

PENNDOT CONTINUES LONG TRADITION OF HYDRO/LMC

By: Patrick Martens, PE

The Pennsylvania Department of Transportation (PENNDOT) has the third largest inventory of state owned bridges, with over 25,000 DOT structures. Pittsburgh is even known as the "city of bridges." The average age of these bridges is over 50 years old. With all those bridges comes the challenge of maintaining and preserving them, especially the bridge decks.

For many years now, PENNDOT has relied on the time tested systematic process of hydrodemolition combined with Latex Modified Concrete (LMC) to rehab and preserve their decks. PENNDOT started with hydrodemolition back in the mid-1990's as a means of surface preparation. Their use of LMC dates back to the first installations in 1972. The Frank Graff Memorial Bridge, in western PA received LMC at initial construction in 1975 and that surface is still in place and protecting the bridge deck.

Since 2014, ten of the larger projects by surface area performed by PENNDOT have included:

Larger Bridge Deck Rehabs on State System					
PENNDOT				Hydro	LMC
Year	Contract	County	Route	SY	CY
2014	69070	Allegheny	SR 2085, Sec A05	33444	1394
2015	62694	Philadelphia	Passyunk Ave Br	39990	971
2015	28500	Allegheny	SR 3069, Sec A20 & SR 2208, Sec A06	7389	308
2016	87775	Allegheny	SR 376, Sec A50	6850	475
2017	87772	Allegheny	SR 279, Sec A83	20039	1564
2017	92277	Allegheny	SR 28, Sec A85	9082	319
2017	88335	Allegheny	SR 51 Elizabeth Br	9230	550
2017	91533	Blair	I-99 @ 17th St	12854	900
2018	69913	Philadelphia	Gray's Ferry Ave	12240	498
2019	80696	Dauphin	SR 22, Sec 60	7406	377
		Totals		158524	7356

During the 2014-2019 time frame, PENNDOT has restored close to 400,000 square yards of bridge deck surface by using hydrodemolition surface preparation. The vast majority of the overlays have been done with LMC. Going back further, one of the largest

overlay projects in PA was done about 10 years ago, on the I-95 Girard Point Bridge, in Philadelphia. This included

hydrodemolition and LMC over 63,000 SY of the truss of the bridge deck.

LMC was designed specifically as a dense concrete overlay, back in the late 1960's. On PENNDOT bridges, it has been placed as thin as 1 ¼" on the

hydroblasted surface. LMC is an ideal surface for the harsh environment that the Pennsylvania climate presents for bridge decks. PENNDOT has done over 1.3 million square yards of hydrodemolition on their bridge decks, in the last 15 years.

Continued on back

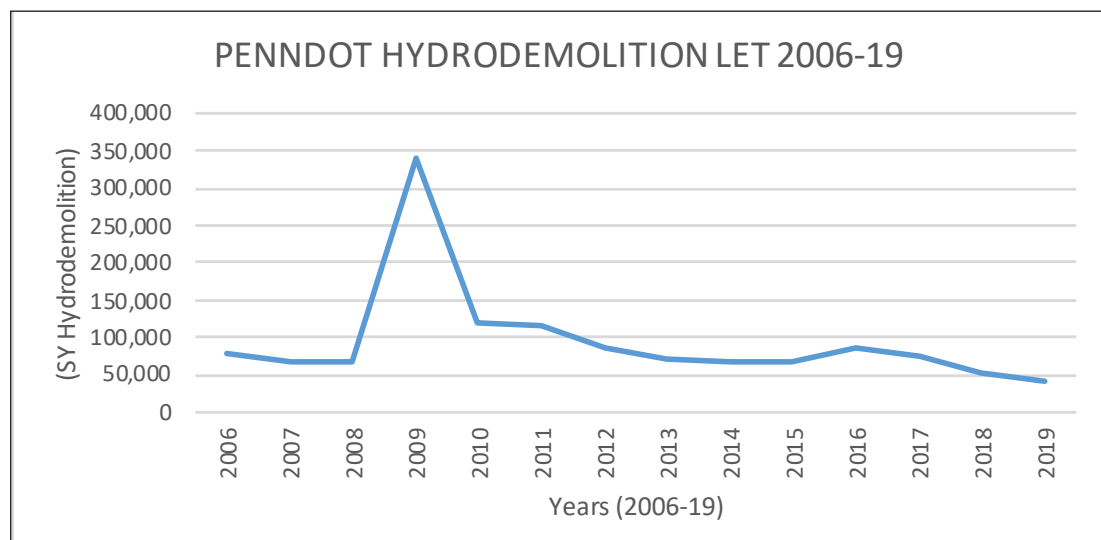


LMC was installed on the Frank Graff Memorial Bridge over the Allegheny River, on State Route 422, northeast of Pittsburgh, back in 1975. The LMC is still in place and protecting the bridge deck today.

**BRIDGE PRESERVATION
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LMC
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FOR MORE INFORMATION ON HOW TO PRESERVE YOUR STRUCTURES WITH THE FAST TRACK METHOD OF HYDRODEMOLITION AND LATEX MODIFIED CONCRETE, **CONTACT PAT MARTENS AT 636-441-1376, OR PMARTENS@BRIDGEPRESERVATION.NET.** ASK ABOUT A LUNCH AND LEARN!



Year	# Projects	Hydro (SY)
2006	22	79,478
2007	22	68,461
2008	24	68,529
2009	51	340,000
2010	33	120,000
2011	37	117,000
2012	22	86,000
2013	24	72,562
2014	28	68,747
2015	26	67,551
2016	30	87,626
2017	23	76,651
2018	28	51,557
2019	22	41,558
Total		1,345,720



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