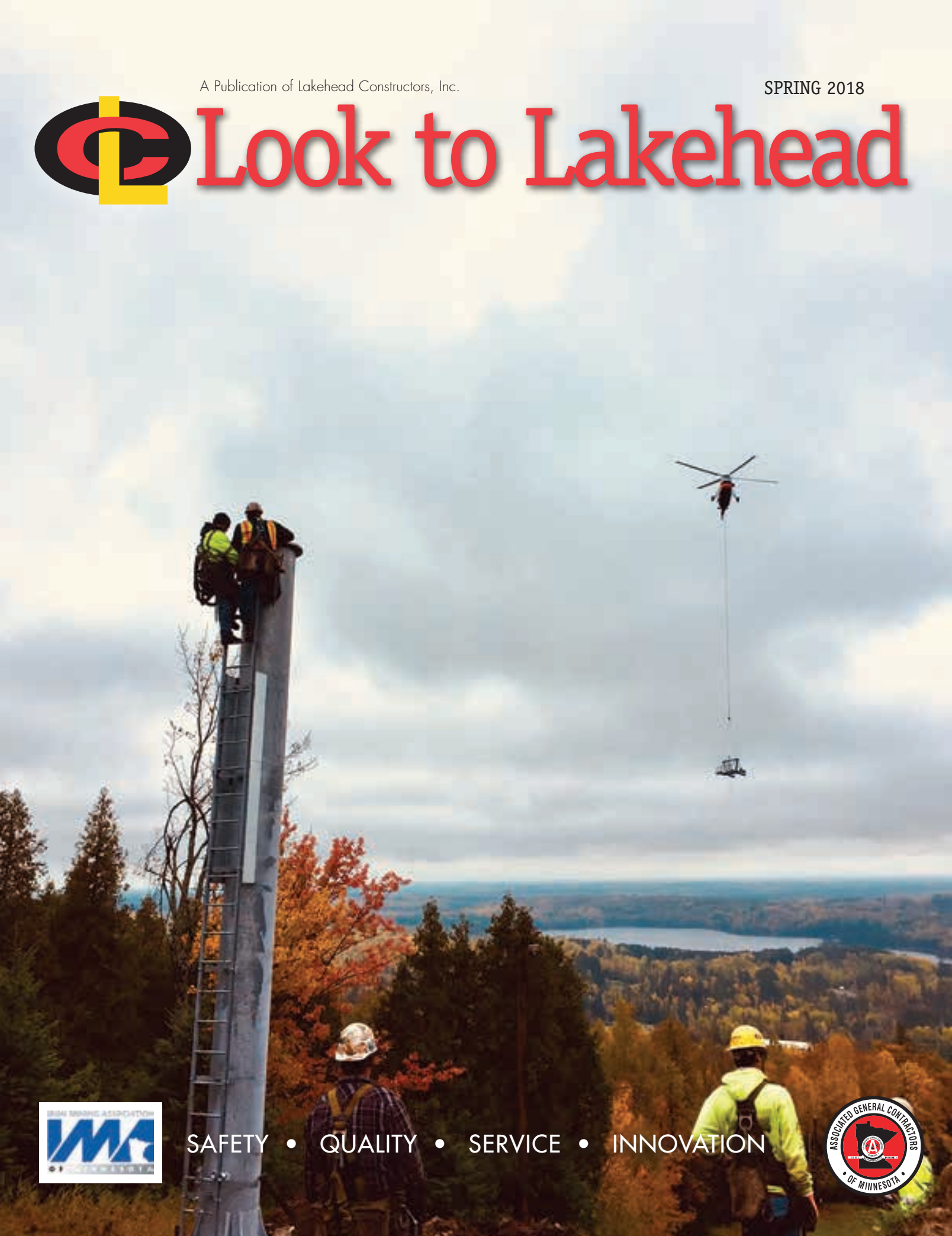


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SPRING 2018



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As Lakehead Constructors, Inc. continues to work into its second century of service, I also continue to extend a very heartfelt thank-you to our trade partners, suppliers and subcontractors for their continued contributions. Without them, Lakehead Constructors, Inc. would be unable to perform as expected or be able to present this publication to you.

Our core values of safety, quality, innovation and integrity continue to be the foundation of this corporation. We commit to these values for you, the owner, in our quest to be the best and most sought-after contractor serving the upper Midwest. We continue to train and mentor our employees in the pursuit of providing the services expected to all of our clients. We incorporate the latest technology to provide the finest workmanship for each of our projects and work closely with our labor bodies to meet the challenges projects present.

This issue features articles on projects that created an emergency response, coupled with hand-in-hand coordination with the Minnesota Department of Transportation and other agencies. Also included is a project for the Giants Ridge ski resort that required specific helicopter usage and a write-up on the new Highway 53 bridge in Virginia. Another piece is a building renovation that involved the Historic Preservation Alliance — something a little out of the ordinary.

With our continued efforts to expand our services, we count on the dedication of all our valued employees. Without their commitment to the quality of work provided and the constant attention to schedules and details, Lakehead Constructors, Inc. would not be in the position it is today — being the contractor of choice for so many great customers.

Best regards,

A handwritten signature in dark ink, appearing to read 'Brian Maki', written in a cursive style.

Brian Maki
Chairman, President and CEO



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EMPIRE BLOCK

The Empire Block project was a historical mixed-use renovation project in downtown Superior, Wisconsin, at the corner of 12th Street and Tower Avenue. With 26,000 square feet of renovation, the 1892 three-story wood, stone and brick structure was no easy task. The street level — approximately 9,000 square feet — was to be sub-divided into three commercial tenant spaces.

The 8,500-square-foot second floor was originally a mix of small commercial spaces and apartments, and the third floor, also 8,500 square feet, was solely apartments. The plan brought forth was to reorganize the second floor into seven apartments and the third floor into eight apartments. Lakehead Constructors, Inc. provided front-end construction estimating service for this project. This was essential information for developers to evaluate the possibility of moving this project forward. The developers also used this cost estimate to receive

a development agreement with the city of Superior, submissions of grant applications, sale of historical tax credits, and financing for the project. This proved to be time well spent for Lakehead, as the developer was able to receive all the necessary grants, credits and financing to move this project forward into the construction phase.

As a portion of this project, equity was funded through both state and federal tax credits. Reuse of existing materials and wall configuration was required. The second and third floor had not been

occupied since the mid-1980s, and no major renovation on the North side of the building had happened since the original construction. The South side of the building had some renovation done after two fires around the turn of the century. This meant thousands of linear feet of trim and around 100 wood doors needed to be salvaged. Lakehead carpenters had the task of carefully removing all the trim and marking each piece by room for reuse. This may be hard to envision, but almost all of the trim was at least a two-part trim. The baseboards were 10 inches with a 2-inch cap, and the door casings had a backband and thrust blocks. There were also three-piece windowsills, window casings with backband and rosettes in the upper corners, picture rail throughout, and chair rails in the corridors.

In February 2017, Lakehead carpenters and laborers moved into selective demolition of existing walls, both plaster and lath, and framing. Once the selective demolition was complete on the third floor, the reconstruction of the new configuration started. This paved the way for the other crafts and contractors to begin rebuilding the structure with all new electrical (by Benson Electric Co.), plumbing, HVAC and sprinklers (by A.G. O'Brien Plumbing and Heating Co.).

In June, as contractors moved to the inside for their respective work, Lakehead started on building envelope work by installing 80 Marvin



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42-inch by 80-inch double-hung casement windows on the second and third floors. Lakehead also completed the removal of a deteriorated roof on the one-story annex space and installation of new wood trusses and sheeting. Concrete foundation work for the new elevator addition also began. The new elevator addition makes the building egress and ADA compliant with current codes. Once the masonry walls were up for the elevator shaft and stairwell, Lakehead ironworkers installed the new steel pan stairwell and railing, along with a steel deck on top of the elevator shaft. The steel pans and steel deck were capped with concrete. The structural wood joist reinforcement of the floor system between the first and second floors in the area was touched by turn of the century fires. Later in summer 2017, Lakehead carpenters provided parapet and knee wall construction on the main building roof to support the multiple skylights provided by Superior Glass Inc. The skylights provide light into four apartments on the third floor, and clerestories provide natural light interior into four apartments on the third floor and down to four apartments on the second floor. A combination of skylights and clerestories allows light in the corridors and stairwells within the building.

After the interior electrical and mechanical rough-ins were complete, wallboard was prepped for plaster skim coats, or drywall was taped and painted. Lakehead was set to start installing the thousands of linear feet of trim that had been restored. The team started

with custom extension jigs for the 80 windows just installed. Putting this 125-year-old jigsaw puzzle together was tedious and required installing not only the salvaged trim but also newly milled trim made to replicate the old. Lakehead installed restored window sashes with frosted glass to allow light via the clerestories and skylights. The team hung restored doors into doorframes left in their original locations and outfitted the doors with new hardware.

As the project continued to progress toward its end, all the contractors were pushed to meet project deadlines, which caused increased manpower onsite. Lakehead was called upon to provide project management staff to ensure that Certificates of Occupancy were obtained by the year's end. Taking on this task in late November did not leave much time or room for error. Through detailed control of the schedule, punch list, contractors and vendors, and open communication with the city of Superior's building inspection team, this challenge was met with success on December 21.

Lakehead has since been contracted for additional commercial tenant build-out work for the Nicolet Law Office and Empire Coffee, located in the building. Lakehead has been a part of other restoration and rehabilitation in the Twin Ports by the likes of Clyde Iron Works, Concordia Lutheran and Cathedral of Christ the King churches in Superior. As these old structures continue to be part of the Twin Ports community, so does Lakehead.



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Giants Ridge Ski Resort Upgrades

Preparing for a Future of Safety and Fun on the Slopes

by Randy Babiracki, Iron Range Facility Manager and Field Resource Manager





The Giants Ridge ski resort, Leitner-Poma of America, Lenci Enterprises, Inc. and Lakehead Constructors, Inc. recently teamed up to install two new cable transport systems in Biwabik, Minnesota, at the Giants Ridge ski resort.

The popularity of the Giants Ridge has increased every year since its last major overhaul in the early 1980s. Giants Ridge, along with the state of Minnesota, knew it was time to make some upgrades to their ski resort by purchasing two new chairlifts. The first two ski runs to get new lifts were the most popular on the mountain — Helsinki and Sarajevo. Leitner-Poma of America, based out of Grand Junction, Colorado, was awarded the bid to design, engineer, manufacture and oversee the installation of the new chairlifts. The new lift on Helsinki would be a fixed-grip chairlift, which is an upgraded version of the lift to be replaced. The Sarajevo chair lift would be a much faster, detachable chairlift system capable of moving passengers up the hill at 1,000 feet per minute.

Leitner-Poma hired Lenci Enterprises, Inc. as the general contractor for this project. The project included the demolition of the existing Helsinki chair lift run and the salvage of the existing Sarajevo run, which was sold to a ski resort in New York. The project would also include concrete foundations for all of the approximately 27 new towers, the lower drive houses, the upper drive houses and new control room buildings.



One of the biggest obstacles to overcome was the lack of any road access to the top of the hill. Lakehead built a road on the existing topsoil and pulled all of the lift components and equipment up the steep hill with bulldozers.



Lenci Enterprises turned to Lakehead for our expertise and knowledge in the equipment needed for working on a ski hill slope, as well as our highly skilled ironworker crews with many certified riggers and welders.

One of the biggest obstacles to overcome was the lack of any road access to the top of the hill. Lakehead built a road on the existing topsoil and pulled all of the lift components and equipment up the steep hill with bulldozers. We fabricated a specially designed sled to haul old towers down the hill and new ones up the hill. All of our tracked equipment had special grousers installed on the tracks to gain better traction for safe working. The rainy weather of July and August proved to be too much for our tracked equipment to allow safe working conditions. Leitner-Poma hired a helicopter to fly the rest of the concrete up the hill to finish the tower base foundations.

Lakehead also provided pipe fitters to reroute a few of the water lines that were in place for Giants Ridge's snow-making equipment while the tower foundations were going in. During the rain-soaked months, the helicopter was also used to fly many of the towers

into place, with Lakehead ironworkers and riggers receiving them and bolting them down. With access still limited to the top of the mountain, we had to come up with a plan to hoist the top drive house on the Sarajevo run. The heaviest piece weighed approximately 24,000 pounds, and we had no way of getting our RT80 up the hill safely. The Lakehead equipment manager was able to find a 100-ton telecrawler hydraulic tracked crane so work could continue safely and stay on schedule.

Near the end of October 2017, the rain dried up, but the temperature dropped significantly. All of the towers were up, and the Lakehead crews continued tightening the tower bases, and hoisting and bolting together the drive house components that arrived preassembled. Lakehead ironworkers aided Leitner-Poma's cable crews in stringing thousands of feet of 1.25-inch cable between the two lifts, with Lenci Enterprises's millwright crew hanging all of the chairs on the cable.

Things were wrapping up at the end of November, with just some odds and ends remaining and cleanup of the lay down yard and




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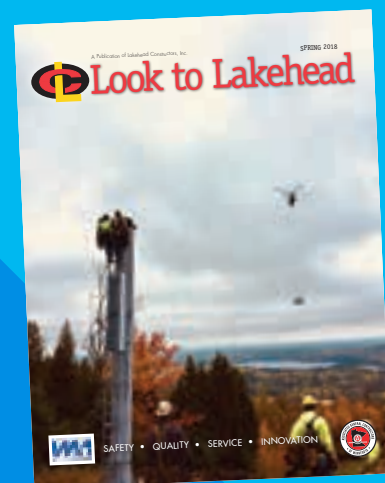
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worksite. Giants Ridge started making snow, and temperatures were in the single digits for most of the end of November and beginning of December. All that was left was putting the test weights on the lifts and letting them run. Final adjustments were made, and the chairlifts were open to the public on December 14, 2017. Immediately, the benefits of the new lifts were clear — no standing in line for long periods of time. Both lifts were able to handle more passengers and move much faster up the hill.

The sheer beauty of the jobsite and working with new customers who have so much knowledge in this type of work were by far the most satisfying parts of the project. All of this made those rainy, mosquito-filled, hot and muggy days — as well as the freezing cold days — all worth it. The one thing that all of the trades that worked on this project will have in common is the knowledge that these chair lifts will be hauling skiers, snowboarders and sightseers up to the top of Giants Ridge ski resort for many decades, and we, along with our children, grandchildren and beyond, will always remember working on this project.

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MN STATE HIGHWAY 53 RELOCATED

Between Eveleth and Virginia for Expansion of Mining Operations

Due to a unique agreement between local iron mines and the Minnesota Department of Transportation (MnDOT), the original roadway built in 1960 on iron mining interests included a requirement for relocation of the roadway with three years' notice if the mining company requested access to the ore below the roadway.

In 2010, the mining interests notified MnDOT that the road would need to be moved. Later that year, MnDOT and the mining company agreed to a 2017 date for the road to be moved.

Part of the project development process included mineral rights acquisition. The state has purchased the mineral rights under the new alignment to ensure that MnDOT will not have to move the road again.

Included in the requirements of this new roadway construction, and also well described on the state of MnDOT website, were the following:

- ▶ Vacating a portion of Highway 53
- ▶ New alignment from Bourgin Road to 2nd Avenue in Virginia (3.2 miles)
- ▶ New interchange at Highway 135
- ▶ New bridge over Rouchleau Pit
- ▶ Relocation of Landfill Road
- ▶ Realignment of Mesabi Trail
- ▶ Reconstruction of 2nd Avenue interchange
- ▶ City of Virginia utility relocation

Lakehead Constructors, Inc.'s involvement in the project included installation of the city of Virginia utilities on the new Rouchleau Pit bridge structure. These utilities included new sewer and water lines on separate sides of the bridge, located beneath the bridge roadway.

Constructing the new utilities simultaneously with the construction of the bridge required daily coordination with the general contractor, the Kiewit Corporation, and the other contractors involved in the project, including Parsons Electric (Lakehead was subcontracted through Parsons Electric for this project), Ulland Brothers Inc. and multiple other construction and service providers.

The general style of construction was to provide a 24-inch utility casing for each utility line (sewer and water), through which the related service line was pushed from end to end. With a length of almost 1,200 linear feet, this installation was a challenge for the crews involved.



With respect to safety performance, the Lakehead crew encountered one first-aid related injury due to a slip on icy surfaces but had no recordable injuries for the project, and was twice named "MooseJaw" Crew of the Month. "MooseJaw" relates to a Kiewit Corporation nickname provided for the project. The actual bridge over the Rouchleau Pit has yet to be formally named by the state of Minnesota.

The Lakehead crew was comprised of pipefitters, painters, laborers and operators — all working in coordination on the project requirements.

Dedicated by Minnesota Lt. Gov. Tina Smith, Rep. Rick Nolan and other elected officials on September 15, 2017, the new bridge over Rouchleau Pit was opened for service approximately one month ahead of schedule.



HIGHWAY 61

EMERGENCY BRIDGE REMOVAL

Highway 61, located along the scenic North Shore of Lake Superior, is the only significant road from Duluth, Minnesota, to the Canadian Border and is traveled by thousands of motorists and trucks daily. On Thursday, August 31, 2017, the day before Labor Day weekend, a contractor's semitruck with an excavator on the trailer struck a bridge located near Taconite Harbor. Due to the impact on the overhead structure and ensuing damage, the situation was precarious.

Minnesota State Patrol and Minnesota Department of Transportation (MnDOT) crews responded, and it was decided to install a temporary signal light in each direction, effectively making Highway 61 a one-lane road for the time being.

At 3:30 p.m. on that Thursday afternoon, Brian Maki, president and CEO of Lakehead Constructors, Inc., received a call from Cleveland-Cliffs Inc., owner of the bridge, and was asked to investigate the possibility of removing the structure. Engineers from Cleveland-Cliffs, Krech Ojard & Associates, and Lakehead all estimated the weight of the structure to be removed as requiring a plan for crane sizing and lift study.

Maki traveled to the site and met with MnDOT and Cleveland-Cliffs personnel, and it was agreed the bridge section needed to be removed.

Equipment was dispatched, including two 80-ton Grove all-terrain cranes, man lifts, light plants and rigging. Manpower was dispatched from Lakehead and supervised by Superintendent Conn Mattfield. Highway 61 remained one lane as long as possible, allowing many of the “lucky” tourists through. At approximately 11:30 p.m., with all of the equipment on-site and some of the pre-work done, it was time to close the highway. Unfortunately for the traffic, the detour was 27 miles in length on some long gravel roads with slow speed limits.

The plan called for lifting the bridge in one piece after cutting each end of the structure. With weight calculations and a lift study in place, Lakehead began the work. There was stored energy in the structure, which had been compromised by a massive strike. Sheared bolts, bent steel plating and destroyed flanges told the story of the bridge’s integrity. Jack hammering of



the concrete deck was done to expose the structural steel on both ends, and torches were used to slice through the steel, which was resting on concrete columns. Once this was accomplished, the lift could be made. The father-son team of Steve Levine, shop manager, and Jake Levine, crane operator, lifted and turned the 56-ton section smoothly to the ground parallel to the highway at precisely 7 a.m.

A great sigh of relief was felt by all, and the road was opened by 11 a.m. after clearing out the scene. Word went out quickly that the North Shore was open for business again, and Gov. Mark Dayton sent an email thanking all involved for the skill, speed and efficiency used in opening up this major highway for Labor Day weekend.




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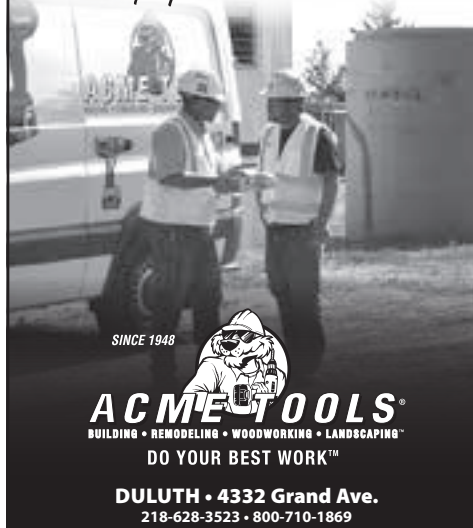


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