

PROTECTING LAKES AND STREAMS

University of Minnesota's newest lab works to protect lakes from aquatic invasive species

For years, Minnesotans have been on alert for the spread of invasive species in all beloved lakes and rivers. Those enjoying the water - boating, fishing, or hunting – are told to follow stringent practices for cleaning their watercraft to prevent the spread of the plants, fungi, and other organisms. These can be detrimental to the waters that are such an integral part of Minnesota's culture and ecosystem.

In March 2016, the University of Minnesota opened the newly renovated Minnesota Aquatic Invasive Species Research Center (MAISRC) on the St. Paul Campus. Funded by the state legislature, the Clean Water Fund, and the Environment and Natural Resources Trust Fund, the 8,300 square foot, state-of-the-art lab allows researchers to do work that was never before possible, with more than 20 dedicated, specially filtrated tanks for species like zebra mussels, fungi, and Asian Carp.

Egan Company installed over 13,500 feet of piping, allowing well water to be filtered for iron and other impurities before it reaches the tanks. More importantly, a wastewater treatment process allows the waters to be safely returned to the sewer system. This means that researchers can now safely monitor potential threats to see if the organisms can withstand a simulated Minnesota climate and the effect that they may have on the indigenous aquatic ecosystems, should they be introduced.

"This project was equally unique and challenging," said Chuck Roberts, Egan Company Mechanical Field Leader. "We used a lot of specialized parts that we've not worked with before – it was complex, but McGough and our people pulled it off – it was very rewarding to see something like this come together."

With these new research capabilities and the cooperation of the general public, it is hoped that Minnesota's lakes and rivers can be healthy for generations.

Core Project Team: McGough Construction, University of Minnesota, Burns & McDonnell

Egan Services Provided: new HVAC system, steam/hot water exchange, hot water piping, lab and filtration equipment installation



The new research center will enable researchers to discover new things about how aquatic invasive species affect Minnesota waters.



MULTI-TRADE, IN-HOUSE ADVANTAGE

Egan consolidates and expands into a new facility located in Champlin, Minn.

When it comes to Egan Company's new Champlin facility, collaboration is the name of the game. With the consolidation of four metro offices into two – the new Champlin location and corporate office/shops in Brooklyn Park – more Egan employees are now able to work together under one roof. The result is improved production and work-flow; and the benefits are seen no better than in the renovation process itself, during which Egan was able to experience its own capabilities firsthand. The renovations began soon after the purchase of the building, starting in September 2015. By the end of the project, Egan had completed 75 to 80 percent of the retrofit in-house.

"We, as Egan, became the customer," said Duane Hendricks, Egan Company Chief Operating Officer. "On completion of the project, we found that integration of all specialty trades was an advantage we were glad to have experienced ourselves."

The 180,000 square foot facility comes in addition to Egan's company headquarters in Brooklyn Park, Minn. and its Southern Minnesota offices in Rochester and Austin. It has increased the size of Egan's shops, including:

- InterClad curtainwall and metal panels fabrication 30% more floor space with 50% more capacity
- U.L. 508A Panel Shop doubled in size
- *Electrical fabrication* tripled in size

- *Garage* two and a half times the size of previous location
- *Tools and warehouse* tripled in size and now have more loading docks for shipping and receiving

Space updates include the addition of collaborative workspaces and training rooms that can seat up to 100 people. Flexibility for extending the timeline created additional space for potential future expansion – an open 9,000 square feet for office space growth, as well as an additional 18,000 square feet for shop expansion in the future.

"This was a large undertaking we're proud we were able to complete," said Hendricks "This is the uniqueness of Egan... the ability to not only renovate a large manufacturing plant to specifically fit our needs, but to also successfully integrate systems within our own space. We're very proud of this single-source offering."

The decision to buy the manufacturing plant was made not only to meet growing needs, but also in order to provide customers with a more seamless delivery and overall experience, starting with Egan's Tom Buirge - the construction manager who was appointed the 'single point' on behalf of all trades on the renovation project. Having an Egan project leader coordinating all trades helped ensure deadlines were enforced, but also created flexibility with timelines.



Egan Company's New Facility - Champlin, Minn.

"What was great was working with Tom [Buirge] and the access he had to the project decision makers," said Chris Ruhl, Egan Company Mechanical Field Leader. "We received immediate feedback when changes were needed so we could maintain our schedule."

Ultimately, this consolidation/expansion serves to further strengthen Egan's offerings as a single-source for specialty trades and systems integration.

"We have been able to bring many of our teams together, making collaborative work easier all around," said Jim Malecha, Egan Company President & CEO. "Coming together in a larger space opens up all kinds of possibilities and, all-in-all, has benefited all facets of our business."

EGAN'S SPECIALTY TRADES WORK PERFORMED:

Mechanical: demolition of plumbing and HVAC, removal and replacement of 12 existing rooftop units with three larger units, renovation of existing air piping, installation of air piping in new shops, rework of air systems for garage.

Electrical: lighting and power for the build out warehouse space, natural gas generator, installation of new office fixtures as LED lighting.

Curtainwall/Glass/Glazing: new interior and exterior signs, window repair, bathroom mirrors, and glass walls.

Millwrights: installation of new bridge crane, relocation of all new/existing shop equipment, and all new/existing material/equipment racking.

Building Technology Integration: building automation system, fire alarm, card access, CCTV, intrusion security, paging, sound masking, voice/data/fiber optic, video intercom, projectors and screens, audio/visual.

PROMISES KEPT

66 We were experiencing problems with our Sielox Pinnacle software connecting to the controller, due to a server crash. Martin Pitman was able to get our system back up and running over the phone, in minimal time. We have no documentation on this system and Martin's help troubleshooting the system was greatly appreciated. Great job!

- Matt Alexander, MCG Energy Solutions

(Martin Pitman is a Service Field Leader.)

We appreciate you scheduling Tim Johnson to handle the data cable install at DecoPac. Tim is an exceptional employee and Egan should be proud to have him representing the company.

- Fritz Budig, Grindstone Construction Services

(Tim Johnson is an Installer Journeyman.)

EXCELLENCE IN SAFETY

Egan Company's commitment to safety was recognized at the Governor's Safety Awards Luncheon during the Minnesota Safety & Health Conference. Egan received four Governor's Safety Awards for achieving safety records better than the 2015 industry average, including an Outstanding Achievement award and three Meritorious Achievement awards!



FlyOver America Attraction at Mall of America // Photo by: Soaring Attractions

VIRTUAL FLIGHT RIDE EXPERIENCE TAKES FLIGHT AT MOA

A brief vacation awaits you at the Mall of America where you can now view some of the country's most breathtaking locales at the mall's newest attraction, FlyOver America.

A ride like FlyOver America requires complex controls, equipment, and a lot of moving parts. "Everything has to communicate with each other ... it's like a symphony of many devices working in concert with each other to make the ride work as a whole," said Elliott Olson, Egan Company Project Manager.

There's more to the attraction than meets the eye, or the ear, or—the nose. Partnering with Mortenson Construction and FlyOver America Ltd., Egan Company installed the special effects devices that transform FlyOver America from a complex flight simulator into a true virtual flight experience with custom scents, wind, and even mist to tantalize riders' senses during their 10-minute adventure.

Multiple trades within Egan were able to work in tandem to provide a cohesive experience for the customer that included installation of A/V equipment, communications and data wiring, and electrical power to the ride.

"We covered the work of four or five individual subcontractors on this project," said Olson, "I think it's a perfect example of what sets Egan apart from others." The ride itself is comprised of three levels, making navigation a unique challenge that required good planning, communication, and coordination among project teams.

66It was great having one point of contact with Elliott Olson who was then able to communicate any changes to others on the team.

- Eric Sambell, Soaring Attractions

Egan's work on the project began in November 2015 and the ride officially opened on April 6, 2016. Even with the challenges posed by the project, Egan Company was able to deliver multiple scopes on a one-of-a-kind project.

"Working with the Egan team was fantastic," said Eric Sambell, FlyOver America Ltd., Director, Construction & Technology. "It was great having one point of contact with Elliott Olson who was then able to communicate any changes to others on the team."

Egan Services Provided: communications and data wiring, electrical power distribution, special effects installation, A/V installation



CLEAN, SAFE, AND CONTROLLED

Prefabrication of two, self-contained utility rooms minimizes safety hazards

Is it possible to create a work environment where safety hazards are at a minimum and work is still completed efficiently? Well, start by thinking inside the box. At least, that's what Egan Company did for one of Wolf Material Handling Systems' customers.

The customer: a sustainable waste and energy solutions company. Their facility, located on the East Coast, was in need of several new features: a power distribution center (PDC), a motor control center (MCC), and a large air compressor. They also needed to preserve the longevity of these additions, so keeping out damaging materials was a priority. Working with Wolf, Egan's team of mechanical, electrical, and process controls experts thought of an innovative idea that incorporated two of Egan's strengths: safety and prefabrication.



Utilizing decommissioned shipping containers, Egan's team developed two selfcontained utility rooms that held all essential equipment, but would insulate it from any damaging materials in the customer's facility. The best part about this plan: all work could be completed

within our Egan facility, allowing for a controlled work environment that reduced many potential safety risks. In addition, this meant there was no need for permanent construction onsite.

The PDC container received the PLC panel and MCC, which basically created two walls of electrical distribution and controls. Employees would be visiting the interior on a regular basis, so features like fire alarm, air-conditioning, and LED lighting were also included.



All utilities were housed in one container, preserving the longevity of the equipment.

A 4,000-lb air compressor was added to the other container. Egan's mechanical team arranged the pieces and added sheet metal ducts to allow air to travel out of the container and into the customer's own duct system.

GAvoiding working outside in the winter helps the crews work better and keeps potential slips and falls to a minimum. There really isn't any safer place to work than in a dedicated space surrounded by other Egan employees that know safety is priority number one.

– Chad Pomplun, Egan Company Electrical Field Leader

Egan Services Provided: design, engineering, and installation of sheet metal ducts, air compressor, power distribution center, motor control center, LED lighting, fire alarm, and HVAC



MECHANICAL SHOPS EXPANSION

Bringing manufacturing efficiency to the construction industry

Over 70 years ago, Egan Company began as a plumbing and heating contractor. The sheet metal trade was added in 1958. Since this era, Egan has invested in its fabrication shops to provide fast delivery of custom-built mechanical systems to its customers.

With the advent of Virtual Construction practices, investment in fabrication shops has become even more important to the industry. When properly implemented by the entire project team, Virtual Construction allows Egan to "manufacture" piping, plumbing, and sheet metal components in its shops—under ideal conditions and with great efficiency. These components can be stored away from the jobsite and delivered just-in-time for field erection. The result: a lower cost building built over a shorter schedule.

With the recent relocation of the warehouse and service garage functions to its new Champlin facility, Egan acted on the opportunity to expand and renovate its mechanical fabrication shops for increased productivity while also creating a safer environment for employees.

"Any task we can perform in our facility, under controlled conditions rather than on the jobsite, is a win for our customers," said Mark Habermann, Egan Company Manufacturing Manager. "We've expanded our shops with the purpose of integrating all shops into one ... we opened walls to promote the sharing of resources and foster collaboration across all trades." Trades served by the expanded shop space include sheet metal, piping, plumbing, and millwrights.



The renovation has allowed for expanded capabilities, including a *Jimmy Jammer* (pictured here).

MECHANICAL FABRICATION UPGRADES:

- Expansion to 50,000 square feet of production space
- New Stinger pipe cutting machine
- New Jimmy Jammer semi-automatic pipe welding system
- Five (5) new jib cranes for safer material handling
- Two (2) new hydraulic lift tables
- o New Axxair stainless steel pipe cutting machine
- New cast iron pipe cutter
- Rearranged equipment for improved production flow
- Additional space for storage of fabricated components away from the jobsite

BEYOND THE Jobsite

Working together for a good cause; Egan Company continues to support our local community through employee events

Spring Blood Drive

Egan partnered with neighboring Insignia Systems, Inc. for our semi-annual blood drive through Memorial Blood Centers. Employees from both companies donated 34 units of blood to help save lives in our community.

Earth Day Park Cleanup

On Earth Day, employees banded together in both Brooklyn Park, Minn. and Rochester, Minn. to clean up local parks. Hartkopf Park and Judd Park are looking fantastic after 40 employees spent the afternoon picking up trash!

Clothing Drive

A new event for Egan – we partnered with two local nonprofit organizations and held a professional clothing drive. *Dress for Success Twin Cities* is committed to promoting economic independence of disadvantaged women. The *Minnesota Assistance Council for Veterans* has been assisting veterans for over 23 years.

Egan's Nietz team cleaned up Judd Park in Rochester, Minn.



PROMISES Kept

⁶⁶The crew you assigned to work on the Anoka County Highway controls project was great and did exceptional work. The crew put new controls on existing equipment, as well as installed new control valves on the hot water piping. They were very efficient, knowledgeable, and experienced. I would eagerly welcome them back on a future project.²³

– Steve Anderson, Anoka County Highway Department

(The Egan team mentioned here includes: Electrical Field Leader Eric Krahmer, Technician Journeyman Bob Gilbert, Electrical Journeyman Mike Heimerl, and Pipefitter Apprentice Mike Meyer.)

⁶⁶I want to pass along my appreciation for being able to work with Jim Vaughn on the Chaska Curling Center job. This job consisted of a difficult construction situation. Jim was incredibly helpful, accommodating, and one of the most pleasant people I have worked with. I sincerely appreciate the opportunity to have worked with him.⁹⁵

– Joel Evermann, Intermedia Systems Group

(Jim Vaughn is an Electrical Field Leader.)



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National Safety Month issue





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Egan Company is a fully integrated, specialty contractor that delivers attention, commitment, and craftsmanship to every project. Egan serves every stage of a building's life, providing in-house expertise in planning, design, building, and maintenance. Core services include: mechanical, electrical, engineering & design, curtainwall/glazing/panel systems (InterClad), millwrights, fabrication, building systems, controls & system integration, and 24/7/365 maintenance. Egan has also been recognized as one of America's Safest Companies by *EHS Today*.