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# HARRIS HORIZONS

Summer 2015

PLUMBING | PROCESS PIPING | HVAC | REFRIGERATION | CONTROLS | SERVICE | CONVEYORS | ENERGY SOLUTIONS

## U.S. Bank Stadium, Minneapolis



## Minnesota's U.S. Bank Stadium Takes Shape

As of July 1st, Harris Companies' work on the U.S. Bank Stadium is 60% complete. Overall, the project is on schedule to meet its completion goal of July 29, 2016.

U.S. Bank Stadium is a one-of-a-kind project. The building's signature roofline is meant to evoke the bow of a traditional Viking ship. The clear, ethylene tetrafluoroethylene (ETFE) roof will be the largest of its kind in the world and will give fans the feeling of an outdoor stadium, while protecting them from Minnesota's unpredictable weather.

At this time, more than 130 Harris sheet metal workers, plumbers, and pipefitters are working on the building. On the west side of the site, earthwork and underground plumbing continues despite heavy rains. On the north side, 50% of the roof decking has already been installed. The transparent ETFE roof installation is beginning on the south side. Catwalk duct installation

is nearly complete. The building's steel super truss is almost in place and will support the weight of the asymmetrical roof-line.

### STADIUM FAST FACTS

- 22 miles of HVAC piping
- 44 miles of plumbing piping
- 15 miles of snowmelt tubing
- 2.4 million pounds of HVAC ducts
- 2,250 plumbing fixtures

In keeping with original goals, all mechanical systems are being modeled, fabricated, and preassembled before arriving at the stadium. Eighty percent of prefabricated skids are now on-site and in place. Tested systems are helping to alleviate space issues and work continues within the tight schedule.

### Progress Update of Significant Work

- *Upper bowl duct hung off of the catwalk is near completion.*
- *Event Level multi-trade (mechanical, electrical, plumbing, and fire protection) pipe rack is 80% tested and installed.*
- *Ninety percent of the building's air handling units are set in place. At least 16 of these will provide temporary heating and cooling by fall 2015.*
- *Upper gutter snowmelt system installation began June 1st. The 80,000 square foot snow catchment will contain and melt all snow that slides off the roof.*

Modeling and coordination of all mechanical, electrical, and plumbing systems is essentially complete. We look forward to seeing the work come to life as the year progresses. Watch the stadium as its presence grows on the Minneapolis skyline. 

## A MESSAGE FROM THE CEO



*I wrote a short article for the May 18th, 2015 issue of ENR Magazine that featured a section on stadiums. Here is an edited version of that piece.*

Today's architects are pushing boundaries in the design of entertainment venues. Simple, round buildings are being replaced by structures with curves, angles, and very few repeated walls and windows.

These signature structures create challenges to those responsible for designing and installing all the mechanical, electrical and plumbing systems within tight budgets and tighter timelines. For these complex structures, the proper intersection of teamwork and technology is crucial for completing tasks on-time and on-budget. Technology, specifically advances in building information modeling (BIM), drives fast-track schedules, safety and quality.

Venues such as the U.S. Bank Stadium could not have been built 20 years ago within the current budget and scheduling constraints. With BIM, we're able to complete more complex

prefabricated assemblies. In fact, we take modeling to the finest level of detail, modeling everything down to the smallest duct and pipe. Our modeling practices have allowed us to virtually eliminate pipe cuts in the field. With BIM and high accuracy modeling, pieces just fit.

Technology enables complex projects, but teamwork—the interaction of BIM designers, prefabricators and installers—is the differentiator which effectively streamlines field activities. Now, we're finding that it's just as important to pull information from the jobsite as it is to push it out to the field. Our foremen regularly have 3D intelligent models pulled up on a screen in the jobsite office to review complex installations with the field team. Mobile devices are a big part of their work as well. On large, complex stadiums and arenas, we look to partner with a general contractor who is able and willing to use technology to orchestrate jobsite activities, thereby making it possible to complete increasingly complex jobs to the satisfaction of our customers. ▲

Greg Hosch, CEO

## DIVISION SPOTLIGHT

*Each quarter, a different Harris division will get a chance to highlight a unique story.*

### Interning at Harris Mechanical



Intern Trent Heuer with CEO Greg Hosch, Construction Executive Alan Andert and interns Grant Schoen, Zach Rolf and Kelly Lechowski.

This summer, four college students are gaining work experience in mechanical engineering and construction management at Harris jobsites around the Twin Cities. The summer's focus is on safety and on-the-job experience. After taking the OSHA 30 Course, Harris Safety Training and safety training for individual job sites, interns are ready to work with office and field mentors to complete their summer projects. ▲

## ZEROING IN ON SAFETY

Dan Kent  
Corporate Safety Director

### Summer Safety Is No Accident

At Harris, safety is our number one priority. The proper training and consideration are crucial parts of every employee's skill set. By now, you may be the safest person on the job, but do you continue to think about safety once you leave work? Here are just a few tips from our Summer Safety Contest to help you have a fun and safe summer. Thanks to everyone who contributed.

"Little ones should always wear a life vest when out on the boat. Safe is never sorry." – *Jared Cozzolino, Superior Air Handling, Utah.*

"When working in the garden on a hot, sunny day, drink water frequently, wear a hat and take breaks. Better yet, work in the garden early in the morning when it is cooler" – *Rodney Bechard, Minneapolis field worker*

"Sun screen. Motorcycle helmets when riding the dirt bike. Drink water, lots of water." – *Matt Barber, Harris Controls.*

"Hearing protection is a sound investment." – *Rob Basch, Harris Companies.*

"Be sure to check yourself well for ticks after being outdoors." – *Gordy Beaman, Minneapolis plumber. ▲*

## RM Thornton Mechanical

Montgomery County Multi-Agency Service Park  
Montgomery County, Maryland

RM Thornton Mechanical has been selected as the mechanical partner for work on the Montgomery County Multi-Agency Service Park. The 9.5 million dollar contract includes HVAC and plumbing for the Main Building and the Fleet Maintenance Building. RM Thornton will also complete ventilation and plumbing work for several storage and service buildings. Central Plant work began July 15th with underground work slated for mid-October.

Washington Metropolitan Area Transit Authority (WMATA)  
Washington D.C.

RM Thornton Mechanical has been selected to remove and replace five chillers at three WMATA locations. The WMATA runs the Washington Metro, America's second busiest subway. RM Thornton will replace the associated pumps, immediate piping and accessories. The project includes the installation of refrigeration monitoring and ventilation systems as well as the refurbishment of parts of the existing cooling towers. The work will also cover the associated electrical, control, water chemical treatment, duct work and insulation involved. Start date is October 15th.

## Wasatch Controls

University of Utah, SJ Quinney Law Building  
Salt Lake City, UT

Wasatch Controls is completing the BMS controls on the new 155,000 sq. ft. LEED Certified SJ Quinney Law Building. The project consists of "chilled beam" heating and cooling, a radiant floor heating and cooling system and a heat recovery system to transfer the heating and cooling provided by a direct evaporative section from the exhausted conditioned air to the fresh air intake. The project also utilizes a 375,000 gallon thermal buffer tank which can be recharged with irrigation or chilled water to help save energy.

University of Utah, Marriott Library  
Salt Lake City, UT

Wasatch Controls is beginning Phase two of the controls retrofit project at the Marriott Library at the University of Utah. This project is a team effort between Wasatch Controls and Harris Mechanical Intermountain. Phase two consists of retrofitting controls and valves on 433 VAV boxes and 80 baseboard heaters. The project also consists of removing all mechanical piping in the Special Collections Vault.

## Harris Mechanical

District Cooling St. Paul Cooling Tower Replacement Project  
St. Paul, MN

Harris Mechanical has been selected as the prime contractor on the District Cooling St. Paul's Cooling Tower Replacement Project. After demolition of the old towers, three new fiberglass-framed cooling towers will be installed. Key subcontractors under Harris include electrical, sump basin construction, cooling tower erection and demolition. Ground-breaking is scheduled for October 1st, with the first tower operational by December 18th.

## OTHER NEWS

### Superior Air Handling

International Group of Lean Construction (IGLC) Invites SAH Speakers to Conferences

Superior has authored two papers for the International Group of Lean Construction Conference, which was held in Perth, Australia in July. Superior's papers were well received and the team accepted an invitation to present the studies. Dr. Patricia Tillman of Superior spoke at the IGLC Conference in Australia and Zach Sargent will be speaking in Boston this August. Congratulations!

## ACE Mentor Program

The ACE Mentor Program gets teams of high schoolers excited about careers in architecture, construction, or engineering (ACE) fields. Mentors from ACE fields support the teams and help the students gain hands-on education as they complete an ACE project. Professionals from Harris Controls have mentored since 2012. "Mentoring for me was a great way to pass on the knowledge that I have on to [the kids] and help out with the mechanical/automation phase of the project," says Matt Barber. Matt's school took second place in their contest. Great job!

## Taryn Fischbach: Apprentice Pipefitter, Harris Mechanical

The Association of Women Contractors (AWC) awarded Harris Mechanical's Taryn Fischbach a scholarship to help her continue her pipefitting apprenticeship. Each year the AWC awards scholarships to women attending college, technical or trade school in construction-related fields. This is the second year Taryn has been awarded this honor. Congratulations!

## Harris Healthcare Certification

Harris Mechanical Southwest has certified the team in the Harris Healthcare Certification Program. The program improves awareness of the special considerations that must be followed while performing work in healthcare facilities in order to improve the quality of patient care. Trainees also become familiar with codes and guidelines for all healthcare related construction activity.

## Hearts & Hammers

Volunteers from Harris St. Paul partnered with Kraus Anderson Contractors and Hearts & Hammers to help fix up several Minneapolis houses this past May. Through its Program Days, Hearts & Hammers connects disabled and senior homeowners with volunteer painters, carpenters and landscapers.

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To submit comments and suggestions, email [marketing@hmcc.com](mailto:marketing@hmcc.com).  
Would you like to receive the electronic version of Harris Horizons? Email [marketing@hmcc.com](mailto:marketing@hmcc.com).

## EMPLOYEE SPOTLIGHT

### 2015 Jerry Dalton Award Winner Susan Marston, Controller | Superior Air Handling



Jerry Dalton was an exemplary Harris employee who passed away about 15 years ago. In his honor we created the Jerry Dalton Award, an annual symbol of gratitude for those who continue the tradition of integrity and dedication at Harris Companies. Each year the recipient is awarded \$1,000 and has their name added to the Jerry Dalton Awards plaque in the St. Paul office.

This year's winner is Susan Marston, Controller at Superior Air Handling. Congratulations, Susan!

Born in Payson, Utah, Susan Marston has been with Superior Air Handling about 26 years starting in October of 1989 as a secretary in the Clearfield office and moving to the accounting manager position in 1994. In her years with the company, Susan has been through many transitions including a change of company ownership from JWP (now EMCOR) to an employee-owned company in 1997 and the subsequent acquisition of Superior by Harris Companies in 2008.

"I am appreciative of the strengths that the Harris Companies acquisition initially brought to Superior and continues to provide. The support provided by the management, accounting and office teams in St. Paul has been a valued asset to Superior over the last seven years."

Susan's hard work and dedication have established her as a pillar of the company. Anyone who has the pleasure of working with Susan will tell you how her level of precision, efficiency, and professionalism motivates others to step up their own endeavors. "I have enjoyed the associations with many talented individuals at Superior over the years who have shared their knowledge and expertise," Susan says. "I am appreciative of the great team that we currently have at Superior and I am proud to play a part in it." Life beyond work includes Bart, Susan's husband of 27 years to whom she credits invaluable love and support in all of her endeavors, her daughter Chantelle, sons Matthew and Skyler, daughter-in-law Jenni, and grandson Owen who all live in Utah. Her hobbies include digital scrapbooking, crocheting and jewelry-making. 