BUILDING MORE THAN BUILDINGS®

ISSUE 6

SIX SECRETS TO A SEAMLESS HEALTHCARE RENOVATION
Breaking down the key lessons learned

SYNCHRONIZING EFFORTS
Using technology to solve complex challenges at the Institute for Contemporary Art

PAINTING THE TOWN GILBANE RED
Ward 1 to ward 8, the city is our canvas
Gone are the days of laying drawings on a light table and using postits during closeout. Now, creating mockups in BIM and using an iPad for punchlists are second nature. Technology continues to permeate the construction industry in all facets from preconstruction to closeout. Project teams are using these technologies to find new ways to improve efficiencies and quality.

A prime example is the Institute for Contemporary Art (ICA) at Virginia Commonwealth University (VCU). The building, designed by world-renowned architect Steven Holl, is a complex framework of cantilevered spaces that represents Steven Holl’s concept of “forking time.” It tells a story of the convergence of Richmond’s past, present and future into a single building at the heart of the city. With the intricacies of the design comes complex engineering and sequencing to bring the building to life. Gilbane used A/E Revit models as baselines to build customized worksets within the Revit models. Then, using Synchro 4D scheduling software, the team developed and verified sequencing for the complex structure. By tying the baseline Primavera P6 schedule and subsequent P6 monthly updates to the 4D scheduling software, the team was then able to create a real-time visual schedule. This visually compared the newly developed baseline with the original plan and the actual progress. In doing so, the team was able to clearly demonstrate the schedule and consequently improve the progress of construction.

Collaboration and communication is essential to a smooth construction process. Utilizing technology can facilitate communication and help coordinate complex construction activities. By using BM 360, the ICA project team has been able to maintain all A/E and trade contractor models in one centralized location. From these models, Gilbane can develop custom models and viewpoints to use as discussion pieces during meetings. Finally, Bluebeam Studio helps maintain up-to-date documentation of all the parties involved throughout the construction process. From BCOM submissions to requests for information to construction change directives (CCD), all of this historical information can be accessed in customized layers. This real-time information is drastically improving construction operations across the country.

Laser scanning has gained momentum and is now widely used on large-scale renovation projects. However, its potential on interior work is significant. Our D.C. Interiors Group was recently hired by UnitedHealth Group (UHG) to complete a 13,000 square-foot renovation of their existing sixth floor space, as well as a 24,000 square-foot build-out of additional space. Before work began, our team recommended laser scanning a majority of the floor plan to determine existing conditions. The architect, RSP, was unfamiliar with the technology or how to capitalize on the extent of its capabilities. As a result, Gilbane organized a training session to walk through the software and to explain how best to maximize its value on the UHG project. Since RSP is located in Minnesota, this software allowed the team to see every as-built condition in great detail without ever stepping foot on the jobsite. Completed within a week, it has since provided real-time information that has supported seamless collaboration between our onsite team in D.C. and the architects 1,100 miles away.

The laser scan is currently being used to coordinate the new fit-out and tie-in to the existing space, with a 1/4 inch accuracy from 150 feet. It will enable the team to release critical trades and materials early, facilitating the fast-track schedule. A floor levelness survey was created from day one that can be used throughout life of the project.
In order for hospitals to stay relevant, renovations are a necessity. According to the 2016 Hospital Design and Construction Facilities Survey, three quarters of the projects under construction or planned in the next three years were either expansions or renovations.1 Renovations give hospital facilities managers the opportunity to get more for their money. They can modernize portions of their facilities that they feel will have the biggest impact to their current and future patients. In 2017, 86 percent of hospital budgets allocated for renovations saw either no change or an increase compared to the previous year according to the 2017 Hospital Construction Survey.2

With the increase in renovation work, facilities managers, general contractors, and architects are looking for ways to work together to minimize the disruption to ongoing operations. Gary Orton, VP of Healthcare for Gilbane’s mid-Atlantic division and an expert in occupied acute care healthcare renovations, has outlined six major areas to focus on during a renovation. Focusing on these areas can help a renovation run smoothly.

1 COMMUNICATION
Communicating shutdowns, deliveries and the progress of the renovation with physicians and clinical staff can help alleviate impacts to ongoing operations. If the staff are aware of the construction schedule they can plan accordingly.

2 QUALITY OF CARE IMPACTS
Patient, visitor and staff comfort are important in maintaining a successful hospital. While noise, dust and vibrations from ongoing construction are occupational hazards, they can negatively impact a patient’s comfort. What if there was a way to track the levels of each of these conditions and alert the team when one of these conditions is outside of its established parameters? Mr. Orton thinks creating a project hub can revolutionize the way healthcare renovations are managed. The project hub would be a tool that measures controls like temperature and air pressure through a centralized Wi-Fi connection. It would send alerts when those levels are outside of their established parameters so team members could address the issue before patients, visitors and staff are affected.

3 CHANGES
Anything from architect changes to hospital personnel changes can have an effect on the schedule, budget, staff and patients. Allowing the design team access to a space prior to finalizing construction documents can have a major impact on the bottom line. This reduces unexpected surprises by verifying existing conditions with the architect’s design plans. Ensuring that key decision makers are involved in the renovation from concept to occupancy allows for continuity and a clear vision. Involving all department head staff throughout the process can also help minimize design changes. This collaboration ensures that the new design will function for all its stakeholders.

4 UTILITY INTERRUPTIONS
Utility interruptions have the potential to impact the healthcare facility more than any of the other factors discussed. Therefore, they must be planned in detail and should require written notification 10 working days in advance of the outage. Hospital facility personnel are the only ones who should initiate utility interruptions to ensure there aren’t negative impacts to patients, staff or visitors. Before hospital facility personnel initiate the project team must ensure redundancy of key components.

5 AUTHORITIES HAVING JURISDICTION (AHJ)
How many times have you reached the end of a project and you had to add additional sprinklers or move a smoke detector? Requesting pre-inspections and engaging AHJs regularly throughout the construction process establishes a rapport. It allows the AHJ to notify the construction and design team early on of problem areas so that they can be resolved before final inspections. By the time the project is nearing completion and final inspections occur, the AHJs know the facility and the areas that needed adjustments.

6 LOGISTICS/PHASING
Visiting a hospital can be stressful. Ensuring that there is enough signage and wayfinding displays to direct patients, staff and visitors to the correct location can help alleviate some of that stress. A designated entrance for construction personnel can also help avoid obstructions to visitors. Lastly, budgeting for a valet early is a must. Having a valet on site allows for patients to be in and out of the hospital hassle free.

Gary Orton
VP Healthcare
Gilbane Mid-Atlantic Division

Gary Orton is the Vice President and Director of Healthcare for Gilbane Building Company’s Mid-Atlantic division. He currently manages all of the healthcare construction projects in the D.C., Maryland, Pennsylvania and Virginia areas in addition to consulting on pursuits in the Carolinas. Gary has 28 years of experience managing all forms of healthcare construction from acute care facilities to operation room renovations to large-scale healthcare projects. His experience totals more than one billion dollars in healthcare construction, with more than $700 million in renovations of occupied acute care facilities. Gary graduated with a Bachelor of Science in Construction Management from Colorado State University and is certified through the American Society for Healthcare Engineering (ASHE) in healthcare construction and infection control.

1 Health Facilities Management/ ASHE 2016 Hospital Construction Survey
2 Health Facilities Management/ ASHE 2017 Hospital Construction Survey
The district has grown dramatically over the past five years and is only positioned to continue to do so. Last month, Mayor Bowser announced that as a part of her D.C. Economic Strategy she hopes to “grow private sector GDP to $100 billion (by 20 percent) by the end of 2021.” This increase would only multiply the number of cranes that have already become fixtures in the D.C. skyline.

With an influx of construction comes a boost in the economy and an impact to the communities throughout the city. While some of the construction is welcomed, some comes with pushback. Residents have to ask the tough questions. Will this new development be at the expense of the communities’ residents? How many people will be displaced? What benefits will this development bring to the community and the economy? Finding a balance can be tough, but new forms of collaboration like public private partnerships (P3) have begun to create new opportunities for developers and city officials. For example, Gilbane is currently underway on the renovation of the East and West Towers of Howard University’s Plaza Towers residence. This project would not have been possible without the unique partnership formed between Howard Dormitory Holdings 1, LLC, a wholly-owned and title-holding company of Howard University ("Howard SPE"), Howard University (the “University”) and Corvias. According to a press release distributed by Corvias, “Corvias will manage the renovation and operations of the facilities on a day-to-day basis for a performance-based management fee, but all residual cash flow will flow to the University Parties. A portion of these funds will be dedicated to a reserve fund for reinvestment into the residence halls and a portion will be collected by the University Parties to fund other discretionary initiatives.”

Ward 7 and 8 will see some of the biggest growth over the next few years. As part of the employment goal for Bowser’s Economic Strategy, she hopes to reduce unemployment levels in both wards. Data shows that each ward saw higher than average unemployment rates in 2016. At the end of 2016, Gilbane began site improvements to the St. Elizabeths East Campus in Ward 8, which will be the foundation for the developments planned for the site over the next few years. This includes the new Entertainment and Sports Arena Smoot | Gilbane is building. According to a press release provided by EventsDC, “The joint venture announced in the fall of 2015 will be a catalyst for new opportunities in Ward 8 and citywide, attracting thousands of new residents and visitors year-over-year to Congress Heights, generating temporary construction and permanent jobs for both the arena and Phase I infrastructure of the St. Elizabeths East Campus redevelopment.”

Initiatives like these are what help the economy to thrive and bring new businesses and jobs to the District. Although the Bowser administration will focus on the growth of Ward 7 and 8, construction is still booming citywide. Gilbane has either an active construction project or recently completed project in every ward within the District. Check out the following page to view a snapshot of our diverse range of projects scattered across the city.
WARD 1

Washington, D.C.’s flagship library sits in the heart of downtown in the Chinatown area. Smoot Gilbane is currently in the process of renovating the 45-year old library, designed by legendary architect Mies van der Rohe. The $208 million rehabilitation of the Martin Luther King Jr. Memorial Library will create a community asset unlike any other.

WARD 2

Gilbane and design-build partner, Quinn Evans Architects, are currently underway on the $61.5 million design-build renovation of the 130,000 SF Marie H. Reed Community Learning School. With a robust public health clinic, child care center, adult education, swimming pool and turf field, Marie Reed is a hub of the Adams Morgan neighborhood in D.C. The modernization intends to renovate the existing spaces and modernize all MEP systems to accommodate not only the needs of its elementary school students, but the needs of the community for years to come.

WARD 3

The Cleveland Park Neighborhood Library sits in one of the most historic areas of Ward 3. Gilbane and design-build partner, Perkins Eastman DC, were tasked with building a new $19.7 million library that will blend into the character of the neighborhood. Features of the new library, which recently broke ground, include a dividable 205-person meeting space, private study rooms and two second-floor balconies.

WARD 4

Smoot Gilbane recently completed the $136.1 million historic renovation, modernization and expansion of the 331,000 SF Roosevelt Senior High School. This modernization involved replacing or upgrading all building systems and components to new condition and modifying space to meet programmatic requirements. Our scope of work included abatement, selective interior demolition, preservation and restoration of the historic fabric to include windows, stone and masonry, woodwork, and moldings. The team met its 50% local business participation (CBE) goals for this project as well as the DC Workforce Utilization Goals under the newest First Source Legislation.

WARD 5

In Ward 5, Gilbane has partnered with Corvias and Howard University to transform the Howard Plaza Towers. Gilbane and design-build partner, Lord Aeck Sargent, will begin renovations on the West Tower and once complete will begin renovations to the East Tower. Ultimately, the two student residential towers will contain 777 apartment-style units, 1,714 beds, a below-grade parking garage, a mixed-use amenity plaza in the west, and a lounge in the east. Furthermore, the project will be committed to supporting the local community by working with local and small businesses along with Minority Business Enterprise (MBE) firms.

WARD 6

Gilbane is currently working with DC Water on the Anacostia River CSO Tunnel portion of the Clean Rivers Project. This project is a new 2.5-mile, 23-foot-inside-diameter tunnel located approximately 100 feet below grade that will serve as a CSO for sections of the District along the Anacostia River. The scope includes multiple microtunnels and near-surface structures.

WARD 7

Gilbane and Perkins Eastman DC are providing design-build services for the new Ron Brown College Preparatory High School. Through extensive outreach efforts, Gilbane worked with the Ward 7 Business Partnership to find opportunities for local businesses to get involved in the construction, which includes structural reinforcement, a library and music room, replacement of existing windows, and a new courtyard.

WARD 8

Smoot Gilbane has begun construction on the new Entertainment and Sports Arena (ESA), which will help to boost the economic development in Ward 8 and create more opportunities for local residents. It is estimated to generate 600 construction jobs, with a focus on hiring residents from the surrounding community, as well as providing apprenticeship opportunities for Ward 7/8 residents. Gilbane is also working on the infrastructure improvements to the St. Elizabeths East campus which will support the ESA and the further redevelopment of the campus.
Libraries are museums for books. The amount of history and art in each and every story that sits on their shelves is unmeasurable. Walking through the stacks of a library you can learn almost anything, and the Enoch Pratt Free Library is no different. Originally built in 1933, Enoch Pratt is currently undergoing a comprehensive modernization program, while the library remains fully operational. Through its modernization, the city of Baltimore is looking to preserve the history this library embodies. The library remains fully operational.

What's unique about this portion of the project is the restoration process. The frames are being left in-situ and restored onsite, while the sashes will be restored offsite. Femenella & Associates is removing and refinishing all of the paint, coatings and weatherstripping on the windows. They are also replacing, repairing or reinforcing any broken or deteriorated steel sections. The replacement of all glazing channels and stops, missing or damaged mutin bars, glazing, hinges, and inoperable hardware will bring these windows back to their 1930’s glory. Finally the sashes and joints will be reinstalled, the bare steel will be primed and painted, and new weatherstripping will be put in place.

Gilbane’s modernization of the Enoch Pratt Free Library has created a window of opportunity to teach others about historic restorations. Gilbane took advantage of this opportunity by hosting the ACE Mentor Program of the existing windows underway, we were able to use this as a teaching moment for young adults looking to pursue careers in architecture, engineering and construction.

A WINDOW OF OPPORTUNITY
Letter From The Senior Vice President

Drew Mucci
SENIOR VICE PRESIDENT

Construction activity continues to increase in the mid-Atlantic, as seen in Mayor Bowser’s D.C. Economic Strategy, trade contractors are stretched thin and competition for top talent is fierce. The U.S. Bureau of Labor Statistics predicts that the construction industry will need 1.6 million new workers nationwide by 2022. We must find ways to ensure our clients are getting the safest and most qualified teams, while continuing to mentor and grow the next generation of talent. Gilbane is implementing strategies to mitigate some of this risk such as mentoring local firms, leading diversity and inclusion outreach efforts, participating heavily in the ACE mentor program aimed at getting students interested in the industry for future career planning, and continuing to put an emphasis on our Gilbane Cares safety culture. We are also offering next-level training programs, peer-to-peer learning opportunities and continued investment in our people to help strengthen and grow our Gilbane family. In order to guard our clients from the impacts of overleveraged trade contractors, we are taking the time to meet with the owners of the trade contractor firms to understand their challenges, capacity limits, material production commitments and staffing levels. The current industry climate warrants these proactive measures to understand the risk embedded beneath the competitive bid numbers. Our client-first mindset is the way we do business.

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