Commercial Real Estate Development **FALL 2023**

Development

IDEAS | ISSUES | TRENDS

VanTrust Real Estate

Developer of the Year *70*

NAIOP

COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION

BETTER
FASTER
SMARTER

Our experts have the creativity and know-how to tackle your toughest supply chain challenges, continuously giving you a competitive edge to realize your success.

CenterPoint

Designed for expertise.

Marcus & Millichap is different by design. With nearly 2,000 sales and financing professionals specializing in 16 property types, we have helped clients succeed in up markets, down markets, and everything in between. Our platform is designed to deliver market and product expertise when you need it the most.

#1 IN EXCLUSIVE LISTINGS • #1 IN CLOSED TRANSACTIONS • OVER 50 YEARS OF EXECUTION

Real Estate Investment Sales » Financing » Research » Advisory Services

MarcusMillichap.com/different

NYSE: MMI

Marcus & Millichap is a service mark of Marcus & Millichap Real Estate Investment Services, Inc. © 2023 Marcus & Millichap.

Marcus & Millichap

Contents

Development® Fall 2023
Volume LIV No. 3

FEATURES

Development on the Web

NAIOP COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION

Read Development® magazine anywhere, anytime at **www.naiop.org**

Connect with NAIOP

www.facebook.com/NAIOPCorporate

twitter.com/DevMag_NAIOP

LinkedIn
http://bit.ly/9zYNI4 (NAIOP)
http://bit.ly/c5gNMO (NAIOP Developing Leaders)

YouTube
www.youtube.com/user/NAIOPCorporate

NEWMARK

One Platform. Endless Solutions.

At Newmark, we are grateful for the opportunity to continue partnering in the success of our clients' offering strategies tailored to exceed their individual investment goals.

2023 MID-YEAR INDUSTRIAL INVESTMENT SALES HIGHLIGHTS

BRIDGE POINT LACEY

LACEY, WA
717,000 SF
Sold on behalf of:
Institutional Seller

1580 OLD OAKLAND ROAD

SAN JOSE, CA
177,117 SF
Sold on behalf of:
Institutional Seller

FORNEY LOGISTICS CROSSING

FORNEY, TX
904,495 SF
Sold on behalf of:
Grandview Partners & Stillwater Capital

PROJECT SEQUOIA

NORTHERN VIRGINIA
856,000 SF
Sold on behalf of:
Institutional Seller

IG LOGISTICS IOS PORTFOLIO

PHILADELPHIA, PA
15.82 Acres
Sold on behalf of:
IG Logistics

8700 RITCHIE DRIVE

CAPITOL HEIGHTS, MD
102,702 SF
Sold on behalf of:
Principal RE Investors

CENTCONN LOGISTICS

CHELSHIRE, CT
527,000 SF
Sold on behalf of:
DRA Advisors

AHF PRODUCTS BEVERLY

BEVERLY, WV
818,642 SF
Sold on behalf of:
AHF Products, LLC

1020 E 149 STREET

BRONX, NY
5.1 Acres
Sold on behalf of:
Buckeye Terminals

nmrk.com

Contents

Development® Fall 2023

COLUMNS

VanTrust CEO Larry Van Tuyl, left, and President Dave Harrison lead a diversified commercial real estate firm that has developed more than $6 billion worth of projects since 2010.

Photo by Carl Schultz Photography, courtesy of VanTrust Real Estate

Development®
(ISSN 0888-6067) is published quarterly and © 2023 by NAIOP, 2355 Dulles Corner Blvd., Suite 750, Herndon, VA 20171. 703-904-7100 FAX 703-904-7942

Unless otherwise noted, the views expressed in articles and advertisements are those of the authors, persons quoted and advertisers, and not necessarily those of the Association. Development magazine is protected by copyright and may not be reproduced in whole or in part without the expressed written permission of the publisher.

Subscription rates available at www.naiop.org/magazine-subscribe. Periodicals postage paid at Dulles, Virginia, and additional mailing offices. POSTMASTER: Send address changes to DEVELOPMENT, 2355 Dulles Corner Blvd., Suite 750, Herndon, VA 20171.

Advertising for Development is accepted for quarterly issues: Spring, Summer, Fall, Winter. Insertion orders are due by the first of the month, two months preceding the month of publication. Rates are available upon request. NAIOP reserves the right to reject advertising that is inconsistent with its objectives.

Submit manuscripts that are educational and focus on industry trends, recently completed development projects and other issues of interest to NAIOP members. For more information, see www.naiop.org/magazine. Submit all inquiries to developmentmagazine@naiop.org.

Reprints and PDF files are available for a small fee; contact Kathy Jackson at jackson@naiop.org for more information. You can also share your favorite articles with colleagues and clients via email and social media, with links to articles online (www.naiop.org/magazine).

Legal disclaimer: Development magazine is intended to provide information and insights to industry practitioners. NAIOP disclaims any liability for action taken as a reliance thereon.

NAIOP 2023 Editorial Board

Julie Cleaver
Howard Hughes Corporation
Las Vegas, Nevada

Jennifer Connelly
Sherin and Lodgen
Boston, Massachusetts

Christopher J. Daly
Childress Klein
Charlotte, North Carolina

Ryan Fitzgerald
MetLife Investment Management
Washington, D.C.

Janelle Gallagher
CBRE
Nashville, Tennessee

Jeff Latier
Ares Management LLC
Denver, Colorado

Darcie Lunsford
Butters Realty
Coconut Creek, Florida

Gerard C.S. Mildner
Portland State University
Portland, Oregon

Mike Riopel
Northwestern Mutual
Milwaukee, Wisconsin

Jeff Thompson
Freehold
Seattle, Washington

Alex Thomson (Chair)
Cameron Corporation
Edmonton, Alberta

Tom Wulf
Lowe Enterprises
Los Angeles, California

Development Staff

Marc Selvitelli
President and CEO

Shaine Anderson
Publisher

Jennifer LeFurgy
Editor-in-Chief

Trey Barrineau
Managing Editor

Kathy Jackson
Publications and Research Foundation Manager

Christopher Ware
Vice President, Business Development

Joel C. Stecura
Business Development Manager

Bonnie Schendell
Business Development Operations Manager

Estasi Design Associates Design

Ron Derven
Contributing Editor

ASSOCIATION MEDIA & PUBLISHING

PRINTED WITH SOY INK

MOVE INTO THE FUTURE

BUILT FOR THE LONG TERM

FULL SERVICE VERTICAL INTEGRATION

RELIABLE • EFFICIENT • FLEXIBLE

MAJESTIC REALTY | COMMERCE CONSTRUCTION CO., L.P. | MAJESTIC MANAGEMENT CO. | MAJESTIC RETAIL

R.E. License #00255328 (CA)
MajesticRealty.com

LET'S COLLABORATE
562 692 9581
13191 Crossroads Parkway North Sixth Floor
City Of Industry, Ca 91746

A Note From the Editor

As the Economy Improves, What's Next for CRE?

As of this summer, it appears that the Fed may have engineered a soft landing for the U.S. economy. Consistent GDP growth, a healthy job market and declining inflation have kept a recession at bay. However, what will happen in certain commercial real estate sectors is more of an unknown.

To hear CRE professionals' real-time viewpoints on the seismic shifts in office, NAIOP brought together a group of high-level office developers, owners and investors this summer in New York City. The participants acknowledged that new ways of working are emerging, such as the end of the five-day-in-office week, and that better amenities in and around office buildings are needed to draw people back to the workplace. They also see lease terms shortening down to as little as three years. Additionally, they agreed that not all office buildings are ideal candidates for conversions, and public-private partnerships will play a significant role in turning around now-struggling central business districts.


Jennifer LeFurgy

For more insights from the office summit, read "Seismic Shift in Office: What's Next," published on June 14 in NAIOP's Market Share blog.

We will have a lot to talk about during CRE.Converge in Seattle. I look forward to seeing you there!

Stay informed,
Jennifer LeFurgy, Ph.D.
Editor-in-Chief

Most Popular From Summer 2023

1. **"The Evolution of Office Amenities"** (naiop.org/23amenities), page 56
2. **"Words from the Past Provide Guidance for Today"** (naiop.org/23words), page 66
3. **"Evolution — from Simple to Complex"** (naiop.org/23evolution), page 82
4. **"What's the Future of Cities in the Aftermath of COVID-19?"** (naiop.org/23future), page 12
5. **"Costs Cool Down, but Not for All Construction Items"** (naiop.org/23costs), page 8

In Brief

Notable facts and figures on the state of the commercial real estate industry, culled from media reports and other sources.

INDUSTRY OUTLOOK

60% **The decline in private equity and venture capital investment in commercial real estate in 2022**, according to S&P Global Market Intelligence data published in June. Private equity and venture capital firms invested $20.73 billion in CRE in 2022, compared to $52.08 billion in 2021. In 2022, there were 251 private equity-backed transactions, down from 365 deals in 2021. That's a year-over-year drop of 31%.

$8 Billion **The increase in the volume of distressed commercial real estate in the second quarter of 2023**, according to MSCI Real Assets. That is the biggest quarterly increase since the second quarter of 2020.

Future NAIOP Events

- **CRE.Converge**, October 18-20, Seattle
- **Chapter Leadership and Legislative Retreat**, February 12-14, 2024, Washington, D.C.
- **I.CON West**, March 11-12, 2024, Long Beach, California

For the most current information on upcoming NAIOP events, visit naiop.org/Events-and-Sponsorship

FINANCIAL

100% **The percentage of U.S. banks that passed the latest Federal Reserve stress test**, which wrapped up in June. "In the 2023 tests, the Fed hypothesized a scenario where there was a severe global recession that caused a 40% decline in commercial real estate prices and a substantial increase in office vacancies, as well as a 38% decline in home prices," according to a report from the Associated Press.

OFFICE

71% **The percentage of builders who say they are "receiving more frequent requests to convert existing office space to a different use compared to one year ago**," according to a June report from the U.S. Chamber of Commerce. The report also noted that zoning and permitting "is impacting (developers') ability to convert current office spaces into other uses."

43% **The percentage of offices that offer both "effective spaces and great workplace experiences**," according to the 2023 Gensler Global Workplace Survey of 14,000 office workers in nine countries. The survey also found that a third of offices fail to meet either benchmark.

$800 Billion **The predicted loss in the value of office properties by 2030 in major global cities**, according to a study published in July by the McKinsey Global Institute. The report, "Empty Spaces and Hybrid Places," notes that "workers were going to the office just 3.5 days per week, on average, some 30% below prepandemic norms." McKinsey's researchers expect that to be a long-lasting trend, and they urge cities to build more mixed-use neighborhoods, which "have suffered less during the pandemic than have office-dense neighborhoods. That resilience gives investors, developers and cities still more reason to engage in placemaking."

65% **The percentage of companies mandating in-office work at least part-time**, according to a survey of 207 corporate real estate executives conducted by CBRE in May. That's more than double the percentage that required in-office attendance in 2022. Additionally, 53% expect their office space to shrink in the next three years. Preferences for office amenities include access to public transportation, car parking and onsite cafés. Interestingly, the survey found that finance and professional-services firms were pushing harder for office attendance than tech companies.

2040 **The year that the office market will rebound to pre-pandemic values**, according to a forecast from Capital Economics that was published in June. "Values are expected to plunge 35% from the peak by the end of 2025 and take an additional 15 years or more to recover as hybrid and remote work reshape real estate," Bloomberg wrote about the report.

INDUSTRIAL

4.5% **The national industrial vacancy rate as of June 2023,** according to research from Commercial Edge. That's a 20-basis-point increase from the previous month. "New construction has been at all-time highs since the pandemic, and properties delivering while demand has normalized led to a slight increase in vacancy rates across the country," according to a related Commercial Edge blog post published in July. "However, industrial vacancy rates are still tight by historical standards." The national average for in-place industrial rents was $7.33 per square foot in June, up 7.4% from the same time in 2022. ■

KSS
ARCHITECTS
WWW.KSSARCHITECTS.COM

Construction Cost Challenges Shift from Materials to Labor

A limited supply of experienced workers pushes wages higher.

By Ken Simonson, AGC

Developers who have watched consumer-level inflation decline might assume the same holds for construction costs, especially given the steep retreat from record-high steel and lumber prices. But materials costs are only part of the pricing equation.

Direct labor costs and subcontractors' prices are still rising at elevated rates. Moreover, those costs account for a higher percentage of total inputs for renovation and remodeling projects than for new construction.

Overall materials costs have tumbled as rapidly — or more so — than they rose. The most comprehensive measure of these costs is the producer price index (PPI) for inputs to new nonresidential construction, which the Bureau of Labor Statistics (BLS) posts around the middle of each month. This index is a weighted average of the cost of all materials and selected services, such as trucking and design services, used in nonresidential construction.

Immediately following Russia's invasion of Ukraine in late February 2022, prices shot up for petroleum products, steel and numerous other inputs. These increases came on top of pandemic-driven shortages and price hikes for many other commodities.

In March 2022, the construction-inputs PPI had its largest one-month jump ever, 3.9%, resulting in a near-record year-over-year increase of 23.1%. Yet, by June of 2023, the index was 3.8% lower than in June 2022.

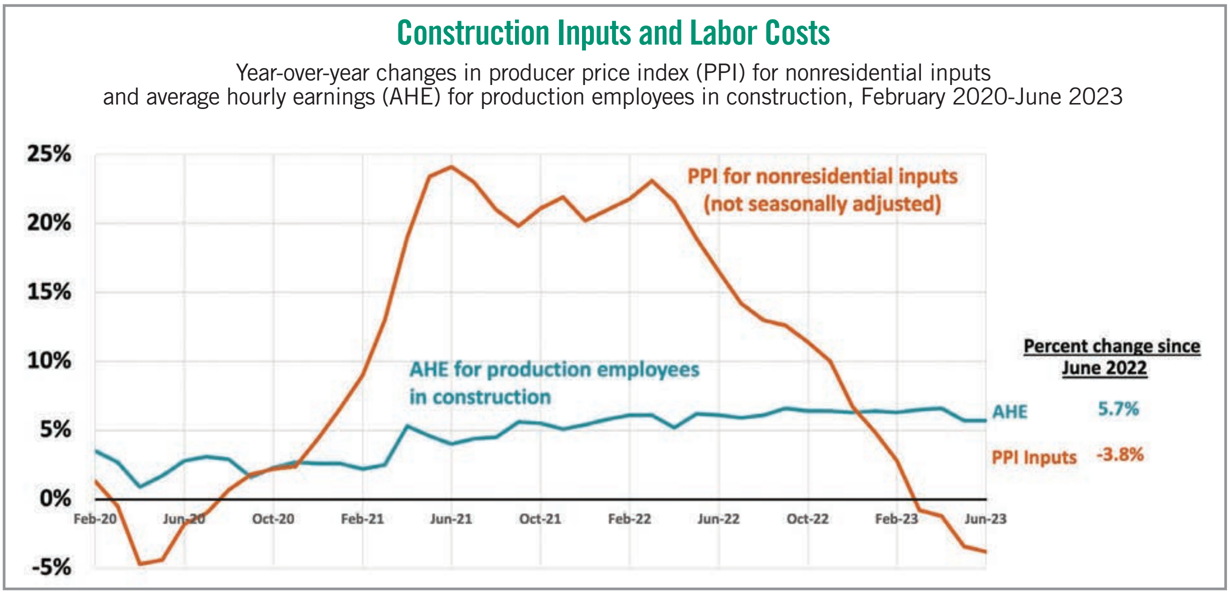
Most subcontractors' pricing has not followed the downward path of materials prices. BLS posts PPIs for four types of subcontractors. From June 2022 to June 2023, the PPI for roofing contractors soared 17.2%; for plumbing contractors, 9.5%; and

Direct labor costs and subcontractors' prices are still rising at elevated rates. Moreover, those costs account for a higher percentage of total inputs for renovation and remodeling projects than for new construction.

for electrical contractors, 9.0%. Only concrete contractors posted mild year-over-year price increases: 2.8%.

While supply chains improved and demand slowed for many materials, the same was not true for construction labor. BLS reports each month on average hourly earnings for production

continued on page 10



Source: Bureau of Labor Statistics, PPI, www.bls.gov/ppi; Current Employment Statistics, AHE, www.bls.gov/ces/ *Associated General Contractors of America*

Rockefeller Group Logistics Park
Bay Shore, NY (Long Island)

Extraordinary Properties

Rockefeller Group is dedicated to excellence in the built environment.

Over the past five years, our development team and capital partners have completed more than 10 million square feet of industrial and logistics property throughout the country with more than 11 million square feet planned or under construction.

Visit **rockefellergroup.com** to view our development pipeline.

ROCKEFELLER GROUP

INDUSTRIAL | OFFICE | RESIDENTIAL | MIXED-USE

© 2023 Rockefeller Group International, Inc.

By the Numbers

Although wage growth in the broader economy may be subsiding, this appears unlikely to occur anytime soon in construction, as the industry is still experiencing very tight labor supply.

continued from page 8

and nonsupervisory employees. Such workers in construction include most craft workers as well as office workers.

For the overall private sector, the year-over-year change in average hourly earnings peaked at 7.0% in March 2022. By June of 2023, wage growth had cooled to 4.7%. But wage growth in construction slowed only fractionally, from 6.1% in March 2022 to 5.7% in June 2023.

Further acceleration of labor costs appears to lie ahead, especially for projects executed with union labor. The Construction Labor Research Council reported in July that local construction union settlements in the first half of 2023 included first-year increases for pay and benefits that averaged 4.4%, up from 3.9% in 2022 and 2.8% in 2020. The council expects the average to rise to 4.7% by 2025.

Although wage growth in the broader economy may be subsiding, this appears unlikely to occur anytime soon in construction, as the industry is still experiencing very tight labor supply. The 396,000 job openings in construction at the end of May was the second-highest May total in the 23-year history of the BLS Job Openings and Labor Turnover Survey.

Finding experienced workers to fill those positions will be difficult. BLS reported that the unemployment rate among jobseekers with construction experience in June was only 3.6%, the lowest June rate since that series began in 2000.

Finding experienced workers to fill those positions will be difficult. BLS reported that the unemployment rate among jobseekers with construction experience in June was only 3.6%, the lowest June rate since that series began in 2000. With such a limited supply of experienced workers to fill a near-record number of openings, it is probable that construction firms will have to raise pay even more.

In short, developers and owners of commercial real estate, especially properties undergoing labor-intensive remodeling or repurposing, should not expect their costs to level off, even if other measures of inflation or wage growth do. For projects with union labor, new contracts will mean even higher labor costs than under contracts signed three or four years ago. ■

Ken Simonson is the chief economist with the Associated General Contractors of America. He can be reached at ken.simonson@agc.org.

BRIDGE

74 MILLION+ SF WORLDWIDE

SEATTLE | CHICAGO | NEW JERSEY | NEW YORK

SAN FRANCISCO | LOS ANGELES | MIAMI | LONDON

Bridge is a vertically integrated real estate operating company and investment manager. Our highly experienced team develops and acquires state-of-the-art, institutional-quality industrial buildings in supply-constrained core markets.

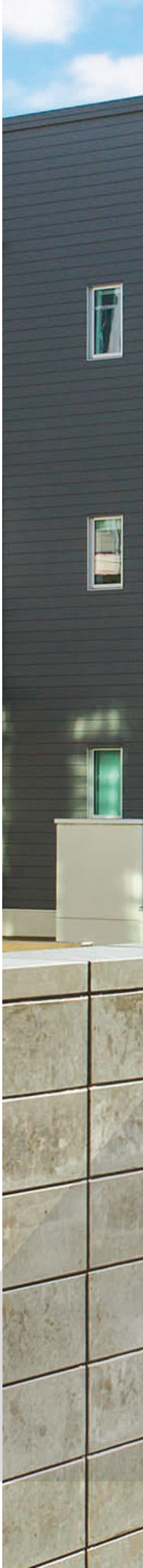
2023 • Developer of the Year, NAIOP SoCal
2022, 2021, 2020, 2019, 2018, 2017 • Industrial Spec Development of the Year, NAIOP Chicago
2022 • Industrial Project of the Year, NAIOP SoCal
2021, 2019, 2018, 2016 • Developer of the Year, NAIOP South Florida
2021, 2019, 2015 • Developer of the Year, NAIOP Chicago
2020, 2018 • Deal of the Year, NAIOP New Jersey
2017 • Project of the Year, NAIOP South Florida
2015, 2014 • Industrial Redevelopment of the Year, NAIOP Chicago

www.bridgeindustrial.com

NEW NAME, SAME MISSION.

For 40 years, USAA Real Estate has acted as a trusted steward of our investors' capital. For the last 10, our seamless partnership with Square Mile Capital has further diversified our investment strategies across the risk spectrum.

Now, we're moving forward as one.



AFFINIUS® CAPITAL

affiniuscapital.com

Revitalization and Revenue: Office Conversions as a Way to Rebuild Cities

It's not a panacea, but reuse can inject life into business districts.

By Hilary Hamburg, Venable LLP

The post-pandemic media landscape is full of headlines about the changing office market and the effects of remote work on the economy. This is happening as urban areas across the nation face an affordable-housing crisis. Office-to-residential conversions are a frequently discussed solution to the problem.

Converting offices to residential uses is not a new concept. According to a 2020 study by RentCafe, nearly 2,000 buildings have been transformed into apartments throughout the U.S. during the past 70 years — and 800 in the past decade alone. While there are obstacles to office-to-residential conversions, analyzing pre- and post-pandemic projects can identify paths for future conversions.

Kip Dawkins Photography

The recent office-to-residential conversion of Park + Ford in Alexandria, Virginia, featured in the Spring 2022 issue of Development, involved careful negotiations with existing tenants.

Benefits of Conversions

The Real Estate Board of New York estimates that approximately 20 million square feet of New York City office space could be transformed into 14,000 apartments under current regulations. Additionally, a study commissioned by New York City Mayor **Eric Adams** determined that 136 million square feet of office space could be converted if regulations were lifted that limit office conversions to buildings constructed after the 1960s. Similar surpluses exist in Dallas, San Francisco, Philadelphia and Chicago, as well as Washington, D.C., and nearby communities in Northern Virginia. Meanwhile, 49% of Americans say that affordable housing is a major issue in their communities, according to an October 2021 survey by the Pew Research Center.

Office-to-residential conversions also provide an opportunity to transform largely vacant buildings in central business districts into active, 24/7 communities while providing tax revenues to local municipalities. When offices are fully occupied, the employees support local retailers, including restaurants, gyms and dry cleaners. Without office workers, transit-rich central business districts can become downtrodden, with a proliferation of abandoned storefronts and empty buildings.

Lastly, as billions of dollars in loans come due, office-to-residential conversions provide a potential revenue stream for buildings that no longer attract tenants. The Mortgage Bankers Association estimates that $92 billion in office loans will mature in 2023, and another $58 billion in 2024. If a loan modification allows for a mostly empty office to be retrofitted to residential use, both the bank and owner could benefit.

Key Considerations

Office-to-residential conversions typically fall under state and local regulations, including zoning, building codes and fire codes. Before beginning, developers must assess legal and practical considerations.

Light, air and code-mandated egress. Traditional urban office buildings have large, open floorplates and perimeter windows. This creates an obstacle for residential design, as most urban areas — including New York City — have legal requirements for sufficient light and air in occupied space. Additionally, under New York State's Multiple Dwelling Law (MDL), a bedroom must

Converting offices to residential uses is not a new concept. According to a 2020 study by RentCafe, nearly 2,000 buildings have been transformed into apartments throughout the U.S. during the past 70 years — and 800 in the past decade alone.

have an operable window to allow for escape in the event of a fire or other emergency. This creates an obstacle for office-to-residential conversions because it requires either substantial structural renovations to create an inner courtyard through the building floorplate, or the creation of open-unit layouts in a loft configuration.

Some developers have solved this issue by focusing on converting older office buildings with smaller floorplates and operable windows. For example, Macklowe Properties, the developer of the recently converted 1 Wall Street in Manhattan, created 566 condominiums ranging from studios to four-bedroom units by constructing bedrooms and great rooms along the building's perimeter and placing hallways and bathrooms in interior areas.

Alternatively, developers can create large, loft-style apartments that have home offices or mezzanines within the unit instead of legal bedrooms. This is a popular conversion design in older offices with taller floor-to-ceiling heights.

To simplify the conversion process, municipalities should consider amending existing laws related to light and air. New York's current MDL was enacted in the early 1900s, when tenements were unregulated,

New & Noteworthy

3.4 million sq. ft.

Stream Realty Partners is building **20 East**, a 3.4 million-square-foot **industrial park** in **Mesquite, Texas**. It will be built in two phases. The first phase will include 1.8 million square feet across three buildings, with the second phase adding three buildings totaling 1.6 million square feet. All buildings at 20 East will feature secure storage, parking and build-to-suit spaces. The business park is close to multiple interstate highways. 20 East is part of Mesquite's Trinity Pointe master-planned business corridor.

1.74 million sq. ft.

Nick Ulivieri Photography

Riverside Investment & Development, Convexity Properties and **Clark Construction** recently completed **320 South Canal**, a 51-story **office tower** in **Chicago**. The building is equipped with advanced air monitoring and filtration systems, touchless technology and outdoor spaces to enhance tenant well-being. It has earned LEED Gold, WELL Platinum and WiredScore Platinum certifications. The site also features The Green at 320, a large public park providing outdoor activities and retail space.

1.7 million sq. ft.

Hillwood is developing two new Class A **speculative industrial buildings** within the 27,000-acre AllianceTexas development in **North Texas**. **Alliance Westport 25** and **Alliance Center North 4** will total nearly 1.7 million square feet. The buildings feature direct access to key transportation logistics infrastructure, onsite parking and clear heights of 40 feet. Westport 25 offers proximity to the BNSF Intermodal Facility, while North 4 provides access to employee amenities and transportation services.

and disease ran rampant due to poor ventilation and air circulation. With modern-day advances in HVAC and artificial lighting, jurisdictions could consider building-code updates that allow for living and sleeping spaces that don't have traditional sources of light and air.

Creating livable communities through zoning regulations. In suburban areas and smaller cities, antiquated zoning regulations allow for sprawling office complexes with copious surface parking while excluding residential and related retail uses. Municipalities and developers alike need to consider if the surrounding area will be attractive to residents. Are there grocery stores, transit routes, restaurants, parks and other amenities that residents would want?

Municipalities should conduct proactive, comprehensive rezonings of underutilized spaces or those with "zombie" buildings. For example, several years ago, Harrison, New York, about 22 miles north of Manhattan, rezoned a vacant office complex built in the 1970s. Then, in 2017, Toll Brothers demolished the two office buildings to create a 421-unit luxury multifamily project. To allow the project to go forward, Harrison added a zoning amendment to permit residential conversions along the Interstate 287 corridor. As part of this rezoning, Harrison allowed for a mix of retail uses nearby. The Toll Brothers development is now adjacent to a Lifetime Fitness complex and a Wegmans grocery store, creating a desirable residential community with amenities to serve the residential population.

Municipalities should review when tax incentives for large corporations are expiring and consider whether areas should be proactively rezoned to address a change in local needs.

If local zoning allows for conversion, or if discretionary approval is feasible, owners should consider if a building's legal framework allows for conversion. For example, if the building is a commercial condominium, can a unit owner unilaterally convert the space, or must all the other unit owners vote on it? Are there use restrictions within the condominium declaration? How will a conversion affect common elements? Conversion will probably require amendments to the condominium documents.

Additionally, owners must consider if the building can be vacated in a cost-effective manner. How much space is currently leased and what are the renewal rights of existing tenants, or the rights of the landlord to move the existing tenants within the building?

The recent Park + Ford office-to-residential conversion in Alexandria, Virginia, featured in Development's Spring 2022 issue, shows how to successfully navigate this challenge. The project features two 14-story buildings. One was mostly occupied by a single tenant. The other was occupied by 22 tenants. According to the article, the developer, Lowe, negotiated a lease extension to keep that solo tenant in one building until its space was ready at another location. Later, Lowe negotiated lease terminations with the remaining 22 tenants.

"Coupled with cash flow from the tenants in the second building, Lowe had reliable income during the predevelopment period, along with certainty that it would have one vacant building and time to work with tenants in the second tower," according to the article.

According to Joseph Gyorko, director of the Zell/Lurie Real Estate Center at the University of Pennsylvania's Wharton School of Business, it can cost $200 to $300 per square foot to retrofit an office building into residential use. Without municipal funding, most office-to-residential conversions become luxury or market-rate housing.

Funding the Conversion

When it comes to creating affordable housing from office conversions, cost is often a major obstacle. According to **Joseph Gyorko**, director of the Zell/Lurie Real Estate Center at the University of Pennsylvania's Wharton School of Business, it can cost $200 to $300 per square foot to retrofit an office building into residential use. Without municipal funding, most office-to-residential conversions become luxury or market-rate housing. California is attempting to tackle this problem with a municipal grant program. More than 50 developers have sought funding for $105 million in grants to convert offices to a combination of affordable and market-rate housing.

While there is no one-size-fits-all solution for office-to-residential conversions, options do exist. Developers and municipalities can look at how past projects can dictate successful future policies. ■

Hilary Hamburg, Esq,. is a real estate and land-use lawyer and counsel with Venable LLP in New York.

New & Noteworthy

1.7 million sq. ft.

CRG has broken ground on **The Cubes at Gilboa**, a 1.1-million-square-foot **warehouse facility** in **Douglas, Massachusetts**. Scheduled for completion in fall 2023, the $100 million project is expected to create 450 permanent jobs. Located near transport routes, the facility will address the high demand for modern distribution space in the Boston area. The Cubes at Gilboa features 40-foot clear heights, 171 dock doors and ample parking.

430,000 sq. ft.

Bromley Companies and **Highwoods Properties** are developing **Midtown East**, an 18-story, 430,000-square-foot **office building** within the 23-acre **Midtown Tampa** project. Expected to be finished by 2025, the project will feature sustainability measures, smart energy management and adaptability for various work formats. Midtown East, designed by Rule Joy Trammell + Rubio, is set to offer a modern workplace experience and will be the tallest building in Tampa's Westshore district.

292,448 sq. ft.

Kraus-Anderson has completed a $66 million **high-rise apartment tower**, **Moment**, which features 222 units, smart home technology, various amenities and energy offset by a solar garden. Located in downtown **Minneapolis**, the 292,448-square-foot project was developed by **Sherman Associates** and designed by **ESG Architecture & Design**. The 10-story building also houses nearly 15,000 square feet of commercial space.

Facility Managers Must Prepare for an All-Electric Future

Before that, many commercial buildings could benefit from hybrid electrification.

By Andrew Lehrer, PE, LEED AP, Stantec Consulting Services, Inc.

Each year, the push toward decarbonization and away from fossil fuel use in commercial real estate grows stronger. One of the biggest challenges for building owners is figuring out what to do with existing gas-fired heating systems, especially in colder climates.

Changing these systems to all-electric can be particularly difficult. For example, there are limits to on-site electrical capacity, and heat-pump systems struggle to achieve the elevated hot water temperatures required for boilers to operate efficiently. Although the technology is improving, heat pumps are not a drop-in replacement for natural gas systems.

How Do Heat Pumps Work?

Heat pumps work by transferring heat from one place to another. They are highly efficient, providing up to four times the energy output relative to the amount of energy used to run them. The International Energy Agency (IEA) predicts that heat pumps will be "the central technology in the global transition to secure and sustainable heating," and by 2050, heat pumps are expected to provide 55% of all indoor heating.

Heat pumps work by transferring heat from one place to another. They are highly efficient, providing up to four times the energy output relative to the amount of energy used to run them.

Heat pumps could provide 55% of all indoor heating by 2050, according to data from the International Energy Agency.

There are several types of heat pumps. Air-to-water heat pumps, which take heat from the outside air and transfer it to water in a heating system, are often used in retrofit projects. However, their efficiency decreases as the exterior air temperatures drop. When outside air temperatures fall below freezing, the heat they supply often cannot meet the design criteria of existing systems and isn't much more efficient than standard electric-powered heaters. The result is much higher operating costs compared to gas-fired systems.

Ground-source or geothermal heat pumps use naturally occurring heat deep in the ground, which is more constant and predictable than air temperatures. That can provide more consistent and efficient performance. However, even with generous incentive programs, the cost of building geothermal heat pumps makes them impractical for many projects.

The 'Bridge Solution'

The challenges around heat pump conversions could make 100% electrification impossible for many projects in the near term.

There is another option, however.

Hybrid electrification, which converts a portion of an existing gas-fired heating system to heat pumps, can go a long way toward reducing carbon emissions. This "bridge solution" lets heat pumps run for most operating hours while gas-fired heating operates during peak heating periods. It can balance capital expenditures and operating expenses while providing flexibility for the future.

For example, in cold climates like New York and Chicago, below-freezing temperatures represent fewer than

Adding envelope upgrades that reduce energy consumption alongside heat pump retrofits can further offset the initial capital impact of this strategy.

25% of the roughly 6,000 yearly heating hours experienced by commercial properties. Furthermore, these chilly readings often occur overnight, when buildings such as offices typically aren't occupied.

This approach also allows for phased implementation, making it more affordable. An incremental shift toward electrification can help achieve climate goals, but it requires a deep understanding of a hybrid plant's configuration and operation.

Envelope Upgrades Boost Savings

Adding envelope upgrades that reduce energy consumption alongside heat pump retrofits can further offset the initial capital impact of this strategy. For example, a current project that Stantec Consulting Services, Inc., is working on in New York includes augmenting a building's existing single-pane glazing with a double-pane insulating glass unit, along with retrofitting the existing heating/cooling plant with geothermal heat pumps. The glazing upgrade significantly reduced the amount of heat lost through the windows, which led to a 25% reduction in the peak heating plant load.

Due to space limitations, geothermal will only replace half of the existing heating and cooling system. However, with the improved envelope performance, this new system should offset

New & Noteworthy

282,500 sq. ft.

Ware Malcomb recently completed the **Breakthru Beverage Group**'s new 282,500-square-foot **distribution facility** in **Middletown, Delaware**. It consolidates existing operations for the distributor of wine, spirits and beer. Notable features include a grand lobby, comprehensive office space, and a collaborative Alchemy Room equipped for events and tastings. The facility has 36-foot clear heights with expanded loading areas and a sizable cold room for beverage storage.

160,000 sq. ft.

A former "dead mall" in **Logansport, Indiana**, is being repurposed into a **retail and housing hub** called **The Junction at Logansport**. Plans call for nearly 160,000 square feet of retail space. In addition to the retail component, the developer, **Park Development**, has plans to build a single-family market-rate housing project less than a mile from The Junction. Dubbed Lexington Village, the neighborhood will include 52 homes ranging in size from 900 to 3,000 square feet.

113,000 sq. ft.

Lowe has completed a nine-story **creative office building** at 2130 Violet Street in **Los Angeles**' Arts District. Designed by Ware Malcomb, the 113,000 square foot building includes office space, retail areas, four levels of parking, outdoor terraces and a rooftop deck/lounge. Inspired by the district's industrial heritage, the building's design features open floorplates, high ceilings, energy-efficient systems, and steel and glass retail fronts.

more than 85% of the heating operating hours, despite being sized at only 50% of previous peak load. Traditionally an expensive endeavor, the glazing upgrade and geothermal system will target up to a 40% federal investment tax credit under the Inflation Reduction Act of 2022, as well as additional incentives through a local utility. (See related story, page 58.)

Do the Homework

While decarbonizing a site is critical to competing in a dynamic marketplace, it's crucial to understand the costs, incentives and logistics before beginning. The goal is to displace fossil fuel heat while also avoiding the use of standard electric heat, which is far less efficient than heat pumps and will significantly increase operating costs compared to competing properties.

Although 100% electrification should be the goal, it is not always feasible. In such cases, facility owners and operators should consider strategically deploying bridge solutions to prevent assets from becoming stranded while realizing significant operational carbon reductions, increasing value and marketability, and setting up these spaces for long-term viability. ■

Andrew Lehrer, PE, LEED AP, is practice leader for high-performance buildings at Stantec Consulting Services, Inc., a global engineering firm.

Due to space limitations, geothermal will only replace half of the existing heating and cooling system. However, with the improved envelope performance, this new system should offset more than 85% of the heating operating hours, despite being sized at only 50% of previous peak load.

Proposed SEC Regulations

Proposed changes to Securities and Exchange Commission (SEC) climate-related reporting requirements for large publicly traded companies could become an important consideration. In April 2022, the SEC proposed rules to enhance and standardize climate-related disclosures for investors. These regulations would require public companies to disclose their climate-related risks and impacts, including their greenhouse gas emissions, adaptation to climate change, and transition to a low-carbon economy. The comment period for the proposed rules closed on June 17, 2022. Implementation is expected to begin in 2024.

The SEC's proposed rules are intended to address the growing investor demand for information about climate-related risks. They would provide investors with a better understanding of the climate-related risks associated with the companies they invest in and ensure that markets are pricing these risks appropriately. ■

Six Strategies to Help Retailers in the Site-Selection Process

First-hand observations and in-depth market knowledge can make a difference.

By Andy Misiaveg, TSCG

Retail real estate is emerging from a period of unprecedented change. Fueled by the pandemic and rapid technological advances, it's a landscape full of new priorities, altered perceptions and fresh concepts.

The trends coming out of the pandemic have drawn shoppers back into stores, highlighting their desire to be among people and get a tactile sense of the in-store shopping experience. This includes new markets that have opened amid population growth, as well as the rise of different store formats influenced by the customers' shopping habits and time allocation in a given area.

However, these innovations have created a disconnect between brands and their stakeholders, including consumers and landlords. How can retail site-selection professionals reassess and reconnect with their brand while getting a genuine sense of the landscape? Here are six strategies to consider.

Strategy No. 1: Visit Existing and Potential Sites

Over the past few years, real estate professionals have become accustomed to doing business remotely. Zoom calls, virtual tours and conference calls replaced many face-to-face meetings. However, nothing can take the place of in-person visits to existing retail locations and new potential sites. These reinforce an understanding of how a brand interplays within a

New & Noteworthy

47,809 sq. ft.

Dedeaux Properties recently completed a 47,809-square-foot high-throughput **distribution center** in the Inland Empire submarket of **Bloomington, California**. Located only one mile from Interstate 10, the Class A project includes 26-foot minimum warehouse clearance, 85 dock-high doors, 226 trailer parking stalls, 44 auto parking spots, an ESFR sprinkler system and a two-story, 5,698-square-foot office area.

20,000 sq. ft.

Nadel Architecture recently completed **The Gallery Sportsman's Club & Range**, a high-tech **shooting range, gear shop, coffee bar, restaurant and lounge** in **Lakewood, Colorado**. The 20,000-square-foot facility serves as Denver's first experiential shooting range and utilizes the latest advancements in range technology. The space provides visitors with 15 shooting lanes, a virtual shooting range, a full-service lounge featuring a full bar and kitchen, a walk-up coffee bar, and more than 3,000 square feet of retail.

15,000 sq. ft.

The recently completed **Jubilee Park Community Clinic** in **Southeast Dallas**, a project developed by **KDC** in partnership with **Jubilee Park & Community Center, Parkland Health** and **Jewish Family Service of Greater Dallas**, is a 15,000-square-foot **health care facility** that is expected to serve 3,500 patients in its first year, doubling to 7,000 patients in subsequent years. It offers primary medical and dental care, mental health services, and nutrition and fitness programs. ■

Do you have a new and noteworthy project in the planning, design or construction stage that you'd like to share with fellow real estate professionals? Send a brief description and high-resolution rendering to developmentmagazine@naiop.org.

market and a trade area, as well as the dynamics that surround each location.

In addition, in-person visits offer valuable context and perspective for the site-selection process from an experiential and tactical perspective. This can further enhance and strengthen a brand's connection to its customers. In-person visits answer questions such as who is shopping at successful and less successful stores? What do those consumers have in common? Is the customer profile the same as three years ago? How do customers access the site/store and/or the development where it's located?

Strategy No. 2: Engage with Regular Customers

The sheer volume of information now available — credit card data, traditional demographic research, cellphone data, traffic patterns and more — can build many forecasting and traffic models. However, that is just the beginning. It is critical to talk face-to-face with actual customers and learn as much as possible about them, because their words can reveal what data cannot. When engaging with shoppers, consider asking:

Where does a regular customer want to experience the brand? While many retailers want their next store at a sleek new high-end mixed-use center, that may not be what the typical customer wants. They may prefer to get in and out quickly and aren't really interested in the fancy fountains and pretty landscaping that retailers pay a rent premium to be near.

Choosing the right site for a retail property involves extensive legwork along with analyzing a lot of data.

How does a customer want to experience the retail offering today? While it may make sense to think everyone is looking for convenience, some customers prefer a more in-depth, drawn-out in-store experience. Maybe they want a larger, more curated experience, and they are willing to pay more for that. For example, in an urban central business district, a customer might prefer a smaller, more efficiently sized store format that allows them to shop quickly and move on with their day. Conversely, a shopper accustomed to a larger regional retail area might prefer a bigger store, where they can spend more time browsing and learning about new products. Some stores are even doing ghost kitchens, digital only or pick-up-only store locations to service customer demand and to shift their labor to other stores where it might be needed more.

How does a customer perceive the brand? With so many new concepts being launched, understanding how customers perceive the brand in each market is essential. While customer demographics may be similar, how they view a brand may be different depending on the market.

> **The trends coming out of the pandemic have drawn shoppers back into stores, highlighting their desire to be among people and get a tactile sense of the in-store shopping experience. This includes new markets that have opened with population growth, as well as the rise of different store formats influenced by the customers' shopping habits and time allocation in a given area.**

Strategy No. 3: Consider the Point of View

It's natural to have opinions on a location and to consider a brand's retail experience from a personal viewpoint, but that perspective can be skewed by individual experiences, demographics, perceptions and context, which may not align with the brand or its customers. For example, a specific location might seem inconvenient or uncomfortable to one person, but another one may find it matches the experience they are seeking.

When entering a new market, shopping center or trade area, it's crucial to consider the perspectives of other stakeholders. For instance, a retailer might prefer a sleek new open-air shopping center, but the landlord might want a more high-end concept, better financial credit, a different merchandise mix or an edgier concept. With limited availability in today's marketplace and less new retail construction coming online, there's a lot of competition for space, and landlords usually have multiple options to fill it.

Other stakeholder perspectives for a brand to consider include neighboring tenants and businesses, residents, community organizations and local officials.

Strategy No. 4: Educate the Market

A retailer's tenant rep broker is the brand's face in the marketplace. They should be knocking on doors, actively building trust with landlords and brokers, and sharing the brand story through high-quality marketing materials and one-on-one conversations. This familiarizes relevant stakeholders with the brand, creates excitement around the concept, opens doors to new sites and opportunities, and expedites the process when a desirable site is found.

Data can be an important tool in this process. For example, it can showcase how much traffic a tenant generates, their annual sales volume or the demographics of their customer base.

Sharing success stories from other locations can highlight how the development, landlord and other tenants will benefit. For example, if a retailer wants to be in a Whole Foods-anchored center, draw parallels between the current site and their other sites at similar centers across the country. This can build instant credibility, especially when entering a new market.

If there is no relevant support story, create brand correlations to stand out as a competitive contender. If there aren't any natural correlations, accept that a particular space might not be the right fit for the brand and instead focus on finding a more suitable location.

Strategy No. 5: Know the Competitors

In site selection, retailers must consider not only who they are competing against for customers, but also who they are competing against for a site. What other operators in the market are looking for a site with similar specifications? How do the landlord and neighboring tenants, businesses and even residents perceive the brand compared to potential competitors? Is the brand and merchandise considered more appealing and valuable than what competitors offer? Having this information on hand during negotiations can provide a significant advantage.

A retailer's tenant rep broker is the brand's face in the marketplace. They should be knocking on doors, actively building trust with landlords and brokers, and sharing the brand story through high-quality marketing materials and one-on-one conversations.

Strategy No. 6: Be Flexible and Nimble

Despite media reports about an overall slowdown in commercial real estate, retail is thriving, and available space is scarce. (The national retail vacancy rate in the second quarter of 2023 was just 5.4%, according to research from Cushman & Wakefield — the ninth straight quarter of positive net absorption.)

This disconnect between retail tenants and the reality of the market can cost retailers the best available space. At any point, a retailer may be competing against a dozen other brands for a particular space. Flexibility is essential.

This is particularly true for sites in the 2,000- to 6,000-square-foot range, due to the number of tenants in that space category. That's why the first five steps listed above are fundamental to even being in the running. The best impression must be made before others arrive at the starting line.

Then, once a site is found that meets most of the criteria, it's vital to move quickly. This can alleviate many of the landlord's remaining concerns while strengthening credibility.

Finally, as the site-selection process moves along, a motto to keep in mind is, "Don't let perfect be the enemy of good." While everyone wants the perfect site, it's important to consider whether it is good enough for the brand to achieve the required returns on investment and if the story of the location strengthens or weakens the brand in the long run. ■

Andy Misiaveg is a partner in TSCG's Charlotte office.

The Benefits of Insulated Metal Panels for Cold Storage Facilities

These versatile products have become the industry standard for refrigerated warehouses.

By Karim Muri, Kingspan

Fueled by big increases in e-commerce grocery orders, cold storage demand is surging across the U.S. Insulated metal panels are crucial to the construction of these facilities.

The need for cold storage is on the rise. According to Precedence Research, the U.S. cold storage market size reached $33.46 billion in 2022 and it could reach $74.12 billion by 2032, a compound annual growth rate of 8.28%. CBRE estimates that demand for cold storage space will continue to outpace supply over the next three to five years.

Additionally, CBRE data revealed that there were 3.3 million square feet of speculative cold storage development underway in the U.S. in the second quarter of 2022, up from only 300,000 square feet in 2019. Increasing demand for fresh and frozen foods and a rise in online grocery shopping are two factors driving this strong growth. Aging inventory is another factor. According to research from Newmark, the average cold storage facility in top U.S. markets is 37 years old. The inefficient refrigeration systems in these older warehouses cost more to operate and raise the risk of product spoilage.

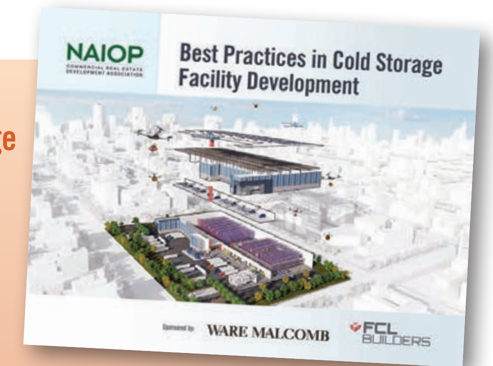
More architects and designers are specifying insulated metal panels (IMPs) for the walls of these facilities. With their high thermal performance, energy efficiency, sustainability, ease of installation and durability, IMPs are now the building-envelope solution of choice for cold storage construction.

The Basics of IMPs

Prior to IMPs, the industry used many materials, including horsehair, foam glass dipped in hot tar, wood construction and cork. Later, there were hybrid foam glass panels that were produced with a thin aluminum face on both sides. The industry then went to a beadboard EPS (expanded polystyrene) panel with redwood splines to bridge the joint before going to XPS (extruded

IMPs can reduce a cold storage facility's overall environmental impact in other ways. For example, they typically have a 30- to 40-year lifespan and the steel in the panels is often made with up to 89% recycled content sourced from electric arc furnace mills, which also greatly reduces the embodied carbon required to produce the panels.

NAIOP E-Book: 'Best Practices in Cold Storage Facility Development'



Cold storage development is not for the faint of heart — it is complex, expensive and requires high-level expertise. This niche property type has gotten more attention due to the increasing demand for temperature-sensitive goods including online grocery orders, meal kits and pharmaceuticals. The growth in cold storage has become so great that speculative cold projects, unheard of several years ago, have become increasingly popular. To serve as an introductory guide to the topic, NAIOP released an e-book, "Best Practices in Cold Storage Facility Development."

Industry experts from Ware Malcomb, FCL Builders and Cold Summit Development offer their latest insights along with specific design and construction considerations for build-to-suit and speculative projects, including Ware Malcomb's new Cold Ready prototype. This 40-page e-book features over a dozen illustrations and covers topics such as predevelopment, site planning, building envelopes, insulated mental panel walls, roofs and racking.

To purchase a copy, visit www.naiop.org/coldstorage ■

polystyrene) panels with redwood support splines. Modern-day IMPs evolved from there, initially starting with PUR (polyurethane) cores, then evolving to PIR (polyisocyanurate) cores. Today, there are new foam insulation cores on the market with higher R-values to ensure high thermal efficiency.

IMPs consist of an insulated core made of high-density foam sandwiched between two pieces of metal siding. They typically serve as the exterior walls for newly built facilities, but they also can be attached to existing concrete walls for retrofit projects. Depending on the thickness of the foam used, IMPs have R-values that can range as high as 72 in cold storage applications. (R-value is a measure of thermal resistance. The higher the R-value, the greater the level of insulation.) Paired with high-performance coatings on the interior and exterior, an IMP acts as an all-in-one air, water, vapor and thermal barrier.

Those properties can help cold storage facilities reduce their huge energy needs. According to "Best Practices in Cold Storage Facility Development," published in 2021 by NAIOP, the typical refrigerated warehouse consumes 24.9 kilowatt-hours (kWh) of electricity per square foot each year. (Dry warehouses, on the other hand, use an average of 6.1 kWh of electricity per square foot each year.) IMPs reduce the amount of energy required for cooling by providing an airtight envelope that minimizes heat transfer between the interior and exterior. That energy efficiency translates to lower operating costs and reduced carbon emissions while maintaining a stable low-temperature environment that protects stored products.

IMPs can reduce a cold storage facility's overall environmental impact in other ways. For example, they typically have a 30- to 40-year lifespan and the steel in the panels is often made with up to 89% recycled content sourced from electric arc furnace mills, which also greatly reduces the embodied carbon required to produce the panels. The foam can be repurposed, both pre- and post-consumer. With a range of IMP brands available in North America, thoughtful selection of products can yield a lower embodied carbon footprint.

Rapid Construction

Another advantage of IMPs in cold storage facility construction is their ease of installation. These lightweight, modular panels require one installer rather than multiple trades installing multiple performance layers, which can lead to scheduling delays. IMPs

Another advantage of IMPs in cold storage facility construction is their ease of installation. These lightweight, modular panels require one installer rather than multiple trades installing multiple performance layers, which can lead to scheduling delays

also allow a new refrigerated warehouse to be quickly dried in. Fast-tracking construction like this means other trades can proceed with interior work sooner. The increased construction speed of these panels helps projects stay on track, resulting in reduced downtime. A study by construction and

continued on page 28


TIMELESS
RESULTS
GRUNLEY
COMMERCIAL | INSTITUTIONAL | GOVERNMENT BUILDERS

Cold storage IMPs are available in a range of profiles and surfaces, including smooth surfaces that can be finished with coatings approved for use by the U.S. Department of Agriculture.

continued from page 26

asset management consultancy Currie & Brown found that the installed costs of IMP wall systems can be 25% lower in the U.S. and 27% lower in Canada compared to precast insulated concrete walls or standard tilt-up concrete walls.

Cold storage IMPs are available in a range of profiles and surfaces including smooth surfaces that can be finished with coatings approved for use by the U.S. Department of Agriculture. These easy-to-clean panels can withstand the heavy sanitization used in many food-processing plants and other cold storage facilities. Their tight-fitting interlocking joints resist moisture and eliminate the risk of toxic mold or bacterial growth.

As demand for cold storage facilities continues to increase, the need for building envelope solutions like IMPs are critical to protecting product safety and quality, while shrinking the facility's carbon footprint, cutting energy usage and reducing maintenance costs. ■

Karim Muri is vice president, marketing services and strategy development at Kingspan Insulated Panels North America.

What Does EPA's Proposed PFAS Regulation Mean for Commercial Real Estate?

A new designation for certain chemicals regulated by the Superfund law could impact property transactions.

By Jeffrey D. Marshall, PE, and Michael J. Miller, CHMM

Environmental due diligence is typically required when buying, selling or refinancing commercial and industrial property. An important part of this process is a Phase I Environmental Site Assessment (ESA), which checks for the presence or absence of known environmental issues linked to the release of hazardous substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as the Superfund law. These ESAs also evaluate petroleum products that may have leaked into the environment.

When preparing an ESA report, environmental professionals use a set of regulations and industry standards. The most important are U.S. Environmental Protection Agency (EPA) regulation 40 CFR 312 – Innocent Landowners, Standards for Conducting All Appropriate Inquiries, and ASTM Standard E1527 – Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The most recent version of the ASTM standard is E1527-21, which went into effect on February 13. EPA has indicated that the prior version, E1527-13, will continue to be recognized through February 13, 2024.

Per- and polyfluoroalkyl substances (PFAS) are a large group of hazardous substances that have recently gained greater recognition due to their toxicity and widespread use in industrial and consumer products. On September 6, 2022, EPA proposed a rule designating two specific PFAS chemicals as CERCLA Hazardous Substances. Once this rule is finalized, which is expected sometime in 2023 or 2024, it will be mandatory for environmental professionals performing ESAs to consider them. Due to the extensive use of these so-called "forever chemicals," there is concern that PFAS-related issues will become very common.

An additional seven PFAS chemicals were identified on April 20, 2023, through an EPA Advanced Notice of Proposed Rule Making, indicating that

Per- and polyfluoroalkyl substances (PFAS) are a large group of hazardous substances that have recently gained greater recognition due to their toxicity and widespread use in industrial and consumer products. On September 6, 2022, EPA proposed a rule designating two specific PFAS chemicals as CERCLA Hazardous Substances.

Photo by Peter Downham, courtesy of Bridge Industrial

Environmental remediation efforts underway at a project in Belleville, New Jersey. The U.S. Environmental Protection Agency has proposed a rule designating two specific PFAS chemicals as hazardous substances under the Superfund law.

more PFAS will be identified and likely regulated in the future.

Scope of CERCLA Hazardous Substances Listing

While there are an estimated 10,000 PFAS substances, the proposed rule only includes two specific PFAS chemicals, perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). However, these two chemicals are among the most used because of their water- and oil-repelling properties. PFAS can be found in stain repellents for upholstery, carpeting, clothing and other products. They are also used in the manufacturing of non-stick cookware, in electric wire casing, pipe thread seal tape, surfactants and emulsifiers, vapor suppressants in metal plating operations, waterproof and breathable membranes, food wrappers and packaging, toilet paper and many more. Additionally, they can be found in firefighting foam used at airfields and in many industrial processes.

Determining whether PFOA and PFOS were used or released at a site is challenging because many records aren't specific to individual PFAS constituents.

Much of the literature regarding the use of PFAS in industrial processes and consumer products is not specific

Sites That May Contain PFAS

The September 6, 2022, Federal Register announcement of the proposed rule change regarding PFAS lists U.S. industrial facilities that may be affected by the new regulation. The following EPA list can serve as a guide to environmental professionals who may need to perform environmental site assessments at such facilities:

NAICS Code	Potentially Affected U.S. Industrial Facilities
488119	Aviation operations
314110	Carpet manufacturers
811192	Car washes
325	Chemical manufacturing
332813	Chrome electroplating, anodizing and etching services
325510	Coatings, paints, and varnish manufacturers
325998	Firefighting foam manufacturers
562212	Landfills
339112	Medical devices
922160	Municipal fire departments and firefighting training centers, including Federal agencies that use, trained with and tested firefighting foams
322121 & 322130	Paper mills
325320	Pesticides and insecticides
324	Petroleum and coal product manufacturing
324110 & 424710	Petroleum refineries and terminals
352992	Photographic film manufacturers
325612	Polish, wax and cleaning product manufacturers
325211	Polymer manufacturers
323111 & 325910	Printing facilities where inks are used in photolithography
313210, 313220, 313230, 313240, & 313320	Textile mills (textiles and upholstery)
562	Waste management and remediation services
221320	Wastewater treatment plants

to individual PFAS constituents. When performing ESAs, environmental professionals will face the challenge of evaluating whether the subject facility used or released PFOA and PFOS. Additionally, they must evaluate whether their use or release affected the subject property.

> **Much of the literature regarding the use of PFAS in industrial processes and consumer products is not specific to individual PFAS constituents. When performing ESAs, environmental professionals will face the challenge of evaluating whether the subject facility used or released PFOA and PFOS.**

Is the Presence of PFOA/PFOS a Recognized Environmental Condition?

In many cases, the presence of PFOA/PFOS in products does not pose a significant environmental risk. Like copper in electronics or phthalates in plastics, their presence is often considered a minor condition that isn't harmful to the environment.

An environmental issue arises when there is a significant release of a hazardous substance that results in its presence in soil, water or air. This must be more than just a minor or trivial release. Therefore, professionals need to understand the definitions of certain ESA terms provided in ASTM E1527-21.

3.2.73 *recognized environmental conditions,* n—(1) the presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to a *release* to the *environment*; (2) the likely presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* due to a *release* or likely *release* to the *environment*; or (3) the presence of *hazardous substances* or *petroleum products* in, on, or at the *subject property* under

continued on page 32

TRADEPOINT ATLANTIC

INDUSTRY IN MOTION

HARBORING GROWTH **UNLOCKING POTENTIAL**

TRADEPOINT ATLANTIC IS EMPOWERING BALTIMORE'S PORT WITH EXPANDED CONTAINER CAPACITY.
A 3,300 acre global logistics and maritime development, the largest and most strategically important multi-modal industrial tract on the eastern seaboard.

TRADEPOINTATLANTIC.COM

LEARN MORE

WILLIAM PELLINGTON
Executive Vice President
+1 410 244 3137
bill.pellington@cbre.com

JON CASELLA
Executive Vice President
+1 410 244 3127
jonathan.casella@cbre.com

THOMAS MINK
Executive Vice President
+1 410 244 3171
toby.mink@cbre.com

CBRE

PANATTONI®

INTERNATIONAL VISION. LOCAL FOCUS.

Founded In 1986, Panattoni Development Company, Inc. is one of the largest privately held development companies worldwide and is headquartered in Irvine, CA.

Since inception, Panattoni has developed more than 594 Million SF of industrial, office, and flex facilities space.

Connect with Panattoni
www.panattoni.com

On a related topic, when it comes to ESAs, the EPA has regulated the use of biosolids on land for decades. However, no databases or readily available records identify the sites that received biosolids or the amounts of biosolids applied. Therefore, when conducting an ESA, particularly at a current or former agricultural site, the environmental professional must consider the possibility that biosolids were previously used at the site, and they should examine any historical records that might be available.

continued from page 30

conditions that pose a *material threat* of a future release to the *environment*.

3.2.20-*de minimis condition*, n – a condition related to a release that generally does not present a threat to human health or the *environment* and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a *de minimis condition* is not a *recognized environmental condition* nor a *controlled recognized environmental condition.*

While PFOA/PFOS are in many products, it is possible that many uses will be considered de minimis and not harmful. For instance, leaching of trace amounts from outdoor furniture or fast-food wrappers is likely, but these are typically minor issues.

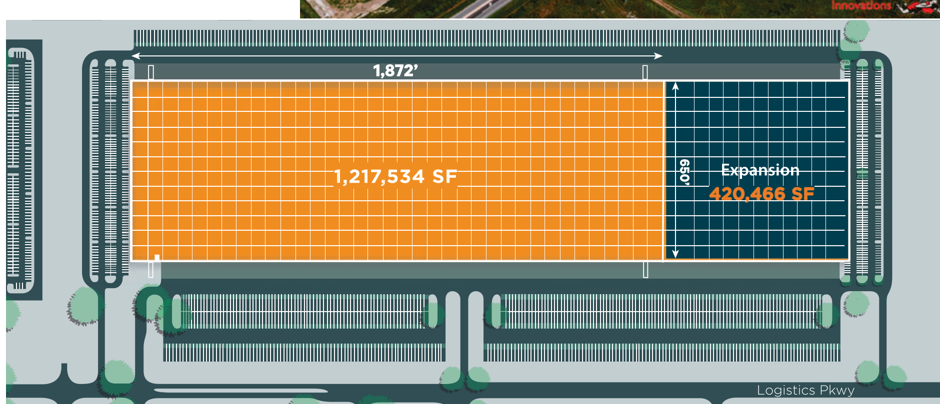
However, there are cases where contamination by PFOA and PFOS could lead to recognized environmental conditions. For example, they could be found in firefighting foam sites, certain industrial facilities and sites linked to PFAS waste.

CENTRAL FLORIDA
INTEGRATED LOGISTICS PARK
4161 Logistics Parkway
Winter Haven, FL 33884

BDLG 1 DELIVERING Q3 2023

1.2 MSF SPEC BUILDING | 420K SF EXPANSION OPTION | CLASS A | CROSS-DOCK | ESFR

BLDG # 1	UNDER CONSTRUCTION
Total SF	1,217,534 SF
Expansion	420,466 SF
Office	B-T-S
Clear Height	40'
Dimensions	1,872' x 650'
Column Spacing	52' x 53'
Speed Bay	60'
Dock Doors	193
Drive-In	4
Truck Court	135'
Trailer Parking	543
Auto Parking	376
Sprinklers	ESFR



TRATT PROPERTIES LLC
CBRE
www.trattprop.com
VISIT WEBSITE FOR MORE DETAILS!
www.integratedlogisticspark.com

Additionally, there are places where processed sewage sludge, also called biosolids, has been used, which may be of concern for environmental professionals conducting ESAs. Biosolids are commonly used as fertilizer on land in the U.S., such as agricultural fields, golf courses, home gardens, and other landscaped areas. The specific PFAS chemicals found in biosolids can vary, but PFOA and PFOS are common. The EPA is continuously working to assess PFAS, including PFOA and PFOS, in sewage and biosolids as part of its long-term efforts to address PFAS issues.

On a related topic, when it comes to ESAs, the EPA has regulated the use of biosolids on land for decades. However, no databases or readily available records identify the sites that received biosolids or the amounts applied. Therefore, when conducting an ESA, particularly at a current or former agricultural site, the environmental professional must consider the possibility that biosolids were previously used at the site, and they should examine any historical records that might be available.

Final Thoughts

PFAS chemicals are in many industrial and commercial products, and it's possible for very small amounts to leak into the environment. But such leaks from many products will likely be considered minor and de minimis. Larger releases are more likely at certain industrial facilities, PFAS waste sites, PFAS firefighting foam sites, and possibly some sites where treated sewage sludge has been applied.

The current understanding of PFAS use and its impacts on human health and the environment is evolving. Its toxicity, environmental behavior, chemical properties and human exposure to individual PFAS chemicals are still being studied. As PFAS knowledge continues to evolve, so will its application to environmental due diligence practices for the commercial real estate industry. ■

Jeffrey D. Marshall, PE, is a vice president and the practice leader for the Environmental Services Practice for SCS in the mid-Atlantic region. He is the SCS national expert for innovative technologies and emerging contaminants. **Michael J. Miller**, CHMM, is a vice president and the practice leader for the Environmental Services Practice for SCS in the Central region. He is SCS's national expert on due diligence.

VORYS
New thinking.
Since 1909.

Congratulations to VanTrust on earning the much-deserved Developer of the Year Award after only 13 years in business.

We are proud to be your lawyers, your community partners and your friends. We can't wait to see what's in store in the years to come!

vorys.com

Ohio Washington .D.C. Texas Pennsylvania California London

Siphonic Roof Drains Can Move Water More Efficiently

These systems harness the power of the siphon effect, which can reduce costs and increase design flexibility on projects.

By Brennan Doherty, MIFAB

When it comes to new commercial construction, saving money is always a top priority for builders and property owners. However, many overlook one area that can produce significant savings: choosing the right type of roof drain.

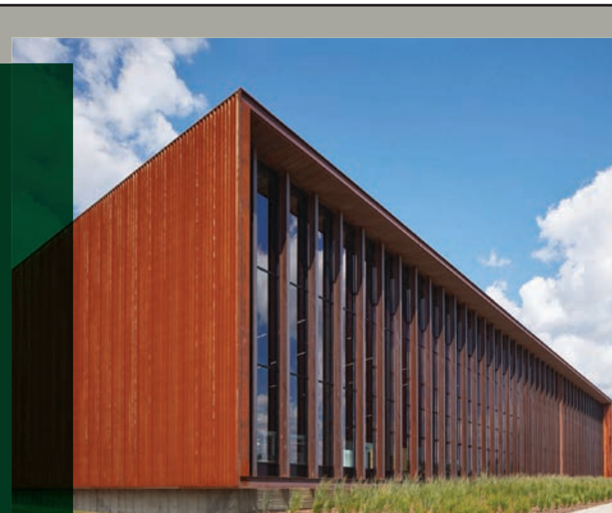
The traditional approach to storm drainage has focused on using gravity to move water away from buildings and other structures. However, siphonic drainage technology can provide a more cost-effective way to do this, particularly for large buildings with flat roofs, such as industrial facilities.

The Technology in Action

How does a siphonic drainage system work? During a rain event, gravity initially moves the water that collects on the roof toward the roof drains, which are like a traditional drainage system. As the rainwater enters the roof drains, it empties into the siphonic drainage pipes, which are narrower than standard pipes and are designed to fill completely with water. That's different from a traditional gravity system in which the pipes only partially fill with water. Because air takes up the rest of the space in a gravity system, it creates a vortex that slows the movement of water.

Once the pipes fill to a certain point, a baffle at the roof drain reduces the amount of air entering the system. That creates a siphon effect, which works to "pull" the water through the piping. That siphonic action dramatically increases the water's velocity and

BUILDING YOUR FUTURE BEGINS WITH BUILDING RELATIONSHIPS



TRUMPF SMART FACTORY

ENR Midwest Best Manufacturing Project

McShane Construction gets involved early in the process to provide you continuous input throughout the project lifecycle. Starting earlier leads to better outcomes. And better outcomes lead to better relationships.

McSHANE CONSTRUCTION COMPANY

A siphonic roof drain system inside an industrial building. These systems allow for greater flexibility when it comes to the placement of pipes.

flow rate, enabling it to travel upward in horizontal pipes, or against gravity. This allows more flexibility in the routing of the pipes. Finally, the water discharges into a stormwater drainage system or rainwater harvesting system.

Siphonic storm drainage provides several financial benefits. Because these systems use up to 80% fewer downpipes, installation costs are greatly reduced. Additionally, siphonic drainage typically comes with lower maintenance expenses and improved overall system efficiency. Together, these factors can lead to a longer lifespan for the roof drain system and the building itself, resulting in significant cost savings over time.

Maintenance and Repair Costs

Siphonic drainage systems are more efficient than traditional drainage systems. Because they use the siphon effect to draw water into the system, they can move larger amounts of water, with smaller diameter pipes, in a shorter amount of time. This means that buildings with siphonic drainage systems are less likely to experience flooding or water damage during heavy rain events. In contrast, extreme downpours can overwhelm traditional drainage systems, which can result in costly damage to buildings and infrastructure. By preventing flooding and water damage, siphonic systems help reduce overall facility maintenance and repair costs.

The traditional approach to storm drainage has focused on using gravity to move water away from buildings and other structures. However, siphonic drainage technology can provide a more cost-effective way to do this, particularly for large buildings with flat roofs, such as industrial facilities.

Lower Lifetime Maintenance Costs

The high rate of water flow in siphonic drainage systems can serve as a self-cleaning mechanism for the pipes. This means they typically need less maintenance than traditional drainage systems, which require time-consuming and expensive regular cleaning to prevent blockages and ensure that water flows smoothly. Because of this, building owners and managers can save a significant amount of money on maintenance costs over the life of the building by using siphonic drainage. However, it is critically important to ensure that regular maintenance is performed on these systems, because any clogs caused by leaves or other debris can impact the siphonic action and lead to impaired performance.

Siphonic storm drainage provides several financial benefits. Because these systems use up to 80% fewer downpipes, installation costs are greatly reduced. Additionally, siphonic drainage typically comes with lower maintenance expenses and improved overall system efficiency.

Smaller Pipes

Because traditional drainage systems rely on gravity to move water, they require a significant amount of space to function properly. This means buildings must be designed with large sloping roofs and adequate space for drainage pipes and gutters. With siphonic drainage, the pipe is installed with no pitch, and it is generally half the diameter of gravity-sized pipe. Because the system requires less space, this can reduce overall building height, eliminate vertical stacks by connecting multiple drains, and route the pipes to the most optimal location. By maximizing space, building owners and managers can save money on construction costs.

Another advantage of siphonic drainage is its ability to enhance design possibilities. Because the system requires less space, architects have more freedom to explore different design options. They can incorporate features such as irregular roof shapes or complex building facades without worrying about how they will impact the drainage system. This allows for more creativity in the design process and can result in more visually striking buildings.

Costs and Excavation

Traditional drainage systems require a complex network of pipes and drains, which can be time-consuming and expensive to install. The significant excavation needed for these systems can increase the cost of installation and prolong construction timelines. Siphonic drains utilize a more efficient design that allows for faster and easier installation at a lower cost. This means that building owners and managers can save money on installation costs,

Another advantage of siphonic drainage is its ability to enhance design possibilities. Because the system requires less space, architects have more freedom to explore different design options. They can incorporate features such as irregular roof shapes or complex building facades without worrying about how they will impact the drainage system.

which can be a significant expense in the construction of a new building or the renovation of an existing one.

Siphonic systems can provide a more efficient and cost-effective solution to drainage problems while costing from 25% to 40% less than traditional drainage systems. By preventing flooding and water damage, requiring less maintenance, maximizing space, and reducing installation and operating costs, they can save building owners and managers significant amounts of money. As the demand for sustainable and cost-effective building practices continues to grow, siphonic storm drainage has emerged as a popular alternative to traditional drainage systems. ■

Brennan Doherty is the director of siphonic drainage for MIFAB HydroMax.


Supporting and validating your journey to net zero.
GREEN GLOBES® NET ZERØ ENERGY
GREEN GLOBES® NET ZERØ CARBON
Complimentary pilot available through December 31
GBI® GREEN BUILDING INITIATIVE®
thegbi.org | info@thegbi.org | 503.274.0884

“Worth Repeating”

Sounds bites from NAIOP’s I.CON East, held June 7-8 in Jersey City, New Jersey

“It does seem like the worst is over from the fallout of Silicon Bank and the related banking crisis, but banks are looking at CRE, which is the Achilles’ heel, mostly in the office space.” — ***Dana M. Peterson***, *chief economist and center leader for economy, strategy and finance, The Conference Board*

“You are seeing a factory boom in the U.S., especially in the East North Central and East South Central regions. And as a less expensive alternative, friendshoring has many opportunities in places like Mexico and Canada.” — ***Dana M. Peterson***, *chief economist and center leader for economy, strategy and finance, The Conference Board*

“[Artificial Intelligence] won’t replace real estate people. AI will replace real estate people who don’t have AI. Right now, we are reaching an inflection point where you can easily use data for commercial real estate.” — ***Itay Ron***, *senior president of Northeast markets, Faropoint*

“Solar is a great solution, but achieving ESG goals is fundamentally about understanding your whole portfolio and how to work through it. Start with one building, evaluate it, and look at the load and tenant usage. Then, look at how to apply tools for improvement.” — ***Michael Barone***, *project manager, Rockefeller Group*

Dana M. Peterson, chief economist with The Conference Board, was the keynote speaker at NAIOP’s I.CON East.

“The challenge we’re trying to solve with the logistics building is primarily the speed to customers … We have challenged ourselves to think creatively if we’re going to meet the needs of occupiers as those needs evolve, and that’s what this whole exercise is about: designing the logistics building of the future.” — ***Matt Brady***, *LEED AP, architect and executive vice president, Ware Malcomb (see related article, page 78)*

“But the core thing that we have learned over the past few years of [overseeing a workforce initiative] is, candidly, the training is the easy part. It’s figuring out the support for workers that’s the hard part. How many people can we retain and what services do they need to be retained?” — ***Steven Hussain***, *head of government and community affairs, Prologis*

“[Nearshoring] is real and it’s growing at an exponential rate. Mexico is at less than 3% vacancy and they are on fire with industrial companies, especially with Tier 1 companies realizing they need a mitigation strategy for China.” — ***Jeffrey Garza Walker***, *MRED/MBA, executive vice president at NAI Horizon.*

“Industrial is the most popular asset class in the world. If a fund needs liquidity, it will not sell an office but an industrial asset that has held up in value. There is interest in this space.” — ***Jack Fraker***, *president and global head, industrial and logistics capital markets, Newmark* ■


GLP
Logistics real estate solutions for today and tomorrow
We oversee a growing portfolio of high-quality assets, enabling companies to operate effectively across major US markets and key logistics hubs.
Learn more at glp.com/us

CEO on Leadership: Andrew VanHorn

The new president and chief development officer for Dweck Properties in Washington, D.C., talks about leadership, culture and growing a new commercial real estate company focused on multifamily.

By Ron Derven

Andrew VanHorn

"Leadership is about cultivating leaders at every level who embody qualities such as courage, humility, integrity, kindness and creativity. That is the magic of our company — leadership is not about title or hierarchy at Dweck. It's about an ethos that lies with everyone."

— Andrew VanHorn, president and chief development officer, Dweck Properties

Development: *What attracted you to a career in commercial real estate?*

Andrew VanHorn: As a child, I enjoyed building with Legos, blocks, hammers, nails and wood. But now I understand real estate is more than building things; it's about having a lasting generational impact on people and places. It involves creating thoughtful and artfully delivered communities that enhance people's lives.

Development: *Was your family involved in commercial real estate as well?*

VanHorn: My father and grandfather were in the trucking business in northern New Jersey where I grew up. The business started out with dairy farming and moved into orange juice and water and other products that were delivered up and down the East Coast. We owned garages and large real estate facilities where all the work happened. The entrepreneurial attitude of running a company, of taking care of people and of building something, was instilled in me at a young age.

Development: *What compelled you to join Dweck Properties?*

VanHorn: Dweck created a brand-new company in 2021, which grew from 50 years of family real estate investing, and their culture inspired me because it is built on the thesis that extraordinary care of our employees translates into extraordinary care of our residents — creating higher value and profits. This focus has begun to shape a highly engaged team that is already outperforming and producing powerful results. This new culture, combined with the entrepreneurial family investment attitude, created a perfect opportunity for me. Together with the Dweck family, we are building something pretty extraordinary here.

Development: *What does leadership mean to you?*

VanHorn: Leadership is about cultivating leaders at every level who embody qualities such as courage, humility, integrity, kindness and creativity. That is the magic of our company — leadership is not about title or hierarchy at Dweck. It's about an ethos that lies with everyone. It's my responsibility to foster this leadership mentality in our teams, their properties, their projects and their relationships. This applies to not only our senior team, but also to property managers, leasing teams, our engineers, concierges — everyone. To me, leadership means understanding the strengths of your team, creating a vision for the organization and then providing the necessary support and guidance to make that vision a reality. I believe in the servant leadership model, which involves uniting people around a shared vision and then empowering them to carry it out.

Development: *What is your primary role as president and chief development officer at Dweck Properties?*

VanHorn: My primary role is to inspire the entire team in every area of the business. As a company, we have enormous potential. Our assets are in great, thriving submarkets, and

continued on page 42

MORE THAN JUST SPACE – SPACE TO GROW.

We've got more than half a billion square feet of logistics real estate, and 18.5 million square feet of brand new, state-of-the-art space in key strategic locations being built as we speak. And every inch is designed to meet the evolving needs of today's supply chain.

See how we make logistics space a strategic priority at

LINKLOGISTICS.COM/DEVELOPMENT

LINK

SPACE TO GROW

continued from page 40

our team is energized and primed for growth. My role is to realize our potential — by setting short-term and long-term strategies — and then coaching, inspiring and supporting at every level of the company to get us there. I devote time to engaging with individuals throughout the company. My aim is to ensure that all our people feel seen as valued business partners with a seat at the table. Aligning the business potential with the team's capabilities paves the way for growth and value generation.

Development: *What qualities do you look for when hiring senior people?*

VanHorn: The key qualities I look for in senior leaders are curiosity, kindness, passion and a lack of defensiveness. If a person is interested in learning, partnering with others and owning their

"The key qualities I look for in senior leaders are curiosity, kindness, passion and a lack of defensiveness. If a person is interested in learning, partnering with others and owning their mistakes, I can build anything with them."

— Andrew VanHorn, president and chief development officer, Dweck Properties

mistakes, I can build anything with them. We truly encourage input from everywhere, and focus on empowering others. That means there's no room for ego. Joy is also important here. I look for positivity, and people who will be active contributors to our culture.

Development: *Are you looking for the team player or the star who can hit the big home run?*

VanHorn: I look for the team player who will fit in with our culture and add that additional building block. I don't want someone who will try to hold up the entire tower alone. I want someone who will hold up the tower with 10 other people. Doing it that way creates so much more resiliency and capacity within the organization than having a unique star.

Development: *What has been your greatest leadership challenge at Dweck Properties?*

VanHorn: Because the company was recently established in 2021, there was an enormous amount of work required to achieve its potential. Fusing those assets together under a new vision required considerable work in creating the necessary infrastructure, such as our development and construction-management teams, establishing channels for reporting and communication, and refining our operations while keeping the key cultural pillars intact. One of the major leadership challenges that commercial real estate companies face is ensuring that their organizational culture is effectively communicated to their property teams. It is crucial that the individuals "on the ground" who play a pivotal role in the company's success feel a strong sense of connection to the company's overall mission and culture.

Development: *How do you resolve internal conflicts or mistakes at the company?*

VanHorn: Our culture is all about personal and professional growth — as humans and as a business. Clarity and candor are key. We seek to address conflicts and mistakes head on as quickly as possible once we understand the root issue. Addressing the underlying issue instead of the immediate problem typically allows

continued on page 44

Congratulations to our valued partner, VanTrust Real Estate, for being named NAIOP's 2023 Developer of the Year!

The City of Raymore, Missouri, continues to see results of its long-term strategic initiatives to diversify its economy, provide quality, diverse housing options and create a culturally vibrant community. These developments are made possible by the City's developer-friendly, concierge-style economic development approach.

Learn more at **raymore.com**

RAYMORE
come home to more


REIMAGINING NOW
TO CREATE WHAT'S NEXT
HudsonPacificProperties.com
HUDSON
PACIFIC
PROPERTIES

continued from page 42

everyone to grow. Once you've been through a conflict or a mistake, you've learned more at that moment than you can learn in a year of things going right. My goal is to ensure that people see it as a chance to learn while taking responsibility.

Development: *Has your involvement in NAIOP at the chapter level and as a national board member and a member of the National Forums helped build your leadership skills?*

VanHorn: Indeed it has. The network I have developed at NAIOP and the resources available to me are unparalleled. On the National Forums, the relationships and the depth of guidance and insights that are shared are amazing. Because of NAIOP and the people I have met, I have probably avoided making 100 mistakes. My local NAIOP chapter and the two NAIOP conferences I attend each year have given me a priceless amount of guidance and support throughout my career.

"I look for the team player who will fit in with our culture and add that additional building block. I don't want someone who will try to hold up the entire tower alone. I want someone who will hold up the tower with 10 other people."

— Andrew VanHorn, president and chief development officer, Dweck Properties

"The network I have developed at NAIOP and the resources available to me are unparalleled. On the National Forums, the relationships and the depth of guidance and insights that are shared are amazing. Because of NAIOP and the people I have met, I have probably avoided making 100 mistakes."

— Andrew VanHorn, president and chief development officer, Dweck Properties

Development: *What advice would you give a person coming into commercial real estate who wants to have a long career and achieve a top position at a company?*

VanHorn: Ask questions. Always be learning and make sure you are valued for what you are bringing to the business. A great career typically involves the right mix of the person and the company culture — some people thrive in certain conditions and wither in others, so being intentional about where you work is critical. If you are passionate and aligned with your company, you have found a great opportunity. Look for companies that invest in their people as much as they invest in their assets.

Development: *What is the best advice you've ever received?*

VanHorn: My father, who was mayor of my small hometown as well as the owner of a trucking company, taught me through his actions and words that you need to be honest, fair and kind when it comes to your reputation and actions. I've always striven to treat people well and make every outcome a win-win. Not only because it is the right thing to do, but because the real estate industry is a small world. Those same people will be back in your future business life. I've seen the benefits of my behavior time and time again over my 20-plus years in the business.

Development: *What crucial lessons have you learned during your time in the business?*

VanHorn: Remember the phrase "This too shall pass." While it may seem that every decision is consequential in the moment, having a broader perspective on your real estate, business and personal goals will help you to make the right decision more often than not. I've had to remind myself of this lesson many times in the past two years as the industry has gone through a financial sea change. Focusing on the long-term goals for our company has allowed us to maintain our direction and vision despite the market turbulence.

Development: *How do you like to relax during your time away from work?*

VanHorn: There are three things that bring me great joy outside of my employment: my wife, my children and running. Watching my children mature into amazing young adults while spending time with them is wonderful. Traveling with my family is a gift that I enjoy — we were lucky enough to travel to Portugal and Spain last summer and will be in France this summer. Also, I find that running allows me to clear my brain and work through problems in the back of my mind, which brings me peace and steadiness. I like to run everywhere I go on my work and personal travels. It allows me to experience places in a more intimate and connected way. ■

Ron Derven is a contributing editor for Development magazine.

Strong ownership matters

Granite

With decades of experience in leadership, finance and development, Granite brings valuable expertise and insight to every partnership. Partners appreciate our collaborative approach, brokers enjoy working with us, and customers stay loyal, thanks to our focus on service.

graniteprop.com

30 Years of Experience in Commercial Real Estate.

The Flight to Cool Leads the Future of Work

In New York City, top-quality office space is coming online despite challenging economic conditions.

By Jonathan Meyers, Partner, HR&A Advisors

The ongoing "flight to quality" for commercial office space across the country is no secret, with companies of all sizes flocking to recently redeveloped or newly built buildings with unique, enticing amenities. As larger companies embrace hybrid work models and seek a more boutique office experience, smaller creative tenants in the 10,000- to 30,000-square-foot range now make up the most active segment of the market. According to CoStar, about 65% of leases signed in early 2023 were for space commitments of less than 15,000 square feet.

While tech and FIRE (financial, insurance, real estate and legal) tenants have rethought larger office spaces, smaller office users are driving a new wave of commercial leasing. CoStar expects that this trend will only continue in 2023. Just 9.1% of leases signed in early 2023 were for 100,000 square feet or more, down from 11.6% in 2022 and nearly 19% on average in 2017-19.

Along with the trend toward smaller space commitments, the style of in-person workspaces has also shifted. According to CBRE, these tenants are driving demand for flexible, well-located offices that support new hybrid work models and in-person collaboration. When looking for space, today's employees don't want monotonous cubicles and corporate environments that have long been commonplace, but rather buildings with character, history, charm and creativity. Thus, a subsequent trend has emerged, both nationally and across core Manhattan: a "flight to cool."

Courtesy of Hudson Square Properties

Fashion brand ESPRIT's new U.S. global headquarters is at 160 Varick in Lower Manhattan, an adoptive reuse of an industrial building that first opened in 1928.

Affordable and Cool

According to owners and brokers, this flight to cool stems from a few different factors: companies not having the budgets for $150-per-square-foot office rents, yet still wanting top-quality, desirable space that entices employees to show up in real life; greater attention to ESG and sustainable building practices, which puts adaptive-reuse office spaces front and center; and a need for spaces that possess character and cultivate a sense of culture, whether it's through historic architecture, communal indoor-outdoor workspaces, or

continued on page 48

Defining skylines globally.

For over 60 years, Hines has been at the forefront of developing landmark real estate projects that provide lasting value to investors and communities. With a global portfolio exceeding 295 million square feet, we are dedicated to creating projects that set new standards of success in their respective markets and product types for generations to come.

hines.com

Development

1. **ONE VANDERBILT**
New York, NY | 1.6 million SF

2. **FAT VILLAGE**
Fort Lauderdale, FL | 834,000 SF

3. **WOLF POINT EAST**
Chicago, IL | 629,000 SF

4. **CIBC SQUARE**
Toronto, ON, CA | 3.0 million SF

5. **RIVERWALK**
San Diego, CA | 845,000 SF

6. **TEXAS TOWER**
Houston, TX | 1.2 million SF

7. **EDEN PARK BY DROR**
Sao Paulo, Brazil | 632,000 SF

Hines

Hines Interests Limited Partnership, a Delaware limited partnership. © 2022

continued from page 46

fitness, restaurant, and retail offerings.

With the ongoing effects of climate change and impending legislation that requires sustainable building practices, such as Local Law 97 in New York and the Building Emissions Reduction and Disclosure Ordinance (BERDO) in Boston, commercial and residential developers are looking to adaptive reuse to address embodied carbon and breathe new life into buildings, while meeting the demand for unique, character-filled spaces.

Estimates show that within the next 10 years, 90% of real estate development could involve adaptive reuse of existing buildings instead of new construction, according to a Deloitte study cited in Work Design Magazine. On top of decreasing the carbon footprint, adaptive reuse projects preserve architectural and historical elements, re-engage urban spaces previously viewed as liabilities, and reinvigorate communities by turning existing structures into places that add to the neighborhood's energy and desirability.

Hudson Square is Happening

Midtown Manhattan and the Financial District have long been known as a global hub for office buildings and workplaces, with an endless skyline of skyscrapers and the constant bustle of workers.

While the pandemic brought a series of unprecedented challenges, it also introduced opportunities for the city to embrace new styles of hybrid work and tap into the advantages of adaptive reuse projects that were already underway in neighborhoods that weren't historically known for office environments.

One such neighborhood is Manhattan's Hudson Square. Once known as the city's printing district, the area has rapidly solidified into an important live-work-play district thanks to rezoning, an influx of new businesses, ultra-sustainable development, and new cultural and retail opportunities. Located between the West Village, Soho and Tribeca and bounded directly to the west by the Hudson River Greenway, Hudson Square has emerged as a hotspot for creative firms and media companies.

continued on page 50

KS Shadowline

Our king-sized R-Values are the best in the industry

With an industry-leading R-Value of 9.0 per inch in controlled environments, Kingspan Insulated Panels with QuadCore® Technology are the most thermally efficient panels on the market.

Learn more at
KingofCold.kingspanpanels.us

Kingspan®

Courtesy of Hudson Square Properties

555 Greenwich in Lower Manhattan was combined with 345 Hudson in a rare horizontal overbuild construction process that essentially merged the two properties into one.

continued from page 48

Innovative businesses frequently demand space to achieve their goals, and neighborhoods that appeal to their creative workforces. Hudson Square offers both. Fashion brand ESPRIT recently announced a 10-year, 38,000-square-foot lease at Hudson Square's 160 Varick Street, which will serve as the retailer's U.S. global creative headquarters.

A few blocks away, the newly built 555 Greenwich will soon seamlessly combine with the historic 345 Hudson in a rarely utilized development method — a horizontal overbuild. This involves the addition of new construction on top of an existing building, expanding the usable floor space horizontally. Thus, the building will expand "out" rather than "up." These projects reside in an increasingly diverse neighborhood of boutique retail, appealing dining options, and an array of public art and landscaping.

The Sweet Spot

In Brooklyn's Sunset Park, Industry City is an example of reimagining former manufacturing buildings into epicenters of creativity and innovation, with tenants across industries such as technology, fashion, design, film production, life sciences and more. Today, the campus serves as a blueprint, not only for this kind of adaptive reuse, but also for a robust design and placemaking strategy that successfully attracts and retains the creative class.

For example, in 2019, fast-growing e-commerce company MPB, which specializes in used photo and video equipment, opened its North American headquarters at Industry City. Currently, MPB occupies a 15,000-square-foot office that connects via staircase to a 45,000-square-foot warehouse and fulfillment center on the lower level.

continued on page 52

Northmarq

These aren't simply transactions.

Whether you're financing an acquisition, selling a multi-asset portfolio, finalizing a 1031 exchange or exploring a sale leaseback, we've got you covered. Our nationwide team of investment sales and debt and equity experts will guide you through the process and deliver exceptional results.

Work with us today.
It's time to thrive.

For us, it's personal.

Scan the QR Code to read our latest **Trends & Insights**

$51,250,000
Rose Canyon Business Park
15 Buildings | West
Private Debt Fund

$28,310,000
Warehouse Development
230,140 sf | Northeast
Bank Construction Financing

$18,100,000
Amazon
144,283 sf | Southeast
Sale

Commercial Real Estate
Debt + Equity
Investment Sales
Loan Servicing
Fund Management

Northmarq.com

continued from page 50

Similar investments across Brooklyn appear to be paying off — attracting desirable tech and creative tenants looking for a feeling of authenticity and connection to place. A recent study on NYC's Tech Ecosystem, which HR&A Advisors produced for the Association for a Better New York (ABNY), Tech:NYC and Google, showed a 42% increase in tech job growth in Brooklyn between 2012 and 2021, likely a result of a decade of investments in the Brooklyn Navy Yard and Tech Triangle.

Given the success and interest adaptive reuse buildings have experienced, additional projects continue to come online across New York, such as 122 Fifth Avenue, an 11-story building originally designed in 1899 by prolific architect **Robert Maynicke** that is wrapping up a thoughtful vertical and horizontal expansion and restoration that maintains its century-old character.

While the office sector is undoubtedly changing, companies are still in need of in-person spaces. Creative companies that thrive on collaboration are looking for smaller space commitments in cool, retrofitted buildings that shine a spotlight on character, functionality and creativity. As productive as these dynamic, mixed-use buildings and districts are for their owners and tenants, they are just as valuable for the cities that surround them. Every vacant building that is repurposed creates property tax revenues, business opportunities and opportunities for policy goals such as affordable housing.

Boosting street-level vibrancy in neighborhoods attracts office workers, residents and visitors, who in turn generate jobs, sales taxes, and other important economic and social benefits. There is an opportunity — and perhaps a collective imperative — for building owners, tenants and policymakers to work together to find ways to create workplaces, neighborhoods and cities that are exciting, inviting and inclusive. ■

Jonathan Meyers is a partner with HR&A Advisors.

WE RESPECT THE COMMUNITIES WE JOIN AND THE PEOPLE WHO PROUDLY BUILT THEM.

WE PROTECT THE ENVIRONMENT WE SHARE THROUGH REMEDIATION AND REDEVELOPMENT.

WE CONNECT THE PAST TO A BOLD NEW FUTURE OF ECONOMIC VITALITY AND OPPORTUNITY.

Hilco™
Redevelopment Partners

HILCOREDEV.COM

How to Navigate Risk and Maximize Returns When Investing in Distressed Real Estate

Savvy moves require homework to profit in a challenging environment.

By Adam Gower, Ph.D.

As interest rates continue to rise, the market will see more distressed real estate deals. Investors who know how to navigate the risk associated with these transactions should be able to capitalize on these opportunities.

A quick refresher: Distressed real estate is property that is not performing to its full potential. Distress occurs for many reasons. In some cases, the property is in physical disrepair. This often happens because of deferred maintenance and lack of capital improvements. In other cases, the property's capital stack is distressed. The asset may be physically fine, but the owner took on too much debt or otherwise cannot repay their lenders. In situations like these, the owner may have to sell at a discount or turn the keys over to the bank if they cannot repay the loan.

Distressed real estate can offer great opportunities. The office market, for example, has collapsed in many areas of the country, and some buildings are trading for 20 cents on the dollar. For an investor with long-term, patient capital, some of these deals are going to be attractive. These buyers must be well capitalized because few banks are going to make a loan on an office building in today's market — but this is an example of where opportunity exists.

One of the best ways to land distressed deals is by providing the seller with surety of close. This means having capital lined up and ready to invest when deals come to market. In some cases, there might not be time to get a traditional loan. Buy it with cash if possible and put a loan on the property later.

Many office markets across the country are facing extreme distress amid low occupancy and rising interest rates.

Passive investors, such as those putting money into a real estate fund or syndication, should spend this time doing their homework about different sponsors. Those who do extensive research now will be prepared to move as soon as their preferred sponsor has a deal in hand.

How Cap Rates Impact Property Value

One way to calculate the value of commercial real estate is by its capitalization rate, or cap rate for short. It's calculated by dividing a property's net operating income (NOI) by its market value.

For many years, properties were trading at 3% to 5% cap rates, depending on the asset class, its condition and market location. The low-interest-rate environment allowed investors to buy properties at arguably inflated values, which pushed cap rates to all-time lows. However, all things being equal (e.g., assuming NOIs remain the same), as interest rates have risen, properties have become less affordable. To make comparable returns, investors must pay less for properties. That's because more of the NOI must be used to make debt payments, which are now higher since interest rates are higher (even if total debt remains the same).

In short: as interest rates go up, cap rates go up, and values correspondingly come down.

Assumable Debt is Keeping Cap Rates Artificially Low

Whenever there's turmoil in the capital markets, as there is now, cap rates should rise — as noted above. However, in some cases, cap rates haven't climbed, at least not as fast as might be expected.

This is apparent in the multifamily sector. As it turns out, multifamily cap rates are not telling the whole story because people are selling deals with assumable debt. This allows them to

Distress occurs for many reasons. In some cases, the property is in physical disrepair. This often happens because of deferred maintenance and lack of capital improvements. In other cases, the property's capital stack is distressed. The asset may be physically fine, but the owner took on too much debt or otherwise cannot repay their lenders.

sell at inflated values which, in turn, keeps some cap rates low.

Here's an example of how that might work. Consider a hypothetical business environment with 7% interest rates. Someone may only be willing to spend $10 million on a property given the cost of their anticipated debt service payments. Now, consider an owner who is willing to sell with "assumable debt," meaning they work with their bank to have the buyer assume the existing mortgage, which is presumably locked in at a lower rate. Someone who was only willing to spend $10 million in a 7% interest rate environment might now be willing to spend $12.5 million on that same property since they'll only be paying perhaps 3.5% on their loan. This keeps the property value artificially high when the expectation would be for values to come down. Similarly, it keeps the cap rate lower than the market would otherwise bear. Deals with assumable debt are artificially propping up values and also keeping cap rates low. (CBRE noted that this trend might be happening across all asset classes in its 2022 Cap Rate Survey.)

How to Navigate Risk in Today's Market

It is important for investors to understand the market dynamics at play. For instance, lack of knowledge about the number of deals trading with assumable debt could cause some buyers to purchase a comparable property for the same price, except the interest rate might not be as low. In the case of two otherwise similar properties, one would be worth less because more must be spent on debt payments. To achieve the same returns as the other investor, the property would have to sell at a discount.

FRISCO
TEXAS
VanTrust®

CONGRATULATIONS

The city of Frisco and Frisco Economic Development Corporation congratulate the team at VanTrust Real Estate. We are proud to have visionaries like VanTrust among our premier partners bringing new concepts to Frisco.

A CULTURE OF UNRIVALED PERFORMANCE.

Here are some other steps to consider when trying to navigate risk and maximize returns:

Understand the current bid-ask spread. The "bid-ask" spread is the difference between what sellers want to sell for (the "ask") and the bids they're actually receiving from potential buyers. There is still a lot of bid-ask spread in today's market. Owners are not in enough distress to be willing to sell at a discount — yet. Savvy investors should consider putting in conservative offers based on their own sophisticated underwriting (more on this below). Some sellers will reject the offer. Others may wait to see what other offers they get before coming back to negotiate closer to the desired asking price. In some cases, sellers will pull the deal from the market entirely. It's risky, but it also ensures properties aren't purchased at over-inflated prices. As the bid-ask spread narrows, more deals will begin to happen.

Play defense. One way to navigate risk in today's market is by playing defense with existing assets. This can be accomplished through aggressive asset management, such as improving rent collection efforts, getting three bids on every contract, or renovating units to get a pop in value. Focusing on these things now will increase the property's value as the market recovers.

Be sophisticated with underwriting. Properties became financially distressed in recent years because some owners were too optimistic with their underwriting. They assumed rents would continue increasing by double digits. Instead, it's important to be conservative with underwriting. Look at historical averages, which are closer to 4% to 6% vs. the 7% to 12% that people were underwriting. By underwriting more substantial rent increases, owners were able to juice their projected returns, leading to inflated property values. This strategy ends up backfiring as double-digit rent growth can't be sustained.

One of the best ways to land distressed deals is by providing the seller with surety of close. This means having capital lined up and ready to invest when deals come to market. In some cases, there might not be time to get a traditional loan. Buy it with cash if possible and put a loan on the property later.

Here are some important considerations for underwriting:

Conduct sensitivity analyses. This is a technique that considers various elements that could influence the return on an investment property and helps determine how adjustments to each element could affect profitability. Consider the best, worst and most likely scenarios. Stress-test for things like inflation, rising interest rates, higher insurance premiums and higher taxes. Taxes can be particularly challenging to predict in markets where there is no cap on how much a municipality can raise them in a given year. This is why it is important to be conservative.

Don't forget about insurance. Expect premiums to rise as properties get older and deferred-maintenance costs increase.

Consider local job growth, future supply and construction costs. These will all affect property values in the local marketplace.

WHAT'S IN A NAME?

Trust. Experience. History. Results.

Since 1881, the J.F. Shea Family of Companies has established itself as a leader in the construction industry. With a résumé that includes the Hoover Dam, the Golden Gate Bridge, and the subway systems of San Francisco, Washington D.C. and New York City, it has played a significant role in America's history. This tradition of building great things is deeply embedded in the way we work at Shea Properties today.

SheaProperties.com

Shea | Properties

It is important for investors to understand the market dynamics at play. For instance, lack of knowledge about the number of deals trading with assumable debt could cause some buyers to purchase a comparable property for the same price, except the interest rate might not be as low.

Of course, being too conservative with every number will effectively kill each deal. Nevertheless, it is important to have confidence in underwriting. Sensitivity analyses should help prepare for worst-case scenarios. Those who were too lackadaisical with their underwriting in the recent past are in distressed deals today.

Bridge Lenders

During the most recent market run-up, some investors used excessive leverage to bolster their returns. Whereas most traditional lenders will only make loans worth 60% to 65% of the property's value (the "loan to value"), bridge lenders are usually willing to take on a riskier second position. However, these loans come at higher rates.

Some borrowers, particularly those with less equity to invest, take out a bridge loan to secure a deal. Many of these loans are starting to come due, and borrowers face a deadly combination: they either can't refinance into a new loan because values have come down, or they're forced to refinance at a higher rate. In either case, the borrower might be forced to sell in a distressed situation because they cannot afford to make their debt payments.

Bridge lenders, unlike traditional banks, tend to be more comfortable taking over and managing commercial properties. They are less likely to work out an alternative arrangement with the borrower. This is poised to cause more distressed deals to hit the market as borrowers have no choice but to sell at a discount.

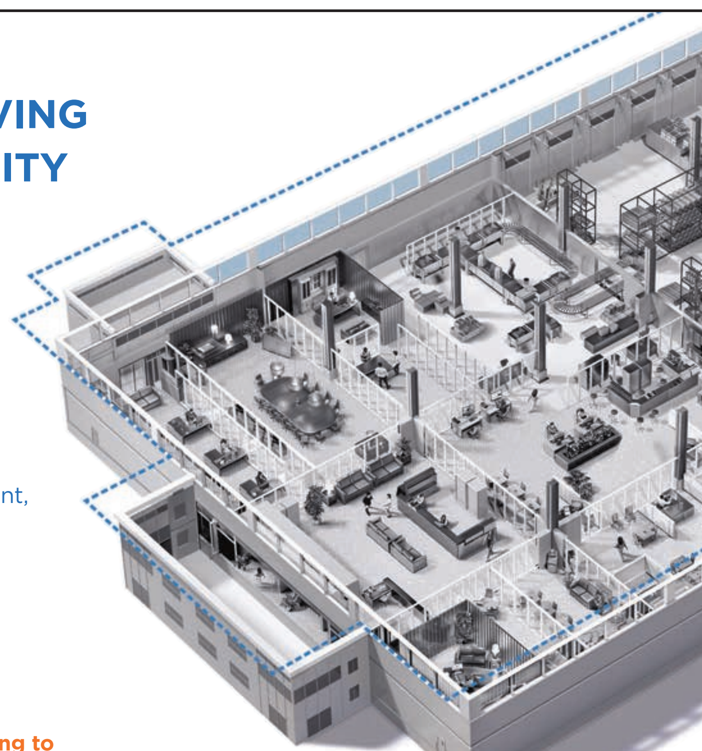
Bringing it All Together

The market is experiencing a correction, and the worst is yet to come. Short-term loans are starting to expire; leases are starting to roll. More investors will find themselves in distressed situations over the next 12 months, creating opportunities for diligent sponsors to invest at a discount. There will always be some risk associated with buying distressed property, but those who know how to navigate it will be well positioned to realize tremendous returns. ■

Adam Gower, Ph.D., builds digital marketing systems for real estate professionals who want to raise equity capital online (also known as crowdfunding). His latest book is "The Reality of Distressed Real Estate." Learn more about Gower at GowerCrowd.com.

IS YOUR ROOF SYSTEM LEAVING YOUR OPERATIONAL SECURITY

EXPOSED?



Cover your assets.

The consequences of a faulty or failing roof system can be devastating to your occupants, your equipment, your customers and your reputation. Prevent leaks. Slow the spread of fire. Protect your business inside and out. Choose FiberTite® Roof Systems and get **Confidence Without Compromise**.

FiberTite® Seaman Corporation

Check out our interactive building to learn how your roof could be leaving your business exposed at FiberTite.com/Risks.

Developers Can Cash Out Tax Credits for Renewable Improvements

A major change to the tax code could greatly incentivize green construction in commercial real estate.

By Ethan Epstein, Dale Dekker and Adam Harper

New guidance from the Internal Revenue Service (IRS) is poised to stimulate renewable energy growth in the utility sector and invigorate investment in energy-efficient measures in commercial real estate development across the country.

In one of the most significant changes in the 150-year history of the Internal Revenue Code, renewable-energy tax credits can now be transferred tax-free to independent buyers in the for-profit sphere. They can also be directly paid out, tax-free, within the non-profit sector. These changes essentially transform renewable energy tax credits into cash, and they should evolve into a reliable financing source for commercial real estate.

Dekker/Perich/Sabatini, Ltd.

A rendering of a 100,000-square-foot warehouse with a solar array on the roof. A building like this is now eligible for a range of renewable-energy tax credits.

While the commercial development community has welcomed the Inflation Reduction Act's new Section 45L tax credits for energy-efficient homes and the strong write-offs available for energy-efficient commercial buildings in the Internal Revenue Code's Section 179D, the ability to cash in federal renewable-energy tax credits is a radically different funding tool for green construction. Fiscal benefits in the form of transfers or direct payments have been available in a few states for several years, which has provided financial incentives regardless of the participants' tax obligations. But without sufficient tax liability, traditional tax credits would expire, eliminating their economic advantage.

In one of the most significant changes in the 150-year history of the Internal Revenue Code, renewable energy tax credits can now be transferred tax-free to independent buyers in the for-profit sphere. They can also be directly paid out, tax-free, within the non-profit sector. These changes essentially transform renewable energy tax credits into cash, and they should evolve into a reliable financing source for commercial real estate.

Integrating monetization features into renewable-energy tax credits could produce greater incentives to build more solar, wind, hydrogen, nuclear and other forms of renewable energy. In the commercial real estate sector, it is expected to drive greater adoption of solar power.

ITC and PTC

Monetizable federal tax credits fall into two categories — the investment tax credit (ITC) and the production tax credit (PTC). Taxpayers must choose one or the other; they can't claim both. The ITC is generally 30% of the cost of the renewable-energy project and applies to the year in which the project goes into service.

The PTC is tied to the renewable energy produced by a project that has gone online within the past 10 years. Unlike

continued on page 60

BLACK & VEATCH

Future-Ready Commercial Facilities

Sustainable Design for Net-Zero Companies

Companies are setting environmental, social, and governance (ESG) goals to actively protect the environment and mitigate climate change impacts. Through green development and retrofits, developers can divest from carbon-heavy assets that will likely depreciate as the globe transitions to net-zero and instead focus on in-demand green-certified structures. The combined dynamic of advanced technology evolution, low green building stock, climate change, and the drive to decarbonize Commercial and Industrial (C&I) processes is priming the real estate market for an upsurge in sustainable development. With thoughtful design, developers will net strong gains from their green buildings.

Green buildings leverage the natural environment and engineering to use clean versions of essential functions, such as water reuse, renewable energy, and zero-emission transportation. Developers who implement green building practices lower the impact of their buildings on the surrounding community and align with ecology and climate.

Sustainable operations are intentional and best deployed when comprehensively planned for maximum cost efficiency and system integration. In order for developers to stay ahead of the net-zero curve, it's imperative to plan and design sustainable water, energy, and transportation systems optimized using digital data and processes.

Zero-Emission Transportation

Investors and developers who include charging infrastructure and the electric power needed to support charging will stay ahead of electric vehicle (EV) adoption and charging demands. They will also net valuable cost efficiencies, such as optimized onsite energy.

Integrated Water/Reuse

When industries and businesses curb their water use, they protect community water supplies. Facility owners and developers can make process changes to use stormwater and wastewater without significant capital investment.

According to the U.S. Green Building Council, only 21% of current building stock is green, opening the door for real estate investors, developers and building owners. Green buildings include EV charging stations, integrated water/reuse systems, decarbonized energy such as solar, and digital technologies.

Resilient, Decarbonized Energy

Reliable, resilient energy is a priority for commercial entities—if systems go down, they lose revenue. Some tenants require always-on energy systems dictated by the nature of their services, such as data centers, research facilities, and retail buildings that double as emergency shelters.

Communications and Digital Technologies

Developers who establish communications capabilities will not only attract more tenants, but also open pathways to additional revenue; with more services, developers can also implement service charges. Real estate developers should consider building operation automation, smart sensors and data analytics, private networks and building information modeling, and digital twin technologies as they design or retrofit their buildings.

Black & Veatch is a global engineering, procurement, consulting and construction company with a more than 100-year track record of innovation in sustainable infrastructure. Continue reading about sustainable design in their latest eBook, Future-Ready Commercial Facilities.

continued from page 58

ITCs, which are granted at the start of a project, PTCs are awarded incrementally over 10 years, proportional to the level of clean energy produced. PTCs are generally selected for large-scale energy production involving multi-acre solar arrays, wind turbine farms, or other clean-energy sources such as geothermal or biomass. However, in the commercial building sector, ITCs are often the preferred choice to recover 30% to 70% of renewable-energy investment costs as quickly as possible.

More on Bonuses

Tax credit bonuses can boost the investment tax credit's base rate of 30%. A taxpayer can earn a 10% tax credit bonus by certifying that any steel, iron or manufactured product used in the project was made in the United States. Another 10% bonus is available for projects located in energy communities. These include brownfield sites, landfills, and areas designated as federal empowerment zones or enterprise communities. Finally, a 10% to 20% bonus is available for projects in low-income communities. These are defined as areas where at least 50% of the electricity goes to households with incomes below 200% of the poverty level or 80% below the area's median gross income. ■

Consider the example of a developer building a rooftop solar array on a 100,000-square-foot office/warehouse/distribution building in New Mexico (see box at right). The anticipated costs are approximately $2,076,505 for solar photovoltaics (PV) and $1 million for an energy storage system (ESS), both of which qualify for the ITC. If the system only uses products made in the United States, the developer receives an additional 10% bonus (see box at left). Therefore, 40% of the total cost of $3,076,505 for the solar and energy storage is recoverable as transferable ITCs — a total tax credit amount of $1,230,602. The developer could use these ITCs against their federal tax liability or transfer them, tax-free, to another taxpayer.

The example above also benefits from depreciation. While non-transferable, depreciation boosts the building's economic recovery by $516,853. When added to the ITC, it yields a recovery of $1,747,455. Additionally, the developer would qualify for a New Mexico-specific transferable and refundable energy storage system tax credit worth 40% of the $1 million cost of the system, up to a limit of $150,000. The addition of this state tax credit increases the total tax credit and depreciation award to $1,897,455, which is roughly 62% of the overall system cost of $3,076,505.

A New Landscape

Because these types of transferable tax credits are new, there isn't any data available on their value. However, in June 2023, the IRS issued temporary guidance detailing plans for an online

continued on page 62

How the Savings Pencil Out

Calculations of the savings generated by using renewable-energy tax credits to build a hypothetical 100,000-square-foot office/warehouse/distribution building (10% office, 90% warehouse/distribution) with 36-foot clear heights, concrete tilt-up exterior walls, structural steel and a joist roof system. It is built to the standards of the 2018 International Energy Conservation Code. It features a roof-mounted solar photovoltaics (PV) system (1,589 panels) and a 1.3-megawatt battery energy storage system (ESS) to recharge electric semi-tractor vehicles and reduce overall electricity demand for the building.

Initial Construction

Internal rate of return: 14%
Net present value: $3,273,437
Payback period: 5.8 years
Solar PV system cost: $2,076,505
Energy storage system cost: $1 million
Total upfront cost: $3,076,505

Inflation Recovery Act/Investment Tax Credit (IRA/ITC) Incentives (40%)

Solar PV: $830,602
ESS: $400,000
Subtotal: $1,230,602

Federal Modified Accelerated Cost Recovery System (MACRS) 80% Bonus Depreciation

Solar PV: $348,853
ESS: $168,000
Subtotal: $516,853

Final Tally

Total IRA/ITC/MACRS incentives: $1,747,455
New Mexico ESS incentives: $150,000
Total incentives $1,897,455
Net PV and ESS cost: $1,179,050

Additional Savings

Annual electricity bill savings: $193,317
Electric bill savings over 20 years: $4,502,579 (savings calculated based on current rates in Albuquerque, New Mexico) ■

1237 w. DIVISION

CHICAGO'S FIRST MULTISTORY WAREHOUSE

EXPLORE WHAT'S COMING AT 1237WDIVISION.COM

continued from page 60

portal, which is expected to go live later this year. The platform will assign registration numbers to ITCs and PTCs, which are necessary for transferring the tax credits. Although no tax credit sales have occurred yet, prices are expected to be high.

The combination of ITCs, associated depreciation, other federal incentives, and state and local incentives will allow developers to recoup a significant percentage of the costs of their renewable energy systems. This will lead to even greater integration of green energy sources into large-scale commercial buildings. Additionally, the reduced energy costs and support for environmental, social and governance (ESG) goals that encourage sustainable building will help these buildings stand out in the market. ■

Because these types of transferable tax credits are new, there isn't any data available on their value. However, in June 2023, the IRS issued temporary guidance detailing plans for an online portal, which is expected to go live later this year. The platform will assign registration numbers to ITCs and PTCs, which are necessary for transferring the tax credits. Although no tax credit sales have occurred yet, prices are expected to be high.

Ethan Epstein is a founding principal of the New Mexico Tax Credit Alliance and the United States Tax Credit Alliance. **Dale Dekker**, AIA, is founding principal of Dekker/Perich/Sabatini, Ltd. **Adam Harper** is founder, CEO and principal of OE Solar.

Additional Information

For more information on renewable energy tax credits or related topics, visit www.taxcreditalliance.com. ■

California's Title 24 Introduces New Solar Requirements for CRE

Provisions require photovoltaic systems and energy storage on new non-residential construction.

By Brielle Scott

California's Title 24, the state's energy code, has required solar for all low-rise multifamily projects since 2016, but new provisions have gone into effect this year, impacting any projects permitted since January 1.

To help navigate the regulatory landscape and explain how solar and energy storage can benefit building owners and developers, **Rachel McCafferty**, director of business development for CalSolar Inc., shared her expertise during a recent NAIOP webinar on the topic.

"The solar requirement has been extended to not just multifamily projects but to all commercial and industrial new construction in California," McCafferty explained.

Changes include:

- A mandate for photovoltaic (PV) systems and energy storage on new non-residential construction, including high-rise multifamily (four stories and above) buildings.
- PV systems sized to meet approximately 60% of buildings' electricity loads, based on the conditioned floor area, climate zone and type of building.
- Electric vehicle (EV) charging requirements including EV-capable spaces and chargers. For parking lots with more than 25 spaces, you are required to install EV chargers. For larger parking lots (200 spots or more), roughly 25% of the parking spots must have EV chargers installed.

Not only is solar PV required, but battery storage also will be required on all new construction, McCafferty said. She explained that the PV system requirement is calculated based on a building's conditioned floor area and capacity factor. The capacity factor is based on building type and climate zone. So, there can be significant variability, she pointed out. The battery storage system required is based on the solar system's size.

Owners also have the option to use the Solar Access Roof Area (SARA) formula, which calculates the solar size requirement based on total square footage available on the roof multiplied by 14 watts per square foot.

"We don't see [the SARA calculation used] a lot, especially in industrial where you have a lot of roof space," McCafferty said, adding that it's possible to take both calculations and use the smallest of the two for building permits.

There are some exemptions to the code. For example, if the building's roof area does not have 80 contiguous square feet of space, or if the calculated PV system size would be less than four kilowatts.

"We're seeing cases in the state of California, especially with industrial spec development, where it is becoming more common for jurisdictions to require builders and developers to offset a certain percentage of the building load beyond what Title 24 stipulates," McCafferty said.

The city of Fontana, California, has an ordinance that requires all buildings over 400,000 square feet to offset 100% of the building load with renewable energy — a significant requirement. The city also requires more EV charging than is currently included in the state code.

"With speculative developments, that can be challenging because you don't know who the tenant will be," McCafferty said.

However, there are some ways to do an early-stage analysis to get some idea of what the local building codes will require. With the help of energy modeling (she estimates a typical industrial warehouse uses between 2-4 kilowatt hours per square foot per year), CalSolar can determine what would be required to offset 15% of the load, or whatever is required in the jurisdiction.

An upside to these sometimes-onerous requirements is the potential for monetizing the energy transition.

"We hear our commercial and industrial developers and owners often ask, 'How do I monetize this, especially when I'm not responsible for paying the utility bill — the tenant is?'" said McCafferty, adding that tenant billing is a way for building owners to reap the rewards of installing solar. "Say you have a tenant that would be paying 10 cents per kilowatt hour to the utility. As the building owner, you can offer power at 9 cents per kilowatt hour, essentially a 10% discount. You as the building owner get to take that spread — 9 cents — as additional net operating income for your development."

This can work for single-tenant or multi-tenant scenario. For multiple tenants, owners can utilize Virtual Net Metering (VNM), which allows them to install a single solar system but allocate tenant billing credit based on the consumption of each tenant meter.

"This can become pretty lucrative for building owners," McCafferty said. ■

Brielle Scott is senior communications manager at NAIOP.

The Future of Electric Vehicle Charging: A Guide for Commercial Real Estate Developers

As adoption increases, demand will surge for facilities at a wide range of properties.

By Trey Barrineau

Electric vehicle (EV) use is accelerating, and commercial real estate owners can reap significant benefits from installing EV-charging infrastructure at their properties. A recent NAIOP webinar explained how these programs can attract and retain tenants, improve the property's environmental score and generate new revenue streams.

According to **Bryce Christensen**, P.E., a senior partner with Kimley-Horn, EVs are becoming more affordable. Of the more than 40 options currently on the market, he said that 10 now cost under $40,000, and nearly every major automaker has made public commitments to EVs, which should boost adoption by helping bring prices down even more.

"It's no secret that the market share of electric vehicles in the United States and worldwide is trending up," Christensen said. "The demand is rising, and many potential consumers are just waiting for more charging infrastructure before committing to going all-electric."

Christensen noted that the tipping point for accelerated adoption of EVs seems to be around 5% market share, based on data from BloombergNEF.

As more drivers opt for electric vehicles, charging infrastructure will become more common at commercial properties.

"Typically, the first 5% market share is the slowest to achieve," Christensen said. "But once you get to 5%, EVs can quickly go from niche to mainstream."

For example, Norway currently leads the world in EV adoption rates. In 1990, the Norwegian government implemented a temporary tax exemption to incentivize EVs. It took until 2013 for the country to hit 5% adoption, but today, EVs account for more than 20% of all passenger vehicles on the road in the country, and more than 80% of all new vehicles sold.

According to Christensen, the U.S. market share for EVs reached 5.6% in the second quarter of this year.

Charging Basics

Jessica Cain, P.E., a senior partner with Kimley-Horn, discussed the different charging levels available for EVs.

Level 1 charging has power requirements similar to a toaster.

"You can run an extension cord and plug it right into your kitchen outlet and in about 10 minutes, you can drive about a mile," she said." In several days, you'll have a fully charged battery. So while it is an option, it probably isn't too practical for most of us."

continued on page 66

Understanding different business models for EV charging is crucial as it can influence investment and revenue opportunities. There are several options, such as leasing the site to network operators who handle the infrastructure investment, equipment and maintenance. In return, they might pay rent or offer a revenue-sharing solution based on usage.

- **FOSTER EMPLOYEE ENGAGEMENT AND CREATIVITY**
- **CREATE CONNECTION**
- **INFUSE ENERGY AND INSPIRATION INTO YOUR SPACE**

Through collaboration, the Johnson Atelier creates one-of-a-kind experiences that bring together art and nature through music, dance, poetry and food.

JOHNSON ATELIER

Learn more about exhibition opportunities

Jenée Castellanos, Associate Curator, 609-890-7777 ext. 227, jcastellanos@sewardjohnsonatelier.org

All rights reserved ©2023 Johnson Atelier, a not-for-profit 501(c)(3) organization.

Seward Johnson, *Who's in Charge,* ©1991, The Seward Johnson Atelier, Inc.

Photo by Kate Carter

continued from page 64

Level 2 chargers, with power requirements similar to a clothes dryer, can fully charge a car in about eight to 13 hours.

Level 3 chargers, also called DC fast chargers, have the potential to fully charge a vehicle in about 20 minutes. They also have the greatest power consumption, with requirements equaling five to 10 central air conditioners.

Use Case

The first step in setting up the ideal EV charging solution is understanding the use case:

- Consider the types of vehicles that will be charged, the types of drivers who will use the facility, and the goals of the site owners.
- Determine if the chargers will be open to the public or reserved for private users only.
- Evaluate the dwell time of vehicles at the charging location, which can vary significantly depending on the purpose of the site. For example, if the site is a destination charging stop where travelers need a quick charge before continuing their journey, a Level 3 DC fast-charging solution may be suitable. Conversely, if the site is a hotel where vehicles are parked for an extended period, a Level 2 charger might be more appropriate.
- Think about additional features such as smart monitoring, payment capabilities, credit card readers, cellular or Wi-Fi connections, and data collection for sustainability reports.

Site Characteristics

Analyzing the site's physical characteristics is another critical aspect of successful EV charging station implementation:

- Assess available electrical capacity and whether it's feasible to bring in more power if needed.
- Consider charging station placement, site accessibility and drainage patterns.
- Verify whether the site is in a floodplain and if it meets accessibility standards for public-facing charging.
- Station visibility is also important. While charging stations can usually be found by EVs seeking them out with GPS, having some visibility to the charging station can be good for public relations and safety for the users.

Business Models

Understanding different business models for EV charging is crucial as it can influence investment and revenue opportunities. There are several options, such as leasing the site to network operators who handle the infrastructure investment, equipment and maintenance. In return, they might pay rent or offer a revenue-sharing solution based on usage.

Alternatively, some landlords own and maintain the EV charging equipment. While this requires upfront costs, it offers more control over the charging rates, access to customer data and other revenue opportunities, such as contracting with fleet customers.

Grants and Funding

Federal and state grants and funding opportunities aimed at promoting EV adoption and infrastructure development provide major incentives for installing charging stations. For example, the $1.2 trillion Infrastructure Investment and Jobs Act includes provisions for EV charging network

continued on page 68

Federal and state grants and funding opportunities aimed at promoting EV adoption and infrastructure development provide major incentives for installing charging stations. For example, the $1.2 trillion Infrastructure Investment and Jobs Act includes provisions for EV charging network development and emissions reductions.

More About NEVI and CFI Funding

In February 2022, the U.S. Departments of Transportation and Energy unveiled the National Electric Vehicle Infrastructure (NEVI) Formula Program. **President Biden**'s Bipartisan Infrastructure Law established it to build out a national electric vehicle charging network, a key step toward greater accessibility to electric vehicle charging. The program will provide nearly $5 billion over five years to help states create a network of EV charging stations along designated Alternative Fuel Corridors, particularly along interstate highways. States must submit EV Infrastructure Deployment Plans to access these funds.

While the NEVI Formula Program sends money to states to build EV-charging infrastructure along interstates, U.S. routes and state highways, the CFI Discretionary Grant Program awards competitive grants to projects that fill gaps in the national charging and alternative-fueling network and build out charging in communities. A priority of the CFI Program is bringing EV charging into urban and rural communities, downtown areas and local neighborhoods, particularly in underserved and disadvantaged communities, as well as to designated alternative fuel corridors. ■

Think Matrix

PROUD SUPPORTER OF NAIOP

INDUSTRIAL

COMMERCIAL

OFFICE

RESIDENTIAL

GOLF & HOSPITALITY

MATRIX

Real Estate Investment & Development ▪ 732-521-2900 ▪ www.matrixcompanies.com

continued from page 66
development and emissions reductions. This includes programs such as the $5 billion National Electric Vehicle Infrastructure (NEVI) Formula Program, which is working to develop a national DC fast-charging network, and the $2.5 billion Community and Fueling Infrastructure (CFI) discretionary grant programs that will be open to cities, counties, local municipalities and tribes. The CFI program also includes carve-outs for battery storage and solar to support infrastructure development.

Investing in EV charging stations offers several benefits to a company. Beyond the potential revenue streams, implementing charging infrastructure helps meet sustainability objectives and differentiate the property. As more companies adopt sustainability goals, offering EV charging facilities becomes a strategic advantage that aligns with the growing demand for environmentally responsible practices.

It's essential to research and identify the various funding sources and incentives that are locally available to offset the installation costs and ensure the viability of any EV charging project.

Many Benefits

Investing in EV charging stations offers several benefits to a company. Beyond the potential revenue streams, implementing charging infrastructure helps meet sustainability objectives and differentiate the property. As more companies adopt sustainability goals, offering EV charging facilities becomes a strategic advantage that aligns with the growing demand for environmentally responsible practices.

"We've seen many of the largest corporations in America make public sustainability goals," Christensen said. "They have to find ways to achieve these. Lots of different things come into play. And differentiating your location with EV charging is a great way to attract customers, tenants and future investors." ■

Trey Barrineau is the managing editor of publications for NAIOP.





Congratulations, VanTrust!

NAIOP DEVELOPER OF THE YEAR

At Martin-Harris Construction, we know excellence when we see it. That's why we are thrilled to celebrate and congratulate VanTrust Real Estate on being named NAIOP Developer of the Year. As a trusted partner, we have had the privilege of working alongside VanTrust on numerous successful developments that have transformed Southern Nevada. We are proud to be part of VanTrust's journey and look forward to many more ventures together.

Congratulations once again and thank you for your unwavering commitment to strengthening our communities.

MARTIN-HARRIS CONSTRUCTION

For over **45 years**, Martin-Harris Construction has helped Owners, Developers and Real Estate Executives *Discover Excellence*®.

See how at www.**martinharris**.com.

Southern Nevada 702.385.5257 // Northern Nevada 775.306.1700 // License No. 79469 Unlimited

Photo courtesy of VanTrust Real Estate

The employees of VanTrust Real Estate, NAIOP's 2023 Developer of the Year, work out of five offices around the country, with a sixth one coming in 2024. Not pictured: Christy Poston, Jessica Van Tuyl, Tricia Van Tuyl and Vanessa Van Tuyl.

VanTrust Real Estate: Developing with a Difference

This Kansas City-based real estate firm 'has always been about people.'

By Ron Derven

At a Glance

- Kansas City-based VanTrust Real Estate was founded in 2010 and has grown into a full-service real estate development firm, operating nationwide.
- VanTrust follows a collective-success business model where everyone participates in the success of the company.
- The company believes in being good stewards of the land it develops, aiming to enrich the communities it touches.

Since its founding in 2010, Kansas City-based VanTrust Real Estate has worked to ensure that "developing with a difference" is more than just finding the right property or developing a successful project. Rather, it's making a strong commitment to its employees, communities and clients. It's "doing right by the dirt." It's developing every project as if it were a long-term hold — and so much more.

For its outstanding quality of products and services, financial stability, ability to adapt to market conditions and support of NAIOP and the communities in which it works, VanTrust Real Estate is NAIOP's 2023 Developer of the Year.

"On behalf of NAIOP, we are honored to recognize VanTrust as our 2023 Developer of the Year," said **Marc Selvitelli**, CAE, NAIOP's president and CEO. "The company has achieved remarkable success by effectively navigating challenges and leading with an entrepreneurial and nimble approach. Its commitment to employees, clients and communities is impressive."

"We at VanTrust are extremely proud to be recognized by NAIOP as the Developer of the Year, and we would like to thank NAIOP for this honor," said **Dave Harrison**, president of VanTrust. "This award is a testament to the work ethic and conviction of our employees and the commitment of the Van Tuyl family capital. These two things, combined with the valued relationships we have in the brokerage, banking, construction and customer/client communities, is what we believe distinguishes VanTrust and enables us to develop with a difference."

The Early Days

VanTrust Real Estate started with a meeting in 2010 between **Cecil Van Tuyl** and Harrison, who was leading a regional office for a national development company. Both Cecil and his son Larry experienced exceptional success in the automotive industry. Cecil started with a single used-car dealership in the 1950s, then Larry joined the business in 1971. Together, they grew the Van Tuyl Group into the largest privately owned auto group in the U.S. with

Photo by Carl Schultz Photography, courtesy of VanTrust Real Estate

VanTrust CEO Larry Van Tuyl, left, and President Dave Harrison. They're shown amid the history, timeline and legacy of founder Cecil Van Tuyl.

more than 100 dealerships. In addition to owning the car dealerships and the land on which they were located, Cecil had exceptional business acumen in investing in various classes of real estate.

During a meeting in early 2010, Dave was assisting Cecil with a challenging real estate project. Aware that Dave and his group were embarking on a future "to be defined" endeavor, Cecil proposed a go-forward partnership. Caymus Real Estate was formed six weeks later.

"Cecil wanted to invest between $40 million to $60 million a year in commercial real estate," Harrison said. "Fast-forward a couple of years, and Caymus was saying grace over more than $700 million in projects. In 2012, I went to Cecil with three options for the go-forward business, as our business model did not match up with our in-place work product: Keep the original partnership model, create a hybrid company or become a regional/national developer. Cecil then suggested that I meet with his son, Larry, because he said 'you'll only have me for another 16 years' as he had planned on retiring at 100.

"After a brief meeting with Larry, the decision was made to be a regional/national real estate development company. Considering mutual objectives, the go-forward would become a fiduciary-based organization, owned by the Van Tuyl family. The name of the company changed from Caymus to VanTrust Real Estate as an ode to Cecil, as he was known as Van by his friends."

Sadly, "Van" passed away in 2012, but his legacy continues as part of the fabric of the company.

The Business Model

VanTrust Real Estate, LLC has grown into a full-service real estate development company, offering a broad range of real estate services including acquisition, disposition, development, development services and asset management. Product types include office, industrial, multifamily, retail, hospitality, science and technology, and recreational. VanTrust operates nationally

Larry Van Tuyl, left, with his father, Cecil, who began as a successful owner of car dealerships before launching a real estate company in 2010.

with regional offices in Columbus, Dallas, Phoenix and Jacksonville and its headquarters in Kansas City, Missouri.

"We have what we call a collective-success model," Harrison said. "That is, everyone in the company participates in its success. We are not judged at the project level or at

The Meadowbrook Park development in Prairie Village, Kansas, spans 136 acres on the former site of a golf club.

Photo by Max McBride, courtesy of VanTrust Real Estate

the regional level. We are judged as a team."

Using a baseball analogy, Harrison noted that one approach in the industry is to swing for the fences — to hit home runs.

"We are 'small ball' players," he said. "We want to consistently hit a lot of singles and doubles. Then, if we're lucky, they turn into triples and even home runs. I would argue that when you look at it from a team approach rather than an individual star approach, you will win more ballgames. We want to consistently develop good real estate."

"Cecil and Larry have always been about people," Harrison said. "Their mantra — whether it was the car business or the real estate business — is develop and grow people."

VanTrust has become one of the nation's larger privately held commercial real estate companies by following a pragmatic, disciplined approach. The firm uses a straightforward yield-to-cost analysis and an estimated exit value at stabilization. In simple terms, a project must be worth more at completion than it costs. Each project is developed as if it will be a long-term hold for the Van Tuyl family.

VanTrust's underwriting strategy emphasizes conservatism to allow for unforeseen circumstances, according to Harrison.

"We are selective about the projects we undertake and prioritize quality over quantity," Harrison said.

'We Do What is Right for the Dirt'

However, VanTrust is about more than transactions, Harrison said. The company's goal is not only to deliver developments that become a part of a community's fabric, but also to strengthen that community in the process.

"When we touch a piece of ground, whatever we do to it probably encumbers that property for the next 100 years," he said. "You must be good stewards of that piece of dirt and the community where the dirt resides. Being a good steward of dirt never gets you in trouble. Bottom line, we do what is right by

"When we touch a piece of ground, whatever we do to it probably encumbers that property for the next 100 years. You must be good stewards of that piece of dirt and the community where the dirt resides. Being a good steward of dirt never gets you in trouble. **Bottom line, we do what is right by the dirt, and we are tasked by Larry Van Tuyl with three simple fundamentals: Do good real estate, do it with people you like, and have fun doing it."**

— Dave Harrison, President, VanTrust Real Estate

Photo by Martin-Harris Construction, courtesy of VanTrust Real Estate

The Northgate Distribution Center in North Las Vegas, Nevada, which opened in 2021, has eight Class A industrial buildings on 196 acres. VanTrust had to solve several infrastructure challenges to complete the project.

By the Numbers

A quick look at VanTrust Real Estate:

Years in existence: 13

Employees: 66

Offices: Five (headquarters in Kansas City, plus regional offices in Dallas; Phoenix; Columbus, Ohio; and Jacksonville, Florida, along with Salt Lake City, Utah, coming in 2024.)

Geographic reach: Projects in more than 50 municipalities across the U.S.

Space developed: More than 65 million square feet of office, industrial, multifamily, mixed-used, science and technology, and hospitality projects

Project starts in 2022: More than $1.3 billion ■

the dirt, and we are tasked by Larry Van Tuyl with three simple fundamentals; Do good real estate, do it with people you like, and have fun doing it."

While VanTrust has focused on quality at all its developments, three projects that really stand out are Meadowbrook Park in Prairie Village, Kansas; Northgate Distribution Center in North Las Vegas, Nevada; and Frisco Station in Frisco, Texas.

The 136-acre Meadowbrook Park project, formerly home to the Meadowbrook Golf and Country Club, was acquired by VanTrust in 2010. The company continued to operate the club until 2014. During that time, VanTrust worked with the city and local stakeholders to establish what it termed a "community vision" for the site. The company wanted buy-in to create a redevelopment project that would be a win-win for all.

When the golf club closed, VanTrust, along with Johnson County Parks & Recreation, designed and executed a community engagement program that solicited input from more than 800 residents over a two-day open house. According to the company, this high level of public participation helped create support and buy-in from the community that was reflected throughout the entitlement process.

Recognizing how important green space is to communities, VanTrust dedicated 80 acres of the 136-acre site to be a county-owned regional park, which opened in 2019. The balance of the private development focused on the integration of 48 single-family homes, 70 twin villa units, 225 senior housing units, a 54-room boutique hotel including 5,000 square feet of restaurant and retail space, and The Kessler at Meadowbrook, a 282-unit luxury apartment community with a mix of studio, one-, two- and three-bedroom units.

The $300 million redevelopment effort, which wrapped up in 2022, included stormwater filtration systems; lake restoration to improve the local watershed, control flooding (15 homes were taken out of the downstream floodplain) and

Photo by Debra Hale ©Hillwood, courtesy of VanTrust Real Estate and Hillwood

The Offices Two at Frisco Station in Frisco, Texas. VanTrust has invested more than $250 million in this award-winning 242-acre mixed-use development north of Dallas.

enhance the aquatic habitat; and strategic tree preservation throughout the project that saved more than 500 trees.

In North Las Vegas, the Northgate Distribution Center features eight Class A industrial buildings on 196 acres. The 3.6 million-square-foot park has about a mile of frontage on Interstate 15 and provides state-of-the-art distribution space for Amazon, Fanatics, Honest Co. and other major companies. The buildings range from 191,000 square feet to 813,000 square feet.

The main difficulty encountered during the $175 million project, which opened in 2021, was the lack of infrastructure at the site. VanTrust needed to add 3.5 miles of sewer lines, 2.5 miles of power lines and four miles of gas lines. The site was also constrained by its location, with I-15 to the south and a Union Pacific Railroad line to the north. As the first buildings within the Northgate Distribution Center progressed through design and construction, VanTrust experienced surging demand for the space.

The success of those speculative buildings made a strong business case for the development of future buildings within the park.

VanTrust met the infrastructure challenges and completed the development in just four years, a year less than initial projections, and the company went on to develop another 1.8 million square feet across I-15 at the Tropical Distribution Center.

Frisco Station is an award-winning 242-acre mixed-use development in Frisco, Texas, one of the fastest-growing communities in the U.S. Located along Frisco's highly desired North Platinum Corridor, Frisco Station features fully amenitized office, residential and hotel properties surrounding the Dallas Cowboys World Headquarters, The Star. Built upon the pillars of smart, creative and healthy, the project is being developed by the Frisco Station Partnership, which is composed of The Rudman Partnership, Hillwood and VanTrust Real Estate. Upon completion, Frisco Station will include 2,400 units of urban living residential, a 30-acre programmed park system, a 55-acre corporate campus, a dining, shopping and entertainment district, three million square feet of mid- and high-rise office space, and 34 acres of health, wellness and medical facilities. VanTrust is the exclusive office developer within Frisco Station and has already completed more than 650,000 square feet of Class A office within the park consisting of The Offices One, Two and Three.

Sustainability

VanTrust seeks to reduce environmental impacts in its developments. According to the company, its project teams include numerous LEED-accredited professionals from a variety of disciplines. The project teams evaluate opportunities to incorporate sustainable strategies into every project. In 2022, they completed the $125 million, LEED Platinum-certified SkyCenter One at Tampa International Airport.

This 275,000-square-foot office building connects to the airport via a skywalk and is the first platinum-level LEED-certified new-

At 275,000 square feet, SkyCenter One at Tampa International Airport is the first office building in Tampa to obtain LEED Platinum certification.

Photo by Ben Tanner Photography, courtesy of VanTrust Real Estate

construction project in Tampa. It reached that level by implementing practical and measurable solutions in areas including sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

Built with low-emitting materials, SkyCenter One uses 34% less energy than the industry baseline and saves an estimated 1.1 million gallons of water annually. More than 63% of the materials used in construction were extracted and manufactured regionally, supporting the local economy during the pandemic. Additionally, 45% of materials were sourced from recycled content, and more than 1,118 tons of construction waste was diverted from landfills, representing an 84% total diversion rate. The parking garage includes 66 charging stations for electric vehicles, as well as a large and secure room for bike storage.

Active Within NAIOP

VanTrust is a major supporter of NAIOP. Of its 66 employees, 30 belong to the association. They are active across several chapters, including NAIOP Arizona, NAIOP Central Ohio, NAIOP Northeast Florida, NAIOP North Texas and NAIOP Southern Nevada.

VanTrust takes full advantage of the association's networking, education and public-policy support. Further, it gives back by encouraging employees to be available for functions including multiple chairmanships, committee leadership, educational offerings, mentoring, and speaking at local and national NAIOP events.

VanTrust's involvement with NAIOP includes employees who have served as local chapter presidents, including **Keith Earnest** with NAIOP Arizona, and **Andy Weeks, Bill Baumgardner**, **Phil Rasey** and **Raif Webster** with NAIOP Central Ohio. (Baumgardner also currently serves on the board for NAIOP North Texas.) Earnest also serves on the NAIOP National Board. Members of the VanTrust team have also held positions on the board of directors for several local chapters, including **Jenna Borcherding**, currently serving on the board for NAIOP Arizona, **Ryan Lidke**, currently serving on the board for NAIOP Central Ohio and **Marc Munago** with NAIOP Northeast Florida. Borcherding also served on the NAIOP I.CON conference planning committees in 2022 and 2023.

Support of Local Communities

At VanTrust, the core mission is to be responsible stewards to the communities it serves. In the past three years, the company has made contributions to more than 172 charitable organizations.

"We strive to build stronger, healthier communities and put our energy into the relationships with those communities," Van Tuyl said. "For VanTrust, it's about more than transactions. Our goal is to deliver developments that become ingrained into the fabric of the community."

VanTrust wants its employees to be leaders in the community, and that involves taking part in both charitable and civic causes.

"Each year, our employees earmark a charity that they would like to become involved with," Harrison said.

How VanTrust Develops a Project

The majority of VanTrust's development opportunities come from the brokerage community and trusted partners (such as lenders, architects, general contractors, etc). The company has no in-house brokerage, so it never competes with its outside brokerage partners.

"When a project comes to us, we like to do what we call 'cowboy math,'" said VanTrust President **Dave Harrison**. "We are not a big spreadsheet company. We put every opportunity up on a whiteboard and keep it general and simple to begin with."

Some of the questions that Harrison and his team ask at this initial phase are: Does the project match up with our objectives? Does it match up with market opportunities? Does it hit our return thresholds?

"If we are looking at eight opportunities, two of them might make it past this triage stage," he said. "If an opportunity isn't a good fit, we often suggest who it might be a fit for. We want to stay in our lane, and we want to do what we know we can do well."

If an opportunity does appear promising, VanTrust will then pull all disciplines together to do the initial underwriting and due diligence because its style is to "get about there real quick" This underwriting brings to the table its valued partners associated with the development process and identifies any "gotchas."

"We will look at all the components and distill the project down to a one-page document," Harrison said. "We focus on four levers: Can we build it for no more than W? Can we lease it for at least X? Will it be worth at least Y at completion? And can we finish the project in no more than Z amount of time?"

The bottom line for VanTrust Real Estate is this: a project must be worth more the day it is completed than what it costs to build or buy.

"This simplistic approach in taking calculated risks has proven to be successful for VanTrust," Harrison said. ■

"We strive to build stronger, healthier communities and put our energy into the relationships with those communities. For VanTrust, it's about more than transactions. Our goal is to deliver developments that become ingrained into the fabric of the community."

— Larry Van Tuyl, CEO, VanTrust Real Estate

"All employees get to take a check to a charity of their choice annually, but it's not just writing a check — we want them involved. The community benefits, the specific causes benefit and the employee benefits."

Last year, the company helped nurses who worked through COVID in underserved areas of the community by providing signing bonuses and scholarships to help recruit and retain low-income and diverse professionals in the field. This year, VanTrust is focusing on contributions to help children in underserved areas who have experienced learning loss because of COVID.

2023 and Beyond

What's ahead for VanTrust Real Estate?

The company recently launched Science + Technology, a new national division that is designed to match its real estate expertise and capital resources with both public- and private-sector clients in the life sciences, R&D, institutional, governmental, biotech, pharmaceutical and technology industries.

"We had not done many medical, life science or tech projects, preferring instead to stick with what we knew best — industrial, office and multifamily," Harrison said. "Now we are creating an additional silo for deploying capital and utilizing our human resources in this exciting sector."

VanTrust is also poised to expand its geographical footprint in 2024 by opening a regional office in Salt Lake City. It will be the company's sixth regional office.

As for civic involvement, VanTrust currently includes the creation of a scalable affordable-housing model that can deliver homes and ultimately home ownership in their local underserved communities. This endeavor, which launches in the coming months, includes collaboration with many of VanTrust's existing business partners.

These new ideas, and others that will emanate from the partnership of the VanTrust team and the Van Tuyl family, will undoubtedly lead to even more pioneering national development opportunities. But through it all, the company will remain true to its legacy — "developing with a difference." ■

Ron Derven is a contributing editor for Development magazine.

The Logistics Building of

Courtesy of Ware Malcomb

The prototype's design uses existing building systems and leverages them in innovative ways to improve flexibility and throughput.

the Future

A new prototype aims to solve the challenge of putting industrial facilities in dense urban areas where land supplies are constrained.

Courtesy of Ware Malcomb

Ware Malcomb unveiled a prototype that it calls "the industrial building of the future" during I.CON East in Jersey City in June. It's a multistory logistics facility that is designed to fit in densely developed urban areas.

By Matt Brady, LEED AP, Ware Malcomb

At a Glance

- Ware Malcomb has designed a prototype that addresses land constraints for logistics facilities in dense urban areas.
- The prototype uses innovative methods to streamline operations.
- The new design prioritizes sustainability by integrating solar and wind strategies. ■

Technology has added new layers and dimensions to the built environment. In the logistics industry, it affects the layout of sites, as well as the utilization and function of industrial buildings. It is also helping them evolve into facilities that resemble automated machines for production, supply and delivery.

The e-commerce revolution has intensified speed-to-market demand. However, industrial developers in almost every major market across the Americas face unprecedented challenges around land constraints and customer proximity. What is the solution?

One possibility is a new prototype of an industrial facility. Designed by Ware Malcomb, the company calls it the "logistics building of the future."

In recent years, developers have built multistory industrial buildings to solve the challenges associated with land constraints in dense urban markets, and Ware Malcomb has been a leader in the growth of

Courtesy of Ware Malcomb

The internal components of the prototype include a dedicated lane for inbound trucks (1), a 120-foot-tall automated storage and retrieval system (2), flexible material-handling space (3), and Parkmatic's rack-and-rail Stacker system for vehicle storage (4).

this property type. (See "Industrial Development Goes Vertical" in the Winter 2018 issue of Development.) However, these facilities require ramps and trucks that take up valuable space, creating cost and navigational challenges.

The new prototype overcomes these obstacles. It includes technologies such as machine learning and artificial intelligence (AI) that redefine how the building's components interact while enhancing synchronization and increasing efficiency to maximize throughput.

The Ware Malcomb team collaborated with industry experts from JLL, to gain insights from tenants; DH Property Holdings, which develops innovative industrial buildings; Suffolk Construction, to determine the cost of the project; and Parkmatic, to understand the future of automated parking systems.

Site Considerations

The lack of large, urban sites close to consumers results in the challenge of fitting more throughput into tighter spaces. The new prototype could work in any dense, urban market affected by high land costs and the scarcity of large parcels.

Another problem for industrial facilities in these areas is parking. Delivery vehicles and employees' personal cars can take up a lot of room. To solve this challenge, industrial tenants are renting offsite parking lot space as close to their facilities as possible. In some urban areas, there are no alternative options for transportation storage. The result is more vehicles parked on public streets, creating more congestion and restricting the critical flow of goods and people.

Exploring the Internal Components

This new logistics facility uses existing systems, but leverages them in innovative ways.

Automation of inbound traffic. Unlike existing multistory industrial facilities, there is a dedicated lane for inbound trucks. This design ensures that inbound and outbound traffic never conflicts, and it also leaves all doors in the warehouse available for offloading. The prototype's design uses GPS and other software to automatically schedule truck arrival and placement. This synchronization can greatly improve optimization throughout the facility.

The automatic storage and retrieval (ASRS) system in this facility is like the racking systems used in many warehouses and cold buildings, only taller. The 120-foot clear height racks run on AI and machine learning to help them anticipate receiving and pallet-delivery needs for fast and efficient operations.

The truck court is fully automated with driverless electric vehicles called "yard hogs" handling all trailers on the site. This computer-automated choreography of vehicles will smooth operations and increase throughput.

With dedicated outbound doors on three upper levels, there is potentially more than triple the amount of throughput compared to a conventional warehouse located on a similarly sized site. Each floor can accommodate most material-handling and packing systems in use today, as well as those anticipated in the future.

Racking/ASRS. The automatic storage and retrieval (ASRS) system in this facility is like the racking systems used in many warehouses and cold buildings, only taller. The 120-foot clear height racks run on AI and machine learning to help them anticipate receiving and pallet-delivery needs for fast and efficient operations. Because the ASRS system serves all four levels of the building, not just the ground floor, the amount of ASRS activity can quadruple. Instead of only delivering goods to the ground level (as in current warehouses), which can be a bottleneck in the process, products can now move to the three upper material-handling levels via a one-way flow. Pallets are also returned to this area. And with 100% automated racking, this area could ultimately run as a “dark warehouse” that operates with no human labor.

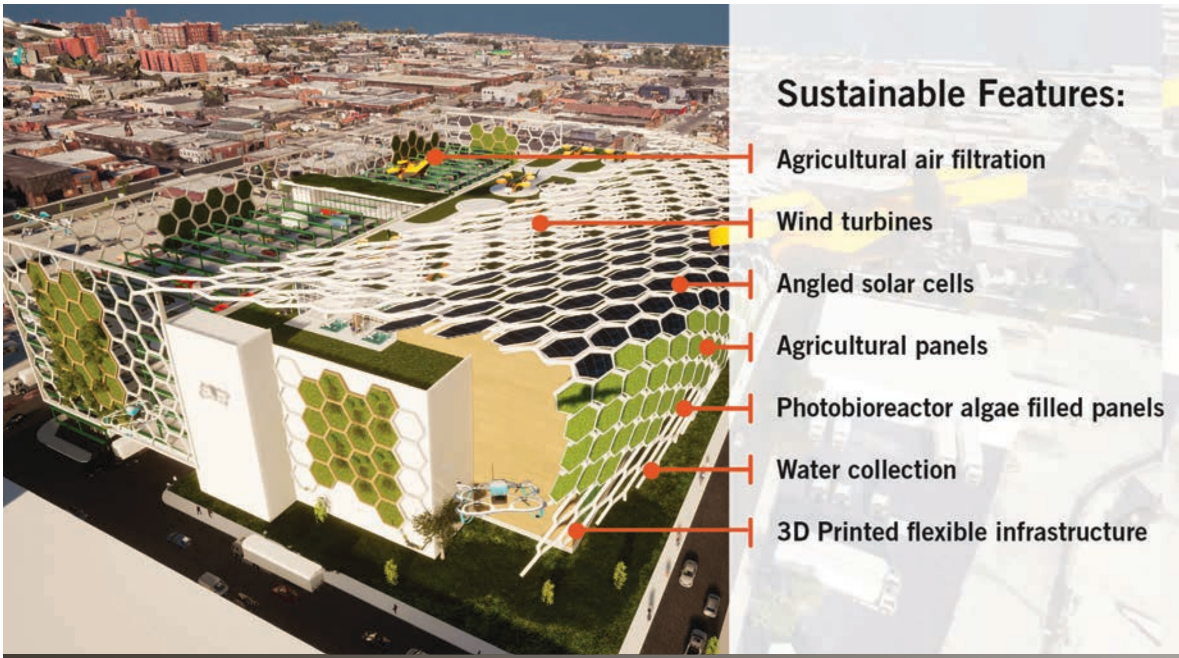
Material-handling space. With dedicated outbound doors on three upper levels, there is potentially more than triple the amount of throughput compared to a conventional warehouse located on a similarly sized site. Each floor can accommodate most material-handling and packing systems in use today, as well as those anticipated in the future. The office space is located on the roof level to maximize the utility of the lower levels. This is also an ideal area for coveted rooftop amenities and to accommodate vertical takeoff and landing (VTOL) drone delivery operations, as well as executive commuters in helicopters.

Courtesy of Ware Malcomb

An example of the efficient vehicle queuing system in action. A driver returns an empty delivery vehicle, parks it in a stall, and heads to a full delivery vehicle that is waiting for them.

The Stacker. Ramps are inefficient in multistory warehouses, and elevators aren’t favored by most occupiers. To solve this challenge, the prototype uses a system that brings vehicles to the outbound dock doors automatically. Parkmatic’s vehicle rack-and-rail Stacker system enables drivers to leave their cars at the entry, and the computer system manages and stores the vehicles in an unoccupied vault. When a user completes a shift, the Stacker delivers their car to them at the ground level. The technology doesn’t require ramps and eliminates the need for drivers to motor around searching for a vacant parking space, increasing efficiency and safety. The parking system can be used for both passenger and delivery vehicles. It sorts and delivers vehicles based on need in real time. For each level of material handling, there are two levels of automated storage for employee vehicles and delivery vans. Additionally, AI and machine learning will improve the process as they learn the building’s operations, which are based on the needs of the tenants.

Vehicle queuing. When a delivery worker arrives at the site, they leave their personal car in an open bay at the ground floor. The system knows who they are, their role and schedule based on a scan of their car or phone. This same electronic intelligence provides them with a fully loaded delivery vehicle to start their shift. After completing a route, the driver returns to the facility. Again, thanks to GPS, the system knows they are arriving and prepares a new, fully loaded delivery vehicle for them, with a vacant spot nearby. The employee parks the now-empty



Courtesy of Ware Malcomb

The sustainable design features of the logistics building prototype.

vehicle in the vacant spot, moves into the new vehicle, and starts their next route. At the end of their shift, the driver's personal car is returned to them where they dropped it off at the start of the workday.

Sustainability is Critical

This design employs conventional solar and wind strategies. The dynamic, hexagonal grid also contains photobioreactor algae-filled glass systems that remove carbon dioxide from the air and respire oxygen, creating heat and energy in the process.

To allow for other energy-harvesting mechanisms such as water collection, a 3-D printed façade system provides a flexible infrastructure that could be fitted and scaled with prefabricated and interchangeable panels as needed.

There are many other sustainable components possible within the prototype. As other technologies come to market, the building has the capacity to incorporate them to increase energy independence and reduce the strain on the power grid.

Reducing Transportation Costs

According to a 2022 CBRE Supply Chain Advisory Report, transportation costs typically represent 45% to 70% of a company's total logistics spend, while occupancy costs (including real estate) account for only 3% to 6%. The prototype aids in reducing transportation costs by eliminating the need for offsite vehicle storage. Additionally, the design allows for three times more vehicles than a conventional industrial site and those vehicles are available on demand, which maximizes the throughput of goods.

The chart on the facing page compares three types of industrial buildings on a 4.6-acre urban site. A few important takeaways from this comparison include:

Efficiency. The vast increase in throughput is due to the increased pallet capacity and greater number of dock doors.

Parking. Compare the number of

It's Not About Square Feet Anymore

The logistics industry continues to discuss square feet and clear heights as buildings evolve, but these metrics no longer adequately describe the characteristics of the modern industrial facility. Clear heights have shifted from 32-foot clear, to 36-foot clear, to 40-foot clear and now even higher.

The concept of cubic feet has been around for years, and it is often used for refrigerated facilities (specifically in reference to pallet positions), but there has not been an overall shift from the metrics of square feet. For this study, the discussion is simplified by comparing the number of pallets, amount of packing areas and dock doors. This is the best indicator of the prototype's throughput.

The cubic footage of a building is calculated by multiplying the facility's total square footage by its clear height. ■

This design employs conventional solar and wind strategies. **The dynamic, hexagonal grid also contains photobioreactor algae-filled glass systems that remove carbon dioxide** from the air and respire oxygen, creating heat and energy in the process.

parking stalls. There is enormous potential to consolidate vehicle handling and reduce transportation costs.

ASRS system. There is a unique challenge when considering the ASRS system in the logistics building of the future because the facility does not work without it. Therefore, the system is an essential factor in the overall cost of the project.

Finally, this comparison must include the cost of rent in various markets. The New York City area has many multistory industrial buildings, but the prototype is viable in almost any dense, expensive urban market. For example, a parcel of land in San Francisco's China Basin area was the basis for the prototype's design concept. In this analysis, the key components are access to an enormous consumer base and proximity to a corresponding network of highways and arterial roads. The prototype would be relevant to any market that fits these key components.

Cost Comparison: Three Industrial Buildings on a 4.6-Acre Site

	Traditional Warehouse	Multistory Warehouse	Logistics Building of the Future
Square Feet	177,000	482,940	743,397 (includes parking)
Clear Height	36 feet	36/28/18 feet	116 feet
Pallets	12,000	27,000	36,000
Parking Stalls	22	200	700
Rent	$2.52 per sq. ft.	$2.92 per sq. ft.	$4.88 per sq. ft. with ASRS ($2.71 without ASRS)
Pallet Rent	$3.11 per pallet	$4.35 per pallet	$8.40 per pallet with ASRS ($4.60 without ASRS)

Data provided in partnership with DH Property Holdings; courtesy of Ware Malcomb and DH Property Holdings

Relevant Research

In October 2020, the NAIOP Research Foundation published "The Evolution of the Warehouse: Trends in Technology, Design, Development and Delivery."

The report aims to provide the real estate development community with insight into current and future trends in building and logistics technologies and their implications for industrial real estate. **Steve Weikal** and **James Robert Scott**, researchers at the MIT Real Estate Innovation Lab, interviewed professionals specializing in industrial building design and automated systems to identify emerging trends that will be of interest to industrial developers, building owners and tenants.

To view and download the report, visit: www.naiop.org/research-and-publications/research-reports/ ■

An Evolving Approach

Ware Malcomb has continued to challenge itself since NAIOP's 2013 Distribution Center of the Future competition, when the team envisioned the industrial facility of 2020. Back then, the primary goal was to maximize the use of a site by obtaining a higher return and making the floor area ratio (FAR) as large as possible. The company's designers reached this goal through a creative balance of truck circulation, loading and parking.

When Ware Malcomb set out to study the logistics building of the future, the team focused on increasing the volume of product storage on small urban sites. However, it turned out that increased efficiency and higher throughput are the keys to future success.

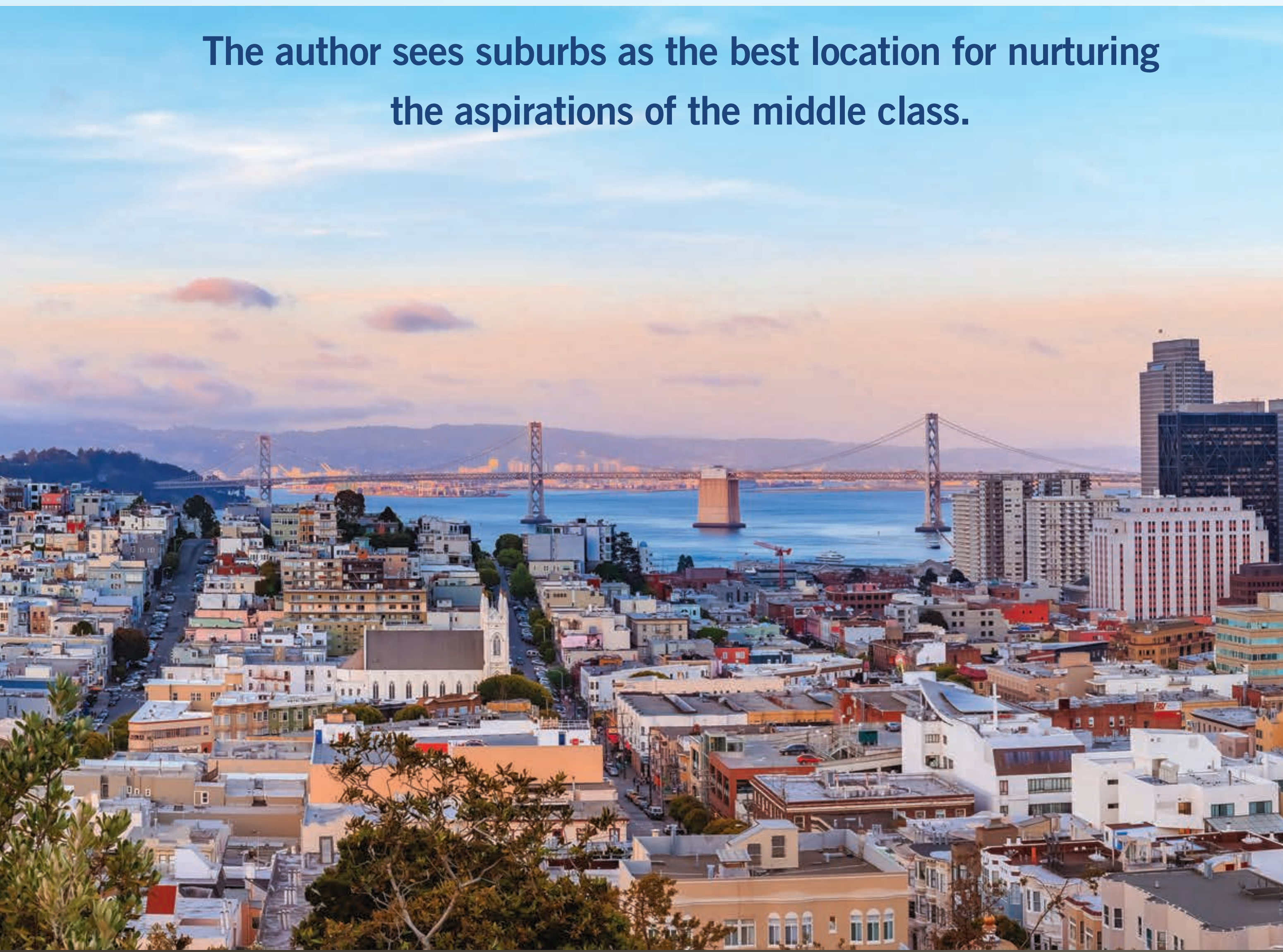
For industrial developers and their tenants, the challenges of customer proximity and land constraints demand solutions. The logistics building of the future, using cutting-edge technology and creative design, could fulfill the unique needs of the current industrial market. ■

Matt Brady, LEED AP, is an architect and the executive vice president at Ware Malcomb.

'We Cannot Allow the Best to Overwhelm the Good'

A Conversation with Joel Kotkin

The author sees suburbs as the best location for nurturing the aspirations of the middle class.



According to demographer Joel Kotkin, cities such as San Francisco, which have seen big increases in crime and homelessness since the pandemic, could see rents fall precipitously in their downtown areas.

At a Glance

- Demographer **Joel Kotkin** predicts continued population shifts from expensive coastal metros to the Sunbelt over the next 20-30 years.
- Kotkin observes that international immigrants are moving to places where there's opportunity and a manageable cost of living.
- In the real estate sector, he sees opportunities in the suburbs and exurbs, especially if they can reduce crime and avoid excessive tax increases.

By Gerard C.S. Mildner and Trey Barrineau

Author and demographer **Joel Kotkin** is a big fan of the suburbs, a stance that often puts him at odds with urban planners and environmentalists.

"The urban fringe is where the American dream is now being rediscovered," Kotkin wrote in the Spring 2022 issue of "American Affairs." "But these fringes remain widely disdained in academia, media and the planning community. … Affordable, safe, healthy communities are vital to maintaining our country's greatest asset: the families creating the next generation. None of this should be seen as an abandonment of the city, but rather as a sign of its continuing reinvention."

Development magazine recently sat down with Kotkin to discuss topics spanning population growth and change, the prospects for real estate in the aftermath of the pandemic and much more. The conversation has been edited for length and clarity.

Joel Kotkin believes that growth in multifamily housing development "has, in some respects, peaked."

Development: *Where do you forecast population growth happening in the United States over the next 20 to 30 years?*

Kotkin: First, the population shift from the expensive coastal metros to the Sunbelt will continue. Second, much of this will be exurban growth, which will be taking place not only between regions, but also within regions. Even here in California, where the state has lost population overall, the suburban areas in the Central Valley and the Inland Empire are likely to keep growing.

Across the country, the trend will be for much lower population growth. I was projecting 400 million people in the U.S. by 2050, but I don't think we're going to get there. I think we'll be somewhat short of that unless there's a massive immigration wave. The birth rate is going to be lower because young people can't afford the housing they need to raise a family in many areas of the country. The death rate doesn't seem to be improving, either. Overall, I think population growth will be low but steady. The U.S. won't experience Japan's level of population decline for a while (that country's birth rate fell to 1.26 per woman in 2022, and its population is expected to decrease from 125 million to 87 million by 2070).

Development: *Where are Californians moving?*

Kotkin: Five years ago, the Pacific Northwest was one of their favorite places, particularly upper-middle-class people from the Bay Area. I think that flow is much lower now. Urban policy analyst **Wendell Cox** has noted that Seattle and Portland now have deficits of domestic migrants. Where are the Californians going instead? Arizona, Texas, and for the first time, we're seeing them moving to Florida. Also, Denver is losing ground in attracting new people. There's more movement toward Idaho, Montana, places like that.

That said, migration is going to be to many places, and it often depends on where adult children have settled. That's a trend I've gleaned from personal interviews with people. They moved to be near their kids.

Development: *What about international immigrants?*

Kotkin: They are not moving to the big cities at anything like the levels seen in the past, and the metros they're moving to are increasingly not New York or Los Angeles. The three cities that saw the largest increases in foreign-born population in the past decade (this is pre-pandemic) were Dallas, Houston and Miami. Los Angeles actually lost foreign-born population over the decade. The immigrants are going to places where there's opportunity and where the cost of living is manageable, such as Omaha, Nebraska. I had a speech there a while back and I went to a nearby park, and it was as multicultural as Brooklyn or Los Angeles.

Development: *How does the movement of people from big metros to suburbs in the Sunbelt jibe with greater concerns about climate change and reducing our carbon footprint for the sake of the planet?*

Kotkin: The whole debate around climate change has shifted toward this idea that people must live a certain lifestyle. However, that lifestyle is not even possible or preferable in most of the country. When people are encouraged to move into densely developed places like Los Angeles, Houston or Dallas, that means more traffic congestion, because mass transit in those places is essentially a non-factor.

If we're going to deal with climate change, it must be done in a way that at least has some congruence with what the economy demands and what people want. How do we do it in a way that's sustainable socially and economically? If people are mandated to adopt policies that are against their interests, there is going to be pushback. We already see this happening in Europe. The climate issue and energy policy have contributed to the growth of the far-right party in Germany.

Brooklyn is one urban area that Joel Kotkin says will prosper thanks to a high concentration of skilled professionals and a surplus of "interesting housing with historic value," such as the borough's famous brownstone apartments.

Development: *Are there any real estate products that will do better or worse under these kinds of conditions?*

Kotkin: There are opportunities in the exurbs, the suburbs and the cities if they can reduce crime, while not repeatedly raising taxes.

Let's look at housing first. Depending on variables such as interest rates and the economy in general, single-family homes will continue to do reasonably well. There doesn't seem to be a glut of them anywhere in the country. There will be some price adjustments up and down, but I think that the overwhelming demand is there. In states like California, it's so hard to build them that existing single-family homes continue to increase in value.

On the rental side, they're still building relatively inexpensive apartments in many parts of the country. I think developers will regret that investment. There's a limited number of people who are willing and able to pay $3,500 to $4,000 a month for a one-bedroom apartment. We're not talking Manhattan, Paris or London; we're talking San Diego, Los Angeles or Philadelphia. These are cities where the allure is not great enough if that's the only kind of housing you're building. I think multifamily has, in some respects, peaked. Then, certainly in a state like California, it's just too expensive. Most of my students pay higher rent than I pay for the mortgage on my house. High-rise development is very expensive per square foot. The only way you can densify your way out of the affordability problem is to have a massive amount of subsidy coming from the government.

As for the office market, an interesting form is satellite offices and coworking spaces. They have a chance to do well in the suburbs. People who need an office can come into a suburban space instead of going downtown. Suburban offices have done better than the inner-city offices, and I think there's good potential in them. As a general trend, there's a lot of redundant space in suburbia, particularly retail space, that might be easier to convert to other uses than a 90-story office building in Manhattan.

I think high-rise downtown office buildings are problematic. Some high-end developers believe Class B office space in New York City is dead because there's going to be enough Class A to cover almost any possible demand.

Industrial seems to be hitting some rough spots but has been solid, particularly compared to retail and office. That and medical seem to be the only kind of construction I see here in Southern California.

Additionally, exurban mixed-use developments like The Woodlands in Texas will continue to thrive. Places like that have a lot to offer — office, residential and even industrial. They have lots of open space, and while it's mainly single-family residential, there's also a lot of multifamily and townhouse development. In the case of The Woodlands, they now have three generations living in

About Joel Kotkin

Joel Kotkin is the Roger Hobbs Presidential Fellow in Urban Futures at Chapman University in Orange, California, and executive director of the Houston-based Urban Reform Institute. He is also senior advisor to the Kem C. Gardner Policy Institute and executive editor of NewGeography.com. His writing appears regularly in many national and international publications.

Kotkin is the author of 10 books. His latest, "The Coming of Neo-Feudalism: A Warning to the Global Middle Class," is now available in paperback. ■

According to Joel Kotkin, The Woodlands, Texas, is the type of suburban mixed-use development that could serve as a model for similar projects.

the same town in different kinds of housing.

And there are also great opportunities in Brooklyn and the first-ring suburbs in places like Portland and Seattle. These areas often have interesting housing with historic value. Development is at a higher density than the traditional suburb, but it's not super-high density. These urban areas where many skilled professionals live could become even stronger, because if residents aren't going downtown every day to work, and they're at home or in a shared office space, they're spending money in their neighborhoods. When I lived in Los Angeles near Studio City, almost all my neighbors worked at home, and they had lunch on Ventura Boulevard in Studio City. That helps local retailers tremendously.

Development: *For some of these troubled downtowns, such as San Francisco and Portland, what happens to these buildings? Do we end up with abandoned high-rises, or are rents going to come down to make those buildings at least competitive?*

Kotkin: Rents will come down. There may be an opportunity for cities, as in the 1970s when prices went down. The problem is that the mortgages on newer construction sometimes demand certain levels of rent. If you can't reach them, they're going to foreclose on you. There are going to be some empty buildings, some under-occupied buildings. One thing I noticed in New York was that the area around Times Square was the only place I didn't see any vacancies. That's because tourism did come back to a large extent. The tourist areas may do reasonably well where you've got this constant movement of people coming in from all over the world.

The challenge is converting the high-rises built in the past 20 or 30 years. You can't open the windows, and the floorplates have these uninteresting layouts. I don't know how you do that with a huge tower in Los Angeles or San Francisco. I don't know what's going to happen to some of these. A lot of them will change ownership, and then we'll see how creative they are.

Development: *Let's talk about transportation. How will changes in the ways roads are designed and managed affect how cities develop?*

Kotkin: There are going to be a lot of interesting options. The oddity of congestion pricing, and we're seeing this now unfold in New York, is that people say, "Well, the hell with it. I'm not going into the city at all." It's a dilemma for the cities. I understand they don't want more traffic, particularly in dense urban areas, and they obviously need revenue since the empty buildings are not going to generate the level of property taxes they were expecting. Looking ahead, the question of whether you need a tax imposed on vehicle miles traveled when people are driving very clean or electric cars seems a bit silly to me, but it will certainly be attempted.

We're not going back to the public transportation we had in cities before World War II, which was dominated by streetcars, subways and buses. So, what are the new models? In some Bay Area communities, they're providing Uber-like transportation for people who have disabilities or can't drive. That may be a better solution than a bunch of buses running around half empty. I live near Orange, California, which is fairly dense. It's a place where you would think public transit would work, but the buses I see are often empty. I see the same thing with the Metrolink commuter rail service in Southern California. The trains are a bit fuller, but that may be because they run much less frequently.

Development: *One of the themes of your writing has been the challenges of the middle class in our society. What kind of strategies can states and cities follow to be more helpful or supportive of the middle class?*

Kotkin: One would be to allow for new development on the periphery,

The Woodlands, Texas, has office, residential, retail and even industrial within proximity of each other.

which would lower the prices in the city as well. In the Bay Area, people may advocate for 80% of the growth on 5% of the land. Well, that's great if you've got that 5% of the land, but for everybody else it means you're going to have higher prices. So regions certainly need to maintain some degree of single-family zoning.

People may be single longer, but the vast majority eventually get married and have children. Now, they probably won't have three or four kids, but they'll have one or two. We need to be able to build new communities on the periphery where possible. This could also happen in brownfields, in abandoned industrial areas, and in unoccupied office and retail space. That would help the middle class. Also, public safety is important, obviously. You're not going to have the middle class in urban areas for very long if the city is perceived as unsafe.

We must figure out how to deal with climate issues in ways that don't drive industries out of California and balance the needs of the working and middle classes. California has been shifting to an imposed-scarcity regime for years — of course, not scarcity for the tech billionaires or Hollywood moguls. However, we can help the middle class by keeping a more diversified economy, and by reshoring as much industry as makes sense to the U.S. But the reality is that those industries are much less likely to go to locations with very high energy prices. That's why we see manufacturing leaving places like New York and California, unless it's completely subsidized, and heading to places such as Ohio.

Finally, one of the biggest long-term issues is fixing the education system. We moved to Orange County from Los Angeles because I didn't want to pay private-school tuition for my youngest daughter. I think I'm like a lot of people who say, "I can't pay $40,000 a year for a high school while I'm paying more than that in taxes to the state of California."

Development: *Looking at the world in the next 30 years, do you see the glass half empty or half full?*

Kotkin: I would say half and half. There are many great technological advances like the 3-D printing of homes, which could greatly reduce the cost of construction. There are some interesting technological advances with nuclear power. There are some advances with solar power, although they're moving very slowly, unfortunately.

We are certainly making enormous progress with cars. If we focused on hybrid cars instead of fully electric, we could reduce auto emissions by a huge amount. But to get to a better reality with regard to climate change, we cannot allow the best to overwhelm the good. The good is achievable. The best is very often impractical and not something that is going to be done easily.

The reality is if we have common-sense energy policies, along with the technological and engineering capacities, there will probably be enough money as well. Yes, society needs to protect the environment, but it also must protect its own existence. It must protect the ability of middle-class and working-class people to make a decent living while allowing for upward mobility and aspiration. ■

Gerard C.S. Mildner, Ph.D., is a former associate professor of real estate finance and former academic director at the Porland State University Center for Real Estate in Portland, Oregon. **Trey Barrineau** is the managing editor of publications for NAIOP.

Seattle Draws Cheers for a Daring Stadium Renovation

Seattle's Climate Pledge Arena reopened in December 2021 after a three-year, $930 million renovation that preserved the facility's signature roof.

The three-year makeover of Climate Pledge Arena involved complex planning and breathtaking engineering.

Photo by Alex Fradkin

At a Glance

- Seattle's Climate Pledge Arena was built beneath the historic shell of the 1962 Seattle Coliseum.
- The construction had to adhere to the landmark designation of the arena, preserving the original roofline and most of its glass facade.
- Sustainability efforts were amplified after Amazon secured naming rights for the arena in 2020, leading to initiatives like converting to all-electric utilities.

By Anthony Paletta

Constructing sports venues — some of the largest structures anywhere — is challenging even when starting with a clean slate. It's an entirely different level of difficulty when the project all has to happen under an existing historic roof that can't be altered.

This was the challenge Oakview Group and their architects Populous faced in building Seattle's Climate Pledge Arena, a 740,000-square-foot stadium burrowed out of space beneath the landmarked shell of the 1962 Seattle Coliseum. It is now home to the Seattle Kraken of the National Hockey League and the Seattle Storm of the Women's National Basketball Association, as well as concerts and other events, but the task of getting there was anything but simple.

Courtesy of Thornton Tomasetti

Temporary supports were needed to shore up the iconic roof of the Climate Pledge Arena, which weighs 44 million pounds.

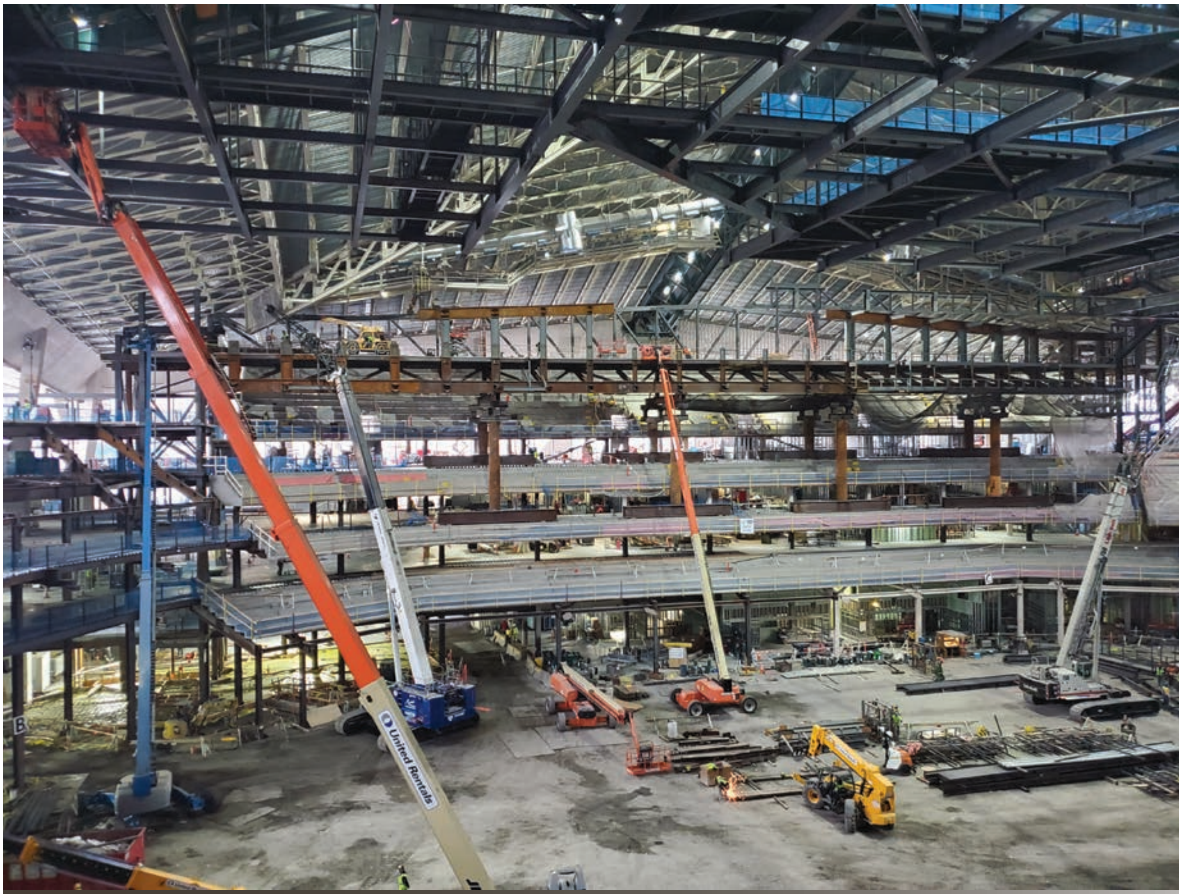
The adaptive reuse work at Climate Pledge Arena, which began in December 2018 and wrapped up in late 2021, was enormously difficult from a technical perspective. It involved doubling the venue's underground space, which was only possible by adding temporary supports for its 44-million-pound roof until a new foundation could be built. The result is a fully modern $1.2 billion arena in a historic shell that has garnered many honors and awards for sustainability and energy performance. True to its name, it's the first net-zero-certified arena in the world.

A Facility Full of History

American sports facilities are often mothballed or demolished when they're past their brief prime, and historic preservation is rarely a thought. The only professional sports stadiums older than what is now called Climate Pledge Arena are baseball's Fenway Park in Boston (1912) and Wrigley Field in Chicago (1914), along with football's Lambeau Field in Green Bay, Wisconsin (1957), and Soldier Field in Chicago (1924).

The building opened in 1962 as the Washington State Pavilion, part of the Seattle World's Fair. Local architect **Paul Thiry** designed it, along with the surrounding exhibition grounds and several other nearby structures. In 1964, renovations made it suitable for sports and concert use, and it was renamed the Seattle Coliseum. It hosted two Beatles concerts and much else over the following decades. The NBA's Seattle SuperSonics arrived in 1967 and won the league championship in 1979. However, the roof was prone to water leaks, which led to the only rain-delayed game in NBA history in 1986.

American sports facilities are often mothballed or demolished when they're past their brief prime, and historic preservation is rarely a thought. The only professional sports stadiums older than what is now called Climate Pledge Arena are baseball's Fenway Park in Boston (1912) and Wrigley Field in Chicago (1914), along with football's Lambeau Field in Green Bay, Wisconsin (1957), and Soldier Field in Chicago (1924).



Courtesy of Thornton Tomasetti

Construction of the seating area in Climate Pledge Arena. Nearly 70,000 tons of soil had to be excavated to expand the stadium's seating capacity.

The structure morphed into KeyArena in 1995 after extensive renovations, including a round of excavation to add seating and to avoid displacing the roof. This increased the venue's capacity from 12,300 to 17,000. While its seating was comparable to other NBA arenas at that time, it lacked many amenities such as wide concourses and extensive concession areas. However, by the mid-2000s, KeyArena was the smallest venue in the NBA. The stadium's shortcomings led the SuperSonics to move to Oklahoma City in 2008 after unsuccessful attempts to persuade the city to renovate the facility or construct a new one.

Efforts to lure another sports tenant picked up in the next decade, with a call for redevelopment proposals in 2017. But complications arose when Seattle's Landmarks Preservation Board and the National Park Service's National Register of Historic Places designated the arena as a landmark. Its concrete hyperbolic paraboloid roof, with two main trusses each supported

Two proposals were submitted for the reuse of the arena. Oakview Group and Populous proposed a plan that was less disruptive yet more difficult. The city's Landmarks Preservation Board approved their proposal because it maintained "the architectural integrity of the original roofline" and most of its glass façade. (A new entrance was the lone deviation.) Their plan also included restoring the surrounding plaza.

Courtesy of Thornton Tomasetti

The concourses inside Climate Pledge Arena are much roomier than in the facility's predecessor, KeyArena.

by tripod concrete buttresses, is a technical and engineering marvel, enabling a column-free main span. The National Register of Historic Places extols its use of "innovative construction techniques to create a prominent showcase for the fair."

Complex Plans Materialize

Two proposals were submitted for the reuse of the arena. Oakview Group and Populous proposed a plan that was less disruptive yet more difficult. The city's Landmarks Preservation Board approved their proposal because it maintained "the architectural integrity of the original roofline" and most of its glass façade. (A new entrance was the lone deviation.) Their plan also included restoring the surrounding plaza.

Steve Collins, president of global venue development and special projects at Oakview Group, acknowledges that his team's proposal "was a little crazy."

"Most people when they looked at this said 'it's got to come down,' " he said. "'There's no way to fit this program in without razing the entire building.' "

Courtesy of Thornton Tomasetti

An exterior view of one of the buttresses supporting the landmark roof at Climate Pledge Arena.

At 380,000 square feet, the facility was closer in size to a minor-league hockey arena — the typical NHL venue is more than 700,000 square feet. Oakview assured the city, "we'll figure out a way to keep that iconic roof and that structure and that façade, and we'll still deliver a building that is a first-class, state-of-the-art NHL facility," Collins said.

"This project has been spoken of as a renovation, but it is truly a rebuild of a new arena," said **Geoff Cheong**, senior principal at Populous. "None of the KeyArena elements — the seating bowl, the subterranean program, the building itself — were preserved. It was all demolished."

That sounds easy enough, but there was no way to excavate without disturbing the roof's foundation. The project required temporary steel supports for the roof while reconstruction went on underneath. Thornton Tomasetti, the structural engineer for the project, faced the fiendishly complicated task of installing roof supports and demolishing the original foundation.

"That was a career-defining project for me," Thornton Tomasetti Principal **Shawn Leary** said. "Thirty-one years in the industry, and nothing I've done comes close to that. That roof weighs 44 million pounds — about the total weight of the population of Tacoma, Washington."

Once the temporary supports were in place, the work grew even more complex, according to Leary. Thornton Tomasetti's plan had to ensure that those temporary supports didn't interfere with the excavation of almost 68,000 cubic yards of soil, which weighed more than two million tons.

The project required temporary steel supports for the roof while reconstruction went on underneath. Thornton Tomasetti, the structural engineer for the project, faced the fiendishly complicated task of installing roof supports and demolishing the original foundation.

Courtesy of Thornton Tomasetti

A Seattle Kraken game at Climate Pledge Arena. The facility can seat 17,100 for professional hockey.

"We continued to excavate down until we reached the bottom, putting in bracing as we went," Leary said. "Once we got down to the bottom, we started putting in the new concrete bowl for the stadium seating, worked back up again, and reattached the new structure to the original structure. At that point we could take out all the shoring and support. Imagine all the coordination required to install all this, and understand where it's going to go so you don't hit anything critical at that time. It was an engineering feat, but it really was more of a coordination feat."

The support of three of the building's four buttresses was relatively straightforward, but a new underground parking garage was slated for the space under the fourth. This required temporary lateral 44-inch beams to reach a wall more than 150 feet away to support about three million pounds of weight (which then required a permanent eight-foot concrete wall to shore it up).

All Eyes on the Roof and Facade

The primary fear throughout was that the roof — the focus of so much effort — might crack or slide off center, either when supported on the temporary frame or when it settled after it was reattached. These load transfers were not done all at once but gingerly, one at a time, with jacks slowly shifting the weight. Most of this process occurred during COVID-19, which slowed but did not stop the work.

They didn't merely have to support the roof to 1962 standards; they had to substantially improve on those, for good reason — the arena is only three miles from an active fault line.

"The seismic codes have changed significantly since 1962," said Thornton Tomasetti Senior Principal **Matt Farber**. "We were designing for seismic forces on the roof and structure that were double what were required over 50 years ago."

In the end, everything wrapped up without a hitch, and Leary regards the project — which involved keeping the roof up on temporary supports for about a year while building in a new foundation — as a career pinnacle.

"We do a lot of load transfer in our business, but never on this order of magnitude," he said. "Each one of these tasks in and of themselves would have been noteworthy, but when you combine three or four of them, it was just unprecedented."

Beyond keeping the roof up, the proposal sought to retain the building's exterior appearance as much as possible.

"A lot of the themes of design were about paying homage to that historic piece of architecture, maintaining its character, its defining elements from when it originally opened in 1962," said Cheong. "Our goal was really to restore that and bring it back to Paul Thiry's original vision."

One of the most unusual restored features is natural light, which is rare for a venue that hosts indoor sports.

"There are these impressive sort of cathedral windows on the north side that are unique to an arena of this scale," Cheong said. "There are spots on the mid-side of the building on the east and west where you can see clear across the seating bowl to the other sides."

You can't see into most arenas from street level at all, let alone through them.

Cheong stressed that this did not entail any compromise in designing a cutting-edge facility.

"The roof was preserved, the exterior curtainwall was preserved," he said. "The curtainwall was entirely disassembled during construction, taken off site and fully cataloged. It was taken apart into pieces almost like a Lego or Erector Set and put back into place later in construction."

A Lot Going on Beneath the Surface

However, that was merely "the tip of the iceberg," Cheong explained. What happened beneath was all new — 80% of the arena's square footage is now below grade.

Building underground involved many more planning challenges beyond roof support. For example, most arenas can put air-circulation elements on the roof; that was not possible here. They snaked these services underground to various spots around the plaza. Air handlers and related equipment are on the second-lowest level of the arena, Cheong said, served by a series of underground passageways and air plenums nicknamed "snorkels" to allow the building to "breathe" — intake air and emit exhaust.

Another issue was figuring out a means to move guests throughout the venue. At most stadiums, fans enter at the bottom and ascend. Here, they enter at the upper concourse and go down. The problem was largely solved by the construction of a new 30,000-foot atrium on the venue's south side. It contains principal circulatory elements, along with the placement of many features underground to each side under the arena's plaza, including a below-grade parking garage.

The development team added in a much greater range of seating options, including premium suites, as well as numerous amenities.

"We moved away from concession stands in the direction of markets and grab-and-gos and self-checkout environments," Cheong said.

These offerings have a definite Seattle flavor, with craft beers, an Impossible Foods meatless test kitchen and pork buns joining typical arena fare. The facility is also 100% cashless; it even has reverse ATMs that allow patrons to deposit cash and receive a debit card, as well as Amazon's just-walk-out payment technology at some concessions areas.

Building underground involved many more planning challenges beyond roof support. For example, most arenas can put air-circulation elements on the roof; that was not possible here. They snaked these services underground to various spots around the plaza.

Many of the additions aren't visible to patrons. This includes locker rooms and training areas, along with a range of facilities to serve musicians such as green rooms, dressing rooms and a recording studio.

Supplying the arena was another challenge: Collins explained that touring concerts can feature as many as 22 trucks.

"KeyArena was quite lacking in that regard," Cheong said. "They had a single loading dock, a really challenging ramp to get down to that dock, and their load-in/load-out situation for shows was one of the major flaws of that arena. We understand that is one of the reasons touring acts were not eager to return."

Musical acts also required a loading

Construction had already begun when another task arrived: Amazon negotiated naming rights for the complex in June of 2020. **However, the Seattle-based e-commerce giant chose not their own name but a concept, Climate Pledge, which entailed the first-ever effort to create a net-zero arena.** The team had already designed a considerably sustainable facility, but this required redoubling of efforts.

dock at a level lower than what had been available at KeyArena, but the development team didn't want to mangle the plaza with winding ramps. The solution involved tunneling under a landmarked garage to build a new two-way semi-truck ramp from another entrance 750 feet away.

Unprecedented Pledge for Sustainability

Construction had already begun when another task arrived: Amazon negotiated naming rights for the complex in June of 2020. However, the Seattle-based e-commerce giant chose not their own name but a concept, Climate Pledge, which entailed the first-ever effort to create a net-zero arena. The team had already designed a considerably sustainable facility, but this required redoubling of efforts.

Collins said the team took a granular approach to the challenge.

"Instead of figuring out how many LEED points we could collect, it was more about how we could make a real difference and reduce carbon used in the day-to-day operations of the building," he said. "There's a solar component to it, there's an elimination-of-fossil-fuels component to it, there's a transportation component to it. Honestly, when we first started, we didn't know if we could get there."

Converting the building to all-electric utilities and eliminating all gas uses was a critical step.

"Buildings are heavy electrical users to begin with," Collins said. "You've got these peaks and valleys, and to add to that electrical load in order avoid using gas required a tremendous upsizing of equipment."

This forced changes to the design of the kitchens and cooking spaces to accommodate appliances, but the design and construction teams made them fit within the footprint.

Because Seattle does not lack for rain, the team also added a "rain to rink" system to collect water from one quadrant of the roof and route it into a 15,000-gallon underground cistern, where it is purified through reverse osmosis and used on the hockey rink.

Thoughtful Touches Outside

A central part of the project was improving the arena's plaza as a space for fans on game days and the general public when no events are scheduled. Cheong recalled that the prior landscape was highly inaccessible.

"It was difficult to navigate around the building and to access entries," he said. "The entrances to the former arena were actually sunken into the plaza below the sidewalk, which required stairs, and then there were some circuitous ramps off to the corners that provided accessible pathways to those entries."

Populous' aim, Cheong explained, was to "design an urban arena in a park," a rarity in the sporting world. The roofline is only 13 feet off the ground at the lowest point. Views go directly into the arena on its north side when the curtains are retracted, a nearly unthinkable vista at most venues.

"We love the fact that when you walk around this building, no matter where you are on the perimeter, you can see glass," he said.

They also sought to provide seamless transitions across the plaza, with ramps whose slope is not obvious.

Swift Company, which designed the plaza's open space and landscape, sought to balance many factors. They had to consider arena circulation, outdoor events and daily neighborhood use while planning around substantial elements buried underground and a 17-foot grade shift across the site — all while taking event security into account.

"There needs to be a very rigid secure perimeter, so we used a combination of bollards, site walls and landforms to create those edges," said **Gareth Loveridge**, principal at Swift. "We tried to make it feel less

Tour This Project at CRE.Converge

NAIOP's national conference, CRE.Converge, will be held in Seattle October 18-22. As part of the event, attendees can tour Climate Pledge Arena, plus other sites in Seattle.

For more information, visit naiop.org/creconverge like a fence, but it's always pretty difficult with these kinds of projects where you need to provide the security, but you want to make it feel less like inside vs. outside."

Their prime aim was to keep what was already there. Swift removed only three of 70 London Plane trees dating from 1962 and retained many of the other existing trees on the site. In all, 170 other trees were added. They calculated these additions and came up with a mix that includes Katsuras, Stewartia and Parrotia, as well as Paperbark and Red Maples.

"The trees are 100% deciduous," Loveridge said. "In the summertime, we want as much shade as possible. In the wintertime, we want to get the light through."

In contrast, the shrubs they planted were mainly evergreen to ensure a presence of green on the plaza year-round. Environmental calculations also informed both decisions to maximize carbon sequestration.

"From a carbon-sequestration standpoint, evergreen shrubs generally take in the most carbon and deciduous trees generally take in more carbon than coniferous trees, so there are many benefits," Loveridge said.

In the end, Swift doubled the plaza's greenspace. Despite practical requirements for heavy pedestrian use, the design team sought to derive inspiration from the modernist 1962 layout.

Climate Pledge Arena - Project Summary

Project Location	Seattle
Project Name	Climate Pledge Arena
Type of Site	Urban
Development Type	Adaptive Reuse
Transportation Modes	Car, Transit, Pedestrian
Mix of Uses	Other
Number of floors	7
Parking	450 underground and 550 in garage across street above
Site Dimensions	
Total Acreage	10.3
Total Square Footage	740,000 square feet (arena only); 932,000 square feet (including underground garage)
Development Team	
Developer	Oakview Group
Project Architect	Populous
Interiors Architect	Rockwell Group
General Contractor	Mortenson Construction
Leasing Agents	N/A
Timeline	
Land Acquisition	December 2017 memorandum of understanding for the redevelopment
Submitted Initial Plans	December 2018 groundbreaking
Project Completed	First event October 2021
Development Cost Information	
Total Project Costs	$1.2 billion ■

"When it's not full of people, it can look really empty," Loveridge said. "Some people think there should be a lot more greenery and other people said 'there's too much green space, you're not respecting Paul Thiry.' So it was definitely a dance."

The building's geometry provided inspiration for curving paths and for seating around the plaza.

Climate Pledge Arena opened in October 2021. It's been a proven success that will influence sustainable building practices into the future.

"The legacy of this building is that it changed the industry mindset. We can get an arena to net zero carbon," Collins said. ■

Anthony Paletta is a freelance writer based in New York.

Supreme Court WOTUS Ruling Clarifies, Limits Federal Jurisdiction Over Wetlands

The ruling is seen as a victory for commercial real estate, agriculture and other industries.

By Aquiles Suarez

In May, a Supreme Court decision ended two decades of regulatory uncertainty and confusion over the extent of federal jurisdiction over wetlands. The ruling also forced the Biden administration to revamp a regulation it had finalized in December 2022 to ensure consistency with the legal standard established by the court's ruling. The decision in Sackett v. EPA, and the impact it has on regulations from federal agencies going forward, will have a significant effect on the commercial real estate industry.

There is a need for reasonable regulations to protect the environment and wetlands. But knowing what areas are subject to regulation is a fundamental requirement for any rule, both for the public and for the regulatory agencies. Without it, rulemaking becomes overly subjective, leading to unpredictable, inconsistent and arbitrary decisions. That had become the case for commercial real estate, agriculture and other industries because of conflicting judicial opinions and federal regulations involving the definition of "waters of the United States."

The Supreme Court's decision in Sackett v. EPA provides clarity on what constitutes a wetlands, which is expected to provide regulatory certainty and predictability for the commercial real estate industry.

The Background

The power to regulate bodies of water and wetlands has traditionally been a state function. In 1972, the federal government was also given power to protect the nation's lakes, streams, rivers and other bodies of water when Congress passed the Clean Water Act (CWA), which gave the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (USACE) authority to regulate "navigable waters." That term in the statute was further defined as being "waters of the United States," (WOTUS). The Clean Water Act was updated in 1977 to include wetlands that are "adjacent" to a WOTUS, giving the EPA and USACE regulatory authority over these areas.

The task of defining a WOTUS, as well as establishing how close a wetland must be to a WOTUS for it to be classified as "adjacent," were delegated to the EPA and the USACE. These agencies were tasked with formulating these definitions within the framework of regulations implementing the CWA. Since then, the agencies have struggled to develop a clear, concise and objective standard that would provide environmental advocates, property owners and the oversight agencies with regulatory certainty and predictability.

The result was constant litigation, with both state and federal courts issuing contradictory rulings. Instead of clarifying, the Supreme Court added to the confusion in 2006 when it issued a ruling in Rapanos v. United States. That case focused on whether the federal government could assert jurisdiction over a wetland near a ditch that drained into navigable waters 11 miles away. The court ruled against the government, but it did not offer a controlling legal standard. Justice **Antonin Scalia** wrote an opinion supported by three other justices. It held that federal jurisdiction extends only to those wetlands with a continuous surface connection to a relatively permanent body of water that was itself connected

continued on page 102

BUILD BETTER
BUILD SAFER
BUILD with LiUNA!

The Laborers' International Union (LIUNA) knows that it's members success goes hand-in-hand with the contractor. By cooperating with signatory contractors, LIUNA provides the best trained, hardest working and safest people in the construction industry.

However, LIUNA and its employers know that isn't enough. In partnership with developers and contractors, LIUNA has crafted streamlined, industry-specific agreements for the commercial real estate market and has offered valuable support to projects before elected officials, regulators, and public forums.

For your next project, Build with LIUNA to raise industry standards, promote quality construction, improve contract procurement, and most importantly, protect the bottom line.

SAFE | ON-TIME | UNDER BUDGET

Oscar De La Torre
Northern CA District Council of Laborers
(925) 469-6800
www.ncdclaborers.org

Jon Preciado
Southern CA District Council of Laborers
(626) 350-6900
www.scdcl.org

Laborers' International Union of North America
LiUNA!
Feel the Power

continued from page 100

to a traditional interstate navigable water. Justice **Anthony Kennedy** issued a concurring opinion that extended jurisdiction to any wetland with a "significant nexus" to a traditional navigable water.

There is a need for reasonable regulations to protect the environment and wetlands. But knowing what areas are subject to regulation is a fundamental requirement for any rule, both for the public and for the regulatory agencies. Without it, rulemaking becomes overly subjective, leading to unpredictable, inconsistent and arbitrary decisions.

Essentially, the two competing legal standards gave litigants and courts the ability to pick and choose which test to apply. It also gave successive presidential administrations the ability to rewrite regulations using their preferred test. The result was a patchwork of different controlling legal standards, with the public and federal regulators see-sawing back and forth.

President Obama's administration issued an expansive rule in 2015 based on the "significant nexus" approach, but it never went into effect after 27 states filed suit against it. In 2019, **President Trump**'s administration repealed the Obama rule and issued one that essentially codified the Scalia "permanent water" standard. A federal district court in Arizona later struck that rule down. **President Biden**'s administration then replaced the Trump rule with its own interpretation in December 2022. Implementation was then stayed in 27 states.

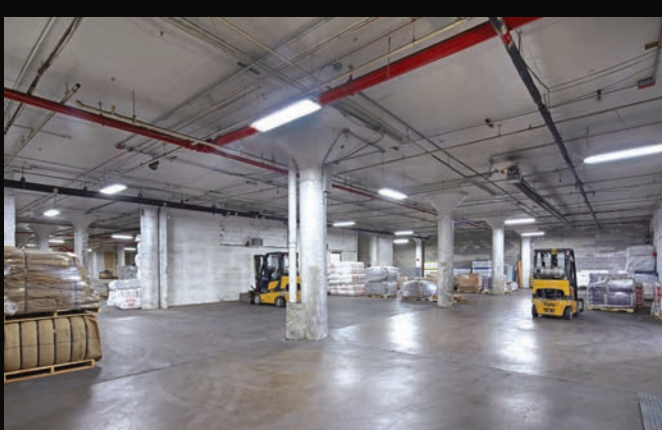
The Sackett Decision

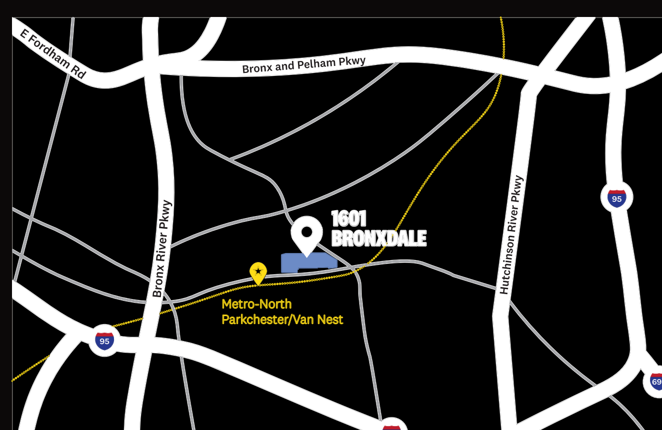
On May 25, the Supreme Court issued a decision in Sackett v. EPA that could

continued on page 104

1601 BRONXDALE

OPTIMAL LOCATION AND PRIME ACCESSIBILITY
92,500 USF AVAILABLE





30 MINS
to Westchester and Connecticut

15 MINS
to Queens and I-495

25 MINS
to Queens and Long Island

15 MINS
to Manhattan and New Jersey

20 MINS
to LIC and Brooklyn

1601bronxdaleavenue.com

Adam D. Weissleder
Senior VP + Director of Leasing
aweissleder@merprop.com
212-337-7763

Amy Fabian
Vice President Leasing
afabian@merprop.com
212-337-7775

Maureen Delehanty
Leasing + Marketing Coordinator
mdelehanty@merprop.com
212-337-7755

HIMMEL+ MERINGOFF

MERINGOFF PROPERTIES

AFFINIUS® CAPITAL

continued from page 102

end the WOTUS regulatory confusion. The Sacketts were an Idaho family who purchased land approximately 300 feet from a lake. They began backfilling the lot in preparation to build a home, only for the EPA to inform them that the property contained wetlands. The Sacketts were threatened with fines of $40,000 per day if they did not restore the site. The EPA argued that the wetlands on the property were WOTUS because they were "adjacent" to a ditch that fed into a tributary on the other side of a 30-foot road. The lot was also near another larger wetlands complex, allowing the EPA to claim that there was a "significant nexus" that allowed the agency to assert jurisdiction.

The court held that to assert jurisdiction, the government must establish that the body of water is a WOTUS (a relatively permanent body of water connected to traditional interstate navigable waters) and that the wetland has a continuous surface connection with that body of water.

The EPA lost 9-0, with all the justices agreeing that the agency had overstepped its authority. But not all agreed with the reasoning in the majority opinion, which was authored by Justice **Samuel Alito** and joined by four others. The majority opinion essentially adopted as the controlling legal standard a test similar to the Scalia test from Rapanos. The court held that to assert jurisdiction, the government must establish that the body of water is a WOTUS (a relatively permanent body of water connected to traditional interstate navigable waters) and that the wetland has a continuous surface connection with that body of water.

Stantec

Optimizing your cold chain logistics

Stantec helps organizations around the world improve their operations and achieve long-term success through process improvements and our facility designs. Our approach involves using space more effectively, reducing costs, and optimizing production flows.

To learn more scan the QR code or visit stantec.com

The court's ruling essentially forces the Biden administration to revise its WOTUS regulation — a result that NAIOP predicted would happen if the administration did not wait for the court's ruling before issuing their regulation as a final rule.

The Impact

The court's ruling essentially forces the Biden administration to revise its WOTUS regulation — a result that NAIOP predicted would happen if the administration did not wait for the court's ruling before issuing their regulation as a final rule (see Development's Summer 2022 issue, "Biden Wetlands Regulation May Be Upended by Supreme Court"). The EPA and USACE have stated their intent to have a revised rule in place by September.

The court's ruling applies to the federal government's jurisdiction over wetlands and is seen as a setback by many environmental advocates, but it does not limit the power of states to regulate or act in this area. It will undoubtedly serve to prevent future presidential administrations from attempting to expand federal jurisdiction to wetlands and streams that are temporary, isolated or not connected to navigable waters. Many states will revisit their own laws regarding wetlands in response. What the Sackett decision does provide, however, is a more objective standard and additional clarity that was long needed. ■

Aquiles Suarez is the senior vice president for government affairs for NAIOP.

Chapter Profile: NAIOP Pittsburgh

The city's diverse economy is benefiting from strong job growth.

By Trey Barrineau

Known for its economic resilience and diversity, Pittsburgh was historically dominated by the steel industry, earning the nickname "Steel City." However, the city has undergone a significant economic transformation in recent decades. The collapse of steel production in the 1980s inspired a shift toward sectors like healthcare, education and technology.

Pittsburgh is home to top-flight universities such as Carnegie Mellon and the University of Pittsburgh. They are fostering a vibrant tech and start-up scene, which is attracting companies such as Google and Uber. The presence of the University of Pittsburgh Medical Center, one of the largest health systems in the U.S., underlines the importance of the healthcare sector.

Tourism, finance and advanced manufacturing also play significant roles in the economies of both Pittsburgh and Pennsylvania.

Commercial real estate does, too.

According to "Economic Impacts of Commercial Real Estate, 2023 U.S. Edition," published by the NAIOP Research Foundation, commercial real estate contributed $12.4 billion to the state's economy in 2022. The industry also generated $4.6 billion in wages and salaries in Pennsylvania, and it created and supported 74,276 jobs.

NAIOP Pittsburgh President **Brandon Snyder**, vice president and market leader with Al. Neyer, LLC, recently spoke to Development magazine about CRE trends in the Pittsburgh region.

Development: *How are the market conditions for member companies in your area?*

Snyder: Pittsburgh has always been a very stable market. While it has never been overbuilt, the office market in the central business district is seeing challenges as a result of impacts from the pandemic, including hybrid work. According to CBRE, year-to-date office space absorption is negative 435,000 square feet within the CBD, and the vacancy rate hit 17.5% in the second quarter. However, new leases are being signed in Class A buildings, which supports the supposition that firms may downsize but take higher-quality space when relocating. Industrial and multifamily are the most active asset types in terms of new deliveries, and the area is experiencing a substantial amount of new investment from out-of-town developers. Current market conditions have caused local NAIOP member companies to be more selective about what projects they are pursuing, but certain positive data such as demand for multifamily and industrial buildings have allowed development to remain active. In the second quarter, the industrial vacancy rate in the Pittsburgh market was 4.2%, 100 basis points lower than this time last year.

Development: *What are the challenges you're facing in either the business or regulatory climate in your area?*

Snyder: Pittsburgh's current challenges in the business climate are similar to other markets. New construction is difficult to finance considering the current costs of construction and debt, combined with rising cap rates driving down values. The regulatory environment needs a complete overhaul — we need to create a better working environment between government and private development. Certain governments still have NIMBY sentiments toward real estate development despite relying heavily on real estate taxes from either existing or new investments. As a chapter, we are striking a balance between standing up against increases in real estate taxes and predevelopment fees while supporting the needs of our local governments.

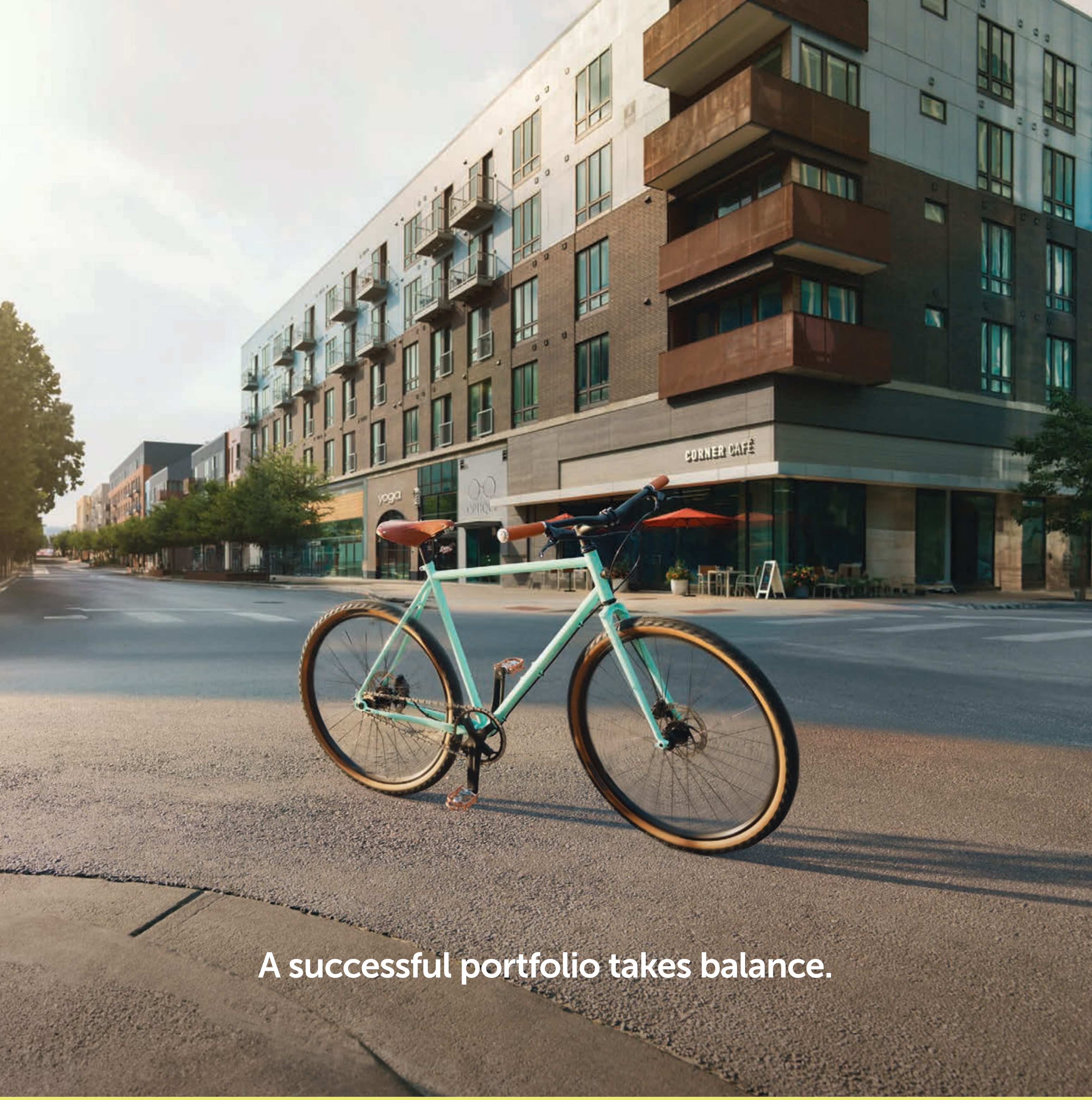
Development: *What are the big opportunities in commercial real estate in your area right now?*

Snyder: Currently, there are significant opportunities for multifamily development in both urban and suburban areas. While Pittsburgh is not considered a growth market in terms of population, we experienced a 2.7% year-over-year increase in jobs last year according to Yardi, which also found that the region's multifamily market saw 6% rent growth in 2022. That outpaced the nation by 120 basis points. The combination of costs associated with home ownership due to the heavy increase in

continued on page 108

"Pittsburgh has always been a very stable market. While it has never been overbuilt, the office market in the central business district is seeing challenges as a result of impacts from the pandemic, including hybrid work."

— Brandon Snyder, president, NAIOP Pittsburgh



With our deep technical knowledge of real estate, CLA provides insight and guidance on every phase of the investment life cycle. We can help you quickly identify strategic financial, tax, and operational opportunities to increase value at every phase. Get started now at **CLAconnect.com/property**.

CLA

We'll get you there.

CPAs | CONSULTANTS | WEALTH ADVISORS

©2023 CliftonLarsonAllen LLP. CLA (CliftonLarsonAllen LLP) is an independent network member of CLA Global. See CLAglobal.com/disclaimer. Investment advisory services are offered through CliftonLarsonAllen Wealth Advisors, LLC, an SEC-registered investment advisor.

Once dependent on steel, Pittsburgh's economy today is focused on healthcare, education and technology.

continued from page 106

mortgage rates and the lack of single-family inventory could fuel demand for additional rental units in the area.

Development: *What are some of your chapter's legislative priorities?*

Snyder: Our chapter's top priorities include improving incentive programs for job-creating projects at the state level, as well as helping to create a more pro-business and pro-development atmosphere within the city of Pittsburgh. NAIOP Pittsburgh is acutely aware of the challenges Pennsylvania faces when it comes to attracting large-scale job-creating opportunities, especially when competing against other states that can offer more substantial economic incentives. We believe Pennsylvania should bolster its economic development tools to be more competitive in multi-market search opportunities. Pennsylvania needs to invest in competitive incentives and economic grant programs so our communities can receive long-term economic benefits like neighboring states such as Ohio. NAIOP Pittsburgh believes that the city needs to enact a YIMBY investment agenda that will combat current economic conditions and support the development community.

"Pittsburgh's current challenges in the business climate are similar to other markets. New construction is difficult to finance considering the current costs of construction and debt, combined with rising cap rates driving down values. The regulatory environment needs a complete overhaul — we need to create a better working environment between government and private development."

— Brandon Snyder, president, NAIOP Pittsburgh

Development: *Education is an important part of NAIOP's mission. Have there been recent educational sessions specific to your chapter recently?*

Snyder: We hold monthly meetings where a relevant topic is the focus of the session, and we invite experts to be panelists so members can learn more about the subject matter. Most recently, we held chapter meetings on topics including multifamily development, green building initiatives and capital markets. NAIOP Pittsburgh has a programs committee that thoughtfully selects the topics for each meeting throughout the year. The programs committee also selects the panelists and the moderator, who are all locally involved, highly experienced and experts in their fields. Chapter meetings help our members stay informed about market conditions and inform them about trends and opportunities within our industry. ■

Trey Barrineau is the managing editor of publications for NAIOP.

NAIOP THANKS OUR

CRE.Converge
NAIOP Annual Conference

Seattle, WA | Hyatt Regency Seattle | October 17-20, 2023 | naiop.org/creconverge.org

SPONSORS

Presenting Sponsors

LINK

NEWMARK

PROLOGIS®

Premier Sponsors

AFFINIUS® CAPITAL

BREEAM® USA

Building Engines

CoStar™

LoopNet™

Ten-X

MAJESTIC REALTY

Marcus & Millichap

VanTrust®

MOODY'S ANALYTICS | CRE

WIPFLI

Platinum Sponsors
Amazon
Avison Young
Bridge Industrial
CBRE
CenterPoint Properties
JLL
Rockefeller Group
Ware Malcomb
Johns Manville
Lee & Associates
Paciÿc Program Management Group, LLC

Gold Sponsors
FCL Builders
Granite Properties
Greater Spokane, Inc.
Hudson Paciÿc Properties

Silver Sponsors
Ares Management, LLC
BentallGreenOak
Clarion Partners
Colliers
KSS Architects
Powers Brown Architecture
Tratt Properties
Wonderful Real Estate

Exhibitors
2-D As-Built Floor Plans
Crexi
Dealpath
Envelon
E-Z Riser Roof Raising
Global Rooÿng Group
Green Building Initiative
Kimley-Horn
Lev, Inc.
LJB Engineering
Partner Engineering & Science
Raymond West Intralogistics Solutions
RPS North America
USI Insurance Services
Yardi Systems

Supporting Sponsors
Kleinfelder
Specialty Consultants

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION

Reach industrial leaders by partnering with NAIOP.

Contact Christopher Ware at ware@naiop.org or 800-666-6780, ext. 127, to create your customized sponsorship package.

If you're in commercial real estate, everyone that you could – or should – be doing business with is here!

What is CRE.Converge?

CRE.Converge is the premier industry event connecting commercial real estate developers, owners, investors, brokers and more from across North America.

Attendees

- Over 1,000 top commercial real estate professionals attended CRE.Converge in 2022.
- 91% of attendees are in senior management.
- Most attendees work in industrial or office real estate.
- 60% of attendees are developers, owners, investors or asset managers.

See the current registration list in real time by scanning the QR code below and make plans to connect on-site!

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION






Welcome Party: The Museum of Pop Culture

Wednesday, October 18 | 5:30-7 p.m.

Kick-start your conference experience and connect with other attendees against the backdrop of Seattle's iconic Space Needle! Join us at the Museum of Pop Culture (MoPOP), designed by internationally acclaimed architect Frank O. Gehry, to view the unique pop culture content and current exhibitions, meet up with colleagues, and make new connections over drinks and refreshments. Open to all conference attendees.

"This is the place to be if you're in commercial real estate. It brings together such a diverse group of people - diverse in terms of who they are, diverse in terms of what they do. I would never hesitate to come to this conference." — Ed Klimek, AIA, Partner Emeritus, KSS Architects

Session Topics

- CRE Strategies for the Future of Global E-commerce
- The Evolution of Amenities in the Office and Industrial Markets
- Trends and Considerations in Adaptive Reuse
- Office Capital Markets
- Case Studies in Mixed-use Industrial Development
- Retaining and Attracting Real Estate Talent in Volatile Times
- Industrial Real Estate and the North American Supply Chain Revolution
- Advancing ESG Performance in the Built Environment
- The Future and Institutionalization of Industrial Outdoor Storage
- Maximizing Equity from Municipal Incentives
- Understanding Carbon Goals and Approaches for Developers
- Implementing Mass Timber in Today's Market

Keynotes

Daniel Mallory
Amazon Vice President for World Wide Real Estate

Peter Zeihan
Geopolitical Strategist

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION

Report Highlights Approaches to Wellness in Distribution Centers

Healthy, safe working environments are critical for attracting and retaining employees.

By Shawn Moura, Ph.D.

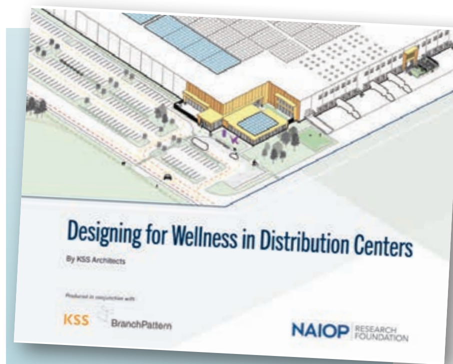
The expansion of e-commerce has spurred demand for distribution centers across North America. Although occupiers have invested in mechanization, automation and warehouse-management systems, e-commerce distribution centers still tend to be more labor-intensive than those that serve brick-and-mortar retailers. This is due to the larger number of items that each center must carry and the larger number of small orders that these centers process. Because of this, rapid growth in the amount of industrial space dedicated to e-commerce distribution in recent years has translated to a sharp increase in demand and competition for distribution-center workers.

Competition for workers, increased awareness about safety concerns, and growing investor interest in environmental, social and governance goals have led to design approaches that can make warehouses healthier and more attractive work environments. The NAIOP Research Foundation's June 2023 report, "Designing for Wellness in Distribution Centers," describes a series of design interventions that can improve distribution center worker safety and well-being. The report's authors, designers from KSS Architects and BranchPattern, drew from secondary research, interviews with distribution-center occupiers and employees, and observations from site visits to examine the factors that affect work conditions at these facilities. Using their findings and expertise in industrial architecture, they created a prototype distribution center with elements and features that contribute to a healthier and safer work environment.

Designing for occupant wellness in a distribution center presents a different set of challenges than for an office or retail building. Distribution centers are expensive to condition using traditional HVAC systems, they are filled with noisy and fast-moving vehicles and machinery, and the time needed to traverse their large floors shortens employees' meal and rest breaks.

Designing for occupant wellness in a distribution center presents a different set of challenges than for an office or retail building. Distribution centers are expensive to condition using traditional HVAC systems, they are filled with noisy and fast-moving vehicles and machinery, and the time needed to traverse their large floors shortens employees' meal and rest breaks. Workers engage in more physically demanding labor than is typical in an office or retail store, and they usually have more limited access to key amenities such as day care, grocery stores or restaurants in surrounding areas.

The report illustrates a series of interventions at each level of a distribution center's design to address these challenges. It begins with site location and design to ensure pedestrian safety and facilitate access to public transportation, green space and adjacent amenities. Shell building improvements such as radiant heating and cooling systems, skylights, destratification fans and acoustic treatments enhance the building's thermal conditions, acoustic environments, air quality and lighting. Within the building, dedicated break spaces at regular intervals provide access to hydration and nutrition, restorative rest, and shelter from noise and material-handling equipment. Workstations are enhanced with ergonomic features, local conditioning and task-oriented lighting.



Get the Report

To view and download "Designing for Wellness in Distribution Centers," visit www.naiop.org/research-and-publications/research-reports/reports/designing-for-wellness-in-distribution-centers/ ■

The authors designed the prototype to be a model that can be adapted to standard distribution-center layouts and local contexts. It includes lists of features that can be installed in the speculative phase of development and those that can be added as tenant improvements. Development teams can look to the report as a helpful reference for building healthier, more attractive and more comfortable distribution centers. ■

Shawn Moura, Ph.D., is research director at NAIOP.

MAXIMIZE YOUR POTENTIAL (AND YOUR ROI) WITH NAIOP

Success starts with NAIOP. Join the premier association advancing commercial real estate development.

NAIOP connects you to exceptional research, education, advocacy and a 20,000-member network across North America.

Join NAIOP to accelerate your career growth and strengthen the future of commercial real estate development.

SPECIAL MEMBERSHIP OFFER

Get the most value: Starting Oct. 1, join for 2024 and receive the rest of 2023 free!

naiop.org/join

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION

Become a NAIOP member today!

Questions? Contact membership@naiop.org or 800-456-4144.

Planning 2024 Compensation?

This **VALUABLE REPORT** includes current data provided by over **300 companies** on **up to 200 positions** reflecting **more than 100,000 distinct jobs** in **office, industrial and retail**, including **executive to administrative jobs** in the fields of **acquisitions, development, leasing, management, financing** and more.

ALSO INCLUDED ▸ **Salary** ▸ **Bonus** ▸ **Incentives** ▸ **Benefits**

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION

NAIOP MEMBERS — Purchase by Dec. 31 and save $150 on this report!

2023 NAIOP/CEL Commercial Real Estate Compensation and Benefits Report

OFFICE/INDUSTRIAL and RETAIL

DATA PRESENTED BY:

- Four levels of **company size**
- **Company type** (private and public)
- Seven **real estate specializations**
- Seven **U.S. regions** and up to 28 **metro areas**

FIND OUT MORE AT:

naiop.org/compensation2023

NAIOP Awards Diversity Student Scholarships

Six graduate and undergraduate students from backgrounds traditionally under-represented in the commercial real estate industry received the honor.

By NAIOP Staff

In May, NAIOP announced the six recipients of the 2023 Diversity Student Scholarship. The scholarship program supports students who are seeking degrees in commercial real estate, and it reflects the association's commitment to fostering diversity within the sector. "NAIOP is committed to supporting the next generation of commercial real estate leaders and increasing diversity in the industry," said **Marc Selvitelli**, CAE, NAIOP president and CEO. "This scholarship program provides not only a financial award but also opportunities for education and networking at our annual fall conference — valuable resources for this emerging talent."

> "NAIOP is committed to supporting the next generation of commercial real estate leaders and increasing diversity in the industry. This scholarship program provides not only a financial award but also opportunities for education and networking at our annual fall conference – valuable resources for this emerging talent."
>
> *— Marc Selvitelli, CAE, NAIOP President and CEO*

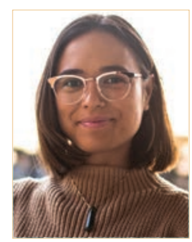
NAIOP will provide four graduate students with $5,000 scholarships and two undergraduate students with $2,500 scholarships. The awards are aimed at individuals from demographic groups typically underrepresented in the field of commercial real estate, and whose institutions participate in the NAIOP University Membership program.

Along with the financial aid, every scholarship winner will get a chance to broaden their professional network and refine their commercial real estate knowledge via a complimentary registration to the NAIOP's CRE.Converge 2023, taking place October 18-20 in Seattle.

Priyanka Kakoti

Priyanka Kakoti is a graduate student in the Master of Real Estate Development and Design program at the University of California, Berkeley and a member of NAIOP San Francisco Bay Area. She currently works as a development intern for SteelWave Inc., in San Francisco, where she focuses on sustainable development for life science projects in South San Francisco.

Previously, she worked as an architect for Feedback Infra (P) Ltd., in India, where she focused on feasibility and business cases for both private and public entities. The projects she worked on included India's largest freight village and multimodal logistics park (she developed the master plan for the site's redevelopment), and the monetization of India's oldest five-star resort, the Ashok Hotel, which has a capitalization value of more than $1 billion.



Serena Lousich

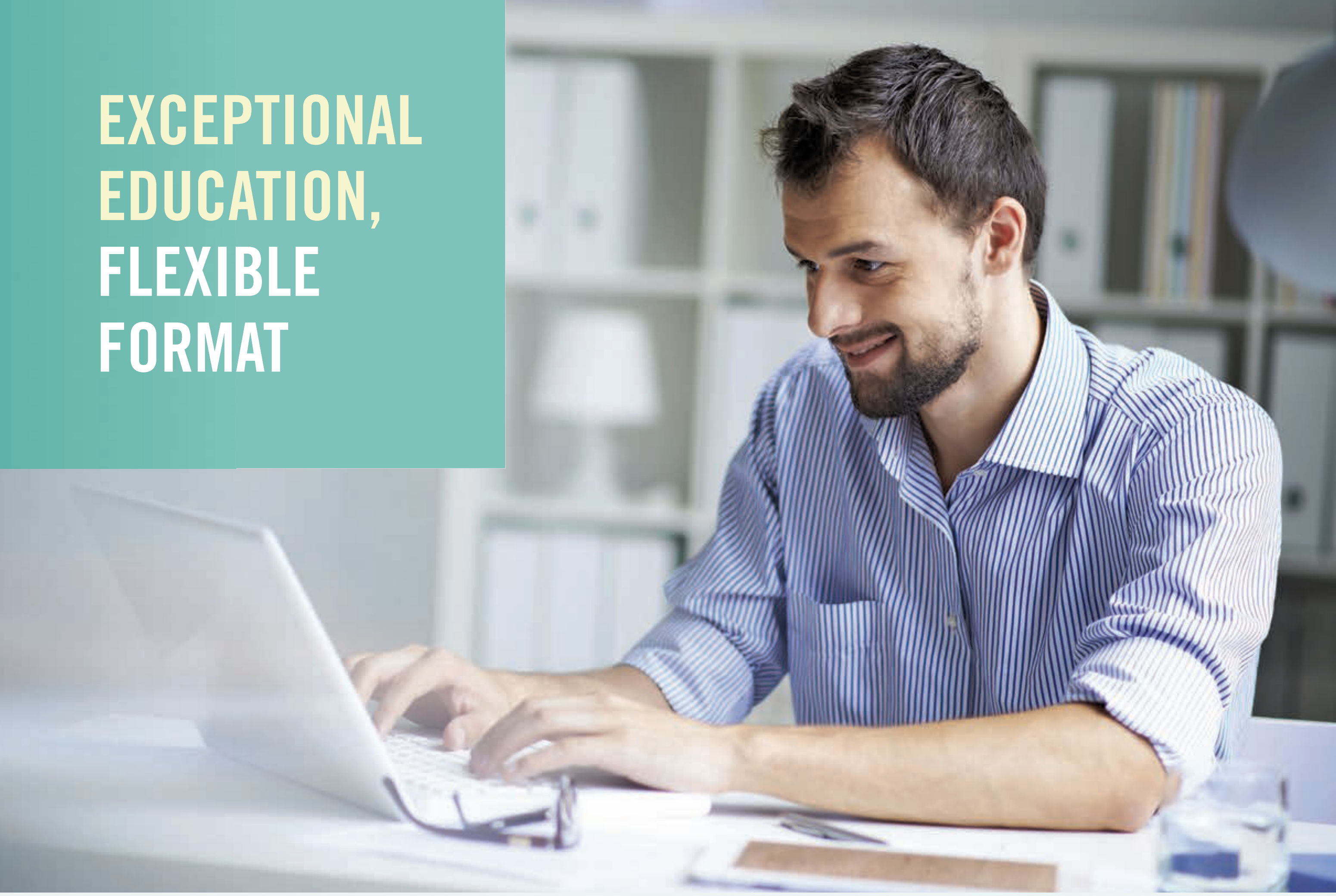
Serena Lousich is a graduate student in the Master of Real Estate Development and Design program at the University of California, Berkeley and a member of NAIOP San Francisco Bay Area.

She previously received a master's degree in landscape architecture and worked as a senior landscape designer for landscape architecture firm Surfacedesign Inc. In that role, her work touched on a wide range of commercial projects in the San Francisco Bay Area and Aotearoa (the Máori name for New Zealand). She hopes to leverage her design background in her new career in real estate development.

Lousich's passion lies with Indigenous-led design and development. As a Máori woman, she has worked with tribes in both Aotearoa and California, leveraging her cultural heritage to develop innovative solutions for Indigenous agency in the design and development process.

continued on page 116

EXCEPTIONAL EDUCATION, FLEXIBLE FORMAT



CHANGING ROLES? Want to add to your skill set or gain more understanding and context for your projects?

THE NAIOP CENTER FOR EDUCATION offers over a dozen on-demand courses focused on commercial real estate core competencies.

WORK AT YOUR OWN PACE and take up to 90 days to complete most courses.

Learn more and get started today at **learn.naiop.org**

NAIOP THE CENTER FOR EDUCATION

NOW AVAILABLE ON-DEMAND:

- Advanced Development Practices
- Advanced Real Estate Finance
- Basic Real Estate Finance
- Construction Management for Developers and Owners
- Essentials of the Development Process
- Financial Analysis of Development Projects
- Fundamentals of Adaptive Reuse
- Leasing, Marketing and Negotiations
- Modern Industrial Development
- Private Equity Fund Structure and Management
- Real Estate as a Service
- Real Estate Investment and Capital Markets
- Real Estate Law and Land Use Policy
- Site Feasibility and Market Analysis

continued from page 114

Erick Martinez

Erick Martinez is an undergraduate student in the Kelley School of Business at Indiana University-Purdue University, where he is pursuing a Bachelor of Science in finance and real estate. He is also a member of NAIOP Indiana.

Martinez worked at Bondry Consulting as an economic development intern during his first year of college and worked on redevelopment projects financed through bonds and municipal funding. This past summer, he interned as a commercial real estate analyst at J.P. Morgan.

Martinez currently serves as an investment analyst intern at Buckingham Companies, a fully integrated real estate investment firm headquartered in Indianapolis.

Jaydin Moore

Jaydin Moore is an undergraduate student pursuing a degree in real estate and urban economics at the University of Nevada, Las Vegas, and a member of NAIOP Southern Nevada.

He serves as president of the university's Real Estate and Business Society; the group helps students bridge the gap between classroom learning and the professional world. Moore also works with real estate broker **Dana Berggren** in Las Vegas as an associate of sales and leasing.

NAIOP will provide four graduate students with $5,000 scholarships and two undergraduate students with $2,500 scholarships.

Garrett Runck, AIA

Garrett Runck is a graduate student in the Master of Real Estate Development program at Portland State University, and a member of NAIOP Oregon.

A licensed architect with 10 years of experience in hospitality, tech workplace and critical facilities design, he recently made the transition into affordable housing development. He currently works as a development manager at Hacienda Community Development Corporation, a Latino-led nonprofit affordable-housing developer and resident-services provider.

His work includes managing new affordable housing development projects and rehabilitation of existing affordable housing properties in Portland Metro and greater Oregon.

A member of the LGBTQ community, Runck strives to foster an inclusive environment in the real estate profession.

Samantha (Hoyle) Willcock

Samantha (Hoyle) Willcock is a graduate student in the Master of Science in Real Estate program at the University of San Diego, and a member of NAIOP San Diego.

She currently works for Pacifica Companies as an asset manager in their retail and development department. Willcock began her commercial real estate career in property management with Cushman & Wakefield in San Francisco.

She quickly worked her way up to property manager for Columbia Property Trust, where she was responsible for managing the overall operations and resources of a building, working closely with the asset management team, and acting as the main point of communication for tenants. ■

Along with the financial aid, every scholarship winner will get a chance to broaden their professional network and refine their commercial real estate knowledge via a complimentary registration to the NAIOP's CRE.Converge 2023, taking place October 18-20 in Seattle.

I.CON
INDUSTRIAL REAL ESTATE
COLD STORAGE

September 12-13, 2023 **Westin Buckhead Atlanta, Atlanta, GA** **naiop.org/coldstorage23**

NAIOP THANKS OUR SPONSORS

Presenting Sponsor

FCL BUILDERS

Premier Sponsors

METL SPAN a NUCOR company

PRIMUS

Platinum Sponsor

CenterPoint Properties

Gold Sponsors

ARCO Design Build
BentallGreenOak
Bohler
Bridge Industrial
Brinkmann Constructors
Catalyze
Choate Construction Company
Evans General Contractors
Food Properties Group
Griffco Design/Build, Inc.
JLL
PREMIER Design+Build Group
Stantec
Stellar
Ti Cold
Ware Malcomb
WDS Construction

Silver Sponsors

Alston Construction
Alta Refrigeration, Inc.
CBRE
Concrete Fiber Solutions
Costar Group
Cushman & Wakefield
Dynamic Energy Solutions, LLC
Epstein
E-Z Riser Roof Raising
FREEZ Construction
Global Roofing Group
Hernandez Construction
Kingspan Insulated Panels
Layton Construction
MG2
Novus Architects
Partner Engineering & Science
PGIM Real Estate
Powers Brown Architecture
Providence Engineering
Saxum Real Estate
Walker Consultants
Whiting-Turner Contracting Company

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION

Reach industrial leaders by partnering with NAIOP.

Contact Christopher Ware at ware@naiop.org or 800-666-6780, ext. 127, to create your customized sponsorship package.

NAIOP represents commercial real estate developers, owners and investors of office, industrial, retail and mixed-use properties. It provides strong advocacy, education and business opportunities, and connects its members through a powerful North American network. **For more information, visit naiop.org.**

Programs and Services

NAIOP Membership
For membership, information or changes to your membership record, contact membership@naiop.org.

Chapter Network
NAIOP chapters provide local and regional education, networking and legislative affairs.

naiop.org
NAIOP's central resource for industry and association news, programs, advocacy efforts and connections.

National Forums
Special-interest groups that comprise senior-level NAIOP members in a non-competitive environment for exclusive networking and experience exchange.

Center for Education
The principal learning resource for the commercial real estate development professional. Offerings include online, on-demand and live courses, plus two certificate programs.

Development Magazine
Current and past issues are available online and are mobile-responsive for those who want to read Development magazine on-the-go.

NAIOP Research Foundation
Research projects and initiatives to improve the understanding of the built environment and the challenges that lie ahead for individuals and organizations engaged in real estate development, investment and operations.

Career Center
Online resource designed to help employers and job seekers find new commercial real estate job opportunities.

Business Development Industry Partners
Enhance your company's presence as an industry partner by sponsoring, exhibiting or advertising.

Government Affairs
Strong, effective support and guidance to create, protect and enhance development and property values. NAIOP's government affairs team is active on Capitol Hill, in state legislatures and in Canadian provinces.

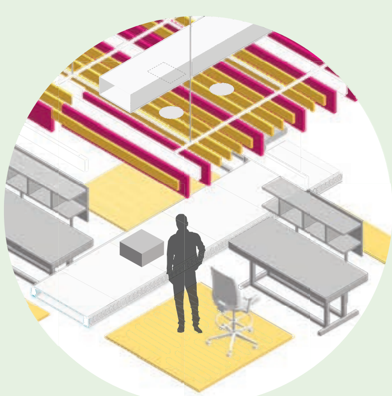
Market Share Blog
Insights on trends, CRE-related topics and professional development tips. Subscribe to weekly posts, interviews and news at blog.naiop.org.

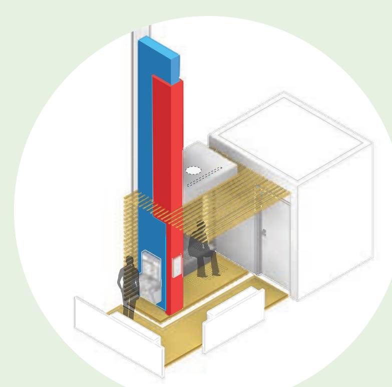
Mobile Apps
Take NAIOP wherever you go. Access the membership directory, find news, chapters and events, and connect on social media. ■

NEW NAIOP RESEARCH REPORT

Designing for Wellness in Distribution Centers

Wellness features can increase employee retention, impact productivity, and help meet ESG goals. This new report from the NAIOP Research Foundation introduces a prototype distribution center with design elements that improve worker health and well-being.





NAIOP RESEARCH FOUNDATION

Download this report at **naiop.org/wellness**

For information regarding advertising opportunities, contact Christopher Ware at 800-666-6780.

* *This is a listing of NAIOP members who are mentioned in this issue, as well as paid advertisers, which appear in bold.*

2023 Industry Partners

NAIOP wishes to thank our Industry Partners, whose financial support helps us to provide quality programs and communications to you throughout the year. We encourage you as a NAIOP member to include these partners, wherever possible, when you are considering services and products for your business.

Premier Industry Partners

Platinum Industry Partners

Gold Industry Partners

Silver Industry Partners

Bronze Industry Partners

Chairman's Circle

Trends and Conversations: What I'm Hearing During Chapter Visits

Since becoming NAIOP's 2023 chair in January, it's been my pleasure to visit chapters from Orlando to Milwaukee to Southern California, where I've talked with thousands of members about current market conditions, the forces impacting our industry, and our future as an organization. Regardless of chapter location or size, four topics frequently arise during these conversations:

Kim Snyder

Community relations. In today's environment, it's essential that developers fully understand the impacts of their products on the communities where they operate, particularly regarding jobs, hours of operations and environmental effects (traffic, water, energy, etc.). Most of NAIOP's chapters report a surge in anti-growth sentiment, which highlights the importance of engaging with the community early and often.

E-commerce education and research. E-commerce's share of total retail sales was on a growth trajectory before the pandemic, which turbocharged the industrial sector as people were forced to stay home. Unfortunately, the news media, non-governmental organizations and policymakers frequently focus on truck traffic associated with home deliveries while often ignoring the consumer behaviors that put those vehicles on the road in the first place. Further, some research suggests that ordering goods for delivery is better for the environment because people make fewer individual trips to malls, grocery stores and local shops in their cars. We need comprehensive research about e-commerce's environmental footprint to help educate our external audiences and debunk common misconceptions. This will allow developers to clearly articulate e-commerce's economic impact and the role industrial real estate plays in the community.

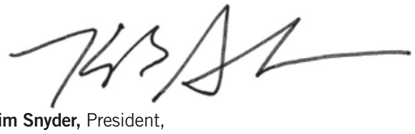
Electric vehicle trends. In response to growing truck-traffic and climate-change concerns, many communities — typically on the West and East Coasts — are imposing requirements around the electrification of commercial vehicles. Southern California leads the pack, and the region's local air quality regulatory body recently approved the unprecedented Indirect Source Rule (ISR). This requires warehouse occupiers to quantify and report vehicle trips to and from their facilities to identify impacts and provide data for issuing taxes. In response, California businesses are investing heavily in electric vehicles and the infrastructure needed to support them. Other states looking to adopt similar "indirect

Since becoming NAIOP's 2023 chair in January, it's been my pleasure to visit chapters from Orlando to Milwaukee to Southern California, where I've talked with thousands of members about current market conditions, the forces impacting our industry, and our future as an organization.

source" regulations include New Jersey, New York, Washington, Colorado and Nevada. NAIOP will continue to track and provide updates on this issue, as members in urban areas can expect to see this policy affecting their future projects.

Working with communities to design policies. Anti-warehouse sentiments fueled by environmental concerns have led some municipalities to pause new projects in response to community pushback. NAIOP and other business associations continue to make the case that such moratoriums disrupt the supply chain, prevent businesses from operating efficiently and lead to economic losses that stifle job creation. NAIOP members have worked with municipal staffers and communities to create good-neighbor policy agreements that address issues like setbacks, landscape screening and noise-abatement strategies. Developers have found that proactively incorporating neighborhood-friendly building features is more effective than having aggressive approval conditions imposed upon their projects that impede functionality and increase costs.

This year as NAIOP chair has been a meaningful one for me. As we begin the fourth quarter and I approach the end of my term, I'll continue steadfastly strengthening NAIOP and helping members talk boldly about the value our industry brings to communities and the economy. I look forward to my remaining chapter visits and seeing many of you at CRE.Converge this October in Seattle. ■



Kim Snyder, President,
Western Region
Prologis
2023 NAIOP Chair

Wonderful industrial park™

5104 EXPRESS AVENUE, SHAFTER, CA 93263

FOR LEASE / ±1,087,000 Sq. Ft.

Breaking Ground / 1Q 2023

For more information, please contact:

Phil Lombardo
+1 909 942 4678
phil.lombardo@cushwake.com
Lic. #00892477

Andrew Starnes
+1 909 942 4667
andrew.starnes@cushwake.com
Lic. #01799801

Cruise Adams
+1 909-942 4641
cruise.adams@cushwake.com
Lic. #02075368

CUSHMAN & WAKEFIELD   Wonderful real estate DEVELOPMENT™

Cushman & Wakefield of California | 901 Via Piemonte, Suite 200 | Ontario, CA 91764 | cushmanwakefield.com

2020 Cushman & Wakefield. All rights reserved. The information contained in this communication is strictly confidential. This information has been obtained from sources believed to be reliable but has not been verified. No warranty or representation, express or implied, is made as to the condition of the property (or properties) referenced herein or as to the accuracy or completeness of the information contained herein, and same is submitted subject to errors, omissions, change of price, rental or other conditions, withdrawal without notice, and to any special listing conditions imposed by the property owner(s). Any projections, opinions or estimates are subject to uncertainty and do not signify current or future property performance.

PEACE OF MIND
AT A WHOLE NEW LEVEL.

STRENGTH.
EXPERTISE.
SERVICE.

NATIONWIDE.

Fidelity National Title
Insurance Company
NATIONAL COMMERCIAL SERVICES

fntic.com/commercial

ATLANTA
C. Shane Rogers
678.213.1756
shane.rogers@fntg.com

BOSTON
John Gunasti
617.619.4818
john.gunasti@fnf.com

CALIFORNIA
Chris Smith
949.221.4700
chris.smith@fnf.com

CHICAGO
Adam Gemeinhardt
312.621.5008
adam.gemeinhardt@fnf.com

COLORADO
John V. Miller
303.291.9968
john.miller@fnf.com

COLUMBUS
Jeff Gross
614.818.4811
jeff.gross@fnf.com

DALLAS
Tom Garner
214.965.1618
thomas.garner@fnf.com

D.C./RICHMOND
Christopher Naughten
202.312.5113 / 804.521.5725
cnaughten@fnf.com

DETROIT
Terese A. McDermott
248.816.3848
terese.mcdermott@fnf.com

HOUSTON
Sam Smith
713.986.0769
samsmith@fnf.com

LAS VEGAS
Robert N. Ray
702.469.7323
robert.ray@fnf.com

MINNEAPOLIS
Christopher White
612.573.2595
christopher.white@ctt.com

NEW YORK
Melissa Hernandez
212.471.3705
melissa.hernandez@fnf.com

PHILADELPHIA
James E. Sindoni
215.241.6262
james.sindoni@fnf.com

PHOENIX
John R. Johnson
602.206.8000
john.r.johnson@fnf.com

SEATTLE
Sara Larkin
206.470.9595
sara.larkin@ctt.com

Fidelity National Title is a member of **Fidelity National Financial**, the nation's largest provider of title insurance services. **NYSE: FNF**