

Construction Update

Pennsylvania Rapid Bridge Replacement Project

Issue 2: Winter 2015/2016



Entering Year Two of the Pennsylvania Rapid Bridge Replacement Project

As the first year of the Rapid Bridge Replacement Project comes to an end, construction crews all across the state are wrapping up their work completing the first round of bridge replacements.

By the end of December nearly 50 bridges will have been replaced in only six months after construction began in early June. A total of 80 contracts have been awarded for bridge replacement so far, and some of the work that began this year will continue into 2016.

Sixteen different counties saw bridge replacements in 2015, but that changes in 2016 when it will happen all over the state. In all, 58 counties are scheduled for construction in the coming year, from Crawford County in the northwest to Montgomery County in the southeast, Wayne County in the northeast to Greene County in the southwest. As many as 264 different bridges are currently planned to be rebuilt, with Allegheny County seeing the most replacements at 33, followed by Washington County with 15 replacements,

and Lancaster County with 14.

While the next year is sure to be busy for construction workers, the project has already created a large number of jobs for people all across Pennsylvania. PWKP itself employs nearly 250, while hundreds more are working for the many subcontractors who have been building the new bridges. Walsh Granite, the joint venture construction arm of PWKP, has taken on the largest number of projects, but 19 other construction subcontractors have also been able to put their people to work. Another 120 companies have been involved in various aspects of the project, including engineering design, excavation, landscaping, ironwork, equipment rental, trucking, paving and utility work among others. So a large amount of the project's \$899 million cost will remain here in Pennsylvania.

As for the actual construction of the bridges and culverts in the project, the average duration for a typical bridge with a detour is scheduled for about 10 weeks from start to



JV 204, PA 339, Catawissa Creek, Schuylkill County

JV 204 was one of nearly 50 bridges completed in 2015.

finish. Culvert construction can happen faster in many cases, with some culverts scheduled for completion in five or even as few as two weeks. In all, 388 of the crossings will be detoured, while another 170 bridges are being built in stages with either temporary “runaround” crossings or replaced one half at a time.

Prior to the start of construction (most of which will begin in the spring) public meetings will be scheduled around the state so that interested residents can find out what is going to happen

in their community. PWKP and PennDOT personnel will be on hand to answer questions about construction issues, such as how long the projects are expected to take, and display the detour routes drivers will use during construction. If you are interested in attending one of these meetings check the Outreach Calendar section of the project website at PARapidBridges.com for the dates, times and locations.



Typical bridge design. Most bridges will look similar to this illustration.

About the Rapid Bridge Replacement Project

The Rapid Bridge Replacement Project will replace 558 of Pennsylvania's structurally deficient bridges by the end of 2017.

The bridges included in the project are primarily crossings on smaller state highways, many in rural areas, rather than interstate bridges or large river crossings.

The project will be financed, designed, constructed and maintained for the next 25 years by Plenary Walsh Keystone Partners (PWKP), a consortium of some of the nation's most experienced infrastructure designers and builders, including The Plenary Group, Walsh Investors, Walsh Construction Company, Granite Construction Company, HDR and Walsh Infrastructure Management.

Another 11 Pennsylvania based subcontractors and consultants have also been involved in the project from the beginning, while many more are currently bidding for new work and building the bridges already under construction.

Project Facts, by the Numbers

- **558** bridges included for replacement
- **411** are single-span bridges (they cross from one side to the other without needing a pier in the middle)
- **27** are multi-span crossings
- **120** are culverts
- Average bridge is about **60** feet in length
- **62** will be more than **100** feet long
- **417** bridges will be constructed using **2,291** pre-stressed concrete beams
- Laid end to end the beams would stretch more than **27** miles
- The beams will use **6.1 million** linear feet of steel strand, or **1,155** miles

Each bridge has a 25 year warranty that makes PWKP responsible for general maintenance such as bridge inspections, filling potholes and making the day-to-day repairs due to accidents and normal wear and tear. PennDOT will maintain responsibility for roadway striping and snowplowing and will retain ownership of all the structures.



Questions about bridge construction near you?

visit www.PaRapidBridges.com

or call 877-444-9990

In the Eastern Region

On the eastern side of the Keystone state, PWKP completed 10 bridges from July to December of 2015. Two additional bridges currently under construction are scheduled for completion by the beginning of January, 2016. One of those bridges, in Monroe County, proved one of the most challenging bridge projects in the east region.

While driving pile in September for the Rimrock Road bridge over Pocono Creek in Stroudsburg, a construction crew discovered a problem - in the shape of four concrete and steel reinforced caissons that had supported the middle of the old bridge. Each one was 8 feet in diameter, and right where pile driving for the new bridge's center support pier was supposed to be. The huge structure went 45 feet into the ground to straddle a coal seam and hadn't shown up on any pre-construction surveys.

Rather than dig it all up, crews made the decision to drill through it where necessary and build the bridge according to their original plans. Drilling through 45 feet of concrete and steel takes time though, so that bridge is behind schedule but should reopen in late January.

The bridges completed in 2015 were in PennDOT Districts 4 and 5. The first bridge completion in the east was in Buckingham Township - one of two bridges in Wayne County. Other bridge completions included five in Schuylkill County, two in Monroe County, one in Pike County, one in Susquehanna County and one in Wyoming County.

Work was completed by subcontractors - Clearwater Construction with four, Fahs, Inc. and Minichi, Inc. with one each. Walsh Construction self-performed the other four.

Things really start to ramp up for the east region team in 2016, with work occurring in 22 different counties across PennDOT districts 4, 5, 6 and 8.



Ironworkers set reinforcing steel for the bridge deck in preparation for a concrete pour.
JV 166, SR 1001, Outlet Lake Carey, Wyoming County



Pouring the bridge deck at JV162
JV 162, Starlight Road, Shehawken Creek, Wayne County

Eastern Region - Photos

BEFORE



JV 204, PA 339, Catawissa Creek, Schuylkill County

AFTER



BEFORE



JV 208, SR 4016, Mahantango Creek, Schuylkill County

AFTER



In the Central Region



The Central Region completed 12 bridges from June to December of 2015. The bridges completed this year were all in PennDOT District 3 and included three in Bradford County, two in Columbia County, three in Lycoming County, two in Tioga County, one in Montour County and one in Sullivan County.

Of those 12 bridges, seven were built by subcontractors- Glen O. Hawbaker with four, and LC Whitford, CP Ward, and Clearwater Construction with one each. Walsh Construction built the rest. Thanks to the combined efforts of the subcontractors, vendors, field personnel and the State College based PWKP team it was a productive year and crews are looking forward to the 2016 construction season when things really get busy. Next year the central region will see work occurring in 23 different counties across three different PennDOT districts.



Contractors working on the abutment
JV107, SR 44, Antes Creek, Lycoming County



Getting ready to pour the deck
JV107, SR 44, Antes Creek, Lycoming County



Working on the deck
JV129, SR 249, Jemison Creek, Tioga County

Central Region - Photos



JV 107 Plaque from 1939



In the Western Region



As 2015 comes to a close, 23 bridges in the western region have been completed and open to traffic. Walsh Granite self-performed six of the west region projects while the others were completed by RL Johnson, Allison Park, CH & D, Mekis, Clearwater, Paliotta, Swank, Beech, JF Shea and Plum construction companies.

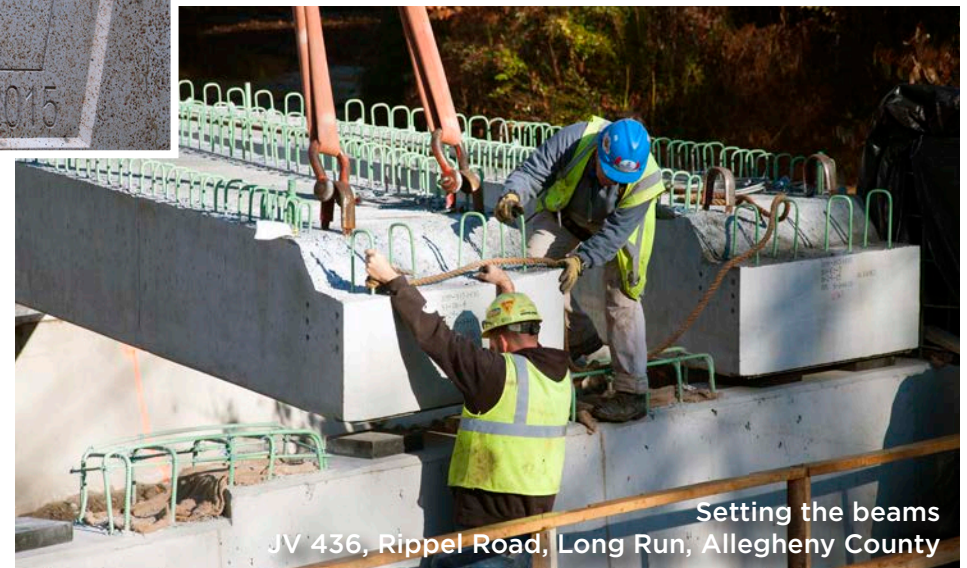
Looking ahead to 2016 in the western region, more than 100 bridges are scheduled for replacement during the construction season. The bulk of those bridges are located in Allegheny, Fayette, Westmoreland, Lawrence and Washington counties. Additional bridges scheduled for replacement are located in Armstrong, Beaver, Butler, Clarion, Crawford, Forest, Greene, Indiana, Jefferson, Mercer and Warren counties.



Setting the beams
JV 436, Rippel Road, Long Run, Allegheny County

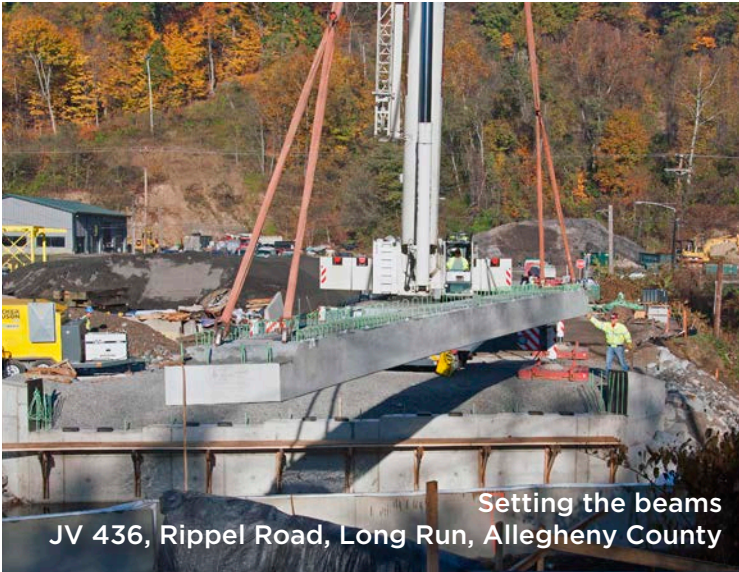


Pouring the deck at JV 552
JV 552, SR 1017, Mill Creek, Westmoreland County



Setting the beams
JV 436, Rippel Road, Long Run, Allegheny County

Western Region - Photos



Setting the beams
JV 436, Rippel Road, Long Run, Allegheny County

2016 Bridge Construction By County

A bid letting date schedule for these structures is posted to www.parapidbridges.com. Anticipated bid lettings from October 2015 thru May 2016.

