

HORIZONS

GIVING BACK TO THE COMMUNITY

SALT LAKE CITY COMMUNITY COLLEGE PROJECT



This unusual college contributes to the community, and to Utah, by offering local training in multiple trades. There are not enough schools turning out trained trades people to keep up with demand; graduates of SLCC will help meet those demands.

A SHOWCASE OF INNOVATIVE DESIGN AND CONSTRUCTION

Much of the equipment that students will use was moved from existing facilities, so careful inventory evaluation and detailing of every piece of equipment was required to be sure that it was appropriate for the new facility and fit its infrastructure. To achieve the vision, Harris used multiple processes that are more commonly seen in industrial settings, ranging from:

Diesel engine repair, paint booths, plastics and composites fabrication, machining and finishing, welding and all the services that those processes require, including:

- Ventilation
- Fume and dust exhaust
- Compressed air
- Vacuum
- Welding gases
- Ovens
- Quench tanks
- Resin hoods

All these training areas were created in one building and designed for students to learn specific skills. The project was delivered while achieving an energy cost reduction of 70% from the ASHRAE baseline, through efficient mechanical and lighting systems, controls, a well-insulated envelope and solar photovoltaic panels. We are pleased to report that there were zero safety incidents from start to finish of the project, and it was awarded a “Most Outstanding Project” by *Utah Construction & Design Magazine*.

HARRIS RATES AMONG INDUSTRY PEERS NATIONWIDE

The *Engineering News-Record* (ENR) has released its annual list of top 600 specialty contractors for 2018. We are pleased to report that Harris once again ranks near the top in two categories. Nationally, Harris ranks #12 among the top 50 mechanical firms in the country, and #53 on the top 600 specialty contractors list. Harris is thrilled to be recognized by ENR once again this year.

(ENR provides engineering news, analysis, commentary and data for construction industry professionals.)



A HOLIDAY MESSAGE FROM GREG HOSCH, CEO



GREG HOSCH
CEO

We wish you a happy holiday season, as you celebrate the traditions that are special to you! And, as the year draws to a close, we want to thank you for your ongoing partnership with Harris. Whether you are a current or past client, a contracting partner, or someone we'd like to work with in the future, we value the chance to build and continue a relationship with you ... again and again.

It's been quite a year for Harris; perhaps most notable was transitioning from 19 companies with a variety of names to one brand and one name: Harris. Our goal? A consistent, more efficient way of doing business across the company, leveraging each division's talents nationally, and having an easily recognized presence in each of our markets. Also in 2018, we welcomed DiamondB contractors in Bellingham, Washington to the Harris family. This strengthens our nationwide footprint and offers local service to the upper West Coast. Over the course of the next year, DiamondB will transition to the Harris name as well.

While Harris continues to grow its local, regional and national presence, the picture isn't all rosy for the construction industry. In this issue you'll read about a current trend that impacts the construction industry: the graying of the workforce. We hope you find this issue insightful and useful.

MERKLE COMPLETES FIVE DECADES OF SERVICE

After more than a half century, Ronald E. Merkle is retiring for the second time. Ronald originally served RM Thornton Mechanical (now Harris) as a steamfitter for most of his career. His impressive body of work includes iconic projects such as the Washington National Cathedral and The Kennedy Center, and a highlight of his career was when he received the Washington Building Congress Craftsmanship Star Award for a National Institutes of Health chillers installation.

Ronald retired once, but later returned to Harris, this time as a safety officer. For the last 10 years, he oversaw the safety training programs that ensure workers have the mindset, tools and knowledge to create an injury-free work environment. A goal shared by all of Harris, Ronald strived to establish a Zero Incident Workplace at the company each and every day. We will miss this well-respected, dedicated man and hope that his retirement, like his workplace, is "incident free."



RONALD E. MERKLE
FORMER SAFETY OFFICER

PROJECT UPDATES



ANTON HAERING MANUFACTURING PLANT

Lavonia, Georgia



Germany-based automotive parts manufacturer Anton Haering's 170,000+ square foot manufacturing plant is taking shape in Lavonia, Ga. The project, underway for several months, is ready for mechanical, electrical and plumbing systems to be installed by Harris. We expect to finish in early 2019. The project includes office space and an expansive production floor for manufacturing fuel injector parts and other precision automotive components. The plant will create more than 800 jobs in Hart County, Ga. by 2025.

LUKE AIR FORCE BASE

Maricopa County, Arizona

This project consists of an 18,740 square foot airplane hangar that will house four F-35 fighter planes. It includes four air craft cooling units with specialized ductwork and hosing to connect the units to the planes. There are four large HVLS ceiling fans to circulate air through the hangar and two large evaporative cooling units to temper the space. The building has infrared heaters to heat the building. The hangar area has multiple large sidewall exhaust fans for ventilation. The building has two mini split systems for cooling office spaces. There is a small ERV unit included for outside air and general small exhaust. The mechanical piping systems consists of refrigerant piping and condensate piping systems. The plumbing includes PVC below and above grade waste and vent systems; it also includes full domestic water and natural gas piping systems. There is an air compressor with full distribution to the building space for end user use.

EDISON HIGH SCHOOL

Minneapolis, Minnesota

Edison High School in Minneapolis is leading the way for "green" campuses everywhere. Edison rebuilt its grounds with features to protect the environment and provide a real-world learning laboratory for students. Harris Controls played a crucial role in the integration of rainfall collection, storage, irrigation system and other devices. The project – and its success two years after it was launched – is featured on the Mississippi Watershed Management Organization website at MWMO.org.

UNIVERSITY OF MINNESOTA VETERANS MEDICAL CENTER

St. Paul, Minnesota

The U of M Veterans Med project consisted of installing new AHUs, duct, plumbing, medical gas and piping serving the surgical center at the veterans facility. This project with Knutson Construction included a quick turn-around in order to keep the facility's down-time to a minimum.

SAFETY FIRST, LAST + ALWAYS

Harris' safety programs span all our divisions, aligning tradespeople and management toward a zero-injury goal. Harris sustains this environment of incident prevention by creating, tracking and managing a safety-focused culture.

We use the following safety programs: Industry Safe UI, Toolbox Talks, ISNetWorld, Browz, Avetta, Veriforce.

**TO DATE, HARRIS'
DAYS WITHOUT A LOST
TIME INCIDENT:**

637

**HARRIS' EXPERIENCE
MODIFICATION RATE (EMR)**

2015

0.57

2,506,970 HOURS

2016

0.58

3,099,449 HOURS

2017

0.55

2,884,318 HOURS

2018

0.52

2,927,311 HOURS

YEAR TO DATE (11/27/2018)

CONSTRUCTION INDUSTRY ENDURES WORKFORCE SHORTAGE



The global population is increasing, yet there is a lack of people constructing buildings for them. According to the results of an industry-wide survey released by Autodesk and the Associated General Contractors of America (AGC), “Eighty percent of construction firms report they are having a hard time filling hourly craft positions that represent the bulk of the construction workforce.” This workforce shortage threatens the very future of the industry.

One cause is the societal push, in the past few decades, toward earning a college degree. Reece Peterson, a business development manager for Harris, states that “while I was attending high school there was a lot of focus on doing well in academics to attend a four-year college and very little information provided about craft or trade opportunities.” Across the country, many schools offer little information on the trades and some have gone so far as to remove courses, such as woodworking or design, from their curriculums. This lack of engagement in high schools has made it that much harder for construction companies to recruit, entice and retain younger entrants.

Brenda Devlin and April Keizer of Harris’ Human Capital say that this current cultural reality is generational within the industry. Without this potential pool to rely on, once the current workforce retires the industry risks significant and severe losses. This threat could materialize as soon as 2025 if serious changes aren’t implemented.

The generational loss diminished a crucial way the construction industry gains employees organically. Joe Schadt, an industrial construction executive for Harris, states that “there was this link between fathers who have worked in the construction industry and their children following suit; most people today do not have such a background and don’t see trades as being a successful career.” This rings true for Peterson, whose initial interest began with his father’s involvement in building management and construction. This “feeder system” for getting younger people interested in trades has largely gone extinct. So, the industry needs to increase recruiting efforts and outreach in order to survive and grow.

One solution is to double recruiting efforts for construction employees at trade shows and career fairs and reintroduce trades back into the school system. Schadt says it’s about “finding the fix-it guy” and showing them the potential a career in construction can offer. Not everyone has the skills or inclination to attend traditional college, so there’s an opportunity to promote the idea of entering a trade instead of attending a four-year institution.

Devlin mentioned how Weber State in Ogden, Utah has been working with local school systems to offer a CAD Program. Inserting programs like this, and after school programs such as the national program ACE (<https://www.acementor.org/>) and Minnesotan program Construction Tomorrow (<https://constructtomorrow.org/>), is crucial for engaging young minds. If we can nurture interest in the younger generations, the likelihood of them choosing a construction career path rises significantly.

While external factors contribute to the current shortage, there are internal contributors as well. Devlin and Keizer mention the need for an internal culture change — becoming more flexible in our thinking to understand the different needs of outgoing, current and future generations. When asked how Harris is making internal changes, Peterson said, “Harris has done a good job ramping up foreman training and attempting to find leaders within the field staff. These efforts need to continue to retain talent and build a strong field staff.” Emphasizing a safe, skilled and sustainable workplace and demonstrating that the industry provides great benefits, provides growth and internal security moving forward will ensure stability and success in the coming years.

A key element to the solution is the growth of technology. ACG’s survey results show that, “Twenty-five percent of companies are adopting methods to reduce on-site work time, such as lean construction, virtual construction, off-site prefabrication and BIM. An equal percentage are employing labor-saving equipment like drones, GPS, laser-guided equipment and 3D printing.”

The more technologically advanced construction companies become, the more interesting the industry looks to the young and tech savvy. Peterson discussed how the integration of these new technologies will increase safety, productivity and efficiency. For example, using on-site integrations of 3D printing and robots to help tackle complex problems and perform routine work that doesn’t necessarily need the human touch.

Solving the workforce shortage is a multifaceted puzzle. Enhancing training and education in public schools, ramping up outreach and recruiting, and reinforcing cultural dynamics are all important pieces to ensuring the industry’s future. As each company strives to build and foster these elements, the industry will continue to grow, expand and thrive in the modern world.

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