Concurrent Technologies Corp. will partner with the U.S. Army Tank Automotive Research Development and Engineering Center to design and manufacture Next Generation Combat Vehicle prototype hulls such as this one over the next five years.

Submitted photo

Employees at Concurrent Technologies Corp. are busy designing a prototype of an Army combat vehicle of the future.

The Richland Township firm will work with the Army Tank Automotive Research Development and Engineering Center on a five-year, $7.45 million contract to create and manufacture hulls for Next Generation Combat Vehicles.

The components will be made of aluminum alloys, CTC officials said this past week.

Rigorous testing will be done to make sure the hulls will provide the strength, durability and survivability to keep soldiers safe.

The Army is projecting the high-tech, lightweight vehicles could replace the dependable and deadly Abrams tanks and Bradley Fighting Vehicles.

The highly mobile and well-armed tanks saw extensive action and showed their superiority in Operations Desert Storm and Desert Shield and in Iraq. The Bradleys, armored vehicles designed as troop transports, also were used during the Gulf War.

As many as four prototype concepts, each changing as the design process proceeds, could be constructed by CTC between now and 2022. Each hull will undergo intense fatigue-, ballistic- and blast-testing by the Army to determine how each one holds up, P.J. Mullen, CTC’s manager of advanced technologies, told reporter David Hurst.

A specialized “friction stir” welding process will be used during construction.
The leading-edge technology, developed in 1991, is touted for its defect-free bonding and high strength.

“CTC has a long history of optimizing manufacturing processes, including friction stir welding,” Edward Sheehan Jr., CTC president and CEO, said.

“I’m proud that we are playing a role to improve mission effectiveness through advanced manufacturing.”

About 20 welders, engineers, technicians, machinists and support staff at CTC will be assigned to the project during the next five years, Mullen said.

“Our work will ensure the best possible design of this vehicle and will add to our expertise for the benefit of future efforts as well,” Mullen said.

CTC earned the Army contract through a competitive bidding process among the 137 automotive and defense companies, academic institutions, manufacturers and tech firms that are members of the defense automotive technologies consortium.

That CTC won the bid shows the firm has established itself as a major player in the defense industry.

This project is the latest in a long list of accomplishments at the Richland Township facility. Last month, CTC earned a patent for its rechargeable battery design. In 2016, the firm designed and built award-winning water purification and laundry and shower recycle/reuse systems.

CTC continues to shine as a leader in the region in design, development and manufacturing of a variety of products used across a wide spectrum of applications.