

# Officer Professional Development in a BGE World

By Lieutenant Colonel Scott C. Johnson

Over the last three to four years, our Engineer Regiment's force structure reemerged in the form of the Future Engineer Force. This engineer force included a much larger ratio of combat capability to construction or technical capability than it did in the recent past. These units need leaders and Soldiers with more technical engineering skills and abilities, and the need for these skills and abilities goes beyond the more technically oriented units.

With the February 2008 revision of Field Manual (FM) 3.0, *Operations*—and through personal experience, officially published lessons learned, and feedback from peers and superiors—there is a consensus that United States Army engineers at every level, from brigade combat team (BCT) platoon leaders to staff officers, need to improve their general engineering technical skills to better support full spectrum operations. In a nutshell, this is the central theme of the *Building Great Engineers* (BGE) Campaign Plan.

## How We Got Here

Whether they admit it or not, over the years many of our fellow engineer officers have had a maneuver fetish, real or impressed upon them by the maneuver-centric environment in which they found themselves. The focus on maneuver shaped the Engineer Regiment's doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) decisions and focus over the 15 to 20 years before 11 September 2001. The maneuver mentality was in direct response to the Army's focus on training for direct combat versus a more holistic approach to warfare that emerged with the version of FM 3.0 published in June 2001.

The direct combat focus enabled and enhanced the Army's ability to synchronize combat operations, which in turn facilitated successful (albeit limited) operations that culminated in the initial operational success in Iraq. Operation Desert Storm fits into this context due to the limited time frame and objectives of that action. Force-on-force operations during rotations at the United States Army combat training centers were the culminating point of combined arms training for BCTs.

Similarly, direct engagement-focused computer simulation exercises at the division and corps levels almost never transitioned beyond the *fight* and barely touched on the next phase. In reality, the brigade, division, and corps exercises rarely incorporated the detailed planning and execution requirements of large-unit deployments and sustainment, or the enormous tasks associated with building the infrastructure that supports our forces. These exercises did little to prepare the Army for the realities of repairing a defeated nation—helping to provide

essential services, security, economic recovery, or capacity-building.

To maintain relevance in a direct combat-centric environment, engineers focused on the mission at hand—combined arms offensive and defensive operations. Critical training on general engineer skills and competency requirements were stripped away from all but construction units, and the construction units on active duty were reduced in number and size. The harsh reality was that these types of units just weren't relevant to the majority of the training being conducted by BCTs, divisions, and corps.

The importance of general engineering missions and unique contributions failed to fully register with the decision makers developing the Army's future force structure. Engineer force structure continued to pay bills for a more maneuver-centric Army with the initial transformation to a more modular force.

The Stryker BCT, in the form of the interim BCT in 2000 and the initial modular BCT-centric designs that emerged in 2003 and 2004, did not appear to recognize the unique contributions of the Engineer Regiment. The experiences of Operation Enduring Freedom and Operation Iraqi Freedom validated the need for a more robust engineer force and a renewed requirement for general engineering skills to support the Army.

The latest revision of FM 3.0 validates these requirements and suggests a requirement for additional modifications to the force structure that will enable the Engineer Regiment to support offensive, defensive, and stability operations or civil support operations equally.

## Skills Engineer Leaders Need

While the brief history lesson above is instructive on how the Engineer Regiment was formed, developed, and transformed—and is in the process of transforming again—the Army requires engineer leaders who are able to operate effectively within the engineer force and across the full spectrum of operations. In addition to well-honed tactical skills and acumen, engineers need unique engineer-specific skills to enable the overall success of the operations. The listed tasks and skills are not inclusive, nor are they limited to a single area of full spectrum operations.

### Offensive and Defensive Operations

- Analyze and/or shape terrain to maximize the effects of direct and indirect fires in support of a maneuver force or to protect a designated area.

- Analyze, plan, resource, build, maintain, and/or provide lanes in impediments to movement, to include lines of communication through natural and man-made terrain that enable movement in support of operations across the full spectrum of operations.
- Know and understand maneuver doctrine and how engineers support offensive and defensive missions in urban and restricted terrain.
- Know and understand Army and enemy mobility/countermobility systems and capabilities and how to maximize their employment or counter their strengths.
- Know and understand the integration of fires, construction of survivability positions and the synchronization of effects.
- Know and understand how to enhance mobility by synchronizing effects and/or providing a means to assured mobility in any environment.
- Know, understand, and be able to execute bridge/gap reconnaissance and develop standard and nonstandard gap crossing and solutions.

#### **Stability Operations or Civil Support Operations**

- Design, resource, and build (or have built) force projection structures and life support areas to support our own forces in an austere environment (stability operations or civil support operations).
- Identify, design, resource, and build (or have built) projects that promote economic development and/or restore essential services in a permissive and semipermissive environment.
- Know and understand Army combatant command and Department of Defense standards and planning factors for force protection and life support requirements.
- Know and understand how to develop statements of requirements (SOR), statements of work (SOW), and bills of material (BOM) and how to submit projects for contracting, funding, and resourcing.
- Know and understand the quality assurance (QA)/quality control (QC) process for construction and other engineer-related projects and how to perform as the contracting officer's representative (COR).
- Have a basic knowledge of essential services and how the systems function and interact.

A strong working knowledge of the stability operations and civil support operations skills listed above is a good basis for the emerging mission of capacity-building with civil authorities and local military forces. Engineer officers must know how to effectively use translators and interpreters, have a basic understanding of the local culture, and know how to engage the media.

#### **Developing, Training, and Enhancing Skills**

The tasks and skills listed above provide a framework for developing a personal and professional education program to supplement both a junior officer's college education and the United States Army Engineer School Professional Military Education (PME) program. While the content of the Basic Officer Leader Course (BOLC) III and Captains Career Course (CCC) PME is evolving to meet the demands of the field, the Engineer School has not evolved as an institution to the point where it can produce fully functional engineers capable of executing the wide variety of missions expected of our Engineer Regiment. However, the School continues to adapt. It recently added COR training and just completed its first pilot of Structural Assessment Visual Evaluation (SAVE) training on 12 February 2009.

Now more than ever, a well-thought-out officer professional development (OPD) program and an individual professional development program can significantly enhance the overall professionalism within the Engineer Regiment. Tuition assistance and the ability to coordinate/request training by contractors or through civilian institutions provide a wide range of potential training opportunities on technical topics.

Additional resources and ideas for engineer skills training, although not inclusive, include the following:

#### **Partnering With Installations**

- Installation Department of Public Works (DPW) troop construction programs were a major venue for project development and execution for many of our construction engineers. These projects can provide opportunities to train both horizontal and vertical skills, estimating, and QA/QC procedures.
- Most DPWs own and operate the essential services—such as sewer, water, power transmission, gas, and fiber optics—of the installation. With coordination, these systems can become training venues for engineer leaders, either through OPD or on-the-job training (OJT).
- DPWs execute or have oversight over many projects that fall short of the military construction, Army (MCA) threshold. These project sites make great venues for construction OPDs, site visits, and concepts/construction techniques teaching opportunities.
- If additional time is available, units could create intern-style relationships with DPWs that would provide OJT for officers and noncommissioned officers (NCOs) in fields ranging from environmental engineering to civil engineering and from project management to project development (SOR, SOW, and BOM) in support of the range development process or other requirements.

#### **Partnering With Local Governments and Government Agencies**

- City, town, and county governments provide services to their citizens and provide a great venue for OPDs on basic

services, essential services, emergency services, government processes, and a variety of construction projects.

- The local United States Army Corps of Engineers (USACE) district can provide venues for OPDs and MCA/civilian project site visits and intern-style arrangements.
- The Federal Emergency Management Agency (FEMA), Department of Homeland Security (DHS), United States Department of Housing and Urban Development (HUD), American Red Cross, and other agencies and activities may also provide unique opportunities and perspectives on essential services and other technical engineering issues.

### **Nongovernmental Agencies**

- Habitat for Humanity and other charitable organizations routinely have ongoing construction projects where junior leaders can volunteer and obtain direct construction experience.

### **USACE Proponent-Sponsored Engineer Corps Training (PROSPECT) Program**

- In addition to partnering with USACE, technical training is available through the USACE PROSPECT Program. Course offerings can be found in the “Purple Book” catalog at <http://pdsc.usace.army.mil/>.
- The Internet also provides an abundance of information on how power generation, water purification, water treatment, road design, QA/QC procedures, and basic horizontal and vertical skills can be brought to bear for OPD or even officer physical training events, to include scavenger hunts, junior officer-led OPDs, and question-and-answer sessions during all-hands events.

### **Conclusion**

**T**he technical training resources and opportunities available to units and individuals are vast. Time, of course, is always an issue, but our Soldiers must balance time available, time between deployments, and family time. It’s a challenge, but being able to successfully employ our engineer organizations is also a challenge. Instilling the *Building Great Engineers* ethos for learning our profession is fundamental to our success as engineers.

Leaders throughout the Engineer Regiment must ensure that there is a culture of lifelong learning within our officer and NCO corps that promotes technical as well as tactical proficiency. Fostering a climate that encourages and promotes individual technical and construction-related excellence and discussion is central to developing the adaptive, innovative, and technically competent culture the BGE Campaign Plan envisions.



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