Philadelphia
Construction Market Conditions

Spring 2021

To our

VALUED CLIENTS AND PARTNERS

As 2020 gave rise to unprecedented times in our country with the pandemic, economic apprehensions, political unrest, and social injustices, we have overcome so much. At Gilbane, we mastered navigating safety protocols while performing as essential workers. We traversed supply chain disruptions. We continue to adapt and innovate in order to find new and better ways to bring projects to reality. Gilbane's Philadelphia office, despite all the challenges, continues to grow as we recover from the pandemic and effects of the past year. Most importantly we have all worked together, building more than buildings®, by supporting our economy, community and each other.

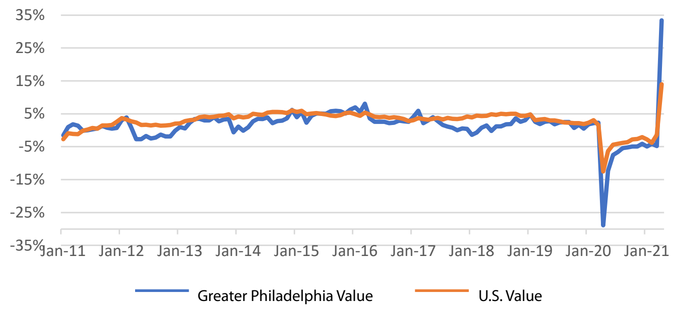
The Philadelphia Construction Market Conditions Report provides an overview of the current conditions in our industry. As a company, our commitment to achieving sustained growth enables us to provide enhanced value to our clients and trade partners, as well as opportunities for our employees. The culture that is promoted among our people, emphasizing safety, ethics and core values, assures our clients and trade partners that we strive to operate with their best interests in mind. Thank you to our trade partners and suppliers who we work with collaboratively to stay on top of impacts and trends. We believe in working as an integrated team to share information so we can learn from each other and be more informed on where our industry is headed as we continue to grow.

Shawn Carlin
Vice President, Philadelphia Business Unit
Gilbane Building Company

Executive summary

The Greater Philadelphia Region continues to improve from the economic setbacks caused by the pandemic. The first and second quarters of 2021 marked forward strides towards our region's economic recovery. **Pennsylvania, New Jersey and Delaware all received a significant boost from the American Rescue Plan Act of 2021, with $25 billion in federal funds flowing to the three states in the first quarter of 2021.** Construction employment rose steadily in the first few months of 2021, followed by a sharp increase in April that coincided with vaccines becoming widely available and with the warmer weather that typically brings a bump in construction activity.

Greater Philadelphia and U.S. Construction Employment
Year to Year Percent Change



Source: U.S. Dept. of Labor, Bureau of Labor Statistics. Greater Philadelphia includes the Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metropolitan Statistical Area (MSA)

Due to state-mandated shutdowns, our region did worse than the U.S. as a whole in terms of construction employment in 2020 but has now bounced back and is currently faring slightly better than the U.S. as a whole. With COVID-19 vaccination rates increasing and becoming more available to the general population, the country's labor force is quickly returning to pre-pandemic levels and the U.S. GDP is expected to reach its previous peak mid-way through this year, according to projections from the Congressional Budget Office.

Given the delay of numerous projects in 2020, and taking into account available private capital and infusion of federal and state government funding to support municipalities, we expect that construction volume and labor hours will continue to increase, but temper that optimism with some caution due to unprecedented material costs. "Looking at the construction market on a macro-level, a general rule of thumb is that once there's an economic recession, which there was in February of 2020, there is a construction slowdown about 12-18 months later. We are at just over 12 months later now, so that might be some of what we are experiencing. In 2021 there's a lot of caution in the market. There are some economic headwinds that we still haven't gotten through, but there is optimism out there for what the future may hold in 2022, 2023 and 2024", says Benjamin Connors, President at General Building Contractors Association (GBCA).

As we have seen in previous economic cycles, we want to reassure our clients that we are keeping a finger on the pulse of the construction market, subcontractor availability and upward pressure on costs, along with the availability of commodities, materials and equipment.

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Construction market overview

Heading into 2020, there was a healthy construction backlog that would have likely continued into 2021 if the pandemic hadn't happened. Now, almost halfway through 2021, companies across the country are looking at post-pandemic habits, the stock market and capital reserves to evaluate whether 2021 is the right time to make capital investments or if they should wait to see how the post-pandemic world begins to play out.

Many companies are also hesitant to start projects as the costs for materials and labor have risen dramatically over the past few months. To help mitigate the impact of price spikes on jobs, many construction managers and their clients are turning towards value engineering to find alternative ways to complete their projects.

Below, our in-house experts and partners have provided a status update and future predictions on multiple construction market sectors in the Greater Philadelphia area. Following that, our trade partners weigh in on materials and labor. Lastly, we provide insight into innovations and trends within the industry.

Corporate office

Gilbane's take: A recent survey by Kastle Systems (a building security provider that tracks this data) suggests that current occupancy is around 28 percent. There is some encouragement that the summer will begin to see signs of a significant return to the office as more of the population is vaccinated and municipalities ease restrictions. Surveys suggest that 45 percent of offices will return to full occupancy by Q3 2021. It's no surprise that the dramatic downturn in the number of employees in the office during the pandemic will limit the need for new facilities. Therefore, the corporate office market is expected to be very soft for several years to come. While most experts project a return to the office setting, it is expected to take a few years to reengage. The market appears saturated, due to the high vacancies of current space throughout the class A and B levels. However, that doesn't mean that office construction will halt entirely. What we are starting to see is an increase in projects that rework existing spaces to configure them to be more favorable to a flexible working arrangement for employees. These "flex spaces" will also contain amenities previously

thought of as luxuries before the start of the pandemic. Not only will office spaces be cleaner and more health-focused, but landlords are contemplating other amenities previously limited to tech companies, such as nap spaces. Office environments will need to pull out all of the stops to provide employees the type of environment that they could get at home, but better. Class A office space focused on WELL Certification, for example, is likely to garner much of the market share from the potential tenants who find themselves in the marketplace for new space. This will force lower class, or older, buildings to rethink their offerings which could also spur a secondary opportunity for construction.

What our partners are saying: Scott Allen, senior director at CBRE told us, "The office market is definitely beginning to heat up as companies begin to put plans into action for return to work. There is still debate as to what the new normal will look like, but activity is picking up enough to show there will be an office presence. The office is not dead; it is just going to be different. In my opinion, the office is going to be a place to do collaborative business, not necessarily the place you go to every day to do individual work.

The pandemic has influenced the future of the corporate office. Mr. Allen believes, "It has been proven throughout the pandemic that people have the ability to be productive from home. But a fully work at home environment also has its challenges. So, firms are starting to figure out what is the best hybrid model that works for them and what they can easily implement. Some are shedding space; some are not. Some of the interesting factors, however, that are affecting the office market right now are construction costs and the availability of materials, for which I know Gilbane is at the forefront of tracking. Public transit is still a big concern in people commuting into urban environments."

"The office is not dead; it is just going to be different. In my opinion, the office is going to be a place to do collaborative business, not necessarily the place you go to every day to do individual work." - Scott Allen, senior director at CBRE

Benjamin Connors, GBCA president, believes we will have a better idea of where the office construction market will be headed come this September. "Looking at how things are trending, you might start to see bigger employers bringing their employees back to the office in September of 2021, and smaller employers seem likely to return, at least in part, even sooner – possibly by this summer. JLL reported that you might have as much as 25 percent of employees not return to the office. The flip side detailed in that report was that other changes would likely lead to a lot of redesign on how office spaces are utilized, so the net change on footprint would only really be a reduction of about 5 percent less. If that's right, that would indicate where offices would be in the future with some work coming back, but it's being reimagined. It's hard to see if our habits are going to go back to what they were, or will it turn into something new? Either way, there's work there."

Education

Gilbane's take: Higher education institutions will be working to draw students back to campus. We expect a focus on student housing and incubator spaces. These institutions also have real estate, the desire to adapt and the eagerness to transfer risk. This creates a high potential for public-private partnerships.

The K-12 market has remained stable both locally and nationally due to bond spending time limitations and the injection of federal funding through three COVID relief funding bills. When speed to market is a priority for new school construction, public-private partnerships are advantageous.

What our partners are saying: Locally, according to Luis Vildostegui at Stantec, our New K-8 School on Ryan Avenue project has received attention as a "project delivery model success story." Mr. Vildostegui has also seen some interest in the public-private partnership delivery method in New Jersey. Additionally, approved building projects have moved quicker in the last year since kids are away from schools — an unexpected benefit of the pandemic.

Mr. Vildostegui also told us, "Twenty-first century learning environments lend themselves both to hybrid learning and social distancing. As kids return to school, we may see some permanent design changes because of COVID, like contactless features in schools. For example, media centers with virtual/augmented reality headsets. Additionally, though touchless faucets, toilets and automatic door openers have become more commonplace in K-12 construction, these features will likely become the norm."

Sennah Loftus, associate principal at Voith & Mactavish Architects LLP explained, "For the last year and a half, there has been a refocus in the higher education market. Prospective students are choosing to invest in themselves and choosing among a bevy of qualified institutions in which to attend. Colleges and universities have taken notice, and are dedicated to providing a student experience, 24/7, that extends beyond the classroom; focusing their attention to their built facilities and campus environment to provide for the whole person, the evolution of their students into educated and responsible contributors to society."

Included in the programming phase and given priority in regard to access and location within these facilities are spaces dedicated to health, wellness, inclusion, equity and diversity.

- Sennah Loftus, associate principal at Voith & Mactavish Architects LLP

Ms. Loftus continued, "Huge emphasis has been put toward student-life activity spaces, and in particular student centers. Included in the programming phase and given priority in regard to access and location within these facilities are spaces dedicated to health, wellness, inclusion, equity and diversity. Further, more and more collaboration-ready spaces are being created that are solely for students, independent of registrar scheduling or management. These spaces extend beyond student centers, programmed and designed into academic buildings and even libraries. These spaces are technology-

ready, provide the bring your own device (BYOD) model, and accommodate occupancies of typically 4-24."

She went on to discuss how her firm is addressing new trends, "Interdisciplinary and multidisciplinary study are at the forefront, colleges and universities are planning for the synthesis between disciplines, and going one step further to provide spaces for creation, entrepreneurship, and prototyping. As examples of this in our current work, at Lehigh University, the new expansion building to the College of Business incorporates an innovation/ incubator space for new business formations, and at the University of Pennsylvania, we are working with UPenn Libraries in the creation of the Biotech Commons, a hub for the University schools such as nursing, medicine, sciences, and engineering, where along with the many collaboration spaces a digital fabrication lab capable of 3D printing and prototyping is made readily available for the larger community."

Healthcare

Gilbane's take: 2020 saw many healthcare institutions put a pause on plans, projects or priorities as they put all of their focus on managing their way, and helping patients through the COVID-19 crisis. Many institutions have begun to dip their toe back into the waters as we rise from the grips of the pandemic and the economy begins to churn again. Healthcare institutions have smartly utilized the past year to find cracks in their systems' armor and re-evaluate their priorities and care of their patients.

In doing so, many have found that former priorities are valid, while others have shifted their direction and focus. In many cases, facilities are looking to "future proof" their facilities for what's next. This includes upgrading their existing building systems and creating spaces that are far more flexible and can be converted to an alternate use in an instant. Before the pandemic, a shift was already underway for more patient-centric consumer-based care models. The pandemic has further reinforced that institutions need to re-think their delivery of care as expectations have grown and competition will grow more fierce based upon a patient's propensity to choose their provider.

This movement is focused on not only upgrading existing facilities, but also bringing care much closer to the patient and "meeting them where they live". As such, outpatient facilities, micro hospitals, surgical centers and multi-disciplined one-stop facilities are surging. Furthermore, the pandemic seemed to highlight our need for more focus on behavioral health as 2020 took a toll on so many people's mental health. We are seeing behavioral health facilities surge in the marketplace as a direct result.

Prefabricated headwall

Lastly, a combination of quality, speed to market, cost drivers and collaboration have given rise to trends such as prefabrication, modular construction, energy savings and efficiency, as well as streamlined and collaborative delivery models such as Integrated Project Delivery, design-build and public-private partnerships. The latter helps institutions keep debt off the balance sheets, while monetizing their assets — allowing them to create something far greater than what they may have been able to finance on their own.

What our partners are saying: Richard Kahn, Robert Masters and James Case of CannonDesign provided some excellent insight into the current state of the healthcare market, the overarching theme being that "the rules have changed!" It goes without saying that the COVID-19 pandemic has had an immense impact on the healthcare market sector and future investment needs to be responsive to the new norm. A common theme they're seeing is "renewed focus with a changed perspective." The adaptive reuse of strip malls is an example of this. CannonDesign is currently working with a client to convert a 271,000-SF department store into an outpatient facility. This trend is not entirely new, but rather a renewed one that those at CannonDesign are seeing with increasing frequency.

Adaptive reuse projects cluster services, which is attractive to providers and patients alike. Another positive aspect of this trend is that it promotes community revitalization. CannonDesign is also starting to see more clients refresh master plans with renewed vigor as we enter a post-pandemic world.

[Adaptive reuse] is not entirely new, but rather a renewed [trend] that those at CannonDesign are seeing with increasing frequency.

Noah Tolson, president at Array Architects, provided an overview of in-demand services saying, "Ambulatory care facilities, strategic master planning and behavioral health design continue to be in-demand services regionally – and for good reason. Ambulatory facilities remain an important gateway to meeting the aims of population health and retaining capacity in the inpatient setting. Strategic master planning will be critically important to ensure facilities' roadmaps are aligned with the new realities of the pandemic. Behavioral health remains a pressing need, and funding and awareness is finally allowing health systems to confront it."

Mr. Tolson also provided some insight on the effects of the COVID-19 pandemic on the healthcare industry, telling us that "a world health crisis certainly took its toll on our healthcare clients. COVID-19 placed a significant financial strain on health systems nationwide. As such, some considerations needed to be made around capital projects – which in some cases were placed on hold or canceled. However, as the end of the pandemic has come into view, the need for new locations within underserved communities and to capture the spread of care services resulting from outpatient shifts has become clear, and we're seeing health systems resume, launch new and begin developing plans for capital projects."

Lastly, Mr. Tolson discusses the effects of telemedicine and technology on healthcare design. He said, "The use of telemedicine has been vital to the safe continuation of urgent and chronic outpatient care during COVID-19. It seems that this highly discussed service type has now emerged in the mainstream and is here to stay. Beyond the modest requirements of telemedicine, technology abounds in new healthcare construction. To compete and stand-out in the market, health systems are including advanced single-site minimally invasive surgery with little to no recovery time and state-of-the-art smart room technology. We have specified, in designs, private patient rooms featuring equipment that measures vital signs and interfaces with the patient's Electronic Medical Record so clinicians no longer need to document the information manually. Interactive TVs allow patients to send and receive messages with their family, seek assistance with medications, or get help with the discharge process – to name a few capabilities."

Hotel and hospitality

Gilbane's take: Few sectors have been hit as hard as hospitality throughout the pandemic. Occupancy dwindled to near 0 percent as business and leisure travel was halted in their entirety for much of the past year. Currently, occupancy rates hover near the 50 percent mark with some signs of positivity as restrictions are lifted and vaccines are widely distributed. The area saw the opening of quite a few new hotels both before and during the pandemic, including the new luxury hotel attached to the Live! Casino in the Stadium District. It would seem that the marketplace is set for a slow recovery and return to pre-COVID occupancy rates as demand is down and supply is up. Before 2020, it was widely believed that additional rooms would bring larger conventions to fill them. But, the convention market rebound is still a bit away and its future outlook is yet to be defined. Although there are some strategic plans for rooms in new areas such as the Navy Yard, we believe there won't be many opportunities in this sector for some time. Some minor opportunities exist in facility upgrades and adaptations to the pandemic, such as touchless controls.

What our partners are saying: Joseph Malinowski, partner at Becker & Frondorf told us, "Leisure travel is recovering rapidly, and owners and operators are banking on this trend continuing through the summer. Properties that primarily accommodated business travel prior to the pandemic are more aggressively completing improvements to make their guests feel safe and welcome in a post-COVID world. Many of these same hotels are also reimagining amenity and common spaces in efforts to recoup lost events revenue."

Industrial

Gilbane's take: Gilbane is collaborating with key supply chain companies and they feel the market is on fire. Real estate is the hottest commodity and the race to find green sites is proving to be more arduous by the day. Our partners are finding success in locating strategic buildings that align with their business model and customizing them to fit. They have to be nimble and flexible, but the intrinsic benefit is speed to market. By using existing sites they can shorten the entitlement process. Our partners are also exploring robotics and ways to improve efficiency on their projects. We've seen a spike in electric delivery vehicle

centers as the world seems to be pivoting to cleaner energy efforts as the global demand continues to increase. Our virtual design and construction (VDC) group has been extremely beneficial to our clients. We can provide existing information surveys via drone and scanning services, which allows our clients to quickly perform feasibility studies and make decisions promptly to allow them to jump on opportunities as they arise. We are continually improving our services to support real-time, informed decisions.

Life science

Gilbane's take: It's no secret that Philadelphia has become a hotbed for life science activity, and that has only escalated over the past year with no signs of slowing down. The emergence of neighborhoods or clusters (such as University City, Lower Market Street, King of Prussia) and their corresponding low vacancy rates have kept the demand for space high. We are starting to see companies interested in the conversion of office space to life science facilities. Due to the increased demand, some companies are building life science facilities on speculation while many venture capital and private equity firms are looking for opportunities. When it comes to the attraction and retention of life science companies in Philadelphia, NIH funding is critical. Innovation hubs, such as The University of Pennsylvania and The Children's Hospital of Philadelphia, account for a significant amount of NIH funding which keeps people, a key resource, local. Lastly, the emergence of cell and gene therapy must be mentioned as companies both within the region and across the country look to set up shop locally due to Philadelphia's leadership in this field.

What our partners are saying: Jamie Doran, AIA, partner at JacobsWyper Architects, provides her overview of trends within the life science market, saying "JacobsWyper has always had a strong life science sector, so we have been aware of the shortage of wet lab and cGMP space in Philadelphia and the surrounding region for years. Over the past year, as the opportunities in the commercial office space market have fizzled out, we have seen an influx of inquiries about conversion of office space to life science. This has remained fairly steady over the past twelve months and does not appear to be losing momentum, even as the COVID-19 restrictions decrease, and people begin to return to the office."

Check out our Gilbane Ink Blog "Converting Office to Life Science Space? We can help with that."

Pulling from JacobsWyper Architect's long history designing within the life science space, Ms. Doran went on to say, "A traditional project for us would start from an inquiry from the client, the actual end-user of the space, whether it was in an academic setting or a commercialized pharmaceutical or biopharma setting. As we have watched the cell and gene therapy industry gain momentum in Philadelphia, we have seen a shift in the way that these projects are structured. Often because these companies are start-ups, and sometimes being spun out of universities, there may not be capital available to build a facility dedicated to these clients, so they are relying upon others to fund the design and construction

of the space. Owner's representatives, investors, landlords and real estate brokers and developers, some with life science experience and some without, have been reaching out to JacobsWyper regularly to talk about the potential of converting existing buildings throughout the region as well as building new. The project types run the gamut of incubator hubs, turn-key speculative lab space, tenant fit-outs, cGMP manufacturing and life science campuses."

Ms. Doran believes, "Despite the higher costs of construction for a building of this type versus a commercial office building, I would anticipate that many of these investors and real estate professionals will remain in the life science market even as the commercial office space market turns the corner. The demand still far outweighs the supply to date and that will continue to be the case for some time given the typical project duration. The potential rental rates far exceed those of a commercial office building and the buzz around Philadelphia and the scientific activity here continues to draw other life science companies to the region."

Design priorities have shifted for some life science clients. Ms. Doran told us, "As we have watched the regional life science sector expand, we have also seen an increased understanding of the importance of aesthetics. Spaces that serve research and scientific discovery have often been treated by clients as utilitarian spaces, where the focus was on functionality and not creative design, despite the protests of any good architect. With more competition to attract and retain the best and brightest scientists, and with the added influence of more design-minded investors and developers, there is more focus on implementing features into life science hubs that architects have typically had to fight for. People are realizing that creating an energized hub of activity through thoughtful, beautiful, and creative placemaking is the best way to stand out amongst your competition.

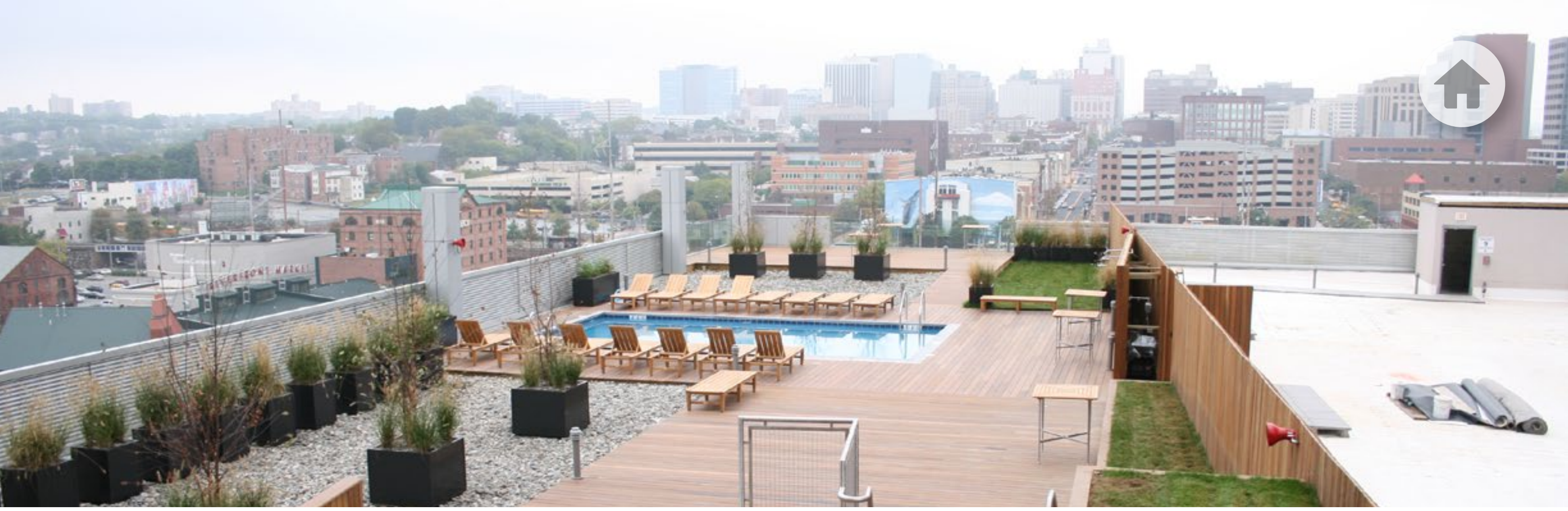
"Another shift that we have witnessed and that JacobsWyper welcomes, is the move away from the very traditional design-bid-build project delivery method and toward more collaborative methods like design-build or construction manager as contractor. We have found that such collaborative methods work perfectly for life science projects because the design and construction can typically be expedited, and speed is key for any life science client."

Another shift that we have witnessed…is the move away from the very traditional design-bid-build project delivery method and toward more collaborative methods like design-build or construction manager as contractor.

- Jamie Doran, AIA, partner at JacobsWyper Architects

Public sector

Gilbane's take: The two largest markets that contribute to public spending are highways/bridges and educational facilities, which make up about 55 percent of all public spending. Social unrest was a predominant theme driving



increased spending through most of 2020. Reduced tax collections and budgets could cause problems in 2021, while overcrowding and aging infrastructure continue to weigh on federal and state resources.

Demographic shifts favoring smaller, less expensive and less dense metropolitans will spur new construction opportunities in the years ahead. In the government and federal sector, we expect a big push to address pent-up demand. There is current activity that seems to indicate a wave of government and federal improvements coming. Backlog heading into 2020 was up about 8 percent per year over the last three years and about 40 percent of all spending comes from projects that started before 2020. Total starts for public work in 2020 have dropped about 9 percent and 2021 starting backlog for all public work is down about 5 percent. Total public spending for 2021 is projected to finish up at 5 percent.

Demographic shifts favoring smaller, less expensive and less dense metropolitans will spur new construction opportunities in the years ahead.

What our partners are saying: When looking at the impact of recently passed and proposed legislation, such as the American Rescue Plan and the American Jobs Plan, Benjamin Connors of the GBCA said, "Major metropolitan regions like Philadelphia will benefit disproportionately from the American Rescue Plan. Philadelphia will receive $1.4 billion in stimulus from the federal government to aid the city, in addition to $1.3 billion in support directly to the Philadelphia School District. Most of that money is going to go towards filling budget holes and bringing budgets back to their pre-COVID levels so that services can ramp back up. However, some of that money could go into infrastructure and investment into the city in ways that will hopefully revitalize and spur future economic growth, so before the American Jobs Plan is even passed there is cause for optimism. This stimulus, if used correctly, would be a positive for our region. It is unlikely to impact 2021 that much, maybe towards the end of the year, but because all of that money has to be spent by 2024, it will be an infusion of energy and capital that if used appropriately could really help our market."

Residential

Gilbane's take: Due to affordability rates and tax incentives, Philadelphia is a desirable city for mixed-use and multifamily. The buzz seems to be a combination of the economic up-side for the general city population related to tax incentives, people exiting the large adjacent cities, like New York and Washington, D.C., and Philadelphia's growing life science and cell therapy reputation. From a developer's perspective, the overall cost of high-rise buildings is starting to tip the affordability scale, thus pushing the focus to mid-rise buildings.

What our partners are saying: William Engle is the director of construction management for National Real Estate Development, LLC (National), a leading multifamily residential and mixed use urban development company.

Mr. Engle shared some insights and trends in the multifamily residential market sector, the effects of COVID on this market, and innovations that may emerge as we look towards the future. As to be expected, multifamily residential developers are identifying ways to differentiate themselves amongst the competition. On some of National's differentiators Mr. Engle says, "Design-wise, National always looks to utilize high-touch unit finishes with real robust amenity packages for residents to really try to differentiate ourselves. In the market, there are a lot of new apartment buildings and a lot of competition, so you have to really find something that sets your project apart. We've had great success at our most recent project, The Girard, with a 20-foot by 75-foot lap pool that is heated all year round and that's been a tremendous draw. With this success, we now look to incorporate pools into all our projects. As residential unit sizes seem to be trending smaller and smaller, you really need to have rich amenity programs in place for tenants to use other areas of the building for recreation and co-working."

Sustainability continues to be important in the development world, now more than ever. National is no exception to this, with Mr. Engle saying, "We really strive for high sustainable design and to develop our projects as responsibly as we're able. It may cost more money up front over lower cost systems and materials, but in the end we look at it as a responsibility. We strive for every project to be LEED certified or above with moving towards LEED Silver as a new baseline. We've been studying mass timber for high-rise, and we've been looking into modular construction as well. Those are two building types we certainly want to get involved in. The challenge with that for high-rise application is getting the local jurisdictions and local building codes willing to adopt it. Also, just as important, the local labor forces have to be receptive as well. In certain municipalities, current approved building codes still limit the number of stories that you can construct with mass timber, but a trend we are seeing in other cities, such as Washington D.C., is utilizing mass timber to expand existing buildings or utilizing a hybrid model of mass timber and concrete or steel – which can help overcome the height limitations."

As residential unit sizes seem to be trending smaller and smaller, you really need to have rich amenity programs in place for tenants to use other areas of the building for recreation and co-working.

- William Engle, director of construction management at National Real Estate Development, LLC

When looking at the effects from the COVID pandemic on the multifamily residential market sector, Mr. Engle continues, "Land prices and construction costs are certainly not decreasing, but over the past 12 months rents have been, so it's very challenging to make a deal today. Until you start to see rents increase commensurately with land and construction costs, it will be a real challenge. Many multifamily owners lost residents over the last 12 months. We're glad we have been able to restabilize our

properties after losing a number of residential tenants in the beginning of the pandemic. We have two proposed high-rises we are planning in Northern Liberties right now and those will be challenging projects that are going to have some strain, because we will require a certain level of product to be delivered. We need to be strategic in how we design and build our new projects to deliver our product and maintain project returns."

Retail

Gilbane's take: Retail was one of the most heavily decimated sectors through 2020. The pandemic further expedited shop-from-home trends and online retailers gained even greater prominence and power. Many would argue that 2020 merely accelerated the inevitable for many retailers who have closed shop the past year. Those trends were already in-place so to speak. It would seem that trends for in-place retail (brick and mortar) revolve around smaller boutique types, or more so, toward the trend of mixed-use where you bring the convenience of shopping, eating, playing and even working, to where you live.

In places like Center City Philadelphia, the reliance is upon foot traffic, and many residents have gone out of their way to support these businesses to any extent that they can. In many ways, the retail recovery in our area has intimate ties to the return of travel and tourism. Furthermore, the return of businesses to the workplace and students to our many higher education institutions will weigh heavy upon the recovery since both bring tremendous amounts of foot traffic and demand.

2019 saw quite a bit of retail expansion and activity, particularly in Market East, but was halted by the pandemic. While there are rumors of lease interest, we believe that this sector will see a slow return to normalcy. Current opportunities and trends could be found in the expansion of services such as curbside delivery and outdoor seating for food, gathering and entertainment.

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Sports and entertainment

Gilbane's take: 2020 saw almost a complete pause to the sports and entertainment industry due to gathering restrictions imposed by local governments and authorities. As the future was very uncertain, most projects in these respective industries found themselves paused or suspended while owners awaited what the new normal may look like. Furthermore, some projects were even halted to avoid laying off or furloughing employees. Answers to questions surrounding the economy and the end to the pandemic are unknown. What will attending events look like? Will people have the desire to attend?

As we have begun to emerge from the pandemic, we believe that the answer to these questions for the sports and

entertainment industry are very positive. The general feeling is that the population overwhelmingly wants to 'get out' and see four different walls. It would seem that people are willing to spend money on entertainment in the hopes of finding a relative return to normalcy that they have craved after more than a year. While this feeling is certainly there, we have not yet witnessed a true commitment to move forward on new or previously planned and paused projects quite yet. Despite this, we do firmly believe that those projects will restart. Some new norms will help facilities protect patrons with better and more comfortable amenities that enable distancing and can be efficiently sanitized.

Click the image to explore Gilbane's sports and entertainment portfolio.

Furthermore, the crisis of the past year has shown organizations their vulnerabilities, which could be in their facilities or in their business plans. Both will result in new and better spaces that will require renovations and additions. There is no doubt that every facility in this industry is looking to capitalize on more outdoor space, which was already popular before the pandemic. Better, healthier and more thought-out facilities will be required as we move forward and will help this industry bounce back over the course of 2022 and 2023.

What our partners are saying: Perhaps no other business market has been as devastated by this global pandemic more than sports and entertainment. Slowly, some venues are reopening. To help us make sense of a sector handcuffed by uncertainty about the future, we've tapped the minds of local experts to weigh in with their predictions. Taylor Gray, vice president of development for The Cordish Company, provided insight on how they have adapted their business plan and the changes they see across their portfolio. Mr. Gray stated that the ripple effect from COVID has challenged their entertainment venues and they are looking for opportunities to bring events outside to environments where patrons feel safe and secured. They added outside extensions to many of their existing venues to allow more flexibility for events and opportunities to get people back and connecting with each other. They have also tweaked their internal design standards for back of house areas. They now include more open environments with additional sinks and mini sanitation stations that are easily accessible and serve smaller areas. When asked about finish selections and design trends, Mr. Gray stated that he foresees the industry moving towards heartier materials that can be cleaned easier than ornate finishes, which don't lend well towards chemical cleaning agents.

Other experts believe this market will focus on converting older and larger racetrack and stadium facilities into medium-size spaces that can be used across multiple sports markets. New facilities will most likely be additions to current entertainment districts. This trend began prior to COVID and is expected to re-emerge quickly.

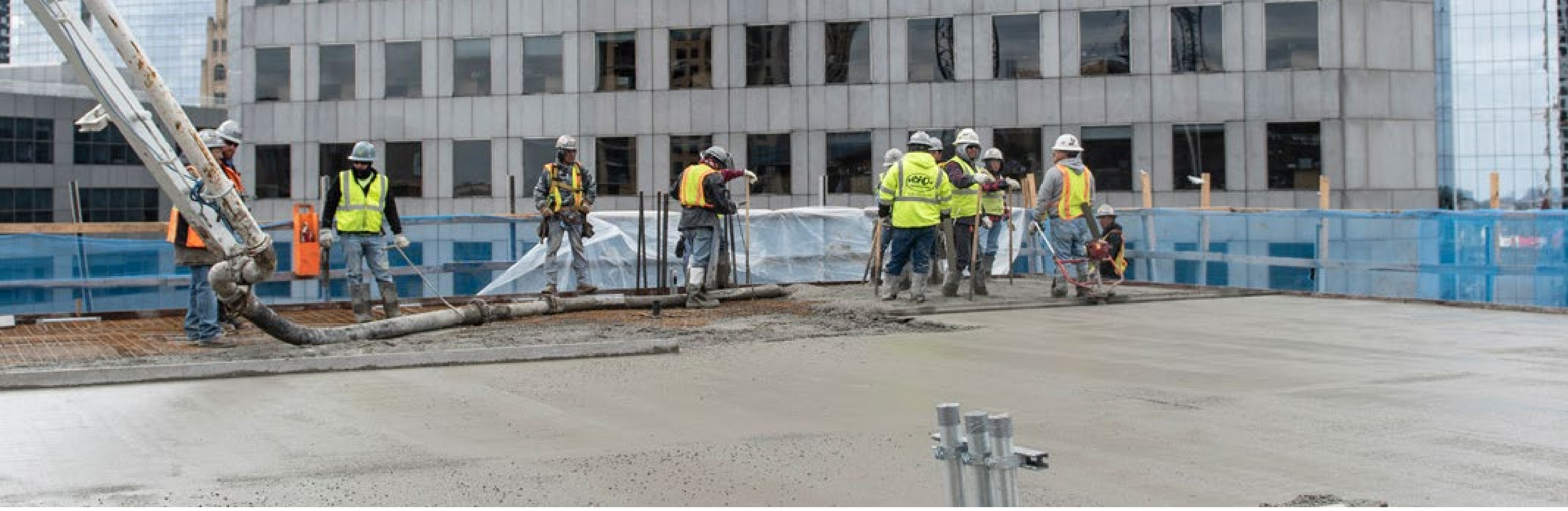
Transportation

Gilbane's take: There is high potential, but low immediate expectations for the transportation market. In the short term, facilities are focused on maintenance and re-opening. Ridership levels across all transportation modes fell in 2020 and remain depressed in 2021. COVID-19 vaccine distribution will allow travel to generally return through the end of 2021, but recovery will be slow. Leisure travel is expected to lead in the near term, while business travel will mostly return by 2023. The American Jobs Plan, also known as the 'infrastructure bill', will inject billions of dollars into our region's highways, bridges, ports, airports and transit systems. According to the Infrastructure Report Cards issued by the American Society of Civil Engineers, Pennsylvania received a C-, New Jersey received a D+, and Delaware received a D. If The American Jobs Plan passes, our region as a whole can expect to receive a large bucket of funding for these much-needed improvements. Until that comes into play, there are some redevelopments of transit centers in Greater Philadelphia, New Jersey and New York. One example is the upcoming redevelopment of 30th Street Station. In addition, there are current and potential developments on the west side of the Main Line, such as in Downingtown and Frazer.

Many other significant planned projects across transit, rail and airport infrastructure will be redrawn and/or pushed back until revenue, state and local budgets, and ridership levels stabilize. Projects already underway will continue but are likely to face budgetary limitations and/or some reduction of scope.

What our partners are saying: Benjamin Connors, GBCA president, offers his take on the proposed infrastructure bill and what it means for transportation construction in our region, "There's a regional effort, between the City of Philadelphia and the surrounding counties, to take a broader view on infrastructure needs and opportunities. I believe this is a wise approach that could be stimulating for not just the city, but the surrounding counties as well. The region may see a number of significant transportation projects that way, which for building purposes would be great. Improved connectivity will lead to more building construction and investment in our region. So as a whole, for the infrastructure bill, there would be a downstream effect into Philadelphia that would be positive. An infrastructure in excess of $1 trillion seems likely to pass, and that level of capital would very likely benefit our market."

Kristopher Takacs, managing director of Skidmore, Owings & Merrill LLP (Gilbane's design partner for the 30th Street Station Redevelopment Project), believes that the current focus of the transportation market is on longer term systematic upgrades and potential medium size spoke developments that build on the hubs of larger cities to increase overall accessibility. In addition, there continues to be buzz in the marketplace about the potential for high speed railway projects and what needs to happen to make those dreams a reality. When it comes to high speed rail, what needs to come first – the infrastructure or the development? Or, can the P3 market bridge the two?



Supply, price and labor impacts in Greater Philadelphia

Concrete

Concrete has been affected by rising costs and supply chain interruptions. However, we didn't see severe changes in the first quarter of 2021. Redi-mix plants seem to be working at full capacity with marginal cost increases, which aligns with a typical annual adjustment of 3-5 percent. We're seeing price increases between 10-15 percent for rebar, metal accessories and petroleum-based products, such as insulation. Yet, they remain readily available. One exception to the stable supply chain is rebar chairs, which are in short supply. The long lead times require ample planning even though more significant items are available. Workforce, heavy equipment and formwork are all stable and available. Concrete is historically strong in Philadelphia and should continue to meet market demands in the near term.

Drywall and framing

As of May 2021, we're not seeing a labor shortage for carpenters; but there is a limited availability of tapers. The price of cold-formed metal framing has increased 30 percent over the last four months. We're also seeing lumber prices reach unprecedented escalation. Some commodities have exceeded 200 percent over the last six months. There is a 12-week lead time for insulation and 7 days for drywall from the time of order, which are both longer than usual. The challenges with COVID have impacted input productivity by 5-7 percent on our projects.

Masonry

Masonry prices have risen in the Philadelphia region between approximately 7 percent to 10 percent since the fourth quarter of 2020. Concrete masonry units have been relatively stable around 5 percent above last year's price levels. However, the reinforcing and other ancillary products and accessories are up by as much as 15 percent. Material availability for standard CMU products are generally good, but some items (i.e. cavity wall insulation) have very long lead times. Consider letting subcontracts out as far in advance as is practical to alleviate schedule delays. Many special-order items such as custom shapes, certain brick and stone have very limited stock with backlog orders. Therefore, flexibility in design is important. For example, Cold Spring Granite is quoting summer of 2022 for new orders. Philadelphia masonry subcontractors are reporting that there are a number of smaller projects ongoing, but nothing that is taxing the workforce. They've noted many of their projects are in the planning stage.

Glass and glazing

While there is no labor shortage for glazers, the volume of work is steady. The glass manufacturer J.E. Berkowitz, part of the Consolidated Glass Holdings, has closed and shut down its South Jersey plant. Consolidated Glass Holdings has several manufacturing plants on the east coast with enough capacity to meet current demand, so we haven't noticed material shortages or increased lead times. Industry energy surcharges are driving material price increases and we expect further increases during the second and third quarters of 2021.

Steel

When dealing with structural steel, caution is required in predicting both pricing and availability. Rolled steel sections are still generally available from the mill with regular rollings occurring, but warehouse steel inventories are low. Structural steel prices have increased approximately $300 per ton since November 2020. Steel Market Update's check of the market in May showed the benchmark price for hot-rolled steel reaching $1,524/ton, topping the previous high mark set in 2008 by $400/ton. Steel prices continue to set new record highs week after week.

Bar joists and deck pricing have increased and are less available, due to the extensive amount of new warehouse construction. Raw material availability is becoming an issue for fabricators, which leads us to believe that the current trend in steel price increases and longer lead times will continue into the third quarter. Due to this, subcontractors are reluctant to provide firm pricing beyond 7-10 days. In the Philadelphia market there are several steel tower projects, but the workforce appears to be in ample supply to absorb the impact and still service other projects.

Doors, frames and hardware

While there is no shortage in material, lead times have been extended an additional 2-3 weeks and are expected to remain through the summer. The cost has risen 9 percent for hollow metal doors and frames and 4 percent for door hardware. As of May 2021, there is a healthy backlog of work.

Elevators

Based on conversations with Tim Quigley from Thyssen Krupp's Philadelphia office, the elevator industry has been impacted to some degree by the pandemic. The usual situation we find ourselves in is having a chronic shortage of elevator constructors; however, much like the rest of our industry, the elevator business finds itself in a dip for the second and third quarters, with work likely picking up in the fourth quarter as new projects pick up. Material escalation has also hit the elevator industry. Mr. Quigley tells us "there is currently no labor shortage with elevator contractors, with a steady backlog of work for the second and third quarters of 2021. The challenges with COVID-19 have slightly impacted backlog, but the fourth quarter of 2021 and first quarter of 2022 backlog projection may cause a shortage of available labor in the workforce. Material costs have increased on average 7 percent over the last six months, with the latest increase in May. Elevator lead times are holding steady with fabrication and delivery 16 weeks and high-rise elevators 32 weeks."

Innovation and trends

Gilbane and our trade partners consistently drive new and innovative techniques to improve safety, increase productivity and maximize quality on job sites. Below are a few of the ways we are leading the industry with innovative advancements.

Click to learn how we are employing cutting-edge technology to build the future

Prefabrication

Prefabrication of aspects of work like wall panels and bathroom rough-ins continue to be common. Pods, like bathrooms and kitchenettes, are gathering momentum. Volumetric modular is trending upward, but mostly in the mid-rise, mixed-use market. The drivers for this method are cost certainty and speed to market. This has potential for lasting impacts – some designers are shifting to a metal stud based 'box' in order to counteract the rise in timber prices, but will mostly stay within the mixed-use, and hotel new construction markets.

Check out our Gilbane Ink Blog "Prefabrication as a Project Strategy"

MEP

In general, there is considerable upward price pressure. Manufacturers are constantly sending out information on warnings of price increases for metal pipe, sheet metal for ductwork, insulation for pipe and duct, and all other related pieces and parts. We believe this is from a very strong national demand, but some believe COVID is still impacting this market by stunting production, due to pandemic restrictions. Therefore, the supply has been unable to keep up with demand resulting in higher prices.

Locally, Philadelphia continues to be an ultra-competitive market. Demand for large projects is dwindling, the mid to large mechanical contractors need to decide if they are going to work on those projects with slight margins, as a result of larger bid lists, or find other streams of revenue. Mechanical contractors with high-level service departments have a higher degree of success. They create avenues into many facilities and develop relationships which leads to negotiated work. Another avenue is to improve in-house engineering capabilities so owners can consider these mechanical subcontractors as one-stop shops, thus all but eliminating the need to hire engineers up front resulting in less costs.

Roofing

The roofing market is being hit with material price increases across the board due to the petroleum components in both the roofing membranes as well as

Innovation and trends

the insulation. However, unlike many other trades, the cost of the raw materials has less of an impact on the overall cost of roofs in place. Instead, labor is the major cost driver. Roofing materials saw escalation in the third and fourth quarters of 2020 but leveled off in the first quarter of 2021. Suppliers are stating that another round of escalation should be expected in the near term in the range of 5 to 15 percent for membrane and insulation, and 15 to 20 percent for metal panels. Material is generally still readily available for most items, except for insulation. Dow Chemical, a major supplier of installation, is revamping manufacturing processes due to environmental concerns. Lead times of 6-8 weeks are manageable, but we anticipate they will improve. The work force appears to be solid and in good shape to service the needs of scheduled projects.

Curtainwall/windows

The COVID impact cannot be denied in the glass marketplace. Projects have pushed and are now starting to come back into play. While not as robust as previous years, the demand for glass should increase within the next six months. COVID has impacted the lead times of glass and extrusions. The time frame of deliveries has increased between 10 to 15 percent on average. Raw materials are not the issue. Instead, manufacturing facilities with high back log and an insufficient number of manufacturing employees are contributing to the increased lead times. Manpower within Philadelphia did have a spike when the work force started back up. However, it has stabilized and should remain stable for the foreseeable future.

The marketplace within Philadelphia has become very focused on panelized systems. The designs align with the install process, which speeds up installation. We've also seen technologies, like Procore, increase collaboration with subcontractors, design professionals and construction managers. This has improved the quality and speed of design and installation.

Public-private partnerships

Public-private partnerships continue to have potential, but will take time to mature. In the short term, the market still appears to be a bit disjointed and project by project as individual owners move to this delivery method. It is still unclear if the public-private partnership model is moving to infiltrate the medium/small size projects and if the approach will normalize across the market.

We are seeing greater activity in this delivery model as institutions and organizations are looking to keep debt off the balance sheets, while monetizing their assets — allowing them to create something far greater than what they may have been able to finance on their own. The speed, efficiency, quality and collaboration is unmatched.

Gilbane specializes in public-private partnerships and we are building the first public school for the School District of Philadelphia via this model, as well as the William H. Grey 30th Street Station masterplan.

Paul Choquette III, executive vice president, discusses public-private partnerships in Engineering News Record's recent article, **"Is the Pandemic Forcing An Evolution in P3 Work?"**

Design-build

Design-build is increasing in popularity and offers owners many advantages and efficiencies including cost savings, speed to market, greater team collaboration and higher quality. This method allows the construction manager to be involved from the earliest stages before pen meets paper so that the cost model becomes the guiding light and communication and collaboration become the transparent norm. Designers are increasingly favoring this model as well. It provides efficiencies in their design process as well as critical information at far earlier stages than other delivery methods. It prevents re-design and extensive and exhausting value engineering periods getting the budget and design right the first time. Speed to market is king and design-build achieves that. Furthermore, it eliminates finger pointing, arguments and changes as the entire team is part of the decision making process.

Innovation and trends

Mass timber

In the past year there has been a significant increase in inquiries to explore mass timber on various buildings throughout the United States, resulting in increased demand. For example, Gilbane is partnering with the University of Pennsylvania on the first six-story mass timber building in the City of Philadelphia, which is set to break ground in 2022. The mass timber industry has also seen a significant increase in costs, via the commodities market, because of the sharp demand for lumber in the residential markets. In addition, due to pandemic restrictions on sawmills, supply can't keep up with demand. Furthermore, the associated materials that are needed to support the production, such as adhesives and resins, are falling short of needed supply contributing to a delay in production. Much of this material shortage can be attributed to the weather issues in Texas where much of the product is produced. The severe temperatures halted production and all the inventory was lost due to low temperatures.

All these factors have put significant upward pressure on prices. Price increases are expected to continue into the summer months. Some mass timber vendors control their harvesting through forests they own, so they are not as affected by the commodities market. However, other factors such as high demand, restricted production from COVID and supporting material pricing challenges contribute to the higher prices.

Though not specific to timber manufacturing, an issue that is also pushing costs up is the American dollar versus the Canadian dollar. The American dollar has weakened substantially compared to the Canadian dollar over the past several months. As a result, since most mass timber production occurs in Canada, American clients are seeing higher costs in securing contracts. As the dollar ebbs and flows, it is expected that this will trend back in the next year.

Overall there is general excitement amongst architects for mass timber's aesthetic and environmental benefits, but there is concern with its long term and widespread integration into the industry. Cross laminated timber (CLT) has made inroads with IBC requirements, however there are still specifics to work through with many jurisdictions on approvals.

Check out our Gilbane Ink Blog "What's the Buzz Surrounding Mass Timber"

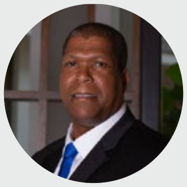
Rendering of the University of Pennsylvania Data Science Building

Our Philadelphia Preconstruction Group

Gilbane's seasoned team of estimating and preconstruction experts brings valuable best practices and an understanding of the local marketplace necessary to evaluate numerous interdependent options, as well as provide the most comprehensive and thorough support to deliver accurate results to maximize your investment. We focus on the current market trends and their short- and long-term impact.

For more information on how our local Philadelphia team can assist you, please contact one of our team members below.

Philadelphia's Preconstruction Group



Alex Camps
Estimating Executive
267-256-4528 | ACamps@GilbaneCo.com

James Carpenter
Operations Manager
267-534-8012 | JCarpenter@GilbaneCo.com

Jim Gibson
Chief Estimator
267-256-2472 | JGibson1@GilbaneCo.com

Rick Platas
Preconstruction Executive
267-534-8007 | RPlatas@GilbaneCo.com

John Rowland
Senior Preconstruction Executive
267-256-2461 | JRowland@GilbaneCo.com

Gilbane

www.gilbaneco.com

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