July 2016

RAILWORKS® TODAY

A monthly newsletter for employees of RailWorks Corporation and its subsidiaries

Old and New Tech Combine for G&W Line

A BNSF Railway coal train moves through a bridge junction in Illinois not long after RailWorks Signals & Communications had installed and placed into service new wayside digital communications at the junction. RailWorks performed the same intricate work at six other locations on the Tazewell & Peoria Railroad, a Genesee & Wyoming property and a connecting railroad for BNSF and several other railroads.

Instead of "out with the old and in with the new," it was in with both old and new technology on a recent RailWorks Signals & Communications project. RailWorks kept intact portions of an aging train control system in Illinois while linking to a modern, computerized dispatching center in Vermont.

Genesee & Wyoming (G&W) contacted RailWorks to update an aging legacy system on its Tazewell & Peoria Railroad (TZPR), a 24-mile short line in Illinois. "G&W has reached out when they had a situation in need of higher technical support than your normal signal install or maintenance," notes Tim Orlandi, general manager of RailWorks Signals & Communications. "This is the first code line of this kind where we interfaced the old equipment to a centralized dispatch system."

RailWorks' job was to install, test and commission a system that would transition dispatch control from a tower operation in Peoria, IL, to G&W's centralized American Rail Dispatching Center in St. Albans, VT, a control center supporting multiple short lines in multiple states. RailWorks coordinated with two subcontractors also hired for the job.

Project Manager Tom Trovato says those fac-

Continued to page 2

INSIDE LINE

Tom Trovato
Assistant Vice President - Testing Operations
RailWorks Signals & Communications

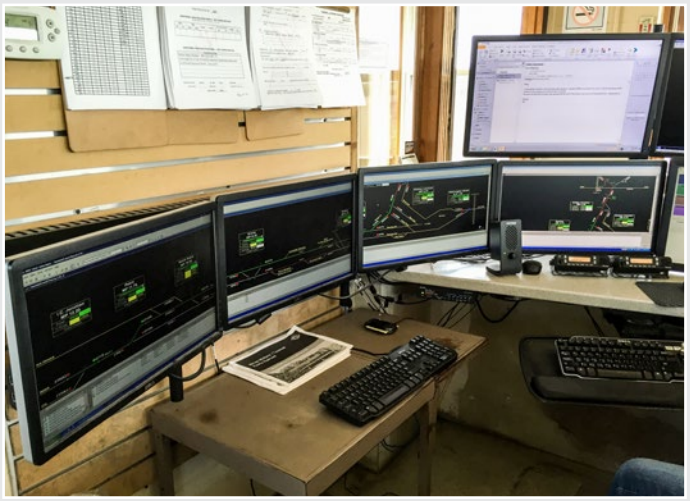
The one major obstacle on this project was the incompatibility of the two types of systems. The design team thought that we could interface the new controllers with the telegraph system and everything would work together, making an easier transition to the computer dispatch system. In reality it was like trying to hook a MacBook Pro computer to a crank box radio.

The first attempt at making these systems work together broke the old system, which forced us into coming up with the temporary dispatch computer at Peoria. In reality this turned out to be a better solution than our original plan. It gave our system team some additional real-time operation with the new locations prior to our cutover to St. Albans.

TZP's operations team was extremely pleased with the cutover, and our design and equipment teams learned some do's and don'ts should we ever have to take on one of these projects in the future.

Elimination of local dispatch towers with these old pushbutton machines signified the end of an era. It was a little sad to pull the plug on a system that had been in service since April 1966.

Conquering the Compact and Complex *from page 1*



Old (left) and new dispatch systems operated together for about five weeks in the old dispatch tower in Peoria, IL, before transitioning fully to the new centralized dispatching from St Albans, VT. A 60-year-old wireline-based system was replaced with the new computer system, featuring modern, over-the-air, internet-protocol-based technology using wayside communication controllers equipped with cellular technology.

tors made the job, which began in late April and lasted about six weeks, both challenging and interesting. "We had to integrate multiple groups, with one sub, Progress Rail, designing the job and another sub, Railcomm, providing the equipment. Both groups handed over to our team the responsibility of interfacing the system and making it work.

"Our role became more of a system integrator and problem solver," says Tom. "We had multiple coordination sessions with our design team and our equipment provider, usually on a daily basis, due to the type system we were working with. There are very few of these older-type telemetry systems left operating in the country today."

A RailWorks crew took on the challenge of the interface between the legacy and new systems. They needed to cut in new wayside digital communication controllers at seven field locations along a 13-mile stretch between Peoria and Pekin that were equipped with systems installed in the 1960s, all the while minimizing service interruptions.

"Prior to the transition, the legacy system was connected to the seven field sites using a direct wireline system similar to an old teletype telegraph system," Tom explains. "The dispatcher turned a knob to operate a switch or signal, and a telemetry code was sent down a pair of wires to a field location, which in turn decoded the signal and carried out the function. We eliminated the old wire-line system and converted this to cellular digital technology." But the existing relay system, with which the "telegraph" formerly interfaced, was to remain and be used.

Tom says there was no easy solution for overlaying new computer-controlled equipment and keeping the teletype equipment working. "What we were able to do was create a temporary stage where we put the new equipment in service on a temporary computer-controlled system that was actually co-located (with the existing legacy system) in the tower in Peoria." In each of the field locations, RailWorks cut over the new wayside controllers one location at a time, placing each on the temporary new system in Peoria. "Every time we put a new system in," Tom explains, "they were able to control it from the temporary dispatch computer."

This system greatly reduced the downtime at each field site. Most sites were modified and operational on the temporary equipment within an eight-hour operating window. Over about a five-week period, the old and new systems operated at the same time. Then, when all seven locations were operable, RailWorks ported the system from Peoria to St. Albans.

The transition took place on schedule, on May 25. TZPR trains are now dispatched from the American Rail Dispatching Center in St. Albans.

Give Us Your Best Shot!

We'd like to share what RailWorks at work looks like across the company, but we need your help. Please give us your best photograph of employees on the job this summer. Email your best shot to RailWorksToday@RailWorks.com. Include • Your name and title • Company • Customer • Location • Caption describing what's going on in the photo • Name of project manager or supervisor on project. We'll share the images in the August issue of *RailWorks Today.* Deadline: July 31.

RAILWORKSMART RAILWORKSAFE

Crew Learns Lockout-tagout Safety System Works

By Ralph Weber

Ralph Weber
Regional Safety Director, RailWorks Track Systems

A few weeks ago, I was visiting an industrial plant job site and was briefed by the RailWorks foreman that the track was protected and inaccessible by way of a track switch that was lined away and locked and tagged with his lockout-tagout (LOTO) padlock and tag. The track was in a refinery facility and connected to a siding, which in turn was connected to a railroad main line. The track being worked on was a very tight curve with dirt berms and trees close in, and the sight lines were at best 150 feet in either direction. The RailWorks project was to upgrade the track with new rail and some tie replacement. The rail portion was complete, and the crew was driving spikes in the occasional tie that had been changed. The track looked good, and outside of some spiking and quality control was ready to be put into service. The crew was working in about the middle of the curve.

After a visiting with the crew for a while, I did what I typically do and took a walk to go check the locked switch. It didn't take long before I was out of sight of the crew, and as I continued around the curve and came in sight of the switch, I could see tank cars sitting on the track at a point just past foul of the switch, and I saw a trainman who had been at the switch walking toward me.

His first comment to me was, "That's your lock, and you guys are working in there, huh." To which I responded, "Yes." His second comment was, "Well, I was supposed to push 20 tank cars onto this track, and now what am I supposed to do with them?" Before I could respond he said, "I'm not mad at you guys, because I know you've been in there for a few days now, but somebody should have known that and not given us a switch list that called for this." The man then walked away, calling for assistance on his radio, presumably about what to do with the 20 cars that didn't have a home.

Obviously, with the switch lined away and the lock and tag on it, the trainman wasn't going to push cars in. My first thought was: The system worked perfectly. I completed my walk to the switch, and yes, the foreman's tag and lock were on it.

My second thought was thank goodness for that, and well done, Mr. Foreman, because if that trainman had pushed cars in, there was no way he could have stopped in time to avoid hitting something. And given that our crew was running an air-operated spike-driver and wearing hearing protection, they might not have seen or heard something coming. Lastly, my thought was that that crew didn't even know about what had just transpired.

When I got back to the crew, I gathered them together and told them the story of what I had encountered at the switch, and I congratulated them on a well-done job using lockout-tagout. And to reinforce the point, I took them out to lunch.

Safety Success Starts with Fundamentals

In his safety story for this issue of *RailWorks Today*, Ralph Weber highlights an instance of a successful (meaning safe and incident-free) result of the lockout-tagout (LOTO) application. A process worked as it should. Life, health and equipment were all preserved as intended.

This safety achievement using LOTO brings to mind a couple of safety fundamentals. Here are two key steps that we want to implement without fail:

- Job planning. It's critical to safety success. Plan the work, and work the plan.
- When a job or hazard changes, stop. Teams must step back and reassess the situation. The employee in charge must communicate the nature of the change and the resulting changes to be made in the approach to related tasks.

These are mandatory, critically important procedures. They underscore the significance of clear and frequent communication. Please take time with your teams to reiterate Ralph's story and this accompanying message.

RailWorks Values In Action: **Customer Focus**

Comstock Skanska JV Make Hay on NYCT's 63rd Street Line

There are plenty of expressions that aptly describe our work on the New York City Transit (NYCT) Authority's 63rd Street Project. "Making hay while the sun shines," "striking while the iron is hot," and "seizing the day" all seem to fit. JV partners L.K. Comstock & Co. and Skanska USA made the most of a timely opportunity and successfully completed this fast-paced subway project on Manhattan's Upper East Side.

To prepare for service on the new Second Avenue Subway (SAS) line, the NYCT Authority decided to replace the main line track and contact rail between the 57th Street Station and the 63rd Street Station. When the JV team known as Comstock Skanska (CSJV) won this $17.5 million 63rd Street Project this past February, they understood the sizeable challenge: Maintain the schedule of the massive Second Avenue Subway project while simultaneously completing the 63rd Street job by July 22, in just 21 weeks.

The seasoned team took the challenge in stride and leveraged some key advantages. They already had a keen understanding of their customer - the NYCT Authority – and the requirements for the job through their work on the SAS project. They also were already mobilized just down the street on SAS.

Once they were awarded the job, their proximity enabled them to get to work right way. They began immediately by dropping excavators down the 86th Street subway shaft and positioned them to start chopping concrete to demolish the existing trackbed. Over the next five months, with crews working two 12-hours shifts around the clock, six days a week, they completed the following work:

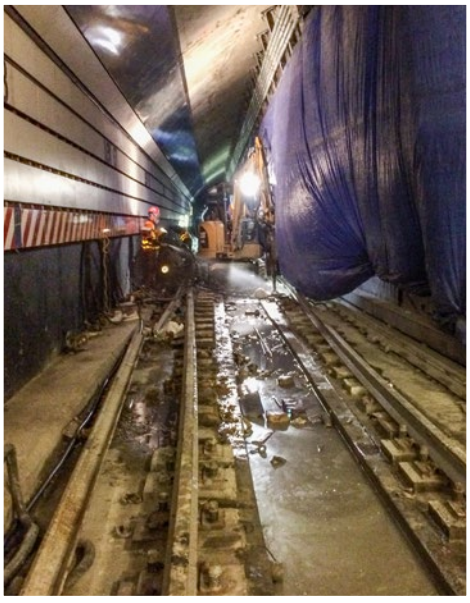
- Demolished and installed 5,000 linear feet of track bed and plinths
- Removed and installed 18,240 linear feet of continuously welded rail (CWR)
- Demolished and installed 10,260 linear feet of new contact rail and concrete pads
- Installed 8,500 new direct fixation rail plates
- Installed 2,000 linear feet of grease piping and 10 new grease applicators
- Installed 16 new stop machines.

Besides the short project duration, the team had to address the logistics of coordinating with other contractors who were working in the tunnel at the same time. During weekly planning meetings, the JV team mapped out the sequence of work trains to position equipment, materials and workers in the tunnel in the proper order. Constant coordination among contractors also was necessary.

The JV team substantially completed the project by July 22, which was a positive reflection of their commitment to and understanding of their customer.

Project Leadership Team

Joe Maikisch, Project Director
Lorenzo Pasquariello, General Foreman
Courtney Davis, Track General Foreman
Alex Engel, Assistant Project Manager
Dan Ferrentino, Track Project Manager



Track demolition

Completed track bed and plinth installation

Geometry testing of the completed track

RailWorks Values In Action: **Employee Focus**

Information Technology: Providing Constant 'PPE'

Having your Information Technology (I.T.) team around is kind of like having personal protective equipment (P.P.E.). It's when something goes awry that you appreciate having the ever-present protection, not to mention support and outright facilitation of all the work each of us at RailWorks does.

Accounts Receivable Specialist Michael Reyes of our Deer Park, TX, office recently stopped and thought about his "P.P.E.," as it were. He was reflecting on some technical assistance he'd received, and it generated an idea: "We need to recognize I.T."

It was a simple yet significant statement, one of those thoughts many of us have contemplated after being assisted by I.T. Without them, portions of our work could grind to a halt. So here's a shout-out to the RailWorks I.T. team — 13 members strong — for their expertise and constant attention to our systems and the employees using them in the field and at more than 30 offices.

I.T. is organized into two major groups that support employees in both the United States and Canada. The seven-person Application Support group, based in our New York, Farmingdale and Guelph offices, provides support to application systems like J.D. Edwards (standard and integrated business processes and a centralized repository for official company data), Hard Dollar (bidding) and Cyber Recruiter (employee hiring). This group also supports AL Mobile, the time and labor tracking and reporting tool in use in the field. Shared Services, with I.T. assistance, recently rolled out an update enabling RailWorks' field technicians to go fully paperless with timekeeping and signoffs. Fred Omar, manager – Shared Services, called I.T. "the gas for the (Shared Services) engine. That's why they are so integral to what we do."

And how about the members of the Network and Infrastructure support team, who their leader, Chief Information Officer Bob Cummings, describes as "there when you need them and there when you don't see them." Those six team members include the folks based in the New York area and also in our Guelph office who are at the end of the "help desk" calls and emails to "support." Among their countless tasks are helping more than 2,000 of us use the company email system and handling at least 1,000 support tickets every month. They ensure 200 servers support the continual exchange of information across the company over email, SharePoint and other networks, provide security to avoid computer viruses and cyber-attacks and make sure we are outfitted with all manner of computer hardware and software.

If you are outside of their working area you might've come voice-to-voice but not face-to-face with anyone in I.T. So here are the faces of RailWorks' Information Technology team:

Members of I.T. who work from RailWorks' headquarters at 5 Penn Plaza are Chief Information Officer Bob Cummings; Gerry Moreland, director - Financial & Business Systems; Chris Lazarus, intern; Ken Walker, director – Information Systems; and Lisa Walsh, JDE business analyst. Not pictured: John Impenna, director – Systems Reporting & Consolidation.

Based in Farmingdale, NY, are Byron Singh and Jose Cruz, desktop support technicians; Alex Zeines, applications director; John Barry, director – Telecommunications & Network Services; Bob Hickey, director – Infrastructure Services; Tony D'Auria, senior systems analyst and David Morris, senior systems administrator.

Located in Guelph, ON, are I.T. Director Bruce Muller and Desktop Support Technician Ryan DeYoung.