

**PROJECT TYPE**

Transportation & Bridge



**PCI** Mid-Atlantic  
A Chapter of Precast/Prestressed Concrete Institute

# REPLACING THE BECKVILLE ROAD BRIDGE

North Manheim Township, Schuylkill County, PA



## THE PROJECT

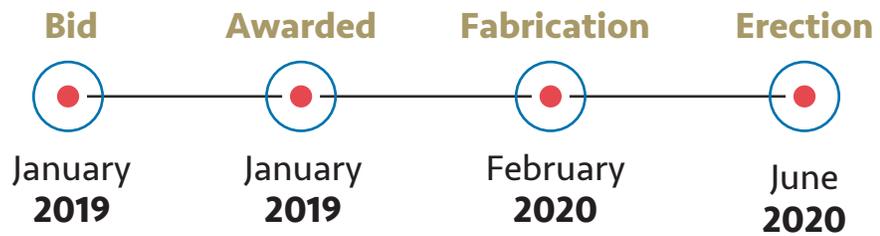
The Beckville Road Bridge in the North Manheim Township of Schuylkill County, Pennsylvania, stood in desperate need of repair. Passing over the West branch of the Schuylkill River, the concrete T-beam bridge, originally built in 1927, was rated as being in poor condition decades later in 2019.

With the detour sending all truck traffic through the town of Schuylkill Haven for the duration of this project, the general contractor was awarded a total contract of \$4.9M and tasked with reconstructing a crucial community path in a matter of three or four short months.



**Before its new construction, the bridge stood 82 feet long and 36 feet wide and saw an average traffic of nearly 2,000 vehicles each day.**

## THE TIMELINE



## THE TEAM

### Owner:

Kamlesh Ashar, PE  
District Bridge  
Engineer

Engineering  
District 5-0,  
PA Department  
of Transportation  
(PennDOT)

### Contractor:

Zachary Artim  
Project Engineer

Susquehanna Valley  
Construction  
Corporation

### Designer:

John Newell  
MEng, PE, CBSI  
Principal

NTM Engineering,  
Inc.

### Precast Producer:

Troy Jenkins, PE  
Vice President &  
Chief Engineer

Northeast  
Prestressed  
Products, LLC  
(NPP)



## THE SOLUTION

NTM Engineering, the designer on the project, began by performing an alternatives analysis to evaluate three alignments for the SR 3005 Beckville Road Bridge replacement. This allowed them to determine the level of impact that the work would have on the surrounding area as the team reviewed the project's purpose and scope.

### The Alternatives Analysis Elements

- Right of Way
- Social Impact
- Environmental Impact
- Overall Project Complexity
- Constructability
- Total Cost

### The Designer's Responsibilities

- Project Management & Administration
- Transportation, Logistics & Railway Coordination
- Design Field View & Cross-Sections
- Public Involvement, Traffic & Safety
- Drainage & Stormwater Design
- Hydrologic, Hydraulics & Waterway Permits
- Line, Grade, Pavement & Road Design

The new Beckville Road Bridge was designed as a spread box beam bridge constructed of pre-stressed concrete set on top of a total precast substructure. It was built to stand 44 feet wide and 73 feet long.

### The Products

- Footings
- Abutments
- Beams
- Sleeper Slabs
- Approach Slabs

**Utilizing an accelerated total precast bridge was the solution that allowed the team to satisfy this project's tight timeline demands.**

*"With this being a truck route through Cressona, the state deemed we only had four months to complete this job. So we went with a precast sub-structure which accelerated the construction speed and increased productivity by almost fifty percent. A typical bridge project of this scope would take around five to six months to complete; this will take three to four months."*

**Zachary Artim, Project Engineer**

## THE RESULTS

With a strong focus on reducing the potential for disturbance to consumers and the public, the Beckville Road Bridge reconstruction project offered an improved experience for all parties involved. The accelerated precast bridge solution helped to minimize disruption and create the shorter construction timeline that the owner was looking for.

Working closely together throughout the duration of the project, the designer, contractor, and precast producer made impressive progress that helped the team stay a month ahead of the schedule during the project's early phases.



*"This was a fantastic project and a major win for the community. It started with a well-thought-out and detailed set of contract plans that made planning our manufacturing of the product simple and repetitive. From that, NPP was able to generate shop drawings and complete the manufacturing process smoothly."*

**Troy Jenkins,  
Chief Engineer**

*"It has been really nice working with NPP. Panels were done on time, even with all the chaos of COVID-19. All the pieces worked and fit well together. The production team did a great job of manufacturing all the panels as to how they should be. The construction easement is on NPP's property; this was a big plus on this job."*

**Zachary Artim,  
Project Engineer**

*"By the time the contractor received the product, building the bridge was like a grown-up version of a new LEGO set, which saved considerable time and minimized public traffic disruption while removing a poorly rated bridge on a truck route."*

**Troy Jenkins,  
Chief Engineer**

# ACHIEVE MORE WITH PRECAST

It takes a team of experienced, collaborative precast industry professionals to complete projects like the Beckville Road Bridge. Their work brought big benefits for the owner, contractor, and all involved parties through rapid project delivery, streamlined coordination, and skilled approaches to the bridge's design and execution.

Keep precast concrete and the Mid-Atlantic region's precast businesses in mind for your next project. Find helpful design tools, project resources, and detailed information on working with precast in our comprehensive Solutions Center.

[Explore the Solutions Center](#)

## GET IN TOUCH

Contact us today to learn how the precasters of the PCI Mid-Atlantic Chapter can help you with your next project.

### MID-ATLANTIC CHAPTER

 (717) 682-1215

 [pci.org/PCIMidAtlantic](https://pci.org/PCIMidAtlantic)

### NATIONAL INSTITUTE

 (312) 786-0300

 [pci.org](https://pci.org)

**WITH PRECAST, IT'S POSSIBLE.**

Achieve Remarkable Architecture through Prefabrication.