

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D. C. 20549
FORM 10-K**

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended: December 31, 2021

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number: 001-11954 (Vornado Realty Trust)

Commission File Number: 001-34482 (Vornado Realty L.P.)

**Vornado Realty Trust
Vornado Realty L.P.**

(Exact name of registrants as specified in its charter)

Vornado Realty Trust	Maryland	22-1657560
	(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)
Vornado Realty L.P.	Delaware	13-3925979
	(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

888 Seventh Avenue, New York, New York 10019

(Address of principal executive offices) (Zip Code)

(212) 894-7000

(Registrants' telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Registrant	Title of Each Class	Trading Symbol(s)	Name of Exchange on Which Registered
Vornado Realty Trust	Common Shares of beneficial interest, \$.04 par value per share	VNO	New York Stock Exchange
	Cumulative Redeemable Preferred Shares of beneficial interest, liquidation preference \$25.00 per share:		
Vornado Realty Trust	5.40% Series L	VNO/PL	New York Stock Exchange
Vornado Realty Trust	5.25% Series M	VNO/PM	New York Stock Exchange
Vornado Realty Trust	5.25% Series N	VNO/PN	New York Stock Exchange
Vornado Realty Trust	4.45% Series O	VNO/PO	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

Registrant	Title of Each Class
Vornado Realty Trust	Series A Convertible Preferred Shares of beneficial interest, liquidation preference \$50.00 per share
Vornado Realty L.P.	Class A Units of Limited Partnership Interest

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Vornado Realty Trust: Yes No Vornado Realty L.P.: Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Vornado Realty Trust: Yes No Vornado Realty L.P.: Yes No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Vornado Realty Trust: Yes No Vornado Realty L.P.: Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Vornado Realty Trust: Yes No Vornado Realty L.P.: Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "non-accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Vornado Realty Trust:

<input checked="" type="checkbox"/> Large Accelerated Filer	<input type="checkbox"/> Accelerated Filer
<input type="checkbox"/> Non-Accelerated Filer	<input type="checkbox"/> Smaller Reporting Company
	<input type="checkbox"/> Emerging Growth Company

Vornado Realty L.P.:

<input type="checkbox"/> Large Accelerated Filer	<input type="checkbox"/> Accelerated Filer
<input checked="" type="checkbox"/> Non-Accelerated Filer	<input type="checkbox"/> Smaller Reporting Company
	<input type="checkbox"/> Emerging Growth Company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Vornado Realty Trust: Yes No Vornado Realty L.P.: Yes No

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Vornado Realty Trust: Yes No Vornado Realty L.P.: Yes No

The aggregate market value of the voting and non-voting common shares held by non-affiliates of Vornado Realty Trust, i.e. by persons other than officers and trustees of Vornado Realty Trust, was \$8,259,860,000 at June 30, 2021.

As of December 31, 2021, there were 191,723,608 common shares of beneficial interest outstanding of Vornado Realty Trust.

There is no public market for the Class A units of limited partnership interest of Vornado Realty L.P. Based on the June 30, 2021 closing share price of Vornado Realty Trust's common shares, which are issuable upon redemption of the Class A units, the aggregate market value of the Class A units held by non-affiliates of Vornado Realty L.P., i.e. by persons other than Vornado Realty Trust and its officers and trustees, was \$515,447,000 at June 30, 2021.

Documents Incorporated by Reference

Part III: Portions of Proxy Statement for Annual Meeting of Vornado Realty Trust's Shareholders to be held on May 19, 2022.

EXPLANATORY NOTE

This report combines the Annual Reports on Form 10-K for the fiscal year ended December 31, 2021 of Vornado Realty Trust and Vornado Realty L.P. Unless stated otherwise or the context otherwise requires, references to “Vornado” refer to Vornado Realty Trust, a Maryland real estate investment trust (“REIT”), and references to the “Operating Partnership” refer to Vornado Realty L.P., a Delaware limited partnership. References to the “Company,” “we,” “us” and “our” mean collectively Vornado, the Operating Partnership and those subsidiaries consolidated by Vornado.

The Operating Partnership is the entity through which we conduct substantially all of our business and own, either directly or through subsidiaries, substantially all of our assets. Vornado is the sole general partner and also a 92.6% limited partner of the Operating Partnership. As the sole general partner of the Operating Partnership, Vornado has exclusive control of the Operating Partnership’s day-to-day management.

Under the limited partnership agreement of the Operating Partnership, unitholders may present their Class A units for redemption at any time (subject to restrictions agreed upon at the time of issuance of the units that may restrict such right for a period of time). Class A units may be tendered for redemption to the Operating Partnership for cash; Vornado, at its option, may assume that obligation and pay the holder either cash or Vornado common shares on a one-for-one basis. Because the number of Vornado common shares outstanding at all times equals the number of Class A units owned by Vornado, the redemption value of each Class A unit is equivalent to the market value of one Vornado common share, and the quarterly distribution to a Class A unitholder is equal to the quarterly dividend paid to a Vornado common shareholder. This one-for-one exchange ratio is subject to specified adjustments to prevent dilution. Vornado generally expects that it will elect to issue its common shares in connection with each such presentation for redemption rather than having the Operating Partnership pay cash. With each such exchange or redemption, Vornado’s percentage ownership in the Operating Partnership will increase. In addition, whenever Vornado issues common shares other than to acquire Class A units of the Operating Partnership, Vornado must contribute any net proceeds it receives to the Operating Partnership and the Operating Partnership must issue to Vornado an equivalent number of Class A units of the Operating Partnership. This structure is commonly referred to as an umbrella partnership REIT, or UPREIT.

The Company believes that combining the Annual Reports on Form 10-K of Vornado and the Operating Partnership into this single report provides the following benefits:

- enhances investors’ understanding of Vornado and the Operating Partnership by enabling investors to view the business as a whole in the same manner as management views and operates the business;
- eliminates duplicative disclosure and provides a more streamlined and readable presentation because a substantial portion of the disclosure applies to both Vornado and the Operating Partnership; and
- creates time and cost efficiencies in the preparation of one combined report instead of two separate reports.

The Company believes it is important to understand the few differences between Vornado and the Operating Partnership in the context of how Vornado and the Operating Partnership operate as a consolidated company. The financial results of the Operating Partnership are consolidated into the financial statements of Vornado. Vornado does not have any significant assets, liabilities or operations, other than its investment in the Operating Partnership. The Operating Partnership, not Vornado, generally executes all significant business relationships other than transactions involving the securities of Vornado. The Operating Partnership holds substantially all of the assets of Vornado. The Operating Partnership conducts the operations of the business and is structured as a partnership with no publicly traded equity. Except for the net proceeds from equity offerings by Vornado, which are contributed to the capital of the Operating Partnership in exchange for Class A units of partnership in the Operating Partnership, and the net proceeds of debt offerings by Vornado, which are contributed to the Operating Partnership in exchange for debt securities of the Operating Partnership, as applicable, the Operating Partnership generates all remaining capital required by the Company’s business. These sources may include working capital, net cash provided by operating activities, borrowings under the revolving credit facility, the issuance of secured and unsecured debt and equity securities and proceeds received from the disposition of certain properties.

To help investors better understand the key differences between Vornado and the Operating Partnership, certain information for Vornado and the Operating Partnership in this report has been separated, as set forth below:

- Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities;
- Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations includes information specific to each entity, where applicable; and
- Item 8. Financial Statements and Supplementary Data which includes the following specific disclosures for Vornado Realty Trust and Vornado Realty L.P.:
 - Note 10. Redeemable Noncontrolling Interests
 - Note 11. Shareholders' Equity/Partners' Capital
 - Note 14. Stock-based Compensation
 - Note 18. Income (Loss) Per Share/Income (Loss) Per Class A Unit

This report also includes separate Part II, Item 9A. Controls and Procedures sections and separate Exhibits 31 and 32 certifications for each of Vornado and the Operating Partnership in order to establish that the requisite certifications have been made and that Vornado and the Operating Partnership are compliant with Rule 13a-15 or Rule 15d-15 of the Securities Exchange Act of 1934 and 18 U.S.C. §1350.

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⁽¹⁾ These items are omitted in whole or in part because Vornado, the Operating Partnership's sole general partner, will file a definitive Proxy Statement pursuant to Regulation 14A under the Securities Exchange Act of 1934 with the Securities and Exchange Commission no later than 120 days after December 31, 2021, portions of which are incorporated by reference herein.

FORWARD-LOOKING STATEMENTS

Certain statements contained herein constitute forward-looking statements as such term is defined in Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements are not guarantees of performance. They represent our intentions, plans, expectations and beliefs and are subject to numerous assumptions, risks and uncertainties. Our future results, financial condition and business may differ materially from those expressed in these forward-looking statements. You can find many of these statements by looking for words such as “approximates,” “believes,” “expects,” “anticipates,” “estimates,” “intends,” “plans,” “would,” “may” or other similar expressions in this Annual Report on Form 10-K. We also note the following forward-looking statements: in the case of our development and redevelopment projects, the estimated completion date, estimated project cost and cost to complete; and estimates of future capital expenditures, dividends to common and preferred shareholders and operating partnership distributions. Many of the factors that will determine the outcome of these and our other forward-looking statements are beyond our ability to control or predict. For further discussion of factors that could materially affect the outcome of our forward-looking statements, see “Item 1A. Risk Factors” in this Annual Report on Form 10-K.

Currently, one of the most significant factors is the ongoing adverse effect of the COVID-19 pandemic on our business, financial condition, results of operations, cash flows, operating performance and the effect it has had and may continue to have on our tenants, the global, national, regional and local economies and financial markets and the real estate market in general. The extent of the impact of the COVID-19 pandemic will depend on future developments, including vaccination rates among the population, the efficacy and durability of vaccines against emerging variants, and governmental and tenant responses thereto, all of which are uncertain at this time but the impact could be material. Moreover, you are cautioned that the COVID-19 pandemic will heighten many of the risks identified in “Item 1A. Risk Factors” in this Annual Report on Form 10-K.

For these statements, we claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995. You are cautioned not to place undue reliance on our forward-looking statements, which speak only as of the date of this Annual Report on Form 10-K or the date of any document incorporated by reference. All subsequent written and oral forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. We do not undertake any obligation to release publicly any revisions to our forward-looking statements to reflect events or circumstances occurring after the date of this Annual Report on Form 10-K.

PART I

ITEM 1. BUSINESS

Vornado is a fully-integrated REIT and conducts its business through, and substantially all of its interests in properties are held by, the Operating Partnership, a Delaware limited partnership. Accordingly, Vornado's cash flow and ability to pay dividends to its shareholders are dependent upon the cash flow of the Operating Partnership and the ability of its direct and indirect subsidiaries to first satisfy their obligations to creditors. Vornado is the sole general partner of and owned approximately 92.6% of the common limited partnership interest in the Operating Partnership as of December 31, 2021.

We currently own all or portions of:

New York:

- 67 Manhattan operating properties consisting of:
 - 20.6 million square feet of office space in 32 of the properties;
 - 2.7 million square feet of street retail space in 60 of the properties;
 - 1,674 units in eight residential properties;
- Multiple development sites, including Hotel Pennsylvania;
- A 32.4% interest in Alexander's, Inc. ("Alexander's") (NYSE: ALX), which owns six properties in the greater New York metropolitan area, including 731 Lexington Avenue, the 1.1 million square foot Bloomberg, L.P. headquarters building, and The Alexander, a 312-unit apartment tower in Queens;
- Signage throughout the Penn District and Times Square; and
- Building Maintenance Services LLC ("BMS"), a wholly owned subsidiary, which provides cleaning and security services for our buildings and third parties.

Other Real Estate and Investments:

- The 3.7 million square foot theMART in Chicago;
- A 70% controlling interest in 555 California Street, a three-building office complex in San Francisco's financial district aggregating 1.8 million square feet;
- A 25% interest in Vornado Capital Partners, our real estate fund (the "Fund"). We are the general partner and investment manager of the fund. The fund is in wind-down; and
- Other real estate and investments.

OBJECTIVES AND STRATEGY

Our business objective is to maximize Vornado shareholder value. We intend to achieve this objective by continuing to pursue our investment philosophy and to execute our operating strategies through:

- maintaining a superior team of operating and investment professionals and an entrepreneurial spirit;
- investing in properties in select markets, such as New York City, where we believe there is a high likelihood of capital appreciation;
- acquiring quality properties at a discount to replacement cost and where there is a significant potential for higher rents;
- developing and redeveloping properties to increase returns and maximize value; and
- investing in operating companies that have a significant real estate component.

We expect to finance our growth, acquisitions and investments using internally generated funds and proceeds from asset sales and by accessing the public and private capital markets. We may also offer Vornado common or preferred shares or Operating Partnership units in exchange for property and may repurchase or otherwise reacquire these securities in the future.

ACQUISITION

We completed the following acquisition during 2021:

- \$158 million purchase of our joint venture partner's 45% ownership interest in One Park Avenue (valuing the property at \$875 million, encumbered by \$525 million of existing debt), increasing our ownership interest to 100%.

DISPOSITIONS

We completed the following sale transactions during 2021:

- \$137 million net proceeds from the sale of six condominium units at 220 Central Park South ("220 CPS");
- \$100 million aggregate sale of three Manhattan retail properties located at 677-679, 759-771 and 828-850 Madison Avenue;
- \$75 million sale by Alexander's (32.4% interest) of its Paramus, New Jersey property to IKEA Property, Inc. ("IKEA"), the tenant at the property, pursuant to IKEA's purchase option contained in the lease;
- \$28 million sale of 501 Broadway by the Fund (25% interest); and
- \$10 million sale by Alexander's (32.4% interest) of a parcel of land in the Bronx, New York.

FINANCINGS

We completed the following financing transactions during 2021:

- \$1.25 billion unsecured revolving credit facility extended from January 2023 to April 2026, lowering the interest rate to LIBOR plus 0.89% from LIBOR plus 1.00%;
- \$1.2 billion refinancing of 555 California Street (70% interest);
- \$950 million refinancing of 1290 Avenue of the Americas (70% interest);
- \$750 million green bond public offering of senior unsecured notes;
- \$675 million repayment of theMART mortgage loan;
- \$525 million refinancing of One Park Avenue;
- \$500 million modification of the PENN 11 mortgage loan lowering the interest rate to LIBOR plus 1.95% from LIBOR plus 2.75%, resulting in a fixed rate of 2.23% pursuant to the interest rate swap agreement;
- \$350 million refinancing of 909 Third Avenue;
- \$300 million issuance of 4.45% Series O cumulative redeemable preferred shares; and
- \$300 million redemption of 5.70% Series K cumulative redeemable preferred shares.

DEVELOPMENT AND REDEVELOPMENT EXPENDITURES

PENN District

Farley

Our 95% joint venture (5% is owned by the Related Companies ("Related")) is developing Farley Office and Retail, which will include approximately 845,000 rentable square feet of commercial space, comprised of approximately 730,000 square feet of office space and approximately 115,000 square feet of restaurant and retail space. The total development cost of this project is estimated to be approximately \$1,120,000,000 at our 95% share, of which \$896,186,000 of cash has been expended as of December 31, 2021.

PENN 1

We are redeveloping PENN 1, a 2,547,000 square foot office building located on 34th Street between Seventh and Eighth Avenue. In December 2020, we entered into an agreement with the Metropolitan Transportation Authority (the "MTA") to oversee the redevelopment of the Long Island Rail Road Concourse at Penn Station (the "Concourse"), within the footprint of PENN 1. Skanska USA Civil Northeast, Inc. will perform the redevelopment under a fixed price contract for \$380,000,000 which is being funded by the MTA. In connection with the redevelopment, we entered into an agreement with the MTA which will result in the widening of the Concourse to relieve overcrowding and our trading of 15,000 square feet of back of house space for 22,000 square feet of retail frontage space. Vornado's total development cost for the PENN 1 project is estimated to be \$450,000,000. As of December 31, 2021, \$309,437,000 of cash has been expended.

PENN 2

We are redeveloping PENN 2, a 1,795,000 square foot (as expanded) office building, located on the west side of Seventh Avenue between 31st and 33rd Street. The development cost of this project is estimated to be \$750,000,000, of which \$161,066,000 of cash has been expended as of December 31, 2021.

PENN 15 (Hotel Pennsylvania Site)

We have permanently closed the Hotel Pennsylvania and plan to develop an office tower on the site. Demolition of the existing building structure commenced in the fourth quarter of 2021.

We are also making districtwide improvements within the PENN District. The development cost of these improvements is estimated to be \$100,000,000, of which \$31,481,000 of cash has been expended as of December 31, 2021.

We are also evaluating other development and redevelopment opportunities at certain of our properties in Manhattan including, in particular, the PENN District.

There can be no assurance that the above projects will be completed, completed on schedule or within budget.

ENVIRONMENTAL SUSTAINABILITY INITIATIVES

We have long believed a focus on environmental sustainability is responsible management of our business and important to our tenants. It has been central to Vornado's business strategy for over 10 years. The Corporate Governance and Nominating Committee of Vornado's Board of Trustees is assigned with oversight of Environmental, Social and Governance ("ESG") matters, which includes climate change risk. Environmental sustainability initiatives are carried out by a dedicated team of professionals that work directly with our business units.

Vornado is an industry leader in sustainability, owning and operating more than 27 million square feet of LEED (Leadership in Energy and Environmental Design) certified buildings, representing 95% of our office portfolio, with over 23 million square feet at LEED Gold or Platinum. In 2021, we were selected as a global "Sector Leader" for all Office/Retail Diversified REITs in the Global Real Estate Sustainability Benchmark ("GRESB"), ranked second among 94 responding listed companies in the United States and received the "Green Star" distinction for the ninth consecutive year. In 2020, we received the Leader in the Light Award by the National Association for Real Estate Investment Trusts (NAREIT) for the 11th consecutive year; were recognized as an EPA ENERGY STAR Partner of the Year, with the Sustained Excellence distinction; and received the 2020 Leadership Award from the United States Green Buildings Council (USGBC). We prioritize addressing climate change and in 2019 adopted a 10-year plan to make our buildings carbon neutral by 2030 ("Vision 2030"). Vision 2030 is a multi-faceted approach that prioritizes energy efficiency, demand management, and renewable power. We rely on both existing and future technology, as well as meaningful stakeholder collaboration with our tenants, our employees, and our communities, to achieve this plan. Our commitment to carbon neutrality and associated emissions reduction targets have been approved by the Science Based Targets Initiative as consistent with a 1.5°C climate scenario, the most ambitious goal of the Paris Agreement.

We consider sustainability in all aspects of our business, including the design, construction, retrofit and ongoing maintenance and operations of our portfolio of buildings. We operate our buildings sustainably and efficiently by establishing best practices in energy and water consumption, carbon reduction, resource and waste management and ecologically sensitive procurement. Our policies, from 100% green cleaning to energy efficiency, are implemented across our entire portfolio. Mandatory sustainability training is required for all of our building operators and managers, and we undertake significant outreach with our tenants, employees and investors regarding Vornado's sustainability programs and strategies.

In January 2022, the Compensation Committee of Vornado's Board of Trustees approved the 2022 performance based long-term incentive plan which for the first time formally ties senior management compensation to achievement of certain ESG targets, including reductions in greenhouse emissions, achieving a specified GRESB score and targeting a higher percentage of LEED Gold or Platinum certified square footage.

We are committed to transparent reporting of sustainability performance indicators and publish an annual ESG Report in accordance with the Global Reporting Initiative and aligned with the metrics codified by the Sustainability Accounting Standards Board and recommendations set forth by the Task Force on Climate-related Financial Disclosures. Further details on our environmental sustainability initiatives and strategy, including our Vision 2030 Roadmap, can be found in our 2020 ESG Report at (esg.vno.com). There can be no assurance that our Vision 2030 commitment will be achieved in the planned time frame. The ESG Report is not incorporated by reference and should not be considered part of this Annual Report on Form 10-K.

HUMAN CAPITAL MANAGEMENT

As of December 31, 2021, we have approximately 3,224 employees, consisting of (i) 2,710 employees of Building Maintenance Services LLC, a wholly owned subsidiary, which provides cleaning, security, and engineering services primarily to our New York properties, (ii) 235 employees in our corporate office, (iii) 161 employees in leasing and property management, and (iv) 118 employees of theMART. The foregoing does not include employees of partially owned entities.

Human capital management is critical to our success and our employees are the foundation of our human capital. To foster talent and growth, we provide training and continuing education, promote career and personal development, and encourage innovation and engagement.

Compensation, Benefits and Employees Wellbeing

To attract and retain the best-qualified talent and to help our employees stay healthy, balance their work and personal lives, and meet their financial and retirement goals, we offer competitive benefits including, but not limited to, market-competitive compensation, healthcare (medical, dental and vision coverage), a health savings account, 401(k) and employer match, dependent care flexible spending account, parental leave, adoption/surrogacy benefits, short-term and long-term disability insurance, life insurance, time off/paid holidays, tuition reimbursement, subsidized gym memberships, employee wellness programs and incentives, in-workplace COVID-19 and flu vaccinations, onsite COVID-19 testing, commuter benefits, employee assistance program and workplace flexibility.

Talent Development

We promote career and personal development, provide training and continuing education, and encourage innovation and engagement. This includes tuition reimbursement for our employees' continuing education and professional development, and the opportunity to participate in a variety of training and networking engagements.

HUMAN CAPITAL MANAGEMENT - CONTINUED

Culture and Engagement

Our employees are critical to our success, and we believe creating a positive and inclusive culture is essential to attracting and retaining engaged employees. We seek to retain our employees by actively engaging with our workforce and we solicit their feedback through our divisional leaders and employee surveys. We use their feedback to create and continually enhance programs that support their needs.

Through our volunteer program, Vornado Volunteers, employees are granted one day of paid time off per calendar year to volunteer for a cause of their choice.

Diversity and Inclusion

Vornado is a diverse and inclusive environment that empowers the individual and enriches the employment experience. We have published Equal Employment Opportunity "EEO" data since 2017 and have a broadly diverse workforce across both our corporate base as well as our BMS division. Our employee demographics data can be found on our ESG micro-site (esg.vno.com), which is not incorporated by reference and should not be considered part of this Annual Report on Form 10-K.

Our diversity metrics set a baseline from where we constantly strive to improve.

Health and Wellness / COVID-19 Response

As a building owner and landlord to thousands of business tenants, we focus on maintaining and improving the health of our indoor environments, as well as communicating the value of our health and wellness programs with consistency and clarity to our stakeholders. We believe that consistent health programming and communications protocols not only mitigate health risks within our buildings, but they also create a responsible behavior framework for our employees, our tenants, and our visitors.

We responded to the COVID-19 pandemic with determination to ensure that our tenants, employees and visitors remain healthy and safe. We fortified many of our buildings with protections that include daily health screenings and questionnaires, social distancing and PPE requirements, enhanced HVAC and indoor air quality, and installed onsite COVID-19 testing and vaccination locations. This infrastructure is further reinforced with our green cleaning program and our on-site operations team.

Labor Relations

BMS employs and manages janitorial and security staff who are members of 32BJ SEIU and engineering staff who are members of Local 94 of the International Union of Operating Engineers AFL-CIO. Through our active participation in the Realty Advisory Board on Labor Relations, we work collaboratively with both unions and consider our relations with our union employees to be very positive.

For additional information on human capital matters, please see our most recent ESG report, available for download on our website at www.vno.com and in digital format at esg.vno.com. This report and other information on our website are not incorporated by reference into and do not form any part of this Annual Report on Form 10-K.

COMPETITION

We compete with a large number of real estate investors, property owners and developers, some of which may be willing to accept lower returns on their investments. Principal factors of competition are rents charged, sales prices, attractiveness of location, the quality of the property and the breadth and the quality of services provided. Our success depends upon, among other factors, trends of the global, national, regional and local economies, the financial condition and operating results of current and prospective tenants and customers, availability and cost of capital, construction and renovation costs, taxes, governmental regulations, legislation, population and employment trends. See "Risk Factors" in Item 1A for additional information regarding these factors.

SEGMENT DATA

We operate in the following reportable segments: New York and Other. Financial information related to these reportable segments for the years ended December 31, 2021, 2020 and 2019 is set forth in Note 23 – *Segment Information* to our consolidated financial statements in this Annual Report on Form 10-K.

TENANTS ACCOUNTING FOR OVER 10% OF REVENUES

None of our tenants accounted for more than 10% of total revenues in any of the years ended December 31, 2021, 2020 and 2019.

CERTAIN ACTIVITIES

We do not base our acquisitions and investments on specific allocations by type of property. We have historically held our properties for long-term investment; however, it is possible that properties in our portfolio may be sold or otherwise disposed of when circumstances warrant. Further, we have not adopted a policy that limits the amount or percentage of assets which could be invested in a specific property or property type. Generally our activities are reviewed and may be modified from time to time by Vornado's Board of Trustees without the vote of our shareholders or Operating Partnership unitholders.

PRINCIPAL EXECUTIVE OFFICES

Our principal executive offices are located at 888 Seventh Avenue, New York, New York 10019; telephone (212) 894-7000.

MATERIALS AVAILABLE ON OUR WEBSITE

Copies of our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports, as well as Reports on Forms 3, 4 and 5 regarding officers, trustees or 10% beneficial owners, filed or furnished pursuant to Section 13(a), 15(d) or 16(a) of the Securities Exchange Act of 1934 are available free of charge through our website (www.vno.com) as soon as reasonably practicable after they are electronically filed with, or furnished to, the Securities and Exchange Commission. Also available on our website are copies of our Audit Committee Charter, Compensation Committee Charter, Corporate Governance and Nominating Committee Charter, Code of Business Conduct and Ethics, and Corporate Governance Guidelines. In the event of any changes to these charters or the code or guidelines, changed copies will also be made available on our website. Copies of these documents are also available directly from us free of charge. Our website also includes other financial and non-financial information, including certain non-GAAP financial measures, none of which is a part of this Annual Report on Form 10-K. Copies of our filings under the Securities Exchange Act of 1934 are also available free of charge from us, upon request.

ITEM 1A. RISK FACTORS

Material factors that may adversely affect our business, operations and financial condition are summarized below. We refer to the equity and debt securities of both Vornado and the Operating Partnership as our “securities” and the investors who own shares of Vornado or units of the Operating Partnership, or both, as our “equity holders.” The risks and uncertainties described herein may not be the only ones we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business, operations and financial condition. See “Forward-Looking Statements” contained herein on page 6.

RISKS RELATED TO OUR PROPERTIES AND INDUSTRY

Our business, financial condition, results of operations and cash flows have been and may continue to be adversely affected by the COVID-19 pandemic and the impact could be material to us.

Our business has been adversely affected by the ongoing COVID-19 pandemic and preventive measures taken to curb the spread of the virus. The pandemic has resulted in governments and other authorities implementing numerous measures to try to contain the virus, such as travel bans and restrictions, quarantines, shelter in place orders, and business closures. Existing and potential new variants make the on-going impact of the COVID-19 pandemic difficult to predict. If the virus continues to spread significantly in its current form or as a more contagious variant, governmental agencies and other authorities may order additional closures or impose further restrictions on businesses, which could negatively impact the financial condition of our tenants. The continuation of the pandemic could also have fundamental adverse effects on our business. Further delays in tenant return-to-work plans as a result of the continued risks of the pandemic and further dependence on work from home and flexible work arrangements may lead our office tenants to reassess their long-term physical space needs. Further, while many of the limitations and restrictions imposed on retailers during the onset of the pandemic have been lifted and/or eased, economic conditions, including a decline in Manhattan tourism since the onset of the virus, continue to adversely affect the financial health of our retail tenants. The impact of such conditions could cause retailers to reduce the number and size of their physical locations and further increase reliance on e-commerce. Over time, these factors could decrease the demand for office and retail space and ultimately decrease occupancy and/or rent levels across our portfolio, which may have a negative impact on our financial condition and/or access to capital. In addition, the value of our real estate assets may decline, which may result in non-cash impairment charges in future periods and the impact could be material. The extent of the COVID-19 pandemic’s effect on our operational and financial performance will depend on future developments, including vaccination rates among the population, the efficacy and durability of vaccines against emerging variants, and governmental and tenant responses thereto, all of which are uncertain at this time. Given the dynamic nature of the circumstances, it is difficult to predict the ongoing impact of the COVID-19 pandemic on our business, financial condition, results of operations and cash flows but the impact could be material.

A significant portion of our properties is located in the New York City Metropolitan area and is affected by the economic cycles and risks inherent to this area.

In 2021, approximately 88% of our net operating income (“NOI”, a non-GAAP measure) came from properties located in the New York City metropolitan area. We may continue to concentrate a significant portion of our future acquisitions, development and redevelopment in this area. Real estate markets are subject to economic downturns and we cannot predict how economic conditions will impact this market in either the short or long term. Declines in the economy or declines in real estate markets in the New York City metropolitan area, including the effects of the COVID-19 pandemic, have hurt and could continue to hurt our financial performance and the value of our properties. In addition to the factors affecting the national economic condition generally, the factors affecting economic conditions in this region include:

- financial performance and productivity of the media, advertising, professional services, financial, technology, retail, insurance and real estate industries;
- business layoffs or downsizing;
- any oversupply of, or reduced demand for, real estate;
- industry slowdowns;
- relocations of businesses;
- changing demographics;
- increased work from home and use of alternative work places;
- changes in the number of domestic and international tourists to our markets (including as a result of changes in the relative strengths of world currencies and as a result of the COVID-19 pandemic);
- the fiscal health of New York State and New York City governments and local transit authorities, particularly as a result of the COVID-19 pandemic;
- infrastructure quality; and
- changes in rates or the treatment of the deductibility of state and local taxes.

It is impossible for us to ensure the accuracy of predictions of the future or the effect of trends in the economic and investment climates of the geographic areas in which we concentrate, and more generally of the United States, or the real estate markets in these areas. Local, national or global economic downturns could negatively affect the value of our properties, our businesses and profitability.

We are subject to risks that affect the general and New York City retail environments.

Certain of our properties are Manhattan retail properties. In 2021, approximately 17% of our NOI is from Manhattan retail properties. As such, these properties are affected by the general and New York City retail environments, including office and residential occupancy rates, the level of consumer spending and consumer confidence, Manhattan tourism, employer remote-working policies, the threat of terrorism, increasing competition from on-line retailers, other retailers, and outlet malls, and the impact of technological change upon the retail environment generally. Further, New York City tourism has not yet fully recovered from the effects of the COVID-19 pandemic. The decline in international tourists, who comprise a major source of demand for our Manhattan retail tenants, has adversely affected such tenants. These factors could adversely affect the financial condition of our retail tenants, or result in the bankruptcy of such tenants, and the willingness of retailers to lease space in our retail locations, which could have an adverse effect on the value of our properties, our business and profitability.

Our performance and the value of an investment in us are subject to risks associated with our real estate assets and with the real estate industry.

The value of our real estate and the value of an investment in us fluctuates depending on conditions in the general economy and the real estate business. These conditions may also adversely impact our revenues and cash flows.

The factors that affect the value of our real estate investments include, among other things:

- global, national, regional and local economic conditions;
- competition from other available space, including co-working space and sub-leases;
- local conditions such as an oversupply of space or a reduction in demand for real estate in the area;
- how well we manage our properties;
- the development and/or redevelopment of our properties;
- changes in market rental rates;
- the impact on our retail tenants and demand for retail space at our properties due to increased competition from online shopping;
- the timing and costs associated with property improvements and rentals;
- whether we are able to pass all or portions of any increases in operating costs through to tenants;
- changes in real estate taxes and other expenses;
- the ability of state and local governments to operate within their budgets;
- whether tenants and users such as customers and shoppers consider a property attractive;
- changes in consumer preferences adversely affecting retailers and retail store values;
- changes in space utilization by our tenants due to technology, economic conditions, and business environment;
- the financial condition of our tenants, including the extent of tenant bankruptcies or defaults;
- consequences of any armed conflict involving, or terrorist attacks against, the United States or individual acts of violence in public spaces;
- trends in office real estate;
- availability of financing on acceptable terms or at all;
- inflation or deflation;
- fluctuations in interest rates;
- our ability to obtain adequate insurance;
- changes in zoning laws and taxation;
- government regulation;
- potential liability under environmental or other laws or regulations;
- natural disasters;
- general competitive factors;
- climate change; and
- pandemics.

The rents or sales proceeds we receive and the occupancy levels at our properties may decline as a result of adverse changes in any of these factors. If rental revenues, sales proceeds and/or occupancy levels decline, we generally would expect to have less cash available for operating costs, to pay indebtedness and for distribution to equity holders. In addition, some of our major expenses, including mortgage payments, real estate taxes and maintenance costs generally do not decline when the related rents decline and maintenance costs can increase substantially in an inflationary environment.

Real estate is a competitive business and that competition may adversely impact us.

We compete with a large number of real estate investors, property owners and developers, some of which may be willing to accept lower returns on their investments. Principal factors of competition are rents charged, sales prices, attractiveness of location, the quality of the property and the breadth and the quality of services provided. Substantially all of our properties face competition from similar properties in the same market, which may adversely impact the rents we can charge at those properties and our results of operations.

Our commercial office properties are located primarily in highly developed areas of the New York metropolitan area. Manhattan is the largest office market in the United States. The number of competitive office properties in the New York metropolitan area, which may be newer or better located than our properties, could have a material adverse effect on our ability to lease office space at our properties and on the effective rents we are able to charge.

We depend on leasing space to tenants on economically favorable terms and collecting rent from tenants who may not be able to pay.

Our financial results depend significantly on leasing space in our properties to tenants on economically favorable terms. In addition, because a majority of our income comes from renting of real property, our income, funds available to pay indebtedness and funds available for distribution to equity holders will decrease if a significant number of our tenants cannot pay their rent or if we are not able to maintain occupancy levels on favorable terms. If a tenant does not pay its rent, we may not be able to enforce our rights as landlord without delays and may incur substantial legal and other costs. Even if we are able to enforce our rights, a tenant may not have recoverable assets.

We may be adversely affected by trends in office real estate, including work from home trends.

In 2021, approximately 79% of our NOI is from our office properties. Work from home, flexible or hybrid work schedules, open workplaces, videoconferencing, and teleconferencing are becoming more common, particularly as a result of the COVID-19 pandemic. These practices may enable businesses to reduce their office space requirements. There is also an increasing trend among some businesses to utilize shared office spaces and co-working spaces. A continuation of the movement towards these practices could, over time, erode the overall demand for office space and, in turn, place downward pressure on occupancy, rental rates, cash flows and property valuations.

We may be unable to renew leases or relet space as leases expire.

When our tenants decide not to renew their leases upon their expiration, we may not be able to relet the space. Even if tenants do renew or we can relet the space, the terms of renewal or reletting, considering among other things, rent and other concessions, the cost of improvements to the property and leasing commissions, may be less favorable than the terms in the expired leases. In addition, changes in space utilization by our tenants may impact our ability to renew or relet space without the need to incur substantial costs in renovating or redesigning the internal configuration of the relevant property. If we are unable to promptly renew the leases or relet the space at similar rates or if we incur substantial costs in renewing or reletting the space, our cash flow and ability to service debt obligations and pay dividends and distributions to equity holders could be adversely affected.

Bankruptcy or insolvency of tenants may decrease our revenue, net income and available cash.

From time to time, some of our tenants have declared bankruptcy, and other tenants may declare bankruptcy or become insolvent in the future. The bankruptcy or insolvency of a major tenant could cause us to suffer lower revenues and operational difficulties, including leasing the remainder of the property. As a result, the bankruptcy or insolvency of a major tenant could result in decreased net income and funds available to pay our indebtedness or make distributions to equity holders.

Terrorist attacks may adversely affect the value of our properties and our ability to generate cash flow.

We have significant investments in the New York City, Chicago and San Francisco metropolitan areas. In response to a terrorist attack or the perceived threat of terrorism, tenants in these areas may choose to relocate their businesses to less populated, lower-profile areas of the United States that may be perceived to be less likely targets of future terrorist activity and fewer customers may choose to patronize businesses in these areas. This, in turn, would trigger a decrease in the demand for space in these areas, which could increase vacancies in our properties and force us to lease space on less favorable terms. Furthermore, we may experience increased costs in security, equipment and personnel. As a result, the value of our properties and the level of our revenues and cash flows could decline materially.

Natural disasters and the effects of climate change could have a concentrated impact on the areas where we operate and could adversely impact our results.

Our investments are concentrated in the New York, Chicago and San Francisco metropolitan areas. Natural disasters, including earthquakes, storms, tornados, floods and hurricanes, could cause significant damage to our properties and the surrounding environment or area. Potentially adverse consequences of "global warming," including rising sea levels, could similarly have an impact on our properties and the economies of the metropolitan areas in which we operate. Government efforts to combat climate change may impact the cost of operating our properties. Over time, these conditions could result in declining demand for office space in our buildings or the inability of us to operate the buildings at all. Climate change may also have indirect effects on our business by

increasing the cost of (or making unavailable) property insurance on terms we find acceptable, increasing the cost of energy at our properties and requiring us to expend funds as we seek to repair and protect our properties against such risks. The incurrence of these losses, costs or business interruptions may adversely affect our operating and financial results.

Our properties are located in urban areas, which means the vitality of our properties is reliant on sound transportation and utility infrastructure. If that infrastructure is compromised in any way by an extreme weather event, such a compromise could have an adverse impact on our local economies and populations, as well as on our tenants' ability to do business in our buildings.

Our properties are subject to transitional risks related to climate-related policy change.

De-carbonization of grid-supplied energy could lead to increased energy costs and operating expenses for our buildings. Retrofitting our building systems to consume less energy could lead to increased capital costs. Buildings which consume fossil fuel onsite may be subject to penalties. In addition, the full transition of grid-supplied energy to renewable sources (as has been mandated by the Climate Leadership and Community Protection Act in New York State) could lead to increased energy costs and operating expenses for our buildings.

We may become subject to costs, taxes or penalties, or increases therein, associated with natural resource or energy usage, such as a "carbon tax" and by local legislation such as New York City's Local Law 97, which sets limits on carbon emissions in our buildings and imposes penalties if we exceed those limits, or laws passed to impose limits or eliminate any onsite fossil fuel combustion in new construction and major renovations. These costs, taxes or penalties could increase our operating costs and decrease the cash available to pay our obligations or distribute to our equity owners.

Changes to tax laws could affect REITs generally, the trading of our shares and our results of operations, both positively and negatively, in ways that are difficult to anticipate.

The rules dealing with U.S. federal, state and local income taxation are constantly under review by persons involved in the legislative process and by the IRS and the Treasury Department. Changes to tax laws (which changes may have retroactive application) could adversely affect the taxation of REITs and their shareholders. We cannot predict whether, when, in what form, or with what effective dates, tax laws, regulations and rulings may be enacted, promulgated or decided, or technical corrections made, which could result in an increase in our, or our shareholders', tax liability or require changes in the manner in which we operate in order to minimize increases in our tax liability. If such changes occur, we may be required to pay additional taxes on our assets or income and/or be subject to additional restrictions. These increased tax costs could, among other things, adversely affect the trading price for our common shares, our financial condition, our results of operations and the amount of cash available for the payment of dividends.

RISKS RELATED TO OUR OPERATIONS AND STRATEGIES

We face risks associated with property acquisitions.

We have acquired in the past and intend to continue to pursue the acquisition of properties and portfolios of properties, including, but not limited to, large portfolios that could increase our size and result in alterations to our capital structure. Our acquisition activities and their success are subject to the following risks:

- even if we enter into an acquisition agreement for a property, we may be unable to complete that acquisition after making a non-refundable deposit and incurring certain other acquisition-related costs;
- we may be unable to obtain or assume financing for acquisitions on favorable terms or at all;
- acquired properties may fail to perform as expected;
- the actual costs of repositioning, redeveloping or maintaining acquired properties may be greater than our estimates and may require significantly greater time and attention of management than anticipated;
- the acquisition agreement will likely contain conditions to closing, including completion of due diligence investigations to our satisfaction or other conditions that are not within our control, which may not be satisfied;
- acquired properties may be located in new markets where we may face risks associated with a lack of market knowledge or understanding of the local economy, lack of business relationships in the area, costs associated with opening a new regional office and unfamiliarity with local governmental and permitting procedures;
- we may acquire real estate through the acquisition of the ownership entity subjecting us to the risks of that entity and we may be exposed to the liabilities of properties or companies acquired, some of which we may not be aware of at the time of acquisition; and
- we may be unable to quickly and efficiently integrate new acquisitions, particularly acquisitions of portfolios of properties, into our existing operations, and this could have an adverse effect on our results of operations and financial condition.

Any delay or failure on our part to identify, negotiate, finance and consummate such acquisitions in a timely manner and on favorable terms, or operate acquired properties to meet our financial expectations, could impede our growth and have an adverse effect on us, including our financial condition, results of operations, cash flow and the market value of our securities.

We are exposed to risks associated with property redevelopment and repositioning that could adversely affect us, including our financial condition and results of operations.

We continue to engage in redevelopment and repositioning activities with respect to our properties, and, accordingly, we are subject to certain risks, which could adversely affect us, including our financial condition and results of operations. These risks include, without limitation, (i) the availability and pricing of financing on favorable terms or at all; (ii) the availability and timely receipt of zoning and other regulatory approvals; (iii) the potential for the fluctuation of occupancy rates and rents at redeveloped properties, which may result in our investment not being profitable; (iv) start up, repositioning and redevelopment costs may be higher than anticipated; (v) cost overruns, especially in an inflationary environment, and untimely completion of construction (including risks beyond our control, such as weather or labor conditions, material shortages or supply chain delays); (vi) the potential that we may fail to recover expenses already incurred if we abandon development or redevelopment opportunities after we begin to explore them; (vii) the potential that we may expend funds on and devote management time to projects which we do not complete; (viii) the inability to complete leasing of a property on schedule or at all, resulting in an increase in carrying or redevelopment costs; (ix) the possibility that properties will be leased at below expected rental rates and (x) to the extent the redevelopment activities are conducted in partnership with third parties, the possibility of disputes with our joint venture development partners and the potential that we miss certain project milestone deadlines. These risks could result in substantial unanticipated delays or expenses and could prevent the initiation or the completion of redevelopment activities or the ultimate rents achieved on new developments, any of which could have an adverse effect on our financial condition, results of operations, cash flow, the market value of our common shares and ability to satisfy our principal and interest obligations and to make distributions to our shareholders.

From time to time we have made, and in the future we may seek to make one or more material acquisitions. The announcement of such a material acquisition may result in a rapid and significant decline in the price of our securities.

From time to time we have made, and in the future we may seek to make one or more material acquisitions that we believe will maximize shareholder value. However, an announcement by us of one or more significant acquisitions could result in a quick and significant decline in the price of our securities.

It may be difficult to sell real estate timely, which may limit our flexibility.

Real estate investments are relatively illiquid. Consequently, we may have limited ability to dispose of assets in our portfolio promptly in response to changes in economic or other conditions which could have an adverse effect on our sources of working capital and our ability to satisfy our debt obligations.

We may not be able to effectively operate our business if we are unable to attract and retain qualified personnel due to a tight labor market and COVID-19 vaccine mandate in areas in which we operate.

Our success depends on our ability to continue to attract, retain, and motivate qualified personnel. Currently, the U.S. job market is experiencing labor shortages and employee resignations at record levels. Factors impacting the labor shortage include continued fears of COVID-19, enhanced unemployment insurance benefits, people leaving the workforce entirely, higher pay from competitors, demand for flexible working hours and remote work, and many other factors. The increased ability of employees in the workforce to work from home or in other remote work arrangements has made it and may continue to make it more difficult for us to compete in the job market. In addition, we may find it difficult to attract and retain employees in New York City, where our corporate office and a significant portion of our properties are located, due to the implementation of a COVID-19 vaccine mandate beginning in December 2021. Our inability to attract, retain, and motivate qualified personnel, could have a material adverse effect on our ability to operate our business.

Significant inflation could adversely affect our business and financial results.

Increased inflation could adversely affect us by increasing costs of land, construction and renovation. In a highly inflationary environment, we may be unable to raise rental rates at or above the rate of inflation, which could reduce our profit margins. In addition, our cost of labor and materials could increase, which could have an adverse impact on our business or financial results. While increases in most operating expenses at our properties can be passed on to our office and retail tenants, some tenants have fixed reimbursement charges and expenses at our residential properties may not be able to be passed on to residential tenants. Unreimbursed increased operating expenses may reduce cash flow available for payment of mortgage debt and interest and for distributions to shareholders.

We may not be permitted to dispose of certain properties or pay down the debt associated with those properties when we might otherwise desire to do so without incurring additional costs. In addition, when we dispose of or sell assets, we may not be able to reinvest the sales proceeds and earn similar returns.

As part of an acquisition of a property, or a portfolio of properties, we may agree, and in the past have agreed, not to dispose of the acquired properties or reduce the mortgage indebtedness for a long-term period, unless we pay certain of the resulting tax costs of the seller. These agreements could result in us holding on to properties that we would otherwise sell and not pay down or refinance. In addition, when we dispose of or sell assets, we may not be able to reinvest the sales proceeds and earn returns similar to those generated by the assets that were sold.

From time to time we have made, and in the future we may seek to make investments in companies over which we do not have sole control. Some of these companies operate in industries with different risks than investing and operating real estate.

From time to time we have made, and in the future we may seek to make, investments in companies that we may not control, including, but not limited to, Alexander's, our Fifth Avenue and Times Square JV, and other equity and loan investments. Although these businesses generally have a significant real estate component, some of them operate in businesses that are different from investing and operating real estate. Consequently, we are subject to operating and financial risks of those industries and to the risks associated with lack of control, such as having differing objectives than our partners or the entities in which we invest, or becoming involved in disputes, or competing directly or indirectly with these partners or entities. In addition, we rely on the internal controls and financial reporting controls of these entities and their failure to maintain effectiveness or comply with applicable standards may adversely affect us.

We are subject to risks involved in real estate activity through joint ventures and private equity real estate funds.

We currently own properties through joint ventures and private equity real estate funds with other persons and entities and may in the future acquire or own properties through joint ventures and funds when we believe circumstances warrant the use of such structures. Joint venture and fund investments involve risk, including: the possibility that our partners might refuse to make capital contributions when due and therefore we may be forced to make contributions to maintain the value of the property; that we may be responsible to our partners for indemnifiable losses; that our partners might at any time have business or economic goals that are inconsistent with ours; that third parties may be hesitant or refuse to transact with the joint venture or fund due to the identity of our partners; and that our partners may be in a position to take action or withhold consent contrary to our recommendations, instructions or requests. We and our respective joint venture partners may each have the right to trigger a buy-sell, put right or forced sale arrangement, which could cause us to sell our interest, or acquire our partner's interest, or to sell the underlying asset, at a time when we otherwise would not have initiated such a transaction, without our consent or on unfavorable terms. In some instances, joint venture and fund partners may have competing interests in our markets that could create conflicts of interest. These conflicts may include compliance with the REIT requirements, and our REIT status could be jeopardized if any of our joint ventures or funds do not operate in compliance with REIT requirements. To the extent our partners do not meet their obligations to us or our joint ventures or funds, or they take action inconsistent with the interests of the joint venture or fund, we may be adversely affected.

RISKS RELATED TO OUR INDEBTEDNESS AND ACCESS TO CAPITAL

Capital markets and economic conditions can materially affect our liquidity, financial condition and results of operations as well as the value of an investment in our debt and equity securities.

There are many factors that can affect the value of our debt and equity securities, including the state of the capital markets and the economy. Demand for office and retail space typically declines nationwide due to an economic downturn, bankruptcies, downsizing, layoffs and cost cutting. Government action or inaction may adversely affect the state of the capital markets. The cost and availability of credit may be adversely affected by illiquid credit markets and wider credit spreads, which may adversely affect our liquidity and financial condition, including our results of operations, and the liquidity and financial condition of our tenants. Our inability or the inability of our tenants to timely refinance maturing liabilities and access the capital markets to meet liquidity needs may materially affect our financial condition and results of operations and the value of our securities.

We may not be able to obtain capital to make investments.

We depend primarily on external financing to fund the growth of our business. This is because one of the requirements of the Internal Revenue Code of 1986, as amended, for a REIT is that it distributes 90% of its taxable income, excluding net capital gains, to its shareholders. This, in turn, requires the Operating Partnership to make distributions to its unitholders. There is a separate requirement to distribute net capital gains or pay a corporate level tax in lieu thereof. Our access to debt or equity financing depends on the willingness of third parties to lend or make equity investments and on conditions in the capital markets generally. Although we believe that we will be able to finance any investments we may wish to make in the foreseeable future, there can be no assurance that new financing will be available or available on acceptable terms. For information about our available sources of funds, see "Management's Discussion and Analysis of Financial Condition and Results of Operations — Liquidity and Capital Resources" and the notes to the consolidated financial statements in this Annual Report on Form 10-K.

We depend on dividends and distributions from our direct and indirect subsidiaries. The creditors and preferred equity holders of these subsidiaries are entitled to amounts payable to them by the subsidiaries before the subsidiaries may pay any dividends or distributions to us.

Substantially all of Vornado's assets are held through its Operating Partnership that holds substantially all of its properties and assets through subsidiaries. The Operating Partnership's cash flow is dependent on cash distributions to it by its subsidiaries, and in turn, substantially all of Vornado's cash flow is dependent on cash distributions to it by the Operating Partnership. The creditors of each of Vornado's direct and indirect subsidiaries are entitled to payment of that subsidiary's obligations to them, when due and payable, before distributions may be made by that subsidiary to its equity holders. Thus, the Operating Partnership's ability to make distributions to its equity holders depends on its subsidiaries' ability first to satisfy their obligations to their creditors and then to make distributions to the Operating Partnership. Likewise, Vornado's ability to pay dividends to its holders of common and preferred shares

depends on the Operating Partnership's ability first to satisfy its obligations to its creditors and make distributions to holders of its preferred units and then to make distributions to Vornado.

Furthermore, the holders of preferred units of the Operating Partnership are entitled to receive preferred distributions before payment of distributions to the Operating Partnership's equity holders, including Vornado. Thus, Vornado's ability to pay cash dividends to its equity holders and satisfy its debt obligations depends on the Operating Partnership's ability first to satisfy its obligations to its creditors and make distributions to holders of its preferred units and then to its equity holders, including Vornado. As of December 31, 2021, there were three series of preferred units of the Operating Partnership not held by Vornado with a total liquidation value of \$53,223,000.

In addition, Vornado's participation in any distribution of the assets of any of its direct or indirect subsidiaries upon the liquidation, reorganization or insolvency is only after the claims of the creditors, including trade creditors and preferred equity holders, are satisfied.

We have a substantial amount of indebtedness that could affect our future operations.

As of December 31, 2021, our consolidated mortgages and unsecured indebtedness, excluding related premium, discount and deferred financing costs, totaled \$8.7 billion. We are subject to the risks normally associated with debt financing, including the risk that our cash flow from operations will be insufficient to meet our required debt service. Our debt service costs generally will not be reduced if developments in the market or at our properties, such as the entry of new competitors or the loss of major tenants, cause a reduction in the income from our properties. Should such events occur, our operations may be adversely affected. If a property is mortgaged to secure payment of indebtedness and income from such property is insufficient to pay that indebtedness, the property could be foreclosed upon by the mortgagee resulting in a loss of income and a decline in our total asset value.

We have outstanding debt, and the amount of debt and its cost may increase and refinancing may not be available on acceptable terms.

We rely on both secured and unsecured, variable rate and non-variable rate debt to finance acquisitions and development activities and for working capital. If we are unable to obtain debt financing or refinance existing indebtedness upon maturity, our financial condition and results of operations would likely be adversely affected. In addition, the cost of our existing debt may increase, especially in the case of a rising interest rate environment, and we may not be able to refinance our existing debt in sufficient amounts or on acceptable terms. If the cost or amount of our indebtedness increases or we cannot refinance our debt in sufficient amounts or on acceptable terms, we are at risk of credit rating downgrades and default on our obligations that could adversely affect our financial condition and results of operations.

Failure to hedge effectively against interest rate changes may adversely affect results of operations.

The interest rate hedge instruments we use to manage some of our exposure to interest rate volatility involve risk and counterparties may fail to perform under these arrangements. In addition, these arrangements may not be effective in reducing our exposure to interest rate changes and when existing interest rate hedges terminate, we may incur increased costs in implementing further interest rate hedges. Failure to hedge effectively against interest rate changes may adversely affect our results of operations.

Covenants in our debt instruments could adversely affect our financial condition and our acquisitions and development activities.

The mortgages on our properties contain customary covenants such as those that limit our ability, without the prior consent of the applicable lender, to further mortgage the applicable property or to discontinue insurance coverage. Our unsecured indebtedness and debt that we may obtain in the future may contain customary restrictions, requirements and other limitations on our ability to incur indebtedness, including covenants that limit our ability to incur debt based upon the level of our ratio of total debt to total assets, our ratio of secured debt to total assets, our ratio of EBITDA to interest expense, and fixed charges, and that require us to maintain a certain ratio of unencumbered assets to unsecured debt. Our ability to borrow is subject to compliance with these and other covenants. In addition, failure to comply with our covenants could cause a default under the applicable debt instrument, and we may then be required to repay such debt with capital from such other sources or give possession of a secured property to the lender. Under those circumstances, other sources of capital may not be available to us or may be available only on unattractive terms.

A downgrade in our credit ratings could materially and adversely affect our business and financial condition.

Our credit rating and the credit ratings assigned to our debt securities and our preferred shares could change based upon, among other things, our results of operations and financial condition. These ratings are subject to ongoing evaluation by credit rating agencies, and any rating could be changed or withdrawn by a rating agency in the future if, in its judgment, circumstances warrant such action. Moreover, these credit ratings are not recommendations to buy, sell or hold our common shares or any other securities. If any of the credit rating agencies that have rated our securities downgrades or lowers its credit rating, or if any credit rating agency indicates that it has placed any such rating on a "watch list" for a possible downgrading or lowering, or otherwise indicates that its outlook for that rating is negative, such action could have a material adverse effect on our costs and availability of funding, which could in turn have a material adverse effect on our financial condition, results of operations, cash flows, the trading/redemption price of our securities, and our ability to satisfy our debt service obligations and to pay dividends and distributions to our equity holders.

RISK RELATED TO OUR ORGANIZATION AND STRUCTURE

Vornado's Amended and Restated Declaration of Trust (the "declaration of trust") sets limits on the ownership of its shares.

Generally, for Vornado to maintain its qualification as a REIT under the Internal Revenue Code, not more than 50% in value of the outstanding shares of beneficial interest of Vornado may be owned, directly or indirectly, by five or fewer individuals at any time during the last half of Vornado's taxable year. The Internal Revenue Code defines "individuals" for purposes of the requirement described in the preceding sentence to include some types of entities. Under Vornado's declaration of trust, as amended, no person may own more than 6.7% of the outstanding common shares of any class, or 9.9% of the outstanding preferred shares of any class, with some exceptions for persons who held common shares in excess of the 6.7% limit before Vornado adopted the limit and other persons approved by Vornado's Board of Trustees. In addition, our declaration of trust includes restrictions on ownership of our common shares and preferred shares to preserve our status as a "domestically controlled qualified investment entity" within the meaning of Section 897 (h)(4)(B) of the Internal Revenue Code of 1986, as amended. These restrictions on transferability and ownership may delay, deter or prevent a change in control of Vornado or other transaction that might involve a premium price or otherwise be in the best interest of equity holders.

The Maryland General Corporation Law (the "MGCL") contains provisions that may reduce the likelihood of certain takeover transactions.

The MGCL imposes conditions and restrictions on certain "business combinations" (including, among other transactions, a merger, consolidation, share exchange, or, in certain circumstances, an asset transfer or issuance of equity securities) between a Maryland REIT and certain persons who beneficially own at least 10% of the corporation's stock (an "interested shareholder"). Unless approved in advance by the board of trustees of the trust, or otherwise exempted by the statute, such a business combination is prohibited for a period of five years after the most recent date on which the interested shareholder became an interested shareholder. After such five-year period, a business combination with an interested shareholder must be: (a) recommended by the board of trustees of the trust, and (b) approved by the affirmative vote of at least (i) 80% of the trust's outstanding shares entitled to vote and (ii) two-thirds of the trust's outstanding shares entitled to vote which are not held by the interested shareholder with whom the business combination is to be effected, unless, among other things, the trust's common shareholders receive a "fair price" (as defined by the statute) for their shares and the consideration is received in cash or in the same form as previously paid by the interested shareholder for his or her shares.

In approving a transaction, Vornado's Board of Trustees may provide that its approval is subject to compliance, at or after the time of approval, with any terms and conditions determined by the Board of Trustees. Vornado's Board of Trustees has adopted a resolution exempting any business combination between Vornado and any trustee or officer of Vornado or its affiliates. As a result, any trustee or officer of Vornado or its affiliates may be able to enter into business combinations with Vornado that may not be in the best interest of our equity holders. With respect to business combinations with other persons, the business combination provisions of the MGCL may have the effect of delaying, deferring or preventing a change in control of Vornado or other transaction that might involve a premium price or otherwise be in the best interest of our equity holders. The business combination statute may discourage others from trying to acquire control of Vornado and increase the difficulty of consummating any offer.

Title 3, Subtitle 8 of the MGCL permits our Board of Trustees, without shareholder approval and regardless of what is currently provided in our declaration of trust or bylaws, to implement certain takeover defenses, including adopting a classified board or increasing the vote required to remove a trustee. Such takeover defenses may have the effect of inhibiting a third party from making an acquisition proposal for us or of delaying, deferring or preventing a change in control of us under the circumstances that otherwise could provide our common shareholders with the opportunity to realize a premium over the then current market price.

Vornado may issue additional shares in a manner that could adversely affect the likelihood of certain takeover transactions.

Vornado's declaration of trust authorizes the Board of Trustees to:

- cause Vornado to issue additional authorized but unissued common shares or preferred shares;
- classify or reclassify, in one or more series, any unissued preferred shares;
- set the preferences, rights and other terms of any classified or reclassified shares that Vornado issues; and
- increase, without shareholder approval, the number of shares of beneficial interest that Vornado may issue.

Vornado's Board of Trustees could establish a series of preferred shares whose terms could delay, deter or prevent a change in control of Vornado, and therefore of the Operating Partnership, or other transaction that might involve a premium price or otherwise be in the best interest of our equity holders, although Vornado's Board of Trustees does not now intend to establish a series of preferred shares of this kind. Vornado's declaration of trust and bylaws contain other provisions that may delay, deter or prevent a change in control of Vornado or other transaction that might involve a premium price or otherwise be in the best interest of our equity holders.

We may change our policies without obtaining the approval of our equity holders.

Our operating and financial policies, including our policies with respect to acquisitions of real estate or other companies, growth, operations, indebtedness, capitalization, dividends and distributions, are exclusively determined by Vornado's Board of Trustees. Accordingly, our equity holders do not control these policies.

Steven Roth and Interstate Properties may exercise substantial influence over us. They and some of Vornado's other trustees and officers have interests or positions in other entities that may compete with us.

As of December 31, 2021, Interstate Properties, a New Jersey general partnership, and its partners beneficially owned an aggregate of approximately 6.9% of the common shares of beneficial interest of Vornado and 26.1% of the common stock of Alexander's, which is described below. Steven Roth, David Mandelbaum and Russell B. Wight, Jr. are the three partners of Interstate Properties. Mr. Roth is the Chairman of the Board of Trustees and Chief Executive Officer of Vornado, the managing general partner of Interstate Properties, and the Chairman of the Board of Directors and Chief Executive Officer of Alexander's. Messrs. Mandelbaum and Wight are Trustees of Vornado and Directors of Alexander's.

Because of these overlapping interests, Mr. Roth and Interstate Properties and its partners may have substantial influence over Vornado, and therefore over the Operating Partnership. In addition, certain decisions concerning our operations or financial structure may present conflicts of interest among Messrs. Roth, Mandelbaum and Wight and Interstate Properties and our other equity holders. In addition, Mr. Roth, Interstate Properties and its partners, and Alexander's currently and may in the future engage in a wide variety of activities in the real estate business which may result in conflicts of interest with respect to matters affecting us, such as which of these entities or persons, if any, may take advantage of potential business opportunities, the business focus of these entities, the types of properties and geographic locations in which these entities make investments, potential competition between business activities conducted, or sought to be conducted, competition for properties and tenants, possible corporate transactions such as acquisitions and other strategic decisions affecting the future of these entities.

We manage and lease the real estate assets of Interstate Properties pursuant to a management agreement for which we receive an annual fee equal to 4% of annual base rent and percentage rent. See Note 22 – *Related Party Transactions* to our consolidated financial statements in this Annual Report on Form 10-K for additional information.

There may be conflicts of interest between Alexander's and us.

As of December 31, 2021, we owned 32.4% of the outstanding common stock of Alexander's. Alexander's is a REIT that has six properties, which are located in the greater New York metropolitan area. In addition to the 2.2% that they indirectly own through Vornado, Interstate Properties, which is described above, and its partners owned 26.1% of the outstanding common stock of Alexander's as of December 31, 2021. Mr. Roth is the Chairman of the Board of Trustees and Chief Executive Officer of Vornado, the managing general partner of Interstate Properties, and the Chairman of the Board of Directors and Chief Executive Officer of Alexander's. Messrs. Mandelbaum and Wight are Trustees of Vornado and Directors of Alexander's and general partners of Interstate Properties. Ms. Mandakini Puri and Dr. Richard West are Trustees of Vornado and Directors of Alexander's.

We manage, develop and lease Alexander's properties under management, development and leasing agreements under which we receive annual fees from Alexander's. These agreements are described in Note 5 - *Investments in Partially Owned Entities* to our consolidated financial statements in this Annual Report on Form 10-K.

RISKS RELATED TO OUR COMMON SHARES AND OPERATING PARTNERSHIP CLASS A UNITS

The trading price of Vornado's common shares has been volatile and may continue to fluctuate.

The trading price of Vornado's common shares has been volatile and may continue to fluctuate widely as a result of several factors, many of which are outside our control. In addition, the stock market is subject to fluctuations in the share prices and trading volumes that affect the market prices of the shares of many companies. These broad market fluctuations have in the past and may in the future adversely affect the market price of Vornado's common shares and the redemption price of the Operating Partnership's Class A units. In particular, the market price of our common shares has been further adversely impacted since March 2020 due to the COVID-19 pandemic. These factors include:

- our financial condition and performance;
- the financial condition of our tenants, including the extent of tenant bankruptcies or defaults;
- actual or anticipated quarterly fluctuations in our operating results and financial condition;
- our dividend policy;
- the reputation of REITs and real estate investments generally and the attractiveness of REIT equity securities in comparison to other equity securities, including securities issued by other real estate companies, and fixed income securities;
- uncertainty and volatility in the equity and credit markets;
- fluctuations in interest rates;
- changes in revenue or earnings estimates or publication of research reports and recommendations by financial analysts or actions taken by rating agencies with respect to our securities or those of other REITs;
- failure to meet analysts' revenue or earnings estimates;
- speculation in the press or investment community;
- strategic actions by us or our competitors, such as acquisitions or restructurings;
- the extent of institutional investor interest in us;
- the extent of short-selling of Vornado common shares and the shares of our competitors;
- fluctuations in the stock price and operating results of our competitors;

- general financial and economic market conditions and, in particular, developments related to market conditions for office REITs and other real estate related companies and the New York City real estate market;
- domestic and international economic factors unrelated to our performance;
- changes in tax laws and rules; and
- all other risk factors addressed elsewhere in this Annual Report on Form 10-K.

A significant decline in Vornado's stock price could result in substantial losses for our equity holders.

Vornado has many shares available for future sale, which could hurt the market price of its shares and the redemption price of the Operating Partnership's units.

The interests of equity holders could be diluted if we issue additional equity securities. As of December 31, 2021, Vornado had authorized but unissued 58,276,392 common shares of beneficial interest, \$.04 par value, and 58,387,098 preferred shares of beneficial interest, no par value; of which 20,859,593 common shares are reserved for issuance upon redemption of Class A Operating Partnership units, convertible securities and employee stock options and 11,200,000 preferred shares are reserved for issuance upon redemption of preferred Operating Partnership units. Any shares not reserved may be issued from time to time in public or private offerings or in connection with acquisitions. In addition, common and preferred shares reserved may be sold upon issuance in the public market after registration under the Securities Act or under Rule 144 under the Securities Act or other available exemptions from registration. We cannot predict the effect that future sales of Vornado's common and preferred shares or Operating Partnership Class A and preferred units will have on the market prices of our securities.

In addition, under Maryland law, Vornado's Board of Trustees has the authority to increase the number of authorized shares without shareholder approval.

Loss of our key personnel could harm our operations and adversely affect the value of our common shares and Operating Partnership Class A units.

We are dependent on the efforts of Steven Roth, the Chairman of the Board of Trustees and Chief Executive Officer of Vornado. While we believe that we could find a replacement for him and other key personnel, the loss of their services could harm our operations and adversely affect the value of our securities.

RISKS RELATED TO REGULATORY COMPLIANCE

Vornado may fail to qualify or remain qualified as a REIT and may be required to pay federal income taxes at corporate rates, which could adversely impact the value of our common shares.

Although we believe that Vornado will remain organized and will continue to operate so as to qualify as a REIT for federal income tax purposes, Vornado may fail to remain so qualified. Qualifications are governed by highly technical and complex provisions of the Internal Revenue Code for which there are only limited judicial or administrative interpretations and depend on various facts and circumstances that are not entirely within our control. In addition, legislation, new regulations, administrative interpretations or court decisions may significantly change the relevant tax laws and/or the federal income tax consequences of qualifying as a REIT. If, with respect to any taxable year, Vornado fails to maintain its qualification as a REIT and does not qualify under statutory relief provisions, Vornado could not deduct distributions to shareholders in computing our taxable income and would have to pay federal income tax on its taxable income at regular corporate rates. The federal income tax payable would include any applicable alternative minimum tax. If Vornado had to pay federal income tax, the amount of money available to distribute to equity holders and pay its indebtedness would be reduced for the year or years involved, and Vornado would not be required to make distributions to shareholders in that taxable year and in future years until it was able to qualify as a REIT and did so. In addition, Vornado would also be disqualified from treatment as a REIT for the four taxable years following the year during which qualification was lost, unless Vornado were entitled to relief under the relevant statutory provisions. Our failure to qualify as a REIT could impact our ability to expand our business and raise capital and adversely affect the value of our common shares.

We may face possible adverse federal tax audits and changes in federal tax laws, which may result in an increase in our tax liability.

In the normal course of business, certain entities through which we own real estate either have undergone or may undergo tax audits. Although we believe that we have substantial arguments in favor of our positions, in some instances there is no controlling precedent or interpretive guidance. There can be no assurance that audits will not occur with increased frequency or that the ultimate result of such audits will not have a material adverse effect on our results of operations.

At any time, the U.S. federal income tax laws governing REITs or the administrative interpretations of those laws may be amended. We cannot predict if or when any new U.S. federal income tax law, regulation, or administrative interpretation, or any amendment to any existing U.S. federal income tax law, Treasury regulation or administrative interpretation, will be adopted, promulgated or become effective and any such law, regulation, or interpretation may take effect retroactively. Vornado, its taxable REIT subsidiaries, and our security holders could be adversely affected by any such change in, or any new, U.S. federal income tax law, Treasury regulation or administrative interpretation.

We may face possible adverse state and local tax audits and changes in state and local tax law.

Because Vornado is organized and qualifies as a REIT, it is generally not subject to federal income taxes, but we are subject to certain state and local taxes. In the normal course of business, certain entities through which we own real estate either have undergone, or are currently undergoing, tax audits. Although we believe that we have substantial arguments in favor of our positions in the ongoing audits, in some instances there is no controlling precedent or interpretive guidance on the specific point at issue. There can be no assurance that audits will not occur with increased frequency or that the ultimate result of such audits will not have a material adverse effect on our results of operations.

From time to time changes in state and local tax laws or regulations are enacted, which may result in an increase in our tax liability. A shortfall in tax revenues for states and municipalities in which we operate may lead to an increase in the frequency and size of such changes including changes in laws, regulations and administration of property and transfer taxes. If such changes occur, we may be required to pay additional taxes on our assets or income. These increased tax costs could adversely affect our financial condition and results of operations and the amount of cash available for the payment of dividends and distributions to our security holders.

Compliance or failure to comply with the Americans with Disabilities Act ("ADA") or other safety regulations and requirements could result in substantial costs.

ADA generally requires that public buildings, including our properties, meet certain Federal requirements related to access and use by disabled persons. Noncompliance could result in the imposition of fines by the Federal government or the award of damages to private litigants and/or legal fees to their counsel. From time to time persons have asserted claims against us with respect to some of our properties under the ADA, but to date such claims have not resulted in any material expense or liability. If, under the ADA, we are required to make substantial alterations and capital expenditures in one or more of our properties, including the removal of access barriers, it could adversely affect our financial condition and results of operations, as well as the amount of cash available for distribution to equity holders.

Our properties are subject to various federal, state and local regulatory requirements, such as state and local fire and life safety requirements. If we fail to comply with these requirements, we could incur fines or private damage awards. We do not know whether existing requirements will change or whether compliance with future requirements will require significant unanticipated expenditures that will affect our cash flow and results of operations.

We may incur significant costs to comply with environmental laws and environmental contamination may impair our ability to lease and/or sell real estate.

Our operations and properties are subject to various federal, state and local laws and regulations concerning the protection of the environment, including air and water quality, hazardous or toxic substances and health and safety. Under some environmental laws, a current or previous owner or operator of real estate may be required to investigate and clean up hazardous or toxic substances released at a property. The owner or operator may also be held liable to a governmental entity or to third parties for property damage or personal injuries and for investigation and clean-up costs incurred by those parties because of the contamination. These laws often impose liability without regard to whether the owner or operator knew of the release of the substances or caused the release. The presence of contamination or the failure to remediate contamination may also impair our ability to sell or lease real estate or to borrow using the real estate as collateral. Other laws and regulations govern indoor and outdoor air quality including those that can require the abatement or removal of asbestos-containing materials in the event of damage, demolition, renovation or remodeling and govern emissions of and exposure to asbestos fibers in the air. The maintenance and removal of lead paint and certain electrical equipment containing polychlorinated biphenyls (PCBs) are also regulated by federal and state laws. We are also subject to risks associated with human exposure to chemical or biological contaminants such as molds, pollens, viruses and bacteria which, above certain levels, can be alleged to be connected to allergic or other health effects and symptoms in susceptible individuals. Our predecessor companies may be subject to similar liabilities for activities of those companies in the past. We could incur fines for environmental compliance and be held liable for the costs of remedial action with respect to the foregoing regulated substances or related claims arising out of environmental contamination or human exposure to contamination at or from our properties.

Each of our properties has been subject to varying degrees of environmental assessment. To date, these environmental assessments have not revealed any environmental condition material to our business. However, identification of new compliance concerns or undiscovered areas of contamination, changes in the extent or known scope of contamination, human exposure to contamination or changes in clean-up or compliance requirements could result in significant costs to us.

GENERAL RISKS

The occurrence of cyber incidents, or a deficiency in our cyber security, as well as other disruptions of our IT networks and related systems, could negatively impact our business by causing a disruption to our operations, a compromise or corruption of our confidential information, and/or damage to our business relationships or reputation, all of which could negatively impact our financial results.

We face risks associated with security breaches, whether through cyber attacks or cyber intrusions over the Internet, malware, ransomware, computer viruses, attachments to e-mails, persons who access our systems from inside or outside our organization, and other significant disruptions of our IT networks and related systems. The risk of a security breach or disruption, particularly through cyber attack or cyber intrusion, including by computer hackers, foreign governments and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. Although we have not experienced cyber incidents that are individually, or in the aggregate, material, we have experienced cyber attacks in the past, which have thus far been mitigated by preventative, detective, and responsive measures that we have put in place. Our IT networks and related systems are essential to the operation of our business and our ability to perform day-to-day operations (including managing our building systems) and, in some cases, may be critical to the operations of certain of our tenants. Although we make efforts to maintain the security and integrity of these types of IT networks and related systems, and we have implemented various measures to manage the risk of a security breach or disruption, there can be no assurance that our security efforts and measures will be effective or that attempted security breaches or disruptions would not be successful or damaging. Unauthorized parties, whether within or outside our company, may disrupt or gain access to our systems, or those of third parties with whom we do business, through human error, misfeasance, fraud, trickery, or other forms of deceit, including break-ins, use of stolen credentials, social engineering, phishing, computer viruses or other malicious codes, and similar means of unauthorized and destructive tampering. Even the most well protected information, networks, systems and facilities remain potentially vulnerable because the techniques used in such attempted security breaches evolve and generally are not recognized until launched against a target, and in some cases are designed to not be detected and, in fact, may not be detected. Accordingly, we may be unable to anticipate these techniques or to implement adequate security barriers or other preventative measures, and thus it is impossible for us to entirely mitigate this risk.

A security breach or other significant disruption involving our IT networks and related systems could disrupt the proper functioning of our networks and systems and therefore our operations and/or those of certain of our tenants; result in the unauthorized access to, and destruction, loss, theft, misappropriation or release of, proprietary, confidential, sensitive or otherwise valuable information of ours or others, which others could use to compete against us or which could expose us to damage claims by third-parties for disruptive, destructive or otherwise harmful purposes and outcomes; result in our inability to maintain the building systems relied upon by our tenants for the efficient use of their leased space; require significant management attention and resources to remedy any damages that result; may require payments to the attackers; subject us to litigation claims for breach of contract, damages, credits, fines, penalties, governmental investigations and enforcement actions or termination of leases or other agreements; or damage our reputation among our tenants and investors generally. Any or all of the foregoing could have a material adverse effect on our results of operations, financial condition and cash flows.

A cyber attack or systems failure could interfere with our ability to comply with financial reporting requirements, which could adversely affect us. A cyber attack could also compromise the confidential information of our employees, tenants, customers and vendors. A successful attack could disrupt and materially affect our business operations, including damaging relationships with tenants, customers and vendors. Any compromise of our information security systems could also result in a violation of applicable privacy and other laws, significant legal and financial exposure, damage to our reputation, loss or misuse of the information (which may be confidential, proprietary and/or commercially sensitive in nature) and a loss of confidence in our security measures, which could harm our business.

Competition for acquisitions may reduce the number of acquisition opportunities available to us and increase the costs of those acquisitions.

We may acquire properties when we are presented with attractive opportunities. We may face competition for acquisition opportunities from other well-capitalized investors, including publicly traded and privately held REITs, private real estate funds, domestic and foreign financial institutions, life insurance companies, sovereign wealth funds, pension trusts, partnerships and individual investors, which may adversely affect us because that competition may cause an increase in the purchase price for a desired acquisition property or result in a competitor acquiring the desired property instead of us.

If we are unable to successfully acquire additional properties, our ability to grow our business could be adversely affected. In addition, increases in the cost of acquisition opportunities could adversely affect our results of operations.

We may be adversely affected by the discontinuation of London Interbank Offered Rate ("LIBOR").

On March 5, 2021, the United Kingdom Financial Conduct Authority ("FCA") announced that USD LIBOR will no longer be published after June 30, 2023. The Secured Overnight Financing Rate ("SOFR") has been identified by market participants as the preferred alternative to USD LIBOR in derivatives and other financial contracts. Our new floating rate loans entered into after December 31, 2021 no longer reference to LIBOR rates and instead reference to SOFR or another floating rate.

As of December 31, 2021, we had approximately \$6.7 billion of consolidated outstanding debt indexed to LIBOR. \$2.2 billion of this debt is subject to interest rate swaps that convert the floating rates to a fixed interest rate. In the transition from the use of LIBOR

to SOFR or other alternatives, the level of interest payments we incur may change. In addition, although certain of our LIBOR based obligations provide for alternative methods of calculating the interest rate payable (including transition to an alternative benchmark rate) if LIBOR is not reported and we have been entering into amendments to certain of our financing agreements to provide for alternative benchmark rates if LIBOR is discontinued, uncertainty as to the extent and manner of future changes may result in interest rates and/or payments that are higher than or lower than or that do not otherwise correlate over time with the interest rates and/or payments that would have been made on our obligations if LIBOR was available in its current form. Use of alternative interest rates or other LIBOR reforms could result in increased volatility or a tightening of credit markets which could adversely affect our ability to obtain cost-effective financing. In addition, the transition of our existing LIBOR financing agreements to alternative benchmarks may result in unanticipated changes to the overall interest rate paid on our liabilities.

Some of our potential losses may not be covered by insurance.

For our properties, we maintain general liability insurance with limits of \$300,000,000 per occurrence and per property, of which \$250,000,000 includes communicable disease coverage, and we maintain all risk property and rental value insurance with limits of \$2.0 billion per occurrence, with sub-limits for certain perils such as flood and earthquake, excluding communicable disease coverage. Our California properties have earthquake insurance with coverage of \$350,000,000 per occurrence and in the aggregate, subject to a deductible in the amount of 5% of the value of the affected property. We maintain coverage for certified terrorism acts with limits of \$6.0 billion per occurrence and in the aggregate (as listed below), \$1.2 billion for non-certified acts of terrorism, and \$5.0 billion per occurrence and in the aggregate for terrorism involving nuclear, biological, chemical and radiological (“NBCR”) terrorism events, as defined by the Terrorism Risk Insurance Act of 2002, as amended to date and which has been extended through December 2027.

Penn Plaza Insurance Company, LLC (“PPIC”), our wholly owned consolidated subsidiary, acts as a re-insurer with respect to a portion of all risk property and rental value insurance and a portion of our earthquake insurance coverage, and as a direct insurer for coverage for acts of terrorism including NBCR acts. Coverage for acts of terrorism (excluding NBCR acts) is fully reinsured by third party insurance companies and the Federal government with no exposure to PPIC. For NBCR acts, PPIC is responsible for a deductible of \$1,785,910 and 20% of the balance of a covered loss and the Federal government is responsible for the remaining portion of a covered loss. We are ultimately responsible for any loss incurred by PPIC.

We continue to monitor the state of the insurance market and the scope and costs of coverage for acts of terrorism and other events. However, we cannot anticipate what coverage will be available on commercially reasonable terms in the future. We are responsible for uninsured losses and for deductibles and losses in excess of our insurance coverage, which could be material.

Our debt instruments, consisting of mortgage loans secured by our properties, senior unsecured notes and revolving credit agreements contain customary covenants requiring us to maintain insurance. Although we believe that we have adequate insurance coverage for purposes of these agreements, we may not be able to obtain an equivalent amount of coverage at reasonable costs in the future. Further, if lenders insist on greater coverage than we are able to obtain it could adversely affect our ability to finance or refinance our properties and expand our portfolio.

ITEM 1B. UNRESOLVED STAFF COMMENTS

There are no unresolved comments from the staff of the Securities and Exchange Commission as of the date of this Annual Report on Form 10-K.

ITEM 2. PROPERTIES

We operate in two reportable segments: New York and Other. The following pages provide details of our real estate properties as of December 31, 2021.

NEW YORK SEGMENT Property	% Ownership	Type	% Occupancy	Square Feet		Total Property
				In Service	Under Development or Not Available for Lease	
PENN 1 (ground leased through 2098) ⁽¹⁾	100.0 %	Office / Retail	82.4 %	2,290,000	257,000	2,547,000
1290 Avenue of the Americas	70.0 %	Office / Retail	99.6 %	2,120,000	—	2,120,000
PENN 2	100.0 %	Office / Retail	100.0 %	428,000	1,192,000	1,620,000
909 Third Avenue (ground leased through 2063) ⁽¹⁾	100.0 %	Office	96.7 %	1,350,000	—	1,350,000
280 Park Avenue ⁽²⁾	50.0 %	Office / Retail	98.1 %	1,264,000	—	1,264,000
Independence Plaza, Tribeca (1,327 units) ⁽²⁾	50.1 %	Retail / Residential	100.0 % ⁽³⁾	1,249,000	8,000	1,257,000
770 Broadway	100.0 %	Office / Retail	99.3 %	1,182,000	—	1,182,000
PENN 11	100.0 %	Office / Retail	99.3 %	1,153,000	—	1,153,000
90 Park Avenue	100.0 %	Office / Retail	98.9 %	956,000	—	956,000
One Park Avenue	100.0 %	Office / Retail	96.9 %	944,000	—	944,000
888 Seventh Avenue (ground leased through 2067) ⁽¹⁾	100.0 %	Office / Retail	94.6 %	887,000	—	887,000
100 West 33rd Street	100.0 %	Office	95.3 %	859,000	—	859,000
Farley Office and Retail (ground and building leased through 2116) ⁽¹⁾	95.0 %	Office / Retail	100.0 %	756,000	89,000	845,000
330 West 34th Street (65.2% ground leased through 2149) ⁽¹⁾	100.0 %	Office / Retail	74.2 %	725,000	—	725,000
85 Tenth Avenue ⁽²⁾	49.9 %	Office / Retail	89.6 %	638,000	—	638,000
650 Madison Avenue ⁽²⁾	20.1 %	Office / Retail	93.3 %	601,000	—	601,000
350 Park Avenue	100.0 %	Office / Retail	72.8 %	581,000	—	581,000
150 East 58th Street ⁽⁴⁾	100.0 %	Office / Retail	88.3 %	545,000	—	545,000
33-00 Northern Boulevard (Center Building)	100.0 %	Office	92.4 %	498,000	—	498,000
7 West 34th Street ⁽²⁾	53.0 %	Office / Retail	100.0 %	477,000	—	477,000
595 Madison Avenue	100.0 %	Office / Retail	81.4 %	332,000	—	332,000
640 Fifth Avenue ⁽²⁾	52.0 %	Office / Retail	84.9 %	315,000	—	315,000
50-70 West 93rd Street (324 units) ⁽²⁾	49.9 %	Residential	96.3 %	283,000	—	283,000
Manhattan Mall	100.0 %	Retail	18.3 %	257,000	—	257,000
40 Fulton Street	100.0 %	Office / Retail	84.7 %	251,000	—	251,000
260 Eleventh Avenue (ground leased through 2114) ⁽¹⁾	100.0 %	Office	95.5 %	209,000	—	209,000
4 Union Square South	100.0 %	Retail	99.3 %	204,000	—	204,000
61 Ninth Avenue (2 buildings) (ground leased through 2115) ⁽¹⁾⁽²⁾	45.1 %	Office / Retail	94.5 %	192,000	—	192,000
512 West 22nd Street ⁽²⁾	55.0 %	Office / Retail	72.6 %	172,000	—	172,000
825 Seventh Avenue	51.2 %	Office ⁽²⁾ / Retail	44.7 %	172,000	—	172,000
1540 Broadway ⁽²⁾	52.0 %	Retail	79.9 %	161,000	—	161,000
Paramus	100.0 %	Office	85.2 %	129,000	—	129,000
666 Fifth Avenue ⁽²⁾⁽⁵⁾	52.0 %	Retail	100.0 %	114,000	—	114,000
1535 Broadway ⁽²⁾	52.0 %	Retail / Theatre	98.2 %	107,000	—	107,000
57th Street (2 buildings) ⁽²⁾	50.0 %	Office / Retail	83.9 %	103,000	—	103,000
689 Fifth Avenue ⁽²⁾	52.0 %	Office / Retail	93.9 %	98,000	—	98,000
478-486 Broadway (2 buildings) (10 units) ⁽⁶⁾	100.0 %	Retail / Residential	100.0 % ⁽³⁾	33,000	56,000	89,000
150 West 34th Street	100.0 %	Retail	100.0 %	78,000	—	78,000
510 Fifth Avenue	100.0 %	Retail	51.5 %	66,000	—	66,000
655 Fifth Avenue ⁽²⁾	50.0 %	Retail	100.0 %	57,000	—	57,000
155 Spring Street ⁽⁶⁾	100.0 %	Retail	88.6 %	50,000	—	50,000
435 Seventh Avenue	100.0 %	Retail	100.0 %	43,000	—	43,000

See notes on page 27.

ITEM 2. PROPERTIES – CONTINUED

NEW YORK SEGMENT – CONTINUED Property	% Ownership	Type	% Occupancy	In Service	Square Feet	
					Under Development or Not Available for Lease	Total Property
692 Broadway	100.0 %	Retail	64.4 %	36,000	—	36,000
606 Broadway	50.0 %	Office / Retail	100.0 %	36,000	—	36,000
697-703 Fifth Avenue ⁽²⁾	44.8 %	Retail	100.0 %	26,000	—	26,000
1131 Third Avenue	100.0 %	Retail	100.0 %	23,000	—	23,000
131-135 West 33rd Street	100.0 %	Retail	100.0 %	23,000	—	23,000
715 Lexington Avenue	100.0 %	Retail	100.0 %	10,000	12,000	22,000
537 West 26th Street	100.0 %	Retail	100.0 %	17,000	—	17,000
443 Broadway	100.0 %	Retail	100.0 %	16,000	—	16,000
334 Canal Street (4 units)	100.0 %	Retail / Residential	100.0 % ⁽³⁾	14,000	—	14,000
304 Canal Street (4 units)	100.0 %	Retail / Residential	100.0 % ⁽³⁾	13,000	—	13,000
431 Seventh Avenue	100.0 %	Retail	— %	10,000	—	10,000
759-771 Madison Avenue (40 East 66th Street) (4 units)	100.0 %	Residential	100.0 %	10,000	—	10,000
138-142 West 32nd Street	100.0 %	Retail	100.0 %	8,000	—	8,000
148 Spring Street	100.0 %	Retail	72.7 %	8,000	—	8,000
339 Greenwich Street	100.0 %	Retail	100.0 %	8,000	—	8,000
150 Spring Street (1 unit)	100.0 %	Retail / Residential	74.2 % ⁽³⁾	7,000	—	7,000
966 Third Avenue	100.0 %	Retail	100.0 %	7,000	—	7,000
968 Third Avenue ⁽²⁾	50.0 %	Retail	100.0 %	7,000	—	7,000
137 West 33rd Street	100.0 %	Retail	100.0 %	3,000	—	3,000
57th Street ⁽²⁾	50.0 %	Land	(7)	—	—	—
Eighth Avenue and 34th Street	100.0 %	Land	(7)	—	—	—
PENN 15 (Hotel Pennsylvania Site) ⁽⁸⁾	100.0 %	Land	(7)	—	—	—
Other (3 buildings)	100.0 %	Retail	100.0 %	16,000	—	16,000
Alexander's, Inc.:						
731 Lexington Avenue ⁽²⁾	32.4 %	Office / Retail	98.9 %	1,056,000	23,000	1,079,000
Rego Park II, Queens (6.6 acres) ⁽²⁾	32.4 %	Retail	84.4 %	480,000	135,000	615,000
Rego Park I, Queens (4.8 acres) ⁽²⁾	32.4 %	Retail	100.0 %	260,000	78,000	338,000
The Alexander Apartment Tower, Queens (312 units) ⁽²⁾	32.4 %	Residential	95.2 %	255,000	—	255,000
Flushing, Queens (1.0 acre ground leased through 2037) ⁽⁴⁾⁽²⁾	32.4 %	Retail	100.0 %	167,000	—	167,000
Rego Park III, Queens (3.2 acres) ⁽²⁾	32.4 %	Land	(7)	—	—	—
Total New York Segment			91.8 %	25,445,000	1,850,000	27,295,000
Our Ownership Interest			91.3 %	20,086,000	1,683,000	21,769,000

See notes on page 27.

ITEM 2. PROPERTIES – CONTINUED

OTHER SEGMENT Property	% Ownership	Type	% Occupancy	Square Feet		
				In Service	Under Development or Not Available for Lease	Total Property
theMART:						
theMART, Chicago	100.0 %	Office / Retail / Trade show / Showroom	88.8 %	3,673,000	—	3,673,000
Pieqs 92 and 94 (New York) (ground and building leased through 2110)	100.0 %	Trade show / Other	— %	—	208,000	208,000
527 West Kinzie, Chicago	100.0 %	Land	(7)	—	—	—
Other (2 properties) ⁽²⁾ , Chicago	50.0 %	Retail	100.0 %	19,000	—	19,000
Total theMART			88.9 %	3,692,000	208,000	3,900,000
Our Ownership Interest			88.9 %	3,683,000	208,000	3,891,000
555 California Street:						
555 California Street	70.0 %	Office / Retail	97.8 %	1,505,000	—	1,505,000
315 Montgomery Street	70.0 %	Office / Retail	100.0 %	235,000	—	235,000
345 Montgomery Street	70.0 %	Office / Retail	— %	78,000	—	78,000
Total 555 California Street			93.8 %	1,818,000	—	1,818,000
Our Ownership Interest			93.8 %	1,273,000	—	1,273,000
Other:						
Rosslyn Plaza, VA (197 units) ⁽²⁾	46.2 %	Office / Residential	65.1 % ⁽³⁾	685,000	304,000	989,000
Fashion Centre Mall, VA ⁽²⁾	7.5 %	Retail	95.7 %	868,000	—	868,000
Washington Tower, VA ⁽²⁾	7.5 %	Office	75.0 %	170,000	—	170,000
Wayne Towne Center, Wayne, NJ (ground leased through 2064) ⁽¹⁾	100.0 %	Retail	100.0 %	638,000	52,000	690,000
Annapolis, MD (ground leased through 2042) ⁽⁴⁾	100.0 %	Retail	100.0 %	128,000	—	128,000
Atlantic City, NJ (11.3 acres ground leased through 2070 to MGM Growth Properties for a portion of the Borgata Hotel and Casino complex)	100.0 %	Land	100.0 %	—	—	—
Total Other			89.7 %	2,489,000	356,000	2,845,000
Our Ownership Interest			92.8 %	1,154,000	192,000	1,346,000
Vornado Capital Partners Real Estate Fund ("Fund")⁽⁹⁾:						
Crowne Plaza Times Square, NY (0.64 acres owned in fee; 0.18 acres ground leased through 2187 and 0.05 acres ground leased through 2035) ⁽¹⁾⁽¹⁰⁾	75.7 %	Office / Retail / Hotel	86.7 %	246,000	—	246,000
Lucida, 86th Street and Lexington Avenue, NY (ground leased through 2082) ⁽¹⁾ (39 units)	100.0 %	Retail / Residential	100.0 % ⁽³⁾	157,000	—	157,000
1100 Lincoln Road, Miami, FL	100.0 %	Retail / Theatre	78.0 %	130,000	—	130,000
Total Real Estate Fund			87.0 %	533,000	—	533,000
Our Ownership Interest			87.0 %	152,000	—	152,000

(1) Term assumes all renewal options exercised, if applicable.

(2) Denotes property not consolidated in the accompanying consolidated financial statements and related financial data included in the Annual Report on Form 10-K.

(3) Excludes residential occupancy statistics.

(4) Includes 962 Third Avenue (the Annex building to 150 East 58th Street) 50.0% ground leased through 2118⁽¹⁾.

(5) 75,000 square feet is leased from 666 Fifth Avenue Office Condominium.

(6) 478-482 Broadway and 155 Spring Street sold on January 13, 2022.

(7) Properties under development or to be developed.

(8) We permanently closed the Hotel Pennsylvania and plan to develop an office tower on the site. Demolition of the existing building structure commenced in the fourth quarter of 2021.

(9) We own a 25% interest in the Fund. The ownership percentage in this section represents the Fund's ownership in the underlying assets.

(10) We own a 32.8% economic interest through the Fund and the Crowne Plaza Joint Venture.

ITEM 2. PROPERTIES – CONTINUED

Top 10 Tenants Based on Annualized Escalated Rents⁽¹⁾ (at share):

Tenant	Square Footage At Share	Annualized Escalated Rents At Share	% of Total Annualized Escalated Rents At Share
Meta Platforms, Inc. (formerly Facebook, Inc.)	1,451,153	\$ 156,036	8.6 %
IPG and affiliates	967,552	66,748	3.7 %
Google/Motorola Mobility (guaranteed by Google)	759,446	42,785	2.4 %
New York University	632,628	40,948	2.3 %
Bloomberg L.P.	304,385	38,237	2.1 %
Equitable Financial Life Insurance Company	336,644	35,196	1.9 %
Swatch Group USA	14,949	32,349	1.8 %
Verizon Media Group	313,726	31,475	1.7 %
Amazon (including its Whole Foods subsidiary)	312,694	29,353	1.6 %
The City of New York	636,573	25,887	1.4 %

See note below.

Annualized Escalated Rents⁽¹⁾ (at share) by Tenants' Industry:

Industry	Percentage
Office:	
Technology	17 %
Financial Services	16 %
Professional Services	8 %
Advertising/Marketing	5 %
Real Estate	4 %
Insurance	3 %
Entertainment and Electronics	3 %
Education	3 %
Banking	3 %
Communications	3 %
Apparel	2 %
Engineering, Architect & Surveying	2 %
Government	2 %
Health Services	2 %
Other	4 %
	77 %
Retail:	
Apparel	6 %
Luxury Retail	4 %
Banking	2 %
Restaurants	1 %
Grocery	1 %
Other	4 %
	18 %
Showroom	5 %
Total	100 %

(1) Represents monthly contractual base rent before free rent plus tenant reimbursements multiplied by 12. Annualized escalated rents at share include leases signed but not yet commenced in place of current tenants or vacancy in the same space.

NEW YORK

As of December 31, 2021, our New York segment consisted of 27.3 million square feet in 73 properties. The 27.3 million square feet is comprised of 20.6 million square feet of Manhattan office in 32 of the properties, 2.7 million square feet of Manhattan street retail in 60 of the properties, 1,674 units in eight residential properties, and our 32.4% interest in Alexander's, which owns six properties in the greater New York metropolitan area, including 731 Lexington Avenue, the 1.1 million square foot Bloomberg, L.P. headquarters building, and The Alexander, a 312-unit apartment tower in Queens. The New York segment also includes 10 garages totaling 1.7 million square feet (4,875 spaces).

As of December 31, 2021, the occupancy rate for our New York segment was 91.3%.

Occupancy and weighted average annual rent per square foot:

Office:

As of December 31,	Total Square Feet	In Service Square Feet	Vornado's Ownership Interest		
			In Service Square Feet At Share	Occupancy Rate	Weighted Average Annual Escalated Rent Per Square Foot
2021	20,630,000	19,442,000	16,757,000	92.2 %	\$ 80.01
2020	20,586,000	18,361,000	15,413,000	93.4 %	79.05
2019 ⁽¹⁾	20,666,000	19,070,000	16,195,000	96.9 %	76.26
2018	21,495,000	19,858,000	16,632,000	97.2 %	74.04
2017	21,329,000	20,256,000	16,982,000	97.1 %	71.09

Retail:

As of December 31,	Total Square Feet	In Service Square Feet	Vornado's Ownership Interest		
			In Service Square Feet At Share	Occupancy Rate	Weighted Average Annual Escalated Rent Per Square Foot
2021	2,693,000	2,267,000	1,825,000	80.7 %	\$ 214.22
2020	2,690,000	2,275,000	1,805,000	78.8 %	226.38
2019 ⁽¹⁾	2,712,000	2,300,000	1,842,000	94.5 %	209.86
2018	2,802,000	2,648,000	2,419,000	97.3 %	228.43
2017	2,931,000	2,720,000	2,471,000	96.9 %	217.17

Occupancy and average monthly rent per unit:

Residential:

As of December 31,	Total Number of Units	Vornado's Ownership Interest		
		Total Number of Units	Occupancy Rate	Average Monthly Rent Per Unit
2021	1,986	951	96.4 %	\$ 3,776
2020	1,995	960	84.9 %	3,714
2019	1,996	960	97.5 %	3,902
2018	2,004	968	96.6 %	3,788
2017	2,031	995	96.7 %	3,757

(1) Reflects the transfer of 45.4% of common equity in the properties contributed to the Fifth Avenue and Times Square JV on April 18, 2019.

NEW YORK – CONTINUED

Lease expirations as of December 31, 2021 (at share)⁽¹⁾:

Year	Number of Expiring Leases	Square Feet of Expiring Leases ⁽²⁾	Percentage of New York Square Feet	Annualized Escalated Rents of Expiring Leases	
				Total	Per Square Foot
Office:					
Month to month	7	25,000	0.2%	\$ 1,419,000	\$ 56.76
2022	80	671,000	4.4%	48,405,000	72.14 ⁽³⁾
2023 ⁽⁴⁾	64	1,357,000	8.9%	125,367,000	92.39
2024	81	1,039,000	6.8%	93,258,000	89.76
2025	51	719,000	4.7%	57,919,000	80.55
2026	68	1,451,000	9.7%	107,605,000	74.16
2027	61	1,318,000	8.7%	90,028,000	68.31
2028	38	989,000	6.5%	70,334,000	71.12
2029	32	1,170,000	7.7%	94,220,000	80.53
2030	31	621,000	4.1%	48,939,000	78.81
2031	25	817,000	5.4%	72,149,000	88.31
Retail:					
Month to month	8	20,000	1.6%	\$ 1,548,000	\$ 77.40
2022	8	115,000	9.3%	6,630,000	57.65 ⁽⁵⁾
2023	12	58,000	4.7%	26,356,000	454.41
2024	12	173,000	14.0%	37,780,000	218.38
2025	11	40,000	3.2%	11,074,000	276.85
2026	8	82,000	6.6%	25,544,000	311.51
2027	13	32,000	2.6%	18,241,000	570.03
2028	9	29,000	2.3%	13,539,000	466.86
2029	12	46,000	3.7%	20,046,000	435.78
2030	19	155,000	12.5%	21,686,000	139.91
2031	34	96,000	7.8%	30,658,000	319.35

(1) Assumes tenants do not exercise renewal or cancellation options.

(2) Excludes storage, vacancy and other.

(3) Based on current market conditions, we expect to re-lease this space at rents between \$70 to \$80 per square foot.

(4) Excludes the expiration of 492,000 square feet at 909 Third Avenue for U.S. Post Office as we assume the exercise of all renewal options through 2038 given the below-market rent on their options.

(5) Based on current market conditions, we expect to re-lease this space at rents between \$50 to \$75 per square foot.

Alexander's

As of December 31, 2021, we own 32.4% of the outstanding common stock of Alexander's, which owns six properties in the greater New York metropolitan area aggregating 2.5 million square feet, including 731 Lexington Avenue, the 1.1 million square foot Bloomberg L.P. headquarters building. Alexander's had \$1,096,544,000 of outstanding debt as of December 31, 2021, of which our pro rata share was \$355,280,000, none of which is recourse to us.

OTHER REAL ESTATE AND INVESTMENTS

theMART

As of December 31, 2021, we own the 3.7 million square foot theMART in Chicago, whose largest tenant is Motorola Mobility at 609,000 square feet, the lease of which is guaranteed by Google. As of December 31, 2021, theMART had an occupancy rate of 88.9% and a weighted average annual rent per square foot of \$54.40.

OTHER REAL ESTATE AND INVESTMENTS - CONTINUED

555 California Street

As of December 31, 2021, we own a 70% controlling interest in a three-building office complex aggregating 1.8 million square feet, located at California and Montgomery Streets in San Francisco's financial district ("555 California Street"). 555 California Street is encumbered by a \$1.2 billion mortgage loan that bears a rate of LIBOR plus 1.93% in years one through five (2.04% as of December 31, 2021), LIBOR plus 2.18% in year six and LIBOR plus 2.43% in year seven. The loan matures in May 2023, with five one-year extension options (May 2028 as fully extended). We swapped the interest rate on our \$840,000,000 share of the loan to a fixed rate of 2.26% through May 2024. As of December 31, 2021, 555 California Street had an occupancy rate of 93.8% and a weighted average annual rent per square foot of \$89.53.

Vornado Capital Partners Real Estate Fund (the "Fund") and Crowne Plaza Times Square Hotel Joint Venture (the "Crowne Plaza Joint Venture")

As of December 31, 2021, we own a 25% interest in the Fund, which is in wind-down, and currently has three investments, one of which is the Crowne Plaza Times Square Hotel in which we also own an additional interest through the Crowne Plaza Joint Venture. We are the general partner and investment manager of the Fund. As of December 31, 2021, these three investments including the Crowne Plaza Joint Venture's share of the Crowne Plaza Times Square Hotel are carried on our consolidated balance sheet at an aggregate fair value of \$7,730,000.

ITEM 3. LEGAL PROCEEDINGS

We are from time to time involved in legal actions arising in the ordinary course of business. In our opinion, after consultation with legal counsel, the outcome of such matters is not expected to have a material adverse effect on our financial position, results of operations or cash flows.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Vornado Realty Trust

Vornado's common shares are traded on the New York Stock Exchange under the symbol "VNO."

As of February 1, 2022, there were 830 holders of record of Vornado common shares.

Vornado Realty L.P.

There is no established trading market for the Operating Partnership's Class A units. Class A units that are not held by Vornado may be tendered for redemption to the Operating Partnership for cash; Vornado, at its option, may assume that obligation and pay the holder either cash or Vornado common shares on a one-for-one basis. Because the number of Vornado common shares outstanding at all times equals the number of Class A units owned by Vornado, the redemption value of each Class A unit is equivalent to the market value of one Vornado common share, and the quarterly distribution to a Class A unit holder is equal to the quarterly dividend paid to a Vornado common shareholder.

As of February 1, 2022, there were 882 Class A unitholders of record.

Recent Sales of Unregistered Securities

During 2021, we issued 838,982 Class A units in connection with (i) the issuance of Vornado common shares and (ii) the exercise of awards pursuant to Vornado's omnibus share plan, including grants of restricted Vornado common shares and restricted units of the Operating Partnership and upon conversion, surrender or exchange of the Operating Partnership's units or Vornado stock options. The consideration received included \$898,703 in cash proceeds. Such units were issued in reliance on an exemption from registration under Section 4(a)(2) of the Securities Act of 1933, as amended.

From time to time, in connection with equity awards granted under our Omnibus Share Plan, we may withhold common shares for tax purposes or acquire common shares as part of the payment of the exercise price. Although we treat these as repurchases for certain financial statement purposes, these withheld or acquired shares are not considered by us as repurchases for this purpose.

Information relating to compensation plans under which Vornado's equity securities are authorized for issuance is set forth under Part III, Item 12 of this Annual Report on Form 10-K and such information is incorporated by reference herein.

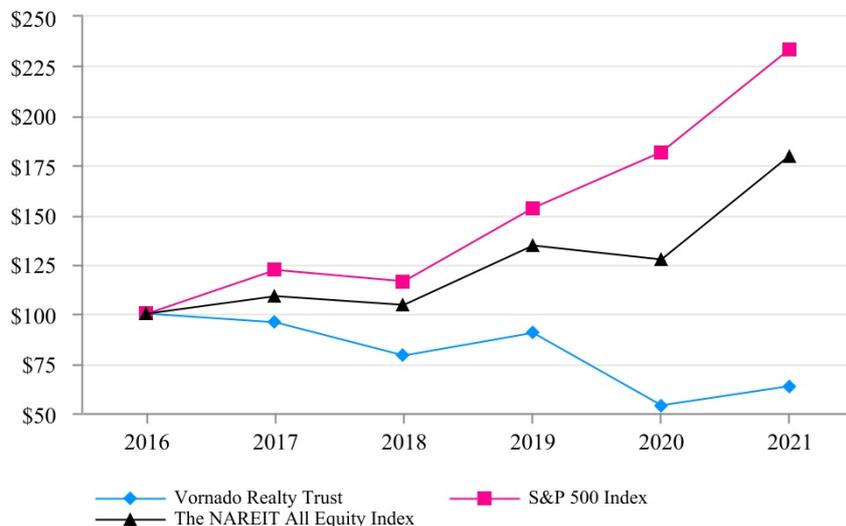
Recent Purchases of Equity Securities

None.

Performance Graph

The following graph is a comparison of the five-year cumulative return of Vornado’s common shares, the Standard & Poor’s 500 Index (the “S&P 500 Index”) and the National Association of Real Estate Investment Trusts’ (“NAREIT”) All Equity Index, a peer group index. The graph assumes that \$100 was invested on December 31, 2016 in our common shares, the S&P 500 Index and the NAREIT All Equity Index and that all dividends were reinvested without the payment of any commissions. There can be no assurance that the performance of our shares will continue in line with the same or similar trends depicted in the graph below.

Comparison of Five-Year Cumulative Return



	2016	2017	2018	2019	2020	2021
Vornado Realty Trust	\$ 100	\$ 96	\$ 79	\$ 90	\$ 54	\$ 63
S&P 500 Index	100	122	116	153	181	233
The NAREIT All Equity Index	100	109	104	134	127	180

ITEM 6. RESERVED

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

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Introduction

The following discussion should be read in conjunction with the financial statements and related notes included under Part II, Item 8 of this Annual Report on Form 10-K.

Our Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") within this section is focused on the years ended December 31, 2021 and 2020, including year-to-year comparisons between these years. Our MD&A for the year ended December 31, 2019, including year-to-year comparisons between 2020 and 2019, can be found in Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations in the Company's Annual Report on Form 10-K for the year ended December 31, 2020.

Overview

Vornado Realty Trust ("Vornado") is a fully-integrated real estate investment trust ("REIT") and conducts its business through, and substantially all of its interests in properties are held by, Vornado Realty L.P., a Delaware limited partnership (the "Operating Partnership"). Accordingly, Vornado's cash flow and ability to pay dividends to its shareholders are dependent upon the cash flow of the Operating Partnership and the ability of its direct and indirect subsidiaries to first satisfy their obligations to creditors. Vornado is the sole general partner of and owned approximately 92.6% of the common limited partnership interest in the Operating Partnership as of December 31, 2021. All references to the "Company," "we," "us" and "our" mean collectively Vornado, the Operating Partnership and those subsidiaries consolidated by Vornado.

We own and operate office and retail properties with a concentration in the New York City metropolitan area. In addition, we have a 32.4% interest in Alexander's, Inc. ("Alexander's") (NYSE: ALX), which owns six properties in the greater New York metropolitan area, as well as interests in other real estate and investments.

Our business objective is to maximize Vornado shareholder value, which we measure by the total return provided to our shareholders. Below is a table comparing Vornado's performance to the FTSE NAREIT Office Index ("Office REIT") and the MSCI US REIT Index ("MSCI") for the following periods ended December 31, 2021:

	Total Return ⁽¹⁾		
	Vornado	Office REIT	MSCI
Three-month	0%	7%	16%
One-year	17%	22%	43%
Three-year	(19%)	30%	66%
Five-year	(36%)	17%	66%
Ten-year	11%	102%	192%

(1) Past performance is not necessarily indicative of future performance.

We intend to achieve this objective by continuing to pursue our investment philosophy and to execute our operating strategies through:

- maintaining a superior team of operating and investment professionals and an entrepreneurial spirit;
- investing in properties in select markets, such as New York City, where we believe there is a high likelihood of capital appreciation;
- acquiring quality properties at a discount to replacement cost and where there is a significant potential for higher rents;
- developing and redeveloping properties to increase returns and maximize value; and
- investing in operating companies that have a significant real estate component.

We expect to finance our growth, acquisitions and investments using internally generated funds and proceeds from asset sales and by accessing the public and private capital markets. We may also offer Vornado common or preferred shares or Operating Partnership units in exchange for property and may repurchase or otherwise reacquire these securities in the future.

We compete with a large number of real estate investors, property owners and developers, some of which may be willing to accept lower returns on their investments. Principal factors of competition are rents charged, sales prices, attractiveness of location, the quality of the property and the breadth and the quality of services provided. Our success depends upon, among other factors, trends of the global, national, regional and local economies, the financial condition and operating results of current and prospective tenants and customers, availability and cost of capital, construction and renovation costs, taxes, governmental regulations, legislation, population and employment trends. See "Risk Factors" in Item 1A for additional information regarding these factors.

Overview - continued

Our business has been adversely affected by the ongoing COVID-19 pandemic and the preventive measures taken to curb the spread of the virus. The pandemic has resulted in governments and other authorities implementing numerous measures to try to contain the virus, such as travel bans and restrictions, quarantines, shelter in place orders, and business closures. Some of the effects on us include the following:

- While many of the limitations and restrictions imposed on our retail tenants during the onset of the pandemic have been lifted and/or eased, economic conditions and other factors, including a decline in Manhattan tourism since the onset of the virus, continue to adversely affect the financial health of our retail tenants.
- While our buildings are open, many of our office tenants are working remotely.
- We temporarily closed the Hotel Pennsylvania on April 1, 2020 and on April 5, 2021, we permanently closed the hotel and plan to develop an office tower on the site.
- Trade shows at theMART were cancelled beginning March of 2020 and resumed in the third quarter of 2021 with generally lower attendance than pre-pandemic levels.

The extent of the COVID-19 pandemic's effect on our operational and financial performance will depend on future developments, including vaccination rates among the population, the efficacy and durability of vaccines against emerging variants and governmental and tenant responses thereto, all of which are uncertain at this time. Given the dynamic nature of the circumstances, it is difficult to predict the ongoing impact of the COVID-19 pandemic on our business, financial condition, results of operations and cash flows but the impact could be material.

Overview - continued

Year Ended December 31, 2021 Financial Results Summary

Net income attributable to common shareholders for the year ended December 31, 2021 was \$101,086,000, or \$0.53 per diluted share, compared to net loss attributable to common shareholders of \$348,744,000, or \$1.83 per diluted share, for the year ended December 31, 2020. The years ended December 31, 2021 and 2020 include certain items that impact net income (loss) attributable to common shareholders, which are listed in the table below. The aggregate of these items, net of amounts attributable to noncontrolling interests, increased net income attributable to common shareholders by \$12,933,000, or \$0.07 per diluted share, for the year ended December 31, 2021 and increased net loss attributable to common shareholders by \$372,637,000, or \$1.95 per diluted share, for the year ended December 31, 2020.

Funds from operations ("FFO") attributable to common shareholders plus assumed conversions for the year ended December 31, 2021 was \$571,074,000, or \$2.97 per diluted share, compared to \$750,522,000, or \$3.93 per diluted share, for the year ended December 31, 2020. The years ended December 31, 2021 and 2020 include certain items that impact FFO, which are listed in the table on the following page. The aggregate of these items, net of amounts attributable to noncontrolling interests, increased FFO by \$21,211,000, or \$0.11 per diluted share, for the year ended December 31, 2021 and by \$249,507,000, or \$1.31 per diluted share, for the year ended December 31, 2020.

The following table reconciles the difference between our net income (loss) attributable to common shareholders and our net income attributable to common shareholders, as adjusted:

(Amounts in thousands)

	For the Year Ended December 31,	
	2021	2020
Certain (income) expense items that impact net income (loss) attributable to common shareholders:		
After-tax net gain on sale of 220 Central Park South ("220 CPS") condominium units	\$ (44,607)	\$ (332,099)
Hotel Pennsylvania loss (permanently closed on April 5, 2021)	29,472	31,280
Tax benefit recognized by our taxable REIT subsidiaries	(27,910)	—
Defeasance costs and write-off of unamortized deferred financing costs related to 1290 Avenue of the Americas refinancing, net of \$7,664 attributable to noncontrolling interests	17,882	—
Our share of Alexander's gain on sale of Paramus, New Jersey property pursuant to IKEA Property, Inc.'s purchase option	(11,620)	—
Deferred tax liability on our investment in Farley Office and Retail (held through a taxable REIT subsidiary)	10,868	—
Previously capitalized Series K preferred share issuance costs	9,033	—
Real estate impairment losses	7,880	236,286
Our share of (income) loss from real estate fund investments	(3,757)	63,114
Non-cash impairment loss on our investment in Fifth Avenue and Times Square JV, net of \$4,289 attributable to noncontrolling interests	—	409,060
608 Fifth Avenue non-cash lease liability extinguishment gain	—	(70,260)
Severance and other reduction-in-force related expenses	—	23,368
Credit losses on loans receivable resulting from a new GAAP accounting standard effective January 1, 2020	—	13,369
Severance accrual related to Hotel Pennsylvania closure, net of \$3,145 of income tax benefit	—	6,101
Mark-to-market decrease in Pennsylvania Real Estate Investment Trust ("PREIT") common shares (sold on January 23, 2020)	—	4,938
Other	(1,379)	12,586
	<u>(14,138)</u>	<u>397,743</u>
Noncontrolling interests' share of above adjustments	1,205	(25,106)
Total of certain (income) expense items that impact net income (loss) attributable to common shareholders	\$ (12,933)	\$ 372,637

Overview - continued

Year Ended December 31, 2021 Financial Results Summary - continued

The following table reconciles the difference between our FFO attributable to common shareholders plus assumed conversions and our FFO attributable to common shareholders plus assumed conversions, as adjusted:

(Amounts in thousands)

	For the Year Ended December 31,	
	2021	2020
Certain (income) expense items that impact FFO attributable to common shareholders plus assumed conversions:		
After-tax net gain on sale of 220 CPS condominium units	\$ (44,607)	\$ (332,099)
Tax benefit recognized by our taxable REIT subsidiaries	(27,910)	—
Defeasance costs and write-off of unamortized deferred financing costs related to 1290 Avenue of the Americas refinancing, net of \$7,664 attributable to noncontrolling interests	17,882	—
Hotel Pennsylvania loss (permanently closed on April 5, 2021)	12,331	20,843
Deferred tax liability on our investment in Farley Office and Retail (held through a taxable REIT subsidiary)	10,868	—
Previously capitalized Series K preferred share issuance costs	9,033	—
Our share of (income) loss from real estate fund investments	(3,757)	63,114
608 Fifth Avenue non-cash lease liability extinguishment gain	—	(70,260)
Severance and other reduction-in-force related expenses	—	23,368
Credit losses on loans receivable resulting from a new GAAP accounting standard effective January 1, 2020	—	13,369
Severance accrual related to Hotel Pennsylvania closure, net of \$3,145 of income tax benefit	—	6,101
Other	3,804	9,660
	(22,356)	(265,904)
Noncontrolling interests' share of above adjustments	1,145	16,397
Total of certain (income) expense items that impact FFO attributable to common shareholders plus assumed conversions, net	<u>\$ (21,211)</u>	<u>\$ (249,507)</u>

Same Store Net Operating Income ("NOI") At Share

The percentage increase (decrease) in same store NOI at share and same store NOI at share - cash basis of our New York segment, theMART and 555 California Street are summarized below.

Year Ended December 31, 2021 compared to December 31, 2020:	Total	New York	theMART ⁽¹⁾	555 California Street
Same store NOI at share % increase (decrease)	2.9 %	4.0 %	(14.2)%	7.9 %
Same store NOI at share - cash basis % increase (decrease)	1.6 %	3.2 %	(14.9)%	0.2 %

(1) 2021 includes an increase in real estate tax expense of \$18,285 primarily due to a recent increase in the triennial tax-assessed value of theMART.

Calculations of same store NOI at share, reconciliations of our net income to NOI at share, NOI at share - cash basis and FFO and the reasons we consider these non-GAAP financial measures useful are provided in the following pages of Management's Discussion and Analysis of Financial Condition and Results of Operations.

Acquisition

One Park Avenue

On August 5, 2021, pursuant to a right of first offer, we increased our ownership interest in One Park Avenue, a 944,000 square foot Manhattan office building, to 100.0% by acquiring our joint venture partner's 45.0% ownership interest in the property. The purchase price values the property at \$875,000,000. We paid approximately \$158,000,000 in cash and assumed our joint venture partner's share of the \$525,000,000 mortgage loan. We previously accounted for our investment under the equity method and have consolidated the accounts of the property from the date of acquisition of the additional 45.0% ownership interest.

Dispositions

220 CPS

During the year ended December 31, 2021, we closed on the sale of six condominium units at 220 CPS for net proceeds of \$137,404,000 resulting in a financial statement net gain of \$50,318,000 which is included in "net gains on disposition of wholly owned and partially owned assets" on our consolidated statements of income. In connection with these sales, \$5,711,000 of income tax expense was recognized on our consolidated statements of income. From inception to December 31, 2021, we have closed on the sale of 106 units for net proceeds of \$3,006,896,000 resulting in financial statement net gains of \$1,117,255,000.

Dispositions - continued

Alexander's, Inc. ("Alexander's")

On June 4, 2021, Alexander's completed the sale of a parcel of land in the Bronx, New York for \$10,000,000. As a result of the sale, we recognized our \$2,956,000 share of the net gain and also received a \$300,000 sales commission paid by Alexander's.

On October 4, 2021, Alexander's sold its Paramus, New Jersey property to IKEA Property, Inc. ("IKEA"), the tenant at the property, for \$75,000,000 pursuant to IKEA's purchase option contained in the lease. The property was encumbered by a \$68,000,000 mortgage loan which was repaid at closing of the sale. As a result of the sale, we recognized our \$11,620,000 share of the net gain and also received a \$750,000 sales commission paid by Alexander's.

Madison Avenue

On September 24, 2021, we sold three Manhattan retail properties located at 677-679, 759-771 and 828-850 Madison Avenue in two separate sale transactions for an aggregate sales price of \$100,000,000. Net proceeds from the sales were \$96,503,000. In connection with the sales, we recorded \$7,880,000 of non-cash impairment losses which are included in "impairment losses, transaction related costs and other" on our consolidated statements of income.

Vornado Capital Partners Real Estate Fund (the "Fund")

On December 7, 2021, the Fund completed the sale of the retail condominium located at 501 Broadway for \$27,500,000. From the inception of this investment through its disposition, the Fund realized a \$6,346,000 net loss.

SoHo Properties

On May 10, 2021, we entered into an agreement to sell two Manhattan retail properties located at 478-482 Broadway and 155 Spring Street for a sales price of \$84,500,000. On January 13, 2022, we completed the sale transaction and realized net proceeds of \$81,399,000. In connection with the sale, we will recognize a net gain of approximately \$850,000 in the first quarter of 2022.

Financings

Secured Debt

On February 26, 2021, the joint venture completed a \$525,000,000 refinancing of One Park Avenue. The interest-only loan bears a rate of LIBOR plus 1.11% (1.22% as of December 31, 2021) and matures in March 2023, with three one-year extension options (March 2026, as fully extended). We realized our \$105,000,000 share of net proceeds. The loan replaced the previous \$300,000,000 loan that bore interest at LIBOR plus 1.75% and was scheduled to mature in March 2021.

On March 7, 2021, we entered into an interest rate swap agreement for our \$500,000,000 PENN 11 mortgage loan to swap the interest rate on the mortgage loan from LIBOR plus 2.75% to a fixed rate of 3.03% through March 2024. On December 1, 2021, we completed a loan modification which reduced the interest rate on the mortgage loan to LIBOR plus 1.95% (2.05% as of December 31, 2021) from LIBOR plus 2.75%, resulting in a fixed rate of 2.23% pursuant to the interest rate swap agreement.

On March 26, 2021, we completed a \$350,000,000 refinancing of 909 Third Avenue, a 1.4 million square foot Manhattan office building. The interest-only loan bears a fixed rate of 3.23% and matures in April 2031. The loan replaced the previous \$350,000,000 loan that bore interest at a fixed rate of 3.91% and was scheduled to mature in May 2021.

On May 10, 2021, we completed a \$1.2 billion refinancing of 555 California Street, a three-building 1.8 million square foot office campus in San Francisco, in which we own a 70.0% controlling interest. The interest-only loan bears a rate of LIBOR plus 1.93% in years one through five (2.04% as of December 31, 2021), LIBOR plus 2.18% in year six and LIBOR plus 2.43% in year seven. The loan matures in May 2023, with five one-year extension options (May 2028 as fully extended). We swapped the interest rate on our \$840,000,000 share of the loan to a fixed rate of 2.26% through May 2024. The loan replaced the previous \$533,000,000 loan that bore interest at a fixed rate of 5.10% and was scheduled to mature in September 2021.

On May 28, 2021, we repaid the \$675,000,000 mortgage loan on theMART, a 3.7 million square foot commercial building in Chicago, with proceeds from our senior unsecured notes offering. The loan bore interest at 2.70% and was scheduled to mature in September 2021.

On November 16, 2021, we completed a \$950,000,000 refinancing of 1290 Avenue of the Americas, a 2.1 million square foot Class A Manhattan office building, in which we own a 70.0% controlling interest. The interest-only loan bears a rate of LIBOR plus 1.51% (1.62% as of December 31, 2021) in years one to five, increasing 0.25% in both years six and seven. The loan matures in November 2023 with five one-year extension options (November 2028 as fully extended). We defeased the existing \$950,000,000 loan that bore interest at a fixed rate of 3.34% and was scheduled to mature in November 2022. As a result, we incurred \$23,729,000 of defeasance costs, which are included in "interest and debt expense" on our consolidated statements of income, of which \$7,119,000 is attributable to noncontrolling interest.

Financings - continued

Unsecured Revolving Credit Facility

On April 15, 2021, we extended our \$1.25 billion unsecured revolving credit facility from January 2023 (as fully extended) to April 2026 (as fully extended). The interest rate on the extended facility was lowered to LIBOR plus 0.90% from LIBOR plus 1.00%. We subsequently qualified for a sustainability margin adjustment by achieving certain key performance indicator (KPI) metrics, which reduced our interest rate by 0.01% to LIBOR plus 0.89%. The facility fee remains at 20 basis points. Our separate \$1.50 billion unsecured revolving credit facility matures in March 2024 (as fully extended) and has an interest rate of LIBOR plus 0.90% and a facility fee of 20 basis points.

Senior Unsecured Notes

On May 24, 2021, we completed a green bond public offering of \$400,000,000 2.15% senior unsecured notes due June 1, 2026 ("2026 Notes") and \$350,000,000 3.40% senior unsecured notes due June 1, 2031 ("2031 Notes"). Interest on the senior unsecured notes is payable semi-annually on June 1 and December 1, commencing December 1, 2021. The 2026 Notes were sold at 99.86% of their face amount to yield 2.18% and the 2031 Notes were sold at 99.59% of their face amount to yield 3.45%.

Preferred Shares/Units

On September 22, 2021, Vornado sold 12,000,000 4.45% Series O cumulative redeemable preferred shares at a price of \$25.00 per share, pursuant to an effective registration statement. Vornado received aggregate net proceeds of \$291,153,000, after underwriters' discount and issuance costs, and contributed the net proceeds to the Operating Partnership in exchange for 12,000,000 4.45% Series O preferred units (with economic terms that mirror those of the Series O preferred shares). Dividends on the Series O preferred shares/units are cumulative and payable quarterly in arrears. The Series O preferred shares/units are not convertible into, or exchangeable for, any of our properties or securities. On or after five years from the date of issuance (or sooner under limited circumstances), Vornado may redeem the Series O preferred shares/units at a redemption price of \$25.00 per share/unit, plus accrued and unpaid dividends/distributions through the date of redemption. The Series O preferred shares/units have no maturity date and will remain outstanding indefinitely unless redeemed by Vornado. Vornado used the net proceeds for the redemption of its 5.70% Series K cumulative redeemable preferred shares/units.

On October 13, 2021, we redeemed all of the outstanding 5.70% Series K preferred shares/units at their redemption price of \$25.00 per share/unit, or \$300,000,000 in the aggregate, plus accrued and unpaid dividends/distributions through the date of redemption. We recognized \$9,033,000 of previously capitalized issuance costs in "Series K preferred share/unit issuance costs" on our consolidated statements of income during the third quarter of 2021, when the preferred shares/units were called for redemption.

Leasing Activity for the Year Ended December 31, 2021

The leasing activity and related statistics below are based on leases signed during the period and are not intended to coincide with the commencement of rental revenue in accordance with accounting principles generally accepted in the United States of America ("GAAP"). Second generation relet space represents square footage that has not been vacant for more than nine months and tenant improvements and leasing commissions are based on our share of square feet leased during the period.

- 2,252,000 square feet of New York Office space (1,973,000 square feet at share) at an initial rent of \$83.26 per square foot and a weighted average lease term of 11.1 years. The changes in the GAAP and cash mark-to-market rent on the 1,591,000 square feet of second generation space were positive 15.9% and positive 10.8%, respectively. Tenant improvements and leasing commissions were \$10.31 per square foot per annum, or 12.4% of initial rent.
- 229,000 square feet of New York Retail space (208,000 square feet at share) at an initial rent of \$145.44 per square foot and a weighted average lease term of 17.1 years. The changes in the GAAP and cash mark-to-market rent on the 109,000 square feet of second generation space were positive 37.1% and positive 13.2%, respectively. Tenant improvements and leasing commissions were \$4.26 per square foot per annum, or 2.9% of initial rent.
- 330,000 square feet at theMART (all at share) at an initial rent of \$51.18 per square foot and a weighted average lease term of 5.8 years. The changes in the GAAP and cash mark-to-market rent on the 273,000 square feet of second generation space were negative 0.5% and 0.0%, respectively. Tenant improvements and leasing commissions were \$7.63 per square foot per annum, or 14.9% of initial rent.
- 74,000 square feet at 555 California Street (52,000 square feet at share) at an initial rent of \$114.70 per square foot and a weighted average lease term of 4.0 years. The changes in the GAAP and cash mark-to-market rent on the 48,000 square feet of second generation space were positive 29.5% and positive 25.4%, respectively. Tenant improvements and leasing commissions were \$3.94 per square foot per annum, or 3.4% of initial rent.

Overview - continued

Square footage (in service) and Occupancy as of December 31, 2021:

(Square feet in thousands)

	Number of properties	Square Feet (in service)		Occupancy %
		Total Portfolio	Our Share	
New York:				
Office	32 (1)	19,442	16,757	92.2 %
Retail (includes retail properties that are in the base of our office properties)	60 (1)	2,267	1,825	80.7 %
Residential - 1,986 units ⁽²⁾	8 (1)	1,518	785	96.4 % (2)
Alexander's	6	2,218	719	95.6 % (2)
		<u>25,445</u>	<u>20,086</u>	91.3 %
Other:				
theMART	4	3,692	3,683	88.9 %
555 California Street	3	1,818	1,273	93.8 %
Other	11	2,489	1,154	92.8 %
		<u>7,999</u>	<u>6,110</u>	
Total square feet at December 31, 2021		<u>33,444</u>	<u>26,196</u>	

See notes below.

Square footage (in service) and Occupancy as of December 31, 2020:

(Square feet in thousands)

	Number of properties	Square Feet (in service)		Occupancy %
		Total Portfolio	Our Share	
New York:				
Office	32 (1)	18,361	15,413	93.4 %
Retail (includes retail properties that are in the base of our office properties)	63 (1)	2,275	1,805	78.8 %
Residential - 1,995 units ⁽²⁾	9 (1)	1,526	793	84.9 % (2)
Alexander's	7	2,366	766	98.5 % (2)
Hotel Pennsylvania (temporarily closed on April 1, 2020 and permanently closed on April 5, 2021)	1	—	—	
		<u>24,528</u>	<u>18,777</u>	92.2 %
Other:				
theMART	4	3,692	3,683	89.5 %
555 California Street	3	1,741	1,218	98.4 %
Other	11	2,489	1,154	92.8 %
		<u>7,922</u>	<u>6,055</u>	
Total square feet at December 31, 2020		<u>32,450</u>	<u>24,832</u>	

(1) Reflects the Office, Retail and Residential space within our 77 and 79 total New York properties as of December 31, 2021 and 2020, respectively.

(2) The Alexander Apartment Tower (312 units) is reflected in Residential unit count and occupancy.

Critical Accounting Estimates

In preparing the consolidated financial statements we have made estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Accounting estimates are deemed critical if they involve a significant level of estimation uncertainty and have had or are reasonably likely to have a material impact on our financial condition or results of operations. Below is a summary of the critical accounting estimates used in the preparation of our consolidated financial statements. A discussion of our accounting policies is included in Note 2 - *Basis of Presentation and Significant Accounting Policies* to our consolidated financial statements in this Annual Report on Form 10-K.

Acquisitions of Real Estate

Upon the acquisition of real estate, we assess whether the transaction should be accounted for as an asset acquisition or as a business combination. Acquisitions of integrated sets of assets and activities that do not meet the definition of a business are accounted for as asset acquisitions. Our acquisitions of real estate generally will not meet the definition of a business because substantially all of the fair value is concentrated in a single identifiable asset or group of similar identifiable assets (i.e. land, buildings, and related identified intangible assets).

We assess the fair value of acquired assets (including land, buildings and improvements, identified intangibles, such as acquired above and below-market leases, acquired in-place leases and tenant relationships) and acquired liabilities and we allocate the purchase price on a relative fair value basis. We assess fair value based on estimated cash flow projections based on a number of factors such as historical operating results, known trends, and market/economic conditions and make key assumptions regarding the discount and capitalization rates used in our analyses. The use of different assumptions to value the acquired properties and allocate value between land and building could affect the revenues recognized over the terms of the leases at our properties and the expenses recognized over the property's estimated remaining useful life on our consolidated statements of income.

Impairment Analyses for Investments in Real Estate and Unconsolidated Partially Owned Entities

Our investments in consolidated properties, including any related right-of-use assets and intangible assets, and unconsolidated partially owned entities are individually reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Impairment analyses are based on current plans, intended holding periods, ability to hold, and available information at the time the analyses are prepared. Assessing impairment can be complex and involves a high degree of subjectivity in determining if impairment indicators are present and in estimating the future undiscounted cash flows or the fair value of an asset. In particular, these estimates are sensitive to significant assumptions, including the estimation of future rental revenues, operating expenses, discount and capitalization rates and our intent and ability to hold the related asset, all of which could be affected by our expectations about future market or economic conditions. These estimates can have a significant impact on the undiscounted cash flows or estimated fair value of an asset and could thereby affect the value of our real estate investments on our consolidated balance sheets as well as any potential impairment losses recognized on our consolidated statements of income.

Collectability Assessments for Revenue Recognition

We evaluate on an individual lease basis whether it is probable that we will collect substantially all amounts due from our tenants and recognize changes in the collectability assessment of our operating leases as adjustments to rental revenue. Management exercises judgment in assessing collectability of tenant receivables and considers payment history, current credit status, publicly available information about the financial condition of the tenant, the impact of COVID-19 on tenants' businesses, and other factors. Our assessment of the collectability of tenant receivables can have a significant impact on the rental revenue recognized in our consolidated statements of income.

Recent Accounting Pronouncements

See Note 2 – *Basis of Presentation and Significant Accounting Policies* to our consolidated financial statements in this Annual Report on Form 10-K for a discussion concerning recent accounting pronouncements.

NOI At Share by Segment for the Years Ended December 31, 2021 and 2020

NOI at share represents total revenues less operating expenses including our share of partially owned entities. NOI at share - cash basis represents NOI at share adjusted to exclude straight-line rental income and expense, amortization of acquired below and above market leases, net and other non-cash adjustments. We consider NOI at share - cash basis to be the primary non-GAAP financial measure for making decisions and assessing the unlevered performance of our segments as it relates to the total return on assets as opposed to the levered return on equity. As properties are bought and sold based on NOI at share - cash basis, we utilize this measure to make investment decisions as well as to compare the performance of our assets to that of our peers. NOI at share and NOI at share - cash basis should not be considered alternatives to net income or cash flow from operations and may not be comparable to similarly titled measures employed by other companies. NOI at share - cash basis includes rent that has been deferred as a result of the COVID-19 pandemic.

Below is a summary of NOI at share and NOI at share - cash basis by segment for the years ended December 31, 2021 and 2020.

(Amounts in thousands)

	For the Year Ended December 31, 2021		
	Total	New York	Other
Total revenues	\$ 1,589,210	\$ 1,257,599	\$ 331,611
Operating expenses	(797,315)	(626,386)	(170,929)
NOI - consolidated	791,895	631,213	160,682
Deduct: NOI attributable to noncontrolling interests in consolidated subsidiaries	(69,385)	(38,980)	(30,405)
Add: NOI from partially owned entities	310,858	300,721	10,137
NOI at share	1,033,368	892,954	140,414
Non-cash adjustments for straight-line rents, amortization of acquired below-market leases, net and other	1,318	(1,188)	2,506
NOI at share - cash basis	\$ 1,034,686	\$ 891,766	\$ 142,920

(Amounts in thousands)

	For the Year Ended December 31, 2020		
	Total	New York	Other
Total revenues	\$ 1,527,951	\$ 1,221,748	\$ 306,203
Operating expenses	(789,066)	(640,531)	(148,535)
NOI - consolidated	738,885	581,217	157,668
Deduct: NOI attributable to noncontrolling interests in consolidated subsidiaries	(72,801)	(43,773)	(29,028)
Add: NOI from partially owned entities	306,495	296,447	10,048
NOI at share	972,579	833,891	138,688
Non-cash adjustments for straight-line rents, amortization of acquired below-market leases, net and other	46,246	36,715	9,531
NOI at share - cash basis	\$ 1,018,825	\$ 870,606	\$ 148,219

NOI At Share by Segment for the Years Ended December 31, 2021 and 2020 - continued

The elements of our New York and Other NOI at share for the years ended December 31, 2021 and 2020 are summarized below.

(Amounts in thousands)

	For the Year Ended December 31,	
	2021	2020
New York:		
Office ⁽¹⁾	\$ 677,167	\$ 672,495
Retail ⁽²⁾	173,363	147,299
Residential	17,783	20,687
Alexander's ⁽³⁾	37,318	35,912
Hotel Pennsylvania ⁽⁴⁾	(12,677)	(42,502)
Total New York	892,954	833,891
Other:		
theMART ⁽⁵⁾	58,909	69,178
555 California Street	64,826	60,324
Other investments	16,679	9,186
Total Other	140,414	138,688
NOI at share	\$ 1,033,368	\$ 972,579

(1) 2020 includes \$18,173 of non-cash write-offs of receivables arising from the straight-lining of rents and \$6,702 of write-offs of tenant receivables deemed uncollectible.

(2) 2020 includes \$25,876 of non-cash write-offs of receivables arising from the straight-lining of rents and \$12,017 of write-offs of tenant receivables deemed uncollectible.

(3) 2020 includes \$3,511 of non-cash write-offs of receivables arising from the straight-lining of rents and \$1,335 of write-offs of tenant receivables deemed uncollectible.

(4) On April 5, 2021, we permanently closed the Hotel Pennsylvania. Beginning in the third quarter of 2021, we commenced capitalization of carrying costs in connection with our development of the future PENN 15 (formerly Hotel Pennsylvania) site.

(5) 2021 includes an increase in real estate tax expense of \$18,285 primarily due to a recent increase in the triennial tax-assessed value of theMART. 2020 includes \$2,722 of non-cash write-offs of receivables arising from the straight-lining of rents and \$1,742 of write-offs of tenant receivables deemed uncollectible.

NOI At Share by Segment for the Years Ended December 31, 2021 and 2020 - continued

The elements of our New York and Other NOI at share - cash basis for the years ended December 31, 2021 and 2020 are summarized below.

(Amounts in thousands)

	For the Year Ended December 31,	
	2021	2020
New York:		
Office ⁽¹⁾	\$ 686,507	\$ 691,755
Retail ⁽²⁾	160,801	158,686
Residential	16,656	19,369
Alexander's ⁽³⁾	40,525	42,737
Hotel Pennsylvania ⁽⁴⁾	(12,723)	(41,941)
Total New York	891,766	870,606
Other:		
theMART ⁽⁵⁾	64,389	76,251
555 California Street	60,680	60,917
Other investments	17,851	11,051
Total Other	142,920	148,219
NOI at share - cash basis	\$ 1,034,686	\$ 1,018,825

(1) 2020 includes \$6,702 of write-offs of tenant receivables deemed uncollectible.

(2) 2020 includes \$12,017 of write-offs of tenant receivables deemed uncollectible.

(3) 2020 includes \$1,335 of write-offs of tenant receivables deemed uncollectible.

(4) On April 5, 2021, we permanently closed the Hotel Pennsylvania. Beginning in the third quarter of 2021, we commenced capitalization of carrying costs in connection with our development of the future PENN 15 (formerly Hotel Pennsylvania) site.

(5) 2021 includes an increase in real estate tax expense of \$18,285 primarily due to a recent increase in the triennial tax-assessed value of theMART. 2020 includes \$1,742 of write-offs of tenant receivables deemed uncollectible.

Reconciliation of Net Income (Loss) to NOI At Share and NOI At Share - Cash Basis for the Years Ended December 31, 2021 and 2020

Below is a reconciliation of net income (loss) to NOI at share and NOI at share - cash basis for the years ended December 31, 2021 and 2020.

(Amounts in thousands)

	For the Year Ended December 31,	
	2021	2020
Net income (loss)	\$ 207,553	\$ (461,845)
Depreciation and amortization expense	412,347	399,695
General and administrative expense	134,545	181,509
Impairment losses, transaction related costs and other	13,815	174,027
(Income) loss from partially owned entities	(130,517)	329,112
(Income) loss from real estate fund investments	(11,066)	226,327
Interest and other investment (income) loss, net	(4,612)	5,499
Interest and debt expense	231,096	229,251
Net gains on disposition of wholly owned and partially owned assets	(50,770)	(381,320)
Income tax (benefit) expense	(10,496)	36,630
NOI from partially owned entities	310,858	306,495
NOI attributable to noncontrolling interests in consolidated subsidiaries	(69,385)	(72,801)
NOI at share	1,033,368	972,579
Non-cash adjustments for straight-line rents, amortization of acquired below-market leases, net and other	1,318	46,246
NOI at share - cash basis	1,034,686	1,018,825

NOI At Share by Region

Region:	For the Year Ended December 31,	
	2021	2020
New York City metropolitan area	88 %	87 %
Chicago, IL	6 %	7 %
San Francisco, CA	6 %	6 %
	100 %	100 %

Results of Operations – Year Ended December 31, 2021 Compared to December 31, 2020

Revenues

Our revenues were \$1,589,210,000 for the year ended December 31, 2021 compared to \$1,527,951,000 in the prior year, an increase of \$61,259,000. Below are the details of the increase by segment:

(Amounts in thousands)

Increase (decrease) due to:

	<u>Total</u>	<u>New York</u>	<u>Other</u>
Rental revenues:			
Acquisitions, dispositions and other	\$ 11,815	\$ 9,696	\$ 2,119
Development and redevelopment	(8,163)	(8,163)	—
Hotel Pennsylvania ⁽¹⁾	(8,493)	(8,493)	—
Trade shows ⁽²⁾	8,179	—	8,179
Same store operations	43,558 ⁽³⁾	32,694	10,864
	<u>46,896</u>	<u>25,734</u>	<u>21,162</u>
Fee and other income:			
BMS cleaning fees	14,244	14,779	(535)
Management and leasing fees	(7,691)	(7,331)	(360)
Other income	7,810	2,669	5,141
	<u>14,363</u>	<u>10,117</u>	<u>4,246</u>
Total increase in revenues	\$ 61,259	\$ 35,851	\$ 25,408

See notes on the following page.

Results of Operations – Year Ended December 31, 2021 Compared to December 31, 2020 - continued

Expenses

Our expenses were \$1,367,869,000 for the year ended December 31, 2021 compared to \$1,550,740,000 in the prior year, a decrease of \$182,871,000. Below are the details of the decrease by segment:

(Amounts in thousands)

Increase (decrease) due to:	Total	New York	Other
Operating:			
Acquisitions, dispositions and other	\$ 11,198	\$ 11,198	\$ —
Development and redevelopment	(10,249)	(10,249)	—
Non-reimbursable expenses	11,125	11,349	(224)
Hotel Pennsylvania ⁽¹⁾	(37,763)	(37,763)	—
Trade shows ⁽²⁾	3,293	—	3,293
BMS expenses	7,670	8,205	(535)
Same store operations	22,975	3,115	19,860 ⁽⁴⁾
	<u>8,249</u>	<u>(14,145)</u>	<u>22,394</u>
Depreciation and amortization:			
Acquisitions, dispositions and other	15,080	15,080	—
Development and redevelopment	11,351	11,351	—
Same store operations	(13,779)	(12,032)	(1,747)
	<u>12,652</u>	<u>14,399</u>	<u>(1,747)</u>
General and administrative	<u>(46,964) ⁽⁵⁾</u>	<u>(15,430)</u>	<u>(31,534)</u>
Expense from deferred compensation plan liability	<u>3,404</u>	<u>—</u>	<u>3,404</u>
Impairment losses, transaction related costs and other	<u>(160,212)</u>	<u>(158,527) ⁽⁶⁾</u>	<u>(1,685)</u>
Total decrease in expenses	<u>\$ (182,871)</u>	<u>\$ (173,703)</u>	<u>\$ (9,168)</u>

- (1) On April 5, 2021, we permanently closed the Hotel Pennsylvania. Beginning in the third quarter of 2021, we commenced capitalization of carrying costs in connection with our development of the future PENN 15 (formerly Hotel Pennsylvania) site. Operating expense for 2020 includes a \$9,246 severance accrual for furloughed union employees.
- (2) We cancelled trade shows at theMART beginning late March of 2020 due to the COVID-19 pandemic and resumed in the third quarter of 2021.
- (3) 2020 includes \$63,204 for the write-off of lease receivables deemed uncollectible (primarily write-offs of receivables arising from the straight-lining of rents).
- (4) 2021 includes an increase in real estate tax expense of \$18,285 primarily due to a recent increase in the triennial tax-assessed value of theMART.
- (5) Primarily due to the overhead reduction program, including \$22,132 of severance and other reduction-in-force related expenses in 2020.
- (6) Primarily due to \$236,286 of non-cash impairment losses related to wholly owned street retail assets in 2020, partially offset by \$70,260 of lease liability extinguishment gain related to 608 Fifth Avenue recognized in 2020 and \$7,880 of non-cash impairment losses for the three Manhattan retail properties sold in 2021.

Results of Operations – Year Ended December 31, 2021 Compared to December 31, 2020 - continued

Income (Loss) from Partially Owned Entities

Below are the components of income (loss) from partially owned entities.

(Amounts in thousands)

	Percentage Ownership at December 31, 2021	For the Year Ended December 31,	
		2021	2020
Our share of net income (loss):			
Fifth Avenue and Times Square JV:			
Equity in net income ⁽¹⁾	51.5%	\$ 47,144	\$ 21,063
Return on preferred equity, net of our share of the expense		37,416	37,357
Non-cash impairment loss		—	(413,349)
		84,560	(354,929)
Alexander's ⁽²⁾	32.4%	40,121	18,635
Partially owned office buildings ⁽³⁾	Various	12,057	12,742
Other investments ⁽⁴⁾	Various	(6,221)	(5,560)
		\$ 130,517	\$ (329,112)

(1) 2021 includes decreases in our share of depreciation and amortization expense compared to the prior year of \$17,448, primarily resulting from non-cash impairment losses recognized during 2020. 2020 includes \$3,125 of write-offs of lease receivables deemed uncollectible.

(2) 2021 includes our \$11,620 share of net gain on the sale of the Paramus, New Jersey property to IKEA Property, Inc., and our \$2,956 share of net gain on the sale of a parcel of land in the Bronx, New York. We also recognized \$750 and \$300, respectively, of sales commissions paid by Alexander's in connection with these sales. 2020 includes our \$4,846 share of write-offs of lease receivables deemed uncollectible.

(3) Includes interests in 280 Park Avenue, 650 Madison Avenue, One Park Avenue (consolidated from August 5, 2021), 7 West 34th Street, 512 West 22nd Street, 61 Ninth Avenue, 85 Tenth Avenue and others.

(4) Includes interests in Independence Plaza, Rosslyn Plaza and others.

Income (Loss) from Real Estate Fund Investments

Below is a summary of income (loss) from the Fund and the Crowne Plaza joint venture.

(Amounts in thousands)

	For the Year Ended December 31,	
	2021	2020
Net investment income (loss)	\$ 6,445	\$ (220)
Net unrealized income (loss) on held investments	3,257	(226,107)
Net realized income on exited investments	1,364	—
Income (loss) from real estate fund investments	11,066	(226,327)
Less (income) loss attributable to noncontrolling interests in consolidated subsidiaries	(7,309)	163,213
Income (loss) from real estate fund investments net of noncontrolling interests in consolidated subsidiaries	\$ 3,757	\$ (63,114)

Interest and Other Investment Income (Loss), net

The following table sets forth the details of interest and other investment income (loss), net.

(Amounts in thousands)

	For the Year Ended December 31,	
	2021	2020
Interest on loans receivable	\$ 2,517	\$ 3,384
Interest on cash and cash equivalents and restricted cash	284	5,793
Credit losses on loans receivable	—	(13,369)
Market-to-market decrease in the fair value of marketable security (sold on January 23, 2020)	—	(4,938)
Other, net	1,811	3,631
	\$ 4,612	\$ (5,499)

Results of Operations – Year Ended December 31, 2021 Compared to December 31, 2020 - continued

Interest and Debt Expense

Interest and debt expense was \$231,096,000 for the year ended December 31, 2021, compared to \$229,251,000 in the prior year, an increase of \$1,845,000. This increase was primarily due to (i) \$23,729,000 of defeasance costs, of which \$7,119,000 is attributable to noncontrolling interest, in connection with the refinancing of 1290 Avenue of the Americas partially offset by, (ii) \$10,941,000 of lower interest expense due to variable rates on certain mortgage loans that were previously swapped to higher fixed rates under interest rate swap arrangements that expired in 2020, and (iii) \$9,387,000 of lower interest expense resulting from lower average interest rates on our variable rate loans.

Net Gains on Disposition of Wholly Owned and Partially Owned Assets

Net gains on disposition of wholly owned and partially owned assets for the year ended December 31, 2021 was \$50,770,000 compared to \$381,320,000 in the prior year, a decrease of \$330,550,000. This resulted primarily from lower net gains on sale of 220 CPS condominium units.

Income Tax Benefit (Expense)

Income tax benefit was \$10,496,000 for the year ended December 31, 2021, compared to an expense of \$36,630,000 in the prior year, a decrease in expense of \$47,126,000. This was primarily due to a higher tax benefit recognized by our taxable REIT subsidiaries in 2021 and lower income tax expense from the sale of 220 CPS condominium units partially offset by an increase in the deferred tax liability on our investment in Farley Office and Retail.

Net (Income) Loss Attributable to Noncontrolling Interests in Consolidated Subsidiaries

Net income attributable to noncontrolling interests in consolidated subsidiaries was \$24,014,000 for the year ended December 31, 2021, compared to net loss of \$139,894,000 in the prior year, an increase in income of \$163,908,000. This resulted primarily from a decrease in net loss allocated to the noncontrolling interests of our real estate fund investments.

Net (Income) Loss Attributable to Noncontrolling Interests in the Operating Partnership (Vornado Realty Trust)

Net income attributable to noncontrolling interests in the Operating Partnership was \$7,540,000 for the year ended December 31, 2021, compared to net loss of \$24,946,000 in the prior year, an increase in income of \$32,486,000. This resulted primarily from higher net income subject to allocation to Class A unitholders.

Preferred Share Dividends of Vornado Realty Trust

Preferred share dividends were \$65,880,000 for the year ended December 31, 2021, compared to \$51,739,000 in the prior year, an increase of \$14,141,000. This was primarily due to the issuance of the 5.25% Series N cumulative redeemable preferred shares in November 2020 and the 4.45% Series O cumulative redeemable preferred shares in September 2021, partially offset by the redemption of the 5.70% Series K cumulative redeemable preferred shares in October 2021.

Preferred Unit Distributions of Vornado Realty L.P.

Preferred unit distributions were \$66,035,000 for the year ended December 31, 2021, compared to \$51,904,000 in the prior year, an increase of \$14,131,000. This was primarily due to the issuance of the 5.25% Series N cumulative redeemable preferred units in November 2020 and the 4.45% Series O cumulative redeemable preferred units in September 2021, partially offset by the redemption of the 5.70% Series K cumulative redeemable preferred units in October 2021.

Preferred Share/Unit Issuance Costs

Preferred share/unit issuance costs for the year ended December 31, 2021 were \$9,033,000 representing the previously capitalized issuance costs which were expensed upon calling for redemption of all the outstanding Series K cumulative redeemable preferred shares/units in September 2021.

Results of Operations – Year Ended December 31, 2021 Compared to December 31, 2020 - continued
Same Store Net Operating Income At Share

Same store NOI at share represents NOI at share from operations which are in service in both the current and prior year reporting periods. Same store NOI at share - cash basis is same store NOI at share adjusted to exclude straight-line rental income and expense, amortization of acquired below and above market leases, net and other non-cash adjustments. We present these non-GAAP measures to (i) facilitate meaningful comparisons of the operational performance of our properties and segments, (ii) make decisions on whether to buy, sell or refinance properties, and (iii) compare the performance of our properties and segments to those of our peers. Same store NOI at share and same store NOI at share - cash basis should not be considered alternatives to net income or cash flow from operations and may not be comparable to similarly titled measures employed by other companies.

Below are reconciliations of NOI at share to same store NOI at share for our New York segment, theMART, 555 California Street and other investments for the year ended December 31, 2021 compared to December 31, 2020.

(Amounts in thousands)

	Total	New York	theMART⁽¹⁾	555 California Street	Other
NOI at share for the year ended December 31, 2021	\$ 1,033,368	\$ 892,954	\$ 58,909	\$ 64,826	\$ 16,679
Less NOI at share from:					
Change in ownership interest in One Park Avenue	(9,651)	(9,651)	—	—	—
Dispositions	312	312	—	—	—
Development properties	(28,793)	(28,793)	—	—	—
Hotel Pennsylvania (permanently closed on April 5, 2021)	12,677	12,677	—	—	—
Other non-same store income, net	(23,464)	(6,785)	—	—	(16,679)
Same store NOI at share for the year ended December 31, 2021	<u>\$ 984,449</u>	<u>\$ 860,714</u>	<u>\$ 58,909</u>	<u>\$ 64,826</u>	<u>\$ —</u>
NOI at share for the year ended December 31, 2020	\$ 972,579	\$ 833,891	\$ 69,178	\$ 60,324	\$ 9,186
Less NOI at share from:					
Dispositions	3,488	3,488	—	—	—
Development properties	(31,707)	(31,707)	—	—	—
Hotel Pennsylvania (permanently closed on April 5, 2021)	42,502	42,502	—	—	—
Other non-same store income, net	(30,321)	(20,382)	(524)	(229)	(9,186)
Same store NOI at share for the year ended December 31, 2020	<u>\$ 956,541</u>	<u>\$ 827,792</u>	<u>\$ 68,654</u>	<u>\$ 60,095</u>	<u>\$ —</u>
Increase (decrease) in same store NOI at share	<u>\$ 27,908</u>	<u>\$ 32,922</u>	<u>\$ (9,745)</u>	<u>\$ 4,731</u>	<u>\$ —</u>
% increase (decrease) in same store NOI at share	<u>2.9 %</u>	<u>4.0 %</u>	<u>(14.2)%</u>	<u>7.9 %</u>	<u>— %</u>

(1) 2021 includes an increase in real estate tax expense of \$18,285 primarily due to a recent increase in the triennial tax-assessed value of theMART.

Results of Operations – Year Ended December 31, 2021 Compared to December 31, 2020 - continued

Same Store Net Operating Income At Share - continued

Below are reconciliations of NOI at share - cash basis to same store NOI at share - cash basis for our New York segment, theMART, 555 California Street and other investments for the year ended December 31, 2021 compared to December 31, 2020.

(Amounts in thousands)

	Total	New York	theMART ⁽¹⁾	555 California Street	Other
NOI at share - cash basis for the year ended December 31, 2021	\$ 1,034,686	\$ 891,766	\$ 64,389	\$ 60,680	\$ 17,851
Less NOI at share - cash basis from:					
Change in ownership interest in One Park Avenue	(7,023)	(7,023)	—	—	—
Dispositions	611	611	—	—	—
Development properties	(25,710)	(25,710)	—	—	—
Hotel Pennsylvania (permanently closed on April 5, 2021)	12,723	12,723	—	—	—
Other non-same store income, net	(25,297)	(7,446)	—	—	(17,851)
Same store NOI at share - cash basis for the year ended December 31, 2021	\$ 989,990	\$ 864,921	\$ 64,389	\$ 60,680	\$ —
NOI at share - cash basis for the year ended December 31, 2020	\$ 1,018,825	\$ 870,606	\$ 76,251	\$ 60,917	\$ 11,051
Less NOI at share - cash basis from:					
Dispositions	(1,835)	(1,835)	—	—	—
Development properties	(42,998)	(42,998)	—	—	—
Hotel Pennsylvania (permanently closed on April 5, 2021)	41,941	41,941	—	—	—
Other non-same store income, net	(41,652)	(29,663)	(553)	(385)	(11,051)
Same store NOI at share - cash basis for the year ended December 31, 2020	\$ 974,281	\$ 838,051	\$ 75,698	\$ 60,532	\$ —
Increase (decrease) in same store NOI at share - cash basis	\$ 15,709	\$ 26,870	\$ (11,309)	\$ 148	\$ —
% increase (decrease) in same store NOI at share - cash basis	1.6 %	3.2 %	(14.9)%	0.2 %	— %

(1) 2021 includes an increase in real estate tax expense of \$18,285 primarily due to a recent increase in the triennial tax-assessed value of theMART.

Related Party Transactions

See Note 22 - *Related Party Transactions* to our consolidated financial statements in this Annual Report on Form 10-K for a discussion concerning related party transactions.

Liquidity and Capital Resources

Our cash requirements include property operating expenses, capital improvements, tenant improvements, debt service, leasing commissions, dividends to our shareholders and distributions to unitholders of the Operating Partnership, as well as acquisition and development and redevelopment costs. The sources of liquidity to fund these cash requirements include rental revenue, which is our primary source of cash flow and is dependent upon the occupancy and rental rates of our properties; proceeds from debt financings, including mortgage loans, senior unsecured borrowings, unsecured term loans and unsecured revolving credit facilities; proceeds from the issuance of common and preferred equity; and asset sales.

As of December 31, 2021, we have \$4.1 billion of liquidity comprised of \$1.9 billion of cash and cash equivalents and restricted cash and \$2.2 billion available on our \$2.75 billion revolving credit facilities. The on-going challenges posed by the COVID-19 pandemic could adversely impact our cash flow from continuing operations but we anticipate that cash flow from continuing operations over the next twelve months together with cash balances on hand will be adequate to fund our business operations, cash distributions to unitholders of the Operating Partnership, cash dividends to our shareholders, debt amortization and recurring capital expenditures. Capital requirements for development and redevelopment expenditures and acquisitions may require funding from borrowings, equity offerings and/or asset sales.

We may from time to time purchase or retire outstanding debt securities or redeem our equity securities. Such purchases, if any, will depend on prevailing market conditions, liquidity requirements and other factors. The amounts involved in connection with these transactions could be material to our consolidated financial statements.

Summary of Cash Flows

Cash and cash equivalents and restricted cash was \$1,930,351,000 at December 31, 2021, a \$199,982,000 increase from the balance at December 31, 2020.

Our cash flow activities for the years ended December 31, 2021 and 2020 are summarized as follows:

(Amounts in thousands)

	For the Year Ended December 31,		Increase (Decrease) in Cash Flow
	2021	2020	
Net cash provided by operating activities	\$ 761,806	\$ 424,240	\$ 337,566
Net cash used in investing activities	(532,347)	(87,800)	(444,547)
Net cash used in financing activities	(29,477)	(213,202)	183,725

Operating Activities

Net cash provided by operating activities primarily consists of cash inflows from rental revenues and operating distributions from our non-consolidated partially owned entities less cash outflows for property expenses, general and administrative expenses and interest expense. For the year ended December 31, 2021, net cash provided by operating activities of \$761,806,000 was comprised of \$758,260,000 of cash from operations, including distributions of income from partially owned entities of \$214,521,000 and return of capital from real estate fund investments of \$5,104,000, and a net increase of \$3,546,000 in cash due to the timing of cash receipts and payments related to changes in operating assets and liabilities.

Liquidity and Capital Resources - continued

Summary of Cash Flows - continued

Investing Activities

Net cash flow used in investing activities is impacted by the timing and extent of our development, capital improvement, acquisition and disposition activities during the year.

The following table details the net cash used in investing activities for the years ended December 31, 2021 and 2020:

(Amounts in thousands)

	For the Year Ended December 31,		Increase (Decrease) in Cash Flow
	2021	2020	
Development costs and construction in progress	\$ (585,940)	\$ (601,920)	\$ 15,980
Additions to real estate	(149,461)	(155,738)	6,277
Proceeds from sale of condominium units at 220 Central Park South	137,404	1,044,260	(906,856)
Acquisition of additional 45.0% ownership interest in One Park Avenue (inclusive of \$5,806 of prorations and net working capital and net of \$39,370 of cash and restricted cash balances consolidated upon acquisition)	(123,936)	—	(123,936)
Distributions of capital from partially owned entities	106,005	2,389	103,616
Proceeds from sales of real estate	100,024	—	100,024
Investments in partially owned entities	(14,997)	(8,959)	(6,038)
Acquisitions of real estate and other	(3,000)	(1,156)	(1,844)
Proceeds from repayments of loans receivable	1,554	—	1,554
Moynihan Train Hall expenditures	—	(395,051)	395,051
Proceeds from sales of marketable securities	—	28,375	(28,375)
Net cash used in investing activities	\$ (532,347)	\$ (87,800)	\$ (444,547)

Financing Activities

Net cash flow used in financing activities is impacted by the timing and extent of issuances of debt and equity securities, distributions paid to common shareholders and unitholders of the Operating Partnership as well as principal and other repayments associated with our outstanding debt.

The following table details the net cash used in financing activities for the years ended December 31, 2021 and 2020:

(Amounts in thousands)

	For the Year Ended December 31,		Increase (Decrease) in Cash Flow
	2021	2020	
Proceeds from borrowings	\$ 3,248,007	\$ 1,056,315	\$ 2,191,692
Repayments of borrowings	(1,584,243)	(1,067,564)	(516,679)
Purchase of marketable securities in connection with defeasance of mortgage payable	(973,729)	—	(973,729)
Dividends paid on common shares/Distributions to Vornado	(406,109)	(827,319)	421,210
Redemption of preferred shares/units	(300,000)	—	(300,000)
Proceeds from the issuance of preferred shares/units	291,153	291,182	(29)
Distributions to redeemable security holders and noncontrolling interests in consolidated subsidiaries	(190,876)	(91,514)	(99,362)
Dividends paid on preferred shares/Distributions to preferred unitholders	(65,880)	(64,271)	(1,609)
Debt issuance costs	(51,184)	(10,901)	(40,283)
Contributions from noncontrolling interests in consolidated subsidiaries	4,052	100,094	(96,042)
Repurchase of shares/Class A units related to stock compensation agreements and related tax withholdings and other	(1,567)	(137)	(1,430)
Proceeds received from exercise of Vornado stock options and other	899	5,862	(4,963)
Moynihan Train Hall reimbursement from Empire State Development	—	395,051	(395,051)
Net cash used in financing activities	\$ (29,477)	\$ (213,202)	\$ 183,725

Liquidity and Capital Resources - continued

Dividends

On January 19, 2022, Vornado declared a quarterly common dividend of \$0.53 per share (an indicated annual rate of \$2.12 per common share). This dividend, if declared by the Board of Trustees for all of 2022, would require Vornado to pay out approximately \$406,000,000 of cash for common share dividends. In addition, during 2022, Vornado expects to pay approximately \$62,000,000 of cash dividends on outstanding preferred shares and approximately \$30,000,000 of cash distributions to unitholders of the Operating Partnership.

Debt

We have an effective shelf registration for the offering of our equity and debt securities that is not limited in amount due to our status as a “well-known seasoned issuer.” We have issued senior unsecured notes from a shelf registration statement that contain financial covenants that restrict our ability to incur debt, and that require us to maintain a level of unencumbered assets based on the level of our secured debt. Our unsecured revolving credit facilities contain financial covenants that require us to maintain minimum interest coverage and maximum debt to market capitalization ratios, and provide for higher interest rates in the event of a decline in our ratings below Baa3/BBB. Our unsecured revolving credit facilities also contain customary conditions precedent to borrowing, including representations and warranties, and contain customary events of default that could give rise to accelerated repayment, including such items as failure to pay interest or principal. As of December 31, 2021, we are in compliance with all of the financial covenants required by our senior unsecured notes and our unsecured revolving credit facilities.

A summary of our consolidated debt as of December 31, 2021 and 2020 is presented below.

(Amounts in thousands)

	As of December 31, 2021		As of December 31, 2020	
	Balance	Weighted Average Interest Rate	Balance	Weighted Average Interest Rate
Consolidated debt:				
Variable rate	\$ 4,534,215	1.59%	\$ 3,220,815	1.83%
Fixed rate	4,140,000	3.06%	4,212,643	3.70%
Total	8,674,215	2.29%	7,433,458	2.89%
Deferred financing costs, net and other	(58,268)		(34,462)	
Total, net	\$ 8,615,947		\$ 7,398,996	

During 2022 and 2023, \$700,000,000 and \$0, respectively, of our outstanding consolidated debt matures (based on the extended maturity for certain loans in which we have the unilateral right to extend); we may refinance this maturing debt as it comes due or choose to repay it using cash and cash equivalents or our unsecured revolving credit facilities. We may also refinance or prepay other outstanding debt depending on prevailing market conditions, liquidity requirements and other factors. The amounts involved in connection with these transactions could be material to our consolidated financial statements.

Details of 2021 financing activities are provided in the “Overview” of Management’s Discussion and Analysis of Financial Condition and Results of Operations.

The contractual principal and interest repayments schedule of our consolidated debt as of December 31, 2021 is as follows:

(Amounts in thousands)

	Total	Less than 1 Year	1 – 3 Years	3 – 5 Years	Thereafter
Notes and mortgages payable	\$ 6,484,855	\$ 1,178,788	\$ 4,112,696	\$ 394,291	\$ 799,080
Senior unsecured notes due 2025	497,906	15,750	31,500	450,656	—
Senior unsecured notes due 2026	438,031	8,600	17,200	412,231	—
Senior unsecured notes due 2031	462,124	11,900	23,800	23,800	402,624
Unsecured term loan	859,732	29,799	829,933	—	—
Revolving credit facilities	585,328	8,181	577,147	—	—
Total contractual principal ⁽¹⁾ and interest ⁽²⁾ repayments	\$ 9,327,976	\$ 1,253,018	\$ 5,592,276	\$ 1,280,978	\$ 1,201,704

(1) Based on the contractual maturity of our loans, including the extended maturity date of certain loans for which the unilateral right to extend has been exercised as of December 31, 2021.

(2) Estimated interest for variable-rate debt based on the 1-month LIBOR curve available as of December 31, 2021.

Liquidity and Capital Resources - continued

Capital Expenditures

Capital expenditures consist of expenditures to maintain and improve assets, tenant improvement allowances and leasing commissions. During 2022, we expect to incur \$275,000,000 of capital expenditures for our consolidated properties. We plan to fund these capital expenditures from operating cash flow, existing liquidity, and/or borrowings. Our partially owned non-consolidated subsidiaries typically fund their capital expenditures without any additional equity contribution from us.

Development and Redevelopment Expenditures

Development and redevelopment expenditures consist of all hard and soft costs associated with the development and redevelopment of a property. We plan to fund these development and redevelopment expenditures from operating cash flow, existing liquidity, and/or borrowings. See detailed discussion below for our current development and redevelopment projects.

PENN District

Farley

Our 95% joint venture (5% is owned by the Related Companies ("Related")) is developing Farley Office and Retail, which will include approximately 845,000 rentable square feet of commercial space, comprised of approximately 730,000 square feet of office space and approximately 115,000 square feet of restaurant and retail space. The total development cost of this project is estimated to be approximately \$1,120,000,000 at our 95% share, of which \$896,186,000 of cash has been expended as of December 31, 2021.

PENN 1

We are redeveloping PENN 1, a 2,547,000 square foot office building located on 34th Street between Seventh and Eighth Avenue. In December 2020, we entered into an agreement with the Metropolitan Transportation Authority (the "MTA") to oversee the redevelopment of the Long Island Rail Road Concourse at Penn Station (the "Concourse"), within the footprint of PENN 1. Skanska USA Civil Northeast, Inc. will perform the redevelopment under a fixed price contract for \$380,000,000 which is being funded by the MTA. In connection with the redevelopment, we entered into an agreement with the MTA which will result in the widening of the Concourse to relieve overcrowding and our trading of 15,000 square feet of back of house space for 22,000 square feet of retail frontage space. Vornado's total development cost for the PENN 1 project is estimated to be \$450,000,000. As of December 31, 2021, \$309,437,000 of cash has been expended.

PENN 2

We are redeveloping PENN 2, a 1,795,000 square foot (as expanded) office building, located on the west side of Seventh Avenue between 31st and 33rd Street. The development cost of this project is estimated to be \$750,000,000, of which \$161,066,000 of cash has been expended as of December 31, 2021.

PENN 15 (Hotel Pennsylvania Site)

We have permanently closed the Hotel Pennsylvania and plan to develop an office tower on the site. Demolition of the existing building structure commenced in the fourth quarter of 2021.

We are also making districtwide improvements within the PENN District. The development cost of these improvements is estimated to be \$100,000,000, of which \$31,481,000 of cash has been expended as of December 31, 2021.

We are also evaluating other development and redevelopment opportunities at certain of our properties in Manhattan including, in particular, the PENN District.

There can be no assurance that the above projects will be completed, completed on schedule or within budget.

Other Obligations

We have contractual cash obligations for certain properties that are subject to long-term ground and building leases. During 2022, \$36,044,000 of lease payments are due, including fair market rent resets accounted for as variable rent, under our operating leases. For 2023 and thereafter, we have \$1,303,520,000 of future lease payments. We believe that our operating cash flow will be adequate to fund these lease payments.

Liquidity and Capital Resources - continued

Insurance

For our properties, we maintain general liability insurance with limits of \$300,000,000 per occurrence and per property, of which \$250,000,000 includes communicable disease coverage, and we maintain all risk property and rental value insurance with limits of \$2.0 billion per occurrence, with sub-limits for certain perils such as flood and earthquake, excluding communicable disease coverage. Our California properties have earthquake insurance with coverage of \$350,000,000 per occurrence and in the aggregate, subject to a deductible in the amount of 5% of the value of the affected property. We maintain coverage for certified terrorism acts with limits of \$6.0 billion per occurrence and in the aggregate (as listed below), \$1.2 billion for non-certified acts of terrorism, and \$5.0 billion per occurrence and in the aggregate for terrorism involving nuclear, biological, chemical and radiological ("NBCR") terrorism events, as defined by the Terrorism Risk Insurance Act of 2002, as amended to date and which has been extended through December 2027.

Penn Plaza Insurance Company, LLC ("PPIC"), our wholly owned consolidated subsidiary, acts as a re-insurer with respect to a portion of all risk property and rental value insurance and a portion of our earthquake insurance coverage, and as a direct insurer for coverage for acts of terrorism including NBCR acts. Coverage for acts of terrorism (excluding NBCR acts) is fully reinsured by third party insurance companies and the Federal government with no exposure to PPIC. For NBCR acts, PPIC is responsible for a deductible of \$1,785,910 and 20% of the balance of a covered loss and the Federal government is responsible for the remaining portion of a covered loss. We are ultimately responsible for any loss incurred by PPIC.

Certain condominiums in which we own an interest (including our leasehold interest in the Farley Condominiums) own insurance policies with different per occurrence and aggregate limits than our policies described above.

We continue to monitor the state of the insurance market and the scope and costs of coverage for acts of terrorism and other events. However, we cannot anticipate what coverage will be available on commercially reasonable terms in the future. We are responsible for uninsured losses and for deductibles and losses in excess of our insurance coverage, which could be material.

Our debt instruments, consisting of mortgage loans secured by our properties, senior unsecured notes and revolving credit agreements contain customary covenants requiring us to maintain insurance. Although we believe that we have adequate insurance coverage for purposes of these agreements, we may not be able to obtain an equivalent amount of coverage at reasonable costs in the future. Further, if lenders insist on greater coverage than we are able to obtain it could adversely affect our ability to finance or refinance our properties and expand our portfolio.

Other Commitments and Contingencies

We are from time to time involved in legal actions arising in the ordinary course of business. In our opinion, after consultation with legal counsel, the outcome of such matters is not currently expected to have a material adverse effect on our financial position, results of operations or cash flows.

Each of our properties has been subjected to varying degrees of environmental assessment at various times. The environmental assessments did not reveal any material environmental contamination. However, there can be no assurance that the identification of new areas of contamination, changes in the extent or known scope of contamination, the discovery of additional sites, or changes in cleanup requirements would not result in significant costs to us.

In July 2018, we leased 78,000 square feet at 345 Montgomery Street in San Francisco, CA, to a subsidiary of Regus PLC, for an initial term of 15 years. The obligations under the lease were guaranteed by Regus PLC in an amount of up to \$90,000,000. The tenant purported to terminate the lease prior to space delivery. We commenced a suit on October 23, 2019 seeking to enforce the lease and the guaranty. On May 11, 2021, the court issued a final statement of decision in our favor and on July 7, 2021, the Regus subsidiary appealed the decision. On October 9, 2020, the successor to Regus PLC filed for bankruptcy in Luxembourg. We are actively pursuing claims relating to the guaranty against the successor to Regus PLC and its parent in Luxembourg and other jurisdictions.

In November 2011, we entered into an agreement with the New York City Economic Development Corporation ("EDC") to lease Piers 92 and 94 (the "Piers"). In February 2019, EDC issued an order for us to vacate Pier 92 due to structural problems. Beginning March 2020 through August 2021, we did not pay EDC the monthly rent due under the non-recourse lease due to the loss of our right to use or occupy Pier 92. On August 31, 2021, both parties entered into a mutual release with respect to claims by EDC for unpaid rent owed and claims by the Company for costs and damages as a result of our inability to use or occupy Pier 92.

Liquidity and Capital Resources - continued

Other Commitments and Contingencies - continued

Our mortgage loans are non-recourse to us, except for the mortgage loans secured by 640 Fifth Avenue, 7 West 34th Street and 435 Seventh Avenue, which we guaranteed and therefore are part of our tax basis. In certain cases we have provided guarantees or master leased tenant space. These guarantees and master leases terminate either upon the satisfaction of specified circumstances or repayment of the underlying loans. In addition, we have guaranteed the rent and payments in lieu of real estate taxes due to ESD, an entity of New York State, for Farley Office and Retail. As of December 31, 2021, the aggregate dollar amount of these guarantees and master leases is approximately \$1,648,000,000.

As of December 31, 2021, \$15,273,000 of letters of credit were outstanding under one of our unsecured revolving credit facilities. Our unsecured revolving credit facilities contain financial covenants that require us to maintain minimum interest coverage and maximum debt to market capitalization ratios, and provide for higher interest rates in the event of a decline in our ratings below Baa3/BBB. Our unsecured revolving credit facilities also contain customary conditions precedent to borrowing, including representations and warranties, and also contain customary events of default that could give rise to accelerated repayment, including such items as failure to pay interest or principal.

Our 95% consolidated joint venture (5% is owned by Related) is developing Farley Office and Retail. In connection with the development of the property, the joint venture admitted a historic tax credit investor partner (the "Tax Credit Investor"). Under the terms of the historic tax credit arrangement, the joint venture is required to comply with various laws, regulations, and contractual provisions. Non-compliance with applicable requirements could result in projected tax benefits not being realized and, therefore, may require a refund or reduction of the Tax Credit Investor's capital contributions. As of December 31, 2021, the Tax Credit Investor has made \$92,400,000 in capital contributions. Vornado and Related have guaranteed certain of the joint venture's obligations to the Tax Credit Investor.

As investment manager of the Fund we are entitled to an incentive allocation after the limited partners have received a preferred return on their invested capital. The incentive allocation is subject to catch-up and clawback provisions. Accordingly, based on the December 31, 2021 fair value of the Fund assets, at liquidation we would be required to make a \$27,100,000 payment to the limited partners, net of amounts owed to us, representing a clawback of previously paid incentive allocations, which would have no income statement impact as it was previously accrued.

As of December 31, 2021, we expect to fund additional capital to certain of our partially owned entities aggregating approximately \$10,300,000.

As of December 31, 2021, we have construction commitments aggregating approximately \$494,000,000.

Funds From Operations

Vornado Realty Trust

FFO is computed in accordance with the definition adopted by the Board of Governors of the National Association of Real Estate Investment Trusts (“NAREIT”). NAREIT defines FFO as GAAP net income or loss adjusted to exclude net gains from sales of certain real estate assets, real estate impairment losses, depreciation and amortization expense from real estate assets and other specified items, including the pro rata share of such adjustments of unconsolidated subsidiaries. FFO and FFO per diluted share are non-GAAP financial measures used by management, investors and analysts to facilitate meaningful comparisons of operating performance between periods and among our peers because it excludes the effect of real estate depreciation and amortization and net gains on sales, which are based on historical costs and implicitly assume that the value of real estate diminishes predictably over time, rather than fluctuating based on existing market conditions. FFO does not represent cash generated from operating activities and is not necessarily indicative of cash available to fund cash requirements and should not be considered as an alternative to net income as a performance measure or cash flow as a liquidity measure. FFO may not be comparable to similarly titled measures employed by other companies. The calculations of both the numerator and denominator used in the computation of income per share are disclosed in Note 18 – *Income (Loss) Per Share/Income (Loss) Per Class A Unit*, in our consolidated financial statements in Part II, Item 8 of this Annual Report on Form 10-K.

FFO attributable to common shareholders plus assumed conversions was \$571,074,000, or \$2.97 per diluted share, for the year ended December 31, 2021, compared to \$750,522,000, or \$3.93 per diluted share, for the prior year. Details of certain items that impact FFO are discussed in the financial results summary of our “Overview.”

(Amounts in thousands, except per share amounts)

	For the Year Ended December 31,	
	2021	2020
Reconciliation of net income (loss) attributable to common shareholders to FFO attributable to common shareholders plus assumed conversions:		
Net income (loss) attributable to common shareholders	\$ 101,086	\$ (348,744)
Per diluted share	\$ 0.53	\$ (1.83)
FFO adjustments:		
Depreciation and amortization of real property	\$ 373,792	\$ 368,556
Real estate impairment losses	7,880	236,286
Decrease in fair value of marketable securities	—	4,938
Proportionate share of adjustments to equity in net income (loss) of partially owned entities to arrive at FFO:		
Depreciation and amortization of real property	139,247	156,646
Net gains on sale of real estate	(15,675)	—
(Increase) decrease in fair value of marketable securities	(1,155)	2,801
Non-cash impairment loss on our investment in Fifth Avenue and Times Square JV, net of \$4,289 of noncontrolling interests	—	409,060
Noncontrolling interests' share of above adjustments	(34,144)	(79,068)
FFO adjustments, net	\$ 469,945	\$ 1,099,219
FFO attributable to common shareholders	\$ 571,031	\$ 750,475
Convertible preferred share dividends	43	47
FFO attributable to common shareholders plus assumed conversions	\$ 571,074	\$ 750,522
Per diluted share	\$ 2.97	\$ 3.93
Reconciliation of weighted average shares outstanding:		
Weighted average common shares outstanding	191,551	191,146
Effect of dilutive securities:		
Out-Performance Plan units	557	—
Convertible preferred shares	26	28
AO LTIP units	10	—
Employee stock options and restricted stock awards	4	19
Denominator for FFO per diluted share	192,148	191,193

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We have exposure to fluctuations in market interest rates. Market interest rates are sensitive to many factors that are beyond our control. Our exposure to a change in interest rates on our consolidated and non-consolidated debt (all of which arises out of non-trading activity) is as follows:

(Amounts in thousands, except per share and unit amounts)

	2021			2020	
	December 31, Balance	Weighted Average Interest Rate	Effect of 1% Change In Base Rates	December 31, Balance	Weighted Average Interest Rate
Consolidated debt:					
Variable rate	\$ 4,534,215	1.59%	\$ 45,342	\$ 3,220,815	1.83%
Fixed rate	4,140,000	3.06%	—	4,212,643	3.70%
	<u>\$ 8,674,215</u>	<u>2.29%</u>	<u>45,342</u>	<u>\$ 7,433,458</u>	<u>2.89%</u>
Pro rata share of debt of non-consolidated entities⁽¹⁾:					
Variable rate	\$ 1,267,224	1.78%	12,672	\$ 1,384,710 ⁽¹⁾	1.80%
Fixed rate	1,432,181	3.72%	—	1,488,464	3.76%
	<u>\$ 2,699,405</u>	<u>2.81%</u>	<u>12,672</u>	<u>\$ 2,873,174</u>	<u>2.81%</u>
Noncontrolling interests' share of consolidated subsidiaries			(6,821)		
Total change in annual net income attributable to the Operating Partnership			51,193		
Noncontrolling interests' share of the Operating Partnership			(3,496)		
Total change in annual net income attributable to Vornado			<u>\$ 47,697</u>		
Total change in annual net income attributable to the Operating Partnership per diluted Class A unit			\$ 0.25		
Total change in annual net income attributable to Vornado per diluted share			<u>\$ 0.25</u>		

(1) Net of our \$16,200 share of Alexander's participation in its Rego Park II shopping center mortgage loan which is considered partially extinguished as the participation interest is a reacquisition of debt. On April 7, 2021, Alexander's used its participation in the loan to reduce the loan balance.

Fair Value of Debt

The estimated fair value of our consolidated debt is calculated based on current market prices and discounted cash flows at the current rate at which similar loans would be made to borrowers with similar credit ratings for the remaining term of such debt. As of December 31, 2021, the estimated fair value of our consolidated debt was \$8,657,000,000.

Derivatives and Hedging

We utilize various financial instruments to mitigate the impact of interest rate fluctuations on our cash flows and earnings, including hedging strategies, depending on our analysis of the interest rate environment and the costs and risks of such strategies. The following table summarizes our consolidated derivative instruments, all of which hedge variable rate debt, as of December 31, 2021.

(Amounts in thousands)

Hedged Item	Fair Value	Notional Amount	As of December 31, 2021			
			Variable Rate			
			Spread over LIBOR	Interest Rate	Swapped Rate	Expiration Date
Included in other assets:						
555 California Street mortgage loan interest rate swap	\$ 11,814	\$ 840,000 ⁽¹⁾	L+193	2.04%	2.26%	5/24
PENN 11 mortgage loan interest rate swap	6,565	500,000	L+195	2.05%	2.23%	3/24
Various interest rate caps	550	1,650,000				
	<u>\$ 18,929</u>	<u>\$ 2,990,000</u>				
Included in other liabilities:						
Unsecured term loan interest rate swap	\$ 28,976	\$ 750,000 ⁽²⁾	L+100	1.10%	3.87%	10/23
33-00 Northern Boulevard mortgage loan interest rate swap	3,861	100,000	L+180	1.91%	4.14%	1/25
	<u>\$ 32,837</u>	<u>\$ 850,000</u>				

(1) Represents our 70.0% share of the \$1.2 billion mortgage loan.

(2) Remaining \$50,000 balance of our unsecured term loan bears interest at a floating rate of LIBOR plus 1.00%.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and Board of Trustees
Vornado Realty Trust
New York, New York

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Vornado Realty Trust and subsidiaries (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the three years in the period ended December 31, 2021, and the related notes and the schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with the accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 14, 2022, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Real Estate Recoverability Assessment — Refer to Note 2 to the financial statements

Critical Audit Matter Description

The Company's wholly owned properties are individually reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment exists when the carrying amount of an asset exceeds the aggregate projected future cash flows over the anticipated holding period on an undiscounted basis. The recoverability assessment is determined based on projected future cash flows that utilize capitalization rates and available market information. The Company's undiscounted cash flows requires management to make significant estimates and assumptions related to future market rental rates and capitalization rates.

We identified the recoverability assessment of wholly owned properties as a critical audit matter because of the significant estimates and assumptions related to future market rental rates and capitalization rates. Performing audit procedures to evaluate the reasonableness of these estimates and assumptions required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists, where applicable.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the recoverability assessment of wholly owned properties included the following, among other things:

- We tested the effectiveness of controls over management's evaluation of recoverability of its wholly owned properties, including those over future market rental rates and capitalization rates used in the assessment.
- We evaluated the reasonableness of future market rental rates and capitalization rates used by management with independent market data, focusing on geographical location and property. In addition, we developed ranges of independent estimates of future market rental rates and capitalization rates and compared those to the amounts used by management.
- We involved our fair value specialists in providing comparable market transaction details to further support the future market rental rate and capitalization rate assumptions, as applicable.
- We evaluated the reasonableness of management's projected future cash flows by comparing management's projections to the Company's historical results.
- We evaluated whether the assumptions were consistent with evidence obtained in other areas of the audit.

/s/ DELOITTE & TOUCHE LLP

New York, New York
February 14, 2022

We have served as the Company's auditor since 1976.

VORNADO REALTY TRUST
CONSOLIDATED BALANCE SHEETS

(Amounts in thousands, except unit, share and per share amounts)

	As of December 31,	
	2021	2020
ASSETS		
Real estate, at cost:		
Land	\$ 2,540,193	\$ 2,420,054
Buildings and improvements	9,839,166	7,933,030
Development costs and construction in progress	718,694	1,604,637
Leasehold improvements and equipment	119,792	130,222
Total	13,217,845	12,087,943
Less accumulated depreciation and amortization	(3,376,347)	(3,169,446)
Real estate, net	9,841,498	8,918,497
Right-of-use assets	337,197	367,365
Cash and cash equivalents	1,760,225	1,624,482
Restricted cash	170,126	105,887
Tenant and other receivables	79,661	77,658
Investments in partially owned entities	3,297,389	3,491,107
Real estate fund investments	7,730	3,739
220 Central Park South condominium units ready for sale	57,142	128,215
Receivable arising from the straight-lining of rents	656,318	674,075
Deferred leasing costs, net of accumulated amortization of \$211,775 and \$196,972	391,693	372,919
Identified intangible assets, net of accumulated amortization of \$97,186 and \$93,113	154,895	23,856
Other assets	512,714	434,022
	<u>\$ 17,266,588</u>	<u>\$ 16,221,822</u>
LIABILITIES, REDEEMABLE NONCONTROLLING INTERESTS AND EQUITY		
Mortgages payable, net	\$ 6,053,343	\$ 5,580,549
Senior unsecured notes, net	1,189,792	446,685
Unsecured term loan, net	797,812	796,762
Unsecured revolving credit facilities	575,000	575,000
Lease liabilities	370,206	401,008
Accounts payable and accrued expenses	613,497	427,202
Deferred revenue	48,118	40,110
Deferred compensation plan	110,174	105,564
Other liabilities	304,725	294,520
Total liabilities	10,062,667	8,667,400
Commitments and contingencies		
Redeemable noncontrolling interests:		
Class A units - 14,033,438 and 13,583,607 units outstanding	587,440	507,212
Series D cumulative redeemable preferred units - 141,400 and 141,401 units outstanding	3,535	4,535
Total redeemable noncontrolling partnership units	590,975	511,747
Redeemable noncontrolling interest in a consolidated subsidiary	97,708	94,520
Total redeemable noncontrolling interests	688,683	606,267
Shareholders' equity:		
Preferred shares of beneficial interest: no par value per share; authorized 110,000,000 shares; issued and outstanding 48,792,902 and 48,793,402 shares	1,182,459	1,182,339
Common shares of beneficial interest: \$0.04 par value per share; authorized 250,000,000 shares; issued and outstanding 191,723,608 and 191,354,679 shares	7,648	7,633
Additional capital	8,143,093	8,192,507
Earnings less than distributions	(3,079,320)	(2,774,182)
Accumulated other comprehensive loss	(17,534)	(75,099)
Total shareholders' equity	6,236,346	6,533,198
Noncontrolling interests in consolidated subsidiaries	278,892	414,957
Total equity	<u>6,515,238</u>	<u>6,948,155</u>
	<u>\$ 17,266,588</u>	<u>\$ 16,221,822</u>

See notes to the consolidated financial statements.

VORNADO REALTY TRUST
CONSOLIDATED STATEMENTS OF INCOME

(Amounts in thousands, except per share amounts)

	For the Year Ended December 31,		
	2021	2020	2019
REVENUES:			
Rental revenues	\$ 1,424,531	\$ 1,377,635	\$ 1,767,222
Fee and other income	164,679	150,316	157,478
Total revenues	1,589,210	1,527,951	1,924,700
EXPENSES:			
Operating	(797,315)	(789,066)	(917,981)
Depreciation and amortization	(412,347)	(399,695)	(419,107)
General and administrative	(134,545)	(181,509)	(169,920)
Expense from deferred compensation plan liability	(9,847)	(6,443)	(11,609)
Impairment losses, transaction related costs and other	(13,815)	(174,027)	(106,538)
Total expenses	(1,367,869)	(1,550,740)	(1,625,155)
Income (loss) from partially owned entities	130,517	(329,112)	78,865
Income (loss) from real estate fund investments	11,066	(226,327)	(104,082)
Interest and other investment income (loss), net	4,612	(5,499)	21,819
Income from deferred compensation plan assets	9,847	6,443	11,609
Interest and debt expense	(231,096)	(229,251)	(286,623)
Net gain on transfer to Fifth Avenue and Times Square JV	—	—	2,571,099
Net gains on disposition of wholly owned and partially owned assets	50,770	381,320	845,499
Income (loss) before income taxes	197,057	(425,215)	3,437,731
Income tax benefit (expense)	10,496	(36,630)	(103,439)
Income (loss) from continuing operations	207,553	(461,845)	3,334,292
Loss from discontinued operations	—	—	(30)
Net income (loss)	207,553	(461,845)	3,334,262
Less net (income) loss attributable to noncontrolling interests in:			
Consolidated subsidiaries	(24,014)	139,894	24,547
Operating Partnership	(7,540)	24,946	(210,872)
Net income (loss) attributable to Vornado	175,999	(297,005)	3,147,937
Preferred share dividends	(65,880)	(51,739)	(50,131)
Series K preferred share issuance costs	(9,033)	—	—
NET INCOME (LOSS) attributable to common shareholders	\$ 101,086	\$ (348,744)	\$ 3,097,806
INCOME (LOSS) PER COMMON SHARE - BASIC:			
Net income (loss) per common share	\$ 0.53	\$ (1.83)	\$ 16.23
Weighted average shares outstanding	191,551	191,146	190,801
INCOME (LOSS) PER COMMON SHARE - DILUTED:			
Net income (loss) per common share	\$ 0.53	\$ (1.83)	\$ 16.21
Weighted average shares outstanding	192,122	191,146	191,053

See notes to consolidated financial statements.

VORNADO REALTY TRUST
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Net income (loss)	\$ 207,553	\$ (461,845)	\$ 3,334,262
Other comprehensive income (loss):			
Increase (reduction) in value of interest rate swaps and other	51,338	(29,971)	(47,883)
Other comprehensive income (loss) of nonconsolidated subsidiaries	10,275	(14,342)	(938)
Amounts reclassified from accumulated other comprehensive loss relating to nonconsolidated subsidiary	—	—	(2,311)
Comprehensive income (loss)	269,166	(506,158)	3,283,130
Less comprehensive (income) loss attributable to noncontrolling interests	(35,602)	174,287	(183,090)
Comprehensive income (loss) attributable to Vornado	\$ 233,564	\$ (331,871)	\$ 3,100,040

See notes to consolidated financial statements.

VORNADO REALTY TRUST
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(Amounts in thousands, except per share amount)

	Preferred Shares		Common Shares		Additional Capital	Earnings Less Than Distributions	Accumulated Other Comprehensive (Loss) Income	Non-controlling Interests in Consolidated Subsidiaries	Total Equity
	Shares	Amount	Shares	Amount					
Balance as of December 31, 2020	48,793	\$ 1,182,339	191,355	\$ 7,633	\$ 8,192,507	\$ (2,774,182)	\$ (75,099)	\$ 414,957	\$ 6,948,155
Net income attributable to Vornado	—	—	—	—	—	175,999	—	—	175,999
Net income attributable to nonredeemable noncontrolling interests in consolidated subsidiaries	—	—	—	—	—	—	—	20,826	20,826
Dividends on common shares (\$2.12 per share)	—	—	—	—	—	(406,109)	—	—	(406,109)
Dividends on preferred shares (see Note 11 for dividends per share amounts)	—	—	—	—	—	(65,880)	—	—	(65,880)
Series O cumulative redeemable preferred shares issuance	12,000	291,153	—	—	—	—	—	—	291,153
Common shares issued:									
Upon redemption of Class A units, at redemption value	—	—	350	14	14,562	—	—	—	14,576
Under employees' share option plan	—	—	1	—	22	—	—	—	22
Under dividend reinvestment plan	—	—	21	1	876	—	—	—	877
Contributions	—	—	—	—	—	—	—	4,052	4,052
Distributions	—	—	—	—	—	—	—	(160,975)	(160,975)
Conversion of Series A preferred shares to common shares	—	(13)	1	—	13	—	—	—	—
Deferred compensation shares and options	—	—	(4)	—	906	(114)	—	—	792
Other comprehensive income of nonconsolidated subsidiaries	—	—	—	—	—	—	10,275	—	10,275
Increase in value of interest rate swaps	—	—	—	—	—	—	51,337	—	51,337
Unearned 2018 Out-Performance Plan awards acceleration	—	—	—	—	10,283	—	—	—	10,283
Redeemable Class A unit measurement adjustment	—	—	—	—	(76,073)	—	—	—	(76,073)
Series K cumulative redeemable preferred shares called for redemption	(12,000)	(290,967)	—	—	—	(9,033)	—	—	(300,000)
Redeemable noncontrolling interests' share of above adjustments	—	—	—	—	—	—	(4,048)	—	(4,048)
Other	—	(53)	—	—	(3)	(1)	1	32	(24)
Balance as of December 31, 2021	<u>48,793</u>	<u>\$ 1,182,459</u>	<u>191,724</u>	<u>\$ 7,648</u>	<u>\$ 8,143,093</u>	<u>\$ (3,079,320)</u>	<u>\$ (17,534)</u>	<u>\$ 278,892</u>	<u>\$ 6,515,238</u>

See notes to consolidated financial statements.

VORNADO REALTY TRUST
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY - CONTINUED

(Amounts in thousands, except per share amounts)

	Preferred Shares		Common Shares		Additional Capital	Earnings Less Than Distributions	Accumulated Other Comprehensive (Loss) Income	Non-controlling Interests in Consolidated Subsidiaries	Total Equity
	Shares	Amount	Shares	Amount					
Balance as of December 31, 2019	36,796	\$ 891,214	190,986	\$ 7,618	\$ 7,827,697	\$ (1,954,266)	\$ (40,233)	\$ 578,948	\$ 7,310,978
Cumulative effect of accounting change	—	—	—	—	—	(16,064)	—	—	(16,064)
Net loss attributable to Vornado	—	—	—	—	—	(297,005)	—	—	(297,005)
Net loss attributable to nonredeemable noncontrolling interests in consolidated subsidiaries	—	—	—	—	—	—	—	(140,438)	(140,438)
Dividends on common shares (\$2.38 per share)	—	—	—	—	—	(454,939)	—	—	(454,939)
Dividends on preferred shares (see Note 11 for dividends per share amounts)	—	—	—	—	—	(51,739)	—	—	(51,739)
Series N cumulative redeemable preferred shares issuance	12,000	291,182	—	—	—	—	—	—	291,182
Common shares issued:									
Upon redemption of Class A units, at redemption value	—	—	236	9	9,257	—	—	—	9,266
Under employees' share option plan	—	—	69	3	3,514	—	—	—	3,517
Under dividend reinvestment plan	—	—	47	2	2,343	—	—	—	2,345
Contributions:									
Real estate fund investments	—	—	—	—	—	—	—	3,389	3,389
Other	—	—	—	—	—	—	—	4,305	4,305
Distributions	—	—	—	—	—	—	—	(33,007)	(33,007)
Conversion of Series A preferred shares to common shares	(3)	(57)	4	—	57	—	—	—	—
Deferred compensation shares and options	—	—	13	1	1,305	(137)	—	—	1,169
Other comprehensive loss of nonconsolidated subsidiaries	—	—	—	—	—	—	(14,342)	—	(14,342)
Reduction in value of interest rate swaps	—	—	—	—	—	—	(29,972)	—	(29,972)
Unearned 2017 Out-Performance Plan awards acceleration	—	—	—	—	10,824	—	—	—	10,824
Redeemable Class A unit measurement adjustment	—	—	—	—	344,043	—	—	—	344,043
Redeemable noncontrolling interests' share of above adjustments	—	—	—	—	—	—	2,914	—	2,914
Other	—	—	—	—	(6,533)	(32)	6,534	1,760	1,729
Balance as of December 31, 2020	<u>48,793</u>	<u>\$ 1,182,339</u>	<u>191,355</u>	<u>\$ 7,633</u>	<u>\$ 8,192,507</u>	<u>\$ (2,774,182)</u>	<u>\$ (75,099)</u>	<u>\$ 414,957</u>	<u>\$ 6,948,155</u>

See notes to consolidated financial statements.

VORNADO REALTY TRUST
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY - CONTINUED

(Amounts in thousands, except per share amount)

	Preferred Shares		Common Shares		Additional Capital	Earnings Less Than Distributions	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interests in Consolidated Subsidiaries	Total Equity
	Shares	Amount	Shares	Amount					
Balance as of December 31, 2018	36,800	\$ 891,294	190,535	\$ 7,600	\$ 7,725,857	\$ (4,167,184)	\$ 7,664	\$ 642,652	\$ 5,107,883
Net income attributable to Vornado	—	—	—	—	—	3,147,937	—	—	3,147,937
Net loss attributable to noncontrolling interests in consolidated subsidiaries	—	—	—	—	—	—	—	(24,547)	(24,547)
Dividends on common shares :									
Special dividend (\$1.95 per share)	—	—	—	—	—	(372,380)	—	—	(372,380)
Aggregate quarterly dividends (\$2.64 per common share)	—	—	—	—	—	(503,785)	—	—	(503,785)
Dividends on preferred shares	—	—	—	—	—	(50,131)	—	—	(50,131)
Common shares issued:									
Upon redemption of Class A units, at redemption value	—	—	171	7	11,243	—	—	—	11,250
Under employees' share option plan	—	—	245	10	5,479	(8,587)	—	—	(3,098)
Under dividend reinvestment plan	—	—	22	1	1,413	—	—	—	1,414
Contributions:									
Real estate fund investments	—	—	—	—	—	—	—	9,023	9,023
Other	—	—	—	—	—	—	—	8,848	8,848
Distributions	—	—	—	—	—	—	—	(45,587)	(45,587)
Conversion of Series A preferred shares to common shares	(2)	(80)	6	—	80	—	—	—	—
Deferred compensation shares and options	—	—	7	—	1,095	(105)	—	—	990
Other comprehensive loss of nonconsolidated subsidiaries	—	—	—	—	—	—	(938)	—	(938)
Reduction in value of interest rate swaps	—	—	—	—	—	—	(47,885)	—	(47,885)
Amounts reclassified related to a nonconsolidated subsidiary	—	—	—	—	—	—	(2,311)	—	(2,311)
Unearned 2016 Out-Performance Plan awards acceleration	—	—	—	—	11,720	—	—	—	11,720
Redeemable Class A unit measurement adjustment	—	—	—	—	70,810	—	—	—	70,810
Redeemable noncontrolling interests' share of above adjustments	—	—	—	—	—	—	3,235	—	3,235
Deconsolidation of partially owned entity	—	—	—	—	—	—	—	(11,441)	(11,441)
Other	(2)	—	—	—	—	(31)	2	—	(29)
Balance as of December 31, 2019	<u>36,796</u>	<u>\$ 891,214</u>	<u>190,986</u>	<u>\$ 7,618</u>	<u>\$ 7,827,697</u>	<u>\$ (1,954,266)</u>	<u>\$ (40,233)</u>	<u>\$ 578,948</u>	<u>\$ 7,310,978</u>

See notes to consolidated financial statements.

VORNADO REALTY TRUST
CONSOLIDATED STATEMENTS OF CASH FLOWS

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Cash Flows from Operating Activities:			
Net income (loss)	\$ 207,553	\$ (461,845)	\$ 3,334,262
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization (including amortization of deferred financing costs)	432,594	417,942	438,933
Distributions of income from partially owned entities	214,521	175,246	116,826
Equity in net (income) loss of partially owned entities	(130,517)	329,112	(78,865)
Net gains on disposition of wholly owned and partially owned assets	(50,770)	(381,320)	(845,499)
Stock-based compensation expense	38,329	48,677	53,908
Defeasance cost in connection with refinancing of mortgage payable	23,729	—	—
Amortization of below-market leases, net	(9,249)	(16,878)	(19,830)
Straight-lining of rents	8,644	24,404	9,679
Real estate impairment losses	7,880	236,286	26,705
Write-off of lease receivables deemed uncollectible	7,695	63,204	17,237
Return of capital from real estate fund investments	5,104	—	—
Net realized and unrealized (income) loss on real estate fund investments	(4,621)	226,107	106,109
Non-cash (gain on extinguishment of 608 Fifth Avenue lease liability) impairment loss on 608 Fifth Avenue right-of-use asset	—	(70,260)	75,220
Credit losses on loans receivable	—	13,369	—
Decrease in fair value of marketable securities	—	4,938	5,533
Net gain on transfer to Fifth Avenue and Times Square JV	—	—	(2,571,099)
Prepayment penalty on redemption of senior unsecured notes due 2022	—	—	22,058
Other non-cash adjustments	7,368	6,739	(3,472)
Changes in operating assets and liabilities:			
Real estate fund investments	(4,474)	(7,197)	(10,000)
Tenant and other receivables	(187)	(5,330)	(25,988)
Prepaid assets	30,466	(137,452)	7,558
Other assets	(54,716)	(52,832)	(4,302)
Accounts payable and accrued expenses	35,856	14,868	5,940
Other liabilities	(3,399)	(3,538)	1,626
Net cash provided by operating activities	761,806	424,240	662,539
Cash Flows from Investing Activities:			
Development costs and construction in progress	(585,940)	(601,920)	(649,056)
Additions to real estate	(149,461)	(155,738)	(233,666)
Proceeds from sale of condominium units at 220 Central Park South	137,404	1,044,260	1,605,356
Acquisition of additional 45.0% ownership interest in One Park Avenue (inclusive of \$5,806 of prorations and net working capital and net of \$39,370 of cash and restricted cash balances consolidated upon acquisition)	(123,936)	—	—
Distributions of capital from partially owned entities	106,005	2,389	24,880
Proceeds from sales of real estate	100,024	—	324,201
Investments in partially owned entities	(14,997)	(8,959)	(18,257)
Acquisitions of real estate and other	(3,000)	(1,156)	(69,699)
Proceeds from repayments of loans receivable	1,554	—	1,395
Moynihan Train Hall expenditures	—	(395,051)	(438,935)
Proceeds from sales of marketable securities	—	28,375	168,314
Proceeds from transfer of interest in Fifth Avenue and Times Square JV (net of \$35,562 of transaction costs and \$10,899 of deconsolidated cash and restricted cash)	—	—	1,248,743
Proceeds from redemption of 640 Fifth Avenue preferred equity	—	—	500,000
Net cash (used in) provided by investing activities	(532,347)	(87,800)	2,463,276

See notes to consolidated financial statements.

VORNADO REALTY TRUST
CONSOLIDATED STATEMENTS OF CASH FLOWS – CONTINUED

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Cash Flows from Financing Activities:			
Proceeds from borrowings	\$ 3,248,007	\$ 1,056,315	\$ 1,108,156
Repayments of borrowings	(1,584,243)	(1,067,564)	(2,718,987)
Purchase of marketable securities in connection with defeasance of mortgage payable	(973,729)	—	(407,126)
Dividends paid on common shares	(406,109)	(827,319)	(503,785)
Redemption of preferred shares	(300,000)	—	(893)
Proceeds from the issuance of preferred shares	291,153	291,182	—
Distributions to noncontrolling interests	(190,876)	(91,514)	(80,194)
Dividends paid on preferred shares	(65,880)	(64,271)	(50,131)
Debt issuance costs	(51,184)	(10,901)	(15,588)
Contributions from noncontrolling interests	4,052	100,094	17,871
Repurchase of shares related to stock compensation agreements and related tax withholdings and other	(1,567)	(137)	(8,692)
Proceeds received from exercise of employee share options and other	899	5,862	6,903
Moynihan Train Hall reimbursement from Empire State Development	—	395,051	438,935
Prepayment penalty on redemption of senior unsecured notes due 2022	—	—	(22,058)
Net cash used in financing activities	<u>(29,477)</u>	<u>(213,202)</u>	<u>(2,235,589)</u>
Net increase in cash and cash equivalents and restricted cash	199,982	123,238	890,226
Cash and cash equivalents and restricted cash at beginning of period	1,730,369	1,607,131	716,905
Cash and cash equivalents and restricted cash at end of period	<u>\$ 1,930,351</u>	<u>\$ 1,730,369</u>	<u>\$ 1,607,131</u>
Reconciliation of Cash and Cash Equivalents and Restricted Cash:			
Cash and cash equivalents at beginning of period	\$ 1,624,482	\$ 1,515,012	\$ 570,916
Restricted cash at beginning of period	105,887	92,119	145,989
Cash and cash equivalents and restricted cash at beginning of period	<u>\$ 1,730,369</u>	<u>\$ 1,607,131</u>	<u>\$ 716,905</u>
Cash and cash equivalents at end of period	\$ 1,760,225	\$ 1,624,482	\$ 1,515,012
Restricted cash at end of period	170,126	105,887	92,119
Cash and cash equivalents and restricted cash at end of period	<u>\$ 1,930,351</u>	<u>\$ 1,730,369</u>	<u>\$ 1,607,131</u>

See notes to consolidated financial statements.

VORNADO REALTY TRUST
CONSOLIDATED STATEMENTS OF CASH FLOWS – CONTINUED

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Supplemental Disclosure of Cash Flow Information:			
Cash payments for interest, excluding capitalized interest of \$38,320, \$40,855 and \$67,980	\$ 188,587	\$ 210,052	\$ 283,613
Cash payments for income taxes	\$ 9,155	\$ 15,105	\$ 59,834
Non-Cash Investing and Financing Activities:			
Marketable securities transferred in connection with the defeasance of mortgage payable	\$ (973,729)	\$ —	\$ (407,126)
Defeasance of mortgage payable	950,000	—	390,000
Increase in assets and liabilities resulting from the consolidation of One Park Avenue:			
Real estate	566,013	—	—
Identified intangible assets	139,545	—	—
Mortgages payable	525,000	—	—
Deferred revenue	18,884	—	—
Accrued capital expenditures included in accounts payable and accrued expenses	291,690	117,641	109,975
Write-off of fully depreciated assets	(123,537)	(189,250)	(122,813)
Reclassification of assets held for sale (included in "other assets")	80,005	—	—
Redeemable Class A unit measurement adjustment	(76,073)	344,043	70,810
Decrease (increase) in accumulated other comprehensive loss due to change in fair value of consolidated interest rate swaps	51,337	(29,972)	(47,885)
Reclassification of condominium units from "development costs and construction in progress" to "220 Central Park South condominium units ready for sale"	16,014	388,280	1,311,468
Decrease in assets and liabilities resulting from the deconsolidation of Moynihan Train Hall:			
Real estate, net	—	(1,291,804)	—
Moynihan Train Hall Obligation	—	(1,291,804)	—
Investments received in exchange for transfer to Fifth Avenue and Times Square JV:			
Preferred equity	—	—	2,327,750
Common equity	—	—	1,449,495
Lease liabilities arising from the recognition of right-of-use assets	—	—	526,866
Special dividend/distribution declared and payable on January 15, 2020	—	—	398,292
Recognition of negative basis related to the sale of our investment in 330 Madison Avenue	—	—	60,052
Amounts related to our investment in Pennsylvania Real Estate Investment Trust reclassified from "investments in partially owned entities" and "accumulated other comprehensive loss" to "marketable securities" upon conversion of operating partnership units to common shares	—	—	54,962

See notes to consolidated financial statements.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Partners
Vornado Realty L.P.
New York, New York

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Vornado Realty L.P. and subsidiaries (the "Partnership") as of December 31, 2021 and 2020, the related consolidated statements of income, comprehensive income, changes in equity, and cash flows for each of the three years in the period ended December 31, 2021, and the related notes and the schedule listed in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Partnership as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with the accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Partnership's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 14, 2022, expressed an unqualified opinion on the Partnership's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Partnership's management. Our responsibility is to express an opinion on the Partnership's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Partnership in accordance with the US federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Real Estate Recoverability Assessment — Refer to Note 2 to the financial statements

Critical Audit Matter Description

The Partnership's wholly owned properties are individually reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment exists when the carrying amount of an asset exceeds the aggregate projected future cash flows over the anticipated holding period on an undiscounted basis. The recoverability assessment is determined based on projected future cash flows that utilize capitalization rates and available market information. The Partnership's undiscounted cash flows requires management to make significant estimates and assumptions related to future market rental rates and capitalization rates.

We identified the recoverability assessment of wholly owned properties as a critical audit matter because of the significant estimates and assumptions related to future market rental rates and capitalization rates. Performing audit procedures to evaluate the reasonableness of these estimates and assumptions required a high degree of auditor judgment and an increased extent of effort, including the need to involve our fair value specialists, where applicable.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the recoverability assessment of wholly owned properties included the following, among other things:

- We tested the effectiveness of controls over management's evaluation of recoverability of its wholly owned properties, including those over future market rental rates and capitalization rates used in the assessment.
- We evaluated the reasonableness of future market rental rates and capitalization rates used by management with independent market data, focusing on geographical location and property. In addition, we developed ranges of independent estimates of future market rental rates and capitalization rates and compared those to the amounts used by management.
- We involved our fair value specialists in providing comparable market transaction details to further support the future market rental rate and capitalization rate assumptions, as applicable.
- We evaluated the reasonableness of management's projected future cash flows by comparing management's projections to the Partnership's historical results.
- We evaluated whether the assumptions were consistent with evidence obtained in other areas of the audit.

/s/ DELOITTE & TOUCHE LLP

New York, New York
February 14, 2022

We have served as the Partnership's auditor since 1997.

VORNADO REALTY L.P.
CONSOLIDATED BALANCE SHEETS

(Amounts in thousands, except unit amounts)

	As of December 31,	
	2021	2020
ASSETS		
Real estate, at cost:		
Land	\$ 2,540,193	\$ 2,420,054
Buildings and improvements	9,839,166	7,933,030
Development costs and construction in progress	718,694	1,604,637
Leasehold improvements and equipment	119,792	130,222
Total	13,217,845	12,087,943
Less accumulated depreciation and amortization	(3,376,347)	(3,169,446)
Real estate, net	9,841,498	8,918,497
Right-of-use assets	337,197	367,365
Cash and cash equivalents	1,760,225	1,624,482
Restricted cash	170,126	105,887
Tenant and other receivables	79,661	77,658
Investments in partially owned entities	3,297,389	3,491,107
Real estate fund investments	7,730	3,739
220 Central Park South condominium units ready for sale	57,142	128,215
Receivable arising from the straight-lining of rents	656,318	674,075
Deferred leasing costs, net of accumulated amortization of \$211,775 and \$196,972	391,693	372,919
Identified intangible assets, net of accumulated amortization of \$97,186 and \$93,113	154,895	23,856
Other assets	512,714	434,022
	<u>\$ 17,266,588</u>	<u>\$ 16,221,822</u>
LIABILITIES, REDEEMABLE NONCONTROLLING INTERESTS AND EQUITY		
Mortgages payable, net	\$ 6,053,343	\$ 5,580,549
Senior unsecured notes, net	1,189,792	446,685
Unsecured term loan, net	797,812	796,762
Unsecured revolving credit facilities	575,000	575,000
Lease liabilities	370,206	401,008
Accounts payable and accrued expenses	613,497	427,202
Deferred revenue	48,118	40,110
Deferred compensation plan	110,174	105,564
Other liabilities	304,725	294,520
Total liabilities	10,062,667	8,667,400
Commitments and contingencies		
Redeemable noncontrolling interests:		
Class A units - 14,033,438 and 13,583,607 units outstanding	587,440	507,212
Series D cumulative redeemable preferred units - 141,400 and 141,401 units outstanding	3,535	4,535
Total redeemable noncontrolling partnership units	590,975	511,747
Redeemable noncontrolling interest in a consolidated subsidiary	97,708	94,520
Total redeemable noncontrolling interests	688,683	606,267
Partners' equity:		
Partners' capital	9,333,200	9,382,479
Earnings less than distributions	(3,079,320)	(2,774,182)
Accumulated other comprehensive loss	(17,534)	(75,099)
Total partners' equity	6,236,346	6,533,198
Noncontrolling interests in consolidated subsidiaries	278,892	414,957
Total equity	6,515,238	6,948,155
	<u>\$ 17,266,588</u>	<u>\$ 16,221,822</u>

See notes to the consolidated financial statements.

VORNADO REALTY L.P.
CONSOLIDATED STATEMENTS OF INCOME

(Amounts in thousands, except per unit amounts)

	For the Year Ended December 31,		
	2021	2020	2019
REVENUES:			
Rental revenues	\$ 1,424,531	\$ 1,377,635	\$ 1,767,222
Fee and other income	164,679	150,316	157,478
Total revenues	1,589,210	1,527,951	1,924,700
EXPENSES:			
Operating	(797,315)	(789,066)	(917,981)
Depreciation and amortization	(412,347)	(399,695)	(419,107)
General and administrative	(134,545)	(181,509)	(169,920)
Expense from deferred compensation plan liability	(9,847)	(6,443)	(11,609)
Impairment losses, transaction related costs and other	(13,815)	(174,027)	(106,538)
Total expenses	(1,367,869)	(1,550,740)	(1,625,155)
Income (loss) from partially owned entities	130,517	(329,112)	78,865
Income (loss) from real estate fund investments	11,066	(226,327)	(104,082)
Interest and other investment income (loss), net	4,612	(5,499)	21,819
Income from deferred compensation plan assets	9,847	6,443	11,609
Interest and debt expense	(231,096)	(229,251)	(286,623)
Net gain on transfer to Fifth Avenue and Times Square JV	—	—	2,571,099
Net gains on disposition of wholly owned and partially owned assets	50,770	381,320	845,499
Income (loss) before income taxes	197,057	(425,215)	3,437,731
Income tax benefit (expense)	10,496	(36,630)	(103,439)
Income (loss) from continuing operations	207,553	(461,845)	3,334,292
Loss from discontinued operations	—	—	(30)
Net income (loss)	207,553	(461,845)	3,334,262
Less net (income) loss attributable to noncontrolling interests in consolidated subsidiaries	(24,014)	139,894	24,547
Net income (loss) attributable to Vornado Realty L.P.	183,539	(321,951)	3,358,809
Preferred unit distributions	(66,035)	(51,904)	(50,296)
Series K preferred unit issuance costs	(9,033)	—	—
NET INCOME (LOSS) attributable to Class A unitholders	\$ 108,471	\$ (373,855)	\$ 3,308,513
INCOME (LOSS) PER CLASS A UNIT - BASIC:			
Net income (loss) per Class A unit	\$ 0.52	\$ (1.86)	\$ 16.22
Weighted average units outstanding	204,728	203,503	202,947
INCOME (LOSS) PER CLASS A UNIT - DILUTED:			
Net income (loss) per Class A unit	\$ 0.51	\$ (1.86)	\$ 16.19
Weighted average units outstanding	205,644	203,503	203,248

See notes to consolidated financial statements.

VORNADO REALTY L.P.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Net income (loss)	\$ 207,553	\$ (461,845)	\$ 3,334,262
Other comprehensive income (loss):			
Increase (reduction) in value of interest rate swaps and other	51,338	(29,971)	(47,883)
Other comprehensive income (loss) of nonconsolidated subsidiaries	10,275	(14,342)	(938)
Amounts reclassified from accumulated other comprehensive loss relating to nonconsolidated subsidiary	—	—	(2,311)
Comprehensive income (loss)	269,166	(506,158)	3,283,130
Less comprehensive (income) loss attributable to noncontrolling interests in consolidated subsidiaries	(24,014)	139,894	24,547
Comprehensive income (loss) attributable to Vornado Realty L.P.	\$ 245,152	\$ (366,264)	\$ 3,307,677

See notes to consolidated financial statements.

VORNADO REALTY L.P.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

(Amounts in thousands, except per unit amount)

	Preferred Units		Class A Units Owned by Vornado		Earnings Less Than Distributions	Accumulated Other Comprehensive (Loss) Income	Non- controlling Interests in Consolidated Subsidiaries	Total Equity
	Units	Amount	Units	Amount				
Balance as of December 31, 2020	48,793	\$ 1,182,339	191,355	\$ 8,200,140	\$ (2,774,182)	\$ (75,099)	\$ 414,957	\$ 6,948,155
Net income attributable to Vornado Realty L.P.	—	—	—	—	183,539	—	—	183,539
Net income attributable to redeemable partnership units	—	—	—	—	(7,540)	—	—	(7,540)
Net income attributable to nonredeemable noncontrolling interests in consolidated subsidiaries	—	—	—	—	—	—	20,826	20,826
Distributions to Vornado (\$2.12 per unit)	—	—	—	—	(406,109)	—	—	(406,109)
Distributions to preferred unitholders (see Note 11 for distributions per unit amounts)	—	—	—	—	(65,880)	—	—	(65,880)
Series O cumulative redeemable preferred units issuance	12,000	291,153	—	—	—	—	—	291,153
Class A Units issued to Vornado:								
Upon redemption of redeemable Class A units, at redemption value	—	—	350	14,576	—	—	—	14,576
Under Vornado's employees' share option plan	—	—	1	22	—	—	—	22
Under Vornado's dividend reinvestment plan	—	—	21	877	—	—	—	877
Contributions	—	—	—	—	—	—	4,052	4,052
Distributions	—	—	—	—	—	—	(160,975)	(160,975)
Conversion of Series A preferred units to Class A units	—	(13)	1	13	—	—	—	—
Deferred compensation units and options	—	—	(4)	906	(114)	—	—	792
Other comprehensive income of nonconsolidated subsidiaries	—	—	—	—	—	10,275	—	10,275
Increase in value of interest rate swaps	—	—	—	—	—	51,337	—	51,337
Unearned 2018 Out-Performance Plan awards acceleration	—	—	—	10,283	—	—	—	10,283
Redeemable Class A unit measurement adjustment	—	—	—	(76,073)	—	—	—	(76,073)
Series K cumulative redeemable preferred units called for redemption	(12,000)	(290,967)	—	—	(9,033)	—	—	(300,000)
Redeemable partnership units' share of above adjustments	—	—	—	—	—	(4,048)	—	(4,048)
Other	—	(53)	—	(3)	(1)	1	32	(24)
Balance as of December 31, 2021	48,793	\$ 1,182,459	191,724	\$ 8,150,741	\$ (3,079,320)	\$ (17,534)	\$ 278,892	\$ 6,515,238

See notes to consolidated financial statements.

VORNADO REALTY L.P.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY – CONTINUED

(Amounts in thousands, except per unit amounts)

	Preferred Units		Class A Units Owned by Vornado		Earnings Less Than Distributions	Accumulated Other Comprehensive (Loss) Income	Non-controlling Interests in Consolidated Subsidiaries	Total Equity
	Units	Amount	Units	Amount				
Balance as of December 31, 2019	36,796	\$ 891,214	190,986	\$ 7,835,315	\$ (1,954,266)	\$ (40,233)	\$ 578,948	\$ 7,310,978
Cumulative effect of accounting change	—	—	—	—	(16,064)	—	—	(16,064)
Net loss attributable to Vornado Realty L.P.	—	—	—	—	(321,951)	—	—	(321,951)
Net loss attributable to redeemable partnership units	—	—	—	—	24,946	—	—	24,946
Net loss attributable to nonredeemable noncontrolling interests in consolidated subsidiaries	—	—	—	—	—	—	(140,438)	(140,438)
Distributions to Vornado (\$2.38 per unit)	—	—	—	—	(454,939)	—	—	(454,939)
Distributions to preferred unitholders (see Note 11 for distributions per unit amounts)	—	—	—	—	(51,739)	—	—	(51,739)
Series N cumulative redeemable preferred units issuance	12,000	291,182	—	—	—	—	—	291,182
Class A Units issued to Vornado:								
Upon redemption of redeemable Class A units, at redemption value	—	—	236	9,266	—	—	—	9,266
Under Vornado's employees' share option plan	—	—	69	3,517	—	—	—	3,517
Under Vornado's dividend reinvestment plan	—	—	47	2,345	—	—	—	2,345
Contributions:								
Real estate fund investments	—	—	—	—	—	—	3,389	3,389
Other	—	—	—	—	—	—	4,305	4,305
Distributions	—	—	—	—	—	—	(33,007)	(33,007)
Conversion of Series A preferred units to Class A units	(3)	(57)	4	57	—	—	—	—
Deferred compensation units and options	—	—	13	1,306	(137)	—	—	1,169
Other comprehensive loss of nonconsolidated subsidiaries	—	—	—	—	—	(14,342)	—	(14,342)
Reduction in value of interest rate swaps	—	—	—	—	—	(29,972)	—	(29,972)
Unearned 2017 Out-Performance Plan awards acceleration	—	—	—	10,824	—	—	—	10,824
Redeemable Class A unit measurement adjustment	—	—	—	344,043	—	—	—	344,043
Redeemable partnership units' share of above adjustments	—	—	—	—	—	2,914	—	2,914
Other	—	—	—	(6,533)	(32)	6,534	1,760	1,729
Balance as of December 31, 2020	<u>48,793</u>	<u>\$ 1,182,339</u>	<u>191,355</u>	<u>\$ 8,200,140</u>	<u>\$ (2,774,182)</u>	<u>\$ (75,099)</u>	<u>\$ 414,957</u>	<u>\$ 6,948,155</u>

See notes to consolidated financial statements.

VORNADO REALTY L.P.
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY – CONTINUED

(Amounts in thousands, except per unit amount)

	Preferred Units		Class A Units Owned by Vornado		Earnings Less Than Distributions	Accumulated Other Comprehensive Income (Loss)	Non-controlling Interests in Consolidated Subsidiaries	Total Equity
	Units	Amount	Units	Amount				
Balance as of December 31, 2018	36,800	\$ 891,294	190,535	\$ 7,733,457	\$ (4,167,184)	\$ 7,664	\$ 642,652	\$ 5,107,883
Net income attributable to Vornado Realty L.P.	—	—	—	—	3,358,809	—	—	3,358,809
Net income attributable to redeemable partnership units	—	—	—	—	(210,872)	—	—	(210,872)
Net loss attributable to noncontrolling interests in consolidated subsidiaries	—	—	—	—	—	—	(24,547)	(24,547)
Distributions to Vornado:								
Special distribution (\$1.95 per Class A unit)	—	—	—	—	(372,380)	—	—	(372,380)
Aggregate quarterly distributions to Vornado (\$2.64 per Class A unit)	—	—	—	—	(503,785)	—	—	(503,785)
Distributions to preferred unitholders	—	—	—	—	(50,131)	—	—	(50,131)
Class A Units issued to Vornado:								
Upon redemption of redeemable Class A units, at redemption value	—	—	171	11,250	—	—	—	11,250
Under Vornado's employees' share option plan	—	—	245	5,489	(8,587)	—	—	(3,098)
Under Vornado's dividend reinvestment plan	—	—	22	1,414	—	—	—	1,414
Contributions:								
Real estate fund investments	—	—	—	—	—	—	9,023	9,023
Other	—	—	—	—	—	—	8,848	8,848
Distributions	—	—	—	—	—	—	(45,587)	(45,587)
Conversion of Series A preferred units to Class A units	(2)	(80)	6	80	—	—	—	—
Deferred compensation units and options	—	—	7	1,095	(105)	—	—	990
Other comprehensive loss of nonconsolidated subsidiaries	—	—	—	—	—	(938)	—	(938)
Reduction in value of interest rate swaps	—	—	—	—	—	(47,885)	—	(47,885)
Amounts reclassified related to a nonconsolidated subsidiary	—	—	—	—	—	(2,311)	—	(2,311)
Unearned 2016 Out-Performance Plan awards acceleration	—	—	—	11,720	—	—	—	11,720
Redeemable Class A unit measurement adjustment	—	—	—	70,810	—	—	—	70,810
Redeemable partnership units' share of above adjustments	—	—	—	—	—	3,235	—	3,235
Deconsolidation of partially owned entity	—	—	—	—	—	—	(11,441)	(11,441)
Other	(2)	—	—	—	(31)	2	—	(29)
Balance as of December 31, 2019	<u>36,796</u>	<u>\$ 891,214</u>	<u>190,986</u>	<u>\$ 7,835,315</u>	<u>\$ (1,954,266)</u>	<u>\$ (40,233)</u>	<u>\$ 578,948</u>	<u>\$ 7,310,978</u>

See notes to consolidated financial statements.

VORNADO REALTY L.P.
CONSOLIDATED STATEMENTS OF CASH FLOWS

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Cash Flows from Operating Activities:			
Net income (loss)	\$ 207,553	\$ (461,845)	\$ 3,334,262
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization (including amortization of deferred financing costs)	432,594	417,942	438,933
Distributions of income from partially owned entities	214,521	175,246	116,826
Equity in net (income) loss of partially owned entities	(130,517)	329,112	(78,865)
Net gains on disposition of wholly owned and partially owned assets	(50,770)	(381,320)	(845,499)
Stock-based compensation expense	38,329	48,677	53,908
Defeasance cost in connection with refinancing of mortgage payable	23,729	—	—
Amortization of below-market leases, net	(9,249)	(16,878)	(19,830)
Straight-lining of rents	8,644	24,404	9,679
Real estate impairment losses	7,880	236,286	26,705
Write-off of lease receivables deemed uncollectible	7,695	63,204	17,237
Return of capital from real estate fund investments	5,104	—	—
Net realized and unrealized (income) loss on real estate fund investments	(4,621)	226,107	106,109
Non-cash (gain on extinguishment of 608 Fifth Avenue lease liability) impairment loss on 608 Fifth Avenue right-of-use asset	—	(70,260)	75,220
Credit losses on loans receivable	—	13,369	—
Decrease in fair value of marketable securities	—	4,938	5,533
Net gain on transfer to Fifth Avenue and Times Square JV	—	—	(2,571,099)
Prepayment penalty on redemption of senior unsecured notes due 2022	—	—	22,058
Other non-cash adjustments	7,368	6,739	(3,472)
Changes in operating assets and liabilities:			
Real estate fund investments	(4,474)	(7,197)	(10,000)
Tenant and other receivables	(187)	(5,330)	(25,988)
Prepaid assets	30,466	(137,452)	7,558
Other assets	(54,716)	(52,832)	(4,302)
Accounts payable and accrued expenses	35,856	14,868	5,940
Other liabilities	(3,399)	(3,538)	1,626
Net cash provided by operating activities	761,806	424,240	662,539
Cash Flows from Investing Activities:			
Development costs and construction in progress	(585,940)	(601,920)	(649,056)
Additions to real estate	(149,461)	(155,738)	(233,666)
Proceeds from sale of condominium units at 220 Central Park South	137,404	1,044,260	1,605,356
Acquisition of additional 45.0% ownership interest in One Park Avenue (inclusive of \$5,806 of proration and net working capital and net of \$39,370 of cash and restricted cash balances consolidated upon acquisition)	(123,936)	—	—
Distributions of capital from partially owned entities	106,005	2,389	24,880
Proceeds from sales of real estate	100,024	—	324,201
Investments in partially owned entities	(14,997)	(8,959)	(18,257)
Acquisitions of real estate and other	(3,000)	(1,156)	(69,699)
Proceeds from repayments of loans receivable	1,554	—	1,395
Moynihan Train Hall expenditures	—	(395,051)	(438,935)
Proceeds from sales of marketable securities	—	28,375	168,314
Proceeds from transfer of interest in Fifth Avenue and Times Square JV (net of \$35,562 of transaction costs and \$10,899 of deconsolidated cash and restricted cash)	—	—	1,248,743
Proceeds from redemption of 640 Fifth Avenue preferred equity	—	—	500,000
Net cash (used in) provided by investing activities	(532,347)	(87,800)	2,463,276

See notes to consolidated financial statements.

VORNADO REALTY L.P.
CONSOLIDATED STATEMENTS OF CASH FLOWS – CONTINUED

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Cash Flows from Financing Activities:			
Proceeds from borrowings	\$ 3,248,007	\$ 1,056,315	\$ 1,108,156
Repayments of borrowings	(1,584,243)	(1,067,564)	(2,718,987)
Purchase of marketable securities in connection with defeasance of mortgage payable	(973,729)	—	(407,126)
Distributions to Vornado	(406,109)	(827,319)	(503,785)
Redemption of preferred units	(300,000)	—	(893)
Proceeds from the issuance of preferred units	291,153	291,182	—
Distributions to redeemable security holders and noncontrolling interests in consolidated subsidiaries	(190,876)	(91,514)	(80,194)
Distributions to preferred unitholders	(65,880)	(64,271)	(50,131)
Debt issuance costs	(51,184)	(10,901)	(15,588)
Contributions from noncontrolling interests in consolidated subsidiaries	4,052	100,094	17,871
Repurchase of Class A units related to stock compensation agreements and related tax withholdings and other	(1,567)	(137)	(8,692)
Proceeds received from exercise of Vornado stock options and other	899	5,862	6,903
Moynihan Train Hall reimbursement from Empire State Development	—	395,051	438,935
Prepayment penalty on redemption of senior unsecured notes due 2022	—	—	(22,058)
Net cash used in financing activities	(29,477)	(213,202)	(2,235,589)
Net increase in cash and cash equivalents and restricted cash	199,982	123,238	890,226
Cash and cash equivalents and restricted cash at beginning of period	1,730,369	1,607,131	716,905
Cash and cash equivalents and restricted cash at end of period	\$ 1,930,351	\$ 1,730,369	\$ 1,607,131
Reconciliation of Cash and Cash Equivalents and Restricted Cash:			
Cash and cash equivalents at beginning of period	\$ 1,624,482	\$ 1,515,012	\$ 570,916
Restricted cash at beginning of period	105,887	92,119	145,989
Cash and cash equivalents and restricted cash at beginning of period	\$ 1,730,369	\$ 1,607,131	\$ 716,905
Cash and cash equivalents at end of period	\$ 1,760,225	\$ 1,624,482	\$ 1,515,012
Restricted cash at end of period	170,126	105,887	92,119
Cash and cash equivalents and restricted cash at end of period	\$ 1,930,351	\$ 1,730,369	\$ 1,607,131

See notes to consolidated financial statements.

VORNADO REALTY L.P.
CONSOLIDATED STATEMENTS OF CASH FLOWS – CONTINUED

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Supplemental Disclosure of Cash Flow Information:			
Cash payments for interest, excluding capitalized interest of \$38,320, \$40,855 and \$67,980	\$ 188,587	\$ 210,052	\$ 283,613
Cash payments for income taxes	\$ 9,155	\$ 15,105	\$ 59,834
Non-Cash Investing and Financing Activities:			
Marketable securities transferred in connection with the defeasance of mortgage payable	\$ (973,729)	\$ —	\$ (407,126)
Defeasance of mortgage payable	950,000	—	390,000
Increase in assets and liabilities resulting from the consolidation of One Park Avenue:			
Real estate	566,013	—	—
Identified intangible assets	139,545	—	—
Mortgages payable	525,000	—	—
Deferred revenue	18,884	—	—
Accrued capital expenditures included in accounts payable and accrued expenses	291,690	117,641	109,975
Write-off of fully depreciated assets	(123,537)	(189,250)	(122,813)
Reclassification of assets held for sale (included in "other assets")	80,005	—	—
Redeemable Class A unit measurement adjustment	(76,073)	344,043	70,810
Decrease (increase) in accumulated other comprehensive loss due to change in fair value of consolidated interest rate swaps	51,337	(29,972)	(47,885)
Reclassification of condominium units from "development costs and construction in progress" to "220 Central Park South condominium units ready for sale"	16,014	388,280	1,311,468
Decrease in assets and liabilities resulting from the deconsolidation of Moynihan Train Hall:			
Real estate, net	—	(1,291,804)	—
Moynihan Train Hall Obligation	—	(1,291,804)	—
Investments received in exchange for transfer to Fifth Avenue and Times Square JV:			
Preferred equity	—	—	2,327,750
Common equity	—	—	1,449,495
Lease liabilities arising from the recognition of right-of-use assets	—	—	526,866
Special dividend/distribution declared and payable on January 15, 2020	—	—	398,292
Recognition of negative basis related to the sale of our investment in 330 Madison Avenue	—	—	60,052
Amounts related to our investment in Pennsylvania Real Estate Investment Trust reclassified from "investments in partially owned entities" and "accumulated other comprehensive loss" to "marketable securities" upon conversion of operating partnership units to common shares	—	—	54,962

See notes to consolidated financial statements.

1. Organization and Business

Vornado Realty Trust ("Vornado") is a fully-integrated real estate investment trust ("REIT") and conducts its business through, and substantially all of its interests in properties are held by, Vornado Realty L.P., a Delaware limited partnership (the "Operating Partnership"). Accordingly, Vornado's cash flow and ability to pay dividends to its shareholders are dependent upon the cash flow of the Operating Partnership and the ability of its direct and indirect subsidiaries to first satisfy their obligations to creditors. Vornado is the sole general partner of and owned approximately 92.6% of the common limited partnership interest in the Operating Partnership as of December 31, 2021. All references to the "Company," "we," "us" and "our" mean, collectively, Vornado, the Operating Partnership and those subsidiaries consolidated by Vornado.

We currently own all or portions of:

New York:

- 67 Manhattan operating properties consisting of:
 - 20.6 million square feet of office space in 32 of the properties;
 - 2.7 million square feet of street retail space in 60 of the properties;
 - 1,674 units in eight Manhattan residential properties;
- Multiple development sites, including Hotel Pennsylvania;
- A 32.4% interest in Alexander's, Inc. ("Alexander's") (NYSE: ALX), which owns six properties in the greater New York metropolitan area, including 731 Lexington Avenue, the 1.1 million square foot Bloomberg, L.P. headquarters building, and The Alexander, a 312-unit apartment tower in Queens;
- Signage throughout the Penn District and Times Square; and
- Building Maintenance Services LLC ("BMS"), a wholly owned subsidiary, which provides cleaning and security services for our buildings and third parties.

Other Real Estate and Investments:

- The 3.7 million square foot theMART in Chicago;
- A 70% controlling interest in 555 California Street, a three-building office complex in San Francisco's financial district aggregating 1.8 million square feet;
- A 25% interest in Vornado Capital Partners, our real estate fund (the "Fund"). We are the general partner and investment manager of the fund. The fund is in wind-down; and
- Other real estate and investments.

2. Basis of Presentation and Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements include the accounts of Vornado and the Operating Partnership and their consolidated subsidiaries. All inter-company amounts have been eliminated. Our consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"), which require us to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates.

Recently Issued Accounting Literature

In March 2020, the Financial Accounting Standards Board ("FASB") issued an update ("ASU 2020-04") establishing Accounting Standards Codification ("ASC") Topic 848, *Reference Rate Reform*. ASU 2020-04 contains practical expedients for reference rate reform related activities that impact debt, leases, derivatives and other contracts. The guidance in ASU 2020-04 is optional and may be elected over time as reference rate reform activities occur. We have elected to apply the hedge accounting expedients related to probability and the assessments of effectiveness for future LIBOR-indexed cash flows to assume that the index upon which future hedged transactions will be based matches the index on the corresponding derivatives. Application of these expedients preserves the presentation of derivatives consistent with past presentation. We continue to evaluate the impact of the guidance and may apply other elections as applicable as additional changes in the market occur.

In August 2020, the FASB issued an update ("ASU 2020-06") *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40)*. ASU 2020-06 simplifies the accounting for convertible instruments by reducing the number of accounting models for convertible debt instruments and convertible preferred stock, removes certain settlement conditions that are required for equity contracts to qualify for the derivative scope exception and also simplifies the diluted earnings per share calculation in certain areas. ASU 2020-06 is effective for reporting periods beginning after December 15, 2021, with early adoption permitted. We are currently evaluating the impact of the adoption of ASU 2020-06 on our consolidated financial statements, but do not believe the adoption of this standard will have a material impact on our consolidated financial statements.

2. Basis of Presentation and Significant Accounting Policies - continued

Recently Issued Accounting Literature - continued

In July 2021, the FASB issued an update ("ASU 2021-05") *Lessors - Certain Leases with Variable Lease Payments* to ASC Topic 842, *Leases* ("ASC 842"). ASU 2021-05 provides additional ASC 842 classification guidance as it relates to a lessor's accounting for certain leases with variable lease payments. ASU 2021-05 requires a lessor to classify a lease with variable payments that do not depend on an index or rate as an operating lease if either a sales-type lease or direct financing lease classification would trigger a day-one loss. ASU 2021-05 is effective for reporting periods beginning after December 15, 2021, with early adoption permitted. We are currently evaluating the impact of the adoption of ASU 2021-05 on our consolidated financial statements, but do not believe the adoption of this standard will have a material impact on our consolidated financial statements.

Significant Accounting Policies

Real Estate: Real estate is carried at cost, net of accumulated depreciation and amortization. Betterments, major renewals and certain costs directly related to the improvement and leasing of real estate are capitalized. Maintenance and repairs are expensed as incurred. For redevelopment of existing operating properties, the net book value of the existing property under redevelopment plus the cost for the construction and improvements incurred in connection with the redevelopment, including interest and debt expense, are capitalized to the extent the capitalized costs of the property do not exceed the estimated fair value of the redeveloped property when complete. If the cost of the redeveloped property, including the net book value of the existing property, exceeds the estimated fair value of the redeveloped property, the excess is charged to expense. Depreciation is recognized on a straight-line basis over the estimated useful lives of these assets which range from 7 to 40 years. Tenant allowances are amortized on a straight-line basis over the lives of the related leases, which approximate the useful lives of the assets.

Upon the acquisition of real estate, we assess whether the transaction should be accounted for as an asset acquisition or as a business combination. Acquisitions of integrated sets of assets and activities that do not meet the definition of a business are accounted for as asset acquisitions. Our acquisitions of real estate generally will not meet the definition of a business because substantially all of the fair value is concentrated in a single identifiable asset or group of similar identifiable assets (i.e. land, buildings, and related identified intangible assets).

We assess the fair value of acquired assets (including land, buildings and improvements, identified intangibles, such as acquired above and below-market leases, acquired in-place leases and tenant relationships) and acquired liabilities and we allocate the purchase price based on these assessments which are on a relative fair value basis. We assess fair value based on estimated cash flow projections that utilize appropriate discount and capitalization rates and available market information. Estimates of future cash flows are based on a number of factors including historical operating results, known trends, and market/economic conditions. We amortize identified intangibles that have finite lives over the period they are expected to contribute directly or indirectly to the future cash flows of the property or business acquired.

Our properties, including any related right-of-use ("ROU") assets and intangible assets, are individually reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment exists when the carrying amount of an asset exceeds the aggregate projected future cash flows over the anticipated holding period on an undiscounted basis. An impairment loss is measured based on the excess of the property's carrying amount over its estimated fair value. Impairment analyses are based on our current plans, intended holding periods and available market information at the time the analyses are prepared. If our estimates of the future cash flows, anticipated holding periods, or market conditions change, our evaluation of impairment losses may be different and such differences could be material to our consolidated financial statements. Estimates of future cash flows are subjective and are based, in part, on assumptions regarding future occupancy, rental rates, capital requirements, capitalization rates and discount rates that could differ materially from actual results.

2. **Basis of Presentation and Significant Accounting Policies - continued**

Significant Accounting Policies - continued

Partially Owned Entities: We consolidate entities in which we have a controlling financial interest. In determining whether we have a controlling financial interest in a partially owned entity and the requirement to consolidate the accounts of that entity, we consider (i) whether the entity is a variable interest entity ("VIE") in which we are the primary beneficiary or (ii) whether the entity is a voting interest entity in which we have a majority of the voting interests of the entity. We are deemed to be the primary beneficiary of a VIE when we have (i) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and (ii) the obligation to absorb losses or receive benefits that could potentially be significant to the VIE. We generally do not control a partially owned entity if the approval of all of the partners/members is contractually required with respect to decisions that most significantly impact the performance of the partially owned entity. This includes decisions regarding operating/capital budgets, and the placement of new or additional financing secured by the assets of the venture, among others. We account for investments under the equity method when the requirements for consolidation are not met, and we have significant influence over the operations of the investee. Equity method investments are initially recorded at cost and subsequently adjusted for our share of net income or loss and cash contributions and distributions each period. Investments that do not qualify for consolidation or equity method accounting are accounted for under the cost method.

Investments in unconsolidated partially owned entities are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recorded when there is a decline in the fair value below the carrying value and we conclude such decline is other-than-temporary. An impairment loss is measured based on the excess of the carrying amount of an investment over its estimated fair value. Impairment analyses are based on current plans, intended holding periods, ability to hold, and available information at the time the analyses are prepared.

220 Central Park South Condominium Units Ready For Sale: Our 220 Central Park South ("220 CPS") residential condominium units are reclassified from "development costs and construction in progress" to "220 Central Park South condominium units ready for sale" upon receipt of the unit's temporary certificate of occupancy. These units are substantially complete and ready for sale. Each unit is carried at the lower of its carrying amount or fair value less costs to sell. We have used the relative sales value method to allocate costs to individual condominium units. GAAP income is recognized when legal title transfers upon closing of the condominium unit sales and is included in "net gains on disposition of wholly owned and partially owned assets" on our consolidated statements of income. As of December 31, 2021 and 2020, none of the 220 CPS condominium units ready for sale had a carrying value that exceeded fair value.

Cash and Cash Equivalents: Cash and cash equivalents consist of highly liquid investments with original maturities of three months or less and are carried at cost, which approximates fair value due to their short-term maturities. The majority of our cash and cash equivalents consists of (i) deposits at major commercial banks, which may at times exceed the Federal Deposit Insurance Corporation limit, (ii) United States Treasury Bills, and (iii) Certificate of Deposits placed through an Account Registry Service.

Restricted Cash: Restricted cash consists of security deposits, cash restricted for the purposes of facilitating a Section 1031 Like-Kind exchange, cash restricted in connection with our deferred compensation plan and cash escrowed under loan agreements, including for debt service, real estate taxes, property insurance and capital improvements.

Deferred Charges: Direct financing costs are deferred and amortized over the terms of the related agreements as a component of interest expense. Direct and incremental costs related to successful leasing activities are capitalized and amortized on a straight-line basis over the lives of the related leases. All other deferred charges are amortized on a straight-line basis, which approximates the effective interest rate method, in accordance with the terms of the agreements to which they relate.

2. **Basis of Presentation and Significant Accounting Policies - continued**

Significant Accounting Policies - continued

Revenue Recognition:

- Rental revenues include revenues from the leasing of space at our properties to tenants, revenues from the Hotel Pennsylvania (permanently closed on April 5, 2021), trade shows, tenant services and parking garage revenues.
 - Revenues from the leasing of space at our properties to tenants includes (i) lease components, including fixed and variable lease payments, and nonlease components which include reimbursement of common area maintenance expenses, and (ii) reimbursement of real estate taxes and insurance expenses. As lessor, we have elected to combine the lease and nonlease components of our operating lease agreements and account for the components as a single lease component in accordance with ASC 842.
 - Revenues from fixed lease payments for operating leases in our portfolio are recognized on a straight-line basis over the non-cancelable term of the lease, together with renewal options that are reasonably certain of being exercised. We commence revenue recognition when the tenant takes possession of the leased space and the leased space is substantially ready for its intended use.
 - Revenue derived from the reimbursement of real estate taxes, insurance expenses and common area maintenance expenses are generally recognized in the same period as the related expenses are incurred.
 - We recognize amortization of acquired below-market leases as an increase to rental revenues and amortization of acquired above-market leases as a decrease to rental revenues over the term of the lease (see Note 8 - *Identified Intangible Assets and Liabilities*).
 - Hotel revenues arising from the operation of Hotel Pennsylvania, which we permanently closed on April 5, 2021, consists of room revenue, food and beverage revenue, and banquet revenue. Room revenues are recognized when the rooms are made available for the guest, in accordance with ASC 842.
 - Trade shows revenues arising from the operation of trade shows is primarily booth rentals. These revenues are recognized upon the occurrence of the trade shows when the trade show booths are made available for use by the exhibitors, in accordance with ASC 842.
 - Tenant services revenues arises from sub-metered electric, elevator, trash removal and other services provided to tenants at their request. These revenues are recognized as the services are transferred in accordance with ASC Topic 606, *Revenue from Contracts with Customers* ("ASC 606").
 - Parking garage revenues arise from the operations of our parking facilities which charge a hourly or monthly fee to provide parking services. These revenues are recognized as the services are transferred in accordance with ASC 606.
- Fee and other income includes management, leasing and other revenue arising from contractual agreements with third parties or with partially owned entities and includes BMS cleaning, engineering and security services. This revenue is recognized as the services are transferred in accordance with ASC 606.

We evaluate on an individual lease basis whether it is probable that we will collect substantially all amounts due from our tenants and recognize changes in the collectability assessment of our operating leases as adjustments to rental revenue. Management exercises judgment in assessing collectability of tenant receivables and considers payment history, current credit status and publicly available information about the financial condition of the tenant, the impact of COVID-19 on tenants' businesses, and other factors. Tenant receivables, including receivables arising from the straight-lining of rents, are written off when management deems that the collectability of substantially all future lease payments from a specific lease is not probable of collection, at which point, the Company will limit future rental revenues to cash received.

We have made a policy election in accordance with the FASB Staff Q&A which provides relief in accounting for leases during the COVID-19 pandemic, allowing us to continue recognizing rental revenue on a straight-line basis for rent deferrals, with no impact to revenue recognition, and to recognize rent abatements as a reduction to rental revenue in the period granted.

2. Basis of Presentation and Significant Accounting Policies - continued

Significant Accounting Policies - continued

Income Taxes: Vornado operates in a manner intended to enable it to continue to qualify as a REIT under Sections 856-860 of the Internal Revenue Code of 1986, as amended. Under those sections, a REIT which distributes at least 90% of its REIT taxable income as a dividend to its shareholders each year and which meets certain other conditions will not be taxed on that portion of its taxable income which is distributed to its shareholders. Vornado distributes to its shareholders 100% of its REIT taxable income and therefore, no provision for Federal income taxes is required. Dividends distributed for the year ended December 31, 2021, were characterized, for federal income tax purposes, as 84.2% ordinary income under Section 199A of the Internal Revenue Code and 15.8% qualified dividend income (taxed as long-term capital gain). Dividends distributed for the year ended December 31, 2020, were characterized, for federal income tax purposes, as ordinary income. Dividends distributed for the year ended December 31, 2019, were characterized, for federal income tax purposes, as 62.1% ordinary income and 37.9% long-term capital gain.

We have elected to treat certain consolidated subsidiaries, and may in the future elect to treat newly formed subsidiaries, as taxable REIT subsidiaries pursuant to an amendment to the Internal Revenue Code that became effective January 1, 2001. Taxable REIT subsidiaries may participate in non-real estate related activities and/or perform non-customary services for tenants and are subject to Federal and State income tax at regular corporate tax rates. Farley Office and Retail, our 220 CPS condominium project and the operations of Hotel Pennsylvania, prior to its closure, are held through taxable REIT subsidiaries.

As of December 31, 2021 and 2020, our taxable REIT subsidiaries had deferred tax assets, net of valuation allowances, of \$8,582,000 and \$15,017,000, respectively, and are included in "other assets" on our consolidated balance sheets. As of December 31, 2021 and 2020, our taxable REIT subsidiaries had deferred tax liabilities of \$40,591,000 and \$29,348,000, respectively, which are included in "other liabilities" on our consolidated balance sheets. The deferred tax assets and liabilities relate to net operating loss carry forwards and temporary differences between the book and tax basis of assets and liabilities.

For the year ended December 31, 2021, we recognized \$10,496,000 of income tax benefit based on an effective tax rate of approximately (5.3)%. For the years ended December 31, 2020 and 2019, we recognized \$36,630,000 and \$103,439,000 of income tax expense, respectively, based on effective tax rates of approximately (8.6)% and 3.0%, respectively. Income tax benefit (expense) recorded in each of the years primarily relates to our consolidated taxable REIT subsidiaries, and certain state, local, and franchise taxes. The year ended December 31, 2021 included \$27,910,000 of income tax benefit recognized by our taxable REIT subsidiaries, \$10,868,000 of income tax expense resulting from book to tax differences (primarily straight-line rent adjustments and depreciation) on our investment in Farley Office and Retail and \$5,711,000 of income tax expense recognized on the sale of 220 CPS condominium units. The years ended December 31, 2020 and 2019, included \$49,221,000 and \$101,828,000, respectively, of income tax expense recognized on the sale of 220 CPS condominium units. The Company has no uncertain tax positions recognized as of December 31, 2021 and 2020.

The Operating Partnership's partners are required to report their respective share of taxable income on their individual tax returns.

The estimated taxable income attributable to Vornado common shareholders (unaudited) for the years ended December 31, 2021, 2020 and 2019 was approximately \$413,026,000, \$419,812,000, and \$917,162,000, respectively. The book to tax differences between net income (loss) and estimated taxable income primarily result from differences in the income recognition or deductibility of depreciation and amortization, gain or loss from the sale of real estate and other capital transactions, impairment losses, straight-line rent adjustments, stock option expense and repairs expense related to the tangible property regulations.

The net basis of Vornado's assets and liabilities for tax reporting purposes is approximately \$2.6 billion lower than the amounts reported in Vornado's consolidated balance sheet as of December 31, 2021.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

3. Revenue Recognition

Below is a summary of our revenues by segment. Additional financial information related to these reportable segments for the years ended December 31, 2021, 2020 and 2019 is set forth in Note 23 - *Segment Information*.

(Amounts in thousands)

	For the Year Ended December 31, 2021		
	Total	New York	Other
Property rentals	\$ 1,354,209	\$ 1,071,816	\$ 282,393
Trade shows ⁽¹⁾	19,482	—	19,482
Lease revenues ⁽²⁾	1,373,691	1,071,816	301,875
Tenant services	37,449	26,048	11,401
Parking revenues	13,391	11,370	2,021
Rental revenues	1,424,531	1,109,234	315,297
BMS cleaning fees	119,780	126,891	(7,111) ⁽³⁾
Management and leasing fees	11,725	12,177	(452)
Other income	33,174	9,297	23,877
Fee and other income	164,679	148,365	16,314
Total revenues	1,589,210	1,257,599	331,611

See notes on following page.

(Amounts in thousands)

	For the Year Ended December 31, 2020		
	Total	New York	Other
Property rentals ⁽⁴⁾	\$ 1,323,347	\$ 1,051,009	\$ 272,338
Hotel Pennsylvania ⁽⁵⁾	8,741	8,741	—
Trade shows ⁽¹⁾	11,303	—	11,303
Lease revenues ⁽²⁾	1,343,391	1,059,750	283,641
Tenant services	34,244	23,750	10,494
Rental revenues	1,377,635	1,083,500	294,135
BMS cleaning fees	105,536	112,112	(6,576) ⁽³⁾
Management and leasing fees	19,416	19,508	(92)
Other income	25,364	6,628	18,736
Fee and other income	150,316	138,248	12,068
Total revenues	\$ 1,527,951	\$ 1,221,748	\$ 306,203

See notes on following page.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

3. Revenue Recognition - continued

(Amounts in thousands)

	For the Year Ended December 31, 2019		
	Total	New York	Other
Property rentals ⁽⁴⁾	\$ 1,589,539	\$ 1,300,385	\$ 289,154
Hotel Pennsylvania	89,594	89,594	—
Trade shows	40,577	—	40,577
Lease revenues ⁽²⁾	1,719,710	1,389,979	329,731
Tenant services	47,512	35,011	12,501
Rental revenues	1,767,222	1,424,990	342,232
BMS cleaning fees	124,674	133,358	(8,684) ⁽³⁾
Management and leasing fees	13,542	13,694	(152)
Other income	19,262	5,818	13,444
Fee and other income	157,478	152,870	4,608
Total revenues	\$ 1,924,700	\$ 1,577,860	\$ 346,840

(1) We cancelled trade shows at theMART beginning late March of 2020 due to the COVID-19 pandemic and resumed in the third quarter of 2021.

(2) The components of lease revenues were as follows:

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Fixed billings	\$ 1,277,645	1,292,184	1,531,917
Variable billings	108,850	126,907	199,291
Total contractual operating lease billings	1,386,495	1,419,081	1,731,208
Adjustment for straight-line rents and amortization of acquired below-market leases and other, net	(5,109)	(12,486)	5,739
Less: write-off of straight-line rent and tenant receivables deemed uncollectible	(7,695)	(63,204)	(17,237)
Lease revenues	\$ 1,373,691	1,343,391	1,719,710

(3) Represents the elimination of theMART and 555 California Street BMS cleaning fees which are included as income in the New York segment.

(4) Reduced by \$63,204 and \$17,237 for the years ended December 31, 2020 and 2019, respectively, for the write-off of lease receivables deemed uncollectible (primarily write-offs of receivables arising from the straight-lining of rents).

(5) We temporarily closed the Hotel Pennsylvania on April 1, 2020 and on April 5, 2021, we permanently closed the hotel and plan to develop an office tower on the site.

4. Real Estate Fund Investments

We are the general partner and investment manager of Vornado Capital Partners Real Estate Fund (the “Fund”) and own a 25.0% interest in the Fund, which had an initial eight-year term ending February 2019. On January 29, 2018, the Fund’s term was extended to February 2023. The Fund’s three-year investment period ended in July 2013. The Fund is accounted for under ASC Topic 946, *Financial Services – Investment Companies* (“ASC 946”) and its investments are reported on its balance sheet at fair value, with changes in value each period recognized in earnings. We consolidate the accounts of the Fund into our consolidated financial statements, retaining the fair value basis of accounting.

We are the general partner and investment manager of the Crowne Plaza Times Square Hotel Joint Venture (the “Crowne Plaza Joint Venture”) and own a 57.1% interest in the joint venture which owns the 24.3% interest in the Crowne Plaza Times Square Hotel not owned by the Fund. The Crowne Plaza Joint Venture is also accounted for under ASC 946 and we consolidate the accounts of the joint venture into our consolidated financial statements, retaining the fair value basis of accounting. On June 9, 2020, the joint venture between the Fund and the Crowne Plaza Joint Venture defaulted on the \$274,355,000 non-recourse loan on the Crowne Plaza Times Square Hotel. The interest-only loan, which bears interest at a floating rate of LIBOR plus 3.69% (3.79% as of December 31, 2021) and provides for additional default interest of 3.00%, was scheduled to mature on July 9, 2020.

On April 12, 2021, the Fund defaulted on the \$82,750,000 non-recourse loan on 1100 Lincoln Road. The interest-only loan currently bears interest at a floating rate of prime plus 1.40% (4.65% as of December 31, 2021) and provides for additional default interest of 3.00%. The loan was scheduled to mature on July 27, 2021.

On December 7, 2021, the Fund completed the sale of the retail condominium located at 501 Broadway for \$27,500,000. From the inception of this investment through its disposition, the Fund realized a \$6,346,000 net loss.

As of December 31, 2021, we had three real estate fund investments through the Fund and the Crowne Plaza Joint Venture with an aggregate fair value of \$7,730,000, \$328,055,000 below cost, and had remaining unfunded commitments of \$28,465,000, of which our share was \$8,849,000. As of December 31, 2020, we had four real estate fund investments with an aggregate fair value of \$3,739,000.

Below is a summary of income (loss) from the Fund and the Crowne Plaza Joint Venture.

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Net investment income (loss)	\$ 6,445	\$ (220)	\$ 2,027
Net unrealized income (loss) on held investments	3,257	(226,107)	(106,109)
Net realized income on exited investments	1,364	—	—
Income (loss) from real estate fund investments	11,066	(226,327)	(104,082)
Less (income) loss attributable to noncontrolling interests in consolidated subsidiaries	(7,309)	163,213	55,274
Income (loss) from real estate fund investments net of noncontrolling interests in consolidated subsidiaries	<u>\$ 3,757</u>	<u>\$ (63,114)</u>	<u>\$ (48,808)</u>

5. Investments in Partially Owned Entities

Fifth Avenue and Times Square JV

As of December 31, 2021, we own a 51.5% common interest in a joint venture (“Fifth Avenue and Times Square JV”) which owns interests in properties located at 640 Fifth Avenue, 655 Fifth Avenue, 666 Fifth Avenue, 689 Fifth Avenue, 697-703 Fifth Avenue, 1535 Broadway and 1540 Broadway (collectively, the “Properties”). The remaining 48.5% common interest in the joint venture is owned by a group of institutional investors (the “Investors”). Our 51.5% common interest in the joint venture represents an effective 51.0% interest in the Properties. The 48.5% common interest in the joint venture owned by the Investors represents an effective 47.2% interest in the Properties.

We also own \$1.828 billion of preferred equity security interests in certain of the properties. The preferred equity has an annual coupon of 4.25% through April 2024, increasing to 4.75% for the subsequent five years and thereafter at a formulaic rate. It can be redeemed under certain conditions on a tax deferred basis.

As of December 31, 2021, the carrying amount of our investment in the joint venture was less than our share of the equity in the net assets of the joint venture by approximately \$387,402,000, the basis difference primarily resulting from non-cash impairment losses recognized during 2020. Substantially all of this basis difference was allocated, based on our estimates of the fair values of Fifth Avenue and Times Square JV’s assets and liabilities, to real estate (land and buildings). We are amortizing the basis difference related to the buildings into earnings as a reduction to depreciation expense over their estimated useful lives.

Management, Development, Leasing and Other Agreements

We provide various services to Fifth Avenue and Times Square JV in accordance with management, development, leasing and other agreements, as described on the following page.

5. Investments in Partially Owned Entities - continued

Fifth Avenue and Times Square JV - continued

We receive an annual fee for managing the Properties equal to 2% of the gross revenues from the Properties. In addition, we are entitled to a development fee of 5% of development costs, plus reimbursement of certain costs, for development projects performed by us. We are entitled to 1.5% of development costs, plus reimbursement of certain costs, as a supervisory fee for development projects not performed by us. We provide leasing services for fees calculated based on a percentage of rents, less any commissions paid to third-party real estate brokers, if applicable. We jointly provide leasing services for the retail space with Crown Retail Services LLC, and exclusively provide leasing services for the office space. We recognized property management fee income, included in "fee and other income" on our consolidated statements of income, of \$4,297,000, \$3,982,000 and \$3,085,000 for the years ended December 31, 2021, 2020 and 2019, respectively.

BMS, our wholly-owned subsidiary, supervises cleaning, security and engineering services at certain of the Properties. We recognized income for these services, included in "fee and other income" on our consolidated statements of income, of \$3,993,000, \$3,595,000 and \$3,087,000 for the years ended December 31, 2021, 2020 and 2019, respectively.

We believe, based on comparable fees charged by other real estate companies, that the fees described above are consistent with the market.

Alexander's, Inc

As of December 31, 2021, we own 1,654,068 Alexander's common shares, or approximately 32.4% of Alexander's common equity. We manage, develop and lease Alexander's properties pursuant to agreements which expire in March of each year and are automatically renewable. As of December 31, 2021 and 2020, Alexander's owed us an aggregate of \$879,000 and \$1,516,000, respectively, pursuant to such agreements.

On June 4, 2021, Alexander's completed the sale of a parcel of land in the Bronx, New York for \$10,000,000. As a result of the sale, we recognized our \$2,956,000 share of the net gain and also received a \$300,000 sales commission paid by Alexander's.

On October 4, 2021, Alexander's sold its Paramus, New Jersey property to IKEA Property, Inc. ("IKEA"), the tenant at the property, for \$75,000,000 pursuant to IKEA's purchase option contained in the lease. The property was encumbered by a \$68,000,000 mortgage loan which was repaid at closing of the sale. As a result of the sale, we recognized our \$11,620,000 share of the net gain and also received a \$750,000 sales commission paid by Alexander's.

As of December 31, 2021, the market value ("fair value" pursuant to ASC Topic 820, *Fair Value Measurements* ("ASC 820")) of our investment in Alexander's, based on Alexander's December 31, 2021 closing share price of \$260.30, was \$430,554,000, or \$339,149,000 in excess of the carrying amount on our consolidated balance sheet. As of December 31, 2021, the carrying amount of our investment in Alexander's, excluding amounts owed to us, exceeds our share of the equity in the net assets of Alexander's by approximately \$30,081,000. The majority of this basis difference resulted from the excess of our purchase price for the Alexander's common stock acquired over the book value of Alexander's net assets. Substantially all of this basis difference was allocated, based on our estimates of the fair values of Alexander's assets and liabilities, to real estate (land and buildings). We are amortizing the basis difference related to the buildings into earnings as additional depreciation expense over their estimated useful lives. This depreciation is not material to our share of equity in Alexander's net income.

Management, Development, Leasing and Other Agreements

We receive an annual fee for managing Alexander's and all of its properties equal to the sum of (i) \$2,800,000, (ii) 2% of the gross revenue from the Rego Park II Shopping Center, (iii) \$0.50 per square foot of the tenant-occupied office and retail space at 731 Lexington Avenue, and (iv) \$344,000, escalating at 3% per annum, for managing the common area of 731 Lexington Avenue. In addition, we are entitled to a development fee of 6% of development costs, as defined.

We provide Alexander's with leasing services for a fee of 3% of rent for the first ten years of a lease term, 2% of rent for the eleventh through twentieth year of a lease term and 1% of rent for the twenty-first through thirtieth year of a lease term, subject to the payment of rents by Alexander's tenants. In the event third-party real estate brokers are used, our fee increases by 1% and we are responsible for the fees to the third-parties. We are also entitled to a commission upon the sale of any of Alexander's assets equal to 3% of gross proceeds, as defined, for asset sales less than \$50,000,000, and 1% of gross proceeds, as defined, for asset sales of \$50,000,000 or more.

BMS, our wholly-owned subsidiary, supervises (i) cleaning, engineering and security services at Alexander's 731 Lexington Avenue property and (ii) security services at Alexander's Rego Park I, Rego Park II properties and The Alexander apartment tower. During the years ended December 31, 2021, 2020 and 2019, we recognized \$4,234,000, \$3,613,000 and \$3,613,000 of income, respectively, for these services.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5. Investments in Partially Owned Entities - continued

Below is a schedule of our investments in partially owned entities.

(Amounts in thousands)

	Percentage Ownership at December 31, 2021	Balance as of December 31,	
		2021	2020
Investments:			
Fifth Avenue and Times Square JV (see page 90 for details)	51.5%	\$ 2,770,633	\$ 2,798,413
Partially owned office buildings/land ⁽¹⁾	Various	306,989	473,285
Alexander's (see page 91 for details)	32.4%	91,405	82,902
Other investments ⁽²⁾	Various	128,362	136,507
		<u>\$ 3,297,389</u>	<u>\$ 3,491,107</u>
Investments in partially owned entities included in other liabilities⁽³⁾:			
7 West 34th Street	53.0%	\$ (60,918)	\$ (55,340)
85 Tenth Avenue	49.9%	(18,067)	(13,080)
		<u>\$ (78,985)</u>	<u>\$ (68,420)</u>

- (1) Includes interests in 280 Park Avenue, 650 Madison Avenue, One Park Avenue (consolidated from August 5, 2021, see Note 7 - *Acquisitions and Dispositions* for details), 512 West 22nd Street, 61 Ninth Avenue and others.
(2) Includes interests in Independence Plaza, Rosslyn Plaza and others.
(3) Our negative basis results from distributions in excess of our investment.

Below is a schedule of income (loss) from partially owned entities.

(Amounts in thousands)

	Percentage Ownership at December 31, 2021	For the Year Ended December 31,		
		2021	2020	2019
Our share of net income (loss):				
Fifth Avenue and Times Square JV (see page 90 for details):				
Equity in net income ⁽¹⁾	51.5%	\$ 47,144	\$ 21,063	\$ 31,130
Return on preferred equity, net of our share of the expense		37,416	37,357	27,586
Non-cash impairment loss		—	(413,349)	—
		<u>84,560</u>	<u>(354,929)</u>	<u>58,716</u>
Alexander's (see page 91 for details):				
Equity in net income	32.4%	20,116	13,326 ⁽²⁾	19,204
Net gain on sale of land		14,576	—	—
Management, leasing and development fees		5,429	5,309	4,575
		<u>40,121</u>	<u>18,635</u>	<u>23,779</u>
Partially owned office buildings ⁽³⁾	Various	12,057	12,742	(3,443)
Other investments ⁽⁴⁾	Various	(6,221)	(5,560)	(187)
		<u>\$ 130,517</u>	<u>\$ (329,112)</u>	<u>\$ 78,865</u>

- (1) 2021 includes decreases in our share of depreciation and amortization expense compared to the prior year of \$17,448, primarily resulting from non-cash impairment losses recognized during 2020 (see page 90 for details). 2021 and 2020 include a \$13,971 reduction in income related to a Forever 21 lease modification at 1540 Broadway. 2020 also includes \$3,125 of write-offs of lease receivables deemed uncollectible.
(2) Includes our \$4,846 share of write-offs of lease receivables deemed uncollectible.
(3) Includes interests in 280 Park Avenue, 650 Madison Avenue, One Park Avenue (consolidated from August 5, 2021, see Note 7 - *Acquisitions and Dispositions* for details), 7 West 34th Street, 512 West 22nd Street, 61 Ninth Avenue, 85 Tenth Avenue and others.
(4) Includes interests in Independence Plaza, Rosslyn Plaza, Urban Edge Properties (sold on March 4, 2019), Pennsylvania Real Estate Investment Trust (accounted for as a marketable security from March 12, 2019 and sold on January 23, 2020) and others.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

5. Investments in Partially Owned Entities – continued

Below is a summary of the debt of our partially owned entities.

(Amounts in thousands)

	Percentage Ownership at December 31, 2021	Maturity	Weighted Average Interest Rate at December 31, 2021	100% Partially Owned Entities' Debt at December 31, ⁽¹⁾	
				2021	2020
Mortgages Payable:					
Partially owned office buildings ⁽²⁾	Various	2022-2029	2.95%	\$ 3,348,149	\$ 3,622,572
Alexander's	32.4%	2024-2027	1.43%	1,096,544	1,164,544
Fifth Avenue and Times Square JV	51.5%	2022-2024	2.61%	950,000	950,000
Other ⁽³⁾	Various	2022-2026	3.67%	1,292,012	1,288,265

- (1) All amounts are non-recourse to us except (i) the \$500,000 mortgage loan on 640 Fifth Avenue, included in the Fifth Avenue and Times Square JV, and (ii) the \$300,000 mortgage loan on 7 West 34th Street.
- (2) Includes interests in 280 Park Avenue, 650 Madison Avenue, One Park Avenue (consolidated from August 5, 2021), 7 West 34th Street, 512 West 22nd Street, 61 Ninth Avenue, 85 Tenth Avenue and others.
- (3) Includes interests in Independence Plaza, Rosslyn Plaza and others.

Based on our ownership interest in the partially owned entities above, our pro rata share of the debt of these partially owned entities was \$2,699,405,000 and \$2,873,174,000 as of December 31, 2021 and 2020, respectively

Summary of Condensed Combined Financial Information

The following is a summary of condensed combined financial information for all of our partially owned entities.

(Amounts in thousands)

	As of December 31,	
	2021	2020
Balance Sheet:		
Assets	\$ 12,689,000	\$ 13,344,000
Liabilities	7,553,000	7,747,000
Noncontrolling interests	2,069,000	2,075,000
Equity	3,067,000	3,522,000

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Income Statement:			
Total revenue	\$ 1,184,000	\$ 1,163,000	\$ 1,504,000
Net income	190,000	45,000	39,000
Net income (loss) attributable to the entities	114,000	(33,000)	(32,000)

6. 220 Central Park South

During the year ended December 31, 2021, we closed on the sale of six condominium units at 220 CPS for net proceeds of \$137,404,000 resulting in a financial statement net gain of \$50,318,000 which is included in "net gains on disposition of wholly owned and partially owned assets" on our consolidated statements of income. In connection with these sales, \$5,711,000 of income tax expense was recognized on our consolidated statements of income. In addition, during 2021 our taxable REIT subsidiaries recognized a \$27,910,000 income tax benefit on our consolidated statements of income. From inception to December 31, 2021, we have closed on the sale of 106 units for net proceeds of \$3,006,896,000 resulting in financial statement net gains of \$1,117,255,000.

As of December 31, 2021, 95% of the condominium units have been sold.

7. Acquisitions and Dispositions

One Park Avenue

On August 5, 2021, pursuant to a right of first offer, we increased our ownership interest in One Park Avenue, a 944,000 square foot Manhattan office building, to 100.0% by acquiring our joint venture partner's 45.0% ownership interest in the property. The purchase price values the property at \$875,000,000. We paid approximately \$158,000,000 in cash and assumed our joint venture partner's share of the \$525,000,000 mortgage loan (discussed below). We previously accounted for our investment under the equity method and have consolidated the accounts of the property from the date of acquisition of the additional 45.0% ownership interest. The aggregate purchase price and our existing basis in the property have been allocated between the assets acquired and the liabilities assumed (excluding working capital accounts) as follows:

(Amounts in thousands)

Assets:		
Land	\$	197,057
Building and improvements		368,956
Identified intangible assets		139,545
Assets consolidated		705,558
Liabilities:		
Mortgages payable		525,000
Deferred revenue		18,884
Liabilities consolidated		543,884
Net assets consolidated (excluding working capital)	\$	161,674

On February 26, 2021, the joint venture completed a \$525,000,000 refinancing of One Park Avenue. The interest-only loan bears a rate of LIBOR plus 1.11% (1.22% as of December 31, 2021) and matures in March 2023, with three one-year extension options (March 2026, as fully extended). We realized our \$105,000,000 share of net proceeds. The loan replaced the previous \$300,000,000 loan that bore interest at LIBOR plus 1.75% and was scheduled to mature in March 2021.

Madison Avenue

On September 24, 2021, we sold three Manhattan retail properties located at 677-679, 759-771 and 828-850 Madison Avenue in two separate sale transactions for an aggregate sales price of \$100,000,000. Net proceeds from the sales were \$96,503,000. In connection with the sales, we recorded \$7,880,000 of non-cash impairment losses which are included in "impairment losses, transaction related costs and other" on our consolidated statements of income.

SoHo Properties

On May 10, 2021, we entered into an agreement to sell two Manhattan retail properties located at 478-482 Broadway and 155 Spring Street for a sales price of \$84,500,000. On January 13, 2022, we completed the sale transaction and realized net proceeds of \$81,399,000. In connection with the sale, we will recognize a net gain of approximately \$850,000 in the first quarter of 2022. As of December 31, 2021, \$80,005,000 of assets associated with these properties were classified as held-for-sale and are included in "other assets" on our consolidated balance sheets.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

8. Identified Intangible Assets and Liabilities

The following summarizes our identified intangible assets (primarily above-market leases) and liabilities (primarily below-market leases).

(Amounts in thousands)

	Balance as of December 31,	
	2021	2020
Identified intangible assets:		
Gross amount	\$ 252,081	\$ 116,969
Accumulated amortization	(97,186)	(93,113)
Total, net	\$ 154,895	\$ 23,856
Identified intangible liabilities (included in deferred revenue):		
Gross amount	\$ 256,065	\$ 273,902
Accumulated amortization	(212,245)	(238,541)
Total, net	\$ 43,820	\$ 35,361

Amortization of acquired below-market leases, net of acquired above-market leases, resulted in an increase to rental revenues of \$9,249,000, \$16,878,000 and \$19,830,000 for the years ended December 31, 2021, 2020 and 2019, respectively. Estimated annual amortization of acquired below-market leases, net of acquired above-market leases, for each of the five succeeding years commencing January 1, 2022 is as follows:

(Amounts in thousands)

2022	\$	5,531
2023		5,151
2024		2,056
2025		843
2026		201

Amortization of all other identified intangible assets (a component of depreciation and amortization expense) was \$7,330,000, \$6,507,000 and \$8,666,000 for the years ended December 31, 2021, 2020 and 2019, respectively. Estimated annual amortization of all other identified intangible assets including acquired in-place leases for each of the five succeeding years commencing January 1, 2022 is as follows:

(Amounts in thousands)

2022	\$	9,805
2023		8,743
2024		7,906
2025		6,330
2026		6,136

9. Debt

Secured Debt

On March 7, 2021, we entered into an interest rate swap agreement for our \$500,000,000 PENN 11 mortgage loan to swap the interest rate on the mortgage loan from LIBOR plus 2.75% to a fixed rate of 3.03% through March 2024. On December 1, 2021, we completed a loan modification which reduced the interest rate on the mortgage loan to LIBOR plus 1.95% (2.05% as of December 31, 2021) from LIBOR plus 2.75%, resulting in a fixed rate of 2.23% pursuant to the interest rate swap agreement.

On March 26, 2021, we completed a \$350,000,000 refinancing of 909 Third Avenue, a 1.4 million square foot Manhattan office building. The interest-only loan bears a fixed rate of 3.23% and matures in April 2031. The loan replaced the previous \$350,000,000 loan that bore interest at a fixed rate of 3.91% and was scheduled to mature in May 2021.

On May 10, 2021, we completed a \$1.2 billion refinancing of 555 California Street, a three-building 1.8 million square foot office campus in San Francisco, in which we own a 70.0% controlling interest. The interest-only loan bears a rate of LIBOR plus 1.93% in years one through five (2.04% as of December 31, 2021), LIBOR plus 2.18% in year six and LIBOR plus 2.43% in year seven. The loan matures in May 2023, with five one-year extension options (May 2028 as fully extended). We swapped the interest rate on our \$840,000,000 share of the loan to a fixed rate of 2.26% through May 2024. The loan replaced the previous \$533,000,000 loan that bore interest at a fixed rate of 5.10% and was scheduled to mature in September 2021.

On May 28, 2021, we repaid the \$675,000,000 mortgage loan on theMART, a 3.7 million square foot commercial building in Chicago, with proceeds from our senior unsecured notes offering discussed below. The loan bore interest at 2.70% and was scheduled to mature in September 2021.

On November 16, 2021, we completed a \$950,000,000 refinancing of 1290 Avenue of the Americas, a 2.1 million square foot Class A Manhattan office building, in which we own a 70.0% controlling interest. The interest-only loan bears a rate of LIBOR plus 1.51% (1.62% as of December 31, 2021) in years one to five, increasing 0.25% in both years six and seven. The loan matures in November 2023 with five one-year extension options (November 2028 as fully extended). We defeased the existing \$950,000,000 loan that bore interest at a fixed rate of 3.34% and was scheduled to mature in November 2022. As a result, we incurred \$23,729,000 of defeasance costs, which are included in "interest and debt expense" on our consolidated statements of income, of which \$7,119,000 is attributable to noncontrolling interest.

Unsecured Revolving Credit Facility

On April 15, 2021, we extended our \$1.25 billion unsecured revolving credit facility from January 2023 (as fully extended) to April 2026 (as fully extended). The interest rate on the extended facility was lowered to LIBOR plus 0.90% from LIBOR plus 1.00%. We subsequently qualified for a sustainability margin adjustment by achieving certain key performance indicator (KPI) metrics, which reduced our interest rate by 0.01% to LIBOR plus 0.89%. The facility fee remains at 20 basis points. Our separate \$1.50 billion unsecured revolving credit facility matures in March 2024 (as fully extended) and has an interest rate of LIBOR plus 0.90% and a facility fee of 20 basis points.

Senior Unsecured Notes

On May 24, 2021, we completed a green bond public offering of \$400,000,000 2.15% senior unsecured notes due June 1, 2026 ("2026 Notes") and \$350,000,000 3.40% senior unsecured notes due June 1, 2031 ("2031 Notes"). Interest on the senior unsecured notes is payable semi-annually on June 1 and December 1, commencing December 1, 2021. The 2026 Notes were sold at 99.86% of their face amount to yield 2.18% and the 2031 Notes were sold at 99.59% of their face amount to yield 3.45%.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

9. Debt - continued

The following is a summary of our debt:

(Amounts in thousands)

	Weighted Average Interest Rate at December 31, 2021	Balance as of December 31,	
		2021	2020
Mortgages Payable:			
Fixed rate	2.80%	\$ 2,190,000	\$ 3,012,643
Variable rate	1.68%	3,909,215	2,595,815
Total	2.08%	6,099,215	5,608,458
Deferred financing costs, net and other		(45,872)	(27,909)
Total, net		\$ 6,053,343	\$ 5,580,549
Unsecured Debt:			
Senior unsecured notes	3.02%	\$ 1,200,000	\$ 450,000
Deferred financing costs, net and other		(10,208)	(3,315)
Senior unsecured notes, net		1,189,792	446,685
Unsecured term loan	3.70%	800,000	800,000
Deferred financing costs, net and other		(2,188)	(3,238)
Unsecured term loan, net		797,812	796,762
Unsecured revolving credit facilities	1.00%	575,000	575,000
Total, net		\$ 2,562,604	\$ 1,818,447

The net carrying amount of properties collateralizing the above indebtedness amounted to \$5.6 billion as of December 31, 2021.

As of December 31, 2021, the principal repayments required for the next five years and thereafter are as follows:

(Amounts in thousands)	Mortgages Payable	Unsecured Debt
Year Ended December 31,		
2022	\$ 1,046,600	\$ —
2023	3,198,400	575,000
2024	773,215	800,000
2025	331,000	450,000
2026	—	400,000
Thereafter	750,000	350,000

10. Redeemable Noncontrolling Interests

Redeemable Noncontrolling Partnership Units

Redeemable noncontrolling partnership units are primarily comprised of Class A Operating Partnership units held by third parties and are recorded at the greater of their carrying amount or redemption value at the end of each reporting period. Changes in the value from period to period are charged to “additional capital” in Vornado’s consolidated statements of changes in equity and to “partners’ capital” on the consolidated balance sheets of the Operating Partnership. Class A units may be tendered for redemption to the Operating Partnership for cash; Vornado, at its option, may assume that obligation and pay the holder either cash or Vornado common shares on a one-for-one basis. Because the number of Vornado common shares outstanding at all times equals the number of Class A units owned by Vornado, the redemption value of each Class A unit is equivalent to the market value of one Vornado common share, and the quarterly distribution to a Class A unitholder is equal to the quarterly dividend paid to a Vornado common shareholder.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

10. Redeemable Noncontrolling Interests - continued

Redeemable Noncontrolling Partnership Units - continued

Below are the details of redeemable noncontrolling partnership units.

(Amounts in thousands, except units and per unit amounts)

Unit Series	Balance as of December 31,		Units Outstanding as of December 31,		Per Unit Liquidation Preference	Preferred or Annual Distribution Rate
	2021	2020	2021	2020		
Common:						
Class A units held by third parties	\$ 587,440 ⁽¹⁾	\$ 507,212 ⁽¹⁾	14,033,438	13,583,607	n/a	\$ 2.12
Perpetual Preferred/Redeemable Preferred:						
5.00% D-16 Cumulative Redeemable ⁽²⁾	\$ —	\$ 1,000	—	1	n/a	n/a
3.25% D-17 Cumulative Redeemable ⁽³⁾	\$ 3,535	\$ 3,535	141,400	141,400	\$ 25.00	\$ 0.8125

(1) Aggregate redemption value was based on Vornado's year-end closing common share price.

(2) Redeemed on October 18, 2021.

(3) Holders may tender units for redemption to the Operating Partnership for cash at their stated redemption amount; Vornado, at its option, may assume that obligation and pay the holders either cash or Vornado preferred shares on a one-for-one basis. These units are redeemable at Vornado's option at any time.

Below is a table summarizing the activity of redeemable noncontrolling partnership units.

(Amounts in thousands)

	For the Year Ended December 31,	
	2021	2020
Beginning balance	\$ 511,747	\$ 888,915
Net income (loss)	7,540	(24,946)
Other comprehensive income (loss)	4,048	(2,914)
Distributions	(29,901)	(32,595)
Redemption of Class A units for Vornado common shares, at redemption value	(14,576)	(9,266)
Redeemable Class A unit measurement adjustment	76,073	(344,043)
Other, net	36,044	36,596
Ending balance	\$ 590,975	\$ 511,747

Redeemable noncontrolling partnership units exclude our Series G-1 through G-4 convertible preferred units and Series D-13 cumulative redeemable preferred units, as they are accounted for as liabilities in accordance with ASC Topic 480, *Distinguishing Liabilities and Equity*, because of their possible settlement by issuing a variable number of Vornado common shares. Accordingly, the fair value of these units is included as a component of "other liabilities" on our consolidated balance sheets and aggregated \$49,659,000 and \$50,002,000 as of December 31, 2021 and 2020, respectively. Changes in the value from period to period, if any, are charged to "interest and debt expense" on our consolidated statements of income.

Redeemable Noncontrolling Interest in a Consolidated Subsidiary

A consolidated joint venture in which we own a 95% interest is developing Farley Office and Retail (the "Project"). During 2020, a historic tax credit investor (the "Tax Credit Investor") funded \$92,400,000 of capital contributions and is expected to make additional capital contributions in future periods.

The arrangement includes a put option whereby the joint venture may be obligated to purchase the Tax Credit Investor's ownership interest in the Project at a future date. The put price is calculated based on a pre-determined formula. As exercise of the put option is outside of the joint venture's control, the Tax Credit Investor's interest, together with the put option, have been recorded to "redeemable noncontrolling interest in a consolidated subsidiary" on our consolidated balance sheets as of December 31, 2021 and 2020. The redeemable noncontrolling interest is recorded at the greater of the carrying amount or redemption value at the end of each reporting period. Changes in the value from period to period are charged to "additional capital" in Vornado's consolidated statements of changes in equity and to "partners' capital" on the consolidated balance sheets of the Operating Partnership. There was no adjustment required for the years ended December 31, 2021 and 2020.

10. Redeemable Noncontrolling Interests - continued

Redeemable Noncontrolling Interest in a Consolidated Subsidiary - continued

Below is a table summarizing the activity of the redeemable noncontrolling interest in a consolidated subsidiary.

(Amounts in thousands)	For the Year Ended December 31,	
	2021	2020
Beginning balance	\$ 94,520	\$ —
Net income	3,188	544
Contributions	—	92,400
Other, net	—	1,576
Ending balance	<u>\$ 97,708</u>	<u>\$ 94,520</u>

11. Shareholders' Equity/Partners' Capital

Common Shares (Vornado Realty Trust)

As of December 31, 2021, there were 191,723,608 common shares outstanding. During 2021, we paid an aggregate of \$406,109,000 of common dividends comprised of quarterly common dividends of \$0.53 per share.

Class A Units (Vornado Realty L.P.)

As of December 31, 2021, there were 191,723,608 Class A units outstanding that were held by Vornado. These units are classified as “partners’ capital” on the consolidated balance sheets of the Operating Partnership. As of December 31, 2021, there were 14,033,438 Class A units outstanding, that were held by third parties. These units are classified outside of “partners’ capital” as “redeemable partnership units” on the consolidated balance sheets of the Operating Partnership (See Note 10 – *Redeemable Noncontrolling Interests*). During 2021, the Operating Partnership paid an aggregate of \$406,109,000 of distributions to Vornado comprised of quarterly common distributions of \$0.53 per unit.

Preferred Shares/Units

On September 22, 2021, Vornado sold 12,000,000 4.45% Series O cumulative redeemable preferred shares at a price of \$25.00 per share, pursuant to an effective registration statement. Vornado received aggregate net proceeds of \$291,153,000, after underwriters’ discount and issuance costs, and contributed the net proceeds to the Operating Partnership in exchange for 12,000,000 4.45% Series O preferred units (with economic terms that mirror those of the Series O preferred shares). Dividends on the Series O preferred shares/units are cumulative and payable quarterly in arrears. The Series O preferred shares/units are not convertible into, or exchangeable for, any of our properties or securities. On or after five years from the date of issuance (or sooner under limited circumstances), Vornado may redeem the Series O preferred shares/units at a redemption price of \$25.00 per share/unit, plus accrued and unpaid dividends/distributions through the date of redemption. The Series O preferred shares/units have no maturity date and will remain outstanding indefinitely unless redeemed by Vornado. Vornado used the net proceeds for the redemption of its 5.70% Series K cumulative redeemable preferred shares/units.

On October 13, 2021, we redeemed all of the outstanding 5.70% Series K preferred shares/units at their redemption price of \$25.00 per share/unit, or \$300,000,000 in the aggregate, plus accrued and unpaid dividends/distributions through the date of redemption. We recognized \$9,033,000 of previously capitalized issuance costs in “Series K preferred share/unit issuance costs” on our consolidated statements of income during the third quarter of 2021, when the preferred shares/units were called for redemption.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

11. Shareholders' Equity/Partners' Capital - continued

Preferred Shares/Units - continued

The following table sets forth the details of our preferred shares of beneficial interest and the preferred units of the Operating Partnership as of December 31, 2021 and 2020. During 2021, preferred dividends were \$65,880,000.

(Amounts in thousands, except share/unit and per share/unit amounts)

Preferred Shares/Units	Balance as of December 31,		Shares/Units Outstanding as of December 31,		Per Share/Unit	
	2021	2020	2021	2020	Liquidation Preference	Annual Dividend/Distribution ⁽¹⁾
	Convertible Preferred:					
6.5% Series A: authorized 12,902 and 13,402 shares/units ⁽²⁾	\$ 920	\$ 934	12,902	13,402	\$ 50.00	\$ 3.25
Cumulative Redeemable Preferred ⁽³⁾ :						
5.70% Series K: authorized 12,000,000 shares/units ⁽⁴⁾	—	290,971	—	12,000,000	n/a	n/a
5.40% Series L: authorized 13,800,000 shares/units	290,306	290,306	12,000,000	12,000,000	25.00	1.35
5.25% Series M: authorized 13,800,000 shares/units	308,946	308,946	12,780,000	12,780,000	25.00	1.3125
5.25% Series N: authorized 12,000,000 shares/units	291,134	291,182	12,000,000	12,000,000	25.00	1.3125
4.45% Series O: authorized 12,000,000 shares/units ⁽⁵⁾	291,153	—	12,000,000	—	25.00	1.1125
	<u>\$ 1,182,459</u>	<u>\$ 1,182,339</u>	<u>48,792,902</u>	<u>48,793,402</u>		

- (1) Dividends on preferred shares and distributions on preferred units are cumulative and are payable quarterly in arrears.
(2) Redeemable at the option of Vornado under certain circumstances, at a redemption price of 1.9531 common shares/Class A units per Series A Preferred Share/Unit plus accrued and unpaid dividends/distributions through the date of redemption, or convertible at any time at the option of the holder for 1.9531 common shares/Class A units per Series A Preferred Share/Unit.
(3) Series L preferred shares/units are redeemable at Vornado's option at a redemption price of \$25.00 per share/unit, plus accrued and unpaid dividends/distributions through the date of redemption. Series M preferred shares/units are redeemable commencing December 2022, Series N preferred shares/units are redeemable commencing November 2025 and Series O preferred shares/units are redeemable commencing September 2026. Series K preferred shares/units were redeemed on October 13, 2021.
(4) Redeemed on October 13, 2021.
(5) Issued in September 2021.

Accumulated Other Comprehensive Loss

The following table sets forth the changes in accumulated other comprehensive loss by component for the year ended December 31, 2021.

(Amounts in thousands)

	Total	Accumulated other comprehensive (loss) income of nonconsolidated subsidiaries	Interest rate swaps	Other
Balance as of December 31, 2020	\$ (75,099)	\$ (14,338)	\$ (66,098)	\$ 5,337
Other comprehensive income (loss)	57,565	10,275	51,337	(4,047)
Balance as of December 31, 2021	<u>\$ (17,534)</u>	<u>\$ (4,063)</u>	<u>\$ (14,761)</u>	<u>\$ 1,290</u>

12. Variable Interest Entities

Unconsolidated VIEs

As of December 31, 2021 and 2020, we have several unconsolidated VIEs. We do not consolidate these entities because we are not the primary beneficiary and the nature of our involvement in the activities of these entities does not give us power over decisions that significantly affect these entities' economic performance. We account for our investment in these entities under the equity method (see Note 5 – *Investments in Partially Owned Entities*). As of December 31, 2021 and 2020, the net carrying amount of our investments in these entities was \$69,435,000 and \$224,754,000, respectively, and our maximum exposure to loss in these entities is limited to the carrying amount of our investments.

Consolidated VIEs

Our most significant consolidated VIEs are the Operating Partnership (for Vornado), the Farley joint venture and certain properties that have non-controlling interests. These entities are VIEs because the non-controlling interests do not have substantive kick-out or participating rights. We consolidate these entities because we control all significant business activities.

As of December 31, 2021, the total assets and liabilities of our consolidated VIEs, excluding the Operating Partnership, were \$4,564,621,000 and \$2,517,652,000 respectively. As of December 31, 2020, the total assets and liabilities of our consolidated VIEs, excluding the Operating Partnership, were \$4,053,841,000 and \$1,722,719,000, respectively.

13. Fair Value Measurements

ASC 820 defines fair value and establishes a framework for measuring fair value. The objective of fair value is to determine the price that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (the exit price). ASC 820 establishes a fair value hierarchy that prioritizes observable and unobservable inputs used to measure fair value into three levels: Level 1 – quoted prices (unadjusted) in active markets that are accessible at the measurement date for assets or liabilities; Level 2 – observable prices that are based on inputs not quoted in active markets, but corroborated by market data; and Level 3 – unobservable inputs that are used when little or no market data is available. The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest priority to Level 3 inputs. In determining fair value, we utilize valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible, as well as consider counterparty credit risk in our assessment of fair value. Considerable judgment is necessary to interpret Level 2 and 3 inputs in determining the fair value of our financial and non-financial assets and liabilities. Accordingly, our fair value estimates, which are made at the end of each reporting period, may be different than the amounts that may ultimately be realized upon sale or disposition of these assets.

Financial Assets and Liabilities Measured at Fair Value on a Recurring Basis

Financial assets and liabilities that are measured at fair value on our consolidated balance sheets consist of (i) real estate fund investments, (ii) the assets in our deferred compensation plan (for which there is a corresponding liability on our consolidated balance sheets), (iii) loans receivable for which we have elected the fair value option under ASC Subtopic 825-10, *Financial Instruments* ("ASC 825-10"), (iv) interest rate swaps and (v) mandatorily redeemable instruments (Series G-1 through G-4 convertible preferred units and Series D-13 cumulative redeemable preferred units). The tables below aggregate the fair values of these financial assets and liabilities by their levels in the fair value hierarchy.

(Amounts in thousands)

	As of December 31, 2021			
	Total	Level 1	Level 2	Level 3
Real estate fund investments	\$ 7,730	\$ —	\$ —	\$ 7,730
Deferred compensation plan assets (\$9,104 included in restricted cash and \$101,070 in other assets)	110,174	65,158	—	45,016
Loans receivable (\$46,444 included in investments in partially owned entities and \$3,738 in other assets)	50,182	—	—	50,182
Interest rate swaps and caps (included in other assets)	18,929	—	18,929	—
Total assets	\$ 187,015	\$ 65,158	\$ 18,929	\$ 102,928
Mandatorily redeemable instruments (included in other liabilities)	\$ 49,659	\$ 49,659	\$ —	\$ —
Interest rate swaps (included in other liabilities)	32,837	—	32,837	—
Total liabilities	\$ 82,496	\$ 49,659	\$ 32,837	\$ —

(Amounts in thousands)

	As of December 31, 2020			
	Total	Level 1	Level 2	Level 3
Real estate fund investments	\$ 3,739	\$ —	\$ —	\$ 3,739
Deferred compensation plan assets (\$10,813 included in restricted cash and \$94,751 in other assets)	105,564	65,636	—	39,928
Loans receivable (\$43,008 included in investments in partially owned entities and \$4,735 in other assets)	47,743	—	—	47,743
Interest rate swaps (included in other assets)	17	—	17	—
Total assets	\$ 157,063	\$ 65,636	\$ 17	\$ 91,410
Mandatorily redeemable instruments (included in other liabilities)	\$ 50,002	\$ 50,002	\$ —	\$ —
Interest rate swaps (included in other liabilities)	66,033	—	66,033	—
Total liabilities	\$ 116,035	\$ 50,002	\$ 66,033	\$ —

13. Fair Value Measurements - continued

Financial Assets and Liabilities Measured at Fair Value on a Recurring Basis - continued

Real Estate Fund Investments

As of December 31, 2021, we had three real estate fund investments with an aggregate fair value of \$7,730,000, or \$328,055,000 below cost. These investments are classified as Level 3.

Significant unobservable quantitative inputs used in determining the fair value of each investment include capitalization rates and discount rates. These rates are based on the location, type and nature of each property, current and anticipated market conditions, industry publications and from the experience of our Acquisitions and Capital Markets departments. Significant unobservable quantitative inputs in the table below were utilized in determining the fair value of these real estate fund investments.

Unobservable Quantitative Input	Range		Weighted Average (based on fair value of assets)	
	December 31, 2021	December 31, 2020	December 31, 2021	December 31, 2020
Discount rates	12.0% to 15.0%	7.6% to 15.0%	13.2%	12.7%
Terminal capitalization rates	5.5% to 8.8%	5.5% to 10.3%	7.4%	7.9%

The inputs above are subject to change based on changes in economic and market conditions and/or changes in use or timing of exit. Changes in discount rates and terminal capitalization rates result in increases or decreases in the fair values of these investments. The discount rates encompass, among other things, uncertainties in the valuation models with respect to terminal capitalization rates and the amount and timing of cash flows. Therefore, a change in the fair value of these investments resulting from a change in the terminal capitalization rate may be partially offset by a change in the discount rate. It is not possible for us to predict the effect of future economic or market conditions on our estimated fair values.

The table below summarizes the changes in the fair value of real estate fund investments that are classified as Level 3.

(Amounts in thousands)

	For the Year Ended December 31,	
	2021	2020
Beginning balance	\$ 3,739	\$ 222,649
Dispositions	(5,104)	—
Purchases/additional fundings	4,474	7,197
Net unrealized income (loss) on held investments	3,257	(226,107)
Net realized income on exited investments	1,364	—
Ending balance	<u>\$ 7,730</u>	<u>\$ 3,739</u>

Deferred Compensation Plan Assets

Deferred compensation plan assets that are classified as Level 3 consist of investments in limited partnerships and investment funds, which are managed by third parties. We receive quarterly financial reports that provide net asset values on a fair value basis from a third-party administrator, which are compiled from the quarterly reports provided to them from each limited partnership and investment fund. The period of time over which these underlying assets are expected to be liquidated is unknown. The third-party administrator does not adjust these values in determining our share of the net assets and we do not adjust these values when reported in our consolidated financial statements.

The table below summarizes the changes in the fair value of deferred compensation plan assets that are classified as Level 3.

(Amounts in thousands)

	For the Year Ended December 31,	
	2021	2020
Beginning balance	\$ 39,928	\$ 32,435
Purchases	5,705	8,766
Sales	(4,766)	(5,467)
Realized and unrealized gains	2,250	808
Other, net	1,899	3,386
Ending balance	<u>\$ 45,016</u>	<u>\$ 39,928</u>

Loans Receivable

Loans receivable consist of loan investments in real estate related assets for which we have elected the fair value option under ASC 825-10. These investments are classified as Level 3.

Significant unobservable quantitative inputs used in determining the fair value of each investment include capitalization rates and discount rates. These rates are based on the location, type and nature of each property, current and anticipated market conditions, industry publications and from the experience of our Acquisitions and Capital Markets departments. Significant unobservable quantitative inputs in the table on the following page were utilized in determining the fair value of these loans receivable.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

13. Fair Value Measurements - continued

Financial Assets and Liabilities Measured at Fair Value on a Recurring Basis - continued

Loans Receivable - continued

Unobservable Quantitative Input	Range		Weighted Average (based on fair value of investments)	
	December 31, 2021	December 31, 2020	December 31, 2021	December 31, 2020
Discount rates	6.5%	6.5%	6.5 %	6.5 %
Terminal capitalization rates	5.0%	5.0%	5.0 %	5.0 %

The table below summarizes the changes in fair value of loans receivable that are classified as Level 3.

(Amounts in thousands)	For the Year Ended December 31,	
	2021	2020
Beginning balance	\$ 47,743	\$ 59,251
Credit losses	—	(13,369)
Interest accrual	3,714	2,461
Paydowns	(1,275)	(600)
Ending balance	<u>\$ 50,182</u>	<u>\$ 47,743</u>

Derivatives and Hedging

We utilize various financial instruments to mitigate the impact of interest rate fluctuations on our cash flows and earnings, including hedging strategies, depending on our analysis of the interest rate environment and the costs and risks of such strategies. We recognize the fair values of all derivatives in "other assets" or "other liabilities" on our consolidated balance sheets. Derivatives that are not hedges are adjusted to fair value through earnings. If a derivative is a hedge, depending on the nature of the hedge, changes in the fair value of the derivative will either be offset against the change in fair value of the hedge asset, liability, or firm commitment through earnings, or recognized in other comprehensive income until the hedged item is recognized in earnings. Reported net income and equity may increase or decrease prospectively, depending on future levels of interest rates and other variables affecting the fair values of derivative instruments and hedged items, but will have no effect on cash flows.

The following tables summarize our consolidated derivative instruments, all of which hedge variable rate debt, as of December 31, 2021 and 2020, respectively.

Hedged Item	Fair Value		Notional Amount		As of December 31, 2021			Expiration Date
					Variable Rate			
					Spread over LIBOR	Interest Rate	Swapped Rate	
Included in other assets:								
555 California Street mortgage loan interest rate swap ⁽¹⁾	\$ 11,814	\$ 840,000	L+193	2.04%	2.26%		5/24	
PENN 11 mortgage loan interest rate swap ⁽³⁾	6,565	500,000	L+195	2.05%	2.23%		3/24	
Various interest rate caps	550	1,650,000						
	<u>\$ 18,929</u>	<u>\$ 2,990,000</u>						
Included in other liabilities:								
Unsecured term loan interest rate swap	\$ 28,976	\$ 750,000	L+100	1.10%	3.87%		10/23	
33-00 Northern Boulevard mortgage loan interest rate swap	3,861	100,000	L+180	1.91%	4.14%		1/25	
	<u>\$ 32,837</u>	<u>\$ 850,000</u>						

(1) Entered into on May 15, 2021.

(2) Represents our 70.0% share of the \$1.2 billion mortgage loan.

(3) Entered into on March 7, 2021.

(4) Remaining \$50,000 balance of our unsecured term loan bears interest at a floating rate of LIBOR plus 1.00%.

Hedged Item	Fair Value		Notional Amount		As of December 31, 2020			Expiration Date
					Variable Rate			
					Spread over LIBOR	Interest Rate	Swapped Rate	
Included in other assets:								
Various interest rate caps	\$ 17	\$ 175,000						
Included in other liabilities:								
Unsecured term loan interest rate swap	\$ 57,723	\$ 750,000	L+100	1.15%	3.87%		10/23	
33-00 Northern Boulevard mortgage loan interest rate swap	8,310	100,000	L+180	1.95%	4.14%		1/25	
	<u>\$ 66,033</u>	<u>\$ 850,000</u>						

(1) Remaining \$50,000 balance of our unsecured term loan bears interest at a floating rate of LIBOR plus 1.00%.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

13. Fair Value Measurements - continued

Fair Value Measurements on a Nonrecurring Basis

There were no assets measured at fair value on a nonrecurring basis on our consolidated balance sheet as of December 31, 2021. As of December 31, 2020, assets measured at fair value on a nonrecurring basis on our consolidated balance sheet consisted of real estate assets that have been written down to estimated fair value for impairment purposes. The impairment losses primarily relate to wholly owned street retail assets.

Our estimate of the fair value of these assets was measured using widely accepted valuation techniques including (i) discounted cash flow analyses based upon market conditions and expectations of growth and utilized unobservable quantitative inputs, including a capitalization rate of 5.0% and discount rate of 7.0%, and (ii) comparable sales activity.

(Amounts in thousands)

	As of December 31, 2020			
	Total	Level 1	Level 2	Level 3
Real estate assets	\$ 191,116	\$ —	\$ —	\$ 191,116

Financial Assets and Liabilities not Measured at Fair Value

Financial assets and liabilities that are not measured at fair value on our consolidated balance sheets include cash equivalents (primarily money market funds, which invest in obligations of the United States government), and our secured and unsecured debt. Estimates of the fair value of these instruments are determined by the standard practice of modeling the contractual cash flows required under the instrument and discounting them back to their present value at the appropriate current risk adjusted interest rate, which is provided by a third-party specialist. For floating rate debt, we use forward rates derived from observable market yield curves to project the expected cash flows we would be required to make under the instrument. The fair value of cash equivalents and borrowings under our unsecured revolving credit facilities and unsecured term loan are classified as Level 1. The fair value of our secured debt and unsecured debt are classified as Level 2. The table below summarizes the carrying amounts and fair value of these financial instruments.

(Amounts in thousands)

	As of December 31, 2021		As of December 31, 2020	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Cash equivalents	\$ 1,346,684	\$ 1,347,000	\$ 1,476,427	\$ 1,476,000
Debt:				
Mortgages payable	\$ 6,099,215	\$ 6,052,000	\$ 5,608,458	\$ 5,612,000
Senior unsecured notes	1,200,000	1,230,000	450,000	476,000
Unsecured term loan	800,000	800,000	800,000	800,000
Unsecured revolving credit facilities	575,000	575,000	575,000	575,000
Total	\$ 8,674,215 ⁽¹⁾	\$ 8,657,000	\$ 7,433,458 ⁽¹⁾	\$ 7,463,000

(1) Excludes \$58,268 and \$34,462 of deferred financing costs, net and other as of December 31, 2021 and 2020, respectively.

14. Stock-based Compensation

Vornado's 2019 Omnibus Share Plan (the "Plan") provides the Compensation Committee of Vornado's Board of Trustees (the "Committee") the ability to grant incentive and nonqualified Vornado stock options, restricted stock, restricted Operating Partnership units ("OP units"), out-performance plan awards ("OPPs"), appreciation-only long-term incentive plan units ("AO LTIP Units") and performance conditioned appreciation-only long-term incentive plan units ("Performance Conditioned AO LTIP Units") to certain of our employees and officers. Awards may be granted up to a maximum 5,500,000 shares, if all awards granted are Full Value awards, as defined in the Plan, and up to 11,000,000 shares, if all of the awards granted are Not Full Value Awards, as defined in the Plan. Full Value Awards are awards of securities, such as restricted shares, that, if all vesting requirements are met, do not require the payment of an exercise price or strike price to acquire the securities. Not Full Value Awards are awards of securities, such as options, that do require the payment of an exercise price or strike price. As of December 31, 2021, Vornado has approximately 3,490,000 shares available for future grants under the Plan, if all awards granted are Full Value Awards, as defined.

We account for all equity-based compensation in accordance with ASC Topic 718, *Compensation - Stock Compensation*. Below is a summary of our stock-based compensation expense, a component of "general and administrative" expense on our consolidated statements of income.

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
OP Units	\$ 27,698	\$ 33,431	\$ 39,969
OPPs	8,629	9,579	1,944
AO LTIP Units	877	3,955	2,636
Vornado stock options	456	656	547
Vornado restricted stock	450	649	549
Performance Conditioned AO LTIP Units	219	407	8,263
	<u>\$ 38,329</u>	<u>\$ 48,677</u>	<u>\$ 53,908</u>

Below is a summary of unrecognized compensation expense for the year ended December 31, 2021.

(Amounts in thousands)

	As of December 31, 2021	Weighted-Average Remaining Contractual Term
OP Units	\$ 13,460	1.3
OPPs	5,104	2.0
AO LTIP Units	565	1.2
Vornado stock options	489	1.4
Vornado restricted stock	483	1.4
Performance Conditioned AO LTIP Units	94	1.0
	<u>\$ 20,195</u>	<u>1.5</u>

OPPs

OPPs are multi-year, performance-based equity compensation plans under which participants have the opportunity to earn a class of units ("OPP units") of the Operating Partnership if, and only if, Vornado outperforms a predetermined total shareholder return ("TSR") and/or outperforms the market with respect to a relative TSR during the three-year or four-year performance period (the "Performance Period") as described on the following page. OPP units, if earned, become convertible into Class A units of the Operating Partnership (and ultimately into Vornado common shares) following vesting.

2021 OPP

On January 12, 2021, the Committee approved the 2021 OPP, a multi-year, \$30,000,000 performance-based equity compensation plan. Awards under the 2021 OPP may potentially be earned if Vornado (i) achieves a TSR greater than 28% over a four-year performance period (the "2021 OPP Absolute Component"), and /or (ii) achieves a TSR above a benchmark weighted index (the "Index"), comprised of 80% of the constituents of the SNL US Office REIT Index at the time awards were granted, and 20% of the constituents of the SNL US Retail Index at the time awards were granted, over the Performance Period (the "2021 OPP Relative Component").

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

14. Stock-based Compensation – continued

2021 OPP - continued

The value of awards under the 2021 OPP Absolute Component and 2021 OPP Relative Component will be calculated separately and will each be subject to an aggregate \$30,000,000 maximum award cap for all participants. The two components will be added together to determine the aggregate award size, which shall also be subject to the aggregate \$30,000,000 maximum award cap for all participants. In the event awards are earned under the 2021 OPP Absolute Component, but Vornado underperforms the Index by more than 200 basis points per annum over the Performance Period (800 basis points over the four years), the amount earned under the 2021 OPP Absolute Component will be reduced based on the degree by which the Index exceeds Vornado's TSR with the maximum payout being 50% under the 2021 OPP Absolute Component. In the event awards are earned under the 2021 OPP Relative Component, but Vornado fails to achieve a TSR of at least 2% per annum, awards earned under the 2021 OPP Relative Component will be reduced on a ratable sliding scale based on Vornado's absolute TSR performance, with the maximum payout being 50% under the 2021 OPP Relative Component in the event Vornado's TSR during the four-year measurement period is 0% or negative. If the designated performance objectives are achieved, awards earned under 2021 OPP will vest 50% in year four and 50% in year five. In addition, all of Vornado's senior executives are required to hold any earned and vested awards for one year following each such vesting date. Dividends on awards granted under the 2021 OPP accrue during the four-year performance period and are paid to participants if awards are ultimately earned based on the achievement of the designated performance objectives.

Below is the summary of the OPP units granted during the years December 31, 2021, 2020 and 2018.

Plan Year	Total Plan Notional Amount	Percentage of Notional Amount Granted	Grant Date Fair Value ⁽¹⁾	OPP Units Earned
2021	\$ 30,000,000	99.1 %	\$ 9,950,000	To be determined in 2025
2020	35,000,000	94.0 %	11,700,000	To be determined in 2023
2018	35,000,000	78.2 %	10,300,000	Not earned

(1) During the years ended December 31, 2021, 2020 and 2018, \$6,140,000, \$7,583,000 and \$8,040,000, respectively, was immediately expensed on the respective grant date due to acceleration of vesting for employees who are retirement eligible (have reached age 65 or age 60 with at least 20 years of service).

Vornado Stock Options

Vornado stock options are granted at an exercise price equal to the average of the high and low market price of Vornado's common shares on the NYSE on the date of grant, generally vest over four years and expire ten years from the date of grant. Compensation expense related to Vornado stock option awards is recognized on a straight-line basis over the vesting period.

Below is a summary of Vornado's stock option activity for the year ended December 31, 2021.

	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding as of December 31, 2020	765,637	\$ 64.79		
Exercised	(598)	36.72		
Forfeited	(3,008)	56.92		
Expired	(570,098)	64.70		
Outstanding as of December 31, 2021	191,933	\$ 65.27	5.75	\$ 152,920
Options exercisable as of December 31, 2021	124,805	\$ 70.13	4.71	\$ 37,820

There were no Vornado stock options granted during the year ended December 31, 2021. The fair value of each option grant is estimated on the date of grant using an option-pricing model with the following weighted-average assumptions for grants in the years ended December 31, 2020 and 2019.

	As of December 31,	
	2020	2019
Expected volatility	35% - 36%	35%
Expected life	5.0 years	5.0 years
Risk free interest rate	0.57% - 1.76%	2.50%
Expected dividend yield	3.2% - 3.4%	2.9%

The weighted average grant date fair value per share for options granted during the years ended December 31, 2020 and 2019 was \$12.28 and \$16.64, respectively. Cash received from option exercises for the years ended December 31, 2021, 2020 and 2019 was \$22,000, \$3,516,000 and \$5,495,000, respectively. The total intrinsic value of options exercised during the years ended December 31, 2021, 2020 and 2019 was \$5,500, \$859,000 and \$18,954,000, respectively.

14. Stock-based Compensation – continued

Performance Conditioned AO LTIP Units

Performance Conditioned AO LTIP Units are AO LTIP Units that require the achievement of certain performance conditions by a specified date or they are forfeited. The performance-based condition is met if Vornado common shares trade at or above 110% of the grant price per share for any 20 consecutive days on or before the fourth anniversary following the date of grant. If the performance conditions are not met, the awards are forfeited. If the performance conditions are met, once vested, the awards may be converted into Class A Operating Partnership units in the same manner as AO LTIP Units until ten years from the date of grant.

Below is a summary of Performance Conditioned AO LTIP Units activity for the year ended December 31, 2021.

	Units	Weighted-Average Grant-Date Fair Value	Weighted- Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding as of December 31, 2020	496,792 ⁽¹⁾	\$ 62.62		
Outstanding as of December 31, 2021	496,792 ⁽¹⁾	\$ 62.62	7.04	\$ —
Options exercisable at December 31, 2021	322,313	\$ 62.62	7.04	\$ —

(1) Granted in 2019 at a grant price of \$64.48 and a fair value of \$8,983,000 at the date of grant.

The fair value of each Performance Conditioned AO LTIP Units granted is estimated on the date of grant using an option-pricing model with the following weighted average assumptions for grants in the year ended December 31, 2019.

Expected volatility	35%
Expected life	8.0 years
Risk free interest rate	2.76%
Expected dividend yield	3.1%

AO LTIP Units

AO LTIP Units are a class of partnership interests in the Operating Partnership that are intended to qualify as “profits interests” for federal income tax purposes and generally only allow the recipient to realize value to the extent the fair market value of a Vornado common share exceeds the threshold level set at the time the AO LTIP Units are granted, subject to any vesting conditions applicable to the award. The threshold level is intended to be equal to 100% of the then fair market value of a Vornado common share on the date of grant. The value of vested AO LTIP Units is realized through conversion of the AO LTIP Units into Class A Operating Partnership units. The number of Class A Units into which vested AO LTIP Units may be converted is determined based on the quotient of (i) the excess of the conversion value on the conversion date over the threshold value designated at the time the AO LTIP Unit was granted, divided by (ii) the conversion value on the conversion date. The “conversion value” is the value of a Vornado common share on the conversion date multiplied by the Conversion Factor as defined in the Partnership Agreement, which is currently one. AO LTIP Units have a term of ten years from the grant date. Each holder will generally receive special income allocations in respect of an AO LTIP Unit equal to 10% (or such other percentage specified in the applicable award agreement) of the income allocated in respect of a Class A Unit. Upon conversion of AO LTIP Units to Class A Units, holders will be entitled to receive in respect of each such AO LTIP Unit, on a per unit basis, a special distribution equal to 10% (or such other percentage specified in the applicable award agreement) of the distributions received by a holder of an equivalent number of Class A Units during the period from the grant date of the AO LTIP Units through the date of conversion.

Below is a summary of AO LTIP Units activity for the year ended December 31, 2021.

	Shares	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding as of December 31, 2020	717,581	\$ 59.71		
Exercised	(16,669)	36.72		
Forfeited	(60,927)	56.30		
Expired	(72,246)	66.32		
Outstanding as of December 31, 2021	567,739	\$ 59.91	7.29	\$ 640,711
Options exercisable as of December 31, 2021	327,535	\$ 61.83	7.06	\$ 279,164

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

14. Stock-based Compensation – continued

AO LTIP Units - continued

There were no AO LTIP Units granted during the year ended December 31, 2021. AO LTIP Units granted during the years ended December 31, 2020 and 2019 had a fair value of \$4,319,000 and \$3,429,000, respectively. The fair value of each AO LTIP Unit granted is estimated on the date of grant using an option-pricing model with the following weighted-average assumptions for grants in the years ended December 31, 2020 and 2019.

	As of December 31,	
	2020	2019
Expected volatility	35% - 36%	35%
Expected life	5.0 years	5.0 years
Risk free interest rate	0.57% - 1.76%	2.50%
Expected dividend yield	3.2% - 3.4%	2.90%

OP Units

OP Units are granted at the average of the high and low market price of Vornado's common shares on the NYSE on the date of grant, vest ratably over four years and are subject to a taxable book-up event, as defined. Compensation expense related to OP Units is recognized ratably over the vesting period using a graded vesting attribution model. Distributions paid on unvested OP Units amounted to \$2,634,000, \$5,316,000 and \$4,070,000 in the years ended December 31, 2021, 2020 and 2019, respectively.

Below is a summary of restricted OP unit activity for the year ended December 31, 2021.

Unvested Units	Units	Weighted-Average Grant-Date Fair Value
Unvested as of December 31, 2020	1,152,418	\$ 53.17
Granted	816,019	32.10
Vested	(867,747)	42.11
Forfeited	(17,603)	52.73
Unvested as of December 31, 2021	<u>1,083,087</u>	<u>53.99</u>

OP Units granted in 2021, 2020 and 2019 had a fair value of \$26,194,000, \$18,013,000 and \$58,732,000, respectively. The fair value of OP Units that vested during the years ended December 31, 2021, 2020 and 2019 was \$36,541,000, \$24,373,000 and \$27,821,000, respectively.

Vornado Restricted Stock

Vornado restricted stock awards are granted at the average of the high and low market price of Vornado's common shares on the NYSE on the date of grant and generally vest over four years. Compensation expense related to Vornado's restricted stock awards is recognized on a straight-line basis over the vesting period. Dividends paid on unvested Vornado restricted stock are charged directly to retained earnings and amounted to \$35,000, \$98,000 and \$51,000 for the years ended December 31, 2021, 2020 and 2019, respectively.

Below is a summary of Vornado's restricted stock activity for the year ended December 31, 2021.

Unvested Shares	Shares	Weighted-Average Grant-Date Fair Value
Unvested as of December 31, 2020	25,315	\$ 60.06
Vested	(8,833)	64.17
Forfeited	(708)	58.56
Unvested as of December 31, 2021	<u>15,774</u>	<u>57.82</u>

There were no Vornado restricted stock awards granted during the year ended December 31, 2021. Vornado restricted stock awards granted in 2020 and 2019 had a fair value of \$853,000 and \$568,000, respectively. The fair value of restricted stock that vested during the years ended December 31, 2021, 2020, and 2019 was \$567,000, \$602,000 and \$477,000, respectively.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

15. Impairment Losses, Transaction Related Costs and Other

The following table sets forth the details of impairment losses, transaction related costs and other:

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Real estate impairment losses	\$ (7,880) ⁽¹⁾	\$ (236,286)	\$ (8,065)
Transaction related costs	(5,935)	(8,001)	(4,613)
608 Fifth Avenue lease liability extinguishment gain in 2020 and impairment loss and related write-offs in 2019	—	70,260	(93,860)
	<u>\$ (13,815)</u>	<u>\$ (174,027)</u>	<u>\$ (106,538)</u>

(1) See Note 7 - *Acquisitions and Dispositions* for additional information.

16. Interest and Other Investment Income (Loss), Net

The following table sets forth the details of interest and other investment income (loss), net:

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Interest on loans receivable	\$ 2,517	\$ 3,384	\$ 6,326
Interest on cash and cash equivalents and restricted cash	284	5,793	13,380
Credit losses on loans receivable	—	(13,369)	—
Market-to-market decrease in the fair value of marketable security (sold on January 23, 2020)	—	(4,938)	(5,533)
Dividends on marketable securities	—	—	3,938
Other, net	1,811	3,631	3,708
	<u>\$ 4,612</u>	<u>\$ (5,499)</u>	<u>\$ 21,819</u>

17. Interest and Debt Expense

The following table sets forth the details of interest and debt expense:

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Interest expense ⁽¹⁾	\$ 249,169	\$ 251,847	\$ 335,016
Capitalized interest and debt expense	(38,320)	(41,056)	(72,200)
Amortization of deferred financing costs	20,247	18,460	23,807
	<u>\$ 231,096</u>	<u>\$ 229,251</u>	<u>\$ 286,623</u>

(1) 2021 includes \$23,729 of defeasance costs, of which \$7,119 is attributable to noncontrolling interest, in connection with the refinancing of 1290 Avenue of the Americas, a property in which we own a 70% controlling interest. See Note 9 - *Debt* for additional information. 2019 includes \$22,540 of debt prepayment costs in connection with the redemption of \$400,000 5.00% senior unsecured notes which were scheduled to mature in January 2022.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

18. Income (Loss) Per Share/Income (Loss) Per Class A Unit

Vornado Realty Trust

The following table presents the calculations of (i) basic income (loss) per common share which includes the weighted average number of common shares outstanding without regard to dilutive potential common shares and (ii) diluted income (loss) per common share which includes the weighted average common shares and dilutive share equivalents. Unvested share-based payment awards that contain nonforfeitable rights to dividends, whether paid or unpaid, are accounted for as participating securities. Earnings are allocated to participating securities, which include restricted stock awards, based on the two-class method. Other potential dilutive share equivalents such as our employee stock options, OP Units, OPPs, AO LTIP Units and Performance Conditioned AO LTIP Units are included in the computation of diluted earnings per share ("EPS") using the treasury stock method, while the dilutive effect of our Series A convertible preferred shares is reflected in diluted EPS by application of the if-converted method.

(Amounts in thousands, except per share amounts)

	For the Year Ended December 31,		
	2021	2020	2019
Numerator:			
Income (loss) from continuing operations, net of (income) loss attributable to noncontrolling interests	\$ 175,999	\$ (297,005)	\$ 3,147,965
Loss from discontinued operations	—	—	(28)
Net income (loss) attributable to Vornado	175,999	(297,005)	3,147,937
Preferred share dividends	(65,880)	(51,739)	(50,131)
Series K preferred share issuance costs	(9,033)	—	—
Net income (loss) attributable to common shareholders	101,086	(348,744)	3,097,806
Earnings allocated to unvested participating securities	(34)	(99)	(309)
Numerator for basic income (loss) per share	101,052	(348,843)	3,097,497
Impact of assumed conversions:			
Convertible preferred share dividends	—	—	57
Earnings allocated to Out-Performance Plan units	—	—	9
Numerator for basic and diluted income (loss) per share	<u>\$ 101,052</u>	<u>\$ (348,843)</u>	<u>\$ 3,097,563</u>
Denominator:			
Denominator for basic income (loss) per share – weighted average shares	191,551	191,146	190,801
Effect of dilutive securities ⁽¹⁾ :			
Employee stock options, restricted stock awards, AO LTIP Units and OPPs	571	—	218
Convertible preferred shares	—	—	34
Denominator for diluted income (loss) per share – weighted average shares and assumed conversions	<u>192,122</u>	<u>191,146</u>	<u>191,053</u>
INCOME (LOSS) PER COMMON SHARE - BASIC:			
Net income (loss) per common share	<u>\$ 0.53</u>	<u>\$ (1.83)</u>	<u>\$ 16.23</u>
INCOME (LOSS) PER COMMON SHARE - DILUTED:			
Net income (loss) per common share	<u>\$ 0.53</u>	<u>\$ (1.83)</u>	<u>\$ 16.21</u>

(1) The effect of dilutive securities excluded an aggregate of 13,835, 14,007 and 13,020 weighted average common share equivalents in the years ended December 31, 2021, 2020 and 2019, respectively, as their effect was anti-dilutive.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

18. Income (Loss) Per Share/Income (Loss) Per Class A Unit – continued

Vornado Realty L.P.

The following table presents the calculations of (i) basic income (loss) per Class A unit which includes the weighted average number of Class A units outstanding without regard to dilutive potential Class A units and (ii) diluted income (loss) per Class A unit which includes the weighted average Class A units and dilutive Class A unit equivalents. Unvested share-based payment awards that contain non-forfeitable rights to dividends, whether paid or unpaid, are accounted for as participating securities. Earnings are allocated to participating securities, which include Vornado restricted stock awards, OP Units and OPPs, based on the two-class method. Other potential dilutive unit equivalents such as Vornado stock options, AO LTIP Units and Performance Conditioned AO LTIP Units are included in the computation of diluted income per unit ("EPU") using the treasury stock method, while the dilutive effect of our Series A convertible preferred units is reflected in diluted EPU by application of the if-converted method.

(Amounts in thousands, except per unit amounts)

	For the Year Ended December 31,		
	2021	2020	2019
Numerator:			
Income (loss) from continuing operations, net of (income) loss attributable to noncontrolling interests in consolidated subsidiaries	\$ 183,539	\$ (321,951)	\$ 3,358,839
Loss from discontinued operations	—	—	(30)
Net income (loss) attributable to Vornado Realty L.P.	183,539	(321,951)	3,358,809
Preferred unit distributions	(66,035)	(51,904)	(50,296)
Series K preferred unit issuance costs	(9,033)	—	—
Net income (loss) attributable to Class A unitholders	108,471	(373,855)	3,308,513
Earnings allocated to unvested participating securities	(2,668)	(5,417)	(17,296)
Numerator for basic income (loss) per Class A unit	105,803	(379,272)	3,291,217
Impact of assumed conversions:			
Convertible preferred unit distributions	—	—	57
Numerator for basic and diluted income (loss) per Class A unit	\$ 105,803	\$ (379,272)	\$ 3,291,274
Denominator:			
Denominator for basic income (loss) per Class A unit – weighted average units	204,728	203,503	202,947
Effect of dilutive securities⁽¹⁾:			
Vornado stock options, Vornado restricted stock awards, OP Units, AO LTIP Units and OPPs	916	—	267
Convertible preferred units	—	—	34
Denominator for diluted income (loss) per Class A unit – weighted average units and assumed conversions	205,644	203,503	203,248
INCOME (LOSS) PER CLASS A UNIT - BASIC:			
Net income (loss) per Class A unit	\$ 0.52	\$ (1.86)	\$ 16.22
INCOME (LOSS) PER CLASS A UNIT - DILUTED:			
Net income (loss) per Class A unit	\$ 0.51	\$ (1.86)	\$ 16.19

(1) The effect of dilutive securities excluded an aggregate of 313, 1,650 and 825 weighted average Class A unit equivalents in the years ended December 31, 2021, 2020 and 2019 respectively, as their effect was anti-dilutive.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

19. Leases

As lessor

We lease space to tenants under operating leases. Most of the leases provide for the payment of fixed base rent payable monthly in advance. Leases typically provide for periodic step-ups in rent over the term of the lease and pass through to tenants their share of increases in real estate taxes and operating expenses over a base year. Certain leases also require additional variable rent payments based on a percentage of the tenants' sales. Electricity is provided to tenants on a sub-metered basis or included in rent based on surveys and adjusted for subsequent utility rate increases. Leases also typically provide for free rent and tenant improvement allowances for all or a portion of the tenant's initial construction costs of its premises.

As of December 31, 2021, future undiscounted cash flows under non-cancelable operating leases were as follows:

(Amounts in thousands)	As of December 31, 2021	
For the year ended December 31,		
2022	\$	1,313,854
2023		1,266,425
2024		1,132,125
2025		1,021,434
2026		977,834
Thereafter		7,068,874

As lessee

We have a number of ground leases which are classified as operating leases. As of December 31, 2021, our ROU assets and lease liabilities were \$337,197,000 and \$370,206,000, respectively. As of December 31, 2020, our ROU assets and lease liabilities were \$367,365,000 and \$401,008,000, respectively.

The discount rate applied to measure each ROU asset and lease liability is based on our incremental borrowing rate ("IBR"). We consider the general economic environment and our credit rating and factor in various financing and asset specific adjustments to ensure the IBR is appropriate to the intended use of the underlying lease. Certain of our ground leases offer renewal options which we assess against relevant economic factors to determine whether we are reasonably certain of exercising or not exercising the option. Lease payments associated with renewal periods that we are reasonably certain will be exercised are included in the measurement of the lease liability and corresponding ROU asset.

Certain of our ground leases are subject to fair market rent resets based on a percentage of the appraised value of the underlying assets at specified future dates. Fair market rent resets occurring during the lease term do not give rise to remeasurement of the related ROU assets and lease liabilities. Fair market rent resets occurring during the lease term, which may be material, will be recognized in the periods in which they are incurred as variable rent expense.

The following table sets forth information related to the measurement of our lease liabilities as of December 31, 2021, 2020 and 2019:

(Amounts in thousands)	For the Year Ended December 31,			
	2021	2020	2019	
Weighted average remaining lease term (in years)	44.4	44.8	40.2	
Weighted average discount rate	4.85 %	4.91 %	4.84 %	
Cash paid for operating leases	\$ 22,382	\$ 23,932	\$ 27,817	

We recognize rent expense as a component of "operating" expenses on our consolidated statements of income. Rent expense is comprised of fixed and variable lease payments. The following table sets forth the details of rent expense for the years ended December 31, 2021, 2020 and 2019:

(Amounts in thousands)	For the Year Ended December 31,		
	2021	2020	2019
Fixed rent expense	\$ 24,901	\$ 28,503	\$ 33,738
Variable rent expense	13,078	1,178	1,978
Rent expense	\$ 37,979	\$ 29,681	\$ 35,716

19. Leases - continued

As lessee - continued

As of December 31, 2021, future lease payments under operating ground leases were as follows:

(Amounts in thousands)	As of December 31, 2021	
For the year ended December 31,		
2022	\$	21,080
2023		22,802
2024		23,154
2025		23,522
2026		23,911
Thereafter		833,728
Total undiscounted cash flows		948,197
Present value discount		(577,991)
Lease liabilities	\$	370,206

Farley Office and Retail

The future lease payments detailed above exclude the ground and building lease at Farley Office and Retail. Our 95% consolidated joint venture has a 99-year triple-net lease with Empire State Development ("ESD") for 845,000 rentable square feet of commercial space at the property, comprised of approximately 730,000 square feet of office space and approximately 115,000 square feet of restaurant and retail space. Our lease of the commercial space at the property is accounted for as a "failed sale-leaseback" as a result of us being deemed the "accounting owner" during development of the property in accordance with ASC 842-40-55 and the lease subsequently meeting "finance lease" classification pursuant to ASC 842-40-25 upon substantial completion. The lease calls for annual rent payments and fixed payments in lieu of real estate taxes ("PILOT") through June 2030. Following the fixed PILOT payment period, the PILOT is calculated in a manner consistent with buildings subject to New York City real estate taxes and assessments. As of December 31, 2021, future rent and fixed PILOT payments are \$542,631,000.

20. Multiemployer Benefit Plans

Our subsidiaries make contributions to certain multiemployer defined benefit plans ("Multiemployer Pension Plans") and health plans ("Multiemployer Health Plans") for our union represented employees, pursuant to the respective collective bargaining agreements.

Multiemployer Pension Plans

Multiemployer Pension Plans differ from single-employer pension plans in that (i) contributions to multiemployer plans may be used to provide benefits to employees of other participating employers and (ii) if other participating employers fail to make their contributions, each of our participating subsidiaries may be required to bear its then pro rata share of unfunded obligations. If a participating subsidiary withdraws from a plan in which it participates, it may be subject to a withdrawal liability. As of December 31, 2021, our subsidiaries' participation in these plans was not significant to our consolidated financial statements.

In the years ended December 31, 2021, 2020 and 2019, we contributed \$19,851,000, \$7,049,000 and \$10,793,000, respectively, towards Multiemployer Pension Plans, which is included as a component of "operating" expenses on our consolidated statements of income. During the year ended December 31, 2021, the Company funded its pension withdrawal liability in relation to the permanent closure of Hotel Pennsylvania which resulted in the Company funding more than 5% of total employer contributions to the related plan for the year. For our other Multiemployer Pension Plans, our subsidiaries' contributions did not represent more than 5% of total employer contributions for the years ended December 31, 2021, 2020 and 2019.

Multiemployer Health Plans

Multiemployer Health Plans in which our subsidiaries participate provide health benefits to eligible active and retired employees. In the years ended December 31, 2021, 2020 and 2019, our subsidiaries contributed \$23,431,000, \$26,938,000 and \$32,407,000, respectively, towards these plans, which is included as a component of "operating" expenses on our consolidated statements of income.

21. Commitments and Contingencies

Insurance

For our properties, we maintain general liability insurance with limits of \$300,000,000 per occurrence and per property, of which \$250,000,000 includes communicable disease coverage, and we maintain all risk property and rental value insurance with limits of \$2.0 billion per occurrence, with sub-limits for certain perils such as flood and earthquake, excluding communicable disease coverage. Our California properties have earthquake insurance with coverage of \$350,000,000 per occurrence and in the aggregate, subject to a deductible in the amount of 5% of the value of the affected property. We maintain coverage for certified terrorism acts with limits of \$6.0 billion per occurrence and in the aggregate (as listed below), \$1.2 billion for non-certified acts of terrorism, and \$5.0 billion per occurrence and in the aggregate for terrorism involving nuclear, biological, chemical and radiological ("NBCR") terrorism events, as defined by the Terrorism Risk Insurance Act of 2002, as amended to date and which has been extended through December 2027.

Penn Plaza Insurance Company, LLC ("PPIC"), our wholly owned consolidated subsidiary, acts as a re-insurer with respect to a portion of all risk property and rental value insurance and a portion of our earthquake insurance coverage, and as a direct insurer for coverage for acts of terrorism including NBCR acts. Coverage for acts of terrorism (excluding NBCR acts) is fully reinsured by third party insurance companies and the Federal government with no exposure to PPIC. For NBCR acts, PPIC is responsible for a deductible of \$1,785,910 and 20% of the balance of a covered loss and the Federal government is responsible for the remaining portion of a covered loss. We are ultimately responsible for any loss incurred by PPIC.

Certain condominiums in which we own an interest (including our leasehold interest in the Farley Condominiums) own insurance policies with different per occurrence and aggregate limits than our policies described above.

We continue to monitor the state of the insurance market and the scope and costs of coverage for acts of terrorism and other events. However, we cannot anticipate what coverage will be available on commercially reasonable terms in the future. We are responsible for uninsured losses and for deductibles and losses in excess of our insurance coverage, which could be material.

Our debt instruments, consisting of mortgage loans secured by our properties, senior unsecured notes and revolving credit agreements contain customary covenants requiring us to maintain insurance. Although we believe that we have adequate insurance coverage for purposes of these agreements, we may not be able to obtain an equivalent amount of coverage at reasonable costs in the future. Further, if lenders insist on greater coverage than we are able to obtain it could adversely affect our ability to finance or refinance our properties and expand our portfolio.

Other Commitments and Contingencies

We are from time to time involved in legal actions arising in the ordinary course of business. In our opinion, after consultation with legal counsel, the outcome of such matters is not currently expected to have a material adverse effect on our financial position, results of operations or cash flows.

Each of our properties has been subjected to varying degrees of environmental assessment at various times. The environmental assessments did not reveal any material environmental contamination. However, there can be no assurance that the identification of new areas of contamination, changes in the extent or known scope of contamination, the discovery of additional sites, or changes in cleanup requirements would not result in significant costs to us.

In July 2018, we leased 78,000 square feet at 345 Montgomery Street in San Francisco, CA, to a subsidiary of Regus PLC, for an initial term of 15 years. The obligations under the lease were guaranteed by Regus PLC in an amount of up to \$90,000,000. The tenant purported to terminate the lease prior to space delivery. We commenced a suit on October 23, 2019 seeking to enforce the lease and the guaranty. On May 11, 2021, the court issued a final statement of decision in our favor and on July 7, 2021, the Regus subsidiary appealed the decision. On October 9, 2020, the successor to Regus PLC filed for bankruptcy in Luxembourg. We are actively pursuing claims relating to the guaranty against the successor to Regus PLC and its parent in Luxembourg and other jurisdictions.

In November 2011, we entered into an agreement with the New York City Economic Development Corporation ("EDC") to lease Piers 92 and 94 (the "Piers"). In February 2019, EDC issued an order for us to vacate Pier 92 due to structural problems. Beginning March 2020 through August 2021, we did not pay EDC the monthly rent due under the non-recourse lease due to the loss of our right to use or occupy Pier 92. On August 31, 2021, both parties entered into a mutual release with respect to claims by EDC for unpaid rent owed and claims by the Company for costs and damages as a result of our inability to use or occupy Pier 92.

Our mortgage loans are non-recourse to us, except for the mortgage loans secured by 640 Fifth Avenue, 7 West 34th Street and 435 Seventh Avenue, which we guaranteed and therefore are part of our tax basis. In certain cases we have provided guarantees or master leased tenant space. These guarantees and master leases terminate either upon the satisfaction of specified circumstances or repayment of the underlying loans. In addition, we have guaranteed the rent and payments in lieu of real estate taxes due to ESD, an entity of New York State, for Farley Office and Retail. As of December 31, 2021, the aggregate dollar amount of these guarantees and master leases is approximately \$1,648,000,000.

21. Commitments and Contingencies – continued

Other Commitments and Contingencies - continued

As of December 31, 2021, \$15,273,000 of letters of credit were outstanding under one of our unsecured revolving credit facilities. Our unsecured revolving credit facilities contain financial covenants that require us to maintain minimum interest coverage and maximum debt to market capitalization ratios, and provide for higher interest rates in the event of a decline in our ratings below Baa3/BBB. Our unsecured revolving credit facilities also contain customary conditions precedent to borrowing, including representations and warranties, and also contain customary events of default that could give rise to accelerated repayment, including such items as failure to pay interest or principal.

Our 95% consolidated joint venture (5% is owned by Related Companies ("Related")) is developing Farley Office and Retail. In connection with the development of the property, the joint venture admitted a historic tax credit investor partner. Under the terms of the historic tax credit arrangement, the joint venture is required to comply with various laws, regulations, and contractual provisions. Non-compliance with applicable requirements could result in projected tax benefits not being realized and, therefore, may require a refund or reduction of the Tax Credit Investor's capital contributions. As of December 31, 2021, the Tax Credit Investor has made \$92,400,000 in capital contributions. Vornado and Related have guaranteed certain of the joint venture's obligations to the Tax Credit Investor.

As investment manager of the Fund we are entitled to an incentive allocation after the limited partners have received a preferred return on their invested capital. The incentive allocation is subject to catch-up and clawback provisions. Accordingly, based on the December 31, 2021 fair value of the Fund assets, at liquidation we would be required to make a \$27,100,000 payment to the limited partners, net of amounts owed to us, representing a clawback of previously paid incentive allocations, which would have no income statement impact as it was previously accrued.

As of December 31, 2021, we expect to fund additional capital to certain of our partially owned entities aggregating approximately \$10,300,000.

As of December 31, 2021, we have construction commitments aggregating approximately \$494,000,000.

22. Related Party Transactions

Alexander's, Inc.

We own 32.4% of Alexander's. Steven Roth, the Chairman of Vornado's Board of Trustees and its Chief Executive Officer, is also the Chairman of the Board of Directors and Chief Executive Officer of Alexander's. We provide various services to Alexander's in accordance with management, development and leasing agreements. These agreements are described in Note 5 - *Investments in Partially Owned Entities*.

Interstate Properties ("Interstate")

Interstate is a general partnership in which Mr. Roth is the managing general partner. David Mandelbaum and Russell B. Wight, Jr., Trustees of Vornado and Directors of Alexander's, respectively, are Interstate's two other general partners. As of December 31, 2021, Interstate and its partners beneficially owned an aggregate of approximately 6.9% of the common shares of beneficial interest of Vornado and 26.1% of Alexander's common stock.

We manage and lease the real estate assets of Interstate pursuant to a management agreement for which we receive an annual fee equal to 4% of annual base rent and percentage rent. The management agreement has a term of one year and is automatically renewable unless terminated by either of the parties on 60 days' notice at the end of the term. We believe, based upon comparable fees charged by other real estate companies, that the management agreement terms are consistent with the market. We earned \$203,000, \$203,000, and \$300,000 of management fees under the agreement for the years ended December 31, 2021, 2020 and 2019, respectively.

Fifth Avenue and Times Square JV

We provide various services to Fifth Avenue and Times Square JV in accordance with management, development, leasing and other agreements. These agreements are described in Note 5 - *Investments in Partially Owned Entities*. Haim Chera, Executive Vice President - Head of Retail, has an investment in Crown Acquisitions Inc. and Crown Retail Services LLC (collectively, "Crown"), companies controlled by Mr. Chera's family. Crown has a nominal minority interest in Fifth Avenue and Times Square JV. Additionally, we have other investments with Crown.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

23. Segment Information

We operate in two reportable segments, New York and Other, which is based on how we manage our business.

Net operating income ("NOI") at share represents total revenues less operating expenses including our share of partially owned entities. NOI at share - cash basis represents NOI at share adjusted to exclude straight-line rental income and expense, amortization of acquired below and above market leases, net and other non-cash adjustments. We consider NOI at share - cash basis to be the primary non-GAAP financial measure for making decisions and assessing the unlevered performance of our segments as it relates to the total return on assets as opposed to the levered return on equity. As properties are bought and sold based on NOI at share - cash basis, we utilize this measure to make investment decisions as well as to compare the performance of our assets to that of our peers. NOI at share and NOI at share - cash basis should not be considered alternatives to net income or cash flow from operations and may not be comparable to similarly titled measures employed by other companies. NOI at share - cash basis includes rent that has been deferred as a result of the COVID-19 pandemic.

Below is a summary of NOI at share, NOI at share - cash basis and selected balance sheet data by segment for the years ended December 31, 2021, 2020 and 2019.

(Amounts in thousands)

	For the Year Ended December 31, 2021		
	Total	New York	Other
Total revenues	\$ 1,589,210	\$ 1,257,599	\$ 331,611
Operating expenses	(797,315)	(626,386)	(170,929)
NOI - consolidated	791,895	631,213	160,682
Deduct: NOI attributable to noncontrolling interests in consolidated subsidiaries	(69,385)	(38,980)	(30,405)
Add: NOI from partially owned entities	310,858	300,721	10,137
NOI at share	1,033,368	892,954	140,414
Non-cash adjustments for straight-line rents, amortization of acquired below-market leases, net and other	1,318	(1,188)	2,506
NOI at share - cash basis	<u>\$ 1,034,686</u>	<u>\$ 891,766</u>	<u>\$ 142,920</u>

Balance Sheet Data:

Real estate, at cost	\$ 13,217,845	\$ 10,702,008	\$ 2,515,837
Investments in partially owned entities	3,297,389	3,265,933	31,456
Total assets	17,266,588	15,969,498	1,297,090

(Amounts in thousands)

	For the Year Ended December 31, 2020		
	Total	New York	Other
Total revenues	\$ 1,527,951	\$ 1,221,748	\$ 306,203
Operating expenses	(789,066)	(640,531)	(148,535)
NOI - consolidated	738,885	581,217	157,668
Deduct: NOI attributable to noncontrolling interests in consolidated subsidiaries	(72,801)	(43,773)	(29,028)
Add: NOI from partially owned entities	306,495	296,447	10,048
NOI at share	972,579	833,891	138,688
Non-cash adjustments for straight-line rents, amortization of acquired below-market leases, net and other	46,246	36,715	9,531
NOI at share - cash basis	<u>\$ 1,018,825</u>	<u>\$ 870,606</u>	<u>\$ 148,219</u>

Balance Sheet Data:

Real estate, at cost	\$ 12,087,943	\$ 9,581,830	\$ 2,506,113
Investments in partially owned entities	3,491,107	3,459,142	31,965
Total assets	16,221,822	15,046,469	1,175,353

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

23. Segment Information - continued

(Amounts in thousands)

	For the Year Ended December 31, 2019		
	Total	New York	Other
Total revenues	\$ 1,924,700	\$ 1,577,860	\$ 346,840
Operating expenses	(917,981)	(758,304)	(159,677)
NOI - consolidated	1,006,719	819,556	187,163
Deduct: NOI attributable to noncontrolling interests in consolidated subsidiaries	(69,332)	(40,896)	(28,436)
Add: NOI from partially owned entities	322,390	294,168	28,222
NOI at share	1,259,777	1,072,828	186,949
Non-cash adjustments for straight-line rents, amortization of acquired below-market leases, net and other	(6,060)	(12,318)	6,258
NOI at share - cash basis	<u>\$ 1,253,717</u>	<u>\$ 1,060,510</u>	<u>\$ 193,207</u>

Below is a reconciliation of net income (loss) to NOI at share and NOI at share - cash basis for the years ended December 31, 2021, 2020 and 2019.

(Amounts in thousands)

	For the Year Ended December 31,		
	2021	2020	2019
Net income (loss)	\$ 207,553	\$ (461,845)	\$ 3,334,262
Depreciation and amortization expense	412,347	399,695	419,107
General and administrative expense	134,545	181,509	169,920
Impairment losses, transaction related costs and other	13,815	174,027	106,538
(Income) loss from partially owned entities	(130,517)	329,112	(78,865)
(Income) loss from real estate fund investments	(11,066)	226,327	104,082
Interest and other investment (income) loss, net	(4,612)	5,499	(21,819)
Interest and debt expense	231,096	229,251	286,623
Net gain on transfer to Fifth Avenue and Times Square JV	—	—	(2,571,099)
Net gains on disposition of wholly owned and partially owned assets	(50,770)	(381,320)	(845,499)
Income tax (benefit) expense	(10,496)	36,630	103,439
Loss from discontinued operations	—	—	30
NOI from partially owned entities	310,858	306,495	322,390
NOI attributable to noncontrolling interests in consolidated subsidiaries	(69,385)	(72,801)	(69,332)
NOI at share	1,033,368	972,579	1,259,777
Non-cash adjustments for straight-line rents, amortization of acquired below-market leases, net and other	1,318	46,246	(6,060)
NOI at share - cash basis	<u>\$ 1,034,686</u>	<u>\$ 1,018,825</u>	<u>\$ 1,253,717</u>

24. Subsequent Event

2022 Long-Term Performance Award

On January 12, 2022, the Compensation Committee approved the 2022 Long-Term Performance Plan ("LTTP"), a multi-year, LTIP units-based performance equity compensation plan. Awards under the 2022 LTTP are bifurcated between operational performance (50%) and relative performance (50%) measurements and may be earned at specified threshold, target and maximum levels.

The operational component awards may be earned based on Vornado's 2022 operational performance in the following categories:

- Comparable FFO per share (75% weighting); and
- ESG performance metrics consisting of greenhouse emissions reductions, GRESB score and Green Building Certification (LEED) achievements (aggregate 25% weighting).

Any LTTP award units tentatively earned based on Vornado's 2022 operational performance are subject to an absolute return modifier pursuant to which such award units are subject to a potential reduction (but not increase) of up to 30% if Vornado's aggregate total 3-year TSR for 2022-2025 is below specified levels.

Awards under relative components may be earned based on Vornado's 3-year TSR, measured against the Dow Jones U.S. Real Estate Office Index (50% weighting) and a Northeast peer group custom index (50% weighting). Awards earned under the relative component of the LTTP are subject to reductions of up to 30% if Vornado's 3-year TSR is below specified levels.

If the designated performance objectives are achieved, awards earned under 2022 LTTP will vest 50% in January 2025 and 50% in January 2026. In addition, the Chief Executive Officer is required to hold any earned and vested awards for three years following each such vesting date and all other award recipients are required to hold such awards for one year following each such vesting date. Dividends on awards granted under the 2022 LTTP accrue during the applicable performance period and are paid to participants if awards are ultimately earned based on the achievement of the designated performance objectives.

Sale of SoHo Properties

On January 13, 2022, we sold two Manhattan retail properties located at 478-482 Broadway and 155 Spring Street. See Note 7 - *Acquisitions and Dispositions* for additional information.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Vornado Realty Trust

Disclosure Controls and Procedures: Our management, with the participation of Vornado's Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as such term is defined in Rule 13a-15 (e) under the Securities Exchange Act of 1934, as amended) as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, Vornado's Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of such period, our disclosure controls and procedures are effective.

Internal Control Over Financial Reporting: There have not been any changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended) during the fourth quarter of the fiscal year to which this report relates that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting

Management of Vornado Realty Trust, together with its consolidated subsidiaries (the "Company"), is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is a process designed under the supervision of Vornado's principal executive and principal financial officers to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external reporting purposes in accordance with accounting principles generally accepted in the United States of America.

As of December 31, 2021, management conducted an assessment of the effectiveness of our internal control over financial reporting based on the framework established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management has determined that our internal control over financial reporting as of December 31, 2021 was effective.

Our internal control over financial reporting includes policies and procedures that pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of assets; provide reasonable assurances that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States, and that receipts and expenditures are being made only in accordance with authorizations of management and our trustees; and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on our financial statements.

The effectiveness of our internal control over financial reporting as of December 31, 2021 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing on the following page, which expresses an unqualified opinion on the effectiveness of our internal control over financial reporting as of December 31, 2021.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and Board of Trustees
Vornado Realty Trust
New York, New York

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Vornado Realty Trust and subsidiaries (the “Company”) as of December 31, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2021, of the Company and our report dated February 14, 2022, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

New York, New York
February 14, 2022

Vornado Realty L.P.

Disclosure Controls and Procedures: Vornado Realty L.P.'s management, with the participation of Vornado's Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as such term is defined in Rule 13a-15 (e) under the Securities Exchange Act of 1934, as amended) as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, Vornado's Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of such period, our disclosure controls and procedures are effective.

Internal Control Over Financial Reporting: There have not been any changes in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended) during the fourth quarter of the fiscal year to which this report relates that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting

Management of Vornado Realty Trust, sole general partner of Vornado Realty L.P., together with Vornado Realty L.P.'s consolidated subsidiaries (the "Company"), is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is a process designed under the supervision of Vornado's principal executive and principal financial officers to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external reporting purposes in accordance with accounting principles generally accepted in the United States of America.

As of December 31, 2021, management conducted an assessment of the effectiveness of our internal control over financial reporting based on the framework established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management has determined that our internal control over financial reporting as of December 31, 2021 was effective.

Our internal control over financial reporting includes policies and procedures that pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of assets; provide reasonable assurances that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States, and that receipts and expenditures are being made only in accordance with authorizations of management and Vornado's trustees; and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on our financial statements.

The effectiveness of our internal control over financial reporting as of December 31, 2021 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing on the following page, which expresses an unqualified opinion on the effectiveness of our internal control over financial reporting as of December 31, 2021.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Partners
Vornado Realty L.P.
New York, New York

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Vornado Realty L.P. and subsidiaries (the “Partnership”) as of December 31, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Partnership maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2021, of the Partnership and our report dated February 14, 2022, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Partnership’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Partnership’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Partnership in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ DELOITTE & TOUCHE LLP

New York, New York
February 14, 2022

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III**ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

Information relating to trustees of Vornado, the Operating Partnership's sole general partner, including its audit committee and audit committee financial expert, will be contained in Vornado's definitive Proxy Statement involving the election of Vornado's trustees which Vornado will file with the Securities and Exchange Commission pursuant to Regulation 14A under the Securities Exchange Act of 1934 not later than 120 days after December 31, 2021, and such information is incorporated herein by reference. Also incorporated herein by reference is the information under the caption "16(a) Beneficial Ownership Reporting Compliance" of the Proxy Statement.

Executive Officers of the Registrant

The following is a list of the names, ages, principal occupations and positions with Vornado of the executive officers of Vornado and the positions held by such officers during the past five years. All executive officers of Vornado have terms of office that run until the next succeeding meeting of the Board of Trustees of Vornado following the Annual Meeting of Vornado's Shareholders unless they are removed sooner by Vornado's Board.

Name	Age	PRINCIPAL OCCUPATION, POSITION AND OFFICE (Current and during past five years with Vornado unless otherwise stated)
Steven Roth	80	Chairman of the Board; Chief Executive Officer since April 2013 and from May 1989 to May 2009; Managing General Partner of Interstate Properties, an owner of shopping centers and an investor in securities and partnerships; Chief Executive Officer of Alexander's, Inc. since March 1995, a Director since 1989, and Chairman of the Board since May 2004.
Michael J. Franco	53	President and Chief Financial Officer since December 2020; President since April 2019; Executive Vice President - Chief Investment Officer from April 2015 to April 2019; Executive Vice President - Head of Acquisitions and Capital Markets from November 2010 to April 2015.
Haim Chera	52	Executive Vice President - Head of Retail since April 2019; Principal at Crown Acquisitions from January 2000 - April 2019.
Barry S. Langer	43	Executive Vice President - Development - Co-Head of Real Estate since April 2019; Executive Vice President - Head of Development from May 2015 to April 2019.
Glen J. Weiss	52	Executive Vice President - Office Leasing - Co-Head of Real Estate since April 2019; Executive Vice President - Office Leasing from May 2013 to April 2019.

Vornado, the Operating Partnership's sole general partner, has adopted a Code of Business Conduct and Ethics that applies to all officers and employees. This Code is available on Vornado's website at www.vno.com.

ITEM 11. EXECUTIVE COMPENSATION

Information relating to Vornado's executive officer and trustee compensation will be contained in Vornado's Proxy Statement referred to above in Item 10, "Directors, Executive Officers and Corporate Governance," and such information is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information relating to security ownership of certain beneficial owners and management and related stockholder matters will be contained in Vornado's Proxy Statement referred to in Item 10, "Directors, Executive Officers and Corporate Governance," and such information is incorporated herein by reference.

Equity compensation plan information

The following table provides information as of December 31, 2021 regarding Vornado's equity compensation plans.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in the second column)
Equity compensation plans approved by security holders	6,099,655 ⁽¹⁾	\$ 65.27	3,489,732 ⁽²⁾
Equity compensation awards not approved by security holders	—	—	—
Total	6,099,655	\$ 65.27	3,489,732

(1) Includes shares/units of (i) 191,933 Vornado Stock Options (124,805 of which are vested and exercisable), (ii) 567,739 Appreciation-Only Long-Term Incentive Plan ("AO LTIP") units (327,535 of which are vested and exercisable), (iii) 496,762 Performance Conditioned AO LTIP units (322,313 of which are vested and exercisable), (iv) 2,911,216 restricted Operating Partnership units (1,828,129 of which are vested and exercisable) and (v) 1,932,005 unearned Out-Performance Plan ("OPP") units, which do not have an exercise price. OPP units, if earned, become convertible into Class A units of the Operating Partnership (and ultimately into Vornado common shares) following vesting.

Does not include 15,774 shares of Vornado Restricted Stock, as they have been reflected in Vornado's total shares outstanding.

(2) Based on awards being granted as "Full Value Awards," as defined. If we were to grant "Not Full Value Awards," as defined, the number of securities available for future grants is approximately 6,980,000 shares.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information relating to certain relationships and related transactions, and director independence will be contained in Vornado's Proxy Statement referred to in Item 10, "Directors, Executive Officers and Corporate Governance," and such information is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information relating to principal accounting fees and services will be contained in Vornado's Proxy Statement referred to in Item 10, "Directors, Executive Officers and Corporate Governance," under the caption "Ratification of The Appointment of Independent Accounting Firm" and such information is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

1. The consolidated financial statements are set forth in Item 8 of this Annual Report on Form 10-K.

The following financial statement schedules should be read in conjunction with the financial statements included in Item 8 of this Annual Report on Form 10-K.

III--Real Estate and Accumulated Depreciation as of December 31, 2021, 2020 and 2019

Page in this
Annual Report
on Form 10-K

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Schedules other than those listed above are omitted because they are not applicable or the information required is included in the consolidated financial statements or the notes thereto.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
SCHEDULE III
REAL ESTATE AND ACCUMULATED DEPRECIATION
(Amounts in thousands)

COLUMN A	COLUMN B	COLUMN C		COLUMN D	COLUMN E			COLUMN F	COLUMN G	COLUMN H	COLUMN I	
	Encumbrances (1)	Initial cost to company			Costs capitalized subsequent to acquisition	Gross amount at which carried at close of period			Accumulated depreciation and amortization	Date of construction (3)	Date acquired	Life on which depreciation in latest income statement is computed
		Land	Buildings and improvements		Land	Buildings and improvements	Total (2)					
New York												
Manhattan												
1290 Avenue of the Americas	\$ 950,000	\$ 518,244	\$ 926,992	\$ 268,355	\$ 518,244	\$ 1,195,347	\$ 1,713,591	\$ 440,097	1963	2007	(4)	
One Park Avenue	525,000	197,057	369,016	1,525	197,057	370,541	567,598	4,538	1926	2021	(4)	
350 Park Avenue	400,000	265,889	363,381	49,025	265,889	412,406	678,295	157,691	1960	2006	(4)	
PENN 1	—	—	412,169	675,839	—	1,088,008	1,088,008	364,744	1972	1998	(4)	
100 West 33rd Street	398,402	242,776	247,970	44,038	242,776	292,008	534,784	115,295	1911	2007	(4)	
150 West 34th Street	205,000	119,657	268,509	—	119,657	268,509	388,166	44,192	1900	2015	(4)	
PENN 2	575,000 (5)	53,615	164,903	261,859	52,689	427,688	480,377	106,149	1968	1997	(4)	
90 Park Avenue	—	8,000	175,890	198,970	8,000	374,860	382,860	177,978	1964	1997	(4)	
Manhattan Mall	181,598	88,595	113,473	31,237	88,595	144,710	233,305	52,851	2009	2007	(4)	
770 Broadway	700,000	52,898	95,686	188,436	52,898	284,122	337,020	127,420	1907	1998	(4)	
888 Seventh Avenue	299,400	—	117,269	164,940	—	282,209	282,209	153,517	1980	1998	(4)	
PENN 11	500,000	40,333	85,259	118,666	40,333	203,925	244,258	93,045	1923	1997	(4)	
909 Third Avenue	350,000	—	120,723	121,136	—	241,859	241,859	122,466	1969	1999	(4)	
150 East 58th Street	—	39,303	80,216	57,661	39,303	137,877	177,180	71,938	1969	1998	(4)	
595 Madison Avenue	—	62,731	62,888	68,956	62,731	131,844	194,575	53,220	1968	1999	(4)	
330 West 34th Street	—	—	8,599	154,213	—	162,812	162,812	49,803	1925	1998	(4)	
715 Lexington Avenue	—	—	26,903	20,217	30,085	17,035	47,120	965	1923	2001	(4)	
484-486 Broadway	—	10,000	6,688	7,358	10,000	14,046	24,046	4,235	2009	2007	(4)	
4 Union Square South	120,000	24,079	55,220	11,398	24,079	66,618	90,697	25,826	1965/2004	1993	(4)	
Farley Office and Retail	—	—	476,235	911,408	—	1,387,643	1,387,643	4,189	1912	2018	(4)	
260 Eleventh Avenue	—	—	80,482	5,530	—	86,012	86,012	14,146	1911	2015	(4)	
510 Fifth Avenue	—	34,602	18,728	36,745	48,403	41,672	90,075	12,270		2010	(4)	
606 Broadway	74,119	45,406	8,993	51,709	45,298	60,810	106,108	4,213		2016	(4)	
40 Fulton Street	—	15,732	26,388	41,597	15,732	67,985	83,717	25,521	1987	1998	(4)	
443 Broadway	—	11,187	41,186	(36,197)	3,457	12,719	16,176	391		2013	(4)	
435 Seventh Avenue	95,696	19,893	19,091	2,166	19,893	21,257	41,150	10,732	2002	1997	(4)	
692 Broadway	—	6,053	22,908	3,901	6,053	26,809	32,862	11,503		2005	(4)	
131-135 West 33rd Street	—	8,315	21,312	477	8,315	21,789	30,104	3,161		2016	(4)	

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
SCHEDULE III
REAL ESTATE AND ACCUMULATED DEPRECIATION - CONTINUED
(Amounts in thousands)

COLUMN A	COLUMN B	COLUMN C	COLUMN D	COLUMN E	COLUMN F	COLUMN G	COLUMN H	COLUMN I			
Encumbrances (1)	Initial cost to company		Costs capitalized subsequent to acquisition	Gross amount at which carried at close of period			Accumulated depreciation and amortization	Date of construction (3)	Date acquired	Life on which depreciation in latest income statement is computed	
	Land	Buildings and improvements		Land	Buildings and improvements	Total (2)					
<i>New York - continued</i>											
Manhattan - continued											
304 Canal Street	\$ —	\$ 3,511	\$ 12,905	\$ (8,456)	\$ 1,771	\$ 6,189	\$ 7,960	\$ 169	1910	2014	(4)
1131 Third Avenue	—	7,844	7,844	5,683	7,844	13,527	21,371	3,093		1997	(4)
431 Seventh Avenue	—	16,700	2,751	—	16,700	2,751	19,451	1,014		2007	(4)
138-142 West 32nd Street	—	9,252	9,936	2,002	9,252	11,938	21,190	1,844	1920	2015	(4)
334 Canal Street	—	1,693	6,507	(1,170)	752	6,278	7,030	205		2011	(4)
966 Third Avenue	—	8,869	3,631	—	8,869	3,631	12,500	756		2013	(4)
148 Spring Street	—	3,200	8,112	398	3,200	8,510	11,710	2,941		2008	(4)
150 Spring Street	—	3,200	5,822	312	3,200	6,134	9,334	2,109		2008	(4)
137 West 33rd Street	—	6,398	1,550	—	6,398	1,550	7,948	262	1932	2015	(4)
825 Seventh Avenue	—	1,483	697	3,940	1,483	4,637	6,120	829		1997	(4)
537 West 26th Street	—	10,370	17,632	19,925	26,631	21,296	47,927	2,062		2018	(4)
339 Greenwich Street	—	2,622	12,333	(10,019)	865	4,071	4,936	123		2017	(4)
PENN 15 (Hotel Pennsylvania site)	—	29,903	121,712	266,365	29,903	388,077	417,980	145,938	1919	1997	(4)
Other (Including Signage)	—	140,477	31,892	3,477	94,788	81,058	175,846	23,571			
Total Manhattan	5,374,215	2,109,887	4,660,401	3,743,622	2,111,143	8,402,767	10,513,910	2,437,012			
Other Properties											
33-00 Northern Boulevard, Queens, New York	100,000	46,505	86,226	14,493	46,505	100,719	147,224	17,829	1915	2015	(4)
Paramus, New Jersey	—	—	—	23,348	1,036	22,312	23,348	19,393	1967	1987	(4)
Total Other Properties	100,000	46,505	86,226	37,841	47,541	123,031	170,572	37,222			
Total New York	5,474,215	2,156,392	4,746,627	3,781,463	2,158,684	8,525,798	10,684,482	2,474,234			

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
SCHEDULE III
REAL ESTATE AND ACCUMULATED DEPRECIATION - CONTINUED
(Amounts in thousands)

COLUMN A	COLUMN B	COLUMN C	COLUMN D	COLUMN E	COLUMN F	COLUMN G	COLUMN H	COLUMN I			
	Encumbrances (1)	Initial cost to company		Costs capitalized subsequent to acquisition	Gross amount at which carried at close of period			Accumulated depreciation and amortization	Date of construction (3)	Date acquired	Life on which depreciation in latest income statement is computed
		Land	Buildings and improvements		Land	Buildings and improvements	Total (2)				
Other											
theMART											
theMART, Illinois	\$ —	\$ 64,528	\$ 319,146	\$ 413,854	\$ 64,535	\$ 732,993	\$ 797,528	\$ 369,439	1930	1998	(4)
527 West Kinzie, Illinois	—	5,166	—	197	5,166	197	5,363	—		1998	
Piers 92 and 94, New York	—	—	—	19,144	—	19,144	19,144	3,905		2008	(4)
Total theMART	—	69,694	319,146	433,195	69,701	752,334	822,035	373,344			
555 California Street, California	1,200,000	223,446	895,379	256,718	223,446	1,152,097	1,375,543	395,120	1922,1969 -1970	2007	(4)
220 Central Park South, New York	—	115,720	16,445	(106,014)	—	26,151	26,151	—		2005	(4)
Borgata Land, Atlantic City, NJ	—	83,089	—	—	83,089	—	83,089	—		2010	
759-771 Madison Avenue (40 East 66th) Residential, New York	—	8,454	13,321	(8,193)	5,273	8,309	13,582	3,101		2005	(4)
Annapolis, Maryland	—	—	9,652	—	—	9,652	9,652	4,713		2005	(4)
Wayne Towne Center, New Jersey	—	—	26,137	47,347	—	73,484	73,484	34,112		2010	(4)
Other	—	—	—	10,035	—	10,035	10,035	1,942			(4)
Total Other	1,200,000	500,403	1,280,080	633,088	381,509	2,032,062	2,413,571	812,332			
Leasehold improvements equipment and other	—	—	—	119,792	—	119,792	119,792	89,781			
Total December 31, 2021	\$ 6,674,215	\$ 2,656,795	\$ 6,026,707	\$ 4,534,343	\$ 2,540,193	\$ 10,677,652	\$ 13,217,845	\$ 3,376,347			

- (1) Represents contractual debt obligations.
(2) The net basis of Vornado's assets and liabilities for tax reporting purposes is approximately \$2.6 billion lower than the amounts reported for financial statement purposes.
(3) Date of original construction — many properties have had substantial renovation or additional construction — see Column D.
(4) Depreciation of the buildings and improvements are calculated over lives ranging from the life of the lease to forty years.
(5) Secured amount outstanding on revolving credit facilities.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
SCHEDULE III
REAL ESTATE AND ACCUMULATED DEPRECIATION
(Amounts in thousands)

The following is a reconciliation of real estate assets and accumulated depreciation:

	Year Ended December 31,		
	2021	2020	2019
Real Estate			
Balance at beginning of period	\$ 12,087,943	\$ 13,074,012	\$ 16,237,883
Additions during the period:			
Land	197,057	1,372	46,074
Buildings & improvements and other	1,286,474	1,127,593	1,391,784
	<u>13,571,474</u>	<u>14,202,977</u>	<u>17,675,741</u>
Less: Assets sold, written-off, reclassified to ready for sale and deconsolidated	353,629	2,115,034	4,601,729
Balance at end of period	<u>\$ 13,217,845</u>	<u>\$ 12,087,943</u>	<u>\$ 13,074,012</u>
Accumulated Depreciation			
Balance at beginning of period	\$ 3,169,446	\$ 3,015,958	\$ 3,180,175
Additions charged to operating expenses	362,311	344,301	360,194
	<u>3,531,757</u>	<u>3,360,259</u>	<u>3,540,369</u>
Less: Accumulated depreciation on assets sold, written-off and deconsolidated	155,410	190,813	524,411
Balance at end of period	<u>\$ 3,376,347</u>	<u>\$ 3,169,446</u>	<u>\$ 3,015,958</u>

(b) Exhibits:

Exhibit No.		
2.1	— Master Transaction Agreement, dated as of October 31, 2016, by and among Vornado Realty Trust, Vornado Realty L.P., JBG Properties, Inc., JBG/Operating Partners, L.P., certain affiliates of JBG Properties Inc. and JBG/Operating Partners set forth on Schedule A thereto, JBG SMITH Properties and JBG SMITH Properties L.P. Incorporated by reference to Exhibit 2.1 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2016 (File No.001-11954), filed February 13, 2017	*
3.1	— Articles of Restatement of Vornado Realty Trust, as filed with the State Department of Assessments and Taxation of Maryland on July 30, 2007 - Incorporated by reference to Exhibit 3.75 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended June 30, 2007 (File No. 001-11954), filed on July 31, 2007	*
3.2	— Amended and Restated Bylaws of Vornado Realty Trust, as amended on July 25, 2018 - Incorporated by reference to Exhibit 3.55 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 (File No. 001-11954), filed on July 30, 2018	*
3.3	— Articles of Amendment to Declaration of Trust, dated September 30, 2016 – Incorporated by reference to Exhibit 3.3 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2020 (File No. 001-11954), filed on February 16, 2021	*
3.4	— Articles of Amendment of Vornado Realty Trust, as filed with the State Department of Assessments and Taxation of Maryland on October 4, 2016—Incorporated by reference to Annex B to Vornado Realty Trust's Definitive Proxy Statement on Schedule 14A (File No. 001-11954), filed on April 8, 2016.	*
3.5	— Articles of Amendment to Declaration of Trust, dated June 13, 2018 - Incorporated by reference to Exhibit 3.54 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018 (File No. 001-11954), filed on July 30, 2018	*
3.6	— Articles of Amendment to Declaration of Trust, dated August 7, 2019 - Incorporated by reference to Exhibit 3.1 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on August 8, 2019	*
3.7	— Articles Supplementary, 5.40% Series L Cumulative Redeemable Preferred Shares of Beneficial Interest, liquidation preference \$25.00 per share, no par value – Incorporated by reference to Exhibit 3.6 to Vornado Realty Trust's Registration Statement on Form 8-A (File No. 001-11954), filed on January 25, 2013	*
3.8	— Articles Supplementary Classifying Vornado Realty Trust's 5.25% Series M Cumulative Redeemable Preferred Shares of Beneficial Interest, liquidation preference \$25.00 per share, no par value - Incorporated by reference to Exhibit 3.7 to Vornado Realty Trust's Registration Statement on Form 8-A (File No. 001-11954), filed on December 13, 2017	*
3.9	— Articles Supplementary Classifying Vornado Realty Trust's 5.25% Series N Cumulative Redeemable Preferred Shares of Beneficial Interest, liquidation preference \$25.00 per share, no par value - Incorporated by reference to Exhibit 3.1 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on November 24, 2020	*
3.10	— Articles Supplementary Classifying Vornado Realty Trust's 4.45% Series O Cumulative Redeemable Preferred Shares of Beneficial Interest, liquidation preference \$25.00 per share, no par value - Incorporated by reference to Exhibit 3.1 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on September 22, 2021	*
3.11	— Second Amended and Restated Agreement of Limited Partnership of Vornado Realty L.P., dated as of October 20, 1997 (the "Partnership Agreement") – Incorporated by reference to Exhibit 3.26 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003 (File No. 001-11954), filed on May 8, 2003	*
3.12	— Amendment to the Partnership Agreement, dated as of December 16, 1997 – Incorporated by reference to Exhibit 3.27 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003 (File No. 001-11954), filed on May 8, 2003	*
3.13	— Second Amendment to the Partnership Agreement, dated as of April 1, 1998 – Incorporated by reference to Exhibit 3.5 to Vornado Realty Trust's Registration Statement on Form S-3 (File No. 333-50095), filed on April 14, 1998	*
3.14	— Third Amendment to the Partnership Agreement, dated as of November 12, 1998 - Incorporated by reference to Exhibit 3.2 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on November 30, 1998	*
3.15	— Fourth Amendment to the Partnership Agreement, dated as of November 30, 1998 - Incorporated by reference to Exhibit 3.1 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on February 9, 1999	*
3.16	— Fifth Amendment to the Partnership Agreement, dated as of March 3, 1999 - Incorporated by reference to Exhibit 3.1 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on March 17, 1999	*
3.17	— Sixth Amendment to the Partnership Agreement, dated as of March 17, 1999 - Incorporated by reference to Exhibit 3.2 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on July 7, 1999	*
3.18	— Seventh Amendment to the Partnership Agreement, dated as of May 20, 1999 - Incorporated by reference to Exhibit 3.3 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on July 7, 1999	*
3.19	— Eighth Amendment to the Partnership Agreement, dated as of May 27, 1999 - Incorporated by reference to Exhibit 3.4 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on July 7, 1999	*
3.20	— Ninth Amendment to the Partnership Agreement, dated as of September 3, 1999 - Incorporated by reference to Exhibit 3.3 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on October 25, 1999	*
3.21	— Tenth Amendment to the Partnership Agreement, dated as of September 3, 1999 - Incorporated by reference to Exhibit 3.4 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on October 25, 1999	*

* Incorporated by reference

- 3.22 — Eleventh Amendment to the Partnership Agreement, dated as of November 24, 1999 - Incorporated by reference to Exhibit 3.2 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on December 23, 1999 *
- 3.23 — Twelfth Amendment to the Partnership Agreement, dated as of May 1, 2000 - Incorporated by reference to Exhibit 3.2 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on May 19, 2000 *
- 3.24 — Thirteenth Amendment to the Partnership Agreement, dated as of May 25, 2000 - Incorporated by reference to Exhibit 3.2 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on June 16, 2000 *
- 3.25 — Fourteenth Amendment to the Partnership Agreement, dated as of December 8, 2000 - Incorporated by reference to Exhibit 3.2 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on December 28, 2000 *
- 3.26 — Fifteenth Amendment to the Partnership Agreement, dated as of December 15, 2000 - Incorporated by reference to Exhibit 4.35 to Vornado Realty Trust's Registration Statement on Form S-8 (File No. 333-68462), filed on August 27, 2001 *
- 3.27 — Sixteenth Amendment to the Partnership Agreement, dated as of July 25, 2001 - Incorporated by reference to Exhibit 3.3 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on October 12, 2001 *
- 3.28 — Seventeenth Amendment to the Partnership Agreement, dated as of September 21, 2001 - Incorporated by reference to Exhibit 3.4 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on October 12, 2001 *
- 3.29 — Eighteenth Amendment to the Partnership Agreement, dated as of January 1, 2002 - Incorporated by reference to Exhibit 3.1 to Vornado Realty Trust's Current Report on Form 8-K/A (File No. 001-11954), filed on March 18, 2002 *
- 3.30 — Nineteenth Amendment to the Partnership Agreement, dated as of July 1, 2002 - Incorporated by reference to Exhibit 3.47 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended June 30, 2002 (File No. 001-11954), filed on August 7, 2002 *
- 3.31 — Twentieth Amendment to the Partnership Agreement, dated April 9, 2003 - Incorporated by reference to Exhibit 3.46 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003 (File No. 001-11954), filed on May 8, 2003 *
- 3.32 — Twenty-First Amendment to the Partnership Agreement, dated as of July 31, 2003 - Incorporated by reference to Exhibit 3.47 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003 (File No. 001-11954), filed on November 7, 2003 *
- 3.33 — Twenty-Second Amendment to the Partnership Agreement, dated as of November 17, 2003 - Incorporated by reference to Exhibit 3.49 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2003 (File No. 001-11954), filed on March 3, 2004 *
- 3.34 — Twenty-Third Amendment to the Partnership Agreement, dated May 27, 2004 - Incorporated by reference to Exhibit 99.2 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on June 14, 2004 *
- 3.35 — Twenty-Fourth Amendment to the Partnership Agreement, dated August 17, 2004 - Incorporated by reference to Exhibit 3.57 to Vornado Realty Trust and Vornado Realty L.P.'s Registration Statement on Form S-3 (File No. 333-122306), filed on January 26, 2005 *
- 3.36 — Twenty-Fifth Amendment to the Partnership Agreement, dated November 17, 2004 - Incorporated by reference to Exhibit 3.58 to Vornado Realty Trust and Vornado Realty L.P.'s Registration Statement on Form S-3 (File No. 333-122306), filed on January 26, 2005 *
- 3.37 — Twenty-Sixth Amendment to the Partnership Agreement, dated December 17, 2004 - Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 000-22685), filed on December 21, 2004 *
- 3.38 — Twenty-Seventh Amendment to the Partnership Agreement, dated December 20, 2004 - Incorporated by reference to Exhibit 3.2 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 000-22685), filed on December 21, 2004 *
- 3.39 — Twenty-Eighth Amendment to the Partnership Agreement, dated December 30, 2004 - Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 000-22685), filed on January 4, 2005 *
- 3.40 — Twenty-Ninth Amendment to the Partnership Agreement, dated June 17, 2005 - Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 000-22685), filed on June 21, 2005 *
- 3.41 — Thirtieth Amendment to the Partnership Agreement, dated August 31, 2005 - Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 000-22685), filed on September 1, 2005 *
- 3.42 — Thirty-First Amendment to the Partnership Agreement, dated September 9, 2005 - Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 000-22685), filed on September 14, 2005 *
- 3.43 — Thirty-Second Amendment and Restated Agreement of Limited Partnership, dated as of December 19, 2005 - Incorporated by reference to Exhibit 3.59 to Vornado Realty L.P.'s Quarterly Report on Form 10-Q for the quarter ended March 31, 2006 (File No. 000-22685), filed on May 8, 2006 *
- 3.44 — Thirty-Third Amendment to Second Amended and Restated Agreement of Limited Partnership, dated as of April 25, 2006 - Incorporated by reference to Exhibit 10.2 to Vornado Realty Trust's Form 8-K (File No. 001-11954), filed on May 1, 2006 *
- 3.45 — Thirty-Fourth Amendment to Second Amended and Restated Agreement of Limited Partnership, dated as of May 2, 2006 - Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 000-22685), filed on May 3, 2006 *
- 3.46 — Thirty-Fifth Amendment to Second Amended and Restated Agreement of Limited Partnership, dated as of August 17, 2006 - Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Form 8-K (File No. 000-22685), filed on August 23, 2006 *

* Incorporated by reference

- 3.47 — Thirty-Sixth Amendment to Second Amended and Restated Agreement of Limited Partnership, dated as of October 2, 2006 – Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Form 8-K (File No. 000-22685), filed on January 22, 2007 *
- 3.48 — Thirty-Seventh Amendment to Second Amended and Restated Agreement of Limited Partnership, dated as of June 28, 2007 – Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 000-22685), filed on June 27, 2007 *
- 3.49 — Thirty-Eighth Amendment to Second Amended and Restated Agreement of Limited Partnership, dated as of June 28, 2007 – Incorporated by reference to Exhibit 3.2 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 000-22685), filed on June 27, 2007 *
- 3.50 — Thirty-Ninth Amendment to Second Amended and Restated Agreement of Limited Partnership, dated as of June 28, 2007 – Incorporated by reference to Exhibit 3.3 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 000-22685), filed on June 27, 2007 *
- 3.51 — Fortieth Amendment to Second Amended and Restated Agreement of Limited Partnership, dated as of June 28, 2007 – Incorporated by reference to Exhibit 3.4 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 000-22685), filed on June 27, 2007 *
- 3.52 — Forty-First Amendment to Second Amended and Restated Agreement of Limited Partnership, dated as of March 31, 2008 – Incorporated by reference to Exhibit 3.44 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended March 31, 2008 (file No. 001-11954), filed on May 6, 2008 *
- 3.53 — Forty-Second Amendment to Second Amended and Restated Agreement of Limited Partnership, dated as of December 17, 2010 – Incorporated by reference to Exhibit 99.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No 000-22685), filed on December 21, 2010 *
- 3.54 — Forty-Third Amendment to Second Amended and Restated Agreement of Limited Partnership, dated as of April 20, 2011 – Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 000-22685), filed on April 21, 2011 *
- 3.55 — Forty-Fourth Amendment to Second Amended and Restated Agreement of Limited Partnership of Vornado Realty L.P., dated as, of March 30, 2012 - Incorporated by reference to Exhibit 99.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 001-34482), filed on April 5, 2012 *
- 3.56 — Forty-Fourth Amendment to Second Amended and Restated Agreement of Limited Partnership dated as of July 18, 2012 – Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 001-34482), filed on July 18, 2012 *
- 3.57 — Forty-Fifth Amendment to Second Amended and Restated Agreement of Limited Partnership, dated as of January 25, 2013 – Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 001-34482), filed on January 25, 2013 *
- 3.58 — Forty-Sixth Amendment to Second Amended and Restated Agreement of Limited Partnership of Vornado Realty L.P., dated April 1, 2015 - Incorporated by reference to Exhibit 3.1 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 001-34482), filed on April 2, 2015 *
- 3.59 ** — Forty-Seventh Amendment to Second Amended and Restated Agreement of Limited Partnership of Vornado Realty L.P., dated December 13, 2017 - Incorporated by reference to Exhibit 3.2 to Vornado Realty L.P.'s Current Report on Form 8-K (File No. 001-34482), filed on December 13, 2017 *
- 3.60 ** — Forty-Eighth Amendment to Second Amended and Restated Agreement of Limited Partnership of Vornado Realty L.P., dated as of January 12, 2018 - Incorporated by reference to Exhibit 3.53 to Vornado Realty Trust's Annual Report on 10-K for the year ended December 31, 2017 (File No. 001-11954), filed on February 12, 2018 *
- 3.61 — Forty-Ninth Amendment to Second Amended and Restated Agreement of Limited Partnership of Vornado Realty L.P., dated as of August 7, 2019 - Incorporated by reference to Exhibit 3.2 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on August 8, 2019 *
- 3.62 — Fiftieth Amendment to Second Amended and Restated Agreement of Limited Partnership of Vornado Realty L.P., dated as of November 24, 2020 - Incorporated by reference to Exhibit 3.2 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on November 24, 2020 *
- 3.63 — Fifty-First Amendment to Second Amended and Restated Agreement of Limited Partnership of Vornado Realty L.P., dated as of September 22, 2021 - Incorporated by reference to Exhibit 3.2 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on September 22, 2021 *
- 4.1 — Indenture, dated as of November 25, 2003, between Vornado Realty L.P. and The Bank of New York, as Trustee - Incorporated by reference to Exhibit 4.10 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended March 31, 2005 (File No. 001-11954), filed on April 28, 2005 *
- 4.2 — Indenture, dated as of November 20, 2006, among Vornado Realty Trust, as Issuer, Vornado Realty L.P., as Guarantor and The Bank of New York, as Trustee – Incorporated by reference to Exhibit 4.1 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954), filed on November 27, 2006 *
Certain instruments defining the rights of holders of long-term debt securities of Vornado Realty Trust and its subsidiaries are omitted pursuant to Item 601(b)(4) (iii) of Regulation S-K. Vornado Realty Trust hereby undertakes to furnish to the Securities and Exchange Commission, upon request, copies of such instruments
- 4.3 — Description of the Vornado Realty Trust securities registered pursuant to Section 12 of the Securities Exchange Act ***

* Incorporated by reference
** Management contract or compensatory agreement
*** Filed herewith

4.4	—	Description of Class A units of Vornado Realty L.P. and certain provisions of its agreement of limited partnership	***
10.1	—	Registration Rights Agreement between Vornado, Inc. and Steven Roth, dated December 29, 1992 - Incorporated by reference to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 1992 (File No. 001-11954), filed February 16, 1993	*
10.2	**	Management Agreement between Interstate Properties and Vornado, Inc. dated July 13, 1992 – Incorporated by reference to Vornado, Inc.'s Annual Report on Form 10-K for the year ended December 31, 1992 (File No. 001-11954), filed February 16, 1993	*
10.3	—	Tax Reporting and Protection Agreement, dated December 31, 2001, by and among Vornado, Vornado Realty L.P., Charles E. Smith Commercial Realty L.P. and Charles E. Smith Commercial Realty L.L.C. - Incorporated by reference to Exhibit 10.3 to Vornado Realty Trust's Current Report on Form 8-K/A (File No. 1-11954), filed on March 18, 2002	*
10.4	**	Amendment to Real Estate Retention Agreement, dated as of July 3, 2002, by and between Alexander's, Inc. and Vornado Realty L.P. - Incorporated by reference to Exhibit 10(i)(E)(3) to Alexander's Inc.'s Quarterly Report for the quarter ended June 30, 2002 (File No. 001-06064), filed on August 7, 2002	*
10.5	**	59th Street Real Estate Retention Agreement, dated as of July 3, 2002, by and between Vornado Realty L.P., 731 Residential LLC and 731 Commercial LLC - Incorporated by reference to Exhibit 10(i)(E)(4) to Alexander's Inc.'s Quarterly Report for the quarter ended June 30, 2002 (File No. 001-06064), filed on August 7, 2002	*
10.6	—	Amended and Restated Management and Development Agreement, dated as of July 3, 2002, by and between Alexander's, Inc., the subsidiaries party thereto and Vornado Management Corp. - Incorporated by reference to Exhibit 10(i)(F)(1) to Alexander's Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2002 (File No. 001-06064), filed on August 7, 2020	*
10.7	**	Second Amendment to Real Estate Retention Agreement, dated January 1, 2007, by and between Vornado Realty L.P. and Alexander's Inc. – Incorporated by reference to Exhibit 10.55 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2006 (File No. 001-11954), filed on February 27, 2007	*
10.8	**	Amendment to 59th Street Real Estate Retention Agreement, dated January 1, 2007, by and among Vornado Realty L.P., 731 Retail One LLC, 731 Restaurant LLC, 731 Office One LLC and 731 Office Two LLC. – Incorporated by reference to Exhibit 10.56 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2006 (File No. 001-11954), filed on February 27, 2007	*
10.9	**	Vornado Realty Trust's 2010 Omnibus Share Plan - Incorporated by reference to Exhibit 10.41 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010 (File No. 001-11954) filed on August 3, 2010	*
10.10	**	Form of Vornado Realty Trust 2010 Omnibus Share Plan Incentive / Non-Qualified Stock Option Agreement - Incorporated by reference to Exhibit 99.1 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954) filed on April 5, 2012	*
10.11	**	Form of Vornado Realty Trust 2010 Omnibus Share Plan Restricted Stock Agreement - Incorporated by reference to Exhibit 99.2 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954) filed on April 5, 2012	*
10.12	**	Form of Vornado Realty Trust 2010 Omnibus Share Plan Restricted LTIP Unit Agreement - Incorporated by reference to Exhibit 99.3 to Vornado Realty Trust's Current Report on Form 8-K (File No. 001-11954) filed on April 5, 2012	*
10.13	**	Form of Vornado Realty Trust 2012 Outperformance Plan Award Agreement - Incorporated by reference to Exhibit 10.45 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2012 (File No. 001-11954) filed on February 26, 2013	*
10.14	**	Form of Vornado Realty Trust 2013 Outperformance Plan Award Agreement - Incorporated by reference to Exhibit 10.50 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended March 31, 2013 (File No. 001-11954), filed on May 6, 2013	*
10.15	**	Employment agreement between Vornado Realty Trust and Michael J. Franco dated January 10, 2014 - Incorporated by reference to Exhibit 10.52 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014 (File No. 001-11954), filed on May 5, 2014	*
10.16	**	Form of Vornado Realty Trust 2010 Omnibus Share Plan AO LTIP Unit Award Agreement - Incorporated by reference to Exhibit 10.34 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2017 (File No. 001-11954), filed on February 12, 2018	*
10.17	—	Amended and Restated Term Loan Agreement dated as of October 26, 2018 among Vornado Realty L.P. as Borrower, Vornado Realty Trust as General Partner, the Banks listed on the signature pages thereof, and JP Morgan Chase Bank N.A. as Administrative Agent for the Banks - Incorporated by reference to Exhibit 10.36 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018 (File No. 001-11954), filed on October 29, 2018	*
10.18	**	Form of Performance Conditioned AO LTIP Award Agreement - Incorporated by reference to Exhibit 10.36 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-11954), filed on February 11, 2019	*
10.19	**	Form of 2019 Amendment to Restricted LTIP Unit and Restricted Stock Agreements - Incorporated by reference to Exhibit 10.37 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-11954), filed on February 11, 2019	*
10.20	**	Form of Vornado Realty Trust 2010 Omnibus Share Plan Restricted LTIP Unit Agreement - Incorporated by reference to Exhibit 10.38 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-11954), filed on February 11, 2019	*
10.21	**	Form of Vornado Realty Trust 2010 Omnibus Share Plan Restricted Stock Agreement - Incorporated by reference to Exhibit 10.39 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2018 (File No. 001-11954), filed on February 11, 2019	*
	*	Incorporated by reference	
	**	Management contract or compensatory agreement	
	***	Filed herewith	

10.22	—	Second Amended and Restated Revolving Credit Agreement dated as of March 26, 2019, among Vornado Realty L.P., as Borrower, Vornado Realty Trust as General Partner, the Banks listed on the signature pages thereof, and JPMorgan Chase Bank N.A., as Administrative Agent for the Banks - Incorporated by reference to Exhibit 10.40 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019 (File No. 001-11954), filed on April 29, 2019	*
10.23	**	— Vornado Realty Trust 2019 Omnibus Share Plan - Incorporated by reference to Annex B to Vornado Realty Trust's Proxy Statement dated April 5, 2019 (File No. 001-11954), filed on April 5, 2019	*
10.24	—	Transaction Agreement between Vornado Realty L.P. and Crown Jewel Partner LLC, dated April 18, 2019 - Incorporated by reference to Exhibit 10.42 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 (File No. 001-11954), filed on July 29, 2019	*
10.25	**	— Form of Vornado Realty Trust 2019 Omnibus Share Plan Restricted Stock Agreement - Incorporated by reference to Exhibit 10.32 to Vornado Realty Trust's Quarterly Report on Form 10-K for the year ended December 31, 2019 (File No. 001-11954), filed on February 18, 2020	*
10.26	**	— Form of Vornado Realty Trust 2019 Omnibus Share Plan Restricted LTIP Unit Agreement - Incorporated by reference to Exhibit 10.33 to Vornado Realty Trust's Quarterly Report on Form 10-K for the year ended December 31, 2019 (File No. 001-11954), filed on February 18, 2020	*
10.27	**	— Form of Vornado Realty Trust 2019 Omnibus Share Plan Incentive/Non-Qualified Stock Option Agreement - Incorporated by reference to Exhibit 10.34 to Vornado Realty Trust's Quarterly Report on Form 10-K for the year ended December 31, 2019 (File No. 001-11954), filed on February 18, 2020	*
10.28	**	— Employment agreement between Vornado Realty Trust and Glen J. Weiss dated May 25, 2018 - Incorporated by reference to Exhibit 10.35 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 (File No. 001-11954), filed on May 4, 2020	*
10.29	**	— Employment agreement between Vornado Realty Trust and Haim Chera dated April 19, 2019 - Incorporated by reference to Exhibit 10.36 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 (File No. 001-11954), filed on May 4, 2020	*
10.30	**	— Form of Vornado Realty Trust 2020 Outperformance Plan Award Agreement - Incorporated by reference to Exhibit 10.37 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 (File No. 001-11954), filed on May 4, 2020	*
10.31	**	— Form of Vornado Realty Trust 2021 Outperformance Plan Award Agreement for Executives – Incorporated by reference to Exhibit 10.42 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2020 (File No. 001-11954), filed on February 16, 2021	*
10.32	**	— Form of Vornado Realty Trust 2021 Outperformance Plan Award Agreement for Non-Executives – Incorporated by reference to Exhibit 10.43 to Vornado Realty Trust's Annual Report on Form 10-K for the year ended December 31, 2020 (File No. 001-11954), filed on February 16, 2021	*
10.33	—	Second Amended and Restated Revolving Credit Agreement dated as of April 15, 2021 among Vornado Realty L.P., as Borrower, the Banks listed on the signature pages thereof, and JPMorgan Chase Bank N.A., as Administrative Agent for the Banks - Incorporated by reference to Exhibit 10.44 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 (File No. 001-11954), filed on August 2, 2021	*
10.34	—	Amendment No. 1 to Second Amended and Restated Revolving Credit Agreement dated as of April 16, 2021 among Vornado Realty L.P. as Borrower, the Banks listed on the signature pages thereof, and JP Morgan Chase Bank N.A. as Administrative Agent for the Banks - Incorporated by reference to Exhibit 10.45 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 (File No. 001-11954), filed on August 2, 2021	*
10.35	—	Amendment No. 2 to Amended and Restated Term Loan Agreement dated as of April 16, 2021 among Vornado Realty L.P. as Borrower, the Banks listed on the signature pages thereof, and JP Morgan Chase Bank N.A. as Administrative Agent for the Banks - Incorporated by reference to Exhibit 10.46 to Vornado Realty Trust's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021 (File No. 001-11954), filed on August 2, 2021	*
10.36	—	Form of Vornado Realty Trust 2022 Long-term Performance Plan LTIP Unit Award Agreement	***
	*	Incorporated by reference	
	**	Management contract or compensatory agreement	
	***	Filed herewith	

21	—	Subsidiaries of Vornado Realty Trust and Vornado Realty L.P.	***
23.1	—	Consent of Independent Registered Public Accounting Firm for Vornado Realty Trust	***
23.2	—	Consent of Independent Registered Public Accounting Firm for Vornado Realty L.P.	***
31.1	—	Rule 13a-14 (a) Certification of the Chief Executive Officer of Vornado Realty Trust	***
31.2	—	Rule 13a-14 (a) Certification of the Chief Financial Officer of Vornado Realty Trust	***
31.3	—	Rule 13a-14 (a) Certification of the Chief Executive Officer of Vornado Realty L.P.	***
31.4	—	Rule 13a-14 (a) Certification of the Chief Financial Officer of Vornado Realty L.P.	***
32.1	—	Section 1350 Certification of the Chief Executive Officer of Vornado Realty Trust	***
32.2	—	Section 1350 Certification of the Chief Financial Officer of Vornado Realty Trust	***
32.3	—	Section 1350 Certification of the Chief Executive Officer of Vornado Realty L.P.	***
32.4	—	Section 1350 Certification of the Chief Financial Officer of Vornado Realty L.P.	***
101	—	The following financial information from Vornado Realty Trust and Vornado Realty L.P. Annual Report on Form 10-K for the year ended December 31, 2021, formatted in Inline Extensible Business Reporting Language (iXBRL) includes: (i) consolidated balance sheets, (ii) consolidated statements of income, (iii) consolidated statements of comprehensive income, (iv) consolidated statements of changes in equity, (v) consolidated statements of cash flows, and (vi) the notes to consolidated financial statements.	***
104	—	The cover page from the Vornado Realty Trust and Vornado Realty L.P. Annual Report on Form 10-K for the year ended December 31, 2021, formatted as iXBRL and contained in Exhibit 101.	***

Filed herewith

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

VORNADO REALTY TRUST

(Registrant)

February 14, 2022

By:

/s/ Deirdre Maddock

Deirdre Maddock, Chief Accounting Officer
(duly authorized officer and principal accounting officer)

SIGNATURES - CONTINUED

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

	<u>Signature</u>	<u>Title</u>	<u>Date</u>
By:	<u>/s/Steven Roth</u> (Steven Roth)	Chairman of the Board of Trustees and Chief Executive Officer (Principal Executive Officer)	February 14, 2022
By:	<u>/s/Candace K. Beinecke</u> (Candace K. Beinecke)	Trustee	February 14, 2022
By:	<u>/s/Michael D. Fascitelli</u> (Michael D. Fascitelli)	Trustee	February 14, 2022
By:	<u>/s/Beatrice Hamza Bassey</u> (Beatrice Hamza Bassey)	Trustee	February 14, 2022
By:	<u>/s/William W. Helman IV</u> (William W. Helman IV)	Trustee	February 14, 2022
By:	<u>/s/David Mandelbaum</u> (David Mandelbaum)	Trustee	February 14, 2022
By:	<u>/s/Mandakini Puri</u> (Mandakini Puri)	Trustee	February 14, 2022
By:	<u>/s/Daniel R. Tisch</u> (Daniel R. Tisch)	Trustee	February 14, 2022
By:	<u>/s/Richard R. West</u> (Richard R. West)	Trustee	February 14, 2022
By:	<u>/s/Russell B. Wight, Jr.</u> (Russell B. Wight, Jr.)	Trustee	February 14, 2022
By:	<u>/s/Michael J. Franco</u> (Michael J. Franco)	President and Chief Financial Officer (Principal Financial Officer)	February 14, 2022
By:	<u>/s/Deirdre Maddock</u> (Deirdre Maddock)	Chief Accounting Officer (Principal Accounting Officer)	February 14, 2022

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

VORNADO REALTY L.P.

(Registrant)

February 14, 2022

By: /s/ Deirdre Maddock

Deirdre Maddock, Chief Accounting Officer of Vornado Realty Trust, sole General Partner of Vornado Realty L.P. (duly authorized officer and principal accounting officer)

SIGNATURES - CONTINUED

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

Signature	Title	Date
By: <u>/s/Steven Roth</u> (Steven Roth)	Chairman of the Board of Trustees and Chief Executive Officer of Vornado Realty Trust (Principal Executive Officer)	February 14, 2022
By: <u>/s/Candace K. Beinecke</u> (Candace K. Beinecke)	Trustee of Vornado Realty Trust	February 14, 2022
By: <u>/s/Michael D. Fascitelli</u> (Michael D. Fascitelli)	Trustee of Vornado Realty Trust	February 14, 2022
By: <u>/s/Beatrice Hamza Bassey</u> (Beatrice Hamza Bassey)	Trustee of Vornado Realty Trust	February 14, 2022
By: <u>/s/William W. Helman IV</u> (William W. Helman IV)	Trustee of Vornado Realty Trust	February 14, 2022
By: <u>/s/David Mandelbaum</u> (David Mandelbaum)	Trustee of Vornado Realty Trust	February 14, 2022
By: <u>/s/Mandakini Puri</u> (Mandakini Puri)	Trustee of Vornado Realty Trust	February 14, 2022
By: <u>/s/Daniel R. Tisch</u> (Daniel R. Tisch)	Trustee of Vornado Realty Trust	February 14, 2022
By: <u>/s/Richard R. West</u> (Richard R. West)	Trustee of Vornado Realty Trust	February 14, 2022
By: <u>/s/Russell B. Wight, Jr.</u> (Russell B. Wight, Jr.)	Trustee of Vornado Realty Trust	February 14, 2022
By: <u>/s/Michael J. Franco</u> (Michael J. Franco)	President and Chief Financial Officer of Vornado Realty Trust (Principal Financial Officer)	February 14, 2022
By: <u>/s/Deirdre Maddock</u> (Deirdre Maddock)	Chief Accounting Officer of Vornado Realty Trust (Principal Accounting Officer)	February 14, 2022

**DESCRIPTION OF VORNADO REALTY TRUST SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF THE
SECURITIES EXCHANGE ACT OF 1934**

The following description of the material terms of the shares of beneficial interest of Vornado Realty Trust is only a summary and is subject to, and qualified in its entirety by reference to, the more complete descriptions of the shares in the following documents: (a) Vornado Realty Trust's Declaration of Trust, as amended and supplemented (including the applicable articles supplementary), which we refer to as our Declaration of Trust, and (b) Vornado Realty Trust's amended and restated bylaws, which we refer to as our bylaws, copies of which are exhibits to this Annual Report on Form 10-K. Please note that references to "Vornado," "we," "our" and "us" refer only to Vornado Realty Trust. Capitalized terms used but not defined herein have the meanings set forth in the Annual Report on Form 10-K to which this description is an exhibit.

General

The Declaration of Trust authorizes the issuance of up to 720,000,000 shares of beneficial interest, consisting of 250,000,000 common shares of beneficial interest, \$.04 par value per share (the "Common Shares"), 110,000,000 preferred shares of beneficial interest, no par value per share (the "Preferred Shares"), and 360,000,000 excess shares, \$.04 par value per share. The Board of Trustees may classify or reclassify any unissued Preferred Shares from time to time in one or more series, without shareholder approval, with such designations, preferences, conversion or other rights, voting powers, restrictions, limitations as to dividends, qualifications and terms and conditions of redemption thereof as established by our Board of Trustees.

As permitted by Maryland law, the Declaration of Trust authorizes our Board of Trustees, without any action by our shareholders, to amend the Declaration of Trust from time to time to increase or decrease the aggregate number of shares of beneficial interest or the number of shares of beneficial interest of any class that we are authorized to issue. The effect of this provision in our Declaration of Trust is to permit our Board of Trustees, without shareholder action, to increase or decrease (a) the total number of authorized shares of beneficial interest of Vornado Realty Trust and/or (b) the number of authorized shares of beneficial interest of any one or more classes. Maryland law permits a real estate investment trust to have shares of beneficial interest that are assigned to a particular class as well as shares that are not assigned to a particular class but are available to be classified by the Board of Trustees at a later time. Thus, the total number of authorized shares of beneficial interest may exceed the total number of authorized shares of all classes. Currently, all of our authorized shares of beneficial interest are assigned to one of the three classes set forth above.

(a) Common Shares, \$0.04 par value share

Dividend Rights

The holders of Common Shares are entitled to receive dividends when, if and as authorized by the Board of Trustees and declared by Vornado out of assets legally available to pay dividends, if receipt of the dividends is in compliance with the provisions in the Declaration of Trust restricting the ownership and transfer of shares of beneficial interest. However, the terms of Vornado's issued and outstanding Preferred Shares provide that, other than in compliance with requirements of an employee incentive or benefit plan or as permitted under Article IV of the Declaration of Trust, Vornado may only pay dividends or other distributions on Common Shares or purchase Common Shares if full cumulative dividends have, for all past dividend periods and the then-current dividend period, been paid or set apart for payment on all outstanding Preferred Shares. The terms of the Preferred Shares that are now issued and outstanding do not provide for any mandatory sinking fund in connection with the payment of dividends on Preferred Shares.

Voting Rights

Subject to the provisions of the Declaration of Trust regarding the restrictions on ownership and transfer of Common Shares, the holders of Common Shares are entitled to one vote for each share on all matters on which shareholders are entitled to vote, including elections of Trustees. There is no cumulative voting in the election of Trustees, which means that the holders of a majority of the outstanding Common Shares may elect all of the Trustees then standing for election. The holders of Common Shares do not have any conversion, redemption or preemptive rights to subscribe to any securities of Vornado.

Listing of Common Shares

Our Common Shares are listed on the New York Stock Exchange under the symbol "VNO".

Rights Upon Liquidation

If Vornado is dissolved, liquidated or wound up, holders of Common Shares are entitled to share proportionally in any assets available for distribution after the prior rights of creditors, including holders of Vornado's indebtedness, and the aggregate liquidation preference of any Preferred Shares then outstanding are satisfied in full.

Restrictions on Ownership of Common Shares

The Common Shares Beneficial Ownership Limit. For Vornado to maintain its qualification as a REIT under the Internal Revenue Code of 1986, as amended (the "Code"), not more than 50% of the value of its outstanding shares of beneficial interest may be owned, directly or indirectly, by five or fewer individuals at any time during the last half of a taxable year and the shares of beneficial interest must be beneficially owned by 100 or more persons during at least 335 days of a taxable year of 12 months, or during a proportionate part of a shorter taxable year. The Code defines "individuals" to include some entities for purposes of the preceding sentence. All references to a shareholder's ownership of Common Shares in this section "— The Common Shares Beneficial Ownership Limit" assume application of the applicable attribution rules of the Code under which, for example, a shareholder is deemed to own shares owned by his or her spouse.

The Declaration of Trust contains a number of provisions that restrict the ownership and transfer of shares and are designed to safeguard Vornado against loss of its REIT status. These provisions may also have the effect of deterring non-negotiated acquisitions of, and proxy fights for, us by third parties. The Declaration of Trust contains a limitation that restricts, with some exceptions, shareholders from owning more than a specified percentage of the outstanding Common Shares. We call this percentage the "common shares beneficial ownership limit." The common shares beneficial ownership limit was initially set at 2.0% of the outstanding Common Shares. Our Board of Trustees subsequently adopted a resolution raising the common shares beneficial ownership limit from 2.0% to 6.7% of the outstanding Common Shares and has the authority to grant exemptions from the common shares beneficial ownership limit. The shareholders who owned more than 6.7% of the Common Shares immediately after the merger of Vornado, Inc. into Vornado in May 1993 may continue to do so and may acquire additional Common Shares through stock option and similar plans or from other shareholders who owned more than 6.7% of the Common Shares immediately after that merger. However, Common Shares may not be transferred if, as a result, more than 50% in value of the outstanding shares of Vornado would be owned by five or fewer individuals. While the shareholders who owned more than 6.7% of the Common Shares immediately after the merger of Vornado, Inc. into Vornado in May 1993 are not generally permitted to acquire additional Common Shares from any other source, these shareholders may acquire additional Common Shares from any source if Vornado issues additional Common Shares, up to the percentage held by them immediately before Vornado issues the additional shares.

Shareholders should be aware that events other than a purchase or other transfer of Common Shares may result in ownership, under the applicable attribution rules of the Code, of Common Shares in excess of the common shares beneficial ownership limit. For instance, if two shareholders, each of whom owns 3.5% of the outstanding Common Shares, were to marry, then after their marriage both shareholders would be deemed to own 7.0% of the outstanding Common Shares, which is in excess of the common shares beneficial ownership limit. Similarly, if a shareholder who owns 4.9% of the outstanding Common Shares were to acquire a 50% interest in a corporation which owns 4.8% of the outstanding Common Shares, then the shareholder would be deemed to own 7.3% of the outstanding Common Shares. You should consult your own tax advisors concerning the application of the attribution rules of the Code in your particular circumstances.

The Constructive Ownership Limit. Under the Code, rental income received by a REIT from persons in which the REIT is treated, under the applicable attribution rules of the Code, as owning a 10% or greater interest does not constitute qualifying income for purposes of the income requirements that REITs must satisfy. For these purposes, a REIT is treated as owning any stock owned, under the applicable attribution rules of the Code, by a person that owns 10% or more of the value of the outstanding shares of the REIT. The attribution rules of the Code applicable for these purposes are different from those applicable with respect to the common shares beneficial ownership limit. All references to a shareholder's ownership of Common Shares in this section "— The Constructive Ownership Limit" assume application of the applicable attribution rules of the Code.

In order to ensure that rental income of Vornado will not be treated as nonqualifying income under the rule described in the preceding paragraph, and thus to ensure that Vornado will not lose its REIT status as a result of the ownership of shares by a tenant, or a person that holds an interest in a tenant, the Declaration of Trust contains an ownership limit that restricts, with some exceptions, shareholders from owning more than 9.9% of the outstanding shares of any class. We refer to this 9.9% ownership limit as the "constructive ownership limit." The shareholders who owned shares in excess of the constructive ownership limit immediately after the merger of Vornado, Inc. into Vornado in May 1993 generally are not subject to the constructive ownership limit. The Declaration of Trust also contains restrictions that are designed to ensure that the shareholders who owned shares in excess of the constructive ownership limit immediately after the merger of Vornado, Inc. into Vornado in May 1993 will not, in the aggregate, own a large enough interest in a tenant or subtenant of the REIT to cause rental income received, directly or indirectly, by the REIT from that tenant or subtenant to be treated as nonqualifying income for purposes of the income requirements that REITs must satisfy. The restrictions described in the preceding sentence have an exception for tenants and subtenants from whom the REIT receives, directly or indirectly, rental income that is not in excess of a specified threshold.

Shareholders should be aware that events other than a purchase or other transfer of shares may result in ownership, under the applicable attribution rules of the Code, of shares in excess of the constructive ownership limit. As the attribution rules that apply with respect to the constructive ownership limit differ from those that apply with respect to the common shares beneficial ownership limit, the events other than a purchase or other transfer of shares which may result in share ownership in excess of the constructive ownership limit may differ from those which may result in share ownership in excess of the common shares beneficial ownership limit. You should consult your own tax advisors concerning the application of the attribution rules of the Code in your particular circumstances.

DREIT Ownership Limit. Under the Code, a domestically controlled qualified investment entity includes a REIT in which, at all times during the relevant testing period, less than 50% in value of the REIT's stock was held directly or indirectly by foreign persons, as such term is used in the provision of the Code defining a domestically controlled qualified investment entity. Our qualification as a domestically controlled qualified investment entity (which, in our case, would mean that we would be a domestically controlled REIT) would mean that foreign investors that enter into joint venture structures with us that utilize subsidiary REITs may be able to treat our interest in such subsidiary REITs as being held entirely by U.S. persons for purposes of determining whether the subsidiary REIT is itself a domestically controlled qualified investment entity (and, therefore, a domestically controlled REIT), thereby enabling such foreign investors to avail themselves of certain tax benefits under the Foreign Investment in Real Property Tax Act of 1980 that may not otherwise be available.

The Declaration of Trust contains provisions that restrict the ownership and transfer of shares and are designed to assist us prospectively in qualifying as a domestically controlled qualified investment entity. Specifically, if any transfer or non-transfer event involving our capital shares would result in Vornado failing to qualify as a domestically controlled qualified investment entity, the purported transferee or affected holder will be a "prohibited owner" and would not acquire any right or interest in those shares.

Issuance of Excess Shares If the Ownership Limits Are Violated. The Declaration of Trust provides that a transfer of Common Shares that would otherwise result in ownership, under the applicable attribution rules of the Code, of Common Shares in excess of the common shares beneficial ownership limit or the constructive ownership limit, or which would cause the shares of beneficial interest of Vornado to be beneficially owned by fewer than 100 persons, will be void and the purported transferee will acquire no rights or economic interest in the Common Shares. In addition, the Declaration of Trust provides that Common Shares that would otherwise be owned, under the applicable attribution rules of the Code, in excess of the common shares beneficial ownership limit or the constructive ownership limit will be automatically exchanged for excess shares. The Declaration of Trust further provides that, if there is a purported transfer or any other event that would, if effective, result in Vornado failing to qualify as a domestically controlled qualified investment entity, then the smallest number of Common Shares owned or purported to be owned, directly or indirectly within the meaning of Section 897(h)(4)(B) of the Code, by the purported transferee or affected holder which, if exchanged for excess shares, would not cause Vornado to fail to qualify as a domestically controlled qualified investment entity shall be automatically exchanged for an equal number of excess shares. These excess shares will be transferred, by operation of law, to Vornado as trustee of a trust for the exclusive benefit of a beneficiary designated by the purported transferee or purported holder. While so held in trust, excess shares are not entitled to vote and are not entitled to participate in any dividends or distributions made by Vornado. Any dividends or distributions received by the purported transferee or other purported holder of the excess shares before Vornado discovers the automatic exchange for excess shares must be repaid to Vornado upon demand.

If the purported transferee or purported holder elects to designate a beneficiary of an interest in the trust with respect to the excess shares, he or she may designate only a person whose ownership of the shares will not violate the common shares beneficial ownership limit or the constructive ownership limit. When the designation is made, the excess shares will be automatically exchanged for Common Shares. The Declaration of Trust contains provisions designed to ensure that the purported transferee or other purported holder of the excess shares may not receive, in return for transferring an interest in the trust with respect to the excess shares, an amount that reflects any appreciation in the Common Shares for which the excess shares were exchanged during the period that the excess shares were outstanding but will bear the burden of any decline in value during that period. Any amount received by a purported transferee or other purported holder for designating a beneficiary in excess of the amount permitted to be received must be turned over to Vornado. The Declaration of Trust provides that Vornado, or its designee, may purchase any excess shares that have been automatically exchanged for Common Shares as a result of a purported transfer or other event. The price at which Vornado, or its designee, may purchase the excess shares will be equal to the lesser of:

- in the case of excess shares resulting from a purported transfer for value, the price per share in the purported transfer that resulted in the automatic exchange for excess shares, or in the case of excess shares resulting from some other event, the market price of the Common Shares exchanged on the date of the automatic exchange for excess shares; and
- the market price of the Common Shares exchanged for the excess shares on the date that Vornado accepts the deemed offer to sell the excess shares.

Vornado's right to buy the excess shares will exist for 90 days, beginning on the date that the automatic exchange for excess shares occurred or, if Vornado did not receive a notice concerning the purported transfer that resulted in the automatic exchange for excess shares, the date on which the Board of Trustees determines in good faith that an exchange for excess shares has occurred.

Other Provisions Concerning the Restrictions on Ownership. Our Board of Trustees may exempt persons from the common shares beneficial ownership limit or the constructive ownership limit, including the limitations applicable to holders who owned in excess of 6.7% of the Common Shares immediately after the merger of Vornado, Inc. into Vornado in May 1993, if evidence satisfactory to the Board of Trustees is presented showing that the exemption will not jeopardize Vornado's status as a REIT under the Code. No exemption to a person that is an individual for purposes of Section 542(a)(2) of the Code, however, may permit the individual to have beneficial ownership in excess of 9.9% of the outstanding shares of the class. Before granting an exemption of this kind, the Board of Trustees is required to obtain a ruling from the IRS or an opinion of counsel satisfactory to it and representations and undertakings, including representations, from the applicant, that demonstrate, to the reasonable satisfaction of the Board of Trustees, that such ownership would not jeopardize the REIT status of Vornado.

The foregoing restrictions on transfer and ownership will not apply if the Board of Trustees determines that it is no longer in the best interests of Vornado to attempt to qualify, or to continue to qualify, as a REIT.

All persons who own, directly or by virtue of the applicable attribution rules of the Code, more than 2.0% of the outstanding Common Shares must give a written notice to Vornado containing the information specified in the Declaration of Trust by January 31 of each year. In addition, each shareholder will be required to disclose to Vornado upon demand any information that Vornado may request, in good faith, to determine Vornado's status as a REIT or to comply with Treasury regulations promulgated under the REIT provisions of the Code.

The ownership restrictions described above may have the effect of precluding acquisition of control of Vornado unless the Vornado Board determines that maintenance of REIT status is no longer in the best interests of Vornado.

(b) Preferred Shares of beneficial interest, no par value

The Declaration of Trust authorizes the issuance of 110,000,000 preferred shares. Of the 110,000,000 authorized preferred shares, as of December 31, 2021, the Declaration of Trust authorizes Vornado to issue:

- 12,902 as \$3.25 Series A Convertible Preferred Shares (the "Series A Convertible Preferred Shares");
- 3,200,000 as Series D-10 7.00% Cumulative Redeemable Preferred Shares;
- 1,400,000 as Series D-11 7.20% Cumulative Redeemable Preferred Shares;
- 800,000 as Series D-12 6.55% Cumulative Redeemable Preferred Shares;
- 4,000,000 as Series D-14 6.75% Cumulative Redeemable Preferred Shares;
- 1,800,000 as Series D-15 6.875% Cumulative Redeemable Preferred Shares;
- 13,800,000 as 5.40% Series L Cumulative Redeemable Preferred Shares (the "Series L Preferred Shares");
- 13,800,000 as 5.25% Series M Cumulative Redeemable Preferred Shares (the "Series M Preferred Shares");
- 12,000,000 as 5.25% Series N Cumulative Redeemable Preferred Shares (the "Series N Preferred Shares"); and
- 12,000,000 as 4.45% Series O Cumulative Redeemable Preferred Shares (the "Series O Preferred Shares").

As of December 31, 2021, 12,902 of \$3.25 Series A Convertible Preferred Shares, 12,000,000 of 5.40% Series L Preferred Shares, 12,780,000 of 5.25% Series M Preferred Shares, 12,000,000 of 5.25% Series N Preferred Shares, 12,000,000 of 4.45% Series O Preferred Shares and no other series of preferred shares, were issued and outstanding. Series D-10 7.00% Cumulative Redeemable Preferred Shares, Series D-11 7.20% Cumulative Redeemable Preferred Shares, Series D-12 6.55% Cumulative Redeemable Preferred Shares, Series D-14 6.75% Cumulative Redeemable Preferred Shares or Series D-15 6.875% Cumulative Redeemable Preferred Shares may be issued upon the redemption of preferred units of limited partnership interest of Vornado Realty L.P. of a corresponding series.

Item 601(b)(4)(vi) of Regulation S-K requires a description of each class of equity securities registered under the Section 12 of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Accordingly, the only series of preferred shares described below are the Series A Convertible Preferred Shares and the Series L, M, N and O Preferred Shares.

Dividend Rights

Dividends on the Series A Convertible Preferred Shares are cumulative from the date of original issue of this series and payable quarterly in arrears on January 1, April 1, July 1 and October 1 of each year, commencing on July 1, 1997, at the rate of \$3.25 per Series A Convertible Preferred Share per annum.

Dividends on the Series L Preferred Shares are cumulative from the date of original issue of this series and payable quarterly in arrears on January 1, April 1, July 1 and October 1 of each year, commencing April 1, 2013, at the rate of 5.40% of the liquidation preference per annum, or \$1.35 per Series L Preferred Share per annum.

Dividends on the Series M Preferred Shares are cumulative from the date of original issue of this series and payable quarterly in arrears on January 1, April 1, July 1 and October 1 of each year, commencing on April 1, 2018, at the rate of 5.25% of the liquidation preference per annum, or \$1.3125 per Series M Preferred Share per annum.

Dividends on the Series N Preferred Shares are cumulative from the date of original issue of this series and payable quarterly in arrears on January 1, April 1, July 1 and October 1 of each year, commencing on January 1, 2021, at the rate of 5.25% of the liquidation preference per annum, or \$1.3125 per Series N Preferred Share per annum.

Dividends on the Series O Preferred Shares are cumulative from the date of original issue of this series and payable quarterly in arrears on January 1, April 1, July 1 and October 1 of each year, commencing on January 1, 2022, at the rate of 4.45% of the liquidation preference per annum, or \$1.1125 per Series O Preferred Share per annum.

Redemption at Option of Vornado

The Series A Convertible Preferred Shares are currently redeemable by the Company, in whole or in part, at the option of the Company, for such number of Common Shares as are issuable at the initial conversion rate of 0.68728 Common Share for each Series A Convertible Preferred Share, subject to adjustment in certain circumstances. The conversion rate as of December 31, 2021 is 1.9531 Common Share for each Series A Convertible Preferred Share. The Company may exercise this option only if for 20 trading days within any period of 30 consecutive trading days, including the last trading day of such period, the closing price of the Common Shares on the New York Stock Exchange ("NYSE") exceeds \$87.30 per share, subject to adjustment in certain circumstances. In order to exercise its redemption option, the Company must issue a press release announcing the redemption prior to the opening of business on the second trading day after the conditions described in the preceding sentences have, from time to time, been met. The Series A Convertible Preferred Shares are not redeemable for cash.

We may redeem the Series L Preferred Shares in whole at any time or in part from time to time at a redemption price of \$25.00 per share, plus any accrued and unpaid dividends through the date of redemption. The Series L Preferred Shares have no maturity date and will remain outstanding indefinitely unless redeemed. We are not required to set aside funds to redeem the Series L Preferred Shares.

Except in instances relating to preservation of our status as a real estate investment trust, the Series M Preferred Shares are not redeemable until December 13, 2022. On and after December 13, 2022, we may redeem the Series M Preferred Shares in whole at any time or in part from time to time at a redemption price of \$25.00 per share, plus any accrued and unpaid dividends through the date of redemption. The Series M Preferred Shares have no maturity date and will remain outstanding indefinitely unless redeemed. We are not required to set aside funds to redeem the Series M Preferred Shares.

Except in instances relating to preservation of our status as a real estate investment trust, the Series N Preferred Shares are not redeemable until November 24, 2025. On and after November 24, 2025, we may redeem the Series N Preferred Shares in whole at any time or in part from time to time at a redemption price of \$25.00 per share, plus any accrued and unpaid dividends through the date of redemption. The Series N Preferred Shares have no maturity date and will remain outstanding indefinitely unless redeemed. We are not required to set aside funds to redeem the Series N Preferred Shares.

Except in instances relating to preservation of our status as a real estate investment trust, the Series O Preferred Shares are not redeemable until September 22, 2026. On and after September 22, 2026, we may redeem the Series O Preferred Shares in whole at any time or in part from time to time at a redemption price of \$25.00 per share, plus any accrued and unpaid dividends through the date of redemption. The Series O Preferred Shares have no maturity date and will remain outstanding indefinitely unless redeemed. We are not required to set aside funds to redeem the Series O Preferred Shares.

Liquidation Preference

The holders of Series A Convertible Preferred Shares will be entitled to receive in the event of any liquidation, dissolution or winding up of Vornado, whether voluntary or involuntary, \$50.00 per Series A Convertible Preferred Share, and the holders of Series L, M, N and O Preferred Shares will be entitled to receive in the event of any liquidation, dissolution or winding up of Vornado, whether voluntary or involuntary, \$25.00 per Preferred Share (such amounts, the "Liquidation Preference") plus an amount per Preferred Share equal to all dividends (whether or not earned or declared) accrued and unpaid thereon to the date of final distribution to such holders.

Until the holders of the Series A Convertible Preferred Shares and the Series L, M, N and O Preferred Shares have been paid the Liquidation Preference and all accrued and unpaid dividends in full, no payment will be made to any holder of Junior Shares upon the liquidation, dissolution or winding up of Vornado. If, upon any liquidation, dissolution or winding up of Vornado, the assets of Vornado, or proceeds thereof, distributable among the holders of the Parity Shares (as defined below under "—Ranking") are insufficient to pay in full the Liquidation Preference and all accrued and unpaid dividends and the liquidation preference and all accrued and unpaid dividends with respect to any other shares of Parity Shares, then such assets, or the proceeds thereof, will be distributed among the holders of Preferred Shares and any such Parity Shares ratably in accordance with the respective amounts which would be payable on such Preferred Shares and any such Parity Shares if all amounts payable thereon were paid in full. None of (i) a consolidation or merger of Vornado with one or more entities, (ii) a statutory share exchange by Vornado or (iii) a sale or transfer of all or substantially all of Vornado's assets will be considered a liquidation, dissolution or winding up, voluntary or involuntary, of Vornado.

The term "Junior Shares" means the Common Shares, and any other class of capital stock of Vornado now or hereafter issued and outstanding that ranks junior as to the payment of dividends or amounts upon liquidation, dissolution and winding up to the Series A Convertible Preferred Shares and the Series L, M, N and O Preferred Shares.

Ranking

The Series A Convertible Preferred Shares and the Series L, M, N and O Preferred Shares rank senior to the Junior Shares, including the Common Shares, with respect to payment of dividends and amounts upon liquidation, dissolution or winding up. While any Series A Convertible Preferred Shares or any L, M, N or O Preferred Shares are outstanding, we may not authorize, create or increase the authorized amount of any class or series of beneficial interest that ranks senior to the Series A Convertible Preferred Shares or the Series L, M, N and O Preferred Shares with respect to the payment of amounts upon liquidation, dissolution or winding up.

up without the consent of the holders of two-thirds of the outstanding Series A Convertible Preferred Shares, and the Series L, M, N and O Preferred Shares and all other shares of Voting Preferred Shares (as defined under "—Voting Rights" below), voting as a single class. However, we may create additional classes of beneficial interest, increase the authorized number of Preferred Shares or issue series of Preferred Shares ranking on parity with the Series A Convertible Preferred Shares or the Series L, M, N or O Preferred Shares with respect, in each case, to the payment of dividends and amounts upon liquidation, dissolution or winding up ("Parity Shares") without the consent of any holder of Series A Convertible Preferred Shares or Series L, M, N or O Preferred Shares.

Voting Rights

The holders of the Series A Convertible Preferred Shares and the L, M, N and O Preferred Shares will generally have no voting rights. However, if dividends on any series of the Preferred Shares upon which like voting rights have been conferred and are exercisable, (together with the Series A Convertible Preferred Shares and the L, M, N and O Preferred Shares, the "Voting Preferred Shares") are in arrears for six quarterly dividend periods (whether or not consecutive), the holders of the Voting Preferred Shares (voting separately as a class with holders of all other series of parity preferred shares upon which like voting rights have been conferred and are exercisable) will have the right to elect two additional trustees to serve on our Board of Trustees until such dividend arrearage is eliminated.

The approval of two-thirds of the votes entitled to be cast by the holders of outstanding Series A Convertible Preferred Shares and all other series of Voting Preferred Shares, acting as a single class either at a meeting of shareholders or by written consent, is required in order to (i) amend, alter or repeal any of the provisions of the Declaration of Trust to materially and adversely affect the voting powers, rights or preferences of the Series A Convertible Preferred Shares and the Voting Preferred Shares; provided that any filing with the State Department of Assessments and Taxation of Maryland in connection with a merger, consolidation or sale of all or substantially all the assets of Vornado shall not be deemed to be an amendment, alteration or repeal of any provisions of the Declaration of Trust, or (ii) to authorize, create, or increase the authorized amount of, any shares of any class or series or any security convertible into shares of any class or series having rights senior to the Series A Convertible Preferred Shares with respect to the payment of dividends or amounts upon liquidation, dissolution or winding up.

The approval of two-thirds of the votes entitled to be cast by the holders of outstanding Series L, M, N and O Preferred Shares and all other series of Voting Preferred Shares, acting as a single class either at a meeting of shareholders or by written consent, is required in order (i) to amend, alter or repeal any provisions of the Declaration of Trust, whether by merger, consolidation or otherwise, to affect materially and adversely the voting powers, rights or preferences of the holders of the Series L, M, N or O Preferred Shares, unless in connection with any such amendment, alteration or repeal, each such share remains outstanding without the terms thereof being materially changed in any respect adverse to the holders thereof or is converted into or exchanged for preferred stock of the surviving entity having preferences, conversion and other rights, voting powers, restrictions, limitations as to dividends, qualifications and terms and conditions of redemption thereof identical to those of the applicable Preferred Shares (except for changes that do not materially and adversely affect the holders of such shares), or (ii) to authorize, create, or increase the authorized amount of, any class or series of beneficial interest having rights senior to the Series L, M, N or O Preferred Shares with respect to the payment of dividends or amounts upon liquidation, dissolution or winding up.

For all Voting Preferred Shares, if such amendment affects materially and adversely the rights, preferences, privileges or voting powers of one or more but not all of the series of Voting Preferred Shares, then only the consent of the holders of at least two-thirds of the votes entitled to be cast by the series so affected is required in lieu of the consent of the holders of two-thirds of the Voting Preferred Shares as a class.

We may create additional classes of shares that rank junior to or on parity with the Series A Convertible Preferred Shares or the Series L, M, N and O Preferred Shares, increase the authorized number of shares of classes that rank junior to or on parity with the Series A Convertible Preferred Shares or the Series L, M, N and O Preferred Shares and issue additional shares of classes that rank junior to or on parity with the Series A Convertible Preferred Shares or the Series L, M, N and O Preferred Shares without the consent of any holder of the Series A Convertible Preferred Shares or the Series L, M, N and O Preferred Shares.

Listing of Preferred Shares

As of the date of filing of this Exhibit 4.3, our Series L, M, N and O Preferred Shares are listed on the New York Stock Exchange under the symbols "VNO Pr L," "VNO Pr M," "VNO Pr N," and "VNO Pr O," respectively.

Conversion Rights

The Series A Convertible A Preferred Shares are convertible, in whole or in part, at the option of the holder at any time, unless previously redeemed, into Common Shares, at an initial conversion price of \$72.75 of Liquidation Preference per Common Share, subject to adjustment in certain circumstances. As of December 31, 2021, the conversion price is \$1.9531 per Common Share.

The Series L, M, N and O Preferred Shares are not convertible into or exchangeable for any other property or securities of Vornado.

Restrictions on Ownership of Preferred Shares

As noted above, for us to maintain our qualification as a REIT under the Code, not more than 50% in value of our outstanding shares of beneficial interest may be owned, beneficially or constructively, by five or fewer individuals (as defined in the

Code to include certain entities) at any time during the last half of a taxable year, and the shares of beneficial interest must be beneficially owned by 100 or more persons during at least 335 days of a taxable year of 12 months (or during a proportionate part of a shorter taxable year). For this and other reasons, the Declaration of Trust and the Articles Supplementary for each series of Preferred Shares contain provisions that restrict the ownership and transfer of shares of beneficial interest.

Our Declaration of Trust contains a Preferred Share ownership limit that restricts shareholders from owning, under the applicable attribution rules of the Code, more than 9.9% of the outstanding Preferred Shares of any class or series and a Common Share ownership limit that generally restricts shareholders from owning, under the applicable attribution rules of the Code, more than 6.7% of the Outstanding Common Shares. In addition, our Declaration of Trust contains provisions that limit ownership under the applicable attribution rules of the Code of our Preferred Shares and our Common Shares to the extent that such ownership of such shares would cause us to fail to qualify as a “domestically controlled qualified investment entity” within the meaning of Section 897(h)(4)(B) of the Code. Shares owned in excess of any of these limits will be automatically exchanged for excess shares pursuant to our Declaration of Trust. Excess shares will be held in trust by us and, while held in trust, will not be entitled to vote or participate in dividends or distributions made by us.

(c) Certain Provisions of Maryland Law and of our Declaration of Trust and our bylaws

The following description of certain provisions of Maryland law and of our Declaration of Trust and bylaws is only a summary. For a complete description, we refer you to Maryland law, our Declaration of Trust and our bylaws.

Board of Trustees

Our Declaration of Trust provides that the number of trustees of the Company will not be more than fifteen and may be increased or decreased by a vote of the trustees then in office. Our bylaws provide that any vacancy on the Board may be filled only by a majority of the remaining trustees, even if the remaining trustees do not constitute a quorum. Any trustee elected to fill a vacancy will hold office for the remainder of the full term of the class of trustees in which the vacancy occurred and until a successor is duly elected and qualifies. Pursuant to our Declaration of Trust and bylaws, each member of our Board of Trustees is elected by our shareholders to serve until the next annual meeting of shareholders and until his or her successor is duly elected and qualifies. Holders of Common Shares have no right to cumulative voting in the election of trustees and trustees will be elected by a plurality of the votes cast in the election of trustees.

Removal of Trustees

Our Declaration of Trust provides that a trustee may be removed only for cause and only by the affirmative vote of at least two-thirds of the votes entitled to be cast in the election of trustees. This provision, when coupled with the provision in our bylaws authorizing the Board of Trustees to fill vacant trusteeships, precludes shareholders from removing incumbent trustees except for cause and by a substantial affirmative vote and thereafter filling the vacancies created by the removal with their own nominees.

Business Combinations

Under Maryland law, "business combinations" between a Maryland real estate investment trust and an interested shareholder or an affiliate of an interested shareholder are prohibited for five years after the most recent date on which the interested shareholder becomes an interested shareholder. These business combinations include a merger, consolidation, share exchange, or, in circumstances specified in the statute, an asset transfer or issuance or reclassification of equity securities. An interested shareholder is defined as:

- any person who beneficially owns, directly or indirectly, ten percent or more of the voting power of the trust's outstanding shares; or
- an affiliate or associate of the trust who, at any time within the two-year period prior to the date in question, was the beneficial owner, directly or indirectly, of ten percent or more of the voting power of the then-outstanding voting shares of the trust.

A person is not an interested shareholder under the statute if the Board of Trustees approved in advance the transaction by which the interested shareholder otherwise would have become an interested shareholder. However, in approving a transaction, the Board of Trustees may provide that its approval is subject to compliance, at or after the time of approval, with any terms and conditions determined by the Board.

After the five-year prohibition, any business combination between the Maryland trust and an interested shareholder generally must be recommended by the Board of Trustees of the trust and approved by the affirmative vote of at least:

- 80% of the votes entitled to be cast by holders of outstanding shares of the trust; and
- two-thirds of the votes entitled to be cast by holders of voting shares of the trust other than voting shares held by the interested shareholder with whom or with whose affiliate the business combination is to be effected or held by an affiliate or associate of the interested shareholder.

These super-majority vote requirements do not apply if the holders of the trust's Common Shares receive a minimum price, as defined under Maryland law, for their shares in the form of cash or other consideration in the same form as previously paid by the interested shareholder for its shares.

The statute permits various exemptions from its provisions, including business combinations that are exempted by the Board of Trustees before the time that the interested shareholder becomes an interested shareholder.

Our Board of Trustees has adopted a resolution exempting any business combination between any trustee or officer of Vornado, or their affiliates, and Vornado. Consequently, the five-year prohibition and the super-majority vote requirements will not apply to business combinations between us and any of them. As a result, the trustees and officers of Vornado and their affiliates may be able to enter into business combinations with us without compliance with the super-majority vote requirements and the other provisions of the statute. With respect to business combinations with other persons, the business combination provisions of Maryland law may have the effect of delaying, deferring or preventing a change in control of Vornado or other transaction that might involve a premium price or otherwise be in the best interest of the shareholders. The business combination statute may discourage others from trying to acquire control of Vornado and increase the difficulty of consummating any offer.

Control Share Acquisitions

Maryland law provides that control shares of a Maryland real estate investment trust acquired in a control share acquisition have no voting rights except to the extent approved by a vote of two-thirds of the votes entitled to be cast on the matter. Shares owned by the acquiror, by officers or by employees who are trustees of the trust are excluded from shares entitled to vote on the matter. Control shares are voting shares which, if aggregated with all other shares owned by the acquiror or in respect of which the acquiror is able to exercise or direct the exercise of voting power (except solely by virtue of a revocable proxy), would entitle the acquiror to exercise voting power in electing trustees within one of the following ranges of voting power:

- one-tenth or more but less than one-third,
- one-third or more but less than a majority, or
- a majority or more of all voting power.

Control shares do not include shares the acquiring person is then entitled to vote as a result of having previously obtained shareholder approval, or shares acquired directly from the trust. A control share acquisition means the acquisition of control shares, subject to certain exceptions.

A person who has made or proposes to make a control share acquisition may compel the board of trustees of the trust to call a special meeting of shareholders to be held within 50 days of demand to consider the voting rights of the shares. The right to compel the calling of a special meeting is subject to the satisfaction of certain conditions, including an undertaking to pay the expenses of the meeting. If no request for a meeting is made, the trust may itself present the question at any shareholders meeting.

If voting rights are not approved at the meeting or if the acquiring person does not deliver an acquiring person statement as required by the statute, then the trust may redeem for fair value any or all of the control shares, except those for which voting rights have previously been approved. The right of the trust to redeem control shares is subject to certain conditions and limitations. Fair value is determined, without regard to the absence of voting rights for the control shares, as of the date of the last control share acquisition by the acquiror or of any meeting of shareholders at which the voting rights of the shares are considered and not approved. If voting rights for control shares are approved at a shareholders meeting and the acquiror becomes entitled to vote a majority of the shares entitled to vote, all other shareholders may exercise appraisal rights. The fair value of the shares as determined for purposes of appraisal rights may not be less than the highest price per share paid by the acquiror in the control share acquisition.

The control share acquisition statute does not apply (a) to shares acquired in a merger, consolidation or share exchange if the trust is a party to the transaction, or (b) to acquisitions approved or exempted by the declaration of trust or bylaws of the trust.

Our bylaws contain a provision exempting from the control share acquisition statute any and all acquisitions by any person of our shares. There can be no assurance that this provision will not be amended or eliminated at any time in the future.

Approval of Extraordinary Trust Action; Amendment of Declaration of Trust and Bylaws

Under Maryland law, a Maryland real estate investment trust generally may not amend its declaration of trust, dissolve, merge or consolidate with or convert into another entity, sell all or substantially all of its assets or engage in a statutory share exchange, unless approved by the affirmative vote of shareholders holding at least two-thirds of the shares entitled to vote on the matter. However, a Maryland real estate investment trust may provide in its declaration of trust for approval of these matters by a lesser percentage, but not less than a majority of all of the votes entitled to be cast on the matter. Vornado may take any of these actions if approved by the Board of Trustees and by the affirmative vote of not less than a majority of all of the votes entitled to be cast on the matter. Similarly, our Declaration of Trust provides for approval of amendments by the affirmative vote of a majority of the votes entitled to be cast on the matter. Some limited exceptions (including amendments to the provisions of our Declaration of Trust related to the removal of trustees, ownership and transfer restrictions and amendments) require the affirmative vote of shareholders holding at least two-thirds of the shares entitled to vote on the matter.

Under Maryland law, the declaration of trust of a Maryland real estate investment trust may permit the trustees, by a two-thirds vote, to amend the declaration of trust from time to time to qualify as a REIT under the Code or the Maryland REIT Law, without the affirmative vote or written consent of the shareholders. Our Declaration of Trust permits such action by the Board of Trustees. In addition, our Declaration of Trust, as permitted by Maryland law, contains a provision that permits our Board, without a

shareholder vote, to amend the Declaration of Trust to increase or decrease the total number of shares of beneficial interest that we are authorized to issue and the number of authorized shares of any class or series of beneficial interest that we are authorized to issue.

The Board of Trustees has the right to adopt and amend the bylaws. Additionally, our bylaws provide that shareholders may adopt, alter or repeal any bylaw by the affirmative vote of a majority of the votes entitled to be cast on the matter, to the extent permitted by law.

Advance Notice of Trustee Nominations and New Business

Our bylaws provide that with respect to an annual meeting of shareholders, nominations of persons for election to the Board of Trustees and the proposal of business to be considered by shareholders may be made only (i) pursuant to our notice of the meeting, (ii) by the Board of Trustees or (iii) by a shareholder or record who is entitled to vote at the meeting and who has complied with the advance notice procedures of our bylaws. With respect to special meetings of shareholders, only the business specified in our notice of the meeting may be brought before the meeting. Nominations of persons for election to the Board of Trustees at a special meeting may be made only (i) by the Board of Trustees, or (ii) pursuant to our notice of the meeting, provided that the Board of Trustees has determined that trustees will be elected at the meeting, by a shareholder of record who is entitled to vote at the meeting and who has complied with the advance notice provisions of our bylaws.

Proxy Access Procedures for Qualifying Shareholders

Our bylaws permit a shareholder, or a group of up to 20 stockholders, that owns 3% or more of our outstanding Common Shares, continuously for at least three years, to nominate and include in our proxy statement for an annual meeting of shareholders, trustee nominees constituting up to the greater of two nominees or 20% of our Board of Trustees, provided that the shareholder(s) and the trustee nominee(s) satisfy the requirements specified in our bylaws.

Subtitle 8

Maryland law permits a Maryland real estate investment trust with a class of equity securities registered under the Exchange Act and at least three independent trustees to elect, without shareholder approval, to classify our Board of Trustees.

Anti-takeover Effect of Certain Provisions of Maryland Law and of the Declaration of Trust and Bylaws

The business combination provisions and, if the applicable provision in our bylaws is rescinded, the control share acquisition provisions of Maryland law, the provisions in our Declaration of Trust on removal of trustees and the advance notice provisions of our bylaws could delay, defer or prevent a transaction or a change in control of Vornado that might involve a premium price for holders of Common Shares or otherwise be in their best interest.

**DESCRIPTION OF CLASS A UNITS OF VORNADO REALTY L.P. AND
CERTAIN PROVISIONS OF ITS AGREEMENT OF LIMITED PARTNERSHIP**

The following description of the material terms of the class A units of Vornado Realty L.P., which we refer to as the “operating partnership,” and some material provisions of the operating partnership’s agreement of limited partnership, which we refer to as the “partnership agreement,” does not describe every aspect of the units or the partnership agreement and is only a summary of, and qualified in its entirety by reference to, applicable provisions of Delaware law and the partnership agreement. A copy of the partnership agreement is filed as an exhibit to the Annual Report on Form 10-K to which this Exhibit is attached.

The Operating Partnership's Outstanding Classes of Units

Holders of units, other than Vornado Realty Trust in its capacity as general partner, hold a limited partnership interest in the operating partnership. All holders of units, including Vornado Realty Trust in its capacity as general partner, are entitled to share in cash distributions from, and in the profits and losses of, the operating partnership.

Holders of units have the rights to which limited partners are entitled under the partnership agreement and the Delaware Revised Uniform Limited Partnership Act. Class A units are registered with the SEC under the Exchange Act. No other class of units is registered under Federal law and no units are registered under any state securities laws, and no units are listed on any exchange or quoted on any national market system. The partnership agreement imposes restrictions on the transfer of units. See “—Restrictions on Transfers of Units by Limited Partners” below for further information about these restrictions.

As of December 31, 2021, there were outstanding:

- 12,902 series A preferred units;
- 12,000,000 series L pass-through preferred units;
- 12,780,000 series M preferred units;
- 12,000,000 series N preferred units;
- 12,000,000 series O preferred units;
- 1,867,311 series D-13 preferred units;
- 141,400 series D-17 preferred units;
- 5,828 series G-1 preferred units;
- 14,424 series G-2 preferred units;
- 43,532 series G-3 preferred units;
- 73,201 series G-4 preferred units;
- 3,478,955 restricted operating partnership units (“LTIP units”), including 567,739 appreciation-only long-term incentive plan units issued in connection with out-performance plan awards; and
- 202,845,830 class A units, including 11,122,222 not held by Vornado Realty Trust.

Distributions with Respect to Units

The partnership agreement provides for distributions, as determined in the manner provided in the partnership agreement, to Vornado Realty Trust and the limited partners in proportion to their percentage interests in the operating partnership, subject to the distribution preferences that are described in the next paragraph. As general partner of the operating partnership, Vornado Realty Trust has the exclusive right to declare and cause the operating partnership to make distributions as and when it deems appropriate or desirable in its discretion. For so long as Vornado Realty Trust elects to qualify as a REIT, it will make reasonable efforts, as determined by Vornado Realty Trust in its sole discretion, to make distributions to partners in amounts such that it will be able to pay shareholder dividends that will satisfy the requirements for qualification as a REIT and avoid any federal income or excise tax liability for Vornado Realty Trust.

Distributions vary among the holders of different classes of units:

- The series A preferred units entitle Vornado Realty Trust as their holder to a cumulative preferential distribution at an annual rate of \$3.25 per series A preferred unit, which we refer to as the “series A preferred distribution preference.” The series A preferred units correspond to Vornado Realty Trust’s series A convertible preferred shares.
- The series L preferred units entitle their holder to a preferential distribution at the annual rate of \$1.35 per unit, which we refer to as the “series L preferred distribution preference.” The series L preferred units correspond to Vornado Realty Trust’s series L preferred shares.
- The series M preferred units entitle their holder to a preferential distribution at the annual rate of \$1.3125 per unit, which we refer to as the “series M preferred distribution preference.” The series M preferred units correspond to Vornado Realty Trust’s series M preferred shares.
- The series N preferred units entitle their holder to a preferential distribution at the annual rate of \$1.3125 per unit, which we refer to as the “series N preferred distribution preference.” The series N preferred units correspond to Vornado Realty Trust’s series N preferred shares.

- The series O preferred units entitle their holder to a preferential distribution at the annual rate of \$1.1125 per unit, which we refer to as the "series O preferred distribution preference." The series O preferred units correspond to Vornado Realty Trust's series O preferred shares.
- The series D-13 preferred units entitle their holder to a preferential distribution at the annual rate of \$0.75 per unit, which we refer to as the "series D-13 preferred distribution preference."
- The series D-17 preferred units entitle their holder to a preferential distribution at the annual rate of \$0.8125 per unit, which we refer to as the "series D-17 preferred distribution preference."
- The series G-1 preferred units entitle their holder to a preferential distribution at the annual rate of LIBOR plus 90 basis points per unit, which we refer to as the "series G-1 preferred distribution preference."
- The series G-2 preferred units entitle their holder to a preferential distribution at the annual rate of \$1.375 per unit, which we refer to as the "series G-2 preferred distribution preference."
- The series G-3 preferred units entitle their holder to a preferential distribution at the annual rate of LIBOR plus 90 basis points per unit, which we refer to as the "series G-3 preferred distribution preference."
- The series G-4 preferred units entitle their holder to a preferential distribution at the annual rate of \$1.375 per unit, which we call the "series G-4 preferred distribution preference."

In this description we sometimes refer to the series A preferred distribution preference, the series L pass-through distribution preference, the series M preferred distribution preference, the series N preferred distribution preference, the series O preferred distribution preference, the series D-13 preferred distribution preference, the series D-17 preferred distribution preference, the series G-1 preferred distribution preference, the series G-2 preferred distribution preference, the series G-3 preferred distribution preference, and the series G-4 preferred distribution preference as the "preferred distribution preferences."

The value of each class A unit, which is the operating partnership's common unit, regardless of its class, equates to one common share of Vornado Realty Trust. Preferred units do not have a value equating to one common share, but have the liquidation preferences and conversion prices for conversion into class A units or terms for redemption for cash or corresponding preferred shares that are established in the partnership agreement. LTIP units have a value equating to one class A unit if and when the LTIP unit becomes exchangeable for one class A unit.

The partnership agreement provides that the operating partnership will make distributions when, as and if declared by Vornado Realty Trust in the order of preference provided for in the partnership agreement. The order of preference in the partnership agreement provides that distributions will be paid first to Vornado Realty Trust as necessary to enable Vornado Realty Trust to pay REIT expenses. The partnership agreement defines "REIT expenses" to mean the following in respect of Vornado Realty Trust:

- costs and expenses relating to the continuity of its existence and any entity in which Vornado Realty Trust owns an equity interest;
- costs and expenses relating to any of the offer or registration of securities;
- costs and expenses associated with preparing and filing of periodic reports under federal, state and local laws, including SEC filings;
- costs and expenses associated with its compliance with laws, rules and regulations applicable to it; and
- all other operating or administrative expenses incurred in the ordinary course of its business.

After the operating partnership pays Vornado Realty Trust distributions as necessary to enable it to pay REIT expenses, distributions will be paid:

- first, to holders of any class of preferred units ranking senior, as to distributions or redemption or voting rights, to class A units and LTIP units; and
- second, to holders of class A units and LTIP units.

Ranking of Units

The series A preferred units, series L preferred units, series M preferred units, series N preferred units, series O preferred units, series D-13 preferred units, series D-17 preferred units, series G-1 preferred units, series G-2 preferred units, series G-3 preferred units, and series G-4 preferred units rank senior to the class A and LTIP units with respect to the payment of distributions and amounts upon liquidation, dissolution or winding up of the operating partnership. The series A preferred units, series L preferred units, series M preferred units, series N preferred units, series O preferred units, series D-13 preferred units, series D-17 preferred units, series G-1 preferred units, series G-2 preferred units, series G-3 preferred units, and series G-4 preferred units and any other units designated as "parity units" all rank on a parity with each other, in each case with respect to the payment of distributions and amounts upon liquidation, dissolution or winding up of the operating partnership, without preference or priority of one over the other.

The series of preferred units have the following liquidation preferences:

- \$50.00 per series A preferred unit; and
- \$25.00 per series L preferred unit, series M preferred unit, series N preferred unit, series O preferred unit, series D-13 preferred unit, series D-17 preferred unit, series G-1 preferred unit, series G-2 preferred unit, series G-3 preferred unit and series G-4 preferred unit.

From time to time as determined by Vornado Realty Trust, in its discretion, the operating partnership may create additional series of preference units or classes of other units senior to or on parity with the class A units with respect to the payment of distributions and amounts upon liquidation, dissolution or winding up of the partnership.

Redemption or Conversion of Units

The holders of class A units, other than Vornado Realty Trust or any of its subsidiaries, have the right to redeem their units for cash or, at the option of Vornado Realty Trust, an equivalent number of Vornado Realty Trust's common shares.

The series A preferred units became redeemable at Vornado Realty Trust's option for class A units on April 1, 2001, and are convertible at its option into class A units at any time, provided that an equivalent number of series A preferred shares are concurrently converted into common shares by their holders. The number of class A units into which the series A preferred units are redeemable or convertible is equal to the aggregate liquidation preference of the series A preferred units being redeemed or converted divided by their conversion price. The conversion price of the series A preferred units is now 1.9531 and may be adjusted from time to time to take account of stock dividends and other transactions.

The series L, series M, series N and series O preferred units are redeemable for cash equal to the liquidation preference of \$25.00 per unit plus any accrued and unpaid distributions at the option of Vornado Realty Trust, provided that an equivalent number of series L, series M, series N or series O preferred shares of Vornado Realty Trust, respectively, are concurrently redeemed by Vornado Realty Trust.

The series D-13 preferred units are redeemable by the holder for cash equal to the liquidation preference of \$25.00 per unit plus any accrued and unpaid distribution, provided that Vornado Realty Trust may determine, at its option, to deliver its common shares with a value equal to the liquidation preference of \$25.00 per unit plus any accrued and unpaid distributions.

The series D-17 preferred units are redeemable for cash (i) at the option of Vornado Realty Trust and (ii) at the option of the holder, in each case following certain events equal to the liquidation preference of \$25.00 per unit plus any accrued and unpaid distributions.

Any redemption of units must comply with the delivery and other requirements of the operating partnership agreement which may limit the ability of a holder to redeem their units at a particular time or in a particular quantity.

Formation of the Operating Partnership

The operating partnership was formed as a limited partnership under the Delaware Revised Uniform Limited Partnership Act on October 2, 1996. Vornado Realty Trust is the sole general partner of, and owned approximately 92.6% of the common limited partnership interest in, the operating partnership at December 31, 2021.

Purposes, Business and Management of the Operating Partnership

The purpose of the operating partnership includes the conduct of any business that may be lawfully conducted by a limited partnership formed under the Delaware Revised Uniform Limited Partnership Act, except that the partnership agreement requires the business of the operating partnership to be conducted in a manner that will permit Vornado Realty Trust to be classified as a REIT under Section 856 of the Internal Revenue Code, unless it ceases to qualify as a REIT for any reason. In furtherance of its business, the operating partnership may enter into partnerships, joint ventures, limited liability companies or similar arrangements and may own interests in any other entity engaged, directly or indirectly, in any of the foregoing.

As the general partner of the operating partnership, Vornado Realty Trust has the exclusive power and authority to conduct the business of the operating partnership, except that the consent of the limited partners is required in some limited circumstances discussed under "—Meetings and Voting" below. No limited partner may take part in the operation, management or control of the business of the operating partnership by virtue of being a holder of units.

In particular, the limited partners expressly acknowledge in the partnership agreement that the general partner is acting on behalf of the operating partnership and the shareholders of Vornado Realty Trust collectively, and is under no obligation to consider the tax consequences to, or other separate interests of, limited partners when making decisions on behalf of the operating partnership. Except as required by lockup agreements described below, Vornado Realty Trust intends to make decisions in its capacity as general partner of the operating partnership taking into account its interests and the operating partnership as a whole, independent of the tax effects on the limited partners. See "—Borrowing by the Operating Partnership" below for a discussion of lockup agreements. Vornado Realty Trust and its trustees and officers will have no liability to the operating partnership or to any partner or assignee for any losses sustained, liabilities incurred or benefits not derived as a result of errors in judgment or mistakes of fact or law or any act or omission if it acted in good faith.

Ability to Engage in Other Businesses; Conflicts of Interest

Vornado Realty Trust generally may not conduct any business other than through the operating partnership without the consent of the holders of a majority of the common limited partnership interests, excluding the limited partnership interests held by it. Other persons including Vornado Realty Trust's officers, trustees, employees, agents and its other affiliates are not prohibited under the partnership agreement from engaging in other business activities and are not required to present any business opportunities to the operating partnership. In addition, the partnership agreement does not prevent another person or entity that acquires control of

Vornado Realty Trust in the future from conducting other businesses or owning other assets, even though those businesses or assets may be ones that it would be in the best interests of the limited partners for the operating partnership to own.

Borrowing by the Operating Partnership

Vornado Realty Trust is authorized to cause the operating partnership to borrow money and to issue and guarantee debt as it deems necessary for the conduct of the activities of the operating partnership. The operating partnership's debt may be secured by mortgages, deeds of trust, liens or encumbrances on the operating partnership's properties. Vornado Realty Trust also may cause the operating partnership to borrow money to enable the operating partnership to make distributions, including distributions in an amount sufficient to permit us to avoid the payment of any federal income tax.

From time to time in connection with acquisitions of properties or other assets in exchange for limited partner interests in the operating partnership, Vornado Realty Trust and the operating partnership have entered into contractual arrangements that impose restrictions on the operating partnership's ability to sell, finance, refinance and, in some instances, pay down existing financing on certain of the operating partnership's properties or other assets. These arrangements are sometimes referred to as "lockup agreements" and include, for example, arrangements in which the operating partnership agrees that it will not sell the property or other assets in question for a period of years unless the operating partnership also pays the contributing partner a portion of the federal income tax liability that will accrue to that partner as a result of the sale. Arrangements of this kind may significantly reduce the operating partnership's ability to sell, finance or repay indebtedness secured by the subject properties or assets. Vornado Realty Trust expects to cause the operating partnership to continue entering into transactions of this type in the future and may do so without obtaining the consent of any partners in the operating partnership.

Reimbursement; Transactions with Vornado Realty Trust and Its Affiliates

Vornado Realty Trust does not receive any compensation for its services as general partner of the operating partnership. However, as a partner in the operating partnership, it has the same right to allocations and distributions with respect to the units it holds as other partners in the operating partnership holding the same classes of units. In addition, the operating partnership reimburses Vornado Realty Trust for all expenses it incurs relating to its ongoing operations and any offering of additional partnership interests in the operating partnership, its securities or rights, options, warrants or convertible or exchangeable securities, including expenses in connection with the registration of Vornado Realty Trust's common shares for issuance in exchange for units if it assumes the obligation to redeem units and elects to redeem them for common shares instead of cash when a limited partner in the operating partnership exercises the right to redeem units. See "Redemption or Conversion of Units" above for further information about the right to redeem units.

Except as expressly permitted by the partnership agreement, the operating partnership will not, directly or indirectly, sell, transfer or convey any property to, or purchase any property from, or borrow funds from, or lend funds to, any partner in the operating partnership or any affiliate of the operating partnership or Vornado Realty Trust that is not also a subsidiary of the operating partnership, except in a transaction that has been approved by a majority of Vornado Realty Trust's disinterested trustees, taking into account its fiduciary duties to the limited partners of the operating partnership.

Vornado Realty Trust's Liability and Limited Partners

Vornado Realty Trust, as general partner of the operating partnership, is liable for all general recourse obligations of the operating partnership to the extent not paid by the operating partnership. Vornado Realty Trust is not liable for the nonrecourse obligations of the operating partnership.

The limited partners in the operating partnership are not required to make additional contributions to the operating partnership. Assuming that a limited partner does not take part in the control of the business of the operating partnership and otherwise complies with the provisions of the partnership agreement, the liability of a limited partner for obligations of the operating partnership under the partnership agreement and the Delaware Revised Uniform Limited Partnership Act will be limited, with some exceptions, generally to the loss of the limited partner's investment in the operating partnership represented by his or her units. Under the Delaware Revised Uniform Limited Partnership Act, a limited partner may not receive a distribution from the operating partnership if, at the time of the distribution and after giving effect to the distribution, the liabilities of the operating partnership, other than liabilities to parties on account of their interests in the operating partnership and liabilities for which recourse is limited to specified property of the operating partnership, exceed the fair value of the operating partnership's assets, other than the fair value of any property subject to nonrecourse liabilities of the operating partnership, but only to the extent of such liabilities. The Delaware Revised Uniform Limited Partnership Act provides that a limited partner who receives a distribution knowing at the time that it violates the foregoing prohibition is liable to the operating partnership for the amount of the distribution. Unless otherwise agreed, a limited partner in the circumstances described in the preceding sentence will not be liable for the return of the distribution after the expiration of three years from the date of the distribution.

The operating partnership has qualified to conduct business in the State of New York and may qualify in certain other jurisdictions. Maintenance of limited liability status may require compliance with legal requirements of those jurisdictions and some other jurisdictions. Limitations on the liability of a limited partner for the obligations of a limited partnership have not been clearly established in many jurisdictions. Accordingly, if it were determined that the right, or exercise of the right by the limited partners, to make some amendments to the partnership agreement or to take other action under the partnership agreement constituted "control" of

the operating partnership's business for the purposes of the statutes of any relevant jurisdiction, the limited partners might be held personally liable for the operating partnership's obligations.

Exculpation and Indemnification of Vornado Realty Trust

The partnership agreement generally provides that Vornado Realty Trust, as general partner of the operating partnership, will incur no liability to the operating partnership or any limited partner for losses sustained, liabilities incurred or benefits not derived as a result of errors in judgment or mistakes of fact or law or any act or omission, if it acted in good faith. In addition, Vornado Realty Trust is not responsible for any misconduct or negligence on the part of its agents, provided it appointed those agents in good faith. Vornado Realty Trust may consult with legal counsel, accountants, appraisers, management consultants, investment bankers and other consultants and advisors, and any action it takes or omits to take in reliance upon the opinion of those persons, as to matters that it reasonably believes to be within their professional or expert competence, will be conclusively presumed to have been done or omitted in good faith and in accordance with the opinion of those persons.

The partnership agreement also provides for indemnification of Vornado Realty Trust and the indemnification of its trustees and officers and any other persons that it may from time to time designate against any and all losses, claims, damages, liabilities, expenses, judgments, fines, settlements and other amounts incurred by an indemnified person in connection with any proceeding and related to the operating partnership or Vornado Realty Trust, the formation and operations of the operating partnership or Vornado Realty Trust or the ownership of property by the operating partnership or Vornado Realty Trust, unless it is established by a final determination of a court of competent jurisdiction that:

- the act or omission of the indemnified person was material to the matter giving rise to the proceeding and either was committed in bad faith or was the result of active and deliberate dishonesty;
- the indemnified person actually received an improper personal benefit in money, property or services; or
- in the case of any criminal proceeding, the indemnified person had reasonable cause to believe that the act or omission was unlawful.

Sales of Assets

Under the partnership agreement, Vornado Realty Trust generally has the exclusive authority to determine whether, when and on what terms assets of the operating partnership will be sold, as long as any sale of a property covered by a lockup agreement complies with such agreement. The partnership agreement prohibits Vornado Realty Trust from engaging in any merger, consolidation or other combination with or into another person, sale of all or substantially all of its assets or any reclassification, recapitalization or change of the terms of any outstanding common shares unless, in connection with the transaction, all limited partners other than Vornado Realty Trust and entities controlled by Vornado Realty Trust will have the right to elect to receive, or will receive, for each unit an amount of cash, securities or other property equal to the conversion factor multiplied by the greatest amount of cash, securities or other property paid to a holder of shares of beneficial interest of Vornado, if any, corresponding to that unit in consideration of one share of that kind. Vornado Realty Trust refers to transactions described in the preceding sentence as "termination transactions." The conversion factor is initially 1.0, but will be adjusted as necessary to prevent dilution or inflation of the interests of limited partners that would result if Vornado Realty Trust were to pay a dividend on its outstanding shares of beneficial interest in shares of beneficial interest, subdivide its outstanding shares of beneficial interest or combine its outstanding shares of beneficial interest into a smaller number of shares, in each case without a corresponding issuance to, or redemption or exchange of interests held by, limited partners in the operating partnership.

See "—Borrowing by the Operating Partnership" above for information about lockup agreements which limit the ability of Vornado Realty Trust to sell some of its properties.

Removal of the General Partner; Transfer of Interests of Vornado Realty Trust

The partnership agreement provides that the limited partners may not remove Vornado Realty Trust as general partner of the operating partnership with or without cause. The partnership agreement also generally prohibits Vornado Realty Trust from withdrawing as general partner of the operating partnership or transferring any of its interests in the operating partnership to any other person, except in each case, in connection with a termination transaction. In addition, the partnership agreement prohibits Vornado Realty Trust from engaging in any termination transaction unless all limited partners other than Vornado Realty Trust and entities controlled by Vornado Realty Trust will have the right in the termination transaction to elect to receive, or will receive, for each unit an amount of cash, securities or other property equal to the conversion factor multiplied by the greatest amount of cash, securities or other property paid to a holder of shares of beneficial interest of Vornado, if any, corresponding to that unit in consideration of one share of Vornado. The lock-up provisions and the gross-up provisions do not apply to a sale or other transfer by Vornado Realty Trust of its interests as a partner in the operating partnership, but they would apply to transfers of assets of the operating partnership undertaken during the period when the lock-up agreements are in effect as part of any sale or other transfer by Vornado Realty Trust of its interests as a partner in the operating partnership. See "—Borrowing by the Operating Partnership" for a description of the restrictions on transfers of assets under the lock-up agreements.

The partnership agreement does not prevent a transaction in which another entity acquires control or all of Vornado Realty Trust's shares nor does it prevent any holder of interests in Vornado Realty Trust from owning assets or conducting businesses outside of the operating partnership.

Restrictions on Transfers of Units by Limited Partners

Subject to the percentage limitations discussed below, a limited partner, other than Vornado Realty Trust and some members of the Mendik group and FW/Mendik REIT, is permitted to transfer all or any portion of his or her units without restriction, provided that the limited partner obtains the prior written consent of Vornado Realty Trust, which it may withhold only if (a) it determines in its sole discretion exercised in good faith that the transfer would cause the operating partnership or any or all of the partners other than the partner seeking to make the transfer to incur tax liability or (b) if it determines that any of the circumstances referred to in the next paragraph exist. In addition, limited partners other than Vornado Realty Trust or any of its subsidiaries are permitted to dispose of their units by exercising their right to redeem units as described under "Redemption and Conversion of Units" above.

Vornado Realty Trust may withhold its consent to any proposed transfer (including any sale, assignment, gift, pledge, encumbrance or other disposition by law or otherwise, and including any redemption pursuant to the redemption rights described under "—Redemption or Conversion of Units" above) for a variety of reasons set forth in Article XI of the partnership agreement. These reasons include, without limitation, a determination by Vornado Realty Trust, in its sole and absolute discretion, that the transfer in question would (i) cause a termination of the operating partnership for tax purposes, (ii) cause the operating partnership to become a "party-in-interest" or a "disqualified person" with respect to any employee benefit plan subject to ERISA, (iii) cause the operating partnership to become a publicly-traded partnership (as defined in Section 469(k)(2) or Section 7704 of the Internal Revenue Code), (iv) cause the operating partnership to become subject to regulation under the Investment Company Act of 1940 or ERISA, (v) adversely affect Vornado Realty Trust's ability to continue to qualify as a REIT or (vi) subject Vornado Realty Trust or the operating partnership to any additional taxes under Section 857 or Section 4981 of the Internal Revenue Code. In addition, no partner of the operating partnership may pledge or transfer any of its units to a lender to the operating partnership or any person who is related (within the meaning of Section 1.752-4(b) of the Treasury regulations) to any lender to the operating partnership whose loan constitutes a nonrecourse liability without the consent of Vornado Realty Trust, in its sole and absolute discretion, and without entering into an agreement with Vornado Realty Trust as described in the partnership agreement. The partnership agreement also provides that unless exempt due to a waiver granted by Vornado Realty Trust, no limited partnership interest in the operating partnership or portion thereof may be transferred in whole or in part, directly or indirectly, if such transfer would cause (i) any "foreign person" (as such term is used in Section 897(h)(4)(b) of the Internal Revenue Code) who already owns any limited partnership interest, to increase its direct or indirect ownership of limited partnership interests, or (ii) any foreign person, other than a foreign person that owns any direct or indirect interest in the operating partnership on and as of August 7, 2019, to directly or indirectly own any such limited partnership interests. Any purported transfer to a foreign person in violation of the foregoing shall be deemed void ab initio and shall have no force or effect.

Transfers of operating partnership units (other than "private transfers" as defined in the regulations under the Internal Revenue Code) are limited in any one taxable year of the operating partnership to 2% of the interests in capital or profits not held by Vornado Realty Trust or certain of its affiliates, and Vornado Realty Trust has the right and currently intends to refuse to permit any attempted transfer of operating partnership units by a holder of such units that, when aggregated with prior redemptions and transfers by other holders of operating partnership units, would exceed this limit. In addition, redemptions of operating partnership units by the operating partnership pursuant to the redemption right of such units and transfers of operating partnership units to Vornado Realty Trust as a result of its assumption and performance of the operating partnership's obligation with respect to the redemption right of units, together with other transfers and redemptions (other than certain of the redemptions or transfers qualifying as "private transfers" under the regulations under Section 7704 of the Internal Revenue Code), are limited in any one taxable year to 10% of the interests in capital or profits not held by Vornado Realty Trust or certain of its affiliates, and it has the right and currently intends to refuse to permit certain redemptions and other transfers of operating partnership units that, when aggregated with prior redemptions and transfers, would exceed this limit.

Any permitted transferee of units may become a substituted limited partner only with Vornado Realty Trust's consent, and it may withhold its consent in its sole and absolute discretion. If it does not consent to the admission of a transferee of units as a substituted limited partner, then the transferee will succeed to the economic rights and benefits attributable to the units, including the right to redeem units, but will not become a limited partner or possess any other rights of limited partners, including the right to vote.

No Withdrawal by Limited Partners

No limited partner has the right to withdraw from or reduce his or her capital contribution to the operating partnership, except as a result of the redemption, exchange or transfer of units under the terms of the partnership agreement.

Issuance of Limited Partnership Interests

Vornado Realty Trust is authorized, without the consent of the limited partners, to cause the operating partnership to issue limited partnership interests to Vornado Realty Trust, to the limited partners and to other persons for the consideration and upon the terms and conditions that it deems appropriate. The operating partnership also may issue partnership interests in different series or classes. Units may be issued to Vornado Realty Trust only if it issues shares of beneficial interest and contributes to the operating partnership the proceeds received by it from the issuance of the shares. Consideration for partnership interests may be cash or any property or other assets permitted by the Delaware Revised Uniform Limited Partnership Act. Except to the extent expressly granted by Vornado Realty Trust on behalf of the partnership pursuant to another agreement, no limited partner has preemptive, preferential or similar rights with respect to capital contributions to the operating partnership or the issuance or sale of any partnership interests.

Meetings and Voting

Meetings of the limited partners may be proposed and called only by Vornado Realty Trust. Limited partners may vote either in person or by proxy at meetings. Any action that is required or permitted to be taken by the limited partners may be taken either at a meeting of the limited partners or without a meeting if consents in writing stating the action so taken are signed by limited partners owning not less than the minimum number of units that would be necessary to authorize or take the action at a meeting of the limited partners at which all limited partners entitled to vote on the action were present. On matters in which limited partners are entitled to vote, each limited partner, including Vornado Realty Trust to the extent it holds units, will have a vote equal to the number of common units he or she holds. At this time, there is no voting preference among the classes of common units. The preferred units have no voting rights, except as required by law or the terms of a particular series of preferred units. A transferee of units who has not been admitted as a substituted limited partner with respect to his or her transferred units will have no voting rights with respect to those units, even if the transferee holds other units as to which he or she has been admitted as a limited partner, and units owned by the transferee will be deemed to be voted on any matter in the same proportion as all other interests held by limited partners are voted. The partnership agreement does not provide for annual meetings of the limited partners, and Vornado Realty Trust does not anticipate calling such meetings.

Amendment of the Partnership Agreement

Amendments to the partnership agreement may be proposed only by Vornado Realty Trust. Vornado Realty Trust generally has the power, without the consent of any limited partners, to amend the partnership agreement as may be required to reflect any changes to the agreement that it deems necessary or appropriate in its sole discretion, provided that the amendment does not adversely affect or eliminate any right granted to a limited partner that is protected by the special voting provisions described below. Limitations on its power to amend the partnership agreement are described below.

The partnership agreement provides that it generally may not be amended with respect to any partner adversely affected by the amendment without the consent of that partner if the amendment would:

- convert a limited partner's interest into a general partner's interest;
- modify the limited liability of a limited partner;
- amend Section 7.11.A, which prohibits Vornado Realty Trust from taking any action in contravention of an express prohibition or limitation in the partnership agreement without the written consent of all partners adversely affected by the action or any lower percentage of the limited partnership interests that may be specifically provided for in the partnership agreement or under the Delaware Revised Uniform Limited Partnership Act;
- amend Article V, which governs distributions, Article VI, which governs allocations of income and loss for capital account purposes, or Section 13.2.A(3), which provides for distributions, after payment of partnership debts, among partners according to their capital accounts upon a winding up of the operating partnership;
- amend Section 8.6, which provides redemption rights; or
- amend the provision being described in this paragraph.

In addition, except with the consent of a majority of the common limited partners, excluding Vornado Realty Trust and entities controlled by Vornado Realty Trust, Vornado Realty Trust may not amend:

- Section 4.2.A, which authorizes issuance of additional limited partnership interests;
- Section 5.1.C, which requires that if Vornado Realty Trust is not a REIT or a publicly traded entity it must for each taxable year make cash distributions equal to at least 95% of the operating partnership's taxable income;
- Section 7.5, which prohibits Vornado Realty Trust from conducting any business other than in connection with the ownership of interests in the operating partnership except with the consent of a majority of the common limited partners, excluding Vornado Realty Trust and any entity controlled by Vornado Realty Trust;
- Section 7.6, which limits the operating partnership's ability to enter into transactions with affiliates;
- Section 7.8, which establishes limits on Vornado Realty Trust's liabilities to the operating partnership and the limited partners;
- Section 11.2, which limits Vornado Realty Trust's ability to transfer its interests in the operating partnership;
- Section 13.1, which describes the manner and circumstances in which the operating partnership will be dissolved;
- Section 14.1.C, which establishes the limitations on amendments being described in this paragraph; or
- Section 14.2, which establishes the rules governing meetings of partners.

In addition, any amendment that would affect those lockup agreements that are part of the partnership agreement requires the consent of 75% of the limited partners benefited by those lockup agreements, with some exceptions. See "—Borrowing by the Operating Partnership" above for information about the lockup agreements.

Books and Reports

Vornado Realty Trust is required to keep the operating partnership's books and records at the principal office of the operating partnership. The books of the operating partnership are required to be maintained for financial and tax reporting purposes on an accrual basis in accordance with generally accepted accounting principles, which we refer to as "GAAP." The limited partners have the right, with some limitations, to receive copies of the most recent annual and quarterly reports filed with the SEC by Vornado Realty Trust, the operating partnership's federal, state and local income tax returns, a list of limited partners, the partnership agreement

and the partnership certificate and all amendments to the partnership certificate. Vornado Realty Trust may keep confidential from the limited partners any information that it believes to be in the nature of trade secrets or other information whose disclosure it in good faith believes is not in the best interests of the operating partnership or which the operating partnership is required by law or by agreements with unaffiliated third parties to keep confidential.

Vornado Realty Trust will furnish to each limited partner, no later than the date on which it mails its annual report to its shareholders, an annual report containing financial statements of the operating partnership, or of Vornado Realty Trust, if it prepares consolidated financial statements including the operating partnership, for each fiscal year, presented in accordance with GAAP. The financial statements will be audited by a nationally recognized firm of independent public accountants selected by Vornado Realty Trust. In addition, if and to the extent that it mails quarterly reports to its shareholders, Vornado Realty Trust will furnish to each limited partner, no later than the date on which it mails the quarterly reports to its shareholders, a report containing unaudited financial statements of the operating partnership, or of Vornado Realty Trust, if the reports are prepared on a consolidated basis, as of the last day of the quarter and any other information that may be required by applicable law or regulation or that it deems appropriate.

The operating partnership is presently subject to the informational requirements of the Exchange Act, and in accordance therewith, files reports and other information with the SEC. Such reports and other information are also available from the SEC's Internet site (<https://www.sec.gov>).

Vornado Realty Trust will use reasonable efforts to furnish to each limited partner, within 90 days after the close of each taxable year, the tax information reasonably required by the limited partners for Federal and state income tax reporting purposes.

Power of Attorney

Under the terms of the partnership agreement, each limited partner and each assignee appoints Vornado Realty Trust, any liquidator, and the authorized officers and attorneys-in-fact of each, as the limited partner's or assignee's attorney-in-fact to do the following:

- to execute, swear to, acknowledge, deliver, file and record in the appropriate public offices (a) all certificates, documents and other instruments including, among other things, the partnership agreement and the certificate of limited partnership and all amendments or restatements of the certificate of limited partnership that Vornado Realty Trust or any liquidator deems appropriate or necessary to form, qualify or maintain the existence of the operating partnership as a limited partnership in the State of Delaware and in all other jurisdictions in which the operating partnership may conduct business or own property, (b) all instruments that Vornado Realty Trust or any liquidator deems appropriate or necessary to reflect any amendment or restatement of the partnership agreement in accordance with its terms, (c) all conveyances and other instruments that Vornado Realty Trust or any liquidator deems appropriate or necessary to reflect the dissolution and liquidation of the operating partnership under the terms of the partnership agreement, (d) all instruments relating to the admission, withdrawal, removal or substitution of any partner, any transfer of units or the capital contribution of any partner and (e) all certificates, documents and other instruments relating to the determination of the rights, preferences and privileges of partnership interests; and
- to execute, swear to, acknowledge and file all ballots, consents, approvals, waivers, certificates and other instruments appropriate or necessary, in the sole and absolute discretion of Vornado Realty Trust or any liquidator, to make, evidence, give, confirm or ratify any vote, consent, approval, agreement or other action which is made or given by the partners under the partnership agreement or is consistent with the terms of the partnership agreement or appropriate or necessary, in the sole discretion of Vornado Realty Trust or any liquidator, to effectuate the terms or intent of the partnership agreement.

The partnership agreement provides that this power of attorney is irrevocable, will survive the subsequent incapacity of any limited partner and the transfer of all or any portion of the limited partner's or assignee's units and will extend to the limited partner's or assignee's heirs, successors, assigns and personal representatives.

Dissolution, Winding Up and Termination

The operating partnership will continue until December 31, 2095, as this date may be extended by Vornado Realty Trust in its sole discretion, unless sooner dissolved and terminated. The operating partnership will be dissolved before the expiration of its term, and its affairs wound up upon the occurrence of the earliest of:

- Vornado Realty Trust's withdrawal as general partner without the permitted transfer of its interest to a successor general partner, except in some limited circumstances;
- the sale of all or substantially all of the operating partnership's assets and properties, subject to the lock-up agreements during the period when the lock-up agreements are in effect;
- the entry of a decree of judicial dissolution of the operating partnership under the provisions of the Delaware Revised Uniform Limited Partnership Act;
- the entry of a final non-appealable order for relief in a bankruptcy proceeding of the general partner, or the entry of a final non-appealable judgment ruling that the general partner is bankrupt or insolvent, except that, in either of these cases, in some circumstances the limited partners other than Vornado Realty Trust may vote to continue the operating partnership and substitute a new general partner in Vornado Realty Trust's place; or
- after December 31, 2046, on election by Vornado Realty Trust, in its sole and absolute discretion.

Upon dissolution, Vornado Realty Trust, as general partner, or any liquidator will proceed to liquidate the assets of the operating partnership and apply the proceeds from the liquidation in the order of priority provided in the partnership agreement.

VORNADO REALTY TRUST

2022 LONG-TERM PERFORMANCE PLAN LTIP UNIT AWARD AGREEMENT

2022 LONG-TERM PERFORMANCE PLAN LTIP UNIT AWARD AGREEMENT made as of the date set forth on Schedule A hereto between VORNADO REALTY TRUST, a Maryland real estate investment trust (the “**Company**”), its subsidiary VORNADO REALTY L.P., a Delaware limited partnership and the entity through which the Company conducts substantially all of its operations (the “**Partnership**”), VORNADO MANAGEMENT CORPORATION, a Delaware corporation (the “**Employer Entity**”) and the party listed on Schedule A (the “**Grantee**”).

RECITALS

A. The Grantee is an employee of the Employer Entity and provides services to the Partnership.

B. The Compensation Committee (the “**Committee**”) of the Board of Trustees of the Company (the “**Board**”) approved this and other 2022 performance-based LTIP unit (“**2022 PB LTIP**”) awards pursuant to the Company’s 2019 Omnibus Share Plan, as amended (as amended, restated and supplemented from time to time, the “**2019 Plan**”) to provide certain key employees of the Company or its Affiliates, including the Grantee, in connection with their employment or other service relationship with the incentive compensation described in this Award Agreement (this “**Agreement**”) and thereby provide additional incentive for them to promote the progress and success of the business of the Company and its Affiliates, including the Partnership. 2022 PB LTIP awards were approved by the Committee pursuant to authority delegated to it by the Board, including authority to make grants of equity interests in the Partnership which may, under certain circumstances, become exchangeable for the Company’s Common Shares reserved for issuance under the 2019 Plan, or in the event the 2019 Plan has been replaced by a successor equity plan prior to the date of issuance of such Common Shares, under such successor equity plan (the 2019 Plan and any such successor plan, as each may be amended, modified or supplemented from time to time, are collectively referred to herein as the “**Share Plan**”). This Agreement evidences one award (this “**Award**”) in a series of substantially identical 2022 PB LTIP awards and is subject to the terms and conditions set forth herein and in the Partnership Agreement (as defined herein).

NOW, THEREFORE, the Company, the Partnership and the Grantee agree as follows:

1. Administration. This Award and all other 2022 PB LTIP awards shall be administered by the Committee, which in the administration of the 2022 PB LTIP awards and this Award shall have all the powers and authority it has in the administration of the Share Plan as set forth in the Share Plan; provided that all powers of the Committee hereunder can be exercised by the full Board if the Board so elects. The Committee, in its sole and absolute discretion, may at any time make any provision for lapse of forfeiture restrictions and/or accelerated vesting under this Agreement of some or all of the Grantee’s unvested Award LTIP Units that have not previously been forfeited.

2. **Definitions.** Capitalized terms used herein without definitions shall have the meanings given to those terms in the Share Plan.

“**2022 PB LTIP**” has the meaning set forth in the Recitals of this Agreement.

“**Absolute TSR**” means, for the period for which the calculation is being tested, the Company’s total annual return (expressed as a percentage) calculated by dividing (i) the difference obtained by subtracting (1) the Baseline Value from (2) the sum of (a) the highest Common Share Price among those calculated for every Averaging Period ending on a day within the period of ninety (90) consecutive days immediately preceding the Final Valuation Date; plus (b) an amount equal to the sum of the total dividends and other distributions actually declared or paid between the Effective Date and the Final Valuation Date (excluding dividends and distributions paid in the form of additional Common Shares or Units so long as the sum of all such in-kind dividends and distributions are reflected in the Baseline Value and the Common Share Price throughout the TSR Performance Period) so long as the “ex-dividend” date with respect thereto falls prior to the Final Valuation Date, in respect of Common Shares and Class A Units by (ii) the Baseline Value. To avoid double-counting, appropriate adjustments to Absolute TSR shall be made to take into account all stock dividends, stock splits, reverse stock splits and the other similar events that occur during such period.

“**Affiliate**” means, with respect to the Company, any company or other trade or business that controls, is controlled by or is under common control with the Company within the meaning of Rule 405 of Regulation C under the Securities Act, including, without limitation, any Subsidiary.

“**Averaging Period**” means a period of thirty (30) consecutive trading days ending on, and including, the date as of which the Common Share Price, Operational Unit TSR Modifier, Index Relative TSR, Northeast Peer Relative TSR or Relative Unit TSR Modifier, as applicable, is determined (or, if such date is not a trading day, the most recent trading day immediately preceding such date).

“**Award LTIP Units**” has the meaning set forth in Section 3.

“**Award Partnership Units**” has the meaning set forth in Section 7.

“**Baseline Value**” means (A) with respect to the Company, \$45.10 and (B) with respect to any Index Company or any Northeast Peer Company, the price of one share of such company’s common equity on the date immediately preceding the first day of the TSR Performance Period.

“**Cause**” for termination of the Grantee’s Continuous Service for purposes of Section 3 and Section 4 means: (A) if the Grantee is a party to a Service Agreement immediately prior to such termination, and “cause” is defined therein, then “cause” shall have the meaning set forth in such Service Agreement; or (B) if the Grantee is not party to a Service Agreement immediately prior to such termination or the Grantee’s Service Agreement does not define “cause” or a substantially equivalent term, then “cause” shall mean: (i) conviction of, or plea of guilty or *nolo contendere* to, a felony pertaining or otherwise relating to his or her employment with the Company or an Affiliate; or (ii) willful misconduct that is materially economically injurious to

the Company or any of its Affiliates, in each case as determined in the Company's sole discretion.

"Change in Control" means:

(i) individuals who, on the Effective Date, constitute the Board (the **"Incumbent Trustees"**) cease for any reason to constitute at least a majority of the Board, provided that any person becoming a trustee subsequent to the Effective Date whose election or nomination for election was approved by a vote of at least two-thirds of the Incumbent Trustees then on the Board (either by a specific vote or by approval of the proxy statement of the Company in which such person is named as a nominee for trustee, without objection to such nomination) shall be an Incumbent Trustee; provided, however, that no individual initially elected or nominated as a trustee of the Company as a result of an actual or threatened election contest with respect to trustees or as a result of any other actual or threatened solicitation of proxies by or on behalf of any person other than the Board shall be an Incumbent Trustee; or

(ii) any "person" (as such term is defined in Section 3(a)(9) of the Exchange Act and as used in Sections 13(d)(3) and 14(d)(2) of the Exchange Act) is or becomes, after the Effective Date, a "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing 30% or more of the combined voting power of the Company's then outstanding securities eligible to vote for the election of the Board (the **"Company Voting Securities"**); provided, however, that an event described in this paragraph (ii) shall not be deemed to be a Change in Control if any of following becomes such a beneficial owner: (A) the Company or any majority-owned subsidiary of the Company (provided that this exclusion applies solely to the ownership levels of the Company or the majority-owned subsidiary), (B) any tax-qualified, broad-based employee benefit plan sponsored or maintained by the Company or any such majority-owned subsidiary, (C) any underwriter temporarily holding securities pursuant to an offering of such securities, (D) any person pursuant to a Non-Qualifying Transaction (as defined in paragraph (iii)), or (E) (I) any of the partners (as of the Effective Date) in Interstate Properties (**"Interstate"**) including immediate family members and family trusts or family-only partnerships and any charitable foundations of such partners (the **"Interstate Partners"**), (II) any entities the majority of the voting interests of which are beneficially owned by the Interstate Partners, or (III) any "group" (as described in Rule 13d-5(b)(i) under the Exchange Act) including the Interstate Partners (the persons in (I), (II) and (III) shall be individually and collectively referred to herein as, **"Interstate Holders"**); or

(iii) the consummation of a merger, consolidation, share exchange or similar form of transaction involving the Company or any of its subsidiaries, or the sale of all or substantially all of the Company's assets (a **"Business Transaction"**), unless immediately following such Business Transaction (A) more than 50% of the total voting power of the entity resulting from such Business Transaction or the entity acquiring the Company's assets in such Business Transaction (the **"Surviving Corporation"**) is beneficially owned, directly or indirectly, by the Interstate Holders or the Company's shareholders immediately prior to any such Business Transaction, and (B) no person (other than the persons set forth in clauses (A), (B), (C), or (E) of paragraph (ii) above or any tax-qualified, broad-based employee benefit plan of the Surviving Corporation or its affiliates) beneficially owns, directly or indirectly, 30% or

more of the total voting power of the Surviving Corporation (a “**Non-Qualifying Transaction**”); or

(iv) Board approval of a liquidation or dissolution of the Company, unless the common equity interests of an ongoing entity (other than a liquidating trust) are beneficially owned, directly or indirectly, by the Company’s shareholders in substantially the same proportions as such shareholders owned the Company’s Company Voting Securities immediately prior to such liquidation and such ongoing entity assumes all existing obligations of the Company to the Grantee under this Agreement.

“**Class A Units**” has the meaning set forth in the Partnership Agreement.

“**Code**” means the Internal Revenue Code of 1986, as amended.

“**Common Shares**” means the Company’s common shares of beneficial interest, par value \$0.04 per share.

“**Common Share Price**” means, as of a particular date, (A) with respect to the Company, the average of the Fair Market Value of one Common Share over the applicable Averaging Period; provided, however, that if such date is the date of the Public Announcement of a Transactional Change in Control, the Common Share Price as of such date shall be equal to the fair market value, as determined by the Committee, of the total consideration payable in the transaction that ultimately results in the Transactional Change in Control for one Common Share and (B) with respect to any Index Company or Northeast Peer Company, the average closing price of the common equity of such company on the New York Stock Exchange, The NASDAQ Stock Market, Inc. or another national securities exchange or an established securities market over the same Averaging Period for which the Company’s Common Share Price is to be determined or, if such date is the date of the Public Announcement of a Transactional Change in Control, the closing price of the common equity of such company on such exchange as of such date.

“**Comparable FFO**” means the Company’s comparable funds from operations on a per share and diluted basis, as reflected in the Company’s public filings, which public filings may reflect adjustments for comparability between periods, and subject to adjustment by the Committee for the impact of one or more of the following factors: (i) any future changes in accounting principles or Board of Governors of the National Association of Real Estate Investment Trusts’ definition of funds from operations or (ii) unbudgeted, material acquisitions or dispositions.

“**Continuous Service**” means the continuous service, without interruption or termination, as an employee, director, trustee, manager or member of, or with the approval of the Committee, consultant or advisor to the Company or an Affiliate. Continuous Service shall not be considered interrupted in the case of: (A) any approved leave of absence; (B) transfers among the Company and any Affiliate, or any successor, in any capacity of trustee, director, employee, manager, member, or with the approval of the Committee, consultant or advisor; or (C) any change in status as long as the individual remains in the service of the Company or any Affiliate of the Company in any capacity of employee, director, trustee, manager, member or similar function of,

or (if the Committee specifically agrees that the Continuous Service is not uninterrupted) a consultant or advisor. An approved leave of absence shall include sick leave, military leave, or any other authorized personal leave. Subject to the preceding sentence, whether a termination of Continuous Service shall have occurred for purposes of this Agreement shall be determined by the Committee, which determination shall be final, binding and conclusive.

“Disability” means: (A) if the Grantee is a party to a Service Agreement immediately prior to the applicable event, and “disability” is defined therein, then “disability” shall have the meaning set forth in such definition; or (B) if the Grantee is not party to a Service Agreement immediately prior to such event or the Grantee’s Service Agreement does not define “disability” or a substantially equivalent term, then “disability” shall mean a disability which renders the Grantee incapable of performing all of his or her material duties for a period of at least 180 consecutive or non-consecutive days during any consecutive twelve-month period.

“Dividend Payment” means, as of a particular date, for each distribution declared and paid on one Class A Unit between the Effective Date and such date (excluding dividends and distributions paid in the form of additional Common Shares and Class A Units unless adjustment is otherwise made pursuant to Section 8 hereof) the amount of such distribution.

“Earned Distribution LTIP Units” has the meaning set forth in Section 3(p) of this Agreement.

“Earned LTIP Units” has the meaning set forth in Section 3(p) of this Agreement.

“Earned Operational LTIP Units” has the meaning set forth in Section 3(e) of this Agreement.

“Earned Performance LTIP Units” has the meaning set forth in Section 3(p) of this Agreement.

“Earned Relative LTIP Units” has the meaning set forth in Section 3(n) of this Agreement.

“Effective Date” means January 12, 2022.

“Exchange Act” means the Securities Exchange Act of 1934, as amended.

“Ex-Dividend Common Share Price” means, as of an “ex-dividend” date with respect to a Common Share, (A) the average of the high and low price of the Common Shares as reported by New York Stock Exchange, The NASDAQ Stock Market, Inc. or another national securities exchange or an established securities market, on which the Common Shares are listed, as applicable (if there is more than one such exchange or market, the Committee shall determine the appropriate exchange or market), on such “ex-dividend” date (or if there is no such reported high and low price, the Ex-Dividend Common Share Price shall be the average of the highest bid and lowest asked prices on such “ex-dividend” date) or, if no sale of Common Shares is reported for such trading day, on the next preceding day on which any sale shall have been reported; or (B) if the Common Shares are not listed on such an exchange, quoted on such system or traded on such a market, Ex-Dividend Common Share Price of the Common Share shall be the value of

the Common Shares as determined by the Committee in good faith in a manner consistent with Code Section 409A.

“**Fair Market Value**” means, as of any given date, the fair market value of a security determined by the Committee using any reasonable method and in good faith (such determination will be made in a manner that satisfies Section 409A of the Code and in good-faith as required by Section 422(c)(1) of the Code); provided that with respect to a Common Share “Fair Market Value” means the value of such Common Share determined as follows: (A) if on the determination date the Common Shares are listed on the New York Stock Exchange, The NASDAQ Stock Market, Inc. or another national securities exchange or is publicly traded on an established securities market, the Fair Market Value of a Common Share shall be the closing price of the Common Shares on such exchange or in such market (if there is more than one such exchange or market, the Committee shall determine the appropriate exchange or market) on the determination date (or if there is no such reported closing price, the Fair Market Value shall be the mean between the highest bid and lowest asked prices or between the high and low sale prices on such trading day) or, if no sale of Common Shares is reported for such trading day, on the next preceding day on which any sale shall have been reported; or (B) if the Common Shares are not listed on such an exchange, quoted on such system or traded on such a market, Fair Market Value of the Common Share shall be the value of the Common Shares as determined by the Committee in good faith in a manner consistent with Code Section 409A.

“**Family Member**” means a person who is a spouse, former spouse, child, stepchild, grandchild, parent, stepparent, grandparent, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother, sister, brother-in-law, or sister-in-law, including adoptive relationships, of the Grantee, any person sharing the Grantee’s household (other than a tenant or employee), a trust in which any one or more of these persons have more than fifty percent (50%) of the beneficial interest, a foundation in which any one or more of these persons (or the Grantee) control the management of assets, and any other entity in which one or more of these persons (or the Grantee) own more than fifty percent (50%) of the voting interests.

“**Final Valuation Date**” means the earliest of: (A) January 12, 2025; or (B) in the event of a Change in Control that is not a Transactional Change in Control, the date on which such Change in Control shall occur; or (C) in the event of a Transactional Change in Control and subject to the consummation of such Transactional Change in Control, the date of the Public Announcement of such Transactional Change in Control.

“**Good Reason**” for termination of the Grantee’s employment for purposes of Section 3 and Section 4 means: (A) if the Grantee is a party to a Service Agreement immediately prior to such termination, and “good reason” or a substantially equivalent term is defined therein, then “good reason” shall have the meaning set forth in such Service Agreement, or (B) if the Grantee is not party to a Service Agreement immediately prior to such termination or the Grantee’s Service Agreement does not define “good reason” or a substantially equivalent term, then “good reason” shall mean: (i) the assignment to the Grantee of duties materially and adversely inconsistent with the Grantee’s status as of the Effective Date or a material and adverse alteration in the nature of the Grantee’s duties, responsibilities or authority; (ii) a reduction in the Grantee’s base salary; or (iii) a relocation of the Grantee’s own office location to a location more than thirty (30) miles from its location as of the Effective Date.

“Green Building Certification” means, for a particular period, the percentage of the aggregate gross square footage of buildings owned or ground leased by the Company or its consolidated subsidiaries or unconsolidated joint ventures that have obtained a rating of LEED Gold or LEED Platinum as of the end of such period, or, in the event such certification is unavailable or the methodology for determining such certifications is significantly changed, a comparable percentage selected by the Committee in good faith, with such adjustments (including, e.g., rounding) as the Committee determines in good faith to be appropriate.

“Greenhouse Emissions Reduction” means, for a particular period, the aggregate reduction of emissions (expressed as a percentage) from stationary combustion sources and fuels (**“Scope 1 Emissions”**) or purchased or acquired electricity, steam, heat and cooling (**“Scope 2 Emissions”**) at buildings owned or ground leased by the Company or its consolidated subsidiaries or unconsolidated joint ventures as of the end of such period when compared to Scope 1 Emissions and Scope 2 Emissions in 2019, in each case as published by the Company in a publicly available report, and with such adjustments (including, e.g., rounding) as the Committee determines in good faith to be appropriate.

“GRESB Score” means, for a particular period, the numerical score assigned by the GRESB organization to the Company for such period or, in the event such numerical score is unavailable or the methodology for determining such numerical score is significantly changed, a comparable numerical score selected by the Committee in good faith.

“Index Companies” means the constituents of the Dow Jones U.S. Real Estate Office Index as published from time to time (or a successor index including a comparable universe of publicly traded U.S. real estate investment trusts), provided that if (A) the Dow Jones U.S. Real Estate Office Index ceases to exist or be published prior to the Final Valuation Date and the Committee determines that there is no successor to such index, or (B) the Committee reasonably determines that the Dow Jones U.S. Real Estate Office Index is no longer suitable for the purposes of this Agreement, then the Committee in its good faith reasonable discretion shall select for subsequent periods, or if the Committee in its reasonable good faith discretion so determines, for any portion of or the entire period from the Effective Date to the Final Valuation Date, a substitute comparable index for purposes of calculating Index Relative TSR.

“Index Relative TSR” means, for the period for which the calculation is being tested, the percentile rank of the Company’s Total Return during such period as determined by dividing (a) the sum of (i) 100% minus the percentage of Index Companies with a Total Return greater than the Company, plus (ii) the percentage of Index Companies with a Total Return less than the Company, by (b) two, with Total Return prepared on a consistent basis across all companies. For purposes of Index Relative TSR, the Total Return of each Index Company shall be calculated in the same manner as Total Return is calculated for the Company. The Committee may compute the Index Relative TSR in a manner different from that set forth above to the extent deemed appropriate by the Committee in order to ensure such consistency and is authorized to delegate to a valuation or other expert the performance of adjusted calculations to carry out the foregoing intent.

“Index Relative TSR LTIP Units” means the Award LTIP Units set forth as Index Relative TSR LTIP Units in Schedule A that may be earned based on Index Relative TSR and the Company’s Total Return pursuant to Section 3 of this Agreement.

“Initial Earned Index Relative TSR Amount” has the meaning set forth in Section 3(g) of this Agreement.

“Initial Earned Northeast Peer Relative TSR Amount” has the meaning set forth in Section 3(k) of this Agreement.

“Initial Earned Operational Amount” has the meaning set forth in Section 3(b) of this Agreement.

“LTIP Units” means LTIP Units, as such term is defined in the Partnership Agreement.

“Non-Adjustable Operational LTIP Units” has the meaning set forth in Section 6(b) of this Agreement.

“Northeast Peer Companies” means Boston Properties, Inc. (BXP), Brandywine Realty Trust (BDN), Empire State Realty Trust (ESRT), JBG Smith (JBGS), Paramount Group, Inc. (PGRE) and SL Green Realty Corp. (SLG), provided that in the event any such company ceases to be listed on the New York Stock Exchange, The NASDAQ Stock Market, Inc. or another national securities exchange or publicly traded on an established securities market during the TSR Performance Period, it shall no longer be deemed to be a Northeast Peer Company.

“Northeast Peer Relative TSR” means, for the period for which the calculation is being tested, the percentile rank of the Company’s Total Return during such period as determined by dividing (a) the sum of (i) 100% minus the percentage of Northeast Peer Companies with a Total Return greater than the Company, plus (ii) the percentage of Northeast Peer Companies with a Total Return less than the Company, by (b) two, with Total Return prepared on a consistent basis across all companies. For purposes of Northeast Peer Relative TSR, the Total Return of each Northeast Peer Company shall be calculated in the same manner as Total Return is calculated for the Company. The Committee may compute the Northeast Peer Relative TSR in a manner different from that set forth above to the extent deemed appropriate by the Committee in order to ensure such consistency and is authorized to delegate to a valuation or other expert the performance of adjusted calculations to carry out the foregoing intent.

“Northeast Peer Relative TSR LTIP Units” means the Award LTIP Units set forth as Northeast Peer Relative TSR LTIP Units in Schedule A that may be earned based on Northeast Peer Relative TSR and the Company’s Total Return pursuant to Section 3 of this Agreement.

“Operational LTIP Units” means the Award LTIP Units set forth as Operational LTIP Units in Schedule A that may be earned based on the Operational Performance Metrics and Absolute TSR pursuant to Section 3 of this Agreement.

“Operational Performance Metrics” has the meaning set forth in Section 3(b) of this Agreement.

“Operational Performance Period” means the period of time from January 1, 2022 to the earliest of (A) December 31, 2022; or (B) in the event of a Change in Control that is not a Transactional Change in Control, the date on which such Change in Control shall occur; or (C) in the event of a Transactional Change in Control and subject to the consummation of such Transactional Change in Control, the date of the Public Announcement of such Transactional Change in Control.

“Operational Unit TSR Modifier” means the amount determined to be the Operational Unit TSR Modifier based on Absolute TSR over the TSR Performance Period in accordance with Section 3(d) of this Agreement and the table set forth in Section 2 of Schedule B.

“Partnership Agreement” means the Second Amended and Restated Agreement of Limited Partnership of the Partnership, dated as of October 20, 1997, among the Company, as general partner, and the limited partners who are parties thereto, as amended from time to time.

“Partnership Units” has the meaning set forth in the Partnership Agreement.

“Person” means an individual, corporation, partnership, limited liability company, joint venture, association, trust, unincorporated organization, other entity or “group” (as defined in the Exchange Act).

“Public Announcement” means, with respect to a Transactional Change in Control, the earliest press release, filing with the SEC or other publicly available or widely disseminated communication issued by the Company or another Person who is a party to such transaction which discloses the consideration payable in and other material terms of the transaction that ultimately results in the Transactional Change in Control; provided, however, that if such consideration is subsequently increased or decreased, then the term “Public Announcement” shall be deemed to refer to the most recent such press release, filing or communication disclosing a change in consideration whereby the final consideration and material terms of the transaction that ultimately results in the Transactional Change in Control are announced. For the avoidance of doubt, the foregoing definition is intended to provide the Committee in the application of the *proviso* clause in the definition of “Common Share Price” with the information required to determine the fair market value of the consideration payable in the transaction that ultimately results in the Transactional Change in Control as of the earliest time when such information is publicly disseminated, particularly if the transaction consists of an unsolicited tender offer or a contested business combination where the terms of the transaction change over time.

“Qualified Termination” has the meaning set forth in Section 4.

“Relative Unit TSR Modifier” means the amount determined to be the Relative Unit TSR Modifier based on Absolute TSR over the TSR Performance Period in accordance with Section 3(m) of this Agreement and the table set forth in Section 5 of Schedule B.

“Retirement” means: (A) if the Grantee is a party to a Service Agreement immediately prior to such event, and “Retirement” or a substantially equivalent term is defined therein, then “Retirement” shall have the meaning set forth in such Service Agreement, or (B) if the Grantee is not party to a Service Agreement immediately prior to such event and/or the Grantee’s Service Agreement does not define “Retirement” or a substantially equivalent term, then “Retirement”

shall mean the Grantee's termination of his or her Continuous Service with the Company and its Subsidiaries after attainment of age 65 or attainment of age 60 and completion of twenty (20) years of employment with the Company and/or a Subsidiary.

“**SEC**” means the U.S. Securities and Exchange Commission.

“**Securities Act**” means the Securities Act of 1933, as amended.

“**Service Agreement**” means, as of a particular date, any employment, consulting or similar service agreement (including without limitation a separation, severance or similar agreement if any) then in effect between the Grantee, on the one hand, and the Company or one of its Affiliates, on the other hand, as amended or supplemented through such date.

“**Shares Amount**” has the meaning set forth in the Partnership Agreement.

“**Subsidiary**” means any “subsidiary corporation” of the Company within the meaning of Section 424(f) of the Code.

“**Total Return**” means, for purposes of determining Index Relative TSR or Northeast Peer Relative TSR, the total stockholder return of the Company, an Index Company or a Northeast Peer Company, as applicable, computed using average total stockholder return data (prepared on a consistent basis across all companies) from the first day of the period being tested (using the Baseline Value as the starting stock price) through the last day of such period (using the Common Share Price among those calculated for every Averaging Period ending on a day within the period of ninety (90) consecutive days immediately preceding the Final Valuation Date that results in the highest percentile rank of the Company relative to the Index Companies and the Northeast Peer Companies, as applicable, as the ending stock price) and assuming contemporaneous reinvestment of dividends. To avoid double-counting, appropriate adjustments to Total Return shall be made to take into account all stock dividends, stock splits, reverse stock splits and the other similar events that occur during such period.

“**Transactional Change in Control**” means (A) a Change in Control described in clause (ii) of the definition thereof where the “person” or “group” makes a tender offer for Common Shares, or (B) a Change in Control described in clause (iii) of the definition thereof where the Company is not the Surviving Corporation; provided that if the applicable definition of “Change in Control” (or similar term) in the applicable Service Agreement does not track such clauses (ii) or (iii), then the term “Transactional Change in Control” shall mean a Change in Control meeting the substantive criteria set forth in such clauses, as reasonably determined in good faith by the Committee.

“**Transfer**” has the meaning set forth in Section 7.

“**TSR Performance Period**” means the period of time from January 12, 2022 to the earliest of (A) January 12, 2025; or (B) in the event of a Change in Control that is not a Transactional Change in Control, the date on which such Change in Control shall occur; or (C) in the event of a Transactional Change in Control and subject to the consummation of such Transactional Change in Control, the date of the Public Announcement of such Transactional Change in Control.

“Units” means all Partnership Units (as defined in the Partnership Agreement), including LTIP Units, with economic attributes substantially similar to Partnership Units as determined by the Committee that are outstanding or are issuable upon the conversion, exercise, exchange or redemption of any securities of any kind convertible, exercisable, exchangeable or redeemable for Partnership Units; provided that all Units that are not convertible into or exchangeable for Class A Units shall be excluded from the definition of “Units.”

3. LTIP Unit Award; Vesting; Change in Control.

(a) The Grantee is hereby granted this Award consisting of the number of LTIP Units equal to the sum of the Operational LTIP Units, the Index Relative TSR LTIP Units and the Northeast Peer Relative TSR LTIP Units set forth on Schedule A hereto (the “Award LTIP Units”), which (i) will be subject to forfeiture to the extent provided in this Section 3 and (ii) will be subject to vesting as provided in Section 3(q) hereof. The Award LTIP Units shall be eligible for vesting following a three-year performance period, except as otherwise provided in Section 4 hereof, based on a combination of (I) the Company’s operational performance over a one-year period (or a shorter period in certain circumstances as provided herein) as indicated by the calculations required by this Section 3 and (II) the Company’s total shareholder return over a three-year period (or a shorter period in certain circumstances as provided herein) as indicated by the calculations required by this Section 3. Vesting will occur at the times, in the amounts and upon the conditions set forth in this Section 3 and in Section 4, provided that, except as otherwise expressly set forth in this Agreement, the Continuous Service of the Grantee continues through and on each applicable vesting date.

(b) Operational Units. Subject to the provisions of Section 4 below, the portion of the Award consisting of Operational LTIP Units will initially be earned based on the Company’s achievement of certain operational performance metrics (the “Operational Performance Metrics”) during the Operational Performance Period. The Operational Performance Metrics, and relative percentages associated with such Operational Performance Metrics, are set forth in Section 1 of Schedule B, with each Operational Performance Metric being weighted as indicated below and utilizing linear interpolation for performance between levels. Following the end of the Operational Performance Period, the Committee will determine the “Initial Earned Operational Amount,” which equals the product of (i) the Operational LTIP Units multiplied by (ii) the percentage determined pursuant to the table set forth in Section 1 of Schedule B. The number of Operational LTIP Units ultimately earned will remain subject to adjustment based on Absolute TSR as set forth in Section 3(d) below.

Notwithstanding the foregoing, in the event that the Operational Performance Period ends earlier than it otherwise would have ended due to the occurrence of a Change in Control, all of the Operational Performance Metrics will be deemed to have been achieved at the target level and, as a result, the Initial Earned Operational Amount will equal 50% of the Operational LTIP Units set forth on Schedule A.

(c) As soon as reasonably practicable following the end of the Operational Performance Period, the Committee will in good faith determine the number of Operational LTIP Units that constitute the Initial Earned Operational Amount based upon the Company’s achievement of the Operational Performance Metrics set forth above. Upon such determination,

any portion of the Operational LTIP Units that can no longer be earned by the Grantee pursuant to the terms and conditions of this Agreement (i.e., the number of Operational LTIP Units set forth on Schedule A, if any, in excess of the Initial Earned Operational Amount) shall thereupon, and with no further action, be forfeited by the Grantee.

(d) Operational Unit TSR Modifier. Subject to Section 3(e) below, the number of Operational LTIP Units that are earned will equal the product of (i) the Initial Earned Operational Amount multiplied by (ii) the algebraic sum of 100% and the Operational Unit TSR Modifier determined in accordance with the table set forth in Section 2 of Schedule B based on Absolute TSR over the TSR Performance Period (with linear interpolation between levels).

(e) As soon as practicable following the end of the TSR Performance Period, the Committee will in good faith determine the Operational Unit TSR Modifier and the number of Operational LTIP Units earned by the Grantee pursuant to Section 3(d) above (the “**Earned Operational LTIP Units**”), which will equal the product of (i) the Initial Earned Operational Amount multiplied by (ii) the algebraic sum of 100% and the Operational Unit TSR Modifier. No Operational LTIP Units will vest until such determination of the Earned Operational LTIP Units.

(f) In the event that the TSR Performance Period ends earlier than it otherwise would have ended due to the occurrence of a Change in Control, the number of Earned Operational Units will be calculated pursuant to Section 3(d) based on Absolute TSR as of the date of such Change in Control, provided that the percentages set forth in the “Absolute TSR” column of the table set forth in Section 2 of Schedule B corresponding to “Medium” performance and “High” performance shall be prorated by dividing the applicable percentage by the number of whole and fractional years in the TSR Performance Period.

(g) Index Relative TSR LTIP Units. Subject to Section 3(i) below, the number of Index Relative TSR LTIP Units that are initially earned by the Grantee will be determined pursuant to the table set forth in Section 3 of Schedule B based on Index Relative TSR over the TSR Performance Period (with linear interpolation between levels).

(h) As soon as practicable following the end of the TSR Performance Period, the Committee will in good faith determine Index Relative TSR and the number of Index Relative TSR LTIP Units earned by the Grantee pursuant to Section 3(g) above (the “**Initial Earned Index Relative TSR Amount**”). The Initial Earned Index Relative TSR Amount will remain subject to adjustment based on Absolute TSR as set forth in Section 3(m) below.

(i) In the event that the TSR Performance Period ends earlier than it otherwise would have ended due to the occurrence of a Change in Control, the Initial Earned Index Relative TSR Amount shall equal the number of Index Relative TSR LTIP Units that would be earned pursuant to Section 3(g) based on Index Relative TSR as of the date of the Change in Control without proration of the number of Index Relative TSR LTIP Units earned.

(j) Northeast Peer Relative TSR LTIP Units. Subject to 3(l) below, the number of Northeast Peer Relative TSR LTIP Units that are initially earned by the Grantee will be

determined pursuant to the table set forth in Section 4 of Schedule B based on Northeast Peer Relative TSR over the TSR Performance Period (with linear interpolation between levels).

(k) As soon as practicable following the end of the TSR Performance Period, the Committee will in good faith determine the Northeast Peer Relative TSR and the number of Northeast Peer Relative TSR LTIP Units earned by the Grantee pursuant to Section 3(j) above (the “**Initial Earned Northeast Peer Relative TSR Amount**”). The Initial Earned Northeast Peer Relative TSR Amount will remain subject to adjustment based on Absolute TSR as set forth in Section 3(m) below.

(l) In the event that the TSR Performance Period ends earlier than it otherwise would have ended due to the occurrence of a Change in Control, the Initial Earned Northeast Peer Relative TSR Amount shall equal the number of Northeast Peer Relative TSR LTIP Units that would be earned pursuant to Section 3(j) based on Northeast Peer Relative TSR as of the date of the Change in Control without proration of the number of Northeast Peer Relative TSR LTIP Units earned.

(m) Relative Unit TSR Modifier. Subject to Section 3(n) below, the number of Index Relative TSR LTIP Units and Northeast Peer Relative TSR LTIP Units that are earned will equal the product of (i) the sum of (a) the Initial Earned Index Relative TSR Amount plus (b) the Initial Earned Northeast Peer Relative TSR Amount multiplied by (ii) the algebraic sum of 100% and the Relative Unit TSR Modifier determined in accordance with the table set forth in Section 5 of Schedule B based on Absolute TSR over the TSR Performance Period (with linear interpolation between levels).

(n) As soon as practicable following the end of the TSR Performance Period, the Committee will in good faith determine the Relative Unit TSR Modifier and the number of Index Relative TSR LTIP Units and Northeast Peer Relative TSR LTIP Units earned by the Grantee pursuant to Sections 3(g) and 3(j), respectively, above (the “**Earned Relative LTIP Units**”), which will equal the product of (i) the sum of (a) the Initial Earned Index Relative TSR Amount plus (b) the Initial Earned Northeast Peer Relative TSR Amount multiplied by (ii) the algebraic sum of 100% and the Relative Unit TSR Modifier. No Earned Relative LTIP Units will vest until such determination of the Earned Relative LTIP Units.

(o) In the event that the TSR Performance Period ends earlier than it otherwise would have ended due to the occurrence of a Change in Control, the number of Earned Relative Units will be calculated pursuant to Section 3(n) based on the Company’s Absolute TSR as of the date of such Change in Control, provided that the percentages set forth in the “Absolute TSR” column of the table set forth in Section 5 of Schedule B corresponding to “Medium” performance and “High” performance shall be prorated by dividing the applicable percentage by the number of whole and fractional years in the TSR Performance Period.

(p) If the Grantee earns any Award LTIP Units as of the Final Valuation Date pursuant to the calculations set forth in Sections 3(b)-(o) hereof (the “**Earned Performance LTIP Units**”), then, as of the date on which such Award LTIP Units are earned, the Grantee will also earn an additional number of Award LTIP Units equal to the sum of the following

calculations, which will be performed by the Committee (the “**Earned Distribution LTIP Units**”):

- (I) For each Dividend Payment between the Effective Date and the date as of which such Earned Performance LTIP units are earned, calculate the following number of additional Award LTIP Units:

$$\frac{(W*X)}{Z}$$

Where:

W = the sum of (i) the number of Earned Performance LTIP Units earned as of the Final Valuation Date pursuant to Sections 3(b)-(o) hereof, minus (ii) the number of Non-Adjustable Operational LTIP Units, if any, plus (iii) any Earned Distribution LTIP Units earned for any prior Dividend Payment, (iv) appropriately adjusted to the extent that the Shares Amount for one partnership Unit is greater or less than one Common Share;

X = 90% of the Dividend Payment; and

Z = The Ex-Dividend Common Share Price on the “ex-dividend” date for such Dividend Payment.

- (II) Add all the amounts calculated pursuant to (I) above together.

The Earned Distribution LTIP Units shall be added to the sum of the Earned Performance LTIP Units (the “**Earned LTIP Units**”) and be subject to vesting pursuant to Section 3(q) hereof and to all of the provisions of Section 4 hereof applicable to the other Award LTIP Units that have been earned pursuant to the calculations set forth in Sections 3(b)-(o) hereof. If the total number of Earned LTIP Units is less than the number of Award LTIP Units initially issued to the Grantee, then, immediately following the calculations set forth in this Section 3(p), the amount of such excess (i.e., the difference obtained by subtracting the total number of Earned LTIP Units from the total number of Award LTIP Units) shall thereupon, and with no further action, be forfeited by the Grantee (for the avoidance of doubt, forfeited Award LTIP Units may be, as applicable, Operational LTIP Units, Index Relative TSR LTIP Units and/or Northeast Peer Relative TSR LTIP Units that were not earned based on the calculations set forth in Section 3(b)-(o) hereof, after determination of this number of Earned Distribution LTIP Units pursuant to this Section 3(p)). If the determination of the number of Earned Distribution LTIP Units pursuant to this Section 3(p) causes the total number of Earned LTIP Units to be greater than the number of Award LTIP Units previously issued to the Grantee, then, upon the performance of the calculations set forth in this Section 3(p): (A) the Company shall cause the Partnership to issue to the Grantee, as of the Final Valuation Date, a number of additional LTIP Units equal to the difference; (B) such additional LTIP Units shall be added to the Award LTIP Units previously issued, if any, and thereby become part of this Award; (C) the Company and the Partnership shall take such corporate and Partnership action as is necessary to accomplish the grant of such additional LTIP Units; and (D) thereafter the term Award LTIP Units will refer collectively to

the Award LTIP Units, if any, issued prior to such additional grant plus such additional LTIP Units; provided that such issuance will be subject to the Grantee executing and delivering such documents, comparable to the documents executed and delivered in connection with this Agreement, as the Company and/or the Partnership may reasonably request in order to comply with all applicable legal requirements, including, without limitation, federal and state securities laws.

(g) The Earned LTIP Units, if any, shall become vested in the following amounts and at the following times, provided that the Continuous Service of the Grantee continues through and on the applicable vesting date or the accelerated vesting date provided in Section 4 hereof, as applicable:

- (i) fifty percent (50%) of the Earned LTIP Units shall become vested on January 12, 2025; and
- (ii) fifty percent (50%) of the Earned LTIP Units shall become vested on January 12, 2026.

To the extent that Schedule A provides for amounts or schedules of vesting that conflict with the provisions of this Section 3(g), the provisions of Schedule A will govern. If the number of the Earned LTIP Units has not yet been determined by the Committee on any vesting date set forth above, then the Earned LTIP Units will vest on the date of such determination; provided that, for avoidance of doubt, continued employment beyond the vesting date listed above will not be required in order for any such vesting to occur.

(r) Any Award LTIP Units that do not become vested pursuant to this Section 3 or Section 4 hereof shall, without payment of any consideration by the Partnership, automatically and without notice be forfeited and be and become null and void, and neither the Grantee nor any of his or her successors, heirs, assigns, or personal representatives will thereafter have any further rights or interests in such unvested Award LTIP Units.

(s) Upon the occurrence of a Change in Control and the termination of employment of the Grantee with the Company or its Affiliates within twenty-four (24) months of such Change in Control by the Company (or its successor) without Cause or by the Grantee with Good Reason, then the Award LTIP Units that have been earned based on performance as determined pursuant to this Section 3 shall vest immediately (except to the extent that Award LTIP Units have been previously forfeited).

(t) In the event of a Change in Control, the Committee will make any determinations and certifications required by this Agreement and any provisions necessary with respect to the lapse of forfeiture restrictions and/or acceleration of vesting of this Award within a period of time that enables (i) the Grantee to exercise election, voting or other rights in connection with such Change in Control on the same basis as a Class A Unit holder and (ii) the Company to take any action or make any deliveries or payments it is obligated to make hereunder or under the Partnership Agreement not later than the date of consummation of the Change in Control. For avoidance of doubt, in the event of a Change in Control, the performance of all calculations and actions pursuant to Sections 3(b)-3(o) hereof and the exercise of any election, voting or other

rights pursuant to this Section 3(t) shall be conditioned upon the final consummation of such Change in Control.

4. Termination of Grantee's Continuous Service; Death and Disability.

(a) If the Grantee is a party to a Service Agreement and his or her Continuous Service terminates, the provisions of Sections 4(b), 4(c), 4(d), 4(e), 4(f) and 4(g) hereof shall govern the treatment of the Grantee's Award LTIP Units exclusively, unless the Service Agreement contains provisions that expressly refer to this Section 4(a) and provides that those provisions of the Service Agreement shall instead govern the treatment of the Grantee's Award LTIP Units upon such termination. The foregoing sentence will be deemed an amendment to any applicable Service Agreement to the extent required to apply its terms consistently with this Section 4, such that, by way of illustration, any provisions of the Service Agreement with respect to accelerated vesting or payout or the lapse of forfeiture restrictions relating to the Grantee's incentive or other compensation awards in the event of certain types of termination of the Grantee's Continuous Service with the Company (such as, for example, termination at the end of the term, termination without Cause by the employer or termination for Good Reason by the employee) shall not be interpreted as requiring that any calculations set forth in Section 3 hereof be performed, or vesting occur with respect to this Award other than as specifically provided in this Section 4. In the event that an entity to which the Grantee provides services ceases to be an Affiliate of the Company, such action shall be deemed to be a termination of the Grantee's Continuous Service for purposes of this Agreement, provided that the Committee, in its sole and absolute discretion, may make provision in such circumstances for the lapse of forfeiture restrictions and/or accelerated vesting of some or all of the Grantee's unvested Award LTIP Units that have not previously been forfeited, effective immediately prior to such event, or determine that the Grantee's Continuous Service to the Company or any other of its Affiliates has not been terminated. Notwithstanding any of the foregoing, in the event of any conflict between the provisions of the Grantee's Service Agreement, if any, and the provisions of this Section 4 with respect to death or Disability, the provisions of such Service Agreement shall govern the treatment of the Grantee's Award LTIP Units in the event of death or Disability.

(b) In the event of termination of the Grantee's Continuous Service by (i) the Company without Cause, (ii) the Grantee for Good Reason, or (iii) the Grantee upon Retirement (each a "Qualified Termination") prior to the Final Valuation Date, then the Grantee will not forfeit the Award LTIP Units upon such termination, but the following provisions of this Section 4(b) shall modify the calculations required to determine the Earned LTIP Units and/or the vesting of the Earned LTIP Units, as applicable, with respect to the Grantee only:

(i) the calculations provided in Sections 3(b)-3(o) hereof shall be performed as of the Final Valuation Date as if the Qualified Termination had not occurred; and

(ii) the Grantee's Earned LTIP Units shall no longer be subject to forfeiture pursuant to Section 3(r) hereof; provided that, notwithstanding that no Continuous Service requirement pursuant to Section 3(q) hereof will apply to the Grantee after the effective date of a Qualified Termination, the Grantee will not have the right to Transfer (as defined in Section 7 hereof) his or her Award LTIP Units or request redemption of his or her Award Partnership Units under the Partnership Agreement until such dates as of which his or her Earned LTIP Units would have

become vested pursuant to Section 3(q) hereof absent a Qualified Termination. For the avoidance of doubt, the purpose of this Section 4(b)(ii) is to prevent a situation where grantees of 2022 PB LTIP awards who have had a Qualified Termination would be able to realize the value of their Award LTIP Units or Award Partnership Units (through Transfer or redemption) before other grantees of 2022 PB LTIP awards whose Continuous Service continues through the applicable vesting dates set forth in Section 3(q) hereof.

(c) In the event of Qualified Termination on or after the Final Valuation Date, then all of the Grantee's unvested Award LTIP Units that have not previously been forfeited pursuant to the calculations set forth in Sections 3(b)-3(o) hereof, but remain subject to time-based vesting pursuant to Section 3(q) hereof as of the time of such Qualified Termination shall no longer be subject to forfeiture pursuant to Section 3(r) hereof; provided that, notwithstanding that no Continuous Service requirement pursuant to Section 3(q) hereof will apply to the Grantee after the effective date of a Qualified Termination, the Grantee will not have the right to Transfer (as defined in Section 7 hereof) his or her Award LTIP Units or request redemption of his or her Award Partnership Units under the Partnership Agreement until such dates as of which his or her Earned LTIP Units would have become vested pursuant to Section 3(q) absent a Qualified Termination. For the avoidance of doubt, the purpose of this Section 4(c) is to prevent a situation where grantees of 2022 PB LTIP awards who have had a Qualified Termination would be able to realize the value of their Award LTIP Units or Award Partnership Units (through Transfer or redemption) before other grantees of 2022 PB LTIP awards whose Continuous Service continues through the applicable vesting dates set forth in Section 3(q) hereof.

(d) Notwithstanding the foregoing, in the event any payment to be made hereunder after giving effect to this Section 4 is determined to constitute "nonqualified deferred compensation" subject to Section 409A of the Code, then, to the extent the Grantee is a "specified employee" under Section 409A of the Code subject to the six-month delay thereunder, any such payments to be made during the six-month period commencing on the Grantee's "separation from service" (as defined in Section 409A of the Code) shall be delayed until the expiration of such six-month period.

(e) In the event of a termination of the Grantee's Continuous Service as a result of his or her death or Disability prior to the Final Valuation Date, the Grantee will not forfeit the Award LTIP Units, but the following provisions of this Section 4(e) shall apply:

(i) the calculations provided in Sections 3(b)-3(o) hereof shall be performed as of the Final Valuation Date as if the Grantee's death or Disability had not occurred; and

(ii) 100% of the Grantee's Earned LTIP Units shall no longer be subject to forfeiture pursuant to Section 3(r) hereof and shall automatically and immediately vest as of the Final Valuation Date.

(f) In the event of a termination of the Grantee's Continuous Service as a result of his or her death or Disability after the Final Valuation Date, 100% of the Grantee's Earned LTIP Units shall no longer be subject to forfeiture pursuant to Section 3(r) hereof and shall automatically and immediately vest as of such termination date.

(g) In the event of a termination of the Grantee's Continuous Service other than a Qualified Termination or by reason of death or Disability, all Award LTIP Units except for those that, as of the date at such termination, both (i) have been earned pursuant to the calculations set forth in Sections 3(b)-(o) hereof, and (ii) have vested pursuant to Section 3(q) hereof shall, without payment of any consideration by the Partnership, automatically and without notice terminate, be forfeited and be and become null and void, and neither the Grantee nor any of his or her successors, heirs, assigns, or personal representatives will thereafter have any further rights or interests in such Award LTIP Units.

5. Payments by Award Recipients; Status as Partner. No amount shall be payable to the Company or the Partnership by the Grantee at any time in respect of this Agreement. The Grantee shall have no rights with respect to this Agreement (and the Award evidenced hereby) unless he or she shall have accepted this Agreement by (i) signing and delivering to the Partnership a copy of this Agreement and (ii) unless the Grantee is already a Partner (as defined in the Partnership Agreement), signing, as a Limited Partner, and delivering to the Partnership a counterpart signature page to the Partnership Agreement (attached hereto as Exhibit A). Upon acceptance of this Agreement by the Grantee, the Partnership Agreement shall be amended to reflect the issuance to the Grantee of the LTIP Units so accepted. Thereupon, the Grantee shall have all the rights of a Limited Partner of the Partnership with respect to the number of LTIP Units specified on Schedule A hereto, as set forth in the Partnership Agreement, subject, however, to the restrictions and conditions specified herein. Award LTIP Units constitute and shall be treated for all purposes as the property of the Grantee, subject to the terms of this Agreement and the Partnership Agreement.

6. Distributions.

(a) The holder of the Award LTIP Units shall be entitled to receive distributions with respect to such Award LTIP Units to the extent provided for in the Partnership Agreement as modified hereby.

(b) The Distribution Participation Date (as defined in the Partnership Agreement) for any Award LTIP Unit (to the extent provided in Section 6(c) below) shall be (i) the date as of which the Initial Earned Operational Amount is determined with respect to a number of Operational LTIP Units equal to the product of (A) the Initial Earned Operational Amount multiplied by (B) the algebraic sum of 100% and the Operational Unit TSR Modifier corresponding with "Low" performance as set forth in Section 2 of Schedule B hereto (the "Non-Adjustable Operational LTIP Units") and (ii) the date as of which such Award LTIP Unit is determined to be an Earned LTIP Unit with respect to all other Award LTIP Units, except that if the provisions of Section 4(b) hereof become applicable to the Grantee, the Distribution Participation Date for the Grantee shall be accelerated to the date the calculations provided in Section 3 hereof are performed with respect to the Award LTIP Units that are no longer subject to forfeiture pursuant to Section 4(b) hereof.

(c) Following each applicable Distribution Participation Date, the Grantee shall be entitled to receive one hundred percent (100%) of the same distributions payable with respect to Class A Units on the Award LTIP Units.

(d) Each Award LTIP Unit shall be considered a Special LTIP Unit (as defined in the Partnership Agreement) and as such the: (i) LTIP Unit Initial Sharing Percentage (as defined in the Partnership Agreement) shall be ten percent (10%) and (ii) Award LTIP Units shall not be entitled to receive distributions prior to the applicable Distribution Participation Date. On the applicable Distribution Participation Date, Award LTIP Units shall be entitled to a Special LTIP Unit Distribution (as defined in the Partnership Agreement) to the extent provided in the Partnership Agreement. The Distribution Measurement Date (as defined in the Partnership Agreement) with respect to the Award LTIP Units shall be the Effective Date and all of the Award LTIP Units granted pursuant to this Agreement shall be deemed to have been issued as part of the Same Award (as defined in the Partnership Agreement). In addition, on the Distribution Participation Date for each Non-Adjustable Operational LTIP Unit, the Employer Entity will pay the Grantee, for each such Non-Adjustable Operational LTIP Unit, an amount in cash equal to (i) the product of (A) the per share amount of all dividends declared with respect to the Common Shares with a record date on or after the first day of the TSR Performance Period and before the Distribution Participation Date for such Non-Adjustable Operational LTIP Unit (other than those with respect to which an adjustment was made pursuant to Section 8 hereof) multiplied by (B) the Conversion Factor (as defined in the Partnership Agreement) less (ii) the amount of the Special LTIP Unit Distribution (as defined in the Partnership Agreement) payable with respect to such Non-Adjustable Operational LTIP Unit.

(e) For the avoidance of doubt, after the applicable Distribution Participation Date, Award LTIP Units, both vested and (until and unless forfeited pursuant to Section 3(r) and 4(g) hereof) unvested, shall be entitled to receive the same distributions payable with respect to Class A Units if the payment date for such distributions is after the applicable Distribution Participation Date, even though the record date for such distributions is before the applicable Distribution Participation Date.

(f) All distributions paid with respect to Award LTIP Units, whether at the rate provided in Sections 6(d) hereof prior to the applicable Distribution Participation Date or at the rate provided in Sections 6(c) hereof after the applicable Distribution Participation Date, shall be fully vested and non-forfeitable when paid, regardless of the fact that the underlying LTIP Units may be subject to forfeiture or have not yet become, or never become, vested pursuant to Sections 3 and 4 hereof.

7. Restrictions on Transfer. Except as otherwise permitted by the Committee, none of the Award LTIP Units granted hereunder nor any of the Partnership Units of the Partnership into which such Award LTIP Units may be converted (the “**Award Partnership Units**”) shall be sold, assigned, transferred, pledged, hypothecated, given away or in any other manner disposed of, encumbered, whether voluntarily or by operation of law (each such action a “**Transfer**”), and the Redemption Right (as defined in the Partnership Agreement) may not be exercised with respect to the Award Partnership Units, provided that, at any time after the date that (a) is [three][one] year[s] after the Award LTIP Units have become vested and (b) is at least two (2) years after the Effective Date, (i) Award LTIP Units or Award Partnership Units may be Transferred to the Grantee’s Family Members by gift or pursuant to domestic relations order in settlement of marital property rights; (ii) Award LTIP Units or Award Partnership Units may be Transferred to an entity in which fifty percent (50%) of the voting interests are owned by Family Members (or the Grantee) in exchange for an interest in such entity; and (iii) the Redemption

Right may be exercised with respect to Award Partnership Units, and Award Partnership Units may be Transferred to the Partnership or the Company in connection with the exercise of the Redemption Right, in accordance with and to the extent otherwise permitted by the terms of the Partnership Agreement. Additionally, the transferee must agree in writing with the Company and the Partnership to be bound by all the terms and conditions of this Agreement and that subsequent transfers shall be prohibited except those in accordance with this Section 7 and all Transfers of Award LTIP Units or Award Partnership Units must be in compliance with all applicable securities laws (including, without limitation, the Securities Act) and the applicable terms and conditions of the Partnership Agreement. In connection with any Transfer of Award LTIP Units or Award Partnership Units, the Partnership may require the Grantee to provide an opinion of counsel, satisfactory to the Partnership, that such Transfer is in compliance with all federal and state securities laws (including, without limitation, the Securities Act). Any attempted Transfer of Award LTIP Units or Award Partnership Units not in accordance with the terms and conditions of this Section 7 shall be null and void, and the Partnership shall not reflect on its records any change in record ownership of any Award LTIP Units or Award Partnership Units as a result of any such Transfer, shall otherwise refuse to recognize any such Transfer and shall not in any way give effect to any such Transfer of any Award LTIP Units or Award Partnership Units. Except as provided expressly in this Section 7, this Agreement is personal to the Grantee, is non-assignable and is not transferable in any manner, by operation of law or otherwise, other than by will or the laws of descent and distribution.

8. Changes in Capital Structure. If (i) the Company shall at any time be involved in a merger, consolidation, dissolution, liquidation, reorganization, exchange of shares, sale of all or substantially all of the assets or stock of the Company, spin-off of a Subsidiary, business unit or significant portion of its assets or other transaction similar thereto, (ii) any stock dividend, stock split, reverse stock split, stock combination, reclassification, recapitalization, significant repurchases of stock, or other similar change in the capital stock of the Company or any other event that constitutes a change in stock under the terms of the Share Plan shall occur, (iii) any extraordinary dividend or other distribution to holders of Common Shares or Class A Units shall be declared and paid other than in the ordinary course, or (iv) any other event shall occur that in each case in the good faith judgment of the Committee necessitates action by way of appropriate equitable or proportionate adjustment in the terms of this Award, this Agreement or the Award LTIP Units to avoid distortion in the value of this Award, then the Committee shall take such action as it deems necessary to maintain the Grantee's rights hereunder so that they are substantially proportionate to the rights existing under this Award and the terms of the Award LTIP Units prior to such event, including, without limitation: (A) interpretations of or modifications to any defined term in this Agreement; (B) adjustments in any calculations provided for in this Agreement, and (C) substitution of other awards under the Share Plan or otherwise.

9. Miscellaneous.

(a) Amendment. This Agreement may be amended or modified only with the consent of the Company, the Partnership and the Employer Entity acting through the Committee; provided that any such amendment or modification materially and adversely affecting the rights of the Grantee hereunder must be consented to by the Grantee to be effective as against him. Notwithstanding the foregoing, this Agreement may be amended in writing signed only by the

Company, the Partnership and the Employer Entity to correct any errors or ambiguities in this Agreement and/or to make such changes that do not materially adversely affect the Grantee's rights hereunder. This grant shall in no way affect the Grantee's participation or benefits under any other plan or benefit program maintained or provided by the Company or the Partnership.

(b) Incorporation of Share Plan; Committee Determinations. The provisions of the Share Plan are hereby incorporated by reference as if set forth herein. In the event of a conflict between this Agreement and the Share Plan, the Share Plan shall govern. The Committee will make the determinations and certifications required by this Award as promptly as reasonably practicable following the occurrence of the event or events necessitating such determinations or certifications.

(c) Status of Award LTIP Units under the Share Plan. This Award and the other 2022 PB LTIP awards constitute awards of OP Units (as defined in the 2019 Plan) by the Company under the 2019 Plan. The Award LTIP Units are interests in the Partnership. The number of Common Shares reserved for issuance under the Share Plan underlying outstanding Award LTIP Units will be determined by the Committee in light of all applicable circumstances, including calculations made or to be made under Section 3 hereof, vesting, capital account allocations and/or balances under the Partnership Agreement, the conversion ratio in effect between LTIP Units and Class A Units and the exchange ratio in effect between Class A Units and Common Shares. The Company will have the right at its option, as set forth in the Partnership Agreement, to issue Common Shares in exchange for Award Partnership Units in accordance with the Partnership Agreement, subject to certain limitations set forth in the Partnership Agreement, and such Common Shares, if issued, will be issued under the Share Plan. The Grantee must be eligible to receive the Award LTIP Units in compliance with applicable federal and state securities laws and to that effect is required to complete, execute and deliver certain covenants, representations and warranties (attached as Exhibit B). The Grantee acknowledges that the Grantee will have no right to approve or disapprove such determination by the Committee.

(d) Legend. The records of the Partnership evidencing the Award LTIP Units shall bear an appropriate legend, as determined by the Partnership in its sole discretion, to the effect that such Award LTIP Units are subject to restrictions as set forth herein, in the Share Plan, and in the Partnership Agreement.

(e) Compliance With Law. The Partnership and the Grantee will make reasonable efforts to comply with all applicable securities laws. In addition, notwithstanding any provision of this Agreement to the contrary, no Award LTIP Units will become vested or be paid at a time that such vesting or payment would result in a violation of any such law.

(f) Investment Representations; Registration. The Grantee hereby makes the covenants, representations and warranties set forth on Exhibit B attached hereto. All of such covenants, warranties and representations shall survive the execution and delivery of this Agreement by the Grantee. The Partnership will have no obligation to register under the Securities Act any Award LTIP Units or any other securities issued pursuant to this Agreement or upon conversion or exchange of Award LTIP Units. The Grantee agrees that any resale of the shares of Common Shares received upon the exchange of Units into which Award LTIP Units

may be converted shall not occur during the “blackout periods” forbidding sales of Company securities, as set forth in the then applicable Company employee manual or insider trading policy. In addition, any resale shall be made in compliance with the registration requirements of the Securities Act or an applicable exemption therefrom, including, without limitation, the exemption provided by Rule 144 promulgated thereunder (or any successor rule).

(g) Section 83(b) Election. In connection with each separate issuance of LTIP Units under this Award pursuant to Section 3 hereof the Grantee hereby agrees to make an election to include in gross income in the year of transfer the applicable Award LTIP Units pursuant to Section 83(b) of the Code substantially in the form attached hereto as Exhibit C and to supply the necessary information in accordance with the regulations promulgated thereunder. The Grantee agrees to file the election (or to permit the Partnership to file such election on the Grantee’s behalf) within thirty (30) days after the award of the 2022 PB LTIP awards hereunder with the IRS Service Center at which such Grantee files his personal income tax returns, and to file a copy of such election with the Grantee’s U.S. federal income tax return for the taxable year in which the 2022 PB LTIP awards are awarded to the Grantee.

(h) Severability. If, for any reason, any provision of this Agreement is held invalid, such invalidity shall not affect any other provision of this Agreement not so held invalid, and each such other provision shall to the full extent consistent with law continue in full force and effect. If any provision of this Agreement shall be held invalid in part, such invalidity shall in no way affect the rest of such provision not held so invalid, and the rest of such provision, together with all other provisions of this Agreement, shall to the full extent consistent with law continue in full force and effect.

(i) Governing Law. This Agreement is made under, and will be construed in accordance with, the laws of State of New York, without giving effect to the principles of conflict of laws of such State.

(j) No Obligation to Continue Position as an Employee, Consultant or Advisor. Neither the Company nor any Affiliate is obligated by or as a result of this Agreement to continue to have the Grantee as an employee, consultant or advisor and this Agreement shall not interfere in any way with the right of the Company or any Affiliate to terminate the Grantee’s Continuous Service at any time.

(k) Notices. Any notice to be given to the Company shall be addressed to the Secretary of the Company at 888 Seventh Avenue, New York, New York 10019 and any notice to be given the Grantee shall be addressed to the Grantee at the Grantee’s address as it appears on the employment records of the Company, or at such other address as the Company or the Grantee may hereafter designate in writing to the other.

(l) Withholding and Taxes. No later than the date as of which an amount first becomes includible in the gross income of the Grantee for income tax purposes or subject to the Federal Insurance Contributions Act withholding with respect to this Award, the Grantee will pay to the Company or, if appropriate, any of its Affiliates, or make arrangements satisfactory to the Committee regarding the payment of, any United States federal, state or local or foreign taxes of any kind required by law to be withheld with respect to such amount; provided, however, that

if any Award LTIP Units or Award Partnership Units are withheld (or returned), the number of Award LTIP Units or Award Partnership Units so withheld (or returned) shall be limited to a number which has a fair market value on the date of withholding equal to the aggregate amount of such liabilities based on the minimum statutory withholding rates for federal, state, local and foreign income tax and payroll tax purposes that are applicable to such supplemental taxable income. The obligations of the Company under this Agreement will be conditional on such payment or arrangements, and the Company and its Affiliates shall, to the extent permitted by law, have the right to deduct any such taxes from any payment otherwise due to the Grantee.

(m) Headings. The headings of paragraphs hereof are included solely for convenience of reference and shall not control the meaning or interpretation of any of the provisions of this Agreement.

(n) Counterparts. This Agreement may be executed in multiple counterparts with the same effect as if each of the signing parties had signed the same document. All counterparts shall be construed together and constitute the same instrument.

(o) Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties hereto and any successors to the Company and the Partnership, on the one hand, and any successors to the Grantee, on the other hand, by will or the laws of descent and distribution, but this Agreement shall not otherwise be assignable or otherwise subject to hypothecation by the Grantee.

(p) Section 409A. This Agreement shall be construed, administered and interpreted in accordance with a good faith interpretation of Section 409A of the Code. Any provision of this Agreement that is inconsistent with Section 409A of the Code, or that may result in penalties under Section 409A of the Code, shall be amended, with the reasonable cooperation of the Grantee, the Company and the Partnership, to the extent necessary to exempt it from, or bring it into compliance with Section 409A of the Code.

[signature page follows]

IN WITNESS WHEREOF, the undersigned have caused this Award Agreement to be executed as of the 12th day of January, 2022.

VORNADO REALTY TRUST

By: _____

Name: Michael Franco

Title: President and Chief Financial Officer

VORNADO REALTY L.P.

By: Vornado Realty Trust, its general partner

By: _____

Name: Michael Franco

Title: President and Chief Financial Officer of Vornado Realty Trust, sole General Partner of Vornado Realty L.P.

VORNADO MANAGEMENT CORPORATION

By: _____

Name: Michael Franco

Title: President and Chief Financial Officer

GRANTEE

Name:

EXHIBIT A

FORM OF LIMITED PARTNER SIGNATURE PAGE

The Grantee, desiring to become one of the within named Limited Partners of Vornado Realty L.P., hereby accepts all of the terms and conditions of (including, without limitation, the Section 15.11 “Power of Attorney” thereof), and becomes a party to, the Second Amended and Restated Agreement of Limited Partnership, dated as of October 20, 1997, of Vornado Realty L.P., as amended (the “**Partnership Agreement**”). The Grantee agrees that this signature page may be attached to any counterpart of the Partnership Agreement and further agrees as follows (where the term “**Limited Partner**” refers to the Grantee):

1. The Limited Partner hereby confirms that it has reviewed the terms of the Partnership Agreement and affirms and agrees that it is bound by each of the terms and conditions of the Partnership Agreement, including, without limitation, the provisions thereof relating to limitations and restrictions on the transfer of Partnership Units (as defined in the Partnership Agreement).

2. The Limited Partner hereby confirms that it is acquiring the Partnership Units for its own account as principal, for investment and not with a view to resale or distribution, and that the Partnership Units may not be transferred or otherwise disposed of by the Limited Partner otherwise than in a transaction pursuant to a registration statement filed by the Partnership (which it has no obligation to file) or that is exempt from the registration requirements of the Securities Act of 1933, as amended (the “**Securities Act**”), and all applicable state and foreign securities laws, and the General Partner (as defined in the Partnership Agreement) may refuse to transfer any Partnership Units as to which evidence of such registration or exemption from registration satisfactory to the General Partner is not provided to it, which evidence may include the requirement of a legal opinion regarding the exemption from such registration. If the General Partner delivers to the Limited Partner Common Shares of Beneficial Interest of the General Partner (“**Common Shares**”) upon redemption of any Partnership Units, the Common Shares will be acquired for the Limited Partner’s own account as principal, for investment and not with a view to resale or distribution, and the Common Shares may not be transferred or otherwise disposed of by the Limited Partner otherwise than in a transaction pursuant to a registration statement filed by the General Partner with respect to such Common Shares (which it has no obligation under the Partnership Agreement to file) or that is exempt from the registration requirements of the Securities Act and all applicable state and foreign securities laws, and the General Partner may refuse to transfer any Common Shares as to which evidence of such registration or exemption from such registration satisfactory to the General Partner is not provided to it, which evidence may include the requirement of a legal opinion regarding the exemption from such registration.

3. The Limited Partner hereby affirms that it has appointed the General Partner, any Liquidator (as defined in the Partnership Agreement) and authorized officers and attorneys-in-fact of each, and each of those acting singly, in each case with full power of substitution, as its true and lawful agent and attorney-in-fact, with full power and authority in its name, place and stead, in accordance with Section 15.11 of the Partnership Agreement, which section is hereby incorporated by reference. The foregoing power of attorney is hereby declared to be irrevocable

and a power coupled with an interest, and it shall survive and not be affected by the death, incompetency, dissolution, disability, incapacity, bankruptcy or termination of the Limited Partner and shall extend to the Limited Partner's heirs, executors, administrators, legal representatives, successors and assigns.

4. The Limited Partner hereby confirms that, notwithstanding any provisions of the Partnership Agreement to the contrary, the Award LTIP Units shall not be redeemable by the Limited Partner pursuant to Section 8.6 of the Partnership Agreement.

5. (a) The Limited Partner hereby irrevocably consents in advance to any amendment to the Partnership Agreement, as may be recommended by the General Partner, intended to avoid the Partnership being treated as a publicly-traded partnership within the meaning of Section 7704 of the Internal Revenue Code, including, without limitation, (x) any amendment to the provisions of Section 8.6 of the Partnership Agreement intended to increase the waiting period between the delivery of a Notice of Redemption (as defined in the Partnership Agreement) and the Specified Redemption Date (as defined in the Partnership Agreement) and/or the Valuation Date (as defined in the Partnership Agreement) to up to sixty (60) days or (y) any other amendment to the Partnership Agreement intended to make the redemption and transfer provisions, with respect to certain redemptions and transfers, more similar to the provisions described in Treasury Regulations Section 1.7704-1(f).

(b) The Limited Partner hereby appoints the General Partner, any Liquidator and authorized officers and attorneys-in-fact of each, and each of those acting singly, in each case with full power of substitution, as its true and lawful agent and attorney-in-fact, with full power and authority in its name, place and stead, to execute and deliver any amendment referred to in the foregoing paragraph 5(a) on the Limited Partner's behalf. The foregoing power of attorney is hereby declared to be irrevocable and a power coupled with an interest, and it shall survive and not be affected by the death, incompetency, dissolution, disability, incapacity, bankruptcy or termination of the Limited Partner and shall extend to the Limited Partner's heirs, executors, administrators, legal representatives, successors and assigns.

6. The Limited Partner agrees that it will not transfer any interest in the Partnership Units (x) through (i) a national, non-U.S., regional, local or other securities exchange, or (ii) an over-the-counter market (including an interdealer quotation system that regularly disseminates firm buy or sell quotations by identified brokers or dealers by electronic means or otherwise) or (y) to or through (a) a person, such as a broker or dealer, that makes a market in, or regularly quotes prices for, interests in the Partnership or (b) a person that regularly makes available to the public (including customers or subscribers) bid or offer quotes with respect to any interests in the Partnership and stands ready to effect transactions at the quoted prices for itself or on behalf of others.

7. The Limited Partner acknowledges that the General Partner shall be a third party beneficiary of the representations, covenants and agreements set forth in Sections 4 and 6 hereof. The Limited Partner agrees that it will transfer, whether by assignment or otherwise, Partnership Units only to the General Partner or to transferees that provide the Partnership and the General Partner with the representations and covenants set forth in Sections 4 and 6 hereof.

8. This Acceptance shall be construed and enforced in accordance with and governed by the laws of the State of Delaware, without regard to the principles of conflicts of law.

Signature Line for Limited Partner:

Name: _____

Date: _____, 2022

Address of Limited Partner:

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EXHIBIT B

GRANTEE'S COVENANTS, REPRESENTATIONS AND WARRANTIES

The Grantee hereby represents, warrants and covenants as follows:

- (a) The Grantee has received and had an opportunity to review the following documents (the “**Background Documents**”):
 - (i) The Company’s latest Annual Report to Stockholders;
 - (ii) The Company’s Proxy Statement for its most recent Annual Meeting of Stockholders;
 - (iii) The Company’s Report on Form 10-K for the fiscal year most recently ended;
 - (iv) The Company’s Form 10-Q, if any, for the most recently ended quarter if one has been filed by the Company with the Securities and Exchange Commission since the filing of the Form 10-K described in clause (iii) above;
 - (v) Each of the Company’s Current Report(s) on Form 8-K, if any, filed since the end of the fiscal year most recently ended for which a Form 10-K has been filed by the Company;
 - (vi) The Partnership Agreement;
 - (vii) The Share Plan; and
 - (viii) The Company’s Declaration of Trust, as amended.

The Grantee also acknowledges that any delivery of the Background Documents and other information relating to the Company and the Partnership prior to the determination by the Partnership of the suitability of the Grantee as a holder of LTIP Units shall not constitute an offer of LTIP Units until such determination of suitability shall be made.

- (b) The Grantee hereby represents and warrants that

- (i) The Grantee either (A) is an “accredited investor” as defined in Rule 501(a) under the Securities Act of 1933, as amended (the “**Securities Act**”), or (B) by reason of the business and financial experience of the Grantee, together with the business and financial experience of those persons, if any, retained by the Grantee to represent or advise him with respect to the grant to him of LTIP Units, the potential conversion of LTIP Units into Class A Units of the Partnership (“**Common Units**”) and the potential redemption of such Common Units for the Company’s Common Shares (“**REIT Shares**”), has such knowledge, sophistication and experience in financial and business matters and in making investment decisions of this type that the Grantee (I) is capable of evaluating the merits and risks of an investment in the Partnership and potential investment in the Company and of making an informed investment decision, (II) is

capable of protecting his own interest or has engaged representatives or advisors to assist him in protecting his interests, and (III) is capable of bearing the economic risk of such investment.

(ii) The Grantee, after due inquiry, hereby certifies that for purposes of Rule 506(d) and Rule 506(e) of the Securities Act, he is not subject to any felony or misdemeanor conviction related to any securities matter; any federal or state order, judgment, decree or injunction related to any securities, insurance, banking or U.S. Postal Service matter; any SEC disciplinary or cease and desist order; or any suspension, expulsion or bar related to a registered national securities exchange, national or affiliated securities association or member thereof, whether it occurred or was issued before, on or after September 23, 2013, and agrees that he will notify the Company immediately upon becoming aware that the foregoing is not, or is no longer, complete and accurate in every material respect, including as a result of events occurring after the date hereof.

(iii) The Grantee understands that (A) the Grantee is responsible for consulting his own tax advisors with respect to the application of the U.S. federal income tax laws, and the tax laws of any state, local or other taxing jurisdiction to which the Grantee is or by reason of the award of LTIP Units may become subject, to his particular situation; (B) the Grantee has not received or relied upon business or tax advice from the Company, the Partnership or any of their respective employees, agents, consultants or advisors, in their capacity as such; (C) the Grantee provides or will provide services to the Partnership on a regular basis and in such capacity has access to such information, and has such experience of and involvement in the business and operations of the Partnership, as the Grantee believes to be necessary and appropriate to make an informed decision to accept this Award of LTIP Units; and (D) an investment in the Partnership and/or the Company involves substantial risks. The Grantee has been given the opportunity to make a thorough investigation of matters relevant to the LTIP Units and has been furnished with, and has reviewed and understands, materials relating to the Partnership and the Company and their respective activities (including, but not limited to, the Background Documents). The Grantee has been afforded the opportunity to obtain any additional information (including any exhibits to the Background Documents) deemed necessary by the Grantee to verify the accuracy of information conveyed to the Grantee. The Grantee confirms that all documents, records, and books pertaining to his receipt of LTIP Units which were requested by the Grantee have been made available or delivered to the Grantee. The Grantee has had an opportunity to ask questions of and receive answers from the Partnership and the Company, or from a person or persons acting on their behalf, concerning the terms and conditions of the LTIP Units. **The Grantee has relied upon, and is making its decision solely upon, the Background Documents and other written information provided to the Grantee by the Partnership or the Company.**

(iv) The LTIP Units to be issued, the Common Units issuable upon conversion of the LTIP Units and any REIT Shares issued in connection with the redemption of any such Common Units will be acquired for the account of the Grantee for investment only and not with a current view to, or with any intention of, a distribution or resale thereof, in whole or in part, or the grant of any participation therein, without prejudice, however, to the Grantee's right (subject to the terms of the LTIP Units, the Share Plan and this Agreement) at all times to sell or otherwise dispose of all or any part of his LTIP Units, Common Units or REIT Shares in compliance with the Securities Act, and applicable state securities laws, and subject, nevertheless, to the disposition of his assets being at all times within his control.

(v) The Grantee acknowledges that (A) neither the LTIP Units to be issued, nor the Common Units issuable upon conversion of the LTIP Units, have been registered under the Securities Act or state securities laws by reason of a specific exemption or exemptions from registration under the Securities Act and applicable state securities laws and, if such LTIP Units or Common Units are represented by certificates, such certificates will bear a legend to such effect, (B) the reliance by the Partnership and the Company on such exemptions is predicated in part on the accuracy and completeness of the representations and warranties of the Grantee contained herein, (C) such LTIP Units or Common Units, therefore, cannot be resold unless registered under the Securities Act and applicable state securities laws, or unless an exemption from registration is available, (D) there is no public market for such LTIP Units and Common Units and (E) neither the Partnership nor the Company has any obligation or intention to register such LTIP Units or the Common Units issuable upon conversion of the LTIP Units under the Securities Act or any state securities laws or to take any action that would make available any exemption from the registration requirements of such laws, except, that, upon the redemption of the Common Units for REIT Shares, the Company may issue such REIT Shares under the Share Plan and pursuant to a Registration Statement on Form S-8 under the Securities Act, to the extent that (I) the Grantee is eligible to receive such REIT Shares under the Share Plan at the time of such issuance, (II) the Company has filed a Form S-8 Registration Statement with the Securities and Exchange Commission registering the issuance of such REIT Shares and (III) such Form S-8 is effective at the time of the issuance of such REIT Shares. The Grantee hereby acknowledges that because of the restrictions on transfer or assignment of such LTIP Units acquired hereby and the Common Units issuable upon conversion of the LTIP Units which are set forth in the Partnership Agreement or this Agreement, the Grantee may have to bear the economic risk of his ownership of the LTIP Units acquired hereby and the Common Units issuable upon conversion of the LTIP Units for an indefinite period of time.

(vi) The Grantee has determined that the LTIP Units are a suitable investment for the Grantee.

(vii) No representations or warranties have been made to the Grantee by the Partnership or the Company, or any officer, trustee, shareholder, agent, or Affiliate of any of them, and the Grantee has received no information relating to an investment in the Partnership or the LTIP Units except the information specified in paragraph (b) above.

(c) So long as the Grantee holds any LTIP Units, the Grantee shall disclose to the Partnership in writing such information as may be reasonably requested with respect to ownership of LTIP Units as the Partnership may deem reasonably necessary to ascertain and to establish compliance with provisions of the Code, applicable to the Partnership or to comply with requirements of any other appropriate taxing authority.

(d) The address set forth on the signature page of this Agreement is the address of the Grantee's principal residence, and the Grantee has no present intention of becoming a resident of any country, state or jurisdiction other than the country and state in which such residence is sited.

SCHEDULE A TO 2022 PERFORMANCE-BASED LTIP UNIT AWARD AGREEMENT

Date of Award Agreement:	[_____] [__], 2022
Name of Grantee:	
Number of LTIP Units Subject to Grant:	
Operational LTIP Units:	
Index Relative TSR LTIP Units:	
Northeast Peer Relative TSR LTIP Units:	
Grant Date:	[_____] [__], 2022

Initials of Company representative: _____

Initials of Grantee: _____

All of the following are subsidiaries of both Vornado Realty Trust and Vornado Realty, L.P. as of December 31, 2021, except Vornado Realty, L.P. is a subsidiary of only Vornado Realty Trust.

VORNADO REALTY TRUST AND VORNADO REALTY L.P.
FORM 10-K
SUBSIDIARIES OF THE REGISTRANT
AS OF DECEMBER 31, 2021

Name of Subsidiary	State of Organization
11 East 68th Street LLC	Delaware
11 East 68th TRS LLC	Delaware
1290 Management II, LLC	Delaware
131 West 33rd Street Owner LLC	Delaware
137 West 33rd Street Owner LLC	Delaware
138-142 West 32nd EAT LLC	Delaware
144-150 West 34th Street EAT LLC	Delaware
144-150 West 34th Street Owner II LLC	Delaware
148 Spring Street, LLC	Delaware
150 East 58th Garage LLC	Delaware
150 East 58th Street, L.L.C.	New York
150 Spring Street LLC	Delaware
1535 Broadway Holdings II LLC	Delaware
1535 Broadway LLC	Delaware
1535 Broadway Sign LLC	Delaware
1535/1540 Broadway Holdings LLC	Delaware
1535/1540 Broadway TRS LLC	Delaware
1540 Broadway Garage LLC	Delaware
1540 Broadway Holdings II LLC	Delaware
1540 Broadway LLC	Delaware
1540 Broadway Sign LLC	Delaware
1800 Park REIT LLC	Delaware
201 East 66th Street LLC	New York
220 CPS Garage LLC	Delaware
220 CPS Tower Club Corp	New York
265 West 34th Street Owner LLC	Delaware
280 Park Administration LLC	Delaware
280 Park Cleaning LLC	Delaware
280 Park Holdings LLC	Delaware
280 Park Junior Mezzanine LLC	Delaware
280 Park Management LLC	Delaware
280 Park REIT LLC	Delaware
280 Park Senior Mezzanine LLC	Delaware
280 Park Venture LLC	Delaware
29 West 57th Street Owner LLC	Delaware
304-306 Canal Street LLC	Delaware
31 West 57th Street Owner LLC	Delaware
334 Canal Street LLC	Delaware
350 Park EAT LLC	Delaware

350 Park FC Lessee LLC	Delaware
4 USS LLC	Delaware
40 East 14 Realty Associates, L.L.C.	New York
40 Fulton Street LLC	New York
401 Commercial L.P.	Delaware
401 Commercial Son II LLC	Delaware
401 Commercial Son LLC	Delaware
401 General Partner, L.L.C.	Delaware
401 Hotel General Partner, L.L.C.	Delaware
401 Hotel REIT, LLC	Delaware
401 Hotel TRS, Inc.	Delaware
401 Hotel, L.P.	Delaware
408 West 15th Street Owner LLC	Delaware
480-486 Broadway, LLC	Delaware
486 8th Avenue Owner LLC	Delaware
488 Eighth Avenue Owner LLC	Delaware
49 West 57th Street Owner LLC	Delaware
510 Fifth Avenue LLC	Delaware
527 West Kinzie LLC	Delaware
58 Central Park II LLC	Delaware
58 Central Park III LLC	Delaware
58 Central Park LLC	Delaware
61 Ninth Avenue Development Holdings LLC	Delaware
61 Ninth Avenue Development LLC	Delaware
61 Ninth Avenue Development Member LLC	Delaware
61 Ninth Avenue Management LLC	Delaware
61 Ninth Retail Manager LLC	Delaware
640 Fifth Avenue Holdings II LLC	Delaware
640 Fifth Avenue Holdings LLC	Delaware
640 Fifth Avenue LLC	Delaware
640 Fifth Avenue Owner LLC	Delaware
650 Madison GP LLC	Delaware
650 Madison GP LP	Delaware
650 Madison Junior Mezz LLC	Delaware
650 Madison Office Manager LLC	Delaware
650 Madison Owner LLC	Delaware
650 Madison Retail Manager LLC	Delaware
650 Madison Senior Mezz LLC	Delaware
655 Fifth Avenue Holdings LLC	Delaware
655 Fifth Avenue LLC	Delaware
655 Fifth Avenue Owner LLC	Delaware
655 Fifth Holdings LLC	Delaware
655 Fifth II LLC	Delaware
655 Fifth III LLC	Delaware
666 Fifth Avenue Retail Holdings LLC	Delaware
666 Fifth Retail Holdings II LLC	Delaware
689 Fifth Avenue Holdings II LLC	Delaware
689 Fifth Avenue Holdings LLC	Delaware
689 Fifth Avenue L.L.C.	New York

697 Fifth/2 East 55th Street Manager LLC	Delaware
697 Fifth/2 East 55th Street TIC A Holdings LLC	Delaware
697 Fifth/2 East 55th Street TIC A Mezz LLC	Delaware
697 Fifth/2 East 55th Street TIC A Owner LLC	Delaware
697 Fifth/2 East 55th Street TIC A Titleholder LLC	Delaware
697 Fifth/2 East 55th Street TIC B Lower-Tier LLC	Delaware
697 Fifth/2 East 55th Street TIC B Mezz LLC	Delaware
697 Fifth/2 East 55th Street TIC B Upper-Tier LLC	Delaware
697 Fifth/2 East 55th TIC B Holdings LLC	Delaware
697 Fifth/2 East 55th TIC B Mortgage Borrower LLC	Delaware
6M Investor LP	Delaware
6M REIT LLC	Delaware
7 West 34th Street LLC	New York
715 Lexington Avenue LLC	New York
715 Lexington Avenue TIC II LLC	Delaware
715 Lexington Avenue TIC LLC	Delaware
770 Broadway Company LLC	New York
770 Broadway Mezzanine LLC	Delaware
770 Broadway Owner LLC	Delaware
825 Seventh Avenue Holding Corporation	New York
825 Seventh Avenue Holding L.L.C.	New York
85 Tenth Junior Mezz LLC	Delaware
888 Seventh Avenue LLC	Delaware
888 Seventh Garage LLC	Delaware
909 Third Company, L.P.	New York
909 Third GP, LLC	Delaware
968 Third, L.L.C.	New York
Alexander's, Inc.	Delaware
Art Chicago LLC	Delaware
Art on theMart Foundation	Illinois
Art on theMart LLC	Delaware
Art Patron Holdings LLC	Delaware
Balena Funding LLC	Delaware
Balena Real Estate Development LLC	Delaware
Broadway 280 Park Fee LLC	Delaware
Building Maintenance Service LLC	Delaware
Carpet Care Technologies LLC	Delaware
CIF Times Square Mezz 1 LLC	Delaware
CIF Times Square Mezz 2 LLC	Delaware
CIF Times Square Mezz 3 LLC	Delaware
Circle 1 LLC	Delaware
Coastal Belmont LLC	Delaware
CPTS Domestic Owner LLC	Delaware
CPTS Garage LLC	Delaware
CPTS Hotel Lessee LLC	Delaware
CPTS Hotel Lessee Mezz 1 LLC	Delaware
CPTS Hotel Lessee Mezz 2 LLC	Delaware
CPTS Hotel Lessee Mezz 3 LLC	Delaware
CPTS Parallel Owner LLC	Delaware

CPTS TRS LLC	Delaware
CV Harlem Park LLC	Delaware
Dock Parking LLC	Delaware
Durham Leasing II L.L.C.	New Jersey
Durham Leasing L.L.C.	New Jersey
Eleven Penn Plaza LLC	New York
Farley Building Commercial Member LLC	Delaware
Farley Building Master Tenant LLC	Delaware
Farley Building Retail Member LLC	Delaware
Farley Building TRS LLC	Delaware
Farley Building USPS Member LLC	Delaware
Farley Commercial Master Tenant SPE LLC	Delaware
Farley Commercial Master Tenant SPE Manager LLC	Delaware
Farley Developer LLC	Delaware
Farley Lease Management LLC	Delaware
Farley Property Manager LLC	Delaware
Farley Retail Master Tenant SPE LLC	Delaware
Farley Retail Master Tenant SPE Manager LLC	Delaware
Farley USPS Master Tenant SPE LLC	Delaware
Farley USPS Master Tenant SPE Manager LLC	Delaware
Federal Solutions Group LLC	Delaware
Fuller Madison LLC	New York
Garfield Parcel L.L.C.	New Jersey
Geneva Associates Owner LLC	Delaware
Going Away LLC	Delaware
Green Acres 666 Fifth Retail EAT TIC Owner LLC	Delaware
Guard Management Service Corp.	Delaware
HBR Properties Annapolis, L.L.C.	Delaware
HBR Properties, L.L.C.	Delaware
IP Mezz Borrower I LLC	Delaware
IP Mezz Borrower II LLC	Delaware
IP Mortgage Borrower LLC	Delaware
LaSalle Hubbard L.L.C.	Delaware
Leva II Holdings LLC	Delaware
Leva III Holdings LLC	Delaware
Lincoln Road II LLC	Delaware
Lincoln Road Management LLC	Delaware
Lincoln Road Parallel REIT LLC	Delaware
Lincoln Road REIT LLC	Delaware
M 393 Associates LLC	New York
Madave Holdings LLC	Delaware
Madave Properties SPE LLC	Delaware
Manhattan High Street Holdings GP LLC	Delaware
Manhattan High Street Holdings LLC	Delaware
Manhattan High Street Holdings LP	Delaware
Manhattan High Street REIT Holdings LLC	Delaware
Manhattan High Street Retail Leasing LLC	Delaware
Mart Parking II, LLC	Delaware
Mart Parking LLC	Delaware

Mart Trade Show L.L.C.	Delaware
MC VNO Soho LLC	Delaware
MC VNO Soho Manager LLC	Delaware
Merchandise Mart First Mezzanine Borrower L.L.C.	Delaware
Merchandise Mart Holdco L.L.C.	Delaware
Merchandise Mart L.L.C.	Delaware
Merchandise Mart Properties, Inc.	Delaware
Merchandise Mart Second Mezzanine Borrower L.L.C.	Delaware
MMPI Piers MTS L.L.C.	Delaware
Mortgage Owner LLC	Delaware
Moynihan Commercial Master Landlord SPE LLC	Delaware
Moynihan Food Bar LLC	Delaware
Moynihan Interim Tenant LLC	Delaware
Moynihan Overlook Bar LLC	Delaware
Moynihan Retail Master Landlord SPE LLC	Delaware
Moynihan Train Hall Developer LLC	Delaware
Moynihan USPS Master Landlord SPE LLC	Delaware
MTS-MM L.L.C.	Delaware
New Jersey GL LLC	Delaware
Ninety Park Garage LLC	Delaware
Ninety Park Lender LLC	New York
Ninety Park Lender QRS, Inc.	Delaware
Ninety Park Manager LLC	New York
Ninety Park Owner LLC	Delaware
Ninety Park Property LLC	New York
One Park Avenue Partners LLC	Delaware
One Park Avenue Senior Mezz Partners LLC	Delaware
One Park Owner JV LP	Delaware
One Penn Plaza LLC	New York
One Penn Plaza TRS, Inc.	Delaware
Orleans Hubbard LLC	Delaware
Paris Associates Owner LLC	Delaware
PCJ I Inc.	New York
Peak Power One LLC	Delaware
Penn 1 Azure LLC	Delaware
Penn 1 Birtie LLC	Delaware
Penn 1 FC Lessee LLC	Delaware
Penn 1 Garage LLC	Delaware
Penn 1 Platform LLC	Delaware
Penn 1 Powerspace LLC	Delaware
Penn 1 Restaurant Manager LLC	Delaware
Penn 1 Workspace LLC	Delaware
Penn District Benefits Provider LLC	Delaware
Penn District BP LLC	Delaware
Penn District Station Developer LLC	Delaware
Penn Plaza Insurance Company, L.L.C.	Vermont
Piers 92/94 LLC	Delaware
Powerspace & Services, Inc.	Delaware
RV Farley Developer LLC	Delaware

RVS Partners LLC	Delaware
Shenandoah Parent LLC	Delaware
Skyline Parent LLC	Delaware
SMB Administration LLC	Delaware
SMB Tenant Services LLC	Delaware
SO Hudson 555 Management, Inc.	Delaware
SO Hudson Westside I Corp.	Delaware
T53 Condominium, L.L.C.	New York
The Armory Show Inc.	New York
The Palisades A/V Company, L.L.C.	Delaware
Thebes I LLC	Delaware
theMart Manager LLC	Delaware
TheMart Tots LLC	Delaware
Times Square JV LLC	Delaware
TMO 1 LLC	Delaware
Trees Acquisition Subsidiary, Inc.	Delaware
Two Penn Plaza REIT, Inc.	New York
VBL Company, L.L.C.	New York
VCP COI One Park LP	Delaware
VCP IM L.L.C.	Delaware
VCP Lincoln Road LLC	Delaware
VCP LP L.L.C.	Delaware
VCP One Park Parallel REIT LLC	Delaware
VCP Parallel COI One Park LP	Delaware
Virgin Sign L.L.C.	Delaware
VMC Parking LLC	Delaware
VNO 100 West 33rd Street LLC	Delaware
VNO 11 East 68th Street Holding Company LLC	Delaware
VNO 11 East 68th Street Mezz LLC	Delaware
VNO 155 Spring Street LLC	Delaware
VNO 1750 Pennsylvania Avenue LLC	Delaware
VNO 1800 Park LLC	Delaware
VNO 220 Development LLC	Delaware
VNO 225 West 58th Street LLC	Delaware
VNO 225 West 58th Street Mezz Owner LLC	Delaware
VNO 267 West 34th LLC	Delaware
VNO 280 Park JV Member LLC	Delaware
VNO 33 West 57th Street LLC	Delaware
VNO 33-00 Northern Blvd LLC	Delaware
VNO 401 Commercial Lessee LLC	Delaware
VNO 431 Seventh Avenue LLC	Delaware
VNO 435 Seventh Avenue LLC	Delaware
VNO 443 Broadway Holdings II LLC	Delaware
VNO 443 Broadway Holdings III LLC	Delaware
VNO 443 Broadway LLC	Delaware
VNO 510 Fifth LLC	Delaware
VNO 510 West 22nd JV Member LLC	Delaware
VNO 510 West 22nd Lender LLC	Delaware
VNO 535-545 5th Loan LLC	Delaware

VNO 537 West 26th Street Owner LLC	Delaware
VNO 606 Broadway LLC	Delaware
VNO 606 Broadway Manager Member LLC	Delaware
VNO 61 Ninth Avenue Member LLC	Delaware
VNO 63rd Street LLC	Delaware
VNO 650 Madison Investor LLC	Delaware
VNO 650 Madison LLC	Delaware
VNO 7 West 34th Street Owner LLC	Delaware
VNO 7 West 34th Street Sub LLC	Delaware
VNO 86 Lex LLC	Delaware
VNO 93rd Street LLC	Delaware
VNO 966 Third Avenue LLC	Delaware
VNO AC LLC	Delaware
VNO Building Acquisition LLC	Delaware
VNO Capital Partners REIT LLC	Delaware
VNO Capital Partners TRS LLC	Delaware
VNO CP Co-Investor LP	Delaware
VNO CP GP LLC	Delaware
VNO CP LLC	Delaware
VNO IF GP LLC	Delaware
VNO IP Loan LLC	Delaware
VNO Island Global LLC	Delaware
VNO LF 50 West 57th Street Holding LLC	Delaware
VNO LF 50 West 57th Street JV LLC	Delaware
VNO LF 50 West 57th Street LLC	Delaware
VNO LF 50 West 57th Street Management LLC	Delaware
VNO LNR Holdco, L.L.C.	Delaware
VNO Mobility LLC	Delaware
VNO New York Office Management LLC	Delaware
VNO One Park LLC	Delaware
VNO One Park Management LLC	Delaware
VNO One Park Owner LLC	Delaware
VNO Parking Garages LLC	Delaware
VNO Pentagon City LLC	Delaware
VNO Pier 94 JV Member LLC	Delaware
VNO RTR AP, LLC	Delaware
VNO SC Note LLC	Delaware
VNO Second Building Acquisition LLC	Delaware
VNO Wayne License LLC	Delaware
VNO Wayne Towne Center Holding LLC	Delaware
VNO Wayne Towne Center LLC	Delaware
VNO/Farley BL Member LLC	Delaware
VNO/Farley Developer Member LLC	Delaware
VNO/Farley PM Member LLC	Delaware
VOI Parking LLC	Delaware
Vornado 220 Central Park South II LLC	Delaware
Vornado 220 Central Park South LLC	Delaware
Vornado 330 W 34 Mezz LLC	Delaware
Vornado 330 West 34th Street L.L.C.	Delaware

Vornado 40 East 66th Street LLC	Delaware
Vornado 40 East 66th Street Member LLC	Delaware
Vornado 40 East 66th Street TRS LLC	Delaware
Vornado 401 Commercial LLC	Delaware
Vornado 601 Madison Avenue, L.L.C.	Delaware
Vornado 620 Sixth Avenue L.L.C.	Delaware
Vornado 677 Madison LLC	Delaware
Vornado 692 Broadway, L.L.C.	Delaware
Vornado 90 Park Avenue L.L.C.	Delaware
Vornado 90 Park Member L.L.C.	Delaware
Vornado 90 Park QRS, Inc.	Delaware
Vornado Acquisition Co. LLC	Delaware
Vornado Air Rights LLC	Delaware
Vornado Auto L.L.C.	Delaware
Vornado Capital Partners GP LLC	Delaware
Vornado Capital Partners Parallel GP LLC	Delaware
Vornado Capital Partners Parallel LP	Delaware
Vornado Capital Partners Parallel REIT LLC	Delaware
Vornado Capital Partners, L.P.	Delaware
Vornado Cogen Holdings LLC	Delaware
Vornado Communications, LLC	Delaware
Vornado Concierge LLC	Delaware
Vornado Condominium Management LLC	Delaware
Vornado Dune LLC	Delaware
Vornado Eleven Penn Plaza LLC	Delaware
Vornado Eleven Penn Plaza Owner LLC	Delaware
Vornado Farley Member LLC	Delaware
Vornado Fort Lee L.L.C.	Delaware
Vornado Fortress LLC	Delaware
Vornado Harlem Park LLC	Delaware
Vornado India Retail Management LLC	Delaware
Vornado Investment Corporation	Delaware
Vornado Investments L.L.C.	Delaware
Vornado Lending L.L.C.	New Jersey
Vornado M 393 L.L.C.	Delaware
Vornado Management Corp.	Delaware
Vornado Marketing LLC	Delaware
Vornado New York RR One L.L.C.	Delaware
Vornado NY TRS LLC	Delaware
Vornado Office Inc.	Delaware
Vornado Office Management LLC	Delaware
Vornado Penn Plaza Master Plan Developer LLC	Delaware
Vornado Property Advisor LLC	Delaware
Vornado Realty L.L.C.	Delaware
Vornado Realty, L.P.	Delaware
Vornado Retail Finance Manager LLC	Delaware
Vornado Rosslyn LLC	Delaware
Vornado RTR Urban Development LLC	Delaware
Vornado RTR Urban Development TMP LLC	Delaware

Vornado RTR, Inc.	Delaware
Vornado San Jose LLC	Delaware
Vornado SC Properties II LLC	Delaware
Vornado SC Properties LLC	Delaware
Vornado Shenandoah Holdings II LLC	Delaware
Vornado Sign LLC	Delaware
Vornado Suffolk LLC	Delaware
Vornado Sun LLC	Delaware
Vornado Title L.L.C.	Delaware
Vornado Truck LLC	Delaware
Vornado TSQ LLC	Delaware
Vornado Two Penn Plaza L.L.C.	Delaware
Vornado Two Penn Property L.L.C.	Delaware
Vornado Westbury Retail II LLC	Delaware
Vornado Westbury Retail LLC	Delaware
VRT Development Rights LLC	New York
VSPS LLC	Delaware
WDC 666 Fifth Retail TIC Owner LLC	Delaware
Wells Kinzie L.L.C.	Delaware
West 57th Street Holding LLC	Delaware
West 57th Street JV LLC	Delaware
West 57th Street Management LLC	Delaware
WOC 666 Fifth Retail TIC Owner LLC	Delaware

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements of Vornado Realty Trust of our reports dated February 14, 2022, relating to the financial statements of Vornado Realty Trust and subsidiaries and the effectiveness of Vornado Realty Trust and subsidiaries' internal control over financial reporting appearing in this Annual Report on Form 10-K for the year ended December 31, 2021:

Amendment No.1 to Registration Statement No. 333-36080 on Form S-3
Amendment No.1 to Registration Statement No. 333-50095 on Form S-3
Amendment No.1 to Registration Statement No. 333-89667 on Form S-3
Amendment No.1 to Registration Statement No. 333-102215 on Form S-3
Amendment No.1 to Registration Statement No. 333-102217 on Form S-3
Registration Statement No. 333-105838 on Form S-3
Registration Statement No. 333-107024 on Form S-3
Registration Statement No. 333-114146 on Form S-3
Registration Statement No. 333-121929 on Form S-3
Amendment No.1 to Registration Statement No. 333-120384 on Form S-3
Registration Statement No. 333-126963 on Form S-3
Registration Statement No. 333-139646 on Form S-3
Registration Statement No. 333-141162 on Form S-3
Registration Statement No. 333-150592 on Form S-3
Registration Statement No. 333-172880 on Form S-8
Registration Statement No. 333-191865 on Form S-4
Registration Statement No. 333-232056 on Form S-8
Registration Statement No. 333-258409 on Form S-3

and in the following joint registration statement of Vornado Realty Trust and Vornado Realty L. P.:

Registration Statement No. 333-254965 on Form S-3

/s/ DELOITTE & TOUCHE LLP

New York, New York
February 14, 2022

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the joint Registration Statement No. 333-254965 on Form S-3 of Vornado Realty Trust and Vornado Realty L.P. of our reports dated February 14, 2022, relating to the financial statements of Vornado Realty L.P. and subsidiaries and the effectiveness of Vornado Realty L. P. and subsidiaries' internal control over financial reporting appearing in this Annual Report on Form 10-K for the year ended December 31, 2021.

/s/ DELOITTE & TOUCHE LLP

New York, New York
February 14, 2022

CERTIFICATION

I, Steven Roth, certify that:

1. I have reviewed this Annual Report on Form 10-K of Vornado Realty Trust;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

February 14, 2022

/s/ Steven Roth

Steven Roth

Chairman of the Board and Chief Executive Officer

CERTIFICATION

I, Michael J. Franco, certify that:

1. I have reviewed this Annual Report on Form 10-K of Vornado Realty Trust;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

February 14, 2022

/s/ Michael J. Franco

Michael J. Franco

President and Chief Financial Officer

CERTIFICATION

I, Steven Roth, certify that:

1. I have reviewed this Annual Report on Form 10-K of Vornado Realty L.P.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

February 14, 2022

/s/ Steven Roth

Steven Roth

Chairman of the Board and Chief Executive Officer
of Vornado Realty Trust, sole General Partner of Vornado Realty
L.P.

CERTIFICATION

I, Michael J. Franco, certify that:

1. I have reviewed this Annual Report on Form 10-K of Vornado Realty L.P.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

February 14, 2022

/s/ Michael J. Franco

Michael J. Franco

President and Chief Financial Officer of Vornado Realty Trust,
sole General Partner of Vornado Realty L.P.

CERTIFICATION

**Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsection (a) and (b) of Section 1350 of Chapter 63 of Title 18 of the United States Code)**

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350 of Chapter 63 of Title 18 of the United States Code), the undersigned officer of Vornado Realty L.P. (the "Company"), hereby certifies, to such officer's knowledge, that:

The Annual Report on Form 10-K for the year ended December 31, 2021 (the "Report") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

February 14, 2022

/s/ Steven Roth

Name: Steven Roth
Title: Chairman of the Board and Chief Executive Officer
of Vornado Realty Trust, sole General Partner of
Vornado Realty L.P.

CERTIFICATION

**Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(Subsection (a) and (b) of Section 1350 of Chapter 63 of Title 18 of the United States Code)**

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350 of Chapter 63 of Title 18 of the United States Code), the undersigned officer of Vornado Realty L.P. (the “Company”), hereby certifies, to such officer’s knowledge, that:

The Annual Report on Form 10-K for the year ended December 31, 2021 (the “Report”) of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

February 14, 2022

/s/ Michael J. Franco
Name: Michael J. Franco
Title: President and Chief Financial Officer of Vornado Realty Trust, sole General Partner of Vornado Realty L.P.