558,086,381
2043	0	\$671,727,549	0	\$584,810,264
2044	0	\$703,027,168	0	\$611,071,900
2045	0	\$736,061,737	0	\$638,893,928
2046	0	\$769,721,559	0	\$667,095,344
2047	0	\$805,874,097	0	\$697,736,393
2048	0	\$842,240,906	0	\$728,478,301
2049	0	\$881,545,827	0	\$761,935,849
2050	0	\$920,875,185	0	\$795,508,489
Total	15,574,438 SF	\$14,382,920,303	13,442,153 SF	\$12,651,159,654

Source: New York City's Office of Management and Budget and Department of Finance, Hudson Yards Development Corporation, Moody's Economy.com, Cushman & Wakefield, Inc.



Introduction

The analysis of residential demand for the Hudson Yards focuses on Manhattan as the prime competitive market, as well as the key driver of demand generators. With the rezoning of the Hudson Yards, substantial new residential development can be added to this area of Midtown with the goal of accommodating a portion of Manhattan's future housing demand.

The transformation of Hudson Yards into a 24/7 community would help forge an important link with the established residential neighborhoods that line the Hudson River, from Battery Park City to the Upper West Side. In addition, Hudson Yards is adjacent to the burgeoning mixed-use development that extends along West 42nd Street.

This chapter analyzes Manhattan's residential market conditions and the potential for new residential development in the Hudson Yards and includes:

- an overview of the New York City housing market and recent history
- the specific characteristics of the Manhattan market
- an assessment of current supply and development trends
- an analysis of housing demand generators in New York City and particularly in Hudson Yards
- a forecast of housing demand for 2006 2035

New York City's Residential Market

New York City's residential market has received enormous attention over the past few years. New York, like other parts of the country, has experienced a remarkable housing boom since 2000, during which the citywide average home price has more than doubled and multi-million dollar transactions have become commonplace. These rates of growth are not assumed to be a trend that will continue and are not used as the basis for determining future demand. In fact, recent data suggests that the housing market cycle has peaked as rent levels and condominium and cooperative unit prices have reached historic highs. Rather, the purpose of highlighting these current trends is to examine fundamental supply and demand components that are expected to impact the housing market in the future.

The City's housing market reflects the vast social and demographic diversity of its 8.2 million residents. Luxury high-rise condominiums, single-family townhouses, pre-war cooperatives and tenement buildings, lofts and converted office buildings, and public housing are all present in the City's housing stock. Additionally, as one of the premier cities of the world, New York City has housing that serves to accommodate the secondary or multiple homes of



many non-residents who are not counted as part of the City's population and the corporate apartments of the multi-national companies that have a large presence in the City².

New York City Housing Inventory

The physical characteristics of the City's housing inventory vary widely, reflecting the population density and history of each borough as shown in Exhibit 4-2.

Manhattan, as the borough with the highest density, has very few, single-family homes. Most Manhattan residents live in mid- or high-rise buildings in apartments that average less than 1,000 square feet, many of which were built over the last two decades. The early tenement buildings that housed the huge influx of immigrants who came to this country at the turn of the 20th century are still a fixture of many Manhattan neighborhoods. More recently, conversion of manufacturing and office buildings to loft residences has added additional housing stock in desirable districts such as SoHo and Tribeca.

Exhibit 4-2. New York City Housing Inventory by Type and Borough, 2005

Туре	New York City	Manhattan	Outer Boroughs
1- Family	325,068	1,753	323,315
2- Family	500,404	4,194	496,210
3- Family	197,241	4,002	193,239
Cooperatives	360,665	160,222	200,443
Condominiums	99,438	60,720	38,718
Rentals	944,082	398,966	545,116

Source: New York City Office of Finance, Property Tax Annual Report.

In contrast, the housing stock of the Outer Boroughs³ contains a larger proportion of single-family homes. Of the over 1.0 million single- to three-family homes in the City, less than 10,000 are located in Manhattan. Conversion of manufacturing sites to loft buildings has also accelerated in the Outer Boroughs as a result of zoning changes, particularly along the waterfront in Brooklyn and Long Island City in Queens.

The unique and varying characteristics of New York City's housing stock are even more apparent when comparing the City to the nation where high-rise buildings are an exception



² This is based exclusively on anecdotal evidence as housing data for non-residents is not available from traditional sources of data like the Census.

³ Outer Boroughs comprise Brooklyn, Queens, Staten Island and the Bronx.

and ample availability of land makes it cheaper to build new rather than convert buildings to residences.

Another important characteristic that differentiates the City's housing stock from the rest of the nation is its age. According to the U.S. Census, the City's housing stock is one the oldest in the nation, with 1946 as the median year, in contrast to 1971 for the U.S. Over 43 percent of Manhattan's housing stock pre-dates War World II compared to just 15 percent for the U.S and 80 percent of Manhattan's housing stock that was built before 1970. This is not surprising given Manhattan's longer history relative to younger cities, particularly in the southwest. Many of Manhattan's buildings and neighborhoods retain unique architectural elements and features that are, and will likely continue to be, meticulously preserved and designated as landmarks.

Exhibit 4-3. Housing Stock Age, Manhattan and the United States

	United States	Percent of Units	Manhattan, New York	Percent of Units
Total:	115,904,641	100%	798,144	100%
Built 1999 to March 2000	2,755,075	2%	5,833	1%
Built 1995 to 1998	8,478,975	7%	13,199	2%
Built 1990 to 1994	8,467,008	7%	15,039	2%
Built 1980 to 1989	18,326,847	16%	50,562	6%
Built 1970 to 1979	21,438,863	18%	69,001	9%
Built 1960 to 1969	15,911,903	14%	113,765	14%
Built 1950 to 1959	14,710,149	13%	91,921	12%
Built 1940 to 1949	8,435,768	7%	92,858	12%
Built 1939 or earlier	17,380,053	15%	345,966	43%
Median year structure built	1971		1946	-

Source: 2000 U.S. Decennial Census, (latest available data).

Rental and Owner-Occupied Inventory

New York City's housing stock is further categorized by rental and owner-occupied units. Home ownership rates are even more varied when comparing New York City to the nation. The ratio of home ownership to total inventory reached 69.1 percent nationwide in 2005⁴. In New York City, however, the ratio of owner-occupied housing units in 2005 was 33.3 percent, nearly the opposite of the national average. Home ownership rates also vary across the boroughs from a low of 23.6 percent in Manhattan to 67.7 and 46.4 percent for Staten Island and Queens respectively.



⁴ U.S. Department of Housing and Urban Development's US Housing Market Conditions Report, 2005.

The City's rental housing stock can be categorized to reflect the various types of regulations and subsidies governing these properties. Initial regulations were instituted at the federal level during World War II and subsequently adopted in 1947 at a state level. Rent regulation was augmented in 1972 by rent stabilization laws that limit yearly increases within parameters set annually by the New York City Rent Guidelines Board. Other categories of regulated rental housing fall under the Mitchell LAMA and public housing programs run by New York State or the U.S government. Market rate rentals make up the remainder of the rental housing stock. In the 1990s, incentives available under the 80/20 program encouraged developers to build rental buildings that contained a mix of market rate rentals and low-income units. The impact of these regulations is most evident in Manhattan where 73 percent of the rental market is regulated in some form or another, compared to only 23 percent in Staten Island as shown in Exhibit 4-4.

In contrast to the regulated rental units, there are 742,171 market rate occupied rental units Citywide, representing only 36.6 percent of all occupied rental properties, and 24.4 percent of the occupied housing stock.

Exhibit 4-4. New York City Occupied Housing Units – Rental and Owner-Occupied by Borough, 2005

	Total Renter Occupied	Total Owner Occupied	Total Units Occupied	Total Controlled	Total Stabilized	Mitchell LAMA	Public Housing	All Other Rental Housing
Total	2,027,626	1,010,370	3,037,996	43,317	1,015,654	58,944	167,539	742,171
Bronx	367,846	104,400	472,246	3,985	217,048	21,962	37,851	87,000
Brooklyn	621,597	255,955	877,552	10,567	270,110	17,762	59,585	263,573
Manhattan	563,589	174,179	737,768	23,190	324,749	11,797	50,660	153,194
Queens	421,726	365,040	786,766	5,575	195,351	5,885	17,030	197,884
Staten Island	52,868	110,795	163,663	0	8,397	1,538	2,413	40,521

Source: 2005 New York City Housing and Vacancy Survey.

Vacancy Rates

Another distinguishing characteristic of the City's housing market is that vacancy rates in New York City have been extremely low, well below the national average. Over the course of the last five *Housing and Vacancy Survey* (HVS) reports (1993 to 2005, the latest available survey), vacancies in the City consistently averaged below 4.0 percent, and were 3.1 percent as of 2005, as shown by borough in Exhibit 4-5. Over the same period, vacancy rates in the nation were almost double this rate, and reached 9.8 percent in 2005.



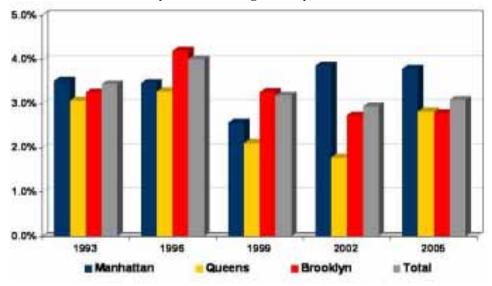


Exhibit 4-5. New York City Rental Housing Vacancy, 1993-2005

Source: New York City Housing and Vacancy Surveys.

Recent Trends in New York City Housing

Growth in the City's housing market has been exceptionally strong and widespread across all five boroughs. Data on annual housing completions from the 2005 Housing Supply Report, indicates that over the past five years more than 72,000 new housing units were completed from 2000 through 2004 in New York City. The pace of housing completions in the outer boroughs accelerated from an average of 26,000 new units during the five years from 1990 to 1994 and 1995 to 2000, to 41,000 units between 2000 and 2004. Manhattan's upward trend was even more pronounced. The 32,000 units completed between 2000 and 2004 represented an increase of nearly 100 percent over the average of the previous five-year period as shown in Exhibit 4-6.



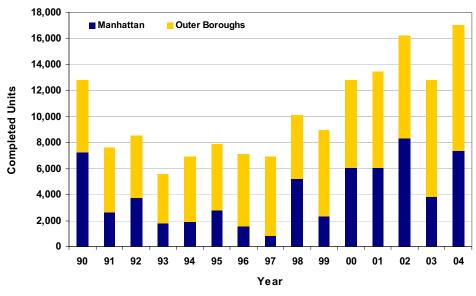


Exhibit 4-6. New York City Newly Completed Housing Units, 1990-2004

Source: New York City 2005 Housing Supply Report, New York City Rent Guidelines Board

An anomaly of the current expansion in both supply and pricing is that it coincided with a downturn in the City's economy. From 2000 to 2004, a period that saw significant growth in the housing market, overall employment declined by 180,000 jobs as the City struggled to recover from the aftermath of September 11th and the national recession. In fact, even with the rebound in the local economy in 2005 total employment still remains below its 2000 peak. Various factors, including strong growth in household formation, low interest rates and a strong investor preference for residential assets have helped support housing demand during this period of weak employment.

Household formation growth, the primary driver of new housing demand, has been particularly strong in recent years. Whereas 55,000 households were formed in the decade of the 1980s, more than 254,690 households have been formed in the City from 1990 to 2005 as shown in Exhibit 4-7.

The demand for second homes from Baby Boomers who have reached their maximum earning potential has also been a demographic factor contributing to increased housing demand⁵.

⁵ Data from the Federal Financial Institutions Examination Council indicates that in 2004, 14 percent of all loans were underwritten for purchases of secondary or investor homes. This share increased at average annual rate of 16 percent over the 2000 through 2004. Additional data compiled from the National Association of Realtors, *March 2006 Real Estate Insights*. The increasing share of second home ownership is also highlighted in the Federal Reserve Bulletin, Summer 2005.



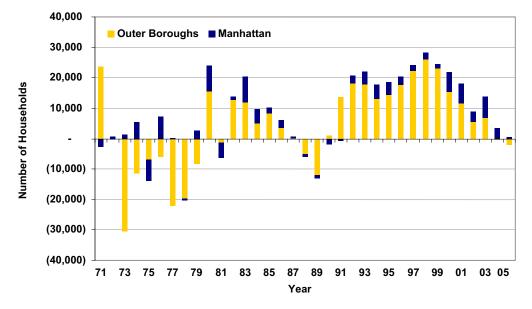


Exhibit 4-7. Annual Change in Households, New York City, 1970-2005

Source: U.S. Census Bureau, Moody's Economy.com, Cushman & Wakefield, Inc.

Manhattan's Residential Market

Since demand for residential development in Hudson Yards is expected to compete primarily with other development in Manhattan, a more detailed analysis of the characteristics of Manhattan's housing stock and the recent performance of the rental and condominium/cooperative unit sales market is provided herein.

Composition of Manhattan's Occupied Housing Stock

Manhattan's occupied stock of 737,768 housing units remains heavily weighted towards rental units, which represent 76.3 percent of the occupied stock as shown in Exhibit 4-8. Rent regulated units comprise 410,395 units, equating to 72.8 percent of total renter-occupied housing inventory for the borough.



Rent Controlled
23,190
Stabilized Post
'47
69,574
Stabilized Pre '47
Co-op
134,334
Single-Family
Homes
6,162
Non-Regulated
153,194
Other
Regulated
62,457

Exhibit 4-8: Composition of Housing Stock, Manhattan, 2005

Sources: 2005 New York City Housing & Vacancy Survey, Cushman & Wakefield, Inc.

While rental units still comprise the majority of Manhattan's housing stock, the share of owner-occupied units has been on the rise. As of 2005, 23.6 percent of the inventory was owner-occupied in contrast to 21.8 percent in 2002 as seen in Exhibit 4-9.

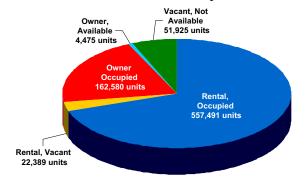
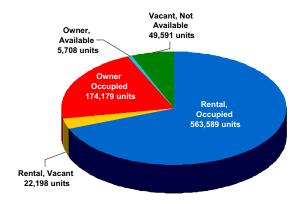


Exhibit 4-9: Share of Owner-Occupied and Rental Unit in Manhattan, 2002 and 2005

Sources: 2002 New York City Housing and Vacancy Survey, Cushman & Wakefield, Inc.



Sources: 2005 New York City Housing and Vacancy Survey, Cushman & Wakefield, Inc.



Rental Market

Manhattan's rental market continues to maintain low vacancy rates and increasingly high rental rates. Manhattan's vacancy rate as reported in the *2005 HVS* was 3.8 percent. Market rental rates which dropped from 2001 to 2003 increased to an average of \$3,083 per month in 2005, a 6.0 increase from year-end 2004⁶ as shown in Exhibit 4-10. Rental rates have continued to increase through third quarter 2006, with the average rental rate in Manhattan exceeding \$3,200 per month.

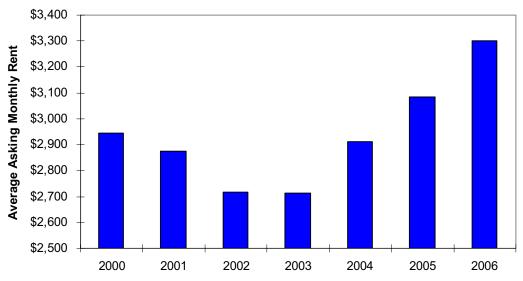


Exhibit 4-10. Monthly Asking Apartment Rents, Manhattan 2000 - 2006 Q3

Source: REIS Inc., Cushman & Wakefield, Inc.

Though conditions in the rental market have tightened considerably, new construction of rental units has lagged condominium units in recent years as low interest rates have favored construction of owner occupied units. According to Reis, Inc., which tracks investment-grade market-rate rental apartments nationally, in Manhattan 1,289 rental units were underway or have been completed through third quarter 2006, compared to 4,802 condominium units. This trend favoring condominium for sale units is likely to subside or even reverse direction in favor of rental units as the condominium market is likely to have peaked in terms of price appreciation as discussed in the following section of this chapter.

Additionally, a number of office buildings, particularly Downtown, have been and are planned for conversion into residential units as illustrated in Exhibit 4-11. Some of this impetus is due to The Downtown Plan of 1995 which amended the City's Zoning Resolution and provided a



⁶ REIS, Inc.

variety of tax benefits to developers who converted non-residential buildings in designated areas to multiple dwellings as an incentive to encourage a more diverse mixed-use Downtown. Since then the conversion (completed and ongoing) of over 90 buildings, totaling approximately 11,380 apartments⁷ of which 9,225 have been or are being converted to rental units, and 2,156 units represent conversions to condominium units.

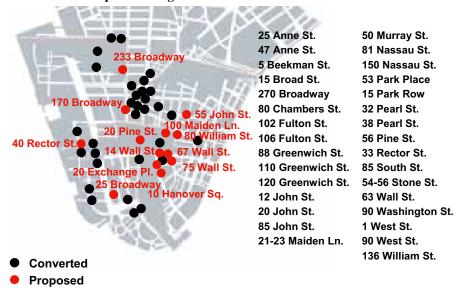


Exhibit 4-11. Sample Building Conversions to Residential Units in Downtown Manhattan, 1995 -2007

Source: Alliance for Downtown New York, Cushman & Wakefield, Inc.

Condominiums and Cooperatives Market

Condominiums and cooperatives units comprise the vast majority of the 174,179 owner-occupied housing units in Manhattan where single family homes are an exception. Cooperative units encompass the bulk of these apartments (134,334), and are typical of prewar buildings. Owners of cooperative units are allocated shares in the apartment corporation that owns the building. A purchaser receives a proprietary lease for the use of the apartment, often subject to other restrictions, including those that could affect liquidity.

Condominium units are purchased outright and a buyer is solely responsible for the apartment unit, meaning that the owner has the option to occupy the unit or rent it to an outside tenant. Generally, buyers today prefer condominiums, as they own the unit rather than own shares in



⁷ List of residential buildings (2006 Q1), Alliance for Downtown New York.

a building and typically have more flexibility and fewer restrictions. As such, virtually all new for-sale residential buildings are condominiums.

Over the past 10 years, the Manhattan condominium market has seen a remarkable and continued increase in prices, as illustrated in Exhibit 4-12. The average sale price, which was \$446,602 in 1996, more than tripled to a record \$1.48 million in 2005, up 19.2 percent from 2004 according to data from Miller-Samuel / Prudential Douglas Elliman. This surge in pricing is attributed to the newly developed luxury condominium units, coupled with low interest rates, which fueled the rising demand.

Looking at the average price per square foot for condominiums, it increased 24.4 percent to \$1,086 psf in 2005, up from \$873 psf in 2004, and represented an extraordinary 188.8 percent increase over the \$376 psf average of 1996⁸. The rapid increase in price appreciation has slowed recently in 2006 but at nearly \$1,200 psf it still exceeds 2005 and the number of transactions has remained at very high levels, averaging almost double the levels of the mid-1990s.



Exhibit 4-12. Manhattan Condominium Unit Sales, 1996 – 2006 Q3

Source: Miller Samuel / Prudential Douglas Elliman, Manhattan Market Report 1996-2006, Cushman & Wakefield, Inc.

⁸ Miller Samuel / Prudential Douglas Elliman, Manhattan Market Report 1996-2006, Cushman & Wakefield, Inc.



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Development Trends

New supply is predicated on the issuance of building permits which lead to construction completions⁹. Permits issued usually coincide with New York City's economic growth cycles. In reviewing the HVS reports of the 1990s, the weak economy that characterized the early part of the decade was reflected in the paucity of new completions, as shown in Exhibit 4-13. New building trends were impacted by the deep recession of the early 1990s, where certain luxury condominium projects failed to sell-out, while rental properties typically remained viable. After peaking in 1990 at over 7,000 unit completions, an average of just over 2,000 units were completed from 1991 to 1997.

As the economy began to rapidly expand in the late 1990s, annual building completions increased markedly, averaging almost 5,000 units per year between 1998 through 2001. The residential market continued to surge even after the 2000-2001 recession as completions averaged 6,500 per year from 2002-2004¹⁰. The permits issued, 4,600 and 8,500 respectively, in 2004 and 2005 suggest that forthcoming supply is expected to remain at high levels.

This increasingly high number of permits issued could result in some overstock, especially in the inventory of middle to upper-middle priced condominium units based on recent development trends. On the other hand, such pricing pressure coupled with rising interest rates bodes well for a stronger rental market.



4-15 • RESIDENTIAL

⁹ Typically there is a one and half to two year lag between permitted residential starts and completions, although not all permitted construction takes place and results in a completion. ¹⁰ 2004 is the latest available data.

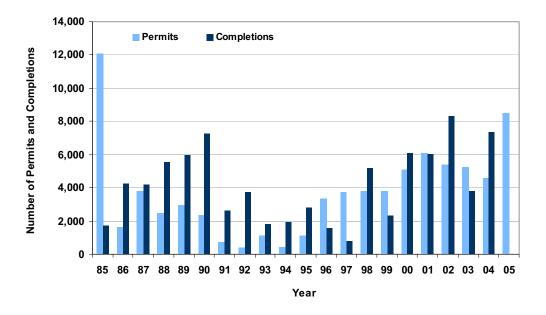


Exhibit 4-13. Permits Issued and New Residential Units Completed in Manhattan, 1985 – 2005

Source: New York City 2005 Housing Supply Report, U.S. Bureau of the Census, Cushman & Wakefield, Inc.

Competition to find and assemble development sites remains challenging. The truly premier locations along Fifth and Park Avenues and Central Park West rarely witness new development, although occasional conversions to residential uses or conversions from rental apartments to condominiums occur. These include the new condominiums under construction at 15 Central Park West, a full-block development replacing the former Mayflower Hotel, and the conversion to luxury condominiums of the Barbizon Hotel on East 63rd Street and the Stanhope Hotel on Fifth Avenue.

Conversion of former office and manufacturing buildings to residential use that have transformed former manufacturing districts like SoHo, Tribeca and more recently northern Chelsea, have largely taken place already. And the expiration of favorable tax incentives to convert commercial properties in the Financial District¹¹ into residential is also expected to limit the potential supply of new housing stock Downtown.

Availability is further impacted by other factors, including Manhattan's restrictive zoning, the density of buildings in general, rapidly increasing land acquisition costs, and complications arising from new zoning, environmental, and building codes that impact changes in housing supply. These result in construction costs that are typically 40 percent greater than the



¹¹ This tax program known as 421g expired in June 2006.

national average. These factors have significantly influenced the location and type of housing constructed and, over the past few years, have resulted in a preference by developers for luxury housing.

One of the major benefits of the rezoning of Hudson Yards, therefore, is that the increased FAR could lead to development of under-utilized sites. Recent new development in West Side residential neighborhoods totals over 6,000 units surrounding or adjacent to Hudson Yards. Approximately 2,500 rental units and 3,500 condominium units have been completed, are under construction, or planned in the Midtown West area as shown in Exhibit 4-14.

Such activity lends credence to the evolution and changing character of Hudson Yards. Currently, two large condominium properties located west of Ninth Avenue are expected to be completed in 2006 – The Orion with 550 units and The Atelier with 478 units. Combined with smaller projects an estimated 1,086 units are expected to be completed in Hudson Yards by 2006. Also recently proposed is the Hudson Mews, an 80/20 rental project of approximately 650,000 sf with 800 units, expected to begin construction in mid-2007. The project would rise atop a platform to be built south of Dyer Plaza (Lincoln Tunnel entrance ramps) at Ninth Avenue between West 36th and West 38th Streets. The sale was approved by the owner, the Port Authority of New York and New Jersey, to a private development team with the Port Authority paying for the construction of a platform over the entry ramps to facilitate development.



Exhibit 4-14. New York Apartment New Construction Listings, 2006

Property Name	Туре	Street Address	Comp Year	Units	Status
The Helena	Apartments	601 W 57th St	2005	596	Complete
Windsor Park	Condominiums	100 W 58th St	2005	125	Complete
	Condominiums	555 W 23rd St	2005	337	Complete
The Chelsea Club	Condominiums	438 W 19th St	2005	42	Complete
Clinton Parkview	Apartments	555 W 52 St	2005	19	Complete
The Haywood	Condominiums	263 9th Ave	2005	50	Complete
Bryant Park Tower	Condominiums	1033 6th Ave	2005	96	Complete
Vesta 24	Condominiums	231 10th Ave	2006	22	Complete
Clinton West	Condominiums	516 W 47th St	2006	149	Complete
Tower 31	Apartments	9 W 31st St	2006	146	Complete
The Heywood	Condominiums	263 9th Ave	2006	50	Under Constr.
Lions Head Condo	Condominiums	121 W 19th St	2006	66	Under Constr.
	Condominiums	4 W 21st St	2006	56	Under Constr.
The Chelsea House	Condominiums	130 W 19th St	2006	64	Under Constr.
The Oneill Building	Condominiums	655 6th Ave	2006	49	Under Constr.
The Atelier	Condominiums	W 42nd St @ 11th Ave	2006	478	Under Constr.
Verde Chelsea	Condominiums	125 W 22nd St	2006	33	Under Constr.
1600 Broadway On The Square	Condominiums	1600 Broadway	2006	136	Planned
	Apartments	135 W 31st St	2007	368	Planned
The Link	Condominiums	310 W 52nd St	2007	209	Under Constr.
	Condominiums	611 6th Ave	2007	42	Planned
Centria	Condominiums	18 W 48th St	2007	152	Under Constr.
The Orion	Condominiums	350 W 42nd St	2007	550	Under Constr.
Element	Condominiums	555 W 57th St	2007	200	Under Constr.
Unnamed Condo Project	Condominiums	W 43rd St @ 8th Ave	2007	300	Planned
	Condominiums	261 W 28th St	2007	53	Planned
The Mosaic	Apartments	10th Ave at 51st St	2007	502	Under Constr
	Condominiums	261 W 28th St	2007	53	Planned
	Condominiums	735 6th Ave	2008	190	Planned
River Place li	Apartments	600 W 42nd St		880	Proposed

Source: REIS Inc., Cushman & Wakefield, Inc.



Incentives for New Housing

Existing government programs that provide incentives to develop new affordable housing units are expected to remain available for use in Hudson Yards.

80/20 Program

The 80/20 program offers developers favorable real estate tax incentives in exchange for reserving 20 percent of a building's units for low-income families¹². Construction of 80/20 buildings also allows developers to obtain tax exempt bond financing. Sponsored by the New York State Housing Finance Agency, the New York City Housing Development Corporation (HDC) and the New York City Department of Housing Preservation and Development (HPD), developers can make use of tax-exempt bonds to finance the construction of large residential buildings in the City, thereby greatly reducing the costs.

421-a Program

The Section 421-a tax program is administered by HPD to promote multi-family residential construction by providing a declining exemption on the new value that is created by the improvement. The 421-a benefits vary depending upon the location of the development within the City. Specific aspects of the program relevant to development in Manhattan are discussed herein. Generally, the areas north of 14th Street and below East 96th Street and West 110th Street in Manhattan, referred to as the geographic exclusion area (GEA), do not qualify, unless the project is an 80/20 development. Specifically, under the 421-a program (for an 80/20 development south of 96th street), the developer receives a 100 percent exemption on any increase in real estate taxes during the construction period, up to a limit of three years. Post completion, the increase in the assessed value will be 100 percent exempt for 12 years. The improvement assessment is phased over the subsequent eight years, with 20 percent increments every two years until full taxes are reached in year 21.

In addition, Manhattan developers may "buy in" to the 10-year 421-a program by the purchase of tax certificates from other entities creating affordable housing in the City. This results in the same benefit pre-completion, followed by a 100 percent exemption on the increase in assessed value for two years. The exemption is phased out in 20 percent increments over the ensuing eight years.



¹² Defined as a family that earns between 30 and 60 percent or less of the area's median income

¹³ A more detailed description on the 421-a program is found in Appendix B.

The current 421-a program expires in December 2007. A panel has recommended changes to the existing program which would affect key aspects of the 421-a program.

Among the principal changes recommended, the exclusion area would be expanded to include Downtown Manhattan, most of Upper Manhattan, as well as parts of Brooklyn and Queens that are currently not in the GEA. Additionally as proposed, the program would impose a limit of \$100,000 on the exempt assessed value per unit on new housing that does not include affordable housing. The panel has also recommended ending the certificate program so that market rate development housing in the GEA would be subject to full taxation unless affordable housing is provided.

At this point, however, given the legislative approvals still needed to modify and implement, it is assumed that Hudson Yards will be able to take advantage of the existing 421-a program. Alternatively, if the program is substantially changed there are three likely options that developers would consider. If the program is less generous in the future, developers may rush to initiate projects. Developers could also choose to hold and effect a "wait and see" attitude pending weakening economic and demand conditions of the future, or, pending strong demand, may choose to develop regardless of incentive programs.

Residential Forecast

The forecast of residential completions in Hudson Yards is determined by analyzing the factors that drive overall residential demand in Manhattan and then obtaining the estimated share of this overall demand that Hudson Yards could capture. This capture rate is based on recent development and supply trends in Manhattan, including the significant new construction activity already underway in the Hudson Yards area and surrounding neighborhoods. As noted previously, a pipeline of new building constructions in Hudson Yards totaling 1,086 units is scheduled for completion in 2006.

Residential Demand Generators

Population growth is typically the greatest demand generator for new housing units. For the nation as a whole, the relationship between household formation and new housing units has been fairly stable over time and the ratio between new housing units and households formed has typically been close to one, indicating a direct relationship between housing demand and households formed. In Manhattan, however, the ratio between housing units and household formation has typically exceeded one. This implies that demand for new housing is driven by other factors in addition to resident households.



In order to determine the effect of these other factors, data on housing completions and household formation in the U.S and Manhattan over the 34-year period from 1970 to 2004 was used and shown in the Exhibit 4-15 and summarized in five time intervals.

Exhibit 4-15 Housing Completions & Change in Households, Manhattan & United States, 1970-2004

U.S				
Totals	Completed units	Change in HH	Difference Completed Units Households	Ratio Completions/ Change Households
1970 -2004	52,139,700	48,599,000	3,540,700	1.07
1970-1980	17,130,400	17,375,000	-244,600	0.99
1980-1990	16,204,100	16,017,000	187,100	1.01
1990-2000	14,874,700	13,604,000	1,270,700	1.09
1990-2004	21,614,700	19,170,000	2,444,700	1.13

Manhattan				
Totals	Completed units	Change in HH	Difference Completed Units Households*	Ratio Completions/ Change Households
1970 -2004	141,346	77,370	63,976	1.83
1970-1980	45,664	15,830	29,834	2.88
1980-1990	44,581	19,493	25,089	2.29
1990-2000	36,131	27,910	8,221	1.29
1990-2004	61,667	48,810	12,857	1.26

Source: U.S. Census, Moody's Economy. Com, 2005 Housing Supply Report, New York City Rent Guidelines Board.

While the ratio of housing completions and household demand over the 1970 to 2004 period has averaged 1.07 for the nation, in Manhattan this ratio has averaged a much higher 1.83. More recently it appears to have stabilized around 1.26.

This discrepancy between household formation and housing completions can be attributed to four factors which are analyzed below. A qualitative analysis is used for some of these when quantitative data was unavailable.

Replacement Housing

As previously noted, Manhattan's housing stock is considerably older than the rest of the U.S., with a median age of almost 60 years compared to 35 years. A portion of this stock is likely in need of replacement and demolishment. Typically for the nation, a replacement



standard of 1.0 percent of the existing stock is used¹⁴. This standard may not be applicable to Manhattan, given the unique characteristics of its housing stock, the legislative requirements regarding rent regulated tenants (who are entitled to a replacement unit when buildings are demolished), and landmark designation of historic buildings.

The U.S. Census discontinued releasing data on demolition statistics in 1995 and prior to that the data only distinguished among buildings containing less than five units, and not the total number of units demolished. The New York City Department of Buildings began supplying data on demolitions from 1996, but these do not specify whether buildings are residential or if they have five or more units.

Second Homes

In addition to this replacement factor, a share of housing demand and completions in Manhattan is driven by non-resident demand for second homes. As a global city, Manhattan attracts many non-residents who may have homes here, but do not necessarily establish residency in the City. Businessmen and corporations own *pied-a-terres* in Manhattan without being residents. Additionally, since New York City residents are subject to personal income taxes, there are strong incentives for those who have multiple homes in the New York area to declare residency outside the City.

According to the 2005 HVS report, there are nearly 50,000 units, approximately 8.0 percent of Manhattan overall housing stock, that are not considered occupied due to factors relating to occasional uses such as *pied-a-terres*, vacation and seasonal homes. This number does not, however, necessarily include homeowners who for tax purposes maintain residency outside the City.

Churning of Housing Stock

New housing demand is also driven by "churning" and upward mobility as households combine units together creating larger and more luxurious units. No known data is available to quantify this demand component.

Household Data

Some analysts have suggested that the discrepancy between housing units and households is also due to an undercount of the actual number of households. As the U.S. Census' estimates



¹⁴ Source: U.S. Housing Adequacy Report.

of the population have become more sophisticated, this potentially explains why this discrepancy has declined over time. Recently, the City has successfully contested that the Census population figures undercount the City's true population count and obtained revisions to the population data.

Since quantitative estimates of many of these individual factors were not available, for the purposes of estimating future housing demand in Manhattan the aggregate ratio of housing completions to household formation was used. In order to provide a conservative estimate the ratio of 1.26 completions to new households seen over the more recent 1990-2004 time period was used rather than the higher ratio of 1.83 for the 1970-2004 time period.

Hudson Yards Residential Demand Forecast and Likely Construction

The methodology for both the Base and Cyclical scenarios is identical and the resulting differences are due to the underlying population projections.

- For each year the change in households in Manhattan, or net household formation, provided by Moody's Economy.com was multiplied by the 1.26 percent ratio of completions to households to obtain Manhattan's overall housing demand.
- Hudson Yards is assumed to capture a 15 percent share of the overall Manhattan demand. This rate is based on recent data on the share of residential activity in the Hudson Yard area as shown in Exhibit 4-16 from 2003 to 2005. A 15 percent share in Hudson Yards' initial captive rate was used based on this three-year time frame. Note, however, that since the 2005 Hudson Yards rezoning, the share of new units in the Hudson Yards area neighborhoods has increased.



Exhibit 4-16. New Residential Units by Neighborhood in Manhattan, 2003 - 2005

	2003	2004	2005	Total 2003-2005
Uptown	730	927	490	2,147
Upper West Side	452	2,328	463	3,243
Upper East Side	497	1,005	816	2,318
Midtown West *	25	16	633	674
Midtown East	242	75	188	505
Midtown	-	158	357	515
Murray Hill	345	241	602	1,188
Fashion District *	61	576	1,295	1,932
Flat Iron	-	-	147	147
Chelsea	68	279	538	885
Soho	106	213	161	480
West Village	307	627	172	1,106
East Village	69	271	166	506
Tribeca	145	75	140	360
Lower Manhattan	22	685	1,994	2,701
Total	3,069	7,476	8,162	18,707
Total HY District	86	592	1,928	2,606
Total HY Share	3%	8%	24%	14%
Total Share Including Neighboring Districts	20%	43%	36%	36%

Source: The Real Deal – New York State Attorney General Condominium Filings.

- This share is escalated to 20 percent in 2012 as Hudson Yards becomes a more established area. It also takes into consideration that existing development sites in the established neighborhoods of Northern Chelsea and the Upper West Side are likely to become scarcer, further increasing demand in Hudson Yards.
- Construction is assumed to take place over a two-year period, resulting in a similar lag between demand and completions based on average construction period of 18 to 24 months.
- A weighted average of approximately 975 gross square feet per unit (inclusive of common hallway areas and other structures such as elevator shafts and HVACs) was used to obtain the total square feet of development. This average was based on an average apartment size of 1,100 sf for condominium units and a smaller 900 sf per unit for 80/20 units, and assumes a two to one ratio of rental to condominium units¹⁵.

¹⁵ This assumes that condominiums account for one-third of all units, the remaining two-thirds are 80/20 units.



^{*} Hudson Yards Neighborhoods

Forecast Hudson Yards Residential Completions

The annual housing demand and completions are shown in Exhibits 4-17 and 4-18. The total forecast construction in the Base scenario is 15,972 units, or an average annual 551 units, and 13,765 units, or an average annual of 475 units in the Cyclical scenario.

Exhibit 4-17. Base

Base Scenario: Hudson Yards Housing Forecast

Year	Units Demand	Units Supply	Estimated Square Feet Completed
2005	1,086		0
2006	741		0
2007	726	1,086	1,058,850
2008	912	741	722,003
2009	928	726	707,683
2010	991	912	889,223
2011	902	928	904,467
2012	1,040	991	965,904
2013	943	902	879,522
2014	885	1,040	1,013,791
2015	912	943	918,941
2016	822	885	862,893
2017	737	912	888,761
2018	663	822	801,917
2019	587	737	718,153
2020	487	663	646,708
2021	396	587	572,182
2022	255	487	474,868
2023	157	396	386,177
2024	82	255	248,213
2025	39	157	152,746
2026	71	82	80,069
2027	83	39	38,187
2028	100	71	68,982
2029	118	83	81,300
2030	174	100	97,314
2031	303	118	115,176
2032	388	174	169,376
2033	447	303	295,638
2034	465	388	378,170
2035	466	447	435,450
Total	16,903	15,972	15,572,661
Average		551	
Rounded:			15,600,000

Source: U.S. Census, Moody's Economy. Com, 2005 Housing Supply Report, New York City Rent Guidelines Board, Cushman & Wakefield, Inc.



Exhibit 4-18. Cyclical Scenario: Hudson Yards Housing Forecast

EXIIIDIL 4-16.	v	iiuuson 1 arus iii	Estimated
Year	Units Demand	Units Supply	Square Feet Completed
2005	1,086		0
2006	760		0
2007	696	1,086	1,058,850
2008	790	760	741,404
2009	779	696	679,043
2010	851	790	770,506
2011	876	779	759,419
2012	973	851	830,095
2013	794	876	854,578
2014	742	973	949,120
2015	777	794	774,201
2016	711	742	723,697
2017	633	777	757,572
2018	543	711	693,517
2019	428	633	617,144
2020	351	543	529,684
2021	407	428	416,972
2022	231	351	341,831
2023	85	407	397,263
2024	11	231	225,424
2025	0	85	82,532
2026	0	11	10,471
2027	5	0	0
2028	13	0	0
2029	0	5	4,927
2030	99	13	12,934
2031	351	0	0
2032	392	99	96,698
2033	378	351	341,831
2034	198	392	382,481
2035	352	378	368,315
Total	14,315	13,765	13,420,511
Average		475	
Rounded:			13,400,000

Source: U.S. Census, Moody's Economy. Com, 2005 Housing Supply Report, New York City Rent Guidelines Board, Cushman & Wakefield, Inc.

Demand for housing units in both scenarios declines considerably over the forecast period, from an average of about 900 units per year from 2006 to 2015, to approximately 400 units per year (300 in the Cyclical) from 2016 to 2035. This result is driven by the assumptions on population and household formation growth provided by Moody's Economy.com that



anticipates a slowdown in population growth, due to the ageing of the Baby-Boomer generation. The estimated average annual completions in Hudson Yards, particularly in the later years, are comparable to other recent large-scale housing developments on the West Side. Housing completions in Battery Park City averaged about 361 units per year, and in Riverside West averaged 384 units per year.

Over the course of the next 30 years, the projected demand for housing in Hudson Yards is expected to account for about 18 percent of Manhattan's overall housing demand. Shown below are the resulting annual completions expected to be built in Hudson Yards based on projections in the Base and Cyclical scenarios.

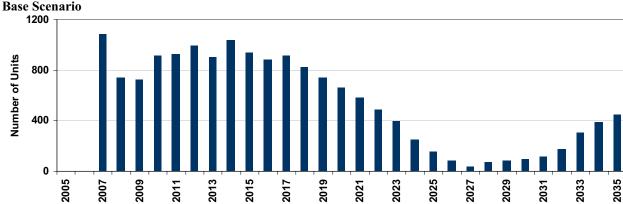


Exhibit 4-19. Hudson Yards Annual Forecast of Housing Completions, 2006 – 2035

Source: U.S. Census, Moody's Economy.com, 2005 Housing Supply Report, New York City Rent Guideline Board, Cushman & Wakefield, Inc.

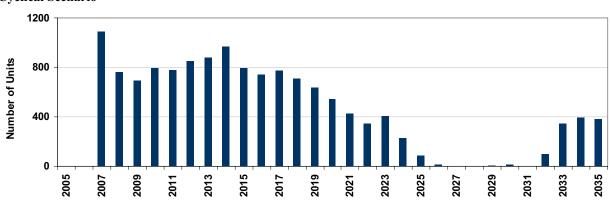


Exhibit 4-20. Hudson Yards Annual Forecast of Housing Completions, 2005 – 2035 Cyclical Scenario

Source: U.S. Census, Moody's Economy.com, 2005 Housing Supply Report, New York City Rent Guideline Board, Cushman & Wakefield, Inc.



Revenues from Residential Development: Methodology and Assumptions

Tax revenues associated with residential property development will accrue to HYIC in the form of payments equivalent to the underlying property taxes, referred to as tax equivalency payments (or TEP), and appropriated annually by the City council¹⁶. Revenues associated with residential development are expected to account for over 37 percent of the overall revenues in both the Base and Cyclical scenarios. These projections are the result of two major inputs into the City's revenue model used to calculate the 45-year revenues from 2006 to 2050.

Projected Demand is defined in millions of square feet (msf) and number of units as derived in the previous section. The projections provided by C&W rely on underlying economic forecasts provided by Moody's Economy.com (Chapter 2) that were used as inputs along with key real estate and zoning variables and assumptions on infrastructure improvements.

Even though the 30-year demand forecast ends in 2035, the revenues from the development are projected and retained by HYIC for an additional 15 years, from 2036 through 2050. C&W incorporated the following assumptions and factors to support the revenues for new residential development in the Hudson Yards.

<u>Infrastructure</u>: Projected demand assumes that key infrastructure improvements are completed. The Mid-Block Park is planned in two sections, West 33rd to West 36th Streets, and West 38th to West 42nd Streets, and both are likely to be considered complementary amenities to some of the larger residential sites that front on the proposed park between 36th and West 39th Streets. Although the completion of the number 7 subway is critical to office development in Hudson Yards, it is not as important to residential uses as evidenced by the new residential construction that is already taking place.

Taxes generated from the new residential development in Hudson Yards are derived by multiplying the projected new units derived above by the projected taxes per unit.

<u>Tax Programs</u>: C&W reviewed the assessment mechanism, tax policies¹⁷ and incentive programs used to determine the tax rates and payments in the revenue model.

<u>Market Comparables:</u> C&W reviewed relevant market comparables for condominiums units and rental units used to determine projected taxes.

<u>Growth Rates:</u> To project the revenues over the forecast period, the revenue model assumes constant growth rate in residential property taxes of 4.0 percent from 2006 through 2050.



¹⁶ Preconsidered Res. No. 760 adopted by the City Council on January 19, 2005

¹⁷ An overview of New York City property taxes and assessment mechanism is provided in Appendix C.

On the basis of the real estate variables provided by Cushman & Wakefield and analysis of the other available data provided by third parties (which are relied upon and assumed to be reasonable and accurate), including forecasts provided by Moody's Economy.com and 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 believes the revenue projections to be reasonable.

The revenues are contingent on the realization of all the economic and real estate assumptions, analyses, zoning and completion of key infrastructure, and limiting conditions that are sourced or detailed herein and in Chapter 1.B. Limiting Conditions.

421-a Program

It is assumed that residential property owners in Hudson Yards would take advantage of existing incentive programs offered under the 421-a program. Two-thirds of the total residential development is assumed to be rental units that receive the 421-a, 20-year tax abatement under the 80/20 affordable housing program. This ratio is consistent with the historic overall ratio of rental units to owner-occupied units in New York City. The remaining units are either owner-occupied condominiums or market-rate rentals. These units are expected to receive 10-year abatements by purchasing certificates.

Under the 421-a program, only the existing land assessment is taxed at the time the 421-a exemption is granted during the abatement period (12 years for 20-year abatement, 2 years for the 10-year abatement in Hudson Yards). Abatements on the remaining assessments (due to new building improvements) are exempt during this period. These abatements phase out over the remaining eight years in increments of 20 percent every two years, until full taxes are paid in years 21 and 11, respectively.¹⁸

Hudson Yards Residential Property Tax Analysis

In order to compute the revenues associated with new residential development, estimates of land taxes and building assessments for new residential properties (Class 2) in Hudson Yards were determined based on tax comparables of existing residential properties.

Exhibit 7-21 shows the comparables for 80/20 rental units and market rate condominiums. In the case of the 80/20 rental units, the comparable buildings used are located within Hudson Yards, providing a direct comparison for future residential units in Hudson Yards. Assessed

¹⁸ A more detailed discussion of the 421-a program eligibility and abatement mechanism is provided in Appendix B.



values of vacant lots and parking lots were also used to obtain land comparables for 80/20 units. In the case of condominiums, although there are several recently completed new condominium projects in the Hudson Yards, these have not yet been reflected in Department of Finance's (DOF) final assessment rolls and could not be used for comparison purposes. Comparables from other areas were therefore used and a median value was assigned to minimize the effect of outliers.

Exhibit 4-21. Manhattan Residential Condominium Comparables

Building	Median MV Per Unit	Median MV/SF	Median Land AV*/SF
Time Warner Center Condominiums	\$462,255	\$420.23	\$53.15
The Marais	\$172,793	\$157.08	\$30.72
295 Greenwich Street	\$225,730	\$205.21	\$31.85
275 Greenwich Street	\$226,564	\$205.97	\$30.75
Zeckendorf Towers	\$241,011	\$219.10	\$29.97
One Lincoln Square (144 Columbus Ave)	\$366,680	\$333.35	\$18.92
Millennium Ritz Apartments	\$222,812	\$202.56	\$14.76
21 South End Avenue	\$257,973	\$234.52	\$32.28
Overall Median	\$233,788	\$212.53	\$30.74

Manhattan 80/20 Unit Comparables

Address	MV* Per Unit	MV Per SF	Assessed Value Land
315-319 West 33 rd Street	\$271,265.91	\$278.22	\$14.22
501 West 41st Street	\$261,852.90	\$268.57	\$5.03
343 West 42nd Street	\$169,637.51	\$173.99	\$4.49
360 West 34th Street	\$164,259.11	\$168.47	\$13.69
400 West 37th Street	\$160,384.26	\$164.50	\$5.39
640 West 42nd Street	\$147,148.43	\$150.92	\$23.97
444 West 35th Street	\$118,454.13	\$121.49	\$8.66
350 West 42nd Street			\$7.19
440 West 42nd Street			\$6.75
Not Yet Assigned			\$4.48
Not Yet Assigned			\$4.45
Not Yet Assigned			\$6.04
Parking Lot			\$10.11
Parking Lot			\$9.55
Overall Median	\$164,259.11	\$168.47	\$6.97

^{*} MV=Market value, AV=Assessed value as determined by the New York City Department of Finance. Source: New York City Department of Finance, Hudson Yards Development Corporation.

A ratio of 1,100 sf per condominium unit and 900 sf per 80/20 rental unit was used to convert market value per unit on a square foot basis consistent. This results in an implied DOF



market value of \$213 psf for condominiums and \$168 psf for each 80/20 rentals and land values of \$30.74 and \$6.97 psf, respectively.

Projected Growth Rates in Property Values and Taxes

The revenue model assumes that market values (and therefore taxes since tax rates are held constant) grow by 4.0 percent annually over the forecast years, 2006 to 2050. Total taxes are obtained by multiplying the forecast market value psf by a constant assessment ratio of 45.0 percent and a constant tax rate of 12.74¹⁹ percent. The portion exempt from assessment by 421-a is subtracted from assessed values to determine total tax revenues associated with Class 2 properties.

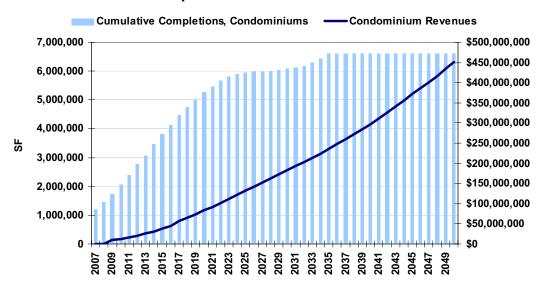
Hudson Yards Residential Tax Revenues

A summary of the revenues for both condominium units and 80/20 rental units is provided in Exhibit 4-22 for the Base and Cyclical scenarios, while detailed calculations are provided in the supporting tables in Appendix B.

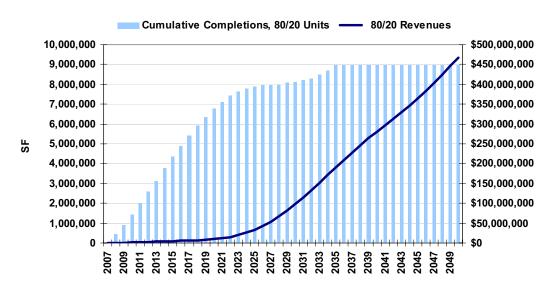


¹⁹ Based on FY 2007 tax rate data provided by HYDC and New York City OMB.

Exhibit 4-22. Base Scenario Total Condominium Unit Completions and Revenues



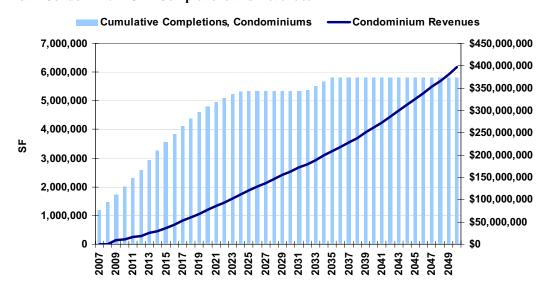
Total 80/20 Units and Revenues



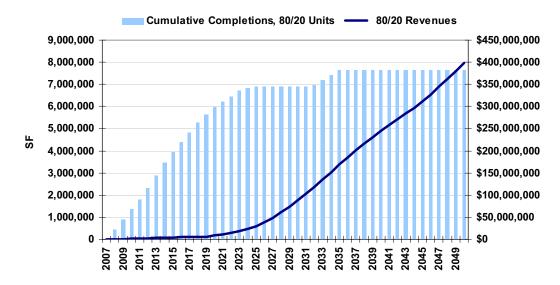
Source: U.S. Census, Moody's Economy.com, 2005 Housing Supply Report, New York City Rent Guideline Board, Hudson Yards Development Corporation, Cushman & Wakefield, Inc.



Cyclical Scenario Total Condominium Unit Completions and Revenues



Total 80/20 Units and Revenues



Source: U.S. Census, Moody's Economy.com, 2005 Housing Supply Report, New York City Rent Guideline Board, Hudson Yards Development Corporation, Cushman & Wakefield, Inc.



Because of the 421-a exemption schedule, property tax revenues from condominium units are expected to grow slowly during the first 10 years, reaching only \$46 million in 2016 and then accelerate to \$144 million in 2026 and \$456 million by 2050 in the Base scenario, when exemptions are fully phased out.

Even though rental properties account for two-thirds of overall expected new units, growth in tax revenues from 80/20 units is even lower initially because of the longer exemption schedules. Total revenues are expected to be only \$5 million in 2016, \$43 million in 2026, and then grow exponentially to \$466 million in 2050 in the Base scenario. Combined, the condominium and 80/20 unit revenues are expected to total \$14.4 billion over the forecast period.

The revenue patterns in the Cyclical scenario are very similar, although the lower forecast of overall completions (13,765 units compared to 15, 972 in the Base) results in lower revenues by the end of the forecast period in 2050, \$396 million for rental units and \$400 million for condominium units. Combined, the condominium and 80/20 unit revenues are expected to total \$12.7 billion over the forecast period.

Residential Revenues Forecast – Summary of Assumptions and Risks

<u>Demand</u> - In assessing the revenue projections for residential property taxes, C&W provided the 30-year forecast for residential completions based on projections on households provided by Moody's economy.com. Even though the demand forecast ends in 2035, the revenues from the development are retained by HYIC for an additional 15 years, from 2036 through 2050.

<u>421-a Program and other tax legislation</u>- Based on current pricing conditions in the condominium and rental market, it is important to note that, unlike office development, where development feasibility in Hudson Yards is dependant on a PILOT discount to full taxes, the projected demand for residential units is not predicated on the incentives offered under the 421-a program, even though it is assumed that developers will take advantage of these in the revenue model.

As noted previously, a task force is currently in place to review the eligibility and abatement criteria of the 421-a program. Assuming that resulting changes in the 421-a program affect areas of Manhattan equally, Hudson Yards' projected share of Manhattan's overall demand would not be impacted.

Likewise, developers' response to changes in the 421-a program could vary, depending on their perception of whether the changes to the program are permanent or temporary, and depending on prevailing market conditions at the time. If incentives were to be permanently reduced, developers could respond by accelerating development to take advantage of the



deeper existing incentives. If development were to occur earlier than forecast, resulting revenues would be higher than forecast. Alternatively developers might affect a wait-and-see approach that would result in lower-than-forecasted revenues.

It is further assumed that the annual appropriation of revenues associated with new residential development is assigned to HYIC by the New York City Council²⁰. If this does not occur and the revenues are not appropriated to HYIC, future revenue streams are likely to be lower than shown in Exhibit 4-22.

<u>Growth Rates</u> - The assumption used in the revenue model of forecast growth rate in market values and assessments of 4.0 percent per year over the forecast period is reasonable, based on the 5.5 percent average growth rate in assessed value for Class 2 properties from 1985 to 2006 (Appendix C).

The economy's cyclical nature could cause growth in any given year to deviate from this long-term trend. In particular, during periods of market downturns tax revenues and underlying assessments are likely to experience periods of decline similar to those experienced following the 1990 recession, when Class 2 billable assessed values dropped annually from 1993 through 1996 by 1.1 percent on average.

Given, however, that the 10 and 20-year abatement periods provided under 421-a are considerably longer than the forecast duration of economic downturns, the effect of market downturns is neither expected to be prolonged enough to have a significant overall effect on assessments, nor result in deviations from the long-term trend growth rate over the forecast period.

<u>Infrastructure</u> - In reviewing assumptions related to the planned investments in public infrastructure in the Hudson Yards and the impact on residential development and revenues, unlike office development, which is expected to be more dependent on the completion of the subway, residential development and revenues are not as likely to be as impacted by a delay in the subway completion, as indicated by recent residential construction in the area.

<u>Zoning</u> - The projected demand assumes that the existing zoning legislation ²¹ regarding building FAR and DIB bonus remains in place throughout the analysis period. It is also assumed that future changes to City zoning will not materially affect Manhattan's overall development potential. Significant changes to zoning by creating competitive markets to Hudson Yards other than those identified in this report could potentially result in lower revenues than forecast.



²⁰ Preconsidered Res. No. 760 adopted by the City Council on January 19, 2005

²¹ Hudson Yards Special District Zoning Resolution, January 2005

5. HOTEL MARKET

Overview

New York City is one of the most visited cities in the world with visitors from around the globe coming to see the City's many famous cultural and entertainment attractions. A variety of hotel accommodations, ranging from high-end luxury hotels to smaller bed and breakfast facilities, cater to the many visitors who choose to stay overnight. Additionally because New York City has the nation's largest CBD, the hotel industry serves the many men and women who come to the City to conduct business.

Approximately 41 million leisure and business visitors visited the City last year, primarily Manhattan, establishing a new record for visitation and reinforcing the outlook for the tourism industry as a growing sector of the economy. This forecast growth in tourism coupled with the projected growth in business visitors generated by expected employment gains, would create a need for additional hotel rooms in Manhattan. While overall demand for hotel rooms is expected to grow, the current hotel room supply is extremely tight. Hotel market conditions in Manhattan are at historic peaks in terms of occupancy and there are limited sites for new development.

The confluence of these factors positions Hudson Yards to be an extension of Midtown's new hotel growth. The proposed expansion of the Javits Convention Center would also provide a direct boost to hotel development in Hudson Yards. C&W estimates demand for approximately 3,000 additional rooms in Hudson Yards from 2006 through 2035, or about 3.5 percent of the projected overall demand for the 85,000 hotel rooms Manhattan will need over the forecast period. Already a 1,000 room convention hotel is planned and expected to open in 2011. On a square foot basis, a forecast of over 2.3 msf and 2.1 msf of hotel development is anticipated in the Base and Cyclical scenarios, respectively.

Associated with the development timeline, total property tax revenues from hotel completions flowing to HYIC as tax equivalency payments (TEP) are expected to total \$959 million, increasing from approximately \$1.0 million in 2006-2008 to \$49 million in 2050 for the Base scenario and to total \$851 million, increasing from approximately \$1.0 million in 2006-2008 to \$44 million in 2050 for the Cyclical scenario. For the purposes of this analysis, no convention center hotel revenues are included in the hotel revenue projections.



Exhibit 5-1. Hotel Sector Forecast of Completions¹ and Revenues, 2007-2050

Exhibit 5-	Base Scenario	ast of Completions	Cyclical Scenario	-2030
Data		Davanuaa		Davanuas
Date	Completions SF	Revenues	Completions SF	Revenues
2006	0	\$0	50,000	\$0
2007	50,000	\$498,005	50,000	\$498,005
2008	0	\$512,945	0	\$512,945
2009	60,000	\$1,162,334	60,000	\$1,162,334
2010	0	\$1,197,204	0	\$1,197,204
2011*	900,000	\$1,233,120	900,000	\$1,233,120
2012	0	\$1,270,113	0	\$1,270,113
2013	0	\$1,308,217	0	\$1,308,217
2014	350,000	\$5,634,847	0	\$1,347,463
2015	0	\$5,803,892	420,000	\$6,687,093
2016	0	\$5,978,009	0	\$6,887,706
2017	0	\$6,157,349	0	\$7,094,337
2018	0	\$6,342,070	0	\$7,307,167
2019	0	\$6,532,332	0	\$7,526,382
2020	350,000	\$11,847,662	0	\$7,752,174
2021	0	\$12,203,091	0	\$7,984,739
2022	0	\$12,569,184	0	\$8,224,281
2023	0	\$12,946,260	0	\$8,471,009
2024	0	\$13,334,647	350,000	\$14,487,024
2025	150,000	\$16,278,147	0	\$14,921,635
2026	0	\$16,766,492	0	\$15,369,284
2027	0	\$17,269,487	0	\$15,830,363
2028	150,000	\$20,566,879	0	\$16,305,274
2029	0	\$21,183,886	0	\$16,794,432
2030	0	\$21,819,402	0	\$17,298,265
2031	0	\$22,473,984	180,000	\$21,461,643
2032	0	\$23,148,204	0	\$22,105,492
2033	0	\$23,842,650	0	\$22,768,657
2034	280,000	\$30,752,722	180,000	\$27,434,083
2035	0	\$31,675,304	0	\$28,257,106
2036	0	\$32,625,563	0	\$29,104,819
2037	0	\$33,604,330	0	\$29,977,963
2038	0	\$34,612,460	0	\$30,877,302
2039	0	\$35,650,834	0	\$31,803,621
2040	0	\$36,720,359	0	\$32,757,730
2041	0	\$37,821,969	0	\$33,740,462
2042	0	\$38,956,628	0	\$34,752,676
2043	0	\$40,125,327	0	\$35,795,256
2044	0	\$41,329,087	0	\$36,869,114
2045	0	\$42,568,960	0	\$37,975,187
2046	0	\$43,846,029	0	\$39,114,443
2047	0	\$45,161,409	0	\$40,287,876
2048	0	\$46,516,252	0	\$41,496,512
2049	0	\$47,911,739	0	\$42,741,408
2050	0	\$49,349,091	0	\$44,023,650
Total	2,290,000 SF	\$959,108,474	2,140,000 SF	\$850,815,564

Source: New York City's Office of Management and Budgets and Department of Finance, Hudson Yards Development Corporation, Moody's Economy.com, PriceWaterhouseCoopers study *Jacob K. Javits Convention Center Expansion and Headquarters Hotel*, 2003, Cushman & Wakefield, Inc.

 $^{^{1}}$ The proposed Convention Center Hotel is included in the square footage of completions but not in revenues.



Introduction

The following section examines the impact of the rezoning of the Hudson Yards on the City's hotel market and the potential for new hotel development in the Hudson Yards. Since Manhattan is the primary hotel market in which new hotels in Hudson Yards will compete, an overview of Manhattan's hotel market fundamentals forms the necessary basis to determine the hotel demand for Hudson Yards. The analysis provides:

- an overview of Manhattan's hotel market, historic and current conditions
- an assessment of hotel demand generators
- a determination of demand generators specific to Hudson Yards
- a forecast of hotel demand for 2006 2035

New York City's Hotel Market

As one of the most significant cultural and commercial cities in the world, New York City, particularly Manhattan, is one of the most popular international tourist destinations. Visitors come to enjoy the many landmarks and attractions including the Empire State Building, Radio City Music Hall, the United Nations, Carnegie Hall, Broadway theatres, and Lincoln Center, all of which attract millions of visitors per year.

According to New York & Company (NYC & Co.), the City visitor's bureau, approximately 41.0 million people visited New York in 2005², representing a 2.8 percent increase over 2004 and continuing the strong upward trend in tourism following the September 11, 2001 terrorist attacks. Direct visitor spending rose to \$21 billion in 2004 (the latest available data), up from \$18.5 billion in 2003.

In addition to the major leisure traveler attractions, Manhattan accounts for nearly two-thirds of New York City's total employment and is the nation's largest Central Business District (CBD). As such, business travelers represent a significant portion of the overall visitors to the City. The current expansion of the Jacob K. Javits Convention Center will also enable New York City to better attract convention travelers who, like business travelers, tend to have a higher economic impact on the lodging industry due to the longer lengths of their stays and higher overall spending.

Manhattan's high visitation rate and resultant high economic activity translates to strong demand for hotel rooms. The City, however, has stiff barriers to entry for new hotels



² The most recent available data form NYC & Co.

including soaring land and construction costs, and a limited supply of available sites. As a result, Manhattan's occupancy rates have typically been among the highest in the nation. According to Smith Travel Research (STR), New York City's average occupancy rate in 2006³ was 83.6 percent, roughly 20 percentage points higher than the national average.

Although the boroughs of Brooklyn and Queens capture much of the displaced demand as well as the airport-generated demand, they do not capture sufficient room nights to have an impact on Manhattan's overall performance. The New York City hotel market supply was estimated to have over 79,000 available rooms throughout all five boroughs in 2006, with Manhattan accounting for approximately 62,000 rooms or almost 80 percent of the total room supply. Any hotel development in Hudson Yards would be competitive with the Manhattan hotel market. The following analysis is, therefore, limited to Manhattan.

Overview of Manhattan's Hotel Market

Manhattan has been a popular leisure and commercial travel destination for decades and is home to some of the world's largest and most luxurious hotels, as well as a full range of budget, boutique and business-oriented hotels. The City's visitation levels have closely followed the ups and downs of the economic cycle, no different from the tourism industry nationwide, as shown in Exhibit 5-2.

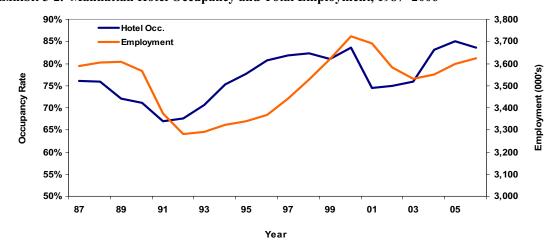


Exhibit 5-2. Manhattan Hotel Occupancy and Total Employment, 1987-2006*

Source: Smith Travel Research, U.S. Bureau of Labor Statistics. *2006 is preliminary data through July

³ Hotel statistics are through July 2006. Due to seasonality of the hotel industry in New York the last quarter typically register the highest occupancy and average daily room rates. 2006 data is therefore not directly comparable to the prior year's annual data.



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Applying a similar historic time frame as used in the Office chapter of this report, relevant statistics of hotel occupancy, room supply and revenues are shown in Exhibit 5-3. Occupancy peaked in the late 1980s through 1990 just as the local and national economies peaked in terms of employment and economic growth. A nationwide recession, the Persian Gulf War, and poor stock market performance caused a sharp drop in occupancy from 1990 to 1992, and to a lesser extent, in average daily room rates (ADR). Occupancy declined by almost 10 percentage points from the 1987 peak of 76 percent to 67 percent in 1991 and 1992, and ADR declined to \$126 in 1992 from a peak of \$132 in 1990. It was not until 1993 that the industry and the nation began to recover. This coincided with the elimination in 1993 of the 5.0 percent hotel room tax that had previously deterred convention and event planners from booking meetings in New York City.

Exhibit 5-3. Manhattan Hotel Supply, Occupancy, and Revenues Per Available Room, 1987-2006*

Year	Hotel Room Supply	Yr over Yr % Change in Hotel Room Supply	Occupied Hotel Rooms	Yr over Yr % Change in Occupied Hotel Rooms	Total Revenue	Hotel Occupancy	Hotel ADR ¹	Hotel RevPAR ²
1987	52,683		14,624,039		\$1,653,263,504	76.05%	\$113.05	\$85.98
1988	52,768	0.2%	14,634,194	0.1%	\$1,757,710,721	75.98%	\$120.11	\$91.26
1989	52,724	-0.1%	13,873,898	-5.2%	\$1,832,608,484	72.09%	\$132.09	\$95.23
1990	54,421	3.2%	14,139,816	1.9%	\$1,871,271,838	71.18%	\$132.34	\$94.21
1991	55,058	1.2%	13,442,624	-4.9%	\$1,714,406,783	66.89%	\$127.54	\$85.31
1992	56,235	2.1%	13,871,555	3.2%	\$1,751,509,258	67.58%	\$126.27	\$85.33
1993	56,190	-0.1%	14,494,889	4.5%	\$1,831,142,083	70.67%	\$126.33	\$89.28
1994	56,083	-0.2%	15,410,904	6.3%	\$2,063,004,441	75.28%	\$133.87	\$100.78
1995	56,285	0.4%	15,943,468	3.5%	\$2,301,357,578	77.61%	\$144.34	\$112.02
1996	56,552	0.5%	16,654,408	4.5%	\$2,676,737,127	80.68%	\$160.72	\$129.68
1997	57,424	1.5%	17,158,942	3.0%	\$3,034,698,252	81.87%	\$176.86	\$144.79
1998	57,943	0.9%	17,415,191	1.5%	\$3,452,491,875	82.34%	\$198.25	\$163.24
1999	59,550	2.8%	17,621,807	1.2%	\$3,673,094,618	81.07%	\$208.44	\$168.99
2000	61,018	2.5%	18,632,319	5.7%	\$4,146,337,642	83.66%	\$222.53	\$186.17
2001	62,755	2.8%	17,053,663	-8.5%	\$3,336,509,093	74.45%	\$195.65	\$145.66
2002	63,296	0.9%	17,332,886	1.6%	\$3,221,764,487	75.02%	\$185.88	\$139.45
2003	64,450	1.8%	17,846,276	3.0%	\$3,234,458,072	75.86%	\$181.24	\$137.49
2004	64,077	-0.6%	19,442,658	8.9%	\$3,914,999,006	83.13%	\$201.36	\$167.39
2005	63,101	-1.5%	19,580,575	0.7%	\$4,548,771,141	85.01%	\$232.31	\$197.50
2006*	63,163	NA	11,192,234	NA	\$2,617,763,769	83.55%	\$234.17	\$195.90*
Average Annual % Change 87-05	1.0%		1.6%		5.8%	76.7%	4.1%	4.7%

*Monthly data though July is not directly comparable to the prior year's data (1) ADR = Average Daily Rate (2) RevPAR = Revenue Per Available Room Source: Smith Travel Research, *2006 is preliminary data through July



Hotel demand and occupancy rates increased substantially throughout the mid-1990s as the national and local economies rebounded. With hotel room supply remaining flat, hoteliers city-wide were able to implement price increases and as a result ADR increased. The reopening of the 1,013 room Roosevelt Hotel in 1997 marked the first significant increase⁴ to hotel room supply in almost seven years, about 2.0 percent of the 56,000 rooms, and Manhattan's hotel occupancy continued to grow reaching 82 percent. In 1998, ADR approached \$200, and revenue per available room (RevPAR), the industry standard of measuring profitability, increased 12.7 percent over 1997. Hotel room supply continued to grow and by 1999, inventory reached almost 60,000 rooms. Occupancy fell slightly as supply had increased at a faster rate than demand.

The turn of the millennium was a monumental year for the hotel market as it encountered its eighth successive RevPAR increase with a 10 percent annual gain. Manhattan occupancy reached an all time high of 83.7 percent. A major reversal of the previous decade's expansion followed in 2001. The national and regional economies were in a recession and the events of September 11th significantly reduced corporate and individual spending and travel. RevPAR in Manhattan decreased by 21.7 percent. Hotel supply continued to increase, however, as several hotels remained under construction despite the decline in travel. The years 2002 and 2003 were also difficult for the hotel industry with the war in Iraq, the SARS scare, and the continued uncertainty in the economy. By year-end 2003, the economy finally began to stabilize and demand began to return.

2004 heralded a significant reversal as evidenced by the sharp increase in occupancy and ADR due to improving hotel operating fundamentals. Occupancies tightened and the pendulum of pricing power swung from travelers to hotel owners and operators. Corporate travel expanded and leisure travel continued to grow as Americans began to feel more confident about traveling and foreigners took advantage of favorable currency exchange rates to visit New York City. Supply decreased for the first time in a decade in 2004, due mainly to hotel closures and conversions to residential condominium units.

With the national economy rebounding in 2005 conditions further tightened and the Manhattan occupancy rate reached a record high of 85 percent, the highest since 1965. The scarcity of availabilities placed significant pressures on ADR and RevPAR increased for the second consecutive year by 18 percent to \$197, even higher than the 2000 peak of \$186.

Despite the increasing demand for hotel rooms, room supply continued to decline in 2005 by 1.5 percent, the largest decrease over the 19-year time frame. The strength in the residential market continued to result in several hotels converting to either condominium units or a mix of hotel and condominium units.

⁴ Hotel rooms undergoing renovations are subtracted from the existing overall room supply if these are expected to last more than six months as was the case with the Roosevelt Hotel.



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Preliminary data in 2006 thorough July indicates that Manhattan hotel operating fundamentals are still extremely strong with occupancy averaging 83.6 percent through the first seven months of the year and RevPAR at \$196. Since the last quarter typically registers the highest hotel occupancy and ADR, it is likely that 2006 will surpass last year's record levels. Room supply has remained at approximately 63,000 rooms. The pace of conversions/closings, however, has slowed in 2006 compared to 2005 as the price appreciation in the residential condominium market appears to have peaked. Additionally as hotel RevPAR continues to increase, there is renewed investor interest in hotels as evidenced by the recent sale of the W Hotel Union Square which commanded more that \$1,000,000 per key. Exhibit 5-4 provides a summary of hotel conversions and closing since 2002.

Overall, since 2002, 14 hotels have closed for conversion to condominiums, most notably the Plaza Hotel, which closed in January 2005 for partial conversion, as listed in Exhibit 5-4. Also in 2005, one of the most notable transactions was the sale of the Essex House/St. Regis Hotel that is planned for a hotel renovation and conversion of 91 rooms or 15 percent of the inventory to condominium units. In 2006 there are currently two hotels pending closing, the Mark and The Drake totaling almost 700 rooms.

Exhibit 5-4. Manhattan Hotel Closings/Conversions, 2002-2006*

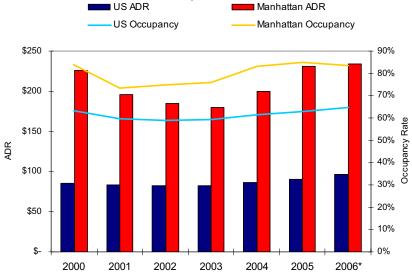
Year	Property	Submarket	Rooms
2002	Hotel Delmonico	Upper East Side	152
2003	The Helmsley Windsor Hotel	Midtown West	240
	Empire Hotel	Upper West Side	381
2004	Regent Hotel	Downtown	144
	Intercontinental Central Park South	Midtown West	211
	The Mayflower	Upper West Side	356
2005	Stanhope Park Hyatt	Upper East Side	185
	The Plaza	Midtown East	457
	The Melrose	Upper East Side	306
	Sutton	Upper East	84
	The Essex House/St. Regis	Midtown West	91
	The Olcott	Upper West	120
2006	The Mark (Pending)	Upper East Side	177
-	The Drake (Pending)	Midtown East	495

Source: Cushman & Wakefield, Inc. *2006 is preliminary data through July.



Another illustration of the strength of Manhattan's hotel market is to compare it to national averages for hotel activity as seen Exhibit 5-5. Since 2000, Manhattan's hotel occupancy rate and ADR have been consistently and significantly higher than the U.S. average. As a result Manhattan RevPAR continues to far outpace the national average at \$196 compared to \$62 for the nation.

Exhibit 5-5. Hotel Occupancy and Average Daily Rate, Manhattan and United States, 2000-2006



Source: Smith Travel Research.

Exhibit 5-6 is a more detailed table comparing occupancy, ADR, and RevPAR in the nation's Top 10 cities in 2005, the latest available data. New York City is the highest ranked market in the nation in terms of absolute RevPAR, 47 percent ahead of the next closest market.⁵

Exhibit 5-6. Hotel Occupancy, ADR, and RevPAR Top 10 Metropolitan Markets in U.S., 2005

	Occupancy	ADR	RevPAR
New York-NY	82.9%	\$211.57	\$175.37
Oahu-HI	85.5%	\$139.27	\$119.05
Wash-DC	71.4%	\$131.35	\$93.73
Miami-FL	72.6%	\$128.48	\$93.23
San Fran-CA	71.5%	\$125.02	\$89.40
San Diego-CA	72.4%	\$122.02	\$88.31
Boston-MA	65.3%	\$129.69	\$84.64
New Orleans-LA	67.2%	\$115.53	\$77.58
Los Angles-CA	74.7%	\$103.89	\$77.57
Anaheim-CA	74.3%	\$102.21	\$75.98

Source: Smith Travel Research.



⁵ Note that Exhibit 5-6 figures are by city, in contrast to Exhibit 5-3 and 5-5 which are Manhattan only.

Manhattan Hotel Submarkets

The prime hotel submarkets within Manhattan are Midtown and Downtown as shown in Exhibit 5-7. Midtown is defined as the area between 34th Street and 59th Street, which comprises Midtown West as the area west of Fifth Avenue and Midtown East as the area east of Fifth Avenue. Midtown is the prime business district in Manhattan and contains many of the city's largest office buildings, retail buildings and hotels. It is considered to be the busiest commercial business district in the United States. In addition to the more than two million people who work in Manhattan, thousands of visitors come to the borough everyday. With an overall supply of 47,444 rooms in 2006, the Midtown market accounts for 76 percent of Manhattan's hotel supply.

Lower Manhattan/Downtown⁶ is defined as the area south of 34th Street and is home to the New York Stock Exchange and many of the city's major financial institutions. In 2006, there were 15,719 rooms in Downtown, representing approximately 24 percent of the overall Manhattan market.

⁶ Note: this geographic definition for the hotel submarkets is different from the definition for the office submarkets defined in the Office Chapter.



Exhibit 5-7. Manhattan Hotel Supply, Demand, Occupancy, ADR and RevPAR Historic Trends by Submarket; 1999-2006*

Midtown West

Year	Hotel Room Supply	Occupied Hotel Rooms	Yr over Yr % Change in Occupied Hotel Rooms	Total Revenue	Hotel Occ.	Hotel ADR ¹	Hotel RevPAR ²
1999	25,694	7,724,994		\$1,580,331,271	82.37%	\$204.57	\$168.51
2000	25,903	8,122,556	5.1%	\$1,789,580,962	85.91%	\$220.32	\$189.28
2001	27,276	7,809,526	-3.9%	\$1,489,236,831	78.44%	\$190.69	\$149.59
2002	28,314	7,997,122	2.4%	\$1,481,346,135	77.38%	\$185.23	\$143.34
2003	29,027	8,311,424	3.9%	\$1,507,177,312	78.45%	\$181.34	\$142.25
2004	28,589	8,882,459	6.9%	\$1,786,443,228	85.12%	\$201.12	\$171.20
2005	28,130	8,808,873	-0.8%	\$2,042,630,944	85.79%	\$231.88	\$198.94
2006	28,268	5,055,998	NA	\$1,174,629,286	84.32%	\$232.19	\$195.97
Average Annual % Change 99-05	1.5%	2.2%		4.4%	0.7%	2.1%	2.8%

Midtown East

Year	Hotel Room Supply	Occupied Hotel Rooms	Yr over Yr % Change in Occupied Hotel Rooms	Total Revenue	Hotel Occ.	Hotel ADR ¹	Hotel RevPAR ²
1999	20,278	5,824,728		\$1,407,352,701	78.70%	\$241.62	\$190.14
2000	20,451	6,171,098	5.9%	\$1,572,730,396	82.67%	\$254.85	\$210.70
2001	20,577	5,458,024	-11.6%	\$1,219,589,105	72.67%	\$223.45	\$162.38
2002	20,453	5,622,249	3.0%	\$1,191,029,088	75.31%	\$211.84	\$159.54
2003	20,301	5,624,906	0.0%	\$1,141,587,588	75.91%	\$202.95	\$154.06
2004	19,972	5,906,873	5.0%	\$1,361,637,868	81.03%	\$230.52	\$186.79
2005	19,563	6,119,192	3.6%	\$1,622,352,238	85.70%	\$265.13	\$227.21
2006	19,176	3,411,381	NA	\$902,794,558	83.91%	\$266.22	\$ 224.35
Average Annual % Change 99-05	-0.6%	0.8%		2.4%	1.4%	1.6%	3.0%

Downtown

Year	Hotel Room Supply	Occupied Hotel Rooms	Yr over Yr % Change in Occupied Hotel Rooms	Total Revenue	Hotel Occ.	Hotel ADR ¹	Hotel RevPAR ²
1999	13,578	4,072,085		\$685,410,646	82.17%	\$168.32	\$138.30
2000	14,593	4,338,665	6.5%	\$784,026,284	81.45%	\$180.71	\$147.19
2001	14,902	3,786,113	-12.7%	\$627,683,157	69.61%	\$165.79	\$115.40
2002	14,529	3,713,515	-1.9%	\$549,389,264	70.03%	\$147.94	\$103.60
2003	15,122	3,909,946	5.3%	\$585,693,172	70.84%	\$149.80	\$106.11
2004	15,438	4,653,326	19.0%	\$766,917,910	82.58%	\$164.81	\$136.10
2005	15,409	4,652,510	0.0%	\$883,787,959	82.72%	\$189.96	\$157.14
2006	15,719	2,724,855	N/A	\$540,339,925	81.71%	\$197.43	\$161.01
Average Annual % Change 99-05	2.1%	2.2%		4.3%	0.1%	2.0%	2.2%

^{1.} ADR=Average Daily Rate

Source: Smith Travel Research. *2006 is preliminary data through July.



^{2.} RevPAR=Revenue Per Available Room

The operating statistics for all three submarkets continues to remain above the levels attained in 2000 prior to September 11th, a mark first surpassed in 2005⁷.

In looking at development trends in these submarkets, new hotel development since 2000 has generally occurred in Midtown West and Downtown as illustrated in Exhibit 5-8. Between 2000 and 2006, approximately 2,400 new rooms were added in Midtown West and 1,100 in Downtown, while the supply of rooms in Midtown East declined by nearly 1,300 rooms. As noted most of the new hotel room supply came on the market prior to 2004 when the pace of residential conversion and hotel closures accelerated. Also evident is the trend toward boutique hotels (typically 100 to 300 rooms), over the larger national branded hotels which can be accommodated on smaller sites and thus are less costly than a business hotel with full amenities and meeting rooms. Among the more notable are the Hudson and W Hotels in Midtown West and the Soho and Tribeca Grand in Downtown.

⁷ As previously noted since the last quarter typically register the highest hotel occupancy and ADR, it is likely that 2006 will meet or surpass last year's record levels.



Exhibit 5-8. Manhattan's New Hotels, 2000-2006 **Shown by Submarket**

Property	Address	Number of Rooms	Property Class	Opening Date
Midtown Woot 5th Avo and W	est from 34th Street to 59th Street			
Herald Hotel	Broadway and 34th Street	60	Extended-	2000
	,		Stay	
Hilton Times Square	42nd Street between 7th and 8th Ave	455	Upscale	2000
Sofitel	44th Street between 5th and 6th Ave	398	Upscale	2000
The Muse	130 W 46th Street	200	Boutique	2000
Hudson Hotel	57th Street between 8th and 9th Ave	810	Boutique	2000
Bryant Park Hotel	40th Street between 5th and 6th Ave	130	Boutique	2001
Chambers Hotel	56th Street between 5th and 6th Ave	77	Boutique	2001
Comfort Inn	442 W 36th Street	56	Economy	2001
W Times Square	47th Street and Broadway	509	Boutique	2001
Best Western	522-24 W 38th Street	83	Economy	2002
City Club Hotel	55 W 44th Street	65	Boutique	2002
Ritz-Carlton Central Park	50 Central Park South	277	Luxury	2002
Hotel 41	216 W 41st Street	47	Boutique	2002
Westin Times Square	270 W 43rd Street	863	Upscale	2002
Mandarin Oriental	10 Columbus Circle	251	Luxury	2003
Dream Hotel	210 W 55th Street	220	Boutique	2004
Hotel QT	W 44th Street between 6th and 7th Ave	140	Boutique	2005
Midtown East 5th Ave and Ea	ast from 34th Street to 59th Street			
Habitat	57th Street and Lexington	220	Midscale	2000
Library	299 Madison Ave	60	Boutique	2000
Dylan	52 East 41st Street	107	Boutique	2000
The Alex	205 East 45th Street	203	Boutique	2000
The San Carlos Hotel	150 East 50th Street	147	Boutique	2001
Downtown and Lower Manha				
Tribeca Grand	6th and White Streets	203	Boutique	2000
Red Roof Inn	6 W 32nd Street	171	Economy	2000
Thirty Thirty	East 29th Street	251	Boutique	2000
Embassy Suites Battery Park	Battery Park City	463	All-Suite	2000
Park South Hotel	122 East 28th Street	143	Boutique	2000
Le Marquis	12 East 31st Street	123	Boutique	2000
W Hotel	Union Square Park Ave South	270	Boutique	2000
70 Park Avenue	70 Park Ave	205	Boutique	2001
60 Thompson	60 Thompson Street	101	Boutique	2001
Howard Johnson	135 East Houston	46	Economy	2001
Ritz-Carlton	Battery Park City	298	Luxury	2002
Marriott Financial Center*	85 West Street	504	Upscale	2002
La Quinta Inn	17 W 32nd Street	182	Economy	2003
Millennium Hilton*	55 Church Street	565	Upscale	2003
Maritime Hotel	9th Ave between 16th and 17th Streets	125	Boutique	2003
Hampton Inn	W 24th Street between 6th and 7th Ave	144	Midscale	2003
Sheraton Four Points	W 25th Street	158	Midscale	2003
Hotel Gansevoort	9th Ave and 13th Street	187	Boutique	2004
Solita Hotel	159 Grand Street	42	Boutique	2004
Hotel on Rivington	107 Rivington Street	110	Boutique	2004
Hampton Inn	W 31st Street between 6th and 7th Ave	136	Midscale	2005

* Reopening
Note: Number of new rooms does not typically correlate to overall supply changes (Exhibits 5-3 and 5-7) due to other circumstances like conversions or demolitions.



^{1.} Description and definitions of the various hotel types is found in the Glossary. Source: Cushman & Wakefield, Inc.

Additional new hotel supply that is under construction or proposed is shown below.

Exhibit 5-9. Manhattan New Hotels - Under Construction and Proposed, 2006- 2007 Shown by Submarket

Property	Address	Number of Rooms	Property Class ¹	Opening Date
Midtown West • 5th Ave and Street	West from 34th Street to 59th			
Holiday Inn Express	13 W 45th Street	125	Midscale	2006
M&R Hotel	305 W 39th Street	72	Unknown	2006
Ramada Hotel	416 Broadway	100	Midscale	2006
West Park Hotel	308 W 58th Street	181	Boutique	2007
Courtyard by Marriott	Broadway and W 54th Street	380	Midscale	2007
Midtown East • 5th Ave and	East from 34th Street to 59th Street	et		
Unknown	East 35th Street and 5th Ave	60	Boutique	2006
Downtown and Lower Manh	attan • 34th Street and South			
Four Points Soho Village	66 Charlton Street	153	Midscale	2006
Hilton Garden Inn Tribeca	6 York Street	150	Midscale	2006
Holiday Inn Express	232 W 29th Street	188	Economy	2006
The Loft	130 Duane Street	45	Boutique	2006

^{1.} Description and definitions of the various hotel types is found in the Glossary. Source: Cushman & Wakefield, Inc.

Hudson Yards Hotel Demand Generators

As noted, Manhattan's hotel market conditions are at historic peaks in terms of occupancy and revenues, and supply remains restricted. The expansion of the Javits Center, as well as the projected new office development in Hudson Yards, is expected to generate considerable new hotel room demand. In analyzing the hotel demand for Hudson Yards, three demand generators are considered:

- Business demand resulting from new Hudson Yards office development during such period
- Meeting and group demand as well as convention demand resulting from the planned expansion of the Javits Center
- Leisure demand resulting from Hudson Yard's capture of a share of Manhattan leisure travel.



Business

Business demand arises from individuals conducting business in an area. Demand is strongest Monday through Thursday nights, and is relatively constant throughout the year, although declines are noticeable during holiday periods. The typical length of stay for business travelers ranges from one to three days.

Meeting, Group and Convention

Meeting and group demand represents demand generated by groups who reserve blocks of hotel rooms for meetings, seminars, trade association shows, and other similar gatherings of 10 or more people. Demand is typically strongest during the spring and fall months, while the summer months represent the slowest period. These travelers stay, on average three to five days. In Manhattan, this demand segment is generated primarily by local businesses, civic groups and professional societies, and represents uses such as training sessions, small exhibits, product announcements, meetings and seminars. In Midtown, many meetings and conventions are held in local hotels, such as the Marriott Marquis and the Hilton New York, as well as the Javits Center and catering halls such as those found at Chelsea Piers at West 21st to West 23rd Streets.

The Jacob K. Javits Convention Center

While Manhattan is the nation's largest CBD, the current Javits Convention Center ranks only 10th in the nation in terms of overall exhibit space and, more important, 14th in terms of contiguous available space as shown in Exhibit 5-10.



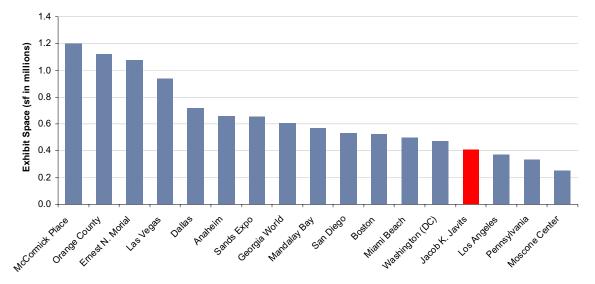


Exhibit 5-10. Contiguous Convention Center Exhibit Space Comparison

Source: PriceWaterhouseCoopers 2003 study, Jacob K. Javits Convention Center Expansion and Headquarters Hotel.

A number of large trade shows and conventions consider New York to be a highly attractive destination because of its status as a premier business center, its world class cultural and entertainment attractions and its large local and regional population. According to the 2003 study of the Jacob K. Javits Convention Center (Javits Center) Expansion by PriceWaterhouseCoopers, the absence of prime contiguous exhibit space at the current Javits Center has been a detriment to convention bookings. With only 410,000 sf of contiguous space, the current Javits is able to accommodate only 42 percent of the largest 200 trade shows held in the United States. Furthermore, as this 42 percent represents only the smallest shows, it accounts for only 25 percent of the overall attendance at these 200 events. The Javits Center is also at a competitive disadvantage to other convention cities because it a lacks a convention hotel within walking distance. New York City ranks 15th among the top national convention centers in terms of hotel rooms available within a quarter mile radius to their convention center, as shown in Exhibit 5-11.



Exhibit 5-11. Proximate Hotel Rooms - Quarter-Mile Radius of Convention Centers

Center	Quarter Mile Radius Convention Class Hotel Rooms
Sands Expo Convention Center (Las Vegas)	6,949
Moscone Center (San Francisco)	4204
Las Vegas Convention Center	3,778
Mandalay Bay Convention Center (Las Vegas)	3746
San Diego Convention Center	3393
Pennsylvania Convention Center (Philadelphia)	3158
Orange County Convention Center (Orlando)	2934
New Washington (DC) Convention Center	250
Ernest N Morial Convention Center (New Orleans)	1669
Anaheim Convention Center	1002
McCormick Place (Chicago)	800
Boston Convention and Exhibition Center	426
Georgia World Congress Center (Atlanta)	321
Los Angeles Convention Center	195
Jacob K. Javits Convention Center	83

Source: Smith Travel Research, and PriceWaterhouseCoopers 2003 study, *Jacob K. Javits Convention Center Expansion and Headquarters Hotel*.

Currently, overnight visitor demand from the Javits Center is primarily accommodated within Manhattan's existing hotel inventory, as there is no convention center-affiliated hotel. The proposed expansion of the Javits Center along with the proposed new convention hotel will therefore significantly increase the marketability of the Javits Center and enable New York City to attract events and visitors that have so far eschewed the city.

As planned, the renovated Javits Center will offer a total of 1.2 msf of exhibition space. The expansion will include 340,000 sf of exhibition space and 180,000 sf of meeting room space⁸.

Leisure Inflow

This demand segment consists of individual tourists and families who are staying in Manhattan and/or passing through en route to other destinations. Leisure demand is strongest Friday and Saturday nights, holiday periods and during the spring and summer months. This segment typically stays at all types of hotels, but tends to be the most price-sensitive traveler.

⁸ Per the General Project Plan Phase I, July 18, 2006 for the Jacob K. Javits Convention Center by the Convention Center Development Corporation.



5-16 • **HOTEL**

Hotel Room Demand Generators in Hudson Yards

The projected mixed-use development of Hudson Yards is expected to generate significant room demand from each of the three aforementioned demand generators.

- The forecast construction of roughly 25.7 msf of new office buildings in the Base Scenario for Hudson Yards (Chapter 3) and the resulting commercial activity in the area will bring new business travelers to Manhattan. While existing hotels in Midtown will certainly attract some of these overnight visitors, a portion will chose to stay in Hudson Yards.
- The expansion of the Javits Center and the construction of a new hotel adjacent to the Center will significantly enhance the City's ability to attract new convention and trade shows, thus increasing the number of convention visitors.
- Of the more than 41 million annual domestic and international visitors to New York City, a small portion of leisure visitors will "inflow" and choose to stay in Hudson Yards hotels.

Forecast Methodology

The forecast assumes that a share of the demand associated with each of the three demand generators (business, meetings/groups and convention, and leisure travelers) is captured by new hotel development within Hudson Yards. The methodology presented here outlines the assumptions used to determine the overall Manhattan hotel room demand and the capture rates associated with the business, convention, and inflow visitors over the 30-year forecast period. These demand segments are then combined to determine the cumulative demand for occupied rooms and the resulting hotel completions that could be supported. Note that the demand is forecast beginning in 2011 as the Javits Center is expected to be completed in 2010, followed by the West 34th Street subway station and the first Hudson Yards office buildings assumed to be completed in 2012. Throughout the analysis, conservative figures and approaches are used in order to avoid over-estimating potential hotel development. Projections are provided for Base and Cyclical scenarios.

Business Demand

The hotel demand generated by Business travelers visiting Hudson Yards is based on the historic relationship between occupied office space and occupied hotel rooms as shown in Exhibit 5-12.



Of the overall occupied rooms in Manhattan, 65 percent⁹ are assumed to be occupied by business travelers or those customers likely to interact with colleagues in office buildings. The resulting number of rooms is divided by the overall occupied office space to obtain an average annual ratio of 30 occupied hotel rooms per 1,000 sf of occupied office space.

Exhibit 5-12. Manhattan Office and Hotel, Change in Occupancy, 1987-2005

Year	Rounded Avg. Occupied Office Space ¹ (SF)	Hotel Room Supply ²	Total Occupied Hotel Rooms ²	65% Business Travelers Occupied Rooms ³	Occupied Annual Business Hotel Rooms/ 1,000 SF of Occupied Office Space	Hotel Occupancy
1987	347,000,000	52,683	14,624,039	9,505,625	27.4	76.1%
1988	346,000,000	52,768	14,634,194	9,512,226	27.5	76.0%
1989	341,000,000	52,724	13,873,898	9,018,034	26.4	72.1%
1990	335,000,000	54,421	14,139,816	9,190,880	27.4	71.2%
1991	332,000,000	55,058	13,442,624	8,737,706	26.3	66.9%
1992	331,000,000	56,235	13,871,555	9,016,511	27.2	67.6%
1993	335,000,000	56,190	14,494,889	9,421,678	28.1	70.7%
1994	340,000,000	56,083	15,410,904	10,017,088	29.5	75.3%
1995	346,000,000	56,285	15,943,468	10,363,254	30.0	77.6%
1996	353,000,000	56,552	16,654,408	10,825,365	30.7	80.7%
1997	366,000,000	57,424	17,158,942	11,153,312	30.5	81.9%
1998	371,000,000	57,943	17,415,191	11,319,874	30.5	82.3%
1999	379,000,000	59,550	17,621,807	11,454,175	30.2	81.1%
2000	392,000,000	61,018	18,632,319	12,111,007	30.9	83.7%
2001	356,000,000	62,755	17,053,663	11,084,881	31.1	74.5%
2002	351,000,000	63,296	17,332,886	11,266,376	32.1	75.0%
2003	350,000,000	64,450	17,846,276	11,600,079	33.1	75.9%
2004	359,000,000	64,077	19,442,658	12,637,728	35.2	83.1%
2005	371,000,000	63,101	19,580,575	12,727,374	34.3	85.0%
Avg. Annual Compound Changes	0.4%	1.0%	1.6%		1.3%	0.6%
Average 1987-2005	353,000,000	58,032	16,272,322		29.9	76.82%
Average 1999-2005	365,000,000	62,607	18,215,741		32.4	79.71%
Forecast Ann	nual Business Occ Office Space:	upied Hotel	Rooms/1,000 SF		30.0	

^{1.} Cushman & Wakefield, Inc., inclusive of tenant and owner occupied office buildings.

⁹ This assumption is based on surveys of hotel room visitors to Manhattan, conducted by NYC and Co. and Cushman and Wakefield, Inc.



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^{2.} Smith Travel Research.

^{3. 65} percent of the hotel room night can be attributed to business travelers (Surveys by NYC & Co. and Cushman & Wakefield, Inc.).

This ratio is then multiplied by the increase in occupied office space (Office Chapter) in Hudson Yards to determine the additional demand generated by business travel.

Since business travelers typically stay in proximity to their meeting places, it is assumed that Hudson Yards could capture a significant portion of the incremental demand related to office development in Hudson Yards. An initial capture rate of 40 percent is applied, ramping up to 50 percent after three years as market acceptance of Hudson Yards development increases in the Base scenario, as shown in Exhibit 5-13.

Exhibit 5-13. Business Generated Hotel Demand Base Scenario, 2006-2035

	Increase in Occupied Office Space (SF)	30 Occupied Rooms/1,000 SF Occupied Office	HY Room Night	HY Annual Room Night	Cumulative HY Room Night
Year	Baseline (1)	Space (2)	Capture (3)	Demand	Demand (Office)
2006					
2007					
2008					
2009					
2010	-	-		-	-
2011	-	-		-	-
2012	977,165	29,315	40%	11,726	11,726
2013	1,311,125	39,334	45%	17,700	29,426
2014	1,357,950	40,739	50%	20,369	49,795
2015	1,299,632	38,989	50%	19,494	69,290
2016	1,208,099	36,243	50%	18,121	87,411
2017	1,177,108	35,313	50%	17,657	105,068
2018	1,169,964	35,099	50%	17,549	122,617
2019	1,163,095	34,893	50%	17,446	140,064
2020	1,164,775	34,943	50%	17,472	157,536
2021	1,163,700	34,911	50%	17,455	174,991
2022	918,975	27,569	50%	13,785	188,776
2023	781,073	23,432	50%	11,716	200,492
2024	1,089,410	32,682	50%	16,341	216,833
2025	1,081,954	32,459	50%	16,229	233,062
2026	1,087,262	32,618	50%	16,309	249,371
2027	1,069,386	32,082	50%	16,041	265,412
2028	1,066,347	31,990	50%	15,995	281,407
2029	1,078,077	32,342	50%	16,171	297,578
2030	1,053,107	31,593	50%	15,797	313,375
2031	1,062,625	31,879	50%	15,939	329,314
2032	1,009,073	30,272	50%	15,136	344,450
2033	953,413	28,602	50%	14,301	358,752
2034	1,023,442	30,703	50%	15,352	374,103
2035	948,019	28,441	50%	14,220	388,323

^{1.} Cushman & Wakefield Base scenario office forecast net absorption.



^{2.} Increase in occupied space multiplied by 30 average rooms per 1,000 sf as per Exhibit 5-12.

^{3.} The capture rate reflects increasing market acceptance of Hudson Yards hotels over the first three years.

Jacob K. Javits Convention Center Demand

The 340,000 sf expansion of the Javits Center¹⁰ is expected to generate demand for an estimated 243,276 additional hotel room nights annually when full capacity is reached in 2014. This estimate is based on the 2003 study for the proposed expansion of the Javits Center by PriceWaterhouseCoopers. The Javits Center is assumed to ramp up from 65 percent capacity in the initial years of operation from 2011 to 2014, reaching full capacity of 243,276 room night demand in 2015.

According to a survey of convention and meeting organizers as part of the 2003 study, 80 percent of the respondents considered the availability of hotels to be a key determinant in selecting an event destination. Therefore, approximately 80 percent of the room night demand generated by the expanded Javits is assumed to be captured within Hudson Yards.

This implies that of the 243,000 room nights generated, approximately 194,000 room nights will be demanded within Hudson Yards on an annual basis in the Base Scenario as shown in Exhibit 5-14.

Without additional capacity to accommodate additional events and trade shows, the demand generated by the Javits is capped at 194,621 throughout the forecast.

¹⁰ Completion of expanded Javits Center and convention hotel is assumed to be 2010 per Hudson Yards Development Corporation.



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Exhibit 5-14. Javits Convention Center Hotel Demand, Base Scenario, 2006-2035

	Room Nights from	HY Room Night	
Year	Expanded Javits (1)	Capture (2)	Convention
2006	•		
2007			
2008			
2009			
2010	-		
2011	159,613	80%	127,691
2012	177,348	80%	141,878
2013	197,053	80%	157,643
2014	218,948	80%	175,159
2015	243,276	80%	194,621
2016	243,276	80%	194,621
2017	243,276	80%	194,621
2018	243,276	80%	194,621
2019	243,276	80%	194,621
2020	243,276	80%	194,621
2021	243,276	80%	194,621
2022	243,276	80%	194,621
2023	243,276	80%	194,621
2024	243,276	80%	194,621
2025	243,276	80%	194,621
2026	243,276	80%	194,621
2027	243,276	80%	194,621
2028	243,276	80%	194,621
2029	243,276	80%	194,621
2030	243,276	80%	194,621
2031	243,276	80%	194,621
2032	243,276	80%	194,621
2033	243,276	80%	194,621
2034	243,276	80%	194,621
2035	243,276	80%	194,621



^{1.} Source: PriceWaterhouseCoopers 2003 study, *Jacob K. Javits Convention Center Expansion and Headquarters Hotel*.

2. According to *Meetings Market Report*, the top determinant in selecting a convention center is the availability and location of the hotel supply.

Leisure Inflow Demand

Leisure inflow visitor demand to Hudson Yards is based on capturing a share of overall Manhattan hotel room occupancy

The 2005 data for occupied room nights in Manhattan is projected at a conservative annual growth rate of 1.0 percent throughout the forecast period to estimate the projected Manhattan room supply. This is considerably less than the annual average growth rate of 1.6 percent over the 1987-2005 period seen in Exhibit 5-12.

Hudson Yards' share of this overall room night demand is expected to grow from 0.5 percent in 2010 when the area will be considered new, to 1.0 percent in 2012, at which point it is assumed to stabilize as Hudson Yards will have become more of a destination. This is significantly lower than the forecast Hudson Yards share of overall office inventory (about 5.0 percent), and conservative given the area's proximity to Times Square, one of the City's most popular tourist destinations.

By the end of the forecast period, Hudson Yards is expected to capture almost 264,000 room nights annually from the inflow segment in the Base scenario, as summarized in Exhibit 5-15.



Exhibit 5-15. Leisure Inflow Demand Base Scenario, 2006-2035

			HY Annual Room Night Capture				
Year	Manhattan Annual Room Night Demand (Occupied Rooms) (1)	Percent Change	Percent Penetration (2)	Annual HY Room Night Demand			
2006	19,776,381	1.0%	0.25%	49,441			
2007	19,974,145	1.0%	0.25%	49,935			
2008	20,173,886	1.0%	0.25%	50,435			
2009	20,375,625	1.0%	0.25%	50,939			
2010	20,579,381	1.0%	0.50%	102,897			
2011	20,785,175	1.0%	0.75%	155,889			
2012	20,993,027	1.0%	1.00%	209,930			
2013	21,202,957	1.0%	1.00%	212,030			
2014	21,414,987	1.0%	1.00%	214,150			
2015	21,629,136	1.0%	1.00%	216,291			
2016	21,845,428	1.0%	1.00%	218,454			
2017	22,063,882	1.0%	1.00%	220,639			
2018	22,284,521	1.0%	1.00%	222,845			
2019	22,507,366	1.0%	1.00%	225,074			
2020	22,732,440	1.0%	1.00%	227,324			
2021	22,959,764	1.0%	1.00%	229,598			
2022	23,189,362	1.0%	1.00%	231,894			
2023	23,421,255	1.0%	1.00%	234,213			
2024	23,655,468	1.0%	1.00%	236,555			
2025	23,892,023	1.0%	1.00%	238,920			
2026	24,130,943	1.0%	1.00%	241,309			
2027	24,372,252	1.0%	1.00%	243,723			
2028	24,615,975	1.0%	1.00%	246,160			
2029	24,862,135	1.0%	1.00%	248,621			
2030	25,110,756	1.0%	1.00%	251,108			
2031	25,361,863	1.0%	1.00%	253,619			
2032	25,615,482	1.0%	1.00%	256,155			
2033	25,871,637	1.0%	1.00%	258,716			
2034	26,130,353	1.0%	1.00%	261,304			
2035	26,391,657	1.0%	1.00%	263,917			



Growth of 1.0 percent based on historic growth rate trends from Smith Travel Research.
 Penetration or capture of market share grows to 1.0 percent as the Hudson Yards market area becomes more established.

Hudson Yards Hotel Demand Forecast and Likely Construction

Base Scenario

The three demand generators are aggregated to derive the cumulative hotel room night demand in Hudson Yards, and used to determine the actual number of new hotel rooms required to meet this demand.

The cumulative occupied room nights are divided by 365 days and an occupancy rate of 75 percent is applied to compute the annual incremental room-night demand. The resulting cumulative demand over the forecast period is 846,861 room nights.

The 75 percent occupancy rate is based on Manhattan's historical average as shown in Exhibit 5-2. The resulting overall demand is expected to support the construction of a 1,000 room convention hotel which would open in 2011, one year after the completion of the Javits Convention Center expansion.

As additional demand accumulates, new hotels will be built. Although the actual product type and size may vary, it is projected that three business hotels will be constructed in 2014, 2020 and 2034 and four boutique hotels will be built in 2007, 2009, 2025 and 2028, resulting in a total of 3,080 new hotel rooms, including the convention hotel, in Hudson Yards.

To obtain the total square feet of projected hotel development the annual room night-demand is multiplied by an average of 700 sf per room for business hotels and 600 sf per room for boutique hotels. A smaller size for boutique hotels is used since these do not typically require the meeting room spaces associated with business hotels. Reflecting the larger meeting spaces required at convention hotels, a 900 sf per room average was used for the Javits Convention hotel. Based on this, approximately 2.3 msf of hotel development could be supported in the Hudson Yards. The Base scenario construction forecasts are summarized in Exhibit 5-16.

Overall, the cumulative hotel room-night demand projected for Hudson Yards represents a very modest 3.1 percent of the total Manhattan room night demand, and the 3,080 hotel rooms forecast for Hudson Yards represent only 3.5 percent of the projected 85,000 hotel rooms (grown at 1.0 percent CAGR) for Manhattan.



Exhibit 5-16. Base Scenario: Cumulative Room Night Demand and Likely Hotel Completions, 2006-2035

ANNUAL ROOM DEMAND							ANNUA	L LIKELY CONSTR	RUCTION COMPLETION	NS
			Cumulative	Incrememtal		Total Rooms		Annual		
		Visitor	Room Night	Hotel Room		coming on-line per	Cumulative	Surplus/Unmet	Total SF coming on-	Cumulative
Business	Convention	Inflow	Demand (1)	Demand (2)	Year	Year (3)	Hotel Rooms	Room Demand	line per Year (4 & 5)	Square Feet
		49,441	49,441	226	2006	-	-	226	-	-
		49,935	49,935	2	2007	80	80	148	50,000	50,000
		50,435	50,435	2	2008	-	80	150	-	50,000
		50,939	50,939	2	2009	100	180	53	60,000	110,000
-	-	102,897	102,897	237	2010	_	180	290	-	110,000
-	127,691	155,889	283,579	725	2011	1,000	1,180	15	900,000	1,010,000
11,726	141,878	209,930	363,535	228	2012	-	1,180	243	-	1,010,000
29,426	157,643	212,030	399,098	35	2013	-	1,180	278	-	1,010,000
49,795	175,159	214,150	439,104	146	2014	500	1,680	(76)	350,000	1,360,000
69,290	194,621	216,291	480,202	150	2015	-	1,680	74	-	1,360,000
87,411	194,621	218,454	500,486	74	2016	-	1,680	148	-	1,360,000
105,068	194,621	220,639	520,328	72	2017	-	1,680	221	-	1,360,000
122,617	194,621	222,845	540,083	72	2018	-	1,680	293	-	1,360,000
140,064	194,621	225,074	559,758	72	2019	-	1,680	365	-	1,360,000
157,536	194,621	227,324	579,481	72	2020	500	2,180	(63)	350,000	1,710,000
174,991	194,621	229,598	599,209	72	2021	_	2,180	9	-	1,710,000
188,776	194,621	231,894	615,290	59	2022	_	2,180	68	-	1,710,000
200,492	194,621	234,213	629,325	51	2023	-	2,180	119	-	1,710,000
216,833	194,621	236,555	648,008	68	2024	-	2,180	187	-	1,710,000
233,062	194,621	238,920	666,603	68	2025	250	2,430	5	150,000	1,860,000
249,371	194,621	241,309	685,301	68	2026	-	2,430	73	-	1,860,000
265,412	194,621	243,723	703,755	67	2027	-	2,430	141	-	1,860,000
281,407	194,621	246,160	722,188	67	2028	250	2,680	(42)	150,000	2,010,000
297,578	194,621	248,621	740,820	68	2029	-	2,680	26	-	2,010,000
313,375	194,621	251,108	759,103	67	2030	-	2,680	93	-	2,010,000
329,314	194,621	253,619	777,554	67	2031	-	2,680	160	-	2,010,000
344,450	194,621	256,155	795,226	65	2032	-	2,680	225	-	2,010,000
358,752	194,621	258,716	812,089	62	2033	-	2,680	287	-	2,010,000
374,103	194,621	261,304	830,027	66	2034	400	3,080	(48)	280,000	2,290,000
388,323	194,621	263,917	846,861	61	2035	-	3,080	`14 [°]	, -	2,290,000
				3,094	Total	3,080	3,080		2,290,000	2,290,000

^{1.} Hudson Yards total cumulative annual demand generated by Hudson Yards office, Javits, and a portion of the rest of the Manhattan.



^{2.} Referring to Exhibit 5-2, forecast Hudson Yards stabilized occupancy averages 75 percent (rounded market average since 1987, ramping up from 60 percent in year 2012). Room night demand is divided by 365 days to compute annual demand and by 75 percent, assuming hotels will operate at 75 percent occupancy.

^{3.} A 1,000-room convention hotel is included in expected completions, but the square feet are excluded from the TEP revenues.

^{4.} Completing business hotels (in 2014, 2020 and 2034) and boutique hotels (in 2007, 2009, 2025, and 2028).

^{5.} Estimated business hotel at 700 sf/room, boutique hotel at 600 sf/room, and 900 sf/room for convention hotel

Cyclical Scenario

The general methodology and framework used to derive the demand generators for occupied rooms in the Hudson Yards' Base scenario is also used to forecast a Cyclical scenario. The critical distinction between the two forecasts is that the underlying pattern of growth and the forecast for all three demand generators is based on the cyclical forecast for office-using employment provided by Moody's Economy.com. The assumptions for the Hudson Yards capture rates and ramp-up schedules are unchanged from the Base scenario, and their derivation is noted but not replicated.

Business Demand

As in the Base scenario, a ratio of 30 rooms per 1,000 sf of occupied office space is used to compute the business demand generated from occupied office. This ratio is multiplied by the forecast occupied space (see Cyclical scenario in Office Chapter) to obtain the overall room demand generated by business travelers. The same capture rates and ramp-up schedule used in the Base scenario are used to allocate Hudson Yards' share of this overall demand.

The resulting demand from business travel in the Cyclical scenario is projected to be 344,114 room nights, about 12 percent lower than the Base scenario, in line with the projected difference in estimated office buildings completions of 25.7 msf in the Base compared to 24.0 msf in the Cyclical, as shown in Exhibit 5-17.



Exhibit 5-17. Business Generated Hotel Demand, Cyclical Scenario, 2006-2035

30 Occupied									
.,	Office Space (SF) -	Rooms/1,000 SF Occupied Office	HY Room Night	HY Annual Room Night	Cumulative HY Room Night				
Year	Cyclical (1)	Space (2)	Capture (3)	Demand	Demand				
2006									
2007 2008									
2009									
2009									
2010	-	-		-	-				
2011	480,000	- 14,400	40%	5,760	5,760				
2012	480,000	14,400	45%	5,700	5,760				
2013	-	-	50%	-	5,760				
2015	1,268,656	38,060	50%	19,030	24,790				
2016	1,424,983	42,750	50%	21,375	46,165				
2017	2,375,553	71,267	50%	35,633	81,798				
2018	901,905	27,057	50%	13,529	95,326				
2019	1,096,964	32,909	50%	16,454	111,781				
2020	(10,708)	(321)	50%	(161)	111,620				
2021	1,321,067	39,632	50%	19,816	131,436				
2022	508,787	15,264	50%	7,632	139,068				
2023	762,093	22,863	50%	11,431	150,500				
2024	1,413,323	42,400	50%	21,200	171,699				
2025	902,360	27,071	50%	13,535	185,235				
2026	572,299	17,169	50%	8,584	193,819				
2027	1,745,201	52,356	50%	26,178	219,997				
2028	289,155	8,675	50%	4,337	224,335				
2029	(734,752)	(22,043)	50%	(11,021)	213,313				
2030	671,892	20,157	50%	10,078	223,392				
2031	2,833,766	85,013	50%	42,506	265,898				
2032	2,366,442	70,993	50%	35,497	301,395				
2033	841,293	25,239	50%	12,619	314,014				
2034	961,695	28,851	50%	14,425	328,440				
2035	1,044,948	31,348	50%	15,674	344,114				



Cushman & Wakefield Cyclical Office forecast net absorption.
 Increase in occupied space multiplied by 30 average rooms per 1,000 sf as per Exhibit 5-12.

^{3.} The capture rate reflects increasing market acceptance of Hudson Yards hotels over the first three years.

Leisure Inflow Demand

The pattern of office-using employment growth in the Cyclical scenario provided by Moody's Economy.com was used to estimate the fluctuations in visitor and convention demand associated with the overall economic cycle. The correlation between hotel occupancy and employment was illustrated in Exhibit 5-2. The forecast growth rates for employment from Moody's Economy.com Cyclical scenario from 2006 to 2035 are provided below.

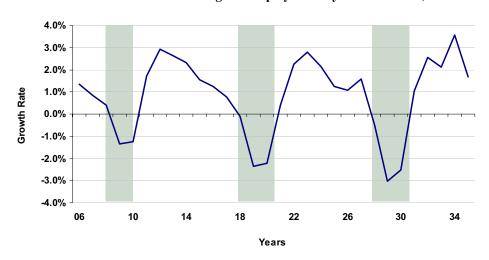


Exhibit 5-18. Year-Over-Year Change in Employment Cyclical Scenario, 2006-2035

Source: Moody's Economy.com, Cushman & Wakefield, Inc.

The resulting hotel room demand is obtained by applying these growth rates from 2006 to 2035. The estimated leisure inflow is then computed directly from the forecast occupied room demand assuming, as in the Base scenario, that Hudson Yards would capture 1.0 percent of the overall Manhattan demand. For the first two years, 2010 to 2011 Hudson Yards is expected to capture a smaller portion of hotel room demand, 0.5 and 0.7 percent, respectively, to reflect its emerging new neighborhood status.

Overall, the resulting room night demand in the Cyclical scenario is projected to be about 5.0 percent lower than in the Base scenario (249,651 vs. 263,917) as shown in Exhibit 5-19.



Exhibit 5-19. Leisure Inflow and Convention Demand, Cyclical Forecast 2006-2035

	VISITO	R INFLOW				CONVENTI	CONVENTION TRAVEL		
Room Night Demand (Occupied	Percent	Percent	Total HY Room		Room Nights from	Percent	HY Room	HY Room Night	
Rooms) (1)	Change	Penetration (2)	Night Capture	Year	Expanded Javits (1)	Change	Night Capture	Demand	
19,841,487	1.3%	0.25%	49,604	2006					
20,007,829	0.8%	0.25%	50,020	2007					
20,090,963	0.4%	0.25%	50,227	2008					
19,823,013	-1.3%	0.25%	49,558	2009					
19,579,402	-1.2%	0.50%	97,897	2010	-		80%	-	
19,917,950	1.7%	0.75%	149,385	2011	159,613	0.0%	80%	127,691	
20,499,449	2.9%	1.00%	204,994	2012	177,348	11.1%	80%	141,878	
21,038,354	2.6%	1.00%	210,384	2013	197,053	11.1%	80%	157,643	
21,523,963	2.3%	1.00%	215,240	2014	218,948	11.1%	80%	175,159	
21,854,080	1.5%	1.00%	218,541	2015	222,306	1.5%	80%	177,845	
22,122,543	1.2%	1.00%	221,225	2016	225,037	1.2%	80%	180,030	
22,296,656	0.8%	1.00%	222,967	2017	226,808	0.8%	80%	181,447	
22,271,070	-0.1%	1.00%	222,711	2018	226,548	-0.1%	80%	181,238	
21,744,481	-2.4%	1.00%	217,445	2019	221,191	-2.4%	80%	176,953	
21,258,872	-2.2%	1.00%	212,589	2020	216,252	-2.2%	80%	173,001	
21,347,578	0.4%	1.00%	213,476	2021	217,154	0.4%	80%	173,723	
21,828,642	2.3%	1.00%	218,286	2022	222,048	2.3%	80%	177,638	
22,434,406	2.8%	1.00%	224,344	2023	228,210	2.8%	80%	182,568	
22,914,810	2.1%	1.00%	229,148	2024	233,096	2.1%	80%	186,477	
23,199,694	1.2%	1.00%	231,997	2025	235,994	1.2%	80%	188,795	
23,449,317	1.1%	1.00%	234,493	2026	238,534	1.1%	80%	190,827	
23,822,980	1.6%	1.00%	238,230	2027	242,335	1.6%	80%	193,868	
23,703,924	-0.5%	1.00%	237,039	2028	241,124	-0.5%	80%	192,899	
22,983,502	-3.0%	1.00%	229,835	2029	233,795	-3.0%	80%	187,036	
22,402,809	-2.5%	1.00%	224,028	2030	227,888	-2.5%	80%	182,311	
22,639,309	1.1%	1.00%	226,393	2031	230,294	1.1%	80%	184,235	
23,216,776	2.6%	1.00%	232,168	2032	236,168	2.6%	80%	188,934	
23,710,375	2.1%	1.00%	237,104	2033	241,189	2.1%	80%	192,951	
24,552,493	3.6%	1.00%	245,525	2034	243,276	0.9%	80%	194,621	
24,965,069	1.7%	1.00%	249,651	2035	243,276	0.0%	80%	194,621	

^{1.} Cyclical pattern based on cyclical growth in employment from Moody's Economy.com.

Javits Convention Center Demand

The same growth rates and cyclical pattern used to determine inflow visitors are applied to convention visitors. In the case of convention demand, however, the straightforward application of these cyclical growth rates would result in demand exceeding maximum capacity for the Javits Center in some years. Room nights are necessarily capped at 243,276, causing the growth rates in convention demand to diverge from the visitor inflow growth rates, as seen in Exhibit 5-19. Additionally, as in the Base scenario, the Javits Center is assumed to ramp up from 90 percent capacity in the initial years of operation, 2010 to 2013 reaching full capacity of 243,276 room night demand in 2014.



^{2.} Penetration or capture of market share grows to 1.0 percent as the Hudson Yards market area becomes more established.

Demand Forecast - Cyclical Demand

The three demand generators were summed to obtain the cumulative demand for hotel room nights, as shown in Exhibit 5-20. As in the Base scenario, this demand accommodates a mix of hotels - two business and four boutique are assumed, although the actual mix of hotel types could change.

Given the cyclical pattern and the deep recession forecast for 2018 to 2020, the timing of development is delayed with respect to the Base scenario. The second business hotel would not open until 2023, three years later than in the Base scenario.



Exhibit 5-20. Cyclical Scenario: Cumulative Room Night Demand and Likely Hotel Completions, 2006-2035

ANNUAL ROOM DEMAND						ANNUAL LIKELY CONSTRUCTION COMPLETIONS				
Business	Convention	Visitor Inflow	Cumulative Room Night Demand (1)	Annual Hotel Room Demand (2)	Year	Total Rooms Coming On-Line per Year (3)	Cumulative Hotel Rooms	Annual Surplus/Unmet Room Demand	Total SF Coming On- Line per Year (4 & 5)	Cumulative Square Feet
		49,604	49,604	227	2006		-	227		-
		50,020	50,020	2	2007	80	80	148	50,000	50,000
		50,227	50,227	1	2008	-	80	149	-	50,000
		49,558	49,558	(3)	2009	100	180	46	60,000	110,000
-	-	97,897	97,897	221	2010	-	180	267	-	110,000
-	127,691	149,385	277,075	721	2011	1,000	1,180	(12)	900,000	1,010,000
5,760	141,878	204,994	352,633	212	2012	-	1,180	200	-	1,010,000
5,760	157,643	210,384	373,786	(15)	2013	-	1,180	185	-	1,010,000
5,760	175,159	215,240	396,158	82	2014	-	1,180	267	-	1,010,000
24,790	177,845	218,541	421,176	91	2015	600	1,780	(241)	420,000	1,430,000
46,165	180,030	221,225	447,420	96	2016	-	1,780	(146)	-	1,430,000
81,798	181,447	222,967	486,211	142	2017	-	1,780	(4)	-	1,430,000
95,326	181,238	222,711	499,276	48	2018	-	1,780	44	-	1,430,000
111,781	176,953	217,445	506,179	25	2019	-	1,780	69	-	1,430,000
111,620	173,001	212,589	497,210	(33)	2020	-	1,780	36	-	1,430,000
131,436	173,723	213,476	518,635	78	2021	-	1,780	115	-	1,430,000
139,068	177,638	218,286	534,993	60	2022	-	1,780	174	-	1,430,000
150,500	182,568	224,344	557,411	82	2023	-	1,780	256	-	1,430,000
171,699	186,477	229,148	587,325	109	2024	500	2,280	(135)	350,000	1,780,000
185,235	188,795	231,997	606,027	68	2025	-	2,280	(66)	-	1,780,000
193,819	190,827	234,493	619,139	48	2026	-	2,280	(18)	-	1,780,000
219,997	193,868	238,230	652,095	120	2027	-	2,280	102	-	1,780,000
224,335	192,899	237,039	654,273	8	2028	-	2,280	110	-	1,780,000
213,313	187,036	229,835	630,184	(88)	2029	-	2,280	22	-	1,780,000
223,392	182,311	224,028	629,730	(2)	2030	-	2,280	20	-	1,780,000
265,898	184,235	226,393	676,526	171	2031	300	2,580	(109)	180,000	1,960,000
301,395	188,934	232,168	722,497	168	2032	-	2,580	59	-	1,960,000
314,014	192,951	237,104	744,069	79	2033	-	2,580	138	-	1,960,000
328,440	194,621	245,525	768,585	90	2034	300	2,880	(72)	180,000	2,140,000
344,114	194,621	249,651	788,385	72	2035	-	2,880	(0)	-	2,140,000
				2,880	Total	2,880	2,880		2,140,000	2,140,000

^{1.} Hudson Yards total cumulative annual demand generated by Hudson Yards office, Javits, and a portion of the rest of the Manhattan.



^{2.} Referring to Exhibit 5-2, forecasted Hudson Yards stabilized occupancy averages 75 percent (rounded market average since 1987, ramping up from 60 percent in year 2010). Room night demand is divided by 365 days to compute annual demand and by 75 percent, assuming hotels will operate at 75 percent occupancy.

^{3.} A 1,000-room convention hotel is included in expected completions, but the sf is excluded from the TEP revenues.

^{4.} Completing business hotels (in 2015, and 2024) and boutique hotels (in 2007, 2009, 2031 and 2034).

^{5.} Estimated business hotel at 700 sf per room and boutique hotel at 600 sf per room, and 900 sf per room for convention hotel.

Revenues from Hotel Development: Methodology and Assumptions

Revenues associated with hotel development are expected to account for approximately two percent of the overall revenues in both the Base and Cyclical scenarios. These projections are the result of two major inputs into the City's revenue model used to calculate the 45-year revenues from 2006 to 2050:

Projected Demand is defined in millions of square feet (msf) and number of hotel rooms as derived in the previous section. The projections provided by C&W rely on underlying economic forecasts provided by Moody's Economy.com (Chapter 2) as well as other sector demand generators as detailed in this chapter. These projections were used as inputs along with key real estate and zoning variables and assumptions on infrastructure improvements.

Even though the 30-year demand forecast ends in 2035, the revenues from the development are projected and retained by HYIC for an additional 15 years, from 2036 through 2050. C&W incorporated the following assumptions and factors to support the revenues for new hotel development in the Hudson Yards.

<u>Infrastructure</u>: Projected demand assumes that key infrastructure improvements are completed. The Mid-Block Park is planned in two sections and both are likely to be considered complementary amenities to any future new hotels. Furthermore it is assumed that the transfer of air rights from the ERY to private developers under the agreement between the MTA¹¹ and the City of New York and the Hudson Yards Infrastructure and Development Corporations will occur in a timely manner in order to support the projected development. The completion of the number 7 subway is critical to office development in the Hudson Yards, and could therefore impact the future business traveler estimates if not completed as planned.

Zoning: The projected demand assumes that the existing zoning legislation¹² regarding building FAR and DIB bonus remains in place throughout the analysis period. It is also assumed that future changes to City zoning will not materially affect Manhattan's overall development potential. Significant changes to zoning by creating competitive markets to Hudson Yards other than those identified in this report could potentially result in lower revenues than forecast.

Taxes were calculated using the forecast for hotel completions derived in Exhibit 5-16 and 5-20. The forecast square feet of hotel completions is multiplied by taxes of approximately \$10

¹¹ For details relating to the development of the MTA Western and Eastern Rail Yards refer to, No. 7 Extension Memorandum of Understanding and Rail Yards Agreement: 28 September 2006, Agreement between Metropolitan Transportation Authority, NYC Transit Authority and MTA Capital Construction, and the City of New York, Hudson Yards Development Corporation and Hudson Yards Infrastructure Corporation.
¹² Hudson Yards Special District Zoning Resolution, January 2005



psf based on comparable hotels taxes in fiscal year 2006 shown in Exhibit 5-21. It is assumed that tax revenues associated with hotel development will be paid as Tax Equivalency Payments to HYIC and are therefore subject to annual appropriations by the New York City Council.

<u>Tax Programs</u>: C&W reviewed the assessment mechanism, tax policies¹³ and incentive programs used to determine the tax rates and payments in the revenue model.

<u>Market Comparables:</u> C&W provided relevant market comparables (Exhibit 5-21) to help derive a comparable tax rate for new hotel development in the Hudson Yards. Based on the market comparables, the average approximately \$10 psf tax was applied to the projected Hudson Yards hotel development.

Exhibit 5-21: Midtown Hotel Tax Comparables, Fiscal Year 2006

Hotel	Address	Final Assessed Value	Total Tax	Total Tax PSF
Millennium Hotel	145 West 44th Street	\$51,761,160.00	\$5,852,116.75	\$12.40
Sheraton	811 Seventh Avenue	\$94,600,270.00	\$10,695,506.53	\$9.13
Hilton	234 West 42nd Street	\$48,423,591.00	\$5,474,771.20	\$6.08
Omni Berkshire	21 East 52nd Street	\$30,726,000.00	\$3,473,881.56	\$16.21
Hilton	1335 Avenue of the Americas	\$124,504,500.00	\$14,076,478.77	\$10.09
Crown Plaza	1605 Broadway	\$60,920,000.00	\$6,887,615.20	\$8.35
Milford Plaza	270 West 45th Street	\$33,210,000.00	\$3,754,722.60	\$7.98
New York Palace	451 Madison Avenue	\$68,760,000.00	\$7,774,005.60	\$9.54
Roosevelt Hotel	361 Madison Avenue	\$44,055,000.00	\$4,980,858.30	\$8.33
Westin New York	270 West 42nd Street	\$85,410,000.00	\$9,656,454.60	\$15.06
Best Western	522 West 38th Street	\$2,086,200.00	\$235,865.77	\$9.57
Ramada Plaza New Yorker	481 8th Avenue	\$37,650,000.00	\$4,256,709.00	\$3.27
Midtown Hotel Average				\$9.67

Source: New York City Department of Finance, Cushman & Wakefield, Inc.

<u>Growth Rates:</u> To project the revenues over the forecast period, the revenue model assumes constant growth rates for taxes from 2006 through 2050. These taxes are assumed to grow at a conservative 3.0 percent annual growth rate, significantly lower than the historic average for Class 4 properties.



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 $^{^{\}rm 13}$ An overview of New York City property taxes and assessments is provided in Appendix C

On the basis of the real estate variables provided by Cushman & Wakefield and analysis of the other available data provided by third parties (which are relied upon and assumed to be reasonable and accurate) including forecasts provided by Moody's Economy.com and tax methodology and calculations provided by New York City's Department of Finance and New York City's Office of Management and Budget, and the Hudson Yards Development Corporation, Cushman & Wakefield believes the revenue projections to be reasonable.

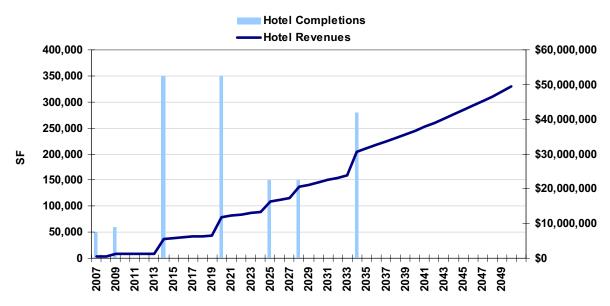
The revenues are contingent on the realization of all the economic and real estate assumptions, analyses, zoning and completion of key infrastructure, and limiting conditions that are sourced or detailed herein and in Chapter 1.B. Limiting Conditions.

Since hotel completions in both the Base and Cyclical scenarios are forecast to occur at intervals, the resulting tax revenues jump when new hotels come on line in Hudson Yards, as shown in the Exhibit 5-22. Total hotel tax revenues are estimated to reach \$959 million in the Base scenario by 2050 and a slightly lower \$851 million in the Cyclical scenario. No convention center hotel revenues are included in these hotel revenue projections.

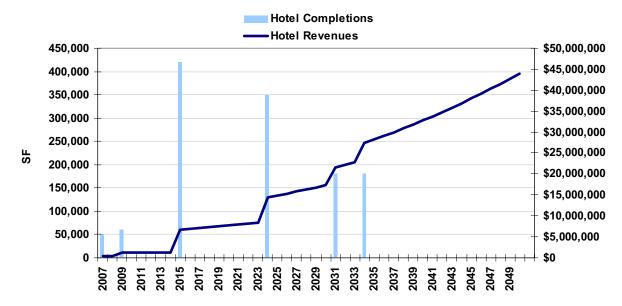
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Exhibit 5-22: Hudson Yards Annual Hotel Completions and PILOT Payments Base Scenario



Cyclical Scenario



Source: Hudson Yards Development Corporation, Cushman & Wakefield, Inc.



6. RETAIL MARKET

Overview

The retail market in New York City is one of the biggest (110.2 msf) and consistently one of the strongest in the world, where rents along the prime retail corridors of Fifth and Madison Avenues exceed \$1,350 psf. Few cities can boast the wide array of retail neighborhoods as Manhattan. In addition to the high-end districts, there are the boutiques of the West Village and SoHo, the mix of family and fashion on the Upper West Side and the "something for everyone" feel of the West 34th Street corridor. When it comes to retail in New York City, there appears to be no shortage of either opportunity or demand.

Development of Hudson Yards as a new mixed use 24/7 community is expected to generate additional retail demand. The retail venues in Hudson Yards would complement the highly trafficked West 34th Street corridor around Pennsylvania Station and Herald Square, currently one of the most sought-after locations in Manhattan for mid-market retailers.

The same factors that drive retail sales in Manhattan would support development in the Hudson Yards. These include the spending of the new local residents, as well as spending from new office workers in the Hudson Yards. In addition, spending from a portion of the over 41 million tourists who visit the City each year, plus additional visitors to the expanded Javits Convention Center would also contribute to retail demand in Hudson Yards.

Based on an analysis of these demand generators and the portion of overall demand that Hudson Yards is expected to capture, C&W estimates a demand for approximately 1.4 msf of retail over the 30-year forecast period. As is the case for most of Manhattan, retail development is expected to take place within existing office and residential development rather than as stand-alone retail. More important, Hudson Yards has the potential to become a new retail district, one that connects to the adjacent established shopping districts, while creating a distinct identity of its own.

The revenues associated with retail development in Hudson Yards are expected to total \$1.1 billion in the Base scenario, growing from \$82,265 in 2007, with the first estimated residential completions, to \$69.0 million in 2050. The Cyclical scenario revenues are expected to total \$1.0 billion, growing from \$82,332 in 2007 to \$69.3 million in 2050.



Exhibit 6-1. Retail Sector Forecast Completions and Revenues, 2006-2050

	Base Scenario		Cyclical Scenario	
Date	Completions SF	Revenues	Completions SF	Revenues
2006	0	\$0	0	\$0
2007	21,013	\$82,265	21,013	\$82,332
2008	7,620	\$97,236	7,760	\$97,578
2009	7,487	\$153,669	7,016	\$153,083
2010	17,723	\$198,801	15,979	\$194,604
2011	39,806	\$340,568	38,155	\$332,436
2012	44,568	\$794,923	31,895	\$566,146
2013	43,749	\$1,393,435	12,379	\$693,222
2014	46,813	\$1,976,489	13,499	\$776,718
2015	44,800	\$2,546,155	41,099	\$1,401,065
2016	66,928	\$3,167,983	72,657	\$2,393,384
2017	185,315	\$4,268,956	196,378	\$3,788,478
2018	53,051	\$5,002,434	43,728	\$4,427,153
2019	51,483	\$5,972,247	47,945	\$4,869,757
2020	50,399	\$6,719,402	8,350	\$5,103,891
2021	49,173	\$7,478,906	54,702	\$5,677,906
2022	39,489	\$8,143,049	26,519	\$6,034,660
2023	33,491	\$9,137,700	36,776	\$7,171,130
2024	41,519	\$10,273,374	96,371	\$7,905,017
2025	42,163	\$11,727,435	0	\$8,569,641
2026	116,596	\$13,413,691	100,925	\$9,787,400
2027	37,702	\$15,014,043	65,994	\$11,754,895
2028	39,346	\$16,704,138	13,122	\$12,856,621
2029	41,012	\$18,827,472	0	\$13,964,081
2030	39,504	\$20,776,554	25,686	\$15,092,491
2031	38,249	\$23,219,680	105,550	\$17,069,899
2032	37,368	\$25,513,531	91,911	\$18,968,548
2033	38,519	\$28,191,624	41,141	\$21,960,989
2034	42,122	\$30,276,721	46,524	\$24,133,931
2035	40,708	\$32,738,616	48,543	\$27,312,162
2036	0	\$34,733,792	0	\$29,546,454
2037	0	\$37,090,605	0	\$31,801,778
2038	0	\$39,169,432	0	\$34,221,894
2039	0	\$41,072,231	0	\$36,211,088
2040	0	\$43,356,401	0	\$38,929,760
2041	0	\$45,481,784	0	\$40,978,256
2042	0	\$47,980,881	0	\$44,190,488
2043	0	\$50,209,239	0	\$46,547,327
2044	0	\$52,812,997	0	\$50,160,028
2045	0	\$55,173,891	0	\$52,811,332
2046	0	\$58,073,676	0	\$56,344,968
2047	0	\$60,717,664	0	\$59,166,460
2048	0	\$63,373,043	0	\$62,448,910
2049	0	\$66,170,732	0	\$65,621,942
2050	0	\$68,970,744	0	\$69,292,913
Total	1,357,715 SF	\$1,068,538,213	1,311,635 SF	\$951,412,818
TOTAL	1,001,110 0F	ψ1,000,330,213	1,311,033 3F	ψ3J1,41Z,010

Source: New York City's Office of Management and Budget and Department of Finance, Hudson Yards Development Corporation, Moody's Economy.com, PriceWaterhouseCoopers 2003 study Jacob K. Javits Convention Center Expansion and Headquarters Hotel, Cushman & Wakefield, Inc.



Introduction

Demand for retail space in the Hudson Yards is expected to emerge concurrent with the real estate property types discussed in the previous chapters. Manhattan is the primary retail market from which new retail uses in Hudson Yards will evolve. Existing retail venues are vast and accessible in most commercial and residential areas throughout Manhattan. This analysis focuses primarily on the characteristics and the drivers of retail demand in Manhattan, outlining only the more important and distinguishing features of the outer boroughs' retail market. The chapter presents:

- an overview of the Manhattan retail market
- an assessment of the Manhattan's recent performance
- an analysis of demand generators in Manhattan and specifically in Hudson Yards
- a forecast of retail demand in Hudson Yards for 2006-2035

Overview of Manhattan's Retail Market

Manhattan is famous throughout the world for its glamorous retail high streets of Madison and Fifth Avenues and East 57th Street, as well as the newer venues such as SoHo, Times Square and 125th Street. Luxury retail rents are the highest in the world¹. The prime Fifth Avenue locations have the highest rents with an average of \$1,350 psf as seen in Exhibit 6-2, followed by Hong Kong's Causeway Bay at \$1,134 psf. Paris's Avenue des Champs Elysées ranks third in the world, with an average rent of \$805 psf, 59 percent less than Manhattan's Fifth Avenue.



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¹ Cushman & Wakefield Healy & Baker, *Main Streets Across the World 2006* – average of luxury rents on Fifth and Madison Avenues and 57th Streets.

Exhibit 6-2. Top 10 Most Expensive Retail Locations by Country, 2006

Location	City	Country	Rent psf
5th Avenue	New York	USA	\$1,350
Causeway Bay	Hong Kong	Hong Kong	\$1,134
Avenue des Champs Elysées	Paris	France	\$805
New Bond Street	London	UK	\$673
Ginza	Tokyo	Japan	\$652
Grafton Street	Dublin	Ireland	\$534
Bahnhofstrasse	Zurich	Switzerland	\$418
Pitt Street Mall	Sydney	Australia	\$391
Myeongdong	Seoul	S. Korea	\$376
Kaufingerstraβe	Munich	Germany	\$356
Ermou	Athens	Greece	\$356

Source: Cushman & Wakefield Healy & Baker, Main Streets Across the World 2006.

The heart of Manhattan's retail activity lies in Midtown between 31st and 59th Streets. Fifth Avenue is home to high-end retailers like Saks Fifth Avenue, Bergdorf Goodman and Henri Bendel. Exclusive jewelers such as Tiffany & Co., Cartier, Van Cleef & Arpels, Harry Winston, and H. Stern are also located on Fifth Avenue. Many upscale European fashion boutiques including Christian Dior, Burberry, Gucci, Prada, Hermes, Louis Vuitton, Salvatore Ferragamo, and Bruno Magli are found between Fifth and Madison Avenues and East 57th Street, along with well-known American retailers including Brooks Brothers and Nike. Additionally, large American and European retailers like American Girl and H&M either first established or expanded their U.S. presence with a large store on Fifth Avenue.

Beyond this Midtown core, numerous large retail corridors exist in Manhattan, and provide additional opportunities to shop, dine, and entertain. Pennsylvania Station and Herald Square are located along the highly trafficked West 34th Street corridor. Anchored by Macy's blocklong department store fronting Sixth Avenue, many of the nation's most well-known retailers occupy stores along this corridor including GAP, Victoria's Secret, The Limited, Footlocker, H&M, and Kmart. Currently, this is the most sought after location in Manhattan by national mid-market retailers.

Both the Upper West Side, along Broadway and Columbus and Amsterdam Avenues, as well as the area of the Upper East Side between First and Madison Avenues include many of the aforementioned retailers, as well as famous local institutions such as Zabar's on Broadway and E.A.T. on Madison Avenue.

A vast array of mid and high-end market retailers such as Bloomingdale's, Pottery Barn, Armani Exchange, Williams Sonoma, Prada and Chanel line SoHo's Broadway and West Broadway. The West Village has also become a prime retail market, housing high-end retailers and boutiques such as Marc Jacobs, Ralph Lauren, Intermix, and Cynthia Rowley.



There is more retail to be found in other neighborhoods, including Battery Park City in Downtown, Murray Hill in the East 30s, Sutton Place in the East 50s, Union Square in the West Teens, Greenwich Village and NoHo between Houston and West 14th Street, Chelsea in the West 20s, and uptown in Harlem.

Big-box type retailers have established a strong presence in Manhattan. Toys "R" Us is in Times Square, Bed, Bath & Beyond has several locations throughout the City, Best Buy and Old Navy are on Sixth Avenue, Home Depot is on Lexington Avenue and West 23rd Street, and has recently signed a lease in Downtown. Whole Foods has opened two locations in the City, at Columbus Circle and Union Square, and plans to open at two other locations, in the East Village and Downtown Manhattan. Trader Joe's has also opened in Union Square and continues to look for additional sites throughout the City. A proposed power center anchored by Home Depot and Target is planned at East River Plaza on a former manufacturing plant site in the East 140's near the FDR Highway in Upper Manhattan. And popular apparel and cosmetics retailers – GAP, Benetton, Ann Taylor, Talbots, Banana Republic, Aveda, Sephora, and the Body Shop are ubiquitous.

Manhattan Retail Inventory Overview

The Manhattan retail market contains approximately 110.2 msf of space. Over 80 percent of Manhattan's retail space is in street-level shops, targeting the pedestrian shopper. Of the remaining space, about 5.0 msf are in department stores and another 5.3 msf are in office building atriums and retail projects configured as vertical urban malls, such as the Shops at Columbus Circle, Trump Tower, Herald Center, Manhattan Mall (formerly A&S Plaza), and Rockefeller Center, or alternative retail centers, such as the South Street Seaport and Battery Park City.

The *Retail Report Spring 2006*, published by the Real Estate Board of New York, divides Manhattan's retail market into six primary submarkets, as highlighted in the following map.





Exhibit 6-3. Manhattan's Prime Retail Submarkets

Source: Real Estate Board of New York, Retail Report.

Midtown South contains the largest inventory of space with 35.5 msf, or 32.2 percent of the total inventory. Midtown is the next largest with 28.9 msf, or 26.2 percent of the total, followed by Downtown with 21.3 msf, Upper Manhattan with 10.4 msf, the East Side with 9.7 msf, and the West Side with 4.4 msf. The retail market inventory is illustrated by submarket in Exhibit 6-4.



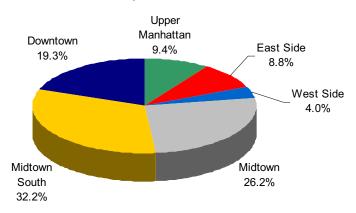


Exhibit 6-4. Manhattan Retail Inventory by Submarket Area, 2006 (% of overall inventory)

Source: Real Estate Board of New York, Retail Report Spring 2006.

Retail Markets Beyond Manhattan

The retail market in New York City's four outer boroughs (Brooklyn, Queens, the Bronx and Staten Island) has also been growing over the past few years. Home to about 80 percent of the City's population, the boroughs offer cheaper rents and bigger spaces for big-box retailers. In Brooklyn, neighborhoods such as DUMBO (Down Under the Manhattan Bridge Overpass), Downtown Brooklyn, East New York, Brooklyn Heights, Red Hook, and Williamsburg represent a wide range of retail environments.

Ikea is opening its first large store in the City in Red Hook. Queens is home to the City's first lifestyle center² that opened in 2006. Big-box retailers that have a presence in Brooklyn and Queens began moving into the borough in 2004, whereas smaller neighborhood strip centers dominate in the Bronx. The proposed 1.0 msf Gateway Center at the Bronx Terminal, however, will bring big box to the borough. The Center will be anchored by a Home Depot and Target. Staten Island, the most suburban of all the boroughs, is populated by neighborhood centers and smaller shopping malls.

Outside of New York City, there are many thriving retail markets in northern New Jersey, Fairfield County, Connecticut, Westchester County, and Long Island. These markets are primarily mall driven with the exception of Greenwich and Westport, Connecticut. Aside from community and neighborhood centers, the malls in these markets have drawn New York shoppers for years, especially to New Jersey, due to the no sales tax policy applied to apparel.

² As defined by the International Council of Shopping Centers, a Lifestyle center is an open-air retail center of roughly 50,000 sf of upscale national specialty stores located near affluent residential neighborhoods.



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Recent Performance of Manhattan Retail Market

Data from the *Retail Reports* was also used to analyze the recent performance of the Manhattan retail market. The increase in availabilities seen in 2005 and 2006 is due almost exclusively to increases in Downtown and Upper Manhattan submarkets. In contrast Midtown and Midtown South experienced significant tightening of occupancy rates. Overall, rents continue to increase, rising 4.9 percent year over year to an average asking rent of \$108 psf for Manhattan in Spring 2006 as shown in Exhibit 6-5.

Exhibit 6-5. Manhattan's Retail Market Recent Performance

Year	Total Available Space	Average Asking Rent \$psf
2001	10,573,173	\$98
2002	11,158,883	\$87
2003	14,549,940	\$88
2004	11,828,218	\$97
2005	13,119,371	\$103
2006	14,491,180	\$108

Source: Real Estate Board of New York Retail Report, spring issues 2001-2006.

Most of the prime retail corridors, particularly in Midtown and the East Side, experienced significant increases in average asking rents as illustrated in Exhibit 6-6. East Side's Madison Avenue (East 57th-72nd Street) experienced the most dramatic increase between Spring 2005 and Spring 2006, rising 35 percent to \$902 psf.



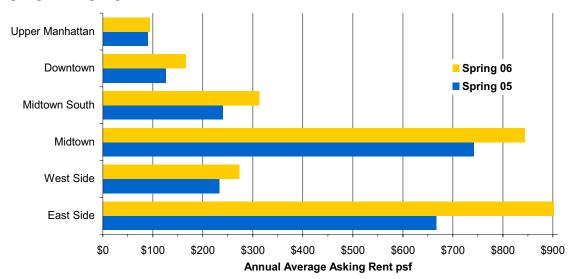


Exhibit 6-6. Manhattan Retail Rents – Selected Major Corridors (average asking rents), Spring 2005– Spring 2006

Source: Real Estate Board of New York, Retail Report Spring 2006.

In addition to vacancy rates and asking rents, another indicator of the performance of the retail market is the total volume of retail sales. The New York CBSA (Combined Statistical Area) ranked first in terms of overall retails sales out of 320 CBSAs.³ Focusing specifically on Manhattan (New York County), total retail sales exceeded \$41.7 billion in 2005, representing 16.3 percent of the total retail sales in the CBSA region and just over half of the City's overall retail sales. This share is far higher than Manhattan's share of the overall City population and reflects the fact that, in addition to local residents, retail sales in Manhattan are also driven by spending from tourists and commuters who work in the City.

From 2000 through 2005, overall retail sales in Manhattan grew at a compound annual growth rate (CAGR) of 5.7 percent, as illustrated in Exhibit 6-7. After growing rapidly through 2001, retails sales in Manhattan started to deteriorate in 2002 and declined in 2003 as the effects of the national recession and September 11th took hold. With the economy recovering in late 2004 and tourism spending rebounding, overall retail sales increased almost seven percent during 2005 in Manhattan.

³ The most recent data on retail is based on the Sales and Marketing *Survey of Buying Power* 2005. The most comprehensive source for retail data is the U.S. Retail Census but data for New York is only available as of 2002.



Exhibit 6-7. Manhattan Total Retail Sales, 2000-2005

Year	Amount (000)	Change
2000	\$31,570,743	
2001	\$34,458,929	9.1%
2002	\$39,028,690	13.3%
2003	\$38,212,235	-2.1%
2004	\$38,813,160	1.6%
2005	\$41,655,050	7.3%
CAGR 00-05		5.7%

Source: Sales & Marketing Management *Survey of Buying Power* (2000-2005) Data prior to 2000 is not directly comparable due to a change in methodology. CAGR=Compound Annual Growth Rate

Manhattan's Retail Support Factors

The analysis of the various factors which support and generate retail demand and sales in Manhattan are examined in order to derive retail demand in the Hudson Yards.

Typically, consumer demand for retail expenditures is driven by spending from local residents and is directly correlated to household income. In Manhattan, however, in addition to this core resident base, a significant component of demand is also generated by tourists, both leisure and business visitors, and employees commuting to work from outside Manhattan. A detailed overview of Manhattan's household income and a related measure of consumer buying power (Effective Buying Income) is analyzed to help determine the demand for retail sales generated by local residents. Zip code level data provided by Claritas, Inc., was used in the analysis, since the data on household income from the U.S. Bureau of Economic Analysis and forecast by Moody's Economy.com was only available at the county level⁴.

With respect to the other non-local components of retail demand, an overview of the recent performance of the City's tourism industry and specifically total visitor spending in Manhattan is also provided. Office worker spending patterns are discussed only as they relate to the forecast for Hudson Yards in the later part of this chapter.

Household Income

Consumer expenditures are largely driven by household income and household composition. Manhattan and the outer boroughs, form two distinct demographic segments in terms of household composition and income. Manhattan has a high proportion of one-person households, comprising 48 percent of its total household population. Manhattan's average household size of 2.0 is significantly smaller than the 2.8 average in the outer boroughs.

⁴ Claritas demographic and income data is as of 2005, consistent with the latest U.S. census data from the American Community Survey.



Along with the higher earnings of its residents, who tend to be employed in higher paying industries, this contributes to a per capita income that is over 86 percent higher than both the national average and New York City as a whole. As shown in Exhibit 6-8, Manhattan's median household income in 2005 was \$54,955⁵, or roughly 26 percent higher than New York City's median household income of \$43,515, and 15 percent greater the national median household income of \$47,837. This high level of discretionary income in Manhattan supports both mid-priced and upscale retailers.

In general, the outer boroughs of Brooklyn, Bronx, Queens and Staten Island have a larger average household size, and median household incomes range from \$31,202 in the Bronx to \$47,967 in Queens. Staten Island with \$62,131 actually has a higher median income than Manhattan, but its average household size of 2.76 makes its residents' discretionary income level lower than Manhattan's. A comparison of household income for New York City and the nation is shown below.

Exhibit 6-8. Household Earnings in New York City and the United States, 2005

Household Earnings	Bronx	Kings	Manhattan	Queens	Richmond	NYC	U.S.
\$150,000 or more	2.69%	4.56%	16.84%	5.27%	8.77%	7.73%	6.28%
\$100,000 to \$149,000	6.06%	8.07%	11.74%	11.33%	16.37%	9.94%	10.64%
\$75,000 to \$99,999	7.53%	8.83%	9.64%	11.98%	14.75%	9.94%	11.50%
\$50,000 to \$74,999	14.46%	15.66%	14.69%	19.30%	19.65%	16.37%	19.30%
\$35,000 to \$49,999	14.66%	14.22%	11.73%	15.63%	12.68%	13.94%	15.87%
\$25,000 to \$34,999	12.11%	11.26%	8.27%	10.78%	7.80%	10.34%	11.49%
\$15,000 to \$24,999	12.91%	12.26%	8.97%	10.42%	7.86%	10.84%	11.25%
Less than \$15,000	29.58%	25.15%	18.12%	15.29%	12.13%	20.90%	13.68%
Avg. Income/Household	\$43,940	\$52,329	\$95,849	\$61,762	\$76,357	\$65,503	\$64,816
Median Income	\$31,202	\$36,405	\$54,955	\$47,967	\$62,131	\$43,515	\$47,837
Per Capita Income	\$15,587	\$18,843	\$46,545	\$21,510	\$27,427	\$24,898	\$24,704

Source: Claritas, Inc. 2005.

Nearly all of Manhattan's zip codes below 96th Street register a household income well above the national average, as illustrated in Exhibit 6-9. The most affluent concentrations of households border Central Park on Manhattan's West Side between West 77th and West 91st Streets, and on the East Side along Fifth, Park and Madison Avenues between East 60th and East 96th Streets. Other affluent pockets include the southern tip of Manhattan at Battery Park City and the communities surrounding the financial district, such as TriBeCa. In contrast, the area north of Central Park, as well as portions of the Lower East Side, are where residents with the lowest median household incomes reside.



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⁵ Claritas, Inc. 2005

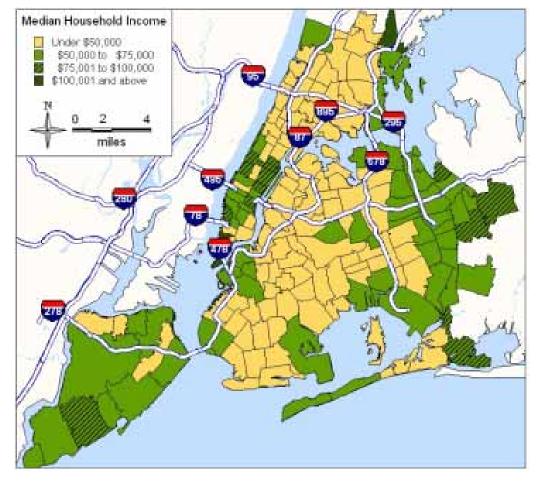


Exhibit 6-9. Median Household Income New York City, 2005

Source: Claritas, Inc. 2005.

Manhattan's median household income is expected to increase between 2005 and 2010 by \$6,426 to \$61,381, representing a projected CAGR of 3.2 percent. This figure exceeds the median household income CAGR for both New York City and the nation as a whole, at 2.5 and 3.0 percent, respectively. The faster growth rate in income typically achieved by Manhattan residents reflects the higher share of its residents employed in rapid wage growth industries such as finance and professional services.



Effective Buying Income

A related measure of New York City's ability to support retail business is its Effective Buying Income (EBI)⁶, which is computed as a derivative of household income and measures more accurately disposable income. According to the 2005 *Survey of Buying Power*⁷, the New York-Newark-Edison, NY-NJ-PA CBSA (Combined Statistical Area) ranked first in the nation with an EBI of \$421.6 billion. Approximately \$58.3 billion, or 13.4 percent of EBI for the entire CBSA, is generated by Manhattan. New York City (the five boroughs) accounted for \$154.5 billion, or 36.6 percent, of the total CBSA's EBI.

The New York CBSA ranks first in the number of households, with an EBI in excess of \$150,000 per year with 306,000 households. This indicates an extremely high level of purchasing power, which, in turn has a positive impact on retail sales levels. The high purchasing power in both the New York CBSA and in Manhattan encourages mid-level and high-end retail stores to locate in the region. Exhibit 6-10 summarizes total EBI for New York City and compares Manhattan with the Outer Boroughs.

Exhibit 6-10. New York City Total Effective Buying Income, 2000-2005

Manhattan		Outer Boro	oughs	New York City		
Year	Amount (000)	Change	Amount (000)	Change	Amount (000)	Change
2000*	\$58,774,686		\$87,725,104		\$146,499,790	
2001	\$60,350,749	2.7%	\$98,692,045	12.5%	\$159,042,794	8.6%
2002	\$59,156,303	-2.0%	\$99,028,230	0.3%	\$158,184,533	-0.5%
2003	\$51,490,973	-13.0%	\$91,655,940	-7.4%	\$143,146,913	-9.5%
2004	\$54,523,585	5.9%	\$93,292,353	1.8%	\$147,815,938	3.3%
2005	\$58,299,444	6.9%	\$96,197,624	3.1%	\$154,497,066	4.5%
CAGR 00-05		-0.2%		1.9		1.1%

Source: Sales & Marketing Management *Survey of Buying Power* (2000-2005). Data prior to 2000 is not directly comparable due to a change in methodology.

While EBI in both Manhattan and the boroughs declined following September 11th, the outer boroughs EBI growth rate outpaced Manhattan's EBI between 2001 and 2003. This stronger relative performance of the outer boroughs is consistent with the more rapid population growth rate experienced in the boroughs. Manhattan's 6.9 percent EBI growth rate in 2005,

⁷ The Annual *Surveys of Buying Power*, conducted by Sales & Marketing Management, rank the major U.S. markets by city, county, defined metro region and states. Note that the use of the CBSA began in 2004, and prior years were ranked according to metropolitan statistical areas (MSA), using different geographic definitions. Thus year over year changes are not comparable, and therefore the focus remains on the Manhattan's year over year change.



⁶ EBI is money income less personal tax and non-tax payments, or disposable income. EBI is computed as a derivative of household income, per Sales & Marketing Management.

however, indicates a continued strong recovery from the recessionary years from 2001 through 2003.

Tourism Spending

In addition to the retail demand generated from its local residents, tourism spending (both leisure and business) represents a significant source of overall retail spending in the City, particularly for certain categories of retail expenditures like eating and drinking establishments, museums and entertainment and lodging. For some tourists, shopping itself is the main purpose of visiting Manhattan. Overall statistics on the City's tourism industry are detailed in the Hotel Chapter, with greater emphasis here on those measures more specifically related to retail sales.

Likewise, as noted in the Hotel Chapter, almost all statistics indicate the City's tourism industry has rebounded from the effects of the recent downturn. New York City had a record number of visitors, totaling 41.0 million in 2005, a 2.8 percent increase over the previous year and preliminary data suggests that 2006 is expected to be another banner year, reaching over 43 million visitors. Exhibit 6-11 displays the total, domestic and international travel to New York City over the past seven years.

Exhibit 6-11. Annual Visitor Travel to New York City, 1999-2005

Visitors (in millions)	1999	2000	2001	2002	2003	2004	2005
Total % change from prior year	36.4 10.0%	36.2 -0.5%	35.2 -2.8%	35.3 0.3%	37.8 7.2%	39.9 5.5%	41.0 2.8%
Domestic % change from prior year % of total	29.8	29.4	29.5	30.2	33.0	33.8	34.0
	10.0%	-1.3%	0.3%	2.4%	9.4%	2.3%	0.7%
	81.9%	81.2%	83.8%	85.6%	87.3%	84.7%	82.9%
International	6.6	6.8	5.7	5.1	4.8	6.1	6.6
% change from prior year	9.1%	3.5%	-15.9%	-10.5%	-5.7%	27.5%	7.6%
% of total	17.9%	18.7%	16.2%	14.4%	12.7%	15.4%	16.1%

Source: NYC & Co.



Following this pattern of increasing visitation to the City, the total value of retail expenditures from tourism to the City has also reached new record levels. After steadily increasing throughout the 1990s, direct visitor spending (including both domestic and international) experienced two years of consecutive declines in 2001 and 2002, but has since rebounded, growing from \$14.1 billion in 2002 to over \$21 billion in 2004 (latest available statistics). Given the increased number of tourists in 2005, tourism spending is expected to post another record year of an estimated \$22.6 billion, based on the recent growth rates of visitors and spending volume⁸.



Exhibit 6-12. Direct Visitor Spending in NYC, 1994-2005 (\$ billions)

*forecast

Note: Due to the statistical timeline, 2005 figures are estimated.

Source: NYC &Co.

With the majority of this spending occurring in Manhattan, the \$22.6 billion in overall visitor spending represents over 50 percent of the borough's overall retail expenditures, clearly illustrating the importance of this component of overall retail demand. This spending is concentrated in certain categories of retail expenditures, such as restaurants, lodging and entertainment, as shown in Exhibit 6-13.

⁸ Between 2003 and 2004, the number of visitors increased by 5.5 percent and total visitor spending increased by 14.1 percent. As the number of visitors grew at approximately half that rate between 2004 and 2005, estimated spending was given a similar growth rate of 7.0 percent, and applied to the \$21.1 billion of 2004 to estimate the \$22.6 billion visitor spending of 2005.



Food 23% 22%

Ent./Rec 8%
Shopping 20%
Other Transp 8%

Exhibit 6-13. New York City Visitor Spending Allocations, 2005*

*Estimated

Source: NY & Co., Cushman & Wakefield Analytics

Hudson Yards Retail Demand Forecast and Likely Construction

Demand for retail space in Hudson Yards is expected to be driven by the same factors that generate overall retail demand in Manhattan. Hudson Yards, as a newly evolving neighborhood, will need retail services to cater to the everyday needs of its residents. In addition, expenditures by office workers in the new buildings and by business, convention, and leisure visitors to the area are also expected to be a major source of retail demand. The inflow spending from residents in nearby zip codes is expected to support retail development. These four determinants of consumer demand form the basis for the forecast retail demand in the Hudson Yards.

Forecast Methodology

The assumptions relating to the forecast of the four demand generators (office, residential, convention and visitor, and inflow) for retail sales in Hudson Yards are discussed herein. The analysis assumes that for each component Hudson Yards will capture a fraction of the overall Manhattan demand. The captured spending potentials are considered to be conservative in order to avoid over anticipating retail demand. The four components are then combined to derive the total demand for retail sales in the Hudson Yards and converted to a square foot basis, using a threshold measure of the sales per square foot necessary to sustain retail development. Annual forecasts for each component of demand through 2035 for both the Base and Cyclical scenarios are provided, as well as a summary table of the total demand.



Office Expenditure Potential

The office expenditure potential is based on the number of new office-using employees expected in Hudson Yards. This number was calculated by using the Hudson Yards office completions (millions of square feet) and assuming an average of 200 sf per employee⁹.

- The number of employees is multiplied by an average per capita spending potential in order to estimate total expenditure potential. An International Council of Shopping Centers (ICSC) survey measured the expenditure patterns for various categories of retail purchases among office workers in five metropolitan areas, Atlanta, Chicago, Dallas, Philadelphia, and San Francisco¹⁰. The categories of expenditures include spending for lunch, general merchandise, grocery, variety, drug and convenience items and drinks/dinner. The average overall weekly expenditure in the five metro areas was \$130 in 2003. Adjusting for inflation (2.2 percent¹¹) and annualizing these weekly yields, an average office worker expenditure will spend \$6,556 (48 work weeks) a year on retail goods in 2006.
- This amount is then adjusted to reflect the higher cost of living in New York City based on the American Chamber of Commerce Researchers Association (ACCRA) Cost of Living Index, which measures relative price levels for consumer goods and services in metro areas across the nation. The use of the ACCRA index is particularly suited for this calculation since the index reflects cost differentials for the standard of living for a professional and or managerial household.
- Using ACCRA figures for the cost of living in the five metro areas, the ICSC survey figure relative to New York City results in a standard of living increase of 86.3 percent, or a weekly expenditure of \$238 instead of \$130. This figure is increased annually at 2.2 percent (rate of inflation).
- Of the total employee expenditures, only a share is expected to occur in Hudson Yards. As the neighborhood is developing between 2012 and 2017, Hudson Yards is assumed to capture 25 percent of employee expenditures, and then assumed to increase to 35 percent for the remainder of the forecast period (2018 to 2035).
- The 25 to 35 percent capture rates are conservative based on an average of ICSC survey results, which estimate that 85 percent of employees purchased lunch outside the office, 60 percent shopped either before, during or after work, and 35 percent socialized after work. The rationale behind the capture rate increase is to remain conservative but realistic; growing over time as the

¹¹ Based on Moody's Economy.com forecast of inflation and also used as the annual growth rate in other applicable sections of this Retail analysis.



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⁹ See survey results of office employee space use in Appendix A.

¹⁰ Office Worker Retail Spending Patterns: A Downtown and Suburban Study, 2003, International Council of Shopping Centers (ICSC).

Hudson Yards office market establishes its presence and becomes a more desirable retail location.

Residential Expenditure Potential

The residential expenditure potential calculation is based on the existing households in the broader Hudson Yards area¹², plus Hudson Yards' share of Manhattan's future new household growth based on the forecast in the Residential Chapter. The calculation is done as follows.

- The share of household income allocated to retail sales in Hudson Yards is determined by summing the existing and projected household incomes in Hudson Yards.
- Two adjoining zip codes, 10036 and 10018, include and extend beyond the Hudson Yards area. A portion equal to 25 percent of the households in this area is estimated to approximate the existing households in Hudson Yards. The number of existing households is multiplied by the 2005 median household income in these zip codes, \$52,225, and inflated at 2.2 percent annually to obtain total expenditure potential of existing households in the area.
- The number of new households in Hudson Yards is based on the construction of new residential buildings as described in the Residential Chapter. This is multiplied by the overall median Manhattan household income of \$54,955 and inflated at a 2.2 percent rate. It is assumed that the new households in Hudson Yards will more closely resemble the demographic profile of overall households in Manhattan.
- The total of the existing and new households creates an aggregate household income applicable to Hudson Yards. Manhattan households typically allocate 38.9 percent of household income to non-automotive retail expenditures¹³. This percentage is applied to the aggregate Hudson Yards household income to obtain total non-automotive retail expenditures of households in Hudson Yards.
- A 30 percent share of income allocated to non-automotive retail expenditures is expected to be captured in Hudson Yards. This share is estimated using a slightly larger share of income than that is spent by office employees (25 percent) per the ICSC study. It is assumed that the 30 percent share in 2007 will grow to 50 percent beginning in 2011, as the Hudson Yards neighborhood becomes more established, and the retail market becomes more fully developed.



¹² Source: Survey of Buying Power, 2005.

¹³ Source: Claritas Inc. 2005

Inflow Expenditure Potential

Inflow expenditure is calculated by multiplying the total number of households in the areas surrounding the Hudson Yards by the household expenditure potential, and then assuming a small fraction, 2.5 percent, of the area's expenditure potential will be spent in Hudson Yards.

- The inflow figures were obtained by totaling household information from following the zip codes: 10025, 10024, 10023, 10019, 10001, and 10011. These zip codes border Hudson Yards and run north from roughly West 115th Street to West 49th Street and south from West 35th Street to West 4th Street.
- As of 2005, there were 180,947 households in these zip codes and the median household income was \$73,515¹⁴. Inflow households are assumed to grow at a CAGR of 0.14 percent¹⁴, and household income is assumed to grow at 2.2 percent annually.
- Total expenditure potential is the product of the number of households multiplied by the median household income. Of the total expenditure potential, 38.5 percent is allocated to non-automotive retail spending and a conservative capture rate of 2.5 percent is applied to this to estimate the resident inflow potential into Hudson Yards.

Visitor Expenditure Potential

The visitor expenditure potential is calculated by adding a share of Hudson Yards overnight visitors and convention center day-trippers, plus an estimated inflow of non-Hudson Yards tourists, as described below.

- The number of overnight visitors in Hudson Yards is based on the total Hudson Yards room night demand derived in the Hotel Chapter and assumes 1.3 guests per room.
- Each overnight visitor in Hudson Yards is assumed to spend \$205¹⁵ per day, grown at an annual rate of 2.2 percent.
- As the majority of overnight visitors in Hudson Yards are expected to be business and convention travelers and given that food and beverage is the largest expenditure category for visitors, 50 percent of this spending is assumed to take place in Hudson Yards.
- The total number of new Javits Convention Center day-trippers forecast for 2010 is increased by a conservative 1.0 percent until 2012, at which point capacity at the Javits reaches its maximum.



¹⁴ Source: Claritas Inc., 2005.

¹⁵ Based on the 2003 Price Waterhouse Cooper's Study of the Jacob Javits Convention Center.

- Day-trippers are assumed to spend \$65¹⁶ on average.
- A capture rate of 5.0 percent in the Hudson Yards is then applied to the total day-trippers' expenditures.
- To calculate other Hudson Yards visitor expenditure potential, the total number of international and domestic visitors, per NYC & Co. was grown at 1.0 percent per year.
- The resulting number of visitors was multiplied by the \$20 daily expenditure, grown at an annual rate of 2.2 percent.
- A conservative 3.0 percent share of the other Hudson Yards visitors retail expenditures is then assumed to be captured in Hudson Yards in the years 2010 to 2015, growing to 5.0 percent between 2016 and 2025, and then assumed to grow to 10 percent for the remainder of the forecast.

Cumulative Potential Retail Demand

The cumulative expenditure potential for Hudson Yards is based on the sum of the estimated number of Hudson Yards office employees, Hudson Yards residents, inflow New York residents, and visitors.

The annual total expenditure potential was divided by a base productivity of \$680 psf which measures the necessary sales psf ratio for supportable retail development. The \$680 psf threshold productivity is calculated by assuming a 12.5 percent rent to sales ratio ¹⁷ using an average retail rent of \$85 psf, a rate reflective of Hudson Yards' status as an emerging market.

The annual retail demand is calculated by subtracting the previous year's supportable square footage by the current year's supportable square footage to determine the amount square feet. The results, nearly 1.36 msf in the Base, and 1.31 msf in the Cyclical scenario, are shown Exhibits 6-14 and 6-15.



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¹⁶ Based on the 2003 Price Waterhouse Cooper's Study of the Jacob Javits Convention Center.

¹⁷ The rent to sales ratio is typically 15 to 20 percent for established retail corridors in Manhattan, thus a 12.5 percent ratio is appropriate for Hudson Yards, as a new retail location.

Exhibit 6-14. Base Scenario for Retail Demand in Hudson Yards, 2007 – 2035

Poten	tial/P	roiecte	d C	ι Δ*
Poten	ıuai/F	roiecte	:u G	ᅜᄶ

								LIV
	Captured	Captured	Captured	Captured	• • •	*****	Cumulative	HY
	Office	Resident	Inflow	Hotel & Visitor	Cumulative	\$680/psf	Potential Retail	Annual Retail Constructed
	Expenditure	Expenditure	Expenditure	Expenditure	Expenditure	Base		
	Potential	Potential	Potential	Potential	Potential	Productivity	Demand [†]	Completions ⁺
Year	(000) ¹	(000) ²	(000) ³	(000)4	(000) ⁵	Threshold ⁶	(000) ⁸ SF	(000) ⁷ SF
		\$19,848	\$105,906	\$25,136	\$150,890	\$695	217	-
2007	-	\$27,560	\$108,355	\$33,219	\$169,134	\$710	238	21
2008	-	\$33,236	\$110,860	\$34,290	\$178,386	\$726	246	8
2009	-	\$39,047	\$113,424	\$35,395	\$187,865	\$742	253	7
2010	-	\$46,428	\$116,047	\$42,961	\$205,435	\$758	271	18
2011	-	\$54,229	\$118,730	\$67,838	\$240,798	\$775	311	40
2012	\$16,990	\$62,822	\$121,476	\$80,101	\$281,388	\$792	355	45
2013	\$40,661	\$71,091	\$124,285	\$86,949	\$322,986	\$809	399	44
2014	\$66,217	\$80,767	\$127,159	\$94,669	\$368,811	\$827	446	47
2015	\$91,794	\$90,059	\$130,099	\$102,842	\$414,795	\$845	491	45
2016	\$116,729	\$99,252	\$133,108	\$132,651	\$481,740	\$864	558	67
2017	\$198,962	\$181,712	\$136,186	\$139,096	\$655,956	\$883	743	185
2018	\$235,790	\$197,377	\$139,335	\$145,754	\$718,256	\$902	796	53
2019	\$273,948	\$212,398	\$142,557	\$152,633	\$781,536	\$922	847	51
2020	\$313,719	\$226,898	\$145,853	\$159,759	\$846,229	\$942	898	50
2021	\$355,075	\$240,777	\$149,226	\$167,133	\$912,211	\$963	947	49
2022	\$390,694	\$253,611	\$152,677	\$174,170	\$971,153	\$984	987	39
2023	\$423,444	\$265,455	\$156,208	\$181,106	\$1,026,212	\$1,006	1,020	33
2024	\$467,191	\$275,410	\$159,820	\$189,058	\$1,091,478	\$1,028	1,062	42
2025	\$512,417	\$284,057	\$163,515	\$199,807	\$1,159,797	\$1,051	1,104	42
2026	\$559,582	\$291,693	\$167,297	\$291,957	\$1,310,528	\$1,074	1,220	117
2027	\$607,971	\$298,786	\$171,165	\$302,818	\$1,380,740	\$1,098	1,258	38
2028	\$658,114	\$306,607	\$175,123	\$315,407	\$1,455,251	\$1,122	1,297	39
2029	\$710,582	\$314,855	\$179,173	\$329,672	\$1,534,282	\$1,146	1,338	41
2030	\$764,140	\$323,620	\$183,316	\$343,243	\$1,614,319	\$1,172	1,378	40
2031	\$820,062	\$332,963	\$187,555	\$355,052	\$1,695,632	\$1,197	1,416	38
2032	\$876,060	\$343,631	\$191,892	\$367,081	\$1,778,664	\$1,224	1,453	37
2033	\$931,986	\$357,152	\$196,329	\$380,501	\$1,865,968	\$1,251	1,492	39
2034	\$992,699	\$372,803	\$200,869	\$394,487	\$1,960,859	\$1,278	1,534	42
2035	\$1,052,604	\$390,176	\$205,514	\$408,878	\$2,057,173	\$1,306	1,575	41
Total	\$11,477,431	\$6,114,165	\$4,513,060	\$5,758,798	\$27,863,455			1,358



Exhibit 6-15. Cyclical Scenario for Retail Demand in Hudson Yards, 2007 – 2035

		Demand Generators						ojected GLA*
	Captured Office Expenditure Potential	Captured Resident Expenditure Potential	Captured Inflow Expenditure Potential	Captured Visitor Expenditure Potential	Total Expenditure Potential	\$680/psf Base Productivity	Cumulative Potential Retail Demand ⁺	Annual Potential Retail Demand [†]
Year	(000) ¹	(000) ²	(000) ³	(000)4	(000) ⁵	Threshold ⁶	(000) ⁸ SF	(000) ⁷ SF
		\$19,848	\$105,906	\$25,134	\$150,887	\$695	217	
2007	-	\$27,560	\$108,355	\$33,229	\$169,144	\$710	238	21
2008	-	\$33,373	\$110,860	\$34,265	\$178,498	\$726	246	8
2009	-	\$38,980	\$113,424	\$35,226	\$187,630	\$742	253	7
2010	-	\$45,489	\$116,047	\$42,336	\$203,872	\$758	269	16
2011	-	\$52,183	\$118,730	\$67,008	\$237,921	\$775	307	38
2012	\$8,569	\$59,690	\$121,476	\$78,678	\$268,413	\$792	339	32
2013	\$8,783	\$67,694	\$124,285	\$83,574	\$284,336	\$809	351	12
2014	\$9,003	\$76,779	\$127,159	\$88,817	\$301,757	\$827	365	13
2015	\$33,617	\$84,799	\$130,099	\$94,622	\$343,137	\$845	406	41
2016	\$62,536	\$92,713	\$133,108	\$125,099	\$413,456	\$864	479	73
2017	\$156,911	\$168,706	\$136,186	\$134,134	\$595,937	\$883	675	196
2018	\$186,974	\$182,508	\$139,335	\$139,688	\$648,505	\$902	719	44
2019	\$224,237	\$195,700	\$142,557	\$144,493	\$706,987	\$922	767	48
2020	\$229,517	\$208,055	\$145,853	\$146,985	\$730,411	\$942	775	8
2021	\$276,488	\$219,108	\$149,226	\$154,348	\$799,170	\$963	830	55
2022	\$299,677	\$229,354	\$152,677	\$161,149	\$842,857	\$984	856	27
2023	\$332,160	\$240,844	\$156,208	\$169,187	\$898,399	\$1,006	893	37
2024	\$387,968	\$249,880	\$159,820	\$219,584	\$1,017,252	\$1,028	989	96
2025	\$428,756	\$256,776	\$163,515	\$186,779	\$1,035,826	\$1,051	986	0
2026	\$459,684	\$262,606	\$167,297	\$277,414	\$1,167,001	\$1,074	1,087	101
2027	\$534,346	\$268,383	\$171,165	\$291,213	\$1,265,107	\$1,098	1,153	66
2028	\$558,433	\$274,288	\$175,123	\$299,815	\$1,307,659	\$1,122	1,166	13
2029	\$544,452	\$280,413	\$179,173	\$303,714	\$1,307,751	\$1,146	1,141	0
2030	\$584,253	\$286,827	\$183,316	\$312,219	\$1,366,615	\$1,172	1,166	26
2031	\$712,079	\$293,137	\$187,555	\$330,293	\$1,523,064	\$1,197	1,272	106
2032	\$826,793	\$301,494	\$191,892	\$348,865	\$1,669,045	\$1,224	1,364	92
2033	\$882,778	\$315,020	\$196,329	\$363,090	\$1,757,217	\$1,251	1,405	41
2034	\$946,225	\$329,833	\$200,869	\$378,414	\$1,855,341	\$1,278	1,452	47
2035	\$1,015,964	\$344,847	\$205,514	\$393,244	\$1,959,569	\$1,306	1,500	49
Total	\$9,710,203	\$5,526,732	\$4,513,060	\$5,462,617	\$25,212,612			1,312



Notes:

- * GLA (Gross Leaseable Area) as defined by the Urban Land Institute "is the total floor area designed for tenant's occupancy and exclusive use, including any basements, mezzanines, or upper floors, expressed in square feet and measured from the centerline of joint partitions and from outside wall faces. Because GLA lends itself readily to measurement, the shopping center industry has adopted it as the standard for statistical comparison."
- 1. The captured office expenditure potential was calculated by taking the cumulative office worker projection and multiplying it by total spending potential for Hudson Yards, and then taking a 25 percent share of the figure for 2010 2017 and increasing to 35 percent for 2018 2035.
- 2. The captured resident expenditure potential was calculated by taking both the cumulative number of existing and new households in the Hudson Yards area and multiplying the aggregate figure by the anticipated total non-automotive retail sales potential. Then taking a 30 percent share of the total for 2007 2010, and increasing the share to 50 percent in 2011 when approximately 25 percent of the total residential units will have come online.
- 3. Captured retail inflow spending potential was calculated by multiplying the number of households by the household expenditure potential, and then capturing 2.5 percent of the said area's spending potential from the major zip codes that border Hudson Yards to the north and south/southeast (roughly the Upper West Side, Chelsea and Greenwich Village).
- 4. The captured hotel and visitor spending potential is calculated by adding a share of Hudson Yards hotel overnight room occupancy, Javits day-trippers and an estimated inflow of tourists.
- 5. The cumulative expenditure potential is the sum of the captured office, resident, inflow and hotel and visitor expenditure potentials.
- 6. The \$680 psf threshold is calculated by assuming a 12.5 percent sales to rent ratio based on an average rent of \$85 psf.
- 7. Annual potential retail demand square footage coming on-line per year is calculated by subtracting the potential retail square footage (column to the right) by the previous year's potential retail square footage.
- 8. Cumulative potential retail demand square footage is calculated by dividing the cumulative expenditure potential by the \$680 psf base productivity threshold (which is grown at an annual rate of 2.2 percent).

Sources: Moody's Economy.com, International Council of Shopping Centers, NYC & Co., ACCRA, Urban Land Institute, New York City Economic Development Corporation, Cushman & Wakefield, Inc.



Revenues from Retail Development: Methodology and Assumptions

Revenues associated with retail development are expected to account for approximately three percent of the overall revenues in both the Base and Cyclical scenarios. These projections are the result of two major inputs into the City's revenue model used to calculate the 45-year revenues from 2006 to 2050:

Projected Demand is defined in millions of square feet (msf). The forecast for retail demand is assumed to be accommodated within the new office and residential buildings in Hudson Yards. This is a simplifying assumption, but not unreasonable given typical retail usage in residential and office properties in Manhattan. A 3.0 percent share of overall office properties is assigned to retail usage¹⁸. The remaining overall retail demand, if any, is distributed to residential development. In years prior to 2012 all demand is assumed to occur in new residential buildings. The demand projections provided by C&W rely on underlying economic forecasts provided by Moody's Economy.com (Chapter 2) as well as other demand generators as detailed in this chapter. These projections were used as inputs along with key real estate and zoning variables and assumptions on infrastructure improvements.

Even though the 30-year demand forecast ends in 2035, the revenues from the development are projected and retained by HYIC for an additional 15 years, from 2036 through 2050. C&W incorporated the following assumptions and factors to support the revenues for new retail development in the Hudson Yards.

Infrastructure: Projected demand assumes that key infrastructure improvements are competed. The Mid-Block Boulevard and Park is planned in two sections, West 36th to West 38th Streets, and West 38th to West 42nd Streets, and both are likely to be considered complementary amenities to any future new development. Furthermore it is assumed that the transfer of air rights from the ERY under the agreement between the MTA and the City will occur in a timely manner in order to support the projected development. Although the completion of the number 7 subway is critical to office development in the Hudson Yards, it is less essential for new retail development, particularly within the residential component.

Zoning: The projected demand assumes that the existing zoning legislation ¹⁹ regarding building FAR and DIB bonus remains in place throughout the analysis period. It is also



¹⁸ Based on survey of comparable Midtown office buildings a range of 0 to 10 percent of total space is allocated for retail uses. The average is 3 percent.

¹⁹ Hudson Yards Special District Zoning Resolution, January 2005.

assumed that future changes to City zoning will not materially affect Manhattan's overall development potential. Significant changes to zoning by creating competitive markets to Hudson Yards other than those identified in this report could potentially result in lower revenues than forecast.

Taxes or PILOTs. Since the assessment of retail space within office and residential is determined by the dominant use²⁰ the applicable PILOTs or tax equivalency payments (TEP) from office and residential development are applied to the retail portion within each to obtain the forecast total revenues in the Hudson Yards.

<u>Growth Rates:</u> To project the revenues over the forecast period, the revenue model assumes constant growth rates for taxes from 2006 through 2050. These taxes are assumed to grow at same conservative rates used in the comparable office and residential forecasts depending on where the new retail is built as noted above.

On the basis of the real estate variables provided by Cushman & Wakefield and analysis of the other available data provided by third parties (which are relied upon and assumed to be reasonable and accurate) including forecasts provided by Moody's Economy.com and tax methodology and calculations provided by New York City's Department of Finance and New York City's Office of Management and Budget, and the Hudson Yards Development Corporation, Cushman & Wakefield believes the revenue projections to be reasonable.

The revenues are contingent on the realization of all the economic and real estate assumptions, analyses, zoning and completion of key infrastructure, and limiting conditions that are sourced or detailed herein and in Chapter 1.B. Limiting Conditions.

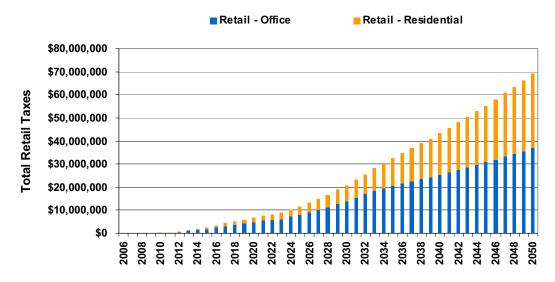
As shown in Exhibit 6-17, the revenues associated with retail development in Hudson Yards are expected to total \$1.1 billion in the Base scenario, growing from \$82,265 in 2007, with the first estimated residential completions, to \$69.0 million in 2050. The Cyclical scenario revenues are expected to total \$1.0 billion, growing from \$82,332 in 2007 to \$69.3 million in 2050.

²⁰ According to information provided to Cushman & Wakefield, Inc. by the New York City Office of Management and Budget.

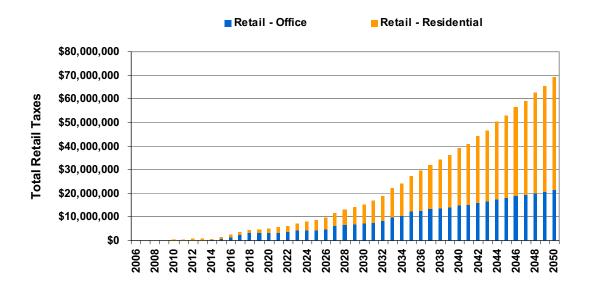


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Exhibit 6-17: Hudson Yards Retail Revenues Base Scenario



Cyclical Scenario



Source: New York City's Office of Management and Budget and Department of Finance, Hudson Yards Development Corporation, Moody's Economy.com, Cushman & Wakefield, Inc.



7. Non-Recurring Revenue

Introduction

In addition to the recurring revenues resulting from the development of the four property types, additional revenues associated with the construction phase of development are also expected to flow to HYIC. The sources of these revenues are one-time payments that developers are expected to make for purchases of additional floor area ratio (FAR) and taxes associated with the financing of construction.

Hudson Yards Revenues from DIB and ERY TDR Purchases

Two mechanisms were established to enable developers to achieve the maximum development envelope on certain sites in the Hudson Yards, including most of the large sites discussed in the Office Chapter.

- An FAR bonus can be obtained, up to a predetermined maximum for each site, through payments pursuant to the District Improvement Fund Bonus (DIB).
- ERY transferable development rights (TDR) can be purchased after the maximum DIB has been obtained on designated receiving sites on the eight blocks north of West 33rd Street.

The allowable purchase of ERY TDR and DIB for each development site is set in the Hudson Yards amendment to the Zoning Resolution, which establishes a base FAR for each site and the mechanisms for increasing FAR, either through the DIB or purchase of transferable development rights¹.

Under the agreement between the City and the MTA, HYIC purchased a 50 percent interest in the ERY TDR for \$200 million. HYIC intends to sell those air rights for use and development in the project area and will receive all proceeds of ERY TDR until it has recouped the \$200 million and financing costs determined by the rate of interest of the bond offering. Thereafter all proceeds will revert to MTA. For the first seven years the HYIC will have the right to market and price, without the consent of the MTA, 100 percent of the interest in all the ERY

¹ Refer to the Hudson Yards Amendment to Zoning Resolution January 2005, for a detailed discussion of zoning and air right transfer mechanism and definition of the Large Scale Plan.



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TDRS provided the that sale of the TDR is equal to or greater than the price per square foot of the DIB.²

Owners within the Large Scale Plan and along Tenth Avenue may also obtain additional density through purchase of development rights from property owners within the Phase II Mid-Block Boulevard. For the purpose of estimating the likely DIB revenues to HYIC, it was assumed that all FAR associated with the Phase II Mid-Block Boulevard is utilized, thus reducing DIB revenues flowing to HYIC.

The time line of expected site completions for the large sites was used to estimate the acquisition of additional allowable FAR specific to each site. The large site completions were grouped in five-year cohorts of 2012, 2017, 2022 and 2027 as shown in Exhibits 3-32 and 3-33³. For modeling purposes, the purchase of additional FAR (both DIB and ERY TDR) is assumed to occur equally over the five years.

TDR and DIB purchases are expected to occur as construction is initiated, typically two years before building completions for residential and three years for office buildings. Through September 2006, HYIC has received DIB revenues totaling \$11.1 million from residential projects, while the first ERY TDR and DIB revenues from office completions are expected to occur in 2009.

Numerous smaller sites that are likely to be developed for residential space, in addition to the large commercial sites studied, can obtain additional FAR through the DIB. For the purposes of estimating DIB revenues, 15 smaller sites were identified as most likely to utilize the DIB, resulting in the purchase of an additional 1.9 msf. As noted above, from this amount, the 111,000 sf already purchased and the approximately 850,000 sf from the Phase II Mid-Block Boulevard have been deducted. The remaining DIB from these 15 sites, approximately 935,000 sf, was distributed equally across the 30 years, resulting in purchases of 31,188 sf annually from 2007 through 2037. Combined, almost 13 msf of additional FAR is expected to be purchased through DIB and ERY TDRs. A summary of the commercial and residential DIB and TDR purchases for the large commercial sites and the smaller sites is shown in Exhibit 7-1.

² For details relating to development of the MTA Rail Yards and transferable development rights refer to :No. 7 Extension Memorandum of Understanding and Rail Yards Agreement: 28 September 2006, Agreement between Metropolitan Transportation Authority, NYC Transit Authority and MTA Capital Construction, and the City of New York, Hudson Yards Development Corporation and Hudson Yards Infrastructure Corporation.

³ The hotel sites, Site 728 and 711, are included respectively, in the 2012 and 2027 cohorts in the Base Scenario, and in the 2017 and 2032 cohort in the Cyclical Scenario.



Exhibit 7-1. DIB and Eastern Rail Yard (ERY) FAR Purchases Base Scenario

		D	IB	ERY	TDRs
Large Commercial	Cohort Grouping	Commercial DIB SF	Residential DIB	Commercial ERY	Residential ERY
729A	2012	643,000	514,400		-
729B	2012	403,645	322,916	-	-
705A	2012	320,928	-	601,740	-
728A	2012	194,590	-	-	-
705B	2017	569,624	-	640,827	427,218
706A	2017	373,072	-	699,510	-
706B	2017	539,616	-	1,011,780	-
707B	2022	513,640	-	385,230	-
708A	2022	323,086	-	346,164	-
710A	2027	278,188	-	417,282	-
1069A	2027	332,640	-	-	498,960
709A	2027	357,386	-	382,914	-
711A	2027	147,200	-	220,800	-
Cumulative		4,996,616	837,316	4,706,247	926,178
Cohort Totals	2012	1,562,163	NA	601,740	NA
	2017	1,482,312	NA	2,352,117	NA
	2022	836,726	NA	592,928	NA
	2027	1,115,414	NA	442,442	NA
Smaller Sites					
731A			24,688		
732A			25,715		
733A			69,125		
734A			68,072		
735A			65,975		
758A			93,153		
758B			72,100		
761A			148,122		
763A			158,044		
710B			297,220		
709B			317,416		
708B			236,500		
711B			123,750		
1050A			100,324		
1069B			96,432		
Cumulative			1,896,634		

Source: Hudson Yards Development Corporation, Cushman & Wakefield, Inc.



Cyclical Scenario

	,	D	IB	ERY	TDRs
Large Commercial Sites	Cohort Grouping	Commercial DIB SF	Residential DIB SF	Commercial ERY TDR SF	Residential ERY TDR SF
729B	2012	403,645	322,916	-	-
705A	2012	320,928	-	601,740	-
729A	2017	643,000	514,400	-	-
705B	2017	569,624	-	640,827	427,218
706A	2017	373,072	-	699,510	-
728A	2017	194,590	-	-	-
706B	2022	539,616	-	1,011,780	-
707B	2027	513,640	-	385,230	-
710A	2027	278,188	_	417,282	-
708A	2027	323,086	_	346,164	-
1069A	2027	332,640	_	-	498,960
709A	2027	357,386	-	382,914	-
711A	2032	147,200	_	220,800	_
Cumulative		4,996,616	837,316	4,706,247	926,178
Cohort Totals	2012	724,573	NA		NA
	2017	1,780,286	NA		NA
	2022	539,616	NA		NA
	2027	1,291,301	NA		NA
	2032	147,200	NA		NA
Smaller Sites					
731A			24,688		
732A			25,715		
733A			69,125		
734A			68,072		
735A			65,975		
758A			93,153		
758B			72,100		
761A			148,122		
763A			158,044		
710B			297,220		
709B			317,416		
708B			236,500		
711B			123,750		
1050A			100,324		
1069B			96,432		
Cumulative			1,896,634		

Source: Hudson Yards Development Corporation, Cushman & Wakefield, Inc.



Revenues from DIB and ERY TDR: Methodology and Assumptions

The zoning resolution establishes a DIB price of \$106.48 psf (as of 2006) for both residential and commercial development⁴. This is escalated 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. This is grown at 2.2 percent annually in both scenarios, consistent with the projections of inflation by Moody's Economy.com (Chapter 2) and below the 3.0 percent rate annual average growth rate seen in land values from 1985-2005⁵.

For the purposes of estimating ERY TDR revenues, the DIB price of \$106.48 psf was used. This is also consistent with recent land sales in HY, which have ranged from \$100 to \$150 psf for commercial and residential development. The price is also grown by 2.2 percent annually, consistent with the DIB inflation rate.

The resulting total revenues are obtained by multiplying the total square feet of additional FAR (through the DIB or ERY TRD) determined from the forecast of completions by the expected purchase price of the DIB or ERY TDRs.

On the basis of the real estate variables provided by Cushman & Wakefield and analysis of the other available data provided by third parties (which are relied upon and assumed to be reasonable and accurate), including forecasts provided by Moody's Economy.com and 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 believes the revenue projections to be reasonable.

The revenues are contingent on the realization of all the economic and real estate assumptions, analyses, zoning and completion of key infrastructure, and limiting conditions that are sourced or detailed herein and in Chapter 1.B. Limiting Conditions.

In the Base scenario the cumulative revenues over the forecast period are \$1.2 billion, while in the Cyclical scenario these total a slightly higher \$1.3 billion, as the delayed timing of development results in slightly higher average purchase prices. As noted, based on the agreement between the City and the MTA, ERY payments are limited to \$200 million interest plus any financing costs and are expected to be repaid by 2017 in the Base Scenario (2019 in the Cyclical). A summary of the revenues associated with the bonus FAR purchases is shown on annual basis in the Exhibit 7-2.



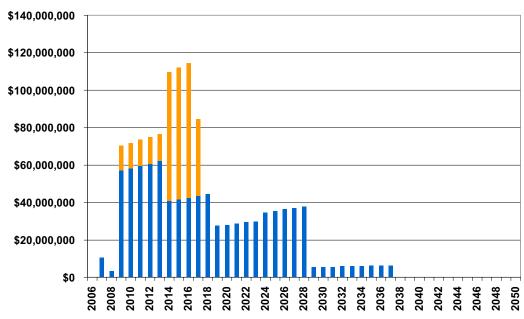
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⁴ Certain sites owned by the State and the Port Authority within Hudson Yards could also build larger buildings without necessarily making DIB Payments. Refer to Limiting Conditions Chapter 1B.

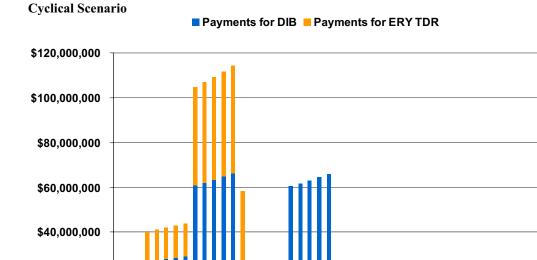
⁵ See Office Chapter.

Exhibit 7-2. Revenues from ERY Air Rights and DIB Payments Base Scenario

■ Payments for DIB ■ Payments for ERY TDR



Source: Hudson Yards Development Corporation, Cushman & Wakefield, Inc.



Source: Hudson Yards Development Corporation, Cushman & Wakefield, Inc.



\$20,000,000

\$0

Revenues from the Mortgage Recording Tax: Methodology and Assumptions

A mortgage-recording tax is imposed on the recording of real estate mortgages in New York City. For mortgages on commercial properties exceeding 500,000 sf a tax of 1.75 percent is levied by the City and an additional 1.0 percent is levied by the State. Pursuant to the Hudson Yards UTEP Amendment⁶, HYIC will receive the 2.75 percent of revenues levied under this tax⁷ as a payment in lieu of taxes on the mortgage recording tax (PILOMRT).

The mortgage-recording tax was calculated by multiplying the projected total square feet of commercial office and retail development within commercial (Chapters 3 and 6) by the expected cost of construction and the 2.75 percent tax rate⁸. The mortgage-recording tax is levied upon financing and not construction completions. Therefore it is first applied in 2009 for the first building expected to be completed in 2012. In addition, 80 percent of all costs are assumed to be financed, which is consistent with recent financing trends.

Construction costs, inclusive of both hard costs for labor and materials, as well soft costs of \$400 psf in 2005, are grown at a 3.0 percent annual growth rate over the next 30 years. C&W compared this rate to the average growth rate in construction as measured by the ENR (Engineering News Record) Building Construction Index over the 20-year period from 1985 to 2005, as shown in Exhibit 7-3. The ENR growth rate of 3.7 percent is higher than the 3.0 percent forecast rate used in the revenue analysis, indicating a conservative assumption over the 30-year forecast period.

⁸Since HYIC's share of the PILOMRT for MTA properties is 91 percent, rather than differentiating these properties, the 91 percent was applied across all properties in Hudson Yards.



-

⁶ Amendment to Uniform Tax Exemption Policy (UTEP) for Hudson Yards Commercial Construction Projects, adopted by New York City Industrial Development Agency, August 8, 2006.

For properties belonging to the MTA, HYIC share of the PILOMRT is 91 percent.

Exhibit 7-3. NYC Constructions Costs, 1985-2005

	Building Cost Index
1985	3076.19
1986	3217.83
1987	3369.28
1988	3522.07
1989	3712.2
1990	3847.21
1991	3997.91
1992	4151.28
1993	4349.2
1994	4458.36
1995	4557.44
1996	4774.23
1997	4880.61
1998	4890.13
1999	5147.21
2000	5018.67
2001	5330.03
2002	5438.2
2003	5583.09
2004	6112.26
2005	6304.51
CAAR 1985-2005	3.7%

Source: Engineering News Record and Cushman & Wakefield, Inc.

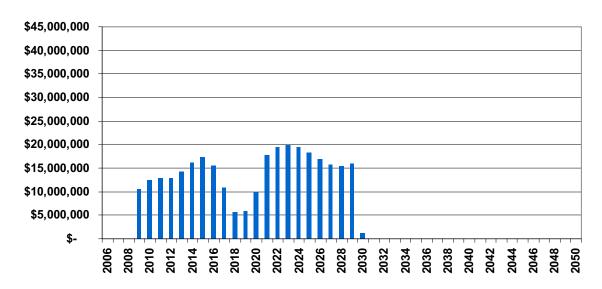
The resulting revenues are shown in the Exhibit 7-4. Cumulative MRT revenues over the forecast period are \$304 million in the Base scenario and \$294 million in the Cyclical scenario.

The revenues are contingent on the realization of all the economic and real estate assumptions, analyses, zoning and completion of key infrastructure, and limiting conditions that are sourced or detailed herein and in Chapter 1.B. Limiting Conditions.



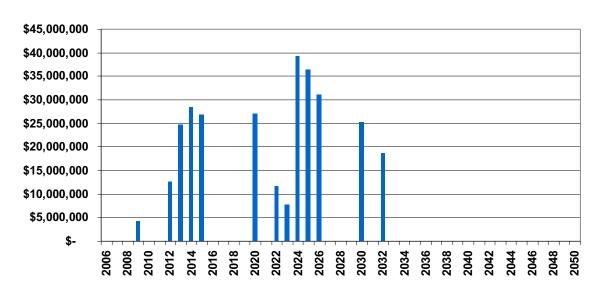
Exhibit 7-4. Mortgage Recording Tax Revenues, Base Scenario

Total PILOMRT Payments



Cyclical Scenario

Total PILOMRT Payments



Source: Hudson Yards Development Corporation, Cushman & Wakefield, Inc.



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APPENDIX A: SUPPLEMENTAL OFFICE MARKET INFORMATION



REGIONAL OVERVIEW

A regional overview of the competitive office markets to Midtown Manhattan are highlighted below. Note that the information includes the historic time period utilized in the forecast of regional office demand, and therefore the data ends with 2005, consistent with the economic forecasts of Moody's Economy.com.

New Jersey

The state of New Jersey has a large labor force with easy access, via ferry, PATH¹, rail, bus, and highway, to the City. In the expansion years of the late 1990s, Hudson County offered inexpensive new office space that was very competitive to Manhattan as office users faced dauntingly high rental rates and a lack of available space. The six counties of Hudson, Essex, Bergen, Morris, Middlesex and Somerset in New Jersey offer the most competitive office markets to Manhattan, and are divided into two Tiers based on both short and long-term competitive characteristics. Combined, the competitive New Jersey counties represent approximately 172 msf of office inventory, or nearly 25 percent of the region's total office inventory.

New Jersey Tier I

Overview

Although New Jersey Tier I (Hudson and Essex Counties) contains only 52.4 msf, or 7.6 percent of the Region's 693.3 msf of office inventory, Hudson County's "Gold Coast" of new class A office buildings in Jersey City and Hoboken is the most formidable of the competitive office markets to Manhattan. This is primarily due to the direct and easy access between the two markets and to the availability of development sites that are cost efficient and/or offer other financial incentives. Essex County, home to Newark and the Interstate 280 office corridor, is the third largest office market in northern and central New Jersey, and offers excellent mass transit and vehicular access and many public amenities. As such, the Tier I counties are considered to be Manhattan's stiffest competition in the near term.



¹ PATH is Port Authority Trans-Hudson, the train service between Manhattan and New Jersey.

Class A office space comprises 44 percent of the total inventory in the New Jersey Tier I market. Hudson and Essex Counties are home to three Fortune 500 headquarters (Prudential Financial, Public Service Enterprise Group, and Automatic Data Processing), representing 4.0 percent of the Region's 76 Fortune 500 headquarters.

The Gold Coast reaped the benefits of the booming economy of the late 1990s due to its availability of development sites coupled with New Jersey's lucrative Business Employment Incentive Program (BEIP) and other financial incentives. As Manhattan's tight office market was faced with very low vacancy rates (below 4.0 percent), office users, particularly in Downtown, were drawn to Jersey City which was easily accessible via ferry and PATH train service and which provided viable development sites and competitive rental rates.

Between 1984 and 2005, 14.4 msf of new class A space was built along the Gold Coast of the Hudson River, primarily in Jersey City. Financial firms that took large blocks of office space in Hudson County included Charles Schwab, Datek Online, DLJ Direct, Knight Securities, Merrill Lynch, UBS/PaineWebber, JP Morgan Chase, and Goldman Sachs. There was even interest from non-financial firms, such as the publisher John Wiley & Sons, which moved from Midtown to 400,000 sf in Waterfront Corporate Center I on Hoboken's Hudson River waterfront to take advantage of the lower costs. Exhibit A-1 illustrates the evolution of the Hudson River waterfront office inventory (Jersey City, Weehawken and Hoboken) as its inventory expanded between 1998 and 2004. Whereas space availabilities were almost zero in 2000 at the height of Manhattan's tight office market conditions, they subsequently increased to almost 14.0 percent of the 52.4. msf inventory in 2005 as the office market softened.

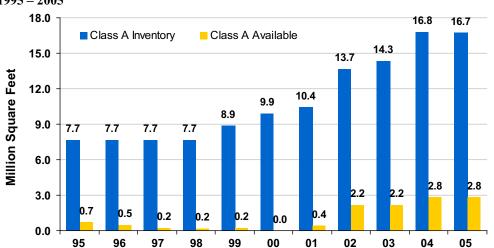


Exhibit A-1. New Jersey's Hudson River Waterfront* Office Market, Class A Inventory vs. Availabilities, 1995 – 2005

*Includes Jersey City, Weehawken and Hoboken.. Source: Cushman & Wakefield of New Jersey, Inc.



Newark also benefited from the robust regional economy, declining crime rates in the city and a growing desire by employers to have offices accessible by mass transportation. Horizon Blue Cross/Blue Shield consolidated operations in downtown Newark, moving suburban workers back into the city. The FBI's built-to-suit new office building was completed in 2002, and Claremont Properties developed a 240,000 sf class A office building on Passaic Street in downtown Newark.

With the economic recession beginning to impact the region in 2001, however, the favorable real estate market conditions began to reverse. Although a short-term boost immediately followed the terrorist attacks of September 11th, at which point several displaced Downtown Manhattan firms leased space in northern New Jersey as either replacement offices or as a security hedge, within a year most tenants returned to Manhattan and left empty office space in Hudson and Essex Counties. Some firms such as Instinet and American International Group, however, decided to keep all or part of their operations in New Jersey.

Additionally, between 2000 and 2003, local New Jersey companies downsized, further reducing the demand for space and resulting in large blocks of sublease space being placed on the market. This sublease space represented over two-thirds of Hudson County's vacant space in 2003, reflecting the recession-driven downsizing of the financial services industry. The same recession loosened up the tight office market in Manhattan, which led to more availabilities and more competitive rental rates. The demand from New York companies for cheaper space in surrounding counties in New Jersey therefore declined, and financial companies with space along the Gold Coast no longer needed it. Lehman Brothers and Charles Schwab were just two of the companies that added significant volumes of Hudson County sublease space to the market.

As of year-end 2005, Hudson County's vacancy rate increased to 17.0 percent from 15.3 percent in 2004. Even though there was no new construction in 2005, the market continues to be impacted by the large amount of space that was built during the past decade. Many of these buildings had been planned at the height of the 2000 boom and have since had difficulty filling space. These include 2.8 msf of new space on the Jersey City waterfront with over 800,000 sf available in Newport Office Center VI and VII, as well as over 320,000 sf of space in Harborside Plaza II and X. Consequently, with over 2.0 msf of sublease space in a market of 23.5 msf, of which 1.8 msf of the space is located along the waterfront, availabilities in Hudson County remain high.

The Essex County market remained on a plateau in 2005. The vacancy rate of 14.3 percent as of year-end 2005 was the lowest throughout northern New Jersey. Compared to Hudson County, the amount of sublease space was far lower, accounting for only 10 percent of the 3.3 msf of available office space. The largest blocks of available space were in Newark, including 360,000 sf at the former Verizon building and the 146,000 sf vacated by the FBI at



1 Gateway Center. In spite of this cyclical downturn, the Newark market continues its renaissance, which began with the completion of the New Jersey Performing Arts Center in 1997, a catalyst to attract new entertainment, residential and retail uses to the City.

The overall average asking rents were \$29.09 psf in Hudson County and \$25.30 psf in Essex County, respectively, as of year-end 2005. The higher rents in Hudson County are reflective of the predominance of new class A office properties along the Gold Coast versus the mix of old and new properties in Essex County. To date, Tier I properties have not recovered from the latest recession of 2001, as vacancy rates continue to hover in the 15 percent range.

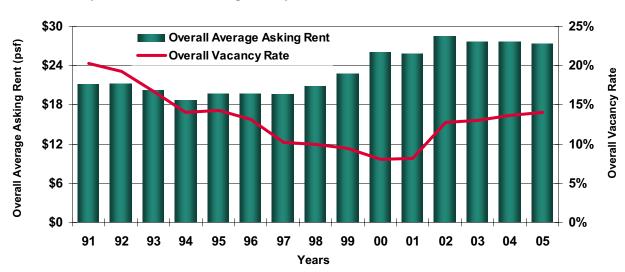


Exhibit A-2. New Jersey Tier I Overall Vacancy Rate and Overall Asking Rent By Year, 1991 - 2005

Source: Cushman & Wakefield, Inc.

Tenant Trends/Leasing Activity

As previously described, during the late 1990s and through 2001, the Tier I market grew quickly, as many companies, particularly the financial firms noted above, discovered less expensive alternatives and availabilities to Manhattan. Although much of this industry base remains intact, the amount of occupied space has declined. The financial services and insurance sectors remain the largest office users, particularly along the Hudson River waterfront, although leasing activity lags in contrast to the pre-2001 period and vacancy rates remain in the mid to high teens. The two largest transactions of 2005 were by the Mellon Financial Corp and Societe Generale, with respective leases of 260,000 sf and 92,000 sf in the Newport Office Center VI in Jersey City.



The Interstate 280 Corridor in Essex County is the county's preeminent location as evidenced by its low vacancy rate of 11 percent. Leasing activity was particularly strong in the Roseland market, which had three of the county's top four largest leases including the largest, 74,000 sf by the accounting firm Rothstein, Kass & Company.

Development Potential

New Jersey Tier I, which has added 14.4 msf to its inventory over the last 14 years, is currently experiencing no major construction activity. This market has the potential for approximately 30 msf of new office development, but without significant pre-leasing in place many of these potential sites will not move forward.

Some of the larger projects proposed within Tier I include the proposed mixed-use development of the new Frank R. Lautenberg Railroad Station, in Secaucus. The \$1 billion plan comprises four office buildings, and hotel, retail and parking garage facilities. Other large projects include Port Imperial South, a 100-acre site on Weehawken's waterfront that could include 1.3 msf of office space, 1,623 residential units, 297,000 sf of retail, a new ferry terminal and a 300-room hotel. There is also Harrison Metro Centre, located between Jersey City and Newark, which is proposed as a mixed-use complex to include 2.5 msf of office space, 2,500 residential units and 500,000 sf of retail. In Weehawken, 400 Harbor Boulevard, which is part of Lincoln Harbor, is a proposed 3.0 msf office complex with retail, hotel and residential components. In Newark, potential exists for office and hotel development along the Passaic River, as it does for additional mixed-use development with an emphasis on residential and retail uses in the South and Central Wards. Matrix Development is planning to build a new 400,000 sf tower in Newark, pending expected commitment by McCarter & English, the city's oldest law firm.

Overview Strengths/Weaknesses

The NJ Tier I market is Manhattan's, particularly Downtown's, stiffest competition for office space in the short term. With the reinstitution of the state's BEIP in 2004, New Jersey has the ability to offer an additional \$45 million in incentives to attract businesses looking to relocate. In the short term, the Gold Coast remains the principal location for future commercial development with its new inventory, clear sites, financial incentives, excellent access and visible proximity to Downtown Manhattan. As evidenced in the last expansion of the late 1990s through 2001, the Hudson River waterfront is the submarket that initially benefits when real estate conditions tighten due to its easy access to Downtown Manhattan. Newark also benefits from some of the Region's best mass transit, which continues to be upgraded. The Tier I counties are crossed by some of the state's prime highways including the New Jersey Turnpike, the Garden State Parkway and Interstate 280.



The Tier I counties, however, still have high vacancies because of the large blocks of space returned to market during the latest economic downturn. At year-end 2005, there was still more than 437,000 sf of office space available at the Newport Office Center VII in spite of UBS' decision to backfill more than 300,000 sf there. At neighboring Newport Office Center VI, close to 333,000 sf were put on the market by JP Morgan Chase, and the Harborside Plaza complex in Jersey City has 250,000 sf of available sublease space. Thus even with its large amount of development potential, Tier I is unlikely to see any significant new construction starts until more space is absorbed or substantial preleasing is in place.

Additionally, as residential home prices throughout the region have soared, some development sites that had been slated for office development are now being used to build residential units instead. For example, along the Gold Coast, the 1990s office building construction boom is evolving into a residential expansion. Indicative of this trend is the \$65 million land purchase of 77 Hudson Street on the Jersey City waterfront by K. Hovnanian and Equity Residential with plans to build two residential towers with 1,300 units. The property was sold by the Hartz Company which had successfully developed three major office towers on the Jersey City waterfront in the 1990s.

New Jersey Tier II

Overview

The Tier II counties of Bergen, Morris, Middlesex and Somerset span a large area of New Jersey surrounding the Tier I market. The Tier II counties are considered to be competitive to Manhattan in the longer-term due to their greater distance from the City or, as in the case of Bergen County, because they are already densely built and have minimal short-term development potential. The Tier II counties have an office inventory of 119.1 msf, representing 17.2 percent of the region's total 693.3 msf office inventory. Class A space represents roughly 47 percent of the total Tier II inventory.

Like Tier I, the Tier II counties have also benefited from the movement of firms out of Manhattan. American Home Products (now Wyeth), AT&T, Foster Wheeler, and Dow Jones & Company are just a few of the companies that moved all or part of their operations to these counties. Many home-grown companies in the area have also become major employers, especially in the pharmaceutical, biotechnology, and life sciences industries, including Johnson & Johnson, Merck, and Pfizer, although the latter also occupies several buildings in Midtown Manhattan. Prominent companies in other fields that also started here include Lucent, Sealed Air, and Automatic Data Processing. Currently, there are 12 Fortune 500 companies headquartered in the Tier II counties, representing about 16.0 percent of the region's total: These include Johnson & Johnson, Medco Health Solutions, Wyeth, Chubb,



Becton Dickinson, Avaya, Engelhard, Sealed Air, Quest Diagnostics, Honeywell International, Pathmark Stores and American Standard Companies, Inc.

Geographically larger than the Tier I counties, Tier II counties are primarily suburban and rural in nature. The major corporations that moved from New York or consolidated operations therefore tended to develop large, suburban corporate campuses with upwards of half a million square feet of office space, and sometimes more than 1 msf. When some of those companies downsized, merged, or relocated, communities were often left with large, empty buildings that in some cases were not easily divisible into multi-tenant facilities.

The bulk of sublease space that returned to the market during the recent economic recession was from telecommunications and high tech firms. AT&T, for example, formerly headquartered in Somerset County, is being replaced by other telecommunication firms. Their 1.3 msf Basking Ridge headquarters complex was purchased by Pharmacia in 2002, which soon after merged with Pfizer, leaving the space empty once again. In 2005, Verizon purchased the 135-acre, 1.3 msf office complex. Renovations are underway and the campus will be known as Verizon Center.

Conditions in the New Jersey Tier II began to turn around gradually in 2005 as growth in the economy resumed. Overall vacancy rates declined to 17.0 percent in 2005, down from 18.3 percent in 2003. Morris County continued to have the largest amount of available space, over 6.3 msf, and a 23.4 percent vacancy rate at year-end 2005. Large amounts of sublet high-end space and especially telecommunication office space remain a drag on Somerset and Middlesex counties, where overall vacancy rates also hover between 23 and 24 percent. Though improving, the Tier II vacancy rate was the highest within the New York region and the average asking rent at \$24.26 psf was the lowest of the competitive markets.



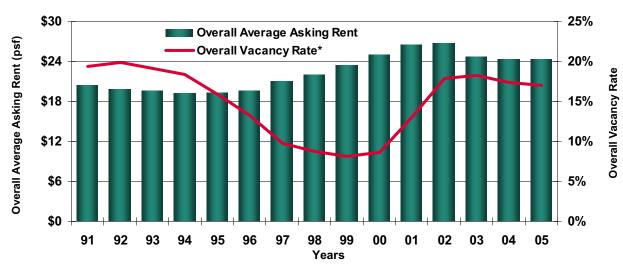


Exhibit A-3. New Jersey Tier II Overall Vacancy Rate and Overall Asking Rent By Year, 1991 – 2005

Source: Cushman & Wakefield, Inc.

Tenant Trends/Leasing Activity

Leasing activity in the Tier II market picked up in 2005 helping to bring overall vacancies down. The pharmaceutical and life sciences sectors remained the strongest users of office space in Tier II. The largest 2005 transaction was by French pharmaceutical firm, Sanofi-Aventis, which is moving its US headquarters to the former 670,000 sf AT&T campus in Bridgewater and is expected to be completed in 2006. Morris County experienced over 2.0 msf of leasing activity, the highest amount within the New Jersey Tier I and II counties. Two of the largest leases in Middlesex County were for firms relocating and expanding within the county – The New Jersey Turnpike Authority leased 100,000 sf in Woodbridge, and Qualcare Alliance Networks, Inc. leased almost 100,000 sf in Piscataway.

Development Potential

Approximately 20 msf of new buildings have been completed since 1990 in Tier II, as tenants have been enticed by new buildings and generous tax incentives. This new construction represents almost 17 percent of the 119 msf inventory. The market has potential for approximately 28 msf of new development, but like Tier I would likely need substantial preleasing before any new construction commences.

The largest project currently in its initial stages is the proposed 4.8 msf mixed-use complex in the Meadowlands in Bergen County known as Xanadu, with a proposed 2.2 msf of office and



hotel space and 590,000 sf of retail space. Originally planned for completion in late 2007 the project has been pushed back to mid-2008 due to financing difficulties of the developer, the Mills Corporation.

Overview Strengths/Weaknesses

The Tier II market provides an excellent quality of life with a range of housing types and costs, as well as a variety of suburban communities. The area also has an excellent highway infrastructure which includes Interstates 287, 280, 80, 78, 95 and the Garden State Parkway.

The greatest challenge facing the Tier II office market is its vacancy rates, which have declined slightly since 2002, but still remain high due to the still large quantity of available sublet space. Abundant amounts of this space are located in Somerset County where a number of new buildings that were completed after the 2000-2001 recession remain vacant. Another concern is the movement of office users out of the state altogether, such as Butler International, which will move out of 84,000 sf Montvale, Bergen County to Tampa, Florida.

Fairfield County, Connecticut

Overview

This southwestern county of Connecticut has a major lifeline to Manhattan via Interstate 95, the Merritt Parkway and the New Haven railroad. Known as one of the nation's most affluent counties, it is home to Greenwich, Darien and Westport, all commuter suburbs with an average median household income of \$74,000.

Today, Fairfield County's office inventory of 44.6 msf comprises 6.4 percent of the region's 693.3 msf office inventory, and is divided between the two major CBD's of Stamford and Greenwich, and six suburban submarkets. Stamford has evolved into one of the region's greatest smaller cities and now accounts for 6.4 msf of the county's office inventory. Overall, over 37 msf, or 80 percent of the county's office inventory is class A product, the highest share among the regional office markets.

As was the case in New Jersey, the Connecticut communities closest to New York began to evolve into prominent business centers in their own right, with access to Manhattan as one key factor to their success². The height of the exodus from Manhattan occurred during the 1970s and 1980s. Since then, the trend has slowed, but there have still been some significant



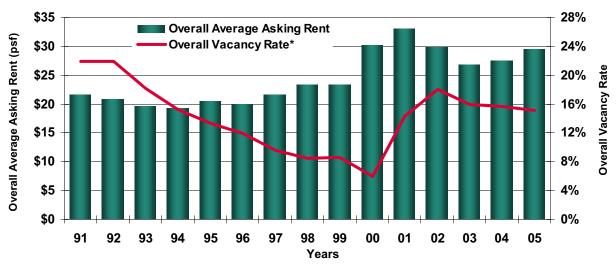
² City, Rediscovering The Center. William H. Whyte, 1988.

relocations, such as the UBS Warburg move to Stamford in the late 1990s. The western area of the county, primarily in Greenwich and Stamford, has also become home to many smaller financial services, hedge funds and money management firms, some of which moved from Manhattan and some that were started locally. Currently, the county is home to nine Fortune 500 headquarters, four of which are based in Stamford. The firms include: General Electric, Pitney Bowes, Praxair, Emcor Group, Xerox, Terex, W.R. Berkley, International Paper Company, and MeadWestvaco Corporation, representing 12 percent of the New York Region's total Fortune 500 headquarters.

Fairfield County's economy is heavily weighted towards professional and business services, financial activities, and education and health services sectors, which account respectively for 15, 10 and 15 percent of the county's employment. Stamford has become a central hub for the reinsurance industry. Other leading industries include biotechnology, information technology, and high-tech manufacturing.

As of year-end 2005, the county's overall vacancy rate was 15.1 percent, down from 15.7 percent in 2004. The overall average asking rent was \$29.37 psf, the highest among the regional markets outside of New York City.

Exhibit A-4. Fairfield County Overall Vacancy Rate and Overall Asking Rent By Year, 1991 – 2005



Source: Cushman & Wakefield, Inc.

Tenant Trends/Leasing Activity

The near-term economic growth of Fairfield County remains dependent on the strengths of service sector and finance employment. Even though the number and size of tenants choosing to relocate to Fairfield County from New York City has significantly diminished over the past



two years, the strong growth in the hedge fund office market has recently supported significant leasing activity and has caused rents to spike in the premier buildings.

Leasing activity increased to 3.5 msf in 2005 from 2.8 msf in 2004. The largest deal was GE Consumer Finance lease of 278,602 sf at 777 Long Ridge Road in Stamford followed by the UBS lease of 255,000 sf in downtown Stamford which contributed to lower the CBD's overall vacancy rate down to 15.7 percent. Sublease space availabilities declined from over 2.0 msf in 2004 to just over 1.5 msf at year-end 2005, another indication of tightening market conditions.

Development Potential

Fairfield County has not seen the new construction activity level of New Jersey. Since 1990 only 4.0 msf of new office space has been completed including two buildings totaling 687, 000 sf in the south central portion of the county near Danbury in 2005. As of year-end 2005, there was no new construction underway.

Currently there is known potential for approximately 11 msf of new development sites in the county. Within lower Fairfield County (Stamford, Greenwich and Norwalk), the office markets most competitive with Manhattan, there is potential for 2.0 to 3.0 m s f of office space. Some of the more prominent development news is the approval of a new 500,000 sf building for the Royal Bank of Scotland in Stamford, with an expected completion date of 2008. Also in Stamford, W&M Properties plans to start construction on a mixed-use office and residential project on the Metro Center II site, Antares is preparing to begin their 70-acre waterfront mixed-use retail and residential development, and there are several other proposed residential projects including Highgrove, and City Place, both adjacent to the central business district, and Glenview in the Glenbrook neighborhood.

Overall Strengths/Weaknesses

Like New Jersey, Fairfield County's advantages of close proximity to Manhattan, a highly educated workforce, and desirable, though costly, residential communities make it a major competitor for companies seeking space outside Manhattan. The county's near-term expansion prospects depend on the strengths of the services and financial sector, which are expected to continue to lead the county's economic growth.

Challenges to future growth include modest population growth and the high wages and high cost of housing in the county, which could push some companies to other market areas. In addition, the Merritt Parkway and Interstate 95 are the only two major thruways serving the county, compared to neighboring Westchester's extensive cross-county highway infrastructure.



Overall development potential is limited by zoning and planning concerns in each municipality. In the case of the large development sites, no activity is likely to occur without significant pre-leasing. This factor alone has prevented all of the major commercial sites from moving forward.

Westchester County

Overview

Through the mid-20th century, Westchester County served primarily as a bedroom community for Manhattan, with pockets of heavy industry, such as the former General Motors assembly plant in Tarrytown. Like Fairfield County, it is a prestigious, affluent and upscale suburban county within a short commute of Manhattan that has historically attracted executives to the area. Thus the area had a major advantage when its resident executives began to move their companies out of Manhattan. General Foods moved to White Plains in 1954, followed 10 years later by International Business Machines (IBM) to Armonk. Other companies that have relocated from Manhattan include Pepsico and ITT Industries, and from outside the Region, most recently, Nokia and Starwood Hotels & Resorts. Four Fortune 500 firms are headquartered in the county: IBM, Pepsi Bottling Group, ITT Industries, and Starwood Hotels & Resorts, representing 5.3 percent of the region's Fortune 500 headquarters.

Westchester's 36.0 msf office inventory represents a modest 5.2 percent of the regional 693.3 msf office market inventory, of which roughly 6.5 msf is located in White Plains. Class A office product represents 75 percent of the total County inventory. Over the past decade, White Plains especially has attracted new retail, entertainment, and residential development resulting in a city with more mixed-use, 24-hour districts.

Westchester ended 2005 with a significant decrease in the overall vacancy rate of 11.8 percent, down from 13.7 percent in 2004. Overall, asking rental rates increased slightly to \$28.66 psf as of year-end 2005, compared to \$28.49 psf the prior year.



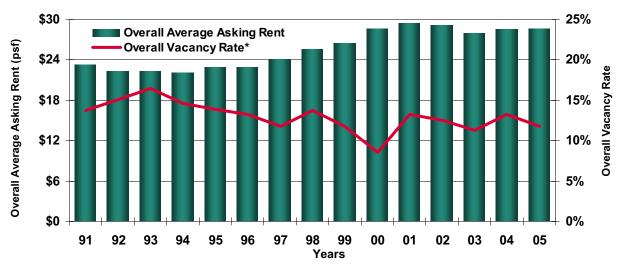


Exhibit A-5. Westchester County Overall Vacancy Rate and Overall Asking Rent By Year, 1991 – 2005

Source: Cushman & Wakefield, Inc.

The county also had its share of negative news. IBM downsized its headquarters operation and relocated to a smaller building in the same area, and recently sold its Personal Computer business to the Chinese firm, Lenovo, although that may have more of an impact in Raleigh, NC, where much of the division's employees are located. The merger of Texaco and Shell left a 750,000 sf Texaco headquarters empty, and the Altria Group put 600,000 sf of space on the market early in 2004. The continued desirability of Westchester, however, was demonstrated when Morgan Stanley purchased the Texaco building to relocate employees from Manhattan, and Cadbury Schweppes moved its Mott's divisions, previously in Stamford, to Rye Brook.

Tenants Trends/Leasing Activity

Even with Morgan Stanley's recent move, the relocation of tenants from New York City, a dominant trend in the late 1980s through mid-1990s, has largely subsided. Emphasis has been on smaller space demands, although most exceed 5,000 sf. Much of the leasing activity is generated within the county.

During 2005, leasing activity totaled 1.7 msf, down from the 2.1 msf of 2004. Part of the lower leasing volume was due to the lack of large leases as seen in 2004, coupled with the return of space to the market by Altria and Reader's Digest. Some of the more notable larger leases of 2005 included BridgeCom International, Inc. for 57,000 sf and Altria Group for



43,000 sf at 800 Westchester Avenue. Overall net absorption declined by a marginal 7,000 sf compared to the negative net absorption of 1.1 msf in 2004. The White Plains CBD had a very strong 2005 with vacancy declining four percentage points to 13.4 percent, and a net absorption of almost 88,000 sf.

Development Potential

Like Fairfield County, newly completed office space has been minimal in Westchester County; in fact only a scant 791,000 sf since 1990, including a modest 91,000 sf in 2005.

Prominent development opportunities total approximately 11 msf and exist in several areas, most notable in the lower county area of Yonkers, Mount Vernon, New Rochelle. A modest number of development sites exist in White Plains, where most development has occurred over the past five to 10 years. The magnitude of development is not known exactly as the development potential at each location is negotiable within each of the municipalities. In northern Westchester County, communities such as Valhalla and Somers, although not as competitive with Manhattan due to its distance from the City, offer large campus-like parcels for new development. The Not In My Back Yard (NIMBY) factor, however, weighs heavily in these more affluent areas, making development timelines more prolonged.

Overall strengths/weaknesses

Westchester County has a more diversified economy than neighboring Fairfield County. White Plains, in particular, has a central location and is readily accessible via highway commuter rail and bus lines, and provides access to a more diverse labor pool and business incentives.

As a mature and established residential market, Westchester County is expected to see only modest population growth going forward. Also restricting its future growth are the county's real estate taxes, which are higher than both Fairfield County and New Jersey, and the high cost of commercial land.

Westchester County like Fairfield County poses challenges for any major future development due to a lack of available vacant land. Communities in both counties, however, have made a conscious effort to improve their central business districts by adding more urban residential development, and in many cases awarding additional Floor Area Ratio (FAR) bonuses in an effort to underwrite the high land costs.



Long Island

Overview

The Long Island (Nassau and Suffolk Counties) office market has a 38.0 msf inventory, representing 5.5 percent of the regional 693.3 msf office inventory. The highest concentration, roughly 64 percent of office space, is located in Nassau County, the county closest to New York City. Almost half of Long Island's total inventory is class A space, the majority of which is located in central Nassau County, particularly in the Mineola-Garden City-Uniondale corridor. The western Suffolk office market also has a high concentration of class A space around the Route 110 corridor in Melville. Most of the existing class A buildings are relatively new, having been constructed in the 1980s as Long Island's economy matured and demand for office space increased.

Long Island's economy historically relied on the defense industry, notably Grumman, Republic Aviation, and Sperry. Following the decline of the defense industry, Long Island has developed a more diversified and stable economy, comprised of a diverse group of industries, including business services, high-tech, software development, and biotechnology.

Long Island is home to three Fortune 500 companies: Arrow Electronics, Cablevision Industries, and Henry Schein, representing a modest 4.0 percent of the region's Fortune 500 headquarters. Other major corporations that are headquartered on the Island include Computer Associates and Symbol Technologies.

The Island is also home to three world-class research institutions, including the Brookhaven National Laboratory (one of 15 national laboratories), the Cold Spring Harbor Laboratory, and the State University of New York (SUNY) at Stony Brook. Recently, SUNY Stony Brook acquired through eminent domain an adjacent 250 acres to their main campus for a new public/private "center of excellence" technical center. The current build-up in defense spending has helped some of the remaining defense contractors such as Northrup Grumman to begin hiring again on the Island.

Long Island's office market vacancy rate increased to 9.7 percent in 2005 from 8.0 percent in 2004, but was still the lowest vacancy rate in the New York region outside of the City. The low vacancy rate was attributed to the strong levels of leasing activity that occurred over the year. The overall average asking rent increased to \$28.98 psf, up significantly from \$27.42 psf in 2004.



\$36 18% **Overall Average Asking Rent** Overall Average Asking Rent (psf) \$30 15% Overall Vacancy Rate* Overall Vacancy Rate \$24 12% 9% \$18 \$12 6% \$6 3% \$0 0% 97 00 91 92 93 94 95 96 98 99 01 02 03 04 05 **Years**

Exhibit A-6. Long Island Overall Vacancy Rate and Overall Asking Rent By Year, 1991 –2005

Source: Cushman & Wakefield, Inc.

Tenants Trends/Leasing Activity

Leasing activity totaled 2.0 msf in 2005, down slightly from 2.3 msf in 2004. Significant leases signed in 2005 include the North Shore Long Island Jewish Health System's lease of 454,000 sf in western Nassau County including a purchase option for a portion of iPark, the 1.3 msf redeveloped Sperry plant in Lake Success, and 1-800-Flowers.com, Inc. for 90,000 sf in Carle Place, in central Nassau County. This strength has led to limited new construction throughout the Island with 447.000 sf completed in 2005, and 560,000 sf completed in 2004. Another 136,000 sf is currently under construction.

Development Potential

The new construction seen during the past two years was the Island's first significant increase since 2002. Overall, Long Island has the potential to develop approximately 4 msf, by far the smallest amount within the New York Region.

One of the largest potential development sites with existing zoning approval for commercial development is the remaining 50 acres within the former Roosevelt Raceway site in Westbury. The master plan permits a mix of uses of which the retail and affordable housing components were built prior to 2000. Presently, the owner has applied to amend the master plan to permit more retail, as they feel the previously approved use of office development is not feasible due to current market conditions. Most other proposed sites are not currently



zoned for commercial development and would require a lengthy approval process. Build-to-suit projects have mostly been built in western Suffolk County and central Nassau County, and future activity will likely remain in these districts.

Overall Strengths/Weaknesses

Like the other New York suburbs, Long Island is home to a well-educated and highly skilled workforce, affording its residents a high quality of life. In contrast to New Jersey and Connecticut, one of Long Island's drawbacks is heavy vehicular traffic which is only partly mitigated by an extensive commuter rail system. The NIMBY dynamic is also a factor in Long Island. Each town government is separately empowered with its own set of zoning regulations, which has often produced an obstructionist, anti-development environment. In 2005 for example, the Brookhaven Town Board adopted a new multifamily and senior housing code that reduced as-of-right yield to a fraction of what was previously permitted and had spurred the construction of thousands of relatively affordable housing units.

Emerging Markets

Overview

The Emerging Markets are comprised of the smaller, newer office submarkets in New York City, including Upper Manhattan, anchored by the 125th Street corridor, Jamaica, Flushing and Long Island City in Queens, and downtown Brooklyn – the most established of all these submarkets. The latter is home to Keyspan's headquarters, a Fortune 500 company. Combined, these submarkets have a total inventory of 34.7 msf, representing 8.6 percent of the overall New York City office inventory. These areas, however, have the potential to add 14 msf of new development, with over half of the space available in Long Island City (LIC) due to the recent up-zoning of Long Island City, the Court Square rezoning in the 1980s, and the state-sponsored Queens West development plan as listed in Exhibit A-7. In particular, the Emerging Markets provide New York City office users with the closest options when looking for more affordable and accessible sites to augment Manhattan corporate offices.

Long Island City (LIC), home to Citigroup's Court Square One, the tall glass tower completed in 1989 that is the only skyscraper gracing the Queens skyline, is currently the most affordable submarket in terms of overall asking rent. Currently under construction is a new 528,000 sf office tower, Court Square Two, for Citigroup. LIC is poised to become a major back office location for Midtown office users especially because of its easy access to the East Side of Manhattan via the N, R, and 7 subway lines.



Downtown Brooklyn, in particular, supports office users in Downtown Manhattan due to ready mass transit access and competitive pricing. Brooklyn has 17 msf of office inventory, of which 44 percent is class A product. These two submarkets, with their ability to develop new commercial space and competitive pricing, are likely to become the City's best offense to New Jersey's Gold Coast.

Exhibit A-7. Emerging New York City Submarkets, 2005

Submarket	Inventory (msf)	Overall Avg. Asking Rent (psf)	Zoning Capacity Development (msf)
Brooklyn	17.0	\$28.11	4.5
Long Island City	8.6	\$17.46	8.0
Jamaica/Flushing	4.7	\$24.23	1.0
Upper Manhattan	4.4	\$23.46	0.5
Total	34.7	\$24.36*	14.0

^{*}Weighted Average

Sources: NYC Economic Development Corporation, CoStar, Cushman & Wakefield, Inc.

Tenant Trends/Leasing Activity

The Downtown Brooklyn market is primarily driven by internal growth and expansion or movement of tenants, both in the public and private sectors. There was no new office building completions in 2005 in downtown Brooklyn following the completion of two buildings (numbers 9 and 12) at MetroTech Center, which is now fully built out. Building 9 is home to the New York City Fire Department, and Building 12 is the new home of the New York State Supreme Court. East of the core of downtown is the Atlantic rail yards project that will be constructed over a 21-acre site adjacent to Atlantic Terminal rail yards. As proposed by developer, Forest City Ratner Companies, the \$3.5 billion redevelopment will comprise 4,500 housing units, 2.0 msf of commercial uses and an arena for the Nets basketball team.

The other markets are too new to classify their tenant composition, but based on the evolving nature of Long Island City, Queens, they will likely serve as support locations to major Manhattan companies.

Development Potential

Future development capacity of approximately 14 msf is available within the Emerging Markets, particularly in Downtown Brooklyn and Long Island City. Downtown Brooklyn has a comprehensive plan that combines zoning changes and strategic infrastructure investments to create a dynamic downtown, with 18,000 jobs in new commercial space, as well as new



housing, retail, open space and improved transit connections. Highlights of the plan include three new office towers with as much as 3.0 msf of space to be built adjacent to a newly created 1.5 acre park on Willoughby Street, just west of Flatbush Avenue. An office development of 848,000 sf anchoring the west end of downtown at Boerum Place is also planned, while there are plans for new residential and office opportunities on the eastern side of Flatbush Avenue. Other development plans will greatly expand the diversity of Downtown Brooklyn, including the proposed Nets arena, as well as mixed-use redevelopment of the Brooklyn Heights waterfront.

Long Island City has been rezoned in an effort to foster reinvestment and redevelopment to take advantage of the excellent mass transit access and supply of large, underdeveloped properties. In Long Island City's core, recent rezoning allows existing low density light manufacturing zones to be redeveloped as higher density, mixed commercial and residential developments, including office buildings with large, efficient floorplates. As noted previously, Citigroup, owner of the largest building in Long Island City, is building a new office tower adjacent to its existing office building with an expected 2007 completion. Nearby, the United Nations Federal Credit Union is constructing a 274,000 sf building with a completion date of 2006.

There are also plans to continue the redevelopment of Jamaica, Queens, in an attempt to create a 24/7 mixed-use central business district. An expanded CBD will attract private investment, and airport related businesses and industries will benefit from the proximity to the airports and the transit-oriented Jamaica hub.

In Upper Manhattan, Harlem Park is a planned \$236 million mixed-use development located at the corner of 125th Street and Park Avenue, directly opposite the 125th Street Metro North Station. The proposal, first announced in 2003 and after years of inactivity, however, may be changing directions and ownership.

It is worth noting that the 14 msf of potential development available in the Emerging Markets is still far less than the 24 msf of potential sites that currently exist in Downtown and Midtown Manhattan.

Overall Strengths/Weaknesses

The Emerging Markets are notable for their large labor pool, as well as the range of housing types and costs – all much more varied than found in the surrounding suburban markets. The mass transit infrastructure is vast and integrated, enabling almost the entire labor pool to travel to employment centers, without having to rely on private cars for transportation.

With the exception of Downtown Brooklyn, these Emerging Markets are quite new and without much history regarding new office development and tenant characteristics. It is



likely, however, that these submarkets will provide additional locations within New York City for tenants seeking to expand beyond Manhattan. In the office market forecast discussion of Chapter 3, the Emerging Markets are excluded as there was limited historic information available to project future trends, and they represent a relatively small portion of the region's office inventory. Thus, the occupied share of regional office space, plus the Emerging Market's occupied space and vacancy rate, was used as of 2005 (roughly 10 percent) to estimate the future growth of these submarkets over the forecast period.



OFFICE EMPLOYEE SPACE UTILIZATION/SQUARE FEET PER EMPLOYEE

Office space utilization is another critical aspect of assessing office demand. An industry standard of roughly 250sf per employee has typically been used for many years. As development costs continue to rise due to increased costs for security, energy, and steel, designs regarding individual office spaces and larger common areas change, with companies increasingly focused on using space more efficiently.

Cushman & Wakefield conducts surveys on space utilization by industry sector and also works with architectural firms that undertake benchmarking surveys on space utilization. The average number of square feet allocated to an employee is reported in rentable square feet (RSF). This measure reflects a markup over the gross square feet (or physical amount) that landlords in Manhattan typically apply to leases. A loss factor averaging 12 percent is applied to the RSF to obtain gross square feet. The markup to RSF that landlords utilize is seldom applied outside Manhattan.

Data from the C&W survey and benchmarking space utilization surveys conducted by two architectural firms, The Phillips Group and Gensler, show the average RSF per employee ranges from 220 to 435 sf, depending on the industry sector with an overall average of 248 RSF. The survey data is summarized below:

Exhibit A-8. Industry Metrics – Average Space Utilization per Office-Using Employee (in rentable square feet)

	C&W	Phillips Group	Gensler
Financial Services	220	225	260
Insurance Firms	218	250	225
Law Firms	386	435	325
Average Rentable SF	275	303	270
Average SF	242	265	238

Source: The Phillips Group, Gensler, Cushman & Wakefield, Inc.

Interestingly, according to the C&W survey, the largest allocation is typically spent on circulation space, 38 percent in financial services, followed by 37 percent in insurance, and 29 percent in law firms. Office space is typically a close second, 33 percent in financial, 35 percent in insurance and 44 percent in legal (the largest share of overall space). Combined, these two uses comprise more than two-thirds or more of office space allocations within these



three large industry users of office space. The remaining space is allocated to other office uses such as conference rooms, coffee/lunch and cafeteria spaces, and mechanical rooms.

Based on the limited information available for new class A office buildings recently completed or under construction, the average office space utilization continues to trend slightly lower, as shown below with an overall average of 249 RSF per employee, almost identical to the industry metrics.

Exhibit A-9. Average Space Utilization per Office-Using Employee in New Class A Office Building (in square feet)

Class A Office Buildings	Rentable Square Feet	Gross Square Feet
One Bryant Park	228	201
620 Eighth Avenue	320	282
300 Madison Avenue	222	195
731 Lexington Avenue	225	198

Source: Costar, McGraw Hill Construction, Cushman & Wakefield, Inc.

Returning to the physical or gross square per employee, the survey revealed an average of 218 sf per employee. In the suburban office markets, the average gross square feet allocated to office employees is generally 10 to 20 percent higher than found in Manhattan.



OFFICE DEMAND FORECAST

Office-using Employment Data

The North American Industrial Classification System (NAICS), as used by the U.S. Census Bureau does not provide a standard definition of office-using employment. Rather than being derived from an actual count, Office-Using Employment (OUE) estimates such as those provided by Moody's Economy.com are based on shares of select industrial sectors from the NAICS classification. These sectors, primarily professional and business services (e.g. legal, finance, accounting, management and consulting etc), reflect the typical users of office space at an aggregate, or national level.

Directly applying this national definition to the individual counties and markets in the regional analysis is problematic. For example, sectors such as publishing and design, which are intense users of office space in Manhattan, are typically not included in the national definition. One approach to analyzing the relationship between OUE and the demand for new space is to derive individual definitions of OUE for each market and county based on local market characteristics and perform separate regressions, based on these specific definitions. This disaggregated approach, however, is limited by the large number of three-digit NAICs codes that would have to be tested for each individual county, and the accompanying potential for error. An alternative approach, used here, makes use of a single definition of OUE and applies it to the larger New York region, where it is inherently more accurate.

In order to derive the demand for the individual markets, the total regional demand is disaggregated to the individual markets through use of time series data and market shares within the region. The analysis used to derive these shares is explained in more detail later in this chapter.

Real Estate Data

A time series of quarterly office market data on vacancy rates, inventory and occupied space going back to 1986 was compiled for each of the six competitive office markets. While data for the Midtown market is available as far back as the 1970s, some of the other markets were still nascent in the mid-1980s.

The data on total office inventory was adjusted to reflect owner-occupied buildings which are not regularly included in the office market data because typically owner-occupied space is not for-lease. These owner-occupied buildings were added to the regularly reported for-lease inventory to arrive at a total inventory that reflects all office building space. Occupied space



within each market, from 1986 to 2005 was derived by multiplying a market's total inventory by its respective vacancy rate³.

Forecast for Regional Occupied Space and Net Absorption

The main determinant of the level of occupied space is OUE, as changes in the levels of office-using workers over a period of time lead to changing demand for office space. As leases are structured as multiple year contracts for each tenancy, office space demand tends to reflect cumulative changes in the underlying market conditions. Firms do not immediately lease space when new employees are hired, nor do they immediately relinquish space when employment declines. To capture the long-term nature of this adjustment process an autoregressive process (AR) was used in the regression.

In addition, other variables, aside from OUE, that could also influence leasing decisions and changes in occupied space were examined⁴. Standard statistical tests (T-tests and other analysis of variance techniques) were applied to determine the inclusion or exclusion of variables equation used to forecast the competitive Analysis Region's occupied space. The application of these techniques was supplemented by knowledge of how real estate markets function and economic theory. The variables included in the regression equation are summarized below.

Dependent Variable

1. Net Absorption—NETABS4. Net absorption or the change in occupied space. The regression equation employed a year-over-year difference rather than single quarterly variables to mitigate the noise caused by quarter-to-quarter volatility in the office market data set.

Independent Variables

2. Office-using Employment—D (OUE, 0, 4): The year-over-year change in OUE across the New York region is reflective of the evolving demand among the region's office tenants for office space. OUE for the entire New York region was chosen not only because the estimate of OUE is more robust across larger geographies, but also because the office properties within the Analysis Region for which the demand forecast is generated draw employees—including office-using employees—throughout the New York region.

³ For the purposes of calculating occupied space, owner-occupied buildings were assumed to be 100 percent occupied. This assumption does not impact the estimation of the regression equation as owner occupied inventory constitutes less than two percent of overall occupied space.

⁴ A simultaneous model that included asking rents and inventory was not used. It is assumed that prices and inventory adjust to equilibrium over the long run. These other macro factors therefore act as shift variables to the demand curve.



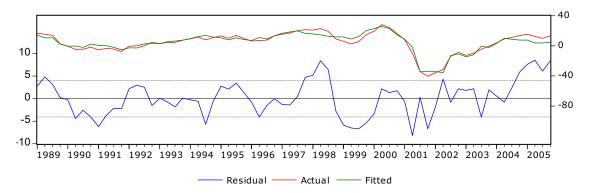
- 3. World Trade Center Dummy Variable— DUMWTC4: To account for the impact on the regional market of the attacks of September 11, 2001, a dummy variable was incorporated into the regression analysis. The four quarters from 2001Q3 to 2002Q2 inclusive, the period during which the regional market was affected, were assigned a value of one (1).
- 4. Change in the Level of Regional Incentives—DLOG NCENTREG(-1),0,4): The log of the four-quarter change in an incentives index⁵, lagged one quarter, reflects the change in the aggregate average level of incentives offered by the local municipalities within the Analysis Region. Collectively, when incentives increase, this tends to encourage firms to take on more space, to remain in an area, or to relocate. Each county in the Analysis Region was scored on a 1-10 scale, and then, based on its inventory of office space a weighted average of regional value of incentives was determined. The increase/decrease in this value over time would tend to encourage/discourage the aggregate absorption of office space in the Analysis Region.
- 5. 10-year Treasury Yield—I(-1): The 10-year Treasury Yield, lagged one quarter, reflects the cost of capital not only for tenants who may be seeking additional office space to lease, but also for developers who may be planning the construction of properties that include office space.
- 6. Autoregressive Function—AR (4): A fourth-order autoregressive function accounts for the serial correlation in the residuals of the regression.

The resulting net absorption equation, based on the variables discussed above was estimated using a multivariate OLS regression with 68 quarterly observations from 1989Q1⁶ through 2005Q4. The output and the relevant statistics for each variable are detailed below.

Exhibit A-10. Rolling 4-Quarter Net Absorption Regression Output Analysis Region, 1989 Q1 – 2005 Q4

⁵ Cushman & Wakefield Technology and Enterprise Group, Stadtmauer Bailkin Biggins LLC, Economic Development Incentives Advisors. ⁶ The initial date of the regression output of 1989Q1 is reflective of the data inputs that begin with 1986Q4. The difference between the dates is driven by the year-over-year difference equation specification and the autoregressor factor that adds an additional four quarter lag so that the regression's initial output observation is for 1989Q1.





Dependent Variable: NETABS4
Method: Least Squares
Date: 05/01/06 Time: 12:19
Sample (adjusted): 1989Q1 2005Q4
Included observations: 68 after adjustments
Convergence achieved after 7 iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(OUE,0,4)	0.113	0.01	15.89	0
DÙMWTC4	-30.717	1.92	-15.97	0
DLOG(INCENTREG(-1),0,4)	47.011	11.98	3.92	0.0002
I(-1)	0.683	0.05	13.86	0
AR(4)	-0.734	0.08	-8.73	0
R-squared	0.918667	Mean deper	ndent var	4.726471
Adjusted R-squared	0.913503	S.D. depen	dent var	13.81554
S.E. of regression	4.063192	Akaike info	criterion	5.712501
Sum squared resid	1040.1	Schwarz cri	terion	5.8757
Log likelihood	-189.225	Durbin-Wat	son stat	0.728174
Inverted AR Roots	.6565i	.6565i	65+.65i	65+.65i

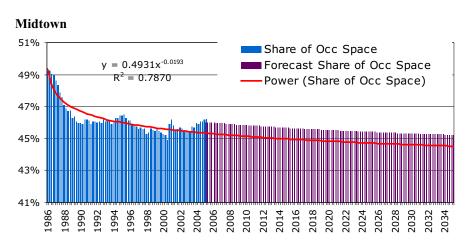
Source: Moody's Economy.com, EViews, Cushman & Wakefield, Inc.

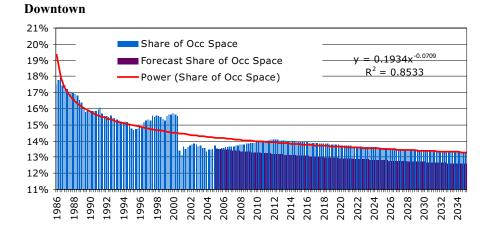


Regional Shares

A time series regression of each market's share of the overall regional occupied space was estimated over the period 1986 Q4 to 2005 Q4 and used to forecast the share of the region's overall demand that each market is estimated to obtain going forward⁷. Each competitive market's share is extrapolated from the historic data. The resulting share of the total market remains the same in both scenarios (Base or Cyclical) and is shown in the following Exhibits.

Exhibit A-11. Shares of Occupied Office Space, Historic and Projected Analysis Region's Office Markets, 1986 Q4 – 2035 Q4

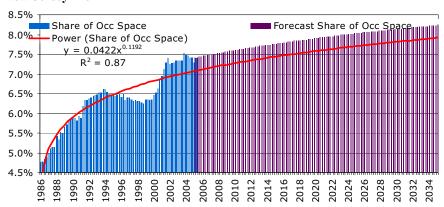




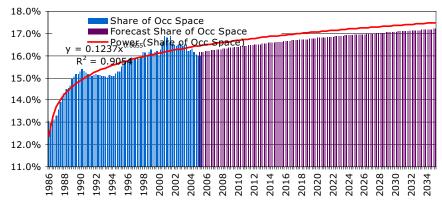


⁷ Initially discussed in Chapter 3.

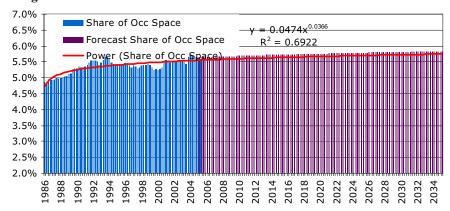
New Jersey Tier 1



New Jersey Tier 2

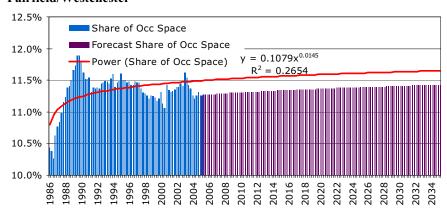


Long Island





Fairfield/Westchester



Source: Cushman & Wakefield, Inc.

Adjustment to Shares Of Net Absorption

Constraints were imposed on the net absorption projections to reflect the short-term submarket dynamics between Hudson Yards and Existing Midtown. These adjustments are modeled to adjust for vacancy differentials amongst the two submarkets and assume that the Existing Midtown market remains the dominant market. These adjustments are more crucial in the Cyclical scenario when market downturns cause vacancy rates to jump dramatically. The constraints imposed are as follows:

Midtown Pull (Adjusted Net Absorption Flow from Hudson Yards into Existing Midtown)

- If Existing Midtown's projected vacancy rate rises above 11.0 percent⁸, its share of Overall Midtown's⁹ net absorption increases linearly from the long-term trend share of 48.2 percent. Based on this linear relationship, when existing Midtown's vacancy reaches 15.0 percent, its share of the overall absorption increases by an additional 25 percentage points.
- When Hudson Yards' vacancy rate falls below 10.0 percent, Hudson Yards' share of overall net absorption declines as tightening conditions in Hudson Yards are expected to draw tenants into Existing Midtown. This adjustment assumes that a fraction of the average past absorption in Hudson Yards will flow into Existing Midtown, reaching a maximum of 1.0 when Hudson Yards vacancies fall to the 4.0 percent frictional rate. As an empirical matter in real estate markets, additional absorption typically ceases at a 4.0 percent rate due to



⁸ Based on historic data, rents in Midtown typically decline rapidly when vacancies exceed 11 percent and accelerate when vacancies fall below 8 percent. As an emerging market a larger range of vacancies is assumed for Hudson Yards.

Overall Midtown: Existing Midtown plus Hudson Yards.

the limitations on, and difficulties with, occupancies that exist when vacancies reach such a low threshold.

Hudson Yards Pull (Adjusted Net Absorption Flow into Hudson Yards from Existing Midtown)

■ Conversely when Hudson Yards' vacancy rate rises above 20.0 percent tenants are assumed to flow into Hudson Yards from Existing Midtown. This adjustment is based on linear relationship that implies an upward adjustment of up to 100 percent of the average past absorption in Hudson Yards when the Hudson Yards vacancy rate exceeds 30.0 percent.

Pre-leasing agreements to secure financing typically impose stricter conditions on occupancy, which accounted for additional adjustments to occupancy and net absorption. These typically require that an anchor tenant (or tenants) is secured to guarantee at least 50 percent occupancy of new buildings constructed over the term of the lease.

Office Pre-Leasing Assumptions

The following assumptions on pre-leasing agreements were made to reflect the strict conditions on occupancy that financing conditions for new development typically impose on borrowers. Pre-leasing conditions are built into the financing terms of most new development in Manhattan and other markets in order to avoid a repeat of the bankruptcies that occurred following the speculative build up in the late 1980s and early 1990s. These assumptions resulted in the following adjustments to occupancy and net absorption.

- Based on recent development trends, construction completions are assumed to be 50 percent leased prior to coming on-line, and during any year of a market downturn, only two-thirds of the pre-leasing within that period's construction completions is assumed to be realized as positive net absorption.
- To reflect the lower propensity among the newer tenancies that will comprise the Hudson Yards submarket to relinquish their occupied office space, during any year of a market downturn (i.e., periods of negative net absorption within the Midtown Overall office market), Hudson Yards' net absorption is floored per the negative sum of the following three tiers of Hudson Yards tenancies:
- Brand New Tenancies (i.e., the space pre-leased within the properties coming on-line) at one-sixth of those properties' total square footage.
- Recent Tenancies (i.e., the space in which occupancy was taken during the previous three years) at one-ninth of those total occupancies.



Remaining Tenancies (i.e., the space in which occupancy was taken prior to the previous three years) at Hudson Yards' pro rata share of Midtown Overall's occupancies as of the end of the prior year.

Construction Multipliers

Within the Existing Midtown and Hudson Yards submarkets the maximum vacancy rate at which new construction is assumed to occur is based on historic construction patterns within Existing Midtown and the region's more recent emerging markets.

- For the larger Existing Midtown market, when vacancy rates in the prior year reach 15 percent, new construction is expected to stop.
- New construction within the emerging Hudson Yards market is assumed to cease when vacancy rates in the prior year reach 25 percent. Once the Hudson Yards submarket's inventory reaches 5.0 msf, however, 18 percent is the maximum vacancy rate at which construction may start.

When vacancies fall within the maximum vacancy ranges set above, construction starts for Hudson Yards and Existing Midtown are computed as follows:

- The current and prior two years' net absorption are summed to measure the existing demand for space in the market.
- This is then multiplied by a factor to account for the fact that construction is accelerated when vacancies are low, and slows or stops when vacancy rates are high.
- This factor, referred to as the construction multiplier reaches a maximum of 1.25 when vacancies fall to 4.0 percent and then decreases in a non-linear manner (based on a cosine function), falling to zero when the maximum vacancies thresholds defined above are reached.
- A five percent vacancy rate is applied to starts to allow for a minimum occupancy in excess of the frictional rate.
- Since the typical construction period for large office towers in Manhattan is 30 to 36 months, new buildings are assumed to come on-line three years after their start¹⁰.

¹⁰ Additionally a started building is put on hold when vacancies deteriorate within a year of the start date. This is the case in Hudson Yards in years 2016 and 2027.



Projected Net Absorption in the Emerging Markets

The midpoint of two estimation methodologies, one employing the share among the Emerging Markets of the Analysis Region's occupied space as of year-end 2005, and the other employing the year-end 2005 vacancy rate for the Emerging Markets was used to forecast net absorption for the Emerging Markets of New York City.

In the first method, the Emerging Markets share of the Analysis Region's occupied office space was held at a constant 5.1 percent over the forecast period, which resulted in an estimated net absorption of 10.3 msf.

Exhibit A-12. Forecasted Net Absorption, Constant Share of Occupied Space Method New York City Emerging Markets, 2005 Q4 – 2035 Q4 (Gross msf)

		2035 Q4			
Market/Submarket	Inventory (msf)	Vacancy Rate	Vacant Space	Occupied Space	Occupied Space
Emerging Markets plus Analysis Region	728.0	10.7%	78.2	649.8	860.6
Analysis Region	693.3	10.8%	75.3	618.0	818.5
Emerging Markets	34.7	8.5%	2.9	31.8	42.1
Brooklyn	17.0	6.9%	1.2	15.8	
LIC*/Jamaica/Flushing	13.3	10.6%	1.4	11.9	
Upper Manhattan	4.4	7.5%	0.3	4.1	
Emerging Markets Share of NYC Occupied Space				5.1%	5.1%
Emerging Markets Forecasted Net Absorption 2005 Q4 to 2035 Q4					10.3

^{*} Long Island City

Source: Economy.com, Cushman & Wakefield, Inc.

The second methodology held the Emerging Markets' overall vacancy rate constant between 2005 Q4 and 2035 Q4 and increased its total inventory over the forecast period by the total square footage zoned for office space. This second method (Exhibit 13) resulted in a cumulative net absorption estimate of 12.8 msf.

Exhibit A-13. Forecasted Net Absorption, Constant Vacancy Method New York City Emerging Markets ,2005 Q4 – 2035 Q4 (Gross msf)

	2005 Q4			Zoned	2035 Q4	
Market/Submarket	Inventory (msf)	Vacancy Rate	Occupied Space	New Office Space	Inventory (msf)	Occupied Space
Emerging Markets	34.7	8.5%	31.8	14.0	48.7	44.6
Brooklyn	17.0	6.9%	15.8	4.5	21.5	
LIC*/Jamaica/Flushing	13.3	10.6%	11.9	9.0	22.3	
Upper Manhattan	4.4	7.5%	4.1	0.5	4.9	



COMMERCIAL DEVELOPMENT SCENARIOS

Farley Corridor

As previously discussed, the two large commercial sites (729A and 729B) along the Farley Corridor between Ninth and Tenth Avenue and West 31st and 33rd Streets are likely to be among the first developed within the Hudson Yards. The future redevelopment of Moynihan Station positions these sites along a corridor of development initiating from the Station and continuing westward along West 34th Street. If Madison Square Garden is redeveloped, the impetus to develop the Farley Corridor could be even stronger, although the time involved with site and platform construction over the MSG site to support any new development could delay future building completions.

Site: 729A (Brookfield)







 Lot Size
 128,600 SF

 0-10
 base FAR

 10-19
 DIB

 Max ZFA
 2,443,400 SF

 Residential FAR:
 4 or 514,400 SF

Assemblage Required: No

Site Attributes: The strength of this large site lies in its access to existing mass transportation at nearby Pennsylvania Station. Three major commuter rail lines (New Jersey Transit, Amtrak, and Long Island Rail) and the subways along 7th and 8th Avenues provide access to the site. Zoning permits large-scale and mixed use development of the parcel.

Site Challenges and Risks: Construction difficulties and costs have so far been the main deterrent to development. Situated over a rail yard, a platform has to be built over at street level before significant construction can occur. Development is also problematic because of zoning mandates that require the building of a below grade parking lot.

Estimated Completion: Construction is likely to occur after pre-leasing to a major tenant.





Site: 729B (Schulweiss)





Location: Bordered by 9th Avenue and West 33rd Street.

Block: 709 Lot: 60

 Lot Size
 80,729 SF

 0-10
 base FAR

 10-19
 DIB

 Max ZFA
 1,533,851 SF

Residential FAR: 4 or 322,916 SF

Assemblage Required: No

Site Attributes: The strength of this site lies in its access to existing mass transportation at nearby Pennsylvania Station. Three major commuter rail lines (New Jersey Transit, Amtrak, and Long Island Rail) and the subways along 7th and 8th Avenues provide access to the site. Zoning permits large-scale and mixed use development of the parcel.

Site Challenges and Risks: Lack of an anchor tenant and high construction costs have so far been the main deterrent to development. Situated over a rail yard, a platform has to be built at street level before construction can occur. Development is also problematic because of zoning mandates that require the building of a below grade parking lot. The U-shaped geometry of this site makes development of this site more problematic than adjacent site 729A.

Estimated Completion: Construction is likely to occur after pre-leasing to a major tenant.



Eastern Rail Yard

At approximately 13 acres, the Eastern Rail Yard is the largest development site within the Hudson Yards. It spans the blocks between West 30th and West 33rd Streets, and Tenth and Eleventh Avenues. A large open space and mixed-used development is planned for the site as envisioned in the Hudson Yards redevelopment plan. The southern edge of the site is expected to be connected to the new elevated High Line Park planned in neighboring Chelsea. Development in this area is likely to be staggered given its large size and the complexity and time involved in constructing a platform to support such development. HYDC is conducting a technical study involved with building over the active tracks and other rail road facilities. The site's zoning allows a mix of uses, including up to approximately 5.0 msf of commercial space and up to 1.3 msf of residential space. In addition, it is expected that 8 FAR would be transferred off-site to eligible receiving sites in the Hudson Yards.

Site: 702 Tower A, B and D (Eastern Rail Yard)



Location: 10th and 11th Avenue, between West 30th St & West 33rd Streets.

Block: 702 Lots: 1 and 50

 Lot Size
 570,000

 0-11
 base FAR

 Max ZFA
 6,350,000 SF

Assemblage Required: No, publicly owned.

Site Attributes: Direct access to parks, a large development site, close to Pennsylvania Station, and near new West 34th Street subway station. Frontage along 10th and 11th Avenues. Due to large lot size, adjacent land uses, and zoning, ideal for mixed-use. Zoning requires a cultural facility, open space/parks, and a 450-space parking garage.

Site Challenges and Risks: Large size of overall ERY site would necessitate high infrastructure costs due to cost of constructing a platform over the site and other construction restrictions. Development could be delayed if the platform is not constructed and a developer(s) is not selected to develop the site.

Estimated Completion: Construction after completion of platform; could be after 729A and 729B. Likely developed as multiple buildings.

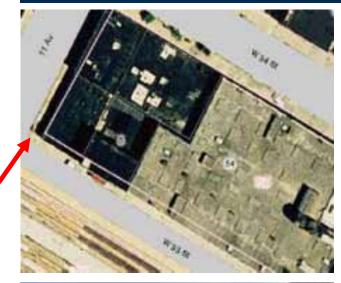


Four Corners

The sites at the Four Corners (705A, 705B, 706A, 706B) located between West 34th and West 35th Streets and between Tenth and Eleventh Avenues, together with the Eastern Rail Yard, comprise the southwest anchor corner of the envisioned commercial district. Accessibility to this area is currently limited to bus service. The planned extension of the Number 7 subway line and a new subway station at the Four Corners will provide direct mass transit access, likely making these sites some of the most desirable in Hudson Yards. Additionally, under the Hudson Yards zoning these sites will be eligible for a maximum 33 FAR, significantly larger than the 24 FAR for the sites along the Mid-Block Boulevard and Park. These sites will likely develop after completion of the subway station, which is expected to be in 2012.



Site: 705A





Location: Bordered by 11th Avenue, West 33rd & West 34th Streets and proposed Mid-Block Park.

Block: 705

Lots: 1, 5, and 54

 Lot Size
 40,116 SF

 0-10
 base FAR

 10-18
 DIB

 18-33
 ERY Transfer

 Max ZFA
 1,323,828 SF

Assemblage Required: Yes, currently three owners

Site Attributes: Prime Hudson Yards site and a lynchpin for commercial development along 11th Avenue given the access to the planned subway station in the base of the building. Site overlooks the proposed Mid-Block Boulevard and Park and underground public parking garage. Offices on western side would offer direct Hudson River views further enhancing the marketability of this site. Zoning allows for the maximum 33 FAR within Hudson Yards. Site is primarily controlled by a large private developer.

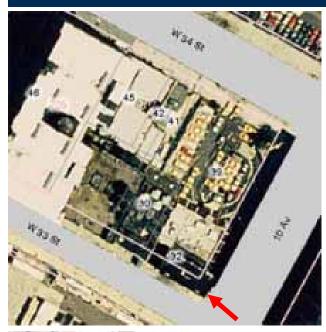
Site Challenges and Risks: This site is situated above planned MTA systems space. Without the planned subway, mass transit access to the site is limited. Assemblage is required for complete control of the site.

Estimated Completion: A premier site on the Four Corners; its development is likely contingent on subway timing and completion.



6 or 427,218 SF

Site: 705B





Location: Bordered by 10th Avenue, West 33rd & West 34th Streets, and proposed Mid-Block Park.

Block: 705

Lots: 29, 30, 32, 39, 41, 42, 45, 46 and 53 (partial)

Lot Size 71,203 SF

0-10 base FAR

10-18 DIB

18-33 ERY Transfer

Max ZFA 2,349,699 SF

Assemblage Required: Yes, multiple private

owners.

Residential FAR:

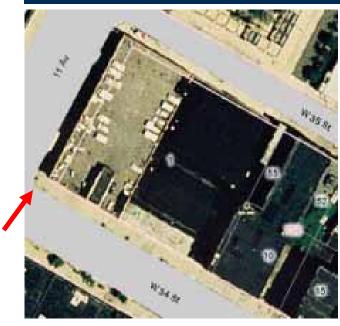
Site Attributes: Another prime Four Corners site with direct access to the proposed Mid-Block Boulevard and Park, and underground to the proposed subway station and public parking garage, make this one of the more desirable sites. The lot size can accommodate very large floor plates. As one of only four large lots of 69,000 sf and greater, residential construction on this site can occur before commercial development per zoning (with an approved commercial development plan). The offices/residences on higher floors would have partial river views. Zoning allows for the maximum 33 FAR within Hudson Yards.

Site Challenges and Risks: Assemblage of this site which comprises numerous lots could delay development. Timely completion of the new subway station is critical and without it, mass transit access to this site is limited to bus service.

Estimated Completion: Another premier site on the Four Corners, its development is likely to be contingent on subway timing and completion.



Site: 706A





Location: Bordered by 11th Avenue, West 34th & West 35th Streets, and proposed Mid-Block Park.

Block: 706

Lots: 1, part of 10, and 55

 Lot Size
 46,634 SF

 0-10
 base FAR

 10-18
 DIB

 18-33
 ERY Transfer

 Max ZFA
 1,538,922 SF

Assemblage Required: No, owned by one developer.

Site Attributes: Like 705A one block south this is a prime Four Corners site for commercial development given its direct access to the planned subway station in the base of the building. The site overlooks the proposed Mid-Block Boulevard and Park and underground public parking garage. Offices on the 11th Avenue side would offer direct Hudson River views further enhancing the marketability of this site. Zoning allows for the maximum 33 FAR within Hudson Yards.

Site Challenges and Risks: This site lies above the Amtrak Empire Line ROW and requires an easement for the future subway station. Direct access and development of the site is restricted as the new subway infrastructure lies directly beneath the site.

Estimated Completion: Assuming completion of the subway station in 2012, the earliest any site development could be completed is likely 2014 or 2015.

Site: 706B





Location: Bordered by 10th Avenue, West 34th & West 35th Streets, and proposed Mid-Block Park.

Block: 706

Lots: 17, 20, 29, 35 and 36

 Lot Size
 67,452 SF

 0-10
 base FAR

 10-18
 DIB

 18-33
 ERY Transfer

 Max ZFA
 2,225,916 SF

Assemblage Required: Fully assembled

Site Attributes: Another Four Corners site, it has frontage on the West 34th Street corridor, the proposed Mid-Boulevard and Park, and is located adjacent to the new parking garage. The planned subway station would be across the park providing convenient mass transit access. Zoning allows for the maximum 33 FAR within Hudson Yards.

Site Challenges and Risks: Full utilization of the sites maximum zoning envelope may be a challenge. Timely completion of the new subway station is critical and without it, mass transit access to this site is limited to bus service. Likewise, the proposed completion date of the Mid-Block Boulevard and Park and underground garage.

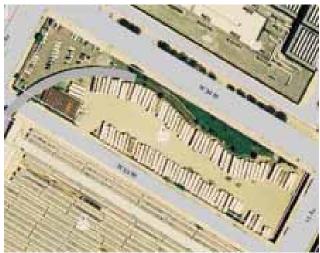
Estimated Completion: Development is likely to be contingent on the subway completion, and is not restricted like the adjacent 706A site.



Mid-Block Boulevard and Park Corridor (north of Four Corners)

North and west of the Four Corners, the sites along Eleventh Avenue (679C, 707B, 708A, 709A, 710A, 1069A) are mostly located furthest from the initial subway station planned at West 34th Street. The blocks are also located across from the Jacob K. Javits Convention Center expansion and near the convention hotel (site 707A), which are expected to be completed in 2010 and 2011. The sites would likely be developed after the Four Corners. Sites closer to West 42nd Street would benefit from the second subway station of the Number 7 line planned at West 41st Street and Tenth Avenue in a subsequent construction phase, the shell of which is expected to be completed in 2012.

Site: 679C (Marshalling Block)



Location: Bordered by 11th and 12th Avenues, West 34th & West 35th Streets.

Block: 679

Lot: 1

 Lot: 1

 Lot Size
 158,000 SF

 Commercial ZFA
 1,450,000 SF

 Max ZFA
 2,450,000 SF

 Residential ZFA:
 1,000,000 SF

Assemblage Required: No, publicly owned.

Site Attributes: Currently a Javits parking lot, the site could easily be made available for development. Located directly south of the Javits and west of the planned subway station at W. 34th Street, with an easement to permit access to the station. Under the GPP for the Javits expansion and renovation, this site can accommodate relatively large floor plate for commercial uses. Proposed up zoning assumes a 1.45 msf office build-out and 1.0 msf residential build-out. The latter is not restricted by timing of the commercial development. The GPP also calls1.25 acres of open space and up to 500 parking spaces.

Site Challenges and Risks: Site is crossed at its eastern and northern edges by the High Line, which may require preservation of a right of way in any future development. The eastern edge of the site may require coordination with No. 7 subway construction. Surrounded on three sides by large development sites – Javits Convention Center, Western Rail Yard, and 705A, all of which could be under construction for years.

Estimated Completion: Development of this site is likely to occur following expected completion of the Javits Center expansion in 2010.



Site: 707B





Location: Bordered by 10th Avenue, West 35th & West 36th Streets.

Block: 707

Lots: 20, 26, 31, 39, 41, 45 and 51

 Lot Size
 64,205 SF

 0-10
 base FAR

 10-18
 DIB

 18-24
 ERY Transfer

 Max ZFA
 1,540,920 SF

Assemblage Required: Yes

Site Attributes: Direct access to the Mid-Block Boulevard and Park, and across the Boulevard from the proposed Convention Hotel and Javits Convention Center. Zoning permits a maximum 24 FAR. The lot size can accommodates large floor plate commercial uses, on par with two of the Four Corner sites.

Site Challenges and Risks: The site is relatively distant from the planned subway stations at West 34th and West 42nd Streets, the latter's completion date remains undetermined. Multiple private owners of the properties expected to likely slow its assemblage as a large commercial site.

Estimated Completion: Development on this site would likely occur after the Four Corners and in the later phases of the 30-year forecast period.



1,246,190 SF

Site: 708A





Location: Bordered by 11th Avenue, West 36th & West 37th Streets.

Block: 708

Max ZFA

Lots: 1 (partial), 62 and 65

 Lot Size
 57,692 SF

 0-10
 base FAR

 10-18
 DIB

 18-21.6
 ERY Transfer

Assemblage Required: Partial assemblage.

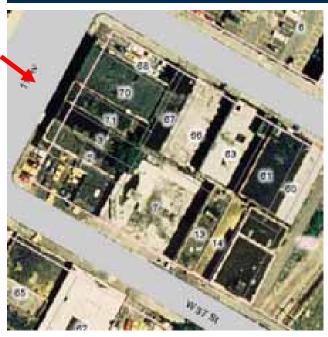
Site Attributes: This site is located across from the Javits Center and overlooks the Mid-Block Boulevard and Park. Zoning permits a maximum FAR of 21.6. Located north of the proposed Javits Convention hotel headquarters site at 707A.

Site Challenges and Risks: Subway access to the site from the West 34th subway station is relatively distant. The Amtrak Empire Line ROW is below a significant portion of this site likely making construction on this site more problematic than some other sites. The Mid-Block Boulevard and Park at this point have an undetermined completion date, as does completion of the West 42nd Street subway station.

Estimated Completion: Development on this site would likely to occur after the Four Corners and completion of the other public amenities noted above, and in the later phases of the 30-year forecast period.



Site: 709A





Location: Bordered by 11th Avenue, West 37th & West 38th Streets.

Block: 709

Lots: 1-3, 7, 13-15, 17 (partial), 60, 61, 63, 66-68,

70 and 71

Lot Size 63,819 SF

0-10 base FAR

10-18 DIB

18-21.6 ERY Transfer

Max ZFA 1,378,490 SF

Assemblage Required: Yes, although mostly

assembled.

Site Attributes: The site is directly across from the Javits Convention Center and the top floors on this site offer Hudson River views. Zoning permits a maximum FAR of 21.6.

Site Challenges and Risks: This is one of the furthest sites from the planned office core at the Four Corners, located midpoint between West 42nd and 34th Streets. The Mid-Block Boulevard and Park north of West 36 Street has an undetermined completion date, as does the West 42nd Street subway station, thus limiting mass transit access initially.

Estimated Completion: Development would likely occur in the later stages of Hudson Yards' development.



Site: 710A





Location: Bordered by 11th Avenue, West 38th & West 39th Streets.

Block: 710

Lots: 1, 6, 11 (partial) and 58

 Lot Size
 69, 547 SF

 0-10
 base FAR

 10-18
 DIB

 18-20
 ERY Transfer

 Max ZFA
 1,390,940 SF

 Residential FAR:
 6 or 417,282 SF

Assemblage Required: Yes, all privately owned lots

Site Attributes: This site is located near the corridor of existing residential development on West 42nd Street. The higher floors could offer Hudson River views. As one of only four large lots of 69,000 sf and greater along 11th Avenue, the site can initially proceed with residential development (with an approved commercial development plan).

Site Challenges and Risks: This site is one of the furthest from the initial subway station at West 34th Street. Congestion and noise from the roadways leading to the Lincoln Tunnel access are adjacent to the site. The Mid-Block Boulevard and Park north of West 36 Street have an undetermined completion date, as does the completion of the West 42nd Street subway station.

Estimated Completion: Development is likely to occur in the later years of Hudson Yards' development.



Site: 1069A





Location: Bordered by 11th Avenue, West 40th & West 41st Streets.

Block: 1069

Lots: 1

Lot Size 83,160 SF

0-10 base FAR

10-18 DIB

18-20 ERY Transfer

Max ZFA 1,663,200 SF

Residential FAR: 6 or 498,960 SF

Assemblage Required: No

Site Attributes: This site is located near the corridor of existing residential development on West 42nd Street. The higher floors could offer Hudson River views. As one of only four large lots of 69,000 sf and greater along 11th Avenue the site can proceed with residential development (with an approved commercial development plan). Residential construction could further bolster the burgeoning West 42nd Street residential corridor.

Site Challenges and Risks: This site is located furthest from the initial subway station at West 34th Street. The Mid-Block Boulevard and Park north of West 36 Street has an undetermined completion date, as does completion of the West 42nd Street subway station, which if built would be very accessible. This is one of the largest sites which may make financing difficult. It is located in an area of heavy traffic leading to the Lincoln Tunnel.

Estimated Completion: Commercial development is likely to occur in the later years of Hudson Yards' development, although residential could occur much earlier.



Other Commercial Sites

Four of the 18 large development sites studied were found to have the most likely use for hotel development, potentially in combination with residential space. For that reason, while the zoning for each of these sites allows office use, these sites were not counted in calculating the office development potential in Hudson Yards. The sites are scattered throughout the Hudson Yards and located in prime midpoints of the major commercial corridors. 707A is at Eleventh Avenue directly across from the Javits Convention Center, 711A is near what will be the northern entrance plaza of the expanded Javits Center, 728A is east of ERY, and site 763B is south of the Port Authority Bus Terminal. Another site, 1033B is located north of the PABT along West 42nd Street, and is considered to be a potential office site. All of these additional sites are presented in the following pages.

Site: 707A



Location: Bordered by 11th Avenue, West 35th & West 36th Streets

Block: 707

Lots: 1, part of 12, and 56.

 Lot Size
 52,007 SF

 0-10
 base FAR

 10-24
 DIB

 Max ZFA
 1,256,688 SF

Assemblage Required: No, publicly owned

Site Attributes: Ideally located directly across from the Javits Convention Center and under the same ownership. Currently being considered as a hotel site, and a developer RFP is expected to be issued in 2006.

Site Challenges and Risks: Site is crossed below grade by Amtrak and will be required to accommodate certain No. 7 related facilities. Site will include the vehicular entrances and exits, and a pedestrian access point for the 950-space public garage to be built immediately to its east. Delayed construction of Javits Center.

Estimated Completion: Given its relation to Javits Center, anticipated completion would be 2011, the year after the Javits Convention Center expansion is expected to be completed.



Site: 711A



Location: Bordered by 11th Avenue, West 39th & West 40th Streets.

Block: 711 Lots: 1

Lot Size 75,000 SF

0-10 base FAR

10-18 District Improvement Bonus

18-20 ERY Transfer

Max ZFA 1,500,000 SF

Residential FAR: 6

Assemblage Required: No, Publicly owned

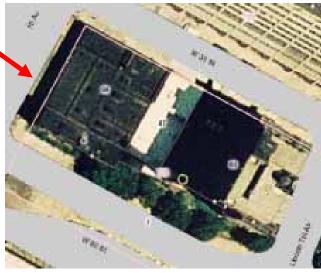
Site Attributes: This site is located directly northeast of the extended Javits Center and is near the corridor of existing residential development on West 42nd Street. The higher floors could offer Hudson River views. As one of the four large lots of 69,000 sf and greater along Eleventh Avenue, the site can initially proceed with residential development (with an approved commercial development plan).

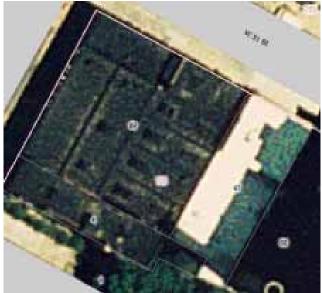
Site Challenges and Risks: In order to build on a large portion of the site, it requires a platform to protect and enable continued Lincoln Tunnel access. The cost and timing of a platform as well as the 24-hour use of the tunnel access complicates development, as does the congestion and noise from the roadways leading to the Tunnel. The Mid-Block Boulevard and Park north of West 36th Street have an undetermined completion date, as does the completion of the West 42nd Street subway station.

Estimated Completion: Construction after completion of a platform, although residential could occur earlier.



Site: 728A





Location: Bordered by 10th Avenue, West 31st & West 30th Streets.

Block: 728

Lots: 67 and 69.

 Lot Size
 16,775 SF

 0-21.6
 base FAR

 Max ZFA
 305,100 SF

Assemblage Required: Privately owned, fully assembled.

Site Attributes: Located south of the large 729A site and directly east of the ERY, this parcel is ideally situated in the midst of the Farley Corridor. Assuming these sites are developed with a large portion devoted to office buildings, this smaller site might best be suited for hotel use. Other commercials uses, however, are allowed by zoning. The proposed parkland within ERY and the High-Line would be major amenities available to this site.

Site Challenges and Risks: Delay in the development of the Farley Corridor and the ERY, the latter with its likely platform construction could result in multi-year construction which might contradict a hotel use earlier in the forecast period. Not close to the new subway station planned for West 34th Street.

Estimated Completion: Would likely follow initial development along the eastern side of ERY and southern side of 729A.



Site: 763B





Location: Bordered by 39th Street and 40th Street, and 8th Avenue.

Block: 763

Lots: 32, 34, 38, and 42.

 Lot Size
 37,038 SF

 0-10
 base FAR

 10-18
 DIB

 Max ZFA
 667,000 SF

 Residential FAR:
 3

Assemblage Required: No

Site Attributes: Given its location near the core of West 42nd Street, this site is a natural extension of the Times Square South office submarket. It has exceptional transportation access via subway and adjacent to Port Authority Bus Terminal. Ideally located in an active development corridor, with the New York Times building, under construction across the street.

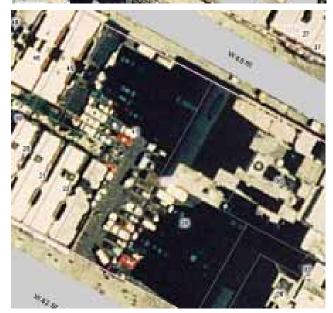
Site Challenges and Risks: The smaller floor plate might make this site better suited for hotel use rather than a class A office building. Other commercials uses, however, are allowed by zoning.

Estimated Completion: Given its preferred location this site would likely to be one of the first sites developed in Hudson Yards.



Site: 1033B





Location: Bordered by West 42nd Street, near 8th Avenue.

Block: 1033 Lots: 25 and 41

 Lot Size
 25,900 SF

 0-10
 base FAR

 Max ZFA 12
 310,800 SF

 Residential 2 FAR (Incls. Hsing):
 51,800 SF

Assemblage Required:

Site Attributes: Given its location near the core of West 42nd Street, this site is a natural extension of the Times Square commercial corridor. It has exceptional transportation access via subway and the Port Authority Bus Terminal (PABT). Near several sites of new development including the New York Times (620 Eighth Avenue) and the 11 Times Square site, both east of PABT.

Site Challenges and Risks: The smaller floor plate might make this site better suited for a boutique office building or hotel.

Estimated Completion: With its location near the West 42nd Street commercial corridor, this site would likely to be one of the first sites developed in Hudson Yards.



SUPPORTING TABLES

Comparable Land Sales

Address	Location	Sale Date	Consideration	Lot Size (sf)	Zoning	FAR	Max Bldg. Area (sf)	Unit Price/ FAR
572 11th Avenue	Between 43rd and 44th Streets	Mar-04	\$5,900,000	12,856	M1- 5/CL	5.00	64,280	\$91.79
96-108 Tenth Avenue	N/W Corner West 16th Street	Jun-04	\$32,000,000	52,875	M1-5	5.00	264,375	\$121.04
555 West 34th Street*	Western Corner with 11th Ave,	Nov-05	\$54,788,000	44,438	C6-4	10.00	444,380	\$123.29
541 West 37 th Street*	Btwn 10th & 11th Avenues	Dec-05	\$6,150,000	4,937	C6-4	10.00	49,370	\$124.57
1-3 East 35th Street	Btwn. Fifth & Madison Avenues	Feb-04	\$10,700,000	4,905	C5-3	15.00	73,575	\$145.43
358-366 Tenth Avenue	Between 30th & 31st Streets	Sep-05	\$23,006,000	14,241	C6-4	10.00	142,410	\$161.55
47-49 East 34th Street	Btwn. Madison & Park Avenues	Jun-04	\$9,550,000	4,938	C5-2	10.00	49,380	\$193.40
604 Tenth Avenue	Between 43rd and 44th Streets	Feb-06	\$12,700,000	10,075	C2-5/R8	6.02	60,652	\$209.39
123-127 West 22nd Street	Between 6th & 7th Avenues	Feb-04	\$10,600,000	9,600	C6-3A	5.00	48,000	\$220.83
243 Hudson Street	Between Canal & Spring Streets	May-04	\$20,000,000	14,618	C6-2A	6.02	88,000	\$227.27
126-136 West 19th Street	Btwn. Sixth & Seventh Avenues	Nov-04	\$22,500,000	13,163	C6-3A	7.52	98,986	\$227.31
137 Wooster Street	Between Houston & Prince Streets	Feb-04	\$9,850,000	7,500	M1-5A	5.00	37,500	\$262.67
137 Wooster Street	Between Houston & Prince Streets	Feb-04	\$9,850,000	7,500	M1-5A	5.00	37,500	\$262.67
140-144 Tenth Avenue	S/E/C 19th Street	Aug-05	\$11,000,000	6,967	R8A	6.00	41,802	\$263.15
240 Park Avenue South	N/W/C East 19th Street	Aug-04	\$25,500,000	7,860	C6-4A	12.00	94,320	\$270.36
393-397 West 12th Street	Between Washington & West Streets	Aug-05	\$10,000,000	5,929	C6-2	6.00	35,574	\$281.10

^{*}Sites are in Hudson Yards district.



8th to 10th Avenue, Base Scenario-Projected PILOT

	n Avenue, Da			YEAR BUILT	
	Expected Full Taxes	25 percent Discount	2012	2013	2014
2012	\$15.27	\$11.45	\$11.45		
2013	\$15.72	\$11.79	\$11.79	\$11.79	
2014	\$16.19	\$12.15	\$12.15	\$12.15	\$12.15
2015	\$16.68	\$12.51	\$12.51	\$12.51	\$12.51
2016	\$17.18	\$12.89	\$12.89	\$12.89	\$12.89
2017	\$17.70	\$13.27	\$13.27	\$13.27	\$13.27
2018	\$18.23	\$13.67	\$13.67	\$13.67	\$13.67
2019	\$18.77	\$14.08	\$14.08	\$14.08	\$14.08
2020	\$19.34	\$14.50	\$14.50	\$14.50	\$14.50
2021	\$19.92	\$14.94	\$14.94	\$14.94	\$14.94
2022	\$20.51	\$15.39	\$15.39	\$15.39	\$15.39
2023	\$21.13	\$15.85	\$15.85	\$15.85	\$15.85
2024	\$21.76	\$16.32	\$16.32	\$16.32	\$16.32
2025	\$22.42	\$16.81	\$16.81	\$16.81	\$16.81
2026	\$23.09	\$17.32	\$17.32	\$17.32	\$17.32
2027	\$23.78	\$17.84	\$19.03	\$17.84	\$17.84
2028	\$24.50	\$18.37	\$20.82	\$19.60	\$18.37
2029	\$25.23	\$18.92	\$22.71	\$21.45	\$20.18
2030	\$25.99	\$19.49	\$24.69	\$23.39	\$22.09
2031	\$26.77	\$20.08	\$26.77	\$25.43	\$24.09
2032	\$27.57	\$20.68	\$27.57	\$27.57	\$26.19
2033	\$28.40	\$21.30	\$28.40	\$28.40	\$28.40
2034	\$29.25	\$21.94	\$29.25	\$29.25	\$29.25
2035	\$30.13	\$22.60	\$30.13	\$30.13	\$30.13
2036	\$31.03	\$23.27	\$31.03	\$31.03	\$31.03
2037	\$31.96	\$23.97	\$31.96	\$31.96	\$31.96
2038	\$32.92	\$24.69	\$32.92	\$32.92	\$32.92
2039	\$33.91	\$25.43	\$33.91	\$33.91	\$33.91
2040	\$34.93	\$26.19	\$34.93	\$34.93	\$34.93
2041	\$35.97	\$26.98	\$35.97	\$35.97	\$35.97
2042	\$37.05	\$27.79	\$37.05	\$37.05	\$37.05
2043	\$38.16	\$28.62	\$38.16	\$38.16	\$38.16
2044	\$39.31	\$29.48	\$39.31	\$39.31	\$39.31
2045	\$40.49	\$30.37	\$40.49	\$40.49	\$40.49
2046	\$41.70	\$31.28	\$41.70	\$41.70	\$41.70
2047	\$42.95	\$32.22	\$42.95	\$42.95	\$42.95
2048	\$44.24	\$33.18	\$44.24	\$44.24	\$44.24
2049	\$45.57	\$34.18	\$45.57	\$45.57	\$45.57
2050	\$46.94	\$35.20	\$46.94	\$46.94	\$46.94

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes.



8th to 10th Avenue, Base Scenario-Projected Revenue

0011 00 10011 11 011	ie, Base Scenario-P	YEAR BUILT	
	2012	2013	2014
Completion SF	1,193,379	1,374,370	1,334,441
Revenues			
2012	\$13,662,692.62		
2013	\$14,072,573.40	\$16,206,865.95	
2014	\$14,494,750.61	\$16,693,071.93	\$16,208,090.79
2015	\$14,929,593.12	\$17,193,864.08	\$16,694,333.51
2016	\$15,377,480.92	\$17,709,680.01	\$17,195,163.51
2017	\$15,838,805.34	\$18,240,970.41	\$17,711,018.42
2018	\$16,313,969.50	\$18,788,199.52	\$18,242,348.97
2019	\$16,803,388.59	\$19,351,845.50	\$18,789,619.44
2020	\$17,307,490.25	\$19,932,400.87	\$19,353,308.02
2021	\$17,826,714.96	\$20,530,372.90	\$19,933,907.27
2022	\$18,361,516.40	\$21,146,284.08	\$20,531,924.48
2023	\$18,912,361.90	\$21,780,672.60	\$21,147,882.22
2024	\$19,479,732.75	\$22,434,092.78	\$21,782,318.68
2025	\$20,064,124.74	\$23,107,115.57	\$22,435,788.24
2026	\$20,666,048.48	\$23,800,329.03	\$23,108,861.89
2027	\$22,705,098.59	\$24,514,338.90	\$23,802,127.75
2028	\$24,847,892.27	\$26,933,087.01	\$24,516,191.58
2029	\$27,098,818.99	\$29,474,897.10	\$26,935,122.48
2030	\$29,462,438.20	\$32,144,976.01	\$29,477,124.67
2031	\$31,943,485.62	\$34,948,732.25	\$32,147,405.37
2032	\$32,901,790.19	\$37,891,783.39	\$34,951,373.51
2033	\$33,888,843.90	\$39,028,536.89	\$37,894,647.07
2034	\$34,905,509.22	\$40,199,393.00	\$39,031,486.48
2035	\$35,952,674.49	\$41,405,374.78	\$40,202,431.07
2036	\$37,031,254.73	\$42,647,536.03	\$41,408,504.01
2037	\$38,142,192.37	\$43,926,962.11	\$42,650,759.13
2038	\$39,286,458.14	\$45,244,770.97	\$43,930,281.90
2039	\$40,465,051.88	\$46,602,114.10	\$45,248,190.36
2040	\$41,679,003.44	\$48,000,177.52	\$46,605,636.07
2041	\$42,929,373.54	\$49,440,182.85	\$48,003,805.15
2042	\$44,217,254.75	\$50,923,388.34	\$49,443,919.30
2043	\$45,543,772.39	\$52,451,089.99	\$50,927,236.88
2044	\$46,910,085.56	\$54,024,622.69	\$52,455,053.99
2045	\$48,317,388.13	\$55,645,361.37	\$54,028,705.61
2046	\$49,766,909.78	\$57,314,722.21	\$55,649,566.78
2047	\$51,259,917.07	\$59,034,163.87	\$57,319,053.78
2048	\$52,797,714.58	\$60,805,188.79	\$59,038,625.39
2049	\$54,381,646.02	\$62,629,344.45	\$60,809,784.16
2050	\$56,013,095.40	\$64,508,224.79	\$62,634,077.68
Total Per Building	\$1,216,558,912.84	\$1,376,654,734.62	\$1,312,245,675.63

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes.



10th Avenue 1st Tier, Base Scenario-Projected PILOT

					YEAR E	BUILT		
	Expected Full Taxes	40 percent Discount	2012	2014	2015	2016	2017	2018
2012	\$15.27	\$9.16	\$9.16					
2013	\$15.72	\$9.43	\$9.43					
2014	\$16.19	\$9.72	\$9.72	\$9.72				
2015	\$16.68	\$10.01	\$10.01	\$10.01	\$10.01			
2016	\$17.18	\$10.31	\$10.31	\$10.31	\$10.31	\$10.31		
2017	\$17.70	\$10.62	\$10.62	\$10.62	\$10.62	\$10.62	\$10.62	
2018	\$18.23	\$10.94	\$10.94	\$10.94	\$10.94	\$10.94	\$10.94	\$10.94
2019	\$18.77	\$11.26	\$11.26	\$11.26	\$11.26	\$11.26	\$11.26	\$11.26
2020	\$19.34	\$11.60	\$11.60	\$11.60	\$11.60	\$11.60	\$11.60	\$11.60
2021	\$19.92	\$11.95	\$11.95	\$11.95	\$11.95	\$11.95	\$11.95	\$11.95
2022	\$20.51	\$12.31	\$12.31	\$12.31	\$12.31	\$12.31	\$12.31	\$12.31
2023	\$21.13	\$12.68	\$12.68	\$12.68	\$12.68	\$12.68	\$12.68	\$12.68
2024	\$21.76	\$13.06	\$13.06	\$13.06	\$13.06	\$13.06	\$13.06	\$13.06
2025	\$22.42	\$13.45	\$13.45	\$13.45	\$13.45	\$13.45	\$13.45	\$13.45
2026	\$23.09	\$13.85	\$13.85	\$13.85	\$13.85	\$13.85	\$13.85	\$13.85
2027	\$23.78	\$14.27	\$16.17	\$14.27	\$14.27	\$14.27	\$14.27	\$14.27
2028	\$24.50	\$14.70	\$18.62	\$14.70	\$14.70	\$14.70	\$14.70	\$14.70
2029	\$25.23	\$15.14	\$21.19	\$17.16	\$15.14	\$15.14	\$15.14	\$15.14
2030	\$25.99	\$15.59	\$23.91	\$19.75	\$17.67	\$15.59	\$15.59	\$15.59
2031	\$26.77	\$16.06	\$26.77	\$22.48	\$20.34	\$18.20	\$16.06	\$16.06
2032	\$27.57	\$16.54	\$27.57	\$25.36	\$23.16	\$20.95	\$18.75	\$16.54
2033	\$28.40	\$17.04	\$28.40	\$28.40	\$26.13	\$23.85	\$21.58	\$19.31
2034	\$29.25	\$17.55	\$29.25	\$29.25	\$29.25	\$26.91	\$24.57	\$22.23
2035	\$30.13	\$18.08	\$30.13	\$30.13	\$30.13	\$30.13	\$27.72	\$25.31
2036	\$31.03	\$18.62	\$31.03	\$31.03	\$31.03	\$31.03	\$31.03	\$28.55
2037	\$31.96	\$19.18	\$31.96	\$31.96	\$31.96	\$31.96	\$31.96	\$31.96
2038	\$32.92	\$19.75	\$32.92	\$32.92	\$32.92	\$32.92	\$32.92	\$32.92
2039	\$33.91	\$20.34	\$33.91	\$33.91	\$33.91	\$33.91	\$33.91	\$33.91
2040	\$34.93	\$20.96	\$34.93	\$34.93	\$34.93	\$34.93	\$34.93	\$34.93
2041	\$35.97	\$21.58	\$35.97	\$35.97	\$35.97	\$35.97	\$35.97	\$35.97
2042	\$37.05	\$22.23	\$37.05	\$37.05	\$37.05	\$37.05	\$37.05	\$37.05
2043	\$38.16	\$22.90	\$38.16	\$38.16	\$38.16	\$38.16	\$38.16	\$38.16
2044	\$39.31	\$23.59	\$39.31	\$39.31	\$39.31	\$39.31	\$39.31	\$39.31
2045	\$40.49	\$24.29	\$40.49	\$40.49	\$40.49	\$40.49	\$40.49	\$40.49
2046	\$41.70	\$25.02	\$41.70	\$41.70	\$41.70	\$41.70	\$41.70	\$41.70
2047	\$42.95	\$25.77	\$42.95	\$42.95	\$42.95	\$42.95	\$42.95	\$42.95
2048	\$44.24	\$26.55	\$44.24	\$44.24	\$44.24	\$44.24	\$44.24	\$44.24
2049	\$45.57	\$27.34	\$45.57	\$45.57	\$45.57	\$45.57	\$45.57	\$45.57
2050	\$46.94	\$28.16	\$46.94	\$46.94	\$46.94	\$46.94	\$46.94	\$46.94

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes.



10th Avenue 1st Tier, Base Scenario-Projected Revenue

			YEAR BUILT		
	2014	2015	2016	2017	2018
Completion SF	60,179.09	1,338,188.82	1,446,135.63	1,599,228.26	1,661,894.92
Revenues					
2012					
2013					
2014	\$584,747.13				
2015	\$602,289.55	\$13,392,977.23			
2016	\$620,358.24	\$13,794,766.55	\$14,907,539.99		
2017	\$638,968.98	\$14,208,609.55	\$15,354,766.19	\$16,980,271.83	
2018	\$658,138.05	\$14,634,867.83	\$15,815,409.17	\$17,489,679.99	\$18,175,022.92
2019	\$677,882.19	\$15,073,913.87	\$16,289,871.45	\$18,014,370.38	\$18,720,273.61
2020	\$698,218.66	\$15,526,131.28	\$16,778,567.59	\$18,554,801.50	\$19,281,881.81
2021	\$719,165.22	\$15,991,915.22	\$17,281,924.62	\$19,111,445.54	\$19,860,338.27
2022	\$740,740.18	\$16,471,672.68	\$17,800,382.36	\$19,684,788.91	\$20,456,148.42
2023	\$762,962.38	\$16,965,822.86	\$18,334,393.83	\$20,275,332.57	\$21,069,832.87
2024	\$785,851.25	\$17,474,797.54	\$18,884,425.64	\$20,883,592.55	\$21,701,927.86
2025	\$809,426.79	\$17,999,041.47	\$19,450,958.41	\$21,510,100.33	\$22,352,985.69
2026	\$833,709.59	\$18,539,012.71	\$20,034,487.16	\$22,155,403.34	\$23,023,575.26
2027	\$858,720.88	\$19,095,183.10	\$20,635,521.78	\$22,820,065.44	\$23,714,282.52
2028	\$884,482.51	\$19,668,038.59	\$21,254,587.43	\$23,504,667.40	\$24,425,711.00
2029	\$1,032,485.91	\$20,258,079.75	\$21,892,225.05	\$24,209,807.42	\$25,158,482.33
2030	\$1,188,573.49	\$23,647,931.76	\$22,548,991.81	\$24,936,101.65	\$25,913,236.79
2031	\$1,353,097.08	\$27,222,942.62	\$26,322,189.77	\$25,684,184.70	\$26,690,633.90
2032	\$1,526,422.38	\$30,991,170.99	\$30,301,485.51	\$29,982,004.94	\$27,491,352.92
2033	\$1,708,929.40	\$34,960,992.42	\$34,495,849.04	\$34,514,578.62	\$32,091,572.64
2034	\$1,760,197.28	\$39,141,111.07	\$38,914,603.03	\$39,292,122.93	\$36,943,063.32
2035	\$1,813,003.20	\$40,315,344.41	\$43,567,436.00	\$44,325,256.77	\$42,056,761.04
2036	\$1,867,393.30	\$41,524,804.74	\$44,874,459.08	\$49,625,015.73	\$47,444,031.85
2037	\$1,923,415.10	\$42,770,548.88	\$46,220,692.85	\$51,113,766.20	\$53,116,687.84
2038	\$1,981,117.55	\$44,053,665.35	\$47,607,313.64	\$52,647,179.19	\$54,710,188.47
2039	\$2,040,551.08	\$45,375,275.31	\$49,035,533.05	\$54,226,594.56	\$56,351,494.13
2040	\$2,101,767.61	\$46,736,533.57	\$50,506,599.04	\$55,853,392.40	\$58,042,038.95
2041	\$2,164,820.64	\$48,138,629.57	\$52,021,797.01	\$57,528,994.17	\$59,783,300.12
2042	\$2,229,765.25	\$49,582,788.46	\$53,582,450.92	\$59,254,864.00	\$61,576,799.12
2043	\$2,296,658.21	\$51,070,272.12	\$55,189,924.45	\$61,032,509.92	\$63,424,103.10
2044	\$2,365,557.96	\$52,602,380.28	\$56,845,622.18	\$62,863,485.21	\$65,326,826.19
2045	\$2,436,524.70	\$54,180,451.69	\$58,550,990.85	\$64,749,389.77	\$67,286,630.97
2046	\$2,509,620.44	\$55,805,865.24	\$60,307,520.57	\$66,691,871.46	\$69,305,229.90
2047	\$2,584,909.05	\$57,480,041.19	\$62,116,746.19	\$68,692,627.61	\$71,384,386.80
2048	\$2,662,456.32	\$59,204,442.43	\$63,980,248.58	\$70,753,406.44	\$73,525,918.41
2049	\$2,742,330.01	\$60,980,575.70	\$65,899,656.04	\$72,876,008.63	\$75,731,695.96
2050	\$2,824,599.91	\$62,809,992.97	\$67,876,645.72	\$75,062,288.89	\$78,003,646.84
Total Per Building	\$55,989,857.48	\$1,217,690,590.98	\$1,285,481,815.99	\$1,386,899,970.98	\$1,404,140,061.80

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes.



10th Avenue 2nd Tier, Base Scenario-Projected PILOT

					YEAR B	UILT		
	Expected Full Taxes	25 percent Discount	2019	2020	2021	2022	2023	2024
2012	\$15.27	\$11.45						
2013	\$15.72	\$11.79						
2014	\$16.19	\$12.15						
2015	\$16.68	\$12.51						
2016	\$17.18	\$12.89						
2017	\$17.70	\$13.27						
2018	\$18.23	\$13.67						
2019	\$18.77	\$14.08	\$14.08					
2020	\$19.34	\$14.50	\$14.50	\$14.50				
2021	\$19.92	\$14.94	\$14.94	\$14.94	\$14.94			
2022	\$20.51	\$15.39	\$15.39	\$15.39	\$15.39	\$15.39		
2023	\$21.13	\$15.85	\$15.85	\$15.85	\$15.85	\$15.85	\$15.85	
2024	\$21.76	\$16.32	\$16.32	\$16.32	\$16.32	\$16.32	\$16.32	\$16.32
2025	\$22.42	\$16.81	\$16.81	\$16.81	\$16.81	\$16.81	\$16.81	\$16.81
2026	\$23.09	\$17.32	\$17.32	\$17.32	\$17.32	\$17.32	\$17.32	\$17.32
2027	\$23.78	\$17.84	\$17.84	\$17.84	\$17.84	\$17.84	\$17.84	\$17.84
2028	\$24.50	\$18.37	\$18.37	\$18.37	\$18.37	\$18.37	\$18.37	\$18.37
2029	\$25.23	\$18.92	\$18.92	\$18.92	\$18.92	\$18.92	\$18.92	\$18.92
2030	\$25.99	\$19.49	\$19.49	\$19.49	\$19.49	\$19.49	\$19.49	\$19.49
2031	\$26.77	\$20.08	\$20.08	\$20.08	\$20.08	\$20.08	\$20.08	\$20.08
2032	\$27.57	\$20.68	\$20.68	\$20.68	\$20.68	\$20.68	\$20.68	\$20.68
2033	\$28.40	\$21.30	\$21.30	\$21.30	\$21.30	\$21.30	\$21.30	\$21.30
2034	\$29.25	\$21.94	\$23.40	\$21.94	\$21.94	\$21.94	\$21.94	\$21.94
2035	\$30.13	\$22.60	\$25.61	\$24.10	\$22.60	\$22.60	\$22.60	\$22.60
2036	\$31.03	\$23.27	\$27.93	\$26.38	\$24.82	\$23.27	\$23.27	\$23.27
2037	\$31.96	\$23.97	\$30.36	\$28.77	\$27.17	\$25.57	\$23.97	\$23.97
2038	\$32.92	\$24.69	\$32.92	\$31.27	\$29.63	\$27.98	\$26.34	\$24.69
2039	\$33.91	\$25.43	\$33.91	\$33.91	\$32.21	\$30.52	\$28.82	\$27.13
2040	\$34.93	\$26.19	\$34.93	\$34.93	\$34.93	\$33.18	\$31.43	\$29.69
2041	\$35.97	\$26.98	\$35.97	\$35.97	\$35.97	\$35.97	\$34.17	\$32.38
2042	\$37.05	\$27.79	\$37.05	\$37.05	\$37.05	\$37.05	\$37.05	\$35.20
2043	\$38.16	\$28.62	\$38.16	\$38.16	\$38.16	\$38.16	\$38.16	\$38.16
2044	\$39.31	\$29.48	\$39.31	\$39.31	\$39.31	\$39.31	\$39.31	\$39.31
2045	\$40.49	\$30.37	\$40.49	\$40.49	\$40.49	\$40.49	\$40.49	\$40.49
2046	\$41.70	\$31.28	\$41.70	\$41.70	\$41.70	\$41.70	\$41.70	\$41.70
2047	\$42.95	\$32.22	\$42.95	\$42.95	\$42.95	\$42.95	\$42.95	\$42.95
2048	\$44.24	\$33.18	\$44.24	\$44.24	\$44.24	\$44.24	\$44.24	\$44.24
2049	\$45.57	\$34.18	\$45.57	\$45.57	\$45.57	\$45.57	\$45.57	\$45.57
2050	\$46.94	\$35.20	\$46.94	\$46.94	\$46.94	\$46.94	\$46.94	\$46.94

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes.



10th Avenue 2nd Tier, Base Scenario-Projected Revenue

	YEAR BUILT								
	2019	2020	2021	2022	2023	2024			
Completion SF	1,456,904	984,851	500,000	500,000	813,618	1,421,953			
Revenues									
2012	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			
2013	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			
2014	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			
2015	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			
2016	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			
2017	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			
2018	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			
2019	\$20,513,963.23	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00			
2020	\$21,129,382.13	\$14,283,226.90	\$0.00	\$0.00	\$0.00	\$0.00			
2021	\$21,763,263.60	\$14,711,723.70	\$7,469,010.99	\$0.00	\$0.00	\$0.00			
2022	\$22,416,161.50	\$15,153,075.41	\$7,693,081.32	\$7,693,081.32	\$0.00	\$0.00			
2023	\$23,088,646.35	\$15,607,667.68	\$7,923,873.76	\$7,923,873.76	\$12,894,010.63	\$0.00			
2024	\$23,781,305.74	\$16,075,897.71	\$8,161,589.98	\$8,161,589.98	\$13,280,830.95	\$23,210,789.21			
2025	\$24,494,744.91	\$16,558,174.64	\$8,406,437.68	\$8,406,437.68	\$13,679,255.88	\$23,907,112.88			
2026	\$25,229,587.26	\$17,054,919.88	\$8,658,630.81	\$8,658,630.81	\$14,089,633.55	\$24,624,326.27			
2027	\$25,986,474.88	\$17,566,567.47	\$8,918,389.73	\$8,918,389.73	\$14,512,322.56	\$25,363,056.06			
2028	\$26,766,069.12	\$18,093,564.50	\$9,185,941.42	\$9,185,941.42	\$14,947,692.24	\$26,123,947.74			
2029	\$27,569,051.20	\$18,636,371.43	\$9,461,519.66	\$9,461,519.66	\$15,396,123.01	\$26,907,666.17			
2030	\$28,396,122.73	\$19,195,462.57	\$9,745,365.25	\$9,745,365.25	\$15,858,006.70	\$27,714,896.16			
2031	\$29,248,006.41	\$19,771,326.45	\$10,037,726.21	\$10,037,726.21	\$16,333,746.90	\$28,546,343.04			
2032	\$30,125,446.61	\$20,364,466.25	\$10,338,858.00	\$10,338,858.00	\$16,823,759.30	\$29,402,733.33			
2033	\$31,029,210.00	\$20,975,400.23	\$10,649,023.74	\$10,649,023.74	\$17,328,472.08	\$30,284,815.33			
2034	\$34,090,758.72	\$21,604,662.24	\$10,968,494.45	\$10,968,494.45	\$17,848,326.24	\$31,193,359.79			
2035	\$37,308,074.08	\$23,736,322.25	\$11,297,549.28	\$11,297,549.28	\$18,383,776.03	\$32,129,160.59			
2036	\$40,687,746.67	\$25,976,437.66	\$12,412,240.81	\$11,636,475.76	\$18,935,289.31	\$33,093,035.40			
2037	\$44,236,622.35	\$28,329,597.31	\$13,583,646.04	\$12,784,608.04	\$19,503,347.99	\$34,085,826.47			
2038	\$47,961,811.61	\$30,800,567.74	\$14,814,164.56	\$13,991,155.42	\$21,427,678.33	\$35,108,401.26			
2039	\$49,400,665.95	\$33,394,299.76	\$16,106,288.92	\$15,258,589.50	\$23,449,915.47	\$38,572,430.18			
2040	\$50,882,685.93	\$34,396,128.75	\$17,462,607.99	\$16,589,477.59	\$25,574,201.93	\$42,212,703.28			
2041	\$52,409,166.51	\$35,428,012.61	\$17,986,486.22	\$17,986,486.22	\$27,804,840.65	\$46,036,677.58			
2042	\$53,981,441.51	\$36,490,852.99	\$18,526,080.81	\$18,526,080.81	\$30,146,300.92	\$50,052,098.90			
2043	\$55,600,884.75	\$37,585,578.58	\$19,081,863.24	\$19,081,863.24	\$31,050,689.95	\$54,267,012.50			
2044	\$57,268,911.29	\$38,713,145.94	\$19,654,319.13	\$19,654,319.13	\$31,982,210.65	\$55,895,022.87			
2045	\$58,986,978.63	\$39,874,540.32	\$20,243,948.71	\$20,243,948.71	\$32,941,676.97	\$57,571,873.56			
2046	\$60,756,587.99	\$41,070,776.53	\$20,851,267.17	\$20,851,267.17	\$33,929,927.27	\$59,299,029.76			
2047	\$62,579,285.63	\$42,302,899.82	\$21,476,805.18	\$21,476,805.18	\$34,947,825.09	\$61,078,000.66			
2048	\$64,456,664.20	\$43,571,986.82	\$22,121,109.34	\$22,121,109.34	\$35,996,259.85	\$62,910,340.68			
2049	\$66,390,364.13	\$44,879,146.42	\$22,784,742.62	\$22,784,742.62	\$37,076,147.64	\$64,797,650.90			
2050	\$68,382,075.05	\$46,225,520.81	\$23,468,284.90	\$23,468,284.90	\$38,188,432.07	\$66,741,580.42			
Total Per Building	\$1,286,918,160.68	\$848,428,321.36	\$419,489,347.94	\$407,901,694.93	\$644,330,700.16	\$1,091,129,891.00			

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes.



10th Avenue 3rd Tier, Base Scenario-Projected PILOT

				YEAR	BUILT	
	Expected Full Taxes	20 percent Discount	2025	2026	2027	2028
2012	\$15.27	\$12.21				
2013	\$15.72	\$12.58				
2014	\$16.19	\$12.96				
2015	\$16.68	\$13.34				
2016	\$17.18	\$13.74				
2017	\$17.70	\$14.16				
2018	\$18.23	\$14.58				
2019	\$18.77	\$15.02				
2020	\$19.34	\$15.47				
2021	\$19.92	\$15.93				
2022	\$20.51	\$16.41				
2023	\$21.13	\$16.90				
2024	\$21.76	\$17.41				
2025	\$22.42	\$17.93	\$17.93			
2026	\$23.09	\$18.47	\$18.47	\$18.47		
2027	\$23.78	\$19.03	\$19.03	\$19.03	\$19.03	
2028	\$24.50	\$19.60	\$19.60	\$19.60	\$19.60	\$19.60
2029	\$25.23	\$20.18	\$20.18	\$20.18	\$20.18	\$20.18
2030	\$25.99	\$20.79	\$20.79	\$20.79	\$20.79	\$20.79
2031	\$26.77	\$21.41	\$21.41	\$21.41	\$21.41	\$21.41
2032	\$27.57	\$22.06	\$22.06	\$22.06	\$22.06	\$22.06
2033	\$28.40	\$22.72	\$22.72	\$22.72	\$22.72	\$22.72
2034	\$29.25	\$23.40	\$23.40	\$23.40	\$23.40	\$23.40
2035	\$30.13	\$24.10	\$24.10	\$24.10	\$24.10	\$24.10
2036	\$31.03	\$24.82	\$24.82	\$24.82	\$24.82	\$24.82
2037	\$31.96	\$25.57	\$25.57	\$25.57	\$25.57	\$25.57
2038	\$32.92	\$26.34	\$26.34	\$26.34	\$26.34	\$26.34
2039	\$33.91	\$27.13	\$27.13	\$27.13	\$27.13	\$27.13
2040	\$34.93	\$27.94	\$29.34	\$27.94	\$27.94	\$27.94
2041	\$35.97	\$28.78	\$31.66	\$30.22	\$28.78	\$28.78
2042	\$37.05	\$29.64	\$34.09	\$32.61	\$31.12	\$29.64
2043	\$38.16	\$30.53	\$36.64	\$35.11	\$33.58	\$32.06
2044	\$39.31	\$31.45	\$39.31	\$37.74	\$36.16	\$34.59
2045	\$40.49	\$32.39	\$40.49	\$40.49	\$38.87	\$37.25
2046	\$41.70	\$33.36	\$41.70	\$41.70	\$41.70	\$40.03
2047	\$42.95	\$34.36	\$42.95	\$42.95	\$42.95	\$42.95
2048	\$44.24	\$35.39	\$44.24	\$44.24	\$44.24	\$44.24
2049	\$45.57	\$36.46	\$45.57	\$45.57	\$45.57	\$45.57
2050	\$46.94	\$37.55	\$46.94	\$46.94	\$46.94	\$46.94

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes.



10th Avenue 3rd Tier, Base Scenario-Projected Revenue

		YEAR	BUILT	
	2025	2026	2027	2028
Completions SF	1,519,851	1,496,002	1,435,060	1,310,911
Revenues				
2012	\$-	\$-	\$-	\$-
2013	\$-	\$-	\$-	\$-
2014	\$-	\$-	\$-	\$-
2015	\$-	\$-	\$-	\$-
2016	\$-	\$-	\$-	\$-
2017	\$-	\$-	\$-	\$-
2018	\$-	\$-	\$-	\$-
2019	\$-	\$-	\$-	\$-
2020	\$-	\$-	\$-	\$-
2021	\$-	\$-	\$-	\$-
2022	\$-	\$-	\$-	\$-
2023	\$-	\$-	\$-	\$-
2024	\$-	\$-	\$-	\$-
2025	\$27,256,607.84	\$-	\$-	\$-
2026	\$28,074,306.07	\$27,633,774.44	\$-	\$
2027	\$28,916,535.25	\$28,462,787.67	\$27,303,301.10	\$-
2028	\$29,784,031.31	\$29,316,671.30	\$28,122,400.14	\$25,689,487.44
2029	\$30,677,552.25	\$30,196,171.44	\$28,966,072.14	\$26,460,172.06
2030	\$31,597,878.82	\$31,102,056.59	\$29,835,054.30	\$27,253,977.22
2031	\$32,545,815.18	\$32,035,118.28	\$30,730,105.93	\$28,071,596.54
2032	\$33,522,189.64	\$32,996,171.83	\$31,652,009.11	\$28,913,744.43
2033	\$34,527,855.33	\$33,986,056.99	\$32,601,569.38	\$29,781,156.77
2034	\$35,563,690.99	\$35,005,638.70	\$33,579,616.47	\$30,674,591.47
2035	\$36,630,601.72	\$36,055,807.86	\$34,587,004.96	\$31,594,829.21
2036	\$37,729,519.77	\$37,137,482.09	\$35,624,615.11	\$32,542,674.09
2037	\$38,861,405.36	\$38,251,606.56	\$36,693,353.56	\$33,518,954.31
2038	\$40,027,247.52	\$39,399,154.75	\$37,794,154.17	\$34,524,522.94
2039	\$41,228,064.95	\$40,581,129.40	\$38,927,978.79	\$35,560,258.63
2040	\$44,588,152.24	\$41,798,563.28	\$40,095,818.16	\$36,627,066.39
2041	\$48,112,739.51	\$45,205,146.18	\$41,298,692.70	\$37,725,878.38
2042	\$51,808,672.68	\$48,778,505.36	\$44,664,536.16	\$38,857,654.73
2043	\$55,683,060.38	\$52,525,581.45	\$48,195,161.40	\$42,024,553.59
2044	\$59,743,283.53	\$56,453,581.46	\$51,897,426.07	\$45,346,494.50
2045	\$61,535,582.04	\$60,569,988.44	\$55,778,450.97	\$48,829,929.76
2046	\$63,381,649.50	\$62,387,088.09	\$59,845,629.69	\$52,481,559.29
2047	\$65,283,098.98	\$64,258,700.73	\$61,640,998.58	\$56,308,339.65
2048	\$67,241,591.95	\$66,186,461.76	\$63,490,228.54	\$57,997,589.84
2049	\$69,258,839.71	\$68,172,055.61	\$65,394,935.39	\$59,737,517.54
2050	\$71,336,604.90	\$70,217,217.28	\$67,356,783.46	\$61,529,643.06
Total Per Building	\$1,164,916,577.40	\$1,108,712,517.52	\$1,026,075,896.29	\$902,052,191.84

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes.



10th Avenue 4th Tier, Base Scenario-Projected PILOT

				Y	EAR BUILT		
	Expected Full Taxes	15 percent Discount	2029	2030	2031	2032	2033
2012	\$15.27	\$12.98					
2013	\$15.72	\$13.36					
2014	\$16.19	\$13.77					
2015	\$16.68	\$14.18					
2016	\$17.18	\$14.60					
2017	\$17.70	\$15.04					
2018	\$18.23	\$15.49					
2019	\$18.77	\$15.96					
2020	\$19.34	\$16.44					
2021	\$19.92	\$16.93					
2022	\$20.51	\$17.44					
2023	\$21.13	\$17.96					
2024	\$21.76	\$18.50					
2025	\$22.42	\$19.05					
2026	\$23.09	\$19.63					
2027	\$23.78	\$20.22					
2028	\$24.50	\$20.82					
2029	\$25.23	\$21.45	\$21.45				
2030	\$25.99	\$22.09	\$22.09	\$22.09			
2031	\$26.77	\$22.75	\$22.75	\$22.75	\$22.75		
2032	\$27.57	\$23.43	\$23.43	\$23.43	\$23.43	\$23.43	
2033	\$28.40	\$24.14	\$24.14	\$24.14	\$24.14	\$24.14	\$24.14
2034	\$29.25	\$24.86	\$24.86	\$24.86	\$24.86	\$24.86	\$24.86
2035	\$30.13	\$25.61	\$25.61	\$25.61	\$25.61	\$25.61	\$25.6
2036	\$31.03	\$26.38	\$26.38	\$26.38	\$26.38	\$26.38	\$26.38
2037	\$31.96	\$27.17	\$27.17	\$27.17	\$27.17	\$27.17	\$27.17
2038	\$32.92	\$27.98	\$27.98	\$27.98	\$27.98	\$27.98	\$27.98
2039	\$33.91	\$28.82	\$28.82	\$28.82	\$28.82	\$28.82	\$28.82
2040	\$34.93	\$29.69	\$29.69	\$29.69	\$29.69	\$29.69	\$29.69
2041	\$35.97	\$30.58	\$30.58	\$30.58	\$30.58	\$30.58	\$30.58
2042	\$37.05	\$31.49	\$31.49	\$31.49	\$31.49	\$31.49	\$31.49
2043	\$38.16	\$32.44	\$32.44	\$32.44	\$32.44	\$32.44	\$32.44
2044	\$39.31	\$33.41	\$34.59	\$33.41	\$33.41	\$33.41	\$33.4
2045	\$40.49	\$34.41	\$36.84	\$35.63	\$34.41	\$34.41	\$34.4
2046	\$41.70	\$35.45	\$39.20	\$37.95	\$36.70	\$35.45	\$35.45
2047	\$42.95	\$36.51	\$41.67	\$40.38	\$39.09	\$37.80	\$36.5
2048	\$44.24	\$37.61	\$44.24	\$42.91	\$41.59	\$40.26	\$38.93
2049	\$45.57	\$38.73	\$45.57	\$45.57	\$44.20	\$42.84	\$41.47
2050	\$46.94	\$39.90	\$46.94	\$46.94	\$46.94	\$45.53	\$44.12

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes.



10th Avenue 4th Tier, Base Scenario-Projected Revenue

		YEAR BUILT						
	2029	2030	2031	2032	2033			
Completion SF	60,179.09	1,338,188.82	1,446,135.63	1,599,228.26	1,661,894.92			
Revenues								
2012								
2013								
2014								
2015								
2016								
2017								
2018								
2019								
2020								
2021								
2022								
2023								
2024								
2025								
2026								
2027								
2028								
2029	\$25,280,810.57							
2030	\$26,039,234.89	\$23,383,076.67						
2031	\$26,820,411.94	\$24,084,568.98	\$22,732,936.88					
2032	\$27,625,024.29	\$24,807,106.04	\$23,414,924.98	\$23,681,621.02				
2033	\$28,453,775.02	\$25,551,319.23	\$24,117,372.73	\$24,392,069.65	\$1,125,056.45			
2034	\$29,307,388.27	\$26,317,858.80	\$24,840,893.92	\$25,123,831.74	\$1,158,808.15			
2035	\$30,186,609.92	\$27,107,394.57	\$25,586,120.73	\$25,877,546.69	\$1,193,572.39			
2036	\$31,092,208.22	\$27,920,616.40	\$26,353,704.36	\$26,653,873.09	\$1,229,379.56			
2037	\$32,024,974.47	\$28,758,234.90	\$27,144,315.49	\$27,453,489.29	\$1,266,260.95			
2038	\$32,985,723.70	\$29,620,981.94	\$27,958,644.95	\$28,277,093.97	\$1,304,248.78			
2039	\$33,975,295.41	\$30,509,611.40	\$28,797,404.30	\$29,125,406.78	\$1,343,376.24			
2040	\$34,994,554.27	\$31,424,899.74	\$29,661,326.43	\$29,999,168.99	\$1,383,677.53			
2041	\$36,044,390.90	\$32,367,646.74	\$30,551,166.22	\$30,899,144.06	\$1,425,187.85			
2042	\$37,125,722.63	\$33,338,676.14	\$31,467,701.21	\$31,826,118.38	\$1,467,943.49			
2043	\$38,239,494.31	\$34,338,836.42	\$32,411,732.24	\$32,780,901.93	\$1,511,981.79			
2044	\$40,776,797.22	\$35,369,001.51	\$33,384,084.21	\$33,764,328.99	\$1,557,341.25			
2045	\$43,431,922.77	\$37,715,838.79	\$34,385,606.74	\$34,777,258.86	\$1,604,061.49			
2046	\$46,209,656.73	\$40,171,654.20	\$36,667,192.88	\$35,820,576.62	\$1,652,183.33			
2047	\$49,114,966.00	\$42,740,874.28	\$39,054,727.14	\$38,197,377.24	\$1,701,748.83			
2048	\$52,153,005.14	\$45,428,093.08	\$41,552,512.99	\$40,684,547.37	\$1,814,664.87			
2049	\$53,717,595.29	\$48,238,078.22	\$44,165,016.73	\$43,286,570.07	\$1,932,824.30			
2050	\$55,329,123.15	\$49,685,220.57	\$46,896,873.43	\$46,008,098.04	\$2,056,440.09			
Total Per Building	\$810,928,685.11	\$698,879,588.63	\$631,144,258.55	\$608,629,022.78	\$26,728,757.34			

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes.



8th to 10th Avenue, Cyclical Scenario-Projected PILOT

	th Avenue, Cy		·	YEAR BUILT	
	Expected Full Taxes	25 percent Discount	2012	2015	2016
2012	\$15.27	\$11.45	\$11.45		
2013	\$15.72	\$11.79	\$11.79		
2014	\$16.19	\$12.15	\$12.15		
2015	\$16.68	\$12.51	\$12.51	\$12.51	
2016	\$17.18	\$12.89	\$12.89	\$12.89	\$12.89
2017	\$17.70	\$13.27	\$13.27	\$13.27	\$13.27
2018	\$18.23	\$13.67	\$13.67	\$13.67	\$13.67
2019	\$18.77	\$14.08	\$14.08	\$14.08	\$14.08
2020	\$19.34	\$14.50	\$14.50	\$14.50	\$14.50
2021	\$19.92	\$14.94	\$14.94	\$14.94	\$14.94
2022	\$20.51	\$15.39	\$15.39	\$15.39	\$15.39
2023	\$21.13	\$15.85	\$15.85	\$15.85	\$15.85
2024	\$21.76	\$16.32	\$16.32	\$16.32	\$16.32
2025	\$22.42	\$16.81	\$16.81	\$16.81	\$16.81
2026	\$23.09	\$17.32	\$17.32	\$17.32	\$17.32
2027	\$23.78	\$17.84	\$19.03	\$17.84	\$17.84
2028	\$24.50	\$18.37	\$20.82	\$18.37	\$18.37
2029	\$25.23	\$18.92	\$22.71	\$18.92	\$18.92
2030	\$25.99	\$19.49	\$24.69	\$20.79	\$19.49
2031	\$26.77	\$20.08	\$26.77	\$22.75	\$21.41
2032	\$27.57	\$20.68	\$27.57	\$24.81	\$23.43
2033	\$28.40	\$21.30	\$28.40	\$26.98	\$25.56
2034	\$29.25	\$21.94	\$29.25	\$29.25	\$27.79
2035	\$30.13	\$22.60	\$30.13	\$30.13	\$30.13
2036	\$31.03	\$23.27	\$31.03	\$31.03	\$31.03
2037	\$31.96	\$23.97	\$31.96	\$31.96	\$31.96
2038	\$32.92	\$24.69	\$32.92	\$32.92	\$32.92
2039	\$33.91	\$25.43	\$33.91	\$33.91	\$33.91
2040	\$34.93	\$26.19	\$34.93	\$34.93	\$34.93
2041	\$35.97	\$26.98	\$35.97	\$35.97	\$35.97
2042	\$37.05	\$27.79	\$37.05	\$37.05	\$37.05
2043	\$38.16	\$28.62	\$38.16	\$38.16	\$38.16
2044	\$39.31	\$29.48	\$39.31	\$39.31	\$39.31
2045	\$40.49	\$30.37	\$40.49	\$40.49	\$40.49
2046	\$41.70	\$31.28	\$41.70	\$41.70	\$41.70
2047	\$42.95	\$32.22	\$42.95	\$42.95	\$42.95
2048	\$44.24	\$33.18	\$44.24	\$44.24	\$44.24
2049	\$45.57	\$34.18	\$45.57	\$45.57	\$45.57
2050	\$46.94	\$35.20	\$46.94	\$46.94	\$46.94

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes



8th to 10th Avenue, Cyclical Scenario-Projected Revenue

	YEAR BUILT					
	2012	2015	2016			
Completion SF	500,000	1,321,517	2,080,673			
Revenues						
2012	\$5,724,375.00					
2013	\$5,896,106.25					
2014	\$6,072,989.44					
2015	\$6,255,179.12	\$16,532,651.65				
2016	\$6,442,834.49	\$17,028,631.20	\$26,810,858.74			
2017	\$6,636,119.53	\$17,539,490.14	\$27,615,184.50			
2018	\$6,835,203.11	\$18,065,674.84	\$28,443,640.04			
2019	\$7,040,259.21	\$18,607,645.09	\$29,296,949.24			
2020	\$7,251,466.98	\$19,165,874.44	\$30,175,857.7			
2021	\$7,469,010.99	\$19,740,850.68	\$31,081,133.4			
2022	\$7,693,081.32	\$20,333,076.20	\$32,013,567.4			
2023	\$7,923,873.76	\$20,943,068.48	\$32,973,974.4			
2024	\$8,161,589.98	\$21,571,360.54	\$33,963,193.7			
2025	\$8,406,437.68	\$22,218,501.35	\$34,982,089.52			
2026	\$8,658,630.81	\$22,885,056.39	\$36,031,552.20			
2027	\$9,512,949.05	\$23,571,608.08	\$37,112,498.7			
2028	\$10,410,733.61	\$24,278,756.33	\$38,225,873.73			
2029	\$11,353,823.60	\$25,007,119.02	\$39,372,649.9			
2030	\$12,344,129.32	\$27,474,488.09	\$40,553,829.44			
2031	\$13,383,634.95	\$30,067,392.91	\$44,555,140.63			
2032	\$13,785,144.00	\$32,791,144.97	\$48,760,032.0			
2033	\$14,198,698.32	\$35,651,261.50	\$53,177,117.2			
2034	\$14,624,659.27	\$38,653,473.00	\$57,815,343.6			
2035	\$15,063,399.05	\$39,813,077.19	\$62,684,004.1			
2036	\$15,515,301.02	\$41,007,469.50	\$64,564,524.24			
2037	\$15,980,760.05	\$42,237,693.59	\$66,501,459.9			
2038	\$16,460,182.85	\$43,504,824.40	\$68,496,503.7			
2039	\$16,953,988.34	\$44,809,969.13	\$70,551,398.8			
2040	\$17,462,607.99	\$46,154,268.20	\$72,667,940.8			
2041	\$17,986,486.22	\$47,538,896.25	\$74,847,979.0			
2042	\$18,526,080.81	\$48,965,063.14	\$77,093,418.4			
2043	\$19,081,863.24	\$50,434,015.03	\$79,406,221.00			
2044	\$19,654,319.13	\$51,947,035.48	\$81,788,407.6			
2045	\$20,243,948.71	\$53,505,446.55	\$84,242,059.86			
2046	\$20,851,267.17	\$55,110,609.94	\$86,769,321.6			
2047	\$21,476,805.18	\$56,763,928.24	\$89,372,401.30			
2048	\$22,121,109.34	\$58,466,846.09	\$92,053,573.3			
2049	\$22,784,742.62	\$60,220,851.47	\$94,815,180.54			
2050	\$23,468,284.90	\$62,027,477.01	\$97,659,635.96			
Total Per Building	\$509,712,076.39	\$1,274,634,596.10	\$1,966,474,517.02			

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes



10th Avenue 1st Tier, Cyclical Scenario-Projected PILOT

			YEAR BUILT			
	Expected Full Taxes	40 percent Discount	2016	2017	2018	
2012	\$15.27	\$9.16				
2013	\$15.72	\$9.43				
2014	\$16.19	\$9.72				
2015	\$16.68	\$10.01				
2016	\$17.18	\$10.31	\$10.31			
2017	\$17.70	\$10.62	\$10.62	\$10.62		
2018	\$18.23	\$10.94	\$10.94	\$10.94	\$10.94	
2019	\$18.77	\$11.26	\$11.26	\$11.26	\$11.26	
2020	\$19.34	\$11.60	\$11.60	\$11.60	\$11.60	
2021	\$19.92	\$11.95	\$11.95	\$11.95	\$11.95	
2022	\$20.51	\$12.31	\$12.31	\$12.31	\$12.31	
2023	\$21.13	\$12.68	\$12.68	\$12.68	\$12.68	
2024	\$21.76	\$13.06	\$13.06	\$13.06	\$13.06	
2025	\$22.42	\$13.45	\$13.45	\$13.45	\$13.45	
2026	\$23.09	\$13.85	\$13.85	\$13.85	\$13.85	
2027	\$23.78	\$14.27	\$14.27	\$14.27	\$14.27	
2028	\$24.50	\$14.70	\$14.70	\$14.70	\$14.70	
2029	\$25.23	\$15.14	\$15.14	\$15.14	\$15.14	
2030	\$25.99	\$15.59	\$15.59	\$15.59	\$15.59	
2031	\$26.77	\$16.06	\$18.20	\$16.06	\$16.06	
2032	\$27.57	\$16.54	\$20.95	\$18.75	\$16.54	
2033	\$28.40	\$17.04	\$23.85	\$21.58	\$19.31	
2034	\$29.25	\$17.55	\$26.91	\$24.57	\$22.23	
2035	\$30.13	\$18.08	\$30.13	\$27.72	\$25.31	
2036	\$31.03	\$18.62	\$31.03	\$31.03	\$28.55	
2037	\$31.96	\$19.18	\$31.96	\$31.96	\$31.96	
2038	\$32.92	\$19.75	\$32.92	\$32.92	\$32.92	
2039	\$33.91	\$20.34	\$33.91	\$33.91	\$33.91	
2040	\$34.93	\$20.96	\$34.93	\$34.93	\$34.93	
2041	\$35.97	\$21.58	\$35.97	\$35.97	\$35.97	
2042	\$37.05	\$22.23	\$37.05	\$37.05	\$37.05	
2043	\$38.16	\$22.90	\$38.16	\$38.16	\$38.16	
2044	\$39.31	\$23.59	\$39.31	\$39.31	\$39.31	
2045	\$40.49	\$24.29	\$40.49	\$40.49	\$40.49	
2046	\$41.70	\$25.02	\$41.70	\$41.70	\$41.70	
2047	\$42.95	\$25.77	\$42.95	\$42.95	\$42.95	
2048	\$44.24	\$26.55	\$44.24	\$44.24	\$44.24	
2049	\$45.57	\$27.34	\$45.57	\$45.57	\$45.57	
2050	\$46.94	\$28.16	\$46.94	\$46.94	\$46.94	

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes



10th Avenue 1st Tier, Cyclical Scenario-Projected Revenue

	YEAR BUILT					
	2016	2017	2018			
Completion SF	440,358	2,797,363	2,617,598			
Revenues						
2012						
2013						
2014						
2015						
2016	\$4,539,450.44	\$0.00	\$0.00			
2017	\$4,675,633.95	\$29,701,818.80	\$0.00			
2018	\$4,815,902.97	\$30,592,873.37	\$28,626,897.14			
2019	\$4,960,380.06	\$31,510,659.57	\$29,485,704.06			
2020	\$5,109,191.46	\$32,455,979.36	\$30,370,275.18			
2021	\$5,262,467.20	\$33,429,658.74	\$31,281,383.44			
2022	\$5,420,341.22	\$34,432,548.50	\$32,219,824.94			
2023	\$5,582,951.46	\$35,465,524.95	\$33,186,419.69			
2024	\$5,750,440.00	\$36,529,490.70	\$34,182,012.28			
2025	\$5,922,953.20	\$37,625,375.42	\$35,207,472.65			
2026	\$6,100,641.80	\$38,754,136.69	\$36,263,696.83			
2027	\$6,283,661.05	\$39,916,760.79	\$37,351,607.73			
2028	\$6,472,170.88	\$41,114,263.61	\$38,472,155.96			
2029	\$6,666,336.01	\$42,347,691.52	\$39,626,320.64			
2030	\$6,866,326.09	\$43,618,122.26	\$40,815,110.26			
2031	\$8,015,291.32	\$44,926,665.93	\$42,039,563.57			
2032	\$9,227,014.77	\$52,444,394.70	\$43,300,750.48			
2033	\$10,504,227.87	\$60,372,753.19	\$50,546,409.39			
2034	\$11,849,769.44	\$68,729,613.24	\$58,187,837.16			
2035	\$13,266,589.70	\$77,533,549.41	\$66,242,258.83			
2036	\$13,664,587.39	\$86,803,865.10	\$74,727,576.75			
2037	\$14,074,525.01	\$89,407,981.05	\$83,662,395.71			
2038	\$14,496,760.76	\$92,090,220.49	\$86,172,267.58			
2039	\$14,931,663.58	\$94,852,927.10	\$88,757,435.61			
2040	\$15,379,613.49	\$97,698,514.91	\$91,420,158.67			
2041	\$15,841,001.90	\$100,629,470.36	\$94,162,763.43			
2042	\$16,316,231.95	\$103,648,354.47	\$96,987,646.34			
2043	\$16,805,718.91	\$106,757,805.11	\$99,897,275.73			
2044	\$17,309,890.48	\$109,960,539.26	\$102,894,194.00			
2045	\$17,829,187.19	\$113,259,355.44	\$105,981,019.82			
2046	\$18,364,062.81	\$116,657,136.10	\$109,160,450.41			
2047	\$18,914,984.69	\$120,156,850.18	\$112,435,263.93			
2048	\$19,482,434.23	\$123,761,555.69	\$115,808,321.84			
2049	\$20,066,907.26	\$127,474,402.36	\$119,282,571.50			
2050	\$20,668,914.48	\$131,298,634.43	\$122,861,048.64			
Total Per Building	\$391,438,225.02	\$2,425,959,492.79	\$2,211,616,090.18			

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes



10th Avenue 2nd Tier, Cyclical Scenario-Projected PILOT

			YEAR BUILT				
	Expected Full Taxes	25 percent Discount	2023	2024	2025	2026	
2012	\$15.27	\$11.45					
2013	\$15.72	\$11.79					
2014	\$16.19	\$12.15					
2015	\$16.68	\$12.51					
2016	\$17.18	\$12.89					
2017	\$17.70	\$13.27					
2018	\$18.23	\$13.67					
2019	\$18.77	\$14.08					
2020	\$19.34	\$14.50					
2021	\$19.92	\$14.94					
2022	\$20.51	\$15.39					
2023	\$21.13	\$15.85	\$15.85				
2024	\$21.76	\$16.32	\$16.32				
2025	\$22.42	\$16.81	\$16.81	\$16.81			
2026	\$23.09	\$17.32	\$17.32	\$17.32	\$17.32		
2027	\$23.78	\$17.84	\$17.84	\$17.84	\$17.84	\$17.84	
2028	\$24.50	\$18.37	\$18.37	\$18.37	\$18.37	\$18.37	
2029	\$25.23	\$18.92	\$18.92	\$18.92	\$18.92	\$18.92	
2030	\$25.99	\$19.49	\$19.49	\$19.49	\$19.49	\$19.49	
2031	\$26.77	\$20.08	\$20.08	\$20.08	\$20.08	\$20.08	
2032	\$27.57	\$20.68	\$20.68	\$20.68	\$20.68	\$20.68	
2033	\$28.40	\$21.30	\$21.30	\$21.30	\$21.30	\$21.30	
2034	\$29.25	\$21.94	\$21.94	\$21.94	\$21.94	\$21.94	
2035	\$30.13	\$22.60	\$22.60	\$22.60	\$22.60	\$22.60	
2036	\$31.03	\$23.27	\$23.27	\$23.27	\$23.27	\$23.27	
2037	\$31.96	\$23.97	\$23.97	\$23.97	\$23.97	\$23.97	
2038	\$32.92	\$24.69	\$26.34	\$24.69	\$24.69	\$24.69	
2039	\$33.91	\$25.43	\$28.82	\$25.43	\$25.43	\$25.43	
2040	\$34.93	\$26.19	\$31.43	\$27.94	\$26.19	\$26.19	
2041	\$35.97	\$26.98	\$34.17	\$30.58	\$28.78	\$26.98	
2042	\$37.05	\$27.79	\$37.05	\$33.35	\$31.49	\$29.64	
2043	\$38.16	\$28.62	\$38.16	\$36.26	\$34.35	\$32.44	
2044	\$39.31	\$29.48	\$39.31	\$39.31	\$37.34	\$35.38	
2045	\$40.49	\$30.37	\$40.49	\$40.49	\$40.49	\$38.46	
2046	\$41.70	\$31.28	\$41.70	\$41.70	\$41.70	\$41.70	
2047	\$42.95	\$32.22	\$42.95	\$42.95	\$42.95	\$42.95	
2048	\$44.24	\$33.18	\$44.24	\$44.24	\$44.24	\$44.24	
2049	\$45.57	\$34.18	\$45.57	\$45.57	\$45.57	\$45.57	
2050	\$46.94	\$35.20	\$46.94	\$46.94	\$46.94	\$46.94	

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes



10th Avenue 2nd Tier, Cyclical Scenario-Projected Revenue

	YEAR BUILT					
	2023	2024	2025	2026		
Completions SF	2,266,059	939,959	596,144	2,905,370		
Revenues						
2012						
2013						
2014						
2015						
2016						
2017						
2018						
2019						
2020						
2021						
2022						
2023	\$35,911,932.38					
2024	\$36,989,290.35					
2025	\$38,098,969.06	\$15,803,407.03				
2026	\$39,241,938.13	\$16,277,509.24	\$10,323,589.63			
2027	\$40,419,196.28	\$16,765,834.51	\$10,633,297.32	\$51,822,437.69		
2028	\$41,631,772.16	\$17,268,809.55	\$10,952,296.24	\$53,377,110.82		
2029	\$42,880,725.33	\$17,786,873.84	\$11,280,865.12	\$54,978,424.1		
2030	\$44,167,147.09	\$18,320,480.05	\$11,619,291.08	\$56,627,776.87		
2031	\$45,492,161.50	\$18,870,094.45	\$11,967,869.81	\$58,326,610.18		
2032	\$46,856,926.35	\$19,436,197.29	\$12,326,905.91	\$60,076,408.49		
2033	\$48,262,634.14	\$20,019,283.20	\$12,696,713.08	\$61,878,700.7		
2034	\$49,710,513.16	\$20,619,861.70	\$13,077,614.48	\$63,735,061.76		
2035	\$51,201,828.56	\$21,238,457.55	\$13,469,942.91	\$65,647,113.62		
2036	\$52,737,883.41	\$21,875,611.28	\$13,874,041.20	\$67,616,527.02		
2037	\$54,320,019.91	\$22,531,879.62	\$14,290,262.43	\$69,645,022.8		
2038	\$59,679,595.21	\$23,207,836.01	\$14,718,970.31	\$71,734,373.52		
2039	\$65,311,857.01	\$23,904,071.09	\$15,160,539.41	\$73,886,404.72		
2040	\$71,228,342.88	\$26,262,606.10	\$15,615,355.60	\$76,102,996.87		
2041	\$77,441,037.23	\$28,741,139.55	\$17,156,070.68	\$78,386,086.7		
2042	\$83,962,387.74	\$31,344,748.66	\$18,775,174.85	\$86,120,180.67		
2043	\$86,481,259.37	\$34,078,707.30	\$20,475,984.81	\$94,247,772.72		
2044	\$89,075,697.15	\$36,948,493.17	\$22,261,945.71	\$102,785,512.13		
2045	\$91,747,968.06	\$38,056,947.97	\$24,136,635.87	\$111,750,692.9		
2046	\$94,500,407.11	\$39,198,656.41	\$24,860,734.95	\$121,161,277.58		
2047	\$97,335,419.32	\$40,374,616.10	\$25,606,557.00	\$124,796,115.90		
2048	\$100,255,481.90	\$41,585,854.58	\$26,374,753.71	\$128,539,999.3		
2049	\$103,263,146.36	\$42,833,430.22	\$27,165,996.32	\$132,396,199.36		
2050	\$106,361,040.75	\$44,118,433.13	\$27,980,976.21	\$136,368,085.34		
Total Per Building	\$1,794,566,577.88	\$697,469,839.58	\$426,802,384.63	\$2,002,006,892.05		

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes



10 Avenue 3rd Tier, Cyclical Scenario-Projected PILOT

			YEAR BUILT			
	Expected Full Taxes	20 percent Discount	2028	2029	2033	
2012	\$15.27	\$12.21				
2013	\$15.72	\$12.58				
2014	\$16.19	\$12.96				
2015	\$16.68	\$13.34				
2016	\$17.18	\$13.74				
2017	\$17.70	\$14.16				
2018	\$18.23	\$14.58				
2019	\$18.77	\$15.02				
2020	\$19.34	\$15.47				
2021	\$19.92	\$15.93				
2022	\$20.51	\$16.41				
2023	\$21.13	\$16.90				
2024	\$21.76	\$17.41				
2025	\$22.42	\$17.93				
2026	\$23.09	\$18.47				
2027	\$23.78	\$19.03				
2028	\$24.50	\$19.60	\$19.60			
2029	\$25.23	\$20.18	\$20.18	\$20.18		
2030	\$25.99	\$20.79	\$20.79	\$20.79		
2031	\$26.77	\$21.41	\$21.41	\$21.41		
2032	\$27.57	\$22.06	\$22.06	\$22.06		
2033	\$28.40	\$22.72	\$22.72	\$22.72	\$22.72	
2034	\$29.25	\$23.40	\$23.40	\$23.40	\$23.40	
2035	\$30.13	\$24.10	\$24.10	\$24.10	\$24.10	
2036	\$31.03	\$24.82	\$24.82	\$24.82	\$24.82	
2037	\$31.96	\$25.57	\$25.57	\$25.57	\$25.57	
2038	\$32.92	\$26.34	\$26.34	\$26.34	\$26.34	
2039	\$33.91	\$27.13	\$27.13	\$27.13	\$27.13	
2040	\$34.93	\$27.94	\$27.94	\$27.94	\$27.94	
2041	\$35.97	\$28.78	\$28.78	\$28.78	\$28.78	
2042	\$37.05	\$29.64	\$29.64	\$29.64	\$29.64	
2043	\$38.16	\$30.53	\$32.06	\$30.53	\$30.53	
2044	\$39.31	\$31.45	\$34.59	\$33.02	\$31.45	
2045	\$40.49	\$32.39	\$37.25	\$35.63	\$32.39	
2046	\$41.70	\$33.36	\$40.03	\$38.37	\$33.36	
2047	\$42.95	\$34.36	\$42.95	\$41.24	\$34.36	
2048	\$44.24	\$35.39	\$44.24	\$44.24	\$37.16	
2049	\$45.57	\$36.46	\$45.57	\$45.57	\$40.10	
2050	\$46.94	\$37.55	\$46.94	\$46.94	\$43.18	

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes



10 Avenue 3rd Tier, Cyclical Scenario-Projected Revenue

	_	YEAR BUILT	
	2028	2029	2033
Completion SF	2,658,482	2,216,327	1,568,458
Revenues			
2012			
2013			
2014			
2015			
2016			
2017			
2018			
2019			
2020			
2021			
2022			
2023			
2024			
2025			
2026			
2027			
2028	\$52,097,411.81		
2029	\$53,660,334.16	\$44,735,613.42	
2030	\$55,270,144.19	\$46,077,681.82	
2031	\$56,928,248.51	\$47,460,012.28	
2032	\$58,636,095.97	\$48,883,812.64	
2033	\$60,395,178.85	\$50,350,327.02	\$35,632,102.19
2034	\$62,207,034.21	\$51,860,836.83	\$36,701,065.26
2035	\$64,073,245.24	\$53,416,661.94	\$37,802,097.22
2036	\$65,995,442.60	\$55,019,161.80	\$38,936,160.13
2037	\$67,975,305.88	\$56,669,736.65	\$40,104,244.94
2038	\$70,014,565.05	\$58,369,828.75	\$41,307,372.28
2039	\$72,115,002.00	\$60,120,923.61	\$42,546,593.45
2040	\$74,278,452.06	\$61,924,551.32	\$43,822,991.26
2041	\$76,506,805.63	\$63,782,287.86	\$45,137,680.99
2042	\$78,802,009.79	\$65,695,756.50	\$46,491,811.42
2043	\$85,224,373.59	\$67,666,629.19	\$47,886,565.77
2044	\$91,961,157.41	\$73,181,459.47	\$49,323,162.74
2045	\$99,025,446.32	\$78,966,279.60	\$50,802,857.62
2046	\$106,430,827.52	\$85,032,325.63	\$52,326,943.3
2047	\$114,191,408.70	\$91,391,264.76	\$53,896,751.65
2048	\$117,617,150.96	\$98,055,211.15	\$58,289,336.9
2049	\$121,145,665.49	\$100,996,867.48	\$62,896,970.2
2050	\$124,780,035.45	\$104,026,773.51	\$67,728,601.10
Total Per Building	\$1,829,331,341.40	\$1,463,684,003.24	\$851,633,308.51

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes



10th Avenue 4th Tier, Cyclical Scenario-Projected PILOT

	· ·		nario-Projected I YEAR BUILT
	Expected Full Taxes	15 percent Discount	2035
2012	\$15.27	\$12.98	
2013	\$15.72	\$13.36	
2014	\$16.19	\$13.77	
2015	\$16.68	\$14.18	
2016	\$17.18	\$14.60	
2017	\$17.70	\$15.04	
2018	\$18.23	\$15.49	
2019	\$18.77	\$15.96	
2020	\$19.34	\$16.44	
2021	\$19.92	\$16.93	
2022	\$20.51	\$17.44	
2023	\$21.13	\$17.96	
2024	\$21.76	\$18.50	
2025	\$22.42	\$19.05	
2026	\$23.09	\$19.63	
2027	\$23.78	\$20.22	
2028	\$24.50	\$20.82	
2029	\$25.23	\$21.45	
2030	\$25.99	\$22.09	
2031	\$26.77	\$22.75	
2032	\$27.57	\$23.43	
2033	\$28.40	\$24.14	
2034	\$29.25	\$24.86	
2035	\$30.13	\$25.61	\$25.61
2036	\$31.03	\$26.38	\$26.38
2037	\$31.96	\$27.17	\$27.17
2038	\$32.92	\$27.98	\$27.98
2039	\$33.91	\$28.82	\$28.82
2040	\$34.93	\$29.69	\$29.69
2041	\$35.97	\$30.58	\$30.58
2042	\$37.05	\$31.49	\$31.49
2043	\$38.16	\$32.44	\$32.44
2044	\$39.31	\$33.41	\$33.41
2045	\$40.49	\$34.41	\$34.41
2046	\$41.70	\$35.45	\$35.45
2047	\$42.95	\$36.51	\$36.51
2048	\$44.24	\$37.61	\$37.61
2049	\$45.57	\$38.73	\$38.73
2050	\$46.94	\$39.90	\$41.30

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes



10th Avenue 4th Tier, Cyclical Scenario-Projected Revenue

	YEAR BUILT
	2035
Completion SF	1,088,488
Revenues	
2012	
2013	
2014	
2015	
2016	
2017	
2018	
2019	
2020	
2021	
2022	
2023	
2024	
2025	
2026	
2027	
2028	
2029	
2030	
2031	
2032	
2033	
2034	
2035	\$27,873,751.67
2036	\$28,709,964.22
2037	\$29,571,263.14
2038	\$30,458,401.04
2039	\$31,372,153.07
2040	\$32,313,317.66
2041	\$33,282,717.19
2042	\$34,281,198.70
2043	\$35,309,634.67
2044	\$36,368,923.71
2045	\$37,459,991.42
2046	\$38,583,791.16
2047	\$39,741,304.89
2048	\$40,933,544.04
2049	\$42,161,550.36
2050	\$44,959,093.23
Total Per Building	\$563,380,600.16

^{*}Total may not match Exhibit 1-5 due to rounding. Shaded areas highlight five-year phase-out to full taxes



APPENDIX B: SUPPLEMENTAL RESIDENTIAL MARKET INFORMATION



CLASS 2 RESIDENTIAL, 421-a TAX PROGRAM

Developers of residential rental properties (Class 2) in Hudson Yards are assumed to be able to purchase additional FAR by participating in the 421-a tax program (421-a). The 421-a program expires in December 2007 and a task force has recently recommended numerous changes. As any changes still require legislative action, it is assumed for purposes of this analysis that the program remains intact for Hudson Yards.

The eligibility requirements of the 421-a vary by geographic location within the City. Properties generally located between 14th and 96th Streets in Manhattan, including the Hudson Yards, are not eligible to participate in 421-a (referred to as the Exclusion Area) unless these properties contain 20 percent of affordable housing or receive substantial government assistance.

Properties eligible for 421-a receive full (100 percent) abatement on assessment increases, due to improvements and new construction¹ during a construction period and then reduced taxes, or a phased out abatement, for a post-construction period. The duration of the exemption during construction and the phase-out schedule of these abatements vary by location.

Rental properties in Hudson Yards that provide affordable housing are expected to receive full (100 percent) abatement during a three-year construction period and for 12 years following construction. After this 12-year period the abatement progressively declines by 20 percent in two year increments over an eight year period (80.0 percent abatement in years 13 and 14, 60.0 percent abatement in years 15 and 16 until the abatement phases out in year 21).

Property developers of market-rate rental or condominium units in the Exclusion Area can purchase negotiable certificates from other developers. Under 421-a, a developer of affordable housing, rather than receiving an on-site abatement, can enter into an agreement with the HPD Tax Incentive Programs (TIP) and receive negotiable certificates, (five certificates for every one unit built) which allows exemption for market-rate units in the Exclusion Area. The affordable housing developer then sells the certificates to the developer of a project in the Exclusion Area. These certificates grant a post-construction 10-year abatement on taxes (2 years full abatement, plus 8 year phase-out, 80 percent in years 3 and 4, and 60 percent in years 5 and 6 until the abatement phases out in year 11). An overview of the 421-a program is provided in Exhibit B-1.

¹ Land values and existing building assessments for properties under 421-a are held constant during the abatement period.



Exhibit B-1. Schedule of Exemptions Under 421-a Tax Program

Qualifying Conditions:

- A. Substantial government assistance
- B. At least 20% of the units must be reserved for low and moderate income occupants
- C. Participation in a lower/moderate income off-site housing production program

Location	Qualifying Conditions To Be Met	Number Of Yea New Value Is E		Construction Commencement
Manhattan Exclusion Zone - south of 96th Street north of Houston Street on the West Side, north of 14th Street on the East Side	A, B or C	10 Year Exemp Years 1-2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10	tion 100% 80% 80% 60% 60% 40% 40% 20% 20%	After January 1, 1975 but no later than December 31, 2007
Manhattan south of 110th Street and not in the Exclusion Zone	A or B	20 Year Exemp Years 1-12 Year 13 Year 14 Year 15 Year 16 Year 17 Year 18 Year 19 Year 20	100% 80% 80% 60% 60% 40% 40% 20%	After January 1, 1992 but no later than December 31, 2007
Manhattan south of 110th Street and not in the Exclusion Zone	none	10 Year Exemp Years 1-2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9 Year 10	tion 100% 80% 80% 60% 60% 40% 40% 20%	After January 1, 1975 but no later than December 31, 2007
Manhattan south of 110th Street and not in the Exclusion Zone	A or B	15 Year Exemp Years 1-11 Year 12 Year 13 Year 14 Year 15	tion 100% 80% 60% 40% 20%	No longer available from 7/1/92
Manhattan north of 110th Street or in the other four boroughs	none	15 Year Exemp Years 1-11 Year 12 Year 13 Year 14 Year 15	tion 100% 80% 60% 40% 20%	After January 1, 1975 but no later than December 31, 2007
Manhattan north of 110th Street or in the other four boroughs	A, or are located in a neighborhood preservation area*, or REMIC**	25 Year Exemp Years 1-21 Year 22 Year 23 Year 24 Year 25	tion 100% 80% 60% 40% 20%	After January 1, 1975 but no later than December 31, 2007

 $^{{}^*\!\}text{Areas}$ within the five boroughs as defined by the NYC Planning Commission.

 $Source: New\ York\ City\ Office\ of\ Management\ and\ Budget.$



^{**}Residential Mortgage Insurance Corporation.

RESIDENTIAL REVENUES - SUPPORTING TABLES

DOF Market Value 80/20 Units, Base Scenario

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2007 \$	- \$	- \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - :	\$ -	\$ - :	- :	- \$	- \$	-
2008 \$	- \$	80,960,411 \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - :	\$ -	\$ - :	- :	5 - \$	- \$	-
2009 \$	- \$	84,198,828 \$	82,528,857	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - :	\$ -	\$ - :	- :	- \$	- \$	-
2010 \$	- \$	87,566,781 \$	85,830,011	\$ 107,847,762	\$ -	\$ -	\$ -	\$ -	\$ - :	\$ -	\$ - :	- :	- \$	- \$	-
2011 \$	- \$	91,069,452 \$	89,263,212	\$ 112,161,673	\$ 114,084,444	\$ -	\$ -	\$ -	\$ -:	\$ -	\$ - :	- :	- \$	- \$	-
2012 \$	- \$	94,712,230 \$	92,833,740	\$ 116,648,140	\$ 118,647,822	\$ 126,707,148	\$ -	\$ -	\$ -	\$ -	\$ - :	- :	- 9	- \$	
2013 \$	- \$	98,500,719 \$	96,547,090	\$ 121,314,065	\$ 123,393,735	\$ 131,775,434	\$ 119,990,639	\$ -	\$ - :	\$ -	\$ - :	- :	- \$	- \$	_
2014 \$	- \$ 1	102,440,748 \$	100,408,974	\$ 126,166,628	\$ 128,329,485	\$ 137,046,452	\$ 124,790,265	\$ 143,840,879	\$ - :	\$ -	\$ - :	- :	- \$	- \$	
2015 \$	- \$ 1	106,538,378 \$	104,425,333	\$ 131,213,293	\$ 133,462,664	\$ 142,528,310	\$ 129,781,875	\$ 149,594,515	\$ 135,598,430	\$ -	\$ - :	- :	- \$	- \$	
2016 \$							\$ 134,973,150								
2017 \$	- \$ 1	115,231,909 \$	112,946,440	\$ 141,920,298	\$ 144,353,217	\$ 154,158,620	\$ 140,372,076	\$ 161,801,427	\$ 146,663,262	\$ 137,717,983	\$ 141,846,573	- :	- 9	- \$	-
2018 \$							\$ 145,986,960								
2019 \$													\$ 123,970,327 \$		
2020 \$													\$ 128,929,140 \$		
2021 \$													134,086,305		
2022 \$													\$ 139,449,758 \$		
2023 \$													\$ 145,027,748 \$		
2024 \$													150,828,858 \$		
2025 \$													\$ 156,862,012 \$		
2026 \$													163,136,493		
2027 \$													169,661,952		
2028 \$ 2029 \$													\$ 176,448,430 \$ \$ 183,506,368 \$		
2030 \$													\$ 190,846,622 \$		
2030 \$													\$ 198,480,487 \$		
2032 \$													\$ 206,419,707		
2033 \$													\$ 214,676,495		
2034 \$													\$ 223,263,555 \$		
2035 \$													\$ 232,194,097		
2036 \$													\$ 241,481,861 \$		
2037 \$	- \$ 2	252,487,304 \$	247,479,558	\$ 310,964,849	\$ 316,295,675	\$ 337,780,519	\$ 307,572,505	\$ 354,526,851	\$ 321,357,268	\$ 301,757,059	\$ 310,803,309	280,433,755	\$ 251,141,135 \$	226,156,254 \$	200,094,438
2038 \$	- \$ 2	262,586,796 \$	257,378,740	\$ 323,403,443	\$ 328,947,502	\$ 351,291,740	\$ 319,875,406	\$ 368,707,925	\$ 334,211,558	\$ 313,827,341	\$ 323,235,441	291,651,105	\$ 261,186,781 \$	235,202,504 \$	208,098,216
2039 \$	- \$ 2	273,090,267 \$	267,673,890	\$ 336,339,581	\$ 342,105,402	\$ 365,343,410	\$ 332,670,422	\$ 383,456,243	\$ 347,580,021	\$ 326,380,435	\$ 336,164,859	303,317,149	\$ 271,634,252 \$	244,610,604 \$	216,422,144
2040 \$	- \$ 2	284,013,878 \$	278,380,845	\$ 349,793,164	\$ 355,789,618	\$ 379,957,146	\$ 345,977,239	\$ 398,794,492	\$ 361,483,221	\$ 339,435,652	\$ 349,611,453	315,449,835	\$ 282,499,622 \$	254,395,028 \$	225,079,030
2041 \$	- \$ 2	295,374,433 \$	289,516,079	\$ 363,784,891	\$ 370,021,203	\$ 395,155,432	\$ 359,816,328	\$ 414,746,272	\$ 375,942,550	\$ 353,013,078	\$ 363,595,912	328,067,829	\$ 293,799,607 \$	264,570,830 \$	234,082,191
2042 \$	- \$ 3	307,189,411 \$	301,096,722	\$ 378,336,286	\$ 384,822,051	\$ 410,961,649	\$ 374,208,981	\$ 431,336,123	\$ 390,980,252	\$ 367,133,601	\$ 378,139,748	341,190,542	\$ 305,551,591 \$	275,153,663 \$	243,445,479
2043 \$	- \$ 3	319,476,987 \$	313,140,591	\$ 393,469,738	\$ 400,214,933	\$ 427,400,115	\$ 389,177,341	\$ 448,589,568	\$ 406,619,462	\$ 381,818,946	\$ 393,265,338	354,838,163	\$ 317,773,655 \$	286,159,809 \$	253,183,298
2044 \$	- \$ 3	332,256,067 \$	325,666,215	\$ 409,208,527	\$ 416,223,531	\$ 444,496,120	\$ 404,744,434	\$ 466,533,150	\$ 422,884,241	\$ 397,091,703	\$ 408,995,951	369,031,690	\$ 330,484,601 \$	297,606,202 \$	263,310,630
2045 \$	- \$ 3	345,546,309 \$	338,692,864	\$ 425,576,868	\$ 432,872,472	\$ 462,275,965	\$ 420,934,212	\$ 485,194,476	\$ 439,799,610	\$ 412,975,371	\$ 425,355,789	383,792,958	\$ 343,703,985 \$	309,510,450 \$	273,843,055
2046 \$													\$ 357,452,145 \$		
2047 \$	- \$ 3	373,742,888 \$	366,330,201	\$ 460,303,941	\$ 468,194,866	\$ 499,997,683	\$ 455,282,443	\$ 524,786,346	\$ 475,687,259	\$ 446,674,162	\$ 460,064,822	415,110,463	\$ 371,750,230 \$	334,766,502 \$	296,188,648
2048 \$													\$ 386,620,240 \$		
2049 \$													\$ 402,085,049 \$		
2050 \$	- \$ 4	120,409,920 \$	412,071,655	\$ 517,779,332	\$ 526,655,549	\$ 562,429,394	\$ 512,130,830	\$ 590,313,268	\$ 535,083,473	\$ 502,447,684	\$ 517,510,356	466,942,816	\$ 418,168,451 \$	376,566,787 \$	333,171,948



Market Value 80/20 Units, Base Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2007 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2008 \$	\$ - \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2009 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2010 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2011	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	_
2012 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- 9	- \$	- \$	- \$	- \$	
2013	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2014 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2015	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- 9	- \$	- \$	- \$	- \$	-
2016 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2017 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2018 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2019	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2020 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2021 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2022 \$	\$ 92,209,059 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2023 \$	\$ 95,897,422 \$	77,986,619 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2024 \$	\$ 99,733,319 \$	81,106,084 \$	52,130,386 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
	\$ 103,722,651 \$					- \$								-
2026 \$	\$ 107,871,557 \$	87,724,340 \$	56,384,225 \$	34,697,985 \$	18,188,460 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2027 \$	\$ 112,186,420 \$	91,233,314 \$				9,021,476 \$	- \$			- \$				-
	\$ 116,673,876 \$					9,382,335 \$								-
	\$ 121,340,831 \$					9,757,628 \$								
	\$ 126,194,465 \$. , ,	, , ,	,, +		10,147,934 \$	18,331,751 \$,,	.,,					
	\$ 131,242,243 \$													
	\$ 136,491,933 \$													
	\$ 141,951,610 \$													
	\$ 147,629,675 \$,,			-, -, -, -				. ,,	117,567,601 \$	
	\$ 153,534,862 \$												122,270,305 \$	
	\$ 159,676,256 \$												127,161,117 \$	
	\$ 166,063,306 \$												132,247,562 \$	
	\$ 172,705,839 \$, ,		., .,	.,,	25,088,267 \$.,,.		, , ,	. , ,		137,537,464 \$	
	\$ 179,614,072 \$												143,038,963 \$	
	\$ 186,798,635 \$												148,760,521 \$	
	\$ 194,270,581 \$				32,756,388 \$								154,710,942 \$	
	\$ 202,041,404 \$. , ,	, ,							.,,	,,		160,899,380 \$	
	\$ 210,123,060 \$. , ,									167,335,355 \$	
	\$ 218,527,982 \$					17,572,938 \$	31,744,662 \$						174,028,769 \$	
	\$ 227,269,102 \$						33,014,448 \$						180,989,920 \$	
	\$ 236,359,866 \$.,. , ,		19,006,889 \$	34,335,026 \$., , .	,,				188,229,517 \$	
	\$ 245,814,260 \$					19,767,165 \$	35,708,427 \$						195,758,698 \$	
	\$ 255,646,831 \$					20,557,852 \$	37,136,764 \$						203,589,046 \$	
	\$ 265,872,704 \$, ,	, , , , , ,	21,380,166 \$	38,622,235 \$						211,732,607 \$	
∠∪50 ३	\$ 276,507,612 \$	224,004,10/ \$	144,529,919 \$	88,941,489 \$	46,622,555 \$	22,235,372 \$	40,167,124 \$	47,339,825 \$	56,664,336	67,064,752 \$	₹ 600,024,035	112,144,01/ \$	220,201,912 \$	200,004,970



Exempt Assessed Value 80/20 Units, Base Scenario

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2007															
2008		33,247,939													
2009			33.892.051												
2010	\$			\$ 44,289,743											
2011				\$ 46,231,003	\$ 46.850.956										
2012	\$	39.436.257		\$ 48,249,913		\$ 52,034,710									
2013	\$	41,141,078		\$ 50,349,580		\$ 54,315,439	\$ 49.276,448								
2014		42,914,091	\$ 41,938,104	\$ 52,533,233	\$ 53,261,224	\$ 56,687,397	\$ 51,436,279	\$ 59,071,004							
2015	\$	44,758,024	\$ 43,745,465	\$ 54,804,232	\$ 55,571,155	\$ 59,154,233	\$ 53,682,504	\$ 61,660,140	55,686,085						
2016	\$	46,675,715	\$ 45,625,121	\$ 57,166,071	\$ 57,973,483	\$ 61,719,742	\$ 56,018,578	\$ 64,352,841	58,126,857	\$ 54,381,269					
2017	\$	48,670,113	\$ 47,579,963	\$ 59,622,384	\$ 60,471,904	\$ 64,387,872	\$ 58,448,094	\$ 67,153,251	60,665,259	\$ 56,764,849	58,252,004				
2018	\$	50,744,288	\$ 49,612,999	\$ 62,176,950	\$ 63,070,262	\$ 67,162,728	\$ 60,974,792	\$ 70,065,676	63,305,198	\$ 59,243,773	60,805,242	54,662,421			
2019	\$	52,901,429	\$ 51,727,357	\$ 64,833,698	\$ 65,772,554	\$ 70,048,577	\$ 63,602,557	\$ 73,094,599	66,050,734	\$ 61,821,854	63,460,610	57,058,325 \$	50,910,782		
2020	\$	44,115,885	\$ 53,926,288	\$ 67,596,715	\$ 68,582,938	\$ 73,049,860	\$ 66,335,433	\$ 76,244,679	68,906,092	\$ 64,503,058	66,222,193	59,550,065 \$	53,142,248 \$	47,679,738	
2021	\$	45,982,416	\$ 44,970,542	\$ 70,470,254	\$ 71,505,737	\$ 76,171,195	\$ 69,177,624	\$ 79,520,761	71,875,664	\$ 67,291,510	69,094,239	62,141,474 \$	55,462,973 \$	49,769,584 \$	43,872,624
2022	\$	35,942,706	\$ 46,873,233	\$ 58,766,987	\$ 74,545,448	\$ 79,417,383	\$ 72,133,502	\$ 82,927,888	74,964,019	\$ 70,191,500	72,081,166	64,836,540 \$	57,876,526 \$	51,943,024 \$	45,795,601
2023	\$	37,456,837	\$ 36,639,024	\$ 61,253,403	\$ 62,165,398	\$ 82,793,419	\$ 75,207,616	\$ 86,471,299	78,175,908	\$ 73,207,489	75,187,571	67,639,408 \$	60,386,622 \$	54,203,402 \$	47,795,497
2024	\$	26,021,021	\$ 38,182,488	\$ 47,879,456	\$ 64,795,600	\$ 69,043,596	\$ 78,404,694	\$ 90,156,446	81,516,273	\$ 76,344,119	78,418,232	70,554,391 \$	62,997,121 \$	56,554,195 \$	49,875,389
2025	\$	27,112,810	\$ 26,525,127	\$ 49,896,436	\$ 50,648,257	\$ 71,964,812	\$ 65,383,724	\$ 93,989,000	84,990,252	\$ 79,606,213	81,778,120	73,585,974 \$	65,712,041 \$	58,999,019 \$	52,038,477
2026	\$	14,124,135	\$ 27,638,067	\$ 34,662,731	\$ 52,781,876	\$ 56,252,158	\$ 68,150,092	\$ 78,379,884	88,603,190	\$ 82,998,791	85,272,403	76,738,819 \$	68,535,557 \$	61,541,637 \$	54,288,088
2027	\$	14,714,575	\$ 14,397,762	\$ 36,117,108	\$ 36,667,227	\$ 58,621,848	\$ 53,270,336	\$ 81,696,116	73,888,517	\$ 86,527,073	88,906,457	80,017,779 \$	71,472,014 \$	64,185,959 \$	56,627,684
2028	\$	- 9	\$ 14,999,640	\$ 18,814,830	\$ 38,205,709	\$ 40,724,218	\$ 55,514,414	\$ 63,858,748	77,014,720	\$ 72,157,188	92,685,873	83,427,897 \$	74,525,929 \$	66,936,054 \$	59,060,863
2029	\$	- 9	-	\$ 19,601,357	\$ 19,902,865	\$ 42,432,922	\$ 38,565,503	\$ 66,548,875	60,199,479	\$ 75,210,140	77,293,173	86,974,420 \$	77,702,001 \$	69,796,153 \$	61,591,369
2030	\$	- 9	-	\$ - :	\$ 20,734,876	\$ 22,104,988	\$ 40,183,633	\$ 46,231,072	62,735,455	\$ 58,788,907	80,563,427	72,530,242 \$	81,005,115 \$	72,770,656 \$	64,223,096
2031	\$	- 9	\$ -	\$ - :	\$ -	\$ 23,029,055	\$ 20,933,244	\$ 48,170,833	43,581,914	\$ 61,265,461	62,973,368	75,598,978 \$	67,552,284 \$	75,864,139 \$	66,960,092
2032	\$	- (\$ -	\$ - :	\$ -	\$ -	\$ 21,808,328	\$ 25,094,092	\$ 45,410,521	\$ 42,560,718	65,626,197	59,092,847 \$	70,410,403 \$	63,265,089 \$	69,806,568
2033	\$	- 9	\$ -	\$ - :	\$ -	\$ -	\$ -	\$ 26,143,115	\$ 23,656,137	\$ 44,346,479	\$ 45,590,093	61,582,205 \$	55,037,135 \$	65,941,818 \$	58,213,522
2034	\$	- (\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - :	24,645,048	\$ 23,101,835	47,502,960	42,780,758 \$	57,355,641 \$	51,544,212 \$	60,676,521
2035	\$	- 9	\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - :	\$ - :	\$ 24,067,574	\$ 24,746,171	44,575,751 \$	39,844,592 \$	53,715,575 \$	47,428,529
2036	\$	- (\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - :	\$ - :	\$ - :	\$ 25,780,649	23,221,272 \$	41,516,389 \$	37,315,861 \$	49,426,514
2037	\$	- (\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - :	\$ - :	\$ - :	- 9	24,192,004 \$	21,627,529 \$	38,881,558 \$	34,336,278
2038	\$	- (\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - :	- :	\$ - :	- 9	- \$	22,531,637 \$	20,254,942 \$	35,776,958
2039	\$	- (\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - :	- :	\$ - :	- 9	- \$	- \$	21,101,671 \$	18,637,633
2040	\$	- (\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - :	- :	\$ - :	- 9	- \$	- \$	- \$	19,416,752
2041	\$	- (\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - :	\$ - :	\$ - :	- 9	- \$	- \$	- \$	
2042	\$	- (\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - :	\$ - :	\$ - :	- 9	- \$	- \$	- \$	
2043	\$	- (\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - :	- :	\$ - :	- 9	- \$	- \$	- \$	
2044	\$	- (\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - :	- :	\$ - :	- 9	- \$	- \$	- \$	
2045	\$	- (\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - :	- :	\$ - :	- 9	- \$	- \$	- \$	
2046	· ·		•	•	•		•		•	•					
2047			-	\$ - :	\$ -	\$ -	\$ -	\$ - 5	- :	\$ - :	- 9	- \$	- \$	- \$	
2048				•						\$ - :				- \$	-
2049		- 9		•										- \$	-
2050	\$	- 9	\$ -	\$ - :	\$ -	\$ -	\$ -	\$ - 5	- :	\$ - :	- 9	- \$	- \$	- \$	



Exempt Assessed Value 80/20 Units, Base Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2007														
2008														
2009														
2010														
2011														
2012														
2013														
2014														
2015														
2016														
2017														
2018														
2019														
2020														
2021	07.007.444													
2022 \$		32,026,695												
2023 \$		33,430,454 \$	21 400 220											
2025 \$, ,	34,890,363 \$	22,346,685 \$	13,701,337										
2026 \$		36,408,669 \$	23,322,566 \$	14,301,879 \$	7,469,438									
2027 \$,,	37,987,707 \$	24,337,482 \$	14,926,442 \$		3,704,841								
2028 \$		39.629.907 \$	25,392,995 \$	15,575,989 \$	8,137,319 \$	3,867,228 \$	6,960,321							
2029 \$		41,337,794 \$	26,490,728 \$		8,491,426 \$	4,036,110 \$	7,265,399 \$	8,531,365						
2030 \$	53,160,844 \$	43,113,998 \$	27,632,371 \$	16,954,066 \$	8,859,698 \$	4,211,747 \$	7,582,679 \$	8,905,303 \$	10,620,257					
2031 \$	55,432,344 \$	44,961,249 \$	28,819,679 \$	17,684,717 \$	9,242,701 \$	4,394,410 \$	7,912,650 \$	9,294,198 \$	11,085,753 \$	13,072,327				
2032 \$	57,794,704 \$	46,882,390 \$	30,054,479 \$	18,444,595 \$	9,641,023 \$	4,584,379 \$	8,255,821 \$	9,698,649 \$	11,569,868 \$	13,645,299 \$	19,992,970			
2033 \$	60,251,559 \$	48,880,377 \$	31,338,672 \$	19,234,867 \$	10,055,279 \$	4,781,948 \$	8,612,718 \$	10,119,278 \$	12,073,348 \$	14,241,190 \$	20,869,281 \$	36,292,694		
2034 \$	50,245,351 \$	50,958,284 \$	32,674,232 \$	20,056,750 \$	10,486,105 \$	4,987,418 \$	8,983,891 \$	10,556,732 \$	12,596,967 \$	14,860,916 \$	21,780,643 \$	37,883,436 \$	48,281,381	
2035 \$	52,371,218 \$	42,495,445 \$	34,063,215 \$	20,911,509 \$	10,934,164 \$	5,201,108 \$	9,369,911 \$	11,011,684 \$	13,141,531 \$	15,505,432 \$	22,728,460 \$	39,537,807 \$	50,397,597 \$	57,818,133
2036 \$	40,936,590 \$	44,293,416 \$	28,406,206 \$	21,800,458 \$	11,400,145 \$	5,423,345 \$	9,771,372 \$	11,484,834 \$	13,707,878 \$	16,175,728 \$	23,714,190 \$	41,258,354 \$	52,598,463 \$	60,352,354
2037 \$	42,661,093 \$	34,622,479 \$	29,608,065 \$	18,179,972 \$	11,884,766 \$	5,654,472 \$	10,188,891 \$	11,976,910 \$	14,296,878 \$	16,872,836 \$	24,739,348 \$	43,047,722 \$	54,887,363 \$	62,987,944
2038 \$.,,	36,080,993 \$	23,143,498 \$	18,949,161 \$	9,911,017 \$	5,894,844 \$	10,623,111 \$	12,488,669 \$	14,909,438 \$	17,597,828 \$	25,805,514 \$	44,908,665 \$	57,267,819 \$	65,728,958
2039 \$, , ,	25,065,232 \$	24,118,446 \$	14,811,839 \$	10,330,349 \$	4,915,864 \$	11,074,700 \$	13,020,899 \$	15,546,501 \$	18,351,820 \$	26,914,325 \$	46,844,045 \$	59,743,493 \$	68,579,612
2040 \$.,,.	26,116,918 \$	16,754,928 \$	15,435,806 \$	8,074,841 \$	5,123,853 \$	9,235,482 \$	13,574,418 \$	16,209,047 \$	19,135,972 \$	28,067,490 \$	48,856,841 \$	62,318,195 \$	71,544,293
2041 \$.,,	13,605,335 \$	17,457,931 \$	10,723,154 \$	8,415,004 \$	4,005,121 \$	9,626,233 \$	11,320,062 \$	16,898,094 \$	19,951,490 \$	29,266,781 \$	50,950,149 \$	64,995,884 \$	74,627,561
2042 \$			9,094,527 \$	11,173,076 \$	5,845,848 \$	4,173,842 \$	7,524,460 \$	11,799,011 \$	14,091,762 \$	20,799,628 \$	30,514,043 \$	53,127,189 \$	67,780,681 \$	77,834,159
2043 \$		- \$	9,474,710 \$	5,820,497 \$	6,091,128 \$	2,899,541 \$	7,841,437 \$	9,222,838 \$	14,687,981 \$	17,345,354 \$	31,811,196 \$	55,391,310 \$	70,676,870 \$	81,169,022
2044 \$		- \$	- \$.,,.	3,173,110 \$	3,021,200 \$	5,447,395 \$	9,611,361 \$	11,481,036 \$	18,079,231 \$	26,528,188 \$	57,745,997 \$	73,688,906 \$	84,637,278
2045 \$	<u> </u>	- \$	- \$	- \$	3,305,757 \$	1,573,862 \$	5,675,957 \$	6,676,950 \$	11,964,689 \$	14,131,848 \$	27,650,589 \$	48,155,896 \$	76,821,424 \$	88,244,266
2046 \$		- \$	- \$	- \$	- \$	1,639,655 \$	2,956,831 \$	6,957,102 \$	8,311,792 \$	14,727,169 \$	21,613,414 \$	50,193,360 \$	64,063,394 \$	91,995,532
2047 \$		- \$	- \$		- \$	- \$	3,080,437 \$	3,624,229 \$	8,660,537 \$	10,230,869 \$	22,523,905 \$	39,234,241 \$	66,773,899 \$	76,717,480
2048 \$ 2049 \$		- \$ - \$	- \$ - \$	- \$ - \$	- \$ - \$	- \$ - \$	- \$ - \$	3,775,735 \$	4,511,616 \$ 4,700,218 \$	10,660,135 \$ 5,553,286 \$	15,647,211 \$ 16,303,736 \$	40,887,031 \$ 28,403,955 \$	52,194,618 \$ 54,393,380 \$	79,963,376 62,504,331
2049 \$		- \$	- \$		- \$	- \$	- \$	- \$	4,700,218 \$	5,785,433 \$	8,493,261 \$	29,595,727 \$	37,786,728 \$	65,137,401
2000 \$, - ə	- ş	- ə	- p	- ş	- p	- ə	- ə	- ə	J, 100,400 Þ	0,433,201 \$	20,000,121 Þ	J1,100,120 Þ	00, 107,401



Taxes 80/20 Units, Base Scenario

2007 S		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2000 S	2007 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2010 S 3 405,577 3 413,455 5 540,727 5 71,515 5 5 5 5 5 5 5 5 5	2008 \$	- \$	405,577 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2011 S	2009 \$	- \$	405,577 \$	413,435 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2012 S	2010 \$	- \$	405,577 \$	413,435 \$	540,272 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2011 S	2011 \$	- \$	405,577 \$	413,435 \$	540,272 \$	571,515 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2014 S	2012 \$	- \$	405,577 \$	413,435 \$	540,272 \$	571,515 \$	634,749 \$	- \$	- \$	- 9	- \$	- \$	- \$	- \$	- \$	-
2015 \$. \$ 405.77 \$ 413.48 \$ 540.27 \$ 571.515 \$ 634.74 \$ 601.102 \$ 720.582 \$ 678.29 \$. \$. \$. \$. \$. \$. \$. \$. \$. \$	2013 \$	- \$	405,577 \$	413,435 \$	540,272 \$	571,515 \$	634,749 \$	601,102 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2016 S	2014 \$	- \$	405,577 \$	413,435 \$	540,272 \$	571,515 \$	634,749 \$	601,102 \$	720,582 \$	- \$	- \$	- \$	- \$	- \$	- \$	
2017 \$ -\$ 405.577 \$ 413.635 \$ 540.272 \$ 571.515 \$ 634.749 \$ 601.102 \$ 720.682 \$ 672.201 \$ 663.374 \$ 710.991 \$ -\$ -\$ -\$ -\$ -\$ -\$ -\$ -\$ -\$ -\$ -\$ -\$ -	2015 \$	- \$	405,577 \$	413,435 \$	540,272 \$	571,515 \$	634,749 \$	601,102 \$	720,582 \$	679,291	- \$	- \$	- \$	- \$	- \$	
2018 S	2016 \$	- \$	405,577 \$	413,435 \$	540,272 \$	571,515 \$	634,749 \$	601,102 \$	720,582 \$	679,291	663,374 \$	- \$	- \$	- \$	- \$	
2019 \$ - \$ 406,577 \$ 413,435 \$ 540,272 \$ 671,515 \$ 634,749 \$ 601,102 \$ 720,582 \$ 679,291 \$ 663,374 \$ 710,591 \$ 666,804 \$ 621,039 \$ 511,625 \$ - \$ 1,920 \$ 1,920 \$ 1,920	2017 \$	- \$	405,577 \$	413,435 \$	540,272 \$	571,515 \$	634,749 \$	601,102 \$	720,582 \$	679,291	663,374 \$	710,591 \$	- \$	- \$	- \$	
2020 S	2018 \$	- \$	405,577 \$	413,435 \$	540,272 \$	571,515 \$	634,749 \$	601,102 \$	720,582 \$	679,291	663,374 \$	710,591 \$	666,804 \$	- \$	- \$	
2021 \$ - \$ 1,8887,702 \$ 1,8845,700 \$ 540,272 \$ 571,515 \$ 634,749 \$ 601,02 \$ 720,582 \$ 679,291 \$ 663,374 \$ 710,591 \$ 668,804 \$ 621,039 \$ 581,625 \$ 535,182 \$ 2023 \$ - \$ 3,506,162 \$ 3,524,576 \$ 2,490,733 \$ 2,551,017 \$ 634,749 \$ 601,02 \$ 720,582 \$ 679,291 \$ 663,374 \$ 710,591 \$ 668,604 \$ 621,039 \$ 581,625 \$ 535,182 \$ 2024 \$ - \$ 5,577,024 \$ 3,055,637 \$ 4,006,876 \$ 2,294,798 \$ 2,835,270 \$ 601,102 \$ 720,582 \$ 679,291 \$ 663,374 \$ 710,591 \$ 668,604 \$ 621,039 \$ 581,625 \$ 535,182 \$ 2024 \$ - \$ 5,577,024 \$ 3,055,637 \$ 4,006,876 \$ 2,294,798 \$ 2,835,270 \$ 601,102 \$ 720,582 \$ 679,291 \$ 663,374 \$ 710,591 \$ 668,604 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2026 \$ - \$ 5,770,045 \$ 4,841,193 \$ 4,777,144 \$ 4,847,227 \$ 2,282,029 \$ 2,683,004 \$ 720,582 \$ 679,291 \$ 663,374 \$ 710,591 \$ 668,04 \$ 621,039 \$ 581,625 \$ 555,183 \$ 2026 \$ - \$ 7,601,542 \$ 5,593,262 \$ 7,162,760 \$ 5,053,400 \$ 5,411,307 \$ 2,771,172 \$ 3,042,004 \$ 601,002 \$ 663,000 \$ 710,591 \$ 668,004 \$ 621,039 \$ 581,625 \$ 555,183 \$ 2026 \$ - \$ 7,601,542 \$ 5,693,262 \$ 7,162,760 \$ 5,053,400 \$ 5,411,307 \$ 2,771,172 \$ 3,042,000 \$ 663,374 \$ 710,591 \$ 668,004 \$ 621,039 \$ 581,625 \$ 555,183 \$ 2028 \$ - \$ 7,601,542 \$ 5,693,202 \$ 7,748,008 \$ 7,740,000 \$ 7,870,000 \$ 5,411,307 \$ 2,771,172 \$ 3,042,000 \$ 663,374 \$ 710,591 \$ 668,004 \$ 621,039 \$ 581,625 \$ 555,183 \$ 2028 \$ - \$ 10,167,616 \$ 8,055,461 \$ 10,120,061 \$ 7,870,000 \$ 8,145,315 \$ 5,315,016 \$ 6,374,400 \$ 3,311,000 \$ 7,70,919 \$ 668,004 \$ 621,039 \$ 8,1625 \$ 555,183 \$ 2028 \$ - \$ 10,167,616 \$ 8,055,461 \$ 10,120,061 \$ 7,870,000 \$ 8,145,315 \$ 8,345,312 \$ 1,135,519 \$ 1,186,517 \$ 1	2019 \$	- \$	405,577 \$	413,435 \$	540,272 \$	571,515 \$	634,749 \$	601,102 \$	720,582 \$	679,291	663,374 \$	710,591 \$	666,804 \$	621,039 \$	- \$	-
2022 \$ -\$ 3,467,962 \$ 1,905,969 \$ 2,411,569 \$ 571,515 \$ 804,749 \$ 601,102 \$ 720,582 \$ 679,291 \$ 663,374 \$ 710,591 \$ 666,804 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2024 \$ -\$ 5,377,024 \$ 3,655,637 \$ 4,605,676 \$ 2,634,769 \$ 2,833,277 \$ 601,102 \$ 720,582 \$ 679,291 \$ 663,374 \$ 710,591 \$ 666,804 \$ 621,039 \$ 561,625 \$ 535,183 \$ 2025 \$ -\$ 5,585,615 \$ 5,481,133 \$ 4,777,144 \$ 4,872,227 \$ 2,202,239 \$ 2,683,004 \$ 720,582 \$ 679,291 \$ 663,374 \$ 710,591 \$ 666,804 \$ 621,039 \$ 561,625 \$ 535,183 \$ 2026 \$ -\$ 7,601,542 \$ 5,685,082 \$ 7,746,260 \$ 5,685,004 \$ 7,746,260 \$ 5,685,004 \$ 7,746,260	2020 \$	- \$	1,810,337 \$	413,435 \$	540,272 \$	571,515 \$	634,749 \$	601,102 \$	720,582 \$	679,291	663,374 \$	710,591 \$	666,804 \$	621,039 \$	581,625 \$	-
2023 \$ - \$ 3.586,162 \$ 3.524,676 \$ 2.480,733 \$ 2.551,071 \$ 634,749 \$ 601,02 \$ 720,582 \$ 673,201 \$ 663,374 \$ 710,591 \$ 666,804 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2025 \$ - \$ 5.571,024 \$ 8, 465,876 \$ 2.484,708 \$ 2.484,708 \$ 2.283,270 \$ 620,202 \$ 720,202 \$ 673,201 \$ 663,374 \$ 710,591 \$ 666,804 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2025 \$ - \$ 7,601,642 \$ 5.683,825 \$ 7,162,700 \$ 5.055,400 \$ 5.411,307 \$ 2.771,172 \$ 3.216,383 \$ 703,200 \$ 663,374 \$ 710,591 \$ 666,804 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2027 \$ - \$ 7,902,309 \$ 7,748,902 \$ 7,	2021 \$	- \$	1,869,772 \$	1,845,409 \$	540,272 \$	571,515 \$	634,749 \$	601,102 \$	720,582 \$	679,291	663,374 \$	710,591 \$	666,804 \$	621,039 \$	581,625 \$	535,183
2024 \$ - \$ 5.377.024 \$ 3.855.677 \$ 4.605.677 \$ 2.694.709 \$ 2.833.277 \$ 601.02 \$ 720.582 \$ 679.201 \$ 663.374 \$ 710.591 \$ 666.804 \$ 621.039 \$ 581.625 \$ 555.182 \$ 2026 \$ - \$ 7.601.642 \$ 5.698.825 \$ 7.162.700 \$ 5.055.400 \$ 5.411.307 \$ 2.205.289 \$ 7.711.72 \$ 3.216.339 \$ 679.201 \$ 663.374 \$ 710.591 \$ 666.804 \$ 621.039 \$ 581.625 \$ 535.183 \$ 2027 \$ - \$ 7.901.542 \$ 5.698.825 \$ 7.162.700 \$ 5.055.400 \$ 5.411.307 \$ 2.771.172 \$ 3.216.339 \$ 679.201 \$ 663.374 \$ 710.591 \$ 666.804 \$ 621.039 \$ 581.625 \$ 535.183 \$ 2027 \$ - \$ 7.902.599 \$ 7.748.006 \$ 7.746.026 \$ 7.767.907 \$ 5.612.505 \$ 5.124.404 \$ 3.321.901 \$ 3.032.086 \$ 663.374 \$ 710.591 \$ 666.804 \$ 621.039 \$ 581.625 \$ 535.183 \$ 2026 \$ - \$ 10.676.163 \$ 8.005.461 \$ 10.126.051 \$ 7.767.905 \$ 5.612.505 \$ 5.124.404 \$ 3.321.901 \$ 3.032.086 \$ 663.374 \$ 710.591 \$ 666.804 \$ 621.039 \$ 581.625 \$ 535.183 \$ 2029 \$ - \$ 10.676.163 \$ 10.726.071 \$ 7.787.906 \$ 5.612.505 \$ 5.124.404 \$ 5.321.901 \$ 3.032.086 \$ 663.374 \$ 710.591 \$ 666.804 \$ 621.039 \$ 581.625 \$ 535.183 \$ 2029 \$ - \$ 10.676.321 \$ 10.046.946 \$ 10.526.71 \$ 7.787.905 \$ 6.613.31 \$ 5.514.525 \$ 6.006.801 \$ 3.211.901 \$ 3.032.806 \$ 9.006.803 \$ 7.006.91 \$ 7.006.91 \$ 666.804 \$ 621.039 \$ 581.625 \$ 535.183 \$ 2029 \$ - \$ 10.574.321 \$ 10.344.954 \$ 10.526.71 \$ 7.787.905 \$ 6.613.31 \$ 6.371.409 \$ 5.791.029 \$ 3.058.253 \$ 3.171.799 \$ 666.804 \$ 621.039 \$ 581.625 \$ 535.183 \$ 2029 \$ - \$ 10.574.321 \$ 10.344.954 \$ 10.526.71 \$ 7.789.912 \$ 6.631.401 \$ 3.111.401 \$ 3.111.401 \$ 1	2022 \$	- \$	3,457,592 \$	1,905,996 \$	2,411,559 \$	571,515 \$	634,749 \$	601,102 \$	720,582 \$	679,291	663,374 \$	710,591 \$	666,804 \$	621,039 \$	581,625 \$	535,183
2026 \$ - \$ 5,886,815 \$ 5,881,193 \$ 4,777,144 \$ 4,872,227 \$ 2,928,289 \$ 2,883,084 \$ 720,582 \$ 679,291 \$ 683,374 \$ 710,591 \$ 686,804 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2026 \$ - \$ 7,601,542 \$ 5,693,825 \$ 7,162,760 \$ 5,053,400 \$ 5,611,250 \$ 5,144,644 \$ 3,321,819 \$ 3,020,86 \$ 663,374 \$ 710,591 \$ 666,804 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2028 \$ - \$ 10,167,816 \$ 8,055,461 \$ 10,126,061 \$ 7,877,900 \$ 8,415,315 \$ 5,315,016 \$ 6,143,041 \$ 3,131,632 \$ 2,961,039 \$ 710,591 \$ 666,804 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2028 \$ - \$ 10,674,321 \$ 10,126,061 \$ 7,877,900 \$ 8,415,315 \$ 5,315,016 \$ 6,143,041 \$ 3,131,632 \$ 2,961,039 \$ 710,591 \$ 666,804 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2030 \$ - \$ 10,972,94 \$ 10,779,177 \$ 13,544,332 \$ 11,135,519 \$ 11,895,798 \$ 8,874,771 \$ 9,923,800 \$ 9,820,833 \$ 3,775,932 \$ 2,976,348 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2030 \$ - \$ 10,997,204 \$ 10,779,177 \$ 13,544,332 \$ 11,135,519 \$ 11,895,978 \$ 8,278,386 \$ 9,553,299 \$ 6,005,377 \$ 5,653,285 \$ 3,275,932 \$ 2,976,348 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2030 \$ - \$ 11,997,204 \$ 10,779,177 \$ 13,544,332 \$ 11,135,519 \$ 11,895,798 \$ 8,278,386 \$ 9,553,299 \$ 6,005,377 \$ 5,653,385 \$ 3,275,932 \$ 2,976,348 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2030 \$ - \$ 11,997,040 \$ 11,210,344 \$ 14,066,105 \$ 14,907,049 \$ 11,702,009 \$ 13,005,200 \$ 9,905,333 \$ 5,885,628 \$ 6,007,870 \$ 3,074,064 \$ 2,772,072 \$ 581,625 \$ 535,183 \$ 2030 \$ - \$ 11,289,673 \$ 11,086,768 \$ 14,649,549 \$ 14,900,685 \$ 15,912,835 \$ 11,772,009 \$ 13,005,200 \$ 9,905,333 \$ 5,885,425 \$ 2,876,348 \$ 2,272,772 \$ 581,625 \$ 535,183 \$ 2033 \$ - \$ 11,289,673 \$ 11,086,768 \$ 14,649,549 \$ 14,900,685 \$ 15,949,541 \$ 1,149,749 \$ 1,149,7	2023 \$	- \$	3,586,162 \$	3,524,576 \$	2,490,733 \$	2,551,017 \$	634,749 \$	601,102 \$	720,582 \$	679,291	663,374 \$	710,591 \$	666,804 \$	621,039 \$	581,625 \$	535,183
2026 \$ - \$ 7,601,542 \$ 5,668,362 \$ 7,748,063 \$ 7,748,063 \$ 7,748,063 \$ 7,748,063 \$ 5,7576,072 \$ 5,612,526 \$ 5,612,526 \$ 5,612,526 \$ 5,612,626 \$ 5,612,	2024 \$	- \$	5,377,024 \$	3,655,637 \$	4,605,876 \$	2,634,769 \$	2,833,270 \$	601,102 \$	720,582 \$	679,291	663,374 \$	710,591 \$	666,804 \$	621,039 \$	581,625 \$	535,183
2027 \$ - \$ 7,002,359 \$ 7,748,806 \$ 7,440,626 \$ 7,576,972 \$ 5,612,526 \$ 5,124,64 \$ 3,321,91 \$ 3,032,086 \$ 6,83,74 \$ 710,591 \$ 666,804 \$ 621,039 \$ 5,816,25 \$ 5,351,831 \$ 2029 \$ - \$ 10,676,16 \$ 8,065,451 \$ 10,286,571 \$ 10,716,265 \$ 8,415,315 \$ 5,315,016 \$ 6,371,469 \$ 5,781,029 \$ 3,056,253 \$ 3,171,799 \$ 666,804 \$ 621,039 \$ 5,816,25 \$ 5,351,831 \$ 2029 \$ - \$ 10,574,321 \$ 10,384,594 \$ 10,526,771 \$ 10,711,625 \$ 8,747,171 \$ 7,996,235 \$ 6,6371,469 \$ 5,791,029 \$ 3,056,253 \$ 3,171,799 \$ 666,804 \$ 621,039 \$ 5,816,25 \$ 5,351,831 \$ 2030 \$ - \$ 10,997,294 \$ 10,779,177 \$ 13,443,322 \$ 11,135,519 \$ 11,896,798 \$ 8,278,380 \$ 9,583,259 \$ 6,006,337 \$ 5,685,308 \$ 3,275,932 \$ 2,976,348 \$ 621,039 \$ 5,816,25 \$ 5,351,831 \$ 1.457,166 \$ 11,121,344 \$ 14,086,109 \$ 14,227,581 \$ 11,126,171 \$ 1,126,	2025 \$	- \$	5,585,615 \$	5,481,193 \$	4,777,144 \$	4,872,227 \$	2,926,289 \$	2,683,084 \$	720,582 \$	679,291	663,374 \$	710,591 \$	666,804 \$	621,039 \$	581,625 \$	535,183
2028 \$ - \$ 10,167,816 \$ 8,055,451 \$ 10,126,051 \$ 7,870,906 \$ 8,415,315 \$ 5,315,016 \$ 6,143,041 \$ 3,131,632 \$ 2,961,039 \$ 710,591 \$ 666,804 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2029 \$ - \$ 10,597,294 \$ 10,779,177 \$ 13,544,332 \$ 11,135,679 \$ 11,899,798 \$ 8,278,386 \$ 9,553,259 \$ 6,005,367 \$ 5,565,363 \$ 3,275,992 \$ 2,976,348 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2031 \$ - \$ 11,497,186 \$ 11,210,344 \$ 14,098,105 \$ 14,327,581 \$ 11,287,598 \$ 11,898,798 \$ 8,278,386 \$ 9,553,259 \$ 6,005,367 \$ 5,565,363 \$ 3,275,992 \$ 2,976,348 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2031 \$ - \$ 11,497,186 \$ 11,210,344 \$ 14,098,105 \$ 14,327,581 \$ 11,249,579 \$ 11,249,579 \$ 1,2497,577 \$ 1,344,943 \$ 11,498,105 \$ 14,498,105 \$ 1	2026 \$	- \$	7,601,542 \$	5,693,825 \$	7,162,760 \$	5,053,400 \$	5,411,307 \$	2,771,172 \$	3,216,393 \$	679,291	663,374 \$	710,591 \$	666,804 \$	621,039 \$	581,625 \$	535,183
2029 \$ - \$ 10,574,321 \$ 10,364,594 \$ 10,526,771 \$ 10,711,626 \$ 8,741,771 \$ 7,969,235 \$ 6,371,469 \$ 5,791,029 \$ 3,058,253 \$ 3,171,799 \$ 6,668,04 \$ 621,039 \$ 581,625 \$ 535,183 \$ 2031 \$ - \$ 11,437,168 \$ 11,201,947 \$ 13,544,332 \$ 11,135,519 \$ 11,896,798 \$ 1,896,792 \$ 11,867,992 \$ 11,867,992 \$ 11,867,992 \$ 10,867,992 \$ 1	2027 \$	- \$	7,902,359 \$	7,748,806 \$	7,440,626 \$	7,576,972 \$	5,612,526 \$	5,124,464 \$	3,321,991 \$	3,032,086	663,374 \$	710,591 \$	666,804 \$	621,039 \$	581,625 \$	535,183
2030 \$ -\$ 10,997,294 \$ 10,779,177 \$ 13,544,332 \$ 11,135,519 \$ 11,896,798 \$ 8,278,386 \$ 9,553,259 \$ 6,006,367 \$ 5,655,336 \$ 3,275,932 \$ 2,976,348 \$ 62,772,072 \$ 581,625 \$ 535,183 \$ 2031 \$ -\$ 11,437,168 \$ 11,120,344 \$ 14,086,105 \$ 14,327,581 \$ 12,367,592 \$ 11,266,171 \$ 9,923,860 \$ 9,005,833 \$ 5,685,628 \$ 0,677,03 \$ 3,074,064 \$ 2,772,072 \$ 581,625 \$ 535,183 \$ 2032 \$ -\$ 11,896,673 \$ 11,686,768 \$ 14,468,949 \$ 14,086,105 \$ 14,327,581 \$ 12,367,592 \$ 11,266,171 \$ 9,923,860 \$ 9,005,833 \$ 5,685,628 \$ 0,677,03 \$ 3,074,064 \$ 2,726,072 \$ 581,625 \$ 535,183 \$ 2033 \$ -\$ 12,370,460 \$ 12,125,109 \$ 15,235,531 \$ 15,496,712 \$ 16,549,349 \$ 11,569,349 \$ 11,	2028 \$	- \$	10,167,616 \$	8,055,451 \$	10,126,051 \$	7,870,906 \$	8,415,315 \$	5,315,016 \$	6,143,041 \$	3,131,632	2,961,039 \$	710,591 \$	666,804 \$	621,039 \$	581,625 \$	535,183
2031 \$ - \$ 11,437,186 \$ 11,210,344 \$ 14,086,105 \$ 14,327,581 \$ 12,367,592 \$ 11,266,171 \$ 9,923,860 \$ 9,005,833 \$ 5,865,628 \$ 6,057,870 \$ 3,074,064 \$ 2,772,072 \$ 581,625 \$ 535,183 \$ 2032 \$ - \$ 11,884,673 \$ 11,669,789 \$ 14,649,549 \$ 14,900,865 \$ 16,912,835 \$ 11,712,009 \$ 13,505,520 \$ 9,365,198 \$ 8,784,812 \$ 6,283,130 \$ 5,684,574 \$ 2,266,132 \$ 2,266,143 \$ 5,261,432 \$ 1,261,133 \$ 1,261,133 \$ 1,261,133 \$ 1,261,133 \$ 1,271,134,134 \$ 1,400,885 \$ 1,121,1323 \$ 1,132,132,133 \$ 1,132,132,133 \$ 1,132,132,133 \$ 1,132,133 \$ 1,132,133,133 \$ 1,132,133 \$	2029 \$	- \$	10,574,321 \$	10,364,594 \$	10,526,771 \$	10,711,626 \$	8,741,771 \$	7,969,235 \$	6,371,469 \$	5,791,029	3,058,253 \$	3,171,799 \$	666,804 \$	621,039 \$	581,625 \$	535,183
2032 \$ -\$ 11,894,673 \$ 11,668,758 \$ 14,649,549 \$ 14,900,685 \$ 15,912,835 \$ 11,712,009 \$ 13,505,520 \$ 9,355,198 \$ 8,794,812 \$ 6,283,130 \$ 5,684,574 \$ 2,863,082 \$ 2,596,143 \$ 535,183 \$ 2,034 \$ -\$ 12,370,460 \$ 12,125,109 \$ 15,225,531 \$ 15,496,712 \$ 16,478,549 \$ 15,672,099 \$ 18,004,618 \$ 13,235,450 \$ 12,433,277 \$ 9,786,269 \$ 8,840,821 \$ 5,491,298 \$ 4,958,416 \$ 2,2467,275 \$ 2,488,847 \$ 2,034 \$ 2,594,425 \$ 2,881,377 \$ 2,388,847 \$ 2,034 \$ 2,346,747 \$ 2,346,4953 \$ 2,446,495 \$ 2	2030 \$	- \$	10,997,294 \$	10,779,177 \$	13,544,332 \$	11,135,519 \$	11,896,798 \$	8,278,386 \$	9,553,259 \$	6,006,367	5,655,336 \$	3,275,932 \$	2,976,348 \$	621,039 \$	581,625 \$	535,183
2033 \$ - \$ 12,370,460 \$ 12,125,109 \$ 15,235,531 \$ 15,496,712 \$ 16,549,349 \$ 16,069,326 \$ 14,039,976 \$ 12,731,619 \$ 9,135,990 \$ 9,420,807 \$ 5,895,954 \$ 5,294,425 \$ 2,681,377 \$ 2,388,847 \$ 2034 \$ - \$ 12,865,278 \$ 12,610,113 \$ 15,844,953 \$ 16,116,580 \$ 17,211,323 \$ 15,672,099 \$ 18,064,618 \$ 13,235,450 \$ 12,433,297 \$ 9,786,269 \$ 8,840,281 \$ 5,491,288 \$ 4,956,416 \$ 2,467,276 \$ 2035 \$ - \$ 13,379,890 \$ 13,145,17 \$ 16,478,751 \$ 16,781,241 \$ 17,491,693 \$ 16,616,580 \$ 17,211,323 \$ 15,672,099 \$ 18,064,618 \$ 13,235,450 \$ 12,433,297 \$ 9,786,269 \$ 8,840,281 \$ 5,491,288 \$ 4,956,416 \$ 2,467,276 \$ 2036 \$ - \$ 13,915,085 \$ 13,639,098 \$ 17,137,901 \$ 17,431,693 \$ 18,615,766 \$ 16,950,942 \$ 19,538,691 \$ 17,710,648 \$ 16,630,441 \$ 13,845,317 \$ 12,497,577 \$ 8,552,953 \$ 7,711,007 \$ 4,732,153 \$ 2037 \$ - \$ 14,471,689 \$ 14,184,662 \$ 17,823,417 \$ 18,128,961 \$ 19,360,397 \$ 17,628,980 \$ 20,320,238 \$ 18,419,074 \$ 17,295,658 \$ 17,814,145 \$ 12,992,146 \$ 11,639,832 \$ 8,010,141 \$ 7,095,301 \$ 2038 \$ - \$ 15,652,578 \$ 15,342,131 \$ 19,277,808 \$ 19,608,248 \$ 20,940,206 \$ 19,607,504 \$ 21,978,370 \$ 19,952,070 \$ 18,706,984 \$ 19,267,793 \$ 15,569,125 \$ 11,332,645 \$ 10,001,112 \$ 7,370,501 \$ 2040 \$ - \$ 16,278,681 \$ 15,958,186 \$ 20,048,290 \$ 20,320,238 \$ 20,482,267 \$ 20,482,392 \$ 20,	2031 \$	- \$	11,437,186 \$	11,210,344 \$	14,086,105 \$	14,327,581 \$	12,367,592 \$	11,266,171 \$	9,923,860 \$	9,005,833	5,865,628 \$	6,057,870 \$	3,074,064 \$	2,772,072 \$	581,625 \$	535,183
2034 \$ - \$ 12,865,278 \$ 12,610,113 \$ 15,844,953 \$ 16,116,580 \$ 17,211,323 \$ 15,672,099 \$ 18,064,618 \$ 13,235,450 \$ 12,433,297 \$ 9,786,269 \$ 8,840,281 \$ 5,491,298 \$ 4,958,416 \$ 2,467,276 \$ 2035 \$ - \$ 13,379,899 \$ 13,114,517 \$ 16,478,751 \$ 16,761,244 \$ 17,899,775 \$ 16,299,893 \$ 18,787,203 \$ 17,029,469 \$ 12,925,322 \$ 13,318,271 \$ 9,183,224 \$ 8,233,547 \$ 5,142,793 \$ 4,562,498 \$ 2036 \$ - \$ 13,915,085 \$ 13,639,098 \$ 17,137,901 \$ 17,431,693 \$ 18,615,766 \$ 16,950,942 \$ 19,538,691 \$ 17,710,648 \$ 16,630,441 \$ 13,845,317 \$ 12,497,577 \$ 8,852,935 \$ 7,711,007 \$ 4,732,153 \$ 12,437,134,693 \$ 14,184,662 \$ 17,823,417 \$ 18,128,961 \$ 19,360,997 \$ 17,628,980 \$ 20,320,238 \$ 18,419,074 \$ 17,295,658 \$ 17,814,158 \$ 12,992,146 \$ 11,639,832 \$ 8,010,141 \$ 7,095,301 \$ 2038 \$ - \$ 15,050,556 \$ 14,752,049 \$ 18,536,353 \$ 18,854,120 \$ 20,134,813 \$ 18,334,139 \$ 21,133,048 \$ 19,155,837 \$ 17,987,485 \$ 18,526,724 \$ 16,716,421 \$ 12,100,457 \$ 10,901,112 \$ 7,370,550 \$ 2039 \$ - \$ 15,652,578 \$ 15,542,131 \$ 19,277,808 \$ 19,060,284 \$ 20,040,206 \$ 19,067,504 \$ 21,978,370 \$ 19,922,070 \$ 18,706,984 \$ 19,267,793 \$ 17,386,077 \$ 15,669,125 \$ 11,332,504 \$ 10,030,685 \$ 2040 \$ - \$ 16,278,681 \$ 15,552,516 \$ 20,048,920 \$ 20,392,616 \$ 21,777,814 \$ 19,830,204 \$ 22,857,505 \$ 20,718,953 \$ 19,455,684 \$ 20,038,505 \$ 18,080,480 \$ 16,191,890 \$ 14,581,033 \$ 10,427,630 \$ 2041 \$ - \$ 16,629,829 \$ 16,594,048 \$ 20,868,877 \$ 21,203,320 \$ 22,264,896 \$ 20,263,413 \$ 23,771,805 \$ 21,547,711 \$ 20,233,474 \$ 20,840,045 \$ 18,080,480 \$ 16,191,890 \$ 14,581,033 \$ 10,427,630 \$ 2041 \$ - \$ 16,620,485 \$ 20,484,912 \$ 22,266,683 \$ 22,264,906 \$ 22,384,914 \$ 24,497,079 \$ 22,306,283 \$ 21,484,349 \$ 24,422,677 \$ 22,409,620 \$ 21,042,813 \$ 21,673,647 \$ 19,555,848 \$ 17,513,148 \$ 15,770,845 \$ 13,953,443 \$ 2043 \$ - \$ 18,005,555 \$ 19,412,690 \$ 24,382,577 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,735 \$ 24,810,7	2032 \$	- \$	11,894,673 \$	11,658,758 \$	14,649,549 \$	14,900,685 \$	15,912,835 \$	11,712,009 \$	13,505,520 \$	9,355,198	8,794,812 \$	6,283,130 \$	5,684,574 \$	2,863,082 \$	2,596,143 \$	535,183
2035 \$ -\$ 13,379,890 \$ 13,114,517 \$ 16,478,751 \$ 16,761,244 \$ 17,899,775 \$ 16,298,983 \$ 18,787,203 \$ 17,029,469 \$ 12,925,322 \$ 13,318,271 \$ 9,183,224 \$ 8,233,547 \$ 5,142,793 \$ 4,562,498 \$ 2036 \$ -\$ 13,915,085 \$ 13,639,098 \$ 17,137,901 \$ 17,431,693 \$ 18,615,766 \$ 16,950,942 \$ 19,538,691 \$ 17,710,648 \$ 16,630,441 \$ 13,845,317 \$ 12,497,577 \$ 8,552,953 \$ 7,711,007 \$ 4,732,153 \$ 12,007,570 \$ 14,471,689 \$ 14,184,662 \$ 17,823,417 \$ 18,128,961 \$ 19,800,397 \$ 17,628,980 \$ 20,320,238 \$ 18,419,074 \$ 17,295,658 \$ 17,814,158 \$ 12,992,146 \$ 11,639,832 \$ 8,010,141 \$ 7,095,301 \$ 12,000,47 \$ 15,650,556 \$ 14,471,649 \$ 18,536,353 \$ 18,854,028 \$ 20,402,06 \$ 19,067,504 \$ 21,978,370 \$ 19,922,070 \$ 18,706,944 \$ 19,267,793 \$ 17,385,077 \$ 15,569,125 \$ 11,332,504 \$ 10,030,685 \$ 10,478,184 \$ 10,478,18	2033 \$	- \$	12,370,460 \$	12,125,109 \$	15,235,531 \$	15,496,712 \$	16,549,349 \$	15,069,326 \$	14,039,976 \$	12,731,619	9,135,990 \$	9,420,807 \$	5,895,954 \$	5,294,425 \$	2,681,377 \$	2,388,847
2036 \$ - \$ 13,915,085 \$ 13,639,098 \$ 17,137,901 \$ 17,431,693 \$ 18,615,766 \$ 16,950,942 \$ 19,538,691 \$ 17,710,648 \$ 16,630,441 \$ 13,845,317 \$ 12,497,577 \$ 8,552,953 \$ 7,711,007 \$ 4,732,153 \$ 20,711,007 \$ 1,007,007 \$ 1,007,0	2034 \$	- \$	12,865,278 \$	12,610,113 \$	15,844,953 \$	16,116,580 \$	17,211,323 \$	15,672,099 \$	18,064,618 \$	13,235,450	12,433,297 \$	9,786,269 \$	8,840,281 \$	5,491,298 \$	4,958,416 \$	2,467,276
2037 \$ - \$ 14,471,689 \$ 14,184,662 \$ 17,823,417 \$ 18,128,961 \$ 19,360,397 \$ 17,628,980 \$ 20,320,238 \$ 18,419,074 \$ 17,295,658 \$ 17,814,158 \$ 12,992,146 \$ 11,639,832 \$ 8,010,141 \$ 7,095,301 \$ 2038 \$ - \$ 15,050,556 \$ 14,752,049 \$ 18,536,353 \$ 18,854,120 \$ 20,134,813 \$ 18,334,139 \$ 21,133,048 \$ 19,155,837 \$ 17,987,485 \$ 18,526,724 \$ 16,716,421 \$ 12,100,457 \$ 10,901,112 \$ 7,370,550 \$ 15,662,578 \$ 15,342,131 \$ 19,277,808 \$ 19,608,284 \$ 20,940,206 \$ 19,067,504 \$ 21,978,370 \$ 19,922,070 \$ 18,706,984 \$ 19,267,793 \$ 17,385,077 \$ 15,569,125 \$ 11,332,504 \$ 10,030,685 \$	2035 \$	- \$	13,379,890 \$	13,114,517 \$	16,478,751 \$	16,761,244 \$	17,899,775 \$	16,298,983 \$	18,787,203 \$	17,029,469	12,925,322 \$	13,318,271 \$	9,183,224 \$	8,233,547 \$	5,142,793 \$	4,562,498
2038 \$ - \$ 15,050,556 \$ 14,752,049 \$ 18,536,353 \$ 18,854,120 \$ 20,134,813 \$ 18,334,139 \$ 21,133,048 \$ 19,155,837 \$ 17,987,485 \$ 18,526,724 \$ 16,716,421 \$ 12,100,457 \$ 10,901,112 \$ 7,370,550 \$ 2039 \$ - \$ 15,652,578 \$ 15,342,131 \$ 19,277,808 \$ 19,608,284 \$ 20,940,206 \$ 19,067,504 \$ 21,978,370 \$ 19,922,070 \$ 18,706,984 \$ 19,267,793 \$ 17,385,077 \$ 15,569,125 \$ 11,332,504 \$ 10,030,685 \$ 10,000 \$ - \$ 16,276,681 \$ 15,955,816 \$ 20,048,920 \$ 20,392,616 \$ 21,777,814 \$ 19,830,204 \$ 22,2857,505 \$ 20,718,953 \$ 19,455,264 \$ 20,038,505 \$ 18,080,400 \$ 16,191,899 \$ 14,516,033 \$ 10,427,630 \$ 2041 \$ - \$ 16,929,829 \$ 16,594,048 \$ 20,850,877 \$ 21,208,320 \$ 22,684,926 \$ 20,623,413 \$ 23,771,805 \$ 21,448,349 \$ 24,722,677 \$ 22,409,620 \$ 21,042,813 \$ 21,673,647 \$ 19,555,848 \$ 17,513,148 \$ 15,770,845 \$ 13,953,443 \$ 2043 \$ - \$ 18,311,303 \$ 17,948,123 \$ 22,552,308 \$ 22,938,919 \$ 24,497,079 \$ 22,306,283 \$ 25,711,584 \$ 23,306,004 \$ 21,884,526 \$ 22,540,593 \$ 20,338,082 \$ 18,213,674 \$ 16,401,679 \$ 14,511,580 \$ 2044 \$ - \$ 19,043,755 \$ 18,666,048 \$ 23,454,401 \$ 23,856,476 \$ 25,476,962 \$ 23,198,534 \$ 26,740,047 \$ 24,238,245 \$ 22,759,907 \$ 23,442,216 \$ 21,151,605 \$ 18,942,221 \$ 17,057,746 \$ 15,092,044 \$ 2045 \$ - \$ 19,043,755 \$ 18,666,048 \$ 23,454,401 \$ 23,856,476 \$ 25,476,962 \$ 23,198,534 \$ 26,740,047 \$ 24,238,245 \$ 22,759,907 \$ 23,442,216 \$ 21,151,605 \$ 18,942,221 \$ 17,057,746 \$ 15,092,044 \$ 2045 \$ - \$ 19,005,7775 \$ 24,189,197 \$ 24,810,735 \$ 26,496,040 \$ 24,126,476 \$ 27,809,649 \$ 25,207,774 \$ 23,670,303 \$ 24,379,905 \$ 21,997,669 \$ 19,699,909 \$ 17,740,056 \$ 15,695,725 \$ 2048 \$ - \$ 21,421,634 \$ 20,996,765 \$ 25,868,201 \$ 26,895,041 \$ 26,895,107 \$ 27,244,729 \$ 25,601,800 \$ 26,625,872 \$ 27,424,078 \$ 24,744,386 \$ 22,179,719 \$ 19,955,155 \$ 20,487,797 \$ 24,487,797 \$ 24,487,797 \$ 24,245,647 \$ 27,445,799 \$ 26,625,872 \$ 27,424,078 \$ 24,744,086 \$ 23,744,086 \$ 23,744,085 \$ 24,744,086 \$ 24,744,086 \$ 24,744,086 \$ 24,744,086 \$ 24,744,086 \$ 24,744,086 \$ 24,744,086 \$ 24,744,086 \$ 24,744,086 \$ 24,744,086 \$ 24,744,086 \$ 24,744,086 \$ 24,744,086 \$ 24,744,086 \$ 24,744,	2036 \$	- \$	13,915,085 \$	13,639,098 \$	17,137,901 \$	17,431,693 \$	18,615,766 \$	16,950,942 \$	19,538,691 \$	17,710,648	16,630,441 \$	13,845,317 \$	12,497,577 \$	8,552,953 \$	7,711,007 \$	4,732,153
2039 \$ - \$ 15,652,578 \$ 15,342,131 \$ 19,277,808 \$ 19,608,284 \$ 20,940,206 \$ 19,067,504 \$ 21,978,370 \$ 19,922,070 \$ 18,706,984 \$ 19,267,793 \$ 17,385,077 \$ 15,569,125 \$ 11,332,504 \$ 10,030,685 \$ 10,000,000 \$ 10,000,	2037 \$	- \$	14,471,689 \$	14,184,662 \$	17,823,417 \$	18,128,961 \$	19,360,397 \$	17,628,980 \$	20,320,238 \$	18,419,074	17,295,658 \$	17,814,158 \$	12,992,146 \$	11,639,832 \$	8,010,141 \$	7,095,301
2040 \$ - \$ 16,278,681 \$ 15,955,816 \$ 20,048,920 \$ 20,392,616 \$ 21,777,814 \$ 19,830,204 \$ 22,857,505 \$ 20,718,953 \$ 19,455,264 \$ 20,038,505 \$ 18,080,480 \$ 16,191,890 \$ 14,581,033 \$ 10,427,630 \$ 2041 \$ - \$ 16,929,829 \$ 16,594,048 \$ 20,850,877 \$ 21,208,320 \$ 22,648,926 \$ 20,623,413 \$ 23,771,805 \$ 21,547,711 \$ 20,233,474 \$ 20,840,045 \$ 18,803,700 \$ 16,839,565 \$ 15,164,274 \$ 13,416,772 \$ 2042 \$ - \$ 17,607,022 \$ 17,257,810 \$ 21,684,912 \$ 22,056,655 \$ 23,554,883 \$ 21,448,349 \$ 24,722,677 \$ 22,409,620 \$ 21,042,813 \$ 21,673,647 \$ 19,555,848 \$ 17,513,148 \$ 15,770,485 \$ 13,541,543,434 \$ 20,444 \$ - \$ 19,043,755 \$ 18,666,048 \$ 23,545,401 \$ 23,856,476 \$ 25,476,962 \$ 23,188,535 \$ 25,476,962 \$ 23,188,535 \$ 22,759,907 \$ 23,442,216 \$ 21,151,605 \$ 18,942,221 \$ 17,057,746 \$ 15,092,044 \$ 19,402,045 \$ 19,402,	2038 \$	- \$	15,050,556 \$	14,752,049 \$	18,536,353 \$	18,854,120 \$	20,134,813 \$	18,334,139 \$	21,133,048 \$	19,155,837	17,987,485 \$	18,526,724 \$	16,716,421 \$	12,100,457 \$	10,901,112 \$	7,370,550
2041 \$ - \$ 16,929,829 \$ 16,594,048 \$ 20,850,877 \$ 21,208,320 \$ 22,648,926 \$ 20,623,413 \$ 23,771,805 \$ 21,547,711 \$ 20,233,474 \$ 20,840,045 \$ 18,803,700 \$ 16,839,565 \$ 15,164,274 \$ 13,416,772 \$ 17,607,022 \$ 17,257,810 \$ 21,684,912 \$ 22,056,653 \$ 23,554,883 \$ 21,448,349 \$ 24,722,677 \$ 22,409,620 \$ 21,042,813 \$ 21,673,647 \$ 19,555,848 \$ 17,513,148 \$ 15,770,845 \$ 13,953,443 \$ 20,448,709 \$ 22,306,830 \$ 22,448,709 \$ 22,306,830 \$ 25,711,584 \$ 23,306,004 \$ 21,884,526 \$ 22,540,593 \$ 20,338,082 \$ 18,213,674 \$ 16,401,679 \$ 14,511,580 \$ 19,403,755 \$ 18,666,048 \$ 23,454,401 \$ 23,856,476 \$ 25,476,962 \$ 23,188,534 \$ 26,740,047 \$ 24,238,245 \$ 22,759,907 \$ 23,442,216 \$ 21,151,605 \$ 18,942,221 \$ 17,057,746 \$ 15,092,044 \$ 20,45 \$ - \$ 19,043,755 \$ 19,412,690 \$ 24,392,577 \$ 24,810,735 \$ 26,496,040 \$ 24,126,476 \$ 27,809,649 \$ 25,207,774 \$ 23,670,303 \$ 24,379,905 \$ 21,997,669 \$ 19,699,909 \$ 17,449,666 \$ 16,635,557 \$ 20,487,906 \$ 25,882,801 \$ 25,883,011 \$ 25,883,801 \$ 25,883,801 \$ 25,883,801 \$ 26,095,105 \$ 28,883,101 \$ 26,885,201 \$ 28,885,117 \$ 26,095,105 \$ 28,822,335 \$ 26,216,085 \$ 24,617,115 \$ 25,555,115 \$ 22,277,576 \$ 20,487,906 \$ 19,899,909 \$ 17,844,96,684 \$ 16,303,555 \$ 20,487,906 \$ 22,278,500 \$ 21,242,634 \$ 22,271,010 \$ 28,535,865 \$ 29,025,051 \$ 30,996,620 \$ 28,224,564 \$ 32,533,356 \$ 29,489,531 \$ 27,690,906 \$ 28,521,041 \$ 25,734,161 \$ 23,046,108 \$ 20,753,356 \$ 18,841,779,878,100 \$ 20,487,790,100	2039 \$	- \$	15,652,578 \$	15,342,131 \$	19,277,808 \$	19,608,284 \$	20,940,206 \$	19,067,504 \$	21,978,370 \$	19,922,070	18,706,984 \$	19,267,793 \$	17,385,077 \$	15,569,125 \$	11,332,504 \$	10,030,685
2042 \$ - \$ 17,607,022 \$ 17,257,810 \$ 21,684,912 \$ 22,056,653 \$ 23,554,863 \$ 21,448,349 \$ 24,722,677 \$ 22,409,620 \$ 21,042,813 \$ 21,673,647 \$ 19,555,848 \$ 17,513,148 \$ 15,770,845 \$ 13,953,443 \$ 2043 \$ - \$ 18,311,303 \$ 17,948,123 \$ 22,552,308 \$ 22,938,919 \$ 24,497,079 \$ 22,306,283 \$ 25,711,584 \$ 23,306,004 \$ 21,884,526 \$ 22,540,593 \$ 20,338,082 \$ 18,213,674 \$ 16,401,679 \$ 14,511,580 \$ 2044 \$ - \$ 19,043,755 \$ 18,666,048 \$ 23,454,401 \$ 23,856,476 \$ 25,476,962 \$ 23,188,534 \$ 26,740,047 \$ 24,238,245 \$ 22,759,907 \$ 23,442,216 \$ 21,151,605 \$ 18,942,221 \$ 17,057,746 \$ 15,092,044 \$ 2045 \$ - \$ 19,805,505 \$ 19,412,690 \$ 24,392,577 \$ 24,810,735 \$ 26,496,040 \$ 24,126,476 \$ 27,809,649 \$ 25,207,774 \$ 23,670,033 \$ 24,379,905 \$ 21,997,669 \$ 19,699,909 \$ 17,740,056 \$ 15,692,045 \$ 20,487,905 \$	2040 \$	- \$	16,278,681 \$	15,955,816 \$	20,048,920 \$	20,392,616 \$	21,777,814 \$	19,830,204 \$	22,857,505 \$	20,718,953	19,455,264 \$	20,038,505 \$	18,080,480 \$	16,191,890 \$	14,581,033 \$	10,427,630
2044 \$ - \$ 18,311,303 \$ 17,948,123 \$ 22,552,308 \$ 22,938,919 \$ 24,497,079 \$ 22,306,283 \$ 25,711,584 \$ 23,306,004 \$ 21,884,526 \$ 22,540,593 \$ 20,338,082 \$ 18,213,674 \$ 16,401,679 \$ 14,511,580 \$ 2044 \$ - \$ 19,043,755 \$ 18,666,048 \$ 23,454,401 \$ 23,856,476 \$ 25,476,962 \$ 23,198,534 \$ 26,740,047 \$ 24,238,245 \$ 22,759,907 \$ 23,442,216 \$ 21,151,605 \$ 18,942,221 \$ 17,057,746 \$ 15,092,044 \$ 2045 \$ - \$ 19,805,505 \$ 19,412,690 \$ 24,392,577 \$ 24,810,735 \$ 26,496,040 \$ 24,126,476 \$ 27,809,649 \$ 25,207,774 \$ 23,670,303 \$ 24,379,905 \$ 21,997,669 \$ 19,699,909 \$ 17,740,056 \$ 15,695,725 \$ 2046 \$ - \$ 20,597,725 \$ 20,189,197 \$ 25,368,280 \$ 25,803,164 \$ 25,803,164 \$ 25,803,164 \$ 25,803,164 \$ 25,803,164 \$ 25,803,164 \$ 26,805,105 \$ 28,803,104 \$ 26,805,105 \$ 26,803,105 \$	2041 \$	- \$	16,929,829 \$	16,594,048 \$	20,850,877 \$	21,208,320 \$	22,648,926 \$	20,623,413 \$	23,771,805 \$	21,547,711	20,233,474 \$	20,840,045 \$	18,803,700 \$	16,839,565 \$	15,164,274 \$	13,416,772
2044 \$ - \$ 19,043,755 \$ 18,666,048 \$ 23,454,401 \$ 23,856,476 \$ 25,476,962 \$ 23,198,534 \$ 26,740,047 \$ 24,238,245 \$ 22,759,907 \$ 23,442,216 \$ 21,151,605 \$ 18,942,221 \$ 17,057,746 \$ 15,092,044 \$ 2045 \$ - \$ 19,805,505 \$ 19,412,890 \$ 24,392,577 \$ 24,810,735 \$ 26,486,040 \$ 24,126,476 \$ 27,809,649 \$ 25,207,774 \$ 23,670,303 \$ 24,379,905 \$ 21,997,669 \$ 19,699,909 \$ 17,740,056 \$ 15,695,725 \$ 20,487,906 \$ 19,699,909 \$ 17,740,056 \$ 15,695,725 \$ 20,487,906 \$ 19,699,909 \$ 17,740,056 \$ 18,942,241 \$ 17,057,746 \$ 18,942,24	2042 \$	- \$	17,607,022 \$	17,257,810 \$	21,684,912 \$	22,056,653 \$	23,554,883 \$	21,448,349 \$	24,722,677 \$	22,409,620	\$ 21,042,813 \$	21,673,647 \$	19,555,848 \$	17,513,148 \$	15,770,845 \$	13,953,443
2045 \$ - \$ 19,805,505 \$ 19,412,690 \$ 24,392,577 \$ 24,810,735 \$ 26,496,040 \$ 24,126,476 \$ 27,809,649 \$ 25,207,774 \$ 23,670,303 \$ 24,379,905 \$ 21,997,669 \$ 19,699,99 \$ 17,740,056 \$ 15,695,725 \$ 20,487,905 \$ - \$ 20,597,725 \$ 20,189,197 \$ 25,368,280 \$ 25,803,164 \$ 27,555,882 \$ 25,991,535 \$ 28,922,035 \$ 26,216,085 \$ 24,617,115 \$ 25,355,101 \$ 22,877,576 \$ 20,487,906 \$ 18,449,658 \$ 16,323,554 \$ 20,477,908 \$ 21,307,422 \$ 19,187,644 \$ 16,976,497 \$ 20,487,905 \$ 21,242,634 \$ 20,996,765 \$ 26,383,011 \$ 26,835,291 \$ 28,685,117 \$ 26,095,196 \$ 30,078,917 \$ 27,264,729 \$ 25,601,800 \$ 26,369,305 \$ 23,792,679 \$ 21,307,422 \$ 19,187,644 \$ 16,976,497 \$ 20,487,905 \$ 22,278,500 \$ 21,307,422 \$ 19,187,644 \$ 16,976,497 \$ 20,487,905 \$ 22,278,500 \$ 21,307,422 \$ 27,438,331 \$ 27,908,703 \$ 29,804,442 \$ 27,139,004 \$ 31,282,073 \$ 28,355,318 \$ 26,625,872 \$ 27,424,078 \$ 24,744,386 \$ 22,159,719 \$ 19,955,150 \$ 17,655,557 \$ 20,487,905 \$ 20,4	2043 \$	- \$	18,311,303 \$	17,948,123 \$	22,552,308 \$	22,938,919 \$	24,497,079 \$	22,306,283 \$	25,711,584 \$	23,306,004	21,884,526 \$	22,540,593 \$	20,338,082 \$	18,213,674 \$	16,401,679 \$	14,511,580
2046 - \$ 20,597,725 \$ 20,189,197 \$ 25,368,280 \$ 25,803,164 \$ 27,555,882 \$ 25,901,535 \$ 28,922,035 \$ 26,216,085 \$ 24,617,115 \$ 25,355,101 \$ 22,877,576 \$ 20,487,906 \$ 18,449,658 \$ 16,323,554 2047 \$ - \$ 21,421,634 \$ 20,996,765 \$ 26,383,011 \$ 28,685,291 \$ 28,685,117 \$ 20,995,196 \$ 30,078,917 \$ 27,264,729 \$ 25,601,800 \$ 26,369,305 \$ 23,792,679 \$ 21,307,422 \$ 19,187,644 \$ 16,976,497 2048 \$ - \$ 22,278,500 \$ 21,836,636 \$ 27,438,331 \$ 27,908,703 \$ 29,804,442 \$ 27,139,004 \$ 31,282,073 \$ 28,355,318 \$ 26,625,872 \$ 27,424,078 \$ 24,744,386 \$ 22,159,719 \$ 19,955,150 \$ 17,655,557 2049 \$ - \$ 23,169,640 \$ 22,710,101 \$ 28,535,865 \$ 29,025,051 \$ 30,996,620 \$ 28,224,564 \$ 32,533,356 \$ 29,489,531 \$ 27,690,906 \$ 28,521,041 \$ 25,734,161 \$ 23,046,108 \$ 20,753,356 \$ 18,361,779	2044 \$	- \$	19,043,755 \$	18,666,048 \$	23,454,401 \$	23,856,476 \$	25,476,962 \$	23,198,534 \$	26,740,047 \$	24,238,245	\$ 22,759,907 \$	23,442,216 \$	21,151,605 \$	18,942,221 \$	17,057,746 \$	15,092,044
2047 \$ - \$ 21,421,634 \$ 20,996,765 \$ 26,383,011 \$ 26,835,291 \$ 28,658,117 \$ 26,095,196 \$ 30,078,917 \$ 27,264,729 \$ 25,601,800 \$ 26,369,305 \$ 23,792,679 \$ 21,307,422 \$ 19,187,644 \$ 16,976,497 \$ 2048 \$ - \$ 22,278,500 \$ 21,836,636 \$ 27,438,331 \$ 27,908,703 \$ 29,804,442 \$ 27,139,004 \$ 31,282,073 \$ 28,355,318 \$ 26,625,872 \$ 27,424,078 \$ 24,744,386 \$ 22,159,719 \$ 19,955,150 \$ 17,655,557 \$ 2049 \$ - \$ 23,169,640 \$ 22,710,101 \$ 28,535,865 \$ 29,025,051 \$ 30,996,620 \$ 28,224,564 \$ 32,533,356 \$ 29,489,531 \$ 27,690,906 \$ 28,521,041 \$ 25,734,161 \$ 23,046,108 \$ 20,753,356 \$ 18,361,779	2045 \$	- \$	19,805,505 \$	19,412,690 \$	24,392,577 \$	24,810,735 \$	26,496,040 \$	24,126,476 \$	27,809,649 \$	25,207,774	23,670,303 \$	24,379,905 \$	21,997,669 \$	19,699,909 \$	17,740,056 \$	15,695,725
2048 \$ - \$ 22,278,500 \$ 21,836,636 \$ 27,438,331 \$ 27,908,703 \$ 29,804,442 \$ 27,139,004 \$ 31,282,073 \$ 28,355,318 \$ 26,625,872 \$ 27,424,078 \$ 24,744,386 \$ 22,159,719 \$ 19,955,150 \$ 17,655,557 \$ 2049 \$ - \$ 23,169,640 \$ 22,710,101 \$ 28,535,865 \$ 29,025,051 \$ 30,996,620 \$ 28,224,564 \$ 32,533,356 \$ 29,489,531 \$ 27,690,906 \$ 28,521,041 \$ 25,734,161 \$ 23,046,108 \$ 20,753,356 \$ 18,361,779	2046 \$	- \$	20,597,725 \$	20,189,197 \$	25,368,280 \$	25,803,164 \$	27,555,882 \$	25,091,535 \$	28,922,035 \$	26,216,085	24,617,115 \$	25,355,101 \$	22,877,576 \$	20,487,906 \$	18,449,658 \$	16,323,554
2049 \$ - \$ 23,169,640 \$ 22,710,101 \$ 28,535,865 \$ 29,025,051 \$ 30,996,620 \$ 28,224,564 \$ 32,533,356 \$ 29,489,531 \$ 27,690,906 \$ 28,521,041 \$ 25,734,161 \$ 23,046,108 \$ 20,753,356 \$ 18,361,779	2047 \$	- \$	21,421,634 \$	20,996,765 \$	26,383,011 \$	26,835,291 \$	28,658,117 \$	26,095,196 \$	30,078,917 \$	27,264,729	25,601,800 \$	26,369,305 \$	23,792,679 \$	21,307,422 \$	19,187,644 \$	16,976,497
	2048 \$	- \$	22,278,500 \$	21,836,636 \$	27,438,331 \$	27,908,703 \$	29,804,442 \$	27,139,004 \$	31,282,073 \$	28,355,318	\$ 26,625,872 \$	27,424,078 \$	24,744,386 \$	22,159,719 \$	19,955,150 \$	17,655,557
2050 \$ - \$ 24,096,425 \$ 23,618,505 \$ 29,677,299 \$ 30,186,053 \$ 32,236,484 \$ 29,353,547 \$ 33,834,690 \$ 30,669,112 \$ 28,798,543 \$ 29,661,882 \$ 26,763,528 \$ 23,967,952 \$ 21,583,490 \$ 19,096,250	2049 \$	- \$	23,169,640 \$	22,710,101 \$	28,535,865 \$	29,025,051 \$	30,996,620 \$	28,224,564 \$	32,533,356 \$	29,489,531	27,690,906 \$	28,521,041 \$	25,734,161 \$	23,046,108 \$	20,753,356 \$	18,361,779
	2050 \$	- \$	24,096,425 \$	23,618,505 \$	29,677,299 \$	30,186,053 \$	32,236,484 \$	29,353,547 \$	33,834,690 \$	30,669,112	28,798,543 \$	29,661,882 \$	26,763,528 \$	23,967,952 \$	21,583,490 \$	19,096,250



Taxes 80/20 Units, Base Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2007 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2008 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2009 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2010 \$		- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2011 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2012 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2013 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2014 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2015 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2016 \$		- \$	- \$		- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2017 \$		- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2018 \$		- \$	- \$		- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2019 \$	- \$	- \$	- \$		- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2020 \$	- \$	- \$	- \$		- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2021 \$		- \$	- \$		- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2022 \$	461,928 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2023 \$	461,928 \$	390,680 \$	- \$			- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2024 \$		390,680 \$	261,151 \$		- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2025 \$	461,928 \$	390,680 \$	261,151 \$		- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2026 \$	461,928 \$	390,680 \$	261,151 \$	167,137 \$	91,116 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2027 \$. ,	390,680 \$	261,151 \$		91,116 \$	45,194 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2028 \$	461,928 \$	390,680 \$	261,151 \$		91,116 \$	45,194 \$	84,906 \$	- \$	- \$	- \$	- \$	- \$	- \$	
2029 \$	461,928 \$	390,680 \$	261,151 \$		91,116 \$	45,194 \$	84,906 \$	104,070 \$	- \$	- \$	- \$	- \$	- \$	
2030 \$	461,928 \$	390,680 \$	261,151 \$		91,116 \$	45,194 \$	84,906 \$	104,070 \$	129,552 \$	- \$	- \$	- \$	- \$	<u>-</u>
2031 \$		390,680 \$	261,151 \$		91,116 \$	45,194 \$	84,906 \$	104,070 \$	129,552 \$	159,464 \$	- \$	- \$	- \$	
2032 \$		390,680 \$	261,151 \$		91,116 \$	45,194 \$	84,906 \$	104,070 \$	129,552 \$	159,464 \$	243,886 \$	- \$	- \$	
2033 \$		390,680 \$	261,151 \$		91,116 \$	45,194 \$	84,906 \$	104,070 \$	129,552 \$	159,464 \$	243,886 \$	442,719 \$	- \$	
2034 \$	2,061,866 \$	390,680 \$	261,151 \$	167,137 \$	91,116 \$	45,194 \$	84,906 \$	104,070 \$	129,552 \$	159,464 \$	243,886 \$	442,719 \$	588,964 \$	
2035 \$			261,151 \$		91,116 \$	45,194 \$	84,906 \$	104,070 \$	129,552 \$	159,464 \$	243,886 \$	442,719 \$	588,964 \$	705,299
2036 \$	3,937,991 \$	1,801,093 \$	1,165,676 \$		91,116 \$	45,194 \$	84,906 \$	104,070 \$	129,552 \$	159,464 \$	243,886 \$	442,719 \$	588,964 \$	705,299
2037 \$		3,330,590 \$	1,203,946 \$	746,033 \$	91,116 \$	45,194 \$	84,906 \$	104,070 \$ 104.070 \$	129,552 \$	159,464 \$ 159,464 \$	243,886 \$	442,719 \$	588,964 \$ 588,964 \$	705,299
2038 \$	6,124,108 \$ 6.361.681 \$	3,454,437 \$ 5,179,518 \$	2,226,343 \$ 2.309.129 \$	770,525 \$ 1,424,859 \$	406,708 \$ 420,061 \$	45,194 \$ 201,727 \$	84,906 \$ 84,906 \$	104,070 \$	129,552 \$ 129,552 \$	159,464 \$	243,886 \$ 243.886 \$	442,719 \$ 442,719 \$	588,964 \$	705,299 705,299
2039 \$	8,657,701 \$	5,380,448 \$	3,462,264 \$, , , , , , , ,	776,778 \$	201,727 \$	378,987 \$	104,070 \$	129,552 \$	159,464 \$	243,886 \$	442,719 \$	588.964 \$	705,299
2040 \$		7,322,326 \$	3,596,576 \$		805,663 \$	385,282 \$	391,429 \$	464,530 \$	129,552 \$	159,464 \$	243,886 \$	442,719 \$	588,964 \$	705,299
2041 \$	11,580,306 \$	7,612,094 \$	4,894,631 \$	2,301,809 \$	1,207,995 \$	399,609 \$	723,833 \$	479,780 \$	578,269 \$	159,464 \$	243,886 \$	442,719 \$	588,964 \$	705,299
2042 \$		9,794,145 \$	5,088,327 \$	3,132,564 \$	1,207,995 \$	599,166 \$	750,749 \$	887,212 \$	597,254 \$	711,783 \$	243,886 \$	442,719 \$	588,964 \$	705,299
2043 \$	12,525,259 \$	10.185.911 \$	6,546,925 \$	3,256,529 \$	1,707,752 \$	622.409 \$	1,125,658 \$	920,203 \$	1.104.445 \$	735.152 \$	1,088,610 \$	442,719 \$	588.964 \$	705,299
2044 \$, , , , , , ,	10,185,911 \$	6,808,802 \$	4,190,032 \$	1,707,752 \$	847,045 \$	1,125,658 \$	1,379,735 \$	1,104,445 \$	1,359,446 \$	1,124,350 \$	1,976,123 \$	588,964 \$	705,299
2045 \$	13,547,320 \$	11,017,081 \$	7,081,154 \$	4,357,633 \$	2,284,243 \$	880.565 \$	1,591,352 \$	1,433,260 \$	1,717,561 \$	1,409,997 \$	2,079,153 \$	2,041,001 \$	2,628,903 \$	705,299
2046 \$	14,089,213 \$	11,457,765 \$	7,061,154 \$	4,531,939 \$	2,264,243 \$	1,132,985 \$	1,654,327 \$	1,950,543 \$	1,717,561 \$	2,114,122 \$	2,079,153 \$	3,774,229 \$	2,715,212 \$	3,148,175
2047 \$	14,089,213 \$	11,457,765 \$	7,364,401 \$	4,531,939 \$	2,375,613 \$	1,132,985 \$	2,128,549 \$	2,027,732 \$	2,428,130 \$	2,114,122 \$	3,233,364 \$	3,774,229 \$	5.020.983 \$	3,148,175
2048 \$	15,238,893 \$	12,392,718 \$	7,965,336 \$	4,713,216 \$	2,470,638 \$	1,178,304 \$	2,128,549 \$	2,608,993 \$	2,428,130 \$	2,196,136 \$	3,233,364 \$	5,869,437 \$	5,020,983 \$	6,012,750
2049 \$		12,392,718 \$	8,283,949 \$	5,097,815 \$	2,569,463 \$	1,274,454 \$	2,302,239 \$	2,713,353 \$		3,107,026 \$	4,571,032 \$	6,097,131 \$	7,808,307 \$	6,236,333
2000 \$	13,040,449 \$	12,000,421 \$	0,203,949 \$	\$ 510,180,6	2,012,242 \$	1,274,434 \$	۷,۵02,۷۵۶ \$	۷,/ ۱۵,۵۵۵ \$	3,247,801 \$	3,107,020 \$	4,011,U3Z \$	0,097,131 \$	1,000,301 \$	0,230,333



Market Value Condominium Units, Base Scenario

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2007 \$ 264,048,997 \$	- \$	- (- 9	- 9	- :	- 9	- :	\$ - :	\$ -	\$ - :	\$ - \$	- \$	- \$	-
2008 \$ 274,610,957 \$	62,417,982 \$	- 9	- 9	- 9	- :	5 - 5	- :	\$ - :	\$ -	\$ - :	\$ - 5	- \$	- \$	-
2009 \$ 285,595,395 \$	64,914,702 \$	63,627,206	- 9	- 9	- :	5 - 5	- :	\$ - :	\$ -	\$ - :	\$ - 5	- \$	- \$	-
2010 \$ 297,019,211 \$	67,511,290 \$	66,172,294	83,147,302	- 9	- :	5 - 5	- :	\$ - :	\$ -	\$ - :	\$ - 5	- \$	- \$	-
2011 \$ 308,899,980 \$	70,211,741 \$	68,819,186	86,473,194	87,955,592	- :	- 9	- :	\$ - :	\$ -	\$ - :	\$ - 5	- \$	- \$	-
2012 \$ 321,255,979 \$	73,020,211 \$	71,571,954	89,932,122	91,473,815	97,687,307	- 9	- :	\$ -	\$ -	\$ - :	\$ - :	- \$	- \$	
2013 \$ 334,106,218 \$	75,941,020 \$	74,434,832	93,529,407	95,132,768	101,594,800	\$ 92,509,086	- :	\$ - :	\$ -	\$ - :	\$ - 5	- \$	- \$	_
2014 \$ 347,470,467 \$	78,978,660 \$	77,412,225	97,270,583	98,938,079	105,658,592	\$ 96,209,449	110,896,886	\$ - :	\$ -	\$ - :	\$ - 5	- \$	- \$	_
2015 \$ 361,369,286 \$	82,137,807 \$	80,508,714	101,161,406	102,895,602	109,884,935	\$ 100,057,827	115,332,762	\$ 104,542,212	\$ -	\$ - :	\$ - 9	- \$	- \$	_
2016 \$ 375,824,057 \$	85,423,319 \$	83,729,063	105,207,863	107,011,426	114,280,333	\$ 104,060,140 \$	119,946,072	\$ 108,723,900	\$ 102,092,617	\$ - :	\$ - 5	- \$	- \$	
2017 \$ 390,857,019 \$	88,840,252 \$	87,078,225	109,416,177	111,291,883	118,851,546	\$ 108,222,546 \$	124,743,915	\$ 113,072,856	\$ 106,176,321	\$ 109,359,337	\$ - :	- \$	- \$	
2018 \$ 406,491,300 \$	92,393,862 \$	90,561,354	113,792,824	115,743,558	123,605,608	\$ 112,551,448 \$	129,733,672	\$ 117,595,770	\$ 110,423,374	\$ 113,733,711	\$ 102,620,438	- \$	- \$	_
2019 \$ 422,750,952 \$	96,089,616 \$	94,183,808	118,344,537	120,373,301	128,549,832	\$ 117,053,506 \$	134,923,019	\$ 122,299,601	\$ 114,840,309	\$ 118,283,059	\$ 106,725,255	95,577,302 \$	- \$	-
2020 \$ 439,660,990 \$	99,933,201 \$	97,951,161	123,078,319	125,188,233	133,691,826	\$ 121,735,646	140,319,939	\$ 127,191,585	\$ 119,433,922	\$ 123,014,382	\$ 110,994,265	99,400,394 \$	89,511,504 \$	-
2021 \$ 457,247,430 \$	103,930,529 \$	101,869,207	128,001,451	130,195,762	139,039,499	\$ 126,605,072 \$	145,932,737	\$ 132,279,249	\$ 124,211,278	\$ 127,934,957	\$ 115,434,036	103,376,410 \$	93,091,965 \$	82,364,224
2022 \$ 475,537,327 \$	108,087,750 \$	105,943,975	133,121,509	135,403,592	144,601,078	\$ 131,669,275	151,770,046	\$ 137,570,419	\$ 129,179,730	\$ 133,052,355	\$ 120,051,398	107,511,467 \$	96,815,643 \$	85,658,793
2023 \$ 494,558,820 \$	112,411,260 \$	110,181,734	138,446,370	140,819,736	150,385,122	\$ 136,936,046	157,840,848	\$ 143,073,235	\$ 134,346,919	\$ 138,374,450	\$ 124,853,453	\$ 111,811,925 \$	100,688,269 \$	89,085,145
2024 \$ 514,341,173 \$	116,907,711 \$	114,589,004	143,984,225	146,452,526	156,400,526	\$ 142,413,488	164,154,482	\$ 148,796,165	\$ 139,720,796	\$ 143,909,428	\$ 129,847,592	116,284,402 \$	104,715,800 \$	92,648,550
2025 \$ 534,914,820 \$	121,584,019 \$	119,172,564	149,743,594	152,310,627	162,656,548	\$ 148,110,027	170,720,661	\$ 154,748,011	\$ 145,309,627	\$ 149,665,805	\$ 135,041,495	120,935,778 \$	108,904,432 \$	96,354,492
2026 \$ 556,311,412 \$	126,447,380 \$	123,939,466	155,733,337	158,403,052	169,162,809	\$ 154,034,428	177,549,488	\$ 160,937,932	\$ 151,122,012	\$ 155,652,437	\$ 140,443,155	125,773,210 \$	113,260,609 \$	100,208,672
2027 \$ 578,563,869 \$	131,505,275 \$	128,897,045	161,962,671	164,739,174	175,929,322	\$ 160,195,805	184,651,467	\$ 167,375,449	\$ 157,166,893	\$ 161,878,534	\$ 146,060,881	130,804,138 \$	117,791,033 \$	104,217,019
2028 \$ 601,706,424 \$	136,765,486 \$	134,052,927	168,441,178	171,328,741	182,966,495	\$ 166,603,637	192,037,526	\$ 174,070,467	\$ 163,453,569	\$ 168,353,676	\$ 151,903,316	136,036,303 \$	122,502,675 \$	108,385,700
2029 \$ 625,774,681 \$	142,236,105 \$	139,415,044	175,178,825	178,181,890	190,285,154	\$ 173,267,783	199,719,027	\$ 181,033,286	\$ 169,991,711	\$ 175,087,823	\$ 157,979,449	141,477,756 \$	127,402,782 \$	112,721,128
2030 \$ 650,805,668 \$	147,925,550 \$	144,991,646	182,185,978	185,309,166	197,896,561	\$ 180,198,494	207,707,788	\$ 188,274,617	\$ 176,791,380	\$ 182,091,336	\$ 164,298,627	147,136,866 \$	132,498,893 \$	117,229,973
2031 \$ 676,837,895 \$														
2032 \$ 703,911,410 \$														
2033 \$ 732,067,867 \$														
2034 \$ 761,350,581 \$														
2035 \$ 791,804,605 \$														
2036 \$ 823,476,789 \$														
2037 \$ 856,415,860 \$														
2038 \$ 890,672,495 \$														
2039 \$ 926,299,395 \$														
2040 \$ 963,351,370 \$														
2041 \$1,001,885,425 \$														
2042 \$1,041,960,842 \$														
2043 \$1,083,639,276 \$														
2044 \$1,126,984,847 \$														
2045 \$1,172,064,241 \$														
2046 \$1,218,946,810 \$														
2047 \$1,267,704,683 \$														
2048 \$1,318,412,870 \$														
2049 \$1,371,149,385 \$														
2050 \$1,425,995,360 \$	324,123,095 \$	317,694,550	399,191,912	406,035,202	433,615,734	\$ 394,837,091	455,113,342	\$ 412,532,871	\$ 387,371,684	\$ 398,984,540	\$ 359,998,524	322,394,992 \$	290,321,391 \$	256,865,306



Market Value Condominium Units, Base Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2007 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2008 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2009 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2010 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- 9	- \$	- \$	- \$	- \$	
2011 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- 9	- \$	- \$	- \$	- \$	
2012 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2013 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2014 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2015 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2016 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2017 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2018 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2019 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2020 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2021 \$						- \$								
	71,090,344 \$			· · · · · ·		- \$								
2023 \$	73,933,957 \$	60,125,281 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2024 \$,,. , ,		40,190,921			- \$								
2025 \$						- \$								
2026 \$. , ,		, . ,		- \$	· ·						<u>.</u>	
2027 \$, . , . ,	.,,	-, -, -, -,		7	6,955,280 \$								
2028 \$., . ,				7,233,491 \$.,,					-	·	
2029 \$						7,522,831 \$								
2030 \$, . , ,					7,823,744 \$								
	101,183,726 \$, ,	,,	8,136,694 \$								
	105,231,075 \$					8,462,162 \$., , ,	.,,			37,533,782 \$			
	109,440,318 \$													
	113,817,931 \$,, +		9,152,674 \$,, +	20,021,000	Σ1,000,010 ψ		.,,		400 544 000
	\$ 118,370,648 \$ \$ 123,105,474 \$, , ,	.,,	9,518,781 \$ 9,899,532 \$., ,			, , , , , ,			
	123,105,474 \$					10,295,514 \$							101,958,796 \$	
	133,150,881 \$					10,707,334 \$							106,037,147 \$	
	138,476,916 \$					11,135,627 \$							110,278,633 \$	
	144,015,992 \$, , , , , , ,	.,,								114,689,779 \$	
	149,776,632 \$					12.044.295 \$							119.277.370 \$	
	155,767,697 \$,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			., . ,	12,526,066 \$							124,048,465 \$	
	161,998,405 \$					13,027,109 \$						100,855,038 \$		
	168,478,341 \$.,,.	, ,				104,889,240 \$		
	175,217,475 \$					14,090,121 \$						109,084,809 \$		
	182,226,174 \$, . ,	. ,,	, ,								113,448,202 \$		
	189,515,221 \$											117,986,130 \$		
	197,095,830 \$											122,705,575 \$		
	204,979,663 \$												163,239,317 \$	
2050 \$	213,178,850 \$	173,363,345 \$	111,428,115 \$	68,571,147 \$	35,944,553 \$	17,142,787 \$	30,967,615 \$	36,497,546 \$	43,686,457	51,704,857 \$	76,036,555 \$	132,718,350 \$	169,768,889 \$	195,483,070



Exempt Assessed Value Condominium Units, Base Scenario

	2007	200	8	2009		2010	2011		2012		2013	2014	_	2015		2016	2017	2018	2019	2020	2021
2007 \$	82,104,767																				
2008 \$	86,857,649	19,408,572	2										_								
2009 \$	73,440,517	\$ 20,532,09	5 \$	19,784,574									_								
2010 \$	77,553,091	17,360,44	3 \$	20,929,864	\$	25,854,254															
2011 \$	61,372,626	18,332,61	1 \$	17,696,772	\$	27,350,906 \$	27,349,369						_								
2012 \$	64,708,745	14,507,74	5 \$	18,687,768	\$	23,125,938 \$	28,932,569	\$	30,375,399				_								
2013 \$	45,452,207	15,296,36	3 \$	14,788,803	\$	24,420,961 \$	24,463,278	\$	32,133,770 \$	5	28,765,256										
2014 \$	47,857,771	10,744,35	1 \$	15,592,700	\$	19,325,838 \$	25,833,190	\$	27,169,982 \$	5	30,430,419 \$	34,482,854									
2015 \$	25,179,779	11,312,99	7 \$	10,952,501	\$	20,376,361 \$	20,443,424	\$	28,691,465 \$	5	25,729,752 \$	36,478,998	\$	32,506,899							
2016 \$	26,480,709	5,952,19	5 \$	11,532,164	\$	14,312,603 \$	21,554,696	\$	22,705,356 \$	8	27,170,584 \$	30,843,990	\$	34,388,658 \$	31,	745,209					
2017 \$	-	6,259,719	9 \$	6,067,507	\$	15,070,099 \$	15,140,280	\$	23,939,584 \$	5	21,501,788 \$	32,571,214	\$	29,076,551 \$	33,	582,876 \$	34,004,761				
2018 \$	-	\$	- \$	6,380,988	\$	7,928,948 \$	15,941,581	\$	16,815,454 \$	5	22,670,591 \$	25,775,644	\$	30,704,800 \$	28,	395,240 \$	35,973,229 \$	31,909,332			
2019 \$	- 1	\$	- \$	-	\$	8,338,602 \$	8,387,468	\$	17,705,414 \$	5	15,924,098 \$	27,176,768	\$	24,298,634 \$	29,9	985,336 \$	30,416,348 \$	33,756,500 \$	29,719,303		
2020 \$	-	\$	- \$	-	\$	- \$	8,820,811	\$	9,315,486 \$	5	16,766,883 \$	19,089,291	\$	25,619,470 \$	23,	729,278 \$	32,119,624 \$	28,542,044 \$	31,439,694 \$	27,833,172	
2021 \$	- :	\$	- \$	-	\$	- \$	-	\$	9,796,777 \$	5	8,821,690 \$	20,099,595	\$	17,995,426 \$	25,0	019,164 \$	25,418,274 \$	30,140,361 \$	26,583,121 \$	29,444,379 \$	25,610,760
2022 \$	- :	\$	- \$	-	\$	- \$	-	\$	- \$	5	9,277,468 \$	10,575,155	\$	18,947,837 \$	17,	573,764 \$	26,799,971 \$	23,851,958 \$	28,071,742 \$	24,896,028 \$	27,093,316
2023 \$	- :	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	11,121,527	\$	9,969,172 \$	18,	503,858 \$	18,824,624 \$	25,148,514 \$	22,214,930 \$	26,290,173 \$	22,908,139
2024 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	10,484,235 \$	9,	735,578 \$	19,820,920 \$	17,664,621 \$	23,422,499 \$	20,805,063 \$	24,190,965
2025 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	8	- \$	-	\$	- \$	10,2	238,573 \$	10,428,534 \$	18,599,523 \$	16,452,247 \$	21,935,994 \$	19,143,828
2026 \$		\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$		\$	- \$		- \$	10,967,331 \$	9,785,911 \$	17,322,984 \$	15,408,108 \$	20,184,457
2027 \$		\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	10,291,506 \$	9,114,276 \$	16,223,584 \$	14,177,807
2028 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	9,585,171 \$	8,535,840 \$	14,928,170
2029 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	8,976,849 \$	7,854,273
2030 \$	-		- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	8,260,069
2031 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	_
2032 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	_
2033 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	\$	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2034 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	-
2035 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2036 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2037 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2038 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2039 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2040 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	-
2041 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2042 \$		\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2043 \$		\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2044 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2045 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	8	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2046 \$	-	\$	- \$	-	\$	- \$	-	\$	- \$	8	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2047 \$	-	\$	- \$	-	\$	- \$	=	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2048 \$	-	\$	- \$	-	\$	- \$	=	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2049 \$	- 1	\$	- \$	-	\$	- \$	=	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2050 \$	- 1	\$	- \$	-	\$	- \$	-	\$	- \$	5	- \$	-	\$	- \$		- \$	- \$	- \$	- \$	- \$	
2000 \$	-	Ų	- ф	-	φ	- a		φ	- 3	ų	- 3		φ	- ə		- 3	- Þ	- ə	- ş	- 3	



Exempt Assessed Value Condominium Units, Base Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2007														
2008														
2009														
2010														
2011														
2012														
2013														
2014														
2015														
2016														
2017														
2018														
2019														
2020														
2021														
2022 \$	22,105,201													
2023 \$	23,384,827 \$	18,695,667												
2024 \$	19,772,511 \$	19,777,922 \$	12,497,174											
2025 \$	20,879,746 \$	16,722,774 \$												
2026 \$	16,523,452 \$	17,659,228 \$	11,178,388 \$	8,461,191 \$	4,360,304									
2027 \$	17,421,641 \$	13,974,855 \$,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		4,612,714 \$	2,162,711								
2028 \$	12,237,172 \$		9,341,533 \$		3,900,175 \$	2,287,906 \$	4,063,106							
2029 \$	12,884,826 \$		9,849,324 \$		4,118,580 \$	1,934,487 \$	4,298,311 \$	4,980,207						
2030 \$	6,779,193 \$	10,897,454 \$	6,918,284 \$	-,, +	3,259,291 \$	2,042,816 \$	3,634,340 \$	5,268,501 \$	6,199,603					
2031 \$	7,129,445 \$	5,733,562 \$	7,284,436 \$			1,616,608 \$	3,837,858 \$	4,454,662 \$	6,558,486 \$	7,631,005				
2032 \$	- \$	6,029,790 \$	3,832,616 \$		2,413,812 \$	1,704,485 \$	3,037,138 \$	4,704,117 \$	5,545,379 \$	8,072,749 \$				
2033 \$	- \$	- \$	4,030,631 \$		2,541,563 \$	1,197,251 \$	3,202,232 \$	3,722,663 \$	5,855,913 \$	6,825,730 \$	12,346,557 \$	21,185,956		
2034 \$	- \$	- \$	- \$,,	1,337,212 \$	1,260,615 \$	2,249,286 \$	3,925,021 \$	4,634,151 \$	7,207,962 \$	10,439,352 \$	22,412,368 \$	-, -,	
2035 \$	- \$	- \$	- \$			663,257 \$	2,368,330 \$	2,756,982 \$	4,886,057 \$	5,704,112 \$		18,950,270 \$	29,815,921 \$	
2036 \$	- \$	- \$	- \$			697,525 \$	1,246,068 \$	2,902,896 \$	3,432,025 \$	6,014,179 \$	8,723,937 \$	20,011,461 \$	25,210,176 \$	35,705,294
2037 \$	- \$	- \$	- \$		- \$	- \$	1,310,447 \$	1,527,323 \$	3,613,666 \$	4,224,432 \$	9,198,156 \$	15,836,324 \$	26,621,913 \$	30,189,802
2038 \$	- \$	- \$	- \$		- \$	- \$	- \$	1,606,233 \$	1,901,286 \$	4,448,011 \$	6,460,896 \$	16,697,162 \$	21,067,590 \$ 22,212,791 \$	31,880,392
2039 \$	- \$ - \$	- \$ - \$	- \$ - \$		- \$ - \$	- \$ - \$	- \$ - \$	- \$ - \$	1,999,517 \$	2,340,266 \$ 2,461,178 \$	6,802,840 \$ 3,579,231 \$	11,728,289 \$ 12,349,010 \$	22,212,791 \$ 15,602,534 \$	25,228,954 26,600,360
2040 \$	- \$	- \$	- \$			- \$	- \$ - \$				3,764,154 \$	6,497,280 \$	16,428,300 \$	18,684,415
2041 \$	- \$	- \$	- \$		- \$ - \$	- \$	- \$ - \$	- \$ - \$	- \$ - \$	- \$ - \$	3,764,154 \$	6,832,966 \$	8,643,549 \$	19,673,291
2042 \$	- \$	- \$	- \$		- \$	- \$	- \$ - \$	- \$	- \$	- \$	- \$	- \$	9,090,123 \$	10,350,861
2043 \$	- 5	- ş - \$	- \$			- \$ - \$	- \$ - \$	- \$ - \$	- \$ - \$	- ş - \$	- ş - \$	- s	9,090,123 \$	10,885,644
2044 \$	- \$	- ş - \$	- \$		- \$	- \$	- \$	- \$ - \$	- \$	- \$	- \$	- \$	- 3	10,000,044
2045 \$	- ş	- ş	<u>- Φ</u>		- ş - \$	- \$ - \$	- \$ - \$	- \$ - \$	- \$ - \$	- ş	- ş - \$	- ş - \$	- Þ	
2047 \$	- \$	- \$	- \$		- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2047 \$	- ş	- ş - \$	- •		- ş - \$	- ş	- ş - \$	- ş - \$	- \$ - \$	- ş	- ş - \$	- ş - \$	- \$ - \$	
2049 \$	- \$	- \$	- \$		- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2050 \$	- \$	- \$	- \$		- \$	- \$	- \$	- ş - \$	- \$	- \$	- \$	- \$	- \$	
	- ə	- ş	- p	- p	- ş	- p	- p	- ş	- ş	- p	- ş	- ə	- ə	



Taxes Condominium Units, Base Scenario

	2007	20	800	2009	2	010	2011		2012		2013		2014	2015	2016	2017	2018	2019	2020	2021
2007 \$	4,676,680 \$		- \$	-	\$	- \$	-	\$	- ;	\$	-	\$	- \$	- \$	-	\$ - \$	- \$	- \$	- \$	
2008 \$	4,676,680 \$	1,105,5	11 \$	=	\$	- \$	-	\$	- :	\$	-	\$	- \$	- \$; <u>-</u>	\$ - \$	- \$	- \$	- \$	
2009 \$	7,015,210 \$	1,105,5	11 \$	1,126,928	\$	- \$	-	\$	- :	\$	-	\$	- \$	- \$; <u>-</u>	\$ - \$	- \$	- \$	- \$	
2010 \$	7,146,164 \$	1,658,3	11 \$	1,126,928	\$ 1,472,6	56 \$	-	\$	- :	\$	-	\$	- \$	- \$; <u>-</u>	\$ - \$	- \$	- \$	- \$	
2011 \$	9,888,034 \$	1,689,2	67 \$	1,690,437	\$ 1,472,6	56 \$	1,557,818	\$	- :	\$	-	\$	- \$	- \$; <u>-</u>	\$ - \$	- \$	- \$	- \$	
2012 \$	10,171,315 \$	2,337,4	11 \$	1,721,993	\$ 2,209,0)44 \$	1,557,818	\$	1,730,180	\$	-	\$	- \$	- \$	-	\$ - \$	- \$	- \$	- \$	
2013 \$	13,360,551 \$	2,404,3	76 \$	2,382,694	\$ 2,250,2	280 \$	2,336,790	\$	1,730,180	\$	1,638,466	\$	- \$	- \$	-	\$ - \$	- \$	- \$	- \$	
2014 \$	13,820,147 \$	3,158,2	72 \$	2,450,956	\$ 3,113,6	677 \$	2,380,411	\$	2,595,340	\$	1,638,466	\$	1,964,140 \$	- \$	-	\$ - \$	- \$	- \$	- \$	
2015 \$	17,505,274 \$	3,266,9	15 \$	3,219,458	\$ 3,202,8	81 \$	3,293,737	\$	2,643,788	\$	2,457,766	\$	1,964,140 \$	1,851,590 \$	-	\$ - \$	- \$	- \$	- \$	
2016 \$	18,168,072 \$	4,138,0	35 \$	3,330,205	\$ 4,207,1	50 \$	3,388,099	\$	3,658,167	\$	2,503,646	\$	2,946,290 \$	1,851,590 \$	1,808,204	\$ - \$	- \$	- \$	- \$	
2017 \$	22,402,556 \$	4,294,7	12 \$	4,218,201	\$ 4,351,8	374 \$	4,450,444	\$	3,762,970	\$	3,464,255	\$	3,001,289 \$	2,777,460 \$	1,808,204	\$ 1,936,908 \$	- \$	- \$	- \$	
2018 \$	23,298,659 \$	5,295,6	93 \$	4,377,913	\$ 5,512,2	296 \$	4,603,536	\$	4,942,856	\$	3,563,502	\$	4,152,836 \$	2,829,308 \$	2,712,380	\$ 1,936,908 \$	1,817,553 \$	- \$	- \$	
2019 \$	24,230,605 \$	5,507,5	20 \$	5,398,286	\$ 5,721,0	07 \$	5,831,065	\$	5,112,888	\$	4,680,845	\$	4,271,810 \$	3,914,868 \$	2,763,012	\$ 2,905,441 \$	1,817,553 \$	1,692,809 \$	- \$	-
2020 \$	25,199,829 \$	5,727,8	21 \$	5,614,218	\$ 7,054,4	18 \$	6,051,845	\$	6,476,234	\$	4,841,863	\$	5,611,245 \$	4,027,025 \$	3,823,136	\$ 2,959,677 \$	2,726,403 \$	1,692,809 \$	1,585,375 \$	-
2021 \$	26,207,822 \$	5,956,9	34 \$	5,838,786	\$ 7,336,5	95 \$	7,462,365	\$	6,721,442	\$	6,132,941	\$	5,804,268 \$	5,289,706 \$	3,932,665	\$ 4,095,258 \$	2,777,297 \$	2,539,282 \$	1,585,375 \$	1,458,787
2022 \$	27,256,135 \$	6,195,2	12 \$	6,072,338	\$ 7,630,0	59 \$	7,760,860	\$	8,288,028	\$	6,365,151	\$	7,351,970 \$	5,471,669 \$	5,165,760	\$ 4,212,583 \$	3,842,902 \$	2,586,683 \$	2,378,127 \$	1,458,787
2023 \$	28,346,381 \$	6,443,0	20 \$	6,315,231	\$ 7,935,2	261 \$	8,071,294	\$	8,619,549	\$	7,848,695	\$	7,630,336 \$	6,930,684 \$	5,343,459	\$ 5,533,447 \$	3,952,997 \$	3,579,153 \$	2,422,520 \$	2,188,239
2024 \$	29,480,236 \$	6,700,7	41 \$	6,567,841	\$ 8,252,6	372 \$	8,394,146	\$	8,964,331	\$	8,162,643	\$	9,408,760 \$	7,193,098 \$	6,768,286	\$ 5,723,794 \$	5,192,467 \$	3,681,691 \$	3,352,002 \$	2,229,087
2025 \$	30,659,445 \$	6,968,7	70 \$	6,830,554	\$ 8,582,7	79 \$	8,729,912	\$	9,322,904	\$	8,489,148	\$	9,785,111 \$	8,869,614 \$	7,024,552	\$ 7,250,038 \$	5,371,085 \$	4,836,093 \$	3,448,033 \$	3,084,353
2026 \$	31,885,823 \$	7,247,5	21 \$	7,103,776	\$ 8,926,0	90 \$	9,079,109	\$	9,695,820	\$	8,828,714	\$	10,176,515 \$	9,224,399 \$	8,661,785	\$ 7,524,544 \$	6,803,279 \$	5,002,452 \$	4,529,171 \$	3,172,716
2027 \$	33,161,256 \$	7,537,4	22 \$	7,387,927	\$ 9,283,1	33 \$	9,442,273	\$	10,083,653	\$	9,181,863	\$	10,583,576 \$	9,593,375 \$	9,008,256	\$ 9,278,311 \$	7,060,869 \$	6,336,350 \$	4,684,972 \$	4,167,527
2028 \$	34,487,706 \$	7,838,9	19 \$	7,683,445	\$ 9,654,4	59 \$	9,819,964	\$	10,486,999	\$	9,549,137	\$	11,006,919 \$	9,977,110 \$	9,368,586	\$ 9,649,443 \$	8,706,566 \$	6,576,262 \$	5,934,215 \$	4,310,888
2029 \$	35,867,214 \$	8,152,4	76 \$	7,990,782	\$ 10,040,6	37 \$	10,212,762	\$	10,906,479	\$	9,931,103	\$	11,447,196 \$	10,376,194 \$	9,743,330	\$ 10,035,421 \$	9,054,829 \$	8,109,010 \$	6,158,900 \$	5,460,382
2030 \$	37,301,903 \$	8,478,5	75 \$	8,310,414	\$ 10,442,2	263 \$	10,621,273	\$	11,342,738	\$	10,328,347	\$	11,905,083 \$	10,791,242 \$	10,133,063	\$ 10,436,838 \$	9,417,022 \$	8,433,370 \$	7,594,373 \$	5,667,127
2031 \$	38,793,979 \$	8,817,7	18 \$	8,642,830	\$ 10,859,9	53 \$	11,046,124	\$	11,796,448	\$	10,741,481	\$	12,381,287 \$	11,222,892 \$	10,538,386	\$ 10,854,312 \$	9,793,703 \$	8,770,705 \$	7,898,148 \$	6,987,980
2032 \$	40,345,738 \$	9,170,4	26 \$	8,988,543	\$ 11,294,3	851 \$	11,487,969	\$	12,268,306	\$	11,171,140	\$	12,876,538 \$	11,671,807 \$	10,959,921	\$ 11,288,484 \$	10,185,451 \$	9,121,533 \$	8,214,074 \$	7,267,499
2033 \$	41,959,568 \$.,,		9,348,085	. , .,	_		_	, ,	•	11,617,986	_	13,391,600 \$	12,138,680 \$,,.	\$ 11,740,023 \$	10,592,869 \$	9,486,394 \$	8,542,637 \$	7,558,199
2034 \$.,,,,	-,,	33 \$	9,722,009	\$ 12,215,9	_		_	-, -,,	_	12,082,705	_	13,927,264 \$	12,624,227 \$		\$ 12,209,624 \$	11,016,584 \$	9,865,850 \$	8,884,342 \$	7,860,527
2035 \$	45,383,469 \$			10,110,889	\$ 12,704,6		12,922,402	_	13,800,175	_	12,566,013	•	14,484,354 \$,,			11,457,247 \$	10,260,484 \$	9,239,716 \$	8,174,948
2036 \$	47,198,807 \$	-, -,	_	10,010,021	\$ 13,212,7	_	., ,	_	14,352,182	_	13,068,654	_	15,063,728 \$	13,654,364 \$		\$ 13,205,930 \$,	10,670,904 \$	9,609,304 \$	8,501,946
2037 \$	49,086,760 \$,,=		10,000,001	\$ 13,741,3		,	_	14,926,270	_	-,,	_	15,666,278 \$	14,200,538 \$		\$ 13,734,167 \$	12,392,159 \$	11,097,740 \$	9,993,676 \$	8,842,024
2038 \$			_		\$ 14,290,9	_		_	15,523,320	_	14,135,056	_	16,292,929 \$	14,768,560 \$				11,541,649 \$	10,393,424 \$	9,195,705
2039 \$, , ,	, , .		, , , , ,	\$ 14,862,5		-, ,	_	16,144,253	_	, ,	_	16,944,646 \$	15,359,302 \$		\$ 14,854,875 \$	13,403,359 \$	12,003,315 \$	10,809,161 \$	9,563,533
2040 \$	55,215,929 \$,,-		,,	\$ 15,457,1		,,	_	,,	_	15,288,477	_	17,622,432 \$	15,973,674 \$,,	\$ 15,449,070 \$,, +	12,483,448 \$	11,241,527 \$	9,946,075
2041 \$. , , ,	-,,-		,,	\$ 16,075,3	_	16,350,962		17,461,624	_	15,900,016	_	18,327,329 \$	16,612,621	-,,		, , , , , , ,	12,982,786 \$	11,691,188 \$	10,343,918
2042 \$			_	.,,	\$ 16,718,3	_	, ,	_	18,160,089	_	16,536,016		19,060,422 \$					13,502,097 \$	12,158,836 \$	10,757,674
2043 \$	62,110,411 \$, , .		10,001,100	\$ 17,387,1		,,	_	18,886,493	_	,,	\$	19,822,839 \$	17,968,211	10,012,200	\$ 17,378,103 \$	15,680,034 \$	14,042,181 \$	12,645,189 \$	11,187,981
2044 \$. , ,			, ,	\$ 18,082,6		.,,	_	19,641,953	_	17,885,355	_	20,615,753 \$.,,		,,	.,,	14,603,868 \$	13,150,996 \$	11,635,501
2045 \$, ,	\$ 18,805,9			_	20,427,631	_	18,600,769	_	21,440,383 \$,,			.,,	15,188,023 \$	13,677,036 \$	12,100,921
2046 \$			_	,,	\$ 19,558,1				21,244,736	_	19,344,800	_							14,224,118 \$	
2047 \$	72,660,395 \$	-,,		,,	\$ 20,340,4		-,,		22,094,525	_	20,118,592	_	23,189,918 \$		-, -, -	\$ 20,329,922 \$,, +	16,427,366 \$	14,793,083 \$	13,088,356
2048 \$	75,566,811 \$			10,000,010	\$ 21,154,1	_	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	_		_	20,923,336	_	24,117,515 \$,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		\$ 21,143,119 \$		17,084,461 \$	15,384,806 \$	13,611,890
2049 \$,,	\$ 22,000,2	_				_		_	25,082,215 \$	22,735,520 \$		\$ 21,988,844 \$	19,840,246 \$	17,767,839 \$	16,000,198 \$	14,156,366
2050 \$	81,733,063 \$	18,577,6	01 \$	18,209,140	\$ 22,880,2	283 \$	23,272,517	\$	24,853,336	\$	22,630,680	\$	26,085,504 \$	23,644,940 \$	22,202,789	\$ 22,868,397 \$	20,633,855 \$	18,478,553 \$	16,640,206 \$	14,722,620



Taxes Condominium Units, Base Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2007 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2008 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2009 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2010 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2011 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2012 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2013 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2014 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2015 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2016 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2017 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2018 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2019 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2020 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2021 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2022 \$	1,259,110 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2023 \$	1,259,110 \$	1,064,904 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2024 \$	1,888,716 \$	1,064,904 \$	711,838 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2025 \$	1,923,974 \$	1,597,398 \$	711,838 \$	455,576 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2026 \$	2,662,172 \$	1,627,217 \$	1,067,786 \$	455,576 \$	248,363 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2027 \$	2,738,440 \$	2,251,555 \$	1,087,718 \$	683,383 \$	248,363 \$	123,188 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2028 \$	3,597,083 \$	2,316,060 \$	1,505,059 \$	696,140 \$	372,554 \$	123,188 \$	231,434 \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2029 \$	3,720,821 \$	3,042,265 \$	1,548,177 \$	963,237 \$	379,508 \$	184,787 \$	231,434 \$	283,672 \$	- \$	- \$	- \$	- \$	- \$	
2030 \$	4,712,974 \$	3,146,917 \$	2,033,611 \$	990,833 \$	525,120 \$	188,236 \$	347,161 \$	283,672 \$	353,129 \$	- \$	- \$	- \$	- \$	-
2031 \$	4,891,420 \$	3,986,039 \$	2,103,566 \$	1,301,511 \$	540,164 \$	260,459 \$	353,641 \$	425,520 \$	353,129 \$	434,661 \$	- \$	- \$	- \$	
2032 \$	6,031,477 \$	4,136,961 \$	2,664,479 \$	1,346,282 \$	709,533 \$	267,921 \$	489,328 \$	433,463 \$	529,708 \$	434,661 \$	664,776 \$	- \$	- \$	
2033 \$	6,272,736 \$	5,101,174 \$	2,765,364 \$	1,705,267 \$	733,941 \$	351,929 \$	503,346 \$	599,776 \$	539,596 \$	652,010 \$	664,776 \$	1,206,750 \$	- \$	-
2034 \$	6,523,645 \$	5,305,221 \$	3,409,895 \$	1,769,833 \$	929,645 \$	364,035 \$	661,172 \$	616,959 \$	746,630 \$	664,181 \$	997,191 \$	1,206,750 \$	1,605,380 \$	
2035 \$	6,784,591 \$	5,517,430 \$	3,546,291 \$		964,844 \$	461,104 \$	683,915 \$	810,407 \$	768,020 \$	919,017 \$	1,015,806 \$	1,810,174 \$	1,605,380 \$	1,922,482
2036 \$	7,055,975 \$	5,738,127 \$	3,688,143 \$	2,269,626 \$	1,189,723 \$	478,563 \$	866,281 \$	838,285 \$	1,008,834 \$	945,345 \$	1,405,555 \$	1,843,965 \$	2,408,135 \$	1,922,482
2037 \$	7,338,214 \$	5,967,653 \$	3,835,668 \$	2,360,411 \$	1,237,312 \$	590,103 \$	899,081 \$	1,061,813 \$	1,043,538 \$	1,241,760 \$	1,445,822 \$	2,551,465 \$	2,453,088 \$	2,883,800
2038 \$	7,631,742 \$	6,206,359 \$	3,989,095 \$		1,286,805 \$	613,707 \$	1,108,632 \$	1,102,016 \$	1,321,796 \$	1,284,476 \$	1,899,163 \$	2,624,562 \$	3,394,299 \$	2,937,633
2039 \$	7,937,012 \$	6,454,613 \$	4,148,659 \$		1,338,277 \$	638,255 \$	1,152,977 \$	1,358,866 \$	1,371,843 \$	1,626,980 \$	1,964,493 \$	3,447,498 \$	3,491,542 \$	4,064,756
2040 \$	8,254,493 \$	6,712,798 \$	4,314,605 \$		1,391,808 \$	663,785 \$	1,199,096 \$	1,413,221 \$	1,691,582 \$	1,688,582 \$	2,488,323 \$	3,566,090 \$	4,586,322 \$	4,181,207
2041 \$	8,584,672 \$	6,981,309 \$	4,487,189 \$		1,447,480 \$	690,337 \$	1,247,060 \$	1,469,749 \$	1,759,245 \$	2,082,145 \$	2,582,537 \$	4,516,984 \$	4,744,089 \$	5,492,233
2042 \$	8,928,059 \$	7,260,562 \$	4,666,677 \$		1,505,380 \$	717,950 \$	1,296,942 \$	1,528,539 \$	1,829,615 \$	2,165,431 \$	3,184,457 \$	4,688,010 \$	6,009,095 \$	5,681,162
2043 \$	9,285,182 \$	7,550,984 \$	4,853,344 \$		1,565,595 \$	746,668 \$	1,348,820 \$	1,589,681 \$	1,902,800 \$	2,252,048 \$	3,311,835 \$	5,780,658 \$	6,236,616 \$	7,196,038
2044 \$.,,	7,853,024 \$	5,047,478 \$		1,628,219 \$	776,535 \$	1,402,773 \$	1,653,268 \$	1,978,912 \$	2,342,130 \$	3,444,309 \$	6,011,884 \$	7,690,202 \$	7,468,500
2045 \$	10,042,852 \$	8,167,145 \$	5,249,377 \$		1,693,347 \$	807,596 \$	1,458,884 \$	1,719,399 \$	2,058,068 \$	2,435,815 \$	3,582,081 \$	6,252,359 \$	7,997,810 \$	9,209,204
2046 \$		8,493,830 \$	5,459,352 \$		1,761,081 \$	839,900 \$	1,517,239 \$	1,788,175 \$	2,140,391 \$	2,533,248 \$	3,725,364 \$	6,502,454 \$	8,317,722 \$	9,577,573
2047 \$.,,.	8,833,584 \$	5,677,726 \$			873,496 \$	1,577,929 \$	1,859,702 \$	2,226,007 \$	2,634,578 \$	3,874,379 \$	6,762,552 \$	8,650,431 \$	9,960,676
2048 \$		9,186,927 \$	5,904,835 \$		1,904,785 \$	908,436 \$	1,641,046 \$	1,934,090 \$	2,315,047 \$	2,739,961 \$	4,029,354 \$	7,033,054 \$	8,996,448 \$	10,359,103
2049 \$	11,748,717 \$	9,554,404 \$	6,141,028 \$., .,	1,980,977 \$	944,774 \$	1,706,688 \$	2,011,453 \$	2,407,649 \$	2,849,559 \$	4,190,528 \$	7,314,376 \$	9,356,306 \$	10,773,467
2050 \$	12,218,666 \$	9,936,580 \$	6,386,670 \$	3,930,258 \$	2,060,216 \$	982,565 \$	1,774,955 \$	2,091,912 \$	2,503,955 \$	2,963,541 \$	4,358,149 \$	7,606,951 \$	9,730,559 \$	11,204,405



DOF Market Value 80/20 Units, Cyclical Scenario

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2007 \$	- \$	- \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	· -	\$ - :	- :	\$ - \$	- \$	-
2008 \$	- \$	83,135,931 \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - 9	\$ -	\$ - :	\$ - :	\$ - \$	- \$	_
2009 \$	- \$	86,461,368 \$	79,188,916	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - 5	š -	\$ - :	5 - :	\$ - \$	- \$	-
2010 \$	- \$	89,919,823 \$	82,356,473	\$ 93,449,386	\$ -	\$ -	\$ -	\$ -	\$ - 5	-	\$ - :	5 - :	\$ - \$	- \$	-
2011 \$	- \$	93,516,616 \$	85,650,732	\$ 97,187,361	\$ 95,788,982	\$ -	\$ -	\$ -	\$ - 5	-	\$ - :	š - :	\$ - \$	- \$	-
2012 \$	- \$	97,257,280 \$	89,076,761	\$ 101,074,856	\$ 99,620,541	\$ 108,891,796	\$ -	\$ -	\$ - 5	-	\$ - :	- :	\$ - \$	- \$	-
2013 \$	- \$	101,147,571 \$	92,639,832	\$ 105,117,850	\$ 103,605,363	\$ 113,247,468	\$ 116,587,543	\$ -	\$ - 9	-	\$ - :	- :	\$ - \$	- \$	-
2014 \$	- \$ ^	105,193,474 \$	96,345,425	\$ 109,322,564	\$ 107,749,577	\$ 117,777,367	\$ 121,251,045	\$ 134,665,125	\$ - 9	\$ <u>-</u>	\$ - :	\$ - :	\$ - \$	- \$	
2015 \$	- \$ ^	109,401,213 \$	100,199,242	\$ 113,695,466	\$ 112,059,561	\$ 122,488,461	\$ 126,101,087	\$ 140,051,730	\$ 114,240,768	-	\$ - 9	- :	\$ - \$	- \$	
2016 \$									\$ 118,810,399						
2017 \$									\$ 123,562,815						-
2018 \$									\$ 128,505,328					-	
2019 \$													\$ 106,533,677 \$		
2020 \$													\$ 110,795,024 \$		
2021 \$													\$ 115,226,825 \$		
2022 \$													\$ 119,835,898 \$		
2023 \$													\$ 124,629,334 \$		
2024 \$													\$ 129,614,507 \$		
2025 \$ 2026 \$													\$ 134,799,088 \$ \$ 140,191,051 \$		
2027 \$													\$ 145,798,693 \$		
2028 \$													\$ 151,630,641 \$		
2029 \$													\$ 157,695,867 \$		
2030 \$													\$ 164,003,701 \$		
2031 \$													\$ 170,563,849 \$		
2032 \$	- \$ 2	213,102,678 \$	195,178,153	\$ 221,467,456	\$ 218,280,873	\$ 238,595,334	\$ 245,632,370	\$ 272,806,834	\$ 222,529,650	\$ 208,012,998	\$ 217,749,776	199,338,413	\$ 177,386,403 \$	152,247,811 \$	119,850,893
2033 \$	- \$ 2	221,626,785 \$	202,985,279	\$ 230,326,154	\$ 227,012,108	\$ 248,139,148	\$ 255,457,665	\$ 283,719,107	\$ 231,430,836	\$ 216,333,518	\$ 226,459,767	\$ 207,311,950	\$ 184,481,859 \$	158,337,724 \$	124,644,929
2034 \$	- \$ 2	230,491,856 \$	211,104,691	\$ 239,539,200	\$ 236,092,593	\$ 258,064,714	\$ 265,675,971	\$ 295,067,871	\$ 240,688,069	\$ 224,986,858	\$ 235,518,158	\$ 215,604,428	\$ 191,861,134 \$	164,671,233 \$	129,630,726
2035 \$	- \$ 2	239,711,530 \$	219,548,878	\$ 249,120,768	\$ 245,536,296	\$ 268,387,302	\$ 276,303,010	\$ 306,870,586	\$ 250,315,592	\$ 233,986,333	\$ 244,938,885	\$ 224,228,605	\$ 199,535,579 \$	171,258,082 \$	134,815,955
2036 \$	- \$ 2	249,299,991 \$	228,330,833	\$ 259,085,599	\$ 255,357,748	\$ 279,122,794	\$ 287,355,130	\$ 319,145,410	\$ 260,328,215	\$ 243,345,786	\$ 254,736,440	\$ 233,197,749	\$ 207,517,002 \$	178,108,405 \$	140,208,593
2037 \$	- \$ 2	259,271,991 \$	237,464,067	\$ 269,449,023	\$ 265,572,058	\$ 290,287,706	\$ 298,849,336	\$ 331,911,226	\$ 270,741,344	\$ 253,079,618	\$ 264,925,897	242,525,659	\$ 215,817,682 \$	185,232,741 \$	145,816,937
2038 \$	- \$ 2	269,642,871 \$	246,962,629	\$ 280,226,983	\$ 276,194,941	\$ 301,899,214	\$ 310,803,309	\$ 345,187,675	\$ 281,570,998	\$ 263,202,802	\$ 275,522,933	252,226,685	\$ 224,450,390 \$	192,642,051 \$	151,649,615
2039 \$	- \$ 2	280,428,586 \$	256,841,134	\$ 291,436,063	\$ 287,242,738	\$ 313,975,183	\$ 323,235,441	\$ 358,995,182	\$ 292,833,838	\$ 273,730,914	\$ 286,543,851	\$ 262,315,753	\$ 233,428,405 \$	200,347,733 \$	157,715,599
2040 \$													\$ 242,765,541 \$		
2041 \$													\$ 252,476,163 \$		
2042 \$													\$ 262,575,210 \$		
2043 \$													\$ 273,078,218 \$		
2044 \$													\$ 284,001,347 \$		
2045 \$													\$ 295,361,401 \$		
2046 \$													\$ 307,175,857 \$		
2047 \$													\$ 319,462,891 \$		
2048 \$ 2049 \$													\$ 332,241,407 \$		
2049 \$													\$ 345,531,063 \$ \$ 359,352,305 \$		
2000 \$	- ə ⁴	101,100,324 Þ	Jaj,Jaj, 120	ψ 440,002,429	442,130,330	ψ 403,330,369	ψ +31,000,111	ψ J0Z,000,009	ψ +50,004,239 3	# ₹21,380,100	٠ ١,١∠١,∪٣٥	# 1 03,023,030	ψ JJ8,JUZ,JUD Φ	JU0,420,130 \$	272,130,319



DOF Market Value 80/20 Units, Cyclical Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2007 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2008 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2009 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2010 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2011 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2012 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2013 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2014 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2015 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2016 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	_
2017 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2018 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2019 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2020 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2021 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2022 \$	66,376,171 \$	- \$	- \$	<u> </u>	- \$	- \$		- \$	- \$				- \$	
2023 \$		80,225,469 \$	- \$	·	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2024 \$		83,434,488 \$	47,344,221 \$	- \$	- \$	- \$		- \$	- \$	- \$			- \$	
2025 \$				\$ 18,027,024 \$	- \$	- \$		- \$	- \$					
2026 \$	77,650,732 \$	90,242,743 \$	51,207,510	\$ 18,748,105 \$	2,378,491 \$	- \$	- \$	- \$	- \$	- \$			- \$	
2027 \$, , ,	93,852,452 \$			2,473,631 \$	- \$		- \$	- \$					
2028 \$		97,606,550 \$			2,572,576 \$	- \$	- \$	- \$	- \$	- \$	- \$	- 9	- \$	
2029 \$				\$ 21,089,068 \$	2,675,479 \$	- \$		1,259,049 \$	- \$					
2030 \$		105,571,245 \$			2,782,498 \$	- \$		1,309,411 \$	3,437,203 \$	- \$				
2031 \$		109,794,095 \$		\$ 22,809,936 \$	2,893,798 \$	- \$		1,361,787 \$	3,574,691 \$					
	98,252,948 \$				3,009,550 \$	- \$		1,416,259 \$	3,717,679 \$		27,794,077 \$		<u> </u>	
				\$ 24,671,227 \$	3,129,932 \$	- \$		1,472,909 \$	3,866,386 \$			102,183,066		
	106,270,388 \$				3,255,129 \$	- \$		1,531,825 \$	4,021,042 \$				118,907,948 \$	
	110,521,204 \$				3,385,334 \$	- \$		1,593,098 \$	4,181,883 \$				123,664,266 \$	
	114,942,052 \$				3,520,748 \$	- \$	•	1,656,822 \$	4,349,159 \$	- \$			128,610,837 \$	
	119,539,734 \$				3,661,577 \$	- \$		1,723,095 \$	4,523,125 \$				133,755,270 \$	
	124,321,324 \$				3,808,041 \$	- \$		1,792,019 \$	4,704,050 \$	- \$			139,105,481 \$	
	129,294,177 \$				3,960,362 \$	- \$		1,863,700 \$	4,892,212 \$,		144,669,700 \$	
	134,465,944 \$				4,118,777 \$	- \$		1,938,248 \$	5,087,901 \$				150,456,488 \$	
	139,844,581 \$				4,283,528 \$	- \$		2,015,778 \$	5,291,417 \$				156,474,748 \$	
	145,438,365 \$				4,454,869 \$	- \$		2,096,409 \$	5,503,073 \$				162,733,738 \$	
	151,255,899 \$				4,633,064 \$	- \$		2,180,265 \$	5,723,196 \$	- \$			169,243,087 \$	
				\$ 37,980,220 \$	4,818,386 \$	- \$		2,267,476 \$	5,952,124 \$	- \$			176,012,811 \$	
	163,598,381 \$				5,011,122 \$	- \$		2,358,175 \$	6,190,209 \$	- \$			183,053,323 \$	
	170,142,316 \$				5,211,566 \$	- \$		2,452,502 \$	6,437,817 \$				190,375,456 \$	
	176,948,008 \$				5,420,029 \$	- \$		2,550,602 \$	6,695,330 \$, ,		197,990,474 \$	
	184,025,929 \$				5,636,830 \$	- \$		2,652,626 \$	6,963,143 \$	-			205,910,093 \$	
	191,386,966 \$				5,862,303 \$	- \$		2,758,731 \$	7,241,669 \$	- \$			214,146,497 \$	
2050 \$	199,042,445 \$	231,319,598 \$	131,260,423	\$ 48,057,095 \$	6,096,796 \$	- \$	- \$	2,869,080 \$	7,531,336 \$	- \$	56,305,701 \$	199,042,445	222,712,357 \$	214,463,751



Exempt Assessed Value 80/20 Units, Cyclical Scenario

	2007	2008	2009		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2007																
2008	\$	34,141,358														
2009	\$	35,637,804	32,520,441													
2010	\$	37,194,109	33,945,841	\$ 3	38,376,775											
2011		38,812,666			40,058,864 \$	39,337,575										
2012	\$	40,495,965	36,969,971	\$ 4	41,808,236 \$	41,061,776	\$ 44,718,496									
2013	\$	42,246,596	38,573,353	\$ 4	43,627,584 \$	42,854,946	\$ 46,678,548	\$ 47,878,901								
2014	\$	44,067,252	\$ 40,240,870	\$ 4	45,519,705 \$	44,719,843	\$ 48,717,002	\$ 49,977,477 \$	55,302,805							
2015	\$	45,960,735	\$ 41,975,087	\$ 4	47,487,511 \$	46,659,335			57,726,778	46,915,153						
2016	\$	47,929,957	\$ 43,778,674	\$ 4	49,534,030 \$	48,676,407	\$ 53,041,787	\$ 54,429,815 \$	60,247,709	48,971,487	\$ 45,608,844					
2017	\$	49,977,947	\$ 45,654,404	\$ 5	51,662,409 \$	50,774,162	\$ 55,334,771	\$ 56,790,428 \$	62,869,477	51,110,074	\$ 47,607,921	\$ 49,653,475				
2018	\$	52,107,858	\$ 47,605,163	\$ 5	53,875,923 \$	52,955,827	\$ 57,719,475	\$ 59,245,465 \$	65,596,116	53,334,205	\$ 49,686,962	\$ 51,829,832	47,273,338			
2019	\$	54,322,964	\$ 49,633,952	\$ 5	56,177,978 \$	55,224,759	\$ 60,199,566	\$ 61,798,703 \$	68,431,821	55,647,301	\$ 51,849,164	\$ 54,093,244	49,345,372 \$	43,750,089		
2020	\$	45,301,340	\$ 51,743,893	\$ 5	58,572,115 \$	57,584,448	\$ 62,778,861	\$ 64,454,071 \$	71,380,954	58,052,921	\$ 54,097,853	\$ 56,447,191	5 51,500,286 \$	45,667,695 \$	39,051,976	
2021	\$	47,218,028	43,150,585	\$ 6	61,062,018 \$	60,038,525	\$ 65,461,328	\$ 67,215,653 \$	74,448,052	60,554,765	\$ 56,436,491	\$ 58,895,297	5 53,741,398 \$	47,662,006 \$	40,763,659 \$	31,971,762
2022	\$	36,908,537	\$ 44,976,275	\$ 5	50,921,213 \$	62,590,764	\$ 68,251,094	\$ 70,087,699 \$	77,637,834	63,156,683	\$ 58,868,674	\$ 61,441,327	5 56,072,153 \$	49,736,088 \$	42,543,810 \$	33,373,113
2023	\$	38,463,354	35,156,244	\$ 5	53,075,676 \$	52,196,075	\$ 71,152,450	\$ 73,074,627 \$	80,955,207		\$ 61,398,144	\$ 64,089,198	5 58,496,139 \$	5 51,893,135 \$	44,395,167 \$	34,830,518
2024	\$	26,720,243	\$ 36,637,244	\$ 4	41,487,238 \$	54,404,477	\$ 59,335,888	\$ 76,181,032 \$	84,405,276	68,676,913	\$ 64,028,793	\$ 66,842,984	61,017,085	5 54,136,463 \$	46,320,578 \$	36,346,220
2025	\$	27,841,369	\$ 25,451,655	\$ 4	43,234,938 \$	42,525,911	\$ 61,846,374	\$ 63,529,354 \$	87,993,347	71,603,718	\$ 66,764,668	\$ 69,706,921	63,638,868 \$	5 56,469,524 \$	48,323,006 \$	37,922,550
2026	\$	14,503,671	\$ 26,519,555	\$ 3	30,035,031 \$	44,317,367	\$ 48,342,959	\$ 66,217,264 \$	73,379,953	74,647,594	\$ 69,609,978	\$ 72,685,416	66,365,523	5 58,895,907 \$	50,405,531 \$	39,561,933
2027	\$	15,109,976	13,815,085	\$ 3	31,295,239 \$	30,786,987	\$ 50,379,465	\$ 51,759,518 \$	76,484,639	62,250,580	\$ 72,569,101	\$ 75,783,051	69,201,244	61,419,346 \$	52,571,357 \$	41,266,891
2028	\$	- 5	14,392,605	\$ 1	16,302,928 \$	32,078,746	\$ 34,998,287	\$ 53,939,950 \$	59,785,134	64,884,386	\$ 60,517,271	\$ 79,004,591	72,150,393	64,043,723 \$	54,823,816 \$	43,040,048
2029	\$	- 5	\$ -	\$ 1	16,984,449 \$	16,711,088	\$ 36,466,744	\$ 37,471,733 \$	62,303,656	50,717,658	\$ 63,077,740	\$ 65,883,994	75,217,509 \$	66,773,074 \$	57,166,373 \$	44,884,130
2030	\$	- 5	5 -	\$	- \$	17,409,671	\$ 18,996,969	\$ 39,043,971 \$	43,281,945	52,854,200			62,725,847	69,611,600 \$	59,602,632 \$	46,801,977
2031	\$	- 5	5 -	\$	- \$	-	\$ 19,791,111	\$ 20,339,549 \$	45,097,967	36,717,470	\$ 51,382,524	\$ 53,677,922	65,379,761	58,050,933 \$	62,136,342 \$	48,796,537
2032	\$	- (\$ -	\$	- \$	-	\$ -:	\$ 21,189,815 \$	23,493,315	38,258,060	\$ 35,695,106	\$ 55,939,170	5 51,104,873 \$	60,507,053 \$	51,817,120 \$	50,870,879
2033	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	24,475,419	19,930,137	\$ 37,192,800	\$ 38,860,579	5 53,257,728 \$	47,296,063 \$	54,009,489 \$	42,422,556
2034	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- \$	20,763,288	\$ 19,375,201	\$ 40,491,089	36,997,798 \$	49,288,467 \$	42,217,164 \$	44,217,443
2035	\$	- (\$ -	\$	- \$	-	\$ - :	\$ - \$	- \$	- :	\$ 20,185,153	\$ 21,093,410	38,550,150 \$	34,240,378 \$	43,995,613 \$	34,563,094
2036	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- \$	- :	\$ -	\$ 21,975,190	20,082,298 \$	35,677,034 \$	30,563,467 \$	36,019,106
2037	\$	- (\$ -	\$	- \$	_	\$ -:	\$ - \$	- 9	- :	\$ -	\$ - :	20,921,810 \$	18,585,578 \$	31,845,848 \$	25,022,239
2038	\$	- (\$ -	\$	- \$	_	\$ -:	\$ - \$	- 9	- :	\$ -	\$ - :	- \$	19,362,522 \$	16,589,762 \$	26,072,121
2039	\$	- (\$ -	\$	- \$		\$ -:	\$ - \$	- 9	- :	\$ -	\$ - :	- \$	- \$	17,283,273 \$	13,581,999
2040	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- 9	- :	\$ -	\$ - :	- \$	- \$	- \$	14,149,775
2041	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- \$	- :	\$ -	\$ - :	- \$	- \$	- \$	-
2042	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- \$	- :	\$ -	\$ - :	- \$	- \$	- \$	-
2043	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- \$	- :	\$ -	\$ - :	- \$	- \$	- \$	-
2044	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- \$	- :	\$ -	\$ - :	- \$	- \$	- \$	-
2045	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- \$	- :	\$ -	\$ - :	- \$	- \$	- \$	-
2046	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- \$	- :	\$ -	\$ - :	- \$	- \$	- \$	=
2047	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- 9	- :	\$ -	\$ - :	- \$	- \$	- \$	-
2048	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- 9	- :	\$ -	\$ - :	- \$	- \$	- \$	-
2049	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- 9	- :	\$ -	\$ - :	- \$	- \$	- \$	-
2050	\$	- (\$ -	\$	- \$	-	\$ -:	\$ - \$	- 9	- :	\$ -	\$ - :	- \$	- \$	- \$	-
				_												



Exempt Assessed Value 80/20 Units, Cyclical Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2007														
2008														
2009														
2010														
2011														
2012														
2013														
2014														
2015														
2016														
2017														
2018														
2019														
2020														
2021														
2022 \$	27,258,642	00.040.404												
2023 \$	28,453,413 \$	32,946,121	10 110 000											
2024 \$	29,695,975 \$	34,390,180 \$		7 400 440										
2025 \$	30,988,240 \$ 32,332,195 \$	35,892,000 \$ 37,453,894 \$	20,295,005 \$	7,403,142 7,727,628 \$	976,773									
2026 \$	33,729,908 \$	39,078,263 \$	22,103,024 \$	8,065,094 \$	1,019,586									
2027 \$	35,183,530 \$	40,767,608 \$	23,061,628 \$	8,416,058 \$	1,019,566									
2029 \$	36,695,296 \$	42,524,525 \$	24,058,577 \$	8,781,061 \$	1,110,417		\$	517,052						
2030 \$	38,267,533 \$	44,351,720 \$	25,095,404 \$	9,160,665 \$	1,158,576		\$	539,715 \$	1,411,553					
2031 \$	39,902,660 \$	46,252,002 \$	26,173,703 \$	9,555,452 \$	1,208,661		\$	563,285 \$	1,473,423					
2032 \$		48,228,296 \$	27,295,135 \$	9,966,031 \$	1,260,749		\$	587,797 \$	1,537,767	\$ 1	1,414,169			
2033 \$	43,371,745 \$	50,283,642 \$	28,461,424 \$	10,393,033 \$	1,314,921		\$	613,290 \$	1,604,686		-	11,963,427		
2034 \$	36,168,832 \$	52,421,201 \$	29,674,365 \$	10,837,115 \$	1,371,260		\$	639,802 \$	1,674,280				18,831,820	
2035 \$		43,715,410 \$	30,935,823 \$	11,298,960 \$	1,429,852		\$	667,375 \$	1,746,659					48,904,163
2036 \$	29,467,973 \$	45,564,997 \$	25,798,192 \$	11,779,280 \$	1,490,788		\$	696,051 \$	1,821,933					51,047,677
2037 \$	30,709,347 \$	35,616,426 \$	26,889,706 \$	9,823,049 \$	1,554,162		\$	725,873 \$	1,900,218	\$ 14	1,123,919 \$ 4	19,773,928 \$ 5	55,513,115 \$	53,276,932
2038 \$	21,333,584 \$	37,116,811 \$	21,018,661 \$	10,238,660 \$	1,296,056		\$	756,889 \$	1,981,634	\$ 14	1,732,602 \$ 5	51,925,643 \$ 5	57,920,710 \$	55,595,356
2039 \$	22,228,698 \$	25,784,808 \$	21,904,098 \$	8,003,171 \$	1,350,892		\$	789,145 \$	2,066,307	\$ 15	5,365,633 \$ 5	54,163,427 \$ 6	60,424,608 \$	58,006,518
2040 \$	11,579,808 \$	26,866,686 \$	15,216,635 \$	8,340,314 \$	1,055,941		\$	822,692 \$	2,154,367	\$ 16	6,023,985 \$	56,490,722 \$ 6	33,028,663 \$	60,514,126
2041 \$	12,063,885 \$	13,995,919 \$	15,855,093 \$	5,793,962 \$	1,100,424		\$	686,064 \$	2,245,949	\$ 16	6,708,671 \$ 5	58,911,109 \$ 6	55,736,880 \$	63,122,039
2042 \$	- \$	14,580,999 \$	8,259,545 \$	6,037,065 \$	764,457		\$	715,092 \$	1,872,956	\$ 17	7,420,745 \$ 6	61,428,312 \$ 6	88,553,425 \$	65,834,268
2043 \$	- \$	- \$	8,604,824 \$	3,144,946 \$	796,532		\$	558,960 \$	1,952,200	\$ 18	3,161,301 \$ 6	64,046,202 \$ 7	71,482,632 \$	68,654,986
2044 \$	- \$	- \$	- \$	3,276,416 \$	414,945		\$	582,507 \$	1,525,961	\$ 15	5,145,184 \$ 6	66,768,809 \$ 7		71,588,533
2045 \$	- \$	- \$	- \$	- \$	432,291		\$	404,664 \$	1,590,243	\$ 15				74,639,421
2046 \$	- \$	- \$	- \$	- \$	-		\$	421,643 \$	1,104,732					77,812,346
2047 \$	- \$	- \$	- \$	- \$	-		\$	219,650 \$	1,151,084					64,889,749
2048 \$	- \$	- \$	- \$	- \$	-		\$	228,832 \$	599,645					67,635,217
2049 \$	- \$	- \$	- \$	- \$	-		\$	- \$	624,713				.,,	52,867,878
2050 \$	- \$	- \$	- \$	- \$	-		\$	- \$	-	\$ 4	1,848,880 \$ 3	34,220,059 \$ 3	88,217,521 \$	55,095,002



Taxes 80/20 Units, Cyclical Scenario

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2007 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2008 \$	- \$	416,476 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2009 \$	- \$	416,476 \$	396,703 \$	- \$	- \$	- \$	- \$	- \$	- \$	s - \$	- \$	- \$	- \$	- \$	
2010 \$	- \$	416,476 \$	396,703 \$	468,142 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2011 \$	- \$	416,476 \$	396,703 \$	468,142 \$	479,862 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2012 \$	- \$	416,476 \$	396,703 \$	468,142 \$	479,862 \$	545,502 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2013 \$	- \$	416,476 \$	396,703 \$	468,142 \$	479,862 \$	545,502 \$	584,054 \$	- \$	- \$	- 9	- \$	- \$	- \$	- \$	
2014 \$	- \$	416,476 \$	396,703 \$	468,142 \$	479,862 \$	545,502 \$	584,054 \$	674,615 \$	- \$	- \$	- \$	- \$	- \$	- \$	
2015 \$	- \$	416,476 \$	396,703 \$	468,142 \$	479,862 \$	545,502 \$	584,054 \$	674,615 \$	572,298	- \$	- \$	- \$	- \$	- \$	
2016 \$	- \$	416,476 \$	396,703 \$	468,142 \$	479,862 \$	545,502 \$	584,054 \$	674,615 \$	572,298	556,363 \$	- \$	- \$	- \$	- \$	
2017 \$	- \$	416,476 \$	396,703 \$	468,142 \$	479,862 \$	545,502 \$	584,054 \$	674,615 \$	572,298	\$ 556,363 \$	605,702 \$	- \$	- \$	- \$	
2018 \$	- \$	416,476 \$	396,703 \$	468,142 \$	479,862 \$	545,502 \$	584,054 \$	674,615 \$	572,298	\$ 556,363 \$	605,702 \$	576,667 \$	- \$	- \$	
2019 \$	- \$	416,476 \$	396,703 \$	468,142 \$	479,862 \$	545,502 \$	584,054 \$	674,615 \$	572,298	556,363 \$	605,702 \$	576,667 \$	533,689 \$	- \$	
2020 \$		1,858,984 \$	396,703 \$	468,142 \$	479,862 \$	545,502 \$	584,054 \$	674,615 \$	572,298	556,363	605,702 \$	576,667 \$	533,689 \$	476,378 \$	
2021 \$	- \$	1,920,016 \$	1,770,725 \$	468,142 \$	479,862 \$	545,502 \$	584,054 \$	674,615 \$	572,298	556,363 \$	605,702 \$	576,667 \$	533,689 \$	476,378 \$	390,010
2022 \$		3,550,503 \$	1,828,860 \$	2,089,601 \$	479,862 \$	545,502 \$	584,054 \$	674,615 \$					533,689 \$	476,378 \$	390,010
2023 \$	- \$	3,682,527 \$	3,381,937 \$	2,158,204 \$	2,141,916 \$	545,502 \$	584,054 \$	674,615 \$	572,298	\$ 556,363 \$	605,702 \$	576,667 \$	533,689 \$	476,378 \$	390,010
2024 \$	- \$	5,521,512 \$	3,507,693 \$	3,990,962 \$	2,212,237 \$	2,434,905 \$	584,054 \$	674,615 \$	572,298	\$ 556,363 \$	605,702 \$	576,667 \$	533,689 \$	476,378 \$	390,010
2025 \$	- \$	5,735,709 \$	5,259,369 \$	4,139,365 \$	4,090,879 \$	2,514,845 \$	2,606,988 \$	674,615 \$	572,298	\$ 556,363 \$	605,702 \$	576,667 \$	533,689 \$	476,378 \$	390,010
2026 \$		7,805,806 \$	5,463,397 \$	6,206,485 \$	4,242,998 \$	4,650,464 \$	2,692,578 \$	3,011,216 \$, ,		533,689 \$	476,378 \$	390,010
2027 \$		8,114,706 \$	7,435,212 \$	6,447,254 \$	6,361,870 \$	4,823,390 \$	4,979,127 \$	3,110,077 \$					533,689 \$	476,378 \$	390,010
2028 \$		10,440,835 \$	7,729,447 \$	8,774,158 \$	6,608,667 \$	7,232,100 \$	5,164,275 \$	5,751,170 \$	2,638,379				533,689 \$	476,378 \$	390,010
2029 \$		10,858,468 \$	9,945,139 \$	9,121,379 \$	8,993,827 \$	7,512,656 \$	7,743,216 \$	5,965,026 \$	4,878,903	. , , , , , , , ,	,,	,	533,689 \$	476,378 \$	390,010
2030 \$		11,292,807 \$	10,342,944 \$, ,	9,349,741 \$	10,224,078 \$	8,043,600 \$	8,943,847 \$	5,060,324	, , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, . ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	533,689 \$	476,378 \$	390,010
2031 \$		11,744,519 \$	10,756,662 \$		12,029,900 \$.,,.	10,946,648 \$	9,290,807 \$, ,				2,382,176 \$	476,378 \$	390,010
2032 \$			11,186,929 \$		12,511,096 \$				7,881,692				2,460,384 \$	2,126,365 \$	390,010
2033 \$	•	12,702,872 \$	11,634,406 \$		13,011,540 \$	14,222,467 \$	14,641,939 \$	13,144,352 \$	10,726,304		.,, ,	5,098,959 \$	4,549,755 \$	2,196,176 \$	1,740,850
2034 \$		13,210,986 \$	12,099,782 \$		13,532,001 \$, , , , , , , ,	15,227,617 \$						4,718,937 \$	4,061,179 \$	1,798,004
2035 \$		-,,	12,583,773 \$		14,073,281 \$.,,.	15,836,721 \$,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		7,075,484 \$	4,212,193 \$	3,324,877
2036 \$		14,289,003 \$	13,087,124 \$		14,636,212 \$		16,470,190 \$	18,292,298 \$, , , , , ,				7,349,964 \$	6,315,682 \$	3,448,512
2037 \$		14,860,563 \$	13,610,609 \$	-, -,-	15,221,661 \$	16,638,275 \$	17,128,998 \$	19,023,990 \$	15,517,946	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	., . ,	11,235,911 \$	10,002,669 \$	6,560,687 \$	5,170,634
2038 \$		15,454,986 \$	14,155,034 \$.,,	15,830,527 \$	17,303,806 \$	17,814,158 \$	19,784,949 \$	16,138,664	,,	., . ,	14,456,751 \$	10,398,506 \$	8,928,530 \$	5,371,219
2039 \$		16,073,185 \$	14,721,235 \$., . ,	16,463,748 \$,, +	18,526,724 \$.,,.		,,	., .,	,,	.,,	9,281,860 \$	7,309,767
2040 \$			15,310,084 \$		17,122,298 \$		19,267,793 \$,,			7,599,037
2041 \$, ,	15,922,488 \$.,,	17,807,190 \$.,,				, , ,			12,420,262 \$	9,777,346
2042 \$		18,080,147 \$	16,559,387 \$	18,789,835 \$	18,519,478 \$	20,243,006 \$	20,840,045 \$	23,145,592 \$	18,879,954	, , , , , , , ,	., ,	10,012,001 ψ	15,049,892 \$	12,917,073 \$	10,168,440
2043 \$, , ,		19,260,257 \$		21,673,647 \$								10,575,178
2044 \$		19,555,487 \$	17,910,633 \$.,,	20,030,667 \$		22,540,593 \$								10,998,185
2045 \$			18,627,058 \$		20,831,894 \$				21,237,381			19,024,098 \$			
2046 \$	•	21,151,215 \$	19,372,141 \$	=:,==:,:== +	21,665,170 \$	23,681,454 \$	24,379,905 \$	27,077,069 \$,, +	17,606,245 \$	15,111,148 \$	11,895,637
2047 \$		21,997,264 \$	20,147,026 \$,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	22,531,777 \$	24,628,712 \$	25,355,101 \$	28,160,152 \$	22,970,351	, , ,		20,010,101 ψ	18,310,495 \$	15,715,594 \$	12,371,462
2048 \$		22,877,154 \$	20,952,908 \$., .,	23,433,048 \$		26,369,305 \$	29,286,558 \$.,,	, , , , , , , , , ,		,,.	19,042,915 \$	16,344,218 \$	12,866,321
2049 \$			21,791,024 \$, , ,	24,370,369 \$		27,424,078 \$, .,			19,804,631 \$	16,997,987 \$	13,380,973
2050 \$	- \$	24,743,930 \$	22,002,005 \$	25,715,187 \$	∠5,345,184 \$	21,103,951 \$	26,521,041 \$	31,0/0,347 \$	∠5,838,5∠1 \$	24,152,953	25,283,517 \$	23,145,724 \$	∠∪,596,816 \$	17,677,906 \$	13,916,212



Taxes 80/20 Units, Cyclical Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2007 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2008 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2009 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2010 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2011 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2012 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2013 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2014 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2015 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2016 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2017 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2018 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2019 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2020 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2021 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2022 \$	332,517 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2023 \$	332,517 \$	401,896 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2024 \$	332,517 \$	401,896 \$	237,175 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2025 \$	332,517 \$	401,896 \$	237,175 \$	90,308 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2026 \$	332,517 \$	401,896 \$	237,175 \$	90,308 \$	11,915 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2027 \$	332,517 \$	401,896 \$	237,175 \$	90,308 \$	11,915 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2028 \$	332,517 \$	401,896 \$	237,175 \$	90,308 \$	11,915 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2029 \$	332,517 \$	401,896 \$	237,175 \$	90,308 \$	11,915 \$	- \$	- \$	6,307 \$	- \$	- \$	- \$	- \$	- \$	
2030 \$	332,517 \$	401,896 \$	237,175 \$	90,308 \$	11,915 \$	- \$	- \$	6,307 \$	17,219 \$	- \$	- \$	- \$	- \$	
2031 \$	332,517 \$	401,896 \$	237,175 \$	90,308 \$	11,915 \$	- \$	- \$	6,307 \$	17,219 \$	- \$	- \$	- \$	- \$	
2032 \$	332,517 \$	401,896 \$	237,175 \$	90,308 \$	11,915 \$	- \$	- \$	6,307 \$	17,219 \$	- \$	139,237 \$	- \$	- \$	
2033 \$	332,517 \$	401,896 \$	237,175 \$	90,308 \$	11,915 \$	- \$	- \$	6,307 \$	17,219 \$	- \$	139,237 \$	511,894 \$	- \$	
2034 \$	1,484,223 \$	401,896 \$	237,175 \$	90,308 \$	11,915 \$	- \$	- \$	6,307 \$	17,219 \$	- \$	139,237 \$	511,894 \$	595,679 \$	
2035 \$	1,532,951 \$	1,793,904 \$	237,175 \$	90,308 \$	11,915 \$	- \$	- \$	6,307 \$	17,219 \$	- \$	139,237 \$	511,894 \$	595,679 \$	596,561
2036 \$	2,834,740 \$	1,852,799 \$	1,058,653 \$	90,308 \$	11,915 \$	- \$	- \$	6,307 \$	17,219 \$	- \$	139,237 \$	511,894 \$	595,679 \$	596,561
2037 \$	2,940,150 \$	3,426,205 \$	1,093,410 \$	403,098 \$	11,915 \$	- \$	- \$	6,307 \$	17,219 \$	- \$	139,237 \$	511,894 \$	595,679 \$	596,561
2038 \$	4,408,405 \$	3,553,608 \$	2,021,939 \$	416,332 \$	53,185 \$	- \$	- \$	6,307 \$	17,219 \$	- \$	139,237 \$	511,894 \$	595,679 \$	596,561
2039 \$	4,579,420 \$	5,328,212 \$	2,097,124 \$	769,884 \$	54,931 \$	- \$	- \$	6,307 \$	17,219 \$	- \$ - \$	139,237 \$	511,894 \$	595,679 \$	596,561
	6,232,197 \$	5,534,910 \$	3,144,389 \$	798,512 \$	101,579 \$	- \$	- \$	6,307 \$	17,219 \$	•	139,237 \$	511,894 \$	595,679 \$	596,561
2041 \$	6,478,825 \$	7,532,537 \$	3,266,369 \$	1,197,273 \$	105,356 \$	- \$	- \$	28,153 \$	17,219 \$	- \$	139,237 \$	511,894 \$	595,679 \$	596,561
2042 \$	8,336,018 \$ 8,669,459 \$	7,830,623 \$ 10,075,317 \$	4,445,248 \$ 4,621,160 \$	1,243,719 \$ 1,692,595 \$	157,969 \$ 164.097 \$	- \$ - \$	- \$ - \$	29,078 \$ 53,770 \$	76,859 \$ 79.382 \$	- \$ - \$	139,237 \$ 139,237 \$	511,894 \$ 511,894 \$	595,679 \$ 595,679 \$	596,561 596.561
2043 \$	9.016.237 \$	10,075,317 \$	5.945.843 \$	1,692,595 \$	223.321 \$	- \$ - \$	- \$ - \$	55,770 \$	146.793 \$	- \$ - \$	621.497 \$	511,894 \$	595,679 \$	596,561
2044 \$	9,016,237 \$	10,478,330 \$	6,183,677 \$	2,263,969 \$	232,159 \$	- \$ - \$	- \$ - \$	83,620 \$	152,252 \$	- \$ - \$	641,901 \$	2,284,892 \$	595,679 \$	596,561
2045 \$		11,333,361 \$	6,431,024 \$	2,354,528 \$	298,709 \$	- \$ - \$	- \$ - \$	86,864 \$	228,283 \$	- \$	1,187,007 \$	2,359,908 \$	2,658,874 \$	596,561
2046 \$	10,142,041 \$	11,786,696 \$	6,688,265 \$	2,448,709 \$	310,657 \$	- \$ - \$	- \$ - \$	118,215 \$	237,139 \$	- \$ - \$	1,231,146 \$	4,363,953 \$	2,746,167 \$	2,662,813
2047 \$	10,142,041 \$	12,258,164 \$	6,955,795 \$	2,546,657 \$	323,083 \$	- \$ - \$	- \$ - \$	122,893 \$	322,726 \$	- \$ - \$	1,845,957 \$	4,526,225 \$	5,078,225 \$	2,750,235
2049 \$	10,947,722 \$	12,748,490 \$	7,234,027 \$	2,546,657 \$	336,007 \$	- \$ - \$	- \$ - \$	158,121 \$	335,497 \$	- \$ - \$	1,917,567 \$	6,786,536 \$	5,267,058 \$	5,085,749
	11,408,416 \$	13,258,430 \$	7,523,388 \$	2,754,464 \$	349,447 \$	- \$ - \$	- \$ - \$	164,446 \$	431,670 \$	- \$ - \$	2,609,644 \$	7,049,807 \$	7,897,327 \$	5,274,861
	11,400,410 Þ	10,200,400 \$	1,020,000 \$	2,104,404 \$	ত ্ৰত,লন । কৃ	- φ	- p	104,440 \$	731,070 ⊅	- p	2,000,044 Þ	1,040,001 Þ	1,031,321 \$	J,Z14,00 I



DOF Market Value Condominium Units, Cyclical Scenario

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
2007 \$ 264,048,997	- \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- :	- \$	- \$	-
2008 \$ 274,610,957	64,095,241 \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- :	- \$	- \$	-
2009 \$ 285,595,395	66,659,051 \$	61,052,215	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - 5	- :	- \$	- \$	-
2010 \$ 297,019,211	69,325,413 \$	63,494,303	\$ 72,046,597	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - 5	- :	5 - \$	- \$	-
2011 \$ 308,899,980 \$	72,098,429 \$	66,034,075	\$ 74,928,461	\$ 73,850,354	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - 9	- :	- \$	- \$	-
2012 \$ 321,255,979	74,982,367	68,675,438	\$ 77,925,600	\$ 76,804,368	\$ 83,952,220	\$ -	\$ -	\$ -	\$ -	\$ - 5	- :	\$ - \$	- \$	-
2013 \$ 334,106,218	77,981,661	71,422,456	\$ 81,042,624	\$ 79,876,543	\$ 87,310,308	\$ 89,885,404	\$ -	\$ -	\$ -	\$ - 9	- :	- \$	- \$	
2014 \$ 347,470,467	81,100,928 \$	74,279,354	\$ 84,284,329	\$ 83,071,604	\$ 90,802,721	\$ 93,480,820	\$ 103,822,662	\$ -	\$ -	\$ - 9	- :	- \$	- \$	
2015 \$ 361,369,286	84,344,965	77,250,528	\$ 87,655,702	\$ 86,394,469	\$ 94,434,830	\$ 97,220,053	\$ 107,975,569	\$ 88,076,113	\$ -	\$ - 5	- :	- \$	- \$	
2016 \$ 375,824,057	87,718,763 \$	80,340,550	\$ 91,161,930	\$ 89,850,247	\$ 98,212,223	\$ 101,108,855	\$ 112,294,591	\$ 91,599,157	\$ 85,623,715	\$ - 9	- :	- \$	- \$	
2017 \$ 390,857,019	91,227,514 \$	83,554,172	\$ 94,808,407	\$ 93,444,257	\$ 102,140,712	\$ 105,153,209	\$ 116,786,375	\$ 95,263,123	\$ 89,048,664	\$ 93,216,899	- :	- \$	- \$	
2018 \$ 406,491,300	94,876,614	86,896,338	\$ 98,600,743	\$ 97,182,027	\$ 106,226,340	\$ 109,359,337	\$ 121,457,830	\$ 99,073,648	\$ 92,610,610	\$ 96,945,575	88,748,551	\$ - \$	- \$	-
2019 \$ 422,750,952	98,671,679	90,372,192	\$ 102,544,773	\$ 101,069,309	\$ 110,475,394	\$ 113,733,711	\$ 126,316,143	\$ 103,036,594	\$ 96,315,035	\$ 100,823,398 \$	92,298,493	\$ 82,134,183 \$	- \$	
2020 \$ 439,660,990													73,314,185 \$	-
2021 \$ 457,247,430													76,246,752 \$	
2022 \$ 475,537,327														62,423,039
2023 \$ 494,558,820													82,468,487 \$	
2024 \$ 514,341,173													85,767,226 \$	
2025 \$ 534,914,820														
2026 \$ 556,311,412														73,026,126
2027 \$ 578,563,869														
2028 \$ 601,706,424														78,985,058
2029 \$ 625,774,681														
2030 \$ 650,805,668 \$														85,430,239
2031 \$ 676,837,895														88,847,448
2032 \$ 703,911,410														92,401,346
2033 \$ 732,067,867														96,097,400
2034 \$ 761,350,581														
2035 \$ 791,804,605 \$														
2036 \$ 823,476,789 \$														
2037 \$ 856,415,860 \$ 2038 \$ 890,672,495 \$														
2039 \$ 926,299,395 \$ 2040 \$ 963,351,370 \$														
2040 \$ 963,331,370														
2042 \$1,041,960,842														
2043 \$1,083,639,276														
2044 \$1,126,984,847														
2045 \$1,172,064,241														
2046 \$1,218,946,810														
2047 \$1,267,704,683														
2048 \$1,318,412,870														
2049 \$1,371,149,385														
2050 \$1,425,995,360														
						, ,	,,	. ,,		= .	,,	. ,,	, , , , , ,	, , .



DOF Market Value Condominium Units, Cyclical Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2007 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	
2008 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	
2009 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	-
2010 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	
2011 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	
2012 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	-
2013	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	-
2014 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	-
2015	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	-
2016	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	
2017 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	-
2018 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	-
2019 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	
2020 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	_
2021 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	
2022 \$	51,173,983 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	
2023 \$	53,220,942 \$	61,851,365 \$	- \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	
2024 \$	55,349,780 \$	64,325,420 \$	36,500,936 \$	- \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	-
2025	57,563,771 \$	66,898,437 \$	37,960,973 \$	13,898,280 \$	- \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	
2026 \$	59,866,322 \$	69,574,374 \$	39,479,412 \$	14,454,211 \$	1,833,743 \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	
2027 \$	62,260,975 \$	72,357,349 \$	41,058,589 \$	15,032,379 \$	1,907,093 \$	- \$	- \$	- \$	- :	- \$	- \$	- \$	- \$	
2028 \$	64,751,414 \$	75,251,643 \$	42,700,932 \$	15,633,675 \$	1,983,377 \$	- \$	- \$			<u> </u>				
2029 \$	67,341,470	78,261,709 \$	44,408,970 \$	16,259,022 \$	2,062,712 \$	- \$	- \$	970,688 \$		<u> </u>	- \$	- \$	- \$	
2030 \$	70,035,129 \$	81,392,177 \$	46,185,328 \$	16,909,383 \$	2,145,220 \$	- \$	- \$	1,009,515 \$	2,649,978	- \$	- \$	- \$	- \$	
2031 \$	72,836,534	84,647,864 \$	48,032,741 \$	17,585,758 \$	2,231,029 \$	- \$	- \$	1,049,896 \$	2,755,977	- \$	- \$	- \$	- \$	
2032 \$	75,749,996 \$	88,033,779 \$	49,954,051 \$	18,289,188 \$	2,320,270 \$	- \$	- \$	1,091,892 \$	2,866,216	- \$	21,428,377 \$	- \$	- \$	
2033	78,779,995 \$	91,555,130 \$			2,413,081 \$	- \$	- \$	1,135,568 \$	2,980,865	- \$	22,285,512 \$	78,779,995 \$	- \$	
2034 \$	81,931,195	95,217,335 \$	54,030,302 \$	19,781,586 \$	2,509,604 \$	- \$	- \$	1,180,990 \$	3,100,099	- \$	23,176,933 \$	81,931,195 \$	91,674,364 \$	
2035	85,208,443	99,026,028 \$	56,191,514 \$	20,572,849 \$	2,609,988 \$	- \$	- \$	1,228,230 \$	3,224,103	- \$	24,104,010 \$	85,208,443 \$	95,341,339 \$	91,810,178
2036	, , ,	102,987,070 \$		21,395,763 \$	2,714,388 \$	- \$	- \$	1,277,359 \$	3,353,067	- \$	25,068,170 \$	88,616,781 \$	99,154,993 \$	95,482,585
2037 \$	92,161,452	107,106,552 \$	60,776,741 \$	22,251,594 \$	2,822,963 \$	- \$	- \$	1,328,453 \$	3,487,190	- \$	26,070,897 \$	92,161,452 \$	103,121,192 \$	99,301,889
2038	95,847,910 \$	111,390,814 \$	63,207,811 \$	23,141,658 \$	2,935,882 \$	- \$	- \$	1,381,591 \$	3,626,678	- \$	27,113,733 \$	95,847,910 \$	107,246,040 \$	103,273,964
2039 \$		115,846,447 \$			3,053,317 \$	- \$	- \$, ,					111,535,882 \$	
2040 \$	103,669,100 \$	120,480,305 \$	68,365,568 \$	25,030,017 \$	3,175,450 \$	- \$	- \$	1,494,329 \$	3,922,615	- \$	29,326,214 \$	103,669,100 \$	115,997,317 \$	111,701,120
2041	107,815,864	125,299,517 \$	71,100,191 \$	26,031,218 \$	3,302,468 \$	- \$	- \$	1,554,103 \$	4,079,519	- \$	30,499,262 \$	107,815,864 \$	120,637,209 \$	116,169,165
2042 \$	112,128,498 \$	130,311,498 \$	73,944,199 \$	27,072,466 \$	3,434,567 \$	- \$	- \$	1,616,267 \$	4,242,700	- \$	31,719,233 \$	112,128,498 \$	125,462,698 \$	120,815,931
2043	116,613,638 \$	135,523,958 \$	76,901,967 \$	28,155,365 \$	3,571,949 \$	- \$	- \$	1,680,917 \$	4,412,408	- \$	32,988,002 \$	116,613,638 \$	130,481,206 \$	125,648,569
		140,944,916 \$			3,714,827 \$	- \$	- \$, ,				135,700,454 \$	
		146,582,713 \$				- \$	- \$,,					141,128,472 \$	
2046 \$	131,174,483	152,446,021 \$	86,504,254 \$	31,670,956 \$	4,017,957 \$	- \$	- \$,,					146,773,611 \$	
		158,543,862 \$			4,178,675 \$	- \$	- \$, , , , , , , ,					152,644,555 \$	
		164,885,616 \$				- \$	- \$,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					158,750,338 \$	
		\$ 171,481,041 \$			4,519,655 \$	- \$	- \$						165,100,351 \$	
2050 \$	153,455,592	178,340,283 \$	101,197,742 \$	37,050,539 \$	4,700,442 \$	- \$	- \$	2,211,972 \$	5,806,428	- \$	43,409,960 \$	153,455,592 \$	171,704,365 \$	165,344,944



Exempt Assessed Value Condominium Units, Cyclical Scenario

	2007	20	08	2009		2010	2011	2012		2013	201	4	2015		2016	2017	2018	2019	2020	2021
2007 \$	82,104,767																			
2008 \$	86,857,649	\$ 19,930,10)7																	
2009 \$	73,440,517	\$ 21,083,82	22 \$	18,983,893																
2010 \$	77,553,091	\$ 17,826,94	18 \$	20,082,833	\$ 2	22,402,543														
2011 \$	61,372,626	\$ 18,825,23	34 \$	16,980,584	\$ 2	23,699,382 \$	22,963,413													
2012 \$	64,708,745	\$ 14,897,58	88 \$	17,931,475	\$ 2	20,038,475 \$	24,292,719	\$ 26,104,539												
2013 \$	45,452,207	\$ 15,707,39	98 \$	14,190,301	\$ 2	21,160,604 \$	20,540,158	\$ 27,615,679 \$	27	7,949,435										
2014 \$	47,857,771	\$ 11,033,06	66 \$	14,961,663	\$ 1	16,745,713 \$	21,690,380	\$ 23,349,812 \$	3 29	9,567,372 \$	32,283,15	,								
2015 \$	25,179,779	\$ 11,616,99	93 \$	10,509,254	\$ 1	17,655,984 \$	17,164,959	\$ 24,657,371 \$	3 25	5,000,021 \$	34,151,96	\$	27,386,844							
2016 \$	26,480,709	\$ 6,112,13	88 \$	11,065,457	\$ 1	12,401,777 \$	18,098,019	\$ 19,512,924 \$	3 26	6,399,990 \$	28,876,42	\$	28,972,214 \$	\$ 2	26,624,283					
2017 \$	- ;	\$ 6,427,92	26 \$	5,821,955	\$ 1	13,058,143 \$	12,712,268	\$ 20,573,617 \$	3 20	0,891,968 \$	30,493,46	\$	24,496,799 \$	\$ 2	28,165,510 \$	28,985,347				
2018 \$	- ;	\$	- \$	6,122,750	\$	6,870,382 \$	13,385,066	\$ 14,451,157 \$	3 22	2,027,623 \$	24,131,39	\$	25,868,588 \$	\$ 2	23,814,709 \$	30,663,251 \$	27,595,935			
2019 \$	- ;	\$	- \$	-	\$	7,225,344 \$	7,042,388	\$ 15,215,987 \$	3 15	5,472,469 \$	25,443,13	\$	20,471,437 \$	\$ 2	25,148,301 \$	25,926,617 \$	29,193,409 \$	25,539,230		
2020 \$	- ;	\$	- \$	-	\$	- \$	7,406,238	\$ 8,005,705 \$	3 16	6,291,352 \$	17,871,56	\$	21,584,232 \$	\$ 1	19,901,428 \$	27,378,474 \$	24,683,826 \$	27,017,645 \$	22,796,693	
2021 \$	- ;	\$	- \$	-	\$	- \$	-	\$ 8,419,325 \$	3	8,571,495 \$	18,817,42	\$	15,161,026 \$	\$ 2	20,983,239 \$	21,666,304 \$	26,066,088 \$	22,844,157 \$	24,116,349 \$	18,663,600
2022 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	5 9	9,014,347 \$	9,900,55	\$	15,963,425 \$	\$ 1	14,738,881 \$	22,844,050 \$	20,627,731 \$	24,123,401 \$	20,391,032 \$	19,743,999
2023 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$	10,412,07	\$	8,398,960 \$	\$ 1	15,518,939 \$	16,045,938 \$	21,749,022 \$	19,090,360 \$	21,532,904 \$	16,694,091
2024 \$	- :	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	8,832,898 \$	\$	8,165,099 \$	16,895,171 \$	15,276,776 \$	20,128,082 \$	17,040,337 \$	17,628,938
2025 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	8,586,954 \$	8,889,187 \$	16,085,302 \$	14,138,209 \$	17,966,623 \$	13,950,885
2026 \$	- :	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	9,348,453 \$	8,463,084 \$	14,886,476 \$	12,619,974 \$	14,709,233
2027 \$	- :	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	8,900,335 \$	7,832,336 \$	13,287,888 \$	10,331,943
2028 \$	- :	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	8,236,999 \$	6,991,259 \$	10,878,763
2029 \$	- :	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	7,352,467 \$	5,723,728
2030 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	6,019,448
2031 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2032 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2033 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2034 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2035 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2036 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2037 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2038 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2039 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2040 \$	- :	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2041 \$	- :	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2042 \$	- :	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	
2043 \$	- :	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	
2044 \$	- 5	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2045 \$	- (\$	- \$	-	\$	- \$	-	\$ - \$	5	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	
2046 \$	- :	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2047 \$	- 5	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	
2048 \$	- ;	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	
2049 \$	- 5	\$	- \$	-	\$	- \$	-	\$ - \$	3	- \$		- \$	- \$	\$	- \$	- \$	- \$	- \$	- \$	-
2050 \$	- ;	\$	- \$	_	s	- \$	_	\$ - \$	S	- S		- \$	- \$	\$	- \$	- \$	- \$	- \$	- S	



Exempt Assessed Value Condominium Units, Cyclical Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2007														
2008														
2009														
2010														
2011														
2012														
2013														
2014														
2015														
2016														
2017														
2018														
2019														
2020														
2021														
2022														
	\$ 16,833,436 \$	19,232,385												
2024	, , , , , , , ,	20,345,709 \$												
2025		17,202,854 \$	12,006,808 \$	4,321,603	570.404									
2026		18,166,191 \$	10,152,084 \$	4,571,772 \$	570,194									
2027	, , , , , , ,	14,376,047 \$	10,720,588 \$	3,865,559 \$	603,201									
2028	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		8,483,873 \$	4,082,025 \$	510,023			004.004						
2029			8,945,043 \$	3,230,362 \$	538,584 426,215		\$ \$	301,831 319,303 \$	000 000					
2030	, , , , , , ,	11,210,300 \$ 5,898,162 \$	6,283,107 \$ 6,615,641 \$	3,405,960 \$ 2,392,387 \$	449,383		<u> </u>	269,980 \$	823,998 871,697					
2032			3,480,739 \$	2,519,005 \$	315,652		\$	285,098 \$	737,044	\$	6,663,051			
2032		- \$		1,325,343 \$	332,358		\$	225,616 \$	778,318	<u> </u>		24,496,261		
2034		- \$	- \$	1,393,818 \$	174,866		\$	237,880 \$	615,932				28,505,703	
2035		- \$	- \$	- \$	183,901		\$	167,090 \$	649,413					28,547,934
2036	·	- \$	- \$	- \$	103,901		**************************************	175,933 \$	456,155					30,200,517
2037		- \$	- \$	- \$	_		\$	92,565 \$	480,297					25,535,363
2038		- \$	- \$	- \$	_		\$	97,347 \$	252,703					26,965,310
2039		- \$	- \$	- \$	_		\$	- \$	265,759					21,339,341
2040		- \$	- \$	- \$	-		\$	- \$	-					22,499,315
2041		- \$	- \$	- \$	-		\$	- \$	-		2,148,990 \$			15,803,791
2042		- \$	- \$	- \$	-		\$	- \$	-	\$	- \$			16,640,209
2043		- \$	- \$	- \$	-		\$	- \$	-	\$	- \$		9,193,756 \$	8,755,042
2044	\$ - \$	- \$	- \$	- \$	-		\$	- \$	-	\$	- \$	- \$	- \$	9,207,377
2045		- \$	- \$	- \$	-		\$	- \$	-	\$	- \$	- \$	- \$	-
2046	\$ - \$	- \$	- \$	- \$	-		\$	- \$	-	\$	- \$	- \$	- \$	-
2047	\$ - \$	- \$	- \$	- \$	-		\$	- \$	-	\$	- \$	- \$	- \$	
2048	\$ - \$	- \$	- \$	- \$	-		\$	- \$	-	\$	- \$	- \$	- \$	-
2049	\$ - \$	- \$	- \$	- \$	-		\$	- \$	-	\$	- \$	- \$	- \$	-
2050	\$ - \$	- \$	- \$	- \$	-		\$	- \$	-	\$	- \$	- \$	- \$	-



Taxes Condominium Units, Cyclical Scenario

	2007		2008		2009		2010		2011		2012		2013	2014		2015		2016	2017	2018	2019	2020	2021
2007 \$	4,676,680	\$	- \$		-	\$	- \$	3	-	\$	- \$		- \$	- \$;	- \$;	- \$	- \$	- \$	- \$	- \$	
2008 \$	4,676,680	\$	1,135,217 \$		-	\$	- \$;	-	\$	- \$		- \$	- \$;	- \$;	- \$	- \$	- \$	- \$	- \$	
2009 \$	7,015,210	\$	1,135,217 \$		1,081,321	\$	- \$;	-	\$	- \$		- \$	- \$;	- \$;	- \$	- \$	- \$	- \$	- \$	
2010 \$	7,146,164	\$	1,702,872 \$		1,081,321	\$	1,276,047 \$;	-	\$	- \$		- \$	- \$;	- \$;	- \$	- \$	- \$	- \$	- \$	
2011 \$	9,888,034	\$	1,734,660 \$		1,622,025	\$	1,276,047 \$;	1,307,994	\$	- \$		- \$	- \$;	- \$;	- \$	- \$	- \$	- \$	- \$	
2012 \$	10,171,315	\$	2,400,221 \$		1,652,304	\$	1,914,122 \$;	1,307,994	\$	1,486,912 \$		- \$	- \$;	- \$;	- \$	- \$	- \$	- \$	- \$	
2013 \$	13,360,551	\$	2,468,985 \$		2,286,267	\$	1,949,853 \$;	1,962,044	\$	1,486,912 \$		1,591,997 \$	- \$;	- \$;	- \$	- \$	- \$	- \$	- \$	
2014 \$	13,820,147	\$	3,243,140 \$		2,351,766	\$	2,697,981 \$;	1,998,670	\$	2,230,429 \$		1,591,997 \$	1,838,846 \$;	- \$;	- \$	- \$	- \$	- \$	- \$	
2015 \$	17,505,274	\$	3,354,702 \$		3,089,166	\$	2,775,275 \$;	2,765,528	\$	2,272,065 \$		2,388,060 \$	1,838,846 \$;	1,559,952 \$;	- \$	- \$	- \$	- \$	- \$	
2016 \$	18,168,072	\$	4,249,229 \$		3,195,432	\$	3,645,468 \$;	2,844,757	\$	3,143,820 \$		2,432,639 \$	2,758,343 \$;	1,559,952 \$,	1,516,517 \$	- \$	- \$	- \$	- \$	
2017 \$	22,402,556	\$	4,410,117 \$		4,047,490	\$	3,770,870 \$	3	3,736,736	\$	3,233,887 \$		3,366,004 \$	2,809,834 \$;	2,339,992 \$,	1,516,517 \$	1,651,003 \$	- \$	- \$	- \$	_
2018 \$	23,298,659	\$	5,437,995 \$		4,200,739	\$	4,776,369 \$	3	3,865,278	\$	4,247,878 \$		3,462,436 \$	3,887,923 \$;	2,383,673 \$; ;	2,274,837 \$	1,651,003 \$	1,571,862 \$	- \$	- \$	-
2019 \$	24,230,605	\$	5,655,515 \$		5,179,818	\$	4,957,215 \$	3	4,895,950	\$	4,394,003 \$		4,548,090 \$	3,999,307 \$;	3,298,250 \$; ;	2,317,302 \$	2,476,571 \$	1,571,862 \$	1,454,712 \$	- \$	_
2020 \$	25,199,829	\$	5,881,736 \$		5,387,010	\$	6,112,608 \$	3	5,081,324	\$	5,565,659 \$		4,704,541 \$	5,253,298 \$;	3,392,741 \$; ;	3,206,413 \$	2,522,802 \$	2,357,857 \$	1,454,712 \$	1,298,498 \$	
2021 \$	26,207,822	\$	6,117,005 \$		5,602,491	\$	6,357,112 \$	3	6,265,643	\$	5,776,390 \$		5,959,003 \$	5,434,008 \$;	4,456,542 \$; ;	3,298,274 \$	3,490,761 \$	2,401,871 \$	2,182,127 \$	1,298,498 \$	1,063,077
2022 \$	27,256,135	\$	6,361,686 \$		5,826,591	\$	6,611,397 \$	3	6,516,269	\$	7,122,710 \$		6,184,627 \$	6,882,981 \$;	4,609,844 \$, 4	4,332,454 \$	3,590,767 \$	3,323,431 \$	2,222,862 \$	1,947,799 \$	1,063,077
2023 \$	28,346,381	\$	6,616,153 \$		6,059,654	\$	6,875,852 \$	3	6,776,919	\$	7,407,618 \$		7,626,095 \$	7,143,589 \$;	5,839,055 \$, 4	4,481,488 \$	4,716,659 \$	3,418,644 \$	3,075,738 \$	1,984,159 \$	1,594,659
2024 \$	29,480,236	\$	6,880,799 \$		6,302,040	\$	7,150,887 \$;	7,047,996	\$	7,703,923 \$		7,931,139 \$	8,808,566 \$;	6,060,137 \$	5 5	5,676,471 \$	4,878,910 \$	4,490,566 \$	3,163,855 \$	2,745,449 \$	1,624,426
2025 \$	30,659,445	\$	7,156,031 \$		6,554,122	\$	7,436,922 \$	3	7,329,916	\$	8,012,080 \$		8,248,385 \$	9,160,909 \$;	7,472,591 \$; ;	5,891,398 \$	6,179,866 \$	4,645,039 \$	4,155,888 \$	2,824,103 \$	2,247,693
2026 \$	31,885,823	\$	7,442,272 \$		6,816,287	\$	7,734,399 \$	3	7,623,113	\$	8,332,563 \$		8,578,320 \$	9,527,345 \$;	7,771,494 \$	7	7,264,523 \$	6,413,852 \$	5,883,634 \$	4,298,848 \$	3,709,607 \$	2,312,087
2027 \$	33,161,256	\$	7,739,963 \$		7,088,938	\$	8,043,775 \$	3	7,928,037	\$	8,665,865 \$		8,921,453 \$	9,908,439 \$;	8,082,354 \$	7	7,555,104 \$	7,908,747 \$	6,106,405 \$	5,445,131 \$	3,837,215 \$	3,037,046
2028 \$	34,487,706	\$	8,049,562 \$		7,372,496	\$	8,365,526 \$	3	8,245,159	\$	9,012,500 \$		9,278,311 \$	10,304,776 \$;	8,405,648 \$; ;	7,857,308 \$	8,225,097 \$	7,529,642 \$	5,651,299 \$	4,860,404 \$	3,141,519
2029 \$	35,867,214	\$	8,371,544 \$		7,667,396	\$	8,700,147 \$	3	8,574,965	\$	9,373,000 \$		9,649,443 \$	10,716,967 \$;	8,741,874 \$: 8	8,171,601 \$	8,554,101 \$	7,830,828 \$	6,968,463 \$	5,044,433 \$	3,979,202
2030 \$	37,301,903	\$	8,706,406 \$		7,974,091	\$	9,048,153 \$	3	8,917,963	\$	9,747,920 \$		10,035,421 \$	11,145,646 \$;	9,091,549 \$: 8	8,498,465 \$	8,896,265 \$	8,144,061 \$	7,247,201 \$	6,220,153 \$	4,129,865
2031 \$	38,793,979	\$	9,054,662 \$		8,293,055	\$	9,410,079 \$	3	9,274,682	\$	10,137,837 \$		10,436,838 \$	11,591,472 \$;	9,455,211 \$: 8	8,838,403 \$	9,252,116 \$	8,469,823 \$	7,537,090 \$	6,468,959 \$	5,092,425
2032 \$	40,345,738	\$	9,416,849 \$		8,624,777	\$	9,786,482 \$	3	9,645,669	\$	10,543,350 \$		10,854,312 \$	12,055,131 \$;	9,833,420 \$: :	9,191,940 \$	9,622,201 \$	8,808,616 \$	7,838,573 \$	6,727,717 \$	5,296,122
2033 \$	41,959,568	\$	9,793,523 \$		8,969,768	\$	10,177,941 \$	3	10,031,496	\$	10,965,084 \$		11,288,484 \$	12,537,336 \$		10,226,756 \$: :	9,559,617 \$	10,007,089 \$	9,160,961 \$	8,152,116 \$	6,996,826 \$	5,507,967
2034 \$	43,637,951	\$	10,185,264 \$		9,328,559	\$	10,585,059 \$	3	10,432,756	\$	11,403,688 \$		11,740,023 \$	13,038,830 \$;	10,635,827 \$;	9,942,002 \$	10,407,372 \$	9,527,399 \$	8,478,201 \$	7,276,699 \$	5,728,285
2035 \$	45,383,469	\$	10,592,674 \$		9,701,701	\$	11,008,461 \$	3	10,850,066	\$	11,859,835 \$		12,209,624 \$	13,560,383 \$;	11,061,260 \$	10	0,339,682 \$	10,823,667 \$	9,908,495 \$	8,817,329 \$	7,567,767 \$	5,957,417
2036 \$	47,198,807	\$	11,016,381 \$	1	0,089,770	\$	11,448,800 \$	3	11,284,069	\$	12,334,228 \$		12,698,009 \$	14,102,798 \$;	11,503,710 \$	10	0,753,269 \$	11,256,614 \$	10,304,835 \$	9,170,022 \$	7,870,478 \$	6,195,713
2037 \$	49,086,760	\$	11,457,036 \$	1	0,493,360	\$	11,906,752 \$	<u> </u>	11,735,432	\$	12,827,598 \$		13,205,930 \$	14,666,910 \$;	11,963,858 \$	1	1,183,400 \$	11,706,878 \$	10,717,028 \$	9,536,823 \$	8,185,297 \$	6,443,542
2038 \$	51,050,230	_	11,915,318 \$	1	0,913,095	\$	12,383,022 \$			\$	13,340,702 \$		13,734,167 \$	15,253,586 \$		12,442,413 \$	1	1,630,736 \$	12,175,153 \$	11,145,709 \$	9,918,296 \$	8,512,709 \$	6,701,284
2039 \$	53,092,239	\$	12,391,930 \$	1	1,349,619	\$	12,878,343 \$	<u> </u>	12,693,043	\$	13,874,330 \$		14,283,534 \$	15,863,730 \$		12,940,109 \$	12	2,095,965 \$	12,662,159 \$	11,591,538 \$	10,315,027 \$	8,853,217 \$	6,969,335
2040 \$	55,215,929	_	12,887,608 \$	1	1,803,603	\$	13,393,476 \$	3	13,200,764	\$	14,429,303 \$		14,854,875 \$	16,498,279 \$		13,457,714 \$	12	2,579,804 \$	13,168,646 \$	12,055,199 \$	10,727,629 \$	9,207,346 \$	7,248,108
2041 \$	57,424,566	\$	13,403,112 \$	1	2,275,747	\$	13,929,215 \$	3	13,728,795	\$	15,006,475 \$		15,449,070 \$	17,158,210 \$	•	13,996,022 \$	1:	3,082,996 \$	13,695,392 \$	12,537,407 \$	11,156,734 \$	9,575,640 \$	7,538,033
2042 \$	59,721,549	\$	13,939,236 \$	1	2,766,777	\$	14,486,384 \$	3	14,277,947	\$	15,606,734 \$		16,067,033 \$	17,844,539 \$	•	14,555,863 \$	1:	3,606,316 \$	14,243,207 \$	13,038,904 \$	11,603,003 \$	9,958,665 \$	7,839,554
2043 \$	62,110,411	\$	14,496,806 \$	1	3,277,448	\$	15,065,839 \$	3	14,849,065	\$	16,231,003 \$		16,709,714 \$	18,558,320 \$	•	15,138,098 \$	14	4,150,569 \$	14,812,936 \$	13,560,460 \$	12,067,123 \$	10,357,012 \$	8,153,136
2044 \$. , , .	_	15,076,678 \$		3,808,546	_	15,668,473 \$		15,443,027	_	16,880,243 \$		17,378,103 \$	19,300,653 \$		15,743,622 \$		4,716,591 \$., , ,	14,102,878 \$, ,	10,771,292 \$	8,479,262
2045 \$		_	15,679,745 \$			_	16,295,212 \$		16,060,748	_	17,555,453 \$		18,073,227 \$	20,072,679 \$		16,373,366 \$		5,305,255 \$		14,666,993 \$.,,	11,202,144 \$	8,818,432
2046 \$		_	16,306,935 \$			_	16,947,020 \$			_	18,257,671 \$			20,875,586 \$							13,573,872 \$		9,171,169
2047 \$	72,660,395		16,959,212 \$		-,,-	_	17,624,901 \$,. ,	\$	18,987,978 \$			21,710,610 \$		17,709,433 \$		6,554,164 \$	17,329,040 \$	15,863,820 \$, ,,	12,116,239 \$	9,538,016
2048 \$	75,566,811	_	17,637,581 \$., . ,	_	18,329,897 \$		18,066,158	\$	19,747,497 \$		20,329,922 \$	22,579,034 \$		18,417,810 \$		7,216,330 \$	18,022,201 \$	16,498,373 \$,,	12,600,889 \$	9,919,537
2049 \$		_	18,343,084 \$.,,	_	19,063,093 \$		18,788,804	_	20,537,397 \$		21,143,119 \$	23,482,195 \$		19,154,523 \$		7,904,984 \$	18,743,089 \$	17,158,308 \$		13,104,924 \$	10,316,318
2050 \$	81,733,063	\$	19,076,808 \$	1	7,472,216	\$	19,825,617 \$	3	19,540,356	\$	21,358,893 \$	_ :	21,988,844 \$	24,421,483 \$		19,920,704 \$	18	8,621,183 \$	19,492,813 \$	17,844,640 \$	15,879,511 \$	13,629,121 \$	10,728,971



Taxes Condominium Units, Cyclical Scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
2007 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2008 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2009 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2010 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2011 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2012 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2013 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2014 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2015 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2016 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2017 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- 9	- \$	- \$	- \$	- \$	-
2018 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2019 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2020 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2021 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	
2022 \$	906,363 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2023 \$	906,363 \$	1,095,475 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2024 \$	1,359,582 \$	1,095,475 \$	646,483 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2025 \$	1,384,962 \$	1,643,257 \$	646,483 \$	246,158 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2026 \$	1,916,349 \$	1,673,932 \$	969,751 \$	246,158 \$	32,478 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2027 \$	1,971,251 \$	2,316,193 \$	987,853 \$	369,247 \$	32,478 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2028 \$	2,589,340 \$	2,382,549 \$	1,366,877 \$	376,140 \$	48,719 \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	- \$	-
2029 \$	2,678,412 \$	3,129,602 \$	1,406,037 \$	520,459 \$	49,628 \$	- \$	- \$	17,192 \$	- \$	- \$	- \$	- \$	- \$	-
2030 \$	3,392,607 \$	3,237,259 \$	1,846,902 \$	535,370 \$	68,670 \$	- \$	- \$	17,192 \$	46,935	- \$	- \$	- \$	- \$	-
2031 \$	3,521,061 \$	4,100,470 \$	1,910,434 \$	703,236 \$	70,637 \$	- \$	- \$	25,789 \$	46,935	- \$	- \$	- \$	- \$	_
2032 \$	4,341,725 \$	4,255,725 \$	2,419,850 \$	727,427 \$	92,785 \$	- \$	- \$	26,270 \$	70,404 \$	- \$	379,527 \$	- \$	- \$	-
2033 \$	4,515,394 \$	5,247,620 \$	2,511,472 \$	921,394 \$	95,977 \$	- \$	- \$	36,350 \$	71,718 \$	- \$	379,527 \$	1,395,305 \$	- \$	-
2034 \$	4,696,009 \$	5,457,524 \$	3,096,828 \$	956,281 \$	121,569 \$	- \$	- \$	37,391 \$	99,236 \$	- \$	569,306 \$	1,395,305 \$	1,623,682 \$	
2035 \$	4,883,850 \$	5,675,825 \$	3,220,701 \$	1,179,164 \$	126,172 \$	- \$	- \$	49,116 \$	102,079 \$	- \$	579,933 \$	2,093,014 \$	1,623,682 \$	1,626,088
2036 \$	5,079,204 \$	5,902,858 \$	3,349,529 \$	1,226,330 \$	155,579 \$	- \$	- \$	50,805 \$	134,086 \$	- \$	802,444 \$	2,132,085 \$	2,435,589 \$	1,626,088
2037 \$	5,282,372 \$	6,138,973 \$	3,483,510 \$	1,275,383 \$	161,802 \$	- \$	- \$	64,352 \$	138,698 \$	- \$	825,433 \$	2,950,132 \$	2,481,055 \$	2,439,198
2038 \$	5,493,667 \$	6,384,532 \$	3,622,850 \$	1,326,399 \$	168,274 \$	- \$	- \$	66,789 \$	175,682 \$	- \$	1,084,249 \$	3,034,650 \$	3,432,996 \$	2,484,731
2039 \$	5,713,413 \$	6,639,913 \$	3,767,765 \$	1,379,455 \$	175,005 \$	- \$	- \$	82,356 \$	182,334 \$	- \$	1,121,547 \$	3,986,170 \$	3,531,348 \$	3,438,082
2040 \$	5,941,950 \$	6,905,509 \$	3,918,475 \$	1,434,633 \$	182,006 \$	- \$	- \$	85,650 \$	224,831	- \$	1,420,606 \$	4,123,292 \$	4,638,609 \$	3,536,580
2041 \$	6,179,628 \$	7,181,730 \$	4,075,214 \$	1,492,018 \$	189,286 \$	- \$	- \$	89,076 \$	233,824 \$	- \$	1,474,394 \$	5,222,763 \$	4,798,174 \$	4,645,481
2042 \$	6,426,813 \$	7,468,999 \$	4,238,223 \$	1,551,699 \$	196,857 \$	- \$	- \$	92,639 \$	243,177 \$	- \$	1,818,035 \$	5,420,511 \$	6,077,603 \$	4,805,283
2043 \$	6,683,886 \$	7,767,759 \$	4,407,752 \$	1,613,767 \$	204,732 \$	- \$	- \$	96,344 \$	252,904	- \$	1,890,757 \$	6,683,886 \$	6,307,717 \$	6,086,606
2044 \$	6,951,241 \$	8,078,469 \$	4,584,062 \$	1,678,318 \$	212,921 \$	- \$	- \$	100,198 \$	263,020 \$	- \$	1,966,387 \$	6,951,241 \$	7,777,875 \$	6,317,062
2045 \$	7,229,291 \$	8,401,608 \$	4,767,424 \$	1,745,450 \$	221,438 \$	- \$	- \$	104,206 \$	273,541 \$	- \$	2,045,043 \$	7,229,291 \$	8,088,990 \$	7,789,398
2046 \$	7,518,462 \$	8,737,672 \$	4,958,121 \$	1,815,268 \$	230,295 \$	- \$	- \$	108,374 \$	284,482 \$	- \$	2,126,844 \$	7,518,462 \$	8,412,550 \$	8,100,974
2047 \$	7,819,201 \$	9,087,179 \$	5,156,446 \$	1,887,879 \$	239,507 \$	- \$	- \$	112,709 \$	295,862	- \$	2,211,918 \$	7,819,201 \$	8,749,052 \$	8,425,013
2048 \$	8,131,969 \$	9,450,666 \$	5,362,704 \$	1,963,394 \$	249,087 \$	- \$	- \$	117,218 \$	307,696	- \$	2,300,395 \$	8,131,969 \$	9,099,014 \$	8,762,013
2049 \$	8,457,248 \$	9,828,693 \$	5,577,212 \$	2,041,930 \$	259,051 \$	- \$	- \$	121,906 \$	320,004 \$	- \$	2,392,411 \$	8,457,248 \$	9,462,974 \$	9,112,494
2050 \$	8,795,537 \$	10,221,841 \$	5,800,300 \$	2,123,607 \$	269,413 \$	- \$	- \$	126,783 \$	332,804 \$	- \$	2,488,107 \$	8,795,537 \$	9,841,493 \$	9,476,994



APPENDIX C: NEW YORK CITY PROPERTY TAXES



New York City Property Taxes¹

Overview

Under the current New York State Real Property Tax Law, enacted December, 1981, all real property in the City is separated into four Classes based upon use and type of building.

- Class 1 property includes one, two and three family houses.
- Class 2 property consists of all other all other residential property, including coops, condos 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 new development in Hudson Yards is expected to 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 year² from all other projected sources of revenues (income and use taxes, fees and intergovernmental transfers). The difference equals the property tax levy which 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

The tax rates for each Class are derived by dividing the Class Levy by the Class billable assessed value.

Class Levy / Class Billable Assessed Value = Class Tax Rate

² Tax Revenue data from New York City Office of Management and Budget and Department of Finance refers to the City fiscal year which anticipates the calendar year by six months running from July 1st to June 30th (i.e., FY2006 runs from July 1, 2005 to June 30, 2006). Pending final agreement between the applicable public agencies and private entities.



¹ Information on the New York City property tax system was obtained from the following sources: New York City Office of Management and Budget and New York City's Department of Finance; also see Source List.

Assessments

All properties are assessed each year and a tentative roll of market 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 Tax Commission. Adjustments are then reflected in the final roll which is published in May of each year.

Property taxes are assessed at a ratio to full market value. This assessment ratio has varied over time and among property classes. The Class 1 assessment ratio, which was 12.4 percent of market value in 1985, dropped to 6.0 percent in 2005 as shown in Exhibit C-1. For Class 2 and Class 4 the assessment ratio has held stable at close to 45.0 percent since the mid-1990s and is assumed to remain constant at 45.0 percent in the revenue model.

Exhibit C-1: Real Estate Tax Assessment Ratios, 1985-2006

Year	Class 1	Class 2	Class 3	Class 4
1985	12.4	45.1	55.4	49.3
1986	11.7	48.8	56.1	54.0
1987	11.3	53.4	52.0	59.6
1988	7.1	53.0	40.7	45.7
1989	5.8	51.0	38.8	43.9
1990	5.0	55.0	35.5	47.4
1991	5.8	37.6	36.8	32.8
1992	5.2	37.5	33.9	33.4
1993	6.9	42.1	48.3	42.8
1994	7.2	42.3	46.1	44.7
1995	8.0	44.1	46.5	45.1
1996	7.9	43.8	45.8	43.9
1997	8.0	45.7	43.9	44.5
1998	8.0	46.5	44.0	46.5
1999	8.0	44.3	45.7	45.0
2000	8.0	45.0	45.0	45.0
2001	8.0	45.0	45.0	45.0
2002	8.0	45.0	45.0	45.0
2003	8.0	45.0	45.0	45.0
2004	8.0	45.0	45.0	45.0
2005	6.0	45.0	45.0	45.0
2006	6.0	45.0	45.0	45.0

Source: New York City Department of Finance.

Assessment increases 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 less 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 of Class 4 are not subject to any limitations.

Changes in assessments for properties in Class 2 and Class 4, both positive and negative, however, are phased in over a five-year time period at 20.0 percent 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 used to compute taxes (for Class 1 and Class 3 billable and actual assessments are identical). This formula has a twofold effect on Class 4 assessments as shown in Exhibit C-2.

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. I t was only in 1994 that this pipeline effect wore out 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.

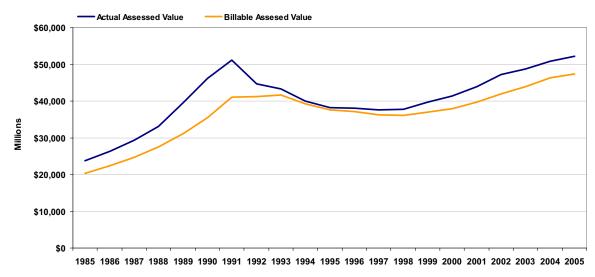


Exhibit C-2: Class 4 Commercial Property - Actual and Billable Assessed Value, 1985-2005

Source: New York City Department of Finance.



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 two alternative approaches, depending on stage of completion. Buildings less than 50 percent complete are assessed based on construction costs, while buildings over 50 percent complete are assessed using the income and expense approach typically used in assessments (the assessment mechanism is discussed in further detail in the following section). 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 the Exhibit C-3. Average annual growth rates are computed for the 20 fiscal years of 1985 to 2006. Overall actual assessed values for Class 2 and Class 4 properties experienced the highest rate of growth over the 21 years at 5.5 percent and 4.3 percent respectively.

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 the fact that the Midtown market remained relatively healthy.



Exhibit C-3: Real Estate Property - Actual and Billable Assessed Value, 1985-2006

	Actual Asse	ssed Value (\$	Millions)			Billable Ass	essed 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	36,552.4	6,836.1	48,704.9	102,705.0	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	\$122,484.6	\$12,146.9	\$38,630.6	\$8,501.9	\$50,734.6	\$110,014.1
Avera	ge Annual Gr	owth 1985-200	06							
	3.0%	5.5%	-0.4%	4.3%	4.0%	3.0%	5.5%	-0.2%	4.5%	4.0%

Source: New York City Department of Finance.

Real Estate Property Class Shares

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, demolitions, 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 discretion³.

³ The cap in Class share growth, set at 5.0 percent in FY 2005 pursuant to the NYS Real Property Tax Law, has been reduced frequently in recent years to 2.75 percent or most often to 2.0 percent by passage of State legislation imposing a lower cap for the current fiscal year.



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 c-4. Class 1 and Class 2 shares combined have increased from an initial 37 percent of the overall levy to almost 50 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. Over the same period, however, the Class 4 levy maintained an annual growth rate of 2.3 percent as the overall property tax levy continued to rise by 3.9 percent.

Exhibit C-4: Property Class Shares and Class Levy, 1991-2006

	Total Levy	Class Sh	ares			Class Lev	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%	845.50	1,994.60	800.60	4,102.30	
1992	8,318.80	11.46%	28.00%	7.80%	52.74%	953.00	2,328.90	649.60	4,387.30	
1993	8,392.50	11.28%	29.00%	6.57%	53.15%	946.90	2,433.40	551.80	4,460.40	
1994	8,113.20	11.56%	30.78%	5.76%	51.90%	938.10	2,497.00	467.20	4,210.90	
1995	7,889.80	11.92%	31.57%	5.98%	50.53%	940.10	2,490.90	472.10	3,986.70	
1996	7,871.40	12.19%	32.61%	6.18%	49.01%	959.90	2,567.00	486.40	3,858.10	
1997	7,835.10	12.47%	33.64%	6.37%	47.51%	977.40	2,635.80	499.50	3,722.50	
1998	7,890.40	12.73%	33.92%	6.87%	46.48%	1,004.40	2,676.50	542.40	3,667.20	
1999	8,099.30	12.96%	33.22%	7.08%	46.74%	1,049.80	2,690.60	573.10	3,785.90	
2000	8,374.30	13.26%	34.08%	7.43%	45.23%	1,110.20	2,854.10	622.10	3,787.80	
2001	8,730.30	13.50%	34.50%	7.63%	44.37%	1,178.40	3,012.10	666.20	3,873.60	
2002	9,271.20	13.65%	34.94%	7.43%	43.98%	1,265.20	3,239.70	688.40	4,077.90	
2003	10,688.80	13.87%	34.92%	7.41%	43.80%	1,482.80	3,732.10	792.00	4,681.80	
2004	12,250.70	14.09%	35.56%	7.12%	43.23%	1,726.10	4,356.70	871.90	5,295.90	
2005	12,720.00	14.69%	34.87%	7.39%	43.05%	1,868.00	4,435.80	940.00	5,476.20	
2006	\$13,668.10	14.95%	35.43%	7.66%	41.96%	\$2,042.90	\$4,842.50	\$1,046.50	\$5,736.20	
Average	Growth 1991	-2006								
	3.9%	2.1%	2.1%	-2.0%	-1.5%	6.1%	6.1%	1.8%	2.3%	

Source: New York City Department of Finance.

Real Estate Property Tax Rates

The tax rate for each Class is then obtained by dividing each Class's levy by its respective billable assessment⁴. Tax rates for each property type are shown in Exhibit C-5 and summarized for 1991 through 2005. 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 September 11, 2001 revenue shortfalls, the Mayor and the City Council enacted an18.0 percent rate increase mid-year through fiscal year 2003.

⁴ For Class 1 and Class 2 properties a small portion of billable assessments is exempt mainly due to exemptions for veterans and eligible senior and other homeowners under the New York State School Tax Relief (STAR) program. This results in a slightly modified calculation.



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 9.910 12.794 10.698 10.591 1994 10.900 10.369 7.404 10.724 10.366 1995 10.552 7.702 10.608 10.366 10.694 1996 10.725 10.807 7.922 10.402 10.366 1997 10.785 11.056 7.840 10.252 10.366 1998 10.849 11.046 8.282 10.164 10.366 1999 10.961 10.739 8.800 10.236 10.366 2000 10.851 9.398 9.989 10.366 11.167 2001 11.255 10.847 10.540 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 14.550 12.620 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

Exhibit C-5. Property Tax Rates* by Class, 1991-2006 (Per \$100 of Assessed Values)

Assessment Guidelines

Class 2 and Class 4 properties are generally assessed as income-producing properties. All properties having assessed values greater than \$80,000 are required to file 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.

In the income approach, operating expenses are subtracted from 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 capitalized net income. Mortgage interest is also excluded from this calculation, since properties are valued as free from encumbrances.

Reported revenues and expenses are compared to the averages for similar properties. Physical characteristics, amenities offered, and geographic locations are all factors considered in



^{*} For year 2003, left figures indicate the tax rates for 1st half year and right figures show the 2nd half year tax rates. Source: New York City Department of Finance.

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 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 market rates.

Assessors also compare rent levels and income in comparable buildings to determine whether rents accurately reflect current market conditions. A market-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 Department of Finance market value is then determined by dividing net operating income by a capitalization rate⁵. Capitalization rates are determined through a modified Ellwood 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.

Exhibit C-6 provides the fiscal year 2007 guidelines used in assessing Class 4 (class A office buildings) properties in different Manhattan office submarkets. As shown, each submarket reflects a range of income, expense and capitalization rates values from which an overall market rate is determined. An overall submarket vacancy rate is also provided and used to determine a mark-up for excess vacancies.

⁵ In practice assessors look at ranges for cap rates that allow for some flexibility in adjusting net income to market assessed value.



Exhibit C-6. Fiscal Year 2007 Assessment Roll Guidelines (in \$PSF)

Class "A" Office Buildings

_			
Р	la	7	2

					Net Rent	Gross Rent		
							Vacancy	Effective
	Low	Mean	Median	High	Market	Market	Rate	Tax Rate
Income	\$39.81	\$56.40	\$52.23	\$79.22	\$61.53	\$52.30		
Expense	\$15.25		\$18.24	\$22.31	\$21.49			
Cap Rate	7.10%		7.60%	8.20%	7.60%			
Approximate Market Value Range	\$202		\$268	\$428	\$316		8.70%	5.09%
Grand Central								
					Net Rent	Gross Rent	.,	=======================================
	Low	Mean	Median	High	Market	Market	Vacancy Rate	Effective Tax Rate
Income	\$32.23	\$38.81	\$39.98	\$55.62	\$51.08	\$43.42		
Expense	\$14.13	400.01	\$16.49	\$20.53	\$19.90	¥ <u>-</u>		
Cap Rate	7.40%		7.90%	8.40%	7.90%			
Approximate Market Value Range	\$145		\$181	\$260	\$240		9.70%	5.09%
Midtown West								
					Net Rent	Gross Rent		
			Madian	III:b	Manhat	Maulant	Vacancy	Effective
In a case	Low \$37.66	Mean \$46.07	Median	High	Market \$50.94	Market	Rate	Tax Rate
Income		\$46.07	\$48.39	\$57.47		\$43.30		
Expense	\$13.01		\$15.49	\$18.70	\$16.31			
Cap Rate Approximate Market Value Range	7.60% \$194		8.20% \$248	8.70% \$281	8.20% \$261		9.57%	5.09%
Midtown South								
Midtown South					Net Rent	Gross Rent		
							Vacancy	Effective
	Low	Mean	Median	High	Market	Market	Rate	Tax Rate
Income	\$25.45	\$39.31	\$35.16	\$50.34	\$38.24	\$32.50		
Expense	\$11.97		\$13.40	\$16.55	\$14.57			
Cap Rate	7.90%		8.50%	9.00%	8.50%			
Approximate Market Value Range	\$104		\$160	\$240	\$174		8.00%	5.09%
Downtown Finance/WTC								
					Net Rent	Gross Rent	.,	=======================================
							Vacancy	Effective

Approximate Market Value Range
Downtown Insurance/Civic Center

Income

Expense

Cap Rate

					Net Rent	Gross Rent		
							Vacancy	Effective
	Low	Mean	Median	High	Market	Market	Rate	Tax Rate
Income	\$19.57	\$28.91	\$30.94	\$38.12	\$31.19	\$26.51		
Expense	\$10.29		\$13.47	\$17.25	\$13.58			
Cap Rate	8.50%		9.00%	9.50%	9.00%			
Approximate Market Value Range	\$68		\$124	\$143	\$125		6.30%	5.09%

Median

\$30.29

\$14.10

9.20%

\$113

High

\$41.47

\$15.79

9.70%

\$174

Market

\$34.39

\$14.55

9.20%

\$139

Market

\$29.23

Rate

12.30%

Tax Rate

5.09%

Mean

\$31.56

Low

\$23.26

\$10.86

8.70%

\$90

Source: New York City Department of Finance.



Market value for a typical class A building in Midtown's Plaza Submarket is determined as follows:

(Market Income Adjusted for Vacancy-Market Expense) / (Cap Rate +Effective Tax Rate) = Approximate Value

(\$61.53-\$21.49) / (0.076+.0509) = \$316 psf



APPENDIX D: GLOSSARY

GENERAL Compound Annual Growth Rate (CAGR): The method of assessing the average growth of a value over time. Consumer Price Index (CPI): A measure of changes in average prices over time as tracked by the US Bureau of Labor Statistics. Core Based Statistical Area (CBSA): A geographic area that is defined by a significant population center plus its surrounding communities that exhibit a high degree of social and economic assimilation with that center, per the U.S. Census. Can include one or more MSAs. Metropolitan Statistical Area (MSA): The Metropolitan Statistical Area comprises the central county or counties containing the core of a CBSA, plus adjacent outlying counties having a high degree of social and economic integration with the central county as measured through commuting, per the U.S. Census. An MSA has a population of 50,000 or greater. MSF: Millions of square feet. **NAICS:** North American Industrial Classification System for employment, as defined by the U.S. Census., which replaced the SIC system. **PSF:** Per square foot.

Real Gross Product: The overall output measure for an economy, adjusted for inflation.



Standard Industrial Classifications: Employment classification system as defined by the U.S. Census and used prior to the development of NAICS.

Total Employment: An estimate of all non-agricultural employment.

OFFICE

Analysis Region: 11 counties analyzed as most competitive to Manhattan office market are Nassau, New York, Suffolk and Westchester in the state of New York; Bergen, Essex, Hudson, Middlesex, Morris and Somerset in New Jersey; and Fairfield in Connecticut.

Asking Rental Rates: Gross asking rates per square foot, weighed by the amount of square footage available.

Class A Office Space: The most prestigious buildings competing for premier office users with above average rents for the area. Buildings have exceptional accessibility and suggest a definitive market presence. Space within buildings have high quality standard finishes, state-of-the art systems, excellent location and access, attract high quality tenants, and are managed professionally. Building materials are high quality and rents are competitive with other new buildings.

Class B Office Space: Buildings competing for a wide range of office users with average rents for the area. Building finishes are fair to good for the area, and systems are adequate, but the buildings do not compete with class A at the same price.

Class C Office Space: Buildings competing for tenants requiring functional space at below- average rents for the area.



Capitalization (CAP) Rate: Determining a present value of income property by taking the annual net income (either known or estimated) and discounting by using a rate of return commonly acceptable to buyers of similar properties. For example: Net income of a property is \$10,000 per year. Capitalizing at a rate of 10 percent, the property would be worth \$100,000. The CAP rate measures the risk involved in an investment. Thus, the higher the risk, the higher the CAP rate; the lower the risk, the lower the CAP rate.

CBD: Central Business District

Construction Completions: Properties completed, and ready for occupancy.

Construction Starts: Properties that commence construction with ground-breaking.

Dependent Variable: A variable in a logical or mathematical expression whose value depends on the independent variable.

Developers' Construction Multiplier: A multiplier calculated to reflect that developers will temper office construction starts when market conditions are soft and are likely to increase the level of construction starts when market conditions are tight.

Direct Asking Rent: Asking rent for office space as offered directly by a building's owner or agent.

Downtown Office Market: For this analysis, defined as the area of Manhattan south of and inclusive of Canal Street.

Dummy Variable: An independent variable typically set to a value of zero or one. In this analysis, the dummy variable is used to account for the extraordinary event of the terrorist attacks of September 11, 2001.



Emerging Markets: The New York City office markets in the outer boroughs of Brooklyn, Queens and the Bronx, as well as north of 96th Street in Manhattan.

Face Rent: Sometimes called "contract rent," annual dollars obligation as specified in an office lease. The initial contract rent may change during the lease term because of specifically stated increases or adjustments based on changes in various published indices such as the Consumer Price Index (CPI).

For-lease Office Market: The portion of the office inventory that is not owner-occupied and is either leased or available for lease.

Frictional Vacancy (rate): The amount of vacant space for an office market's orderly operation. Assumed to be a four percent threshold for this analysis.

Gross Building Area (GBA): The physical or total floor area of a building, measured from the exterior of its walls (excluding uncovered areas such as courtyards or patios).

Gross Leasable (gross) Square Feet: In building measurement, the outside dimensions determine the gross area, irrespective of the area inside actually usable or rentable. For the purposes of this analysis, it is assumed to be 88 percent of Net Rentable Area.

Independent Variable: A variable in a study whose presence or degree determines the change in the dependent variable.

Lag (Lagged Variable): A variable that appears in an equation with a time subscript referring to a past period. Lagging a variable leads to the loss of observations.

Leasing Activity: Sum of completed transactions in a given period of time, typically reported on a quarterly basis. Includes sublet space and pre-leasing, but excludes renewals.



Midtown Office Manhattan: The area of Manhattan extending from Canal Street, north to 72nd Street excluding the Hudson Yards.

Net Absorption: The change in occupied office built space for a given period of time, including sublease space.

Net Rentable Square Feet (NRA): The economic measurement of a building by the landlord for which rent can be charged, and the units in which commercial real estate firms usually report their leasing activity and absorption statistics. For purposes of this study, NRA is typically larger than the physical or gross area of a building.

New York City Region: The 19 counties located in the tri-state area are: Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk and Westchester in the state of New York; Bergen, Essex, Hudson, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset and Union counties in New Jersey; and Fairfield County, Connecticut.

Occupied Space: Office space that is not available for lease.

Office Inventory: All of the office space that inclusive of a base square footage and larger, within a defined geography that is either occupied or available for lease. The physical square footage is used for statistical purposes. It is also the numerator for determining both direct and overall vacancy rates.

Office-Using Employment (OUE): An estimate of the number of employees working in office space.

Overall Vacancy Rates: Office space vacant and available, both directly and through sublease, divided by the inventory. Space in properties under construction or under renovation is not included.



Power Function: Calculates the least squares fit through points by using the following equation: y=cxb, where c and b are constants.

Real Gross Product: The overall output measure for an economy, adjusted for inflation.

Replacement Rent (office): The rent level in an office market necessary to make newly constructed space economically feasible to develop.

Rolling Four-quarter Variables: Variables that are summed or averaged over a 4-quarter period. Using rolling four-quarter independent variables removes much of the quarter-to-quarter volatility in a dataset.

R-squared: The R-squared statistic measures the success of the regression in predicting the values of the dependent variable within the sample. In standard settings, R-squared may be interpreted as the fraction of the variance of the dependent variable explained by the independent variables. The statistic will be between one and zero.

Time Series: A sequence of data points, measured typically at successive times, spaced apart at uniform time intervals. Time series analysis comprises methods that attempt to make forecasts or predictions. Time series prediction is the use of a model to predict future events based on known past events.

t-statistic: The t-statistic, which is computed as the ratio of an estimated coefficient to its standard error, is used to test the hypothesis that a coefficient is equal to zero. To interpret the t-statistic, examine the probability of observing the t-statistic given that the coefficient is equal to zero.

Vacancy Rate: The percentage of space in a building or market that is available for lease.



HOTEL

ADR (Average Daily Rate): Room revenue divided by number of rooms sold.

Association: Meetings other than conventions or trade shows, includes board meetings, professional and technical meetings, educational seminars and chapter meetings.

Change in Rooms: Indicator of whether or not an individual hotel has added or deleted rooms.

Conventions and Large Meetings: Large gatherings typically hosted by professional or social associations and are held in convention centers or hotels. May take place annually or are attended by association members or invited guests, including the following segments:

Conferences: Events held by associations or professional groups with similar characteristics to conventions, but do not require exhibit space and hold events at hotels.

Consumer shows: Public events that exhibit merchandise. These shows range in size and attract local delegates rather than a broader scope of attendees.

Conventions: Professional or membership groups that range from 300 to 30,000 attendees in size and require the utilization of exhibit halls over 100,000 square feet. Typically attract a large proportion of out-of-town attendees who generate new spending including food, retail, transportation and entertainment.

Corporate: Comprised of training seminars, professional conferences or other types of meetings for up to 100 people. These meetings are typically held in hotels.

SMERF (social, military, educational, religious, and fraternal): Categorized as a price sensitive segment that includes weddings, fund raisers, religious and educational seminars or any other event with a civil, social or entertainment purpose.

Tradeshows: Large scale events that provide wholesalers and retailers with an opportunity to conduct business with industry buyers. These events are produced by independent trade show organizers and are typically only held at convention center due to the need for exhibit hall space. The tradeshow delegates have very similar travel behavior to convention delegates, but expenditures are less and the average length stay is typically shorter.

F&B: Food and beverage service.



Hotel Traveler Market Segments: Market segments are the demand classification based on how travelers utilize the lodging facilities.

Commercial/Corporate: Demand is generated by individuals conducting business in an area, and is typically strongest Monday through Thursday nights. Typical length of stay ranges from one to three days, and demand is relatively constant throughout the year. Travelers generally are not rate sensitive.

Leisure: This segment consists of individual tourists and families visiting the attractions of a local market and/or passing through en route to other destinations. Leisure demand is price sensitive and is strongest Friday and Saturday nights, holiday periods and the summer months.

Meeting and Group: Demand is primarily generated by groups who reserve blocks of rooms for meetings, seminars, trade association shows, and other similar gatherings of 10 or more persons. Typically demand is strongest during the spring and fall months, and these travelers have an average length of stay of three to five days.

Market Share: Total hotel room supply, room demand, or room revenue as a percent of some larger group.
Occupancy rate: Hotel rooms sold divided by rooms available.
Rack Rate: The published full price for which hotel rooms are sold.
Revenue (room revenue): Total hotel room revenue generated from sale or rental of rooms.
RevPAR (revenue per available room): Hotel room revenue divided by rooms available.
Occupancy times average room rate is a close approximation of RevPAR.
Rooms Available (Room Supply): Number of hotel rooms times number of days in a time period.

Rooms Sold (Rooms Demand): Number of hotel rooms sold.



Property Types & Pricing Classifications (per Smith Travel Research): Various product types and classes of hotels exist that attract different types of guests. There is no official classification system used industry-wide, although there are some main categories that are commonly accepted.

Luxury: A high-end product that offers the most in-room and on-property amenities, including meeting facilities, retail outlets and at least one on-site full service restaurant. Traditionally caters to the high profile business traveler or transient leisure traveler willing to pay very high rates. Represents top 15 percent average room rates. Examples include the Ritz Carlton, the Four Seasons, and Intercontinental.

Upper Upscale: These high quality full service properties have a slightly lower level of service then the luxury hotel. Represents next 15 percent of average room rates. Brands include Doubletree Hotels, Embassy Suites, Hilton Hotels, Marriott Hotels, and Millennium Hotels.

Upscale: This segment of hotels offer a high to moderate level of service and are typically full or select service. Represent pricing in same 15 percent as Upper Upscale. Brands include Courtyard by Marriott, Hilton Garden Inn, Four Points by Sheraton, and Wyndham Hotels.

Midscale: (with and without Food & Beverage): These hotels usually offer fitness and limited meeting facilities, and business amenities. Represents middle 30 percent of average room rates. Brands include Bestwestern, Clarion, and Doubletree Club (with food and beverage) and Candlewood Hotel, Fairfield Inn, Hampton Inn, and Holiday Inn (without food and beverage).

Economy and Budget: Limited service properties that do not provide on-site food and beverage amenities except for morning coffee and light breakfast. Represents lowest 40 percent of average room rates. Examples include Days Inn, Econo Lodge, and Extended Stay America.

Boutique: First introduced in the early 1980s in response to the increasing dominance of brands within the hotel industry, boutique hotels offers products and services that are unique to each property and market area. The success of the boutique hotel properties led to a rash of boutique hotel development in the late 1990s and early 2000s, with numerous boutique hotels opening in Manhattan, such as Morgans, Royalton and Hudson. With the introduction of Starwood's W brand, however, the boutique segment has been "mainstreamed" to some degree.

Convention: Convention hotels usually have more than 1,000 rooms and more than 50,000 sf of meeting space, with an average meeting space ratio of at least 75 sf per room. Although none of these exist in Manhattan, the closest such comparables are the Hilton NY and Sheraton Hotel and Towers in Midtown.

Headquarter Convention: Headquarters hotels are often built adjacent or connected to convention centers. This is considered an attractive amenity because convention planners often prefer to book conventions in cities and at centers where there is abundant nearby hotel supply.

Extended-Stay: These hotels usually provide fully furnished suite rooms with kitchenettes or full kitchens and laundry facilities and often quote weekly or monthly rates. Brands include Residence Inn by Marriott and Homewood Suites.



RETAIL

Big Box: A single use store typically between 10,000 sf to 100,000 sf or more, such as a large book store, office supply store, pet store, electronic store or toy store.

Effective Buying Income (EBI): Defined as money income less personal tax and non-tax payments, often referred to as "disposable" or "after-tax" income. EBI is computed as a derivative of household income, with the correspondence between before-tax and after-tax income being identified for each state based on three-year combinations of Current Population Survey (CPS) data.

Middle Market Retailers: Retailers that offer merchandise at price points that appeal to the broad middle market place.

National Chains: Retailers that operate in most major markets across the country, as opposed to regional or local chains.



APPENDIX E: SOURCES

A Citizens Guide to the Hudson Yards Draft Environmental Impact Statement, September 2004: Citizens Union, Natural Resources Defense Council, New York Public Interest Research Group and Regional Plan Association.

ACCRA: American Chamber of Commerce Researchers Association, is an organization that publishes the ACCRA Cost of Living Index in order to provide a useful and reasonably accurate measure of living cost differences among urban areas.

Background Paper, 2004: Supply & Demand: City and State may be planning too much Office Space, New York City, New York City Independent Budget Office (IBO).

Claritas, Inc.: A marketing information resources company that provides demographics data at various geographic areas. Data series and reports can include current and projected (typically five years) data available for categories such as population, per capita personal income, number of households, persons per households, average household income, income rages, occupied housing units, and retail trade potential.

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Hudson Yards Amendment to Uniform Tax Exemption Policy (UTEP): adopted by the New York City Industrial Development Agency, August 8, 2006.

ICSC: The International Council of Shopping Centers is the global trade association of the shopping center industry, with members in the U.S., Canada, and more than 80 other countries. ICSC conducts industry surveys and studies, holds conferences on multiple retail topics, and publishes industry news.

Manhattan Lodging Index, Fourth Quarter Update 2005: PricewaterhouseCoopers LLP.

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MarketBeat Reports for the New York Region, Third Quarter 2006: Cushman & Wakefield, Inc.

Market Study for the Ancillary Uses of the James A. Farley Building, prepared for the Pennsylvania Station Redevelopment Corporation, July 23, 1999: Ernst & Young LLP.

New York City Council Resolutions:

- 1. Preconsidered Res No. 760 adopted by the City Council on January 19, 2005
- 2. Intro. No. 530 adopted by the City Council on February 16, 2005.
- 3. Preconsidered Res. No. 1214 adopted by the City Council on October 27, 2005.



New York City Entities:

Hudson Yards Development Corporation

Hudson Yards Infrastructure Corporation

New York City Department of City Planning

New York City Department of Finance

New York City Office of the Deputy Mayor for Economic Development and Rebuilding

New York City Economic Development Corporation

New York City Office of Management and Budget

New York City Housing and Vacancy Surveys, 1993, 1996, 1999, 2002, 2005: US Census Bureau

New York Metro Chapter American Planning Association (APA): Planning for the Far West Side, September, 2004.

New York State Real Property Tax Law Section 421a: New York City Office of Management and Budget

NYC & Co: NYC & Company (formerly known as the New York Convention & Visitors Bureau), the city's official tourism marketing organization, is dedicated to building New York City's economy and positive image through tourism and convention development, major events, and the marketing of the city on a worldwide basis.

No. 7 Extension Memorandum of Understanding and Rail Yards Agreement: 28 September 2006, Agreement between Metropolitan Transportation Authority, NYC Transit Authority and MTA Capital Construction, and the City of New York, Hudson Yards Development Corporation and Hudson Yards Infrastructure Corporation.



Office Worker Retail Spending Patterns: A Downtown and Suburban Study, 2003: International Council of Shopping Centers

Report on Far West Midtown, A Framework for Development, Winter 2001: Department of City Planning, New York City.

Report on Lower Manhattan Transportation: Department of City Planning, New York City.

Report on No. 7 Subway Extension, Hudson Yards Rezoning and Development Program; Generic Environmental Impact Statement, June 2004: Metropolitan Transportation Authority and City Planning Commission, New York City.

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Report on Relocation Employment Assistance Program (REAP), October 2004: Department of Finance and Economic Development Corporation, New York City.

Report on Transportation Choices and the Future of the New York City Economy, 2003: Boston Consulting Group and the University Transportation Research Center at the City University of New York.

Retail Report, Spring issues 2001 - 2006, The Real Estate Board of New York

Smith Travel Research: A key information and data provider for the lodging industry. The firm tracks data across the nation that is used to evaluate hotel industry performance at various geographic levels such as city, county, and state.



Survey of Buying Power: An annual publication that ranks all major US markets by city, county, CBSA, DMA or states, according to EBI, total sales, sales by retail category. Published by Sales & Marketing Management, which produces business publications focused on the sales and marketing industries.

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