

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 8-K

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

Date of Report (Date of earliest event reported):
April 8, 2022

VORNADO REALTY TRUST
(Exact Name of Registrant as Specified in Charter)

Maryland
(State or Other
Jurisdiction of Incorporation)

No. 001-11954
(Commission
File Number)

No. 22-1657560
(IRS Employer
Identification No.)

VORNADO REALTY L.P.
(Exact Name of Registrant as Specified in Charter)

Delaware
(State or Other
Jurisdiction of Incorporation)

No. 001-34482
(Commission
File Number)

No. 13-3925979
(IRS Employer
Identification No.)

888 Seventh Avenue
New York, New York
(Address of Principal Executive offices)

10019
(Zip Code)

Registrant's telephone number, including area code: (212) 894-7000
Former name or former address, if changed since last report: N/A

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instructions A.2.):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

Registrant	Title of each class	Trading Symbol(s)	Name of each 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

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

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.

Item 7.01. Regulation FD Disclosure.

On April 11, 2022, Vornado Realty Trust (the "Company"), the general partner of Vornado Realty L.P., issued a press release announcing that the Company released its 2021 Environmental, Social and Governance ("ESG") report. The ESG report was posted on the Company's website on April 8, 2022.

The press release and the ESG report are attached as Exhibit 99.1 and 99.2, respectively, to this Current Report on Form 8-K and are incorporated herein by reference solely for purposes of this Item 7.01 disclosure.

Exhibit 99.1 and 99.2 hereto shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the Exchange Act), or otherwise subject to the liabilities under that Section and shall not be deemed to be incorporated by reference into any filing of Vornado Realty Trust or Vornado Realty L.P. under the Securities Act of 1933, as amended, or the Exchange Act.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

The following exhibits are being furnished as part of this Current Report on Form 8-K:

99.1	Vornado Realty Trust press release dated April 11, 2022
99.2	2021 ESG report
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

PRESS RELEASE

Vornado Releases 2021 Environmental, Social, & Governance Report

New York City | April 11, 2022

NEW YORK.....VORNADO REALTY TRUST (NYSE: VNO) announced today that it released its 2021 Environmental, Social, & Governance (“ESG”) report.

This ESG report is Vornado's thirteenth consecutive annual report which highlights the Company's industry-leading accomplishments in sustainability and provides key metrics on the Company's ESG priorities. Key sustainability accomplishments include:

- Advanced our commitment to locally-sourced renewable energy through the procurement of Renewable Energy Credits, sourced from hydro energy facilities located in the State of New York, which assigns zero carbon to 100% of our directly procured electricity.
- Aligned our carbon reductions and targets with the Science-Based Target Initiative, and have committed to a 64% reduction by 2030 using a 2019 base year. This will ensure our ongoing emissions reduction contributes to a 1.5-degree climate scenario, the most ambitious goal of the Paris Agreement.
- Achieved a 2.6% reduction in our overall location-based emissions, and a 37.8% drop in our market-based scope 2 emissions.
- Received multiple awards recognizing our continued industry leadership in sustainability including the NAREIT Leader in the Light Leadership Personified Award; ENERGY STAR Partner of the Year with Sustained Excellence (7th time with this distinction); and Global Real Estate Sustainability Benchmark “Green Star” Ranking (9th year in a row; ranking #2 out of 94 publicly traded companies in the Americas, with an “A” grade for our public disclosure).
- Expanded our climate scenario analysis as recommended by the Taskforce on Climate-Related Financial Disclosures and continue to enhance our disclosures according to the Sustainability Accounting Standards Board and the Global Reporting Initiative.

Our report, along with expanded information on Vornado's ESG programs, can be found on the Company's website located at www.vno.com. Vornado Realty Trust is a fully-integrated equity real estate investment trust.

Contact

Thomas J. Sanelli

(212) 894-7000

Certain statements contained herein may constitute “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. 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 press release. We also note the following forward-looking statements: in the case of our development and redevelopment projects, the estimated completion date, estimated project cost, projected incremental cash yield, stabilization date and cost to complete; and estimates of future capital expenditures, dividends to common and preferred shareholders and operating partnership distributions. For a discussion of factors that could materially affect the outcome of our forward-looking statements and our future results and financial condition, see “Risk Factors” in Part I, Item 1A, of our Annual Report on Form 10-K for the year ended December 31, 2021. 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 Part I of our Annual Report on Form 10-K for the year ended December 31, 2021.

NYSE: VNO | WWW.VNO.COM



ENVIRONMENTAL, SOCIAL & GOVERNANCE 2021

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See more at [esg.vornado.com](#)

KEY ACHIEVEMENTS IN SUSTAINABILITY

GLOBAL REAL ESTATE
SUSTAINABILITY BENCHMARK
GREEN STAR RANKING 2021

9TH YEAR IN A ROW
TOP-QUINTILE PERFORMER
RANKED 2ND OUT OF 94 LISTED
ENTITIES IN THE AMERICAS

NAREIT LEADER IN THE LIGHT
LEADERSHIP PERSONIFIED 2021

11 TIME LEADER IN THE LIGHT WINNER

ENERGY STAR PARTNER OF THE YEAR
SUSTAINED EXCELLENCE

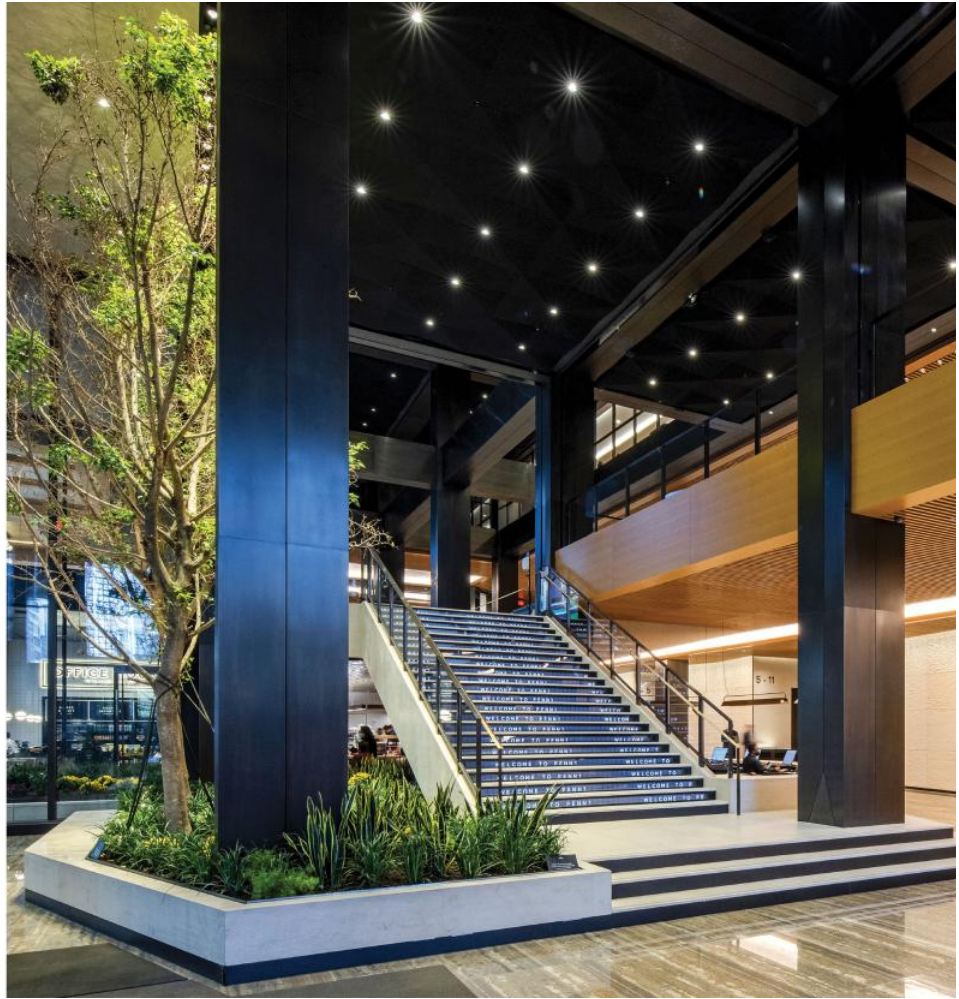
7TH TIME WITH THIS DISTINCTION

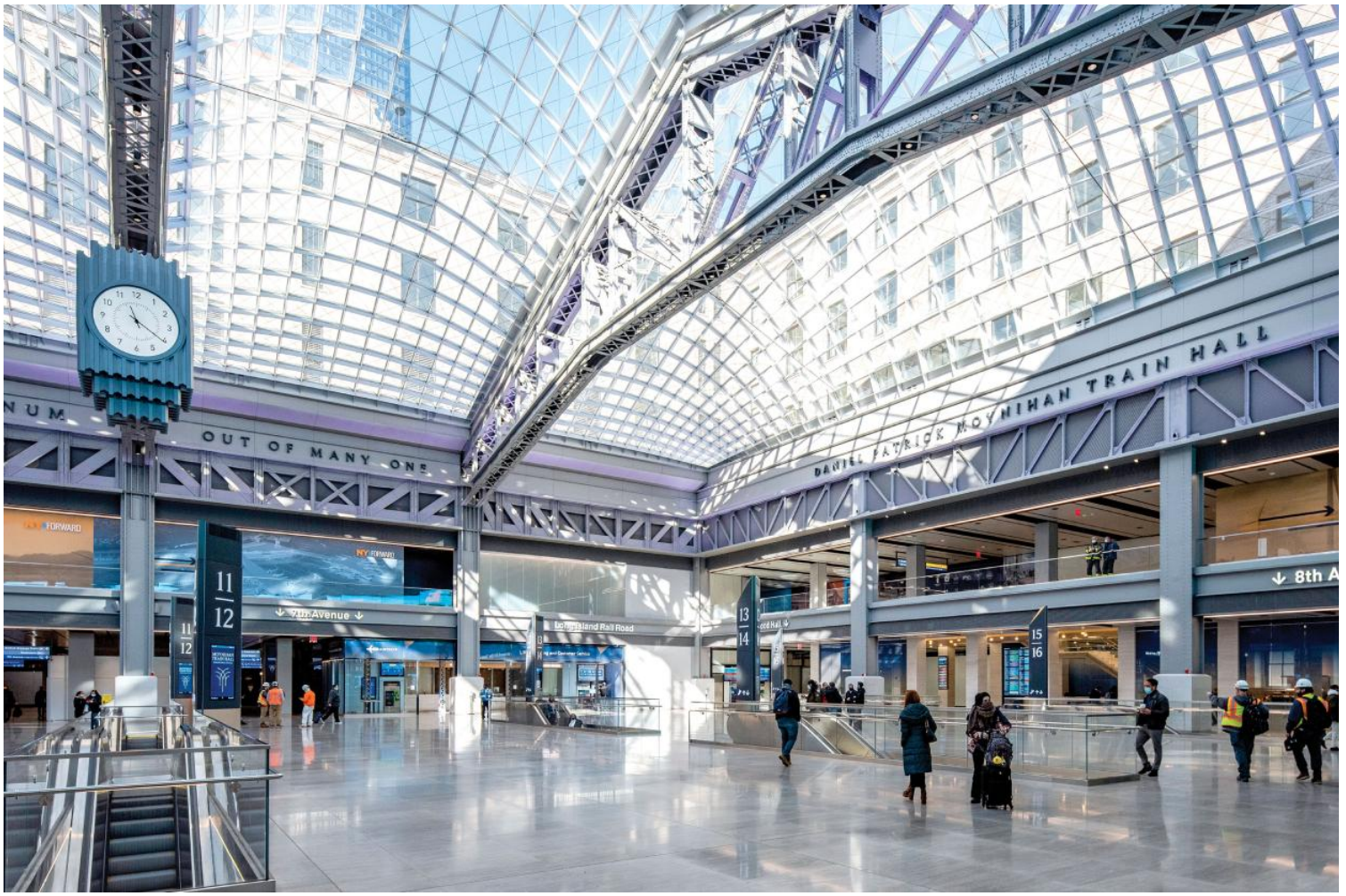
EP100 MEMBER

COMMITTED TO DEPARTMENT OF ENERGY'S
ISO 50001 PROGRAM

SCIENCE BASED TARGETS INITIATIVE

2021 ALIGNMENT WITH 1.5-DEGREE SCENARIO
FOR OUR COMMITMENT TO REDUCING OUR
CARBON EMISSIONS





FROM OUR CHAIRMAN

ENVIRONMENTAL, SOCIAL & GOVERNANCE ("ESG")

Our Board and senior management hold ESG among our top priorities... and we are a clear leader in the industry. In 2019, we published our commitment to making our buildings carbon neutral by 2030. Our six-point plan, known as Vision 2030, is outlined in our ESG Report, found at esg.vno.com.

Key sustainability achievements this past year include:

- Advanced our commitment to locally-sourced renewable energy and the environment through the procurement of Renewable Energy Credits, sourced from hydro energy facilities located in the State of New York, which assigns zero carbon to 100% of our directly procured electricity. With an annualized balance of over 215,000 megawatt hours, we are one of the largest customers of home-grown renewable energy. We support the transmission projects that will alleviate bottlenecks and bring clean energy downstate into New York City.
- Aligned our carbon reductions and targets with the Science-Based Target Initiative, and have committed to a 64% reduction by 2030 using a 2019 base year to ensure our ongoing emissions reduction contributes to a 1.5-degree climate scenario.
- Achieved a 2.6% reduction in our overall location-based emissions, and a 37.8% drop in our market-based scope 2 emissions. Below is an inventory of carbon emissions from our buildings in 2021, according to the Financial Control method¹ measured in metric tons:

Carbon Emissions	LOCATION-BASED		MARKET-BASED	
	2021	% CHANGE 2020-2021	2021	% CHANGE 2020-2021
SCOPE 1	29,864	2.3%	29,864	2.3%
SCOPE 2	131,405	-1.9%	83,295	-37.8%
SCOPE 1+2 TOTAL	161,269	-1.2%	113,159	-30.7%
SCOPE 3	39,633	-7.8%	39,633	-7.8%
GRAND TOTAL	200,902	-2.6%	152,792	-25.9%

- Received multiple awards recognizing our continued industry leadership in sustainability including the NAREIT Leader in the Light Leadership Personified Award; ENERGY STAR Partner of the Year with Sustained Excellence (7th time with this distinction); and Global Real Estate Sustainability Benchmark "Green Star" Ranking (9th year in a row; ranking #2 out of 94 publicly traded companies in the Americas, with an "A" grade for our public disclosure).
- Expanded our climate scenario analysis as recommended by the Taskforce on Climate-Related Financial Disclosures and have updated our disclosures (which are paired with third party assurance) according to the Sustainability Accounting Standards Board and the Global Reporting Initiative.

Altogether, we own and operate more than 27 million square certified buildings, representing 95% of our office portfolio, 1 million square feet at LEED Gold or Platinum. Thanks to our sustainability management captains Gaston Silva, Karen Oh, Robert Michael Lipitz.

In addition, we have provided our employees with the resources, flexibility needed through the pandemic. We enhance our hum sponsorship continuing education and career development. We engaged with our workforce and solicit their feedback through leaders and employee surveys.

Our Board, and particularly our Corporate Governance and Committee, is assigned with oversight of ESG, which includes climate risk. Our 2022 Long Term Performance Plan incorporates ESG metrics as part of our Senior Management compensation discussion regarding our corporate governance is included statement, which can be viewed at www.vno.com/proxy and the section of our website at www.vno.com/governance.

Steven Roth
Chairman of the Board and
Chief Executive Officer

¹ We have chosen to report our emissions according to the financial control method, as discussed in the World Resource Institute's Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard: Revised Edition. Location-Based reflects emissions for our properties based on the grid emission factor, while Market-Based reflects emissions that we are responsible for due to our purchasing decisions. Our Scope 1 emissions include onsite combustion from oil and natural gas; Scope 2 emissions include our district steam consumption and electricity consumption, including electricity by our submetered tenants; Scope 3 emissions include other utility consumption within the direct control of our tenants.

FOOTPRINTS

2021 marked another banner year with progress on our ESG goals and new enhancements to further our leadership in the real estate industry. Below is a selection of highlights over the past year.

SCIENCE BASED TARGETS INITIATIVE PROGRESS (SBTi)

We aligned our goals with the Science Based Targets initiative and have committed to a 64% reduction by 2030 using a 2019 base year to ensure our ongoing emissions reduction contributes to a 1.5-degree climate scenario.

Our progress on this commitment in 2021 is:



RENEWABLE ENERGY PROCUREMENT

In 2021 Vornado procured Renewable Energy Credits (RECs) to document our commitment to renewable energy and the environment, sourced from hydro energy facilities located in the State of New York. With an annualized balance of over 215,000 megawatt hours, we lead by example as one of the largest customers to invest in home-grown renewable energy.



GREEN BONDS

Vornado applied the full \$750 million in bond proceeds to eligible green projects. With our significant investment in sustainable development, all proceeds were spent within the first year of the offering.



PENN 2

THE PENN DISTRICT

Progress is underway with our decarbonization strategy at PENN 1 and PENN 2, with triple-paned glazing systems, electrified cooling systems, and grid-responsive building automation systems among the many elements installed at both buildings.

Vornado is a proud participant in the Empire Building Challenge and has partnered with NYSERDA to develop a carbon neutrality roadmap for the PENN District, which will serve as an example for existing buildings across the state to follow.



EXECUTIVE COMPENSATION

In 2021, the Board updated corporate policy to include ESG as a key performance indicator for executive compensation.



FOOTPRINTS Continued

SUPPLY CHAIN

In addition to maintaining our Vendor Integrity Program and Vendor Code of Conduct, we commenced a comprehensive impact evaluation program with our critical suppliers. The results of this program will contribute to our ongoing inventory of Scope 3 GHG emissions.



theMART is our flagship Chicago asset with over 3.7 million SF of leasable space

CYBERSECURITY GOVERNANCE

In response to cybersecurity threats increasing in frequency and scale, a governance structure was adopted to ensure a process to evaluate and quickly mitigate potential risks.



EMPLOYEE HEALTH AND WELLNESS

We expanded our health and wellness programs as more employees began to return to the office including: reduced-cost membership to the new gym at PENN 1, onsite COVID testing and vaccination, and the introduction of app-based resources to help foster lifestyles.



The new gym at PENN 1

PROMOTING ECOLOGICAL HEALTH

Building on tenant programs at 770 Broadway and 731 Lexington, Vornado is working to bring beehives to our portfolio to support the local pollinator population. Hives were installed at 1290 Avenue of the Americas, and we are on target to add five additional locations in 2022. The urban beekeeping program is an opportunity to protect these pollinators who are a critical piece of our ongoing food supply as well as to engage with tenants in a unique way by providing educational programs year-round.



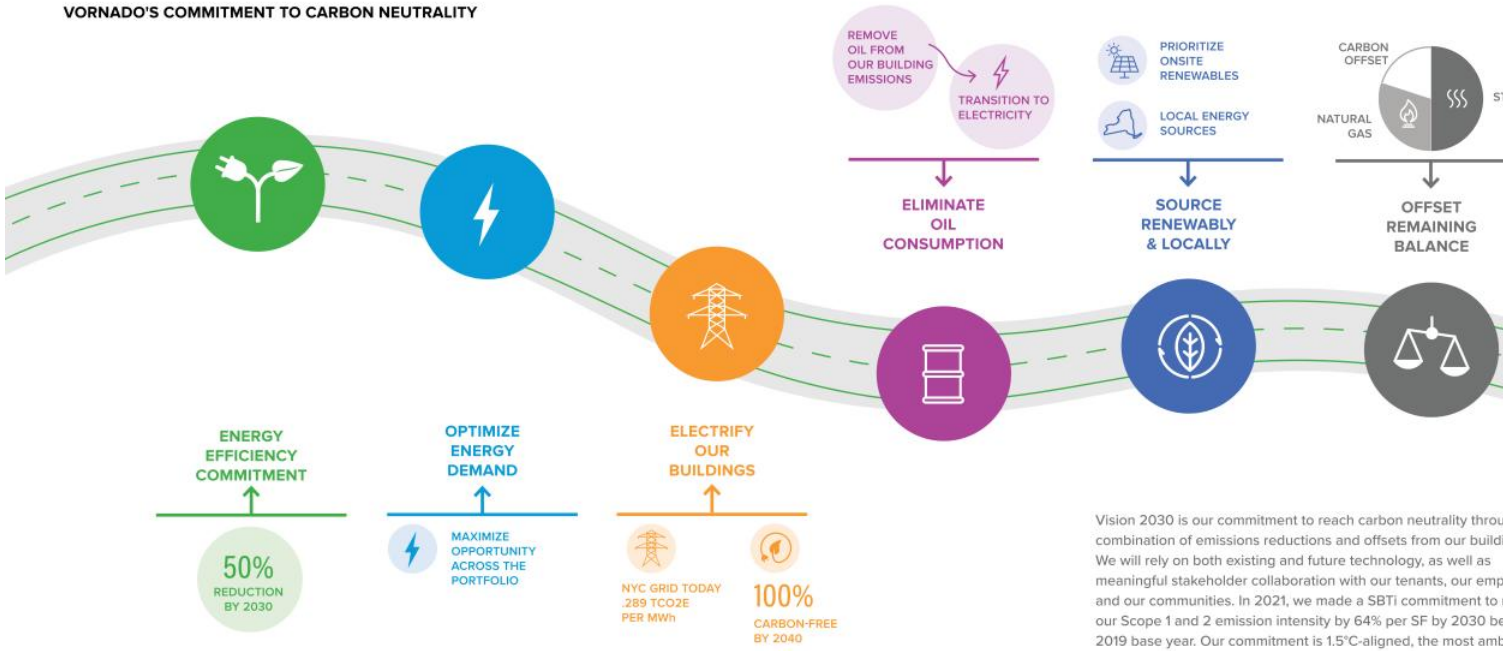
ELECTRIC VEHICLE CHARGING

We have installed over 40 EV charging stations at five of our dock-branded parking garages; additional stations planned in the future.



VISION 2030*

VORNADO'S COMMITMENT TO CARBON NEUTRALITY



Vision 2030 is our commitment to reach carbon neutrality through a combination of emissions reductions and offsets from our buildings. We will rely on both existing and future technology, as well as meaningful stakeholder collaboration with our tenants, our employees and our communities. In 2021, we made a SBTI commitment to reduce our Scope 1 and 2 emission intensity by 64% per SF by 2030 based on 2019 as our base year. Our commitment is 1.5°C-aligned, the most ambitious designation offered through the SBTI process.



*Any information relating to forward-looking statements, targets, goals, and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information.

VISION 2030*

Continued

2030 TARGET COMMITMENTS

2021 PROGRESS

WE WILL ALWAYS PRIORITIZE ENERGY EFFICIENCY

We will reduce our energy consumption 50% below a 2009 base year by 2030. This goal includes both landlord- and tenant-driven consumption. More information on this effort can be found in the Energy Efficiency Targets section of this report.



REDUCTION AS OF 12/31/21

CONTINUED IMPROVEMENT, BEHAVIORAL CHANGE

Our energy efficiency work continues to make progress toward our goal through 2021. We continue to monitor changes to our tenants' use of space as tenants return to our buildings in 2022.

WE WILL PERMANENTLY REDUCE OUR ENERGY PEAKS

In addition to doing more with less energy, we will shift our energy usage to occur during hours when the electric grid uses cleaner sources of generation. Demand response, demand management, and energy storage will be the primary contributors to this strategy. We also will use building analytics software to more smartly operate our buildings and reduce demand on a permanent basis.



DEMAND RESPONSE IN 2021, PORTFOLIO-WIDE, PLUS 6 MW OF COGENERATION

TECH-DRIVEN SMART BUILDING OPERATIONS

In addition to demand response, in 2021 we installed building management systems that will import real-time occupancy and indoor air quality data for permanent peak demand management.

ELECTRIFY OUR BUILDINGS

We know that a carbon-neutral building must consume energy from 100% renewable sources. As New York State pursues its plan to secure 70% of electricity from renewable systems by 2030 and 100% clean electricity by 2040, we will evaluate opportunities to convert our steam, gas, and oil-sourced consumption to electricity. We will prioritize electricity as our sole source of building energy in all ground-up new development.



COOLING CONVERTED TO ELECTRICITY

MODERNIZATION OF OUR HVAC

In 2021, we completed the electrification of cooling systems at PE and 770 Broadway.

ELIMINATE OIL CONSUMPTION

We see a path forward to eliminate or modify all our legacy oil boilers to cleaner sources of energy. We will transition these systems to electricity where economically and technologically feasible.



PROJECTED REDUCTION UPON OIL-TO-ELECTRICITY REPLACEMENT

CAPITAL PLANNING FOR BOILER RETROFITS

In 2021, we completed feasibility studies at three of our four active buildings in New York City and commenced electrification of heating at 48th Street.

SOURCE RENEWABLY AND LOCALLY

We will pursue opportunities to source our supply of electricity from 100% renewable sources while we wait for our grid systems to make their own fully renewable transition. We will prioritize onsite renewable energy production, as well as sources located close to our buildings and cities.



MEGAWATT HOURS OF RENEWABLE POWER ANNUALIZED

A LANDMARK TRANSACTION FOR NEW YORK STATE

In 2021, Vornado procured Renewable Energy Credits that are sourced from hydro energy facilities located in the State of New York. This allowed Vornado to assign zero carbon attributes to 100% of annual directly procured electricity. These RECs will be retired through the New York State Generation Attributes Tracking System (NYGATS).

OFFSET REMAINING BALANCE

As we make this transition, we know there will be a remaining balance of energy consumed from fossil fuels. We will augment that balance with carbon offsets until we fully transition to zero-carbon utility consumption.



SCOPING AND INDICATIVE PRICING RECEIVED

As of December 31, 2021, Vornado has not purchased any carbon offsets to contribute toward Vision 2030. We continue to evaluate our approach for purchase and to engage with our tenants, our investors, local governments, and other stakeholders to assess whether expediting that approach would align with their priorities toward carbon neutrality.

*Any information relating to forward-looking statements, targets, goals, and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information.

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)*

GOVERNANCE

Vornado became a signatory of the TCFD in February 2019, among the first American real estate companies to endorse the TCFD recommendations and to task leadership with evaluating and disclosing climate-related risks. Our Board's Corporate Governance and Nominating Committee oversees environmental matters, including climate-related risks and opportunities. The Board is part of the top-down strategy on ESG risk management, which includes the execution of TCFD-related tasks by our Corporate ESG Team, senior management, divisional leaders, and integration throughout all divisions of our business.

The individual responsible for ESG and climate-related objectives is the SVP Sustainability & Utilities Officer. While responsibility for managing climate-related risks is integrated throughout Vornado, the SVP Sustainability & Utilities Officer takes an overarching view of Vornado's progress and strategy at a corporate level.

Further discussion on our governance around climate-related risks and opportunities can be found in the ESG Governance section of this report.

GOAL: DISCLOSE THE ORGANIZATION'S GOVERNANCE AROUND CLIMATE-RELATED RISKS AND OPPORTUNITIES

STRATEGY

We have identified IPCC Representative Concentration Pathway (RCP) 2.6 (targeting a 1.5- to 2-degree scenario) as the primary scenario to assess transitional risk and opportunities over the short-, medium-, and long-term horizon, as informed by the regulatory frameworks in the communities where our properties are located. We identify a "business-as-usual" scenario of RCP 6.0 to assess the physical risks of climate change, due to the possibility of failure of global efforts to mitigate, though we are constantly evaluating the potential scale and frequency of the identified risks to inform our Risk Management assessments. The impact of such risks guides strategies for our buildings through acquisition, development or redevelopment, or operations for our stabilized assets. More information can be found in our SASB disclosures on climate change risk.

GOAL: DISCLOSE THE ACTUAL AND POTENTIAL IMPACTS OF CLIMATE-RELATED RISKS AND OPPORTUNITIES ON THE ORGANIZATION'S BUSINESS, STRATEGY, AND FINANCIAL PLANNING WHERE SUCH INFORMATION IS MATERIAL

RISK MANAGEMENT

We identify and assess physical risks using data models and resources that use both historical and forward-looking climate data to determine potential exposure to climate-related events. We identify and assess transitional risk through analyzing our exposure to local climate regulations.

Where acute physical risk for a property is noted, we manage this risk through measures of climate resilience and adaptation. In 2021 we re-categorized some of our identified physical risks to drive faster action in the face of the increased frequency of these events. Our primary means of managing this risk is through our energy efficiency program, as energy consumption at our properties drives our ability to comply with regulations such as the Climate Mobilization Act (CMA) in New York City.

The costs of energy efficiency work, electrification, and other efforts to comply for each of our buildings are factored into our risk analysis, and we continue to explore other costs associated with short-, medium-, and long-term climate risks. We will forgo disclosure of these costs until compliance requirements for CMA and other climate regulations are more definitively known, although we do not expect these costs to be material.

Our climate risk assessment informs the risk profiles for our properties and is a component of our annual Enterprise Risk Management process. Understanding these risks helps us to better assess potential acquisitions through the due diligence process as well as potential impacts within our redevelopment efforts. Further discussion on our climate risk assessment is found in the Resilience and Adaptation section of this report, as well as our SASB disclosures on climate change risk.

GOAL: DISCLOSE HOW THE ORGANIZATION IDENTIFIES, ASSESSES, AND MANAGES CLIMATE-RELATED RISKS

METRICS AND TARGETS

Our metrics and targets that most meaningfully assess our climate-related risks and opportunities as defined in our Risk Management assessment are reflected in the Energy Efficiency Target, Environmental Goals and Progress sections of this report. GHG emissions are disclosed in the Environmental Results 2021 section of this report.

To guide Vornado's efforts to assess and manage climate-related risks, in 2021 Vornado Realty committed to reducing its Scope 1 and 2 GHG to 64% per SF by 2030 from a 2019 base year line with a 1.5°C trajectory. The science-based methodologies considered various scenarios: an IEA ETP B2DS scenario, and were model Sector Decarbonization approach applying to specific growth trajectories to historical GHG trends. The target boundary includes biogas and removals from bioenergy feedstocks. As emissions account for less than 40% of total only Scope 1 + 2 emissions were covered by. The analysis provides Vornado with reference to determine the appropriate plans of action emissions reductions, such as energy efficiency measures and renewable energy investments.

More information on our climate risk assessment in the Resilience and Adaptation section of this report as well as our SASB disclosures on climate change risk.

GOAL: DISCLOSE THE METRICS AND TARGETS USED TO ASSESS AND MANAGE RELEVANT CLIMATE-RELATED RISKS OPPORTUNITIES WHERE SUCH INFORMATION IS MATERIAL

*Any information relating to forward-looking statements, targets, goals, and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information.

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)* Continued

TRANSITIONAL RISKS AND OPPORTUNITIES: SCENARIO ANALYSIS - RCP 2.6

SHORT-TERM (1-10 YEARS)	2030 MEDIUM-TERM	2050 LONG-TERM
<p>Risks</p> <p>We identify RCP 2.6 as our short-term transitional scenario, due to the regulations in the cities where we do business, as well as our carbon neutrality goal.</p> <p>Manufacturing and supply chain disruption could occur.</p> <p>Opportunities</p> <p>Our Vision 2030 roadmap outlines the many components required to transition our portfolio to a climate trajectory that aligns with a 1.5-degree climate scenario.</p> <p>In 2021, we expanded our Vendor Integrity Program (VIP) to assess a wide range of ESG criteria across our value chain. More information can be found in the Supply Chain section of this report.</p>	<p>Risks</p> <p>De-carbonization of grid-supplied energy could lead to increased energy costs and operating expenses for our buildings.</p> <p>Retrofitting our building systems to consume less energy could lead to increased capital costs.</p> <p>Fossil fuel consumption, though mitigated through carbon offsets, may be subject to penalties.</p> <p>Opportunities</p> <p>Our overall energy consumption could decrease, yielding a reduced operating cost.</p> <p>Carbon-neutral buildings could be more competitive in the long term and could yield higher value to our business.</p> <p>Energy storage, onsite renewable energy, and distributed energy resource deployment could yield additional sources of revenue and attract and retain tenants.</p>	<p>Risks</p> <p>Full transition of grid-supplied energy to renewable sources could lead to increased costs and operating expenses for our buildings.</p> <p>Opportunities</p> <p>Improved air quality could lead to lower HVAC operating and maintenance costs.</p> <p>Mitigated increases in temperature could lead to reduced costs to adapt our buildings resilient to more extreme climate scenarios.</p> <p>Renewable energy delivered from the grid will reduce source-generated carbon emissions and potentially reduce exposure to climate regulation.</p> <p>Full transition of grid-supplied energy to renewable sources could lead to decreased energy costs and operating expenses for our buildings.</p>

PHYSICAL RISKS – RCP 6.0

SHORT-TERM	MEDIUM-TERM	LONG-TERM
<p>Stormwater surge, flood risk in vulnerable areas.</p> <p>Localized loss of power.</p> <p>Degradation of air quality and public health.</p> <p>Change in workplace behavior and related emissions caused by the COVID pandemic.</p> <p>Increased extreme weather events and temperature conditions cause increases in building HVAC-related energy and maintenance costs.</p>	<p>Increase in disaster relief costs.</p> <p>Increase in infrastructure and construction costs.</p> <p>Increase in instances of business interruption.</p> <p>Increase in insurance premiums.</p>	<p>Accelerated increases in land and ocean temperatures could lead to increased climate events, including extreme precipitation events, which could yield significantly higher costs for response and flood mitigation costs.</p> <p>Accelerated increases in sea-level rise could lead to increased damages from coastal floods.</p>

*Any information relating to forward-looking statements, targets, goals, and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information.

RESILIENCE AND ADAPTATION

Our properties are located in regions with recent history and future risks of climate-related events. As we assess our exposure to climate risk under varying scenarios, we understand that measures in property resilience are measures in adaptation. Our property at 512 West 22nd Street exemplifies how our new building design is resilient and adaptive to future climate conditions.



Clockwise, from bottom: Adjoining stairway, entrance of 512 West 22nd street, rooftop garden, and 512 West 22nd street exterior.



1 MECHANICAL EQUIPMENT

At 512 West 22nd Street, we placed all critical mechanical and electrical switchgear above grade to avoid flood damage.

2 GREEN ROOFS & STORMWATER RETENTION

Our new roof landscape systems are designed to absorb, retain, and slow runoff into the urban landscape surrounding infrastructure. Green and white roofs also insulate buildings, reduce current and future demand for heating and cooling, and contribute to heat island reduction, which provides for lower surface temperatures.

3 GLAZING & ENVELOPE

Our new glazing and envelope systems are designed to withstand heavy wind and ice conditions. They also are designed to minimize solar heat gains and improve insulation values to minimize heating and cooling demand.

4 FLOOD BARRIERS

When a new building is located in a flood zone, we anchor temporary walls and venting systems inside our building to accommodate storm surges and floods and their associated pressure build-up without damaging the building. At our buildings, we install temporary exterior barriers to prevent flooding from touching the building envelope.

5 BACKUP GENERATION

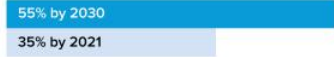
We install backup generation to support, at minimum, fire safety systems, as well as critical infrastructure. At 512 West 22nd Street, we have connected our elevators, lighting, and HVAC to backup generation systems to ensure safe and secure operations in the event of an outage.

ENERGY EFFICIENCY TARGETS*

In Vision 2030, energy efficiency is our primary means to reduce our carbon emissions and make progress toward carbon neutrality. We have bifurcated our approach to address both landlord and tenant consumption, so we can holistically arrive at our goal of 50% reduction by 2030, below a 2009 base year. As was true in 2020, in 2021, the pandemic and resulting slowdown of activity in our buildings resulted in greater than usual reduction of energy. We expect our consumption to increase over 2021 levels in 2022 before returning to a trajectory of reduction.

<p>TOTAL ENERGY REDUCTION GOAL:</p> <p>50% BY 2030 WITH SAME-STORE PORTFOLIO (IN-SERVICE OFFICE)</p>	<p>2021 PROGRESS:</p> <p>▶ 33% MEASURED IN kBtu/SF</p>
--	--

LANDLORD ENERGY REDUCTION PLAN



What's Working

Technical Assessments: Our New York City, Chicago, and San Francisco properties over 50,000 SF have undergone ASHRAE Level II Energy Audits and Retro-commissioning, both of which identify existing deficiencies that, when addressed, reduce energy consumption, as well as Energy Conservation Measures (ECMs) that further optimize each asset's energy performance.

Energy Efficiency Capital Work: Our ECMs serve as the basis of our capital projects, which reduce operating costs, energy consumption, and carbon emissions. We remain committed to completing new capital work every year.

Other Capital Work: While energy efficiency is not the primary value driver for all capital projects, most capital work can save energy when managed responsibly. Such examples include elevator modifications and glazing and envelope improvements, which we procure responsibly and with energy efficiency as a deliverable.

Future Opportunities

Onsite Generation, Renewable Energy, and Energy Storage: We continue to explore opportunities to employ onsite distributed energy resources.

Smart Building Technology: We use predictive analytics and machine learning to run our buildings' electrical and mechanical systems more efficiently. We upgrade and replace our building management systems to increase the automation of this process.

Regulation & Compliance: Our buildings are located in jurisdictions that have adopted bold climate legislation, which may regulate the carbon emissions from buildings and their related energy consumption. This regulation will have an impact on building codes, building infrastructure, and space planning.

TENANT ENERGY REDUCTION PLAN



What's Working

Publicly Sponsored Commitments: We have facilitated the commitment of more than 2 million SF of tenants to the Carbon Challenge in New York. We promote tenant participation in energy reduction events such as the WWF Earth Hour and the Building Energy Exchange's Earth Hour.

Lease-Driven Provisions: As standard practice, we have green provisions in our leases, such as submetered electricity (94% of all leases), submetered water (13%), and capital recovery clauses for energy efficiency projects (63%).

Meaningful Stakeholder Engagement: In 2021, with reduced occupancy continuing throughout most of the year in our buildings, we targeted tenant engagement opportunities with those that were making active changes to their spaces, often in preparation for their offices reopening.

Future Opportunities:

Regulation and Compliance: Laws like Local Law 88 of 2009, New York's Local Law of 2019, and California's Title 24 contain carbon requirements that will result in less consumption in future tenant spaces.

Best Practices in Design: Working with architects and engineers, we have identified several best practices that we will either require or recommend in future design.



*Any information relating to goals and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.

ENVIRONMENTAL GOALS AND PROGRESS*

GRI 302-103-2, 303

ENERGY MANAGEMENT**

Our progress in 2021 was distorted for another year, due to continued low occupancy, business closures, and reduced hours at retail stores during the pandemic. We expect our consumption to increase in 2022 above pandemic levels before returning to a trajectory of reduction in line with energy initiatives.

GOAL 50% total energy reduction below a 2009 baseline by 2030 measured in kBtu/SF

2021 PROGRESS: ON TARGET 33%

WASTE MANAGEMENT

In 2021, due to low occupancy throughout much of the year, we suspended our annual waste education town halls, opting for a more targeted tenant engagement program. This was paired with the roll-out of new organics programs in 25% of our commercial office buildings.

GOAL 75% commercial waste diversion by 2026

2021 PROGRESS: ON TARGET 57%

PROCUREMENT AND RESPONSIBLE CONTRACTING

In 2021, our procurement was impacted by the emergency purchase of personal protective equipment (PPE).

GOAL Every year, purchase **75%** of cleaning supplies that meet sustainability criteria. These criteria include certifications designated by UL ECOLOGO, Green Seal, and EPA's Safer Choice Standard

2021 PROGRESS 60%

WATER MANAGEMENT**

Although our water consumption reduced in 2021 due to continued low occupancy, business closures, and reduced hours at retail stores during the pandemic, we do not consider our 10% reduction goal to be met. We expect our consumption to increase in 2022 above pandemic levels before returning to a trajectory of reduction from water initiatives.

GOAL 10% by 2030 below 2019 base year.

2021 PROGRESS

GOAL 55% energy reduction of landlord-controlled energy by 2030

2021 PROGRESS: ON TARGET 35%

GOAL Introduce organics recycling to **50%** of portfolio by 2020

2021 PROGRESS: GOAL REACHED 75%

*Any information relating to forward-looking statements, targets, goals, and progress against goals was not subject to Deloitte & Touche LLP audit or assurance. Accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information.

**See pages 46 and 47 for additional information on energy and water management.

GOAL 45% energy reduction of tenant-controlled energy by 2030

2021 PROGRESS: ON TARGET 30%

GOAL† Complete in-person demonstration and education on recycling procedures for **50%** of total Vornado portfolio each year

2021 PROGRESS: N/A



GREEN BUILDING CERTIFICATIONS

GOAL LEED certify **100%** of all in-service office properties by 2024

2021 PROGRESS 97%

We paused LEED certification efforts until our tenants return to work post-pandemic.

*Due to the continued pandemic in 2021, we were unable to obtain meaningful data on certain metrics and tenant feedback programs. As a result, 2019 performance information has been provided rather than suspension of reporting.

ENVIRONMENTAL RESULTS 2021



ENERGY EFFICIENCY INVESTMENT

\$23 MILLION spent on Tenant Energy Efficiency Capital Projects since 2012

16.5 MILLION SF of our New York portfolio has undergone energy efficiency capital work

\$5.4 MILLION+ saved in utility costs in 2021 from our energy efficiency projects completed since 2012

29% RATE OF RETURN SINCE 2012 delivered by our capital projects

CUMULATIVE SAVINGS SINCE 2012

100,351 MWh of cumulative electric savings

142,213 MLBS of steam savings

41,992 MT CO₂ cumulative GHG offset

48,376 THERMS of natural gas savings

VORNADO OWNS AND MANAGES**

27+ MILLION SF of LEED-certified properties

80% of Vornado Portfolio

23+ MILLION SF at LEED Gold or higher

68% of Vornado Portfolio

34+ MILLION SF of space with ENERGY STAR rating

100% of Vornado Portfolio

**Includes commercial, retail, and residential assets

INTENSITY MEASURES †

	2019	2020
BUILDING ENERGY (kWh/SF) GRI 302-3	27.71	24.33
BUILDING WATER (m ³ /SF)	.0898	.0600
GHG EMISSIONS* (MT/SF) GRI 305-4	.007	.0061

WATER WITHDRAWAL †

GRI 303-1, 303-3

3,187,066	CUBIC METERS IN 2019
2,027,913	CUBIC METERS IN 2020
1,959,798	CUBIC METERS IN 2021

WHICH WAS A 3.4% REDUCTION FROM 2020 TO 2021

NONHAZARDOUS WASTE TOTAL †

GRI 306-3 306-4, 306-5

An additional of hazardous also recycled

Year	Recycled	Energy Recovery	Composting	Landfill
2021: 9,062 TONS	3,811 TONS	4,386 TONS	765 TONS	11 TONS
2020: 8,594 TONS	3,751 TONS	3,043 TONS	1,031 TONS	7 TONS
2019: 24,878 TONS	12,392 TONS	7,257 TONS	2,889 TONS	2 TONS

†For reporting boundaries, see note on p. 43.
*GHG Emission Intensity includes location-based emissions from Scopes 1, 2 & 3.

ENVIRONMENTAL RESULTS 2021 Continued

FINANCIAL CONTROL METHOD ¹ GHG emissions MTCO ₂ e	LOCATION-BASED		LOCATION-BASED		MARKET-BASED	
	2019	2020	2021	% CHANGE 2020-2021	2021	% CHANGE 2020-2021
SCOPE 1	28,577	29,190	29,864	2.3%	29,864	2.3%
SCOPE 2	177,977	133,997	131,405	-1.9%	83,295	-37.8%
SCOPE 1 + 2 TOTAL	206,554	163,187	161,269	-1.2%	113,159	-30.7%
SCOPE 3	49,760	42,997	39,633	-7.8%	39,633	-7.8%
GRAND TOTAL	256,314	206,184	200,902	-2.6%	152,792	-25.9%

The consumption and emissions data on this page are presented on an absolute basis.

In 2021, our location-based Scope 2 emissions differentiated significantly from our market-based Scope 2 emissions due to our investment in renewable energy certificates in 2021. Going forward we will continue to report our Scope 2 emissions on both a location and market basis.

Because the market-based approach reflects progress on our Vision 2030 carbon neutrality commitment, we will rely on the market-based approach for reporting on our emissions-related goals and targets, including those tied to green debt instruments and executive compensation.

SCOPE 1: 159,875 MWh
Oil & Natural Gas Heating and Cooling
Cogenerated Fuels
SCOPE 2: 499,248 MWh
District Steam
Base Building Electricity
Submetered Tenant Utilities
TOTAL: 659,123 MWh
SCOPE 3: 133,923 MWh
Direct Metered Tenant Utilities

Our location-based Scope 2 emissions inventory includes emissions from tenant electricity that is submetered downstream from our building electricity accounts. We consider these emissions to be within our financial control. If the emissions from submetered tenant electricity were instead to be considered Scope 3 emissions (an approach that is followed by other real estate companies), we estimate our Scope 2 emissions for 2021 to be 85,926 MTCO₂e and our Scope 1 + 2 emissions intensity to be 0.0033 MTCO₂e/SF.

ENERGY CONSUMPTION (MWh)	2019	2020
DISTRICT CHILLED WATER	12,702	9,220
DISTRICT STEAM	259,472	186,163
ELECTRICITY	556,572	440,095
FUELS	182,586	186,127
TOTAL	1,011,332	821,605
COGENERATED FUELS	38,894	55,391

¹We have chosen to report our emissions according to the financial control method, as discussed in the World Resource Institute's Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition. Location-Based reflects emissions for our properties based on the grid average emission factor, while Market-Based reflects emissions that we are responsible for due to our purchasing decisions. Our Scope 1 emissions include onsite combustion from oil and natural gas. Scope 2 emissions include our district steam consumption and electricity consumption, including electricity consumed by our submetered tenants; Scope 3 emissions include other utility consumption within the direct control of our tenants.

ENVIRONMENTAL RESULTS BY REGION

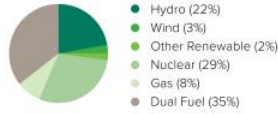
LEED CERTIFICATIONS

NEW YORK
21.7 MILLION SF
 82% of total region (including retail);
 30 buildings

CHICAGO
3.7 MILLION SF
 Over 99% of total region, 1 building

SAN FRANCISCO
1.8 MILLION SF
 100% of total region; 3 buildings

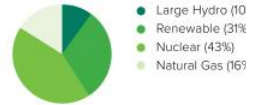
GRID ELECTRICITY MIX



Source: NYCA Energy Production 2021, NYISO



Source: Com Edison Environmental Disclosure Statement, 12 months ending September 30, 2021



Source: PG&E, 2020 Power Mix

WASTE BY REGION (TONS)

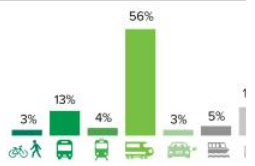
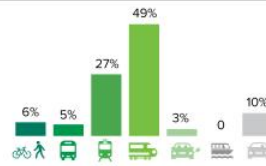
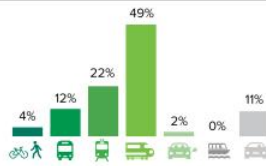
- Non-Hazardous Recycling
- Energy Recovery
- Organic Diversion
- Landfill



TRANSPORTATION SURVEY RESULTS (MILEAGE)[†]

As surveyed from our tenants in 2019

- Walk/Bike/Telecommute
- Bus
- Light Rail
- Heavy Rail
- Carpool/Alternative Fuel
- Ferry
- Car: Solo



2021 GHG EMISSIONS (MT CO₂e)

- Scope 1: Oil & Natural Gas Heating and Cooling, Cogeneration
- Scope 2: District Steam, Base Building Electricity, Submetered Tenant Utilities
- Scope 3: Direct Metered Tenant Utilities

Scope 1	24,051
Scope 2	104,547
Scope 3	32,035
Total	160,633

Scope 1	3,944
Scope 2	14,647
Scope 3	83
Total	18,674

Scope 1	0
Scope 2	0
Scope 3	0
Total	0

[†]Due to continued low occupancy during 2021, survey results reflect 2019, the last full normal year of operations.

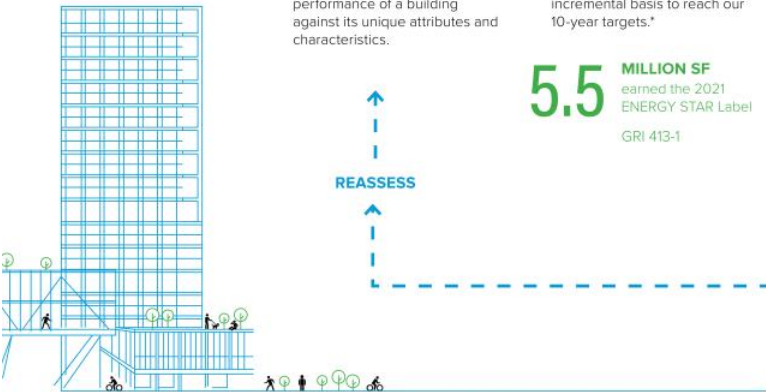
ENERGY MANAGEMENT PLANNING CYCLE

MAKE COMMITMENT → **ASSESS PERFORMANCE** → **SET GOALS*** → **CREATE ACTION PLAN**

Vornado's dedicated energy management begins with team members who report directly to senior management, and it extends to the asset-level teams which operate and manage the properties. By identifying and executing energy solutions that are specific to each of our assets, Vornado will fulfill its commitment to reducing energy consumption 50% by 2030 — below a 2009 baseline.*

Our team uses research and data to comprehensively evaluate each asset by taking three different approaches: assessing the physical condition and efficiency of each property's mechanical infrastructure through energy audits and retrocommissioning; assessing the property's utility costs on an absolute and per-square-foot basis; and assessing the property's ENERGY STAR score, which measures the energy performance of a building against its unique attributes and characteristics.

Our Vision 2030 goal is to achieve carbon neutrality in our buildings by 2030, which includes a 50% energy efficiency goal. We use carbon intensity (MTCO₂e PSF) as the metric to measure against our carbon neutrality goal, and energy intensity (kBtu/SF) against our energy efficiency goal. On an annual basis, we update one- to three-year capital improvement plans that will reduce energy on an incremental basis to reach our 10-year targets.*



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CREATE ACTION PLAN

Define technical solutions, both small-scale (low- and no-cost) and large-scale (energy efficiency capital projects).
Assess projected energy savings of projects and measure their contribution toward property energy reduction goal.

IMPLEMENT ACTION PLAN

Execute plan with projected energy and carbon savings with a variety of stakeholders:

Internal Site-Level Management and Engineering Teams Accounting Group Senior Management Our Board	External Utility Companies Vendor Partners Our Peers Our Community
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EVALUATE PROGRESS

Measure and verify energy project savings using submeters. Assess energy cost savings on a utility bill. Subsidize cost of energy projects using utility rebates where available. Recover costs through lease-driven clauses for resource efficiency-related capital improvements.	Monitor until the project's energy reduction goals are met. Reflect the impacts of our energy savings to the broader environmental performance of our company, through the key performance indicators in our Environmental Management System (EMS). Our EMS is aligned with the "Plan-Do-Check-Act" stages of ISO 14001 EMS standards.
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DATA SOURCE
Resource, Consumption, Cost Info

ENVIRONMENTAL MANAGEMENT SYSTEM (EMS)

G R E S B
arc
VORNAD
SUSTAINABILITY

RECOGNIZE ACHIEVEMENTS

Annually recognize building operators and engineers who achieve 10% or greater energy savings on a weather-normalized basis.
Apply for the ENERGY STAR Label where eligible, annually.
Communicate energy savings and ENERGY STAR Label achievements to internal and external stakeholders.

SUSTAINABLE DEVELOPMENT*

At Vornado, sustainability and resilience are important lenses through which we view all of our development projects at any scale. Our holistic approach enables us to focus on best practices around not only carbon neutrality but also operational efficiencies, human health, minimizing material resources, and climate change adaptation. Important considerations include:

- Pedestrian-oriented public spaces
- Ability to remain architecturally significant
- Implementing energy and water efficiency solutions
- Amenities to support tenants and occupant health
- Promoting reuse to reduce embodied carbon and replacement costs
- Creating a healthy environment that fosters collaboration and innovation
- Beyond our base-building efforts, continuing to incentivize our tenants to implement energy savings strategies within their own spaces through resources and direct engagement, real-time energy use data, and information on public incentives available through Con Edison or NYSERDA to help subsidize costs of energy efficiency projects

PENN 1

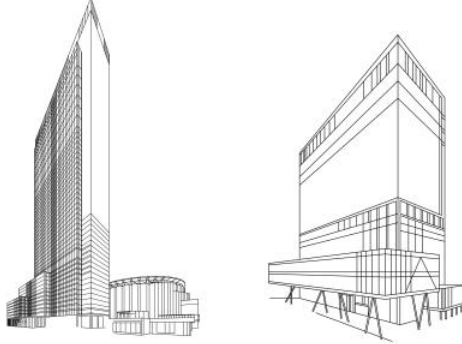


Vornado is a direct supporter of the USGBC and Center for Active Design and uses these certifications to integrate sustainable best practices across our portfolio.

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PENN 1 AND PENN 2

Both PENN 1 and PENN 2 are presently LEED EB+OM Gold certified and are pursuing Fitwel certification while working to improve on the LEED Gold status through renovation. The project is employing a range of sustainable solutions to reduce its environmental footprint and simultaneously improve occupant comfort. Energy reduction and enhanced management capabilities are anticipated to reduce energy consumption by an additional 7% above existing reduction strategies across both buildings. The properties will be delivered as carbon-neutral.



NEW ELECTRIC CHILLERS
Replaced steam-fired chillers in anticipation of a clean electrical grid

TRIPLE-PANE GLASS
Complete replacement of existing single-paned windows with triple-paned curtainwall

BUILDING CONTROLS
Smart building technology that will use occupancy data and analytical software to run HVAC controls

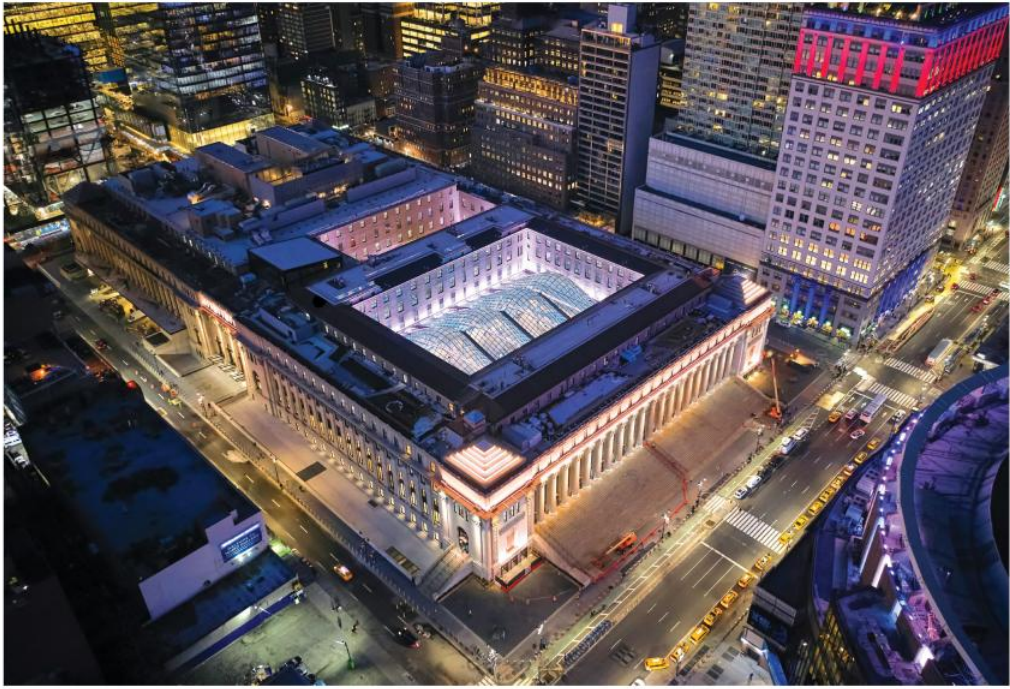
GREEN SPACE
Over 60,000 SF of outdoor green spaces



RENEWABLE POWER
Delivery of 100% zero-carbon electricity from the grid, as supplied from in-state renewable and hydroelectric resources

VERTICAL TRANSPORTATION & ACTIVE STAIRWELLS
Full elevator replacement and tenant access to an active staircase

SUSTAINABLE DEVELOPMENT Continued



Farley

THE FARLEY BUILDING

Vornado converted this iconic Beaux Arts New York City fixture into a modern, in-class creative office hub, on par with the horizontal campuses it has built, which are characterized by large floor plates and abundant green space. The adaptive reuse of the Farley Building will be further supported by Vornado's portfolio-wide sustainable operations strategy that prioritizes resource conservation, healthy indoor environments, and responsible procurement.

The 730,000 SF office building is targeting LEED v4 Gold certification, highlighted by the following:

- Thoughtful restoration of building elements rather than replacement reduced our embodied carbon footprint by 64%, or the equivalent of 78,795 MTCO₂e avoided
- Direct access to Amtrak, Long Island Rail Road, and New Jersey regional train networks, in addition to multiple NYC subway lines
- A 70,000 SF rooftop park space, with up to a quarter mile of covered walkable outdoor paths
- Zero waste design guidelines that include organics diversion for food and retail spaces
- Ample stairwell access to facilitate collaboration among different departments and promote an active lifestyle
- State-of-the-art energy management system that contributes to energy reduction and demand response, and provides tenants with insights into their real-time energy consumption, demand, and carbon emissions

GREEN FINANCING

We have seen the marketplace continue to evolve and establish a firmer connection between sustainability and access to capital. Our recent offering of \$750 million of green bonds and the new sustainability-linked pricing reduction on our \$1.25 billion Revolving Credit Facility evidence our support of this growing connection and allow us to further integrate sustainability principles into our business.

REVOLVING CREDIT FACILITY

In April 2021, Vornado recast its \$1.25 billion Revolving Credit Facility, which assigned reduction of Vornado's GHGs as a Key Performance Indicator metric to grant a 0.01% reduction in the loan's interest rate. Achievement of the KPI requires a cumulative annual 5% reduction through 2025 and will be determined through the ongoing GHG reporting in this and future ESG reports.

GREEN BOND

In May 2021, Vornado completed a \$750 million dual-tranche green bond offering, resulting in \$741.6 million of net proceeds. The offering's Use of Proceeds is to finance recently completed and future eligible Green Projects, defined as (i) all new development or existing redevelopment buildings; (ii) all tenant improvement projects funded by Vornado, and (iii) all capital and redevelopment projects for existing buildings, in each case that have achieved, or are registered for, Gold or Platinum LEED certification level, and includes projects with disbursements made in the three years preceding the bond issuance date.

As of December 31, 2021, Vornado has disbursed the full **\$741.6 million*** of net proceeds to eligible Green Projects, which was achieved through our significant commitment to sustainable redevelopment within the PENN District, as summarized on this page. It is important to note that these funds represent only a portion of the ongoing capital investments we are making to reduce our carbon footprint across the portfolio. The full disbursement of the net proceeds within the first year of the offering evidences our strong commitment to sustainable development and gives us the ability to contemplate future green bond offerings.



Left Farley

TOTAL FUNDS DISBURSED TOWARD ELIGIBLE GREEN PROJECTS

\$741.6 MILLION

FULL NET PROCEEDS
TOTAL FUNDS DISBURSED 2019-2021*

All New Development or Existing Redevelopment Buildings

PENN 1 and PENN 2

- Complete replacement of elevators
- Partial electrification of the chiller plants
- Replacement of PENN 2's Building Management System (BMS)
- Replacement of single-pane curtainwall with triple-pane units
- Increased air filtration and continuous IAQ monitoring

Farley Building

- Over 700,000 SF of LEED Gold registered office space (certification anticipated spring of 2022)
- Increased air filtration and continuous IAQ monitoring

*Preliminary determination of disbursements. Refer to our Green Bond Use of Proceeds Report to be published in May 2022 on our website at www.vno.com for an update on actual amounts disbursed.

RESPONSIBLE RECYCLING

Vornado works closely with industry service providers and regulators to understand how we can optimally increase responsible waste diversion to support broad recycling and reuse markets and reduce our environmental footprint. To accomplish this, we have set progressive goals and improved building waste infrastructure. Most importantly, we have been and continue to be actively engaged with our tenants as they transition back to the office on best practice strategies to reduce overall waste across many waste streams to keep material out of landfills. We employ comprehensive data collection on these efforts, including annual waste audits that lead to targeted programs designed to effect continuous improvement toward our waste reduction goals.

VORNADO'S WASTE MANAGEMENT POLICY

- Increase diversion of waste from landfills through implementing comprehensive recycling, composting, and donation programs and sending the remaining waste to regional waste-to-energy plants.
- Require tenants to properly dispose of waste in the correct waste bins for collection to reduce contamination.
- Ensure all e-waste and hazardous universal waste are either recycled responsibly or disposed of to protect the environment.
- Understand how diversion impacts our Scope 3 carbon reduction efforts.

TENANT ENGAGEMENT

- Due to the continuing impact of the pandemic on office occupancy in 2021, we again suspended our annual town hall events. We plan to resume these in early 2022 as tenants return to their offices, and we will supplement this program with additional educational opportunities for tenants.
- We focused on one-on-one tenant engagement opportunities to reinforce proper recycling habits and reinforce organics collections with over 40 tenants including key partnerships with Bloomberg, Yext, Meta, IPG and subsidiaries, MSG, Neuberger Berman, Cohen & Steers, Anthem, and Axil Partners.
- We introduced a comprehensive e-waste collection program across our New York regional assets that provides direct tenant pickup on a quarterly schedule.

DATA TRACKING †

- We performed waste stream audits at 96% of our office portfolio, representing over 27 million SF.
- In 2021, organics collection increased from 50% of our office portfolio to 75%, representing 87% or 24.7 million SF of our office portfolio.
- Utilizing the EPA WARM Tool Version 15 (<https://www.epa.gov/warm/versions-waste-reduction-model-warm#15>), waste diverted from landfill and incineration represented 18,771 MTCO₂e avoided.

We will continue to monitor and utilize this data to further reduce our Scope 3 emissions in areas over which we have direct influence.

96% PERFORMED WASTE STREAM AUDITS AT 96% OF OUR OFFICE PORTFOLIO, REPRESENTING OVER 27 MILLION SF

87% IN 2021, ORGANICS COLLECTION INCREASED FROM 50% OF OUR OFFICE PORTFOLIO TO 75%, REPRESENTING 87% OR 24.7 MILLION SF OF OUR OFFICE PORTFOLIO

†Diversion rates for the portfolio fell in 2021. This is primarily attributed to the inability to enforce habits during the extended WFH period for many of our tenants, and because of the low occupancy of our tech-based companies which skew diversion rates higher typically, while financial service companies, which traditionally underperform around waste diversion, represented a much higher occupancy percentage.

*The information at this link was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information.



Scan the QR code about waste disposal.

Watch our video our recycling program at www.vno.com

Learn about our waste management at www.vno.com

ROADMAP TO NET ZERO WASTE



REDUCE

Vornado has begun to assess embodied carbon impacts throughout the design of various new and redevelopment projects to minimize replacement and associated construction waste. Tenants are encouraged to provide reusable cups, plates, and service ware in lieu of disposables.



REUSE

We have fostered partnerships with local organizations who can reuse furniture, appliances, cabinetry, and office supplies that come from our own demolition and connect these services to tenants undergoing office remodeling.



RECYCLE

Vornado partners with BMS and our waste haulers to simplify the diversion for tenants and provide feedback to further solidify educational and engagement opportunities. We track a wide range of recycling streams, including organics, metal/plastic, mixed paper, cardboard, bulk and demolition waste, e-waste, light bulbs and ballasts, and batteries.



WASTE-TO-ENERGY

All of the non-diverted waste from our NYC properties is currently being sent to a waste-to-energy facility. Our goal is to limit this to 10% or less of our total waste stream in the next decade.



WASTE-TO-LANDFILL

While only a small number of our assets are in geographic regions that still allow for landfilling, we continue to work with our local waste haulers to identify and create opportunities to eliminate this option.

HEALTH & WELLNESS

MISSION TO IMPROVE OCCUPANT HEALTH

As a building owner and landlord to thousands of business tenants, we are responsible for 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. Healthy buildings contribute to a healthy society and continue to be important criteria for prospective tenants. 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 to consider elsewhere in their daily lives.

We provide a common-sense, evidence-based approach and uphold the Fitwel standard as a framework to align our operating protocols and design standards to support indoor health. Below are examples of areas of focus for health and wellness at Vornado:

Indoor Air Quality

- Semi-annual indoor air quality testing programs to measure carbon dioxide, carbon monoxide, volatile organic compounds, particulate matter, temperature, and relative humidity
- Air quality protection from MERV13 or higher filtration systems, entryway control systems, and walk-off mats
- Piloting of ongoing Indoor Air Quality (IAQ) monitoring in select locations
- Green cleaning with nonhazardous disinfectants and cleaners
- Smoke-free, tobacco-free company across all our properties

Water Quality

- Annual legionella and domestic water quality testing
- Comprehensive Water Management Plan

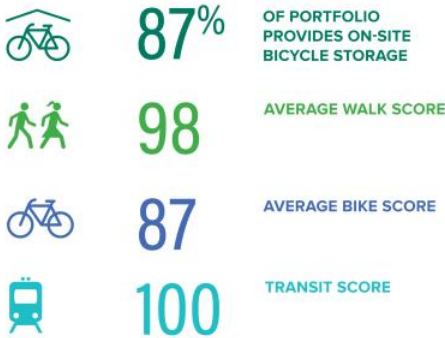
Mobility and Physical Activity

- Transit-oriented locations
- Subsidized memberships to fitness centers at select locations
- Accessible stairwells and active design strategies

Safety & Emergency Preparedness

- Emergency Action Plans
- Emergency supplies, Automated External Defibrillators (AEDs) aid kits
- Certified First Responder and CPR training for tenants and staff

OFFICE PORTFOLIO ACCESSIBILITY METRICS



PENN 1: Providing monumental stairs and encouraging vendors to serve healthy foods are key elements of our Health and Wellness priorities.

We presently have

6.6 MILLION SQUARE FEET of buildings (23% of our portfolio) certified under Multi-Tenant Whole Building Green



BMS & GREEN CLEANING

BMS & GREEN CLEANING

Building Maintenance Service, LLC ("BMS") is Vornado's janitorial division and comprises our essential workers who play critical roles in our pandemic protection program. BMS adheres to an enhanced cleaning, disinfection, and maintenance protocol that prioritizes safety and compliance with CDC and EPA guidelines.

In 2021, our procurement was impacted by the emergency purchase of PPE. BMS achieved 60% sustainable purchases.

GRI 416-1

EMPLOYEE HEALTH & SAFETY, EMPLOYEE TRAINING



Our 2021 training included

60 BMS SUPERVISORS AND SENIOR-LEVEL STAFF TRAINED in GS-42 green cleaning standards.

100% OF ACTIVE BMS EMPLOYEES TRAINED MONTHLY IN COMPLIANCE with training requirements in the OSHA standards.

12 HOURS OF TRAINING per employee, annually. GRI 404-1

1,920 HOURS OF SAFETY CHECKS IN 2021



18% REDUCTION IN WORKERS' COMPENSATION CLAIMS 2020-2021 for BMS employees



INDUSTRY-LEADING CERTIFICATIONS

BMS ensures its products and cleaning methods meet internal and external sustainability goals and improve the health and wellness of building occupants while also achieving optimal performance. We demonstrate this commitment by holding both CIMS-GB with honors and GS-42 certifications since 2014.

ISSA CIMS-GB WITH HONORS (CLEANING INDUSTRY MANAGEMENT STANDARD - GREEN BUILDING)

Compliance with the CIMS-GB standard demonstrates that BMS is structured to deliver consistent, quality services while focusing on sustainable practices. The path to certification consists of a written documentation submittal and an in-person audit. BMS submitted written documentation, including purchasing records, scopes of work, client feedback, and green cleaning policies and procedures. Once the documentation was reviewed and approved, BMS completed a comprehensive assessment by a third-party auditor to demonstrate compliance with CIMS. During the audit, the assessor surveyed janitorial supply closets, equipment, safety stations, and waste storage areas and conducts short interviews with BMS clients to determine that the services provided meet the CIMS-GB standard. The Green Building (GB) aspect of the certification demonstrates that BMS has met the rigorous environmental requirements set forth by CIMS. BMS completed the recertification process in 2020, with recertification occurring every two years.



GS-42 COMMERCIAL AND INSTITUTIONAL CLEANING SERVICES

The Green Seal Standard for Commercial and Institutional Cleaning Services, GS-42, establishes environmental requirements for cleaning service providers of commercial, public, and institutional buildings, including in-house and external cleaning services. To become certified, BMS completed a rigorous audit and documentation process, demonstrating our sustainable purchasing for equipment and products, training schedules, operations, and green cleaning techniques. During the audit, BMS was evaluated based on our written standard operating procedures and building-specific green cleaning plans, which outline the routine maintenance of powered equipment, safety stations, green cleaning techniques, and cleaning procedure requirements. Green Seal emphasizes the integration of sustainable practices within each of these requirements. BMS completed the recertification process in 2021, with recertification occurring every two years.

"BMS meets the highest industry standards for safe, effective cleaning and disinfecting that prioritizes indoor air quality and the health of the people in the building. We see BMS as an outstanding green cleaning service provider and overall industry leader because of the company's professionalism, commitment to sustainability, and consistent quality control. BMS not only provides excellent custodial services, but also delivers critically important indoor environmental health benefits and environmental savings through its services." Green Seal CEO Doug Gatlin

*This cleaning service meets Green Seal® Standard GS-42 based on waste minimization, building-specific operational procedures, effective custodial training, and use of products with limits on human and environmental toxicity. www.GreenSeal.org

BMS & GREEN CLEANING* Continued

2021 SUPPLY PURCHASE IMPACT



Purchased 34,292 cases of paper products, including 656,001 pounds of recycled paper products, which represents

1,082 CUBIC YARDS
of landfill space saved

Revolution liners use about 50% postconsumer recycled plastic. By purchasing these bags, BMS reduced emissions by

94.4 TONS
of CO2e in 2021.

*Any information relating to forward-looking statements, targets, goals, and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information.

BMS employees in 2021



SUPPLY CHAIN

VENDOR CODE OF CONDUCT

To extend our Business Code of Conduct to include our suppliers, we require compliance with Vornado's Vendor Code of Conduct (CoC) as part of our standard form of vendor contract. In addition to conveying our requirements on business ethics, integrity, and anti-bribery, we explicitly state that our vendors must comply with all applicable laws, including those pertaining to the following:

- Freedom of association and collective bargaining
- Human trafficking
- Forced labor and child labor
- Wages and working hours
- Health and safety
- Human rights and labor rights
- Anti-harassment
- Environmental impact and compliance with environmental regulations
- Air and GHG emissions
- Waste and recycling
- Anti-corruption
- Gifts and hospitality

VENDOR INTEGRITY PROGRAM

Vornado actively monitors compliance with our CoC and performs audits on our supply chain through our Vendor Integrity Program (VIP). Vendors are subject to review according to our VIP upon initial contract signing and at least once every three years thereafter. Our VIP uses federal and international databases to canvas our vendors for controversies that may indicate violation of our Code of Conduct. Such controversies may include, but are not limited to:

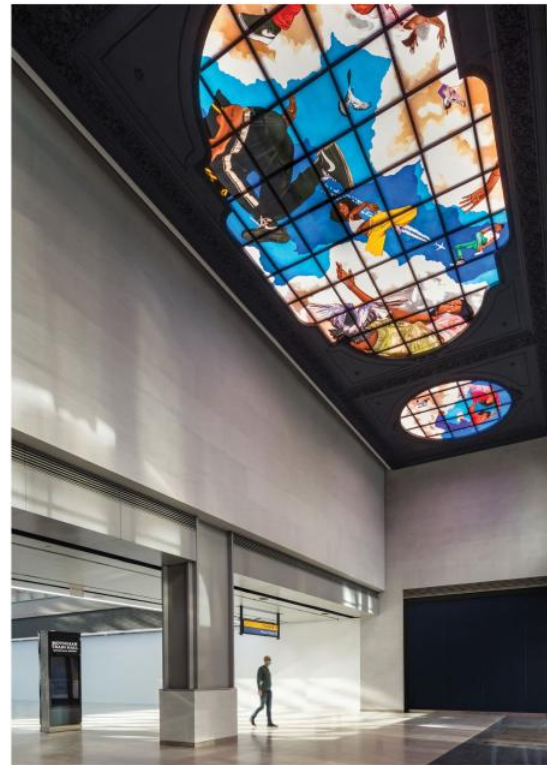
- Criminal and civil litigations
- Human rights violations, such as trafficking or slavery
- Controversial mentioning in the media
- Illegal business practices, including money laundering, terrorism, corruption, or fraud
- OSHA violations

RESPONSIBLE SUPPLY CHAIN PROGRAM

In 2021, Vornado expanded its VIP by engaging with an organization that evaluates our vendors on how well they have integrated the principles of ESG into their businesses and management systems. These measures assess performance and impact across 21 indicators within the following four themes:

- Environment
- Labor and Human Rights
- Ethics
- Sustainable Procurement

Through these assessments, Vornado will now begin to not only help us identify vendors that share our environmental, social, and governance values, but work with our existing vendors to improve their transparency and sustainable practices. The data received will further support our efforts to enhance our own reporting for various frameworks, including Scope 3 carbon emissions and social impacts.



Kehinde Wiley, Go, 2020
 © Kehinde Wiley. An original work of art commissioned by Empire State Development in partnership with Public Art Fund for Moynihan Train Hall.
 Photographer: Nicholas Knight. Image courtesy of the Artist, Sean Kelly, New York, Empire State Development and Public Art Fund, NY

CHICAGO AND SAN FRANCISCO

theMART



555 CALIFORNIA STREET CAMPUS



theMART
Left to right clockwise: theMART exterior, Marshalls Landing interior, Grand Stair

555 California Street Campus
Left to right clockwise: Triplex building exteriors, 555 California Street Plaza, 315 Montgomery Street facade, 345 Montgomery Street Atrium

TENANT & COMMUNITY DEVELOPMENT

Our strategy is to foster and nurture the community within our buildings for our tenants and visitors, and to enrich the neighborhoods and communities in which our buildings are located. Our proprietary LIVE.WORK.DO. app was designed exclusively for our tenants to seamlessly connect with their buildings' amenities, services, and work order system, as well as to connect the neighborhood to our tenants.



TENANT & COMMUNITY DEVELOPMENT Continued



CULTURE, WELLNESS, AND ENTERTAINMENT

Exclusive Vornado tenant deals and promotions from onsite and neighborhood restaurants, gym classes, spa specials, local festivals and concerts, and more. During the pandemic, LiveWork.Do, connected Vornado with our tenants who were working from home via free online exercise programs, yoga classes, meditation podcasts, and recipes for special dishes and cocktails.



PARKING AND TRANSPORTATION

Onsite parking with access to electric charging stations and Revel Mopeds. App access to electric charging stations at our dock garages, moped rentals, and an ever expanding list of alternative transportation options.



MOBILE TENANT ACCESS

Mobile credentials provide tenants with frictionless access through the building's turnstiles, eliminating the need to carry building access cards.



TRANSIT

Live transit information alerts for neighborhood transit options conveniently originating at each office building.



DINING WITH SOCIAL IMPACT

CSA boxes in conjunction with our onsite restaurant provider Sharebite Partnership - Mission driven corporate food ordering platform, with concierge delivery of 3-5 tailored restaurant options per day, helping to keep tenants COVID safe.



MOBILE VISITOR REGISTRATION

The LiveWork.Do, app provides the convenient mobile credentials to our visitors. Tenants can invite a visitor and a QR code will be provided via email or text, reducing dependence on paper badges for all visitors.



SAFETY

Direct links among the tenants, property management teams, and our security force to report on-site and local concerns and communicate in real time. Our in-house Security Operations Center (SOC) was built exclusively for the portfolio and is managed 24 hours a day, 7 days a week by experienced security professionals.



ORDER AHEAD

Platform for ordering coffee for a seamless pickup and for ordering food so tenants can skip the lunch line.



BUILDING SUSTAINABILITY INITIATIVES

We keep our tenants informed of the building's sustainability profile, including energy, water, and transportation data; initiatives such as E-waste recycling programs; and philanthropic activities.



CRITICAL INFORMATION AND EMERGENCY PREPAREDNESS

LiveWork.Do, served as a critical source of information during the pandemic, particularly while tenants worked from home. Through LiveWork.Do., Vornado was able to notify tenants of all COVID-related protection measures, including requirements for entry to the building, updates to building systems, green cleaning and disinfection, and updates on governmental regulations.



HEALTH AND WELLNESS

Access to private gym memberships, fitness classes, and nutrition counseling. On-site clinic appointments for general medical services, flu shots, and physical therapy sessions through Columbia New York Presbyterian.



WORK REQUESTS

Direct links into the building's service order system. Resource reservations allow the tenant administration teams to report on issues and receive updates from the convenience of a mobile phone.

STAKEHOLDER ENGAGEMENT*

Much of 2021 continued to be a story of remote work for a large portion of our tenancy, preventing us from holding typical in-person engagements, such as town halls, or comfort and transportation surveys. Although this made in-person engagement difficult, the Vornado sustainability team adapted to new ways to engage with our tenants as they planned their return to the office and expressed interest in using this transition to address resource efficiency and other environmental priorities.

Key Sustainability Priorities Addressed Through Engagement in 2021:

- Energy competition and associated reduction strategies during low occupancy
- Introduction of organics collection and the reinforcement of existing waste diversion policies
- Identifying tenant Energy Conservation Measures (ECMs) to reduce long-term energy use, some of which Vornado ushered through using the ENERGY STAR Treasure Hunt program.
- Collaborating with tenants on the ENERGY STAR Tenant Space to track performance improvements and seek recognition
- Expanding our urban beehive program**



**Building on tenant programs at 770 Broadway and 731 Lexington, Vornado is working to bring beehives to our portfolio to support the local pollinator population. Hives were installed at 1230 Avenue of the Americas, and we are on target to add five additional locations in 2022. The urban beekeeping program is an opportunity to engage with tenants in a unique way by providing educational programs year-round as well as providing them with harvested honey from the hives.

* Due to low occupancy continuing for much of 2021, 2019 results are presented as a baseline for future reporting.

*Any information relating to forward-looking statements, targets, goals, and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information.

TENANT ENERGY ENGAGEMENT

- Introduction of the tenant ENERGY STAR programs to tenants in New York and San Francisco representing over 9.1 million SF of leased space
- Direct engagement with over 50 tenants representing over 7.3 million SF of leased space within New York, San Francisco and Chicago portfolios to discuss energy reduction strategies, urban beekeeping, the introduction of organics collection, and ways to improve waste diversion within their spaces.

7.3 MILLION SF OF DIRECT
TENANT ENGAGEMENT

26% OF VORNADO'S TENANCY
INTRODUCED ENERGY
STAR PROGRAMS

TENANT SATISFACTION SURVEYS†

TENANT OUTLOOK

8
AVERAGE TENANT
SATISFACTION RANKING

89%
OF TENANTS RANK THEIR
EXPERIENCE AS POSITIVE

We ask tenants to rate their experience on a scale of 1-10 (10 being the most positive). We survey our tenants as part of our stakeholder engagement and our customer service. Our results are reviewed internally every year and help us target areas of improvement. We paused our tenant satisfaction surveys during the pandemic in 2020. We plan to resume our surveys in 2022 and beyond.

HUMAN CAPITAL MANAGEMENT

GRI 102-16, 401-2, 413-103-2, 404-103

Our employees are the foundation of our business. We provide training and education, promote career and personal development, and encourage innovation and engagement to foster their talent and growth. Vornado upholds strict policies against bribery and corruption, child labor, and forced or compulsory labor. Such policies extend to our Board and management as well as our employees. Any trustee, officer, or employee who becomes aware of any existing or potential violation of Vornado's Code of Ethics is required to notify their Code of Ethics contact person promptly. Violations may be reported anonymously, and all communications will be kept confidential. Our Code of Business Conduct and Ethics is found on our website at www.vno.com/governance/conduct-and-ethics. Our policies are found in our employee handbook, which our employees must review and acknowledge on an annual basis.

EMPLOYEE HEALTH & BENEFITS

Financial

- 401(k) and Employer Match
- Tuition Reimbursement
- Employee Referral Bonus
- Commuter Benefits
- Cellular Discounts

Parental Benefits

- Dependent Care Flexible Spending Account
- Maternity & Parental Leave
- Adoption/Surrogacy/IVF Stipend

Work/Life Balance

- Employee Assistance Program
- Time Off/Paid Holidays
- Summer Fridays

- Offered flexibility to encourage employees to find better balance while supporting the critical need for in-person collaboration in the office. We understand how the post-COVID workplace can evolve and thrive.

Health and Wellness

- Medical, Dental, and Vision Coverage including Telemedicine
- Health Savings Account
- Life Insurance
- Short-Term and Long-Term Disability Insurance
- Employee Wellness Incentives
- Healthcare Flexible Spending Account
- Subsidized Gym Memberships

- Biometric Screenings
- In-Workplace Flu & COVID Vaccination

- CPR Trainings

- Enhanced our wellness program/initiatives to encourage our employees to adopt healthy behaviors.

EMPLOYEE TRAINING

- Anti-Harassment
- Cybersecurity
- Active Shooter Training
- Manager and Executive Retreats for Training Purposes
- Continuing Education Through Building Owners and Managers Association (BOMA), IUOE Local 94, Local 32BJ, and the NYU Schack School of Real Estate

- Green Professionals Training, Administered Green Council

EVENTS

- Earth Week
- Corporate Challenge
- Town Halls
- Holiday Parties
- Vornado Day of Serv

*The information at this link was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLO does not express a conclusion or any form of assurance on such information.



PENN 1



PENN 2



theMART

ENVIRONMENTAL, SOCIAL & GOVERNANCE

DIVERSITY, EQUITY, AND INCLUSION



Vornado operates in a diverse and inclusive environment that empowers the individual and enriches the employment experience. As a business leader in one of the most diverse markets in the world, we have a responsibility to improve representation in the real estate industry and enhance opportunities within our organization. Over the course of the past year, we've implemented various programs and initiatives that have a meaningful impact across our employee population.

Ways in which we've targeted our efforts:

- Expanded opportunities to minority students through partnerships with Project Destined, which sourced internships and mentorship opportunities with our senior executives.
- Updated our recruiting and onboarding software. This creates more seamless candidate and new hire experience to ensure we have a fair and balanced hiring process, bringing in applicants from all different backgrounds. Adjusted language in our job postings to promote greater inclusion. Targeted outreach to identify diverse candidates.
- Enhanced our parental leave and established an adoption/surrogacy benefit to recognize all different types of families.
- Added an elective holiday to our calendar, allowing employees to observe a personal religious or cultural holiday.

NYU Internship Program

DIVERSITY, EQUITY, AND INCLUSION Continued

SOCIAL DEMOGRAPHICS VORNADO 2021

Our VNO employees are **54% FEMALE**
28% RACIAL MINORITIES

KEY FINDINGS		TOTAL EMPLOYEES	% ALL EMPLOYEES	PERMANENT	TEMPORARY	FULL-TIME	PART-TIME	RACIAL MINORITIES* (%)
GENDER								
ALL EMPLOYEES	MALE	252	46.41%	247	5	248	4	25%
	FEMALE	291	53.59%	281	10	284	7	31%
AVP OR ABOVE	MALE	76	14.00%	76	0	76	0	16%
	FEMALE	35	6.45%	35	0	35	0	23%
AGE								
ALL EMPLOYEES	< 30 YRS OLD	93	17.13%	82	11	89	4	19%
	30-50 YRS OLD	271	49.91%	267	4	265	6	25%
	> 50 YRS OLD	179	32.97%	179	0	178	1	25%
AVP OR ABOVE	< 30 YRS OLD	1	0.18%	1	0	1	0	100%
	30-50 YRS OLD	65	11.97%	65	0	65	0	22%
	> 50 YRS OLD	45	8.29%	45	0	45	0	11%
REGION								
NEW YORK		259	47.70%	245	14	251	8	23%
NEW JERSEY		226	41.62%	225	1	224	2	36%
CHICAGO		54	9.94%	54	0	54	0	17%
SAN FRANCISCO		4	0.74%	4	0	4	0	100%

TENURE	0-4 YEARS	5-9 YEARS	10-19 YEARS	20+ YEARS	TOTAL	2021 EMPLOYEE TURNOVER RATE	17%
# OF EMPLOYEES	197	147	104	95	543	2021 NUMBER OF NEW HIRES	66
% ALL EMPLOYEES	36.28%	27.07%	19.15%	17.50%	100.00%		

VORNADO 2021 NUMBER OF NEW HIRES

BY AGE	BY GENDER	BY REGION	TOTAL
< 30 YRS OLD	36 54.55% MALE	29 43.94% NEW YORK	42 63.64%
30-50 YRS OLD	24 36.36% FEMALE	37 56.06% NEW JERSEY	20 30.30%
> 50 YRS OLD	6 9.09%	4 6.06% CHICAGO	4 6.06%
		0 0.00% SAN FRANCISCO	0 0.00%
TOTAL	66 100.00%	66 100.00%	66 100.00%

** Demographics were not collected for employees who left employment in 2021 so this data has been omitted.

SOCIAL DEMOGRAPHICS BMS 2021

Our BMS employees are **33% FEMALE**
70% RACIAL M

KEY FINDINGS		TOTAL EMPLOYEES	% ALL EMPLOYEES	PERMANENT	TEMPORARY	FULL-TIME	PART-TIME	RACIAL MINORITIES* (%)
GENDER								
ALL EMPLOYEES	MALE	2,094	66.60%	1,887	207	1,720	374	
	FEMALE	1,050	33.40%	963	87	713	337	
AGE								
ALL EMPLOYEES	< 30 YRS OLD	407	13%	311	96	283	124	
	30-50 YRS OLD	1,362	43%	1,230	132	1,037	325	
	> 50 YRS OLD	1,375	44%	1,309	66	1,113	262	
REGION								
NEW YORK		1,994	63%	1,891	103	1,936	58	
NEW JERSEY		29	1%	25	4	10	19	
CHICAGO		367	12%	180	187	176	191	
WASHINGTON, DC		741	24%	741	0	308	433	
OTHER		13	0%	13	0	3	10	

2021 EMPLOYEE TURNOVER RATE	21%
NEW HIRES IN 2021	583

10.68 YRS AVERAGE TENURE VORNADO EMPLOYEES

BMS 2021 NUMBER OF NEW HIRES

BY AGE	BY GENDER	BY REGION	TOTAL
< 30 YRS OLD	153 26.24% MALE	407 69.81% NEW YORK	350
30-50 YRS OLD	276 47.34% FEMALE	176 30.19% NEW JERSEY	4
> 50 YRS OLD	154 26.42%	4 6.06% CHICAGO	82
		0 0.00% WASHINGTON, DC	147
TOTAL	583 100.00%	583 100.00%	583

Our diversity metrics set a baseline from where we constantly strive to improve. Our target of improvement include increasing female and minority representation in senior positions, maintaining employee tenure and reducing turnover risk.

* These figures represent the diversity of our organization and are inclusive of the following racial minority groups: Black American, Hispanic/Latina, Asian/Pacific Islander and American Indian/Alaskan Native.

VORNADO VOLUNTEERS

Through employee engagement and social impact assessment, Vornado Volunteers identified the following localized community priorities: economically and socially disadvantaged populations, environmental restoration and protection, and health and wellness. In 2020, Vornado Volunteers commenced its commitment to community activism in each of our divisions, before transitioning to virtual volunteering where possible. Below is a selection of our 2020 activity.

- Partnered with Grant Associates for Vornado's Career Discovery Week in February, where Vornado executives hosted career panels, resume reviews, mock interviews, and networking sessions for 30 New York City high school sophomore students.
- Participated in virtual discussion and presentation for Fellows Issue Day, a cohort-style leadership training series, issued through the partnership with the Real Estate Board of New York (REBNY) and Coro, NYC's premier civic leadership training organization.
- Provided host sponsorship and virtually participated in the American Lung Association's 10th annual Fight for Air Stair Climb.

We have also instituted **Vornado's Day of Service**, which is a day of compensated time allowing our employees to volunteer for a cause of their choosing, starting in 2021.

Below is a selection from our 2019 volunteer program. We anticipate returning to in-person volunteering activity after the pandemic subsides in 2022 and beyond.

- American Lung Association, Fight for Air Stair Climb, raising over \$200,000 for lung disease research and awareness programs in New York.
- San Francisco Fire Department First Responders Stair Climb at 555 California Street in San Francisco.
- Partnership with Jersey Cares to provide shelters, hospitals, and food banks with supply kits and care packages.
- Over 600 hours of volunteering to revitalize Norman S. Weir School in Paterson, New Jersey, and provide mentoring support for students.
- Sponsorship of 2019 Construction Awards, which collected over 150,000 lbs. of food to provide over 230,000 meals through the Greater Chicago Food Depository.
- Park cleanup efforts in Central Park in NYC as well as Liberty State Park in Jersey City, New Jersey.

CHARITABLE CONTRIBUTIONS

In addition to volunteering our time and expertise to worthy causes, Vornado generously supports charities with financial contributions. Our beneficiaries represent a broad range of worthy causes, with an emphasis on community development, education and youth services, cultural institutions, and medical research. Below is a selection of recipients of Vornado's charitable giving in 2021:

- All Stars Helping Kids
- Bowery Mission
- Breaking Ground
- Building Skills New York
- Chicagoland Entrepreneurial Center
- Design Museum of Chicago
- Food 1st Foundation
- Greater Chicago Food Depository
- Inner-City Scholarship Fund
- Municipal Arts Society of New York
- New York Community Trust
- Project Cicero
- Regional Plan Association



Vornado team's park cleanup effort, Central Park

OUR PARTNERSHIPS

Our employees serve as members of and hold board positions in organizations where we make meaningful contributions to ESG issues in real estate. Our partnerships strategically address topics that include, but are not limited to: energy and water efficiency; climate policy; green building certifications; building electrification; zero waste strategies and recycling; diversity, equity, and inclusion; ESG reporting frameworks; and sustainable operations and maintenance. Below is a selection of our 2021 involvement.

NATIONAL

- EPA ENERGY STAR Partner
- U.S. Green Building Council Corporate Member, Greenbuild Program Working Group (Co-Chair)
- Urban Land Institute, Center for Sustainability and Economic Performance (Board)
- NAREIT Real Estate Sustainability Council
- Real Estate Roundtable, Sustainability Policy Advisory Committee (Vice Chair), Equity, Diversity & Inclusion Policy Advisory Committee
- Global Real Estate Sustainability Benchmark (GRESB) Benchmark Committee Member
- Sustainability Accounting Standards Board (SASB) Real Estate Sector Advisory Group

REGIONAL

- New York Energy Consumers Council (Co-President)
- Real Estate Board of New York (REBNY) Sustainability Committee
- Building Energy Exchange (Nominating Committee Chair)
- Urban Green Council
- Energy Efficiency & Housing Panel Member, New York State Climate Action Council
- New York State Department of Public Service Energy Efficiency and Building Electrification Strategic Advisory Group
- NYC Commercial Buildings Working Group for Local Law 97 Implementation
- Retrofit Chicago
- Building Owners and Managers Association (BOMA) New York, Chicago, and San Francisco
- BOMA-New York Pinnacle Each Award Sub-Committee (Chair)
- AIA Committee on the Environment (COTE) Zero Waste Design Guidelines Advisory Board
- Regional Plan Association (Board)
- Young Men's/Women's Real Estate Association (Board)
- Citizen Budget Commission



PENN1

COVID 2020-2021 RESPONSE

Our leadership and COVID response team worked tirelessly to ensure our buildings could remain open for business while providing a healthy and safe indoor environment for our employees, tenants, visitors, and contractors. We uphold Fitwel's Viral Response Module framework to guide our pandemic response protocols:

ENHANCE INDOOR ENVIRONMENTS

- Enhanced IAQ and humidity control policies, as recommended by CDC and ASHRAE
- IAQ testing and monitoring
- Legionella testing and water management plan
- Enhanced cleaning, disinfecting, and maintenance protocol

ENCOURAGE BEHAVIORAL CHANGE

- Provision of PPE with accompanying education and signage
- FDA-approved thermal scanning practices, social distancing, and PPE requirements in all of our lobbies and common areas
- Hand hygiene stations, including education and signage
- Health programming and services plan

BUILD OCCUPANT TRUST

- Pandemic preparedness plan and business continuity plan
- Viral response design guidelines for our offices, lobby areas, and loading docks
- Enhanced stakeholder collaboration plan, including our employee survey and emergency communications plans
- Flexible and accommodating paid sick leave and family support policies for employees

ADDITIONAL BENEFITS EXTENDED TO OUR EMPLOYEES

- Daily health screenings and questionnaire
- Provision of COVID tests
- Provision of equipment for remote working capabilities and IT support
- Vaccination and booster shot clinics
- Flexibility to accommodate personal requests



Vornado was among the first five real estate companies to earn the Fitwel Viral Response Module designation in 2020 for our pandemic response program.

In 2020 and 2021, the BMS Green Clean program fully aligned with Fitwel's Viral Response Module (VRM). Highlights from our green cleaning include the following:

- Identification of high-touch surfaces to shift extra attention to cleaning and disinfecting of these areas.
- Active maintenance of PPE inventory, including masks, gloves, eye protection, face shields, and hazmat suits. These provisions are made available to all staff in every building. Additionally, BMS is managing an inventory of hand hygiene supplies including hand soap, sanitizer, and paper towels, to ensure consistent supply.
- Prioritization of safer disinfectants, as outlined by Green Seal and Fitwel VRM, and hydrogen peroxide-based products across all regions of our operations.
- Use of vacuums with HEPA filtration. HEPA, or high efficiency particulate air, filters remove dust, pollen, mold, bacteria, and other airborne particles from the air as it passes through the vacuum. The HEPA filtration helps to supplement the IAQ mitigation strategy in place with HVAC filtration systems.
- Maintenance of healthy entryway systems in our lobbies by routinely cleaning at all high-traffic access points, including walk-off mats, and the continuing disinfection of high-touch surfaces.

2021 also highlighted the critical success of the BMS health and safety program. Since the onset of the pandemic, BMS has been the primary procuring agent for all PPE and other critical supplies for Vornado and our divisions.

BMS established an internal pandemic protocol to respond safely and effectively to the ongoing threat posed by the pandemic. Communication methods for reporting illness, duration of quarantine, and contact tracing were outlined by Human Resources and distributed to all staff. Guidelines for symptom checking and temperature reading were established and executed at the building level for all staff. Operational adjustments such as staggered shift times, limits to the number of

staff in confined spaces, and encouraging employees to arrive fully uniformed when possible were all in response to the pandemic.

In 2020 and 2021, BMS field staff have been utilizing the following COVID-specific training modules and methods:

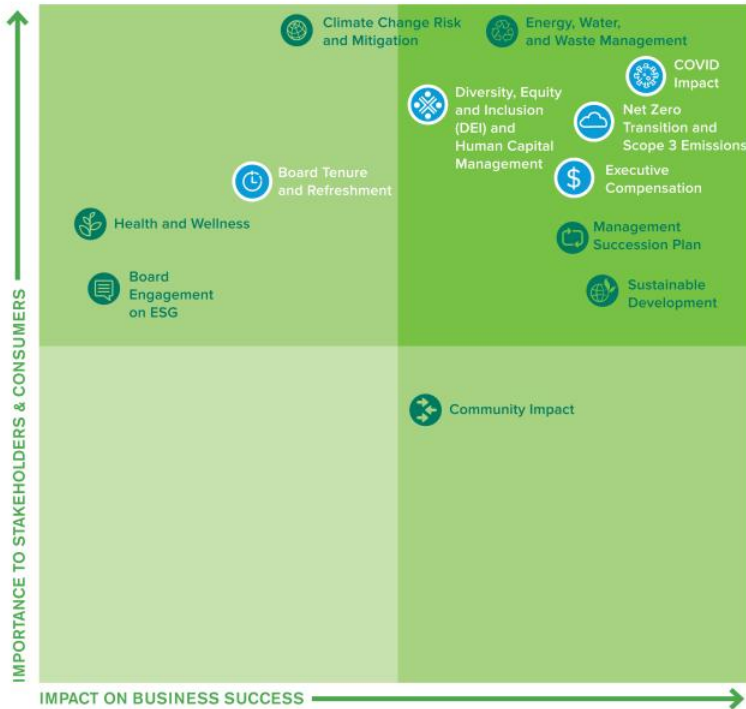
- PPE – how and when to use it, proper donning/doffing techniques
- Proper pandemic disinfection protocol – equipment selection, dwell time, procedures, proper use of equipment
- Preventing the spread of contagious illness
- ISSA Global Biorisk Advisory Council (GBRAC) and Disinfection Principles
- Equipment training – HEPA filtered vacuum, electrostatic sprayers
- BMS staff guidelines for health and safety COVID – social distancing, hand washing, communication, symptom checking
- 32BJ/BMS Partnership COVID Training & Infection Control Course (1 hour)
- Creation of weekly safety/training virtual refreshers (DC/VA region)

Types of QA/QC safety checks conducted to ensure a healthy workplace in 2020 and 2021:

- Safety station inspections to ensure proper signage, Material Safety Data Sheets (MSDS) for bloodborne pathogen procedures in place
- PPE inventory, tracking, and distribution
- Emergency cabinet checks
- Employee injury/incident follow-up

ESG MATERIALITY ASSESSMENT*

GRI 102-40, 102-42, 102-43, 102-44, 102-46, 102-47



*Any information relating to forward-looking statements, targets, goals, and progress against goals was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information.

OBSERVATIONS FROM 2021:

COVID Impact
Our tenants, investors, Board, and employees all expressed concern about the impact of the COVID pandemic on our business, our human capital, and our ability to continue progress on our ESG goals.

Net Zero Transition and Scope 3 Emissions
Our tenants, investors, and Board expressed continued support for Vision 2030, and encouraged Vornado to consider additional categories of Scope 3 emissions as part of our carbon inventory.

Executive Compensation
Based on prior year feedback, our Board prioritized the inclusion of ESG performance metrics in our senior management long-term compensation plan. Our investors expressed support for these changes.

Diversity, Equity, & Inclusion and Human Capital Management
Our employees, tenants, investors, and Board all included these topics as a top priority in their engagement. DEI enhancements, workplace flexibility, and expanded benefits were among the most frequently mentioned components.

Board Tenure and Refreshment
Our investors continued to express support for Board refreshment, which our Board is implementing for 2022.

STAKEHOLDER GROUP	NATURE OF ENGAGEMENT	FREQUENCY OF ENGAGEMENT	KEY TO CONCERN
OUR TENANTS	Active relationship through our property management teams; meetings and discussions on tenant environmental performance; sustainability roundtable or webinar.	Daily (property management); as-needed (in-person meetings); semi-annually (roundtable/webinar).	COVID; Energy, Waste; Net Zero; Comm; Health
OUR INVESTORS	Conference calls to discuss corporate governance and ESG issues. Discussions include Vornado's Lead Trustee; President and Chief Financial Officer; Corporation Counsel; and heads of Investor Relations, Human Resources, and Sustainability. Conducted calls with investors representing ownership of at least 50% of all outstanding shares.	Annually, or more frequently as requested. Total investors reached represent over 40% of all Vornado's outstanding shares.	COVID; Executi; Compe; Managi; Succes; Equity; and Hu; Managi; Zero Tr; 3 Emiss
OUR BOARD	ESG update to the Board by the President and CFO; presentation from the head of Sustainability.	Quarterly (from CFO); annually (from head of Sustainability).	COVID; Financi; Executi; Compe; Capital; Diversit; Inclusio; Transiti
OUR EMPLOYEES	Informal and frequent check-ins on environmental performance; in-person or virtual meetings; employee surveys.	Weekly (informal engagement); annually (in-person meetings, Virtual Town Hall meeting).	COVID; Capital; Health; Energy; Waste; Net Zer; Sustain; Develo
OUR COMMUNITIES	Active membership and partnerships in community and government organizations focused on civic and environmental issues.	Monthly or more frequently (per meeting schedule).	COVID; Zero Tr; Energy; Waste; Comm; Climate; Risk an; Sustain; Develo

ESG GOVERNANCE

ESG at Vornado is vertically integrated and core to our business, starting with the Board and impacting every division.

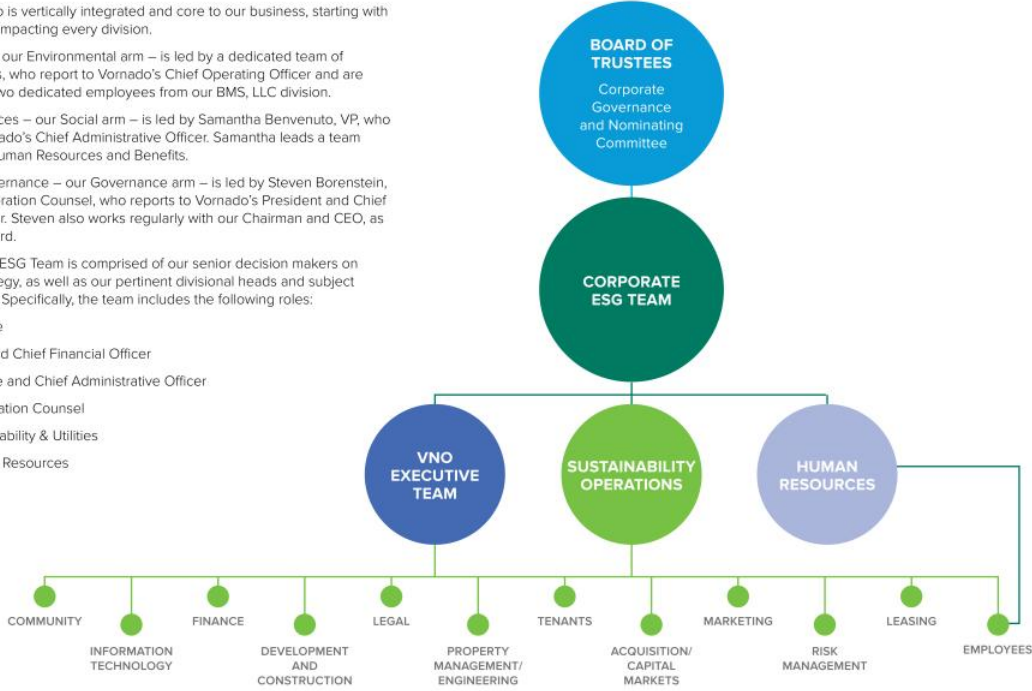
Sustainability – our Environmental arm – is led by a dedicated team of four employees, who report to Vornado’s Chief Operating Officer and are supported by two dedicated employees from our BMS, LLC division.

Human Resources – our Social arm – is led by Samantha Benvenuto, VP, who reports to Vornado’s Chief Administrative Officer. Samantha leads a team dedicated to Human Resources and Benefits.

Corporate Governance – our Governance arm – is led by Steven Borenstein, SVP and Corporation Counsel, who reports to Vornado’s President and Chief Financial Officer. Steven also works regularly with our Chairman and CEO, as well as our Board.

Our Corporate ESG Team is comprised of our senior decision makers on corporate strategy, as well as our pertinent divisional heads and subject matter experts. Specifically, the team includes the following roles:

- Lead Trustee
- President and Chief Financial Officer
- EVP, Finance and Chief Administrative Officer
- SVP, Corporation Counsel
- SVP, Sustainability & Utilities
- SVP, Human Resources



Oversight of social and environmental issues including climate change risk; diversity and inclusion; and human capital management. Quarterly updates from senior management and an annual presentation from Sustainability and Utilities.

Stakeholder engagement, investor communication and outreach, and execution of ESG strategy. Formal schedule of investor engagement on ESG and frequent meetings and communication among stakeholders.

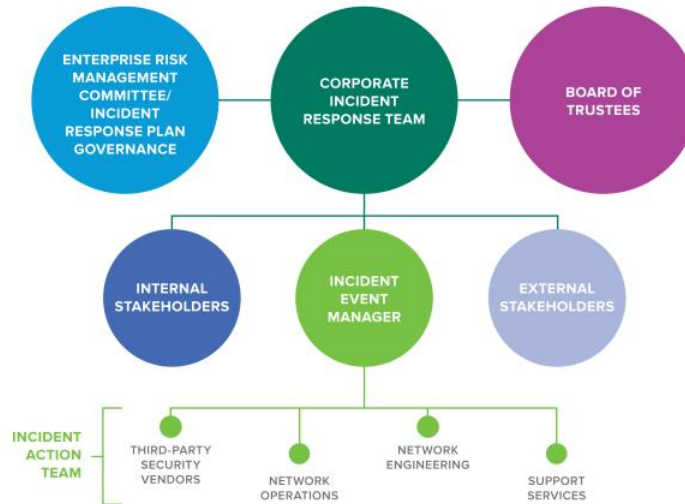
ESG strategy implementation within various areas of focus. Daily discussions and collaboration on specific projects as well as ongoing operations and maintenance.

Integration of ESG strategy across an entire spectrum of business units and stakeholder groups. Frequent communication with respective heads of management.

CYBERSECURITY

Vornado is committed to rigorous cybersecurity protocols and employs a multifaceted approach for protecting our data and the computing environment utilized by our employees and external vendors. We engage with multiple third-party services that provide in-depth 24/7 network monitoring in addition to performing scans for vulnerabilities. These service providers ensure that our cybersecurity posture is correct, updated, and ready to respond to any new and emerging threats as well. In addition, we support and supplement our cybersecurity efforts with physical security to further protect and maintain the network and computing equipment that allow us to operate our assets efficiently. We believe strongly in educating our employees by utilizing both online cybersecurity education and performing phishing campaigns to understand areas of additional educational need. Our Internet of Things (IoT) and corporate networks are physically separate to further enhance our data and access segregation. Furthermore, our IoT network is highly segmented for additional security and to minimize vendor access. Our networks are audited by multiple external firms to further our commitment to ensuring the highest security. Formal reports to both the Audit Committee and Board of Trustees detailing our current cybersecurity program and future enhancements are instrumental in satisfying their responsibilities.

The governance of the response to cyber incidents is designed to be efficient and ensure roles and responsibilities are clear throughout the organization. Because cyber incidents are only one area of risk for Vornado, the governance of their anticipation, identification, management, and response must logically fit within the firm's overall risk management and its associated response to those risks.



OUR OBJECTIVE:

Vornado's primary information security objective is to protect information assets from threats and vulnerabilities through active network monitoring and testing, and strong management of application, infrastructure, and physical access.



IDENTITY AND ACCESS MANAGEMENT

We have engaged outside experts to continually monitor network events and identify flaws or through regular penetration testing. An Identity Management (IAM) system analyzes application activities for suspicious behavior that might go undetected. Multi-Factor Authentication (MFA) is required for all remote network access and for network applications.



PATCH AND VULNERABILITY MANAGEMENT

Workstations and servers are secured via a patch management process and regular system updates to identify and remediate vulnerabilities. We implemented restrictive data access through proprietary software and perform thorough vendor assessments to understand any potential risks outside entities.



TRAINING AND OUTREACH

All staff are trained in cybersecurity awareness through periodic email phishing campaign reminders in the form of newsletters make employees an active part of our cyber defense.



INCIDENT RESPONSE

A detailed Cybersecurity Incident Response Plan is in place for organizational preparedness in the event of a cyber event. The CSIRP is vetted and updated regularly via multidisciplinary tabletop exercises.



BUSINESS CONTINUITY

We validate replication of our critical financial data at our disaster recovery site daily. All employees are trained on secure remote capabilities to perform critical enterprise without interruption.

GLOBAL REPORTING INITIATIVE (GRI) INDEX

GRI 10

Management of Vornado Realty Trust is responsible for the completeness, accuracy, and validity of the disclosures in the Global Reporting Initiative Index included within the Environmental, Social & Governance Report of Vornado Realty Trust as of and for the year ended December 31, 2021. Management is responsible for the collection, quantification, and presentation of the disclosures and for the selection of the criteria, which management believes provide an objective basis for measuring and reporting on the disclosures. Measurement of certain disclosures includes estimates and assumptions that are subject to substantial inherent measurement uncertainty resulting, for example, from accuracy and precision of greenhouse gas conversion factors or estimation methodologies used by management.

The selection by management of different but acceptable measurement methods, input data, or assumptions may have resulted in materially different amounts or disclosures being reported. Management asserts that the disclosures in the Global Reporting Initiative Index included within the Environmental, Social & Governance 2021 Report of Vornado Realty Trust as of and for the year ended December 31, 2021 are presented in accordance with the Global Reporting Initiative (GRI) Sustainability Reporting Standards under its Core option. The GRI has developed an internationally recognized standard for sustainability reporting.

GRI 102: GENERAL DISCLOSURES 2016

DISCLOSURE	DESCRIPTION	RESPONSE
ORGANIZATIONAL PROFILE		
102-1	Name of the organization	Vornado Realty Trust
102-2	Activities, brands, products, and services	We currently own or portions of: New York; 20.6 million square feet of Manhattan office in 32 properties; 2.7 million square feet of Manhattan street retail space in 60 properties; 1,674 units in 8 Manhattan residential properties; 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 1.3 million square foot Bloomberg Terminal building. 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 25.0% interest in Vornado Capital Partners, our real estate fund. We are the general partner and investment manager of the fund. The fund is in winddown; and Other and investments.
102-3	Location of headquarters	888 Seventh Avenue, New York, NY
102-4	Location of operations	United States of America
102-5	Ownership and legal form	Fully integrated REIT which conducts its business through, and substantially all of its interests in properties are held by, the Operating Partnership, a Delaware limited partnership. Vornado is the sole general partner and owned approximately 92.6% of the common limited partnership interest in the Operating partnership as of December 31, 2021.
102-6	Markets served	Our primary property types are office and retail with geographic locations in New York, Chicago, and San Francisco. Also see Materiality Assessment p. 35, and Stakeholder Engagement p. 28 of this report.
102-7	Scale of the organization	ESG Governance, p. 36 of this report; 35+ office properties in New York, Chicago, and San Francisco; 60+ retail properties in New York and surrounding regions, Miami Beach, FL and Annapolis, MD residential apartments in New York City. \$1,589 billion total revenues. In 2021, Vornado in conjunction with BMS employed 3,687 employees, 543 of which are employed by Vornado, and 3,144 of which are BMS. The demographics provided is a reflection of the total number of Vornado and BMS staff employed during 2021.
102-8	Information on employees and other workers	The significant portion of Vornado's activities are performed by workers employed by Vornado. The information included in this ESG report has been supplied and created by Vornado's & BMS's Human Resources departments, respectively. Diversity, Equity, & Inclusion, p. 31 of this report
102-9	Supply chain	Vornado engages primarily with suppliers who provide supplies and equipment that help us manage and develop our properties. Our suppliers range in location but tend to be concentrated in our primary regions of New York, Chicago, and San Francisco. Vornado considers BMS LLC as a supplier of janitorial supplies and equipment for our properties, Supply Chain p. 24, and BMS & Green Cleaning p. 23.
102-10	Significant changes to the organization and its supply chain	No significant changes
102-11	Precautionary Principle or approach	While Vornado has not formally adopted the Precautionary Principle, we apply a precautionary approach in our operational planning or when introducing new products to our buildings. Greenhouse gas and indoor air pollutants are among many of the environmental risks that we seek to avoid and mitigate. pp. 8-9, p. 10
102-12	External initiatives	From Our Chairman, p. 3 of this report
102-13	Membership of associations	Our Partnerships, p. 33 of this report

ENVIRONMENTAL, SOCIAL & GOVERNANCE

GLOBAL REPORTING INITIATIVE (GRI) INDEX Continued 1

GRI 102: GENERAL DISCLOSURES 2016 Continued

DISCLOSURE	DESCRIPTION	RESPONSE
STRATEGY		
102-14	Statement from senior decision-maker	From Our Chairman, p. 3 of this report
ETHICS AND INTEGRITY		
102-16	Values, principles, standards, and norms of behavior	Our Code of Business Conduct and Ethics promotes honest and ethical conduct, including fair dealing and the ethical handling of conflicts of interest; promotes full, fair, accurate, timely, and understandable communication; and deters wrongdoing. Supply Chain, p. 24 of this report
GOVERNANCE		
102-18	Governance structure	ESG Governance, p. 36 & p. 37 of this report
102-20	Executive-level responsibility for economic, environmental, and social topics	ESG Governance, p. 36 of this report
102-32	Highest governance body's role in sustainability reporting	BOARD OF TRUSTEES - Corporate Governance and Nominating Committee is the highest position in the governance structure and is the position that formally reviews and approves the organization's ESG reporting. ESG Governance, p. 36 of this report

GLOBAL REPORTING INITIATIVE (GRI) INDEX Continued 2

GRI 102: GENERAL DISCLOSURES 2016 Continued

DISCLOSURE	DESCRIPTION	RESPONSE
STAKEHOLDER ENGAGEMENT		
102-40	List of stakeholder groups	ESG Materiality Assessment, p. 35 of this report
102-41	Collective bargaining agreements	83% of our total 3,687 employees are covered by collective bargaining agreements.
102-42	Identifying and selecting stakeholders	Stakeholders were identified and selected through our Materiality Assessment & Stakeholder Engagement efforts that were formed back in 2017, aligning stakeholders with key ESG topics of our approach to act on and address these topics. We renew this process each year with our stakeholders, reconfirming and expanding our topics of materiality. This engagement was considered and rated into the 2021 report as appropriate (e.g. COVID Impact is cited/described throughout the 2021 ESG report). 2021 Materiality Assessment, p. 35 of this report
102-43	Approach to stakeholder engagement	We renew our ESG Materiality Assessment each year with our stakeholders, reconfirming and expanding our topics of materiality. ESG Materiality Assessment, p. 35 of this report Stakeholder Engagement p. 28 of this report
102-44	Key topics and concerns raised	ESG Materiality Assessment, p. 35 of this report
REPORTING PRACTICE		
102-45	Entities included in the consolidated financial statements	Vornado Realty Trust; BMS; Alexander's, Inc; In addition to our consolidated entities in the financial statements, we additionally include unconsolidated joint ventures with over 20% ownership
102-46	Defining report content and topic boundaries	From Our Chairman, p. 3 of this report, ESG Materiality Assessment, p. 35 of this report
102-47	List of material topics	Energy, Water, and Waste Management; Climate Change Risk and Mitigation; Human Capital Management; Diversity, Equity, & Inclusion; Carbon Emissions and Carbon Footprint Reporting; Local Community Management Succession Plan; Executive Compensation; Health and Wellness, including our COVID pandemic response; Sustainable Development; Board Structure, Tenure, and Refreshment; Board on ESG; Community Impact, all found on ESG Materiality Assessment p. 35 of this report
102-48	Restatements of information	No restatements.
102-49	Changes in reporting	No significant changes.
102-50	Reporting period	January 2021 - December 2021
102-51	Date of most recent report	2020 Sustainability Report, dated April 9, 2021
102-52	Reporting cycle	Annual
102-53	Contact point for questions regarding the report	Steven Borenstein, SVP & Corporation Counsel, sborenstein@vno.com
102-54	Claims of reporting in accordance with the GRI Standards	This report references the GRI Standards.
102-55	GRI content index	ESG Materiality Assessment, p. 35 of this report, GRI Index, pp. 38-43 of this report. Topics not mentioned in GRI Index disclosure, but covered in our ESG Materiality Assessment include, Board Refreshment, DEI and Human Capital Management, COVID Impact, Net Zero Transition and Scope 3 Emissions, Executive Compensation, and Management Succession Plan. Management Succession Plan has not changed from discussion found on p. 29 of the ESG 2020 Report.
102-56	External assurance	Corporate ESG Team is the highest position that seeks external assurance for the organization's ESG report. The Independent Accountants' Review Report can be found on p. 44 of this report, online at www.vno.com .

GLOBAL REPORTING INITIATIVE (GRI) INDEX Continued 3

GRI 103: MANAGEMENT APPROACH 2016

DISCLOSURE	DESCRIPTION	RESPONSE																																																		
103-1	Explanation of the material topic and its boundary	The ESG topics listed in GRI 102-47 are deemed material based on our recurring stakeholder engagement, which is described on p. 35 of this report. Reporting Boundaries for environmental disclosures are found in the footnote to this GRI index on p.43. Reporting boundaries for GRI topics 401, 404 and 405 are found in the footnote on pp. 22, 27, 28 and 30-31. Reporting boundaries for GRI topics 413 and 416 are the markets where we do business, primarily Chicago, and San Francisco. Reporting boundary for GRI 419 is the extent of Vornado's business, which is referenced above in GRI 102-2.																																																		
103-2	The management approach and its components	<table border="1"> <thead> <tr> <th></th> <th>Policies/ Commitments</th> <th>Goals and Targets</th> <th>Responsibilities</th> <th>Processes/ Projects /Programs</th> </tr> </thead> <tbody> <tr> <td>GRI 201: Economic Performance</td> <td>pp. 6-7, pp. 8-9</td> <td>p. 8</td> <td rowspan="11">Human Capital Management, p. 29</td> <td>p. 49</td> </tr> <tr> <td>GRI 302: Energy</td> <td>pp. 6-7, p. 12, p. 16</td> <td>pp. 11-14</td> <td>pp. 14, p. 46</td> </tr> <tr> <td>GRI 305: Emissions</td> <td>pp. 6-7</td> <td>pp. 13-14</td> <td>pp. 6-7</td> </tr> <tr> <td>GRI 303: Water and Effluents</td> <td>pp. 6-7, p. 12</td> <td>p. 12, p. 13</td> <td>p. 47</td> </tr> <tr> <td>GRI 306: Waste</td> <td>pp. 6-7, p. 12, p. 20</td> <td>p. 12, p. 13</td> <td>p. 20</td> </tr> <tr> <td>GRI 401: Employment</td> <td>p. 29</td> <td></td> <td>p. 29 including reference to grievance med</td> </tr> <tr> <td>GRI 404: Training and Education</td> <td>p. 22, p. 29</td> <td></td> <td>pp. 22-23, p. 26, pp. 27-28, p. 29</td> </tr> <tr> <td>GRI 413: Local Communities</td> <td>pp. 26-27, p. 28, p. 29, p. 32, p. 33</td> <td></td> <td>pp. 26-27</td> </tr> <tr> <td>GRI 416: Customer Health and Safety</td> <td>p. 21, pp. 22-23, p. 34</td> <td></td> <td>p. 21, pp. 22-23, p. 34</td> </tr> <tr> <td>GRI 405: Diversity and Equal Opportunity</td> <td>p. 29, p. 30</td> <td></td> <td>p. 29, p. 30, p. 31</td> </tr> <tr> <td>419: Socioeconomic Compliance</td> <td>10-K FN 21 p. 114</td> <td></td> <td></td> </tr> </tbody> </table>		Policies/ Commitments	Goals and Targets	Responsibilities	Processes/ Projects /Programs	GRI 201: Economic Performance	pp. 6-7, pp. 8-9	p. 8	Human Capital Management, p. 29	p. 49	GRI 302: Energy	pp. 6-7, p. 12, p. 16	pp. 11-14	pp. 14, p. 46	GRI 305: Emissions	pp. 6-7	pp. 13-14	pp. 6-7	GRI 303: Water and Effluents	pp. 6-7, p. 12	p. 12, p. 13	p. 47	GRI 306: Waste	pp. 6-7, p. 12, p. 20	p. 12, p. 13	p. 20	GRI 401: Employment	p. 29		p. 29 including reference to grievance med	GRI 404: Training and Education	p. 22, p. 29		pp. 22-23, p. 26, pp. 27-28, p. 29	GRI 413: Local Communities	pp. 26-27, p. 28, p. 29, p. 32, p. 33		pp. 26-27	GRI 416: Customer Health and Safety	p. 21, pp. 22-23, p. 34		p. 21, pp. 22-23, p. 34	GRI 405: Diversity and Equal Opportunity	p. 29, p. 30		p. 29, p. 30, p. 31	419: Socioeconomic Compliance	10-K FN 21 p. 114		
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103-3	Evaluation of the management approach	Evaluation of climate-related topics: Environmental Results, pp. 13-14 of this report, and progress against environmental goals, found on pp. 11-12. Evaluation of management approach to social topics: Diversity, Equity, and In on p. 31.																																																		

GLOBAL REPORTING INITIATIVE (GRI) INDEX Continued 4

GRI 200-400: TOPIC-SPECIFIC DISCLOSURES

GRI TOPICS	DISCLOSURE	DESCRIPTION	RESPONSE
ECONOMIC			
GRI 201: Economic Performance 2016	201-2	Financial implications and other risks and opportunities due to climate change	Vornado's approach to assessing financial implications, other risks and opportunities due to climate change is stated in TCFD Scenario analysis, pp. 8-9 of this report, Stakeholder Engagement, p. 28, and sure on climate change adaptation, p. 49 of this report.
ENVIRONMENTAL			
GRI 302: Energy 2016	302-1	Energy consumption within the organization	2021 Results, p. 14 of this report. We utilized the Thermal Energy Conversion factors from ENERGY STAR Portfolio Manager Technical Reference Guide published by EPA. Our total energy reported within the organization is 41,544 GJ of chilled water, 636,599 GJ of district steam, 1,119,151 GJ of electricity, and 575,548 GJ of fuels. The total energy within the organization is 2,372,842 GJ. The majority of Vornado's heating is from district steam sources, which are reported on p. 14. Vornado does not sell electricity, heating, cooling or steam. All fuel consumption reported is non-renewable.
	302-2	Energy consumption outside of the organization	2021 Results, p. 14 of this report. We utilized the Thermal Energy Conversion factors from ENERGY STAR Portfolio Manager Technical Reference Guide published by EPA. Total energy outside the organization is 482,123 GJ.
	302-3	Building energy intensity	2021 Results, p. 13 of this report. Our denominator is the square footage as outlined in the boundaries found in the endnotes of this report. Building energy intensity reported includes all energy reported in 302-2 reported amounts. We utilized the latest available emission factors for each energy type and Global Warming Potential factors from the Fifth Assessment Report (SAR) published by Intergovernmental Panel on Climate Change and EPA ENERGY STAR Portfolio Manager GHG Technical Reference to calculate our GHG inventory. No significant recalculations occurred. Consolidation approach as defined in the reporting boundary endnoted in this report. Biogenic emissions of CO2 that occur in the life cycle of biomass other than from combustion or biodegradation are not applicable.
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	2021 Progress & Results, pp. 12-13 of this report. All water listed is municipal water supply. No other sources of consumed water are of material quantities. Water converted from source unit of measure meters. BMS & Green Cleaning, p. 23; SASB Disclosure on Water Management, p. 47 of this report.
	303-2	Management of water discharge-related impacts	TCFD Scenario analysis, p. 9 of this report, Health & Wellness p. 21, and SASB Disclosure on Water Management, p. 47 of this report.
	303-3	Water withdrawal	2021 Results, p. 13, SASB Disclosure on Water Management, p. 47 of this report. All water listed is municipal water supply converted from source unit of measure to cubic meters or 1,959.80 megaliters. No of consumed water are of material quantities. Water listed is municipal and is considered fresh water. Our baseline water stress is 275.87 megaliters.
GRI 305: Emissions 2016	305-1	Scope 1 GHG emissions	2021 & base year 2019 Results, p. 14 of this report. Gases included are CO2, CH4, and N2O. We utilized the latest available emission factors for each energy type and Global Warming Potential factors from Assessment Report (SAR) published by Intergovernmental Panel on Climate Change and EPA ENERGY STAR Portfolio Manager GHG Technical Reference to calculate our GHG inventory. No significant recalculations occurred. Consolidation approach as defined in the reporting boundary endnoted in this report. All GHG emission Scopes have base years of 2019, which is aligned with our SBTi commitment, as well as our Vision 2030 Carbon Neutrality plan. Biogenic emissions of CO2 that occur in the life cycle of biomass other than from combustion or biodegradation are not applicable.
	305-2	Scope 2 GHG emissions	2021 & base year 2019 Results, p. 14 of this report. Gases included are CO2, CH4, and N2O. We utilized the latest available emission factors for each energy type and Global Warming Potential factors from Assessment Report (SAR) published by Intergovernmental Panel on Climate Change and the eGRID 2020 to calculate our GHG inventory. No significant recalculations occurred. Consolidation approach as defined in the reporting boundary endnoted in this report. All GHG emission Scopes have base years of 2019, which is aligned with our SBTi commitment, as well as our Vision 2030 Carbon Neutrality plan.
	305-3	Scope 3 GHG emissions	2021 & base year 2019 Results, p. 14 of this report. Gases included are CO2, CH4, and N2O. We utilized the latest available emission factors for each energy type and Global Warming Potential factors from Assessment Report (SAR) published by Intergovernmental Panel on Climate Change, EPA ENERGY STAR Portfolio Manager GHG Technical Reference guide, and the eGRID 2020 to calculate our GHG inventory. No significant recalculations occurred. Consolidation approach as defined in the reporting boundary endnoted in this report. All GHG emission Scopes have base years of 2019, which is aligned with our Vision 2030 Carbon Neutrality plan. Biogenic emissions of CO2 that occur in the life cycle of biomass other than from combustion or biodegradation are not applicable.
	305-4	GHG emissions intensity	2021 Progress & Results, p. 13 of this report. Our numerator includes Scope 1, 2 & 3 emissions, and our denominator is the square footage as outlined in the boundaries found in the endnotes of this report.
GRI 306: Waste 2020	306-1	Waste generation and significant waste-related impacts	Waste disposal method has been directly confirmed by the organization through annual onsite visits to facilities. Information is provided by waste disposal contractor on a monthly basis. Responsible Recycling, p. 20; Supply Chain, p. 24; Stakeholder Engagement, p. 28
	306-2	Waste by type and disposal method	
	306-3	Waste generated	Waste disposal method has been directly confirmed by the organization through annual onsite visits to facilities. Information is provided by waste disposal contractor on a monthly basis. In 2021 we generated 6578 metric tons of waste across our portfolio with 6578 metric tons non-hazardous waste recycled, 34 tons of hazardous waste recycled, an additional 3978 metric tons incinerated at a waste-to-energy facility metric tons sent to landfill. We were able to divert 694 metric tons of compost. Waste metrics throughout the rest of this report are based on U.S. tons. Environmental Results 2021, p. 13; Responsible Recycling, p. 24
	306-4	Waste diverted from disposal	
	306-5	Waste directed to disposal	

ENVIRONMENTAL, SOCIAL & GOVERNANCE

GLOBAL REPORTING INITIATIVE (GRI) INDEX Continued 5

GRI 200-400: TOPIC-SPECIFIC DISCLOSURES Continued

GRI TOPICS	DISCLOSURE	DESCRIPTION	RESPONSE
SOCIAL			
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	Diversity, Equity, and Inclusion pp. 30-31 of this report.
	401-2	Full-time benefits not provided to temporary/part-time employees	<p>These benefits are provided to employees across all property subsectors of operation. Human Capital Management, p. 29:</p> <ul style="list-style-type: none"> • Medical and prescription plan at low employee cost • Dental plan at no employee cost • Tax deferred 401(k) plan • Flexible spending accounts for medical and dependent care • Life insurance at two times an employee's annual compensation and at no employee cost • Paid time off for vacations, holidays and personal days • Employee Assistance Program • Tuition reimbursement and professional reimbursement development plan • Maternity & Parental Leave • Short-Term and Long-Term Disability Insurance
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	BMS & Green Cleaning, pp. 22 of this report. Training information is not currently tracked to report on average hours of training per employee reported by gender and by employee category respectively.
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	Diversity, Equity, and Inclusion p. 31 of this report. As of December 31, 2021, our Board consisted of 30% women; 0% under age 30; 10% between ages 30 and 50, and 90% over 50 years old and composed of 20% minorities.
GRI 413: Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs.	Our locations of operations are defined in GRI 102-7, and include New York, Chicago, San Francisco, Miami Beach, FL, and Annapolis, Maryland. We have implemented local community engagement, impact assessments or development programs across 97% of our total operations.
GRI 416: Customer Health and Safety 2016	416-1	Assessment of the health and safety impacts of product and service categories	<p>BMS & Green Cleaning, pp. 22-23 of this report.</p> <p>We consider our properties and the maintenance of the buildings to be our services provided to customers. The products purchased to maintain and clean the properties are purchased from Building Maintenance Service (BMS). The responsible purchasing agent at BMS reviews monthly supply reports from all vendors and identifies areas of improvement to address health and safety across the product's life cycle. Therefore, 100% of the products purchased by our janitorial company are evaluated monthly for health and safety impacts. 60% of the annual purchases adhere to third-party certifications for janitorial supplies, while the remaining 40% is evaluated for product replacement and improvement when feasible. The applicable third-party certifications are as follows: ECOLOGO, Green Seal, EPA Safer Choice Standard, USDA Certified Biobased, EPA's Design for Environment, and EPA's Comprehensive Procurement Guidelines.</p>
GRI 419: Socioeconomic Compliance 2021	419-1	Non-compliance with laws and regulations in the social and economic area	None. We consider 'significant' fines as those listed in Form 10-K for the fiscal year ended December 31, 2021, "Note 21: Contingencies" on p. 114

***Reporting boundaries:**

Intensities: 2021 intensities were calculated by dividing the energy consumption, water consumption, and GHG emissions from the properties owned by Vornado at December 31, 2021 by the total square footage of that same list of properties.

Energy and Water: 100% of all in-service square footage as of 12/31/2021, not listed as under development, with more than 20% VNO ownership. Q4 2021 energy and water data was estimated at properties where actual consumption data was not available in time for the publication of this report. Due to observed reductions related to the COVID pandemic, energy and water were es-

timated by applying the weighted average monthly consumption variance from prior year beginning with April 2020 through the most recent available month of actual data. Energy consumption was also adjusted for weather & leased occupancy normalization. Approximately 7% of total energy consumption and 2% of total water consumption was estimated. Four properties have full year estimations for energy and water. The estimation consumption for these properties account for an additional 4% of total energy consumption and 4% of total water consumption.

Waste: Approximately 80% of all in-service square footage as of 12/31/2021, not listed as under

development, with more than 20% VNO ownership. Waste generation in 2020 as represented by actual data from waste haulers. Excluded from waste data are properties where waste hauling is not directly managed by Vornado, such as high street retail and properties. Construction & Demolition waste is excluded from the reporting because it is considered extraordinary waste, which is in line with industry standards. C&D for metric tons, of which 2426 tons were recycled, 392 tons incinerated for energy, and 12 tons landfilled. All C&D waste was non-hazardous.

ENVIRONMENTAL, SOCIAL & GOVERNANCE

INDEPENDENT ACCOUNTANT'S REVIEW REPORT

**Board of Trustees
Vornado Realty Trust
New York, NY**

We have reviewed management of Vornado Realty Trust's (the "Company") assertion that the disclosures in the Global Reporting Initiative (GRI) Index included within the accompanying Environmental, Social & Governance 2021 Report of Vornado Realty Trust as of and for the year ended December 31, 2021 are presented in accordance with the Global Reporting Initiative Sustainability Reporting Standards under its Core option (the "GRI Standards Core option"). The Company's management is responsible for its assertion. Our responsibility is to express a conclusion on management's assertion based on our review.

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants (AICPA) in AT-C Section 105, *Concepts Common to All Attestation Engagements*, and AT-C Section 210, *Review Engagements*. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to management's assertion in order for it to be fairly stated. The procedures performed in a review vary in nature and timing from, and are substantially less in extent than, an examination, the objective of which is to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. Because of the limited nature of the engagement, the level of assurance obtained in a review is substantially lower than the assurance that would have been obtained had an examination been performed. We believe that the review evidence obtained is sufficient and appropriate to provide a reasonable basis for our conclusion.


We are required to be independent and to meet our other ethical responsibilities in accordance with the *Code of Professional Conduct* issued by the AICPA. We applied the *Statements on Quality Control Standards* established by the AICPA and, accordingly, maintain a comprehensive system of quality control.

The procedures we performed were based on our professional judgment. In performing our review, we performed analytical procedures and inquiries. For a selection of the disclosures in the GRI Index, we performed tests of mathematical accuracy of computations, compared the disclosures to underlying records, or observed the data collection process.

The preparation of the disclosures in the GRI Index included within the Environmental, Social & Governance 2021 Report requires management to interpret the criteria, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect the reported information. Measurement of certain disclosures in the GRI Index includes estimates and assumptions that are subject to substantial inherent measurement uncertainty resulting, for example, from the accuracy and precision of greenhouse gas emission conversion factors, or estimation methodologies used by management. Obtaining sufficient, appropriate review evidence to support our conclusion does not reduce the inherent uncertainty in the disclosures in the GRI Index. The selection by management of different but acceptable measurement methods, input data, or assumptions, may have resulted in materially different amounts or disclosures being reported.

Our review was limited to the disclosures in the GRI Index. All other information presented within the Environmental, Social & Governance 2021 Report including, information relating to forward looking statements, targets, goals, progress against goals, and linked information, were not subject to our review and, accordingly, we do not express a conclusion or any form of assurance on such information.

Based on our review, we are not aware of any material modifications that should be made to management of Vornado Realty Trust's assertion that the disclosures in the Global Reporting Initiative Index included within the accompanying Environmental, Social & Governance 2021 Report of the Company as of and for the year ended December 31, 2021 are presented in accordance with the GRI Standards Core option, in order for it to be fairly stated.



April 8, 2022

APPENDIX A – SUSTAINABILITY ACCOUNTING STANDARDS BOARD (SASB) INDEX

Management of Vornado Realty Trust is responsible for the completeness, accuracy, and validity of the metrics in the SASB Index included within Appendix A of the Environmental, Social, & Governance 2021 Report of Vornado Realty Trust as of and for the year ended December 31, 2021. Management is responsible for the collection, quantification, and presentation of the metrics and for the selection of the criteria, which management believes provide an objective basis for measuring and reporting on the metrics. Measurement of certain metrics includes estimates and assumptions that are subject to substantial inherent measurement uncertainty resulting for example, from the accuracy and precision of conversion factors or estimation methodologies used by management. The selection by management of different but acceptable measurement methods, input data, or assumptions may have resulted in materially different amounts or metrics being reported. Management asserts that the metrics in the SASB Index included within Appendix A of the Environmental, Social, & Governance 2021 Report of Vornado

Realty Trust as of and for the year ended December 31, 2021 are presented in accordance with the Sustainability Accounting Standards Board (SASB) Real Estate Sustainability Accounting Standard.

Number of assets includes the number of distinct building assets. In the SASB disclosures, each asset is counted as a single asset, even in cases where portions of an asset are classified into separate subsectors that are all in the FTSE NAREIT Classification Structure. The SASB disclosure instead categorizes assets into the four categories: "New York," "theMART," "555 California," and "Other," which aligns with the entity's financial reporting. All disclosures are representative of the Whole building approach defined on page 46.

ACTIVITY METRICS

CODE	ACTIVITY METRIC	TOTAL	NEW YORK	theMART	555 CALIFORNIA	OTHER	UNIT OF MEASURE
IF-RE-000.A	Number of assets, by property subsector	81	70	2	2	7	Number
IF-RE-000.B ¹	Leasable floor area, by property subsector	34,841,000	27,569,000	3,692,000	1,818,000	1,762,000	Square Feet
IF-RE-000.C ²	Percentage of Indirectly managed assets, by property subsector	0	0	0	0	0	Percentage (%) by Floor Area
IF-RE-000.D ³	Average occupancy rate, by property subsector	89.99%	89.71%	89.13%	97.91%	88.04%	Percentage (%)

¹ Leasable floor area is disclosed separately into the four categories of "New York," "theMART," "555 California," and "Other," which aligns with the entity's financial reporting.
² The definition of "indirectly managed assets" is solely based on the landlord/tenant relationship and is aligned with the 2018 GRESB Real Estate Assessment Reference Guide: "Where a single tenant has the sole authority to introduce and implement operating and/or environmental policies and a tenant should be assumed to have operational control, so the asset should be considered to be an Indirectly Managed Asset." Percentage of indirectly managed assets shall be disclosed separately into the four categories of "New York," "theMART," "555 California," and "Other," which aligns with financial reporting.
³ Average occupancy rate is an average of the reported occupancy for each of the four quarters in the reporting period, and is disclosed separately for each portion of the entity's portfolio into the four categories of "New York," "theMART," "555 California," and "Other," which aligns with the entity's reporting.

APPENDIX A – SASB INDEX

Continued 1

ENERGY MANAGEMENT

CODE	ACCOUNTING METRIC	TOTAL	NEW YORK	theMART	555 CALIFORNIA	OTHER	UNIT OF MEASURE
IF-RE-130a.1	Energy consumption data coverage as a percentage of floor area, by property subsector.	100%	100%	100%	100%	100%	Percentage (%) by floor area
IF-RE-130a.2 ²	Total energy consumed by portfolio area with data coverage.	2,854,964	2,313,950	222,100	143,694	175,220	Gigajoules (GJ)
IF-RE-130a.2 ²	Percentage of total energy that is grid electricity, by property subsector.	52.46%	52.26%	45.41%	51.58%	64.79%	Percentage (%)
IF-RE-130a.2 ²	Percentage of total energy that is renewable, by property subsector.	18.35%	19.52%	25.32%	11.04%	0.00%	Percentage (%)
IF-RE-130a.3 ^{2,3}	Like-for-like change in energy consumption of portfolio area with data coverage, by property subsector (see note on normalization).	-4.93%	-6.50%	0.76%	8.34%	-0.10%	Percentage (%)
IF-RE-130a.4	Percentage of eligible portfolio that has obtained an energy rating.	83.9%	80.74%	99.49%	100%	84.22%	Percentage (%) by floor area
IF-RE-130a.4	Percentage of eligible portfolio that is certified to ENERGY STAR, by property subsector.	16.04%	19.26%	0.00%	0.00%	15.78%	Percentage (%) by floor area

IF-RE-130a.5 DESCRIPTION OF HOW BUILDING ENERGY MANAGEMENT CONSIDERATIONS ARE INTEGRATED INTO PROPERTY INVESTMENT ANALYSIS AND OPERATIONAL STRATEGY.

Vornado's Scope 1 and Scope 2 emissions come entirely from the operation of our buildings. Energy costs are often among the largest controllable expenses on a property's balance sheet. For these reasons, we consider energy management to be an environmental and fiscal priority.

In 2019, Vornado committed to making its buildings carbon neutral by the year 2030. This plan, known as Vision 2030, will combine various methods to reduce or offset all of the Scope 1 and Scope 2 emissions. A major component of Vision 2030 is an energy efficiency goal of 50% below a 2009 base year by the year 2030. Further information on this plan can be found in the Vision 2030 section of this report. Our energy reduction measured 33% at the end of 2021. The COVID pandemic resulted in energy reductions from our buildings starting in 2020 that are due to our office tenants working from home, and some interruptions to our retail tenants' businesses. We continue to measure our energy consumption as business activity returns to our buildings. It may be possible that progress towards our energy reduction goals will be accelerated by changes in occupant behavior that result in a lowered demand for energy. We will continue to measure our energy consumption and evaluate our targets and goals.

We incorporate energy management into our acquisition due diligence process across all our property subsectors. We tour properties and review capital and operating budgets, as well as utility bills to determine opportunities to reduce energy consumption and demand. We assess energy performance through quantifiable methods of consumption and cost on a per square foot basis, and we consider energy labels and benchmark values provided through ENERGY STAR. We gain an understanding of the building's energy inventory and current energy initiatives implemented at the property.

Our building managers and operators in all of our property subsectors are trained and supported by our centralized energy management team to employ sound and responsible energy management across the portfolio. Our engineers perform in-house technical assessments, akin to a Level I audit, per guidance from the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), as part of their ongoing preventative maintenance. We employ third party engineering firms to complete technical assessments such as ASHRAE Level II Energy Audits and Retrocommissioning at all NYC, Chicago, and San Francisco properties over 50,000 square feet, and aim to update these assessments at least once every five years. In our NYC market, the Audits and Retrocommissioning reports are part of Local Law 87 and are subject to City review to ensure that all landlord-controlled inventory is included in the scope, all low- and no-cost recommended repairs are included, and that the assessments were completed by licensed professionals. Such

technical assessments are the basis for our energy efficiency capital work. While total savings from these assessments is difficult to quantify, Vornado completes or seriously considers all low- and no-cost repairs and recommended measures, as well as all energy conservation measures with a simple payback of up to 5 years. Vornado uses Environmental Management Systems (EMS) and Data Systems as part of our strategy.

More information on our technical assessments and our EMS can be found on the Energy Management Planning Cycle section of our report.

We uphold energy ratings, benchmarking, and certifications as an important recognition tool and performance indicator. We believe that our tenants prefer buildings that have earned green building certifications and demonstrate competitive energy ratings. Because our core business is the maintenance and operation of existing assets, we believe that certifications based on performance are more relevant to us than those based on performance-modeled design objectives.

Vornado regularly evaluates opportunities to invest in renewable energy. We believe that onsite renewable energy is the most effective way to reduce carbon emissions, but we are limited in this opportunity by the lack of physical space and high construction costs for the dense urban markets where we are located. Off-site renewable energy can provide a virtual carbon offset to our Scope 2 emissions. In June 2021, Vornado procured Renewable Energy Credits (RECs) to document our commitment to reduce our carbon footprint and the environment, sourced from hydro energy facilities located in the State of New York. With an annualized balance of 1.5 megawatt hours, we lead by example as one of the largest customers to invest in home-grown renewable energy in New York. Renewable energy purchases account for 37.35% of our New York, 21.40% of our California electricity, and 55.76% of our total or 34.97% of our company's total electricity consumption.

We also plan to purchase carbon offsets between 2020 and 2030 to reduce our Scope 1 emissions, as well as the Scope 2 emissions from district steam. This will be the balance of emissions that has not been reduced by energy efficiency, energy conservation, or renewable energy procurement. Carbon offsets, like renewable power, should bear localized benefit and wherever possible align with those which are defined in the Climate Leadership and Community Protection Act (CLCPA) passed in New York

¹ Any information relating to forward looking statements, goals and progress against goals, was not subject to Deloitte & Touche LLP's examination and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information.

² S1 Base Building is defined as "Energy consumed in supplying central building services to lettable/leasable areas and common areas."

³ 2 Tenant Space is defined as "Lettable floor area (both vacant and let/leased areas) that is or can be occupied by tenants."

⁴ 3 Whole Building is defined as "Energy used by tenants and Base Building services to lettable/leasable and common spaces. This should include all energy supplied to the building for the operation of the building and the tenant space."

⁵ While considering our like-for-like boundary for SASB reporting, we include properties that are in-service for the entire current and prior year. Consistent with our financial statement approach to like-for-like. We omit energy from buildings that are out of service or underdevelopment during any part of the current or prior year, as well as any building with ownership less than 20% interest.

APPENDIX A – SASB INDEX Continued 2

WATER MANAGEMENT

CODE	ACCOUNTING METRIC	TOTAL		NEW YORK		theMART		555 CALIFORNIA		OTHER		UNIT OF MEASURE
IF-RE-140a.1	Water withdrawal data coverage as a percentage of total floor area, by property subsector.	100%		100%		100%		100%		100%		Percentage (%) by f
IF-RE-140a.1	Percentage of floor area in regions with High or Extremely High Baseline Water Stress, each by property subsector.	773%		6.79%		0.00%		0.00%		46.54%		Percentage (%) by f
IF-RE-140a.2 ¹	Total water withdrawn in 2021, (1) by portfolio area with data coverage and (2) percentage in regions with High or Extremely High Baseline Water Stress, each by property subsector.	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	Thousand Cubic M Percentage (%)
IF-RE-140a.3 ^{1,2,3}	Like-for-like change in water withdrawn for portfolio area with data coverage, by property subsector.	-1.45%		-1.95%		7.89%		-12.07%		4.69%		Percentage (%)

IF-RE-140A.4 DISCUSSION OF WATER MANAGEMENT RISKS AND DESCRIPTION OF RISKS AND PRACTICES TO MITIGATE THOSE RISKS.

Vornado's portfolio is concentrated in the dense urban cores of New York City, Chicago, and San Francisco. As such, Vornado's primary water consumption includes potable water consumption for drinking across our portfolio; plumbing use; water used for specific business purposes, such as food service or showers in exercise facilities; and water use attributed to Heating, Ventilation, and Air-Conditioning (HVAC). We do not consider water consumption used for agricultural purposes to be significant and therefore do not include this consumption in our reporting boundary. Our sources for water are exclusively municipal water systems, and our discharge destinations are exclusively municipal sewer systems.

We face water-related environmental constraints and risks that are characteristic of urban places, and use publicly available maps, resources, and tools to gain insights into the risks inherent to our properties, including FEMA's Flood Map Service Center and WRI's Aqueduct Water Risk Atlas. Approximately 8% of our total properties operate in some regions with high or extremely high baseline water stress. As referenced in the SASB Real Estate Sustainability Accounting Standard, the World Resource Institute categorizes high and extremely high stress based on the level of available water withdrawn annually to support agricultural, domestic, and industrial users. Our New York and San Francisco regions experience medium to high levels of interannual variability. Our San Francisco locations are subject to medium to high seasonal variability.

We also face water-related regulatory constraints. Our water costs increase regularly to pay for developing and maintaining the infrastructure that supports our municipal water and sewer systems. We incur sewer costs to pay for the treatment of water that is discharged from our buildings. We incur additional costs to reduce the temperature of the water we discharge into the sewer system. We may incur additional costs to comply with future stormwater management regulation in our regions. We expect costs for water to continue to rise into the foreseeable future, which will increase our operating costs.

Our primary method of mitigating water risk is to reduce our water withdrawals and consumption. We reduce our water consumption through retrofitting our plumbing fixtures, modernizing our HVAC systems, and refining our cleaning policies. Our restroom plumbing fixtures are retrofitted as part of renovation efforts, which occur annually as part of our recurring capital improvement process. Our HVAC water efficiency program includes water reduction and

water re-use efforts such as re-directing excess steam condensate to our cooling towers, to reduce sewer discharge; retrofitting our cooling towers with more efficient mechanical systems; and ensuring our chiller systems are serviced and maintained on an ongoing basis. Our janitorial contractors use water conservation efforts including gray water re-use for washing and cleaning, and purchase and use of water efficient cleaning products. In new construction or redevelopment projects, we also mitigate our stormwater runoff with stormwater retention tanks that re-use stormwater for irrigation and cooling tower use, and green roofs and terraces to capture stormwater. In 2020, Vornado set a corporate goal to reduce water consumption by 36% below a 2019 base year by 2030, to be achieved through advancing these efficiency efforts. In 2020, Vornado measured a 36% reduction and an additional 3% in 2021. The COVID pandemic resulted in water reductions from our buildings starting in 2020 that are due in part to tenants working from home, and some interruptions to our retail tenants' businesses. We continue to measure our water consumption as activity returns to our buildings. It may be possible that progress towards our water reduction goals will be accelerated by changes in occupancy that result in a lowered demand for water. We will continue to measure our water consumption and evaluate our targets and goals.

Our primary risk of achieving our water consumption reduction target is our lack of control over end users. Our tenants are the main drivers of water consumption. Increases in occupancy, operating hours, or densification of existing spaces will cause consumption to increase. Diversity of tenants – such as retail uses in food service or health and exercise facilities could also cause an increase in consumption, despite our efforts to reduce consumption.

We collaborate with our water and sewer authorities, city governments, and community boards when issues arise in water management and sewer infrastructure concerns. We observe that our water conservation efforts have achieved tradeoffs in energy reduction but have not yet achieved tradeoffs in GHG emissions. We continue to consider these tradeoffs and evaluate additional lifecycle impacts and tradeoffs, such as GHG emissions potential future opportunities to be realized.

¹5.1 Base Building is defined as "Energy consumed in supplying central building services to lettable/leasable areas and common areas."

²5.2 Tenant Space is defined as "Lettable floor area (both vacant and let/leased areas) that is or can be occupied by tenants."

³5.3 Whole Building is defined as "Energy used by tenants and Base Building services to lettable/leasable and common spaces. This should include all energy supplied to the building for the operation of the building and the tenant space."

⁴No divergences between the scope of assets and/or floor area used in financial reporting and its like-for-like change in water withdrawn.

⁵While considering our like-for-like boundary for SASB reporting, we include properties that are in-service for the entire current and prior year. Consistent with our financial statement approach to like-for-like, we omit energy from buildings that are out of service or underdevelopment during any part of the current or prior year, as well as any building with ownership less than 20% interest.

APPENDIX A – SASB INDEX Continued 3

MANAGEMENT OF TENANT SUSTAINABILITY IMPACTS

CODE	ACCOUNTING METRIC	TOTAL		NEW YORK		theMART		555 CALIFORNIA		OTHER		UNIT OF MEASURE
		(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	
IF-RE-410a.1	(1) Percentage of new leases that contain a cost recovery clause for resource efficiency-related capital improvements and (2) associated leased floor area, by property subsector.	79.16%	1,838,557	77.88%	1,699,575	98.22%	31,844	100.00%	107,138	0.00%	0	Percentage (%); floor
IF-RE-410a.2	Percentage of tenants that are separately metered or submetered for grid electricity consumption, by property subsector.	94.39%		95.61%		100%		94.91%		63.14%		Percentage (%) by flo
IF-RE-410a.2	Percentage of tenants that are separately metered or submetered for water withdrawals, by property subsector.	12.79%		12.23%		3.65%		0.00%		53.80%		Percentage (%) by flo

IF-RE-410A.3 DESCRIPTION OF APPROACH TO MEASURING, INCENTIVIZING, AND IMPROVING SUSTAINABILITY IMPACTS OF TENANTS.

At Vornado, tenants consume much of the electricity consumed in our properties, as is evidenced by the submetered electricity we record throughout our portfolio. Because so much of our energy consumption is under tenant control, it is essential to engage with them as a partner in reducing our carbon footprint. There is clear value to be realized in communicating to our tenants their energy and water consumption, when known, and to encourage their participation in best practices in resource conservation.

While Vornado does not explicitly endorse third-party initiatives concerning green leases, our standard lease agreement includes several components that encourage tenant energy conservation. Across our office portfolio, we promote or require submetered or separately metered electricity consumption for all tenants over 5,000 square feet. We also require submetered or separately metered water consumption for all tenants whose predicted use is expected to exceed normal business practice. The submetered arrangement enables Vornado to share energy and water consumption with our tenants on a monthly basis through the generation of the submeter bill. Tenants are billed transparently based on their actual and exclusive consumption as recorded on the submeter. Included on the submeter bill are Vornado's energy reduction targets and links to Vornado's corporate sustainability page, where our broader strategy on energy and water management is found. Elsewhere in the lease, we include a clause to recover capital costs that reduce operating expenses – whether utility costs or another cost reduction benefit – and we may amortize that recovery over the useful life of the project. Because we have robust coverage of this clause across our entire leased portfolio, we have chosen to also report on percentage of total leases containing this cost recovery clause, as opposed to new leases only. In 2021, leases containing a cost recovery clause for energy efficiency improvements are 63.05% of our New York leases, 72.06% of our Mart leases, 89.89% of our California leases, and 6.12% of our Other leases, or 62.53% of our company's total leases in place.

Where there is an economic or environmental benefit, our company will prioritize sustainability requirements in a tenant fit-out. Our tenant fit-out guidelines and boilerplate drawings include requirements for energy efficient lighting and HVAC equipment and water efficient plumbing fixtures. These requirements are also outlined in our rules and regulations which are also included in the lease. We believe that our lease fosters a sustainably designed tenant space,

and an ongoing environment that both encourages the tenant to actively manage and measure their own carbon footprint.

Beyond the lease, we distinguish ourselves with in-person engagement with our tenants on sustainability. In 2021, we hosted two virtual sustainability roundtables, one focused on energy efficiency, the other concentrated on waste diversion and recycling. During these roundtables we also broader corporate ESG trends and regulatory updates, in addition to best practices. We collect information from our tenants that contribute energy rating schemes, such as the ENERGY STAR Portfolio Manager profiles we submit for compliance with local laws in New York and 5. We encourage tenants to consider ENERGY STAR Tenant Space recognition, and leverage ENERGY STAR Treasure Hunt programs to offer no-cost measures to reduce consumption. We met with tenants onsite to survey opportunities to save energy and water. We train our tenants on energy reduction competitions with tenants to promote awareness and foster their participation. Our tenants have also support for renewable energy procurement, which we complete on their behalf in New York and Chicago properties where tenants are so we have purchased Renewable Energy Certificates.

The COVID pandemic brought new challenges and opportunities to our tenant engagement. While we were unable to meet with our tenants through most of 2020 and 2021 we were able to engage with them remotely. Our pandemic outreach included weekly communication with that included customized reports and snapshots of their energy consumption to help them monitor their performance and encourage deeper measures while their employees worked from home. Lessons learned from this engagement can be applied beyond the pandemic to achieve energy reductions, which will reduce costs to tenants and contribute to our corporate efficiency goals.

We hold ourselves accountable and measure the success of our engagement. Success is measured in the observed reduction of energy in tenant spaces, or from the square footage of space that our team reaches through our engagement program.

APPENDIX A – SASB INDEX Continued 4

CLIMATE CHANGE ADAPTATION

CODE	ACCOUNTING METRIC	TOTAL	NEW YORK	theMART	555 CALIFORNIA	OTHER	UNIT OF ME
IF-RE-450a1	Area of properties located in FEMA Special Flood Hazard Areas or foreign equivalent, by property subsector.	1,898,000	1,078,000	0	0	820,000	Square Feet

IF-RE-450A.2 DESCRIPTION OF CLIMATE CHANGE RISK EXPOSURE ANALYSIS, DEGREE OF SYSTEMATIC PORTFOLIO EXPOSURE, AND STRATEGIES FOR MITIGATING RISKS.

We identify and assess our exposure to climate change risk based on the 1.5° and business-as-usual scenarios discussed in the October 2018 Special Report by the Intergovernmental Panel on Climate Change (IPCC). We find these scenarios to be relevant to our properties for two reasons. The first is that they provide potential future states on the physical risks each scenario presents between the present time and the year 2100. The second is that they provide a shorter-term view of transitional risks related to climate-related policy change that our properties could be subject to. Each of our principal markets of New York, Chicago and San Francisco have existing or pending legislation that would limit carbon emissions to align with a 1.5° scenario. We consider the costs for compliance with such legislation to be a financial impact attributable to the transition to a lower-carbon environment. The risks and opportunities for Vornado do not differ substantially across subsectors and regions, and our approach described below takes all risks and opportunities in each subsector and region into consideration.

Our buildings are located in regions that have had recent history of extreme weather events, including but not limited to hurricanes and super-storms, nor'easters and ice storms, tornadoes, wildfires, temperature extremes, and heavy precipitation events. Under the business-as-usual scenario, they may be an increase in the frequency and severity of these events between now and 2100. Such events may impact our buildings individually, depending on a building's specific use, design, and location characteristics, or regionally, depending on the magnitude of the event. We are also aware that while less than 6% of our property square footage is in areas designated as flood zones by FEMA, our coastal locations are susceptible to sea level rise (SLR). Various global warming scenarios could bring about differing amounts of SLR between now and the year 2100. Financial impacts under various warming scenarios include but are not limited to: increases in capital and operating costs; increases in insurance premiums; increases in energy costs; and increases in overall utility costs.

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. This risk is not unique to Vornado but is endemic to our regions.

Our strategies for mitigating physical risks require a combination of adaptive and preventative measures with a proactive reduction of carbon emissions. Adaptive and preventative measures are executed at both the property level and regional level. We adapt our properties to be resilient against the impact of climate change, with details of our resilience measures found on the Resilience and Adaptation section of this report. We train our operators in disaster risk management and emergency operating procedures. At the regional level, our cities and utilities adapt by creating programs that improve resilience against climate-related impacts. Examples of such programs include New York City's OneNYC plan and Consolidated Edison's Storm Hardening Protection Plan in New York; Resilient Chicago and ComEd's Resilient Electric Grid system in Chicago; and Resilient SF and PG&E's Emergency Preparedness and Response program in San Francisco.

Like adaptive and preventative measures, proactive reduction of carbon emissions requires property-specific and regional efforts. We have developed property-specific Scope 1 and Scope 2 carbon emissions reduction targets that address both landlord- and tenant-controlled energy consumption. These property-specific targets contribute to Vornado's company-wide Vision 2030, our carbon neutrality goal, and more specifically, our energy efficiency goal of 50% reduction by 2030, below a 2009 baseline¹. Our progress towards these goals is measured

in both energy and greenhouse gas emissions. Our carbon reduction strategy prioritizes energy efficiency, while evaluating opportunities to incorporate renewable power into our energy sourcing as a secondary measure. More details of our carbon emissions reduction on the Environmental Results section of this report. Our regions of New York, Chicago and San Francisco each have municipally emissions reduction programs in place. These programs combine strategies of absolute energy reduction, through efficiency measures, as well as fossil fuel intensity reduction of utility-delivered energy. We discuss the intent and requirements of these programs with managers and engineers, as well as our tenants. They provide important framework to the GHG reduction goals we set with our

We have disclosed our Scope 3 carbon emissions that are attributed to certain fuel and energy related activities that are not included in 1 or 2. These emissions are from energy that is delivered directly from the utilities to our tenants and consumed by our tenants. We expand our inventory of Scope 3 emissions to include additional categories relevant to our business.

All carbon emission reduction strategies, whether property-specific or regional, present different risks and opportunities. Risks include unsuccessful investment in new technologies; costs to transition to lower emissions technology; increased pricing on GHG emissions uncertainty in market signals such as utility costs or carbon taxes. Financial impacts of such risks which could include increased operating costs, and increased or unexpected shifts in energy costs. Opportunities, on the other hand, include reduction of energy consumption; use of public-sector incentives, such as utility rebates; diversification of energy resources; and adaptation of new Financial impacts of such opportunities include reduction of energy and/or operating costs; increased value of fixed assets; reduced fossil fuel price increases; reduction of utility costs for our tenants; and various benefits to workforce management and planned opportunities also include the reduction or elimination of burden from emerging carbon pricing or carbon tax mechanisms, as reduction or avoidance of carbon emissions-related penalties.

All three of our regions also have emissions-reporting obligations, which require us to publicly disclose our properties' carbon emissions to ENERGY STAR Portfolio Manager. We consider this requirement as an opportunity to measure the carbon emissions from our properties and manage the reduction of those emissions on an ongoing basis.

In 2019, New York City passed the Climate Mobilization Act (CMA), which contained several local laws to transition New York City greenhouse gas emissions 40 percent by the year 2030 and 80 percent by the year 2050, below 2005 levels. Included in the Law 97, which calculates carbon intensity for buildings on a per square foot basis and assigns limits to intensity beginning in 2020, the law assigns penalties of \$268 per ton of carbon calculated in exceedance of the limits. We are planning energy efficiency strategies to reduce our NYC properties and consider the cost for energy efficiency to be part of our transition costs to a low-carbon environment. We also consider penalty avoidance in the value stack of energy efficiency projects, and the penalty amount of \$268 per ton of carbon considered when making capital allocation decisions.

Vornado Realty Trust has signed on as a supporter of the framework recommended by The Financial Stability Board's Task Force on climate-related Financial Disclosures (TCFD). We believe this framework will guide the real estate industry towards well-informed climate change risks and opportunities. As our internal and external discussions on climate risk and disclosure evolve, we plan to expand this public disclosure.

¹ Any information relating to forward looking statements, goals and progress against goals, was not subject to Deloitte & Touche LLP's examination and, accordingly, Deloitte & Touche LLP does not express a conclusion or any form of assurance on such information.

Normalization Note:
2020 and 2021 Like-for-Like energy consumption data have been normalized to adjust for fluctuations in weather and occupancy. Weather normalization uses inputs of total degree days (TDD), a fixed portion of energy consumption, known as a Base Load, and a variable portion of energy consumption, known as a Seasonal Load.
Occupancy is normalized based on the following assumptions: 1) 50% of the Weather Normalized Energy's Baseload is adjusted for Occupancy based on field research that demonstrates that roughly half of the baseload is occupancy dependent. 2) 33% of the Weather Normalized Energy's Seasonal Load is adjusted for Occupancy based on field research that demonstrates that a third of the seasonal load is occupancy dependent. 3) Quarterly occupancy rates are averaged for the year to calculate the current year and prior year annual occupancy rates.

Estimation:
Q4 2021 energy and water data was estimated at properties where actual consumption data was not available in time for the publication report. Due to the observed reductions related to the COVID pandemic, energy and water were estimated by applying the weighted average consumption variance from prior year beginning with April 2020 through the most recent available month of actual data. Energy consumption also adjusted for weather & leased occupancy normalization. Approximately 7% of total energy consumption and 2% of total water consumption were estimated. Four properties have full year estimations for energy and water. The estimation consumption for these properties account for 1% of total energy consumption and 4% of total water consumption.
Reporting Boundary:
This SASB disclosure includes all in-service square footage as of 12/31/2021, not listed as under development, with more than 20% VNO



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INDEPENDENT ACCOUNTANT'S REPORT

**Board of Trustees
Vornado Realty Trust
New York, NY**

We have examined management of Vornado Realty Trust's (the "Company") assertion that the metrics in the Sustainability Accounting Standards Board (SASB) Index included within Appendix A of the accompanying Environmental, Social & Governance 2021 Report (the "SASB Index") of Vornado Realty Trust as of and for the year ended December 31, 2021 are presented in accordance with the Sustainability Accounting Standards Board Real Estate Sustainability Accounting Standard.

The Company's management is responsible for its assertion. Our responsibility is to express an opinion on management's assertion based on our examination.

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants (AICPA) in AT-C Section 105, *Concepts Common to All Attestation Engagements*, and AT-C Section 205, *Examination Engagements*. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects. An examination involves performing procedures to obtain evidence about management's assertion. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of management's assertion, whether due to fraud or error. We believe that the evidence obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

We are required to be independent and to meet our other ethical responsibilities in accordance with the *Code of Professional Conduct* issued by the AICPA. We applied the *Statements on Quality Control Standards* established by the AICPA and, accordingly, maintain a comprehensive system of quality control.

The preparation of the SASB Index requires management to interpret the criteria, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect reported information. Measurement of certain metrics includes estimates and assumptions that are subject to substantial inherent measurement uncertainty resulting, for example, from the accuracy and precision of conversion factors or estimation methodologies used by management. Obtaining sufficient, appropriate evidence to support our opinion does not reduce the inherent uncertainty in the metrics. The selection by management of different but acceptable measurement methods, input data, or assumptions may have resulted in materially different amounts or metrics being reported.

Our examination was limited to the SASB Index as of and for the year ended December 31, 2021. All other information presented within the Environmental, Social & Governance 2021 Report, including information relating to forward looking statements, goals, and progress against goals and denoted by an asterisk (*) in Appendix A of the Environmental, Social & Governance 2021 Report was not subject to our examination and, accordingly, we do not express an opinion or any form of assurance on such information.

In our opinion, management's assertion that the metrics in the SASB Index included within Appendix A of the accompanying Environmental, Social & Governance 2021 Report as of and for the year ended December 31, 2021 are presented in accordance with SASB Real Estate Sustainability Accounting Standard is fairly stated, in all material respects.

April 8, 2022

UN SUSTAINABLE DEVELOPMENT GOALS*

Vornado supports the United Nations Sustainable Development Goals (UNSDGs) as a global framework to achieve a more sustainable future for the planet, and improve quality of life for all. As a corporate citizen we uphold and contribute to each of the 17 goals through the environmentally and socially responsible manner in which we run our

business and our properties. Below is a selection of metrics and programs where Vornado responds directly identified through the UNSDG 2030 Agenda for Sustainable Development. We will expand upon these disclosures when new metrics and programs develop within the recommended SDG framework.



UN GOAL TARGET	UN GOAL INDICATOR	VNO RESPONSE
3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.	3.5.1 Coverage of treatment interventions (pharmacological, psychosocial, and rehabilitation and aftercare services) for substance abuse disorders	Vornado's Employee Assistance Program (EAP) and other wellness programs, referenced in the "Human Capital Management" section of this report. Our EAP is available to all Vornado employees, which represents our coverage.
3.8 Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all	3.8.1 Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn, and child health; infectious diseases; non-communicable diseases; and service capacity and access, among the general and most disadvantaged population)	Vornado offers all employees universal health coverage through our employee benefits program. Health care services include medical, dental, health and wellness, telemedicine services, seasonal flu shots and preventative screenings. More information can be found in the "Human Capital Management" section of this report.
3.a Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate	3.a.1 Age-standardized prevalence of current tobacco use among persons aged 15 years and older	To protect the health of the occupants, employees, and visitors to our building, Vornado transitioned all properties to tobacco-free and smoke-free environments in 2020. While the use of tobacco products and all smoking devices including electronic cigarettes and vaporizers had already been prohibited for all interior spaces, this policy now extends to all exterior property under Vornado's control.
3.d Strengthen the capacity for all countries, for early warning, risk reduction and management of national and global health risks	3.d.1 International Health regulations (IHR) capacity and health emergency preparedness	Pertinent to 2020-2021 Vornado's COVID response and pandemic preparedness program are discussed at length in the "COVID 2020-2021 Response" section of this report.



UN GOAL TARGET	UN GOAL INDICATOR	VNO RESPONSE
5.1 End all forms of discrimination against all women and girls everywhere	5.1.1 Whether or not legal frameworks are in place to promote, enforce, and monitor equality and non-discrimination on the basis of sex	Vornado Realty Trust is an equal opportunity employer, and strictly prohibits discrimination of all forms on the basis of ethnicity, religion, color, national origin, gender, gender identity, sexual orientation, age, status as a protected veteran or as a qualified individual with a disability.
5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	5.5.2 Proportion of women in managerial positions	32% of Vornado's managerial positions are held by females. More information can be found in the Social Results section of this report.
6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity	6.4.1 Change in water-use efficiency over time	Vornado reduced water consumption in 2021 from 2019 levels. Much of this reduction was due to COVID-19 related measures.



*This disclosure was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.

UN SUSTAINABLE DEVELOPMENT GOALS* Continued

	UN GOAL TARGET	UN GOAL INDICATOR	VNO RESPONSE
<p>7 AFFORDABLE AND CLEAN ENERGY</p>	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1 Renewable energy share in the total final energy consumption	In 2021 Vornado consumed 18.35% of energy from renewable resources. We plan to continue to increase our electricity supply from renewable resources in 2021 and beyond.
	7.3 By 2030, double the global rate of improvement in energy efficiency	7.3.1 Energy intensity measured in terms of primary energy and GDP	We have measured our energy intensity per square foot. In 2021 our energy intensity was 22.76 kWh / SF.
<p>9 INDUSTRY INNOVATION AND INFRASTRUCTURE</p>	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.	9.4.1 CO2 emissions per unit of value added	We have measured our GHG emissions per square foot. Our 2021 GHG emissions intensity was .0058 MTCO2e / SF.

	UN GOAL TARGET	UN GOAL INDICATOR	VNO RESPONSE
<p>11 SUSTAINABLE CITIES AND COMMUNITIES</p>	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	11.2.1 Proportion of population that has convenient access to public transportation, by sex, age, and persons with disabilities	We measure our access to public transportation by the Transit Scores at properties, as determined by that assigns Walk Score. In 2021, 100% of our office properties received a T score of 100, indicating that 100% of our office properties has convenient access to public transportation.
<p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse	12.5.1 National recycling rate, tons of material collected	In 2021, Vornado diverted 63% of waste from the landfill. Our data reported that about 84% of our waste was recycled.

*This disclosure was not subject to Deloitte & Touche LLP's review and, accordingly, Deloitte & Touche LLP does not express a conclusion, opinion, or any form of assurance on such information.



