VOL. 37, NO. 3 | SUMMER 2019

SUPERSTRUCTURE

Planning for a Healthy Project

Setting the Stage for Success Through Early Engagement

INSIDE THIS ISSUE

CLARK CONSTRUCTION

FROM THE CEO

Here at Clark, everything we do is built on trust. It's a cornerstone of who we are. We build trust by consistently delivering on our commitment to providing outstanding experiences, value, and results for our clients and partners. In this issue, you'll see how trust serves as the foundation for building a safety culture and developing solutions to meet our clients' goals, both during the planning phase and in the field.

On every jobsite, trust is integral to fostering a safe work environment. With this in mind, Atkinson has started holding regular town hall safety meetings in Southern California. This people-focused approach allows meaningful relationships to form among project members. These connections create an environment that encourages open dialogue and mutual respect. The approach has been a huge success. Since the beginning of this year, Atkinson has achieved zero lost time incidents in Southern California.

At Suburban Hospital in Bethesda, Maryland, the project team faced a complex challenge – how to excavate underneath an active hospital without causing disruptions. Construction Executive Brian Hetherington and Senior Project Manager Matt Vaughn were able to leverage Clark's network of resources to develop a creative solution to safely perform the work and satisfy our client's operational needs.

In this issue, you'll also hear from our healthcare executives on how early project involvement builds trust by helping our healthcare clients align goals, mitigate project risks, and identify strategies to deliver their facilities faster. This enlightening roundtable discussion highlights the importance of Clark's role as a trusted advisor and our ability to draw on a wealth of experience to provide confidence and certainty both on and off the jobsite.

Serving as a trusted advisor to our clients and our team members results in safer work environments, long-lasting relationships with clients and trade contractors, and the capability to leverage a vast network of resources and expertise to help our clients achieve their vision. It's a role that allows us to go far beyond constructing new buildings. The strong ties that we forge with our clients and partners give us the incredible opportunity to leave a lasting impact on our communities.

ROBERT D. MOSER, JR.
PRESIDENT AND CEO

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CLARK CONSTRUCTION

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Photo by: Halkin Mason Photography

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ON THE COVER

Clark completed the renovation of 264,000 square feet of existing space to make way for the Inova Schar Cancer Institute in 2018. In addition to cancer treatment facilities, the center includes medical offices, a pharmacy, and clinical space for oncology, clinical trials, and research. The Inova Schar Cancer Institute is the first phase of development of Inova's new 90-acre Center for Personalized Health.

Photo by: Halkin Mason Photography

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Rendering courtesy of Perkins+Will

Clark to Build New Student Housing Complex at University of California, San Diego

University of California, San Diego has selected Clark Construction Group and design partner Perkins+Will to bring to life its Pepper Canyon West Student Housing complex under a progressive design-build contract.

The undergraduate housing complex will span more than six acres at the center of campus and provide approximately 1,600 new beds to accommodate increasing student enrollment at University of California, San Diego (UC San Diego). In addition to student housing, the buildings will incorporate amenity and retail space to serve both the tenant and broader campus community.

Located adjacent to the new light rail transit (LRT) station at Pepper Canyon, the complex is aiming to embrace its close proximity to public transportation in order to create a vibrant, urban atmosphere. New amenities will be incorporated to serve those who are using the LRT to travel to and from campus.

To make way for the new buildings, eleven 1960s-era residential buildings will be demolished. The redeveloped space will create a welcoming first impression while integrating with the surrounding canyon landscape and urban campus. The project is being designed to achieve LEED Platinum certification.

The Pepper Canyon West Student Housing project is Clark's fourth with UC San Diego. Clark is also constructing the North Torrey Pines Living and Learning Neighborhood, which is slated for completion in 2020.

Design of the Pepper Canyon West Student Housing project is underway. The complex is expected to welcome students in fall 2022. ■

New Contracts

Across the country and in a variety of markets, Clark Construction Group and our subsidiaries have recently been selected to deliver a number of new projects. Our new work this quarter includes:

GOVERNMENT

Otay Mesa Land Port of Entry Modernization and Expansion
Improvements to numerous facilities, including pedestrian-processing and hazardous material import processing, and construction of a new US Department of Agriculture building
Location: San Diego, California
Company: Atkinson/Clark, a Joint Venture
Client: US General Services Administration
Architect: Gruen Associates
Completion: Spring 2023

OFFICE

1700 Crystal Drive
Renovation of a 14-story office building, including full façade replacement, and construction of a new lobby, public arcade, and amenity spaces
Location: Arlington, Virginia
Company: Clark Construction Group
Client: JBG SMITH
Architect: Gensler
Completion: Spring 2020

MASS TRANSIT

WMATA Traction Power System Upgrades
Installation of electrical equipment at four tie breaker stations and ten traction power substations to accommodate additional power capacity
Location: Washington, DC Metropolitan Area
Company: C3M Power Systems
Client: Washington Metropolitan Area Transit Authority (WMATA)
Completion: Fall 2022

Rendering courtesy of Gruen Associates

HEALTHCARE

New Patient Tower at Clovis Community Medical Center
Construction of a new 144-bed patient tower with 24 ICU beds, as well as expansions to the emergency department, materials management, loading dock, food services, and café
Location: Clovis, California
Company: Clark Construction Group
Client: Community Medical Centers
Architect: HMC Architects
Completion: Spring 2022

Sequoia Medical Office Building at Clovis Community Medical Center
Construction of a 60,000-square-foot, two-story medical center featuring a dialysis center, retail pharmacy, and hospital administrative space
Location: Clovis, California
Company: Clark Construction Group
Client: Community Medical Centers
Architect: HGA
Completion: Spring 2020

TRANSPORTATION

Transform 66 Route 28 Interchange
Construction of four bridges at the I-66/Route 28 Interchange to improve traffic flow and safety, and provide direct access to and from the future I-66 Express Lanes
Location: Fairfax County and Prince William County, Virginia
Company: Shirley Contracting
Client: FAM Construction
Architect: Louis Berger
Completion: Spring 2020

Grosvenor-Strathmore Parking Garage Expansion
Construction of a six-story precast garage addition and upgrades to existing electrical and security systems
Location: Bethesda, Maryland
Company: Clark Construction Group
Client: Fivesquares Development
Architect: Walker Consultants
Completion: Spring 2020

Rendering courtesy of HGA

Photo courtesy of Premier Consultants International, Inc.

Bernie Marable, pictured here with Ruth Marshall, founded Premier Consultants International, Inc. after serving in the military for 30 years.

Small Business Spotlight: Premier Consultants International, Inc.

After 30 years serving in the military, Renard "Bernie" H. Marable was in no hurry to slow down. The retired United States Army colonel settled into the Washington, DC metropolitan area, joining a small business as a director of business development. Constantly interacting with other small business owners, it didn't take long before Marable was bitten by the small business bug.

In November 2000, Marable founded Premier Consultants International, Inc. (PCII), a service-disabled, veteran-owned small business. Originally, PCII served as a consulting firm, helping small businesses win, execute, and manage federal contracts. Today, PCII provides construction services and products nationwide – including finish carpentry, miscellaneous millwork and metals, and elevator services. Marable credits Clark's Strategic Partnership Program for providing his company with the knowledge and network necessary to make that transition.

The Strategic Partnership Program is an executive education program that provides intensive construction management and business skills training, taught by a team of seasoned Clark professionals and guest lecturers. The program launched in 2006, and Marable was a graduate of the inaugural class. In addition to gaining a greater understanding of how large general contractors work, Marable's biggest takeaway from the program was the extensive networking opportunities. Prior to attending the program, PCII was doing less than $500,000 in business annually. Today, PCII has an annual revenue of $10 million.

Another business strategy that PCII implemented in the wake of the Strategic Partnership Program was a mentor/protégé partnership program. This program allows PCII the opportunity to self-perform up to 35% of a project scope under the supervision of a mentoring business, and the capacity to bond as much as $42 million.

"The mentor/protégé program has been hugely successful for us," said Marable. "We are constantly learning. Construction is very complicated, and you learn something new every day. Clark's Strategic Partnership Program was absolutely essential in opening the doors and helping us launch this program."

Although PCII has contributed to projects nationwide, it is primarily focused on projects in the Washington, DC metropolitan area. Currently, PCII is part of several major projects, including the National Air and Space Museum Restoration, Reagan National Airport North Concourse, Federal Reserve Headquarters Renovations, and Martin Luther King Jr. Library in Washington, DC, and the Enoch Pratt Free Library in Baltimore, Maryland.

> *"If you're in construction and haven't been through Clark's Strategic Partnership Program, you should wholeheartedly attend the course. It's a well-organized, well-led program. It's a great platform to launch your business."*
>
> *Renard Marable, Owner, Premier Consultants International, Inc.*

His advice to other small businesses in the construction industry?

"If you're in construction and haven't been through Clark's Strategic Partnership Program, you should wholeheartedly attend the course. It's a well-organized, well-led program. It's a great platform to launch your business." ■

Atkinson's Town Hall Meetings Further Safety Rapport in Southern California

From craftworkers to senior leadership, team members from all levels and all shifts participate in the town hall meetings.

Jobsite safety is often measured in terms of statistics: lost time, recordable incidents, serious injuries. From these statistics, safety professionals analyze trends and implement company-wide procedures. But in Southern California, Atkinson has achieved success by focusing on a key safety component that cannot easily be measured in numbers – relationships. This people-focused approach has created a culture in which project team members at all levels take responsibility for each other's wellbeing, feel empowered to voice concerns, and work together to address challenges. At the heart of this approach is their town hall safety meetings.

The premise of these meetings is to engage project teams in all-hands discussions about specific site conditions relative to an objective everyone shares – going home safely at the end of the day. From craftworkers to senior leadership, team members from all levels and all shifts participate in the gatherings. Having the team in one place at the same time bridges any potential communication gaps, ensuring the entire project team is on the same page with a common goal of safety in mind.

The forum is led by foremen and serves as a place for open dialogue. In particular, the format encourages laborers and operators to share their experiences so that the team can find practical solutions to real-life challenges and agree on expectations for the duration of the project. Carpenter Foreman Darin Stuckey on the Cow Camp Road Phase 2A project reflects, "The meetings have brought us closer together and made us feel like we all have a voice."

To date, Atkinson has held a town hall on every project underway in Southern California and plans to hold two meetings per year on each project going forward. The discussions have brought a range of topics to light. On the I-215/Scott Road Intersection project, parking on the jobsite was impacting the safe movement of large equipment around the site, so parking locations were relocated to maximize both the safety and productivity of operations. In addition, the need for the team to ready equipment and materials for the next shift was emphasized so that the next shift could hit the ground running. On the I-15/Limonite Avenue project, employees discussed the need to train and mentor new employees and develop a schedule for equipment maintenance. In addition, the team provided input about the Kask helmet that is now the company-wide standard, bringing up the need to research effective cooling options and a sun visor. The safety professionals record each of these items during the meeting and ensure follow-up on the action items.

The dialogue has created a positive rapport and a culture of respect that empowers team members to take responsibility for not only their own safety but that of fellow employees. And while the focus has remained on strengthening relationships for safety's sake, the success of this approach can be measured in numbers, as well. In Southern California, Atkinson has achieved zero lost time accidents since January 2019. In addition, the number of near misses and good catches reported by employees continues to increase, an indication of significantly improved employee engagement and communication. With teams reporting strengthened bonds and safety numbers to back it up, Atkinson's town hall meetings in Southern California are leading the effort to build a relationship-based safety program. ■

Though the focus of Atkinson's relationship-based approach is on strengthening relationships for safety's sake, the success of this approach can be measured in numbers, as well. In Southern California, Atkinson has achieved zero lost time accidents year-to-date.

PLANNING FOR A **HEALTHY PROJECT**

SETTING THE STAGE FOR SUCCESS THROUGH EARLY ENGAGEMENT

BY: BARBARA WAGNER

Healthcare is one of the most rapidly evolving service industries in the world today. Elevating the patient experience and focusing on patient care to attract and retain customers is a top priority for health systems and is influencing healthcare across the country. This focus on creating a service-oriented culture parallels Clark's continuing work to elevate our customer and client services throughout a project's lifecycle.

Completed in 2018, the Inova Schar Cancer Institute is the first phase of development of Inova's new 90-acre Center for Personalized Health. This page: The main lobby is full of natural light, as well as murals and other artwork with calming colors by local artists. Opposite page: Oncology clinics live on three floors, each featuring a pod structure based on disease.

Photos by: Halkin Mason Photography

To remain at the forefront of healthcare construction advancements and better serve our clients, Clark established its Healthcare Center of Excellence (COE) in 2013. The COE connects healthcare construction professionals across the company to share best practices and lessons learned. Delivering an average of $1 billion of healthcare work annually, the group collaborates to harness the collective resources and knowledge of the Clark team to provide consistent and exceptional experiences for our healthcare clients. Senior Vice President Barbara Wagner, who leads Clark's Healthcare COE, recently sat down with Clark healthcare executives Megan Calhoun and Ryan McKenzie to discuss the keys to a healthy project and the importance of early project engagement in setting the stage for success.

WAGNER: HOW DO YOU SET UP A PROJECT TO SUCCEED FROM THE VERY BEGINNING?

MEGAN CALHOUN: The ultimate success of a project lies in the early phases of project planning, long before construction. The first thing we do is work to establish a relationship with the client. Health systems understand that the patient experience is a driver of success. The same is true on Clark projects; the client experience defines our success. Even if a project delivers on time and under budget, it does not necessarily mean it was successful. Several factors determine success, and one of the most important is client satisfaction. The idea of client service and anticipating our clients' needs is a top priority for us. As a company, we leverage our healthcare COE team to provide knowledge, specialized tools, and resources to engage our clients in meaningful ways. This helps Clark earn our clients' trust and respect beyond just the construction activities.

RYAN MCKENZIE: One of the ways we set the stage for success is through engagement – specifically how we engage with our clients during the earliest stages of project development. As an example, the average length of client engagement before we will even pursue a project is three years. We spend those three years understanding the client's needs to establish and build trust. We know how important it is for our healthcare clients to trust us and to see that we are the right partner to help them deliver their next project.

CALHOUN: Another example of how we're adding value early on is through our quarterly Market Insight. The Market Insight is a report compiled with the help of internal economists, business analysts, and public and internal data that analyzes the market over the last quarter and provides insight as to where the market may go in the future. Recently, one of our clients asked us to provide an in-depth look at their local market and make some recommendations for their upcoming program of work. Leveraging our knowledge of the national and local economic trends and resources from our COE, we were able to make recommendations, backed by industry data, which were well received and helped our client in making key decisions.

WAGNER: WHAT ARE SOME OF THE RISKS YOU ARE SEEING IN HEALTHCARE CONSTRUCTION TODAY?

CALHOUN: We are facing a depleted pool of qualified tradespersons and contractors across the country. While this is impacting the entire construction market, healthcare is even more complex and demands a highly-specialized workforce. There is a lot of construction work – everyone is busy. Our clients are looking for a builder with real-time knowledge of the marketplace and strong relationships with quality trade partners. Clark brings those strengths to the table. It allows us to advise clients on the right time to buy specific trades and helps us ensure they are maximizing their budget.

"As a company, we believe in transparency. Whether positive or negative, it is our responsibility to inform our clients of possible outcomes and to have a plan in place to mitigate the risks we uncover. The beauty of being involved early on is that we can advise the client on solutions well in advance of any construction."

Ryan McKenzie, Senior Vice President

Photo by: Lawrence Anderson

MCKENZIE: I think one of the most significant risks in healthcare construction today is *not* having a design or construction partner that is willing to dig into the weeds of a project. With any early contractor engagement – whether it is a construction manager at-risk (CMAR) contract, a design-build contract, or a preliminary budgeting and constructability exercise – we understand that it is our job to identify and communicate risks. As a company, we believe in transparency. Whether positive or negative, it is our responsibility to inform our clients of possible outcomes and to have a plan in place to mitigate the risks we uncover. The beauty of being involved early on is that we can advise the client on solutions well in advance of any construction.

WAGNER: CLIENTS ARE CONCERNED WITH RISING COSTS AND THE EFFECT ON THEIR CAPITAL PROGRAM. WHAT STRATEGIES ARE WE INCORPORATING TO REDUCE THESE RISKS AND PROVIDE BETTER VALUE?

CALHOUN: Every client we work with has a wish list of items they'd like to incorporate into their project, but they often need early guidance on what they can afford. Through our experience and volume of work, Clark has captured historical data to provide an accurate cost-per-square-foot for all types of facilities and departments – from acute care towers in California to cancer centers in Virginia to diagnostic buildings in Texas. We use this data to provide early cost metrics for our clients, helping them understand the number of operating rooms, square footage of NICU space, and quantity of advanced imaging suites that fit into their budget.

One of the best ways for clients to maximize their budget is by using integrated delivery methods, such as design-build or CMAR. These methodologies promote early collaboration among the client, builder, designer, and key trade partners. Design-build is very prevalent on the West Coast; on the East Coast, more clients are moving to a CMAR model to realize the benefits of early contractor and stakeholder involvement.

WAGNER: ARE THERE SPECIFIC HEALTHCARE PROJECT RISKS THAT YOUR TEAMS ENCOUNTER TIME AND TIME AGAIN?

MCKENZIE: Low-voltage integration and installation is a risk on healthcare projects. Often, the client procures this work outside of the building construction and long after design and construction are underway. I think one of Clark's most unique differentiators is our in-house capability to support clients through this scope of work. S2N Technology Group (S2N) is a wholly-owned subsidiary of Clark that designs, manages, and installs low-voltage and IT work, and they specialize in medical systems. Having this capability in-house is invaluable to the level of service we can provide. S2N's early engagement often leads to accelerated turnover and activation, which allows patients to start receiving care at the earliest possible date.

CALHOUN: In my 15 years working in healthcare preconstruction, I have seen Clark's early involvement in projects help mitigate two significant risks: commodity price escalation and the timing of medical equipment selection and procurement. When we are engaged early in a project, we can establish a procurement plan that transfers commodity price escalation risk at the most responsible time in the project schedule. Those trade contractors are in a better position to lock in commodity pricing and make the decision to pre-purchase materials for a project.

When it comes to medical equipment selection and procurement, we work with the designer and the client to identify potential medical equipment vendors and understand the required infrastructure for each piece of equipment. We can also develop flexible designs that the team can advance – and even in some instances, start to build – before the client makes a final decision about the medical equipment. We focus on determining the last possible "decision date" for each piece of medical equipment. This approach allows our clients to plan appropriately and facilitates an efficient vendor selection process.

Turning these risks into known values is a big way we help our healthcare clients set their projects up for success and get the most out of their budgets.

This page: The new Stanford Adult Hospital, completed earlier this year, allows the academic health system to accommodate new medical technology and meet updated seismic-safety requirements.

Opposite page: Clark's early involvement can help mitigate risks associated with selection and procurement of medical equipment, like that installed at Ventura County Medical Center, which was completed in 2017.

WAGNER: HOW IS CLARK IDENTIFYING OPPORTUNITIES EARLY IN THE PLANNING PHASES TO BRING PROJECTS ONLINE SOONER?

MCKENZIE: Clients are looking for ways to capitalize on opportunities. The earlier we are involved with our key trade contractors, the more opportunities we have to evaluate time- and cost-saving measures like prefabrication.

Off-site prefabrication allows our project teams to realize cost and time savings and achieve greater efficiency, quality control, and safety. Prefabrication also enables us to incorporate just-in-time delivery, avoiding excess materials on the construction site. The MedStar Georgetown University Hospital's new Surgical Pavilion, which is scheduled to complete in 2021, has a contracted prefabrication package of approximately $7 million and includes structural plenum operating room ceilings and bathroom pods. Additionally, the team is evaluating other elements for prefabrication, such as electrical rooms and MEP skids.

WAGNER: All in all, Clark's ability to provide value for our clients through early engagement is one of the best ways we are ensuring healthcare project success across the country. We are committing to our clients early, aligning goals and expectations, and leveraging our in-house services to facilitate stronger client relationships. We are working closely with clients to mitigate significant project risks like rising construction costs, commodity pricing, and the skilled labor shortage. Early engagement also allows for speed-to-market strategies such as prefabrication opportunities and low-voltage system integration during design. Clark strives to be the partner of choice for our clients and serve as an integral part of a collaborative team dedicated to the success of each project. ■

Photo by: Harry Griffin

Barbara Wagner *is a senior vice president and leads Clark's Healthcare Center of Excellence. She serves as a trusted advisor to healthcare teams and clients across the country. She has more than three decades of construction experience with an in-depth knowledge of healthcare and integrated project delivery.*

Ryan McKenzie *is a senior vice president responsible for co-leading Clark's healthcare operations on the East Coast, including $1.2 billion of ongoing work in Maryland, Virginia, and the District of Columbia.*

Megan Calhoun *is a vice president focused on project development, specifically preconstruction and client services for Clark's healthcare work in California and throughout the Western United States.*

Hydro Excavation at Suburban Hospital Provides Client-Focused Solution

HOW DOES A TEAM EXCAVATE UNDERNEATH AN ACTIVE HOSPITAL without disrupting any operations in critical spaces above and adjacent to the excavation area, all while maintaining stringent sanitation standards required to keep patients safe? It's definitely a bit of a head-scratcher.

At Suburban Hospital's campus in Bethesda, Maryland, Clark is constructing a 300,000-square-foot addition and renovating the existing facility. This included the difficult task of performing extensive below-grade work underneath the active and fully-operational hospital.

THE CHALLENGE

The project team initially planned on hand-excavating a vertical pit under the hospital through the first-floor slab, but that would have required taking more than 5,000 wheelbarrows full of dirt out the front door of the building. Additionally, hand-digging and transporting such a large quantity of soil would have been time-consuming, expensive, extremely labor intensive, and subsequently riskier from a safety perspective due to the potential for strains, sprains, or accidents.

THE SOLUTION

Construction Executive Brian Hetherington reached out to Matt Michler, a project manager with Atkinson Underground, to discuss the challenge. After visiting the site, Michler recommended excavating from the side through the foundation wall – an approach that would minimize the potential for disruption to hospital's operations.

Along with shifting to excavate via the side of the building, the team also sought an alternative to the time-consuming and labor-intensive hand-digging. Matt Vaughn, senior project manager for the Clark team at Suburban Hospital, reached out to Shirley's Metro Earthworks to help evaluate an alternative solution – hydro excavation. After reviewing options with Metro Earthworks, the Clark team decided hydro excavation was the best choice for the hospital.

WHAT IS HYDRO EXCAVATION?

Hydro excavation is a system which excavates using a vacuum hose and pressurized water hoses. The process removes loose soil via the hose from the excavation area and transfers it to a truck, which then transports the material to a yard to dry.

Opposite page: To efficiently excavate a vertical pit under the hospital while minimizing the potential for disruption to hospital operations, the team utilized a non-traditional solution: hydro excavation.

This page, top: Hydro excavator hoses running below the emergency department on racks mounted from the ceiling. Bottom: Rocks too large for the vacuum were broken down and transported out via the hospital's loading dock.

Photos by: Harry Griffin

"This operation was a case study in leveraging Clark's extensive network of resources, including Atkinson Construction, Clark Foundations, Shirley Contracting, Metro Earthworks, and Clark Concrete, to overcome a substantial challenge."

Brian Hetherington, Construction Executive

THE FOUNDATIONAL STEPS FOR SUCCESS

1 The team developed a confined-space safety plan and set up the hydro excavator hoses running below the emergency department, adjacent to active conference rooms on racks mounted from the ceiling.

2 Grout for Clark Foundations' underpinning pits were pumped back into the space along the same racks.

3 Rather than hand excavating and moving the soil, the team only had to loosen the soil for the vacuum. The team broke down rocks too large for the vacuum and transported them out via the hospital's loading dock.

THE RESULTS

The project team worked with key trade contractors and several departments at Suburban Hospital to ensure everyone's needs were known and met during this sensitive operation. In many instances, the hospital continued to hold productive meetings in their conference space with underground excavation occurring only feet away from them at the same time.

Thanks to proactive planning and innovative thinking from the project team, there were zero unplanned disruptions to the emergency department, conference rooms, or auditorium. ■

A FORMULA FOR PRECISE EXECUTION

Prefabrication on Long Beach Civic Center Yields Cost, Schedule Advantages

PREFABRICATION ISN'T A NOVEL CONCEPT IN CONSTRUCTION, but the industry's use of the time-saving technique has become more prolific in recent years. Clark teams nationwide are doubling down on the modular approach and identifying greater opportunities for prefabrication to harness schedule efficiencies and realize greater flexibility, quality control, and potential cost savings.

The Long Beach Civic Center (LBCC) – a newly completed $428-million-dollar, vibrant mixed-use complex that includes a new City Hall and Council Chambers, Port of Long Beach Headquarters, and Main Library – is a primary example of how prefabrication is yielding compelling results in the form of enhanced quality, schedule efficiency and flexibility, and significant savings for the client.

Clark recently delivered the sprawling government development, which is spread across a 22-acre site in downtown Long Beach. The four buildings that comprise the campus are enveloped in more than 330,000 square feet of unitized curtain wall, 3,632 units in total – some stretching as high as 26 feet tall. Understanding the scope and scale of the Civic Center's enclosure, and its potential to disrupt the construction schedule if not executed precisely, Clark and its design-build partner, Skidmore, Owings & Merrill, sought to turn this possible project risk into an opportunity through prefabrication.

The LBCC design-build team knew they needed the perfect formula to be effective – one that involved early engagement from a skilled trade partner, transparency and intensive collaboration during the design and fabrication period, and a high level of trust – not only among stakeholders, but in the process.

Having collaborated with curtain wall design-builder Benson Industries to create iconic façades on civic structures such as the Governor George Deukmejian Courthouse (also in Long Beach) and the Los Angeles Federal Courthouse, Clark and SOM knew they would be the right trade partner for the task at hand. They engaged Benson one full year before the outset of construction. Working closely with the project's structural engineer, they developed the Civic Center's façade design in tandem with the campus structures, leveraging 3D models to ensure the major geometry was correct.

Fabrication and testing also was a highly-collaborative and transparent effort that took place at Benson's off-site facility. Prefabrication allowed materials to be constructed in a controlled environment and gave the owner and contractor visibility into the production process. Each month, client representatives joined Clark and SOM for a shop visit to see Benson's progress and evaluate quality and performance factors. These visits also fostered collective problem solving, eliminating issues before they impacted the project schedule.

Benson stockpiled completed units in a warehouse not far from the project, allowing for just-in-time delivery, but it wasn't until crews began curtain wall assembly that the benefits of prefabrication were fully realized. With units that fit together like LEGOs, crews assembled the skin with maximum efficiency – at times moving faster than the schedule

Photo by: Alan Karchmer

The Long Beach City Hall and Port Headquarters buildings are sheathed in alternating panels of floor-to-ceiling vision glass and solid panels.

Photo by: Alan Karchmer

Prefabricated units that fit together like LEGO blocks made curtain wall erection a highly efficient process, helping crews complete assembly in half the time of traditional methods.

contemplated. "The enclosure came together so quickly that there were instances where it could have caught up to the structure," recalls Ashley Kelly, Clark's senior project manager in charge of the building enclosure.

With a repository of finished materials off site, Benson was able to remain nimble in the field, moving to different areas on the job and scaling their crews appropriately as schedule priorities changed. "The flexibility this approach yielded was a tremendous advantage and allowed us to maintain positive momentum on site – even when we had to adjust the schedule and move crews to another area of the job," added Kelly. Water Crim, Benson's project manager for LBCC added, "Much of our success on site stems from starting this process really early and having a solid plan in place. With a prefabricated system, we had a warehouse of completed curtain wall units at the ready long before they were needed on site, which provided us flexibility to adjust to meet the project schedule."

Even with scope additions, the curtain wall remained ahead of schedule with crews completing assembly in just six months – less than half the time of traditional erection methods, which average 12 to 18 months. Those schedule efficiencies also translated to costs savings for the City of Long Beach in the sum of nearly $1 million dollars.

Prefabricating the building enclosure gave the Civic Center team a leg up, providing an end product that not only met stringent requirements for safety and quality and aligned with California's Title 24 superior energy standards, but that yielded significant time and cost savings. "Through prefabrication, we took a higher-risk schedule impact and gained greater control over that element of work – not just from a production and schedule standpoint, but from a quality standpoint, too," said Kelly. "This gave everyone on our team greater confidence that we could deliver the job on time and gave our clients a high-performing building enclosure that will stand the test of time." ■

CLARK TEAM DELIVERS LONG BEACH CIVIC CENTER AHEAD OF SCHEDULE

In July, Clark Construction joined residents and officials from the City of Long Beach and Port of Long Beach to celebrate the grand opening of the new Long Beach Civic Center.

Clark successfully delivered the new Civic Center on June 29 – two days ahead of the project's contractual completion date. Later this year, the Clark team will begin demolition of the existing Main Library, paving the way for the revitalization of nearby historic Lincoln Park, which will open in 2020.

"Projects of this scale require a high level of trust, collaboration, and transparency to succeed," said Marc Kersey, Clark senior vice president and executive in charge of the project. "We are grateful to the City and Port leadership for their trust and partnership, and to our development, design, and trade partners, who helped us ensure we achieved a successful, on-time delivery of the Civic Center."

"Trust was an important success factor on this project, and something we all worked hard to build early on, and maintain throughout the life of the job," said Marilyn Surakus, project manager for the City of Long Beach Public Works Department.

Over the three-year construction period, Clark worked to fulfill the City's goal of ensuring Long Beach residents played a meaningful role in the construction of the project. More than 1,200 residents from Long Beach and its immediate surrounding communities helped bring the project to life. "It was a priority for our team from the start, and we are proud of what we were able to achieve together and proud to see the contributions that local residents have made to their new government center." Clark exceeded the City's stated local workforce participation goal of 30%, achieving 78% participation from residents in Long Beach, surrounding communities, and greater Los Angeles County combined. ■

Clark and Edgemoor Celebrate Groundbreaking for New Howard County Circuit Courthouse

This July, Clark joined representatives from Howard County, Edgemoor Infrastructure & Real Estate, Star America, HOK, Johnson Controls, and Harkins Builders to break ground on the new Howard County Circuit Courthouse project in Columbia, Maryland. A standing room crowd of more than 150 attended the ceremony.

The 238,000-square-foot courthouse will replace the county's current 175-year-old building. The new facility is designed to include several safety improvements, including separate hallways and elevators for prisoner transport and a large entryway to provide for more efficient safety screening. The new building will also feature a four-story atrium, cafeteria, fitness center, and an adjacent 691-space parking garage.

Clark is a member of the Edgemoor-Star America Judicial Partners (ESJP) team selected to design-build-finance-operate-maintain the new courthouse. Edgemoor Infrastructure & Real Estate, a Clark affiliate, and Star America Howard County Courthouse are leading the project development. The ESJP team also includes HOK as lead architect and Johnson Controls as facilities manager.

The project has been heralded as the first availability payment structured social infrastructure public-private partnership (P3) to reach financial close in the United States outside of California. ESJP reached simultaneous commercial and financial close just 11 months after issuance of the RFP, which was aided by an efficient and thoughtful procurement process by Howard County. Through a continued partnership between the county and ESJP, the team has thus far been able to successfully reach every milestone the county set out to achieve.

Construction of the new circuit courthouse is scheduled to be complete in July 2021. After construction, Edgemoor-Star America Judicial Partners will operate and maintain the new facility for 30 years. ■

PROJECT MILESTONES

This quarter, our project teams across the country reached some exciting milestones:

UNDERWAY

110 North Wacker

Curtain wall installation at 110 North Wacker in Chicago is underway. The building's façade is comprised of 8,669 curtain wall units and features two different fin systems. The west façade, which overlooks the Chicago River, is composed of laminated glass fins with a custom ceramic frit pattern. The east façade, which faces Wacker Drive, consists of aluminum shuttlecock fins. The project is expected to reach substantial completion in 2020.

San Francisco Animal Care and Control Facility

Clark joined San Francisco Mayor London Breed, city officials, and 100 community volunteers to break ground on the new 65,000-square-foot San Francisco Animal Care and Control (SFACC) Facility. With nearly double the space of its current facility, the new shelter will allow SFACC to fulfill its responsibilities as the city's first responder for all domestic and wildlife animal emergencies and to better serve the city's population of lost, abandoned, sick, and injured animals. Completion is slated for January 2021.

TOPPING OUT

Medical Pavilion at White Oak

The Clark team constructing the Medical Pavilion at White Oak recently celebrated the topping out of the seven-story, state-of-the-art facility in Silver Spring, Maryland. Once complete, the 169,000-square-foot facility will connect to Adventist HealthCare's existing White Oak Medical Center and offer physician services in an efficient and thoughtfully-organized caregiving environment. Substantial completion is slated for early 2020.

Photo by: Halkin Mason Photography

Dwight D. Eisenhower Memorial
This spring, the Clark team hoisted the last 27-ton steel box beam on top of the limestone-clad columns at the Dwight D. Eisenhower Memorial in Washington, DC. The box beams, along with a cable net system, will support the tapestries that depict the peacetime cliffs of Normandy. Substantial completion is slated for spring 2020.

Back River Wastewater Treatment Plant
The Clark/Ulliman Schutte joint venture team recently completed structural concrete at the Back River Wastewater Treatment Plant in Baltimore, Maryland. In 17 months, Clark Concrete poured 50,000 cubic yards of concrete and installed four miles of PVC waterstop at the facility. Once complete, the project will help increase the plant's influent capacity to over 750 million gallons per day.

Wheaton Revitalization
The Wheaton Revitalization project team recently completed structural concrete for the 14-story office building. Once complete, the project will transform the old central business district in Wheaton, Maryland to include a new Montgomery County municipal office building and a 25,000-square-foot town square. The project is expected to reach substantial completion in summer 2020.

SUBSTANTIAL COMPLETION

National Museum of the United States Army
In April, the Clark team delivered the Army Historical Foundation's new National Museum of the United States Army. The 188,000-square-foot museum celebrates the service of the more than 30 million men and women who have worn the United States Army uniform since 1775.

Long Beach Civic Center
On July 29, the Long Beach Civic Center debuted to the public in the heart of Long Beach, California's urban core. The 620,000-square-foot project includes a new city hall, council chambers auditorium, headquarters facility for the Port of Long Beach, and main library. The project was delivered under a public-private partnership utilizing a design-build-finance-operate-maintain contract with a performance-based availability payment structure for the City of Long Beach components and a design-build-finance (DBF) contract for the Port of Long Beach components. Edgemoor Infrastructure & Real Estate was one of the lead development partners.

Inova Schar Cancer Institute
Inova Health Systems opened the doors to its new 420,000-square-foot Schar Cancer Institute in April. The first phase of development on Inova's new 90-acre Center for Personalized Health in Fairfax, Virginia, the new state-of-the-art cancer treatment facility offers cutting-edge treatment to the Northern Virginia patient community and beyond.

New Stanford Hospital
On July 5, Clark, along with joint venture partner McCarthy, reached substantial completion of the new Stanford Hospital in Palo Alto, California. This milestone allows hospital staff to begin training in the new space before the hospital opens to the public later this year. The 824,000-square-foot academic health facility, which features 368 patient rooms, 20 state-of-the-art operating suites, and a new 37,000-square-foot emergency department, will accommodate advances in medical technology, increase capacity, and meet new seismic safety standards.

Clark Teams Build Lasting Improvements in their Communities

This summer, Clark teams joined forces with local non-profit organizations to make a difference in their communities. Here's a look at what they accomplished:

HABITAT FOR HUMANITY'S WOMEN BUILD IN SAN DIEGO

In San Diego, Clark team members joined the Habitat for Humanity's Women Build event. Volunteers from projects across the city worked on the final phases of an affordable housing development in the Logan Heights neighborhood. When complete, 11 families will call these townhomes home.

"It was such a great day of women working together," remarked Wendy Brinker, a senior project scheduler at the UC San Diego North Torrey Pines Living and Learning Neighborhood project. ■

HABITAT FOR HUMANITY OF GREATER LOS ANGELES

Clark's team spent more than a year diligently preparing to build a house in just 11 days for Habitat for Humanity of Greater Los Angeles' Housing Blitz. Led by Project Engineer Kevin Wang, volunteers provided design-assist, scheduling, logistics planning, and fundraising to support a deserving family in Los Angeles.

"It is through the generosity and support of our trade contractors that we had this opportunity to help Habitat for Humanity and make a difference in our local communities," said Jacqueline Reed, a purchasing manager at Clark who helped rally trade contractor participation. ■

REBUILDING TOGETHER SEATTLE

The Washington State Convention Center (WSCC) team volunteered in late spring to work with Rebuilding Together Seattle for their Spring Rebuilding Day – the culmination of the National Rebuilding Month campaign in which 40,000 volunteers complete projects across the country.

The WSCC team worked with Rebuilding Together and trade contractors to make necessary repairs to the home of Mr. Curry, an 83-year-old military veteran who has lived in his house for more than half his life. The team worked together to demolish an old ramp, replace stairs and the front door, upgrade the plumping, paint the porch and multiple rooms, and perform extensive yard work. ■

Teams Celebrate Community and Bring Hope Through Friendly Competition

In Washington, DC, Clark employees joined 3,000 industry professionals at the JDRF Real Estate Games to raise a record-breaking $717,000 to support research and treatment for Type 1 Diabetes. Competing in activities ranging from basketball and tug-of-war to chair hockey and the "noodle javelin throw," Clark's team came out of the games with a first-place win for an exciting end to an inspiring day.

Just two weeks later, the Clark team traded their work boots for soccer cleats and competed against 40 other teams in the 2019 DC SCORES Cup. The tournament raises money for DC SCORES, a non-profit organization that creates neighborhood soccer teams that give kids the confidence and skills to succeed on the playing field, and in life. ■

Clark Announces Senior Executive Promotions

DAVID TROLIAN
DIVISION CHIEF EXECUTIVE OFFICER AND PRESIDENT, NORTHERN DIVISION

Throughout his 25-year tenure, David has overseen the successful growth and development of Clark's Northern Division with projects in Chicago, Detroit, Denver, Syracuse, and Nashville. Under David's leadership, Clark has established a strong presence in Chicago and Nashville, delivering notable projects such as 150 North Riverside, Marriott Marquis at McCormick Place, and Wintrust Arena in Chicago, and Music City Center and Vanderbilt University Engineering and Science Building in Nashville. As division president and chief executive officer of Clark's Northern Division, David will continue to oversee Clark's expanding presence in this market, which includes the construction of 110 North Wacker, Chicago Union Station, and Nashville Yards. ■

GEOFF STRICKER
SENIOR VICE PRESIDENT & SENIOR MANAGING DIRECTOR, EDGEMOOR

For nearly two decades, Geoff has played a critical role on Edgemoor's public-private partnership projects across the country, including the Long and Kimmy Nguyen Engineering Building at George Mason University, the Sandler Neurosciences Center at the University of California, San Francisco, and the Central District Development at the University of Kansas. Recently, he spearheaded Edgemoor's efforts as turnkey developer for the largest infrastructure project in Kansas City history, the Terminal Modernization Program at the Kansas City International Airport. As senior vice president and senior managing director, Geoff will continue to focus on identifying and pursuing new opportunities for Edgemoor. ■

RYAN MCKENZIE
SENIOR VICE PRESIDENT MID-ATLANTIC DIVISION

Ryan has worked across the country on projects spanning the healthcare, hospitality, and entertainment sectors. Over the past six years, he has played a significant role in the development and delivery of a series of projects for the Inova Health System in Northern Virginia, including the Women's Hospital, Children's Hospital, and Schar Cancer Institute. Ryan has helped expand Clark's healthcare portfolio across the region, and most recently, has led the successful pursuit and project development efforts on a number of projects in the Mid-Atlantic area. As senior vice president, Ryan will continue to oversee development efforts on newly-awarded projects, in addition to managing day-to-day operations of Clark's Baltimore office, which opened in 2018. ■

ADAM ROSMARIN
SENIOR VICE PRESIDENT REGIONAL DIVISION

As senior vice president, Adam will provide leadership for Clark's Regional Division, which focuses on work outside of our traditional core markets. Specifically, he will oversee project development and project delivery in Texas and Atlanta. Throughout his 23-year career with Clark, Adam has made significant contributions on a diverse range of projects including the Georgetown University Southwest Quadrangle, the East Automated People Mover Tunnels and Stations at Dulles International Airport, DOD-BRAC 133 at Mark Center, The Wharf, and the Dulles Corridor Metrorail Silver Line. Currently, Adam is leading the Plane Train Tunnel West Expansion project at Hartsfield-Jackson Atlanta International Airport. ■

SHIRLEY CONTRACTING CELEBRATES 45TH ANNIVERSARY

April marked the 45th anniversary for Shirley Contracting Company. To commemorate this milestone, Shirley hosted a luncheon at The River View at Occoquan in Lorton, Virginia. Mike Post, president and chief executive officer of Shirley, kicked off the event by welcoming attendees and shared a brief history of the company which his father Robert started in 1976.

Following Mr. Post's remarks, Greg Smith, senior vice president at Shirley and Chuck Smith, president at Shirley provided a business update and expressed their gratitude for Shirley's employees.

"You are our most valuable asset and Shirley would not be where we are today without you. Thank you for your hard work and extraordinary commitment to excellence," said Greg Smith. "Shirley looks forward to the future by continuing to build on our great foundation and past successes." ■

TWO PROJECTS WIN REGIONAL DESIGN-BUILD OF AMERICA AWARDS

The San Diego State University Engineering and Interdisciplinary Sciences Complex and CSX Virginia Avenue Tunnel Reconstruction projects were recently recognized with regional Design-Build Institute of America (DBIA) Awards, which are given annually to projects modeling excellence in design-build best practices.

The San Diego State University Engineering and Interdisciplinary Sciences Complex, recognized by the Western Pacific Region, is a 90,000-square-foot facility designed to provide 21st century teaching and research space to students and faculty. The building features a high-performance mechanical system that helps pressurize lab spaces. To match the campus' historic Mission Revival architectural style, the façade was comprised of stucco and arcades.

Engineering and Interdisciplinary Sciences Complex
San Diego State University

Photo by: David Hebble

CSX Virginia Avenue Tunnel
Washington, DC

Photo by: Harry Griffin

The CSX Virginia Avenue Tunnel Reconstruction project was honored by the Mid-Atlantic Region. Part of CSX's effort in a two-year-long National Gateway Initiative, which set out to improve rail infrastructure throughout the country, this design-build reconstruction project converted the single-track tunnel to a two-track tunnel accommodating double-stack trains, eliminating a key pinch point on the heavily-traveled I-95 corridor railroad route. ■

TOP CONSTRUCTION PROGRAM NAMES PROJECT MANAGER AS ALUMNUS OF THE YEAR

Project Manager Max Charamella was recently recognized by Virginia Tech's Myers-Lawson School of Construction (MLSoC) as the Building Construction program's Outstanding Young Alumnus of the Year. He was presented with his award earlier this summer at the annual MLSoC Banquet.

During the spring 2019 semester, Clark sponsored the MLSoC Capstone Course where students apply their building construction knowledge by solving a real-world challenge. Max organized and led the monthly guest lecturer series with fellow Virginia Tech alumni and Clark professionals. Designed to encourage students to think beyond the classroom, the lectures covered topics such as project logistics and scheduling, managing risk and designer collaboration, and virtual design and construction.

Max began his career at Clark and has worked on a number of projects in the Washington, DC area including CityCenterDC, The Wharf, and The Wilson and The Elm. ■

BALTIMORE OFFICE HOSTS RIBBON CUTTING CEREMONY

Clark welcomed state and local delegates to an open house and ribbon-cutting ceremony at its new Baltimore office in April. Robby Moser, Clark's president and chief executive officer, opened the event with Baltimore office leader Ryan McKenzie, remarking, "Creating an office in a city such as Baltimore allows us to be a part of the fabric and the community."

Since 1975, Clark has completed nearly 70 projects in greater Baltimore, including notable projects such as Oriole Park at Camden Yards, the Camden Station Renovation, and the Johns Hopkins Hospital's Sheik Zayed Tower and Charlotte R. Bloomberg Children's Center. Clark is currently managing the delivery of several complex projects in the Baltimore area from its new office, including the Headworks and Wet Weather Equalization Facility Improvements at Back River Wastewater Treatment Plant and Howard County Circuit Courthouse. Over the past two years, Clark has awarded $95 million to Baltimore City trade contractors, vendors, and suppliers. Clark's Baltimore office is the company's third in the state of Maryland. ■

Newly-Promoted Vice Presidents Announced

MEGAN CALHOUN

Megan began her career at Clark in 2001 in the Mid-Atlantic. In 2004, she relocated to California and transitioned to focus on project development in that region. Megan has led a variety of key pursuits and project development efforts in Southern California, including the Ventura County Medical Center, Los Angeles Federal Courthouse, and Long Beach Civic Center. Recently, she led the successful pursuit of the Cedars-Sinai Marina Del Rey Hospital project and is now leading our team and the associated project development. Megan will lead project development strategy and execution, serving as a trusted advisor to clients throughout the region. ■

BEN EITAN

Ben joined Clark in 2007, and throughout his tenure, has played a critical role in supporting key pursuits and leading both project development and project delivery efforts on numerous projects in the Mid-Atlantic, including three with the George Washington University: South Hall, The Avenue, and District House. For the past several years, he has led construction of The Boro, a 1.7-million-square-foot, mixed-use complex in Northern Virginia. Later this year, Ben will relocate to Seattle where, as vice president, he will work with our team to successfully deliver the Washington State Convention Center Addition project. ■

JAMIE GILMAN

After joining Clark in 2002, Jamie completed numerous residential projects throughout Washington, DC, including 715 Sixth Street and 915 E Street. Jamie relocated to Northern California in 2010 and joined the team building the New Stanford Hospital in Palo Alto, California. She went on to lead the Bowles Hall Renovation at University of California, Berkley and 150 Van Ness in San Francisco. Jamie will continue to lead renovation efforts at the International Terminal Building at the San Francisco International Airport and the project development and delivery phases of the University of California, Hastings New Campus Housing project. ■

BRIAN KRAUSE

Brian joined Clark in 2015 as director of virtual design and construction (VDC). His contributions to the company's nationwide VDC strategy, helping teams employ building information modeling for immersive visualization, coordination, and schedule simulation, have been critical to the successful delivery of projects nationwide. As vice president, he will continue to lead the VDC and construction data teams, overseeing efforts surrounding computational construction setup and development, construction data-based insights, reality capture, and data analysis. ■

BEN LORD

Since joining Clark in 2001, Ben has managed field operations throughout the Mid-Atlantic, leading teams at the American Red Cross National Headquarters, Shakespeare Theater, and Walter Reed National Military Medical Center projects. As construction executive, Ben has led field operations on a number of successful projects for the Inova Health System including the Inova Women's Hospital, Children's Hospital, and the Inova Schar Cancer Institute. Ben will continue to provide field leadership on complex and challenging healthcare projects in the Mid-Atlantic as vice president. ■

SCOTT MOORE

Scott joined Clark in 2001 as a superintendent on the Genentech Hall project at the University of California, San Francisco Mission Bay Campus and has since completed many higher education projects in California, including Campus Village Housing at San Jose State University and Poly Canyon Village at California Polytechnic State University, San Luis Obispo. Scott relocated to Texas in 2009 where he served as construction executive on the San Antonio Military Medical Center and Fort Bliss Replacement Hospital projects. He relocated to the Mid-Atlantic in 2017 and is now leading field operations as vice president on the Dulles Metrorail Silver Line project. ■

LARRY MUNDY

Larry joined Clark in 2010 as a senior superintendent on the 929 Apartments project in Baltimore and has since completed a number of residential projects throughout Maryland, including Prince Frederick Hall at University of Maryland, College Park and The Pearl in Silver Spring. Larry played an instrumental role in the award of The Boro in Northern Virginia and subsequently led construction operations during the project delivery phase. He is currently overseeing construction operations as vice president on the Reston Gateway project, a mixed-use development in Northern Virginia. ■

CHRIS PHARES

Since joining Clark as in intern in 2000, Chris has delivered a number of successful projects across the country, including the General Motors Vehicle Engineering Center in Warren, Michigan, United States Penitentiary in Indiana, Wheeler-Sack Army Airfield Barracks in New York, and Music City Center in Tennessee. In recent years, Chris has aided the transformation of the Chicago skyline with contributions on notable projects such as 150 North Riverside, Linea, and the Hyatt Regency McCormick Place Expansion. As vice president, Chris will continue to lead the construction of 110 North Wacker and Chicago Union Station. ■

PASCO UMBRIAC

Pasco joined Clark in 2001 and quickly gained experience on several government and military projects throughout the Mid-Atlantic, including the HMX-1 Maintenance Hangar in Quantico, Virginia and the South Campus Electrical Utility Plant in Fort Meade, Maryland. He later shifted his focus to residential and commercial mixed-use projects, leading field operations on Central Place Residential and CEB Tower at Central Place in Arlington, Virginia, and West End Square 37 in Washington, DC. Pasco is currently vice president overseeing construction of The Wilson and The Elm, a mixed-used development in Bethesda, Maryland.■

THE WAY WE WERE

A SEASONED HEAVY HIGHWAY CONSTRUCTION PROFESSIONAL, Robert E. Post built a major road construction project known as the "mixing bowl" (officially named the Springfield Interchange) on a stretch of Virginia's Shirley Highway in the early 1970s. This new web of intersections and overpasses was designed to provide safer and more rapid transit over the northern seventeen miles of Interstate-95, Shirley Highway. The critical roadwork, characterized at the time by Douglas B. Fugate, State Highway Commissioner, as "the most complex, challenging project ever undertaken in the history of the Virginia Department of Highways," connected to Columbia Pike, US Route 1, the George Washington Memorial Parkway and served four of the arteries into the Pentagon. The work was completed while maintaining the normal flow of traffic in excess of 100,000 vehicles per day, a miracle in traffic service and control.

Upon completion of the work, Post gathered professionals from the project team to form his own heavy-highway company, and in 1974, Shirley Contracting was born – named after the highway they had just built together. Three decades later, while the number of vehicles traveling that stretch of highway had more than tripled, Shirley was awarded three phases of the massive Springfield Interchange Improvements Project. ■

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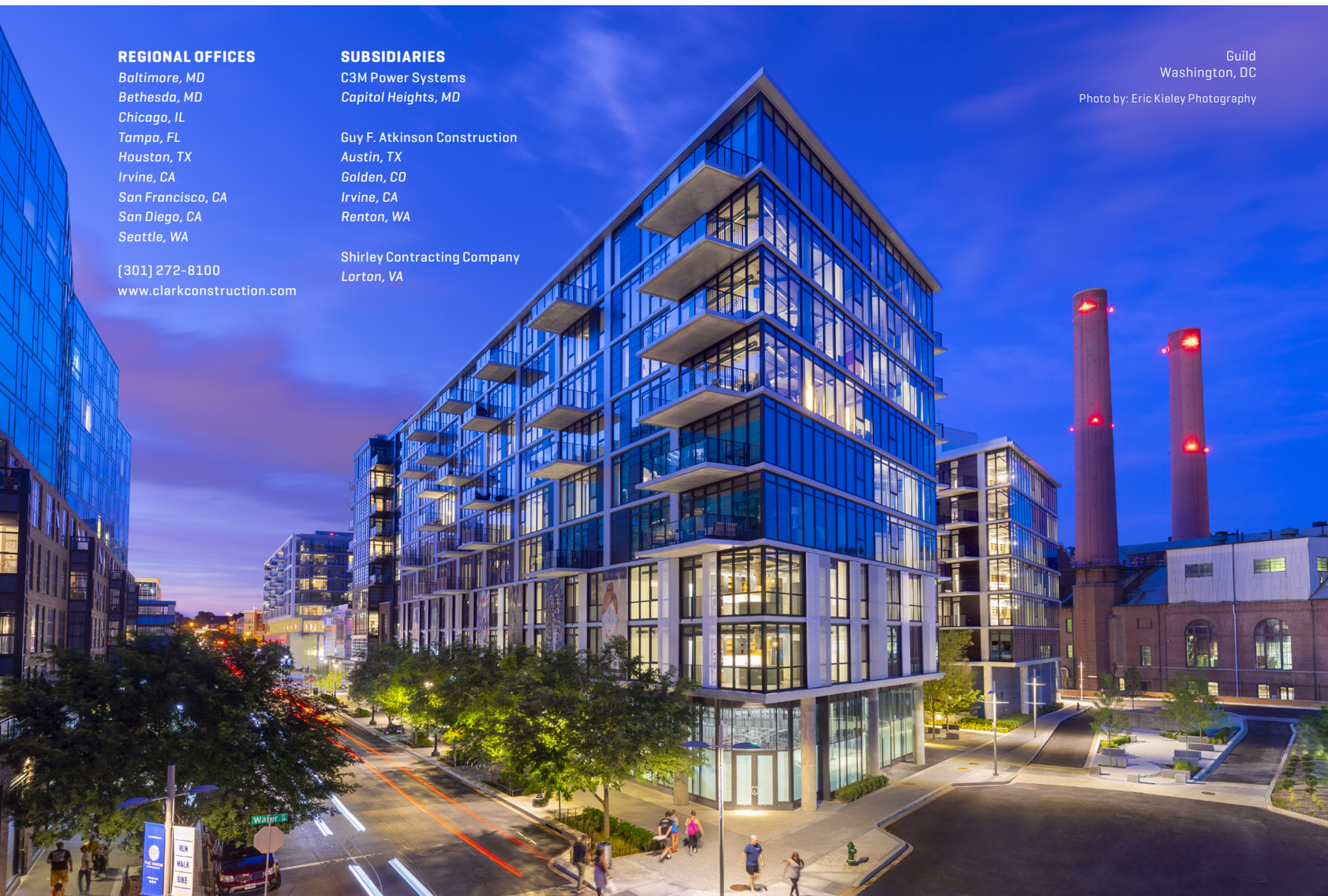

Guild
Washington, DC

Photo by: Eric Kieley Photography