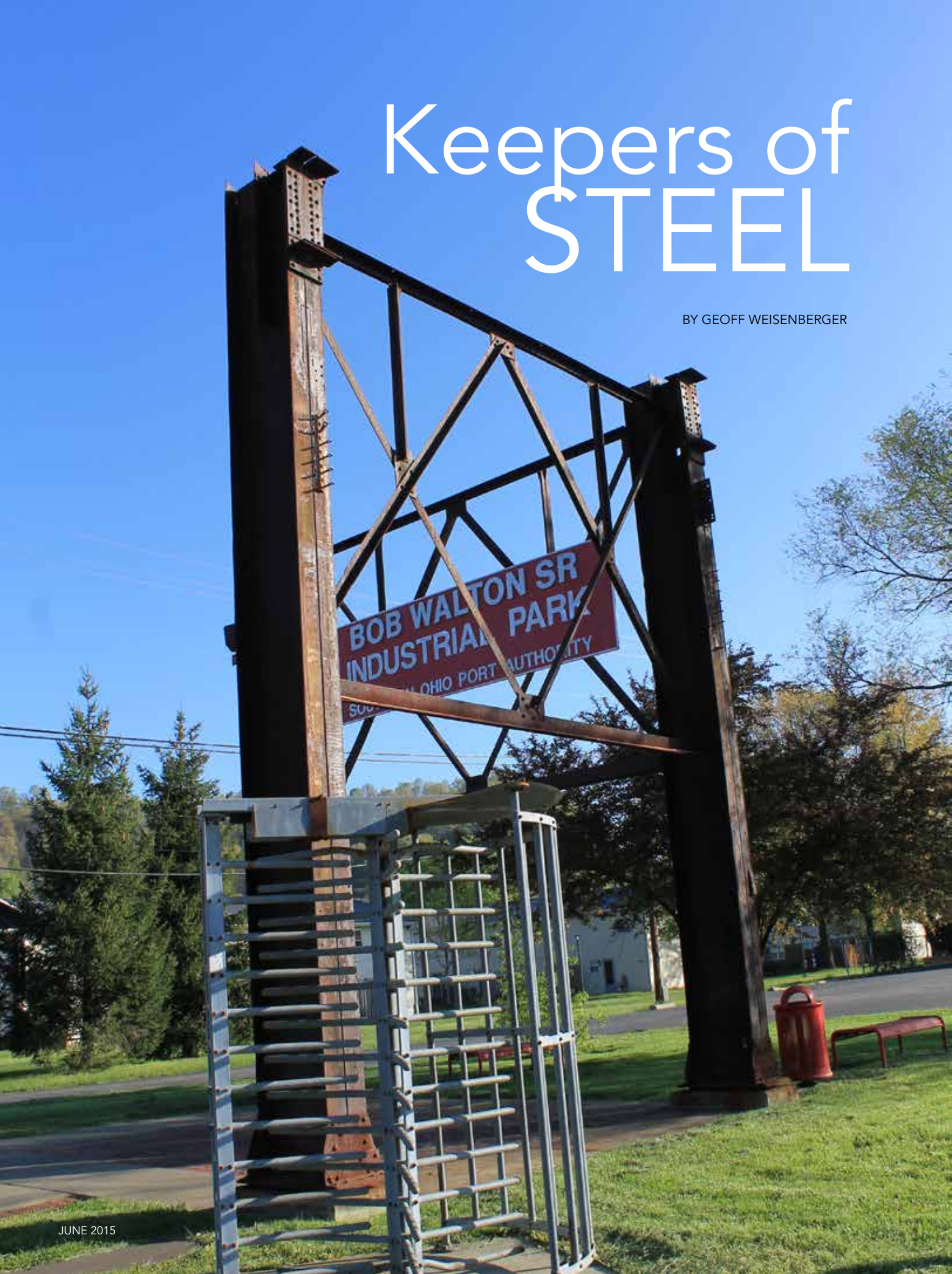


Keepers of STEEL

BY GEOFF WEISENBERGER



While you may not realize the benefits of service centers, if you've worked on a structural steel project, you've almost certainly reaped them.

JUST NORTH OF THE OHIO RIVER in New Boston, Ohio, stand the remains of the entrance to the New Boston Steel Mill.

The three massive steel columns, connected by truss work and forming an L, are flanked by a decades-old employee entrance gate. In the middle of the L is a plaque paying homage to the site's history and workers, as it was home to a steel mill—whose ownership and functionality changed multiple times and at its peak employed 6,000—from 1828 until 1980.

The mill closed in 1980 due to increased import of foreign steel over the previous decade, though industrial facilities began reinvigorating the site, now called the Ohio River Industrial Park, in the late 1990s.

And as of last year, so has a new structural steel facility. Infra-Metals Co., which operates seven major stocking facilities and a handful of smaller retail locations and is a wholly owned subsidiary of Reliance Steel & Aluminum Co., opened a new 280,000-sq.-ft steel service center in January 2014 with logistics in mind.

"We've been in the business for years and saw the New Boston location as an ideal site to learn from our experience and build the best possible facility," says Oak Williams, the facility's general manager. "For example, we decided on longer bays requiring fewer cranes in an effort to streamline things. And the location is perfect for all modes of transportation. We're located within a few hours of several major cities in terms of truck access, we have barge access via the Ohio River and we're just a few miles away from a major Norfolk-Southern switch yard, which we can access via our rail spur."

If you're a designer and don't know exactly what a service center is, you're not alone—but know that you have almost certainly designed projects using steel that has been through one; roughly 70% of all structural steel used in the U.S. has at some point been inventoried at and processed by a service center.

"A lot of architects and engineers don't know we exist," says Williams. "Running tours on SteelDay has been very helpful with bringing awareness, and we will continue to encourage engineers to contact us for availability. Knowing what steel is available early in their process and knowing they might not have to wait as long for it is a benefit to everyone."

Buffer Zone

The most basic definition of a steel service center is a steel warehouse—a buffer zone or even a decompression chamber between mills and fabricators that benefits both. It's a matter of space, really. While mill output sometimes flows directly to fabricators, there is of course no guarantee that all steel from a rolling schedule will be required right away, and mills typically don't want to hold onto massive amounts of sold inventory (when you produce thousands of tons per day, it tends to pile up quickly).

And neither do many fabricators, as they tend to bill on labor hours and generally want to designate as much space as possible to production, not storage. Service centers provide that storage space, and plenty of it; all of Infra-Metals' locations collectively average an inventory of around 150,000 tons of steel at any given time, and the company purchases steel from the various structural mills in bulk; they also distribute steel to smaller service centers.



- ▲ The HSS bay at Infra-Metals' New Boston, Ohio, facility.
- ▼ Steel being unloaded from a rail car; all of the facility's bays are accessible via the rail spur.



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◀ New Boston, Ohio, was home to a steel mill for more than 150 years. Infra-Metals opened a new steel service center in the town last year.



▲ All of Infra-Metals' facilities collectively have 150,000 tons of steel in inventory at any given time.



▲ The plate-processing machine can accommodate plate up to 10 ft wide and more than 60 ft long.
 ▼ The blast and paint line at the company's Connecticut facility.



But while providing space for massive amounts of steel is the key issue—people often tend to describe service centers as Home Depots for fabricators—it's only part of the picture. Service centers offer some or all of the following capabilities: cutting to length, cambering, tee-splitting, drilling, plate burning (beveling), plate shearing and forming and blasting and painting.

“The Home Depot analogy isn't entirely accurate,” explains John Lusdyk, Infra-Metals' executive vice president-commercial. “We don't just store steel, we add value by taking the burden of storing steel off of our partners both upstream and downstream, and we also perform value-added processes that better prepare steel for fabrication.”

One of the most common processes is cutting steel to length, which the New Boston facility performs with two automated CNC band saws, one a 40-in. Voortman and the other a 30-in. HYDMECH. Bolting, welding and coping operations are not performed here, though the facility does have a Sector Technology plate-processing machine, which is capable of processing plate up to 10 ft wide and more than 60 ft long and has the capacity to bevel, drill and plasma-cut the most intricate customer-provided prints or those drawn in-house. There is also a secondary Messer plate burning machine with multiple oxy-fuel heads and dual-plasma units. While scrap from these processes is an inevitability, Infra-Metals works to keep it to a minimum.

“As part of our value-added processes, we work to reduce scrap as much as possible for fabricators,” Williams says. “Our software looks at our inventory to find the most efficient way to cut and deliver product to our customers.”

One of Infra-Metals' facilities, in Connecticut, also includes a blast and paint line that can clean steel to any customer-required surface prep condition, then apply and cure a zinc-based primer (in a 100-ft-long oven) in eight to 10 minutes from start to finish. (That facility services a lot of marine projects, though Williams notes that the New Boston facility has the capability to add blasting and painting capabilities should the demand arise.)

Scheduling and bundling advantages are also part of what service centers offer their customers. Lead times are generally shorter when ordering from service centers; steel can be ordered, shipped and invoiced according to project sequence and fabrication schedule, not based on the production schedule at the mill. Trucks deliver customized bundles of varying shapes to customers, who aren't billed until the order is delivered. (Infra-Metals has a fleet of its own trucks and drivers at each of its seven locations, which allows for improved, on-time deliveries and logistics flexibility.)

AISC Member Service Centers

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|-----------------------------|---|
| Alro Steel Corporation | Infra-Metals Co. |
| American Alloy Steel | Instel Steel Distributors |
| Azco Steel Company | Kloekner Metals |
| Brown-Strauss Steel | Metals USA, Inc. |
| CCC Steel, Inc. | PDM Steel Service Centers, Inc. |
| Chatham Steel Corporation | Reliance Steel & Aluminum Co. |
| Central Steel Service, Inc. | R & S Steel |
| Crest Steel Corporation | Steel & Pipe Supply Company |
| Delta Steel, Inc. | Siskin Steel and Supply Co., Inc. |
| Dillon Supply Company | Smith Pipe & Steel |
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Heavy Lifting

There are four bays at the New Boston plant, each approximately 650 ft long and 110 ft wide: one for channels, angles and flat bars, one for wide-flange beams, one for HSS and one for plate. The sheer size of the bays lets the facility accommodate long products while providing ample storage and loading space. The three indoor bays comprise 200,000 sq. ft, while the outdoor bay is roughly 80,000 sq. ft—all of it under crane. All bays are accessible via the rail spur for efficient offloading and storage, as well as via two 25-ft-wide drive-in areas that allow trucks to enter and load fully inside the facility. The plant, which employs about 60, sits on 50 acres, and the steel is stored inside and outside depending on the type and size. The facility moves steel via overhead cranes—the outdoor crane has a 15-ton capacity while the indoor cranes can handle 20 tons at a time. Steel that comes in on barges is unloaded via crane at a dock roughly a quarter-mile downriver and brought to the plant in trucks. Forklifts are used to handle some of the heavier wide-flange sections that are not stored in crane-ways, while the balance is unloaded and stored in any one of the four bays.

While the facility strives to turn material over in an expedient manner, it also maintains the ability to have whatever a customer needs on hand at any time.

“Our bread-and-butter sizes turn the quickest, but we are known for our ability to supply entire projects, including those that require the more difficult and slower-moving sizes, from stock,” notes Lusdyk.



- ▲ Trucks can pull all the way into each of the bays.
- ▼ Steel in the 80,000-sq.-ft outdoor wide-flange bay, which can be enclosed in the future should the company choose to do so.



- ▲ During its time at the facility, every piece of steel is given a bar code that includes the mill heat number, size, length and grade.



- ▲ Steel can be ordered from service centers by project sequence and fabrication schedule.
- ▼ The New Boston facility can bring in steel via its port on the Ohio River.



- ▼ A wide-flange beam being cut to length with a band saw.



Most steel from the New Boston facility is delivered within a 300-mile-radius, though the less common shapes will travel farther—and all of Infra-Metals’ facilities are typically 500 miles from each other (all are east of the Mississippi River) so that each one has its own distribution area with little to no overlap.

The Steel Code

Infra-Metals has taken a progressive and lead role in the advancement of steel tracking as well as improved customer-vendor data exchange. During its time at the facility, every piece of steel is given a barcode that includes mill heat number, size, length and grade. And every employee at the facility has a barcode scanner so they can instantly identify any piece.

“Bar coding changed the way we do business,” says Williams. “The old way involved lots and lots of filing cabinets and problems like a driver dropping a mill order in the mud so it became unreadable.”

And he hopes that in the future, a piece of steel will be able to be seamlessly tracked throughout its life.

“Mills, of course, provide their own tags and bar coding, then we add our bar codes and then a fabricator might have their own tracking system,” he says. “It would be nice to see one code be applied from mill to service center to fabricator and anywhere else it travels. Plus, initiatives like steelXML are a step in the right direction for ordering and tracking, so I’m optimistic for the future.” (steelXML is an AISC initiative, which Infra-Metals and other companies are involved in, that is geared toward streamlining the steel ordering and data exchange process between various links in the steel supply chain; read more about it in “eSteel” in the March 2014 issue, available at www.modernsteel.com.)

As for the future of the facility, the company’s newest, it will grow as needed and continue to maintain the structural steel industry’s presence in the area.

“When the mill closed back in 1980, it was pretty devastating for the area,” Williams says. “That’s 6,000 jobs gone. Obviously, we didn’t bring as many jobs with us when we opened, as technology and material-handling improvements have allowed for much more efficiency across the entire industry. That said, we’re still ramping up, here. Based on customer feedback, we’ll determine what additional services and personnel we need to add, and do so.” ■