On October 3, 2008, the Marine Corps Air Station (MCAS) at Cherry Point, North Carolina, dedicated a Combat Vehicle Operator’s Training (CVOT) course located at the north-west corner of the air station. The 7,000 linear-foot serpentine CVOT course has been constructed to add a “real-life” combat training element to MCAS Cherry Point’s existing classroom, maintenance, driving and convoy operations curriculum. With construction completed in July, the 2nd Marine Aircraft Wing Driver School has already begun training Marines in both day and night runs through the CVOT.

The U.S. Department of Defense identified the need for CVOT courses, like that constructed at MCAS Cherry Point, because of a significant increase in the number of deaths from vehicle rollovers in Iraq. When armored, the HMMWV M1114 (Humvee) is 12,100 pounds gross and reduces the driver’s total visibility. The armored vehicles help protect soldiers’ lives from improvised explosive devices (IEDs) but have proven more difficult for the soldiers to maneuver, especially in the hazardous terrain experienced in Iraq. “If one life is saved from construction of the MCAS Cherry Point CVOT course,” says Joseph H. Meadows, project manager, Cherry Point Facilities Engineering Department, Civil Division, “it will be worth it.”

Having identified a need for the CVOT course at MCAS Cherry Point, Base Command conducted an initial feasibility study and estimated cost. Marine Combat Engineers
Combat engineers with MWSS-271 lay concrete on Cherry Point’s new CVOT course. The course at Cherry Point will provide a means of training Marines to drive Humvees in Iraq, without having to drive to Camp Lejeune.

Photo Credit Charles E. McKelvey

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also provided obstacle concepts and a CVOT course bill of materials. Dewberry was hired to design the CVOT course, as well as prepare the necessary environmental permits. Dewberry surveyed the approximately 18-acre site and developed the site plan, grading and stormwater plan, as well as the erosion control plan. In addition, Dewberry engineered the obstacle concepts in order to provide a durable and lasting course. Dewberry was also responsible for coordinating erosion and sediment control (E&SC) permit approval from the North Carolina Department of Environmental and Natural Resources. S&ME, Inc. served as geotechnical engineer and performed subsurface evaluation as well as quality control on concrete emplaced CVOT obstacles.

During construction, Dewberry engineers worked closely with the Marine Wing Support Squadrons (MWSS) 271 and 274, who built the CVOT course as a training project. Dewberry also assisted Marine surveyors with site layout, performed periodic site visits to give feedback, and provided final stormwater certification.

Constructed to withstand 120 trips per week, the CVOT course simulates 18 typical Middle Eastern obstacles found in desert and urban terrain. The urban wall obstacle mimics narrow walls often found in a city environment. An IED blast area obstacle simulates hazardous road conditions, while a sloped roadway obstacle and canal, bridge, and ditch crossings challenge the driver with restricted terrain and severe changes in roadway width, inclines, and angles found in the region. “The course provides Marines with confidence in the handling capability of the vehicle,” says Meadows.

The MCAS Cherry Point CVOT course is one of several constructed to address the rollover problem. Camp Lejeune, North Carolina, has a similar facility which served as a conceptual model for the Cherry Point course. Another CVOT course has been built at Yuma Proving Ground in Arizona, which is in the desert and larger in area. A course has also been constructed in Iraq to help train Marines already deployed.