PennFab, Inc.: Putting the Northeast Corridor Back on Track

At just over 453 miles (729 km), the Northeast Corridor is the longest electrified train rail thoroughfare in the United States. With an estimated 11.6 million riders on board each year, 750,000 trips per day and 2,000 plus trains per day – it is notably the busiest line in the country. Daily train commuters rely heavily on this mode of transportation for jobs, the nation’s top-ranked hospitals and other necessary means for everyday living. The Northeast Corridor stretches from Washington, D.C. all the way to Boston, Massachusetts.

May 12th, 2015, Amtrak’s northbound Northeast Regional No. 188 departed Philadelphia’s 30th Street Station en route to Washington, D.C. The train, carrying 238 passengers and five crew members, derailed speeding at approximately 106 miles per hour. The deadly crash resulted in the loss of eight lives and more than 200 injuries (11 critical), making it the deadliest derailment along the Northeast Corridor since 1987. The national tragedy shed light on the severity of the destruction and the massive service interruption that would indeed affect millions of Americans. A commitment from Michael Mabin, Sr., President and CEO of PennFab, Inc., to supply the custom steel structures was a key element that Amtrak needed to ensure that service would be reinstated in a matter of days.

CUSTOMER NAME: PennFab, Inc.

INDUSTRY: Fabrication, welding and assembly firm specializing in the railroad industry.

LOCATION: Bensalem, Pennsylvania, USA

CHALLENGE: To supply the custom steel structures needed to reinstate Amtrak service following a deadly derailment.

SOLUTION: Peddinghaus’ HSFDB-2500/B plate processor, the Advantage-2 drill line in tandem with a DG-1100 bandsaw and an Anglemaster-643/Q.

RESULTS: PennFab completed the custom catenary structures needed to reinstate Amtrak service in a matter of 36 hours (a typical 14-16 week project).
When Tragedy Strikes, PennFab Pushes On

Mike, Sr. began PennFab, Inc. in 1983 and grew the company into a world-class, 140,000 square foot (13,000 square meters) fabrication, welding and assembly firm located in Bensalem, Pennsylvania – minutes from where the derailment occurred. Specializing in the railroad industry for 30 years, Amtrak is one of PennFab’s largest customers. When news broke of the local tragedy, Mike knew without a doubt that his company would step up in any way that Amtrak needed. “We have a phenomenal relationship with Amtrak,” Mike, Sr. explained. “The evening of the derailment, I received the news about 10 minutes after it occurred. I contacted Amtrak to let them know that I would make available the entire resources of our company to do whatever they needed.”

As a result of the disaster, all Amtrak services were disrupted between New York City and Washington, D.C. Mike and the rest of the PennFab team were all on standby waiting to begin what could be considered one of the fastest recoveries of a catastrophic railroad event in history. Following the initial crash on Tuesday May 12th, it wasn’t until Thursday that Amtrak was prepared to give PennFab the direction to design, detail, fabricate, weld, assemble and deliver what they needed to put the railway back in working order.

Beginning the Build

Thursday afternoon, the PennFab team met with Amtrak engineers in Philadelphia to review the circa 1929 drawings of the structures destroyed in the crash. As the PennFab team returned to their office, they laid the foundation for their work ahead to ensure that the employees, equipment and vendors would be ready when quickly called upon. PennFab began creating the drawings at 4:30pm for the two custom catenary structures to submit to Amtrak for approval by midnight. Steve Krotzer, PennFab’s Senior Project Manager, delivered the drawings and CNC programs to Vice President, Michael Mabin, Jr., at PennFab’s Morrisville plant at 3:00am, less than 11 hours after the entire process had even begun. At 3:25am, Mike, Jr. had the first piece of steel placed on the Advantage-2 CNC beam drill line for processing. PennFab’s fabrication facility was ready to tackle the timely project with an arsenal of Peddinghaus CNC equipment including a plate processor, an angle line and a band saw in tandem with their drill line.

Peddinghaus Technology and Precision

The PennFab crew worked continuously around the clock, pushing forward until all processing was completed and ready for erection. Utilizing all of their Peddinghaus equipment, PennFab completed the
two structures that required support beams, holes for pole steps, holes for reinforcing angle, sag braces, cross beams, splice connections, knee braces, cross arms, thick base plates, gussets and additional miscellaneous components.

With quality and safety key as PennFab pushed on, both structures were installed by 6:00pm on Saturday evening. “We were confident that we could knock this out,” Mike, Jr. confirmed. “The speed and the accuracy that the Peddinghaus machines put out is amazing; we couldn’t have done it without that machinery. It was dead on; we got into the field to erect the steel, every bolt lined up perfect; everything was perfect.”

**A Seamless Steel Success**
The team at PennFab was able to provide engineering, submittal, approval, purchasing, fabrication, welding, shipping and assembly in a matter of 36 hours. “Each one of these tasks along the line on a project would take minimum two weeks,” said Jim Yeager, Engineering Manager. “A typical structure like this would be 14-16 weeks from the receipt of order; we did it in less than 2 days with the help of Amtrak and everyone here.”

“We (PennFab) purchased a drill line on a handshake and shortly after that, we purchased an Anglemaster and then a plate processor,” said Mike, Sr. “Those pieces of equipment have been stellar and they really were a huge part of why we were able to do the turnaround that we were able to do.”

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