

Rydell GM Auto Center Brings Home Honors

It isn't often that a company gets to work on a facility that will become the blueprint for over 60 similar buildings across the United States. It is even more rare when the initial project is located in Grand Forks, North Dakota. But that was exactly the opportunity given to Bergstrom Electric when the Rydell Group approached them with an innovative and unique concept for automotive sales in 2002.

"They had a great vision - very unique, but they needed a team to figure out how to make it work," explained Steve Wasvick, the Project Manager for Bergstrom Electric. "We were able to bring in the right people to help bring their concept to life."

And bring it to life they did, in impressive fashion. The 73,000 square foot Rydell GM Auto Center was completed in December of 2005, on time and significantly under budget - no small feat for a project of that magnitude. And to top it off, the project earned a Minnesota Associated Builders and Contractors 2006 Excellence Award as well as a National award from the Independent Electrical Contractors Association.

The initial concept behind the project was an "Auto Mall" where customers could see and compare several different styles of vehicles under one roof. It was important, however, for each brand to maintain its individuality.

In order to successfully deliver the owner's concept, Bergstrom teamed up with general contractor GW Sondreal



The Rydell GM Auto Center was completed in December of 2005 and earned Bergstrom Electric a 2006 Excellence Award from Minnesota Associated Builders and Contractors.

and mechanical contractor McFarlane Sheet Metal. In a unique move, Bergstrom also hired an electrical engineering firm to provide initial input into the design. The bulk of the project was completed as a design/build concept, with Bergstrom taking the lead.

There were three main phases of the project, each with its own unique challenges. The first phase was a 43,000 square foot automotive service area, which had 31 work stations with built-in tool boxes and several miles of underground conduit. Economically lighting the work stations from a 26 foot ceiling was accomplished through use of Columbia Lighting's new T-5 lamp technology.

The second phase of the project was the 30,000 square foot showroom, sales offices, and training area. The unique architectural design of the building created a magnificent showroom from both

inside and out, as evidenced in the photo above. It also, however, created some definite challenges for the team. "Not only did the arch stretch from 14 feet up to 35 feet and back down again, but the entire front wall was glass," explains Wasvick. "Since we couldn't supply power through the walls, we had to get creative and use floor boxes and structural beams."

Continued on Page 2

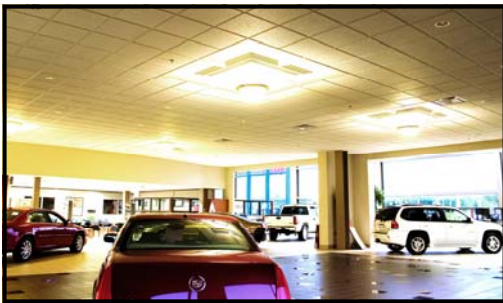
Inside This Issue

Rydell Award	1
Spotlight On	2
Thermal Imaging	3
Cliff Notes	4

Lighting the showroom was a challenge as well since the ceiling height fluctuated but proper showroom lighting levels were important for sales. The final design consisted of mounting 50 foot linear fluorescent light strings 10 feet high and 16 feet apart across the entire area.

The third phase of the project was the site lighting, also a key component for automotive sales. Bergstrom arranged a tour for the owners at a factory, allowing them to learn and see first hand how the pole light fixtures would look. The site lighting design selected included 54 two-head 1000w fixtures.

The final piece of the puzzle was to include Idec programmable relays which involve different light levels and scenes to match business hours and available natural light. The lighting of the showroom, training room, and site can be controlled automatically or



The Cadillac Showroom at the Rydell GM Auto Center shows how a combination of natural lighting and unique fixtures can separate spaces in a large area.

from a computer by a select few individuals.

“The Rydell Group was particularly pleased with that feature as it is cost effective, efficient, and will save them money in the long run,” says Wasvick.

Construction of this large project was multi-phased - first the new service area was built, then the existing service area was demolished and the new showroom was constructed, then the existing showroom was demolished and the site lighting was completed.

“All of this was done while service and sales operations continued virtually uninterrupted,” explains Ward Eagleson, Project Foreman with Bergstrom Electric.

“And, of special importance, there were no accidents, injuries, incidents, or safety violations in the 8,500 manhours Bergstrom employees logged during the project,” adds Dave Lawson, Bergstrom’s Safety Director.

Along with the national awards, Bergstrom has received numerous accolades from members of the Rydell Group and others involved in the project. Of particular note was a letter from Jim Price, who oversees most of Rydell’s construction projects across the country: **“Having been involved in a number of new construction projects**

over the years, I can say that the attention to detail and support on this project was second to none. . . From the foreman to every single electrician that worked on the project, there was never anything but the highest level of cooperation, consideration, and maximum effort.”

Rydell is now building a new facility in Montana using the concepts developed in the Grand Forks building. A unique and innovative design/build concept that may be replicated across the country, originally delivered by a company that believes excellence is par for the course. ◇



Cliff Moen, President of Bergstrom Electric, Inc. accepts the National IEC award from Emerson Smoker, IEC National Awards Committee Chairman (left) and Dennis Thomas, IEC National President (right).

Spotlight on: **Jamie Dietzler**

The manager of the new Thermal Imaging Division at Bergstrom Electric, Jamie Dietzler has been with the company for over six years. He graduated from Grand Forks Central High School and the IEC Dakotas apprenticeship training program before taking his journeymans test. He recently received his Master electricians license. Jamie and his wife, Crystal, live in Larimore with their two children, Colin (2) and Addison (7 months).

What is your favorite part of your job? Being given the chance to work with great people in an environment that promotes

free thinking. Also, Thermal Imaging is a new division of the company. I am excited for the opportunity to be a part of it's growth.

What was your most memorable project with Bergstrom Electric? *My most memorable job was being a job foreman at Ben Franklin Middle School in Fargo, ND. The summer of 2002 there was a large remodel project and the schedule was very tight. In the end the guys working with me put in a lot of hours and completed the school to open on time for the school year. This took a huge effort on everyone's part and I was proud to be part of it.*



Do you have a mentor or person who inspired you? *My dad. He showed me how to work hard for what I want and have fun along the way.*

What are your hobbies? *Spending time with family, snowmobiling, ATV/motorcycle riding, fishing and hunting. ◇*

Thermal Imaging Technology Saves Time and Money

They say a picture is worth a thousand words. But in the case of thermal imaging, maybe they should say "A picture can save you thousands of dollars." This new technology is saving owners and contractors a lot of money and has numerous applications for industrial, commercial, and residential buildings.

The basis behind the concept is simple: thermal imaging is a photograph of the thermal properties of an object. It gives an accurate comparison of the surface temperature of an item compared to surrounding components. Usually, if there is a significant difference in temperature, there is a problem that needs to be addressed. The pictures below give a good example of thermal imaging at work. The photograph below shows the main fuses of an electrical panel. This visual reference shows nothing out of the ordinary and, indeed, the owner did not notice any problems with the operations of this unit. However, the thermal image below right tells a different story. The numbers indicate the temperature of the various components. As indicated, the fuse holder and wire termination are running at 137 degrees - significantly higher than any of the surrounding components.

"We recommended immediate action to prevent further equipment damage," explains Jaime Dietzler, Manager of the

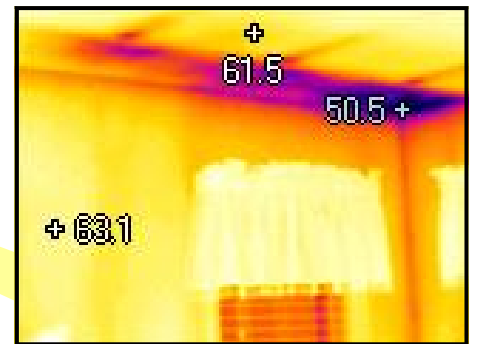
Thermal Imaging Division at Bergstrom Electric. "The wire could eventually burn off, which would mean a loss in production while the equipment is down waiting for parts and repair. Or something could catch fire from that much heat - it's certainly a fire hazard."

The technology has numerous applications and is earning praises from industry experts. Jeff Millard, a technical designer at Widseth Smith Nolting architects had his first experience with thermal imaging during a project at Valley Eldercare in Grand Forks.

"All of the parties involved were trying to figure out what was going on with the front entry," he explains. "The furnace unit we had sized for the area was having a really hard time keeping the entry at 70 degrees like they wanted. Bergstrom did some thermal imaging of the entry and the photos showed that one small area was letting in 20 degree air because of a few missing blocks on the old wall! Just by doing that 15 minute thermal scan probably saved the contractor thousands of dollars."

According to Millard, the administrator of Valley Eldercare was so impressed with the results of the thermal imaging that he wants more of the building photographed as well, including the roof where there are several bad ice spots.

Evaluating insulation is another good use of thermal imaging, as the pictures at right indicate. The corner of this master bedroom looks normal, however, the thermal scan in the bottom photo indicated



A thermal scan of a bedroom (above) indicates where poor insulation is letting in cool air.

an 18 degree difference in temperature. Poor insulation was the culprit.

The benefits of thermal imaging are many and include

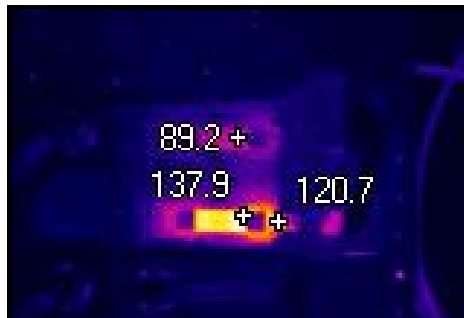
- Reduced unscheduled downtime,
- Extended equipment life,
- Reduced chance of electrical fires,
- Reduced building energy loss.

All of the benefits mean a better bottom line for the home owner, business owner, contractor, or architect involved.

According to Dietzler, the evaluation doesn't take long. "It really depends on how large of an area and how many images the owner wants. It can take a few hours to a few days."

For commercial or industrial businesses, Dietzler recommends annual scans to track the temperatures of equipment and determine if there is deterioration in some pieces over time.

Whether done annually or just once, thermal imaging photographs are proving to be a good investment for a business or home owner. ♦



The main fuses in an electrical panel in a regular digital photo (above left) and using Bergstrom Electric's thermal imaging camera (above right), which indicates a significant temperature variation and potentially dangerous situation.

Cliff Notes

Greetings and welcome to the first issue of Illuminations! In order to better serve our clients, Bergstrom Electric is sending out a quarterly newsletter. We are excited about this new way to communicate with you and hope that you find this publication interesting and informative.

Our intention is to highlight some of the projects our offices work on as well as share important information about the field of electrical contracting that may be useful to you. In addition, we want to introduce you to some of the people that help make Bergstrom Electric projects so successful.

Al and Eva Bergstrom started our company in 1964 working out of their garage. Now, over 40 years later, we have offices in six different communities, staffed with over 140 employees. We are committed to high

quality work, on time and on budget. Most importantly, we emphasize safety in all our jobs.

This first issue is a great example of our philosophy in action - the Rydell GM Auto Center is a unique project that challenged our team. We are proud of the facility we helped envision and create, which came in on time and under budget. It is definitely a beautiful addition to the community, as well as an extremely functional and attractive auto showroom and service center for Rydell's. We also are sharing some information on Thermal Imaging in this issue- a relatively new technology that has numerous applications.

Watch for our Spring edition in April - we'll be highlighting the Canad Inn project in Grand Forks, with its Splashers of the South Seas Water Park, as well as



The Rydell GM AutoCenter Service Write-up area.

introduce you to our Bismarck office.

If you have any questions or comments about this publication or our company, feel free to contact me at our Grand Forks office. Thanks for giving us a look - see you in the spring!

- Cliff Moen, President



Grand Forks

3100 North Washington St.
(701) 775-8897

Fargo

4120 14th Avenue N.
(701) 281-8992

Bismarck

3554 East Divide Avenue
(701) 221-0783

Devils Lake

1100 2nd Avenue NE
(701) 662-5823

Crookston

302 North Main
(218) 281-7571

Thief River Falls

701 Dawn Avenue
Ph (218) 681-7422

www.bergstromelectric.com