



# NEWS RELEASE

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## USACE saves construction time and money in Afghanistan

KANDAHAR AIRFIELD, Afghanistan—How do we quickly construct high-quality, yet inexpensive buildings for Afghanistan National Security Forces and execute within the time frame of President Obama's announced U.S. troop withdrawal planned for 2014? Solving that challenge became a priority for the U.S. Army in late 2010.

Working with the NATO Training Mission-Afghanistan/Combined Security Transition Command-Afghanistan and the Joint Program Integration Office, the U.S. Army Corps of Engineers developed a plan to construct kandak (battalion-sized unit) complexes for the Afghan National Army using arch-span construction instead of traditional concrete brick and mortar as a first step in saving time and money.

Maj. Gen. Kendall P. Cox, USACE Transatlantic Division commander, explained that austere, arch-span facilities are more flexible and adaptable, easier to maintain, and can be constructed in as little as half the time of traditional buildings.

Col. Mario Trevino, Deputy Director for NTM-A/CSTC-A Engineering, agreed. "Sustainment requirements played a big role in the decision to use arch-span construction. When we turn facilities over to the ANSF engineers, sustainment needs to be simple."

With the arch-span construction plan in place, USACE's Afghanistan districts worked with the U.S. Defense Logistics Agency to develop an acquisition strategy to save additional time and money.

This tandem plan to acquire thousands of yards of rolled steel in advance of some contract awards for the fiscal year 2011 arch-span projects took shape in January 2011.

"This acquisition strategy allows USACE to get a head start on the projects because we will provide contractors with U.S. government-furnished material," said Steve Belmore, project manager at the South District and deployed from Army Materiel Command at the U.S. Army Soldier Systems Command in Natick, Mass. "It's a new approach for USACE throughout Afghanistan, but necessary because the shipping of steel is a logistical challenge.

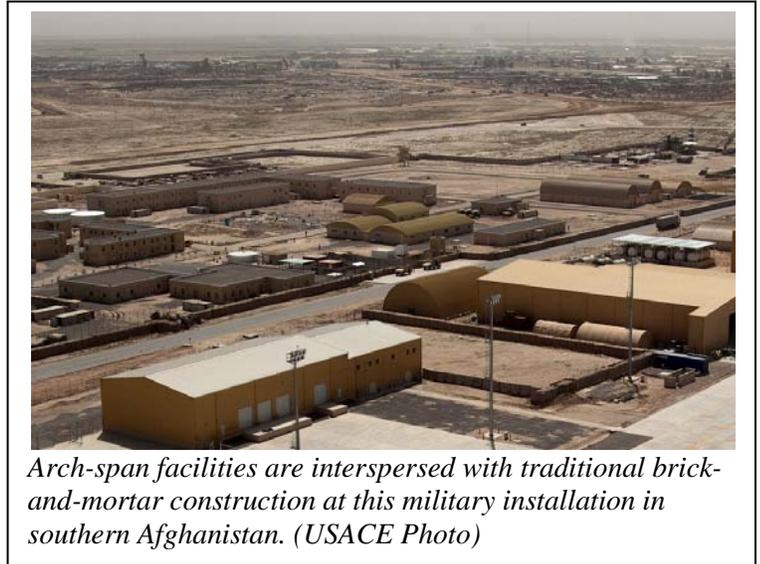


*USACE employee Kenny Pham (right), Herat Area Office project engineer and John Clark, Tarin Kot resident engineer discuss arch-span construction. (USACE Photo/Karla K. Marshall)*

“It could easily take more than six months for the steel to arrive at the storage yards in northern and southern Afghanistan,” said Belmore. “We realized that if we ordered steel and had it on hand when our contractors went to construction, we could potentially shave months off the construction time.”

Security concerns add additional delays and are ever present because the steel comes over land via convoys from Pakistan and other Asian routes. “Our shipping containers all have GPS tracking systems in them so we can check on their locations at anytime, but there’s no guarantee the containers will arrive in a timely manner. So, our ultimate goal was to mitigate for shipping delays,” Belmore added.

After pledging its support to the government-furnished steel initiative in January, DLA developed its purchase plan and by April had ordered \$13 million worth of steel for the anticipated projects. About 3,400 rolls of 1mm and 1.5mm thick steel, in 330 of the planned 409 20-foot shipping containers, were on the way to Afghanistan by mid-May.



*Arch-span facilities are interspersed with traditional brick-and-mortar construction at this military installation in southern Afghanistan. (USACE Photo)*

“The South District’s steel is being stored in original containers at a huge storage yard near Camp Bastion,” said Belmore. “We will keep it there until it’s time to requisition it for use and then will deliver the steel to project sites as needed, depending on each site’s milestone schedule.”

To further speed up construction in the south, the district decided to forego the traditional contracting process and award construction contracts for the kandak complexes via the sealed-bidding process which had been infrequently used in Afghanistan.

After determining the legal requirements and setting up the procedure, the South District hosted its first public bid openings, using the sealed-bidding process, June 18 and 22 at Forward Operating Base Lindsey near Kandahar Airfield. The solicitations were all amendable so that USACE could require the contractor to use government furnished steel when available.

One arch-span contract contained a government-furnished steel provision—expansion of the 215th Afghan Army Corps at Delaram in Nimruz province—while the other garrison facility expansion, for the 207th Afghan Army Corps at Camp Zafar in Herat province, will use contractor-furnished steel.

The Camp Zafar contract went to Contrack International Inc. for \$44.3 million, and the Delaram contract went to Lakeshore TolTest JV LLC for \$71.5 million. Altogether, the district awarded five contracts awarded for arch-span facilities using the sealed-bidding process.

USACE awarded three contracts in August: at Shorab in Helmand province to ECCI for \$29.9 million using government-furnished steel; at Camp Hero East, to ECCI-C/METAG JV for \$62.2 million, and Camp Hero West to Contrack International Inc., for \$16.6 million. The last two are in Kandahar province and will use contractor furnished steel.

“Initially, we were concerned that the sealed-bidding strategy would reduce contractor competition,” said Bill Stout, chief of construction at the South District and deployed from USACE’s Baltimore District. “However, not only was that concern unwarranted, contractors with payment and performance bonds bid on the projects. That was good news to USACE because we now have confidence that our contractors will meet the interim milestones on our critical path.” “Critical path” represents the longest duration of planned activities from the beginning to the end of a project.

“We will drive the critical path heavily to ensure performance, and the bonds are tools we can use to help us meet our deadlines,” he said.

“The combined solution of using arch-span construction, employing bonding requirements with a sealed-bidding process, and providing steel to the contractors is working out well,” said Rob Saari, ANSF program manager deployed from USACE’s Omaha District. “Despite a few challenges, the district is moving forward with the arch-span projects, which will move the ANA into their facilities sooner rather than later.”

“We are considering other types of construction techniques for the future to save time and money,” said Stout. “Also, these techniques may help reduce the amount of time our contractors spend on jobsites, which will help with security in the more remote areas.”

“For these upcoming projects, we provide standardized architectural and engineering designs to the contractor. The contractor then adapts the designs according to a site’s concept plan,” said Belmore.

Contractors save time and money because the construction process is replicated for each building. The techniques are always the same; the only difference is scale, meaning width and length of the structure.

Construction at the ANA sites includes infrastructure, barracks, headquarters offices, latrines, storage, vehicle maintenance, training facilities and others. “We prioritized the construction for each site and separated the projects into smaller components,” said Stout. “This way, we can deliver facilities to the ANA that they, in turn, can take possession of sooner.”

Belmore continued, “We are finishing up the site design work for the Delaram project and all the needed steel has arrived, so, we should begin construction in the next quarter. The interim milestones are set and the critical path is clear.”

From the notice to proceed, meaning USACE has given the contractor the go ahead to begin construction, the total time expected to construct each kandak complex is 540 days. The difference between arch-span and traditional bricks and mortar is the rate in which the facilities will be turned over to the ANA.

“In the past, the entire compound was completed before we turned it over to the Afghans, and many factors played into finishing construction,” said Belmore. “When you compare arch-span construction to traditional concrete masonry construction, arch-span requires fewer construction workers, is not as weather dependent because there is less concrete that must cure, and the exterior is pre-painted. Plus, with arch-span, we can turn over completed buildings as they are completed.”

“The goal is to enable the ANA to field soldiers faster so that the government of Afghanistan can become more self-sufficient by the time NATO forces leave,” said Stout. “If we deliver buildings at intervals that help the ANA train their forces faster, the whole country benefits.”

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USACE’s Afghanistan Engineer District-South provides design and construction services throughout southern Afghanistan to support the International Security Assistance Force and U.S. Forces-Afghanistan. The work is carried out in Regional Commands South, Southwest and West with the goal of achieving counterinsurgency effects and bolstering the Afghan Government’s services to its people.

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