

INTERSTATES

SUMMER 2010 • Vol. 3 • No. 2



INTEGRATING SOLUTIONS

Seamlessly integrating multiple “off-the-shelf” solutions has led to another successful installation for Interstates’ control system division.

The client was Syngenta, a global manufacturer of crop protection products, and their goal was to install a paperless batch and process automation system that gave them flexibility to move production from system to system without having to rewrite recipes. “Syngenta had one, very specific requirement,” says Jerry Steenhoek, chief technologist for Interstates Control Systems. “They wanted an ‘off-the-shelf,’ non-proprietary solution.”

Syngenta had experienced some challenges with their current system which was run by another vendor’s custom code. They hoped by purchasing an “off-the-shelf” product in this new installation, they’d have better technical support and flexibility. Steenhoek explains, “With their old system, you would have to be well-versed in their custom coding to figure anything out.” Installing a generic package would allow almost any system provider to come in and troubleshoot if there were issues.

Planning played a large role in this project’s success. After Interstates was awarded the project, the control system group spent a lot of time with Syngenta representatives going over the functional requirement specifications document. “We wanted to fully

SOUTHWEST REGION

Interstates joined forces with Desert View Electric in Phoenix, AZ in 2008 to offer integrated electrical services to the Southwest region of the United States. Since the establishment of this Southwest Regional Office (SWRO), the combined team has found a variety of ways to merge their talents and add value to clients.

Tracy Brown joined the Interstates team as a regional manager and is leading the business development initiative. Brown has the experience and knowledge to support these growth efforts, bringing a background in industrial power plant, mining construction, and commercial development work to this position. “I have lived and worked in the area for ten years,” says Brown. “During my time here, I have built many relationships in the commercial and industrial - electrical markets,” states Brown. “It is a privilege to be part of a great company like Interstates and to play a role in the growth and development of the Southwest Regional Office.”

Delivering projects efficiently is the office’s priority. The Southwest Regional Office is focusing on Lean and Agile project delivery methods in order to do this. During a recent two-day event, the SWRO team and a group from the Sioux Center office got together and held a Value Stream Mapping event to analyze the service division’s work order procedures. Says Brown, “During this event, we identified steps and procedures that weren’t bringing value to this process.

► SOLUTIONS continued on page 2

► SOUTHWEST continued on page 3

INSIDE

INTERSTATES CONTROL SYSTEMS WINS..... 2

MAXIMIZE YOUR ELECTRICAL INVESTMENT..... 3

PREVENTATIVE MAINTENANCE..... 4

INTERSTATES ADDS MORE LEAN TOOLS..... 4

INTERSTATES AWARDED..... 5

► SOLUTIONS continued from page 1

understand their needs before we jumped into the project planning stage," says Jason Anson, Interstates project manager. "When we felt we had a good understanding of Syngenta's goals, we worked closely with Rockwell Automation, our product vendor, on finding the right combination of products to meet the customer's needs."

As with many projects, timeframes were tight on this upgrade. "We knew this project was going to challenge us from a scheduling standpoint," says Anson. "But, we knew we could do it if we invested extra time in the planning stage." Anson continues, "Also, Rockwell's 'off-the-shelf' products are built for this type of integration schedule."

In the end, the customer received a state-of-the-art batching system which met their project goals. Their existing Rockwell Factory Talk products are now integrated

into one system. States Anson, "Our client has received the latest and greatest products Rockwell has to offer."

"Our focus on understanding needs and delivering results helped us create a product that would support Syngenta's growth," says Anson. "After we were awarded the project, and based on where Syngenta was going as a company, we set up infrastructure to handle more bandwidth than they needed at that time."

Steenhoek adds, "We didn't know it then, but later in the project Syngenta decided to add more systems including a security and monitoring system. Because we saw where they were going as a company and set them up for future expansion, they easily had enough bandwidth to support the camera system."

The time invested at the planning table with Syngenta proved beneficial. The

installation went well. States Steenhoek, "This is why relationships are so important in our business."

Interstates installed the following Rockwell process automation solutions on this project. To learn more about how these products can increase your facility's production, contact Reid Vander Veen (712)722-1662 ext.148 or reid.vanderveen@interstates.com.

- Factory Talk (FT) Asset Centre and Process Device Configuration
- FT Batch
- FT Historian
- FT View Machine Edition
- FT Metrics
- FT VantagePoint
- FT View Site Edition
- FT ViewPoint
- Control Logix platform

INTERSTATES CONTROL SYSTEMS WINS SYSTEM INTEGRATOR OF THE YEAR

Interstates Control Systems has been named a 2010 System Integrator of the Year by *Control Engineering* magazine. The automation company received the honor based on their technical expertise, business skills, and overall customer satisfaction. Entries were divided into three groups determined by their annual revenue, and Interstates won in the \$10 to \$50 million category after receiving the highest score from *Control Engineering's* panel of judges. The panel stated they were impressed by Interstates' commitment to its employees and the company's dedication to client success. "Interstates places an emphasis on understanding needs and delivering results for both our internal and external clients," states Jack Woelber, president of Interstates Control Systems, Inc. "This focus has helped improve the way we run our business and our overall client satisfaction. I'm proud of the entire Interstates team and am pleased that their efforts have been recognized by our peers."

“Interstates places an emphasis on understanding needs and delivering results for both our internal and external clients,”
states Jack Woelber



Team members in the Sioux Falls Regional Office (left) and Sioux Center office (right) celebrate receiving the "Integrator of the Year" award.

MAXIMIZE YOUR ELECTRICAL INVESTMENT

When Your Utility Pays You

Author: Brent Kooiman, P.E.

Did you know there are ways to get your electric utility to pay you? Energy efficiency is important to your utility company, and many utilities have developed programs to encourage reductions in your facility's energy expenditures.

Cash incentives from a utility company can be used to pay for portions of a project or upgrade. Each utility is different, and you will want to talk to your particular provider about their incentives. The key is communicating with your utility and completing the required paperwork before the work is finished.

The first step is identifying what incentives are available to you. Here are some programs that could be offered through your utility:

- **High Efficiency Lighting**

Utilities may offer compensation for installing higher efficiency lighting in a new project or a retrofit. Many of these programs will compensate you on a "per fixture" or "per square foot" basis, offering additional rebates if lighting controls are installed. Because high efficiency lights emit more lumens and use less energy, your long-term utility costs will improve.

Another benefit of upgraded lighting is better visibility. As lights age, they emit less light. Good lighting helps employees see what they're doing and increases productivity and worker safety.

- **High Efficiency Motors**

The motors in your facility use a lot of energy. Purchasing high efficiency motors can save 2-8 percent on energy costs. Your utility may compensate you for some of the associated costs of replacing standard efficiency motors with high efficiency motors.

Whether to replace your standard efficiency motors as they fail, or, to replace all of your current motors at once depends on the potential savings. The return on investment (ROI) through utility incentives and reduced energy consumption can be significant in both situations.

- **Variable Frequency Drives (VFDs)**

Many applications for VFDs can be found by identifying variable loads in your facility. Using a VFD for these

applications will conserve energy that is typically lost when these processes are throttled back or run faster than needed. VFDs used in conjunction with high efficiency motors can lead to maximum efficiency and savings.

- **Energy-Efficient Appliances, HVAC Equipment, or Controls**

The equipment around us uses a lot of energy, and there are many incentives to make them more energy efficient. Programs are available to help offset the cost of purchasing high efficiency equipment and systems. One popular example is the incentive available for installing geothermal HVAC systems instead of standard furnaces and air conditioners. Upfront incentives and the future energy savings make these programs very attractive for new construction or replacement projects.

- **Custom Incentives for Businesses**

If there is a project that does not fit in the utility's standard programs, a custom program may be available for businesses. Often, rates can be negotiated with the utility. While taking advantage of this option might require a little more effort since there isn't a standard application to fill out, businesses are often able to achieve incentives that might not be available otherwise. These could be projects to change the efficiency of a portion of your process or add some new equipment that would reduce the overall consumption of energy.

An energy-efficient project is a win for both you and your utility, and the payback and cash incentives are usually worth the initial investment. If you would like an evaluation of your current facility or help capitalizing on these programs, please contact Interstates for a consultation. We can help determine which programs are right for your facility, calculate your ROI, and complete the necessary paperwork with the utility.

For more information on Interstates' energy services, contact Brent Kooiman (712)722-1664 or brent.kooiman@interstates.com.

► **SOUTHWEST** continued from page 1

Eliminating waste in our work order process is already helping us better serve our clients."

While many of the office's clients are located within the city of Casa Grande, the SWRO also performs work for national and regional contractors and construction managers in the state of Arizona and throughout the region. "We were fortunate to have gained many good client relationships from Desert View. We're trying to build on these relationships, increase our client base, and grow our experience with the types of projects we're doing together." The goal of the office is to build long-lasting relationships with the people we work for." Brown continues, "We're confident that when people get to know us and see our capabilities, they'll continue to partner with us on their projects."

SWRO Project Spotlight

Project: Lab Renovation & Terminal Sterilization

General Contractor: CRB Builders

Interstates is proud to be a part of a lab renovation and terminal sterilization project. As a subcontractor to CRB Builders, the Southwest Regional Office is providing electrical and fire alarm installations for both projects. The finished laboratory will be used by the client for its research and development of breast cancer treatments.

This project presented some unique challenges. Employees are working in adjacent clean room areas of the facility as the work is being completed. Therefore, maintaining a clean and dust-free environment is crucial to this client. Tight scheduling was another challenge. Due to the hard work of the Interstates team and the implementation of Lean and Agile methods, they remain on schedule.

Tracy Brown credits open communication and great teamwork between Interstates and CRB Builders for the progress. He states, "Our team's safety performance, extensive planning, and successful project execution are all tied to our commitment to Lean and Agile methods. We believe this combination helps us bring value to the client's project as well as other regional projects we are working on."

PREVENTATIVE MAINTENANCE

Why do we go to our doctors for annual physicals even if we're feeling well? Because we want to take care of the critical aspects of our physical and mental health in order to live a long and healthy life. We rely on the doctor to be a trained, professional resource who can help us monitor our current state of health, diagnose potential or existing problems, and develop a health plan for us.

How does this relate to your facility? Compare the critical components in your body to those in your facility. The utilities, electrical systems, automation, and process control are all critical to your facility's health and need regular "physicals" to keep your process operational.

Do you have a plan to monitor the critical infrastructure of your facility? Who is your highly-trained resource that you seek out to monitor, diagnose, and plan for the future?

Planned preventive maintenance should be scheduled regularly to keep equipment in good working order and to optimize its efficiency and accuracy. Maintenance activities often involve physical inspection of components, cleaning, testing, calibrating, and potentially replacing components to avoid future breakdowns. For example, performing a complete

INTERSTATES' MAINTENANCE SERVICES

Electrical Service

- Thermographic Imaging
- Exercising of Breakers
- Harmonic Testing of Electrical Equipment
- Physical Inspection and Cleaning of Electrical Equipment

Electrical Engineering

- Document Systems
- Safety Studies – Arc Flash Audits
- Energy Audits

Instrumentation

- Validation
- Calibration
- Troubleshooting
- Documentation

Controls and Automation

- System Display Verification
- Control Loop Tuning
- System Verification
- Control System Updates

instrument "check up" can ensure instrument accuracy and eliminate most instrument-related problems. In turn, your facility should benefit from more consistent process control and decreased process downtime caused by control failures.

Interstates works with our clients to develop maintenance programs that are based on both predictive and preventive maintenance plans. Beyond standard maintenance, we also help assess energy efficiency, electrical safety risks, and exposure to reactive maintenance which all can affect the health and profitability of your facility.

Our integrated approach provides a single resource for all your electrical, controls, and instrumentation needs. Interstates can help you develop a maintenance program tailored

to your facility's needs. In addition, we have the service and manpower capabilities to meet a tight shutdown schedule.

For your next electrical physical, call the experienced, licensed professionals at Interstates. We have the trained professionals to keep your valuable and critical plant gear performing at its best. We can develop, design, and execute an electrical maintenance program that will earn your facility a clean bill of health.

To learn more about Interstates' maintenance services, contact Brian Mowan at brian.mowan@interstates.com or (970) 221-1776 ext. 104.

INTERSTATES ADDS MORE LEAN TOOLS by Dave Los

Interstates has ramped up its project execution efforts by adding two more Lean tools to our project execution tool box. In last quarter's *Current Connections*, we discussed the value of our core Lean tools, including 3-D and BIM, our standard project execution system (WBS database), and our Agile procurement process. The new additions to our Lean tool box are precision tools that help us refine the way we do a project. They are Value Stream Mapping and changeover analysis.

Value Stream Mapping

A Value Stream Map is a detailed flow chart that uses symbols, metrics, and arrows to help visualize processes and track performance. The actual process of Value Stream Mapping takes us to the job site where we observe an individual task and assess how much value-add time is in that task. It requires a clipboard, a stopwatch,

and a willingness to observe and document the activity in detail. It is often easier to break down tasks into smaller components and then evaluate whether each component is required to perform the work. We sometimes find that the only reason we're doing the task a certain way is because we have always done it that way. Value Stream Mapping has allowed us to step back and see our work from a different perspective. Many Lean experts will tell you that Value Stream Mapping may have the greatest impact of all the Lean tools.

Our clients are already seeing some changes because of our Value Stream Map efforts:

- **Wearing Tool Pouches.** Team members were going up and down ladders and bending over to pick up tools. Giving them tool pouches has increased production and worker safety.

- **Better Logistics for Materials.** Interstates' goal is to have material within 25 feet of each employee. As a result, we spend less time transporting materials and more time increasing production.
- **Mobile Fabrication Stations** (picture below). The bender and threader are now stored near the work area and can be moved more quickly. We now spend



► MORE TOOLS continued on page 5

INTERSTATES AWARDED AT ABC NATIONAL CONFERENCE

Interstates Companies was again recognized for safety and project excellence by Associated Builders and Contractors (ABC) at their annual Excellence in Construction and National Safety Excellence Awards Celebration.

Pyramid Award

Interstates received a Pyramid Award for their work on the BMW Automotive Facility in Greer, South Carolina. This national honor was earned in the Electrical-Industrial Over \$2 Million category. Interstates teamed up with Gray Construction of Lexington, Kentucky, to complete work within BMW North America's 1.2 million square-foot Assembly North Manufacturing facility. Interstates provided all transformers, receptacles, lighting, electrical installation of all medium volt switchgear, lighting for the manufacturing facility, and 100,000 square-feet of office electrical.

Randy Van Voorst, project executive for Interstates, credits the strong relationship with Gray Construction for the award-winning

installation. He states, "Gray Construction is a professional company to work for. Their attention to schedule and focus on meeting the customer's needs aligns closely with what we at Interstates strive for on our projects. With this shared purpose, our teams worked very well together."

National Safety Merit Award

Interstates was also honored with a National Safety Merit Award from the ABC organization. The award recognizes companies whose safety performance and programs are judged to be exemplary and who exhibit a lasting commitment to jobsite safety.

The award criteria is very stringent: companies must show a strong track record of safety and demonstrate innovation and continuous improvement of safety efforts. OSHA safety data, self-assessments, and site visits are used to identify safety records. This year, only 27 contractors out of the approximately 28,000 ABC members were eligible to be awarded at this level.



Chris Fischer, Jeremy Swarts, and Scottie Peterson accept the ABC Pyramid Award on behalf of Interstates.

"This award is a great reminder of the effort our people are putting forth every day to truly 'live safely' on our projects," states Dave Crumrine, president of Interstates' construction division. "They have reinvented how they look at keeping each other safe with our Behavior-Based Safety program."

To learn more about how Interstates can bring award-winning work to your next project, contact Dave Crumrine at (712)722-1662 ext. 153 or dave.crumrine@interstates.com.

► MORE TOOLS continued from page 4

more time installing and less time moving the fabrication materials.

- **Enhanced Client Focus.** When we Value Stream Map, we capture the value from the perspective of the client. This helps keep a client focus at all levels of the organization, from the president to the newest apprentice.

Changeover Analysis

Changeover analysis is another tool we have added to our Lean tool box. Changeover is the total elapsed time from the last unit of good product installed at normal speed and efficiency to the first unit of good product installed at normal speed and efficiency after the changeover. Shortening changeover time leads to less downtime; our electricians become more productive when they spend less time in the changeover phase.

Changeover activities can be summed up by what we call "the three-ups":

- **Clean-up** - Removing all previous manpower, materials, tools, and equipment from the work area.
- **Set-up** - Converting the tools, material, and manpower in the area in preparation for the ensuing work.

- **Start-up** - The period of time after the tools, material, and manpower has restarted, but before it is running at normal speed and efficiency.

Here are some ways changeover analysis has helped our clients be more successful:

- By putting more tools and equipment on wheels, we can move our materials from each fabrication area more quickly. This allows us to relocate as needed and respond rapidly to changes and work interruptions.
- We've also made mobile carts for every crew - and on some jobs, every crew member. This allows team members to move parts and tools with them as they work, instead of spending valuable time chasing down the materials they need to do their jobs.
- We have designated an "up-man" whose job is to stock material, empty garbage cans, set up and move fabrication areas, round up tools, plug in equipment at the end of a work day, etc. This position was created to keep our electricians in the work area installing units rather than chasing tools, materials, and parts.

- Crews begin their shifts in the work area rather than first meeting at the trailer. This gets everyone started quickly. Also, our team members are better aware of safety concerns and changes that may have happened overnight.

An analogy we have used during our training workshops is that we want our electricians to be like surgeons. When a surgeon is in the operating room, you want him or her to be focused on the patient, not running around looking for the scalpel or gloves. In the same way, when our electricians are in the field, we want them to be spending their time performing installations and working on electrical systems, not chasing equipment and tools. We're looking for better ways to keep them doing what they do best.

Our Lean journey is one of continuous improvement, but the goal always remains the same: to maximize client value by eliminating unnecessary waste. So if you see our team members in the field with a stopwatch and clipboard, feel free to ask them what they are up to. We'd love the opportunity to share more of our Lean journey with you.

INTERSTATES

P.O. Box 260
Sioux Center, IA 51250 • USA

RETURN SERVICE REQUESTED

PRST FIRST CLASS
U S POSTAGE
PAID
BOELTE HALL
66205



INTERSTATES

The Interstates Companies offer full service, design-build electrical contracting, engineering, instrumentation, and control systems on a worldwide basis. Corporate offices are located in Sioux Center, IA, with regional offices in Sioux Falls, SD; Omaha, NE; Fort Collins, CO; and Casa Grande, AZ.

LOOK INSIDE to see some of the innovative and cost-saving solutions we have brought to our customers' projects.

For more information, visit www.interstates.com.



Integrating Solutions

Seamlessly integrating multiple "off-the-shelf" solutions has led to another ...

► Continued on page 1

Corporate Offices

Interstates Construction Services, Inc.
1520 North Main Ave. • P.O. Box 260
Sioux Center, Iowa 51250
712-722-1662 • Fax: 712-722-1667
e-mail: bdev@interstates.com

Interstates Instrumentation

538 12th Street NE
Sioux Center, Iowa 51250
712-722-1665 • Fax: 712-722-7945
e-mail: instrumentation@interstates.com

Omaha Regional Office

Interstates Construction Services, Inc.
14015 Industrial Road
Omaha, Nebraska 68144-3319
402-934-2133 • Fax: 402-934-2138
e-mail: oro@interstates.com

Interstates Engineering, Inc.

538 12th Street NE
Sioux Center, Iowa 51250
712-722-1664 • Fax: 712-722-8840
e-mail: eng@interstates.com

Rocky Mountain Regional Office

Interstates Construction Services, Inc.
2636 Midpoint Drive, Suite C
Fort Collins, Colorado 80525
970-221-1776 • FAX: 970-221-3652
e-mail: rmro@interstates.com

Interstates Control Systems, Inc.

444 12th Street NE
Sioux Center, Iowa 51250
712-722-1663 • Fax: 712-722-1693
e-mail: icsi@interstates.com

Wyoming Office

Interstates Construction Services, Inc.
1482 Commerce Drive, Unit Y
Laramie, Wyoming 82070
307-742-3516 • FAX: 307-742-3686

Southwest Regional Office

Interstates Construction Services, Inc.
3048 N. Cessna - Suite 3
Casa Grande, AZ 85122
520-413-7811 • Fax: 520-421-0779
e-mail: swro@interstates.com