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POWER CURBER PROFILES

Our Commitment Shows

3D OR NOTHING

3D or stringless control systems for concrete slipforming equipment are becoming more popular by the season. Labor shortages, competitive bidding, and scheduling flexibility are some of the most common reasons companies choose to go stringless. Elliot Jones, Managing Partner of 3D Concrete Solutions, has a different perspective, “I looked at it as training wheels. It kind of keeps us in the rails. I feel a lot better with having this control.”

An opportunity arose in the Jacksonville, Florida construction market, and Jones took advantage by establishing a concrete company. His earthwork company had difficulty with local concrete contractors running out of time, which revealed a gap in the market. Diverging from his earthmoving business was a big move for Jones since he had no prior hand forming or slipforming experience.

From the beginning, Jones wanted the concrete company to be different by being the first in the region running a stringless slipform machine. Jones worked with machine control on earthmoving equipment for the past ten years and had seen green operators successfully trained on dozers or motor graders using 3D systems. He was confident that a slipform operator could be trained similarly and felt good about plunging into stringless slipforming, describing it as a “no-brainer.”

Jones and Rusty Grimes, President, visited the Power Curbers manufacturing facility to learn more. Jones revealed, “that visit to Salisbury sealed the deal.” Grimes agreed, “I would highly recommend that anybody interested in even looking to purchase a slipform machine take a tour of your plant because that was impressive.” To complement their new 5700-D, 3D Concrete Solutions selected a Leica control system because of the precision it delivers on their earthmoving equipment.

One of the primary reasons Jones insisted upon starting with 3D controls was avoiding stringline limitations. He stated, “you are saving at least a day on a small job, a half-day to set up and a half-day to break down or anywhere from 2 days or more for a larger job. You only have so many linear feet of pins, and you have to leapfrog them. That is your bottleneck.” However, with stringless controls, Jones pointed out, “your bottleneck isn’t how many pins, it becomes, control is here, total stations are here, we can keep leapfrogging those bad boys until the concrete plant shuts us down. There are no limits now.” Grimes enforced, “it saves costs with the survey and guys putting out stringline and pins. We can roll in there, localize everything in an hour or two, and we are off and running. We’ve done as much as 4,000 linear feet or more, and that’s only because we ran out of mud.”

Not only is 3D Concrete Solutions seeing time and money savings, but their quality is outstanding. They’ve verified vertical tolerances as small as 0.02”.

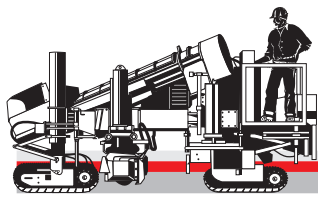
“WE CAN ROLL IN THERE, LOCALIZE EVERYTHING IN AN HOUR OR TWO, AND WE ARE OFF AND RUNNING. WE’VE DONE AS MUCH AS 4,000 LINEAR FEET OR MORE, AND THAT’S ONLY BECAUSE WE RAN OUT OF MUD.”

— RUSTY GRIMES, PRESIDENT



Jones reported that “it’s better than stringline. The stringline gets manipulated by people on the job site. There is room for human error. If you follow the model, it is perfectly to the engineer’s plan.” After getting settled in with the machine, Jones expressed that the 5700-D with Leica controls has “been good, we love it. The guys in the field love it. It works great.” Grimes observed that their slipform crew “adapted to stringless controls really well. . . they jumped right in and have embraced it.”





RESERVOIR REHAB



Highland Park Reservoir's old, crumbling perimeter wall.

In reflecting on the job, Bazella spoke about the savings of using his 5700-C rather than doing it by hand, saying, “We had figured six weeks doing the removal and hand-set repairs. We ended up doing the entire lake. Instead of 1,500’ (457m) we did 4,700 (1,433m), in seven weeks with all new wall in the same budget. It was really thinking outside the box. That’s one of the secrets to our success.”

Bazella relies heavily on Power Curbers Regional Service Manager Carlos Maldonado for support, relaying “My brother-in-law and machine operator absolutely loves Carlos. He picks him up and gets him straightened out any time he has a question. He’s been real good for us out here. I can’t see going anywhere else. Power Curbers has worked great for us so why rock the boat?”

Bazella Group Concrete & Masonry, is part of the Bazella Group, a conglomerate of companies performing all aspects of commercial concrete construction. Bazella Group has been in business for 15 years, but the Bazella name has been stamped in concrete for over 40 years. Justin’s father, John, learned the trade by building airstrip and housing in the 1960’s while serving in the U.S. Army in Vietnam. He taught Justin and his brother John the art of hard work at an early age, instilling in them a drive for excellence. The company has used Power Curbers machinery since 2007. The increase in speed and efficiency on their jobsites led to being offered complete concrete packages by their customers. Today Bazella has offices in Allentown and Pittsburgh, covering all of PA, NJ, and DE. Each location operates a Power Curber and has multiple crews dedicated to curb and sitework.

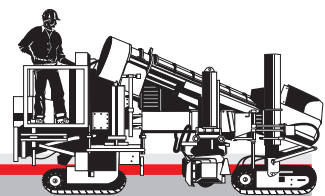
Highland Park, Pittsburgh’s water reservoir is 4,700’ (1,433m) in circumference and last winter the concrete wall surrounding it was in disrepair. Bazella Group Concrete & Masonry was contracted to tear out and replace 1,500’ (457m) of the wall. But after studying the project, company president Justin Bazella approached the general contractor with the idea of slipforming the job and for the same cost proposed that Bazella Group tear out and replace all 4,700 feet (1,433m). In doing so they were able to give the city three times the work they would’ve gotten had the work been done by hand. The job didn’t come without its challenges.

“It was very tight. We only had 12’ (3.7m) from the curb to the barrier fence around the jobsite. Once we ran string under the machine it went real well. We were able to suck the mold in real tight and it went great. We were slipping 8-yard trucks in about 20 minutes – it was a big mold” explained Bazella. Concrete delivery was also a challenge. “We had to back the trucks up to the entrance and back them all the way around the lake to start so it took 20 minutes just to get the truck to where we were working.” Due to that delay Bazella ran a 2% retarder in the concrete. The retarder, along with cool February winter temperatures kept the concrete from getting too hot. The curb’s design included tricky keyways so they built a finishing tool to match the profile. Hinged on top, it would fold up like bat wings and could be placed where needed and refolded. As a base for the pour, Bazella slipped over the original 1879 4’ to 8’ (1.2 to 2.4 m) long, 4” (10cm) thick sandstone slabs.

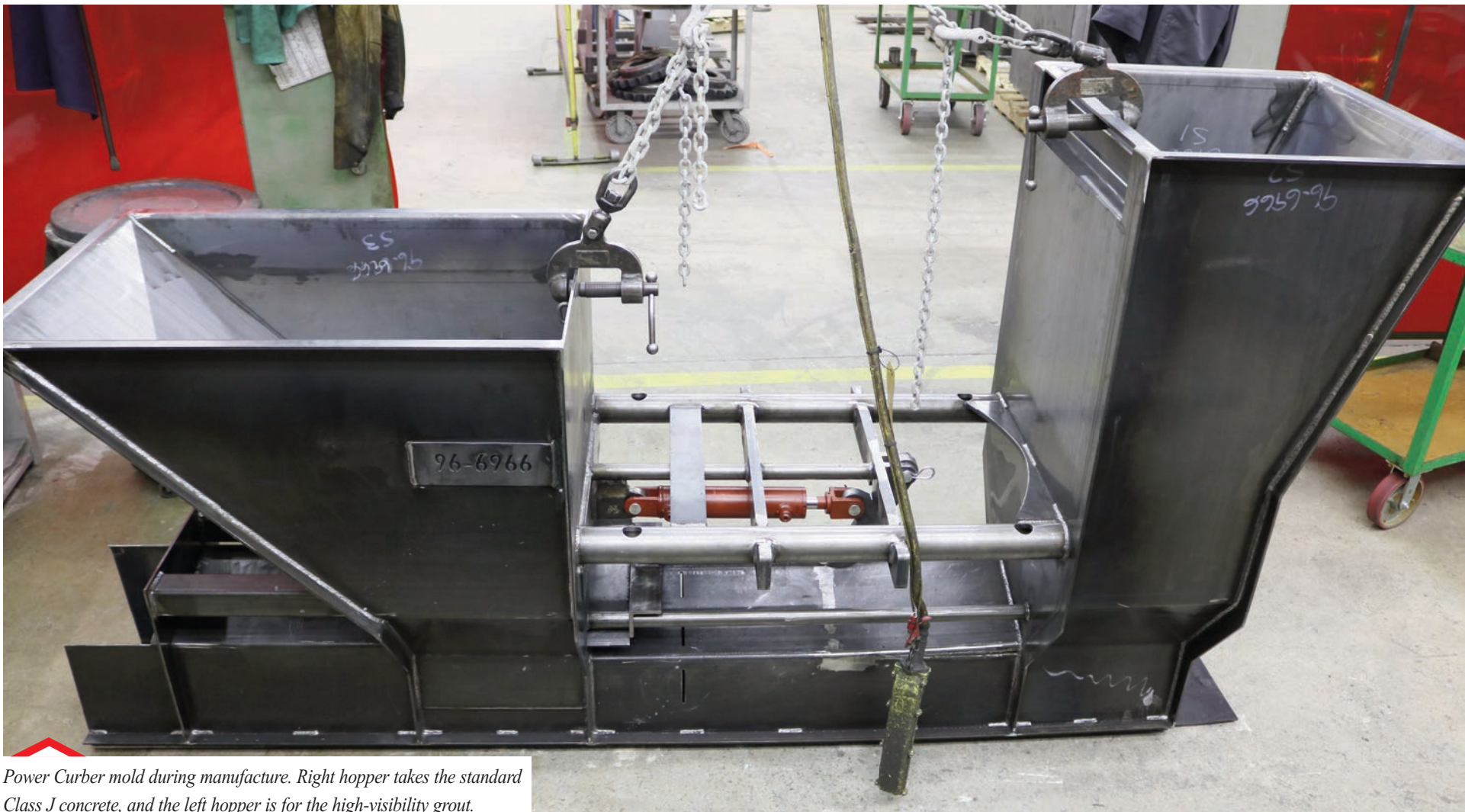


The 5700-C's compact design was essential with only 12’ (3.7m) from the curb to the barrier fence.





A&K ON THE PARKWAY



Power Curber mold during manufacture. Right hopper takes the standard Class J concrete, and the left hopper is for the high-visibility grout.

Imagine how helpful it would be to win a complex, 18,000 linear foot (5,500m) job where you expect to hand form roughly 200 feet (61m) per day, but then you find a way to slipform that job at 1,500 feet (457m) per day. Mark Bartholomew, Superintendent of A&K Slip Forming, Inc. did precisely that. Their job was on a dangerous parkway, and it included a unique design for safety. The intricate application required a highly customized mold from Power Curbers featuring two hoppers, used on their 5700-C. It took ingenuity, negotiation with the state DOT, and adjustments to the mix design to ultimately reach that peak rate. Bartholomew spoke about the job and their machine, “it put down a nice curb. I was super happy with that.”



High-visibility cap textured with a roller to increase safety along this dangerous corridor.

At 104 miles (167km) long, the Taconic State Parkway is the longest in New York State. In a 2016 article, travel site Only In Your State outlined that it is also one of the most dangerous New York roads because much of the parkway is narrow, two-laned, and congested to the south with Big Apple commuters. The story also cites frequent poor weather, occasional rock slides, but primarily, reckless drivers for over 2,000 crashes between July 2011 and July 2014.

To increase safety along the route, the NYSDOT requires that all rehab or new curbing installed on the parkway have a high-visibility cap made with a unique grout that is a brilliant white. The only approved sand for the mix, a white sand out of Pennsylvania, is combined with white cement. To increase visibility further, a roller imprints grooves onto the cap like a rumble stripe. It didn’t make sense to pour the entire curb with the unique mix because the cap grout is very expensive compared to the NYSDOT Class J mix, typically used for slipforming. The specs call for most of the curb to consist of Class J while only the small cap uses the white grout. Most importantly, though, no cold joint between the two mixes was allowed.

An industry friend of Bartholomew, Pete Sommerville, had previously experimented with using a slipform technique for the same curb and together they brought it to A&K. The method involves a Power Curber mold with two hoppers. Ready-mix trucks containing Class J mix fed the first like usual. Bartholomew rented a volumetric mixer that he used to feed the second hopper. He could load the volumetric mixer with the dry ingredients for the specialized grout and mix them as needed throughout the day without it setting up. Bartholomew stressed how essential the volumetric mixer was since they went through a yard of the grout for every two trucks of Class J.

The two different mixes were setting at different times, causing problems for early pours. Distance from the batch plant meant the concrete was about 70 minutes old when it arrived. The grout was newer since it was mixed on-site, so the concrete was setting first. That caused cracking in the high-visibility cap. Bartholomew pushed the state to let him adjust the mixes by replacing 20% of the cement with slag and including 5 oz (148mL) of retarder in the Class J mix and removing the grout’s water reducer. Those changes caused the two products to set at roughly the same time eliminating cracking, and Mark expressed, “it’s going awesome now.”

Donna Bartholomew owns A&K Slipforming, where she employs sixty people. A&K has been in business for twenty-three years and complete stamped concrete, brick paver installation, and slipform work throughout New York, and into Vermont, Connecticut, and Pennsylvania. A&K runs seven crews, including the eight-man team that slipformed the Taconic Parkway job. The Power Curber 5700-C is relatively new to the slipform crew, but Mark has been running competitive machines for years. Regarding his new relationship with Power Curbers, he emphasized, “the service has been outstanding. You’ve impressed me with the quality of the mold made, the quality of the machine. I’m impressed with how well it worked.”

POWER CURBERS POWER PAVERS

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Power Curbers Companies, LLC.

3D OR NOTHING

What can you see in this picture?
How many vehicles?
Any houses?
People?
How far past the oncoming headlights can you see?



Right now, life feels a lot like living in a fog. What I mean by that is that we can't see very far ahead. Whether you are investigating what new projects will be let for Spring, wondering if the DOT will have funds for 2021, or predicting if developers will break ground on their subdivision, the future is uncertain. In our personal lives, we feel it too, wondering how long kids will stay in school, whether our favorite sports will be played this year, and how to protect our families and employees from COVID. All we can do is see what's directly in front of us and do the best we can based on what we know. Some things are certain in heavy fog. We can't drive too fast, and we can't sit completely still. Those are the two worst things to do.

For many, this uncertainty and inability to see far ahead creates anxiety. Please know that during these chaotic days, be assured of this. Power Curbers and Power Pavers are here and ready to assist you with technical support, parts, and industry knowledge. In times like these, we work harder than ever to prove to you, our customers, that "Our Commitment Shows."

This fog may get heavier before it lifts, and before we can clearly see forward again. But we know this – it will clear. Let's keep doing what we can to help each other, pull for each other, and pray for each other. In doing so, together, we'll navigate the fog.

- Stephen Bullock, President, Power Curbers Companies

