

VORNADO

REALTY TRUST

NAREIT ANNUAL CONFERENCE
NOVEMBER 2019





DEEP, TALENTED & EXPERIENCED MANAGEMENT TEAM

CORPORATE OFFICERS



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Chairman of the Board
and Chief Executive Officer



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Chief Administrative Officer



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Office Leasing
Co-Head of Real Estate



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Development
Co-Head of Real Estate



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Executive Vice President,
Head of Retail

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MYRON MAURER
Chief Operations Officer,
theMART



THOMAS SANELLI
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New York



GASTON SILVA
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RICHARD REZKA
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Acquisitions & Capital Markets



ALAN RICE
Senior Vice President,
Corporation Counsel



JESSICA ROSS
Senior Vice President,
Financial Planning & Analysis



STEVE SANTORA
Senior Vice President,
Financial Operations



GEOFF SMITH
Senior Vice President,
Development



NICK STELLO
Senior Vice President,
IT Infrastructure



LISA VOGEL
Senior Vice President,
Marketing



ELI ZAMEK
Senior Vice President,
Development Design
& Construction

ECONOMIC GROWTH



- New York City has captured the greatest share of US (8.9%) and Global GDP (2.6%) of all cities between 2010-2018
- New York City created more jobs than peers across a diverse set of industries, while Tier 2 fast-growing cities are more heavily skewed to technology

LABOR POOL



- New York City has a growing population of educated individuals (net in-migration of 33K people with bachelor degrees between 2014-2017)

TALENT ATTRACTION



- New York City is the leading city for talent attraction domestically (#1 city for top U.S. college graduates) and abroad (31% H1B visa approvals)
- New York City has the most ultra high net worth individuals globally and is growing

INNOVATION



- New York City is leading in new companies formed (e.g., start-up density of 154.7 new businesses per 1000 vs. 150.4 for San Francisco)
- New York City has reached \$13B of VC funding in start-ups so far this year and captured 16% of total U.S. VC funding, second only to San Francisco

- Attractive common dividend yield of 4.0%¹
- Trading at a significant discount to NAV
- Deep, talented, proven management team
- Fortress balance sheet with substantial cash and available liquidity (~\$3.36 billion today and growing) to fund Penn District and take advantage of future investment opportunities
- Only significant way to invest publicly in fast growing West Side of Manhattan
- Growth from Penn District redevelopment – over 9 million SF existing portfolio with significant NOI upside and value creation
 - 6.8 million SF of office with average in-place rents of \$67 PSF; neighboring properties to the west asking rents range from \$98-225 PSF²
 - 5.2 million SF under development now, which is being self-financed with cash from 220 CPS
 - Farley Building (845,000 rentable SF) development in process
 - PENN 1 redevelopment in process
 - PENN 2 transformation (1.8 million rentable SF) to commence in 1Q20
 - Hotel Pennsylvania site (2.8 million rentable SF of development)
 - Other development sites
- Internal growth over time from highly sought-after existing assets (e.g., 770 Broadway, 555 California Street, theMART)
- Largest owner of LEED certified buildings in New York City with 26 million SF
- Management has consistently acted to create shareholder value

1. As of 11/7/2019 market close.

2. As of 9/30/2019.

(Amounts in millions)

	SEPTEMBER 30, 2019
Secured debt	\$ 5,674
Unsecured debt	1,855
Pro rata share of non-consolidated debt	2,807
Less: noncontrolling interests' share of consolidated debt	(484)
Total debt	9,852
Projected cash proceeds from 220 Central Park South	(1,787)
Cash, restricted cash and marketable securities ¹	(995)
Net Debt	\$ 7,070
TTM EBITDA, as adjusted²	\$ 1,119
Net Debt/EBITDA, as adjusted	6.3x

- Investment grade debt – Baa2/BBB
- \$2.1 BN in revolver capacity
- \$1.0 BN in cash¹
- Weighted average debt maturity – 3.6 years
- ~\$9 BN of unencumbered assets

1. Includes \$105 million 150 West 34th Street loan participation and deducts potential special dividend of approximately \$390 million.

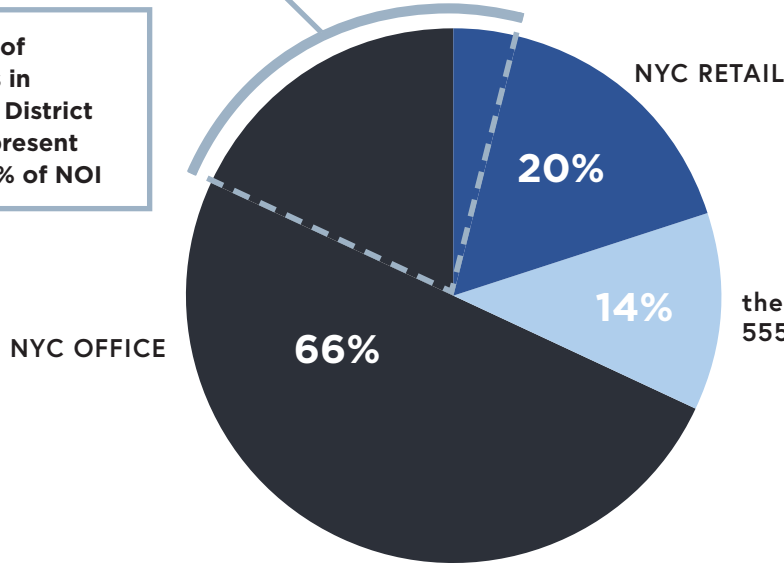
2. See page 30 for non-GAAP reconciliation.

COMPONENTS OF PRO-FORMA NOI AT SHARE - CASH BASIS¹

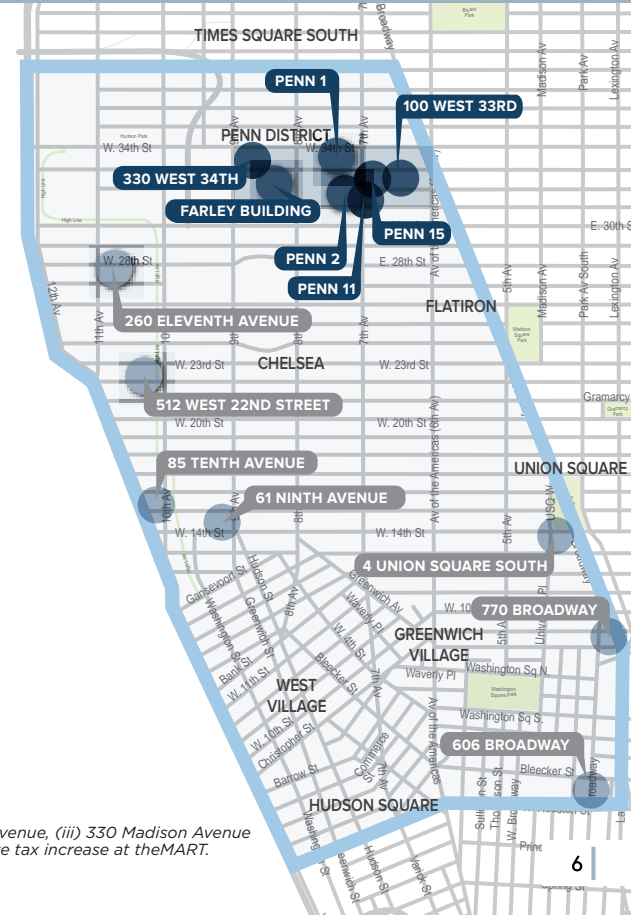
Components of NOI at share - Cash Basis

PENN DISTRICT
23%

Upon completion of the developments in process, the Penn District is expected to represent approximately 33% of NOI



TTM 9/30/19 NOI: \$1,169M



1. For the trailing twelve months ended 9/30/19, as adjusted for (i) the April 18th Retail Transaction, (ii) the termination of the ground lease at 608 Fifth Avenue, (iii) 330 Madison Avenue (sold on July 11, 2019), (iv) 3040 M Street (sold on September 19, 2019), and (v) the adjustment to offset the accrual in Q4 2018 for the annual real estate tax increase at theMART. NOI is a non-GAAP measure. See "Non-GAAP Financial Measures" on page 31 of this presentation for additional information.

PLAZA DISTRICT



888 SEVENTH AVENUE



650 MADISON AVENUE



595 MADISON AVENUE

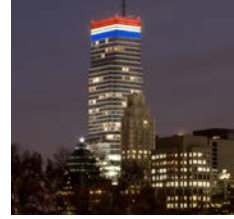


640 FIFTH AVENUE



689 FIFTH AVENUE

MIDTOWN



731 LEXINGTON AVENUE

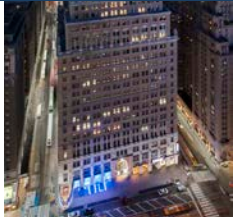


1290 AVENUE OF THE AMERICAS

PENN DISTRICT



7 WEST 34TH STREET



PENN 11



330 WEST 34TH STREET



PENN 1



PENN 2



THE FARLEY BUILDING



90 PARK AVENUE

GRAND CENTRAL

MIDTOWN SOUTH



ONE PARK AVENUE



770 BROADWAY

PARK AVENUE



280 PARK AVENUE



350 PARK AVENUE

CHELSEA / MEATPACKING



61 NINTH AVENUE



512 WEST 22ND STREET



85 TENTH AVENUE

SELECT NEW YORK CITY STREET RETAIL PROPERTIES



689 FIFTH AVENUE



640 FIFTH AVENUE



655 FIFTH AVENUE



697 FIFTH AVENUE



666 FIFTH AVENUE



510 FIFTH AVENUE



828-850 MADISON AVENUE



595 MADISON AVENUE



650 MADISON AVENUE



677 MADISON AVENUE



1540 & 1535 BROADWAY



150 WEST 34TH STREET



435 SEVENTH AVENUE



4 UNION SQUARE



484-486 BROADWAY



theMART building (Chicago) - best example of contemporary office space outside of Silicon Valley. Transformed from a showroom building to the premier creative and tech hub in the Midwest, resulting in significant earnings growth and value creation

- 3,674,000 SF building - 95.0% Occupancy at 9/30/19
- Located in River North, the hottest submarket in Chicago
- Since 2011, have converted over 950,000 SF from showroom/trade show space to creative office space
- 9/30/19 TTM Cash NOI (non-GAAP)¹ of \$102.9 million² versus 2011 Cash NOI of \$54.3 million
- In-place escalated rents average \$47.73 PSF as of 9/30/19 (office \$43.26, showroom \$53.21 and retail \$55.05)
- In conjunction with the City of Chicago, theMART hosts *Art on theMART*, a curated series of digital artwork projects by renowned artists across the 2.5 acre exterior river-façade of theMART. The installation is the largest permanent digital art projection in the world.

Major Tenants:

- Motorola Mobility (guaranteed by Google)
- ConAgra Foods Inc.
- 1871
- Kellogg's
- Allscripts Healthcare
- Yelp Inc.
- Paypal, Inc.
- Razorfish
- Allstate Insurance
- Steelcase
- Herman Miller

1. See page 32 for non-GAAP reconciliation.

2. The 9/30/19 TTM Cash NOI includes the add back of (i) free rent and (ii) the adjustment to offset the accrual in Q4 2018 for the annual real estate tax increase which is billed to tenants throughout 2019.



555 California Street - the franchise office building in San Francisco and arguably the most iconic building on the west coast.

- 1,819,000 SF complex - 100.0% occupancy at 9/30/19
- 9/30/19 TTM Cash NOI (non-GAAP)¹ of \$60.9 million at share
- In-place escalated rents average \$80.96 PSF as of 9/30/19, which are significantly below market



Major Tenants:

- Bank of America
- Blue Shield
- Centerview Partners
- Dodge & Cox
- Fenwick & West LLP
- Goldman Sachs
- Jones Day
- Kirkland & Ellis LLP
- KKR
- Lending Home Corporation
- McKinsey & Company
- Microsoft
- Morgan Stanley
- Sidley Austin
- UBS

1. See page 32 for non-GAAP reconciliation.



6-time Energy Star Partner of the Year; Sustained Excellence recipient 2019.



Largest owner of LEED certified buildings in New York City with over 26 million square feet. All new commercial developments will be, at minimum, LEED Gold certified.



NAREIT Leader in the Light award 10 years in a row.

Global Real Estate Sustainability Benchmark (GRESB) “Green Star” since 2013, 7th year in a row. Our score of 91 ranks #4 out of 62 Listed (i.e. public) companies in the Americas region, and #59 out of the total 964 respondents.



The Climate Group EP100 Member for commitment to 35% reduction in energy efficiency by 2026.



22% reduction in same-store greenhouse gas emission since 2009.



Our marquee assets 731 Lexington Avenue and theMART are among the first buildings to achieve Fitwel certification.



PENN 1



FARLEY



THE PENN DISTRICT

WHERE TALENT IS OUR CLIENT



PENN 2

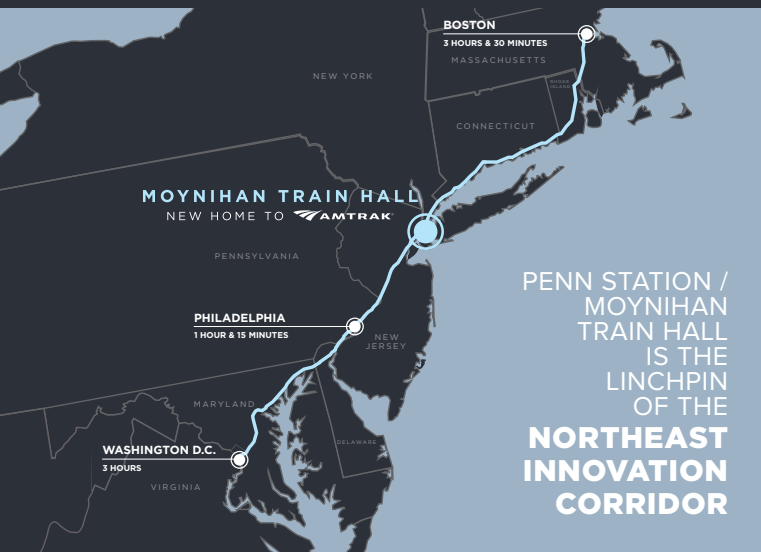


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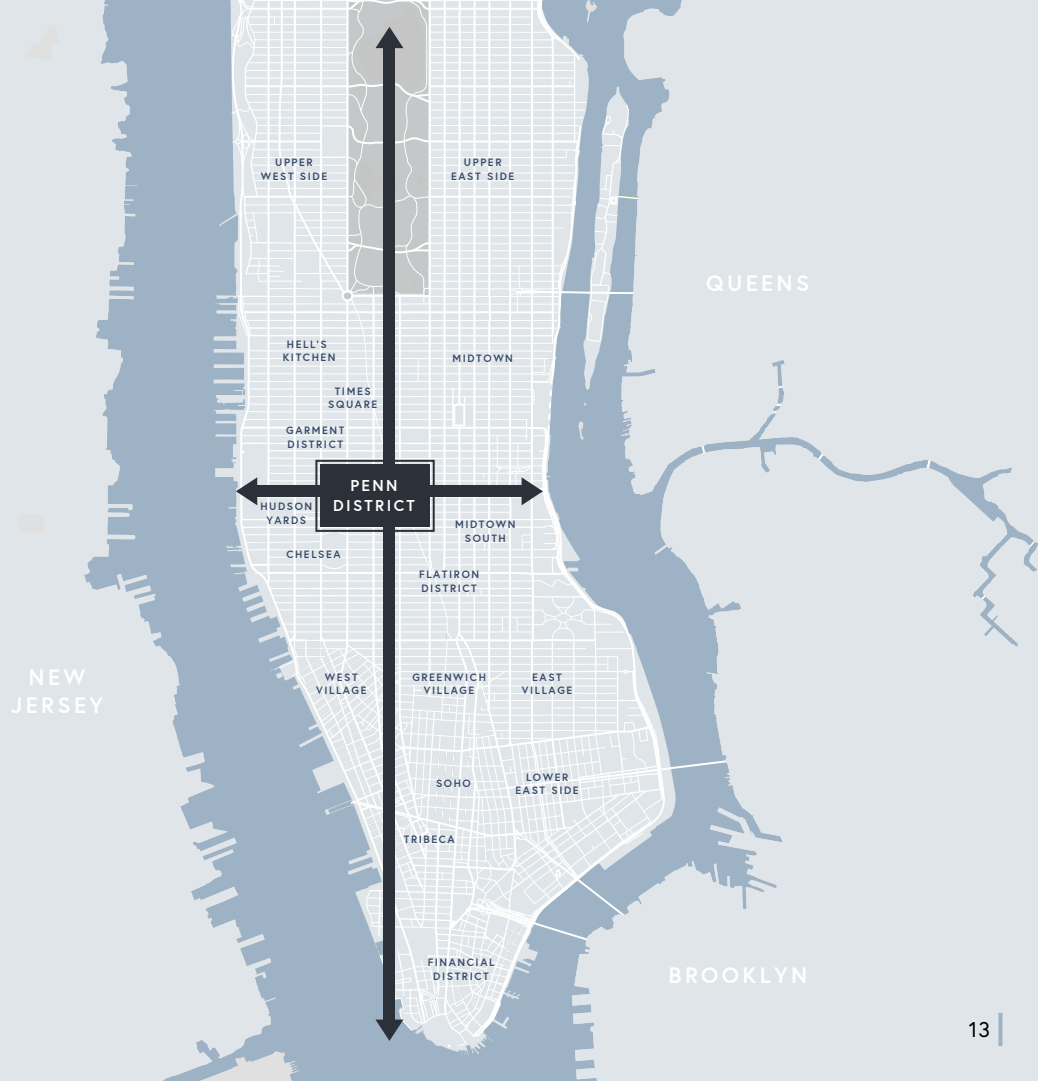
www.vno.com

THE PENN DISTRICT IS THE EASIEST NEIGHBORHOOD TO GET TO AND SITS IN THE EPICENTER OF MANHATTAN.

Penn Station, including Moynihan Train Hall, is the busiest transportation hub in North America. Home to the Long Island Rail Road, New Jersey Transit, Amtrak and several subway lines.



PENN STATION /
MOYNIHAN
TRAIN HALL
IS THE
LINCHPIN
OF THE
**NORTHEAST
INNOVATION
CORRIDOR**



"IN EVERY GREAT
GLOBAL CITY, THE MOST
VALUABLE REAL ESTATE
STANDS ATOP THE MAJOR
TRANSPORTATION HUB."

- JLL RESEARCH, 4/23/19

*ONCE REDEVELOPED, THE
VORNADO PENN DISTRICT
HOLDINGS WILL JOIN THE LIST.*



REAL ESTATE ON TOP OF MAJOR TRANSIT HUBS COMMANDS PREMIUM RENTS & THE HIGHEST VALUES

HONG KONG ICC - KOWLOON / WEST KOWLOON STATION



TOKYO MIRAINA TOWER - SHINJUKU STATION



LONDON KING'S CROSS - KING'S CROSS / ST PANCRAS STATION



SHANGHAI ICC / SHANGHAI IAPM - SOUTH SHAANXI STATION

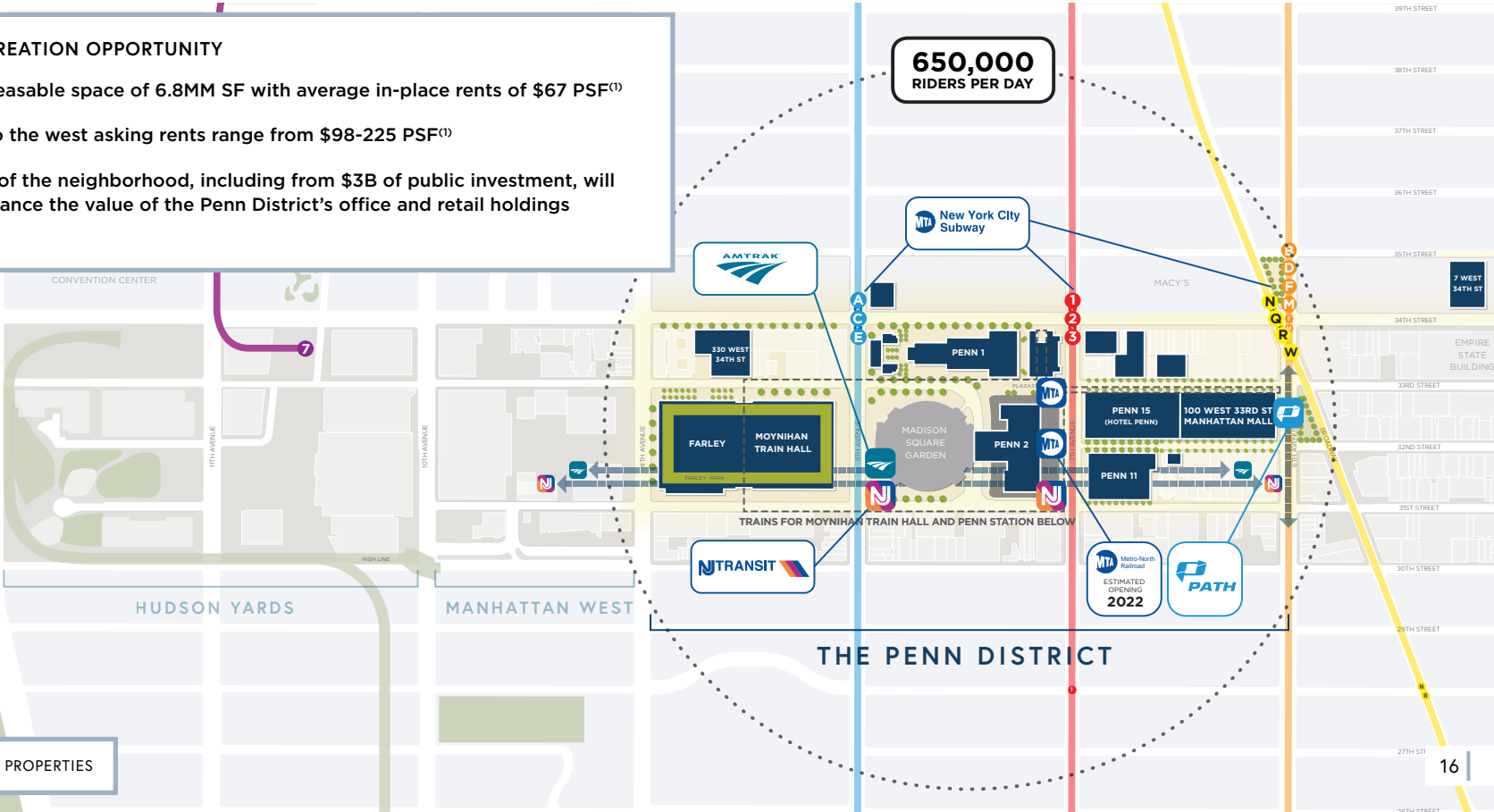


UNIQUE VALUE CREATION OPPORTUNITY

- Existing office leasable space of 6.8MM SF with average in-place rents of \$67 PSF⁽¹⁾
- Hudson Yards to the west asking rents range from \$98-225 PSF⁽¹⁾
- Transformation of the neighborhood, including from \$3B of public investment, will enormously enhance the value of the Penn District's office and retail holdings

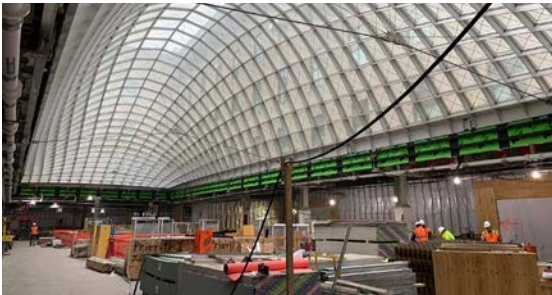
1. As of 9/30/2019

HUDSON RIVER



■ VORNADO OWNED PROPERTIES

FARLEY



PENN 1



PENN 2



EXPECTED
COMPLETION DATE:

2020

2021

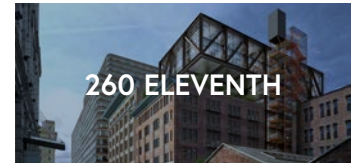
2022

FUTURE

FARLEY

PENN 1

PENN 2



OTHER PENN DISTRICT
DEVELOPMENT
OPPORTUNITIES

(Amounts in thousands, except square feet)

Capital to fund these projects comes entirely from 220 CPS proceeds

ACTIVE PENN DISTRICT PROJECTS	PROPERTY RENTABLE SQ. FT.	BUDGET ⁽¹⁾	AMOUNT EXPENDED	REMAINDER TO BE EXPENDED	STABILIZATION YEAR	PROJECTED INCREMENTAL CASH YIELD
Farley (95% interest)	845,000	1,030,000 ⁽²⁾	528,080	501,920	2022	7.4%
PENN 2 - as expanded	1,795,000	750,000	34,372	715,628	2024	8.4%
PENN 1 ⁽³⁾	2,544,000	325,000	57,355	267,645	N/A	13.5% ⁽³⁾⁽⁴⁾
Districtwide Improvements	N/A	100,000	5,372	94,628	N/A	N/A
Total Active Penn District Projects		2,205,000	625,179	1,579,821 ⁽⁵⁾		8.3%

1. Excluding debt and equity carry.

2. Net of anticipated historic tax credits.

3. Property is ground leased through 2098, as fully extended. Fair market value resets occur in 2023, 2048 and 2073. The 13.5% projected return is before the ground rent reset in 2023, which may be material.

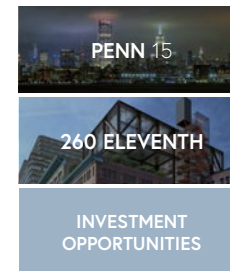
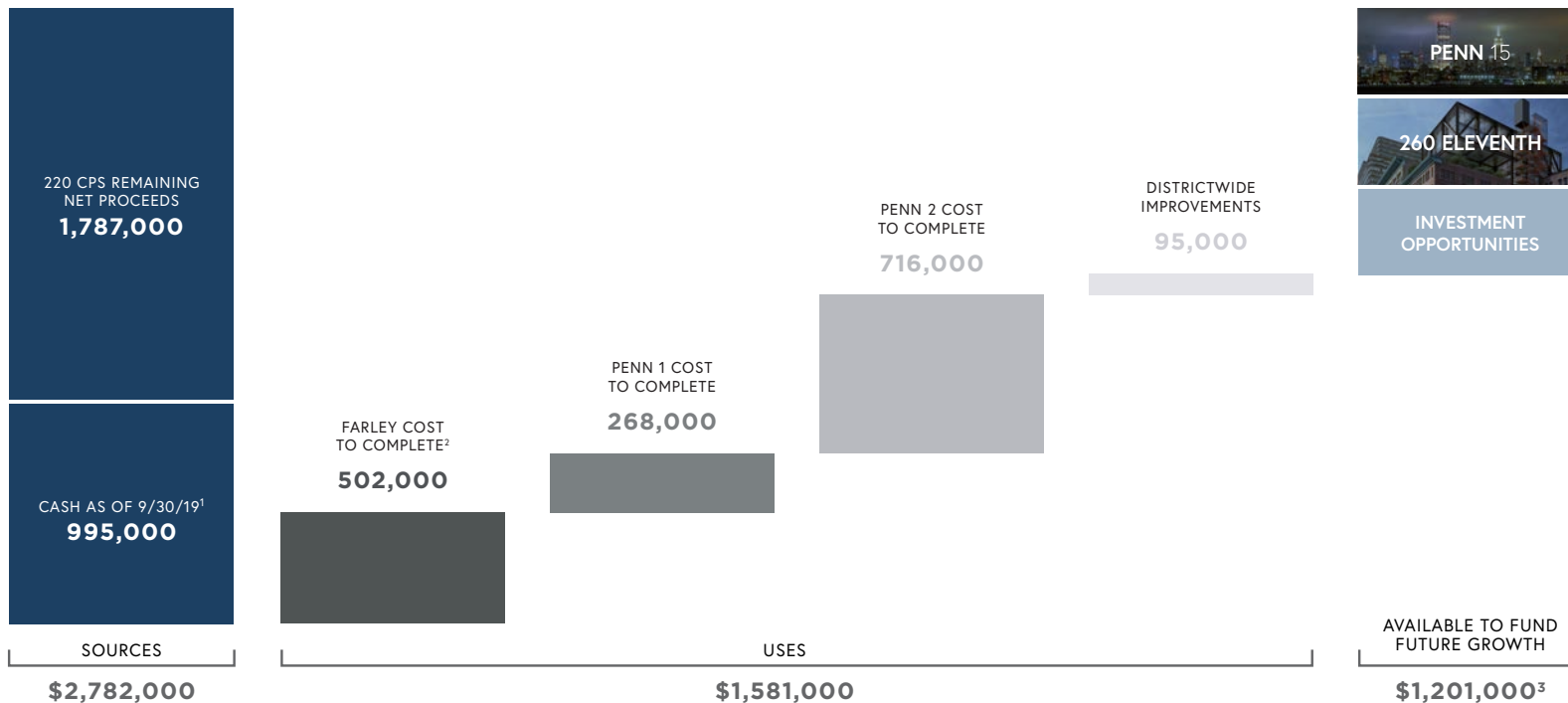
4. Achieved as existing leases roll; average remaining lease term 5.0 years.

5. Expected to be funded from our balance sheet, principally from 220 CPS net sales proceeds.

There can be no assurance that the above projects will be completed, completed on schedule or within budget. In addition, there can be no assurance that the Company will be successful in leasing the properties on the expected schedule or at the assumed rental rates.

SIGNIFICANT DRY POWDER AVAILABLE FOR CURRENT PIPELINE & FUTURE INVESTMENTS

(Amounts in thousands)



1. Includes restricted cash, marketable securities and 150 West 34th Street loan participation, as of 9/30/19, and deducts potential special dividend of approximately \$390 million.

2. Farley development costs at our share, net of anticipated historic tax credits.

3. Does not include \$1.83 billion of preferred equity received as part of the Retail Transaction.

FARLEY

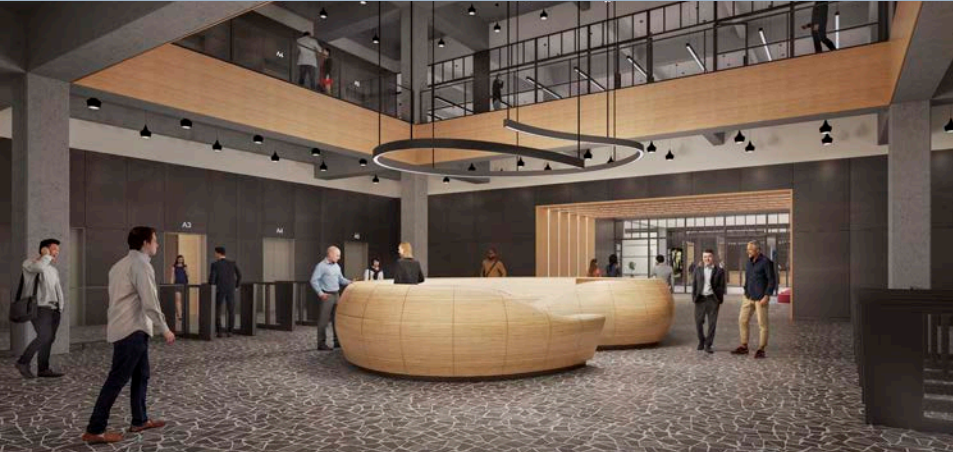
UNIQUE HORIZONTAL CAMPUS DIRECTLY ON TOP OF TRANSPORTATION

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FARLEY
OFFICE INTERIORS & ROOFTOP PARK

VORNADO
REALTY TRUST



PENN 1
34TH STREET ENTRANCE

VORNADO
REALTY TRUST



PENN 1

LOBBY, AMENITY SPACE & PLAZA33



PENN 2

TRANSFORMATIVE REDEVELOPMENT

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PENN 2
REDEVELOPMENT FEATURES

New modern curtain wall

Two Bustle floors, 44,000 RSF each,
featuring double height ceilings and
column free space

New triple height lobby
located off of 33rd Street tree lined plaza

New rooftop terrace

New penthouse duplex

Two exterior loggias
located on all floors

New 4,000 SF
town hall space



PENN 2

7TH AVENUE & 33RD STREET LOBBY



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APPENDIX



This investor presentation contains certain non-GAAP financial measures, including net operating income (“NOI”) and earnings before interest, taxes, depreciation and amortization (“EBITDA”).

NOI represents total revenues less operating expenses. We consider NOI to be the primary non-GAAP financial measure for making decisions and assessing the unlevered performance of our segments as it relates to the total return on assets as opposed to the levered return on equity. As properties are bought and sold based on NOI, we utilize this measure to make investment decisions as well as to compare the performance of our assets to that of our peers. NOI should not be considered a substitute for net income. NOI may not be comparable to similarly titled measures employed by other companies. We calculate NOI on an Operating Partnership basis which is before allocation to the noncontrolling interest of Vornado Realty L.P. (the “Operating Partnership”).

EBITDA represents earnings before interest, taxes, depreciation and amortization. EBITDA is essentially NOI less general and administrative expenses. We use EBITDA as a secondary non-GAAP measure primarily in the context of a net debt to EBITDA ratio. We calculate EBITDA on an Operating Partnership basis which is before allocation to the noncontrolling interest of Vornado Realty L.P. (the “Operating Partnership”).

A reconciliation of NOI and EBITDA to net income, the most directly comparable GAAP measure, is provided on the following pages.

These non-GAAP financial measures are used by management, investors and analysts to facilitate meaningful comparisons of operating performance between periods and among our peers because they exclude the effect of real estate depreciation and amortization and net gains on sales, which are based on historical costs and implicitly assume that the value of real estate diminishes predictably over time, rather than fluctuating based on existing market conditions. These metrics do not represent cash generated from operating activities and are not necessarily indicative of cash available to fund obligations and should not be considered as an alternative to net income as performance measures or cash flow as liquidity measures. These non-GAAP metrics may not be comparable to similarly titled measures employed by other companies.

(Amounts in millions)

Reconciliation of Net income attributable to the Operating Partnership to EBITDA and EBITDA, as adjusted for the trailing twelve months ended September 30, 2019

	For the TTM September 30, 2019
Net income attributable to the Operating Partnership	\$ 3,259
Interest and debt expense	410
Depreciation and amortization	535
Income tax expense	114
EBITDA	4,318
Adjustments, net ⁽¹⁾	(3,199)
EBITDA, as adjusted	<u>\$ 1,119</u>

1. Includes our share of gain on transfer to Fifth Avenue and Times Square JV, income from our sold properties, our Real Estate Fund, gains on sale of real estate, impairment losses, change in fair value of marketable securities, gains on sale of 220 CPS condominium units and other adjustments.

(Amounts in millions)

Reconciliation of Net income to Pro-Forma NOI at share - Cash Basis for the trailing twelve months ended September 30, 2019

	For the TTM Ended September 30, 2019
Net income	\$ 3,271
Depreciation and amortization expense	439
General and administrative expense	163
Transaction related costs, impairment losses and other	118
Income from partially owned entities	(59)
Loss from real estate fund investments	65
Interest and other investment income, net	(24)
Interest and debt expense	310
Net gain on transfer to Fifth Avenue and Times Square JV	(2,571)
Net gains on disposition of wholly owned and partially owned assets	(723)
Purchase price fair value adjustment	(44)
Income tax expense	113
NOI from partially owned entities	297
NOI attributable to noncontrolling interests in consolidated subsidiaries	(72)
Adjustment for Retail Transaction ¹	(60)
Non cash adjustments for straight-line rents, amortization of acquired below-market leases, net and other ²	(23)
Total NOI at share - Cash Basis	<u>1,200</u>
Other Investments NOI - Cash Basis	(31)
NOI at share - Cash Basis	<u>\$ 1,169</u>

Pro-Forma NOI at share - Cash Basis by segment:

	For the TTM Ended September 30, 2019
New York:	
Office (includes \$27MM of BMS NOI)	\$ 700
Retail ²	230
Residential	22
Alexander's	45
Hotel Pennsylvania	7
	<u>1,004</u>
Other:	
theMART (including trade shows) ²	105
555 California Street	60
	<u>165</u>
NOI at share - Cash Basis excluding other investments	<u>\$ 1,169</u>

1. Adjustment for the April 18th Retail Transaction impact on NOI.

2. Includes adjustment for Topshop at 608 Fifth Avenue, 330 Madison Avenue (sold July 11, 2019), 3040 M Street (sold September 19, 2019) and the adjustment to offset the accrual in Q4 2018 for the annual real estate tax increase at theMART.

(Amounts in millions)

Reconciliation of theMART Net income to EBITDA, NOI - Cash Basis and NOI - Cash Basis as adjusted for the year ended December 31, 2011 and for the trailing twelve months ended September 30, 2019

	For the TTM Ended September 30, 2019	For the Year Ended December 31, 2011
Net income (loss)	\$ 24.1	\$ (4.5)
Interest and debt expense	18.7	31.2
Depreciation and amortization	40.3	21.6
EBITDA	83.1	48.3
Non-cash adjustments and other	5.3	3.1
NOI - Cash Basis	88.4	51.4
Real estate tax expense adjustment	9.0	—
Free rent	5.5	2.9
NOI - Cash Basis as adjusted	<u>\$ 102.9</u>	<u>\$ 54.3</u>

Reconciliation of 555 California Street Net income to EBITDA, NOI at share - Cash Basis and NOI at share - Cash Basis as adjusted for the year ended December 31, 2012 and for the trailing twelve months ended September 30, 2019

	For the TTM Ended September 30, 2019 at share	For the Year Ended December 31, 2012 at share
Net income (loss)	\$ 15.3	\$ (4.6)
Interest and debt expense	17.3	22.0
Depreciation and amortization	26.6	28.5
Income tax expense	0.8	0.3
EBITDA	60.0	46.2
Non-cash adjustments and other	(0.6)	(9.1)
NOI at share - Cash Basis	59.4	37.1
Free rent	1.5	1.1
NOI at share - Cash Basis as adjusted	<u>\$ 60.9</u>	<u>\$ 38.2</u>

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NOVEMBER 2019

