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Features

On the Cover

An Afghan engineer talks with Capt Paul Frantz, a civil engineer deployed from Aviano AB, Italy, during a visit by the Nangarhar Provincial Reconstruction Team to a local metalworking shop. (photo by SSgt Joshua T. Jasper)

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Focus on Reconstruction

With the coming of the new year, we've seen many exciting changes within Civil Engineering and across the Air Force. January brought the arrival of a new HQ USAF A4/7. Lt Gen Loren Reno took over as the Deputy Chief of Staff for Logistics, Installations, and Mission Support after commanding the Oklahoma City-Air Logistics Center at Tinker AFB, Okla. We welcome his experience and leadership.

Near the end of 2008, the new Chief and Secretary released a new Air Force Strategic Plan. We are currently updating our Civil Engineering Strategic Plan to ensure that we are properly aligned with their latest guidance and priorities. The updated plan will build on all the hard work that you've already completed. It will also contain new objectives identified since our 2008 plan was published. I am proud of all the men and women in Civil Engineering who have worked hard through a sustained high operations tempo and personnel shortages to embrace change, recognizing the dire need to make critical improvements across the spectrum of our mission.

Within this issue of *Air Force Civil Engineer* magazine, there is a focus on our efforts in the CENTCOM Area of Responsibility. Engineers continue to add to the fight as irregular warfare moves front and center in the Global War on Terror. Every day, more and more Air Force civil engineers deploy worldwide on Civil Affairs Teams, Provincial Reconstruction Teams, Field Engineer Teams, and on Joint Engineer Teams, providing world-class combat and civic support, as well as humanitarian assistance. In some of the most dangerous regions in the world, engineers are the "boots on the ground" assisting these nations in building their infrastructure to support even the most basic needs of their people, offering the hope of stability and opportunity. In many cases, it isn't just military on the ground but also many dedicated government civilians and contractors who risk their lives supporting a greater common good in service to our nation. Our own Air Force Center for Engineering and the Environment has completed over $5B in support projects in Iraq alone, repairing or constructing hundreds of facilities, including schools, police stations, and medical facilities. The list goes on, but it is clear that the expertise that Air Force engineers bring to this joint mission continues to be critical to its success. I encourage you to read the great articles in this issue that highlight some of our accomplishments.

Finally, in conjunction with a successful Engineer's Week in February, I was able to host the annual award ceremony here in Washington, D.C. I'd like to offer another hearty congratulations and thank you to all of the individual, flight, and unit winners, as well as the entire CE community, for an outstanding 2008. I look forward to an even more successful 2009.

Del Eulberg
Major General, USAF
The Air Force Civil Engineer

Building Partnerships through Reconstruction

Maj Gen Del Eulberg
The Air Force Civil Engineer

The Air Force has played an integral role in the ongoing reconstruction efforts in Iraq and Afghanistan, from helping to rebuild both countries' military infrastructure to strengthening partnerships within local communities.

Military engineers have long been an important part of reconstruction efforts, rebuilding infrastructure following conflicts or participating in humanitarian exercises — such as New Horizons in Latin America — in an effort to avoid conflicts. Air Force civil engineers, with their extensive experience in operating and maintaining a base's facilities and infrastructure, have skills and capabilities ideally suited to basic reconstruction goals: provide lasting benefits to the local population while at the same time enhancing our national security. Air Force civil engineers have a justly earned reputation for nation-building around the world and we are breaking new ground in Iraq and Afghanistan.

Reconstruction Defined Today

Most people hear the word "reconstruction" and immediately assume the concept continues to be one of repairing physical destruction caused by war. It still does, but over the years the concept has broadened. Today's reconstruction efforts include developing a partner nation's infrastructure and capabilities to assist in sustaining civil authority and providing for the basic needs of its constituents — both necessary requirements to ensure stability. Reconstruction means building banks to foster the establishment of a banking system, enabling a growing and free economy. It means constructing schools to foster an education system and expand the knowledge base from which to develop future leaders. It means providing reliable utilities and transportation to further an internal confidence of the people in their government. It also means training and working alongside local nationals to help introduce skilled laborers into the workforce to make the country more self-sufficient and shape an employment market that may not have previously existed.

Many of today's reconstruction efforts come under the heading of "Irregular Warfare" — the struggle between state and non-state players for legitimacy and influence over a relevant population. Irregular Warfare continues to be a major concern for the United States military, and for Air Force civil engineers. We have played a role in many of these areas over the past several years and will continue that mission for the future. In addition to constructing facilities, engineers also build partnerships with their sister services, other government agencies, the local population, non-governmental organizations, and partner nations. These partnerships are often key to the overall reconstruction effort.

Air Force CEs and Early Reconstruction Efforts — Background

In 2003, in the first stages of Operation Iraqi Freedom, the country's infrastructure, already weakened by neglect during Saddam Hussein's reign, was further damaged by U.S. and coalition forces. But, even before the fall of the Hussein regime, the United States and its partners began efforts to protect and rebuild the country and its infrastructure. Air Force civil engineers were involved in one of the earliest efforts in Iraq, Operation Restore Iraqi Oil, undertaken while the conflict still raged. Air Force explosive ordnance disposal experts joined their Navy counterparts to clear unexploded ordnance and improvised explosive devices from Iraqi oil fields. They secured approximately 400 oil wells in southern Iraq and cleared explosive hazards from blown wells so that oil specialists could assess the fires and begin extinguishing them. The Air Force Contract Augmentation Program helped restore water and power to Baghdad in 2003. AFCAP contractors replaced worn-out generators at the Al Karkh Water Plant that provided 60 percent of Baghdad's water supply and was a major part of the city's power grid.

After the end of large-scale military action and the Hussein regime, Iraqi reconstruction was placed under the control of the Coalition Provisional Authority (CPA). In November 2003, the CPA's project management office contacted my predecessor, Maj Gen L. Dean Fox, requesting assistance in executing Iraqi Reconstruction contracts, and he turned to AFCEE at Brooks City-Base, Texas, for their contract capacity. CPA authorities needed a "bridge" to begin reconstruction while a more formalized structure was being established. General John P. Jumper, U.S. Air Force Chief of Staff,

Iraqi workers place trusses on a firehouse, part of an AFCEE contract to rebuild the Iraqi infrastructure. (U.S. Air Force photo)

approved Ambassador Paul Bremer's request for AFCEE's involvement in early January 2004. AFCEE supported initial work for security and justice projects until CPA could get their large-scale contracts in place to provide facilities for the new Iraqi Defense Force. The initial request included four task orders for reconstructing Iraqi Army facilities at Tadji, Um Qasr, An Numinayah, and Al Kasik. The tasks, worth about $200-300M, had to meet a tight timeline as new Iraqi Army personnel completed their training.

AFCEE's Reconstruction Role Continues

AFCEE's initial success led to additional work and the bridge continued to grow. Through their contracts, AFCEE was able to meet the overall objectives and goals of the CPA: hire Iraqis, help train them on construction practices, and establish Iraqi contractors to help rebuild their country. It was more than just building the military bases; it was also getting the Iraqis back to work and getting companies established to do the reconstruction work themselves.

The State Department's Iraq Project and Contracting Office replaced the CPA and continued to request AFCEE's support in the reconstruction effort. However, Multi-National Security Transition Command-Iraq (MNSTC-I) soon became AFCEE's primary customer in Iraq. Both were pleased with AFCEE's responsiveness, flexibility, and timeliness, and requested their continued and expanded support. The secret of AFCEE's success was their business model — a cost-plus, performance-based model where the contractor is given the end objective but not the methods they should use to meet that objective. Using their Conceptual Work Plan/Implementation Work Plan instead of design-build, AFCEE could be more responsive and flexible, rapidly adjusting to meet changing customer requirements. AFCEE also maintained a small office in Iraq with strong support from San Antonio, enabling them to keep overhead costs low.

In September 2004, Lt Gen David Petraeus, then commander of MNSTC-I, wrote, "The AFCEE team, which, as you know, came into Iraq to execute work early in the reconstruction process so that we could generate Iraqi Armed Forces as quickly as possible, has contributed significantly to our ability to establish a new Iraqi Army. Without AFCEE intervention at a critical time, we would not have been able to generate the forces as soon as we have. AFCEE's role in this endeavor is a success story."

AFCEE's reconstruction work since 2004 is impressive (see table below) and their work continues in Iraq. As recently as November 2008, AFCEE received guidance to support MNSTC-I's construction projects funded through the Foreign Military Sales program.

Due to their success in Iraq, AFCEE was subsequently asked to assist the Combined Security Transition Command-Afghanistan (CSTC-A) with their reconstruction efforts. CSTC-A's mission is to train and develop the Afghan National Security Forces to provide security and stability and to deter terrorism within the country's borders; reconstruction plays a vital role in doing this. Newly recruited troops need barracks and operational, maintenance, and training facilities to carry out their mission. As the end strength of Afghan forces rapidly increases, AFCEE is helping build the facilities to make this a reality. The first task order was awarded in 2006; to date, AFCEE has awarded 47 projects in Afghanistan valued at $560M.

AFCEE's overall reconstruction efforts since 2004

- 585 projects worth $4.8B
- 4,681 facilities (>80 million sq. ft.)
- 34 brigades and 115 battalion garrisons
- 469 schools repaired
- 11 medical clinics
- Ministry of Defense Headquarters
- 3 airports repaired and expanded
- 15 border forts and expeditionary camps
- 264 police stations
- 1 prison

Reconstruction through Irregular Warfare

For Air Force Civil Engineers, operations in Afghanistan and Iraq have typified what has become known as Irregular Warfare. Air Force Doctrine Document 2-3, "Irregular Warfare," describes the important dual role that engineers play while interacting with partner nations. They can conduct beddown and sustainment operations for military forces. They can support partner nations by building infrastructure, constructing schools and clinics to assist local communities, and providing advice and training to partner nation personnel in engineering trades so that they can build a better tomorrow for themselves. Humanitarian and disaster recovery work can also go a long way in building these partnerships.

In early 2004, the Army established the Gulf Region Division in Baghdad, Iraq. This move consolidated the different U.S. Army Corps of Engineer activities operating in Iraq under one command, creating a sustainable, supportable engineer presence. The command soon became a partner for Air Force CEs. The Air Force began partnering with the Army by providing "in lieu of" forces and individual augmentees to assist with combat support functions at Army locations throughout Iraq. Since then, hundreds of Air Force civil engineers have performed base master planning, design, construction management, troop labor construction, fire protection, and weapons intelligence in what are now known as Joint Expeditionary Taskings. Individual civil engineers have also served in the Gulf Region Division as program managers, developing and overseeing the execution of hundreds of projects to boost Iraq's security and economic and political capacity.

In 2006, the Air Force joined the Provincial Reconstruction Teams (PRTs), which were first established in Afghanistan in 2002. In Afghanistan, PRTs have built bridges and roads, opened schools, developed irrigation systems, and constructed civic structures in an effort to secure and rebuild a post-Taliban nation. What makes PRTs unique is the mixture of military, coalition, and civilian members, each bringing their particular strengths to a particular team and region to promote conditions for self-sufficiency, enduring prosperity, and a secure, stable environment. Teaching construction techniques to local Afghan residents gives them a useful ability, provides future employment possibilities, and helps give them a reason to support the provincial and central Afghan governments.

PRTs soon spread to Iraq, under the oversight of the State Department, and were an important element of "The Surge." The number of PRTs in Iraq grew to about 20; these teams were particularly important for Anbar Province, as local leaders began to support the central government in Baghdad and turn their backs on the extremists. The PRTs in Iraq also acted in concert with civilian and diplomatic efforts in a synergistic attempt to bring stability to the country.

The successes of civil engineers in Irregular Warfare reconstruction are many and varied. In a unique example, RED HORSE engineers of the 557th took responsibility for the Village of Hope vocational school in Hawr Rajab, Iraq, an area that had been under the control of Al-Qaeda in Iraq forces. These engineers-turned-teachers offered local

Far left: CMSgt John Cinquemani, 447 ECES Fire Chief, congratulates Iraqi Air Force firefighters on their accomplishments during a combined American-Iraqi training exercise at New Al Muthana Air Base, Iraq. (photo by MSgt Brian Davidson)

Left: A graduate of the Village of Hope program lays mortar for the construction of a security wall around the community center in Hawr Rajab, Iraq. (photo by SSgt Paul Villanueva II)

Below left: Capt Kenneth McGinnis (right), Provincial Reconstruction Team project engineer, and TSgt David Saugstad (left), structures craftsman, speak to local Afghan contractors about the construction of a micro-hydro system. (photo by MSgt Demetrius Lester)

Below right: Capt Elisabeth Leon (center), Nangarhar Provincial Reconstruction Team lead engineer, is joined by village elders, school administrators, and provincial government representatives while cutting a ribbon to mark the start of construction of a girls' school in Behsood District, Afghanistan. (U.S. Air Force photo)

residents both classroom instruction and hands-on training in the basics of construction. The immediate objective was rebuilding homes in the village that had been almost destroyed by Al-Qaeda forces, but the ultimate goal was encouraging economic activity in the village and reestablishing a normal life for its citizens.

Air Force civil engineers have also been active in establishing the fledgling Iraqi and Afghan Air Forces. In his article on page 8, Maj Kevin Mantovani describes his role in building the Afghan National Army Air Corps. In an earlier issue of *AFCE*, two engineers described their work for the Iraqi Air Force in providing facilities and infrastructure and advising Iraqi engineers on various issues such as planning for long-term capital improvement.

Air Force firefighters have helped establish Iraqi and Afghan fire departments. They initially established a fire academy at Taji Air Base, and graduated the first class in December of 2007. Later in 2008, the Iraqi National Fire Academy moved to the Green Zone. The most recent class of apprentice firefighters graduated from the new Iraqi National Fire Academy in Baghdad in January 2009. Our own firefighters served as instructors and mentors for the Iraqi firefighters, who included Ministry of Interior civilians, Iraqi Army soldiers, and Iraqi Air Force airmen.

The "official" work of all of these engineers is invaluable, but for some the most rewarding work is done in their "off-duty" time as they go into nearby villages to help on a person-to-person level. Whether handing out school supplies to young students in an Afghan school, providing clothing to orphanages in Kyrgyzstan, or rebuilding a community soccer field in Iraq, engineers enjoy touching the lives of people often caught in the crossfire of a conflict.

Conclusion

The important role of Air Force civil engineers in Reconstruction efforts continues. Today, approximately 3,000 Air Force civil engineers are working in the Southwest Asia AOR to meet the United States' overall reconstruction goals for this region. The nation-building skills of our engineers are in use around the world today, but especially in Iraq and Afghanistan. The influence of all of the Air Force's "reconstruction" engineers will be evident in these two countries for many years to come.

Up From the Ashes…Building the Afghan National Army Air Corps

Maj Kevin Mantovani, CAPTF J7 Director

Because air power is one of the fastest and most effective forms of mobility on the battlefield, air base facilities and infrastructure are important strategic components of the operational development of Afghanistan's military power.

U.S. forces, the International Security Assistance Force, and the Afghan National Army are all focused on kinetic operations and directly combating the terrorist insurgency in Afghanistan. In order to leave behind a strong and independent country, coalition partners are working with the Afghans to rapidly build up direct combat force strength so as to fight and defeat insurgents sooner rather than later.

Strong, stable, and capable Afghan security forces are key to winning this counterinsurgency fight. The Combined Security Transition Command-Afghanistan is a joint command tasked to organize, train, and equip the Afghan National Security Forces, including one of its primary components, the Afghan National Army (ANA). The ANA comprises five regional corps and one air corps, and has recently been approved to grow from 67,000 soldiers to more than 134,000 in the next five years. In a large country without a stable road, rail, or maritime infrastructure system, a strong aviation capability is critical to support military operations and logistics as well as the growth of Afghanistan's economic strength.

Building the Air Corps

Effective air power requires effective infrastructure and Air Force civil engineers are playing a major role in providing that infrastructure. The Afghan National Army Air Corps (ANAAC) basing plan is strategically structured to build air base facilities and infrastructure to support major ANA areas of operation in each of the five Regional Corps. Until this year, the only significant Air Corps base with any permanent infrastructure was their headquarters and wing at the Kabul International Airport (KAIA), a legacy Soviet air base collocated with Kabul's civil aviation terminal as well as an International Security Assistance Force aerial port of debarkation.

"It's exciting to see this fledgling air corps regain its wings," said Brig Gen Walter Givhan, who heads up the Combined Air Power Transition Force (CAPTF). "Less than a year ago, NATO flew 90 percent of the missions, but today the Afghans fly 90 percent of their own missions, which is a strong sign of the progress they have made and a great source of pride to the nation of Afghanistan."

The CAPTF is the Combined Security Transition Command-Afghanistan's advisory arm for the ANAAC. CAPTF members plan and execute aircraft acquisition, logistics, manpower, training, and air base infrastructure development. Currently, the CAPTF has a staff of more than 30 people at its headquarters in Kabul and more than 100 air advisors embedded with the ANAAC in several locations. By late 2009, the number of U.S. military, contractors, and other coalition members assigned to CAPTF will grow considerably in size.

Kabul will continue to house the ANAAC's largest air wing but it's only the first of many bases that will open over

the next several years. As more aircraft are procured and pilots and soldiers are trained, a full air wing at Kandahar, along with three smaller operating bases, will become fully operational. Infrastructure development plans are also in the works for small detachments at two locations, and site surveys are underway at a number of potential austere landing zones.

ANAAC — Then and Now

Formed in 1924 with a few Russian aircraft, the Afghan air force gradually grew in strength until the Soviet invasion of 1979. The years 1980 to 1989 saw the Soviet occupation and their modernizing of a robust air force complete with bases and infrastructure. Although internal civil war caused destruction of most of the aircraft and infrastructure from 1990 to 1994, from 1995 to the start of OEF in 2001, both the Taliban and the Northern Alliance maintained forces capable of generating six to eight aircraft for a major operation. In 2001, U.S. Air Force precision bombing destroyed most of what was left of the aircraft and aviation infrastructure of the Afghan Air Force.

The ANAAC is currently able to conduct air mobility, casualty evacuation, and presidential airlift in support of the Afghan National Security Forces and, when directed, civil authorities at all levels. In the near future, the ANAAC will be training their own pilots, flying modern C-27 transport aircraft, and operating a powerful fleet of intelligence, surveillance, reconnaissance, and attack aircraft.

Moving into the Future

During the fall of 2008, the ANAAC Air Wing and Corps headquarters moved from their dilapidated compound on the south side of KAIA to a new, state-of-the-art, $183M base that rivals any found in the United States. The construction efforts spanned more than three years, and involved three prime contractors and dozens of subcontractors working through heat, rain, and snow. Both AFCEE and the U.S. Army Corps of Engineers managed various construction projects on this new base. It will ultimately be capable of supporting up to 3,400 ANAAC soldiers and their advisors and up to 50 permanently based fixed and rotary wing aircraft valued at over $2B.

The ANAAC Air Wings at Kabul and Kandahar will be collocated with coalition forces on two large air fields where a growing Afghan civil aviation capability also operates. This close proximity of Afghan, International Security Assistance Force, and civil aviation compounds presents an opportunity to develop joint capabilities, such as crash fire rescue stations and cargo and passenger processing facilities, and to integrate Afghan and coalition base defense forces. Once decisions are made on where to base ANAAC forces, it is imperative that the right infrastructure be developed to support operations.

Design, Infrastructure, and Cultural Challenges

A well-functioning air base is the cornerstone of effective airpower. Engineers must take into account decades of U.S. Air Force lessons learned, but also account for the many nuances of the Afghan culture, mindset, and work paradigms when designing the bases. Each facility's technical requirements are developed in a collaborative and synergistic effort between the CAPTF J7 engineer staff, the Afghans, and the air advisors who are each functional experts in their own particular area.

Top of previous page: An aerial view of new ANA Air Corps Base construction at Kabul International Airport in January 2008. (U.S. Air Force photo)

This page: A CAPTF officer and Air Corps General survey an old Soviet aircraft junkyard. (U.S. Air Force photo)

"We have a chance from the beginning to build air bases and facilities that meet the Afghans' operational needs," said Maj Rich Hornby, a logistics readiness officer deployed from the U.S. Air Force Academy, Colo., as the HQ CAPTF Deputy J4. "In designing the new passenger-cargo terminal at Kabul Air Wing, we incorporated expected process flow and technical user requirements, but also made sure it would be embraced and utilized by the Afghans." This $3M facility will be similar in many ways to Ramstein AB's, albeit on a significantly smaller scale.

Engineers apply lessons learned at Kabul Air Wing to the construction projects at Kandahar and design for long-term savings. Designs for ANA facilities must maximize use of natural light and add manual controls for as many systems as possible. Fixtures, such as toilets, sinks, and door handles, must be rigid, long-lasting, and as rugged as possible.

"We're learning how the Afghans use facilities. The designs need to be sustainable and durable. Many ANA soldiers come from very rural backgrounds and have little experience with heating and cooling systems, thermostats, reliable electricity, or even running water," said Air Force 1Lt Jared Casebolt, the CAPTF J7 design engineer managing the $90M multi-phase development at Kandahar.

Sustaining the ANAAC Bases

The ANA civil engineering and facility maintenance system is in its seminal stages, and will likely improve quickly. With the current system — a legacy process left over from the Soviet military hierarchical system — some of the simplest decisions must be approved at very high levels. When coupled with still-existing supply challenges, this system can create inefficiencies and delays. Advisors in engineering and other areas, such as logistics, communications, and operations, work daily with their Afghan counterparts to change this dated paradigm and drive decision-making authority to much lower levels.

"My job is to start with basic USAF civil engineer knowledge and create or tailor new processes compatible with the Afghan culture and mindset," said Maj Jack Blalock, the Kabul Air Wing's CE squadron mentor.

During the next three to five years, the wing's CE squadron will grow in trained personnel, acquire much needed tools and equipment, and become self-sufficient. The first step is to send the Afghans through a six-month technical school, similar to initial Air Force CE technical training. A nationwide, USACE-managed contract provides the oversight for

this tech school training. Following school, the Afghans will go through six months of on-the-job training where they will shadow contracted technicians as "apprentices" until they are ready to advance and become self-directed "craftsmen."

Begin With the End in Mind

Job satisfaction and hard work are a natural result of working alongside the motivated and sincere soldiers of the ANAAC. The Afghans are warriors and truly appreciate the sacrifices the coalition members are making in order to be here and help them. An important goal for everyone in CAPTF is to work themselves out of a job.

At the end of the day, the famous T.E. Lawrence quote applies well to CAPTF's mission: "It is better to let them do it imperfectly than to do it perfectly yourself, for it is their country."

Maj Kevin Mantovani is deployed as the J7 Director, CAPTF HQ-Kabul, Afghanistan, from the 818 GMRS/818 CRG, McGuire AFB, N.J., where he is the Director of Operations.

Previous page: ANAAC barracks under construction. (U.S. Air Force photo)

Top: 1Lt Jared Casebolt & SMSgt Mark Stolar observe construction efforts. (U.S. Air Force photo)

Bottom: A completed ANA Air Corps hangar at KAIA. (U.S. Air Force photo)

Engineering Teams Build a Stronger Iraq

Lt Col Mark Zimmerhanzel, HQ PACAF/A7PI

The I-FET is just one way Air Force civil engineers are partnered with the other services to make Iraq a more stable and prosperous country.

Air Force civil engineers are providing engineering support to Army, Marine Corps, and Navy units across Iraq. The 732nd Expeditionary Civil Engineer Squadron provides administrative and operational control of over 300 engineering, explosive ordnance disposal, intelligence, and photographic officers and technicians in support of U.S. Central Command missions. Over 50 of the squadron's personnel are members of Facility Engineer Teams and Detachments (FETs and FEDs), providing direct installation engineering support to Army and Navy installations. These combat engineers work inside and outside the wire, performing design, construction management, surveying, and master planning on bases throughout Iraq.

In support of the U.S. Central Command leader's counter insurgency (COIN) guidance to "Conduct operations with and through our Iraqi partners," "Give the people justice and honor," and "Integrate civilian and military efforts," the FETs and FEDs are leading the way to transfer base engineering responsibilities to local and expatriate Iraqi engineers.

In the spring of 2008, the 20th Engineer Brigade (Combat) (Airborne) began an initiative to replace military FETs with Iraqi engineers with the intent to aid "…the development of civilian engineering and building trades, and the transition of necessary engineer missions to Iraqi Army and Iraqi civilian engineers." This move would reduce the number of military engineers required in Iraq and allow military engineers to focus on work at the small joint security sites, contingency operations posts, and other sites outside the wire. More importantly, it would lay the foundation for Iraqi self-sufficiency.

Air Force engineers were tasked to make this vision a reality. The first contract was awarded in August 2008 to an Iraqi firm for an Iraqi-FET (I-FET) at COB Qayyarah-West (Q-West), and on September 1, the six Iraqi engineers comprising the I-FET began working in partnership with Air Force FET 15. By the end of September, Air Force teams had awarded contracts at four additional bases in Iraq. The short-term goal is to have all I-FETs conducting operations in parallel with Air Force engineers by June 2009. The long-term plan is to completely turn over all base engineering work at Air Force FET locations to the I-FETs.

The six Q-West I-FET engineers had previous experience with American engineering companies working in Iraq, and they quickly proved their technical competence. They integrated with the military engineers and began to perform design, construction management, and surveying work for the base. Within three months, the members of the Air Force FET 15 were leaving day-to-day installation engineering missions to their I-FET partners, which gave the FET members more time to do additional work for Multi-National Division-North in their battle space.

The initiative was directly linked to the Multi-National Force-Iraq Commander's COIN guidance to build Iraqi capacity and find ways to be bigger than we are as the U.S. presence in Iraq thins down. The initiative also gives Iraqi professionals jobs and uses money as a "weapon system."

When Gen Raymond Odierno took command of MNF-I in September 2008 he reiterated his COIN guidance. In a Sept. 16, 2008, memorandum he stated, "We serve during a pivotal period in the campaign for a secure, stable, and prosperous Iraq. Together, coalition and Iraqi forces will continue to protect the populace while fostering reconciliation, promoting good governance, and encouraging Iraqi men and women to build upon their newly won hope by investing in their communities." He stressed that the Iraqi people are the decisive "terrain" and that the U.S. military must foster local governance, provision of basic services, maintenance of infrastructure, and economic revitalization to provide an environment that creates honorable work and rewards honorable behavior. The I-FETs are an important step in that direction.

Lt Col Zimmerhanzel is the Chief, Programs Integration Branch, HQ PACAF, Hickam AFB, Hawaii. He was deployed as Commander, Facility Engineer Team 15, COB Q-West, Iraq.

Top: The 732 ECES Facility Engineer Team works hand in hand with Iraqi engineers, preparing them to take over base engineering responsibilities. (U.S. Air Force photo) Bottom left: I-FET engineers survey a job site at COB Q-West, Iraq. (photo by SrA Christopher Lococo) Bottom right: Mohammed, an Iraqi engineer, explains to an Iraqi worker how to use the vibrating nozzle to remove air bubbles in concrete at the intersection of 8th and Main Streets on COB Q-West, Iraq. (photo by Army SGT Keith Anderson)

Holistic Approach to Air Force Utilities Privatization

Mr. Mike Giniger, AFCESA/CENU
Mr. Ken Miller, AF/A7CAE

One of Civil Engineering's strategic goals is to reduce the size of the Air Force physical plant to offset the reduction in funds available for installation support. Although the Base Realignment and Closure (BRAC) process is designed to reduce the infrastructure footprint, the last BRAC round retained considerably more infrastructure than necessary to execute Air Force missions. The Air Force Utilities Privatization (UP) Program has now become a critical component in the reduction strategy.

When the Air Force privatizes, it funds the real (whole) cost of utilities and, at the same time, removes infrastructure from the Air Force real property records, driving down Sustainment, Restoration, and Modernization funding requirements.

What Is UP?

Defense Reform Initiative Directive 49 directed DOD components to privatize every government-owned electric, water, wastewater, and natural gas utility system unless security concerns required federal ownership or privatization was uneconomical. Under the provisions of 10 USC 2688 and OSD guidance, privatization of a utility system is economically feasible when the long-term cost of privatization is estimated to be less than the government's cost of restoring, owning, and maintaining the system at industry standard for the same period of time. This estimate has become known as the "should-cost."

Air Force UP Program execution is centralized in a program management office at HQ AFCESA, Tyndall AFB, Fla. The program involves 1) the conveyance of a utility system to a municipal, private, regional, district, or cooperative utility company; and 2) a utility services contract for operations, maintenance, and recapitalization for a period of time, not to exceed 50 years. Privatization of utility systems allows Air Force active, Guard, and Reserve installation commanders to focus their operations and maintenance activities on core defense missions and functions.

Solicitations are issued through the standard Federal Acquisition Regulation process and offers are evaluated and compared technically and economically against the should-cost. To be accepted and awarded, an offer must be in compliance with the fiscal year 2006 National Defense Authorization Act and cost less than the should-cost, evaluated over the life of the contract.

System ownership is transferred to the successful offeror under terms and conditions to ensure Air Force's interests are protected. Terms of the contract rarely include aspects of the commodity (electrical power, water, natural gas, and wastewater treatment); the contract is solely for the "service" the system provides, delivering the commodity to the required location. In conjunction with the service contract, the Air Force issues a bill of sale to the successful offeror that provides for access to the system by the new owner. While the contracting officer executes the service contract, only the Deputy Assistant Secretary of the Air Force for Installations may convey the system through a bill of sale.

Post-award project management plans must ensure that a contract's terms are met, including operations and maintenance, capital upgrades, renewals and replacements, and rights-of-access. Utilities privatization contracts must be very specific on the required level of service including repair response times, support for the base mission, and compliance with approved contingency plans.

Current Air Force UP Status

Updated UP policy was issued by AF/A7C2 in August 2008 to accelerate the pace of the Air Force UP program. The Air Force had 661 utility systems to evaluate; 328 systems are still in the schedule for solicitation over the Future Year Defense Plan. Since the start of the program, 25 Air Force utility systems have been privatized. (The last five in FY08 were the electric systems at Westover ARB, Mass., F.E. Warren AFB, Wyo., and Goodfellow AFB, Texas; the sewer system at Dover AFB, Del; and the natural gas system at the U.S. Air Force Academy, Colo.) Seventy-nine utility systems are being evaluated for award decisions in FY09.

UP evaluations require significant levels of contracting office support. This support is provided by the Defense Energy Support Center (DESC), Ft. Belvoir, Va.; AETC CONS, Randolph AFB, Texas; 21 CONS, Peterson AFB, Colo.; Edwards AFB, Calif.; and National Guard Bureau headquarters and installations. The Air Force and DESC, a Defense Logistics Agency organization, have signed a UP support memorandum of agreement in effect through FY2017 that identifies 171 utility systems which will be evaluated for privatization.

There are three significant results of updated policy and a contracting partnership with DESC.

On Sept. 17, 2008, Mr. Paul Parker (right), the Deputy Air Force Civil Engineer, and Mr. Kim Huntley, Director, Defense Energy Support Center, signed a Memorandum of Agreement (MOA) for UP Program contracting support. Under this MOA, the center will partner with the Air Force as one of the agencies providing UP contracting support services from FY2010 through FY2017. (U.S. Air Force photo)

1. UP will be programmed centrally in FY10. Evaluations of systems not yet privatized use the should-cost. Data calls sent to MAJCOMs every September ascertain the fully burdened costs across the FYDP (e.g., include ancillary costs such as contract management and government oversight of UP contracts).

2. UP will be fully funded "off the top" beginning in FY10. Funds will be distributed based on inputs from a year-end data call. The AFCESA PMO will validate and prioritize the requirements.

3. UP solicitations will be standardized (perhaps the most significant aspect of UP contracting at DESC). As DESC assumes the bulk of Air Force UP contracting, widely varying source-selection processes become standardized — templates for requests for proposal; consistency of evaluation factors; and a global sense of comparison for source selection authorities.

The Air Force has recommitted itself to execution of the UP process and privatizing all systems where fiscally attractive and operationally sound. Focusing on privatizing where it is feasible, the Air Force stands to gain many benefits, one of which is the reduction of the utility infrastructure.

With much pride, Air Force civil engineers have operated and maintained systems for years at considerably less cost than industry standard, and have excelled at expediently meeting mission needs during contingencies. But ongoing budget cuts and changing mission priorities have affected civil engineering's ability to operate and maintain the Air Force's utility systems at industry-standard conditions. It has become increasingly important to find a new approach.

Successful privatization of utility systems gives the Air Force this new approach: working with its industry partners to get out of the business of utility system ownership and into an increased focus on its true warfighting mission.

Mr. Giniger is Division Chief, Air Force UP Program Management Office, HQ AFCESA, Tyndall AFB, Fla., and Mr. Miller, a contractor, is the Air Force UP Program Manager, The Office of the Civil Engineer, HQ USAF, The Pentagon, Washington, D.C.

The MILCON Odyssey

Lt Col Mike Nelson, USAF/A7CPP

We hear quite a bit about improving the execution of military construction projects. But how does a project get there, from being a good idea to becoming a congressionally appropriated project? Success through the lengthy MILCON process comes down to writing a solid project definition, building a defendable and hard-hitting story, and effectively communicating and selling the story.

The MILCON Process

A general outline of the process, which begins at installation level, is shown at right. The Air Staff "centrally manages" MILCON funding and provides each MAJCOM with "bogeys," which are sent back to the Air Staff "filled" with priority projects taken from those submitted by installations. After consolidating all MAJCOM inputs, Air Staff civil engineers advocate for the projects through the Air Force Corporate Structure, or AFCS.

The AFCS has several responsibilities, including balancing the entire Air Force program within its given total obligation authority. The AFCS consists of four major levels: panels, group, board, and council. At the lowest level, the panels represent various functions and missions, such as Global Mobility, Air Superiority/Global Attack, Information Superiority, Space, Personnel and Training, Logistics, and Installation Support, which represents many of Civil Engineering's requirements.

MILCON projects enter AFCS deliberations through two primary means. New mission MILCON (mainly weapon system beddown projects) is brought in by the panel responsible for the respective weapon system; current mission MILCON projects are brought in by the Installation Support Panel through the AF/A7C Programs Division.

Panels carry the various requirements into the AFCS through the Air Force Group (AFG). Over several weeks in the spring, the AFG debates priorities and works to fit it all within a defined budget.

After balancing panels' competing requirements with the limited dollars available, the AFG presents the program to the Air Force Board, which reviews decisions by the AFG before passing the program to the Air Force Council, chaired by the Air Force Vice Chief of Staff (four-star) with three-star and SES representation from the functionals. Once approved by the council, the Air Force's program is presented to the Secretary of the Air Force and to the Chief of Staff of the Air Force, usually in late June or early July.

Installations	• Identifies user/customer requirement • Defines AF Form 332 • Programs project (DD Form 1391) • Prioritizes projects • Submits priorities to MAJCOM
MAJCOM	• Prioritizes MAJCOM-wide projects • Submits top priorities to Air Staff (HQ USAF/A7CP) • Presents advocacy briefings to HQ USAF/A7CP
Air Staff & OSD	• HQ USAF/A7C presents MILCON program to Air Force corporate Structure • MILCON projects compete against other Air Force requirements • Air Force presents program to Office of the Secretary of Defense • OSD presents program to Congress • A7C briefs Congressional members on the program
Congress	• Congress debates • Congress passes the defense law with MILCON projects included

The Air Force's program then goes through Office of the Secretary of Defense review before being forwarded to Congress as part of the Department of Defense budget and the President's Budget Request. As Congress debates the overall budget request, they look closely at the MILCON projects and can keep or remove projects, or insert additional ones before forwarding their recommendations to the president for approval. Once approved, each MILCON project is listed as an individual line item as law.

Survival of the "Fittest"

How does a MILCON project survive the process? Your MILCON projects, your ideas for construction requirements, are seen at all levels. Working groups formed from the AFCS, as well as the entire group, board, and council

have the opportunity to view both current and new mission MILCON projects, debate their necessity, and decide if they stay in the program. Your projects receive visibility and scrutiny again after Congress receives the program from OSD and AF/A7C sets up a series of briefings on the projects to congressional staff members, who arrive with well-informed questions. In today's limited fiscal environment many projects don't pass all this scrutiny. Only the hardest hitting, most urgent, most convincing projects survive.

In years past, MILCON projects received little visibility outside of A7C before the program was submitted to OSD and Congress. The AFCS set a maximum funding level for MILCON and let A7C fill it with projects. If funding levels were reduced during budget deliberations, AF/A7C would then work with the MAJCOMs to determine which projects to use. This process has changed: AF/A7C and the Installation Support Panel now put a "mission face" on the MILCON program by briefing your projects to the AFCS from the beginning.

During the buildup to the AFCS FY10 programming meetings last spring, AF/A7C's Programs Division worked closely with the MAJCOMs to nail down their requirements, improve advocacy, and make projects more defendable. This was the first year of putting a "mission face" on the program, and more specifically, requiring each project to stand on its own merit. Coupled with the compressed timeline, it was a bit of a scramble for the MAJCOMs to come up with data necessary for a solid defense.

With a well-defended MILCON program, the Installation Support Panel is better able to advocate for the projects during AFCS debates on overall requirements. The substance for each project comes from you. The MILCON programming document, DD Form 1391, has a section for stating the impact of not funding the project. The information in this section needs to be substantial enough to defend the project through AFCS and Congressional visibility. (See the list at right for some suggestions.) In addition, your MAJCOM prepares advocacy "sight picture" slides to help AF/A7C communicate the necessity and hard-hitting impacts behind your project requirement. These slides and commander prioritization have proven critical to holding the line on current mission MILCON in the corporate structure.

Because of the success in the FY10 program (as this article was written, the Air Force's current mission MILCON program increased 105 percent over FY09), we expect to use a similar process in the future. Installations and MAJCOMs can help the Air Staff by instituting screening and advocacy at their levels and incorporating a solid defense and sight picture with the project as early as possible. Our MILCON theme will continue to be "Tell the Story and Sell the Story."

How will *not* funding the project impact the mission?

Factors to consider when completing DD Form 1391

- Health, safety, fire, Americans with Disabilities Act, and other code issues
- AT/FP, Quantity/Distance Arc, and other violations
- Inspection write-ups (including significance)
- Number of direct scheduled work orders
- Dollars invested in maintenance and upkeep
- Demolition offsets (a focus area for A7C)
- Impact to the mission (quantifying this is critical)
- Impact to the customer
- Impact to Airmen
- "Extra" man-hours necessitated by an inadequate facility (or potential man-hours to be saved)
- Potential energy savings
- Economic analysis of benefits to renovation or new construction
- Potential mission improvement
- How project fulfills Air Force priorities
- Any testimony or other written language supporting the requirement
- Effective/descriptive project titles (sometimes the only thing the AFCS sees)
- Advocates outside of Civil Engineering (i.e., who's interested)
- Pictures for impact or clarity for non-engineers (Note: Conceptual drawings, line drawings, and site maps often don't help sell the story; sometimes the space is better used for other hard-hitting information.)

Lt Col Nelson is the Chief, MILCON Requirements Branch, The Office of the Air Force Civil Engineer, the Pentagon, Washington, D.C.

Range Rehab

Mr. Mohammad Iqbal, P.E., and
Mr. Steve LaFreniere, HQ USAF/A7CAN

Using an innovative, streamlined approach allows the Air Force to return former ranges to mission use more efficiently.

Established in 2001, the Air Force's Military Munitions Response Program (MMRP) uses innovative approaches and technologies to investigate former ranges for potential risks from munitions and then facilitate any necessary restoration activities. The MMRP addresses hazards posed by unexploded ordnance, discarded military munitions, and munitions constituents at 81 installations and 507 individual sites within CONUS. Typical sites within the 500,000 acres of potentially impacted land include former bombing and EOD ranges; open burn and open detonation areas; and small arms ranges.

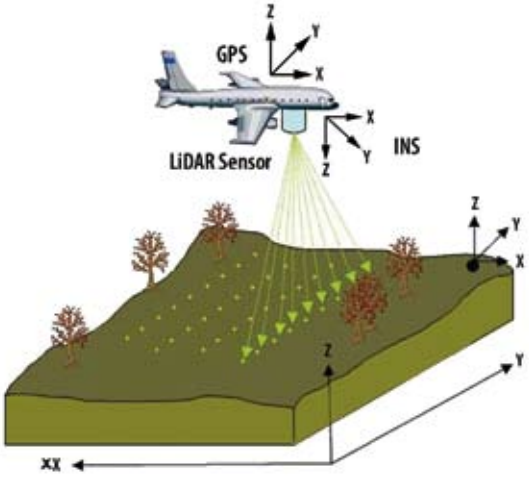
The Natural Infrastructure Branch of the Asset Management Division at the Office of the Air Force Civil Engineer centrally manages the MMRP with active involvement of the MAJCOMs and service centers, including AFCEE and the U.S. Army Corps of Engineers.

The first step in returning former ranges to mission use involves identifying and investigating areas where unexploded ordnance (UXO) and discarded military munitions (DMM) may be present. Potential sites are traditionally investigated using ground-based geophysical systems —vehicle-mounted or hand-held magnetometers — to identify anomalies that might point to the presence of buried munitions. Although ground-based systems provide detailed site data, their use often has high associated costs (approximately $2,000 per acre) because of low production rates (2–10 acres per day) and the unnecessary expense of collecting detailed data within the large UXO-free buffer zones surrounding the smaller impacted target areas.

Given the large acreage being addressed under the MMRP, it was essential to design a streamlined data collection methodology and focus the Air Force investigations on the areas most likely to contain UXO and DMM. The Air Force developed a tiered, integrated investigation model that combines historical records reviews and ground-based systems with innovative airborne technologies.

Under this model, areas are first assessed using historical records and aerial photographs to identify sites where munitions may have been used in the past. Suspect sites are then investigated using wide area assessments (WAAs) to pinpoint areas likely to contain former munitions by identifying features such as bomb craters. WAAs, which can be used in evaluating approximately 10,000 acres per day at a cost of only $8 per acre, are a useful tool for reducing the amount of area that has to be further investigated, and in confirming absence of UXO within buffer zones. With some further processing, data collected through WAAs can also be used to provide information for other installation functions, including three-dimensional mapping of installation infrastructure, mapping of potential aviation easements or airport obstruction surveys, and identification of forest canopy height.

The WAAs, conducted using fixed-wing aircraft flying at an altitude of approximately 1,000 meters, help identify microtopographic features representative of military munitions activities (e.g., berms, craters, etc.). The bottom of the aircraft is fitted with sensors, such as the Light Detection and Ranging (LiDAR) sensor, which measures the time it takes a laser pulse to reflect from the ground surface. LiDAR sensors can detect craters measuring less than one meter in diameter, even in densely forested areas. The aircraft are also fitted with high-resolution digital cameras that help identify manmade structures such as access range roads, berms, and remnants of former bombing targets.



An aircraft fitted with the LiDAR sensor measures the time it takes a laser pulse to reflect from the ground surface to detect craters measuring less than 1 meter in diameter. (figure courtesy of Sky Research, Inc.)

The red arrows point to craters. The overlay on the right side shows how LiDAR imaging "sees" craters that the eye can't. (U.S. Air Force photo)

Areas identified by WAAs as most likely to contain UXO are further characterized using helicopter magnetometry (HeliMag). A helicopter mounted with specially designed magnetometers flies at an altitude of less than 5 meters over areas that are relatively flat and free of tall vegetation. HeliMag systems can evaluate approximately 500 acres per day for approximately $90 per acre. Geophysics data collected from HeliMag systems is used to develop anomaly maps that are later used to determine potential locations of subsurface munitions. Any areas that cannot be investigated using HeliMag due to terrain restrictions are evaluated using traditional ground-based systems.

As the Air Force moves beyond the investigation phase into actually restoring former ranges, it continues to evaluate innovative technologies. At New Boston AFS, for example, the Air Force MMRP teamed up with researchers from the Air Force Research Laboratory to test a robotic system for retrieving underwater munitions from a lake. The Magnetic Unexploded-Ordnance Recovery System, or MURS, consisting of a remotely operated excavator with a 25-foot reach fitted with a 57-inch magnet, was used to remove underwater munitions from approximately 690 feet of shoreline to a distance of 15 feet from shore. At Hill AFB, Utah, the Air Force is investigating recovery and recycling of inert cast-iron practice bombs into granular iron that can then be used in underground trenches to intercept and clean contaminated groundwater, alleviating the need to purchase expensive granular iron from external sources.

Using this tiered approach has provided significant cost and schedule savings. Since 2005, the Air Force has qualified nearly 170,000 acres as areas needing "no further action" and has collected the data needed on the remaining 330,000 acres to restore and return them to mission use.

Mr. Iqbal, a support contractor, provides program management support for the Air Force MMRP and Mr. LaFreniere is the Air Force MMRP Program Manager, HQ USAF/A7CAN, the Pentagon, Washington, D.C.

Ready, Trained, Fire!

SSgt Tammie Moore, U.S. AFCENT/PA

ANAAC firefighters complete a live fire exercise.

Black smoke billowed through the sky above a dilapidated building at Kabul International Airport. An Afghan man lay injured inside, his life resting in the hands of the Afghan National Army Air Corps (ANAAC) and their ability to respond to the crisis.

The Joint Fire Academy initiated this live-fire response exercise to test the ANAAC's emergency forces' response. While a planned exercise for the fire community, the drill was a no-notice exercise for other Afghan response agencies.

Firefighters, medics and security forces were on scene two minutes after the call for help and quickly went to assessing and taking control of the situation.

"I think an exercise like this validates the importance of training," said Army Col. James Brandon, 438 AEW deputy commander. "The Afghans are very interested in learning; they are motivated. They conduct drills, constantly train, improve the training, conduct after-action reviews, and conduct exercises. They always look to become better and do better than they have done before."

These exercises provide the Airmen who serve as mentors for these various emergency response organizations a tool to monitor progress and address limitations.

"When we first started training out here, we had a fire and there was no communication between the Afghan medics, security forces, and fire groups at all," said MSgt Mike Marascia, 438 AEW fire protection mentor. "We recognized the problem and got it fixed. We worked through our issues, and now we are at the point where they can go through their own exercises."

In the months since a real-world emergency, teams have been working together to hone their reaction skills.

"Every time we can put [emergency responders] through an exercise, they get better at it," said Capt Victor Baranowski, 438 AEW flight nurse mentor. "When they respond to an injury they have never seen before, they learn something new. By going through more exercises, they respond better to what they see."

Members of the Afghan National Air Corps fire protection unit extract a simulated victim during a live-fire exercise that tested the team's skills. (photo by MSgt Keith Brown)

When Capt Baranowski first started training with the ANAAC medical team, emergency responders would arrive on scene in a pick-up truck with only a trauma bag and stretcher. In the last few months, however, they have acquired an ambulance and a stock of medical supplies.

"The response times for the medics has always been pretty good," said the captain, who is deployed from Scott AFB, Ill. "In the beginning, they kind of knew there was going to

Members of the Afghan National Air Corps fire protection unit successfully completed a live fire training exercise. The responding fire fighters are graduates of the Joint Fire Academy, which was established and mentored by MSgt Mike Marascia. (photo by MSgt Keith Brown)

be an exercise, just not what the injury was. Now, they respond as quick not even knowing there is an exercise — it is very fluid."

The live-fire response exercise tested many of the techniques the Afghan emergency responders have learned in the last few months.

"This puts together everything we have done into one ball of wax; it is everything we worked for," said MSgt Marascia, who is deployed from Langley AFB, Va. "Live-fire training is as real as you get without actually having an emergency. What we did today preps them for that real fire. These guys are ready, and this proves their skills."

The mindset of exercising to continuously hone their skills was a process that the Afghan first responders were not familiar with before they started working with their Airmen counterparts.

"When we finished with the tech school, they thought they were done with training," MSgt Marascia said. "I was like 'no, it is called proficiency training, we do it on a regular basis.' Now they are in that mindset."

This change in the fire protection force's mindset is what MSgt Marascia credits for the progress his team has made during his time here.

"You guys did really well at your job. I am proud of you," he told fire protection force members. "You have come so far from where you originally started. I did not have to say one word. I stood back and was able to watch it. You guys have come a long way; I am very happy with you."

The Airmen mentors were not the only ones proud of how the emergency teams responded to the exercise drill.

"In two minutes, we got here and responded," said Maj. Razuddin, ANAAC fire chief. "They got here, put out the fire [and treated a] victim. Everything was good. Today, I realized that we are capable; we are able to put out different kind of fires [from] military bases [to] civilian places. This is our responsibility. I am sure that we stood on our feet because of [Sergeant Marascia]."

Likewise, Col. Brandon is pleased with the growth he has seen the mentors cultivate in the ANAAC response capabilities.

"Our Airmen are professionals and very good at what they do," said Col. Brandon, who is deployed from Fort McNair, Washington, D.C. "I think the combination is there between having good mentorship and providing that level of motivation to our Afghan counterparts."

Postcards from IRAQ

The U.S. Army Corps of Engineer's Gulf Region Division (GRD), headquartered in Baghdad, oversees U.S. reconstruction efforts in Iraq. As of Feb. 1, 2009, GRD has completed 4,447 projects, with a program cost of $7.1B, and has 378 projects ongoing. GRD's joint teams — composed of Soldiers, Sailors, Airmen, civilians, and contractors — provide engineer expertise and manage contract construction, working to develop partnerships with government of Iraq ministries. More than 400 Iraqis work directly for GRD as contractors, nearly 75% of contracts are awarded to small, Iraqi-owned businesses, and on average, GRD projects employ 25,000-30,000 Iraqis.

GRD tells the individual stories of some team members through an online series call "Postcards from Iraq" (http://www.grd.usace.army.mil/news/postcards/index.asp). Below are excerpts from three postcards written by Air Force civil engineers working with GRD.

Col Michael Coughlan, HQ USAF/A7CX, Pentagon, Washington, D.C.

"My tour in Iraq started with high expectations as I complete my 29th year in the Air Force Reserves. All my fellow active Air Force counterparts who came to support the U.S. Army Corps of Engineers mission in Iraq tell me it was the best job in their careers....it was more than the best job. It was the best experience... My experiences included meeting the people of Iraq, understanding their culture, and having a small part in the advancement of freedom."

Maj Daniel Guinan, HQ USAF/A7CPP, Pentagon, Washington, D.C.

"As my time in Iraq comes to a close, people ask me what I look forward to when I get back in the states....What people fail to ask is, 'What will you miss about Iraq?' ....the answer is simple — the people....Our Iraqi associates are the bravest people I have ever worked with....What they are doing goes beyond traditional 'bricks and mortar' construction; they also create training programs and develop initiatives for woman-owned businesses. Their efforts have built hope and optimism in me for a strong Iraq."

Capt Jennifer Alecci, 611 ASG/CEPD, Elmendorf AFB, Alaska

"Last November I deployed to Iraq and was tasked to be the U.S. Army Corps of Engineers Officer in charge of the Iraqi National Depot Resident Office, north of Baghdad. Very quickly from my office in Taji, I was overseeing 48 projects worth more than $122 million....This was my first experience with construction, but also my first experience to lend a helping hand through a humanitarian project supporting the Taji Girls' School....It is something I'll never forget."

RED HORSE Airmen Close Chapter with Iraqis

SMSgt Trish Freeland, AFCENT/PA

Through a program called Village of Hope, Airmen of the 557th Expeditionary RED HORSE Squadron taught basic construction, plumbing, and electrical skills to Iraqi citizens in Hawr Rajab, Iraq. Over a 10-month period, their efforts yielded 210 graduates from the course, as well as four remodeled houses, a school for boys, and a community center. They graduated the last class in September, and in December they witnessed the ribbon-cutting ceremony for the community center.

"This was a great opportunity to interact with the Iraqi people in a positive way while providing valuable training they can use in the future," said Col Wilfred Cassidy, the 557 ERHS commander.

The Village of Hope program was created by Multinational Corps-Iraq and reached out to former members of the Sons of Iraq — Iraqi fighters who agreed to lay down their weapons and join forces with the U.S. to defeat their common enemy, Al Qaeda in Iraq. The goal of the program was not only to teach construction, but also to help citizens rebuild their community while giving them additional skills for potential future employment.

MSgt Kyle Wiggins, the NCO in charge of engineering support, ensured the project was done correctly and on time. "I had to make certain every action was within the terms of the Village of Hope contract to protect the interests of the government and those of the contractors," he said.

MSgt Wiggins and SSgt Christopher Davis, the contracting officer representative for the Village of Hope program, kept the projects on track by conducting weekly inspections to ensure that contractors completed scheduled work on time and according to standards. They also oversaw monthly paydays for the student workers.

Although he was the junior member of the team, SSgt Davis expertly managed the project and actively engaged Iraqi sheiks and other key leaders while the project was underway.

"SSgt Davis played an important role in maintaining a harmonious relationship with the contractor, property owners, and community representatives," MSgt Wiggins said. "He also attended to personnel issues for our civilian counterparts."

"I got to work side by side and teach local men who are building a new, better Iraq for themselves," said SSgt Davis, a native of Hamilton, Mo. "This will forever be a high point in my career."

MSgt Wiggins and SSgt Davis deployed from the 820 RHS, Nellis AFB, Nev.

Ed. note: This is a follow-on story to "The Journey of a Thousand Miles Begins with One Step," by Capt Josh Aldred, which appeared in AFCE *16/3.*

SSgt Christopher Davis, 820 RHS, a contracting officer representative for the Village of Hope program, talks with site supervisors about the progress being made to the community center under construction in Hawr Rajab, Iraq. (photo by SSgt Paul Villanueva II)

Steady Winds Blow in Fuel Savings

Mr. Tommie Baker, 611 CES/CEAR

Tin City LRRS is located at Cape Prince of Wales, the westernmost point of the North American mainland, on the tip of the Seward Peninsula in the Bering Sea, approximately 700 miles northwest of Anchorage and 600 miles west of Fairbanks.

Saddled with the high price of diesel fuel, a remote location, and bone-chilling winter temperatures, Tin City Long Range Radar Station (LRRS) in Alaska has extraordinarily high operating costs. To reduce these costs, engineers with the 611 CES installed a wind turbine generator at Tin City, the first at an Alaskan air base and within Pacific Air Forces.

"This important milestone for the 611th Air Support Group will be the largest renewable Air Force energy project in Alaska and is very timely, given the cost of fuel," said Col Brent Johnson, 611th Air Support Group commander, Elmendorf AFB, Alaska. "Wind energy at Tin City should decrease our annual fuel consumption by 30 to 35 percent, about 85,000 gallons."

A $1.9M award through the Energy Conservation Investment Program (ECIP) funded the project. The ECIP is a Department of Defense MILCON initiative for projects that save energy or reduce defense energy costs. Tin City LRRS is currently powered by diesel generators. Once operational, the wind turbine generator will be a wind-diesel hybrid, augmenting the station's power production system.

After extensive wind strength and reliability testing, Tin City was deemed the ideal location for a single tower and turbine to test the real-world application of wind generation at remote radar stations. Energy available for conversion by a wind turbine is measured as wind power density, and the western coast of Alaska is in a class seven wind power density zone, the highest possible category. The average wind speed at Tin City is about 19 miles per hour but, during testing, sustained winds of 83 miles per hour (equivalent to a category 1 hurricane) occurred. "We're not saying it's 83 miles per hour often, but it illustrates the extreme conditions at the site," said Mr. Tony Alecci, 611 CES energy management chief.

An engineering model combining wind density and energy production data estimates potential annual savings of $433,000 in energy costs. The digital control system installed with the turbine allows for more precise control of the existing diesel generators: diesel power production complements wind production and operators can completely shut down diesel generators when the wind strength is sufficient to power the site. Fuel usage at the site is minimized and the resulting reduction in diesel

Far left: The completed wind turbine assembly. Left: MSgt James Fraser, 611 CES quality assurance NCOIC, inspects the turbine nacelle before its installation. (U.S. Air Force photos)

generator run time is estimated to save $10,000 annually in decreased maintenance costs.

With the reduction in fuel consumption, the return on investment should be realized within about four and a half years, according to Lt Col Charles Busch, former commander of the 611 CES, who initially oversaw the Tin City project.

There were a number of challenges in harnessing the available wind at Tin City. Alaskan coastal sites experience tremendous icing, and Tin City is one of the worst. The construction and installation contractor, an Alaskan Native corporation, has extensive experience with cold weather wind generation. Together with the 611 CES engineers, they developed a cutting edge cold weather package to meet the unique needs of such a harsh environment.

The foundation of the package was an electric-based heat system that blows warm air up the tower base and through the tips of the turbine blades to shed the expected icing load. Combined with passive solar blade heating and low-temperature lubrication of the nacelle, this creates the most robust cold weather package available for wind turbines.

Airfield safety, radar interference, and migratory bird strike issues also needed to be addressed. Working with the FAA and using avian studies, potential tower locations were identified that would provide for negligible impacts on any of the three challenges.

The 611 CES is currently pursuing other wind turbine projects in western Alaska — at Cape Lisburne, Cape Romanzof, and Cape Newenham — and engineering work is underway to judge the suitability of wind power generation at Eareckson AS, Shemya Island, Alaska.

"With the installation of the wind turbine at Tin City, we are using proven, commercial, off-the-shelf technology, said Lt Col Busch. "Similar turbine units are in use at Nikolski, Sand Point, and St. Paul Island, Alaska. Wind turbines are not new to the U.S. Air Force, but they are new to Pacific Air Forces and 11th Air Force in Alaska."

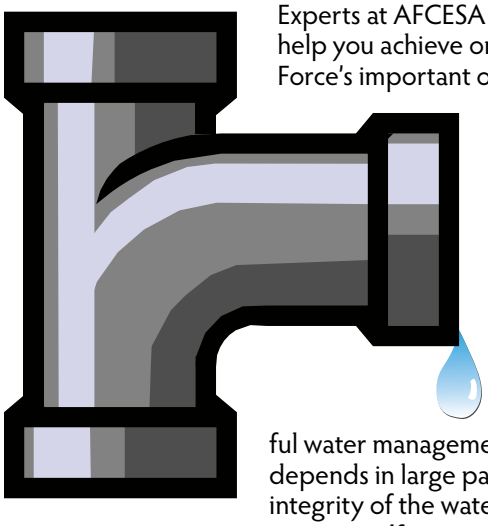
Mr. Baker is the Community Relations Coordinator, 611 CES, Elmendorf AFB, Alaska.

Water Leak Detection and Repair

Mr. Preston Benedyk, HQ AFCESA/CEN

Energy

The U.S. Air Force is a major water user: almost 33 billion gallons in FY08 at a cost of over $74M. We can't afford to waste it.



Experts at AFCESA are ready to help you achieve one of the Air Force's important objectives: reducing water use without degrading military readiness, safety, mission effectiveness, or quality of life. Developing a successful water management program depends in large part on the integrity of the water distribution system itself.

Water distribution systems are often huge sources of water loss. Studies show that water losses can range from 9% to 36% of the total water consumption at many installations. Water loss from leaks can be especially significant at military bases that have old 1940s-era systems. Many of these systems are likely to have more than 10% of their total water production and purchases lost to system leaks caused by corrosion, loose joints, service connections, splits, and cracks along the piping wall.

A Water Program Audit can determine the integrity of the water lines at your installation. Audits can detect inefficient water systems, determine how much water and money is lost through leakage or waste, and identify feasible methods of implementing conservation recommendations.

As part of a comprehensive water audit, a leak detection survey is invaluable in determining sources of unaccounted water consumption. Even small leaks can result in large water losses over time. A one-inch-diameter hole can leak more than 180 gallons per minute at 60 pounds per square inch resulting in an annual loss of about 94,000 Kgal (x1000 gallons), or almost $246,000 at an installation with an incremental water cost of $2.60 per Kgal.

Leaks are detected by listening devices — sonic for metal piping or ultrasonic for PVC piping. Leak detection surveys can locate underground leaks so they can be fixed. An average leak detection survey and repair program can result in a 25 to 50 percent recovery of water being lost due to leaks.

A distribution system audit, leak detection, and repair program can help facilities reduce water losses and make use of limited water resources. Leak detection and repair projects at some federal sites show an average water loss recovery of over 140,000 gallons/day with a payback after repairs of just 18 days.

Water conservation makes good sense for the Air Force. Reduced water consumption leads to reduced energy costs for treating, heating, cooling, and pumping water. Reduced energy use translates into fewer emissions from power plants, an outcome that enhances the Air Force commitment to pollution prevention. By conserving water the Air Force demonstrates to the public its willingness to serve as a responsive community partner in environmental stewardship activities.

For more information on the program, contact the author through AFCESA's Reach-Back Center (1-888-AFCESA1). Additional information concerning water conservation and leak detection can be found at these URLs:

http://www.wbdg.org/ccb/DOD/UFC/ufc_3_440_02n.pdf

http://www.wbdg.org/ccb/AF/AFI/afi_32_1067.pdf

http://www.afcesa.af.mil/shared/media/document/AFD-070613-067.pdf

Mr. Benedyk, a contractor, provides energy engineering support for the Air Force Facility Energy Center, HQ AFCESA, Tyndall AFB, Fla.

"Sustainability"

Not Just Another Buzzword

Gil Dominguez, HQ AFCEE/PA

Mr. Dennis Firman, Director of the Air Force Center for Engineering and the Environment has a dream: whenever people hear the terms "Air Force" and "Sustainability" together, they immediately think "AFCEE."

That may not be too much to ask considering that the center in San Antonio, Texas, is responsible for attaining the Air Force goal that all of its future buildings be designed so that they are capable of achieving a LEED silver rating, an important measure of sustainability.

LEED, or Leadership in Engineering and Environmental Design, is a system developed by the United States Green Building Council to rate buildings on their use of environmentally responsible materials, energy efficiency, and a number of other factors. The ratings are, in ascending order, certified, silver, gold, and platinum.

Although sustainability involves a lot of different facets, it means "essentially that we who are alive today must be sensitive to the needs of generations yet to come," said Mr. Firman. "It means that we use our natural resources wisely so that those who follow us will not be hard pressed to find those resources."

To conserve resources, buildings are constructed using recycled and recyclable materials as much as feasibly possible, and are equipped with highly efficient heating, ventilation, and cooling systems that use less energy.

Sustainability also means healthy buildings "free of potentially dangerous chemicals and materials that in the long term may harm our health and well-being," said Mr. Firman.

On the exterior, a sustainable building sits on a site developed in a way that prevents or controls soil erosion and its soil is free of contaminants. It is landscaped with hardy, drought-resistant native plants and grasses that don't require a lot of watering or fertilizers and pesticides that can pollute waterways.

Top and left: At Offutt AFB, Neb., the Air Force Weather Agency Headquarters was nominated for an Honor Award in the Sustainable Design category of the 2009 Air Force Design Awards. The design makes excellent use of natural lighting throughout the building and achieves a number of LEED goals. (U.S. Air Force photos)

Inside the Air Force Weather Agency Headquarters at Offutt AFB, Neb. (photo by Paul Brokering)

"But new construction is just one piece of the overarching sustainable envelope," said the AFCEE director. "We need to start thinking sustainable installation – fence to fence. Sustainability will now cover the entire range of installation activities, including renovations of existing facilities, conversion of base vehicles to natural gas, storm-water management and all the other facets of base activity that use energy and other resources and increase our carbon footprint."

In October, 2008, AFCEE organized a two-day workshop to "baseline where we are with sustainable investment and set goals for installation-wide sustainable ratings, much like has already been done for new building construction," said Mr. Firman.

The meeting brought together representatives from the Air Force, Army, and Navy, as well as the U.S. Green Building Council, the Environmental Protection Agency, and the Department of Energy.

"While all the services now have their own individual programs, the goal is to come up with a simplified uniform method to evaluate, quantify, and improve the sustainability of military installations throughout DOD," said Mr. Gene Mesick, chief of AFCEE's Built Infrastructure Branch.

Behind the sustainability effort are a series of federal mandates calling for reductions in the use of energy, water, and ground fuel coupled with increases in the use of renewable sources and alternate fuels. A common rating system would be used by all DOD installations as a universal "scorecard" that would make it easier to track and report mandate compliance. Sustainability is reached when federal mandates are met or exceeded, with the scorecard used to track the level of compliance.

The fence-to-fence approach "recognizes both the importance of individual building performance and enterprise-wide activities within an installation in meeting the intent of the mandates," said Mr. Eldon Hix, chief of AFCEE's Technical Support Division.

What makes a base a sustainable community is not just how "green" its buildings are but also everything that takes place within its fences.

"We're taking the sustainability mission seriously at AFCEE," said Mr. Firman. "Not just because it's Air Force policy but because we feel it is our obligation to do the best we can to leave behind an even greater nation to succeeding generations, as well as a safer, cleaner and healthier world for everyone.

"Sustainability to us is not — nor should it be — just another buzzword. It is a major part of who we are and what we want to achieve."

AFIT Course Hones Strategic Thinking for Enlisted Civil Engineers

CMSgt Clarence H. Walsh, AFIT/CEM

We live in a world of constant change. As Air Force Civil Engineering adapts to ongoing changes and the need to balance garrison and expeditionary missions worldwide, we have challenged our civil engineer senior noncommissioned officers to take on more responsibility, to lead shops, elements, and even flights outside of their realm of experience. The MGT 570 Civil Engineer Superintendents Course at AFIT is one of the ways we're helping our CE SNCOs meet these challenges. Since its inaugural class in May 2004, the CE Superintendents Course has graduated 644 students and continues to transform to stay in step with the changing requirements of our CE SNCOs.

"Our senior NCOs were being called upon more and more to step up into flight level responsibilities due to a shortage of officers, and we weren't preparing them very well to take on those tasks," said retired CMSgt Mike Doris, the Civil Engineering Chief of Enlisted Matters from 2000 to 2005 and one of the strategic visionaries for the course. Although CE SNCOs received professional military education, they were missing specific information to help them in their new leadership challenges. This issue was brought to light by heavy deployments that meant a SNCO assumed a deployed flight chief's responsibilities or was the senior enlisted member of a deploying team. Civil Engineering needed a course to assist SNCOs in developing a strategic mindset, to think beyond shop-level requirements.

The atrium area of the Civil Engineer and Services School at the Air Force Institute of Technology. (U.S. Air Force photo)

The initial Education Working Group for MGT 570 convened in 2002 and decided the following topics should be taught: doctrine and mission, organizational structure, supporting agencies, personnel, resources, CE flights, and applied leadership and management techniques. These topics are still taught today by instructors and visiting topical experts, including the Air Force Civil Engineer and numerous MAJCOM, direct reporting unit, and field operating agency representatives from around the Air Force. The working group ensured that the class covered a broad range of AFSCs and experiences with equal representation across the MAJCOMs. Each class consists of 29 Active Duty SNCOs, one WS-12 or higher, three Air National Guard, and three Air Force Reserve SNCOs.

Using the student feedback, MGT 570 continuously evolves to remain relevant. For example, because of increased joint initiatives and deployments, the students wanted to learn more about the other services' engineering units. To address that need, we recently partnered with the Society of American Military Engineers, or SAME, to host a joint discussion panel of senior enlisted engineering representatives. Student and panel member feedback was very positive. The sharing of information was invaluable and it became clear that all services operate in similar ways, with each service bringing a unique competency to the fight. SAME gave all the graduates one free annual membership and has expressed an interest in continuing its support to the class and the students.

One of the course's biggest strengths is its real-world discussion component. "The greatest advantage to the course has to be the networking and sharing of ideas and issues that these senior enlisted leaders must navigate on a daily basis at home and in the AOR," said CMSgt Pat Abbott, the current Chief of Enlisted Matters.

The Civil Engineering community remains on the forefront of transformation and MGT 570 Civil Engineer Superintendents Course remains on track to ensure our CE SNCOs are ready to "lead the way."

CMSgt Walsh is the director of the Civil Engineer Superintendents Course, Civil Engineer and Services School, AFIT, Wright-Patterson AFB, Ohio.

USAFE CE Killed in Pakistan

Left: Maj Rodolfo "Rod" Rodriguez. (U.S. Air Force photo) Right: At Ramstein AB's North Side Chapel, Col Tim Brown, 86th Contingency Response Group commander, renders a salute during a memorial service for Maj Rodriguez. (photo by A1C Kenny Holston)

Maj Rodolfo Rodriguez, a civil engineer deployed from the 86th Airlift Wing at Ramstein AB, Germany, was among the 53 people killed by a truck bomb at the Marriott Hotel in Islamabad, Pakistan, on Sept. 20, 2008. Maj Rodriguez was in Pakistan to help train Pakistani military engineers. This was his third deployment since 2001, supporting Operations Iraqi Freedom and Enduring Freedom.

Survived by his wife, Caryn, his mother, Minerva Rivas, and two younger brothers, he is remembered as a giving person who led by example. He was proud of going from a child who learned English as a second language to earning a commission in the Air Force. "Rod always wanted to make something of himself," said his brother, Edgar Rivas. "He always wanted to make a difference, and yet he was always thinking of everyone else."

Mrs. Rodriguez spoke of her husband's generosity, saying, "He would give to a friend — money, time, his possessions, or just an ear, if they asked. He never acknowledged the contribution he was making."

When Maj Andrew Sheehan reported to Ramstein three years ago, Maj Rodriguez was his sponsor, and the two became friends and colleagues, working on a number of projects together, including airfield improvements, security upgrades, and a gymnasium. "He would handle the design and I'd do construction management," Maj Sheehan said. A wide range of experiences allowed Maj Rodriguez to relate to airmen of any rank. "He wasn't afraid to get his boots dirty."

A private memorial service was held at Ramstein, and then Maj Rodriguez's remains were flown to Peterson AFB, Colo., where he was interred at the Air Force Academy following another memorial service on Oct. 6. Maj Rodriguez was posthumously awarded the Bronze Star, the Purple Heart, the Meritorious Service Medal, and the Air Force Combat Action Medal. His name will be inscribed on the Academy's Memorial Wall along with 170 other graduates who perished in combat or enemy attacks.

This article was compiled from various sources: Bruce Rolfsen in The Air Force Times*; Ken Carter in* The Academy Spirit*; and online at* Air Force News.

General Brings Air Force Message to University of Kentucky ROTC

Mr. Roger Williams, ACC A7/PA

Since becoming the Air Combat Command (ACC) Director of Installations and Mission Support in 2005, Brig Gen Timothy Byers has taken many opportunities to stop by and speak to various groups at his alma mater, the University of Kentucky. Speaking to roughly 200 Air Force ROTC Cadets, parents, and alumni during his most recent visit at the UK AFROTC Parents and Alumni Day, Brig Gen Byers began by commending the parents in the audience.

"You raise America's sons and daughters and instill in them the core values that are the foundation for our Air Force: integrity, excellence, and service before self. We develop them into America's Air Force warriors," said Brig Gen Byers. "We owe you a world of gratitude for letting us borrow them for a period of time and we thank you for the great job you have done because it makes our job easier."

A distinguished graduate of the UK Detachment 290 AFROTC program in 1981, Brig Gen Byers reminisced that he had no idea what was in store for him as a fresh young Air Force lieutenant. "In six years, I would be the Arizona Regional Director of Recruiting and Air Force Junior ROTC Area Manager at Arizona State University, speaking to prospective cadets not much younger than me about the opportunities, responsibilities, and challenges ahead of them in the Air Force. I also didn't know that one day, as Director of Installations and Mission Support for Air Combat Command, I would be responsible for so many Airmen in the fields of civil engineering, security forces, and contracting. Making sure these Airmen are trained and equipped to support commanders in ACC, Iraq, and Afghanistan is a very challenging responsibility."

Brig Gen Byers currently leads ACC's base and expeditionary combat support activities for civil engineering, security forces, and contracting, and oversees the command's Acquisition Management and Integration Center. His responsibilities include management of policy, manpower, and billions of dollars in resources; program execution; and contract acquisition guidance and policy oversight for 15 major bases and numerous smaller installations.

To point out that it all is not without sacrifice, Brig Gen Byers reiterated, "At this very hour, Airmen are in harm's way, accepting the mission and taking the fight to the enemy. These Airmen take the challenge of defending this nation seriously. It is an honor and a privilege and we thank you, America's moms, dads, brothers, and sisters for the brave men and women who serve with us now and in the future Air Force."

"America's Airmen have sacrificed so much in the name of freedom and helped make our nation strong," Brig Gen Byers continued. "From World War One to the Global War on Terror, more than 55,000 brave Airmen have given their lives in the name of freedom. These American men and women were not unlike you and me, from towns large and small from across this great country."

In his introduction, Lt Col Kelvin O'Dell, AFROTC Detachment 290 Commander, acknowledged that Brig Gen Byers "has spoken at other UK AFROTC events and always brings his wealth of Air Force experiences to share with my cadets; something that really sticks in the minds of the young men and women." Lt Col O'Dell said his cadets especially enjoy when this senior Air Force leader comes to speak because he has not forgotten his roots as a young man from Louisville whose military career began at the very same University of Kentucky AFROTC detachment armory building in the early 1980s.

Brig Gen Timothy Byers talks with a University of Kentucky student during a football game. The general was visiting his alma mater to deliver a speech to the AFROTC unit. (U.S. Air Force photo)

Enhanced Use Lease Projects Break Ground in Utah and Nevada

Mr. Armando Perez, AFRPA/PAO

Airman at Hill AFB, Utah, will soon be working in modern office buildings, while their counterparts at Nellis AFB, Nev., will have a renovated fitness facility as the Air Force's latest Enhanced Use Lease projects get underway.

The EUL program, managed by the Air Force Real Property Agency in San Antonio, Texas, gives the Air Force the flexibility to lease some assets to local developer in exchange for fair market value cash or in-kind consideration.

"I am proud of the AFRPA installation and developer teams who leveraged private investments and used the EUL program to create projects worth nearly $180 million to the Air Force," said AFRPA Director Mr. Robert Moore. "These projects are great examples of how the EUL program gives installations tools to unlock the value of their assets for the benefit of the warfighter."

Hill AFB began the process towards revitalizing a large part of the base into a vibrant research park during a groundbreaking ceremony Oct. 10. The park will be known as Falcon Hill National Aerospace Research Park, and was made possible through the collaborative efforts of Hill AFB, Air Force Materiel Command, State of Utah, Sunset Ridge LLP, and AFRPA.

The EUL is giving the base a facelift, including replacing some World War II–era buildings with modern office spaces, installing a new West gate, and upgrading infrastructure and roadways. The initial phase of Falcon Hill includes a hotel and retail and commercial entities.

Nellis AFB broke out the ceremonial shovels Jan. 29 for an EUL with the City of North Las Vegas that will return an estimated $41M in value to the base and its Airmen. The city will renovate the base fitness center in exchange for the use of Nellis land to construct a wastewater treatment plant to supply the base and the desert community with much needed water for irrigation.

The EUL is the product of a year and a half of negotiations between Nellis, the City of North Las Vegas, and AFRPA. The lease saves the city substantial development costs and eliminates the need for additional infrastructure development and the outsourcing of water treatment.

"This construction project will boost economic development in North Las Vegas, while extending our precious water resources," said City Manager Mr. Gregory Rose.

"This project is an example of how the EUL program brings value to the Air Force," said Mr. Dennis Guadarrama, AFRPA Chief of Strategic Asset Management. "Through the collaborative efforts of the Air Force and the City of North Las Vegas, an opportunity was identified that benefited both the base and surrounding community."

For more information on the EUL program, visit the EUL Web page at http://www.safie.hq.af.mil/afrpa/eul/index.asp or contact AFRPA at 210-925-0956 (toll-free at 866-725-7617).

Dignitaries break out the ceremonial shovels, commemorating the "Falcon Hill" EUL project. (U.S. Air Force photo)

Senior Leaders Meet in Texas

Participants at the Senior Leaders Meeting pose for a photo outside the Omni Hotel in San Antonio, Texas, where the gathering was held in December. The conference of the Air Force's senior civil engineering staff was conducted by Maj Gen Del Eulberg (center, in blue jacket), the Air Force Civil Engineer, who is based in Washington. (U.S. Air Force photo)

AFCESA Executive Director Honored

Mr Bryon J. Bednar, Air Force Civil Engineer Support Agency Executive Director, was named winner of the Ronald L. Orr Award. Mr Bednar led AFCESA's efforts in a major reorganization of the agency that established the Air Force Facility Energy Center to oversee the Air Force's efforts to reduce energy consumption and promote the use of renewable energy. Mr Bednar transformed AFCESA into a more effective and efficient organization while improving support to base-level engineers around the world.

The award honors Ronald L. Orr, the former Principal Deputy Assistant Secretary of the Air Force for Installations, Environment and Logistics, for his outstanding service and dedication to the Air Force and nation. Established in 2005, the award recognizes the Air Force staff civilian assigned to a FOA, MAJCOM, HAF or SAF/IE installations or logistics activity. The individual must have spearheaded notable accomplishments to improve business processes or organizational efficiency of military activities.

2008 Air Force Civil Engineer

In association with Society of American Military Engineers, the National Society of Professional Engineers, and the Northeast Chapter of the American Association of Airport Executives, the Air Force recently announced their 2008 Air Force civil engineer award winners. The winners (highlighted here in bold) were honored at a ceremony in Washington, D.C., in February. Runners-up are listed where applicable.

Outstanding Civil Engineer Unit Award and the Society of American Military Engineers Major General Robert H. Curtin Award

Large Unit

18 CEG, Kadena AB, Japan
30 CES, Vandenberg AFB, Calif.

Small Unit

100 CES, RAF Mildenhal, UK
554 RHS, Andersen AFB, Guam

Air Reserve Component

108 CES, McGuire AFB, N.J.
911 CES, Pittsburgh IAP, Pa.

Brigadier General Michael A. McAuliffe Award (Housing Flight)

52 CES, Spangdahlem AB, Germany
341 CES, Malmstrom AFB, Mont.

Major General Robert C. Thompson Award (Resources Flight)

35 CES, Misawa AB, Japan
96 CEG, Eglin AFB, Fla.

Brigadier General Archie S. Mayes Award (Engineering Flight)

332 ECES, Balad AB, Iraq
27 SOCES, Cannon AFB, N.M.

Major General Clifton D. Wright Award (Operations Flight)

18 CES, Kadena AB, Japan
4 CES, Seymour Johnson AFB, N.C.

Chief Master Sergeant Ralph E. Sanborn Award (Fire Protection Flight)

51 CES, Osan AB, Republic of Korea
96 CES, Eglin AFB, Fla.

Senior Master Sergeant Gerald J. Stryzak Award (Explosive Ordnance Disposal Flight)

436 CES, Dover AFB, Del.
775 CES, Hill AFB, Utah

Colonel Frederick J. Riemer Award (Readiness Flight)

Active Duty

775 CES, Hill AFB, Utah
35 CES, Misawa AB, Japan

Air Reserve Component

174 FW/CE, Syracuse, N.Y.

Environmental Flight Award

319 CES/CEV, Grand Forks AFB, N.D.
30 CES/CEV, Vandenberg AFB, Calif.

Major General Joseph A. Ahearn Enlisted Leadership Award

CMSgt Terry W. Masters, 48 CES/CEM, RAF Lakenheath, UK
CMSgt Richard A. Forbrich, 2 CES/CEM, Barksdale AFB, La.

Major General William D. Gilbert Award

Officer

Maj David D. Vanderburg, HQ USAFE/A7PPR, Ramstein AB, Germany
Capt Lisa M. Mabbutt, HQ ACC/A7X, Langley AFB, Va.

Enlisted

MSgt David A. Clifford, HQ AFCESA/CEXF, Tyndall AFB, Fla.
SMSgt Craig L. Mason, Jr., HQ PACAF/CE, Hickam AFB, Hawaii

Civilian

Mr. Wayland H. Patterson, HQ AFCESA/CEKA, Tyndall AFB, Fla.
Mr. Carl M. Drechsel, HQ ACC/A7OI, Langley AFB, Va.

Awards

Harry P. Rietman Award (Senior Civilian Manager)

Mr. Kenny M. Cable, 27 SOCES/CEO, Cannon AFB, N.M.
Ms. Elizabeth A. Tevault, HQ USAFE/A7PP, Ramstein AB, Germany

Major General L. Dean Fox Award (Senior Military Manager)

Maj Kevin R. Mantovani, 818 GMRS, McGuire AFB, N.J.
Lt Col Michael E. Saunders, 379 ECES/CC, Al Udeid AB, Qatar

Major General Eugene A. Lupia Award

Military Manager

Capt Robert E. Berish, 96 CES/CED, Eglin AFB, Fla.
Capt Matthew P. Hileman, 56 CES/CED, Luke AFB, Ariz.

Military Technician

SSGT Phillip A. Myers, 48 CES/CED, RAF Lakenheath, UK
TSGT Benjamin P. Horton, 775 CES, Hill AFB, Utah

Airman

SrA James C. Green, 7 CES/CEO, Dyess AFB, Texas
SrA Adam B. Strasbaugh, 835 CES/CED, Ramstein AB, Germany

Chief Master Sergeant Larry R. Daniels Award (Military Superintendent)

SMSgt Chad D. Brandau, 92 CES, Fairchild AFB, Wash.
MSgt Amanda R. Alexander, 314 CES/CED, Little Rock AFB, Ark.

Outstanding Civil Engineer Civilian Manager

Mr. Randall Kimura, 18 CES/CEOMH, Kadena AB, Japan
Ms. Julieann T. Dwyer, 99 CES/CEVC, Nellis AFB, Nev.

Outstanding Civil Engineer Civilian Supervisor

Mr. Michael Hartsfield, 4 CES/CEO, Seymour Johnson AFB, N.C.
Mr. K.P. Alonzo Doe, 305 CES/CEX, McGuire AFB, N.J.

Outstanding Civil Engineer Civilian Technician

Mr. Donald L. Anderson, 18 CES/CEOFA, Kadena AB, Japan
Mr. Al R. Ravenel, 437 CES/CEOHV, Charleston AFB, S.C.

Outstanding Civil Engineer Air Reserve Component

Officer Manager

Col James L. Iken, HQ USAF/A7CX, Washington, D.C.
Maj Brian Stahl, 49 CES, Holloman, N.M.

Senior NCO Manager

MSgt David E. Freeland, 118 CES/CEF, Nashville IAP, Tenn.
SMSgt Larry V. Keesee, 314 CES/CEOO, Little Rock AFB, Ark.

NCO Manager

TSgt Mark P. Johnson, 315 CES/CED, Charleston AFB, S.C.
SSgt Andrew J. LeBeau, 355 CES/CED, Davis Monthan, Ariz.

Major General Augustus M. Minton Award (Outstanding *Air Force Civil Engineer* Magazine Article)

Capt Josh R. Aldred, 819 RHS, Malmstrom AFB, Mont.
Maj Patrick Suermann, University of Florida, Gainesville, Fla.
Dr. Raymond Issa, M.E., University of Florida, Gainesville, Fla.

Outstanding Community Planner

Mr. Timothy M. Stone, 375 CES/CECP, Scott AFB, Ill.
Mr. Darren T. Horstmeier, 90 CES, F.E. Warren AFB, Wyo.

Society of American Military Engineers' Major General James B. Newman Medal

Col Terry Watkins, 819 RHS/CC, Malmstrom AFB, Mont.
Col Dennis D. Yates, 96 CEG/CC, Eglin AFB, Fla.

Society of American Military Engineers' Goddard Medal

Active Duty

MSgt Jeffrey J. Dunn, 5 CES/CEOE, Minot AFB, N.D.
SMSgt Garry E. Berry II, HQ AFCESA/CEXX, Tyndall AFB, Fla.

Air Reserve Component

SMSgt Mark S. Stolar, 916 CES/CEMB, Seymour Johnson AFB, N.C.
MSgt Franklin J. Soriano, 624 CES, Hickam AFB, Hawaii

National Society of Professional Engineers' Federal Engineer of the Year

Military

Maj Patrick Suermann, Univirsity of Florida, Gainesville, Fla.

Civilian

Ms. Nancy J. Oliver, HQ USAF/A7C, Washington, D.C.

Balchen/Post Award (awarded by the Northeast Chapter of the American Association of Airport Executives for snow and ice removal)

92 CES, Fairchild AFB, Wash.
35 CES, Misawa AB, Japan

Air Force Energy Conservation Award

Individual

Mr. John E. Kain, HQ AETC/A7COE, Randolph AFB, Texas
Ms. Michelle R. Price, 99 CES/CEOEF, Nellis AFB, Nev.

Group

718 CES, Kadena AB, Japan
2 CES/CEA, Barksdale AFB, La.

Bulldog Award

Col Faith Fadok, HQ USAF/A7C, Washington, D.C.
Col Steven W. Zander, HQ AFRC/DA7, Robins AFB, Ga.

Smooth operator.

A1C Joshua Toth, a heavy equipment operator with the 455th Expeditionary Civil Engineer Squadron, smoothes wet concrete at Bagram Airfield, Afghanistan. (photo by SSgt Samuel Morse)