

WVDOT MAINTAINS STEADY APPROACH TO FAST TRACK HYDRO JOBS

By: Patrick Martens, PE

The West Virginia Department of Transportation (WVDOT) bridge preservation relies on Fast Track Hydrodemolition (FTH) and High Performance Latex Modified Concrete (HPLMC) when it comes to effectively rehabbing and preserving bridge decks. On average, WVDOT is awarding close to 30,000 square yards of work per year on their decks. It is a modest program that is effective. WVDOT has been plotting a course each year that includes various FTH/HPLMC projects to address bridge deck restoration. Within the Southeast Bridge Preservation Partnership (SEBPP) Region, WVDOT is well ahead of most other states in the region, when it comes to volume of FTH/HPLMC. They lag only behind North Carolina and Arkansas, when it comes to the square yards of comparable bridge deck preservation done in the SEBPP* area.

WVDOT has done this with a fairly consistent and steady stream of work each year. Making sure to program this type of work is an important part of programming by any agency in preserving bridge decks. The work done in WV is not all shouldered by just one or two districts either. While District Six (Moundsville) has done the most work in recent years, District One (Charleston) is close behind. All ten districts in WV have used the process and produced at least one project over the last seven years.

The use of FTH/HPLMC has been done on several notable bridges in the state, including:

Korean War Veterans Memorial Bridge over Ohio River	Wetzel County
I-64 US Army CPL Kenneth R. Hess Bridge	South Charleston
I-64 Eugene A. Carter Memorial Bridge over Kanawha River	Charleston

The heavily traveled I-70 corridor has been a stretch of roadway that has seen numerous bridges rehabbed with FTH/HPLMC, with projects let in 2018 and 2019 accounting for 46,225 square yards of bridge deck area in Ohio County, in District Six. It is much faster, cheaper, and less disruptive than deck replacement would be. Plus, the combination of the high quality surface preparation of hydrodemolition with the high performing attributes of Latex Modified Concrete will provide a durable, long lasting surface that provides extended protection to the bridge deck.

The FTH surface preparation method is a real key in being able to attack and rehab bridge decks in a shortened period of time, and allows for stretching of those precious agency budget dollars. FTH utilizes high pressure water to perform a selective removal technique that provides for a rapid removal of only the deteriorated or unsound concrete. This eliminates wasteful removal of otherwise sound concrete.

Another feature of the hydrodemolition surface prep is its ability to achieve the

very roughened profile that enhances the mechanical grip of the HPLMC. This allows the overlay to act as a monolithic, structural unit in concert with the deck.

The process can yield upwards of 25 years and beyond of deck protection and service life on a sound, properly prepared surface. There is no other product that has the proven track record or longevity that HPLMC has – over 50 years in the business of protecting bridge decks. It really is a “no-brainer” to incorporate the selective removal approach of FTH with HPLMC.

(* The SEBPP region includes: AL, AR, FL, GA, LA, MS, NC, PR, SC, TN, TX, VA, WV)

For more information on how to preserve your structures with the **Fast Track** method of Hydrodemolition and Latex Modified Concrete,

CONTACT PAT MARTENS
(636) 441-1376

pmartens@bridgepreservation.net

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Fast Track Hydrodemolition Performed in West Virginia, per District, in SQYDS											
Year	1	2	3	4	5	6	7	8	9	10	Total
2013	0	0	3554	17703	1745	4026	0	0	0	6271	33299
2014	32882	0	0	206	0	0	0	0	0	1772	34860
2015	7428	0	0	0	0	0	0	523	0	0	7951
2016	7175	0	0	4650	0	14939	9127	0	2440	0	38331
2017	4852	3370	1516	8412	0	7131	6997	0	0	0	32278
2018	820	1698	0	2103	0	21638	0	4354	0	0	30613
2019	1027	1201	0	0	0	24587	0	0	0	0	26815
Total	54184	6269	5070	33074	1745	72321	16124	4877	2440	8043	204147