Commercial Real Estate Development FALL 2022

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Granite Properties

Developer of the Year 62

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AHF Products, LLC

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2022 Mid-Year Industrial Investment Sales Highlights

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11404 COMMANDO ROAD
Everett, WA
246,640 SF
Sold on behalf of:
Capstone

BELLINGHAM DISTRIBUTION CENTER
Bellingham, MA
345,000 SF
Sold on behalf of: Barings

BELTWAY+ INDUSTRIAL PORTFOLIO
Baltimore-Washington Corridor
484,959 SF
Sold on behalf of:
Link Logistics

178 BAUER
Oakland, NJ
191,240 SF
Sold on behalf of:
A Private Seller

CGI PORTFOLIO SALE LEASEBACK
Multistate
555,795 SF
Sold on behalf of:
CGI Manufacturing

9410 WOODEND RD
Edwardsville, KS
274, 970 SF
Sold on behalf of:
TKC KCY, LLC

RESERVE BUSINESS CENTER
Gaithersburg, MD
200,080 SF
Sold on behalf of:
Kinsley Properties

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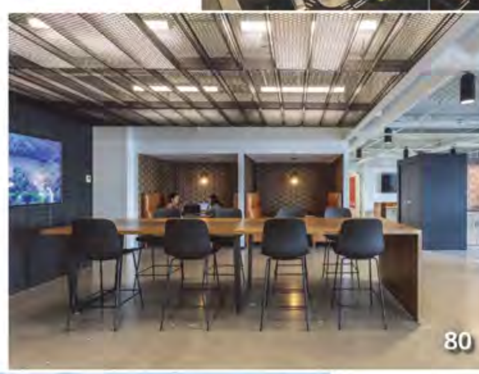
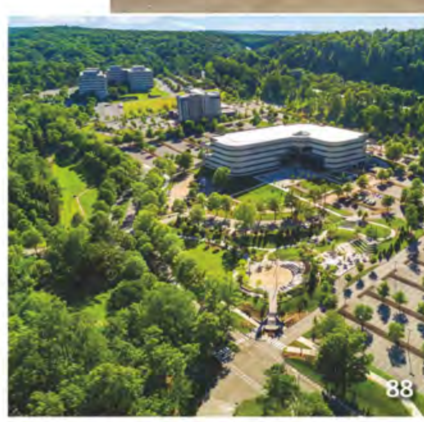
Contents

Development® Fall 2022

Volume LIII No. 3





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Contents

Development® Fall 2022

The leadership team for Dallas-based Granite Properties, NAIOP's 2022 Developer of the Year. The company focuses on developing amenity-rich office properties across the U.S.

COLUMNS

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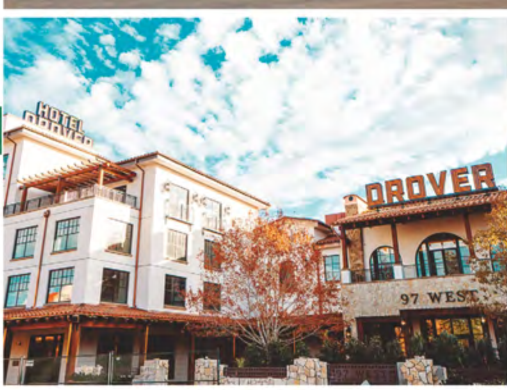

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A Note From the Editor

New Leadership at NAIOP

As of July 1, NAIOP's former executive vice president and COO, **Marc Selvitelli**, began his new role as president and CEO of the association. As part of his previous duties, Marc oversaw Development magazine as publisher. He encouraged us to take the magazine in new directions and always provided excellent guidance.

Jennifer LeFurgy

He has handed the reins to **Shaine Anderson**, who will serve as our new publisher as well as NAIOP's executive vice president and COO. Shane successfully ran NAIOP's Education department for the previous two years and has been a wonderful colleague as well as a steadfast supporter of Development. We look forward to working with her during this exciting new chapter in NAIOP's history.

Welcome aboard, Shaine!

Strategies for returning to the office are top of mind in the commercial real estate industry these days, and this issue explores many of them. I hope you enjoy it.

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

Future NAIOP Events

- **CRE.Converge 2022**, October 9-12, Chicago, Illinois
- **Chapter Leadership and Legislative Retreat 2023**, January 30-February 1, 2023, Washington, D.C.
- **I.CON West 2023**, March 8-9, Long Beach, California
- **I.CON East 2023**, June 7-8, Jersey City, New Jersey

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

Most Popular From Summer 2022

1. **"Office-to-Industrial Conversions: A Niche Market Worth Exploring"** (naiop.org/22conversions), page 56
2. **"Transforming an Abandoned Brownfield into a Modern Cold Storage Facility"** (naiop.org/22transform), page 64
3. **"Last Mile: The Most Challenging Piece of the Logistics Puzzle"** (naiop.org/22lastmile), page 70
4. **"A Triple-Whammy Threatens Project Viability"** (naiop.org/22whammy), page 25
5. **"A 'Calming Presence' at the Helm"** (naiop.org/22tom), page 78

In Brief

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

INDUSTRY OUTLOOK

10 The number of **"current and emerging issues expected to have the most significant impact on all sectors of real estate,"** according to a survey by the Counselors of Real Estate. The top 10 issues are:

1. Inflation and interest rates
2. Geopolitical risk
3. Hybrid work
4. Supply chain disruptions
5. Energy
6. Labor shortage strain
7. The great housing imbalance
8. Regulatory uncertainty
9. Cybersecurity interruptions
10. ESG requirements forcing change

OFFICE

11% **The percentage of total office space in the U.S. facing lease expirations in 2022**, according to JLL research. That represents about 243 million square feet; JLL says it's "the most office space to hit the market in a single year since real-estate services firm JLL began tracking this data in 2015," according to an April report in the Wall Street Journal.

57% **Percentage of suburban office space nationwide that is now "so old as to be functionally obsolete,"** according to JLL research cited in a July 2022 article in the New York Times on the redevelopment potential of office parks that are outside of urban cores.

3 **The number of days a week that Google employees are now required to be in their offices** based on a policy that started in April. In a June article in Forbes, **Kyle Crown**, president of

Crown Commercial PM, notes: "Since the company is widely regarded as a bellwether and standard-bearer in corporate culture and typically seen as at the forefront of employee empowerment, it follows that many major corporations may be back in-person soon, which bodes well for the future of office real estate."

INDUSTRIAL

1.2 Billion Total square footage in Prologis' industrial portfolio after acquiring Duke Realty Corp. for $26 billion in June. According to the Wall Street Journal, the blockbuster deal "highlights a widening gulf between those who think e-commerce growth has a long way to go and those who think it is running out of steam."

30 Million The total square footage of industrial space that Amazon could sublease after the company overbuilt its logistics network during the past few years, according to multiple media reports this summer.

62% The percentage decline from September 2021 to July 2022 in the spot price to ship a 40-foot container from China to the U.S., according to Freightos, a booking and payments platform for international freight. The price in September 2021 briefly soared over $20,000 per container; today, it is closer to $7,000. However, as Axios noted, "that's still more than three times the average pre-pandemic cost."

FINANCIAL

100% Percentage of banks that passed the Federal Reserve Board's annual bank stress test in June. According to a release from the Board of Governors of the Federal Reserve System, this year's test included **"a severe global recession with substantial stress in commercial real estate and corporate debt markets."** In this year's hypothetical scenario, real estate prices drop 40% and stock prices fall 55% as unemployment hits 10% and GDP falls sharply. The Federal Reserve's annual stress tests began in the aftermath of the Global Financial Crisis from 2007-2009. ■

Contractors Share the Pain of Rising Costs

Higher prices for materials and services are being passed on to developers.

By Ken Simonson, AGC

After nearly two years of swallowing ever-rising materials costs, construction contractors are now passing them along in bid prices. Developers may be facing a prolonged period of high construction costs at the same time that financing costs are also escalating.

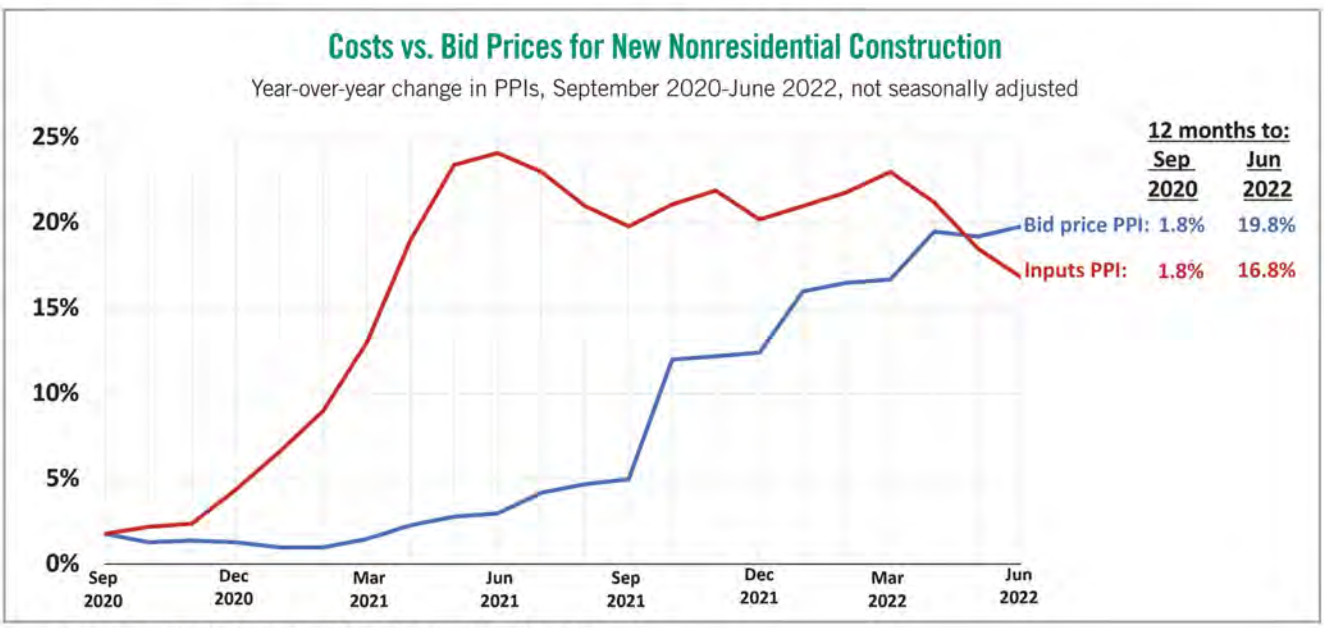
Each month, the Bureau of Labor Statistics (BLS) posts producer price indexes (PPIs) for thousands of materials and services, including one for inputs to new nonresidential construction. The index is a weighted average of all materials and services, such as trucking and design services, used in nonresidential building.

BLS also puts together a "bid price" PPI for new nonresidential building construction by asking a fixed group of contractors what they would charge to erect a particular building. Each respondent is asked about the same building it previously provided an estimate for. Contractors are asked to report what they would charge to cover overhead and profits. BLS combines this number with figures from a cost-estimating firm on the cost of materials, components and installation. In this way, the bid-price estimate comes close to replicating the type of price reported by a manufacturer or wholesaler for a specific commodity. The overall bid-price PPI is a weighted average of PPIs for new warehouse, office, school, industrial (manufacturing) and health care buildings.

As the figure below shows, the PPIs for inputs and bids each rose just 1.8% from September 2019 to September 2020. From then on, the input PPI accelerated steadily, topping out at a 24.1% annual rate of increase in June 2021. By April 2022, the index had risen at an annual rate of 20% or more for 12 consecutive months.

continued on page 12

The PPIs for inputs and bids each rose just 1.8% from September 2019 to September 2020. From then on, the input PPI accelerated steadily, topping out at a 24.1% annual rate of increase in June 2021. By April 2022, the index had risen at an annual rate of 20% or more for 12 consecutive months.



Source: Bureau of Labor Statistics, producer price indexes, www.bls.gov/ppi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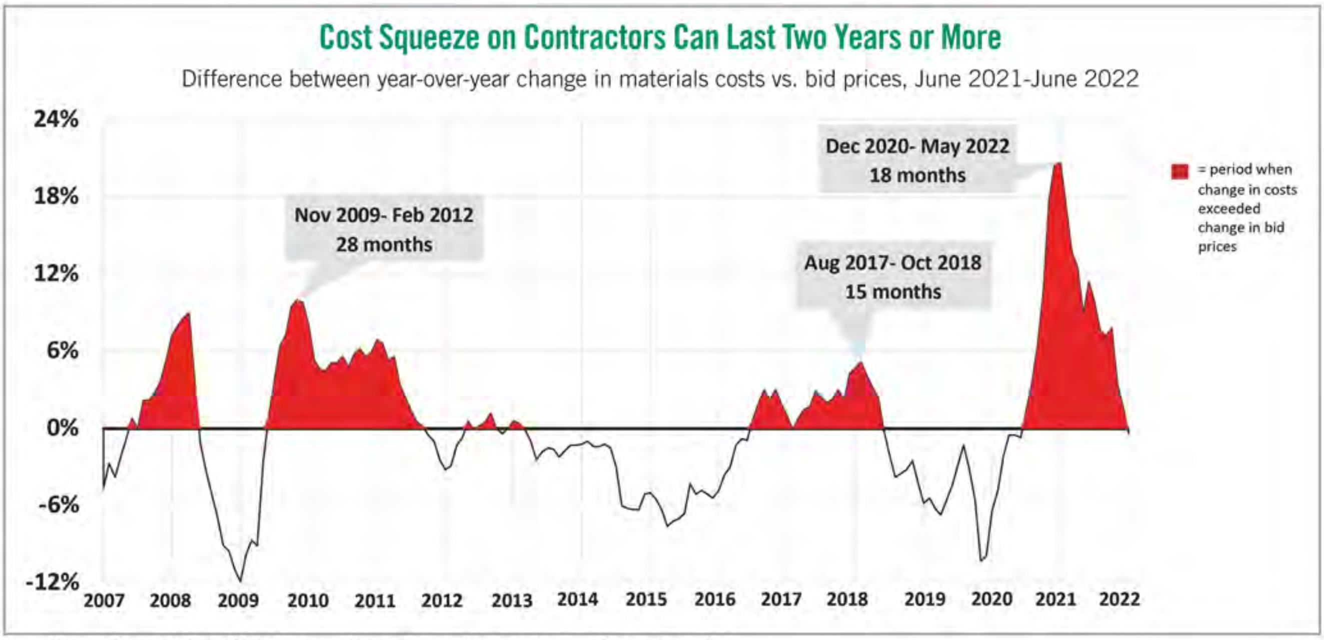

Source: Bureau of Labor Statistics, www.bls.gov/ppi, producer price indexes for goods inputs to nonresidential construction (material costs) and new office building construction (bid prices)

continued from page 10

Meanwhile, the bid-price index barely budged, continuing to rise at an annual rate of only 3% or less until the spring of 2021. At that point, bids began accelerating as increasing workloads enabled contractors to become more insistent on passing through their higher costs and as talk of inflation being "transitory" faded.

By May 2022, the runup in input costs finally moderated to a year-over-year rate of "only" 16.8%. At the same time, the bid-price index rose to a 19.8% annual increase.

Although the year-over-year change in input costs has finally moderated somewhat, developers should not assume that further relief is imminent. The index climbed 1.1% from May to June. That outpaced the 0.5% increase in the bid-price index that month, suggesting that contractors are still experiencing cost increases that they have yet to pass along.

In fact, a comparison of the year-over-year change in the two types of indexes shows that once contractors "catch up" with past input cost increases, bid prices typically outrun input costs for an extended period. The PPI for goods and services inputs to nonresidential construction dates back only to 2014, but a similar index — the PPI for goods alone — was introduced in 2010, allowing for a longer period of comparison.

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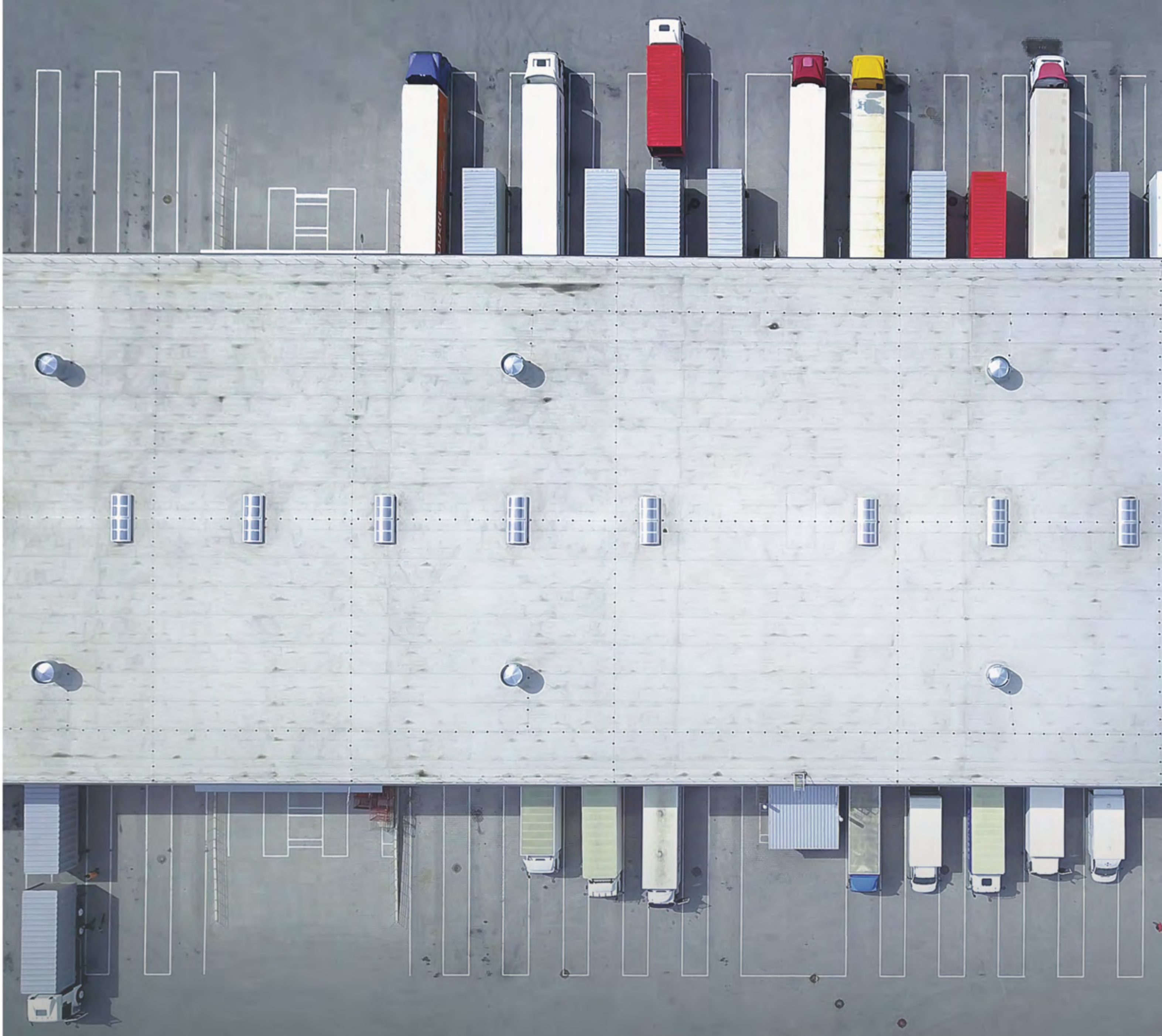
The cost of goods — materials and items consumed in construction such as fuel — increased more than bid prices on a year-over-year basis for nine consecutive months, from June 2011 through February 2012. Then bid prices climbed more rapidly than costs for the next seven months. Similarly, cost increases topped bid-price increases for 15 months from September 2017 through November 2018 before the situation reversed for the following 24 months.

This historical record does not guarantee that contractors will again push up bid prices faster than input costs, and it does not say how soon such a change will occur, if at all. But clearly, contractors cannot absorb rising costs indefinitely. Developers and investors should not be surprised if that reversal occurs soon, given the long period of squeezed margins that contractors have already experienced. ■

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



Ballston Quarter: A 1950s-Era Mall Turned Inside Out

A major retail center in the DC suburbs removes the roof to reinvent itself.

By Patrick Finucan, Sam Bennett and David Kitchens, Cooper Carry

To compete with the rise of e-commerce, traditional shopping malls are evolving to stay relevant and offer experiences that can't be found online. Recognizing the central location of most malls, more owners are executing major redevelopments of these aging monoliths, transforming them into compelling, destination-worthy mixed-use environments that reflect the needs and wants of the communities they serve.

One example of this redevelopment strategy in action is the recent renovation of Ballston Quarter, a formerly enclosed shopping mall in Arlington, Virginia, a few miles outside of Washington, D.C.

Over the past 70 years, the site where Ballston Quarter is located has gone through several iterations. (See box, page 16.) From the rise of parking garages to the advent of experiential retail, this regional mall has lived through generations of retail revolutions and undergone two renovations to ensure its continued relevance.

In its latest and most dramatic facelift yet, Ballston Quarter was literally flipped inside out to better connect the retail spaces with the community, enhance the pedestrian experience and create an open-air shopping and entertainment destination in a densely populated area. According to an August 2021 report from local news site ARLow.com, there is a single census tract in the Ballston neighborhood with a population density equivalent to about 96,000 people per square mile, which is similar to the Upper West Side of Manhattan. It is the most densely populated census tract in the entire D.C. metro area. Other nearby census tracts have population densities equivalent to roughly 50,000 people per square mile.

©Judy Davis, Architectural Photographer

Ballston Quarter's facade is outfitted with black-framed windows and street-facing storefronts.

Brookfield Properties developed the $350 million project, which has 365,000 square feet of retail and 406 residential units. Cooper Carry served as architect of record and collaborated with CRTKL, which also acted as design architect, on the re-design of the mall. CRTKL provided full design architect and architect of record services on the project's residential tower.

In its latest and most dramatic facelift yet, Ballston Quarter was literally flipped inside out to better connect the retail spaces with the community, enhance the pedestrian experience and create an open-air shopping and entertainment destination in a densely populated area.

From Enclosed to Exposed

One of the most noticeable and significant changes to the property was

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the extraction of a portion of the mall's roof. This strategic decision instantly transformed Ballston Quarter into an open-air environment that was more welcoming to visitors. The design team created a multilevel network of retail and dining with storefronts repositioned to face the street. The new configuration encourages an active pedestrian environment, inviting guests to stroll the shopping and entertainment destination and enjoy time with the community.

While taking the roof off was effective in creating a more energized outdoor experience, it presented a new challenge — weatherizing the former indoor shopping space and creating a destination fit for outdoor exposure. Carefully selected building materials and flooring blurred the lines between indoor and outdoor spaces, while sophisticated drainage systems and exterior grade finishes were used throughout the project to combat climate-related wear and tear.

New & Noteworthy

2 million sq. ft.

CapRock Partners is building Phase I of **Palomino Ranch**, a large-scale master-planned **industrial warehouse development** in **Norco, California**. It will total approximately 2 million square feet across 24 buildings on approximately 112 acres. Palomino Ranch will be the largest industrial real estate development in Norco's history. The project will be LEED certified and will feature design elements such as wrap-around wooden porches and lantern streetlighting. The project is approximately one hour driving distance to Los Angeles International Airport and the ports of Long Beach and Los Angeles.

1.6 million sq. ft.

TRG will enter the Dallas-Fort Worth industrial market by developing a two-building, 1.6-million-square-foot **industrial project** 14 miles southeast of downtown Dallas. **CORE45** in **Wilmer, Texas**, will have direct access to Interstate 45 and is one mile from the Union Pacific Dallas Intermodal Terminal. Building 1 will offer 616,068 square feet, 110 dock doors, 151 trailer parking spots and 306 employee parking spaces. Building 2 will feature 1 million square feet with 186 dock doors, 252 trailer parking spots and 594 employee parking spaces. Both facilities have 40-foot clear heights.

1 million sq. ft.

Social media giant **Meta** (formerly known as Facebook) has selected the **Kansas City region** for its new $800 million **hyperscale data center**. The 1 million-square-foot facility will aim to be LEED® Gold level certified and will be fully supplied by 100% renewable energy. The building is currently under construction and will be one of the most sustainable data centers in the world when it goes online in 2024. The facility will be located in the **Golden Plains Technology Park**, a 5.5 million-square-foot data center campus in Kansas City.

For the first-floor outdoor area, the existing slab was removed and lowered by a foot to rebuild it back with the proper slope to nearby drains. Rather than remove the large existing steel framing members, the top 12 inches were cut off and a steel T section was added to the bottom. This, in essence, lowered the structure by a foot. New infill steel beams and a concrete deck were then added, which sloped to the linear deck drains.

Before the exterior tile was installed on the upper floors, floor drains were added to the once-indoor concrete slab, along with a continuous sheet membrane for waterproofing and crack isolation on the existing concrete slabs. Since the structure would now be exposed to temperature changes, it was necessary to help mitigate expansion and contraction in the tile.

A liquid air-barrier and insulation were also installed on all the new demising walls above tenant storefronts/ceilings to help create a new thermal barrier.

On the upper level, the design team incorporated glazing across the second-floor exterior and added promotional displays throughout, pushing shoppers vertically through the mall and calling attention to the mix of diverse retail.

A Site Rich in Retail History

Ballston Quarter is the latest high-profile retail destination at the busy intersection of Wilson Boulevard and Glebe Road in Arlington, Virginia. A timeline:

1951 — The Parkington Shopping Center opens. Initially home to a 300,000-square-foot Hecht's that was the largest suburban department store on the East Coast at the time, it expanded to include more than 30 stores. However, by the early 1980s, it was in steep decline.

1986 — Ballston Common Mall opens. The four-story shopping center would eventually grow to more than 100 businesses before falling out of favor in the 2000s.

2019 — Ballston Quarter opens. According to a September 2020 article in the Washington Business Journal, the development has "succeeded in activating a long-underutilized site at one of Arlington's busiest intersections." ■

Ballston Quarter's recognizable brick exterior was another design consideration for the team. Located along busy Wilson Boulevard, Ballston Quarter has long served as a reference point for the area. With this in mind, the design team preserved a large section of the existing brick exteriors and extended the material into the interiors to create a unified look. The building's reimagined facade is outfitted with industrial-style black-framed windows and a large painted "Ballston" mural. The restyled facade creates visual appeal and draws traffic to ground-floor retail and restaurants like Punch Bowl Social, Ted's Bulletin and True Food Kitchen, all of which can be seen from the street.

Further elevating the indoor-outdoor experience, a new plaza anchored by a large greenspace with amphitheater-style seating and surrounded by outdoor patios was added to the property. The outdoor plaza spills into the Quarter Market, a new 25,000-square-foot food hall that features 18 globally inspired culinary concepts.

Bridging the Gap Between Indoor and Outdoor

To better support the new walkable experience, the street environment surrounding Ballston Quarter was altered to extend the development's existing curb line further out on Wilson Boulevard. This drastic change narrowed the road and made it easier for shoppers to walk along the wide sidewalks and discover the new retail and restaurant offerings before venturing inside.

Further elevating the indoor-outdoor experience, a new plaza anchored by a large greenspace with amphitheater-style seating and surrounded by outdoor patios was added to the property. The outdoor plaza spills into the Quarter Market, a new 25,000-square-foot food hall that features 18 globally inspired culinary concepts. The interior space boasts an industrial, warehouse-inspired theme that integrates the indoors and outdoors with three operable glass garage doors.

Enhancing Connectivity

The original design of the decades-old parking garage made navigating the center challenging. Owned by Arlington County, the eight-story facility is the primary parking complex for a variety of on-site uses. Because of this, it is required to stay open for extended hours to accommodate a wide range of users, including visitors to the Washington Capitals' MedStar Capitals IcePlex located atop the garage. The IcePlex has 20,000 square feet of training space for the NHL team, plus other skating facilities for amateur and youth leagues.

The design team worked closely with the community to ensure the garage's pedestrian circulation was improved across all levels. Additional features such as stairs and escalators were added to the existing elevator areas, and the elevators were refurbished to offer a direct connection to the IcePlex.

One of the final components of the Ballston Quarter renovation was a pedestrian bridge connecting the retail center to a nearby station on DC's Metrorail rapid-transit system. The bridge was frequently used by locals as an access point for the train, and the design team enlisted Cleveland-based studio TECHNE Architects to reconstruct the outdated and rundown bridge. The new design features a more angular, geometric style that blends both form and function.

The newly redesigned Ballston Quarter was unveiled in 2019. Despite some setbacks associated with the COVID-19 pandemic, it has seen substantial boosts in foot traffic and sales. The project could be seen as a model for mall redevelopments that shed dated retail formats for modern, open-air mixed-use destinations that better connect with surrounding communities. ■

Patrick Finucan is a designer at Cooper Carry; **Sam Bennett** is an associate principal at Cooper Carry; **David Kitchens** is a principal at Cooper Carry.

New & Noteworthy

527,000 sq. ft.

ZOM Living is building **Hazel & Azure at National Landing**, a two-tower, 527,000-square-foot **mixed-use development** in **Arlington, Virginia**, that will consist of 491 apartment homes and 6,800 square feet of ground-floor retail space. The residential community will offer a variety of floor plans, including studios, one-, two- and three-bedroom units, and town homes — all ranging from 548 to 1,688 square feet. Resident amenities include an e-lounge and concierge service in the lobby, a rooftop pool and outdoor deck and grilling area with an adjacent club room, fitness center and wellness spa.

364,740 sq. ft.

Trammell Crow Company (TCC), its residential subsidiary **High Street Residential (HSR)** and **Georgia Advanced Technology Ventures (GATV)**, a cooperative organization of the Georgia Institute of Technology, are redeveloping **Science Square**, formerly known as Technology Enterprise Park, a **mixed-use innovation community** in **Atlanta** that features commercial lab/R&D space and residential real estate. The first phase will include TCC's Science Square Labs, a speculative 364,740-square-foot Class A lab/office tower, and HSR's 280-unit residential building.

332,000 sq. ft.

The Altman Companies has opened **Altís Little Havana** in **Miami**, a 332,000-square-foot **apartment and retail project**. It features 224 studio, one-, two- or three-bedroom apartment units set on approximately 1.96 acres. Altís Little Havana is National Green Building Standard (NGBS) certified, and its sustainable initiatives include energy-efficient designer lighting, ENERGY STAR® appliances, individual unit electric meters and sub-metered water, high-efficiency water heaters, and programmable thermostats with humidistat.

C-PACE Financing Finds Solid Footing in the Capital Stack

This rapidly growing alternative funding method can help developers meet a wide range of goals.

By Mansoor Ghori, Petros PACE Finance

New financing vehicles can take time to achieve market acceptance, but with more than $3 billion in transactions since its inception more than 10 years ago, Commercial Property-Assessed Clean Energy (C-PACE) funding is now a go-to green finance alternative for many owners, investors and developers.

Now available in 37 states and the District of Columbia, the special advantages of C-PACE's long-term, low-cost, fixed-rate, non-recourse financing are making it a favored option over more expensive mezzanine debt or preferred equity. However, many CRE professionals are still unfamiliar with it. What is C-PACE? What makes it attractive to commercial real estate owners and developers? How have trends including the environmental, social and governance (ESG) movement further fueled its adoption?

How it Works

C-PACE is an alternative financing mechanism, enacted by state legislation, that provides low-cost, long-term financing to owners and developers of commercial and industrial properties for energy efficiency, water efficiency, renewable energy and resiliency projects. C-PACE payments are secured by and repaid through a voluntary assessment on the property's tax bill, similar to how local water and utility bills are paid. The C-PACE assessment is known as a "debt of property." This means the financing is tied to the property via its tax bill as opposed to the property owner, and the repayment obligation transfers with the property if it is sold. Assessment financing has been used for more than 200 years to repay municipal bonds attached to property taxes to fund projects for the public good, such as fire stations, street lighting, and sewer and sidewalk improvements. The difference is that C-PACE uses the model for energy efficiency and sustainability projects that benefit building owners (and also the general good).

Advantages for Owners/Developers

C-PACE financing is typically used for improvements that provide an environmental or energy-related benefit. These include air conditioning/heating (HVAC) and associated mechanical systems; electrical improvements such as LED lighting; updated building envelope and fenestration such as high-performance windows; water efficiency, including low-flow plumbing and irrigation; and full-on energy systems such as solar power and back-up capabilities. In some states including California and Washington, C-PACE can also be used for seismic strengthening and resiliency such as seismic bracing, foundation improvements, shear-wall reinforcement and the like.

Trends Accelerating Adoption

C-PACE has seen strong growth over the years, including during the COVID-19 pandemic. Industry trends can often accelerate adoption or draw new attention to C-PACE, and several current factors are pushing it forward again.

Facilitating green finance for ESG requirements. The surge of interest in ESG property investing, performance and reporting has drawn further attention to C-PACE. Whether in new construction or retrofit projects, C-PACE offers an immediate tool to help meet ESG objectives.

Nightingale-Wafra

C-PACE helped fund $89 million for retrofits at 111 Wall Street in Manhattan in 2021. Upgrades included a new building envelope and high-efficiency glass.

Meeting local/regional environmental regulations. Local and state jurisdictions are increasingly mandating climate-responsive real estate policies. One recent example is New York City's Local Law 97, also known as the Climate Mobilization Act. The 2019 legislation created hard targets for reducing the environmental impact of individual commercial buildings, and owners-developers are scrambling to respond.

C-PACE is an alternative financing mechanism, enacted by state legislation, that provides low-cost, long-term financing to owners and developers of commercial and industrial properties for energy efficiency, water efficiency, renewable energy and resiliency projects. C-PACE payments are secured by and repaid through a voluntary assessment on the property's tax bill, similar to how local water and utility bills are paid.

A relief valve for market swings. The COVID pandemic essentially froze many capital sources in 2020-21. This sparked a surge of owner-developers turning to C-PACE to replace struggling senior and mezzanine lenders so they could complete development projects that could not be paused. Others used C-PACE to provide emergency refinancing and capital restructuring where needed. For many real estate owners, the COVID-induced downturn quickly established C-PACE as an alternative source of capital that is counter-cyclical and more reliable than traditional sources.

New & Noteworthy

310,900 sq. ft.

Jackson-Shaw is developing a build-to-suit **industrial project** for **Vehicle Accessories, Inc. (VAI)** in the new **Alcott Station Industrial Business District** in **Mesquite, Texas**. The 310,900-square-foot building will host engineering, sales, accounting, senior management, key manufacturing processes and distribution. Urban Logistics Realty is creating the master-planned 180-acre Alcott Station Industrial Business District. Upon completion, the development will incorporate up to two million square feet of industrial space, with a five-acre city park as the centerpiece.

292,000 sq. ft.

The Fallon Company recently opened **301 Hillsborough**, a **mixed-use development** in **Raleigh, North Carolina**. The 19-story Class A office tower features 280,000 square feet of office space and 12,000 square feet of ground floor retail. Designed by Raleigh-based architect DudalPaine Architects, 301 Hillsborough includes a ninth-floor sky park, a bike concierge and ample bike storage, a modern fitness studio and a pedestrian-oriented streetscape. The Fallon Company received Fitwel 2 Star certification and is pursuing LEED Gold certification for sustainability.

234,360 sq. ft.

Robinson Weeks Partners is building a **speculative distribution facility** in **Memphis, Tennessee**. The 234,360-square-foot single-load development known as **Southridge Crossing** will feature ample auto and trailer parking, finished office space, warehouse lights, 42 dock doors and two drive-in doors. The facility is near I-55, I-69 and I-40, as well as the Memphis International Airport, which is the world's busiest freight airport. Memphis is also home to five Class 1 railways. The variety of transportation options available enables future tenants to reach 70% of the U.S. population within a two-day drive.

Benefits of C-PACE

Developers and investors cite several financial and business benefits of C-PACE, including:

- Better cash flow because there are no upfront costs or down payment requirements, which generates immediate cash-positive impact.
- Increased property value from making important property improvements, which also helps position the real estate for potential future sale.
- Increased marketability to potential tenants who are seeking environmentally responsive real estate.
- Decreased maintenance costs from clean-energy retrofits that equip buildings with sustainable amenities, which offer less expensive ongoing maintenance.
- Lower cost of capital as C-PACE displaces more expensive forms of funding in the capital stack and is non-recourse and non-accelerated.
- Achieves ESG goals.

Updates on state-by-state C-PACE adoption and other information is available from the C-PACE Alliance, www.c-pacealliance.org. ■

Retroactive application of C-PACE. Many states allow "look-back" C-PACE financings of up three years, enabling developers to do retroactive C-PACE funding for qualifying improvements on recently completed buildings and renovation projects.

Larger C-PACE transactions. As the C-PACE market has gained traction, the size of deals has also increased. According to a December 2020 report from Morningstar, the average size of C-PACE transactions is increasing exponentially, due in large part to the growing price tags of new construction. For Petros PACE, a $500,000 loan transaction was considered large in C-PACE's infancy, but today's average is between $15 million to $17 million.

How is C-PACE Used in Commercial Properties?

Transactions and case studies are some of the best tools for illustrating how C-PACE is used. Here are a few from among the hundreds of deals closed in recent years across office, hotel, industrial, multifamily, retail, mixed-use, historic and other commercial property types:

High-rise Office. In 2021, C-PACE financing provided $89 million for retrofits at 111 Wall Street in Manhattan, the largest C-PACE funding effort in the U.S. at the time. Joint-venture owners Nightingale and Wafra Capital utilized C-PACE as part of a major transformation and upgrade of the 1.1-million-square-foot property including a new building envelope and high-efficiency glass, upgraded mechanical, electrical and plumbing systems, and energy-efficient elevators.

C-PACE financing is typically used for improvements that provide an environmental- or energy-related benefit. These include air conditioning/heating (HVAC) and associated mechanical systems; electrical improvements such as LED lighting; updated building envelope and fenestration such as high-performance windows; water efficiency, including low-flow plumbing and irrigation; and full-on energy systems such as solar power and back-up capabilities.

Senior Living/Multifamily. In Lebanon, Ohio, Leo Brown Group tapped $8 million in C-PACE financing for a 142-unit independent living, memory care and assisted care facility's efficient envelope. The project included windows, siding, doors and foundations along with HVAC and LED light fixtures.

Warehouse/Industrial. In Troy, Michigan, global manufacturer Heller Machine Tools arranged $979,000 in C-PACE funding for efficient lighting with controls, compressed-air upgrades, server room cooling, HVAC improvements with controls, and a partial roof replacement for its 93,000-square-foot industrial facility.

Hotel/Hospitality. The new 260,000-square-foot Marriott Hotel & Residence Inn in Columbus, Ohio, utilized $16 million in C-PACE for lighting systems with controls and a comprehensive building envelope upgrade.

Historic property renovation. The century-old 21,000-square-foot Whitney restaurant and events property in

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Detroit utilized $863,000 in C-PACE financing for a new HVAC system and high-efficiency stoves, upgraded electrical systems, replacement of 214 storm windows and conversion of 1,865 incandescent light bulbs to more efficient and longer-lasting LED lighting, among other improvements. Whitney owner **Bud Liebler** said the restaurant will see savings of more than $450,000 in utilities, operations and maintenance expenses over the fixed-rate, 20-year term.

As the commercial real estate industry continues embracing C-PACE, developers are finding this innovative tool can provide a green financing alternative to more expensive, less flexible funding sources. ■

Mansoor Ghori is CEO of Austin, Texas-based Petros PACE Finance.

New & Noteworthy

140,000 sq. ft.

Ware Malcomb recently finished construction on **FreezPak Elizabeth**, FreezPak's newest 3PL cold storage **public refrigerated warehouse** in **Elizabeth, New Jersey**. The 140,000-square-foot building includes an ammonia-CO2 cascade central plant refrigeration system and 18 docks that allow for 30,000 pallet positions. The facility includes a 66-foot-high clear freezer and is equipped with an Automated Search and Retrieval System (ASRS) and a Very Narrow Aisle (VNA) racking system, as well as an 80-foot-high clear span cold dock.

116,000 sq. ft.

Trammell Crow Company, in partnership with **CBRE Investment Management** on behalf of a separate account client, will develop **Vista Sorrento Labs**, a 116,000-square-foot **life science development** in **San Diego**. The speculative four-story life science building, with 32,000-square-foot, column-free floor plates, is designed to deliver Class A lab, clean room and office space. It features upgraded MEP and structural engineering, 16-foot floor-to-floor heights, and on-site chemical storage. Plans include EV charging stations and a fitness center with showers and locker rooms.

70,000 sq. ft.

Novocure, a global oncology company headquartered in Europe, recently broke ground on its new $9 million, 70,000-square-foot **training facility** in downtown **Portsmouth, New Hampshire**. The property will accommodate Novocure's rapid growth within New Hampshire, which is now up to 300 team members, with plans to hire more in the new year. The space will serve as a training and development center, where physicians and partners from around the world can visit to learn more about the company's medical treatments. ■

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.

ASTM Adopts a New Phase I Environmental Site Assessment Standard

What does it mean for commercial real estate transactions?

By Sedina L. Banks, Greenberg Glusker LLP

In late 2021, ASTM International revised its standard for conducting Phase I environmental site assessments (ESAs), a change that will affect most commercial real estate transactions. First published in 1993, the standard, officially known as ASTM E1527, is revised every eight years to ensure that it continues to reflect the current best practices for conducting ESAs.

Results of a Phase I environmental site assessment (ESA) could lead to additional tests of the soil, soil vapor or groundwater at a potential development site.

The Importance of a Comprehensive ESA

Conducting an appropriate ESA, commonly known as a "Phase I," is critical to most CRE transactions. Owners of contaminated properties can be subject to environmental liability under federal and state law. For example, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as the Superfund law, imposes strict liability on a current owner for any environmental contamination found on a property. A current owner of a contaminated property can be forced to clean it up even if they did not cause the contamination. Additionally, owners of contaminated properties can face indemnity provisions in leases, purchase and sale agreements, and loan agreements.

An ESA serves two primary purposes. First, it helps the purchaser determine whether there are any potential environmental issues with a property that might require further site assessment, such as testing the soil, soil vapor or groundwater. Second, purchasers seeking to avoid Superfund liability must comply with the statute's "all appropriate inquiries" requirement before the acquisition date to qualify for one of CERCLA's few statutory defenses, such as those for bona fide prospective purchasers, innocent landowners and contiguous property owners. Fortunately, the standard provides guidance to ensure that environmental professionals conduct appropriate and consistent ESAs.

In addition to potential environmental liability, owners of contaminated properties may face difficulty refinancing or reselling the property in the future. Future redevelopment may also be challenging. For example, an environmentally impacted property may be restricted to industrial or commercial use unless remediated to residential standards.

Key Changes in the 2021 Standard

While the 2021 standard includes many of the same provisions as the 2013 standard, there are some important differences.

Key terminology revisions and additions. The primary goal of an ESA is to determine whether there are any Recognized Environmental Conditions, or RECs, at a property. A REC refers to the presence or likely presence of any hazardous substances or petroleum products at a property. The identification of RECs typically triggers a recommendation by the consultant for further site assessment.

The 2021 standard clarifies the definition of RECs, including other types of RECs such as Controlled Recognized Environmental Conditions (CRECs), which are RECs that have been addressed to some degree, and Historical Recognized Environmental Conditions (HRECs), which are RECs that have been addressed to the satisfaction of regulatory authorities and are not subject to any controls. This reduces the possible misclassification of known or likely hazardous materials and petroleum products affecting properties. A new appendix provides useful guidance regarding REC, HREC and CREC classification, as well as an updated discussion of business environmental risks (a risk that may impact the planned use of commercial real estate but is outside the scope of the standard).

ASTM International also added formal definitions for Property Use Limitation and Significant Date Gap to provide clarification of these concepts. According to the standard, a Property Use Limitation is a "limitation or restriction on current or future use of a property in connection with a response to a release, in accordance with the applicable regulatory authority or authorities that allows hazardous substances or petroleum products to remain in place at concentrations exceeding unrestricted use criteria." A Significant Data Gap is "a data gap that affects the ability of the environmental professional to identify a recognized environmental condition."

The new standard also identifies PFAS (per- and polyfluoroalkyl substances) as an "emerging contaminant" that may be evaluated as a business environmental risk. It's an acknowledgment of growing concern and regulation of PFAS. According to the U.S. Environmental Protection Agency (EPA), "PFAS are widely used, long-lasting chemicals, components of which break down very slowly over time." EPA has taken steps toward the regulation of PFAS. Once designated by EPA as a hazardous substance, PFAS analysis will be a required aspect of "all appropriate inquiries."

These revisions should increase consistency between Phase I reports prepared by different environmental professionals and provide additional useful information in those reports to potential property purchasers.

More robust historical research requirements. The 2021 standard imposes more stringent requirements for the review of historical records. The 2013 standard partially left the scope of the historical records review to the discretion of the environmental professional performing the ESA. The 2021 standard requires the environmental professional to review, at a minimum, these four historical sources for both the subject property and any adjoining properties — aerial photographs, fire insurance maps, local street directories and historical topographic maps.

The 2021 standard also includes retail uses with industrial or manufacturing uses to address the possibility of dry-cleaning operations at a retail location. Dry cleaners are a major source of contamination because they use many volatile, long-lasting chemicals.

These and other record-review requirements could increase the scope of work for an ESA depending on the location of the subject property (e.g., rural vs. urban) and types of adjoining properties (e.g., commercial/industrial vs. residential).

A potentially shorter shelf life for the Phase I report. Like the 2013 standard, the 2021 standard states that the Phase I report is viable if completed no more than 180 days prior to the date of acquisition. That timeline could be extended up to one year if certain aspects of the report are updated, such as interviews, environmental lien searches, review of government records, site reconnaissance and the declaration of the environmental professional preparing the report.

However, in contrast to the 2013 standard, the 2021 update requires the report to include the dates that each of these components were completed and determines the 180-day and one-year period based on these completion dates. This will lead to a significant shortening of the viability of a Phase I report. In the past, the report "expiration" was based on the date of the final report. Prospective purchasers with extended diligence periods may be required to update components of the Phase I report prior to property acquisition to comply with the 2021 standard.

Wrapping It All Up

Using the 2021 standard may ultimately result in different findings of RECs due to the revised definitions. It may also increase the cost and time to prepare the Phase I report. The shorter shelf life of the Phase I report under the 2021 standard may also affect the viability of the Phase I report.

As of this writing, the EPA has not adopted the new standard, but the agency will likely approve it later this year. ■

Sedina L. Banks is a partner at Greenberg Glusker LLP in Los Angeles.


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Risky Business: Protecting a Smart Building from Cyber Exposure

Insurance coverage will be increasingly difficult to acquire if information technology security systems and protocols aren't in place.

By Dru Douglas, Hub International

Keeping internet-connected systems secure is a critical challenge for building owners and tenants.

Today, an increasing number of commercial real estate ventures rely on smart technology — the kind of technology that allows users to interact with a device or an entire system through the Internet — to make life easier for owners and tenants alike.

Not only does smart technology make it possible to control an HVAC system for a large office building or to monitor water usage to identify a potential leak, it also can help minimize energy waste by connecting movement sensors to a lighting system in an office building.

Unfortunately, anything connected to the Internet also brings additional risk. If hackers gain control of one system — even a seemingly minor one — it's a short trip to take over another system. In 2017, a Las Vegas casino was hacked through a smart sensor in a fish tank in the lobby — eventually sending 10 gigabytes of data to a device in Finland, according to the Washington Post.

Building owners and operators are keen to adopt smart technology for a variety of good reasons, but it's important to tread carefully. Newer, more advanced technology captures an enormous amount of data, yet it also creates greater risk for building owners and operators.

Risk is commonly managed through the purchase of cyber insurance, an insurance product that protects businesses should a cyber event occur. For instance, a malicious attacker could encrypt a company's files. The criminal's intent could range from wanting to access sensitive information to demanding a monetary payout. Security firm Risk Based Securities reported that the number of stolen records increased by more than 4,000% between 2015 and 2020.

Unfortunately, anything connected to the Internet also brings additional risk. If hackers gain control of one system — even a seemingly minor one — it's a short trip to take over another system. In 2017, a Las Vegas casino was hacked through a smart sensor in a fish tank in the lobby — eventually sending 10 gigabytes of data to a device in Finland, according to the Washington Post.

The increasing number of cyber events is having a direct effect on the cyber insurance market. Insurer underwriting requirements are becoming stricter in conjunction with rising premiums because of higher claim payouts. Cyber is no longer viewed as an emerging coverage. This makes it critically important to manage risk properly and have an action plan.

Four Steps to Reduce Cyber Exposure

When even a small breach can quickly become catastrophic, cyber exposure gains new importance. In the years

Risk is commonly managed through the purchase of cyber insurance, an insurance product that protects businesses, should a cyber event occur. For instance, a malicious attacker could encrypt a company's files. The criminal's intent could range from wanting to access sensitive information to demanding a monetary payout.

ahead, underwriters will be much more likely to scrutinize an organization's network security posture, so it's more important than ever to have a plan.

By employing these four steps, it's possible to reduce a property's cyber exposure.

Review current security controls. With so much at risk, many insurers are requiring building owners to document the specific security controls they are using before a quote will even be offered. Some of these controls are:

- Multifactor authentication (MFA) should be standard for remote network access, e-mail systems and privileged accounts.
- Remote desktop access must be closed or placed behind a virtual private network (VPN) protected by MFA.
- Privileged account access must be limited to those who need access.
- At least one e-mail filtration solution, such as a Sender Policy Framework (SPF), DomainKeys Identified Mail (DKIM), or Domain-based Message Authentication, Reporting & Conformance (DMARC), should be in place to prevent suspicious e-mails from entering the system.
- A next-generation antivirus solution should be operating on all equipment.
- An endpoint detection and response (EDR) solution that continuously monitors end-users' devices for cyber threats such as malware and ransomware must be in operation.
- At least one copy of backups should be stored off-site or in the cloud.

Require cyber risk training. A 2015 Intel Security study showed that 97%

of employees can't identify phishing e-mails when they land in their inbox. No matter how silly it seems, it's essential to explicitly train everyone — whether they are employees, vendors or other key constituents — to recognize and delete suspicious e-mails.

Creating an organization-wide culture of security takes the entire team, not just the IT department, but taking the challenge seriously can help employees do so, too.

Develop an incident-response plan. An incident-response plan (IRP) is a complete roadmap to support participants during the initial stages of a security incident. It details who to call, what steps to take and when to take each step. Once considered a bonus, the IRP is now often required for those seeking insurance coverage, as it forces organizations to plan out appropriate responses from the time of the breach to post-incident response and closure.

With so much at risk, many insurers are requiring building owners to document the specific security controls they are using before a quote will even be offered.

Rehearse the worst-case scenario with a tabletop exercise. The best way to prepare for a disaster is to enact it. Like a fire drill, a cyber tabletop exercise (TTX) is a simulated cybersecurity scenario where participants (usually the management team) must learn about and respond to an incident in real time. Through this stressful situation, management discovers weak links and can improve its preparedness. Anyone looking to minimize their risk can test their IRP with a TTX — and what's more, more insurers are expecting their clients to do this regularly.

Smart technology comes with benefits and challenges, but the challenges can be actively managed to minimize the risk. As always, planning for the worst and taking the risk seriously goes a long way. But when real estate owners and operators, as well as the tenants, are working toward the goal of remaining secure and connected, the technology is a benefit to everyone. ■

Dru Douglas is the Ontario real estate practice leader for global insurance brokerage Hub International who specializes in the office, retail, industrial and multifamily sectors.

A Community-Minded Approach to Industrial Developments

Economic growth is vital to communities, but it's important to consider other factors as well.

By Matt Mulick and Erin Hathaway, Gresham Smith

Courtesy of Gresham Smith

The Coldstream industrial site in Lexington, Kentucky, is near two well-established residential neighborhoods. It is also located in an environmentally sensitive watershed with two streams and a common border with a shared-use greenway trail.

As municipalities evaluate how to market vacant or underutilized industrial parks to make them viable for the future, they are reconsidering the old way of doing things. In the past, the focus was on luring a new manufacturer and a new tax base. Now, the conversation is different. It's still about creating jobs and bringing new businesses, but community engagement and sustainability are at the forefront.

Development Through Collaboration

A desirable location and ample workforce are no longer the only criteria for many companies. Today, more cities want to create walkable spaces and natural amenities that attract workers searching for live/work/play environments. As a result, communities are being more selective and thinking more holistically about the impact of large industrial developments. For developers, that means engaging with the community and talking to residents, stakeholders and other businesses about what types of investments will create a sustainable mix of growth and development.

Lexington, Kentucky's plans for the Coldstream 200-acre industrial site is one such example. It was the longtime home of University of Kentucky's Coldstream Dairy Research Farm and will be transferred to the city this year as a part of a historic land swap that was negotiated in 2017.

The site is adjacent to the university's 735-acre Coldstream Research Campus, which hosts more than 50 companies and organizations in sectors such as biotech, pharmaceuticals and other high-tech industries.

A desirable location and ample workforce are no longer the only criteria for many companies. Today, more cities want to create walkable spaces and natural amenities that attract workers searching for live/work/play environments. As a result, communities are being more selective and thinking more holistically about the impact of large industrial developments.

The Coldstream industrial site was identified as part of the city's strategic growth plan in 2018 because residential developments are already being eyed adjacent to the industrial site. Future developments with a focus on workforce housing will begin opening to new residents in 2022, and the aim is to continue that momentum by developing a live/work/play community, which is highly desired by today's workforce.

In 2021, Lexington set out to create a master plan to envision the future of the Coldstream site that considers the opportunities for residents of the community and attracts new business and tax dollars. It started with community engagement — town halls, surveys and design charrettes, both virtual and in-person — to determine how to attract the workplace of the future to the area.

Next, an accounting was done to determine the positive attributes of the site. It's located near the intersection of an interstate and a major corridor. In addition to the presence of the existing Coldstream Research Campus, two well-established residential neighborhoods are adjacent to the site. Located in an environmentally sensitive watershed, the site contains two streams, as well as a common border with a shared-use greenway trail that connects downtown Lexington with nearby neighborhoods and parks.

During the ongoing community engagement sessions, the first thing the city heard from residents is how valuable preserving and enhancing these elements are to the future of the site. The community wanted to preserve usable space, such as trails and connections to existing greenways, and it also wanted to make sure that preserving local habitats and ecology was a top priority.

The Approach

To chart a new course, the city took an approach that can work for others looking to reinvent underutilized properties.

Think big picture. When looking for the right location, approach those conversations as a partner in the deal, not a transaction. Taxable square footage isn't the only metric being considered anymore. Look to play on the strengths of the entire development. A small investment in community outreach can pay big dividends and help persuade members of the community that are initially skeptical of development.

Develop a mission statement. What's the larger mission? Growing a business is important, but how can it be done to help the community thrive? Work together to develop a mission statement to guide decision-making.

Engage the local community early. What's in it for them? Listen to residents to see where there are opportunities to make an impact across the community. Think about what other investments might make sense to make the deal thrive.

Build on existing assets. In some cases, there are already existing businesses or other resources present in the area. Consider the following:

- Partnership opportunities with a nearby university.
- Conversions of underused facilities such as warehouse space that can be retrofitted for loft-style apartments.
- Promoting multimodal network connectivity.
- Protecting and enhancing natural resources and landscapes.

Be proactive. Determine what infrastructure improvements are needed for the area to flourish in the future. Consider developing or expanding a network for accessible transportation options (think: mass transit, greenways, bike lanes, etc.). Where possible, look for ways to incorporate green space or open space into that planning.

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Look at quality-of-life improvements. Work together to consider how the local environment might be improved to help attract and retain high-paying jobs.

Communicate the value of these investments, and the future developer or end user will see the win-win opportunity that a site like this presents. Lastly, communicate what has been created and the potential for a better quality of life for all residents of the community. ■

Matt Mulick, AIA, NCARB, is a senior architect at Gresham Smith; **Erin Hathaway**, PLA, ASLA, is a senior landscape architect at Gresham Smith.

"Worth Repeating"

Sound bites from NAIOP's I.CON East, held June 8-9 in Jersey City, New Jersey.

"We can't just live in the world we used to. I think the more that we can recognize that the world is requiring us to do a more integrated method of delivery, we can start to partner, and we can start to be smart relative to early bulk purchases of materials … Let's rethink the process in order to strategically gain advantage." — ***Scot Murdoch**, AIA, partner, KSS Architects*

"The key thing is getting the right people who are knowledgeable. There are a lot of unique challenges around electric vehicles, and the right people can help you solve them." — ***Scott Watkins**, vice president of manufacturing, Clayco*

"The biggest risk is in Europe — not only an inflation story but a story of supply constraints and a lack of production. And that can still filter over to the U.S. There's a lot of discussion right now in the U.S. about demand easing, which would help lower inflation and help improve the supply chains." — ***Ed Lerum**, head of global logistics real estate, Norges Bank Investment Management*

"When we were preparing for this panel, we only had a handful of ships across the coast of Savannah. This morning, we have 25 ships waiting five or six days to get into the port. Now we have all this volume coming in, what do we do with it?" — ***Tom Wyville**, regional manager, Georgia Ports Authority*

Economist Dambisa Moyo, Ph.D., told I.CON East attendees that many of the "unprecedented" geopolitical trends currently affecting the world's economy have actually occurred before in history.

"It's not just the consumer that's a bigger driver for this space. A Deloitte study said that 53% of total shipping cost getting a product from manufacturer to consumer is gobbled up in the last-mile fulfillment, and it takes up about 41% of total logistics costs, including real estate assets and everything. It's a critical piece of the supply chain." — ***Keith Lieberman**, PE, senior vice president, operations manager, T&M Associates*

"Over the past 10 years or so, leases stopped being renewed at this mall. So it was an opportunity for my client — a warehouse and distribution center developer — to redevelop the property ... It's not like you're developing a farm field. They already have sewer, water, electric and gas right there." — ***James Thaon**, associate and branch manager, Bohler*

"Today, e-commerce is a $5 trillion market that is projected to soar past $7 trillion by 2025. Of those sales, about one-third — totaling more than $1.25 trillion and expected to reach close to $2 trillion by 2027 — are returned and therefore must go through a return logistics flow." — ***Geoffrey Kasselman**, SIOR, LEED AP, partner and senior vice president, Workplace Strategy, CRG*

"The Port of New York and New Jersey is the largest port on the East Coast and third largest in the U.S., with six marine terminals, 3,000 acres of waterfront property and port-wide intermodal rail facilities. The port provides access to 46.3 million consumers within a four-hour drive. In addition, the port has one billion square feet of warehouse and distribution space within 50 miles." — ***Anne Strauss-Wieder,** director, freight planning, North Jersey Transportation Planning Authority*

"Multistory warehouse development typically requires a minimum of four acres, and being able to find a site that large in this area [the Bronx] is unusual. The site constraints drove much of the design due to parking needs, grade changes, and the need for flexibility, as the tenants were then unknown." — ***Ryan Nelson**, managing principal, Turnbridge Equities* ■

CEO on Leadership: Laura Hines-Pierce

The leader of Houston-based Hines talks about leadership, the current challenges in the industry and becoming co-CEO of a global real estate investment, development and management firm.

By Ron Derven


Laura Hines-Pierce

"This co-CEO structure, while unique, has many benefits. One of the most important is the different perspectives we bring both from a gender and generational standpoint. This helps push us to better decisions and better outcomes."

— Laura Hines-Pierce, co-CEO, Hines

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

Laura Hines-Pierce: I grew up around the commercial real estate industry, but it wasn't always my goal to make it my career. I have a passion for art; I studied art history and pursued a career in the field while at Sotheby's in New York. But around that time, which was over 10 years ago, I found myself drawn toward what was going on at Hines. I saw parallels between art and architecture and was excited by the innovation and community-building aspects of commercial real estate. It was then that I decided to join the firm, and it's one of the best decisions I've ever made. I've been able to participate in grassroots movements to bring a focus on diversity and inclusion to the company, work on projects like River Point in Chicago and redefine our investment management platform. I am thrilled to guide the company as co-CEO in partnership with my father.

***Development:** What is your primary role as co-CEO of Hines today?*

Hines-Pierce: As the pace of innovation in real estate is finally catching up with other industries, my primary focus has always been — and continues to be — positioning Hines at the forefront of those changes.

This co-CEO structure, while unique, has many benefits. One of the most important is the different perspectives we bring both from a gender and generational standpoint. This helps push us to better decisions and better outcomes.

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

Hines-Pierce: It all starts with people. Each person at Hines has a chance to make important contributions to meeting our goals. Along the way, we do a lot of good for our communities, the built environment and our fellow employees. We look for individuals who strive to be the best and embrace the opportunity to be entrepreneurial in their own ways. Employees are expected to always do the right thing because, ultimately, that sustains us as a firm.

***Development:** Heading a global firm with a presence in 285 cities and 28 countries, what are your key leadership challenges today?*

Hines-Pierce: Like other companies during the pandemic, we had to address immediate challenges and adapt. The office and retail sectors, along with many other classes of real estate, were decimated, but throughout the crisis we've demonstrated resilience and have come out better positioned. Also, like many companies, our culture has changed due to the shift toward hybrid and remote work. Our leadership team is focused on how to build and sustain culture virtually while making the most of the time we spend together in-person.

We're also very focused on environmental, social and governance (ESG) and how to ensure that Hines' commitments are meaningful in terms of the impacts they'll make on our people and the planet. Our founder, my grandfather, was a mechanical engineer

> **“I found myself drawn toward what was going on at Hines. I saw parallels between art and architecture and was excited by the innovation and community-building aspects of commercial real estate. It was then that I decided to join the firm, and it’s one of the best decisions I’ve ever made.”**
>
> *— Laura Hines-Pierce, co-CEO, Hines*

with a passion for efficiency, so energy conservation is embedded in our DNA — our standards helped develop the LEED rating system. We’re thinking about how to reduce both operational carbon and embodied carbon, and we named a vice president of carbon strategy who will coordinate our comprehensive efforts globally.

Development: *How do Hines’ headquarters and a company office in another city work together to successfully manage a project in real time?*

Hines-Pierce: Through collaboration, communication and share of ownership, Hines can successfully manage a project in real time. Our local offices are our “boots on the ground” and deeply imbued with Hines’ culture and best practices, so that connection is practically seamless. We have regional CEOs around the world who have the autonomy and authority to make decisions that are right for their regions.

Hines has a group called Conceptual Construction that gets involved in almost every major development we do around the world. They bring the full knowledge, best practices and risk management of Hines’ 65 years of experience to bear on each project, in partnership with the teams on the ground that have the intimate knowledge of that project, site and strategy. Perhaps most importantly, many of the team members working on a project are invested in it alongside the family and our investors, so they’re incentivized to see the project succeed and are completely aligned with the firm and our partners. In the company’s early days, my grandfather implemented this concept when he could no longer oversee every project. He wanted to make sure the people working on a development benefited from its success so they'd be as dedicated as he would be. It has worked well for us over the past 65 years.

Development: *As part of the team that established the OneHines Women's Network, could you talk about your commitment to diversity, equity and inclusion and why it is important to Hines?*

Hines-Pierce: One of my goals is to close the gender gap in real estate, and I hope other firms elevate and hire more female leaders. The OneHines initiative supports an inclusive culture in which all Hines employees feel valued and have equal opportunity to achieve their maximum potential. With offices around the world and a workforce of more than 4,850 professionals — 40% of which are female — we know that diverse skills and viewpoints make us stronger and better able to serve our investors, partners, clients and communities. And our DE&I initiatives are a huge focus for us and tie into our larger, long-term ESG strategy.

Development: *What do you see as the greatest challenges for the industry over the next year and over the next three to five years?*

Hines-Pierce: As we look to the future, there are many definitive trends we are seeing, but the two most important are ESG and innovation. ESG will take the whole firm's focus and commitment for Hines to continue to lead in this space in the future. Putting an increased emphasis on re-evaluating our innovation strategy by focusing on disruptive innovation, technology and data will be pertinent to our success as well. The challenge is how quickly things will be changing around us, but that also creates significant opportunity.

Development: *Where are the greatest opportunities for Hines in the years ahead?*

"As a CEO and a mom, I'm fortunate to work for a company that allows me to prioritize and succeed at both. On a personal level, at the time of this interview, I was pregnant with my second child, and I hope by the time my children come of age it is not out of the ordinary to see a pregnant CEO successfully lead a firm."

— Laura Hines-Pierce, co-CEO, Hines

Hines-Pierce: The last two years have been two of our most productive. We've made strategic investments to continually diversify our portfolio and are focused on a variety of asset classes. We have advanced our investment management platform and launched three flagship funds in the U.S., Europe and Asia.

In New York, where COVID hit the hardest, we've seen swift changes in our projects, and one of our newest partner projects is nearly completely leased. We are a development partner at Manhattan's One Vanderbilt, which opened in the middle of the pandemic, and the Class A trophy tower is now more than 90% leased. In San Francisco, we unveiled plans for the acquisition and redevelopment of the historic PG&E office campus.

Adding social value to our properties and to the communities where we are active is a key challenge next to fighting climate change. The global housing crisis is harming the social fabric of our communities. We are planning to do our part to provide attainable housing where we can and have made strides in the U.S. and Europe.

Development: *Many members of your team belong to NAIOP chapters across the nation. Why is being part of NAIOP important to Hines?*

Hines-Pierce: Hines and NAIOP share many of the same values. Hines will continue to expand on our legacy of supporting our people and communities by partnering with our communities and others across the industry. By partnering with organizations like NAIOP, we can learn from a network of professionals and continue to educate our workforce and enhance expertise through diverse perspectives and outlooks on today's challenges.

Development: *What is the best advice you have been given over the course of your career in real estate?*

Hines-Pierce: As a CEO and a mom, I'm fortunate to work for a company that allows me to prioritize and succeed at both. On a personal level, at the time of this interview, I was pregnant with my second child, and I hope by the time my children come of age it is not out of the ordinary to see a pregnant CEO successfully lead a firm. Additionally, the best advice and input I've gotten is just to listen as much as possible and ask questions wherever you can.

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

Hines-Pierce: I think the most important thing is just that most people around me know more than I do, so I'm always looking to learn from and listen to those around me. I always want to be in learning mode, no matter the point I'm at in my career.

Development: *How do you relax during your off hours?*

Hines-Pierce: Family is very important to me. My favorite part of my day is spending time with my son and husband, bringing them to visit my parents, and enjoying holidays and celebrations with my brothers and sister. ■

Ron Derven is a contributing editor to Development magazine.


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Key Elements for Creating a Technologically Equipped Hybrid Office

High-quality digital connectivity is a crucial element for bringing workers back.

By Jason Lund, JLL

Before the COVID-19 pandemic, people worked at the office wherever computers and phones were plugged in, most often at dedicated work areas or desks. During the past several years, employees have gotten used to working anywhere using their cellphones and laptops.

However, this has not been a painless shift. Connections for cellphones have often been spotty for employees, and everyone has experienced the difficulties of a poor Wi-Fi connection during video calls. Workers making their way back to offices are seeking hybrid spaces, adapted to their needs and their current mode of working wirelessly, that also can provide the same performance quality as the old, wired environment. They want advantages they don't have either at home or in alternative environments. Hybrid offices can provide quieter spaces to work, in-person meeting places for teams and many other desirable physical features. Hybrid space can also differentiate by offering cellular and Wi-Fi connections that are substantially stronger than at home. Additionally, these technologically enabled spaces can provide highly cybersecure environments for everyone's benefit.

If cellular and Wi-Fi signals are the two rails on which technology runs for the hybrid office environment, what are the options for businesses, and how much do they cost?

Obtaining Faster and More Secure Wi-Fi

Unfortunately, Wi-Fi systems for office space are often purchased from local retailers and installed by local on-site personnel. Although this is certainly affordable and can work in some smaller spaces, this type of solution is not adequate for hybrid office demands. These systems tend to be low power, low in capacity, and their usefulness can degrade quickly. (Wi-Fi power refers to how far it extends throughout the space and its ability to go through walls or around obstructions. Capacity refers to how much data it can process at one time. For example, does a single person streaming a video crash the system or can it handle 30 people making video calls and streaming live TV?)

A 5G tower in Salt Lake City. Cellular connectivity will keep growing in importance as mobile phone technology evolves toward greater computing power and storage capacity.

A better option is to purchase a high-quality system and have it professionally installed. This will provide a much better experience for users. However, this system would still need support over years of operation. This would include equipment upgrades as 5G requirements progress, adjustments for degradation in services due to cybersecurity monitoring, software updating and other external factors. Over time, even a good system's performance will degrade if it is not maintained and updated. An "install and forget" model of Wi-Fi would not provide a real differentiation for tenants in a hybrid office environment.

A third option, the one most suitable for the hybrid office, is a professionally managed Wi-Fi network. This includes not only high-quality, high-capacity Wi-Fi equipment but also a professional provider that will maintain the system, update software, upgrade hardware and monitor the system through a Network Operations Center (NOC) and Security Operations Center (SOC). This is ideal for a hybrid office environment. This type of solution can run from 25 cents to 75 cents per square foot depending on factors such as building size, type, location, configuration and coverage level required. It is also important to note that not all providers will require upfront payment. Some will spread the cap ex cost over

continued on page 40


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Hybrid offices can provide quieter spaces to work, in-person meeting places for teams and many other desirable physical features. Hybrid office space can also differentiate by offering cellular and Wi-Fi connections that are substantially stronger than at home.

continued from page 38

the course of a contract period. This amortized cost should be considered separately from the month-to-month service contract to maintain and monitor the system.

Through a NOC, a provider can continually monitor network traffic and network capacity to ensure users receive the most powerful and fastest experience. This includes funneling speed and capacity to certain high-use areas in the building as needed and continually adjusting the service and flow throughout the facility to meet changing requirements as users move around within the space.

A SOC allows the provider to monitor the Wi-Fi network 24/7 and detect threats such as phishing attempts, scam e-mails and potential hacks. The SOC also isolates and protects against any threat or virus a tenant might inadvertently bring to the network after working from a nearby coffee shop, park or other off-site location. In addition, if there is an event, the system can neutralize the hacks quickly and seamlessly with little interruption in service. Restoration of systems and records is a key factor for resilience.

A professional provider will also onboard new users with sign-on credentials and remove the credentials of former users to prevent further access to the system. Additionally, a provider can set up VPN (Virtual Private Network) access protocols for all users working remotely. This allows users to maximize the office environment, surrounding amenities and open areas, which is the hybrid office experience.

Providing the Best Cellular Experience

As with Wi-Fi, there are many ways to provide enhanced cellular connectivity. This is even more important in a hybrid environment than Wi-Fi because in addition to phone calls and texting, a modern cellphone functions as a computer when needed. With in-cloud packages through many of the large technology providers, users can access all their files and do most of what they do on their computers using their phones.

There are many equipment options for enhancing cellular service within a building, but the methodology essentially boils down to two approaches: generating a new cellular signal within a building or drawing an outside cellular signal into a building and distributing it to where it's needed. Both approaches require a good quality professional provider.

Generating a new cellular signal within a building provides the best quality and most powerful service for users. The equipment that does this is called a Distributed Antenna System (DAS). It produces and distributes a new cellular signal throughout the structure wherever it is needed. This can include 100% of the building, elevators, parking garages and even outside spaces such as observation decks on rooftops, surrounding open space and picnic areas. This approach is like bringing a cellular tower inside the building.

This system must be "neutral host," meaning all three major carriers (AT&T, T-Mobile and Verizon) can insert their specific equipment into this larger system so that it can provide a cellular signal to their customers. This system should be professionally monitored and maintained on a service contract with a good quality provider. While this is ideal, it is also expensive and can run from $1 to $2 per square foot depending on many variables. As with Wi-Fi, there are providers that will not require upfront payment and will amortize the costs over the contract period.

Also, with Wi-Fi, the cost should be negotiated separately from the monthly maintenance and monitoring contract. The costs need to be weighed strategically by the owner/investor with regard to the amount of hybrid office provided and the importance of this quality of cellular signal for tenants/occupants.

While the DAS system generates a new signal, the "Passive DAS" approach borrows a cellular signal from the outside, boosts it and then distributes it to various locations within the building that are particularly challenging when it comes to providing good quality signal. Once mapped out, a provider physically goes on the roof of the building and points specific antennas at different cellular installations in the surrounding area. Much like a cellphone draws in a signal from a tower, these bi-directional antennas draw in cellular signals from the strongest surrounding sources and then drop them into the specified building locations.

This approach is more cost effective than generating a new signal from a DAS (typically about half of a DAS cost), but it is also less reliable. Since the signal is from outside towers, it relies on the quality and power of those towers. As conditions change in the surrounding environment, that outside source could become less effective; the towers could even be moved or uninstalled. Since the signal is "borrowed," the carriers have no commitment to provide any level of service to a particular building as they would with a DAS.

continued on page 42


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The pandemic intensified digital transformation and removed the four walls of the workplace. Many employees like the flexibility of working from home, so there must be a good case for them to return to the office.

continued from page 40

Additionally, capacity of the borrowed signal will fluctuate as the number of people using the outside signal fluctuates. Peak times of use for outside signal sources are typically in the morning, lunchtime and evening. Hybrid office users are counting on their signal to be significantly better than what they have at home. If users are experiencing the same up-and-down, on-again off-again reliability they get anywhere, then the hybrid office does not have an advantage.

Achieving a Successful Hybrid Work Environment

The pandemic intensified digital transformation and removed the four walls of the workplace. Many employees like the flexibility of working from home, so there must be a good case for them to return to the office.

A successful hybrid work environment will need to provide exceptional quality and powerful cellular and Wi-Fi signals to differentiate itself from all other alternative environments. This environment must also provide strong cybersecurity (a feature most alternative environments do not provide).

Cellular must provide seamless coverage throughout the environment with no dropped calls, scratchy or gapped quality, or echoing or volume modulations. Wi-Fi must provide depth and strength of signal for video conferencing with no drops, slowdowns, pixilation or quality interruptions. It must allow for multitasking, television watching through Wi-Fi (smart TVs and employees watching or streaming through apps), video gaming on employee breaks and other uses.

Today's workplace must be more agile to embrace a liquid workforce — one that is highly flexible and mobile. ■

Jason Lund is a Leader, Technology Infrastructure with JLL.


1501



Few Signs of Trouble on the Industrial Front

The sector continues to stand strong despite rising inflation and interest rates.

By Ermengarde Jabir, Ph.D., Moody's Analytics

Among commercial real estate sectors, industrial emerged as the clear winner following the pandemic-induced recession. And despite signs of headwinds on the horizon, both warehouse/distribution and flex/R&D continue to exhibit stellar performance.

The sector is likely to stay buoyant into 2023 as the outlook remains positive for the underlying demand drivers, notably the increase in spec construction of properties. This is particularly true for cold storage facilities, which are considered safe investments because they store essential consumer staples such as food and medicine and are thus generally insulated from external macroeconomic shocks.

However, concern over the current macroeconomic environment and what the short-term future might hold raises the question of how the industrial sector will fare going forward. Inflation, already quite high at the start of 2021, has risen sharply since the second half of 2021. By June 2022, the figure came in at 9.1%, a four-decade high, though by late summer there were signs that inflation might be slowing.

As part of the Federal Reserve's dual mandate to keep prices stable and ensure full employment, raising interest rates is one of the main monetary policy tools it has to control inflation. This increases the cost of borrowing, which can have significant effects on the industrial sector.

The obvious effect is that construction gets more expensive because of the higher cost of borrowing as well as rising prices for raw materials resulting from inflation. While the industrial sector currently has a healthy pipeline of projects planned as well as under construction, given the record-setting demand observed in the second half of 2021, combined with ongoing elevated demand through 2022 (both observed and forecast), room still exists for both rent and occupancy growth.

E-Commerce Drives Demand

E-commerce as a percentage of total retail sales is an important metric for the industrial sector, as it requires a larger amount of square footage than traditional retail due to inventory, packaging and shipping requirements.

Online sales increased more than 30% from the first quarter of 2020 to the second quarter of 2020 as consumers relied on e-commerce amid pandemic-related closures and stay-at-home orders. Online now represents 14.3% of total retail sales as of the first quarter of 2022. This number is lower than its historical peak of 16.4% in the second quarter of 2020, but still a notable gain from the first quarter of 2020 when it stood at 11.9%, the highest figure until that point. This indicates that e-commerce growth is returning to its original trajectory. Nonetheless, the substitution of e-commerce for bricks-and-mortar is likely to continue its growth through the next few years, with the potential to reach 20% of total retail sales within a decade.

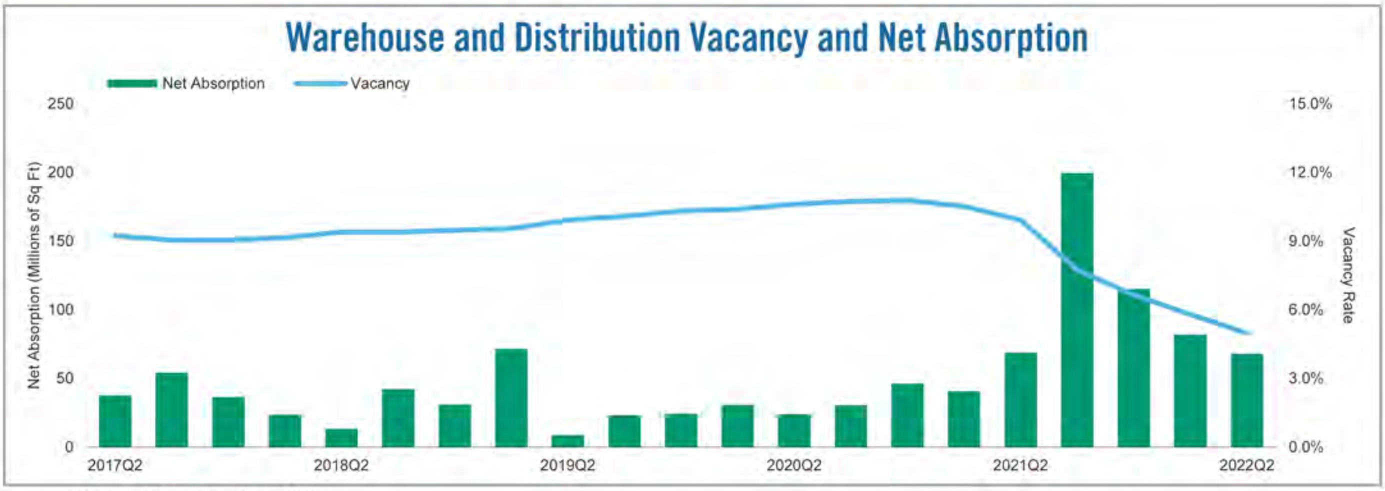
Consumer Spending Concerns

Future demand for warehouse/distribution properties is largely driven

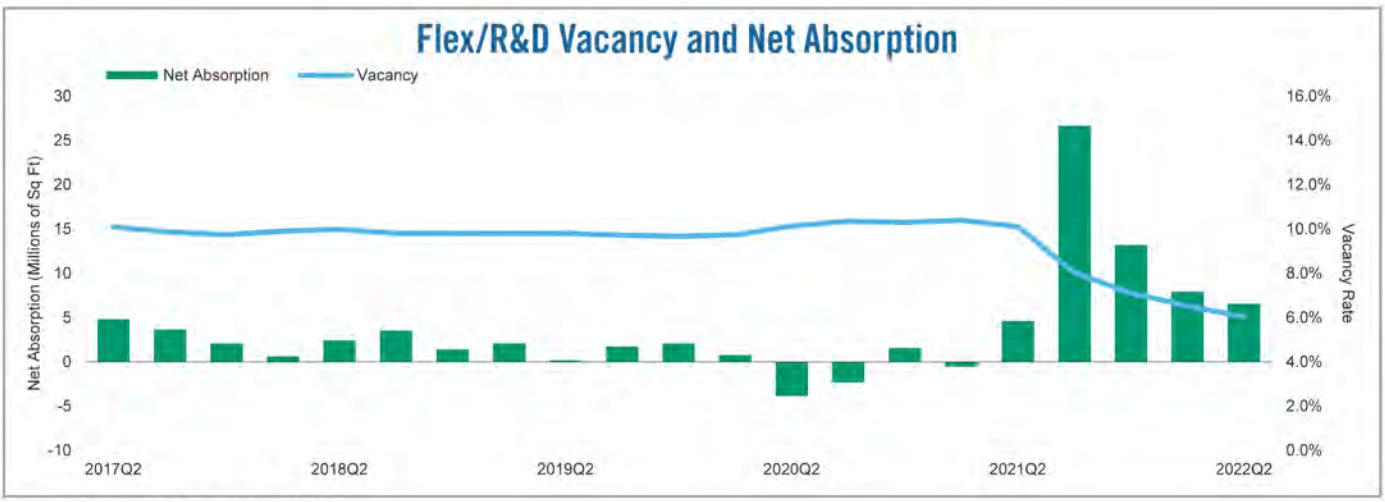
continued on page 46

Industrial Effective Rent Growth

Source: Moody's Analytics CRE



Source: Moody's Analytics CRE



Source: Moody's Analytics CRE

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by consumer spending, whether via e-commerce or through bricks-and-mortar retail. Retail sales have generally risen since the second quarter of 2020. Sales across all sectors have been strong for the past few months, indicating that consumers are willing to spend.

Sales in the first half of 2022 continued the robust trajectory seen since the pandemic-fueled structural break in April 2020. However, high inflation has contributed in part to sustained increases in spending as consumers are now paying substantially more for the same basket of goods.

Consumer sentiment, on a sharp decline since mid-2021 amid inflation worries, continues to fall on the increasing likelihood of a recession. It reached a low of 58.4 in May, a level not seen since October 2008 during the height of the Global Financial Crisis. The fact that consumer sentiment is now lower than it was in April 2020 indicates that rising prices are eclipsing any pandemic concerns. It also points to a possible significant slowdown in spending on the horizon, which could be consequential for the warehouse/distribution subsector.

Factoring in expectations that have revised real GDP growth downward to less than 2% in both 2022 and 2023, as well as rising interest rates that are boosting the cost of borrowing, retail sales are likely to face downward pressure in the second half of this year. Any substantial declines in consumer spending that might result from inflation and rising interest rates will dampen demand for distribution/warehousing properties.

The good news is that warehouse completions prior to 2020 were modest, and global supply chain issues in recent months slowed the pace of construction. Because of this, the sector is not currently oversaturated in a way that would have drastic negative impacts on key metrics such as rents and vacancies if there is a shock to demand-side movements. ■

Ermengarde Jabir, Ph.D., is an economist with Moody's Analytics.

A Fresh Look at Solar for Warehouses and Commercial Buildings

Rooftop community solar can position commercial real estate owners as ESG leaders while generating revenue and strengthening community relations.

By Shaun Keegan, Solar Landscape

A new type of solar, called community solar, is expanding rapidly across the country. Community solar allows commercial real estate owners to achieve their environmental, social and governance (ESG) goals and generate additional revenue at the same time. Environmental advocates, investors, residents and policymakers have widely shown interest in the concept, which is in use in New Jersey, New York, Maryland, Illinois, and soon, California.

Heitman's community solar project on this 316,000-square-foot warehouse in South Brunswick, New Jersey, generates revenue by renting the entire roof.

Community Solar Nationwide: ESG Goals Meet Rooftop Revenue

The commercial real estate sector is thinking more holistically about decarbonizing its operations — and financial health is increasingly tied to those efforts. BlackRock CEO **Larry Fink** made the connection between sustainability initiatives and investment prospects in his annual letter to CEOs, saying, "We believe the companies leading the [decarbonization] transition present a vital investment opportunity for our clients, and driving capital towards these phoenixes will be essential to achieving a net zero world."

In a May 2022 report, Morgan Stanley noted that commercial real estate rooftops are "a largely untapped opportunity to create low-cost renewable energy." The report, "Buildings & Parking Lots: Ready for a Recharge," highlighted multiple community solar case studies, including one by Duke Realty, which was recognized as "Community Solar Project of the Year" by Solar Builder magazine.

With these directives from some of the top global financial voices, community solar presents a way for property owners to create a new revenue stream within their existing building footprints. By adding another tenant to a property — a rooftop tenant — through community solar, owners can maximize the value of their operations, improve relations with the surrounding community and deliver on ESG metrics.

The process involves a solar developer renting a commercial rooftop, installing panels and delivering the electricity directly to the grid. Instead of powering just the building, the energy gets credited to the local community, with benefits earmarked for lower-income households. The programs are usually run through a public utility commission and administered in concert with the utility companies.

The process involves a solar developer renting a commercial rooftop, installing panels and delivering the electricity directly to the grid. Instead of powering just the building, the energy gets credited to the local community, with benefits earmarked for lower-income

continued on page 50

Earlier this year, Sudler Companies, a private real estate owner and developer, began installation of community solar on 11 of its warehouses across central New Jersey. The projects span nearly 1 million square feet and will generate 11.9 megawatts of renewable energy that will power more than 1,000 homes each year.

continued from page 48

households. The programs are usually run through a public utility commission and administered in concert with the utility companies. They enable residents to receive a guaranteed discount on their utility bills without installing panels on their own roofs. Through this program structure, commercial owners can meet ESG goals and generate monthly lease revenue in the process.

Community solar projects also contribute meaningfully to decarbonizing the electricity grid. For example, Solar Landscape is currently either operating or constructing 54 community solar projects across about 7 million square feet of rooftop solar that will power more than 11,000 homes, representing over 70 megawatts of emissions-free energy. These clean-energy projects will prevent more than 60,000 metric tons of carbon dioxide from entering the atmosphere every year.

With community solar, the public utility commissions — especially in leading states like New Jersey — have devised a program setup that works for owners, tenants and residents.

In 2021, the New Jersey Board of Public Utilities approved almost 165 megawatts of solar energy capacity, enough to power an estimated 33,000 homes.

New Jersey: A National Leader in Rooftop Community Solar

Community solar represents the "S" in ESG: "social." It gives the property owner a meaningful way to serve as a good neighbor to surrounding residents. In addition, by hosting solar installations, real estate leaders spark workforce development initiatives and clean energy job creation, which often resonates with local elected officials. Heitman, Sudler Companies and Duke Realty are three companies that have undertaken community solar projects on their commercial properties in New Jersey. It was one of the first states to enact a community solar program and arguably has the strongest state policies for setting up high-quality projects that benefit lower-income residents.

Earlier this year, Sudler Companies, a private real estate owner and developer, began installation of community solar on 11 of its warehouses across central New Jersey. The projects span nearly 1 million square feet and will generate 11.9 megawatts of renewable energy that will power more than 1,000 homes each year. Not only did the solar project optimize Sudler's operations, but it also helped the company meet its ESG goals and relay the community benefits to clients, stakeholders and customers.

Global real estate investment management firm Heitman saw the opportunity to dedicate its 316,000-square-foot warehouse in South Brunswick, New Jersey, to a 3.8-megawatt community solar project.

"Community solar allowed us to check three boxes at once," said **Laura Craft**, head of Heitman's global ESG strategy. "It generates revenue through the rental of our entire roof — monetizing previously unused space — and it also allowed us to lower our carbon footprint for ourselves and the homes in the neighborhoods near our site. Through that connection, we were able to reach out and engage with local residents, and we're proud we were able to energize the community in more ways than one."

In Perth Amboy, New Jersey, an area with many warehouses located just across the water from Staten Island, Mayor **Helmin J. Caba** vowed to embrace community solar projects as a new way to make the city greener and establish its environmental leadership.

"Community solar projects continue to pay dividends for Perth Amboy residents," he said. "They advance our fight against climate change, promote workforce development and make energy more affordable."

The solar energy generated on Perth Amboy's warehouses powers the local housing authority, linking the real estate owner with the local community.

"Community solar engages our most vulnerable residents into the goal toward 100% clean energy," said Housing Authority of the City of Perth Amboy Executive Director **Douglas G. Dzema**.

Easy to Implement, Increases Property Values

For real estate owners, a community solar project is straightforward from an operational and accounting standpoint. It presents no cost to the owner, and the solar developer is responsible for

continued on page 52

For real estate owners, a community solar project is straightforward from an operational and accounting standpoint. It presents no cost to the owner, and the solar developer is responsible for the installation, operation and maintenance of the system. The projects can also enable traditional building tenants to utilize the green energy being generated overhead.

continued from page 50

the installation, operation and maintenance of the system. The projects can also enable traditional building tenants to utilize the green energy being generated overhead. The building owner receives a monthly lease payment, and in the event an owner would like to sell the property, there's no restriction on transferring the community solar lease. The long-term lease with the solar developer can result in increased property value, benefiting the building owner.

The lease agreement is an asset, not a liability, as one recent Solar Landscape customer in South Jersey discovered when his property sold for a more than 4% premium because of the additional community solar lease revenue.

"In commercial real estate, it's not often an opportunity arises to add a revenue stream to our business models," said **Dave Gibbons**, a former NAIOP New Jersey leader and president of Elberon Development Group. "Community solar provides just that, with little commitment required from the owner. These projects expand the use of renewable energy, which will be vital to create a sustainable planet, and also benefit nearby residents. As projects that make economic sense, community solar provides a win-win for all stakeholders and the environment we all share." ■

Shaun Keegan is the CEO of Solar Landscape, a developer, designer, installer, owner and operator of community solar and solar energy solutions for the commercial and industrial marketplace.

Autonomous Trucking Holds Promise

It could drastically reduce costs and boost efficiency across the supply chain.

By Trey Barrineau

The future of autonomous trucking appears bright, and many testing programs are underway across the country, but it might be a decade or more before unoccupied tractor trailers become a common sight along the nation's highways. Nevertheless, the potential cost savings and increased productivity associated with autonomous trucking has many in the logistics industry excited about the possibilities.

"The more automated we get, the more labor costs and fuel costs decrease with more efficient driving," said **Ross Froat**, former director of engineering and IT at the American Trucking Association, during a session at NAIOP's I.CON West in 2019.

It will likely be several years before the fourth wave of autonomous trucking, in which the vehicle no longer needs a human driver, becomes a reality.

E-Commerce Surges Amid a Lack of Drivers

The rise of autonomous trucking hinges on two developments: the massive surge in e-commerce deliveries during the COVID-19 pandemic (according to the U.S. Census Bureau's Annual Retail Trade Survey, online sales increased by 43% in 2020) and a huge decline in the number of available truck operators (the U.S. Department of Transportation estimates that 300,000 drivers leave the profession each year).

Trucks ship about 65% of U.S. consumer products, and the transition to full autonomy could reduce operating costs by roughly 45%.

A December 2018 report from McKinsey & Company noted that the impact of autonomous trucking could be substantial for both logistics companies and consumers. Trucks ship about 65% of U.S. consumer products, and the transition to full autonomy could reduce operating costs by roughly 45%. McKinsey says that would save the U.S. trucking industry between $85 billion and $125 billion annually, which could end up as significant cost savings for consumers.

Additionally, the report notes that automated trucking could lead to around-the-clock warehouse operations. Currently, human drivers' hours behind the wheel are limited by safety regulations established by the Federal Motor Carrier Safety Administration. Those rules would not be necessary for autonomous trucks, which can operate 24/7.

As logistics facilities incorporate robotic technologies such as automated storage and retrieval systems (ASRS), autonomous robot pickcarts, autonomous trailer offloading, autonomous forklifts and more, the synergy between those systems and automated trucks should speed up e-commerce fulfillment.

continued on page 56

Currently, human drivers' hours behind the wheel are limited by safety regulations established by the Federal Motor Carrier Safety Administration. Those rules would not be necessary for autonomous trucks, which can operate 24/7.

continued from page 54

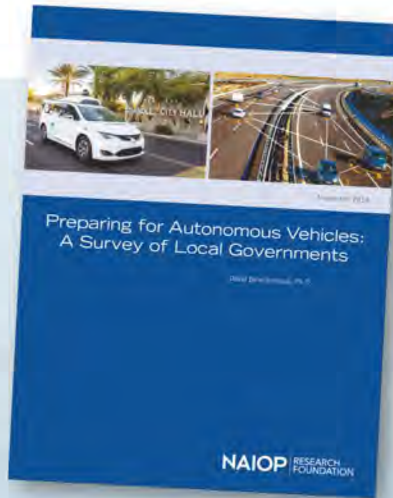
That, in turn, will reduce warehousing costs as units ship more rapidly.

And further in the future, quieter, non-polluting electric motors will likely become standard on autonomous trucks. That could improve site selection for industrial development by alleviating concerns about exhaust fumes and noise among local residents.

A Future of Change

McKinsey says the deployment of autonomous trucks will likely come in four waves. In the first wave, trucks will operate in platoons, which is "a technique to connect wirelessly a convoy of trucks to a lead truck, allowing them to operate safely much closer together and realize fuel efficiencies," according to the report. Drivers will be required in each truck. The next wave will see drivers only in the lead vehicle of a convoy of autonomous trucks. In the third wave, a driver would only be needed to operate a truck from the point it exits an interstate highway to its destination. The fourth wave will be fully autonomous, with the human driver no longer needed.

Regulations Regarding Autonomous Trucks



In November 2019, the NAIOP Research Foundation published a report titled "Preparing for Autonomous Vehicles: A Survey of Local Governments" by **David Dale-Johnson**, Ph.D. the Stan Melton Executive Professor in Real Estate at the Alberta School of Business in Edmonton, Canada. In it, he discussed the state of regulations for autonomous trucks:

"Municipalities interested in AVs (autonomous vehicles) have primarily focused on autonomous passenger vehicles and smaller delivery vehicles such as vans or light trucks, leaving regulation of autonomous freight trucks to states, provinces or national agencies. Within the United States, some states — including Arizona, Florida, Virginia and Louisiana — have allowed autonomous truck (AT) testing or have already authorized the commercial use of ATs.

"A focus on regulating ATs at the state and federal levels may reflect the reality that freight trucks move through multiple municipal jurisdictions and require uniform regulation and oversight. Municipal governments are also less involved in AT oversight because ATs are not yet advanced enough to be tested on city streets. Currently, AT technology developers are focused on creating AT systems that can operate on highways."

To view or download the report, visit naiop.org/AutonomousVehicles ■

The McKinsey report notes that future warehouses will likely need new equipment at entrances and docks to accommodate automated vehicles. Additionally, an article in the Fall 2018 issue of Development magazine predicted that that absence of drivers in autonomous trucks would likely lead to smaller cabs. That, in turn, could allow warehouses to employ smaller dock doors and loading docks, resulting in more usable storage space.

At least one industrial developer is taking steps to rethink designs to accommodate autonomous trucks. According to a January 2022 article by Freightwaves, Hillwood Investment Properties plans to add features such as separate entrances for autonomous trucks and an area for pre- and post-trip inspections of robot-driven trucks, which will be guided by sensors to stopping and starting pads.

However, it's not clear yet whether autonomous trucks will lead to radical changes in warehouse design. In "Rules of Thumb for Distribution/Warehouse Facilities Design, Second Edition," published by NAIOP in June 2020, lead author **Byron Pinckert** of architecture firm HPA, Inc., argued that truck rigs probably won't drastically change in size when automation becomes widely adopted.

continued on page 58

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"It seems unlikely in the near term, given the current road infrastructure and trailers that are configured for conventional trucks," he wrote. "Will these new driver-assisted and autonomous trucks have tighter turning radii and more precise maneuvering? That is more likely, but the parameters are unknown, and facilities will accommodate conventional trucks and human drivers during any industry transition."

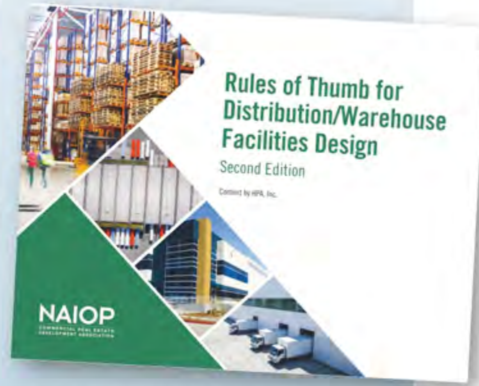
Current State of Play

While the full potential of autonomous trucking won't be realized for years, early experiments are providing a glimpse at what the future might hold. In June, Waymo, the autonomous-vehicle subsidiary of Alphabet (Google's parent company), partnered with Uber to merge Waymo's self-driving technology with Uber Freight, a digital platform from the ridesharing company that matches freight carriers with shippers. Additionally, Waymo has teamed up with J.B. Hunt on a pilot testing program along the I-45 corridor between Houston and Dallas. During the first testing effort in 2021, more than 862,000 pounds of freight was delivered 100% on time and with zero accidents, according to a press release.

However, safety is a major concern. A June 2022 article from Transport Topics notes that "only 19% of consumers at this point feel that autonomous vehicles are safer than traditional vehicles" — down from about 27% four years ago. Additionally, autonomous truck developers must determine how these unmanned vehicles will interact with law enforcement in the event of an accident or breakdown. ■

Trey Barrineau is the managing editor of publications for NAIOP.

Order 'Rules of Thumb for Distribution/Warehouse Facilities Design'



"Rules of Thumb for Distribution/Warehouse Facilities Design," second edition, has been extensively updated with new must-know information and detailed illustrations. Author and former principal with HPA, Inc., **Byron Pinckert**, drew on his firm's decades of industry experience to explain best-practice methods for planning and designing warehouse facilities. This 60-page e-book addresses topics including site planning for truck and rail delivery, material handling equipment and racking systems layouts, as well as field-tested approaches to complex features such as floor slabs and roofs. "Rules of Thumb for Distribution/Warehouse Facilities Design" will help developers achieve peak operational efficiency for their tenants and build-to-suit clients.

To purchase and download the e-book, visit naiop.org/Research-and-Publications/Rules-of-Thumb ■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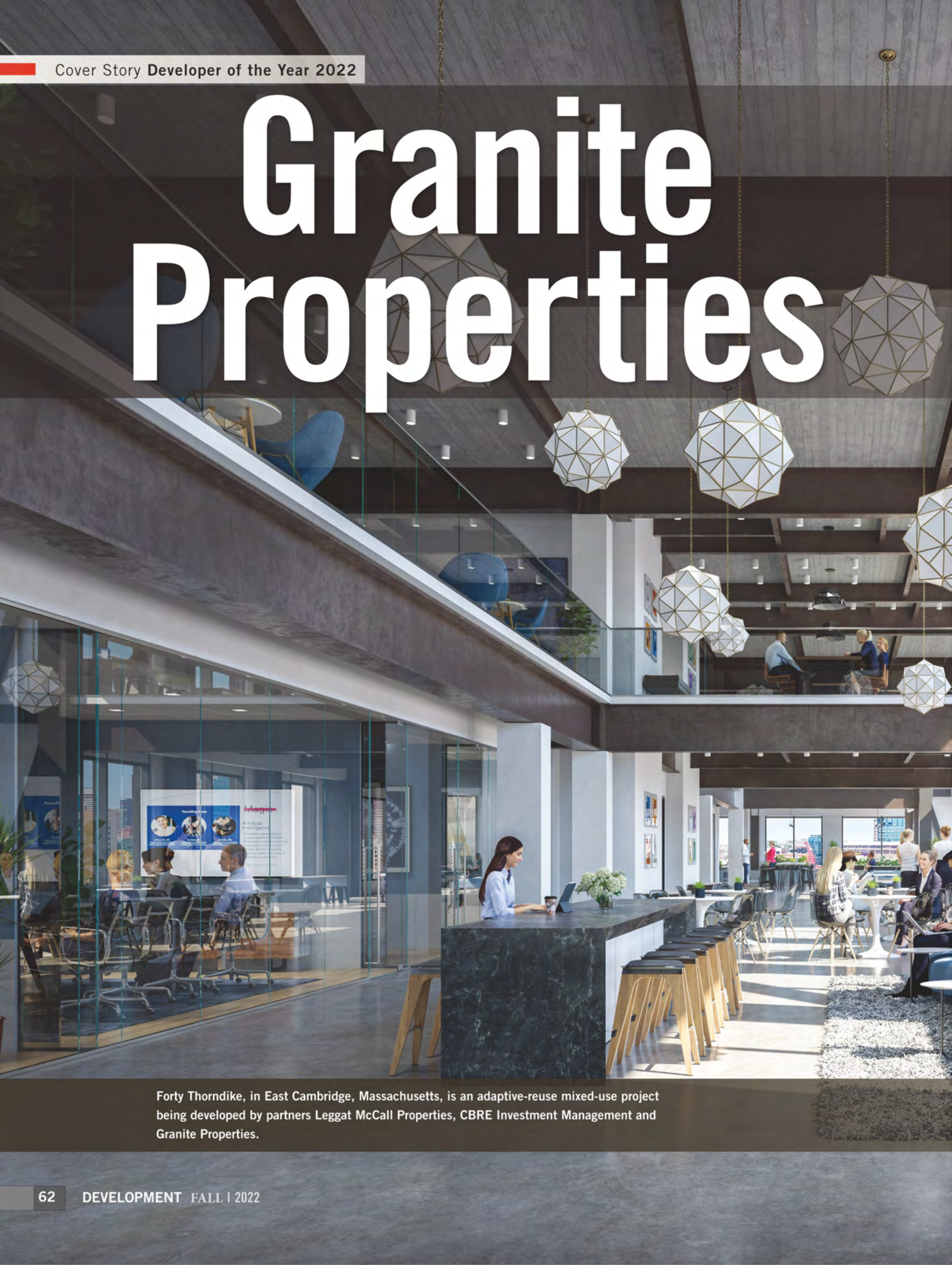


Forty Thorndike, in East Cambridge, Massachusetts, is an adaptive-reuse mixed-use project being developed by partners Leggat McCall Properties, CBRE Investment Management and Granite Properties.

All photos courtesy of Granite Properties.

Creating Spaces Where People Thrive

This Dallas-based developer, investor and management firm has grown to $3 billion in assets by delivering mixed-use facilities with innovative wellness programs and top amenities.

By Ron Derven

At a Glance

- Granite Properties was founded in the aftermath of the real estate recession in the early 1990s.
- Since that time, Granite has completed more than $8 billion in transactions.
- Amenity-rich workplaces are a major focus of its portfolio of office properties.

Since its founding in Dallas in 1991, Granite Properties has understood the impact of real estate developments on people and communities. That's why it creates spaces and relationships where people can flourish while supporting local communities.

Granite Properties CEO Michael Dardick founded the company with the Schusterman family, long-time philanthropists and leaders in the oil and gas industry, in 1991.

For its outstanding quality of products and services, financial stability, ability to adapt to market conditions, support of NAIOP and support for the communities where it works, Granite Properties is NAIOP's 2022 Developer of the Year.

"This award is recognition from our peers that not only are we doing good things, but we are doing them in a way that benefits all of our constituencies," said **Michael Dardick**, CEO of Granite. "What makes it even more special is that it comes from NAIOP, a prestigious industry group."

Factory Six03 is a LEED-certified adaptive reuse of a 100-year-old warehouse in the Dallas West End Innovation District.

Granite Properties President and COO Greg Fuller has been active with NAIOP for many years. He served as national chair in 2019.

"At Granite, we have an amazing development team," said **Greg Fuller**, president and COO of Granite. "That team, however, is supported by accountants, property managers, IT professionals and many others. It takes many people to create our special projects."

Dardick and the Schusterman family, long-time leaders in the oil and gas industry, founded the firm on the heels of one of the worst real estate recessions in the state's history. Despite that, Granite has weathered five downturns and a global pandemic over the past 30 years to emerge as a $3 billion company looking to grow to $5 billion in the next few years. It is now a privately held commercial real estate investment, development and management company with many investors, although the Schusterman family continues to play a major financial role.

Over the years, Granite has completed more than $8 billion in transactions that includes more than 29 million square feet of real estate development and acquisitions. As of 2022, Granite owns 11.5 million square feet of high-quality office space in Dallas, Houston, Atlanta, Denver, Southern California, Boston and Nashville.

Outstanding Quality of Products and Services

Although Granite's state-of-the-art mixed-use developments are well known, Dardick said the company thinks of itself as a people-oriented business that operates in the real estate industry.

"We focus on how we can help each of our stakeholders flourish at whatever they choose," he said. "When our spaces are fully occupied, we touch around 50,000 people each day for perhaps half of their waking lives. When you look at it that way, we have an unbelievable opportunity and responsibility to improve their work lives."

That 'Aha' Moment

While Granite Properties has stressed the development of outstanding space and amenities since its founding, the development team had an "aha" moment back in 2014, at what they term the beginning of "the amenities arms race."

The team was constructing its

"Our branded amenities offer collaboration, comfort, connectivity and consistency across our national network of offices. Since we own so many buildings, we felt branding our amenities might inspire our customers to use all of them from city to city. When our customers go into a Granite property, they know what they are getting."

— Greg Fuller, president and COO, Granite Properties

At Granite's Factory Six03, a section called The Stack serves as a customer lounge and conference center.

fourth building in Dallas' Granite Park, a 90-acre, 2-million-square-foot office project. They met with their architect, who explained how young people were interacting with technology such as smartphones. The architect said young people come home, go up to their rooms, close the door and get on their devices. They come downstairs for meals, and they either go back upstairs or go outside, perhaps to do their homework.

It was the moment when they realized that there was a whole generation of people growing up who would work differently than their parents. In order for Granite to connect with customers (tenants) now and in the future, the company needed to get in front of this trend and rethink how it integrated amenities into its properties.

To draw employees down from their offices, Granite began to place amenities on the first floor of its buildings. It created places for people to collaborate, relax and to enjoy the space. Fitness centers were upgraded, delis in buildings were turned into a fine-dining restaurants and plenty of new outdoor space was added.

Branding Amenities

Granite took another step with its amenities packages by branding them. Fuller explained that the branded amenities allow its customers to have uniformly top-notch experiences at properties in every market where the company does business.

"Our branded amenities offer collaboration, comfort, connectivity and consistency across our national network of offices," Fuller said. "Since we own so many buildings, we felt branding our amenities might inspire our customers to use all of them from city to city. When our customers go into a Granite property, they know what they are getting."

Granite's branded amenities include MEET conference centers, MOVE fitness centers, THE LOUNGE customer spaces, THE YARD outdoor spaces and EATS on-site cafes.

Wellness and Safety

The health and safety of its buildings is a major focus for Granite, and when COVID-19 struck, the company was prepared.

The MEET Conference Center at Two Eldridge in Houston is an example of the branded amenity offerings that Granite has set up in its properties.

In May 2020, it invested more than $10 million in capital improvements across its portfolio to maximize safety and wellness. Called Inspire Wellness, the program included the installation of clean air technology, Needlepoint Bipolar Ionization air-filtration systems and the addition of new building cleaning protocols. Granite launched a "hands-free" customer experience in all its buildings where possible, meaning a customer or visitor could enter the building and go into an office or restroom without touching anything with their hands.

Its property management team recognized the importance of people staying connected during the pandemic even as they worked remotely, so it shifted gears and created online events, webinars, concerts and charity outreach programs.

Working Together City to City

With five offices and properties in Dallas, Houston, Atlanta, Denver, Southern California, Boston and Nashville, how does Granite Properties work together to create new projects?

"We have great professionals with diverse skill sets, but we need to work together as a team with respect, trust and accountability," Dardick said. "The second thing that we have long stressed is what we call 'de-silofication.' We don't want silos in our organization. We don't want people talking up and down, we want people talking horizontally."

As an example, the company meets annually to set long- and short-term goals, such as repositioning opportunities or finding raw land for new development.

"We don't pinpoint who found the land or the building because it takes a whole team to put the deal together," Fuller said. "If our investment person sees an opportunity, the first thing we need to do is bring in our development team and our leasing team to understand the opportunity at hand."

Financial Consistency and Stability

When the company launched 30 years ago, its strategy was to do all-cash acquisitions and developments. Today, Granite is not averse to debt.

"We've matured to where we are putting debt on properties, but overall, our philosophy is to have low leverage," Dardick said. "That is paramount in the office business, maybe less so in the industrial sector or other sectors of the business. But if you are going to survive the ups and downs of this economy or the office business, low leverage is critical. We use appropriate leverage once assets are stabilized. We are very fortunate to have started with a great capital partner who understood this, and we have added many capital partners since then who also share that sentiment, providing us with flexibility when things don't go exactly as planned."

Fuller added that Granite Properties is an investor, developer and operator and to that end, "We are accountable for making good investments, and we don't think you should use debt to make a deal work," he said. "We think a deal should work or not work, and then debt can be used to enhance yields. Further, we are in this business for

"Over the last few years, we've done $2 billion in investing, and we have had five different equity partners. We have raised a little under $400 million of equity and $1.2 billion of debt. **So we are living in this new world of multiple capital partners, and we think it is great. We have a lot of different people we need to answer to and deliver for, and we like that accountability. It keeps us sharp."**

— Michael Dardick, CEO, Granite Properties

The Boardwalk at Granite Park in Dallas has a lake surrounded by eight restaurants and a multipurpose pavilion venue.

the long haul, and we value the flexibility of low debt more than the extra 5% or 10% debt. When you have low debt, it allows you to make operational changes or capitalization changes as necessary because the world changes a lot. We think that flexibility makes us more money than slightly more leverage on the front end."

Dardick said it is important for Granite to have diverse and ample capital available to deliver on its growth plans.

"Over the last few years, we've done $2 billion in investing, and we have had five different equity partners," he said. "We have raised a little under $400 million of equity and $1.2 billion of debt. So we are living in this new world of multiple capital partners, and we think it is great. We have a lot of different people we need to answer to and deliver for, and we like that accountability. It keeps us sharp."

One of Granite's strategies is to buy best-in-class product at a discount — not an easy task in today's competitive commercial real estate industry.

"We try to position ourselves to be a first mover in each market we work in," Fuller said. "We have market experts who have spent the last 20 to 30 years in their specific market, and some have even grown up in these markets — they know everyone and every property. As they say in real estate, you cannot just do it [develop real estate projects] anywhere. You have to know what side of the street to be on and where the sun is coming down. You've got to know the market."

A Focus on Flexibility

There is no better example of how Granite adapts to market conditions than its approach to office leasing. Naturally, the big question right now is: will employees return to the office in large numbers or continue to work remotely?

"That story is still unfolding," Fuller said. "But what we focus on are high-quality spaces in top locations with outstanding amenities. It is this type of space that is winning the war for talent. Some customers are expanding and others are contracting, but they are all trying to figure out what's best for their teams and their space. People have to get together in person and collaborate on some level."

Fuller said that Granite wants to offer customers the exact space they need. To do this, it offers evolve®, an innovative, trademarked office leasing program focused on solutions for what Granite terms "evolving business needs."

The evolve program offers the following ways to use space in Granite's buildings:

evolve® Ready Collective. This program offers a full floor of private suites and an exclusive amenity center for small to mid-size companies, bridging coworking and traditional leasing. The space is furnished and tech-enabled with flexible leasing terms.

evolve® Ready Suites and Ready Suites+. The Ready Suites+ suites are built out and fully furnished including tech connectivity for quick, efficient move-ins; Ready Suites are built out and tech-enabled. There are flexible leasing terms from one to five years with full access to building amenities and portfolio-wide offerings across all five core markets.

evolve® On Demand. This program provides customers with additional workspace options. Granite has coworking partnerships with Industrious and Common Desk.

Environmental, Social and Governance Principles (ESG)

Granite is no newcomer to ESG principles, having adopted them early on. For example, the company began participating in the Energy Star program in its earliest days, and 15 of Granite's 38 properties are LEED certified, with 10 achieving LEED Gold and five LEED Silver. Granite became a Fitwel

A Closer Look at Granite Projects

Here's a sample of projects developed by Granite over the years.

Factory Six03: Granite recently developed three adaptive-reuse properties including Factory Six03, an award-winning, LEED-certified, century-old historic warehouse building in the Dallas West End Innovation District.

Gulch Union: The company partnered with Endeavor Real Estate Group to create Gulch Union, a newly completed mixed-use project in Nashville.

Granite Place at Village Center: This office project is in the Greenwood Village submarket of Denver and was developed and completed in 2017 in a partnership with Confluent Development, a Denver-based real estate investment and development firm. The 10-story, 299,568-square-foot Class A building is strategically located near a diverse workforce and is a five-minute walk to one of the most active light rail stops in the Denver region.

Park17: Completed in 2010, the project is a mixed-use, high-density urban tower located in the Uptown submarket in Dallas. Gables Residential was Granite's development partner. Granite and MetLife did a joint equity partnership for the office component. 1717 McKinney is the 369,017-square-foot Class A office tower in the project. The 300-unit Gables apartment tower and 15,000 square feet of street-level retail accompany 1717 McKinney.

In addition to its $3 billion current portfolio, Granite has invested $1.5 billion in five new properties under development in the Dallas, Atlanta and Boston markets. All five projects utilize biophilic design and footprint-reducing methods.

Midtown Union: Located in the Midtown submarket of Atlanta, this mixed-use development offers distinctive architectural designs featuring office, retail, hotel and outdoor amenities with high walkability and proximity to key transportation hubs.

Forty Thorndike: Located in East Cambridge, Massachusetts, this is an adaptive-reuse mixed-use project being developed by partners Leggat McCall Properties, CBRE Investment Management and Granite Properties. The site was previously the Edward J. Sullivan Courthouse and Jail.

23Springs: Granite's most extensive and expensive development to date will be a major presence in the heart of the desirable Uptown district in Dallas. Three Class B low-rise office buildings were demolished during the summer of 2022 to make way for the Class AA office tower.

Granite Park 6: This is a continuation of the company's 2-million-square-foot Granite Park mixed-use campus. It includes six leased office buildings, a Granite-owned full-service Hilton hotel, walking/exercise trails and The Boardwalk, which features a multipurpose pavilion venue surrounded by a lake and eight restaurants.

Granite Place at Southlake Town Square II: In March 2022, Granite announced the development of the second phase of two planned mid-rise office buildings in a suburban Dallas submarket called Southlake. ■

23Springs is a new 26-story Class AA office tower that Granite is developing in the Uptown district in Dallas.

Champion in 2021 and has earned Fitwel certifications at three properties. The firm has committed to using Fitwel at a portfolio scale and earning certifications at 10 office buildings in 24 months.

"It is important to view the focus on ESG, not as a 'bolt on' activity or to 'check the list,' but rather as an integral way to how we operate in the real estate business," Dardick said. "At Granite, our ESG principles have always been a guiding part of our company's core values. They are ingrained into our culture to build a better world for our communities, customers, partners and team members."

Dardick has also promoted ESG in several articles he's written for D CEO magazine, a real estate publication in the Dallas area.

"We all know that in real estate, people and capital are two key factors," Dardick wrote in June 2021. "It is becoming clear that both people (our internal teams, our customers, and our communities) and capital (our investors) have a heightened focus on how we do business. They are all asking for smarter and bolder approaches to ESG performance."

Community Support

In addition to the $345 million given to various charities by the Schusterman Foundation in 2021, Granite's focus on charitable giving through volunteering and donation is also ingrained in its culture. Its teams believe that they have a responsibility to the communities where its people live and work.

Some of its efforts include:

- $150,000 annual budget for employee-selected charity organizations
- Up to 40 working hours per year for each employee to volunteer with non-profit organizations
- Charitable donation matching
- Reimbursement of entry fees for charitable events, such as fund-raising walk/run races
- Granite Gives community involvement portal on company intranet
- Employees can donate charity dollars through Kazoo HR, an online recognition program where employees highlight teammates for a job well done

In 2020, Granite donated a total of $125,000 to food banks in its five local markets and $60,000 to other charities.

At the property level, the trademarked TogetherWeConnect® program develops meaningful connections in the workplace, enhancing the work-life experience for Granite's customers while also giving back to communities. Since 2017, customers and Granite employees have packed 62,340 snack packs for Boys & Girls Clubs in its core markets, and 14,835 care packages have been assembled during the holiday season for local senior facilities.

Support for NAIOP

Since its founding, Granite has been an avid supporter of NAIOP in each of the markets where it has offices, as well as nationally. The company is active with local chapters in Atlanta, Dallas, Denver, Houston and Southern California.

"NAIOP has been a tremendous resource for me," said Fuller, who served as NAIOP's national chair in 2019. "I am a Forum member and a NAIOP Research Foundation Governor. Being on the Executive Committee has been a remarkable experience for me including the contacts, friendships and networking." ■

Ron Derven is a contributing editor for Development magazine.

From Salt Storage Facility to Concert Venue

A rendering of the Salt Shed in Chicago, an adaptive reuse of a former Morton Salt storage facility that first opened in 1930. The packing house is in the foreground; the former salt storage shed is at the right.

Blue Star

An adaptive-reuse project in Chicago transforms an iconic industrial building into an entertainment destination.

At a Glance

- The Morton Salt warehouse in Chicago was considered innovative when it opened in 1930.
- Preservation efforts focused on the salt shed and its iconic roof, a Chicago landmark.
- The city crafted a narrow noise ordinance to allow the venue to host outdoor concerts. ■

■ By Anthony Paletta

The Morton Salt Company warehouse on Elston Avenue in Chicago once furnished tons of preservative salt for the city's tanning industry. Today it is itself preserved — a city landmark in the process of rebirth as a concert venue combined with commercial and office space.

The complex, containing several buildings in a 4.2-acre site along the North Branch of the Chicago River, is being transformed to contain a 30,000-square-foot indoor concert venue in the former salt storage shed, 60,000 square feet of leasable office and commercial space in what had been a three-floor packaging building, additional space in a former garage, and an outdoor performance venue in the footprint of a recently demolished second salt shed.

The site is in the city's North Branch Industrial Corridor, which has seen considerable development since partial rezoning in 2017 to encourage mixed-used development. The zoning of this site changed from M3-3, Heavy Industry District, to C3-3, Commercial, Manufacturing and Employment District.

The project is a collaboration between R2 Companies, Blue Star Properties and Skydeck. R2 has undertaken several conversion projects in the North Branch Industrial Corridor, including its headquarters and projects for CB2 and Passion House Coffee Roasters. R2 and Skydeck purchased the building in 2017 from Morton Salt for $15 million, with Blue Star joining as an equity owner more recently. Renovation work has cost roughly $40 million since.

The Morton Salt complex was designed by Graham, Anderson, Probst and White, the Chicago architectural firm responsible for notable structures in the city such as Union Station, the Shedd Aquarium and the Wrigley Building. **It was built between 1929 and 1930 as the company's main Chicago storage and distribution center. The site along the river was chosen to provide easy barge, rail and road access.**

Blue Star Properties is the interior designer and general contractor for the restaurant and live music group 16 On Center, a partnership between Chicago-based investors **Craig Golden** and **Bruce Finkelman**. 16 On Center owns and operates restaurants and concert venues in the Chicagoland area.

Blue Star had been seeking a larger stage for concerts and performances. The Salt Shed, with an indoor capacity of 3,800 and an outdoor capacity of 4,500, offered a leap up from the company's current largest venue, which only holds around 900. The site also had a variety of other advantages; its largely commercial and industrial surroundings serve as a buffer against residential areas and provide relatively convenient evening parking. Another benefit is an unusually well-known site; most warehouse names aren't exactly civic knowledge.

Tour This Project at CRE.Converge

NAIOP's national conference, CRE.Converge, will be held in Chicago October 10-12. On October 10, attendees will be able to tour the Morton Salt shed, along with Sterling Bay's nearby Lincoln Yards mixed-use development. The tour costs $85 for CRE.Converge attendees and is limited to 50 people.

For more information, visit naiop.org/creconverge

A Building That's 'More Like a Machine'

The Morton Salt complex was designed by Graham, Anderson, Probst and White, the Chicago architectural firm responsible for notable structures in the city such as Union Station, the Shedd Aquarium and the Wrigley Building. It was built between 1929 and 1930 as the company's main Chicago storage and distribution center. The site along the river was chosen to provide easy barge, rail and road access. It launched amid the city's golden age of agricultural processing uses, initially to provide salt for tanning operations nearby, and it continued to provide salt for many other purposes for 80 years. In later decades, it produced considerable amounts of rock salt for road deicing. The Morton Salt Girl and the company's famous "When it rains, it pours" logo have been replicated on the roof.

Matt Crawford, a coordinating planner at the Historic Preservation Division of the city's Department of Planning and Development, said it's been an iconic building for decades.

"Morton Salt is certainly one of the most visible of our industrial buildings," he said. "It's very visible from the Kennedy Expressway and a commuter rail line."

The building was considered innovative when it was constructed, taking in massive quantities of salt by barge and distributing it by rail or truck. The exterior was almost superfluous, as Crawford noted.

"The building that resulted really functioned more like a machine," he said.

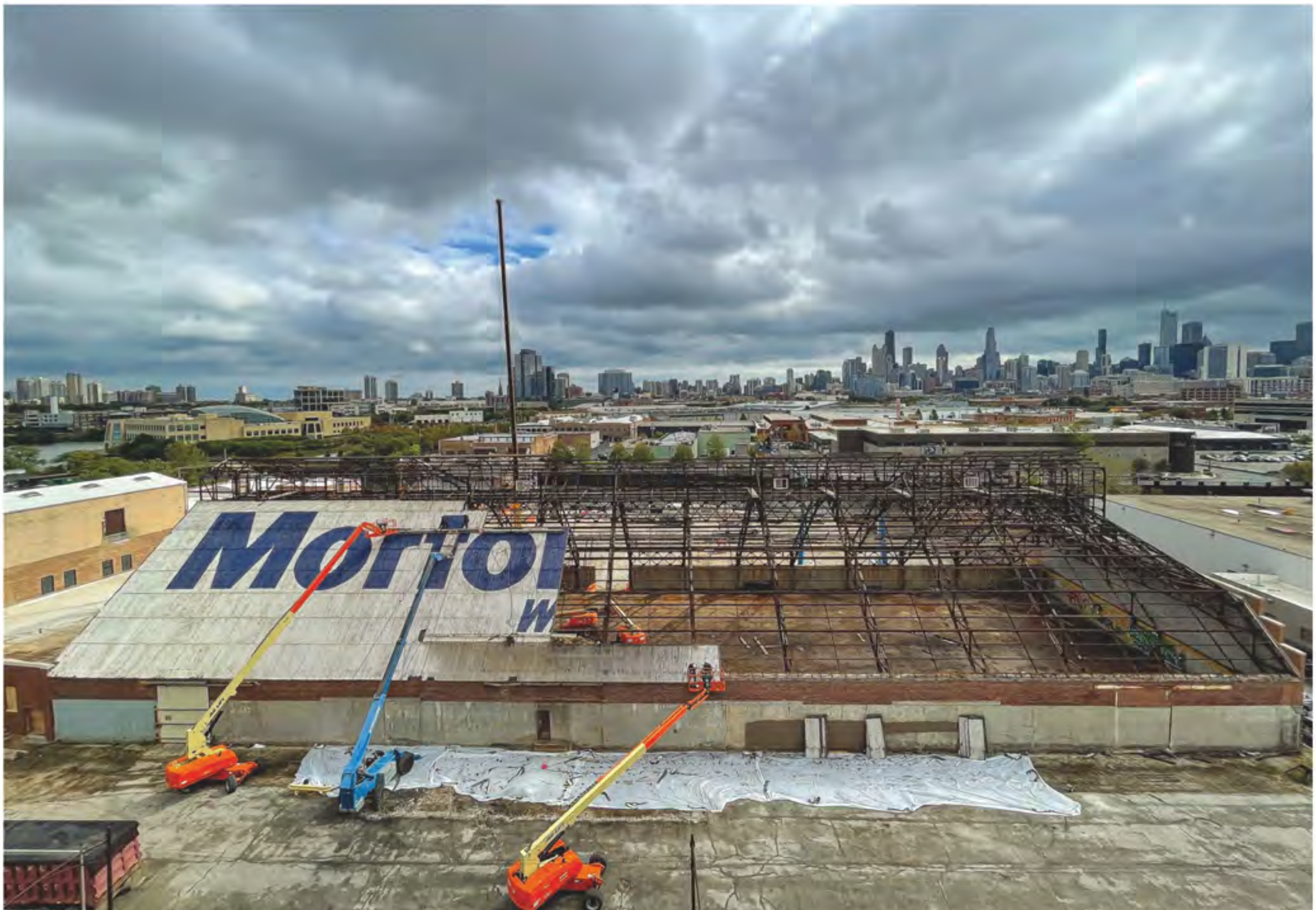
Salt was stored in the shed and then moved to the packaging building by multiple conveyor systems. One ran to the top floor to harness gravity — the salt was packed as it descended downward. Multiple vast piles of salt towered dozens of feet into the air, which required other invisible solutions, according to the city's landmark designation report, published in April 2021.

"Each section of the shed was completed as a large, reinforced concrete bulkhead, with steel tie rods encased in eight inches of concrete beneath the interior maple floor," the report notes. "The tie rods helped to keep the side walls from otherwise pushing apart."

Getting to Work

Golden said he found the initial condition of the site both challenging and inspiring.

"It was in the original abandoned state," he said. "It was full of machinery and steel and lifts and things they left there. We were pull-



Workers replace the original roof at the Morton Salt facility in Chicago with a manufactured roof panel system. Morton Salt's iconic "When it rains, it pours" logo was reproduced.

ing stuff out of there for a year, as well as mounds and mounds of salt — it was packed with salt."

Rusted-out equipment and enough salt to provide decades of margaritas aren't exactly workable theater decor, but the development team was intent on keeping as much of the site as was viable. According to Golden, the aim was "showing the life it had in the past, where you can see the layers of what happened in the '20s to the '50s to the '70s, and this is what we did — while putting in all-new mechanicals so that it operates as a functionally new building."

The developers sought landmark status from the city for the complex, which was granted in 2021. They intended to make as much use of the site as possible. The former East storage shed, condemned by the city, was largely demolished in 2020, but the rest of the buildings are being renovated.

Some elements such as the roof couldn't be retained, though.

"The roof system looked like corrugated metal," Crawford said. "It was actually a cement and asbestos product called Transite. You can't really buy an asbestos roof now, and if you could, you wouldn't want to put it over an entertainment venue."

Crawford said it was replaced by a manufactured roof panel system consisting of an insulated core sandwiched between inner and outer faces composed of sheet metal.

Rusted-out equipment and enough salt to provide decades of margaritas aren't exactly workable theater decor, but **the development team was intent on keeping as much of the site as was viable.**

"The system is relatively lightweight and does not require reinforcing the existing steel trusses that are a character-defining feature of the shed's interior," he said.

While the open-span Salt Shed is ideal for concert use, it still needed plenty of work. The developers inserted elevators and other new mechanicals inside the site, as well as seating boxes and concert and stage infrastructure.

"Trying to keep the shed intact, we developed a plan to utilize the interior as best we could," Golden said. "We had to make compromises a little bit on maximizing seating to create a space that really was more like being in the old salt shed."

Salt works wonders at preserving food, but not metals. The steel truss holding up the shed had been substantially corroded by the material it was designed to shield. While much of that was replaced, Golden was intent on retaining whatever he could.

"We really took a painstakingly architectural approach to the shed itself, and we either restored or structurally enhanced the shed and its lattice steel structure," he said.

The most difficult issue in terms of a civic green light for the project was noise. The nearest residences are several blocks away across the Kennedy Expressway, but noise is always a permitting concern. **Golden said the Morton Salt facility's case was unprecedented in a regulatory sense. Concerts in public parks were already common in Chicago, but this was a new circumstance in a private space.**

Jeffrey Policky, an architect associate at HBRA, said the main difficulty his firm faced on the project was working around the building's historic steel trusses.

"Keeping as much of the existing steel, concrete and brick allows the Salt Shed to be a unique space to experience music, and it also speaks to the former industrial use of the surrounding neighborhood," he said. "While it's the most interesting, the structure of the shed also became the most difficult challenge. As the grandstand rises in height to accommodate views of the stage, it engages the existing trusses and roof plane. Care was needed to avoid blocked sightlines and to allow headroom clearance underneath the steeply sloping roof."

HBRA contracted Forefront Structural Engineers to analyze each piece of the existing truss structure.

"Our addition of the grandstand structure has allowed for less supporting steel being required at the north-end trusses," Policky said.

The plan involves adding a partial second-level grandstand with a capacity of 400 and boxes and a VIP area with capacity for an additional 120 concertgoers. This posed some practical difficulties. The existing building envelope didn't provide adequate space to access boxes on the building's east side, so a covered hallway and balcony is being built along that side of the structure; the balcony will also offer river views. Another platform is being added to house mechanical elements.

Windows and doors were replaced, and new window openings were created throughout the project.

The venue features some innovative interior elements, namely DuctSox, a fabric ductwork system. The trouble with typical metal ductwork in an open space — especially a concert space — is how it reflects sound. DuctSox provided an acoustically deft and space-saving solution.

New Course: 'Fundamentals of Adaptive Reuse'

Adaptive reuse projects allow developers to utilize their creativity and vision to transform aging structures for new, fresh uses. NAIOP's Center for Education recently launched "Fundamentals of Adaptive Reuse," an interactive, on-demand course that provides learners with a detailed look at this dynamic product type. Gain an understanding of the adaptive-reuse approach, methods for evaluating whether an adaptive-reuse project is worth pursuing, crucial steps of the due-diligence process, the key players that make up an effective project team, and the funding available for financing these types of projects. The course explores each step in the adaptive-reuse process, outlines common challenges and solutions, and evaluates diverse adaptive reuse projects through real-world case studies.

For more information, visit learn.naiop.org ■

Blue Star

The Salt Shed will host live music and other events. The developers were able to negotiate a narrowly crafted noise ordinance with the city of Chicago that allows them to host concerts at night.

"It's a fabric that's kind of held open with a little bit of metal wiring and basically blows the air through a fabric duct instead of a metal duct," Golden said.

These efforts are aimed at creating a suitable shell, which doesn't require painstaking tweaks in early stages.

"This is not an opera house; it is mainly a rock & roll venue," he said.

Additional work will be completed by OSA for sound design, Upstaging for lighting design and L Acoustics for PA system design.

Work Along the Waterfront

Outside, Golden saw another opportunity at the site of the demolished salt shed, which fronts the river.

"When we took it down, we stood there one day and we thought 'wow, this would be a great outdoor venue,' " he said.

A portion of the old salt shed remains and is being used as a point of interest, Golden explained.

"We also left the end of the salt shed that we took down," he said. "It was just a cool old frame. We left the last 25 feet as a remnant."

The outdoor portions of the site required several alterations. The development team replaced the riverwall along the water's edge, poured a concrete deck for the concert surface and is installing an assortment of landscaping elements.

According to Golden, the riverwall is about nine feet above the current water level. He is confident this will protect against most water risks.

"If it gets that high, it's going to be a problem for a lot of people," he said.

New sewerage and drainage have also been built. The development team is adding landscaping designed to absorb water. Lighting is also being added to a riverwalk.

"Hopefully, it creates a nice environment for meandering along the river before or during a show," Golden said.

There were practical issues of access to address, namely parking.

"We've rented a lot adjacent to us for about 500 parking spaces," Golden said. "We have about 250 spaces under our control."

Golden explained that despite public perception, parking is not much of a problem at Blue Star's other venues. Rideshare services

Chicago's Class L Property Tax Incentive requires the owner to invest at least half of the value of a property into its rehabilitation. Usually, land conversions in the city's industrial corridor also require a conversion fee. These were waived in 2020 for landmarked buildings that meet some additional zoning requirements, as the Morton Salt complex did.

and public transportation seem to be favored by most concertgoers in Chicago.

"As concert promoters, we haven't found parking to be that challenging," he said. "We have a valet for many shows. We rarely park more than 30 cars."

The nature of the surrounding blocks — largely industrial and commercial — has also meant there's not a great deal of competition for evening parking in existing street spaces. Golden says they're hoping that upcoming developments will improve that balance as new projects come online nearby.

The venue is also about six blocks from the Division Street elevated rail station on the Chicago Transit Authority's Blue Line. The developers are considering creating a shuttle between the stop and the venue.

Working With Local Officials

The most difficult issue in terms of a civic green light for the project was noise. The nearest residences are several blocks away across the Kennedy Expressway, but noise is always a permitting concern. Golden said the Morton Salt facility's case was unprecedented in a regulatory sense. Concerts in public parks were already common in Chicago, but this was a new circumstance in a private space.

"The outdoor music has been the most challenging part just to get the final approval," Golden said. "We realized there was not a current ordinance in the city of Chicago for a non-publicly owned outdoor venue."

Golden said negotiations with the city were successful.

"The city did a very nice job of working with us to craft a kind of narrow ordinance that mainly stipulated times when music must end," he said. "This will allow us to have a limited amount of outdoor music."

Chicago's Department of Planning and Development also worked with the development team to provide financial incentives for the project.

"The city gave us a Class L designation, basically freezing the taxes at the current level for 12 years," said Golden. "That gave us the incentive to put all the time and effort into saving the old salt structure, which we wanted to do."

Chicago's Class L Property Tax Incentive requires the owner to invest at least half of the value of

The Salt Shed - Project Summary

Project Location	Chicago
Project Name	The Salt Shed
Type of Site	Urban
Development Type	Adaptive reuse
Transportation Modes	Car, transit, pedestrian
Mix of Uses	
Office	20,000 square feet
Retail/restaurant	17,000 square feet
Concert venue	30,000 square feet
Parking	Surface only 680
Site Dimensions	4.2 total acres
Development Team	
Developer	Bluestar Properties
Project Architect	HBRA
Interiors Architect	Bluestar Studio
General Contractor	Bluestar Properties
Financial Partners	
Co-owner	Bluestar Properties, R2, Skydeck
Construction Loan	CIBC
Timeline	
Land Acquisition	2017
Submitted Initial Plans	2020
Phase I Completed	2022
Project Completed	Expected completion 2023
Development Cost	
Total Project Costs	$55 million

The metal framework of the salt shed. Preserving these trusses, which had been degraded by many years of exposure to salt, was one of the biggest challenges for the development team.

Photos of Morton Salt Shed are part of a yearlong, ongoing photo documentation project by © Sandra Steinbrecher. All rights reserved. www.sandrasteinbrecher.com

a property into its rehabilitation. Usually, land conversions in the city's industrial corridor also require a conversion fee. These were waived in 2020 for landmarked buildings that meet some additional zoning requirements, as the Morton Salt complex did.

Outdoor concerts began on August 1, with this summer's lineup including Fleet Foxes, Courtney Barnett, Jorja Smith and Death Cab for Cutie.

An Ongoing Project

The facility is now open, though there's more work to be done. Blue Star recently began leasing the first floor of the Packing House.

"We have current plans or leases for a brewery, a catering kitchen, commercial loft office space, and a third-floor indoor/outdoor event space with available maker/retail space on the first floor," Golden said.

Morton Salt is slated to occupy a portion for research and development space. Otherwise, leasing remains a work in progress.

"A renovation is different from new construction; until companies can see what they're getting, they don't quite get it," Golden said. "We're happy with the progress that we're making."

Blue Star also hopes to attract a distillery to an original garage structure that was once used for repairing equipment and vehicles. Additional nods to the site's history are also in the works.

"We're actually hoping to put in a bridge between the Salt Shed and the Packing House that alludes to the bridge that used to connect the buildings with the conveyor belt," Golden said.

The developers are aiming to begin indoor concerts early in the first quarter of 2023.

The undertaking is different, and more difficult, than simply constructing a new concert hall, but that's not what the developers wanted.

"You can just rebuild and it can be attractive, but if you want to retain the authenticity of the property, it does take a lot more work," Golden said. "[This property has now been rehabilitated to highlight] its past glory. It's a really cool thing to see." ■

Anthony Paletta is a freelance writer based in New York.

The Activity-Focused Office:
A Fresh Way to Work

LEO A DALY's redesigned studio in Minneapolis features smaller workstations, sit-stand desks and low walls to increase collaboration. Huddle areas and a café are spaced throughout for both formal and casual meetings.


© LEO A DALY, photo by Brian Droege

The post-pandemic office will look significantly different from its predecessor.

At a Glance

- Focus, collaboration, socialization, learning and rejuvenation are key aspects of the new workplace.
- The pandemic accelerated experimentation in office properties.
- Upgrades to offices should focus on physical, digital and human dimensions.

By Pablo J. Quintana, LEO A DALY

The modern office is in the midst of a transformation. With most knowledge workers opting out of the traditional five-day-in-office workweek in search of flexibility and hybrid work solutions, the shape, size and focus of the future office is rapidly changing.

CBRE's Spring 2022 Office Occupier Sentiment Survey provides a snapshot of these changes and their impact on commercial real estate. In a survey of 185 tenant companies, 39% of respondents said they plan to expand their office portfolios over the next three years. That's up from 29% the previous year, suggesting that fears about the "death of the office" have been exaggerated. Fifty-two percent said they plan to reduce their office space holdings, but only 8% say they will become fully remote. Seventy-three percent — the vast majority — plan to support hybrid work. (See box on page 82 for more findings from the survey.)

As of now, office occupancy is slowly beginning to rebound from the depths of the COVID-19 pandemic. NAIOP's Office Space Demand Forecast, released in May, reports that vacancy rates have increased across the country for 10 straight quarters. However, Class A buildings with amenities designed to attract skilled workers are helping to stabilize the office market. Net office space absorption in the remaining three quarters of 2022 is forecasted to reach 46.9 million square feet and total 47.3 million square feet for all of 2023.

In April, JLL research showed that leasing activity across the U.S. climbed by 5.4%, the fifth quarter in a row of rising demand. The

In April, JLL research showed that leasing activity across the U.S. climbed by 5.4%, the fifth quarter in a row of rising demand. The report cited "improved clarity surrounding return-to-office timelines." Additionally, Moody's Analytics indicates that the U.S. office vacancy rate in the first quarter of 2022 fell 18 basis points from the previous year to 18.1%.

report cited "improved clarity surrounding return-to-office timelines." Additionally, Moody's Analytics indicates that the U.S. office vacancy rate in the first quarter of 2022 fell 18 basis points from the previous year to 18.1%.

While data shows that the office isn't going away, traditional ways of working are. Hybrid work as the new normal means that tenant companies are coming to market with a new set of needs. From property developers and occupants alike, the most popular question seems to be: "How can I bring people back to the office?"

Activity-Focused Environments

Focus, collaboration, socialization, learning and rejuvenation are five activities that have long been considered standard components of the modern workplace. Planned as an all-inclusive environment, the pre-pandemic office is a mixture of these five work modes, with priority given to dedicated-focus, heads-down workspaces. Areas for collaboration and socialization are seen as part of a supporting cast of functions subordinate to dedicated individual spaces.

A key shift in the mindset and planning of the future office will be the re-shaping of individual workspace. In May 2022, **Nelly Hayat**, a workplace innovation analyst for Density,

More Insights from CBRE's Occupier Sentiment Survey

Here are some other office trends identified in CBRE's Spring 2022 Occupier Sentiment Survey, which asked 185 commercial real estate executives their opinions on the future of the office:

A Return to the Office Takes Hold. A total of 62% of survey respondents said they were in the process of returning to the office or were planning to do so.

A Slow Return is Likely. For 53% of respondents, a return to the office will be voluntary, while 31% are making it mandatory. "Companies that are sensitive to employee needs and clearly communicate why the office is important will likely be more successful in effecting an engaged and sustained return," according to the survey.

Sustained Support of Hybrid Working. A total of 61% of survey respondents want to create flexible work schedules that also provide some consistency and predictability. Meanwhile, 12% of respondents say they will try to allow employees to choose which days they come into the office.

Focus on Office Presence. Eighty-five percent of respondents want workers in the office at least half the time, and 75% would like a requirement for the number of days that a worker will be in the office.

Growth of Flexible Office Space Demand. More than half of respondents (51%) see flexible office space making up a larger part of their portfolios in the future.

Prioritizing Space Sharing. Most respondents (63%) anticipate their workspaces transitioning from assigned seating to activity-based work and hotdesking.

Preference for Better Buildings. Most respondents said they wanted buildings with flexible open space (65%), shared meeting space (59%), good indoor air quality (50%) and space for private phone calls and Web meetings (49%).

Leaning into Technology. Enhanced video conferencing is by far the biggest priority for respondents (76%). The next most popular responses were occupancy sensors (53%), smart building sensors (48%), employee experience apps (45%), touchless technologies (42%) and air quality sensors (37%).

Emphasis on ESG. The top three environmental, social and governance (ESG) concerns are reducing greenhouse gases (71%), improving employee health and well-being (59%), and reducing resource usage and waste (49%). Social justice/diversity efforts and reducing pollution also scored highly (32% each).

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A schematic shows the redesign of the office space at the National Retail Federation's headquarters in Washington, D.C. New areas are dedicated to collaboration, deep concentration and other critical functions.

Co-Creation Hub
Furniture Modifications
Deep Concentration
TV & Podcast Studio
Support Space Modification
Agile Alcoves

a space analytics platform, told Bisnow that this shift will "likely signal the end of the 'sea of desks' as firms eschew the one-desk-per-worker ratio in favor of more social and collaborative spaces."

Unburdened by the requirement to accommodate large blocks of space for personal desks, future offices will become catalysts for social interaction and co-creation. This will not only reshape space; it also has the potential to remake organizational culture.

That concept can be seen in LEO A DALY's redesigned studio in Minneapolis. The company moved within its original building to a 25,562-square-foot space. To accommodate the smaller office, the company shrunk employee workstations by 25% and added sit-stand desks and low walls to increase collaboration. The flexible workspace allows employees to be productive within a smaller footprint. Common spaces include a café, as well as huddle areas for both formal and casual meetings.

Along those same lines, a major retailer recently engaged LEO A DALY to rethink its U.S. headquarters in Arlington, Virginia. Six years ago, when the office was first opened, a typical open-plan design met its needs. Post-pandemic,

Focus, collaboration, socialization, learning and rejuvenation are five activities that have long been considered standard components of the modern workplace. Planned as an all-inclusive environment, the pre-pandemic office is a mixture of these five work modes, with priority given to dedicated-focus, heads-down workspaces.

company leaders found that much of the open space was left unused and employees were unmotivated to come into the office. The client asked for more spaces where staff can work collaboratively in open areas rather than closed meeting spaces, which would help increase collaboration and social interaction and, hopefully, the staff's interest in returning.

A review of space utilization and staff feedback showed that employees wanted a combination of collaborative, social spaces and enclosed spaces for deep concentration. There was little demand for the "sea of desks" that had dominated the workplace. In response, the redesign significantly reduced the square footage dedicated to open stations to make room for more collaboration areas and larger social spaces on every floor. In addition, the number of singular spaces for deep concentration doubled.

The Shape of the New Workplace

After two years of wait-and-see strategies, companies are finally moving forward with plans to redesign their offices to accommodate a hybrid workforce. This is a transitional period where firms are testing new ideas and gathering real-time data to inform long-range plans.

What happens next will be an intense period of innovation and

Potential Offices of the Future

In June, The Washington Post profiled several new office concepts that companies are experimenting with. Here's an excerpt:

The Coffee Shop

"Twilio, a communication tools company based in San Francisco, envisions the idea of **company-owned coffee shops, which would offer employees free coffee drinks, ambiance and a place for employees to work without having to enter an office**. ... Entry would be restricted to employees. The coffee shop model would be meant for areas where companies have smaller workforces, complementing its major office hubs."

Nature Connection

"Salesforce's Trailblazer Ranch is located on 75 acres in the Redwoods of Scotts Valley, California. The space, intended to be **a retreat and off-site space for employees**, aims to complement the software company's main office. It offers workers the opportunity to take guided nature walks, garden tours, group cooking classes as well as do yoga, art journaling and meditation."

Corporate Housing on Campus

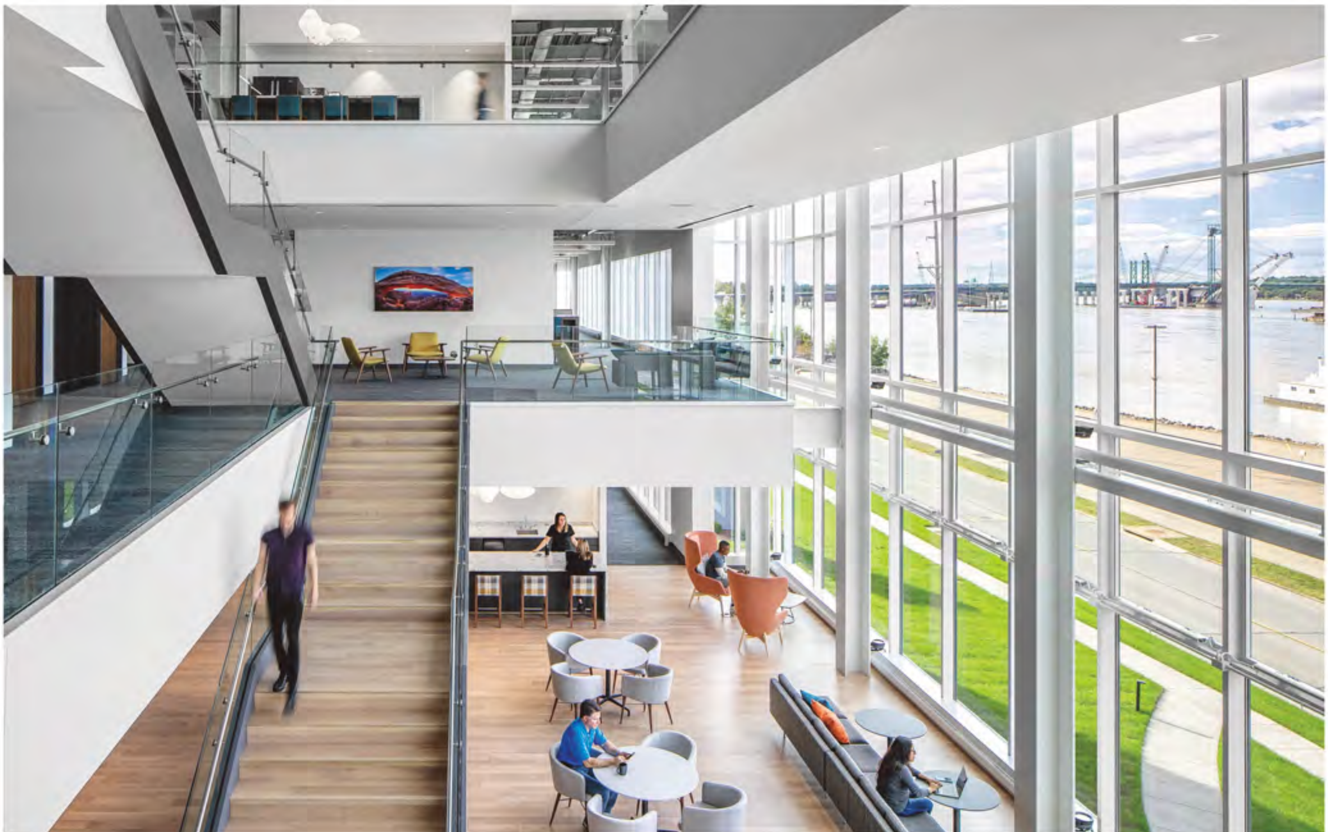
"Google's 1.1 million-square-foot Bay View campus based in Mountain View, California ... features two office buildings, a 1,000-person event center and **240 short-term employee corporate housing units** ... All desks have access to natural daylight and outside views with greenery scattered throughout the office. Automated window shades open and close throughout the day, and the ventilation system uses 100% outside air vs. recycled air."

Living Room Collaboration

"PagerDuty, a digital operations management platform, revamped its offices to cater to events, collaboration, client visits and team meetings instead of individual heads-down work ... **It removed two-thirds of its desks and divided the office into what it calls 'neighborhoods.'** Each neighborhood, which looks like a glorified living room or cafe, has open seating areas, some desks and a spot for tea that employees can reserve."

A Morphable Office

"IBM's three-story office in Toronto is meant to be **easily reconfigured based on how the office will be used each day.** For quick layout changes, the technology company's office features movable walls, adjustable workstations and lightweight furniture." ■



© LEO A DALY, photo by AJ Brown

The lobby of the International Harvester Mississippi Valley Credit Union headquarters in Moline, Illinois, on the banks of the Mississippi River, is infused with natural light.

speculation during which long-held norms regarding the workweek, workday, ideal site, spatial hierarchy, and the proportion of spaces devoted to individual tasks vs. group collaboration will undergo constant tweaking. While it may take several years before today's experiments solidify into new conventions, it's clear that it will be a fundamental change in the way offices are planned, with the collective taking precedence over the individual.

"Our workplace strategy group, and occupancy insights group, have never been busier because of everybody trying to understand what they should be doing," CBRE Global Head of Occupier Thought Leadership **Julie Whelan** said in an interview with Bisnow in May. "They are looking to test and then pull the trigger."

In making sense of this transitional period, Whelan told Bisnow that owners might want to think of upgrades in three categories: physical,

© LEO A DALY, photo by AJ Brown

Amenities at the International Harvester Mississippi Valley Credit Union headquarters in Moline, Illinois, include casual gathering spaces and a mix of private workstations and technology-enabled collaborative spaces.

What happens next will be an intense period of innovation and speculation during which long-held norms regarding the workweek, workday, ideal site, spatial hierarchy, and the proportion of spaces devoted to individual tasks vs. group collaboration will undergo constant tweaking. While it may take several years before today's experiments solidify into new conventions, it's clear that it will be a fundamental change in the way offices are planned, with the collective taking precedence over the individual.

digital and human. Physical elements of space include conference rooms and collaborative spaces. Digital elements include apps to order coffee and book meeting rooms, and technology to hold better hybrid conference calls. Human elements include better air filtration, and health and wellness features.

The National Retail Federation's (NRF) recent office renovation offers an example of how companies are experimenting with physical, digital and human elements. With the goal of bringing people back into the office, NRF engaged LEO A DALY to retool its Washington, D.C., headquarters space. CFO **Zahilys Hernandez-Perez** expressed her hope to "increase the opportunities for collaboration and creativity."

The redesign targeted outdated support spaces such as workrooms and file rooms, and inserted a new program of communal areas into the existing office layout. New spaces include a central co-creation hub, agile alcoves (free-address work areas), collaboration lounges, a library, deep concentration spaces and a new wellness suite. All spaces will include occupancy monitoring technology to provide real-time usage feedback. Through this infusion of communal activities, NRF is hoping to lure staff back to the office and re-energize its organizational culture.

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Biophilic elements are part of the office design for Carson Group's new headquarters campus in Omaha, Nebraska.

© LEO A DALY, photo by AJ Brown

Financial services firm Carson Group's new headquarters campus in Omaha, Nebraska, features a rooftop terrace and a two-story amenity zone called Carson Commons.

The pandemic demonstrated that being in the office is not an imperative to get work done, especially when it comes to individual focus work. **Now, with nearly 50% of the office space previously dedicated to individual desks up for grabs, there is an extraordinary opportunity to innovate the ways companies build their cultures.**

Additionally, LEO A DALY's work on the new 92,000-square-foot International Harvester Mississippi Valley Credit Union headquarters in Moline, Illinois, makes use of ample natural light, which researchers at Cornell University have shown can lead to an 84% reduction in physical issues such as eyestrain and headaches. The facility is home to 300 employees, with space to grow to 400.

The company also maximized natural light at financial services firm Carson Group's new 200,000-square-foot headquarters campus in Omaha, Nebraska. There, an electrochromic glass envelope tints in response to changing daylight conditions, which allows for views in all directions. This transparent skin directs ample interior daylighting to private and collaborative workspaces.

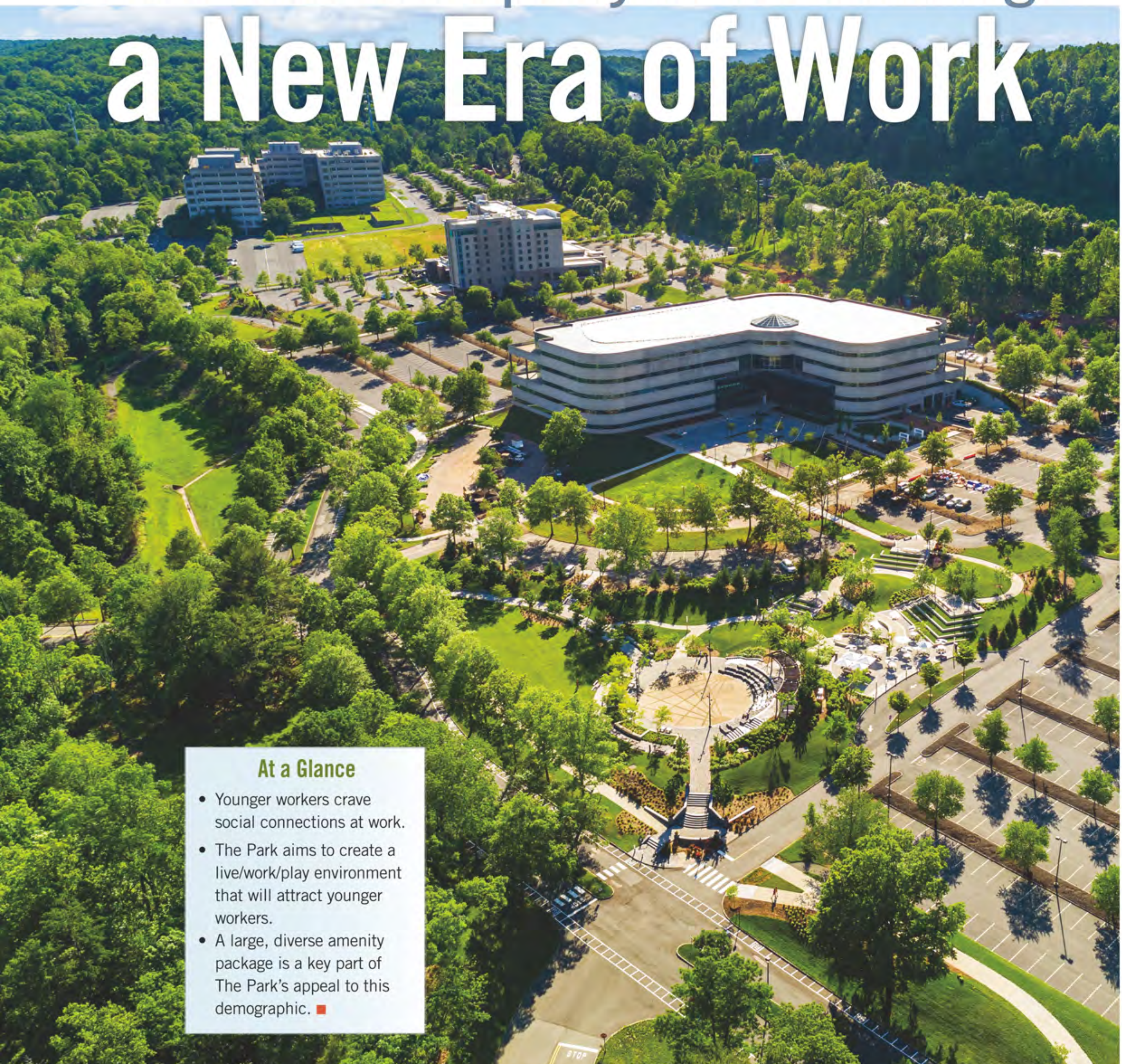
Change and Disruption Drive Innovation

The pandemic demonstrated that being in the office is not an imperative to get work done, especially when it comes to individual focus work. Now, with nearly 50% of the office space previously dedicated to individual desks up for grabs, there is an extraordinary opportunity to innovate the ways companies build their cultures.

The future office will serve as a collaborative hub and innovation center. By prioritizing communal activities and meaningful gatherings, the office becomes a vessel for collective thinking and doing. These new workplaces will deliver a more natural and desirable experience, encouraging people to converge, create and strengthen organizations. ■

Pablo J. Quintana is vice president, national interior design leader – workplace for LEO A DALY, an architecture, planning, engineering, interior design and program management firm.

How One Company is Welcoming a New Era of Work



At a Glance

- Younger workers crave social connections at work.
- The Park aims to create a live/work/play environment that will attract younger workers.
- A large, diverse amenity package is a key part of The Park's appeal to this demographic. ■

Photo by Evan Joseph, courtesy of The Connell Company

The Park in Berkeley Heights, New Jersey, is evolving from a 1980s-era office park into a live/work/play destination just 25 miles from New York City.

In New Jersey, a 1980s-era suburban office park undergoing a $400 million revitalization offers lessons on contemporary work environments that encourage socialization and collaboration.

By Shane Connell, The Connell Company

Gen Z has grown up against the backdrop of a global pandemic, which has changed its expectations for the workplace.

Much of the office workforce — especially Gen Z— has gotten used to the freedom and flexibility that working from home provides. Many employers now use a hybrid model, where their employees work in the office two to three days a week, but that environment continues to compete with the comforts of working from home.

However, despite all the benefits that remote work provides, recent studies have found that the Gen Z workforce is craving social interaction. According to a Generation Lab poll of more than 500 young people conducted in July 2021, 74% missed the office community when working remotely.

In the process of shifting to remote work, employee social circles have shrunk dramatically. A 2021 Microsoft study revealed that people connect with workers from outside their direct departments 25% less than before the pandemic. Separately, a 2021 Indeed survey showed that 73% of people missed socializing with others in-person, and that small interactions with colleagues in the office make a huge difference in the well-being and connectedness of a company's workforce.

There are certain elements gleaned from in-person interactions that can't be replicated in a virtual meeting. According to Gensler, young workers say their No. 1 reason for being in the office is to collaborate with colleagues. At the same time, younger generations have also embraced the flexibility of being able to work from anywhere.

When it comes to anticipating the future of the office, The Park in Berkeley Heights, New Jersey, demonstrates the importance of integrating the features that the workforce now desires. The 1980s-era suburban office park is in the midst of a $400 million transformation with the goal of creating experiential uses that could provide new ways for people to work, live, dine, socialize and entertain — all in one place.

From Office Park to Mixed Use

The Connell Company first developed the Berkeley Heights property in the 1980s as the Connell Corporate Park. The site is located along Interstate 78, approximately 25 miles from New York City and 18 miles from Newark Liberty International Airport. The first 41-acre parcel was acquired in 1981 to develop Building 100. At 428,000 square feet, it was the largest spec office development ever built in New Jersey up to that time. With the last 20-acre acquisition in 2008, the development stood as a five-building, 1.5-million-square-foot suburban office campus on 185 wooded acres with tenants such as AT&T, AIG and L'Oréal.

Around 2010, sections of the property were rezoned for the development of a 114,000-square-foot LifeTime Fitness facility, a 176-room Embassy Suites Hotel with 12,000 square feet of banquet space, the Grain & Cane fine-dining restaurant and a Starbucks. The company began repositioning the property as The Park in 2018,

Photo by Evan Joseph, courtesy of The Connell Company

Building 200 at The Park was part of the first phase of the project's $400 million renovation. The lobby, gym, game room, café and outdoor spaces were updated while the building was occupied.

adding new uses and updating the existing office buildings with amenities that focus on health and wellness, socialization and elevated culinary offerings.

The Park was further rezoned to mixed use in 2020. As a result, the company is developing an additional 185,000 square feet of destination and entertainment retail uses, 328 apartments and public parks.

Due to the size and scale of The Park's property and operations, The Connell Company has a small internal construction team to help support new tenants with construction upgrades. For larger projects, a third-party owner's rep firm is hired to help manage all aspects of development and construction. The owner's rep firm gives the company third-party dedicated guidance and oversight on all design, budgeting, scheduling and construction matters.

The Importance of Amenities

In order to decide which amenities would be most attractive to tenants, the company researched amenity programming that focused on on- and off-campus users. The first perspective was determining the preferences of those who want to work or live in The Park. The second perspective considered what would motivate members of the surrounding communities to drive to the campus as part of their everyday life.

Interestingly, the two lists were nearly identical. The most important amenities focused on convenience, health and wellness, great food, outdoor spaces and experiential spaces while being available to on- and off-campus users, where possible.

Connell established Table and Banter, a branded management group, to run the hospitality, health and wellness, and amenity services for the office and residential properties in The Park. Table and Banter also owns and operates food and beverage concepts as well as catering services. Additionally, The Park also provides concierge-level services including dry cleaning, a bike-share program and catering.

The rollout strategy for the amenities package began by upgrading one office building, so the team focused on a single new high-end office café and catering services for that space. The second office building upgrade will feature a new café with a commissary kitchen, which will service the café and support all the on-site and off-site catering business and the additional restaurant concepts on campus.

The same approach was used with the wellness and fitness amenities. The first FIELDHOUSE gym, a 12,000-square-foot fitness center and game room, was built in Building 200 and serves the office tenants and members of the 44,000-square-foot Round Table Studios coworking space and social

Suburban Office Space is Struggling

Suburban office markets across the country are oversupplied with aging buildings. The problem is particularly acute in the New Jersey suburbs of New York, where a recent JLL report noted that about 72% of office space is "functionally obsolete," according to a July article in the New York Times. ■

Colleges, Resorts Provide Inspiration

Shane Connell, executive vice president of The Connell Company, has said in interviews that vacation resorts and college campuses were major influences on the transformation of The Park in Berkeley Heights, New Jersey, from a staid suburban office park into a lively 24/7 live/work/play destination 25 miles from Manhattan.

"When you choose a place to go on vacation, it has to be better than your home, right?" Connell said in an interview with ROI-NJ in March. "So, what are resorts doing really well to make you pay money to go there? Food is a big part of it, location is a big part of it, service is a big part of it — conveniences, wellness, all those things matter. And all those things can be adapted really well to an office environment."

Connell told ROI-NJ that college campuses do many of those things well, too — but with the important addition of a social component.

"You're seeing an 'arms race' with colleges building better student centers and housing, offering more intramural sports, more indoor-outdoor spaces, the works," he said. "I think the biggest thing that we've seen in colleges are the social solutions. COVID showed that anyone can learn online, just like you can work online. But it's the interaction and integration with people that makes it special. So, we want to deliver a workplace solution that also creates social solutions: evening activations, entertainment, better restaurants and bars — or just changing the work dynamic of the lobby experience, which is a social experience as well as a work solution."

According to Connell, about 9% of the space in every building at The Park is dedicated to social and shared spaces. That includes the development's coworking hub, the 44,000-square-foot Round Table Studios (RTS). It offers "social memberships" to people who "aren't necessarily renting a desk or an office suite in the space, but want access to the perks and services that RTS has to offer," according to an October 2021 report from Real Estate NJ. These social memberships are available to any employee of a company with a lease at The Park.

"We're trying to turn an adult workplace into more of a collegiate feel," Connell told Fast Company in an interview published in September 2021.

Connell also told Fast Company that The Park isn't trying to compete with New York City, but to complement it.

"For the people that are traditionally working in New York City, using the city for entertainment, for culture, for dining, instead of having to drive 30 minutes, driving 10 minutes is an alternative that they want to have," he said. ■

Photo by Clayton Connell, courtesy of The Connell Company

Task tables inside the 44,000-square-foot Round Table Studios coworking space and social club.

club. The second FIELDHOUSE gym on the campus will be 22,000 square feet and will be located in Building 400, serving the office tenants of Buildings 300 and 400, as well as the new apartment tenants nearby and the general public. Creating the first FIELDHOUSE concept allowed the core fitness and wellness team to grow, and they will eventually lead and support the wellness programming for the entire campus.

Connell has also aligned itself with Eden Health, a direct-to-employer health clinic with multiple locations in New York City and one at The Park. Eden Health provides The Park's tenants with direct access to doctors and other medical professionals, both in-person and virtually. With this alignment, The Park's tenants have the opportunity to efficiently coordinate their health care needs with the nutrition guidance, fitness classes, personal training and facilities offered by FIELDHOUSE.

During the first phase of The Park's $400 million transformation, the lobby, gym, game room, café and outdoor spaces at Building 200 were renovated — all while it was

Courtesy of The Connell Company

The Park spans 185 acres and will feature a variety of uses when it is completed in 2023.

occupied. Tenants were understanding about working within a building that was also a temporary construction site, as they lost access to the amenities and worked through noisy conditions. As a compromise, Connell built a temporary café offering fresh take-out items.

The transformation consisted of upgrades to both the interior and exterior of the building, which was fully funded with internal capital.

Early Popularity

The demand and absorption of available office space exceeded expectations. Rents in Building 200 increased above the budgeted assumptions with occupancy for the building effectively at 100%. Prior to these upgrades, Building 200 contained roughly 150,000 square feet of available space. It now offers 358,000 square feet of boutique luxury tenant experience.

Fortune 500 companies were targeted in the tenant search, specifically technology firms. Upgrades and added amenities and services were designed to appeal to all tenant types, but technology industry office and lobby trends served as inspiration for the renovations. New leases in Building 200 included a

Photo by Evan Joseph, courtesy of The Connell Company

The 12,000-square-foot FIELDHOUSE fitness center and game room is in Building 200 at The Park.

Leasing Success

In September 2021, financial technology firm Fiserv announced that it would lease more than 420,000 square feet in Building 100 in The Park and bring in up to 3,000 employees.

"Our new location in Berkeley Heights will be a dynamic hub of collaboration and innovation, bringing our people together in an inspiring workplace environment to create opportunity for unmatched energy and career growth experiences as we move payments and financial services forward on behalf of our clients," said **Frank Bisignano**, Fiserv's CEO, in a statement.

Shane Connell, executive vice president of The Connell Company, told ROI-NJ in March that 40% of the office leases at The Park were up for renewal in 2021. All were either renewed or rented to new tenants.

"We're 99% leased," he said. ■

Photo by Evan Joseph, courtesy of The Connell Company

The Grove is a two-acre landscaped woodland area at The Park.

mix of tech companies, including HP and Samsung, pharmaceutical companies, financial firms, insurance companies and law firms.

Eco-friendly and sustainable design and operating procedures are a major component of The Park. These features include biodegradable packaging and locally sourced ingredients in food and beverage operations; the use of electric vehicles for all engineering and grounds maintenance; and the installation of solar panels and LED lighting in parking lots and roofs.

The office must evolve to attract and accommodate a new generation of workers who want the structure, sustainability and social value that come from working in a welcoming physical environment. By offering shared amenities, community activities, a variety of eateries and communal workplaces, The Park strives to create an environment where workers not only socialize within their organization, but also with other tenants of The Park — exceeding the norm of socializing only within their own companies. ■

Shane Connell is executive vice president at The Connell Company.

The Park - Project Summary

Project Location	Berkeley Heights, New Jersey
Project Name	The Park
Type of Site	Suburban
Development Type	Ground up/new development, redevelopment, adaptive reuse, mixed use
Transportation Modes	Car, transit via bus link to rail, pedestrian
Mix of Uses	Office: 1.5 million square feet Retail/Restaurant: 190,000 square feet (planned); Recreational: 114,000 square feet; Residential: 328 luxury rental units (planned); Common space: 150,000 square feet total in office buildings and hotel Other: 20 acres of public parks and trails
Number of Floors	Four eight-story office buildings, an eight-story hotel, six nine-story apartment buildings
Parking	Surface: 5,230 existing spaces; underground (planned)
Site Dimensions	Total acreage: 185 acres Total square footage: 2.5 million square feet
Tenants	Office: Fiserv, L'Oreal, Samsung, Bristol Myers Squibb, HP, Hikma Pharmaceuticals Retail: LifeTime Fitness, Starbucks, Grain & Cane (more are planned)
Development Team	
Developer	Connell Real Estate & Development Co.
Project Architect	Minno & Wasko (mixed-use project in The Park) Olson Kundig (brewery and taqueria)
Interiors Architect	David M Sullivan
General Contractor	Turner Construction (Building 200, 300 and 400 renovation), Structure Tone (Building 100 renovation). Not awarded yet for The District mixed-use project in The Park.
Leasing Agents	Lee S. Martino, VP Leasing -The Connell Company
Timeline	
Land Acquisition	Various acquistions from 1981-2005
Submitted Initial Plans	1981
Phase I Completed	Building 100 completed 1984 (under renovation 2022-23); Building 200 completed 1988 (renovated 2020); Building 300 completed 1999 (planned renovation 2022-23); Building 400 compeleted 2001 (planned renovation 2022-2023); Building 50 completed 2009; Embassy Suites Hotel 2018; Lifetime Fitness 2010; 328 apartments 2025; 185,000 square feet of retail 2025
Project Completed	The District mixed-use project portion of The Park, including residential, retail and entertainment, is expected to be completed by 2025.
Development Cost	
Phase I Hard Costs	$400 million
Total Project Costs	Approximately $750 million including land costs ■

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Marci Rossell

Expert Economic Forecaster and Former Chief Economist for CNBC and Co-host of Squawk Box

Presented by Prologis

Michael Steep

Executive Director, Stanford Engineering Center for Disruptive Technology and Digital Cities

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Supreme Court Decision Upends Regulatory Framework

A landmark case involving the EPA could have far-reaching effects on how agencies make and enforce rules.

By Aquiles Suarez

With its ruling earlier this June in West Virginia v. Environmental Protection Agency, the Supreme Court fundamentally altered the landscape for federal regulations in the United States.

The case involved a proposed Obama administration regulation that would have created a cap-and-trade system to reduce greenhouse gases. The court held that the U.S. Environmental Protection Agency (EPA) did not have the legal authority to set standards on greenhouse gas emissions for existing power plants. But the reasoning behind the court's decision will have broad repercussions far beyond the particular facts of that case, essentially limiting the power of the executive branch to promote policies through federal agencies that arguably were not intended by Congress when it passed the relevant authorizing legislation.

The U.S. Supreme Court's recent ruling that the U.S. Environmental Protection Agency can't set standards on greenhouse gas emissions for existing power plants could affect how all regulations are enacted.

The decision will likely affect regulatory matters that are important to NAIOP and commercial real estate, such as the climate-disclosure regulation recently proposed by the Securities and Exchange Commission (SEC), as well as the long-running efforts by the EPA and the Army Corps of Engineers to define "Waters of the United States" ("WOTUS") to determine the jurisdictional reach of the Clean Water Act. (See previous column in the Summer issue of Development magazine.)

The 'Major Questions Doctrine'

Since 1984, when the Supreme Court issued its opinion in Chevron v. Natural Resources Defense Council, courts have deferred to federal agencies in policy areas, reasoning that they have expertise in the technical aspects of implementing laws passed by Congress. But by expanding the power of administrative agencies, the court also paved the way for subsequent administrations to use the regulatory process to advance controversial policy goals.

But the reasoning behind the court's decision will have broad repercussions far beyond the particular facts of that case, essentially limiting the power of the executive branch to promote policies through federal agencies that arguably were not intended by Congress when it passed the relevant authorizing legislation.

Critics argued that the decision undermined congressional accountability, allowing elected officials to use vague statutory language on difficult issues rather than having to legislate clearly to denote congressional intent. This provided openings for executive-branch political appointees to pursue certain goals through expansive readings of statutory authority that could not be achieved through the legislative process, according to Chevron's detractors.

Without specifically overturning Chevron, the Supreme Court's 6-3 majority opinion in West Virginia v. EPA, authored by Chief Justice **John Roberts**, nevertheless seriously weakens its

Among legal scholars, the debate will no doubt continue. Proponents of the regulation will argue that Congress intended the flexibility; those opposed will argue the opposite. In that sense, relying on something like the "major questions doctrine" may at least make some sense since larger policy decisions should clearly be rooted in the decisions of the elected representatives.

application by its emphasis on the "major questions doctrine." Essentially, that is a judicial presumption that an executive branch agency can assert authority over questions of great economic and political significance only if Congress has clearly authorized it. As Roberts wrote in his opinion:

"As for the major questions doctrine, it took hold because it refers to an identifiable body of law that has developed over a series of significant cases all addressing a particular and recurring problem: agencies asserting highly consequential power beyond what Congress could reasonably be understood to have granted."

Dissenters from the majority's opinion noted that broad authorizations are sometimes needed to allow agencies the flexibility to adapt to changing conditions and to unforeseen circumstances. Justice **Elena Kagan**, who authored the minority dissenting opinion, wrote:

"A key reason Congress makes broad delegations . . . is so an agency can respond, appropriately and commensurately, to new and big problems . . . Congress knows what it doesn't and can't know when it drafts a statute; and Congress therefore gives an expert agency the power to address issues — even significant ones — as and when they arise."

The court, Kagan argued, "substitutes its own ideas about policymaking for Congress's. . . The Court, rather than Congress, will decide how much regulation is too much."

Among legal scholars, the debate will no doubt continue. Proponents of the regulation will argue that Congress intended the flexibility; those opposed will argue the opposite. In that sense, relying on something like the "major questions doctrine" may at least make some sense since larger policy decisions should clearly be rooted in the decisions of the elected representatives.

Impacts on CRE

The fate of two regulations important to NAIOP and commercial real estate — the SEC's climate disclosure regulation and the EPA and Army Corps of Engineers' WOTUS regulation — are likely to be affected by the Supreme Court's decision.

Earlier this year, the SEC released its proposed "Enhancement and Standardization of Climate-Related Disclosures for Investors" rule, which is designed to increase transparency and standardize the information that public corporations disclose regarding climate-related financial risks and their greenhouse gas emissions (See NAIOP's April 20, 2022 Market Share blog post, "Challenging Issues for CRE in SEC Climate Disclosure Rule").

For greenhouse gas emissions, the rule would require disclosure of three different measures, called "scopes": direct emissions that occur from sources owned or controlled by the company (Scope 1); indirect emissions from purchased electricity and other forms of energy (Scope 2); and indirect emissions from upstream and downstream activities in a company's value chain (Scope 3). For Scope 3 measures, the larger public corporations subject to the SEC's disclosure requirements will need information from those they do business with to comply with the rule. Therefore, the impact of the SEC's regulation will be broadly felt through the larger economy.

The SEC's statutory mission is to protect the investing public, and providing useful information is the rationale for asserting its regulatory authority in this area. As the SEC stated in the rule's preamble, investors "need information about climate-related risks — and it is squarely within the Commission's authority to require such disclosure in the public interest and for the protection of investors — because climate-related risks have present financial consequences that investors in public companies consider in making investment and voting decisions."

However, while protecting investors and ensuring confidence in capital markets would clearly be in the SEC's purview, imposing disclosure requirements for greenhouse gas emissions in what many argue is an effort to advance the Biden administration's environmental agenda is something that could be a "major question" under the West Virginia decision, and outside the SEC's legal authority. The proposed climate disclosure regulation, therefore, could see some major revisions before the SEC issues it in final form. Even then, it will likely face legal challenges.

The decades-long effort to develop a WOTUS regulation that could withstand judicial scrutiny could also be influenced by the Supreme Court's decision in the West Virginia case. The vague WOTUS language, which appears in amendments to the Clean Water Act of 1972 and determines which bodies of water or wetlands are subject to the law's permitting requirements, has resulted in constant legal challenges to regulations that try to define it. The Supreme Court's effort to interpret the WOTUS language in Rapanos v. United States, a 4-1-4 decision with three different opinions offering no controlling standard, added to the confusion.

> **The fate of two regulations important to NAIOP and commercial real estate — the SEC's climate disclosure regulation and the EPA and Army Corps of Engineers' WOTUS regulation — are likely to be affected by the Supreme Court's decision.**

The situation does argue for legislatively clarity, and opponents of the Biden administration's recent efforts to implement its own WOTUS regulation will use the West Virginia case to buttress arguments that the EPA has overstepped its authority. But in this case, Congress did delegate to the agencies the responsibility for defining WOTUS, and legislative clarifications are not forthcoming anytime soon.

The issue may yet again be decided, ultimately this time, by the Supreme Court this fall when it considers Sackett v. EPA. That case will allow the Supreme Court to revisit its ruling in Rapanos, and the court's conclusion in West Virginia would indicate that any agency regulatory definition for WOTUS would need to fit within the parameters of congressional intent. ■

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

Chapter Profile: NAIOP Arizona

A booming population and a robust economy make for a strong CRE market in the Phoenix area.

By Trey Barrineau

Phoenix, which has long been one of the fastest-growing regions in the United States, reached a notable demographic milestone recently — the U.S. Census Bureau reported that it officially grew faster than any other area of the country between 2010 and 2020. The city added more than 160,000 residents during that time, an increase of 11.2%, and it surpassed Philadelphia to become the nation's fifth-largest city.

The more than 900 members of NAIOP Arizona, one of the association's largest chapters and a 2022 Chapter of the Year winner, handle every product type in commercial real estate. **Suzanne Kinney**, president and CEO of NAIOP Arizona, spoke to Development magazine about what's going on in the Phoenix market.

> "Phoenix has been one of the top-performing industrial markets in the country due to incredible tenant demand. It remains a landlord's market, with most new development being built on spec and leasing up well before completion."
>
> *— Suzanne Kinney, president and CEO, NAIOP Arizona*

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

Kinney: Phoenix has been one of the top-performing industrial markets in the country due to incredible tenant demand. It remains a landlord's market, with most new development being built on spec and leasing up well before completion. According to JLL, Phoenix delivered more than 2.9 million square feet of new construction in the first quarter of 2022, but robust demand from space users absorbed nearly 4.6 million square feet. But like much of the nation, construction costs and materials shortages are the biggest challenges our members are facing in the Phoenix area, with costs up 20%-30% across all product types. So far, developers have been able to partially absorb those higher costs with rent growth; Cushman & Wakefield reports that industrial rents in the Phoenix area are up a healthy 12% over the past year and 21% since the first quarter of 2020.

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

Kinney: Phoenix has long been known for its attractive business climate, and conditions remain very favorable overall. However, one recent trend that has started to create a challenge for the business environment is affordable housing. While Phoenix has traditionally benefitted from affordable housing options relative to peer cities, the median price of a single-family home jumped nearly 33% between January 2021 and January 2022, according to the Case-Schiller index. Meanwhile, local apartment brokerage ABI Multifamily reports that average apartment rents have increased more than 25%. These higher housing costs are making it more difficult for businesses to attract, retain and grow their workforce. More housing is in the pipeline as we had over 34,000 new single-family construction permits pulled in 2021, and ABI reports nearly 38,000 new multifamily units are being built as well.

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

Kinney: Opportunities in the Greater Phoenix area are driven by robust expansion of 21st-century manufacturing industries within our market. Intel is expanding its semiconductor factories in Chandler, while Taiwan Semiconductor Manufacturing Corp. is building a massive $12 billion plant in North Phoenix. These multi-billion-dollar capital investments will ensure that Phoenix is the leading domestic source of semiconductors for decades to come. Further, electric vehicle manufacturers Lucid and Nikola have constructed large assembly facilities in Pinal County, just south of Phoenix, and ElecctraMecchanica selected Mesa as its U.S.-based assembly facility and engineering technical center. The economic gain to Greater Phoenix from these large investments multiplies when you include the suppliers these manufacturers bring along with them. Sunlit Chemical is constructing a $100 million facility in North Phoenix to produce chemicals used in semiconductor manufacturing, while LG Energy Solutions plans to build a $1.4 billion high-tech battery plant in the East Valley.

Findings from the 2020 Census show that Phoenix leapfrogged Philadelphia to become the fifth-largest city in the U.S. in terms of population.

Development: *What are some of your legislative priorities?*

Kinney: Our chapter is actively involved in advocacy at the Arizona State Legislature and at other levels of government. This legislative session, Arizona has the largest budget surplus in our state's history at around $5 billion, according to the latest estimates by the Joint Legislative Budget Committee. At the time of this writing, the legislature has not yet come to a budget resolution. However, this fiscal environment has led to opportunities to reduce taxes and make strategic investments. On the tax front, we achieved one of our long-term priorities of bringing down the assessment ratio on commercial property to a more competitive 15%.

We are also engaged in conversations on how to resolve long-term water supply issues. Thanks to wise planning over the past century, Arizona's municipal water users will have a better supply than the national media would lead investors to believe. With our budget surplus, there is strong support to invest more than $1 billion in water-conservation technologies and augmentation, which will position us well for the next century of growth.

We expect to see significant investments in our highways, arterial roadways and airports. Of particular importance is a proposed $400 million investment to widen a portion of Interstate 10 connecting Phoenix and Tucson, which is expected to draw down another $300 million in federal funds thanks to the Infrastructure Investment and Jobs Act championed by Senator **Kyrsten Sinema** (D-Arizona).

"Phoenix has long been known for its attractive business climate, and conditions remain very favorable overall. However, one recent trend that has started to create a challenge for the business environment is affordable housing."

— Suzanne Kinney, president and CEO, NAIOP Arizona

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

Kinney: The Arizona chapter hosts a range of educational programs. With an open race for governor this year, we held a series of six events called Coffee with Candidates. Three Democratic candidates and three Republican candidates each met with NAIOP members to answer questions and talk about their policy positions. Also in the first half of 2022, we hosted a special event with celebrity restauranteur **Sam Fox** about the future of restaurants, hospitality and hotels. More than 300 members attended. We had an insightful program with economist **K.C. Conway**, who covered macroeconomic issues that would impact business generally and the real estate industry specifically over the next few years. In addition to these special programs, we continue to host free continuing education programs for members to renew their real estate licenses. And each semester we teach a practicum for students in the Master of Real Estate Development program at Arizona State University. Our Developing Leaders have held their own events such as programs on inflation and materials costs and site selection complications. They also hosted a project tour of The Beam in Tempe, an innovate office building constructed of cross-laminated timber. ■

> **"The Arizona chapter hosts a range of educational programs. With an open race for governor this year, we held a series of six events called Coffee with Candidates. Three Democratic candidates and three Republican candidates each met with NAIOP members to answer questions and talk about their policy positions."**
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Trey Barrineau is the managing editor of publications for NAIOP.

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Examining the Convergence of Retail and Industrial Real Estate

Competition over the last mile is leading retailers and developers to adopt new strategies.

By Shawn Moura, Ph.D.

The expansion of e-commerce rapidly accelerated during the first year of the COVID-19 pandemic. While consumer safety concerns about in-person shopping have receded, online sales remain significantly higher than before the pandemic. This shift in consumer preferences has led building owners and developers to re-examine traditional approaches to retail and distribution space as bricks-and-mortar retailers expand their e-commerce capabilities and industrial tenants seek last-mile space in land-scarce urban markets.

The NAIOP Research Foundation's June 2022 report, "New Places and New Spaces for E-commerce Distribution," examines the convergence of retail and industrial real estate. The report's author, NAIOP Distinguished Fellow **Dustin Read, Ph.D.**, interviewed developers, investors, architects and other industry practitioners to evaluate the risks and opportunities that this convergence presents for developers and building owners.

Many bricks-and-mortar retailers, forced to close their doors during the first weeks of the pandemic, have innovated by expanding the availability of curbside and in-store pickup options for online orders. Some have also added or expanded ship-from-store capabilities. To varying degrees, these retailers are allocating more store space to online order fulfillment, with some adding automated fulfillment systems to existing stores to enhance their fulfillment capacity. Expanding buy-online, pickup-in-store (BOPIS) options have also led retailers to reconfigure store interiors and dedicate parking spaces for curbside pickup. Should these trends persist, they will require design modifications for shopping center buildings and parking lots to ensure a safe and enjoyable visit for both in-store customers and those picking up online orders. The increase in online sales from bricks-and-mortar locations should also prompt building owners to avoid percentage-rent lease provisions that do not account for online sales gener-

Get the Report

To view and download "New Places and New Spaces for E-commerce Distribution," visit naiop.org/Research-and-Publications.

Many bricks-and-mortar retailers, forced to close their doors during the first weeks of the pandemic, have innovated by expanding the availability of curbside and in-store pickup options for online orders. Some have also added or expanded ship-from-store capabilities.

ated from in-store traffic or co-tenancy clauses that prohibit distribution activities.

Faced with increased demand for last-mile distribution space, developers in land-constrained markets are also considering strategies that would not have been feasible before the pandemic, such as converting vacant malls to distribution centers. Shopping centers and malls that are located adjacent to transportation infrastructure and near dense urban areas can present tempting targets for conversion to distribution uses given their locational advantages and large parking fields. However, complex ownership and lease agreements can make securing control of a mall difficult, and the expenses associated with demolishing or converting existing buildings can make many projects cost prohibitive. For these and other reasons, most experts expect only a small fraction of malls and shopping centers to be redeveloped into distribution centers in the coming years.

Building last-mile facilities alongside retail space in new mixed-use projects is another emerging strategy that seeks to take advantage of synergies between the two product types. Locations near transportation networks and population centers are attractive to both retail and distribution tenants. In addition, each use can benefit from proximity to the other as retail outlets and restaurants offer amenities to distribution workers who generate additional revenue for retail tenants. However, careful planning is needed to separate industrial and retail traffic and ensure pedestrian safety, and developers should be ready to address potential community concerns about traffic on adjacent roads.

It's unclear whether each of the trends examined in the report will prove to be durable, but developers and building owners can expect that the overlap between retail and industrial uses will continue to grow as retailers compete over the last mile of the supply chain. ■

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

NAIOP's Visionaries: Leadership Across the Generational Spectrum

The association's program for rising leaders in commercial real estate offers an outstanding career development opportunity.

By Mike Riopel, Northwestern Mutual

A look at the roster of NAIOP Research Foundation Governors reveals a dynamic group of industry veterans and NAIOP leaders who have made their mark on the commercial real estate profession. The NAIOP Research Foundation is an important source of thought leadership and cutting-edge research largely because of their active participation, insights and counsel.

In 2017, the governors realized that the foundation needed to diversify its ranks to include the voices of bright young CRE professionals so it could best serve the industry amid a time of great change. **Barbara McDuffie**, a governor since 2015 and the program's chair, spearheaded the effort to diversify and expand the group, and her brainchild became the Visionaries program.

Barbara McDuffie, a former managing director with Baker Tilly Virchow Krause, LLP in Tysons, Virginia, and a NAIOP governor since 2015, is the chair of NAIOP's Visionaries committee and led the program's development.

The foundation launched the first Visionaries class in 2018 to connect outstanding rising industry leaders under the age of 40 with the governors and the NAIOP Research Foundation's work. Ten young professionals were in that initial group.

Visionaries work closely with the governors, foundation leadership and staff, and they collaborate at in-person and virtual meetings and social gatherings during their three-year terms. They play an important role in the foundation's research development process by sharing their perspectives and expertise. They are chosen through a competitive application process and are invited to become governors at the end of their terms.

Visionaries work closely with the governors, foundation leadership and staff, and they collaborate at in-person and virtual meetings and social gatherings during their three-year terms. They play an important role in the foundation's research development process by sharing their perspectives and expertise. They are chosen through a competitive application process and are invited to become governors at the end of their terms.

Although COVID-19 presented unique challenges for in-person meetings and networking events, it was also an opportunity for Visionaries to innovate, evolve and ultimately enhance the value of membership in the program. One such idea was establishing quarterly virtual meetings. For the first half of each meeting, a foundation governor shares their expertise, offers career advice and answers questions. During the second half of the meeting, Visionaries share their perspectives, thoughts and insights into the work they're doing and the markets in which they operate. Because conversations are confidential, attendees feel comfortable discussing work challenges and openly sharing advice. These quarterly virtual meetings help Visionaries keep a finger on the pulse of various real estate markets, asset types and trends.

Before the creation of the Visionaries program, governor recruitment was focused almost exclusively on professionals with several decades of experience in the industry, and candidates were identified mostly through peer-to-peer referrals. By actively getting the word out about the foundation and its work to a younger group through the Visionaries program, these professionals are engaged earlier in their careers.

An 'Extraordinary Opportunity'

Mike Riopel

NAIOP Visionary **Mike Riopel** describes his experience with the program:

"When I was initially selected for the Visionaries program in January 2020, I was excited about the extraordinary opportunity to collaborate with industry leaders and the chance to help shape valuable industry research. Over time, the experience has come to be much more than that for me. The program has allowed me to collaborate, lead and learn from a truly outstanding group of peer professionals from varying perspectives, backgrounds and roles. I have also greatly benefited from the unprecedented access to the governors who are so committed to the work of the NAIOP Research Foundation and the future of the industry. Their contributions go well beyond those they make to the research development process and extend to a commitment to developing the careers of future industry leaders through the support they give to all of us in the Visionaries program." ■

An Opportunity for Mentorship

Program participants also have an unparalleled opportunity to learn from and network with senior professionals and governors through a formal mentorship program. In each year of their three-year terms, Visionaries pair with up to three governor mentors.

Mike Chukwuekue, a principal with BentallGreenOak and a member of the 2021 class of Visionaries, said his mentorship experience was uniformly positive.

"Given the unprecedented times we are in, my mentor's perspective of seeing opportunity through uncertainty is one that forces a recalibration of any adversity you believe you are facing," he said. "This creates a clearer, less daunting path toward achieving a more favorable outcome."

Every fall, a selective application process ensures that each five-person class of new Visionaries is committed to careers in commercial real estate and the advancement of the profession. They must also actively participate in the work of the foundation.

Chukwuekue's experience is representative of what many Visionaries have said about their mentor conversations.

New Voices

Before the creation of the Visionaries program, governor recruitment was focused almost exclusively on professionals with several decades of experience in the industry, and candidates were identified mostly through peer-to-peer referrals. By actively getting the word out about the foundation and its work to a younger group through the Visionaries program, these professionals are engaged earlier in their careers.

Every fall, a selective application process ensures that each five-person class of new Visionaries is committed to careers in commercial real estate and the advancement of the profession. They must also actively participate in the work of the foundation.

Finally, many Visionaries see the value in the program and have chosen to continue their support. To date, seven Visionaries who have completed their three-year terms have pledged to become governors. ■

Mike Riopel is assistant general counsel for real estate investments with Northwestern Mutual in Milwaukee.

Six Students Receive NAIOP Diversity Student Scholarships

The scholarships go to graduate and undergraduate students from backgrounds traditionally under-represented in the commercial real estate industry.

By Trey Barrineau

Six graduate and undergraduate students from around the country have been awarded the 2022 NAIOP Diversity Student Scholarships.

"NAIOP is proud to invest in the next generation of commercial real estate leaders and contribute toward increasing diversity in the industry through our Diversity Student Scholarship program," said **Thomas J. Bisacquino**, NAIOP's former president and CEO. "These talented scholars stand out for their passion for commercial real estate, and we're excited to see what's next for their careers."

A panel of commercial real estate experts reviewed applications from dozens of candidates for nearly two months before awarding four graduate students $5,000 scholarships and two undergraduate student $2,500 scholarships. Each scholarship winner will also receive a complimentary registration to attend NAIOP's CRE.Converge 2022, scheduled for October 10-12 in Chicago.

Launched in 2016, the scholarship program provides financial assistance to students from traditionally under-represented backgrounds who study commercial real estate at institutions that participate in the NAIOP University Membership program.


Lauren Czorniak


Quang Nhat Linh Nhan


Scott Nunes


Jacqueline Serna


Pedro Vazquez


Corban Williams

Lauren Czorniak, a graduate student in the Master of Real Estate Development program at the University of California Berkeley and a member of NAIOP San Francisco Bay Area, has more than 10 years of experience in commercial real estate. She currently works for Presidio Bay Ventures as a development intern. Prior to that, she worked as a commercial real estate advisor with CBRE in San Francisco, where she closed more than 250 leases representing $1.2 billion in total lease volume.

Czorniak is a 2022 graduate of the NAIOP San Francisco Bay Area Young Leaders Program and was selected as a recipient of the 2021 NAIOP and Prologis Inclusion in CRE Scholarship.

Czorniak's ultimate career goal is to develop successful projects focused on sustainability and design that will improve the Bay Area and its residents' lives for the better.

Quang Nhat Linh Nhan is a graduate student in the Master of Business Administration program with a major in supply chain management at the Indiana University Kelley School of Business and a member of NAIOP Indi-

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ana. He is president of the System and Operations Management Association at the Kelley School of Business.

Since 2019, Nhan has served as a supply chain specialist for Future Motion, which develops personal digital vehicles. He helped lead the setup of a new production line that generated $28.5 million in revenue.

Nhan previously worked as a senior consultant intern in the Chicago office of Ernst & Young's supply chain practice. After graduation, he will continue to work at Ernst & Young as a senior consultant.

Nhan's long-term career goal is to create better living conditions for people in lower-income communities. To achieve that goal, he wants to invest in fast-growing areas with underrepresented groups primarily living in multifamily properties.

Scott Nunes is an undergraduate student at the University of California San Diego pursuing a Bachelor of Science with a major in real estate and development. He is a member of NAIOP San Diego.

Nunes, who is a single parent with degenerative conditions that affect his sight and mobility, worked as an intern for real estate broker **Mayram Kavosi** in San Diego. He found leads, wrote contracts, and learned databases related to listings and taxes. He also wrote lease options for purchases and worked with industrial leases.

His previous work experience includes being a division sales leader for 24 Hour Fitness, where for more than five years he was ranked in the top 10 producers worldwide among a salesforce of 5,200 people.

His ultimate career goal is to develop multifamily housing, as well as to build projects on one of the Kumeyaay Indian reservations in San Diego County.

Jacqueline Serna recently earned a Bachelor of Science in business administration with a major in commercial real estate and marketing from Marquette University and is a member of NAIOP Wisconsin.

She is a real estate analyst for Northwestern Mutual, where she will focus on underwriting and analytical support. She previously worked as a brokerage and research intern for SVN I Hintze Commercial Real Estate. She also worked as a research intern for Colliers International.

Serna's ultimate career goal is to be a successful real estate investor.

Pedro Vazquez is a graduate student in the Master of Real Estate Development program at Auburn University and a member of NAIOP Alabama.

Since 2015, he has worked as the senior manager of real estate for Guitar Center Inc., where he oversees site selection as well as new store development, relocations and lease negotiations. Among other duties, he manages six brokers across the U.S. and cultivates landlord relationships. He previously worked as the director of real estate and development for Menchie's global headquarters, where he performed market analysis and site selection work, including on-site visits. After graduation, Vazquez says he would like to build sustainable housing and retail developments in overlooked and blighted neighborhoods.

Corban Williams is a graduate student in the Master of Science in Real Estate Development and Master of Science in City and Regional Planning dual-degree program at Clemson University and a NAIOP Member at Large. He worked as a project manager intern for Construction Dynamics, where he learned the basics of the construction process, including how to bid on projects and basic estimating strategies. His site experience includes working on the Brookland Baptist Church Educational Center in Columbia, South Carolina, the Close-Hipp Building for the University of South Carolina, and the Orangeburg-Calhoun Technical College Nursing Building. Williams is a certified LEED Green Associate.

He previously worked as a field engineer for Turner Construction, where he assisted with construction processes and aided the project management team as well as the field management team both on-site and in the office.

Williams' post-college career goals include working with an affordable housing or community-based development firm to further understand how the commercial real estate industry can continue to enrich the built environment. Additionally, he says he would like to find alternative sources of funding to support community-based enterprises within municipalities and better incorporate them within mixed-use developments across the country. ■

Trey Barrineau is the managing editor of publications for NAIOP.

NAIOP Resources

ASSOCIATION PROGRAMS AND SERVICES

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.

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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. ■

People + Companies INDEX

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.*

2022 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.

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What's on the Horizon for NAIOP and the Industry?

As the economy continues to shift, you can look to this informative publication as a bellwether on what your fellow commercial real estate practitioners are experiencing today, as well as their expectations for what's to come.

A Greek philosopher is credited with the phrase "change is the only constant in life," and over the past three years, we can all agree that change has been rapid and unyielding.

The pandemic set in motion an unprecedented chain of events, first with a severe impact on the economy followed by a rapid but uneven recovery. An influx of money to businesses and consumers, provided by the government to support immediate financial needs during the pandemic, contributed to inflationary pressures unlike anything we've seen in four decades. Throw in a struggling supply chain and it's the perfect storm — one from which we're all seeking relief.


Jeff Milanaik

As a result of these economic challenges, the U.S. is heading toward a potential recession and all that comes with it — stagnant job growth, tougher access to capital and a lot of uncertainty. While we're all keeping an eye on whether we'll officially enter a recession or just see a significant slowing, NAIOP members are weighing in with their own viewpoints.

Twice each year, NAIOP publishes the CRE Sentiment Index. It's designed to predict general conditions in the commercial real estate industry over the next 12 months by asking industry professionals to predict conditions for their own projects and markets.

The most recent index from the spring (the fall index will be released shortly after this magazine publishes) reflects respondents' expectations that industry conditions will improve slightly over the next year, although not without concerns about the effect of rising interest rates on capital markets and real estate valuations.

Reflecting recent inflation, respondents are more pessimistic about construction costs than in any previous survey and expect the cost of labor and materials to continue to rise at a record pace.

Compared to the fall 2021 survey, respondents noted greater concern about the effects of inflation and how rising interest rates could affect real estate valuations and the availability of financing. Expecting a contraction in lending, their outlook on the availability of debt contracted, largely fueled by anticipation of rising interest rates.

On a positive note, respondents were optimistic that occupancy rates will continue to improve, and that face rents and effective rents will rise as building owners pass some cost increases on to tenants. Sixty percent of respondents say they expect to be most active in projects or transactions related to industrial properties over the next year, followed by multifamily and office. Few respondents indicated that they expect to be most active in retail properties.

As the economy continues to shift, you can look to this informative publication as a bellwether on what your fellow commercial real estate practitioners are experiencing today, as well as their expectations for what's to come.

Internally, NAIOP has been experiencing changes as well, with the retirement of President and CEO **Tom Bisacquino** after 33 years with the association. Tom's legacy and influence are immeasurable, and we'll miss his leadership and enthusiasm.

Our board wholeheartedly selected **Marc Selvitelli** as NAIOP's president and CEO (only the fourth since it was founded in 1967), and he's had a busy introduction to the role as he begins traveling across North America to meet with our chapters and volunteer leaders. He's eager to hear from each of you about what you see for the future of our organization, and I hope you'll take the time to get to know Marc and see why our board knew he was the right person for the job.

If you're one of the more than 1,300 attendees registered for CRE.Converge October 10-12 in Chicago, I plan to see you there. ■

Jeff Milanaik, Partner, Northeast Region – Bridge Industrial
2022 NAIOP Chair