JULY 2025 | ISSUE 46 | QUARTER TWO

NEWSLTR

Faith Group

INTEGRITY
DIGNITY
QUALITY
IMPACT
COLLABORATION
INNOVATION

FEATURES:

TAKE IT ON FAITH: RUN TOWARDS THE PROBLEM

Faith discusses how we recently refreshed our Core Values and Guiding Principles, including "Run Towards the Problem" which emphasizes problem-solving and collective accountability across all levels of the organization.

TECH UPDATE: USE CASES FOR LIDAR INTEGRATION IN AIRPORT SETTINGS

Discover how integrating LiDAR technologies is transforming airport operations, enhancing safety, optimizing efficiency, and improving the passenger experience.

JEFF CLEMENTS JOINS TEAM AS FEDERAL PROGRAM MANAGER

Meet Jeff Clements, our new Federal Program Manager, who is set to elevate our federal project delivery and client partnerships. Read more about his impactful role and background.

St. Louis Community College
Florissant Valley and Meramec Campus Projects

TAKE IT ON FAITH

RUN TOWARDS THE PROBLEM

Over the past several months, Faith Group has worked to develop new Core Values and refresh our Guiding Principles. Driven by our Marketing Director Loren Boyd and HR Manager Jenna Valjevcic, the team collaborated with members of our Management and Leadership teams to document beliefs that we hold in high regard that will guide the organization's culture and behavior.

One of the added Guiding Principles includes, "RUN TOWARDS THE PROBLEM." When I read that statement, I could not help but think of all the brave men and women who ran toward the problem on 9/11. Public servants like firefighters and police officers are trained to run toward the problem every day – it's part of their job and their culture. But all too often in today's society, many people seem to take the position of "*that's not my problem*." As design professionals, we are challenged with complex problems to solve every day, and it's incumbent on us to RUN TOWARDS THE PROBLEM. We strive to meet our client's expectations by taking the initiative to identify and address the daily issues head-on through open honest engagement with our stakeholders and team members.

Problems typically don't just go away, and the longer they go without action the more challenging it becomes to find a good solution, and on projects we watch our budgets and schedules balloon. No matter your position within your organization, you should always seek to be an active participant in problem-solving.

I firmly believe we either fail or win together, whether it's finishing a client's project by their funding deadline, working internally to create a new service line your client needs, or solving a complex engineering issue. We make it a priority to RUN TOWARDS THE PROBLEM and be a positive contributor to the team's success.

IN THIS ISSUE:

IN THE NEWS: RECENT WINS

AVIATION

- Automated Access Control System Phase 2 - Terminal D as a subconsultant to AECOM
- Gate Expansion Design for Metropolitan Knoxville Airport Authority as a subconsultant to CHA Consulting
- SRA for RWY 9-27 Mill Grind and Re-groove for George Bush Intercontinental Airport as a subconsultant to Atkinsrealis
- Administration Building PM Support and CA Services for Philadelphia Northeast Airport
- Initial Pre-Construction Services for Lobby and Check-In Evolution at Dulles International Airport
- Airport Management System Reconfiguration for Aircraft Parking for San Francisco Airport as a subconsultant to McCarthy
- New Terminal One Phase B at JFK International Airport as a subconsultant to luis vidal & Woods Bagot JV
- Neutral Host DAS Consulting for Columbus International Airport
- Terminal D Lower-Level Exhaust Ventilation HVAC Technical Peer Review for DFW International Airport as a subconsultant to Gensler
- Camera Replace Comprehensive Assessment for Jackson Evers International Airport
- Air Traffic Control Tower for Shreveport Airport as a subconsultant to Corgan

FEDERAL

- F35 Maint. and Test Hangars for Eglin AFB as a subconsultant to RS&H
- Renovate Bldg. 44 at Ft. Leavenworth for USACE Kansas City as a subconsultant to Benham
- SOF HQ Building at Ft. Carson for USACE Omaha as a subconsultant to Benham
- B225 Renovation at Altus AFB for USACE Louisville as a subconsultant to Benham
- IDC for AE Services to Support USACE South Atlantic Division Military Design & Construction Program for USACE Mobile District as a subconsultant to CEMS
- Robert E. Bush Hospital at Camp Pendleton for USACE Little Rock as a subconsultant to SES Construction

GOVERNMENT

- Video Surveillance System Consulting & Design for City of Fresno as a subconsultant to Swinerton
- Police and Emergency Service Facility for the Village of New Baden (IL) as a subconsultant to FGM Architects
- Remann Hall Security Electronics Study for Pierce County

EDUCATION

- Campus Access Controls & Security Systems Upgrades Consultant for Oakland University

FOCUS: FEDERAL

ELLINGTON FIELD JOINT RESERVE BASE - CONSOLIDATED MAINTENANCE FACILITY

Faith Group takes great pride in our ongoing work to support the warfighter and improve the security posture of the United States. As part of this growing vertical, Faith Group recently began supporting the Benham/ Mead & Hunt Joint Venture for the design of a consolidated maintenance facility to support the 147th Attack Wing (ATKW) based out of Ellington Field Joint Reserve Base (JRB) in Houston, Texas. This program, with an estimated construction cost of $50M, will create a purpose-built 70,000 square foot, properly configured space to house the MQ-9 Reaper aircraft for the Texas Air National Guard. This facility will be a high bay maintenance facility with the inclusion of the maintenance shops, machine shops, equipment storage, administrative offices and the security forces operations which include a vault, locker room and administrative offices.

The 147 ATKW continuously flies combat support missions via advanced satellite communications, thus providing surveillance, reconnaissance, and air support for US and Allied forces. In conducting combat support sorties, the 147 ATKW provides theater and national-level leadership with critical real-time Intelligence, Surveillance, and Reconnaissance (ISR) and air-to-ground munitions and strike capability.

As part of the A/E design team, Faith Group is the designer of record for all telecommunications, low voltage and electronic security systems, and supports the entire design program for cybersecurity consulting support. This is a vital design role to meet the advanced technology requirements of the Texas Air National Guard, and United States Air Force as a whole, as we must design not only for today's mission, but also the technology needs of next generation aircraft. Our design team ensures that the end user is physically safe and secure, while having the technological capability to quickly and efficiently maintain a highly advanced squad of MQ-9 Reaper drones. Faith Group is proud to be able to use our engineering expertise in support of these warfighters who continuously defend our nation.

MQ-9 Reaper Drone

Arun Pillai, PMP
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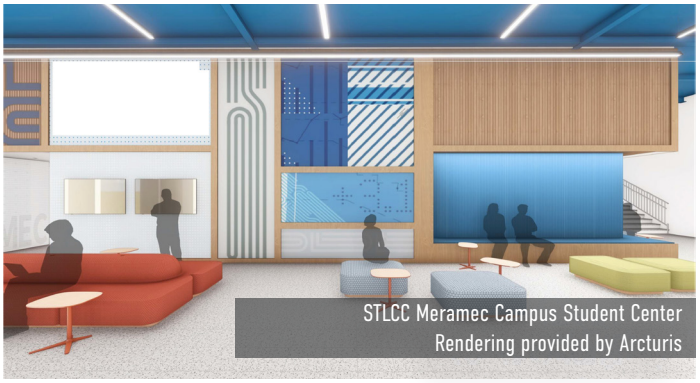
FOCUS: EDUCATION

SAINT LOUIS COMMUNITY COLLEGE (STLCC) - CAMPUS IMPROVEMENTS AT FLORISSANT VALLEY AND MERAMEC CAMPUSES

Faith Group recently completed two projects for the STLCC Florissant Valley Campus. As a partner to JEMA, Faith Group provided mechanical, electrical, plumbing, fire protection and low voltage (MEPFP-LV) systems design for the new Advanced Manufacturing Center (AMC). This 3-story state-of-the-art facility is part of the STLCC Transformed District-Wide Master Plan to ensure the college's programs and facilities can meet the job training demands in Missouri. Additionally, Faith Group provided engineering design for a full renovation of the existing 30,000 sf Student Center. The renovation included a new central learning staircase and rework of the MEP-LV systems throughout the facility.

Currently, we are working as a subconsultant to Arcturis for a full renovation of the existing 50,000 sf Student Center, and demolition of the Continuing Education and Police buildings at the STLCC Meramec Campus. The facility houses administrative spaces, dining spaces, kitchen and servery, studying and continuing education spaces, and miscellaneous student life office suites. Faith Group is providing mechanical and electrical design and consulting services for MEPFP-LV systems and are overseeing the design process for the Campus's Central Utility Plant.

The existing central plant provides chilled, heated, and domestic hot water to the campus through the tunnels and houses the main medium voltage switch gear that supports campus-wide distribution. The project consisted of the replacement of the main campus switchgear, boilers, cooling towers, and pumps. To keep the campus online, the central plant was designed with phased construction. Faith Group is providing bid phase support and construction administration services during the construction phase of the project, which is set to be finalized in mid-2026.



STLCC Meramec Campus Student Center
Rendering provided by Arcturis

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JEFF CLEMENTS JOINS TEAM AS FEDERAL PROGRAM MANAGER

Jeff Clements, OCSMP
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Faith Group is pleased to announce that Jeff Clements has joined the firm as our Federal Program Manager. He brings more than 20 years of federal government experience, directly supporting the U.S. Navy under the Naval Information Warfare Command. As an Object Management Group (OMG) Certified Systems Modeling Professional (OCSMP), he brings a model-based systems engineering approach that will enhance Faith Group's ability to deliver integrated, scalable, and technically rigorous solutions across its federal market.

"We are very excited to welcome Jeff Clements to the team as our new Federal Program Manager. Jeff's past experience with NAVESS will prove to be a key asset towards our growth in the Federal market and help our disciplines expand services with a systems and client-focused perspective," said Ryan Walsh, Principal & Director of Engineering.

In this pivotal role, Jeff will lead and oversee Faith Group's Federal Market portfolio, including both projects and client relationships. His role will encompass full lifecycle project delivery while supporting strategic growth and business development efforts within the Federal sector.

"I am thrilled to be joining Faith Group, LLC as their Federal Program Manager. I look forward to enhancing and extending their support of Federal and Department of Defense (DoD) agencies across the many facets of services provided by Faith Group. I am also pleased to be extending my career of supporting the DoD and other Federal programs in their continued pursuit of excellence in engineering and technology. My goal is to quickly become a value-added asset to the firm in their continually increasing support of Federal tasking," said Jeff Clements.

Read our full press release HERE.

AWARDS

3RD PLACE IN ST. LOUIS BUSINESS JOURNAL BEST PLACES TO WORK

We are honored to share that for the second year in a row, Faith Group has been recognized by St. Louis Business Journal as a Best Place to Work, by placing 3rd in the Medium Company category!

Click HERE to read the full award profile!

ZACH VARWIG RECOGNIZED AS RISING STAR

We are proud to share that Owner/Principal, Zach Varwig has been recognized as one of Zweig Group's 2025 Rising Stars in the AEC Industry! The Rising Stars program shines a spotlight on standout young professionals who are shaking up the AEC industry in the best way possible. This is a huge accomplishment, as this year's group was the biggest yet, featuring 25 emerging leaders from 21 firms and 15 different states.

Click HERE to read his full award profile!

NAMED TOP ENR MIDWEST FIRM

For the second year in a row, Faith Group has been featured on the ENR Midwest Top Design Firms List! This list ranks the largest U.S. based design firms both publicly and privately held, based on design-specific revenue generated for work in the Midwest states. This year, Faith Group was listed at #109! One of our qualifying projects was the St. Louis Community College (STLCC) Meramec Campus Renovation & Demolition with a project cost of $15M.

FAITH GROUP AND SAEFIX LEAD PANELS AT HEXAGON LIVE ON DIGITAL TWIN

Faith Group and our sister company, Saefix, had a strong presence at Hexagon Live in Las Vegas and were proud to contribute to the innovation and collaboration that define this global event.

Rick Adams spoke on two panels centered around digital twins. The first explored how digital twin technology is reshaping operations and driving smarter decisions. The second panel, he was joined with Marc Whalen, CRO of Saefix, to dive into how digital twins are transforming infrastructure security and safety strategies with real-time, data-driven simulations.

FAITH GROUP, SAEFIX, AND HEXAGON: THE FUTURE OF SECURITY IN ACTION

At Faith Group, we partner with innovative product providers like Hexagon to meet our clients' evolving integrated solution needs. Together with Saefix, LLC, we recently hosted Hexagon in our St. Louis offices to showcase how, together, we're bringing smarter, safer infrastructure to life with a focus on LiDAR, digital twins, and sensor fusion.

At the center of this demonstration was HxGN dC3, Hexagon's integrated physical security platform that fuses data from sensors, cameras, and systems into a unified, real-time view - enabling faster response, deeper insights, and future-ready situational awareness.

This collaboration reflects our shared commitment to combining deep subject matter expertise with innovation — helping critical infrastructure clients with situational awareness and operational efficiency.

Click HERE to learn more about HxGN dC3 by watching the full video!

LINDA GEDEMER SHARED ACOUSTICS & VIRTUAL REALITY INSIGHTS AT INFOCOMM 2025

Earlier this June, our AV Engineering Manager, Linda Gedemer, PhD shared her expertise at InfoComm 2025 in Orlando. Linda led two interactive workshops on acoustics. These sessions walked through the principles of sound and its behavior in built environments, offering insights that spanned from scientific fundamentals to practical applications.

She also moderated a forward-thinking panel discussion on virtual reality as a collaboration tool, exploring how immersive technologies are reshaping the way we work, learn, and communicate.

Additionally, Linda made a guest appearance on Avixa TV's podcast, The Tech Effect, to share a recap of technology at this year's conference. Click HERE to view the full podcast.

FROM CONSTRUCTION TO CELEBRATION: BNA HOLDS PRE-OPENING RECEPTION FOR CONCOURSE D EXTENSION

On July 1st, Principal and Director of Engineering, Ryan Walsh, attended an exclusive pre-opening reception held by the Metropolitan Nashville Airport Authority (MNAA) and the Arts at the Airport Foundation. The reception was for the new Concourse D Extension at Nashville International Airport (BNA). The Concourse D extension is the first major project completed under BNA's $3 billion growth and renovation plan, New Horizon.

The event offered guests a "first look" at the expanded terminal during a cocktail reception, with opening remarks from MNAA CEO, Doug Kreulen, a visual storytelling of BNA's past, present and future by country artist Trace Adkins. ribbon-cutting, and self-guided tour. Designed to support Nashville's growing air travel demand, Concourse D marks a major step in the airport's continued transformation. Faith Group provided low voltage design for IT and security systems as a subconsultant to Fentress/Hensel Phelps Design-Build team.

TECH UPDATE: USE CASES FOR LIDAR INTEGRATION IN AIRPORT SETTINGS

System and software applications are evolving rapidly, especially in busy airport hubs across the country, serving 2.7 million Americans daily. So how do we maintain public safety in areas that are this crowded? By consistently innovating our products and utilizing them in scenarios related to public safety and security. One way Faith Group is reshaping aviation security is through the utilization of LiDAR, a remote sensor system capable of capturing highly detailed 3D models of real-world objects and environments.

The financial stakes of accurate infrastructure documentation cannot be overstated.

A STUDY BY AUTODESK AND FMI SHOWS INADEQUATE PROJECT DATA AND COMMUNICATION ERRORS CONTRIBUTE TO 48% OF ALL CONSTRUCTION REWORK IN THE U.S., REPRESENTING AN ESTIMATED GLOBAL INDUSTRY LOSS OF $88.69 BILLION.

This staggering cost underscores the critical importance of precise pre-construction surveying and documentation in complex environments like airports.

This article will explore the diverse applications of LiDAR technology in airport environments, from security, traffic management, and emergency preparedness, to its powerful use as a surveying and commissioning tool.

LiDAR Use Cases in Airport Environments
There are many variables that come into play when considering security and the flow of people throughout an airport, and LiDAR technology is instrumental in addressing these challenges. The versatility of this technology enables multiple applications that enhance both operational efficiency and passenger safety.

1. **Traffic Flow and Curbside Analytics** In situations with high vehicle traffic outside of airport terminals, LiDAR can be utilized for curbside analytics, detailing the total number of vehicles capable of being parked. LiDAR sensors deployed on the exterior of an airport facility monitors the arrival and departure of vehicles, tracking overall traffic flow patterns. Whenever this influx of traffic reaches extreme highs, airport employees can be deployed to these congested areas to keep the flow of traffic moving, ensuring more vehicles are able to drop off passengers efficiently.

2. **Asset Tracking and Resource Optimization** LiDAR excels at asset tracking, such as pinpointing designated areas to retrieve wheelchairs for disabled individuals needing assistance. The technology can highlight wheelchair ADA access points to determine the number of wheelchairs always needed in specific zones, which in turn optimizes resource allocation and streamlines airport operations in drop-off areas.

3. **Emergency Preparedness and Response** LiDAR technology is invaluable for enhancing airport security and emergency preparedness in the event of natural disasters. By generating accurate 3D models of the airport environment, LiDAR can develop simulations that track the movement of people in real-time and identify optimal evacuation routes for passengers in congested airport zones. This "digital twin" of the airport allows personnel to run "what-if" scenarios in software for events like fires, earthquakes, or other extreme circumstances. LiDAR can then be integrated with the Airport Emergency Plan (AEP), providing a platform for personnel to test emergency response factors to mitigate harm to passengers in any future airport emergencies.

4. **Targeted Messaging and Passenger Guidance** LiDAR's capabilities extend to both security management and targeted advertising in airport hubs. By tracking crowd levels and people flow between zones, LiDAR makes digital advertising more efficient by adjusting relevant content so it reaches the right audience at the right time. Additionally, LiDAR technology can direct passengers to the nearest exit points in their zones by providing real-time guidance based on their location.

These use case scenarios highlight LiDAR's power in optimizing security and safety systems while increasing the overall airport experience for passengers. However, one of the most critical applications of LiDAR technology lies in its surveying capabilities, which form the foundation for all successful airport infrastructure projects.

LiDAR and Photogrammetry for Survey Work
Before any major construction, renovation, or security upgrade project can begin, accurate documentation of existing conditions is essential. Every construction

project encounters deviations from the initial plans, challenging contractors to maintain an up-to-date log of all the adjustments and corrections applied throughout the construction phase. Traditional survey methods often fall short in capturing the complexity and detail of modern infrastructure.

Understanding the Technologies
Pre-construction survey work has evolved from manual measurement techniques using rods, chains, and compasses, to sophisticated digital capture methodologies. Modern airports present unique challenges with expansive terminal buildings, complex airfield infrastructure, and critical security requirements that demand millimeter-level accuracy combined with comprehensive spatial documentation.

Photogrammetry - excels in capturing high-resolution visual data of textured surfaces, building facades, and areas with clear line-of-sight visibility. The technology utilizes specialized software to stitch together each photograph, enabling the creation of detailed orthophoto maps, digital surface models, and photorealistic 3D models with texture, shape, and color information. Data collection requires careful attention to camera stability and image overlap ratios to maintain complete coverage and optimal post-processing workflows.

LiDAR technology - complements photogrammetry by providing active laser-based measurements that function independently of lighting conditions and can penetrate vegetation coverage to reveal underlying terrain features. The system emits hundreds of thousands of pulses per second, reflected off surfaces, to generate detailed point cloud data with exceptional vertical accuracy down to 3 cm. This active sensing approach excels at documenting complex infrastructure where traditional photogrammetric methods might be limited by shadows, reflective surfaces, or obstructed views.

Tools and Equipment
The modern approach to pre-construction surveying employs a hybrid methodology that leverages both photogrammetry and LiDAR technologies to maximize accuracy while optimizing cost and time efficiency.

Ground Scanning Equipment:
- **LiBackpack Systems:** Mobile LiDAR units that enable comprehensive surveying of complex indoor and outdoor environments where traditional terrestrial scanners face accessibility constraints
- **Handheld LiDAR Scanners:** Portable devices for detailed capture of specific features and hard-to-reach areas
- **Terrestrial Laser Scanners:** High-precision stationary systems for detailed structural documentation

Aerial Platforms:
- Drones with LiDAR: Efficient documentation of large outdoor areas, parking structures, and airfield infrastructure
- Multi-Drone Photogrammetry: Coordinated aerial image capture for comprehensive site coverage

Photogrammetry Equipment:
- Digital Single Lens Reflex (SLR) Cameras and Tripods: Professional-grade terrestrial photogrammetry for detailed architectural documentation
- Specialized Photogrammetry Software: Advanced processing systems for point cloud generation and 3D model creation

Integration with Cx Software
Three-dimensional survey assets can be imported and integrated into popular construction planning software platforms like ProCore and specialized commissioning applications. The result is centralized data management, progressive tracking through project phases, and ease of validation against as-built documentation. This integration enables seamless workflows from initial survey through final commissioning, ensuring all stakeholders work from the same accurate baseline data.

Data Flow Between Survey Data and Cx Platforms
This streamlined data flow ensures that accurate survey data flows seamlessly from field collection through final project delivery, maintaining data integrity and enabling real-time project coordination across all stakeholders.

Six-Phase Approach to Planning a Survey Scan
The implementation of a comprehensive pre-construction survey begins with detailed planning that considers site-specific conditions, accuracy requirements, and project deliverable specifications. Optimal accuracy relies on meticulous route planning, consistent equipment handling, and post-processing techniques. Surveyors can use a LiBackpack, a DSLR, or both devices in combination, dependent upon project requirements.

You can read more HERE on the detailed, recommended six-phase approach to implementing comprehensive survey scanning.

Conclusion
The integration of LiDAR technology in airport settings provides airports with the necessary capabilities to aid in overall efficiency, physical security, and safety. From analyzing curbside traffic flow and streamlined asset tracking, to detailed "digital twins" and targeted messaging, the diversity of LiDAR's applications can address many issues seen in modern airport hubs daily.

When combined with advanced photogrammetry techniques and integrated with commissioning software, LiDAR becomes an even more powerful tool for comprehensive project and construction management that can help airports and project teams deliver infrastructure programs with precision, efficiency, and less project risks.

Faith Group can help with implementing these advanced surveys, integration solutions, and ultimately the transformation of raw data into actionable project assets within commissioning software platforms for airport clients seeking to modernize their infrastructure documentation and commissioning processes. If you would like to learn more, please reach out to us, and we can start by providing consulting services to assess your site-specific requirements. Leveraging LiDAR technology remains at the forefront of our project delivery strategy as a part of our core value of being an innovation leader.

See the full blog and reference sources cited HERE.

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