when

Waste Handling Equipment News

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B.O.G. Construction, Inc. tackles Ohio bridges with the Allied-Gator MT Series Multi-Tool

B.O.G. Construction, Inc. tackles Ohio bridges with the Allied-Gator MT Series multi-tool

As Seen In when
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The MTR 50 C cleanly removes rebar from the concrete and leaves perfect fill material.

B.O.G. Construction, Inc., a Salem, Ohio based company, has been changing the face of Ohio bridges since 1988. Contracting exclusively with the Ohio Dept. of Transportation (ODOT,) B.O.G. specializes in the new construction, repair, restoration and reconstruction of bridges and culverts throughout the Buckeye State. Three of their most notable projects in the recent past include bridge reconstruction jobs in Gates Mills and Garrettsville, Ohio and a total bridge removal in Cadiz, Ohio.

In general, the type of bridge jobs performed by B.O.G. fall into three main categories: bridge rehabilitation, complete bridge removal and new construction. Bridge rehabilitation, or reconstruction, is the type of work required when only portions or surfaces of a given bridge have become worn or damaged beyond an ODOT acceptable condition. When these bridges have structurally sound underlying bridge components remaining, B.O.G. is contracted to remove the damaged/worn areas and reconstruct the bridge by incorporating the remaining undamaged portions of the structure. In the case of complete bridge removal, B.O.G. must demolish the entire bridge structure. This type of project necessitates the submission of an in-depth project plan to ODOT and entails complex logistics regarding the movement of equipment and material. Lastly, B.O.G. is often contracted to construct a new bridge in place of a demolished structure or on a new roadway requiring waterway or underlying roadway passage.

B.O.G. demolishes thick concrete on the Cadiz bridge with the MTR 50 C.

The moment an ODOT bridge job becomes available forbidding, B.O.G. begins its work. As briefly mentioned, the company must develop and present a detailed plan to ODOT that includes the proposed job completion timeline, specific removal and new construction methodologies, planned removal procedures and the equipment and techniques to be utilized. ODOT then evaluates the presented plan against the specifications and regulations of the upcoming project. Once accepted by ODOT, this project plan must be followed meticulously, as state inspectors and engineers will supervise and monitor the job site every day. With the exception of unforeseen circumstances that necessitate a change in approach, any deviation from the accepted project plan could jeopardize a contractor's relationship with ODOT.

In addition to adhering to the specified project plan, B.O.G. must work within the time parameters set by ODOT, including the time frame during which the job must be completed (ex: within the next six months) and the maximum duration of the road closure. For example, on the Garrettsville job, B.O.G. was allotted 150 days of road closure for project completion, while in Gates Mills they were given 120 days, and the Cadiz bridge project was allowed a narrow 30 day window for completion.

While these types of ODOT jobs are not easily awarded, B.O.G. has been successfully undertaking and completing these bridge projects for over twenty years. B.O.G. has always been excellent at its specialty line of work; however, over the past year, B.O.G. owners Mark Gettman and Tom O'Donnell have found a new way to increase the safety, efficiency and profitability of their bridge rehabilitation and demolition projects. These new advantages were accomplished with the addition of Allied-Gator MT™ Series multi-tool units to B.O.G.'s jobsite fleet.

For the Gates Mills and Cadiz projects, B.O.G. utilized MT Series Multi-Tool model MTR 50 C (with the Quick Change™ Cracker/Crusher Jaw Set,) while they used MT model MTR 70 C for the Garrettsville bridge reconstruction project. Although the MT provided B.O.G. with blanket advantages in terms of safety and efficiency, the innovative tool was an asset in different ways on each project.

The Gates Mills bridge restoration project required B.O.G. to remove portions of a 225-foot long, two lane bridge in a residential area. As with most projects, B.O.G. had to collaborate with local utility companies to ensure the safety of the job site, especially given the presence of overhead power lines within six feet of the Gates Mills bridge, and water and gas lines running through the bridge. Because the project was located in a populous Cleveland suburb, B.O.G. was required by the township to conform to noise ordinances and avoid disruption to the surrounding area. The EPA also imposed strict regulations for this project, allowing no debris to fall into the 200-foot wide river running underneath the bridge. B.O.G. knew that, given these conditions, controlled demolition was their only option.

Finally, because the bridge was to be only partially removed and reconstructed atop remaining portions of the structure, B.O.G. could not damage any portion of the bridge that was not slated to be removed. However, during the process, B.O.G. discovered the entire side walls, completely down to the bridge barrels, were unexpectedly deteriorated and had to be removed. This was well beyond the scope of the plan set forth by ODOT in the original bid specifications, but the state inspector recognized that additional work would be necessary and B.O.G. was resourceful and skillful in tackling this unforeseen challenge.

Strict ODOT guidelines against the use of hydraulic hammers prevented B.O.G. from using the hydraulic hammer it owns for its Komatsu PC 200 on the Gates Mills bridge. In fact, these restrictions prohibited the use of any impact tool larger than a 90-pound jackhammer. By upgrading to the Allied-Gator MT, B.O.G. was able to perform the demolition much more quickly and quietly than it could with a hydraulic hammer. According to Gettman, "The MT provided so much power that it cleanly trimmed the 18-24-inch reinforced concrete walls from the bridge barrels, leaving us a perfect surface to build on." The controlled

nature of the concrete removal with the MT also impressed the EPA inspectors who were on site to ensure that the concrete debris from the bridge walls was not falling into the river below.

On SR 82 in Garrettsville, Ohio, B.O.G. was faced with a number of different challenges while performing a large bridge rehabilitation project. Because the bridge being restored by B.O.G. runs straight into the center of Garrettsville, it is surrounded by restaurants and businesses that remained open throughout the project. On one end of the bridge, a restaurant balcony nearly abutted 30-foot of the bridge structure over the river, and an insurance agency building on the other side came within five feet of the bridge wall to be removed. Removing 20-inch thick concrete walls from a bridge in such close proximity to occupied buildings was a unique challenge, but Gettman and O'Donnell knew they had just the tool for the job — an Allied-Gator MTR 70 C.

Not only was the MT the solution to the concerns regarding noise and dust in the immediate area, but B.O.G. was able to complete the concrete removal in less than a day without any threat to the surrounding structures, windows, traffic, pedestrians or 50-foot wide waterway below the bridge. The use of this innovative tool also enabled B.O.G. to safely and efficiently remove the indicated sections of the Garrettsville bridge without any damage the bridge portions to be left intact and used in reconstruction. Additionally, B.O.G. was able to please the local Garrettsville Trustees by completing and cleaning up the partial demolition process in time for their annual Fourth of July parade.

At the same time, two hours away in Cadiz, Ohio, B.O.G. began to undertake the complete removal of a SR 22 bridge with a 30 day project completion mandate. This project entailed the complete removal of the bridge and using 17-feet of fill material to bring the abandoned coal haul road under the bridge up to road level. Without the need to save portions of the bridge for reconstruction, B.O.G.'s concerns were strictly production and efficiency. Because the material removed from the bridge would be used as fill material, B.O.G. also needed to ensure that the concrete would be free of rebar and meet the 1-foot minus ODOT fill material specification.

The utilization of MTR 50 C on this project gave B.O.G. all the advantages they were looking for. The fast cycle times and tremendous power of the MT allowed B.O.G. to work continuously and quickly, breezing through the heavy duty bridge decking full of 1 and 2-inch thick rebar. The MT Cracker/Crusher jaw set also allowed B.O.G. to remove the rebar cleanly from the concrete as it was being crushed, leaving perfectly sized fill material during the demolition process. By employing a successful demolition plan and utilizing the right tools for the job, B.O.G. had no trouble completing the Cadiz bridge project within the 30 day limit.

Overall, the utilization of the MT Series multi-tool has enabled B.O.G. to tackle complex bridge restoration and removal projects with an innovative new approach. B.O.G. can now move on to the next ODOT job, taking with them a positive reputation and all the new experiences gained through overcoming the challenges of the Gates Mills, Garrettsville and Cadiz bridge projects. With Allied-Gator MT technology at their fingertips, B.O.G. can complete projects quicker, safer and more effectively than ever before.

B.O.G. utilized the MTR 70 C to ensure the safety of adjoining buildings and the underlying waterway during the Garrettsville bridge reconstruction project.

The Garrettsville, Ohio bridge reconstruction project was challenging because of the bridge's close proximity to open businesses.

B.O.G.'s crew stands in front of the Garrettsville bridge reconstruction site.

Allied-Gator attachments give B.O.G. an edge

by Jon M. Casey

When Mark Gettman was looking for a way to meet the ever challenging Ohio DOT noise and vibration requirements that come with working on state roadway construction jobs that entail the demolition of existing structures, he looked to Allied-Gator for the answer. He found that the Allied-Gator MT™ Series Multi-Tool™ would be the attachment that he needed to take down bridges and other concrete and steel structures without all the noise, dust and vibration that other methods might emit. Gettman chose Allied-Gator, Inc. because of their innovative thinking when it comes to hydraulic attachments for the demolition and scrap processing/recycling industries and because by dealing with them through their customer direct system, Gettman is able to immediately receive answers to any questions that he might have about their products.

The Allied-Gator company, founded by the Ramun family is dedicated to designing scrap processing and demolition tools to be the most reliable and durable on the market. With more than 35 years of manufacturing experience, Allied-Gator looks to help customers with new, original and innovative products.

Recently, Gettman reflected on the ways in which the use of the Allied-Gator MT units improved B.O.G.'s performance at the Gates Mills, Garrettsville and Cadiz, Ohio jobs. He found that the MT Cracker/Crusher jaw set with the Finish Teeth trims concrete so precisely that it eliminates all the handwork B.O.G. previously had to perform on bridge projects of this type. Because of the EPA regulations affecting the Gates Mills and Garrettsville jobs, Gettman believes the MT was instrumental in their success.

"We've always been a company that used a hammer whenever we could, and there will always be times when we still need one, but we have really benefitted from the advantages the MT technology brings to our line of work," he said. "We were able to successfully complete the jobs and adhere to the ODOT and EPA guidelines. We looked at other tools, but without the MT's unique benefits, we would have had to do those projects with small hand held jackhammers."

Another advantage of using the MT over a hydraulic hammer is the MT's ability to be used in underwater demolition circumstances. In many cases of bridge removal, the state's engineering plan calls for the removal of an abutment or column to a level below the waterline of an underlying river, stream, lake, etc... The MT can safely and easily be utilized below surface level of a waterway. A hydraulic hammer, on the contrary, cannot be submerged because the water will quickly damage the seals and disable the tool. In this application, the MT is a great asset to this type of specialty work.

Since the patented MT™ Series Multi-Tool line was introduced in early 2001, it has become one of the industry's most powerful, functional and durable hydraulic processing attachment lines available. With 11 sizes ranging from 800-52,000-pounds, the MT Series Multi-Tool can accommodate any size carrier from skid steers and compacts to mass excavators for use in all structural steel and concrete demolition, cast reduction, material densifying and rail processing applications. The MT units also feature unrestricted 360 degree rotation, exclusive Fixed Centerline Closure and patented Allied-Gator Speed-Circuit™ Technology. For more information, visit www.alliedgator.com to view tools specs, pictures, videos and much more.