by Sarah Ferreira

Since 2018, my unit has been executing the Army Combat Fitness Test (ACFT) on a large scale, meaning that we test large groups of Soldiers continuously throughout a single duty day. We found that we can test a battalion size element (about 1,500 Soldiers) in a 9-hour time frame given the following conditions:

- 20 fully equipped lanes
- Grass/turf field that can accommodate 20 lanes-each lane is 3 meters wide and 60m long
- 2 x Rogue pull up rigs located at end of the testing lanes (or 20 x pull up bars)
- 2 mile run course co-located next to testing lanes

- 80 Soldiers per group arriving in 30-minute increments

With each testing repetition we've increased our proficiency in setup, administration, grading procedures, assigning support staff, and Soldier throughput. Below are some lessons learned, advice, and tips for anyone who may be tasked to administer large scale ACFTs in the near future.

Field Space and Equipment

Equipment will always be a limiting factor in how many lanes can be established for the ACFT. The number of lanes will dictate how many Soldiers can be tested in a group. For example, we normally set up 20 lanes for the ACFT which allows us to test 80 Soldiers per group (4 Soldiers per lane as directed by FM 7-22). With this in mind, I recommend setting up as many ***even*** lanes as possible. Having an even number of lanes is essential for efficient and timely grading procedures, as graders pair up lanes for the Standing Power Throw (SPT) and Sprint-Drag-Carry (SDC). Having an odd number of lanes will significantly disrupt the flow of the test. It is important to note that going beyond 20 lanes increases the likelihood of losing command and control of the element and, without the use of a bullhorn, voice commands becoming difficult to hear.

We utilized both synthetic turf and grass surfaces to administer the ACFT; each surface has pros and cons. A grass surface provides the opportunity to spray paint lane lines directly onto the field which saves valuable time on site setup, spares the use of cones, and the aggravation of trying to use engineer tape. The major downside to using grass is that, based on the heavy traffic pattern and weather, it can quickly turn to mud/dirt which greatly impacts the SDC event. You won't have that issue with turf. However, unless the turf field was specifically designed for the ACFT, you are going to be using many cones and a measuring wheel/tape to establish the lanes. This greatly lengthens the setup time as the coned-out field needs to be the first thing established on site. When using a turf field, we found it helpful to place rubber matting underneath the hex bars for the 3-Repetition Maximum Deadlift (MDL) event. This will help save unnecessary wear and tear, as well as denting of the turf surface.

We have the field space (both on turf and grass) to create 2 separate 25m distances per lane. Based on space, many units must utilize the same 25m distance for the standing power throw (SPT), hand release push-up (HRP), and SDC. For our ACFTs, we create a 25m distance for the SPT and another 25m distance for the HRPU and SDC farther down the lane. The ability to create 2 x 25m distances per lane allows us to test multiple groups of Soldiers simultaneously. For example, as a group of 80 Soldiers moves down the lanes to start the Hand-Release Push-up (HRP) event, another group of 80 Soldiers can start the 10-minute warm up for the 3RM deadlift event since there is enough space between events where the groups will not interfere with each other. The 2 x 25m distance per lane has been a total game changer in terms of Soldier throughput.

Weather

Unless your unit has access to an indoor testing facility, the weather can substantially impact test administration. We found that anything heavier than a light rain is grounds to postpone the event, especially if performing the ACFT on a grass field (mud accumulates quickly). The moisture can also negatively impact Soldier performance on the SPT. Towels don't really do much in terms of getting the moisture off the ball. It's still going to be wet. Same conditions apply for the kettlebell handles and pull up bars.

Timeline and Soldier Throughput

A good initial estimation for large scale site setup is 45min-1hour. With an experienced setup team, we can establish the 20-lane test and 2-mile run (2MR) course in about 30 minutes. This took several iterations to achieve. When we first started this process, setup took us a full hour. The station that takes the longest to set up is the MDL due to the sheer number of weight plates needed in order to establish 20 stations that range from 140 to 340lbs. We highly recommend starting setup of the deadlift station early, as it initially surprised us how long it took to establish. Have additional small plates (5 lbs. and 10 lbs.) centrally located between the stations so Soldiers can quickly add weight to the hex bar if desired. If possible, have multiple stations of popular weights. For example, many Soldiers in my unit easily max out the MDL at 340lbs. To alleviate a backlog at that specific weight, we created 5 x 340lbs deadlift stations. Be ready to adjust the weights based on where Soldiers congregate during the event. We also found that laminated placards identifying the specific weight on the bar was very helpful to both participants and graders.

Report times for groups of Soldiers should be spaced approximately 30 minutes apart. For example, if we are testing 20 groups of 80 Soldiers for a specific day- group 1 arrives at 0630, group 2 at 0700, etc. The 30-minute spacing allows for a group to execute the preparation drill (warm up sequence), MDL, and start the SPT, as group 2 arrives and fills out their scorecards. We found that the trigger to start the next group on the MDL station was when the group that is directly ahead starts the HRP.

Always strive to get four Soldiers per testing lane. Three is okay, but five is inefficient. Having a fifth person in a lane will throw off the entire group's throughput timeline. For example, having a fifth person in a lane means an additional 2-minute iteration for the HPR, an additional SDC iteration (up to 3 mins in duration), and an additional Leg Tuck (LTK) iteration. In total that could add up to 7 minutes or more. Multiply this by numerous testing groups and you can quickly find yourself behind schedule.

Arrange Soldiers from heaviest to lightest (or lightest to heaviest) deadlift before starting the SDC. We found that Soldiers who lift heavier on the MDL event generally have faster times on the SDC. If you can front load these Soldiers, it will save time across 4 x SDC iterations per group.

For the HRP, have the last Soldier in the stack of four count the number of repetitions out loud. This allows the grader to focus on form and give the performer feedback.

Support Staff

In order to have multiple groups of Soldiers testing at any given time, we needed two groups of 20 lane graders (1 grader per lane), as well as a fully separate 2MR grading group consisting of about 10 graders/support staff. The lane graders take the groups of Soldiers through the first five events of the ACFT. Once complete with the LTK, graders give the Soldier their scorecard, and the Soldiers are then escorted to the OIC/NCOIC at the 2MR site. The lane graders then go back to the staging area to pick up the next group of 80 Soldiers to start another iteration of the test. This grader schematic allows for 3 groups of 80 Soldiers to be testing the ACFT at any time- two groups of 80 Soldiers on the lanes, and one group of 80 Soldiers on the run.

I recommend identifying three support personnel to assist with flow and organization at three critical areas. The first is reception and staging, the second is Soldier movement from MDL to SPT (arranging Soldiers in stacks of 4 per lane), and the third is the escort from the LTK to the 2MR start. The personnel assigned to flow are instrumental in reducing transition time.

ACFT 3.0

When ACFT version 3.0 was implemented, we needed to slightly modify testing procedures that accounted for the plank as an alternate for ACFT event number five. In order to ensure proper throughput and timeliness, we had Soldiers identify if they were executing the LTK or the plank prior to the test beginning. If they opted to test the plank, it was annotated on the performer's scorecard for lane graders to clearly identify and direct those Soldiers to the plank station when it came time to grade that event.

We opted to establish a separate grading area for the plank event that was located adjacent to the pullup bars used for the LTK. It was optimal to have one dedicated grader and timer for this station that was not part of the 20 lane graders. The plank grader checks for form and enforces standards while the timer sounds off with the time in increments of 15-30 seconds. The grader then annotates the performer's time and score on the scorecard and directs the performers to join back with the main testing group, so that all Soldiers move to the 2MR station together.

COVID-19 Mitigation Measures

Prior to the introduction of the vaccine, we enacted several COVID-19 mitigation measures. Looking ahead, these measures may no longer be necessary. However, in the event that we have to return to social distancing and mask mandates, the below information could assist in risk mitigation.

All ACFT testing is done outside. Soldiers are required to sanitize their hands prior to starting the ACFT. All Soldiers are required to wear masks during the warmup, MDL, SPT, and LTK. Soldiers are permitted to remove masks when actively performing the HRP, SDC, and 2MR. When masks are off, Soldiers are required to maintain appropriate distancing. If possible, have hand sanitizer or handwashing stations near the staging area and at the end of the 2MR.

We also incorporated the use of sanitation teams to clean the equipment after each group of 80 Soldiers completed an event. For example, once all Soldiers were complete with the MDL, the sanitation team would spray and wipe down the hex bar handles. This was done with plenty of time for the bars to dry prior to the next group starting the deadlift. Sanitation was repeated for SPT, SDC, and LTK stations.

Moving Forward

Everything described in this article is focused on large scale testing of the ACFT and would require battalion level or higher coordination, planning, and resourcing based on the large amount of equipment and personnel support needed for test execution. However, all the above information described for large group testing can be scaled or modified to meet the specific needs and requirements of any unit or element that needs to administer an ACFT. While acknowledging that a more decentralized approach to testing may work better for small units, there are numerous benefits to testing Soldiers in mass. With the ACFT being a logistically intense test (setup, tear down, personnel support, etc.), it could save time in the long run if units tested collectively. Rather than trying to execute numerous smaller tests throughout the week during the 90-minute allocated PT time, units could pool resources and dedicate a duty day to complete the bi-annual testing requirement. Large scale testing would also allow for other units/companies to grade each other which, in turn, increases test reliability and the number of trained and certified ACFT graders a unit has available. Equally, and while not something I can prove with statistical analysis, there is visibly a more competitive atmosphere and spirit when testing large groups of Soldiers. Watch an iteration of the SDC event with 20 lanes of Soldiers executing simultaneously and you’ll see competition in action. This naturally lends itself to improved Soldier performance, increased motivation when testing, and increased unit cohesion.

With each successive iteration, testing of the ACFT at the unit level will become more efficient and streamlined. It took my organization almost two years to get to the level we are at today. It’s well worth the time and investment to ensure that we give our Soldiers a high-quality test that will help improve individual readiness and ultimately drive the fitness culture change that our Army needs.

MAJ Sarah Ferreira is an Army Military Intelligence Officer and current instructor in the West Point Department of Physical Education. She has a Masters of Education with a focus in Kinesiology and is a Certified Strength and Conditioning Specialist (CSCS) through the NSCA. Since 2018, she and her team of instructors have been the lead implementers of the ACFT at West Point and for the United States Corps of Cadets.