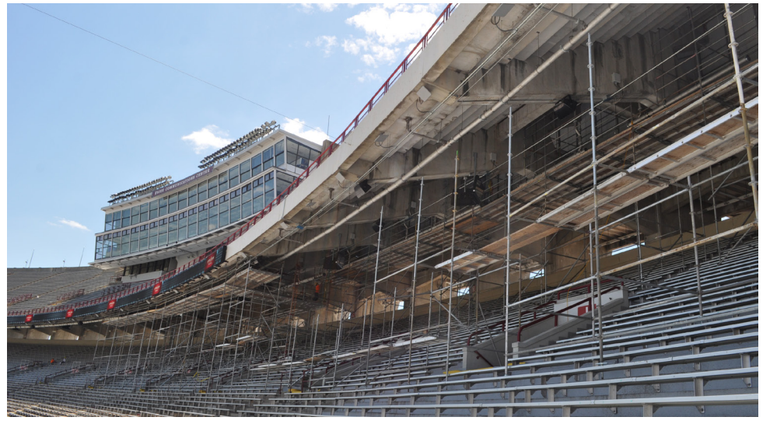
Hooper CORPORATION

OnSite

Fall 2017 Edition

From the President

BY DAVE ORR
HOOPER PRESIDENT



Above: Plumbing Service Team replaces water service valve for the Capitol lawn irrigation system; stainless steel storm piping replacment beneath the upper level at Camp Randall stadium - Summer of 2015.

With the unprecedented series of natural disasters this hurricane season, we have been proud to be part of the recovery program for impacted individuals and businesses in Florida. The unsolicited testimonials we received speaks to the quality of the work we provide and, more important than that, the character of the people who work for Hooper (see page 4 and 5).

Other highlights from this issue:

- Our commitment to safety is reflected in the training we provide and the materials we use to inform and educate our workforce (page 3 and 10).
- We are proud of new projects at UW-La Crosse (page 6) and for Epic in Verona (page 7).
- New partnerships for our Electric Power Division allow us to expand our reach and service (page 8).
- Our work at UW-Madison's new Hamel Music Center will bring state-of- the-art design to enhance music performance and audience experience (page 9).
- Continued work on the new hospital for Michigan's Upper Peninsula is also moving toward completion (page 10).

As 2017 winds down, we are reminded of two significant 100-year anniversaries – that of our state's current Capitol building and Camp Randall on the UW-Madison campus.

Hooper and General Heating and Air Conditioning were actively involved in a series of construction and renovation projects at both of these landmark facilities over the years. In many ways, the stunning beauty of the Capitol and the historic and current use of Camp Randall represent important legacies that are worthy of note.

Hooper Corporation was initially founded in Madison in 1913 as C. A. Hooper Corporation. I reflect on the construction methods and materials associated with these two historic facilities over the years. I marvel at with more than 104 years of service in the mechanical contracting business how much everything has evolved over the years. It is a great testament to the innovation our industry is always promoting.

From natural disaster, to projects large and small, and far and wide, Hooper's commitment to safety, quality, and value has been a part of our culture for more than a century.

The Safety Imperative: Investment and Empowerment

At Hooper Corporation and General Heating & Air Conditioning (GHAC), we view our talented workforce as our most precious asset. Keeping our employees healthy and safe represents our highest priority. Through our education and training programs, we emphasize safety for all of our field and office personnel.

Because our areas of specialization vary, we ensure that each of our divisions require every employee to practice a commitment to safety that builds their stock of knowledge and experience. The foundation for this commitment to safety is reflected in training provided in regular specialized training programs and through weekly safety talks. The knowledge and skills that are developed have applications both on the job and at home.

Members of Hooper's Mechanical Division recently completed a specialized program, "Excavation-Competent Person Training." Members of the plumbing group are frequently in situations that may require an evacuation. The program was provided to all plumbing project managers, foremen, operators, and other identified personnel.

Through this training, all personnel received orientation regarding general rules for excavations. The program addressed the specific tools essential for formalized pre-planning and daily inspections to be conducted prior to all digging activities. The use of updated checklists are part of the shared responsibilities that fit within the different duties and responsibilities that are balanced each day on the jobsite. This approach and the use of these established checklists, ensure we meet important pre-established safety criteria and we develop plans unique to each specific job.

The excavation training includes both hands-on activities and classroom time that both emphasized the importance of understanding the hazards associated with excavations. By completing the "Excavation Pre-Planning Checklist" prior to digging, an acceptable plan will be approved to prevent injuries to our employees and/or damage to our equipment. Our clients appreciate the planning because it prevents delays or disruptions to their line of business.

Above: Mike Murray, Safety Manager - Mechanical Division, provides training to members of our mechanical department at our Vondron Road training facility.

The completion of this training program ensures that we are fully staffed by competent professionals who are:

- capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees; and
- authorized by virtue of that knowledge to take prompt corrective measures to eliminate them.

The training ensures that all concerned employees are actively involved with planning the excavation work and in taking efforts to document that plan. An example of this training is the inspection of the site before any employees enter the trench. By making this inspection and completing the "Excavation Inspection Form," we ensure the safety and document the conditions before an employee is allowed to actually enter the trench.

At Hooper and GHAC, our goal is to provide a safe work environment. A great example of this commitment is the "Stop Work Authority" provided to all employees. This means everyone shares the obligation to help promote safety by immediately stopping work whenever an unsafe act or clear safety risk is perceived.

By stopping all activity and immediately informing a supervisor, we have the ability to address these issues and concerns. Thanks to the training and orientation we provide to all work responsibilities, we know that every employee has the ability to help decide which corrective actions should be implemented.

"At Hooper and GHAC, it's always safety first," said Hooper President, Dave Orr.

Hooper Assists With Electric Power Restoration Following Hurricane Irma

When Hurricane Irma hit on Sunday, September 10, thousands of Florida residents were without power. Hooper sent 23 overhead line crews and 6 tree trimming crews consisting of 111 total trades workers to assist Florida Power and Light (FPL) with the restoration process. Hooper crews worked around the clock for several weeks making sure residents were taken care of. Linda Tapp, an FPL customer from Palm Bay, shared her story with us.

"The Hurricane hit on Sunday and by Monday afternoon, we got power back but it was only for a few hours, then there was a pop and the lights went out and stayed out. The next day, a neighbor said a tree had come down and hit the wires. I work from home, so no power meant no work. We have several neighbors who are elderly and some are disabled. Our house got to be 89 degrees. The tree was two houses away. We saw Hooper guys who were there in minutes. They came to the site right behind me and didn't make me wait. I am so grateful to your people for rescuing us."

Linda's story mirrors what many other Florida residents endured following Hurricane Irma. We were thankful to provide help and service to those in desperate need. Here are the comments we received in the weeks following the hurricane.

From Our Customers...

I live on the East Coast of Florida, in Port St. Lucie. A crew from your company restored power to my home. Hurricane Irma broke 3 poles like toothpicks and draped their lines over a car in my neighborhood. Dangerous work in my estimation.

I cannot begin to thank the people of Hooper for restoring my electricity, and my life. Being on my second organ transplant, climate control is critical to my wellbeing. So, I gave your guys cold water, which is the least a person can do. I am sure others have done the same.

Thank you, Hooper Corporation, for traveling a great distance to help others in need. You are the best our America makes.

-Mark

I live in Dunedin, Florida and was affected by Hurricane Irma. I did not have power for 8 days. Today, I had the pleasure of meeting a crew from your company that came all the way from Denver to help us. They were compassionate, professional, friendly and funny, all of which I needed at that point. I wish I had gotten their names, but didn't. They are true heroes in my eyes. They refused to leave my house until they got the transformer repaired and made sure I was up and running. There were 5 houses affected and we are all grateful for their help. I was there when they flipped the switch. A big Hey Yup to this crew of heroes!

- Elizabeth

Below: A Hooper line clearance arborist removes an Australian pine that was broken during the storm from a single phase line.

Above and Right: Two trucks, with the aid of a climber, remove uprooted Australian pines laying across a three phase line with a capstan winch.

We, in Clearwater, Florida, thank all of you for restoring our power after Hurricane Irma. You all were so nice, understanding, and hard working.

We thank you and God bless you!

-Frederick

Your crew just got our power back up down here in Port St. Lucie, Florida. Thanks for helping us. Good bunch of guys!

-Roy

I live in Stuart Florida and our offices are in Stuart and Hobe Sound, Florida. As you know, we just went through Hurricane Irma. Today I saw several of your trucks pass me by, and I applauded every one of them as they passed. It was a welcomed sight to see.

I just want to say thank you for sending your crews down here to help us. We have our power back on in our office today, and more importantly, my 75 year- old ailing mother finally has AC again today, thanks to the help your crews provided.

God Bless every one of your crew members! I pray every one of your employees makes it home safely to their loved ones, and that they know just how much we appreciate them.

-Donna

Wisconsin's Commitment to Science Education Demonstrated at UW-La Crosse

Science education is a key part of our state's commitment to strengthening and diversifying our economic base. The University of Wisconsin system is advancing this aim with investments to create new facilities throughout the state. A good example is the State Building Commission's 2013 approval of five building projects at the University of Wisconsin-La Crosse.

The construction of a new science labs building is one of these five structures and it will help address a critical lack of space and the severely deteriorating infrastructure that is found in Cowley Hall, the campus' current physical and life sciences facility.

The $82 million dollar project will create a four-story science building. The new facility will be complete with 35 new instructional and research laboratories for biology, chemistry, geography and earth science, physics, microbiology, river studies, and the radiation center. The new structure will also house shared administrative and building support spaces. The building is scheduled to be complete in late 2018.

Hooper plumbing crews worked alongside general contractor, Fowler & Hammer Inc., on the new building located in the heart of campus. Given the centrality of the construction site to campus operations, special care was demonstrated during all phases of construction, including the movement of trucks and the delivery of materials and associated handling.

Hooper coordinated efforts with suppliers and the general contractor to ensure that major activities and deliveries were worked in around class schedules. Plumbing crews installed hangers far enough in advance so that materials could be loaded into hangers once on site. This helped minimize space required for material storage and processing.

Hooper completed the BIM (building information modeling) for the project due to system complexities and the desire of the design team to maintain certain

Above: An artist's rendering of the new science labs building; external views of the building progress.
Below: Vacuum piping installation.

heights of utilities. Plumbing crews completed the install of the following systems:

- sanitary waste and vent
- storm water
- acid waste and vent
- clear water waste and vent
- domestic water
- lab water
- reverse osmosis (RO) water
- natural gas
- lab gas
- lab air
- lab vacuum

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An Epic Tale of Fire Protection for More Than 3,000 Parked Cars

Hooper Corporation and its subsidiary, General Heating and Air Conditioning, have been integrally involved in many design-build developments found at the world headquarters of Epic in Verona. One of the most recent projects is the soon-to-be completed "Jabberwocky" parking structure that is located on Epic Campus 5.

Following the lead of general contractor J.H. Findorff & Son Inc., crews from Hooper's Fire Protection Division installed innovative fire-protection applications to this massive new facility. How big is it? The box below will give you an idea.

The sheer size of the parking structure alone presented some challenges in terms of material handling and testing systems. Multiple office buildings sit on top of this structure making the top floor not typical from a design aspect.

Hooper's Fire Protection crews installed more than 50 dry pipe systems to protect the structure. Dry pipe sprinkler systems can be especially troublesome if not installed with proper pitch for winter pipe drainage. However, our BIM/CAD modelers' design minimized troublesome drains and sprinkler fitters maximized pipe pitch when possible.

Hooper was proud to partner with Findorff and others in the completion of such an exciting project. Our Fire Protection crews were excited to have an opportunity to work on a project of this scale on the well-known Epic campus.

Above: Jabberwocky in progress and the finished product of the underground parking structure.

Epic's Jabberwocky at a Glance:

- 1.2 million square feet, equal to 21 football fields
- 6,050 tons of steel reinforcing bar, equal to the weight of 30 adult blue whales
- 3,095 parking stalls
- 50 dry pipe systems

New Partnerships Bring Growth to Electric Power Division

Hooper Corporation has grown by building strong relationships with long-term customers. We are very grateful for the support of these customers and are committed to continuing to provide them with the highest level of support and services they have become accustomed to.

As we grow, we continue to expand our customer base with key customers who have similar values to ours with a strong safety culture and demand for quality services. Strong long-standing relationships take time to develop. Over the last few years, we have been fortunate enough to successfully complete projects for some new key customers, and begin developing those relationships.

The overhead line department was engaged in 2015 to help with storm restoration services for Northern Indiana Public Service Company (NIPSCO). Since then, Hooper has been engaging with NIPSCO to continue to develop our relationship with the goal of becoming a valued and reliable partner in providing safe, quality, electrical construction and maintenance services.

The NIPSCO service area is conveniently centrally located between our Madison and Detroit offices. Our prior experience with NIPSCO includes storm work as well as a job in Hammond, Indiana that consisted of rebuilding a 34.5 kV powerline with distribution underbuild in 2016. This positioned Hooper as a resource when NIPSCO was looking for a contractor on a large scale system wide structure change out project in Warsaw, Indiana. We were fortunate enough to be awarded this project. We are currently working with NIPSCO to safely and successfully complete this project and will be working hard to continue to provide them with a high level of service and build a relationship that will last long into the future.

Similar to the NIPSCO relationship, the Electric Power Division initially began building rapport with another utility company through storm restoration services. Back in 2012, when Hurricane Sandy hit the northeastern U.S., Hooper assisted National Grid, one of the largest investor-owned energy companies in the world - covering Massachusetts, New York, Rhode Island, and the United Kingdom.

As a further step forward in building this relationship, Hooper participated in a selecting process for National Grid's new construction contracting initiative. In February 2016, we were awarded participation in National Grid's primary contractor list. This contract runs through 2019 and allows us to provide substation proposals in the New England and New York areas of National Grid's territory.

In the time since the contract was awarded, Hooper has submitted proposals on substantial substation projects, and was awarded the Pelham #14 Substation Expansion Project in early 2017.

The Pelham #14 substation project, located in southern New Hampshire, involves a complete rebuild of an existing 115 kV substation. The old substation was completely demolished and a brand new facility is being installed in its footprint to support a large portfolio of National Grid projects in the area. As part of this contract, Hooper is also responsible for rebuilding Liberty Utility's distribution portion of the substation. One of the largest challenges on the project was a granite ledge interfering with several substation foundations and the site expansion.

"When we started this project, we ran into several challenges when digging the substation foundation involving large blocks of granite. Breaking through these large walls of granite added about a month and half to the timeline of the foundations. We hired more workers, brought in extra equipment, and worked longer hours in order to meet the project deadline," said Wayne Meziere, General Foreman on the job.

The substation was scheduled to be energized at the end of October with overall project completion by this December. Hooper Corporation is actively pursuing other National Grid opportunities and looks forward to building on our current relationship. Hooper's highly skilled work teams – and our collaborative approach responsive to customer needs – make us an increasingly sought after partner for important projects that expand the reach of our capabilities.

Above: A panoramic view of the Pelham #14 substation project.

Crystal Clear Music: Hooper & GHAC Help Create State-of-the-Art Music Hall for UW-Madison

UW-Madison is currently building a new performance center at the corner of University Avenue and Lake Street. It will be known as the Hamel Music Center, after Pamela and George Hamel. The nearly $56 million facility will fill an entire open space immediately adjacent to the Chazen Museum of Art. The 75,000-square foot building will include a 680-seat concert hall, named the Mead Witter Foundation Hall. Additional features include the 315-seat Collins Recital Hall and a new rehearsal space for large student ensembles. Hamel Music Center is expected to be completed in time for the 2018-2019 concert season.

Once completed, the new building will host all of UW-Madison's School of Music performances. This will be a significant upgrade from the George L. Mosse Humanities Building with outmoded facilities, poor acoustics, recurring leaks, and a confusing building layout.

The Hamel Music Center will be dedicated to music and acoustics, and built with double-concrete walls and roof to block traffic noise from University Avenue. The striking design of the new building includes a glass-walled lobby and rehearsal room, visible to passersby.

Hooper plumbing crews along with General Heating and Air Conditioning (GHAC) are pleased to be working alongside the general contractor, J.P. Cullen. The combined effort of these teams and others associated with the project will create an exciting new venue that enriches and enhances musical and cultural life on campus and in the broader regional community.

With an uncompromising focus on sound control to ensure building acoustics, exact requirements were given to guarantee all aspects of performance space are ideal for the presentation of exemplary musical performances.

GHAC and Hooper plumbing crews have taken many steps and utilized innovative approaches to ensure these results. Some examples include:

- The four large air handling units (AHUs), that will feed the entire building, are being tested by a third party in a full factory sound test prior to being shipped. There are only a handful of factories in North America that can do this testing.
- Each AHU is getting a very large specialty sound attenuator on both the supply and return duct. This will limit all sound from escaping the AHU as much as possible, which eliminates the largest source of noise in the HVAC system.
- Insulation requirements are above and beyond normal specifications. This will limit duct and pipe noise throughout the building.
- The Concert Hall seating is built over a large concrete plenum. The AHU will feed air into this plenum, and a diffuser under each seat will diffuse the air into the space. Other air in the Concert Hall will come from behind the balcony, to eliminate air noise during any performances.
- Plumbing and other mechanical systems are routed through corridors and back-of-house spaces, around the three main areas of the building, to eliminate penetrations in the Acoustically Isolated Construction (AIC) surrounding the Concert Hall, Recital Hall, and Rehearsal Hall. The AIC requirements are in place to prevent any noise or vibration from transferring to the structure of the building.

Since the construction site is located

(Continued on page 11.)

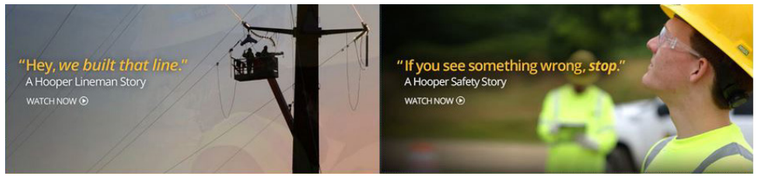
Storytelling Brings Hooper's Character and Safety Initiative to Life

Hooper's commitment to training and safety, as well as the pride our workers have in the work they do is evident in two new videos we have developed in partnership with a talented media company. These videos include:

- Electric Power Story
- Stop Work Authority

The Electric Power story gives a glimpse into the life of a lineman, as told through the eyes of Hooper's Jason Hoel. The brief documentary illustrates the important and rewarding work our linemen do on a daily basis. It reveals the inner drive and character found throughout our organization.

The Stop Work Authority video shows the importance of speaking up on a job site when something unsafe is occurring.



The video shows a staged situation in which a new hire sees something unsafe; and then explores several alternative scenarios to show the effects of what could happen if he does or does not speak up.

In this important safety training video, Electric Power Division Head, Steve Lindley, talks through the definition of Stop Work Authority, why it is important for anyone to speak up on a job site if something unsafe is happening, and also the consequences of not doing so.

These videos can be accessed on our homepage at **www.hoopercorp.com**.

Telling the story of who we are and what we do is important to us. These works capture our essence at Hooper Corporation and we are excited to share these stories with you.

Update: New Hospital for the Upper Peninsula - Marquette, Michigan

Steady progress continues on the new 500,000+ square-foot hospital for the people of Michigan's Upper Peninsula. The total investment being made in the new facilities exceeds $300 million by the owner, Duke Life Point.

Hooper and General Heating and Air Conditioning(GHAC) were pleased to have been selected to provide mechanical systems for the facilities. Since the ground breaking in May 2016, Hooper and GHAC have had sizeable work crews including 58 sheet metal workers, 43 steamfitters and 24 plumbers, performing services in support of ongoing construction. With a projected completion date of Fall 2018, considerable focus will be devoted to the final work to make the 265-bed hospital ready.

- The new hospital – created for the UP Health System – consists of approximately 538,000 square feet.
- The facility will include an approximately 150,000-square-foot diagnostic and therapeutic service center, as well as nearly 183,000 square feet of patient care services.
- The project will also include an adjoining medical office building (80,000 square-feet) and parking structure.

"We have worked hard and in partnership with the construction manager and other trades," said Doug Smithback, Hooper Piping Project Manager. "The resulting building and facilities will be a real source of pride for the people of the UP."

Above: South eastern view of the project, with the clinic building on the left. In the forefront, prefabricated bathroom pods are ready to be hoisted to the sixth floor.

> UW-La Crosse Science Labs Building (continued from page 6)

In addition, crews also installed a large 100 HP air compressor with duplex dryers, a triplex vacuum system, acid dilution basin, and multiple RO units.

Advancing science education is one of our state's areas of leading investment. On this score, Hooper Corporation was proud to have an important part in expanding one of our state's leading publicly-supported universities. We know that the science labs and instructional space will ensure excellent science education for our future leaders.

Above: CPVC lab waste piping installation.

> Crystal Clear Music (continued from page 9)

in the central part of the 45,000 student campus community, significant care has been devoted to all stages of construction especially with the movement of large pieces of equipment and materials. Extremely limited space immediately external to the construction has required creative and innovative approaches relating to material storage, prefabrication, and the processes used for movement and assembly. These special accommodations have impacted such areas as: ductwork, piping assemblies, equipment assemblies, etc.

A project of this size and complexity requires close cooperation and a commitment to shared objectives. GHAC & Hooper worked closely with JP Cullen to lead the building information modeling (BIM) coordination efforts on this building. This was necessary in order to prefabricate our material and meet the schedule required for the HVAC & plumbing install.

UW-Madison has a goal of achieving the Leadership in Energy and Environmental Design (LEED) silver rating for new construction on this project. The goal of becoming LEED certified is to improve performance in metrics such as energy efficiency, water conservation, CO2 emissions reduction, improved indoor environmental quality, and stewardship of resources. For plumbing, this means low water consumption fixtures in the

Above: The lower level and foundation of the building have been poured, and mechanical work will begin soon.

bathrooms. Working to achieve these laudable goals is central to the business purpose and spirit found at Hooper and GHAC.

This once-in-a-generation building opportunity is creating an exciting new music performance venue that will bring honor and distinction to the musicians who perform at UW-Madison. Hooper and GHAC are proud to work on such a prominent building in the community and to join efforts with JP Cullen on all aspects of the important music venue.