STUTTGART

Phillip Pickett, project engineer, ensures the Panzer Bowling Alley's lanes are safely stored during construction. The $4.2 million project will expand the facility from 12 to 24 lanes and will feature the latest in sound systems, bowling equipment, furniture, a fast food restaurant, and a soft play area for children.

Photos by Brian H. Temple

MANNHEIM

Fritz Kroesen, project engineer (right), gets an update from Michael Keller on the Coleman Barracks flight tower. The joint venture between Peter Gross GmbH & Co. and d&b Bau will deliver a new tower for C. Company of 3-58th Aviation Regiment.

RAMSTEIN

Millions of dollars are pouring into construction at Ramstein Air Base, Germany, and Thomas Kies, project engineer (right), works with Staff Sgt. Larry Mackey, 86th Civil Engineer Squadron, on Phase 1 of the Combat Communications Squadron facility.

Engineering in Europe

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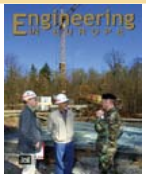


On the Cover

John Adams (left), and Jonas Maciunas, both with the U.S. Army Corps of Engineers, update Lt. Col. Josef Hallatschek, former 6th Area Support Group Director of Public Works on the progress of Stuttgart's new urban combat training site.

URBAN COMBAT

Put the brakes on four-hour drives to Grafenwöhr, Stuttgart troops will soon be able to conduct urban operations within minutes of post.

Story by Brian H. Temple

The U.S. Army Corps of Engineers Europe District is managing Mickan General-Bau-Gessellschaft Amberg mbH & Company's construction of a concrete block MOUT (Military Operations in Urban Terrain) site that will enable Navy SEAL, Army Special Forces and other units to train locally in an urban environment.

Nestled among pine trees near Böblingen, this mock town composed of a half dozen generic masonry buildings will represent just about any urban terrain. The site will become a keen training asset, one designed to last.

"This facility will allow units in USAREUR (United States Army Europe) to train to their mission essential tasks to standard," said Daniel Wemhoff, range and training land program coordinator for the Regional Training Support Center in Mannheim, part of the 7th Army Training Command. "The importance of units being trained in urban combat operations has been re-enforced by current world events." The 7th ATC funded the project he said.

Stuttgart is pivotal because it is expected to be an enduring installation, said former 6th Area Support Group Director of Public Works, Lt. Col. Josef Hallatschek. Not only will local units train here, but USAREUR units, including those from Vicenza, Italy, may use the complex as well, he said.

Having the site here "is just another capability that makes us integral to the training right here in Europe," Hallatschek said. It saves soldiers hours of driving time to get to Grafenwöhr, located near the Czech border, and "is more economical based on the all the [training] requirements, and how often they have to train," he said.

There will be two, two-story buildings, complete with basements. One rooftop is built with a three-foot high concrete safety wall to allow troops to rappel from helicopters and train for rapid personnel extractions, one of many types of training they will conduct on the site, said David Bradley, quality assurance representative with Europe District.

"The Corps of Engineers is the recognized source of expertise for construction of such training facilities throughout the Army."

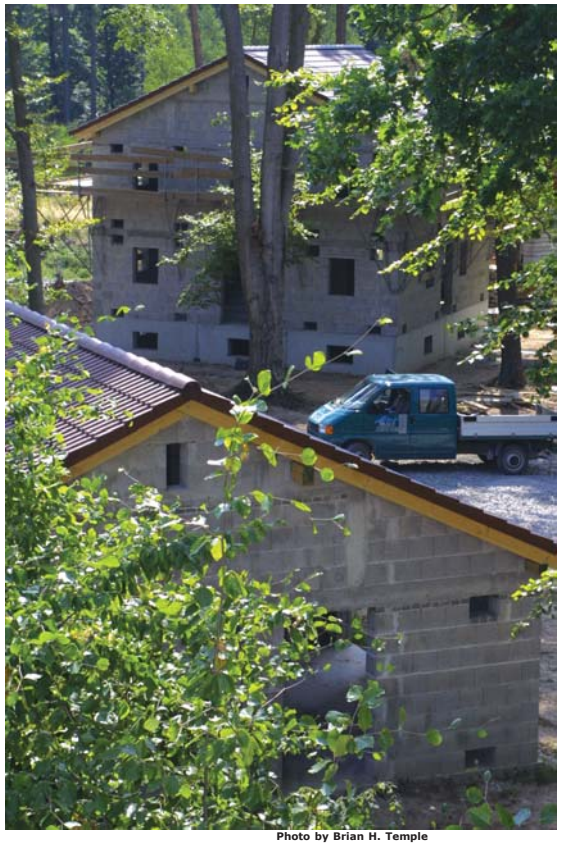


Photo by Brian H. Temple

One multi-room building will shelter troops during classroom instruction and then it will be used for active training. The three remaining single-story buildings have similar layouts with standard A-frame roofs.

Although the site may appear generic, the buildings were designed to meet the needs of specialized training. Plywood facing covers concrete block walls to prevent chipping from training ammunitions, Bradley said. The outer layer will be installed over the initial sheets allowing for a two-inch space to catch plastic pellets and paint ball style ammunition. This will extend the life of the concrete walls and save money because the plywood sheets are replaceable.

Photo by Raymond Barnard

◄ **Two of the five concrete buildings at Stuttgart's new MOUT (Military Operations in Urban Terrain) site. The U.S. Army Corps of Engineers is managing construction of the urban operations training site and is expected to turn it over to the 7th Army Training Command in October.**

Longevity to the buildings is the primary reason for this extra measure, but the troops get the added benefit of safety. The panels will cut down on ricochets.

Steven Roberts, Project Manager with Europe District said the buildings have window openings without actual windows, and the floors are level and smooth which helps cut down on accidents. The customer was pleased with the floors during the latest inspection, as it will reduce tripping hazard, Roberts said.

Additional ventilation openings were added to the original design at the request of the USAREUR Safety Office to reduce accumulation of propellant dust while firing training rounds inside the building, Roberts said. The terrain around the buildings is realistic, but the structures were built with safety in mind to allow for better training, he added.

The customers agree that economics played a big part in why the community decided to go with the Corps.

"We thought about doing it in house, but once we started looking at all the different agencies we felt that the Corps was best staffed to handle it. This way they can work the environmental piece and any of the coordination with the local agencies. We've had a couple of instances dealing with environmental concerns where they were really able to help us out," Hallatschek said.

With the project about 95 percent complete and the final inspection scheduled for October, the customer is expected to get the finished project in November.

"Their expertise in the construction and cost control of projects of this magnitude made them a very logical choice to carry out this project," Wemhoff said. "The Corps of Engineers is the recognized source of expertise for construction of such training facilities throughout the Army. … The expertise, dedication and attitude of the Corps in accomplishing the project … have been really great."

Photo by Brian H. Temple

▲ **The early stages of construction.**

◄ **Navy SEAL, Army Special Forces, and other units will soon be able to conduct urban combat training within minutes of post.**

▼ **This one-story building at Stuttgart's new MOUT site will be used for class instruction as well as combat training. This multi-room structure is typical of buildings throughout the U.S. European Command area of responsibility.**

Photo by Steven Roberts

Photo by Brian H. Temple

Left: (left to right) Douglas Bonham, civil engineer, David Buzard, engineering technician, George Brown, cost engineer, Jon Cole, economist, Joanne Qualey, architect, and David Braidich, mechanical engineer, comprise the talent pool needed to ensure the customer gets what they need during the DD1391 charrette process.

It's In The DESIGN

Payoff is BIG with DD1391 Planning Charrettes

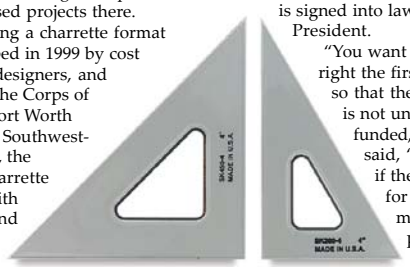
by Grant Sattler

While the adage "an ounce of prevention is worth a pound of cure" may be more succinct, the payoff can be tons greater from applying good planning practices as early as possible in design for military facilities.

A seven-member team from U.S. Army Corps of Engineers Europe District has done just that by applying the new planning charrette concept outlined in Headquarters USACE Engineering Construction Bulletin No. 2003-8 to projects in Europe. The team traveled to Menwith Hill, England, for two weeks in August to plan for three proposed projects there.

Employing a charrette format first developed in 1999 by cost estimators, designers, and planners at the Corps of Engineers' Fort Worth District and Southwestern Division, the planning charrette team met with customers and local engineers to emerge from the conference room with two important products for each proposed project.

One of the outcomes of the initial design charrette is a Department of Defense DD Form 1391, said Jon Cole, an economist and master planner with Europe District's Installation Support Branch. The 'thirteen ninety-one' is a document used by the U.S. Congress to approve military construction and is signed into law by the President.



"You want to do it right the first time, so that the project is not under funded," Cole said, "because if the 1391 is for a $10-million project and you go to design and then discover that for some reason it can't be done for that cost, you have a big problem, and unfortunately, one that is too common throughout the Army."

Jack Shelton, Cost Engineer at Southwestern Division in Dallas, Texas, said a few of the Corps military districts can field teams experienced in 1391 preparation. "It takes a lot of effort by experienced people to adequately prepare a good 1391. The Army installation DPWs usually no longer have all the experience they once had," Shelton said. "The users at the installations need good 1391's that accurately identify the intended project scope and the project cost. Justification – which includes various descriptive paragraphs and an economic analysis of various alternatives – is just as important as scope and cost because it convinces the ACSIM [Assistant Chief of Staff for Installation Management] review boards to place the project in the budget."

But even a carefully completed DD Form 1391 has limitations for designers because it is a more of a tool for programming a project than it is a planning document, Cole said.

"It's nebulous. The biggest punch there is the narrative that justifies the project … there is little design insight," he said. "You have to ask 'What were they thinking three years ago?'" Designers typically have little to go on to validate and design a project that meets the need within the allocated funding, Cole said. "If they have a document that precludes all of that repeat work, it makes their jobs a lot easier."

Therein comes the second product produced by the planning charrette team – a 10 percent design called a Planning Charrette Report. The team, composed of a cost estimator, mechanical engineer, electrical engineer, civil engineer, architect, planner, and a team lead, produces a Planning Charrette Report that can be delivered to designers once the DD Form 1391 it accompanies is approved and funded.

"The 10 percent design includes write ups from all of the engineering disciplines, the cost estimate, the economic analysis, the site plan, and floor plans. All are included so that in two years … there is a 10 percent design that you hand over to the design team," Cole said.

Cole, formerly with Fort Worth District, was involved there in the initial employment of charrette teams to try and solve a chronic problem. Along with Shelton, Cole tried taking teams out to the field in the States and in Europe. "Customers were ecstatic," he said.

Customers in the field were not the only ones impressed. "This has been so successful that [Department of the Army] guidance has been written up, so that as of Fiscal Year '07 all 1391s to be briefed at the Construction Review Committee will have a planning charrette," Cole said. "It is the Corps of Engineers' intent for the districts to do these for consistency, vice Architect & Engineering firms."

Employing various district specialists early in the planning has other benefits as well, he said. It helps ensure a multi-disciplined approach to design and exercises the Corps' core competencies in the engineering disciplines.

Ana Ortega, Fort Worth District's 1391 Team Leader, has recently been engaged in explaining the planning charrette concept at other Corps districts. While the typical cost for the travel and labor of a seven-member team is about $40,000 for a 1391 and a Planning Charrette Report, Ortega said the customer sees a big payoff. "Projects are funded at the appropriate Programmed Amount, experienced designers are involved at the planning stage, there is good communication between all involved proponents, and the products are provided in a timely and cost effective manner," she said.

Not only that, but participants in DD Form 1391 planning charrettes will find that it is rewarding work, Cole said. "It's really cool. Within a few years, you can see initial concepts you helped design being built. That's exciting."

Your Project Delivery Team

Lou Feller, George Brown, Douglas Bonham, Joanne Qualey, Jon Cole, David Buzard, Mike Annand, and David Braidich

U.S. Army Photo

Dry Under PRESSURE

Story by Grant Sattler

Construction of the largest project in the Wye River program has achieved a key milestone with the successful pressure testing of the pilot dry storage building at the Nachshonim Storage Base.

The pilot building recently passed a test procedure performed to American Society for Testing and Materials E 779-99 standards for both pressurization and depressurization, achieving results three times better than the target, said Jody Blackburn, Central Resident Engineer with the Israel Program Office. "In fact, the independent observer [from the Building Services Research and Information Association, England] said it was the tightest building he's ever tested," Blackburn said.

Yair Shani with the Israel Program Office oversaw the testing as he and other Foreign Service National employees picked up the extra work load while Corps engineers were relocated outside Israel during the initial months of Operation Iraqi Freedom.

Construction at the site began in September 2001 and is being accomplished by a U.S./Israeli Joint Venture firm of ABB SUSA, A. Arenson, and Baran Group as a design-build project. Israel Defense Forces, Corps of Engineers, and contractor designers are working closely together. Now almost a third complete, the base is expected to be finished in summer 2005.

Dry storage buildings, or DSBs in construction industry parlance, are a key feature of the $125-million base east of Tel Aviv that is designed for maintenance and long-term, low-humidity storage of Israel Defense Forces equipment and vehicles.

More than half of the 205 structures on the base are dry storage buildings. The 119 DSBs are built of common components, but in 14 different configurations, Blackburn said.

Most of the DSBs are placed at varied elevations on the hills around the base's circular layout, something like a pie sliced into 10 wedges. Roadways, like spokes in a wheel, connect interior and exterior ring roads. Built at the hub of the base are a logistics center for equipment maintenance and administrative space, dining halls, and support facilities for a cadre of about 500.

But it is the DSB that is key to the base's mission.

Built to support an Army reserve armored division, the Nachshonim Storage Base will store the supplies, vehicles, weapons, ammunition, and materiel for artillery, infantry, and armored brigades that would "fall in" on their equipment during a call up, start up their vehicles, and roll out ready to fight.

"The 119 dry storage buildings are the most important element of the base," explained Project Engineer Mike Roach. "Their importance is threefold: first, they protect the equipment from the elements; second, they keep the equipment secure; and third, they keep the equipment ready for service."

◄ Nachshonim Storage Base, located east of Tel Aviv.

Keeping the equipment ready to use over the long term is achieved through humidity control, Roach said. "Rust is the problem, even in a desert," he said. While providing shelter from sun, wind, and rain is commonplace, and providing a secure concrete building with intrusion detection is fairly routine, the true challenge is creating a building envelope that controls the exchange of air, he said.

Chief of Technical Coordination, Israel Program, Ezra Abraham said the basic DSB concept is that of a sealed envelope with military equipment inside that is accessed when needed through a large roll up door sealed around its perimeter. "… The concept is that there are dehumidifying units inside that take the moisture content of that air down to a low relative humidity that is ideal for the long-term storage of equipment," he said. "If you have too much air infiltration or exfiltration, it makes the dehumidifiers run longer than they should and consumes too much electricity."

Determining the rate of air exchange through testing also helps engineers choose the correct capacity dehumidifier for each DSB.

Although the Nachshonim Storage Base is inland from the coastal plain, the difference between desired humidity for long-term storage and the ambient outside air can be significant, Abraham said

"That's why this test was so critical. Because over the life of the facility, 20-30-40 years, the electrical bill could be very high," he said.

Abraham said designers borrowed heavily from cold storage building concepts in developing the DSBs, but that they are not insulated. "This is a very unique application to the dry storage building type," Abraham said.

Several critical areas to the buildings' success are the assembly and joining of wall and roof panels, the connection to the foundation stem walls, and of course, the seals for the personnel and roll up doors.

"Those had to be designed specifically for these buildings types," Abraham said of the segmented doors that are large enough to drive tanks through.

Roach said the concrete floors and walls are coated with special sealants, electrical and plumbing connections to the buildings are sealed, and vehicle exhaust extraction systems have motorized dampers.

Metal wall and roof panels feature a sandwiched polymer sheet that seals around fastening screws. Critical though, is the alignment between panels. Panel joints are sealed with gaskets and special flexible polymer tape at the corners.

"We inspect heavily during construction to see that all alignments are correct," Roach said. "The DSB is designed to control humidity both effectively and efficiently."

Blackburn said Israel Defense Forces, Corps of Engineers, and the contractor are achieving that aim by working closely together. "The IDF is intimately involved in all phases of the Design-Build project," he said. That teamwork includes engineering expertise from Europe District. For example, Louie Brackett reviewed electrical design and specifications and Ragan Glendon worked in concert with IDF designers on mechanical systems. Glendon has continued to be involved in the project, even after his move to Albuquerque District.

"The result is a building that performed in accordance with the accepted criteria," Blackburn said.

Larry Lucken, a mechanical engineer with Europe District, arranged the Quality Assurance testing. Lucken said the standard agreed to is three to four times the air tightness required for an air-conditioned office building. "We did meet and exceed the standard," he said.

U.S. Army Photo

Nigel Potter, an independent observer, verifies the results of the pressure test.

Infantry Marches into INSTALLATION

Story by Grant Sattler

Israeli Ministry of Defense Director General Amos Yaron, U.S. Ambassador to Israel Daniel Kurtzer and Brig. Gen. Merdith "Bo" Temple, commander of the U.S. Army Corps of Engineers North Atlantic Division, cut the ribbon July 15, 2003, for the Southern Infantry Training Base, marking the completion of the first of three installations to be built under the Wye River Memorandum program.

"This first of the bases sets a positive focus for the program," said Kenneth Goldberg, Southern Resident Office, Resident Engineer. "It shows that the Corps with its partners can deliver a quality product. We've done that to great success and to our customer's great satisfaction."

The base construction is one of the concrete steps lined out in the 1998 agreement between Israel and the Palestinian Authority signed at Wye River, Md. Funding for the bases — $42 million for the Southern Infantry Training Base and $266 million altogether — was included in the Fiscal Year 2000 Consolidated Appropriation Act as a Foreign Military Sales case authorized under the Arms Export Control Act.

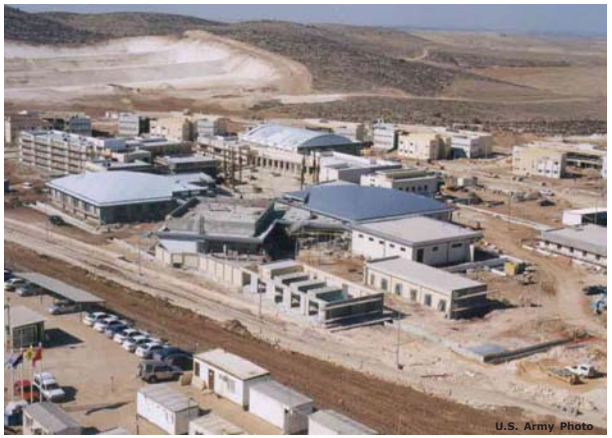
The new bases provide a place for Israeli Army training activities in the West Bank to redeploy to within Israel. The Israel Defense Forces Paratroopers of the 35th Brigade now occupy the new base, just two years after ground was broken.

Construction began mid-May 2001 on the Southern Infantry Training Base situated near Shomryyi, about 20 kilometers north of Beersheva in the Negev desert region. Although delayed by two of the worst winters on record for the region, and the precautionary withdrawal of U.S. personnel during Operation Iraqi Freedom, key facilities and infrastructure were all ready a month and a half ahead of the contract completion date. "The Israelis were able to move in before the contract completion date and begin training because the core facilities and systems were ready," Goldberg said.

Construction was done as a joint venture by Solol-Boneh and Minrav Holdings Ltd. Goldberg said the contractor adapted well to the Corps way of doing business and received high compliments from the Israeli Ministry of Defense. "The MOD, our customer and partner in this project, said the contractor performed honorably and delivered in both quality and performance," Goldberg said.

Under the Wye River program, the U.S. Army Corps of Engineers Europe District Israel Program Office is also managing the construction of a second infantry training base near Hadera for the Golani Brigade and a reserve division storage base east of Tel Aviv. The Northern Infantry Training Base mirrors the southern base in design, but is site modified for a hilltop location adjacent to an existing Israel Defense Forces training camp. All of the installations are of Israeli design.

As the first major military construction project the Corps of Engineers has done in Israel since building Ovda and Ramon Air Bases in 1979-1982, the Corps has benefited from the Southern Infantry Training Base experience. "I think we've learned to improve on our cooperation and coordination with foreign customers and construction contractors," Goldberg said. "We've also shown that the Corps can help establish and maintain partnerships to make sure everyone is working together with a clear goal in mind."



U.S. Army Photo

◄ **Southern Infantry Training Base is the first of three bases constructed under the $266 million Wye River program.**

▼ **New barracks facilities.**

U.S. Army Photo

Courtesy

▲ **Aerial view of base as it nears completion.**

U.S. Army Photo

► **Kenneth Goldberg and Michael Iarosis discuss construction progress of the Southern Infantry Training Base.**

Michael Iarosis, Israel Program Office Resident Program Manager, said the Southern Infantry Training Base is a perfect example of a successful Project Delivery Team engagement and execution. "In addition to the Corps elements, the PDT included the IDF Project Manager, IDF-managed Israeli designers, and the Ministry Of Defense Construction Department providing supplemental Quality Assurance support and in-country administrative assistance with the Israeli Government," he said.

The 10 company quarters areas, company headquarters, staff housing and all the support facilities of the Southern Infantry Training Base are located in one of the isolated military reserve areas used by the Israelis for training.

Goldberg said the Southern Infantry Training Base is a new concept in facilities for the Israelis in terms of design and quality. "Unlike other Israeli bases that have been built piecemeal over time, this base is a first-class facility designed to fit into the overall training concept for fighting companies," he said. The facility houses infantry trainees together for both basic and advanced training to benefit unit cohesion.

"All of the Israeli design and planning team members involved in the project had served in the Israeli Army, many with combat experience," Goldberg said.

"They said they were building the base for their children, based on their experiences in training and combat."

Israel Defense Forces Logistics Branch Construction Center designers considered the psychological aspects of training a cohesive infantry company and the impression the design and layout of the facility will make upon trainees.

While most of the southern base is straightforward vertical construction, all of the infrastructure – potable water, fire suppression systems, electricity, communications, sewer lines, and drainage culverts had to be built before any buildings were begun. The installation's positioning across a narrow hill valley, bisected by a rainy season stream called a wadi, required that a giant culvert be installed beneath the site and 360,000 cubic meters of earth and stone to be drilled, blasted and dug from the hillsides. Three quarters of that material was reused as fill in low places and as berms for 14 weapons firing and maneuver lanes in two ranges that are part of the base. Topsoil from the cuts was saved and stones were crushed into gravel on site for compaction into pads to serve as level foundations for buildings. But the base itself is by no means flat — facilities are positioned at varied elevations.

Although the base's mission is utilitarian, aesthetics were also considered. The MOD/IDF design incorporates regional style with cut stone facades along the main street and rooftops designed to hide unsightly air conditioning units.

Compared to training locations now used, the southern base and its sister base, the Northern Infantry Training Base, have larger rooms, more barracks space, more common use areas, a larger, more efficient dining facility, a gymnasium and running track.

Nevertheless, it is their new locations within Israel that trainees and their families will most appreciate.

For Goldberg, who returns to the Corps of Engineers Philadelphia District and the dredge McFarland, being a part of the Southern Infantry Training Base project was a privilege.

"Working with a dedicated group of people who are extremely supportive of our efforts to assist them during a critical time in their nation's history has been both a pleasure and an honor," Goldberg said.

Lou Brettschneider

From Brooklyn to Berlin

Story and photos by Brian H. Temple

One mechanical engineer wraps up 49 years of service to the Corps of Engineers, the people of Europe, America, and humanity.

Louis "Lou" Brettschneider celebrated completion of his 49-year career with the U.S. Army Corps of Engineers, May 21, near Wiesbaden, Germany.

About 80 of his colleagues from throughout Western Europe and the United States gathered to honor this 80-year-old mechanical engineer. They celebrated his accomplishments, but more than that, they came to pay tribute to the man know as "Mr. EUD" – a title of endearment given by Corps customers and fellow employees alike for his effective work and selflessness.

Pat Biliter, former Europe District deputy district engineer said, "Of all the wonderful and impressive people I've met during my 20 years at the Europe District, none made a greater impression on me than Lou Brettschneider. … He was loyal to a fault to his employees … and no one doubted that EUD (Europe District) was his family."

Brettschneider's career "reads like the chronology of the tumultuous events of the second half of the 20th Century," Biliter said. From his Merchant Marine service during World War II to his more recent involvement in design and construction of infantry bases for the Israel Defense Forces, Brettschneider enjoyed and interacted with people.

He began his European career with the U.S. Army Construction Agency Germany, USACAG (the predecessor to the Engineer Command ENGCOM which was transformed into the Europe Division, and eventually whittled down to what is now Europe District) after working as a mechanical engineer on fast-track airfield construction for the North Atlantic District in Newfoundland.

He arrived in Germany in the mid '50s while Russian troops advanced toward Budapest, Hungary. Over the next five years, Brettschneider supervised construction of new family housing areas to accommodate the growing numbers of U.S. Forces here in Europe. By 1960, there were 540 installations in West Germany meeting the needs of the soldiers and their families.

Col. Lee A. Staab pins a retirement pin on Lou Brettschneider.

As the Cold War's chill enveloped the citizens of Berlin in '61, he was thrust into the rapid renovation of the *Templehof, Gatow* and *Tegel* airports there, preparing the way for a possible second Berlin Airlift. Nikita Krushcehv threatened to sign a separate peace treaty with the German Democratic Republic in January 1962 to turn over full control of Berlin to the communist East Germans if the allied occupation of Germany had not ended. As Krushchev's deadline approached, Brettschneider supervised the installation of aviation guidance systems immune to Soviet jamming. The structures housing these systems were completed by Krushchev's deadline and tensions eventually eased.

> **"The Corps gave me as much as I gave the Corps."**

Brettschneider later witnessed the destruction of the Berlin Wall and said he was grateful for having the opportunity to contribute to the Allies' cause.

"What I can say is that the Corps gave me as much as I gave the Corps. It was a wonderful organization to work for," he said. "Everything that I learned, and everything that I could contribute to the Corps, was really a pleasure to me. … I'm grateful to the Corps of Engineers, the people I've worked with and to the value of the work that we did."

Humility, gratitude, and a sense of accomplishment from a job well done are inherent Brettschneider traits, although he claims he was more humanitarian when he was younger. "When you're young you tend to be more humane, more considerate of your fellow humans. At least that's the way I felt back then. I'm now the

Lou Brettschneider shows longtime friend and Europe District interpreter/translator Jackie (Jakoba) Schempp, the boats he sailed on in the *Aliyah Bet*, the clandestine immigration network delivering Jews into the newly formed Israel.

veteran of many political arguments," he quipped.

Don't let his words fool you. He is armed with a first-class wit and good timing. His attitude is positive and kind. Brettschneider attributes these traits, in part, to his hard work during his upbringing.

His first attempt to earn money was when he was about age 11, walking the streets of Brooklyn peddling shoe repair services door-to-door. He was uncomfortable approaching strangers in the predominately Italian and Jewish neighborhood at first, he said, but he had to earn some cash.

"The local shoemaker … offered me a job. He said, 'Look, you go around and ring bells and knock on doors, and tell 'em you'll pick up the shoes and bring them to me. I'll fix 'em, you'll bring them back, and I'll pay you per pair,'" Brettschneider said. That was a fair way for a "poor Jewish kid" to earn some cash in the early '30s, he said. "But, if we look at the rest of my career, one could say I never wanted to be in business for myself. I've always held a job," he added.

Earning a mechanical engineering degree from City College of New York on a $100-per-year scholarship is what eventually afforded him his engineering career. However, he first served in World War II.

Brettschneider, who suffered from poor eyesight, faced the draft shortly after graduating. His passion was to join the Navy, but he enlisted in the Merchant Marine after failing a Navy eye exam.

After successfully slipping through doctors' exams without anyone noticing his contacts, (he wore an archaic sort of lens that had to be removed with suction cups) one of the last doctors caught a reflection from one. "O.K. son, take them out," Brettschneider recalled the doctor's words. "I had to switch. I went to the Merchant Marine instead. They didn't care whether you could see or not," he chuckled.

He was off to war.

Although he earned rank quickly during his tenure at sea, Brettschneider said he started "as the lowest form of life in the engine room – a wiper. And that's what I did, I wiped." He was responsible for cleaning the oil and the grease from the decks and machinery. "I cleaned underneath the deck plates too, stooped over 'soogeing' (wiping down everything with a mixture of water, soap and alcohol). It was unpleasant, but it was a new experience. I didn't do it every day," he said.

No matter how hard the work, Brettschneider said he felt good contributing to the war's effort. The manual labor did not last long though. It was an electrical mishap that gave him a quick promotion.

During an engine shut down in the middle of the Atlantic Ocean, Brettschneider was there with the knowledge to restore propulsion to the ship. "We had a set up which measured how much ground current there was in the ship's structure, and when it went above the allowable amount, it sounded the alarm and cut off power," he said.

In such situations, the system could be adjusted to take on more ground current and this would allow for further engine operation. Brettschneider made the adjustments to allow for start-up operations to get the ship back to London.

"There wasn't much in the way of electrical engineers at all," he said. "When it came to electrical work I at least understood what was going on. Some of the others had difficulty with three-phase current. I finally worked my way up and became the electrical engineer aboard some of the new turbo electric tankers," he said.

He did not witness combat while he served, but one of every 26 mariners died during the war, Brettschneider said, a higher ratio than any of the armed forces. He said he was pleased to have served in the crew's camaraderie.

"You called everybody by their first name. There wasn't much need for discipline on those ships because you knew damn well you were dependent on all the guys around you. Even the lowliest people working in the galley, they were still respected as seamen," he said.

Photos courtesy of Aliyah Bet and Machal Archives, University of Florida

Lou Brettschneider (circled) along with the crew of the *Geula (Paducah)*. Crew members were volunteers for the *Aliyah Bet*.

(Right) The *Geula (Paducah)* as it passes Gibralter.

Anton Pavlocih Chekhov, Russian author and playwright said, "What a delight it is to respect people," and many who have worked for Brettschneider have been pleased to echo this sentiment.

Col. James M. Barry, one former commander of the District said, "His perseverance, his zest for sharing the greatness of his co-workers and subordinates, his absolute integrity and dignity, his joyful delight in the teamwork of EUD, and his selfless subordination of ego contributed to the well-being of those around him and his beloved organization. … Even now, four years after relinquishing command, Lou Brettschneider's lessons and personal example remain part of me."

Brettschneider's dedication has touched many outside engineering circles as well.

At the conclusion of World War II, many Jewish survivors of the Nazi Holocaust were displaced throughout Europe, and thousands opted to build new lives in Palestine, their homeland.

The British, who had colonial control over Palestine, restricted Jewish immigration to Palestine to 1,500 per month. The *yishuv* (the Jewish community in Palestine) responded by increasing the activities of the clandestine network of immigration known as *Aliyah Bet*.

"The very idea of crossing the Atlantic in a yacht ... and to be involved with the Israelis, both considerations told me, yes - do it."

The availability of ships in Europe, most of which were small, soon proved to be insufficient to transport immigrants to Palestine. In the United States, however, there were affordable ships and volunteers to sail them.

Brettschneider was in New York to continue his

Merchant Marine service. He was in the New York office looking at a wall covered with listings of ships sailing to various part of the world. He considered passage on a tanker down to Buenos Aires, but one would-be passenger, a Jewish man (although Brettschneider did not know that at the time) said, "Oh, we've got something better for you. We're going across the Atlantic in a yacht." Brettschneider said his ears perked up. He gave Brettschneider the address of where to inquire. When he visited the suggested office, the Zionist movement recruited him.

"As a youngster from Brooklyn, I was not much of a yachtsman, but that sounded very attractive. The very idea of crossing the Atlantic on a yacht, number one, and to be involved also with the Israelis – both considerations told me, yes – do it," he said.

He was an engineer on the *Ben Hecht*, a yacht named for a famous Hollywood producer and playwright who helped finance the mission. The boat sailed under the Honduran flag to deceive British naval vessels patrolling the Mediterranean.

In January 1947 at Port du Bouc, France, the crew picked up its cargo - 600 displaced Jews. For weeks the yacht sailed along the coast of France and Italy and toward Palestine. Three British destroyers trailed the Ben Hecht as it approached Palestine, but approximately 10 miles out from a potential docking, British marines forcibly boarded the ship, took control, and towed it into Haifa.

Brettschneider and other crew members could have faced prison sentences had the British discovered they were Americans. Brettschneider, who speaks three languages, used anything but English to avoid capture. With no documents and the appearance of a refugee, Brettschneider, the crew, and the refugees were taken to a British operated relocation camp in Cyprus.

Once released, he joined on a former icebreaker renamed the *Geula* which picked up Jews in Bulgaria and Romania. They were caught in the Mediterranean once again and were back into British custody. Again, crew members had disguised themselves as refugees, and Brettschneider even dressed as a Rabbi. They ended up back in the Cypriot refugee camp.

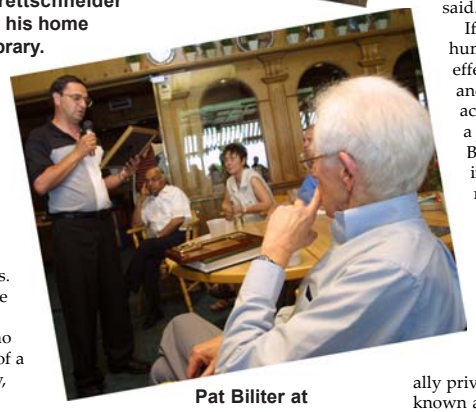
These "cat and mouse" chases throughout the Mediterranean were common for members of the Aliyah Bet fleet, but even when captured, sometimes with an occasional brawl, Brettschneider maintained respect for the British.

"I have the utmost admiration for the British. … We used to feel sorry for them. The average [British] soldier at the camp on guard duty used to come to our dining facility to obtain something to eat from crew members who were getting food from Israel. They had a tough time of it," he said.

Reminiscing about his accomplishments through peace and through war, Brettschneider expressed gratitude for the oportunity to derive satisfaction from his work. As a mechanical engineer, Chief of the Mechanical Section of Technical Engineering, and Chief of Project Management here in Europe, he met the needs of the Corps family and served thousands of customers.

"I could have earned a living elsewhere but it would not have been the same. I would not have the satisfaction of knowing that I've contributed in part to something very important. I wish I could have continued with the Corps," Brettschneider said.

Lou Brettschneider in his home library.



Pat Biliter at Brettschneider's retirement cermony.

If one talks of humility, gratitude, effective mentorship, and a sense of accomplishment for a job well done, Brettschneider indeed comes to mind in Europe District circles.

"Lou is a unique personality. There was never anyone like him in the Corps, and I feel exceptionally privileged to have known and worked with him for so long. His intellect, wit, sense of humor, honesty, kindness and enthusiasm never failed to cheer me up," Biliter said.

** Tanya Williams, a data manager in the Regulatory Division with the New England District, contributed to this report.*

Filling the VOID

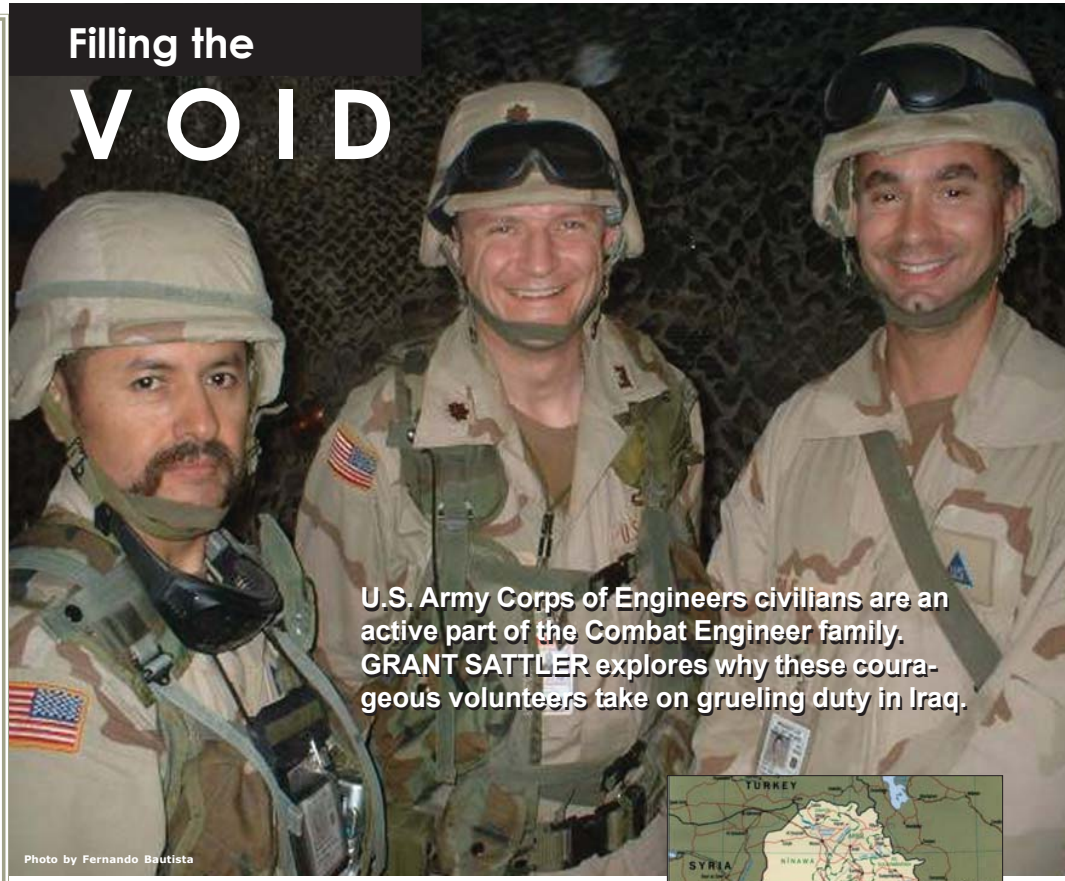


Photo by Fernando Bautista

U.S. Army Corps of Engineers civilians are an active part of the Combat Engineer family. GRANT SATTLER explores why these courageous volunteers take on grueling duty in Iraq.

Europe District's Forward Engineer Support Team – A, attached to V Corps for Operation Iraqi Freedom, battle tested the Field Force Engineering concept and the team members' mettle.

The District's five-member FEST-A deployed to Kuwait at the onset of hostilities, then moved north into Iraq to support soldiers with engineering expertise.

Maj. Kristopher Hurst, an activated Army Reservist serving as an Individual Mobilization Augmentee in the District's operations center, switched out of his role as the Heidelberg Regional Program Manager to the 26th Area Support Group to take on the job of FEST-A leader.

Deploying with him were four Department of the Army Civilian volunteers from Europe District: civil engineers John Hasselman and Stephen Martinez, architect Fernando Bautista, and master planner Jon Cole.

Activated on Feb. 14, Hurst and Maj. Michael Fitzgerald, U.S. Army Corps of Engineers Liaison Officer attached to V Corps, began the process of selecting the team. "We had to solicit volunteers from the District at large and coordinate with their managers, supervisors, and senior District leadership in order to bring the right skill set together for the team," Hurst said.

Courtesy of The University of Texas at Austin

The team's composition in terms of skills was based on customer needs. However, selecting individuals was very difficult

because of personal circumstances, work load situations, and timing, Hurst said. "It was a good team. We had a diverse group of folks … who brought something different to the team." Various perspectives resulted in better engineering solutions, Hurst said.

After just a two-week train up, "… we were standing tall and ready to get on an airplane to Kuwait," he said. The team arrived March 20, just as Operation Iraqi Freedom began.

"The first thing the Air Mobility Command terminal reception person said as we came off the plane was, 'We just had a SCUD 30 minutes ago. There's the bunker, grab your stuff, and start getting out there. Oh, welcome to Kuwait,'" Hurst said. "Coming into theater in that environment was really an eye opener for the team."

The deployment experience also gave some team members a new perspective on their work in Germany as they experienced the tough conditions and the extremes soldiers work in. "What we focus on [in Germany] is the quality of life for soldiers and their families," Martinez said. "When it's their time to punch the card like in Operation Iraqi Freedom, they go off for a long time away from their families, so the quality of their life outside of doing the actual thing they are trained to do is very important."

After arrival, the team transitioned through Kuwait City's Camp Doha, and moved forward to Camp Virginia on the Iraq – Kuwait border, Hurst said. "We were brought into the V Corps Rear Tactical Operations Center and linked up with the Staff Engineer Section." There they started on the planning process for eventual base camps within Iraq and working on missions supporting combat engineers, specifically the 130th Engineer Brigade.

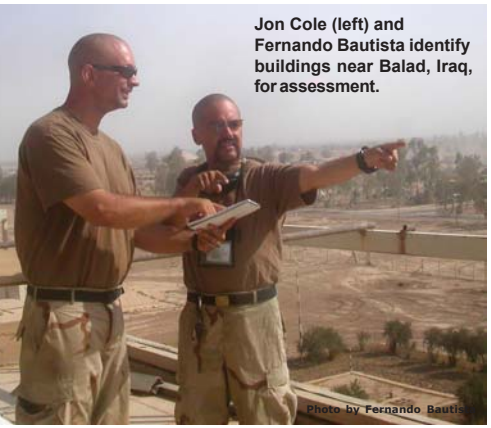
Stephen Martinez ▲

◄ John Hasselman

Team members felt their work was appreciated. Cole said, "A lot of the soldiers were very grateful that we came. They had to be there because they are soldiers, but they knew as civilians we were there because we had volunteered to come."

As the mission developed, Hurst divided the FEST-A into a utilities team, pairing civil engineers Hasselman and Martinez, who both had construction experience with electrical and mechanical systems, and a planning team, pairing architect Bautista and master planner Cole.

"The first thing the ... reception person said as we came off the plane was, 'We just had a SCUD 30 minutes ago. There's the bunker, grab your stuff, and start getting out there. Oh, welcome to Kuwait.'"



Jon Cole (left) and Fernando Bautista identify buildings near Balad, Iraq, for assessment.

Photo by Fernando Bautista

Cole, who works in the District's Installation Support Branch, said the planning team's first mission was to address possible contingency basing on more than a dozen Iraqi airfields.

"Fernando [Bautista] and I worked on 17 lay downs, essentially putting scale polygons on aerial maps and in AutoCadd 2000 representing a stake of land that units would require to satisfy their needs," Cole said. "We [had to] determine if there was enough real estate on the post for about 12,000 personnel, assuming that none of the facilities would be usable." He described the 16-hour days as an exercise in personnel vs. square footage number crunching. "The biggest focus was on Balad Airfield. As it turned out, there were tents set up for soldiers, but there were a lot of facilities available as well."

The utilities team was the first to move into Iraq in mid-April. Fitzgerald led the way on the ground while Hasselman and Martinez moved forward by air to Baghdad International Airport to work with the 94th Engineer Battalion. Fitzgerald, along with members of the 308th Civil Affairs Brigade and the 249th Engineer Battalion (Prime Power), assessed electrical substations and water and sewage treatment plants in the cities of As Samawah, An Najaf, and others as they traveled north to Baghdad. While at Baghdad, Hasselman and Martinez also assessed the water distribution and sewage collection systems at the airport.

"This particular mission focused on infrastructure, particularly water treatment and sewage treatment, and that for me was excellent experience," Martinez said. "We were armed with a very good reference book. … We went in and performed assessments and provided short-term and long-term recommendations and a 35 percent scope of work so that they would have a road map."

Martinez volunteered to deploy because he wanted to get involved and support the Army, and having previously found participation in hurricane relief to be very rewarding from an engineering standpoint, he was also looking to the Field Force Engineering experience. "I gained much more than both of those things," he said.

At the end of April, Fitzgerald and the utilities team linked up and moved to Balad Southeast Airfield and began assessments there. They also supported the 308th Civil Affairs Bridage in assessing Iraqi communities' water treatment and sewage treatment northwest of Baghdad.

Hurst said, "As the war progressed and we moved farther into Iraq, we took on more mitigating-humanitarian-crisis-type missions.

For the utilities team, convoying through Iraq was eye opening. "I felt sorry for the people. Because of the poverty, but mainly because of the hopelessness," Martinez said.

"It's very positive … to know that you were there and you did support the Army and were able to see these things. And the belief that our presence there will improve the quality of life for the people,"

Photo by John Hasselman

▲ Assessment teams check a water treatment plant built in the 50's near Al Dujayl, Iraq. It has the capacity for around 3,000 in a city of almost 30,000. The yellow tanks contain chlorine gas and the team discussed proper storage options.

◄ Maj. Kris Hurst with Iraqi helmet.

▼ An airman with the "Red Horse" engineers discovers a broken drinking water supply near the Baghdad International Airport. The assessment team shut the water down and made the repairs.

Photo by John Hasselman

Martinez said of the humanitarian mission that developed. "But that was not an initial impression during deployment."

The FEST-A's primary mission is to support the warfighter, deploying with skills and equipment to bring engineering expertise to the combat engineer. One of the tools they bring is the TCED Telecommunication Engineering Deployable kit that enables engineers to reach back through data, video, and voice transmission to engineering expertise in theater, and to the U.S. Army Corps of Engineers Europe District and USACE Centers of Expertise in the States. "If any piece of equipment could be labeled as a success, it's the TCED," Hurst said. "It was an invaluable tool."

Fitzgerald deployed with one of the FEST-A's two TCED kits as he moved northward. The second TCED remained at Camp Virginia until that body jumped to Logistical Support Area Anaconda, at Balad Southeast Airfield, in late May.

Once there, the planning team worked with the Facilities Engineering Team 21, essentially an interim Directorate of Public Works, and got to work immediately conducting assessments of 557 facilities on the air base that were damaged by bombing, years of neglect, and vandalism.

"We each took a team of three: a carpenter, electrician, and plumber from the 168th Engineer Group," Cole said. "Fernando took half the post and I took the other and we went through every building. What we walked out of the building with was a bill of materials that would repair all concrete slab roofs and replace broken windows, light fixtures, toilets, sinks, and make any other repairs necessary."

As part of the survey, the planning team generated 'as-built' drawings of buildings including fire stations, emergency operations facility, gymnasium, hangars, and concrete buildings of type E, EE, H, and HH. All drawings were created on laptop computers running AutoCAD software.

The team's contribution was the basis for a prioritized project list completed even as some units with discretionary funds began to hire out repairs to local laborers. While most of the masonry buildings could be repaired, some were condemned due to bomb damage and demolished, Cole said.

"There were times I would sit there and the alarms would be going off, I'd run through the faces of my family and I'd think 'What am I doing here?!'"

For Cole, the work was not particularly demanding, though the hours were grueling. The wartime environment, however, was a real teacher.

"Like most everyone who goes through such an experience, I have a greater appreciation for my family. I also learned a lot about myself," he said.

Although he served in the Navy and experienced boot camp, he found he had to reach down deep.

"I went into it thinking it shouldn't be a problem," he said. "There were times I would sit there and the alarms would be going off, I'd run through the faces of my family and I'd think 'What am I doing here?!'"

But adjusting to the tense situation allowed Cole to draw new boundaries for himself. "In that environment, I found I had a tendency to allow people greater latitude than I would otherwise. You're a fish out of water. Every few hours the first couple of weeks I was fumbling around with my mask. … It was a brand new experience. It took a while to become proficient and react quickly and appropriately. I felt incompetent for a time, so I kind of let people push me around more.

"I know anybody who would hear me say that would say, 'That's not the same Jon Cole I know.' I was out of my element. So this was good professionally. If I'm out of my element again, say if I find a job in Civil Works, then this experience in Iraq will benefit me. It may be new, but that's not to say I'm incompetent."

Martinez agrees that there are real personal benefits from serving, but cautions that it may not be for everyone.

"The thing about FFE and the mission in Iraq is that it is a whole different animal. It's not the hurricane relief field engineering type experience. There is a level of risk," Martinez said. "I can only speak for myself and tell folks what happened and all of the great benefits you gain from it by learning about yourself, learning about playing on a team, about engineering work, the amount of learning that's going to happen through that field engineering experience.

Photo by Fernando Bautista

Jon Cole ensures that supplies are compacted before his team departs Camp Virginia on a convoy.

"You have all these benefits that start stacking up, and then you have the difficulties, the fact that you're going to be away from family for a very long period of time, the fact that there are big security issues, and the living conditions. ... You have to personally weigh all of those. … "

Martinez said the value from successful accomplishment of an FFE mission can be great. The mid-July FEST-A transition came at a good time, Hurst said, taking place as the warfighters in Iraq transitioned from V Corps and 1st Marine Expeditionary Force into Combined Joint Task Force 7 (CJTF7).

"We were basically finishing up missions we had started in support of V Corps and the new team would be coming in and starting new projects in support of the CJTF-7that would affect the whole country," he said.

In addition to the six member FEST-A now in Iraq, 17 Europe District people are also supporting operations in Afghanistan, the Gulf Region in engineering capacities at bases, and with FEST-Restore Iraqi Oil.

Photo by Fernando Bautista

Fernando Bautista climbs a water tank at the Balad Air Field in Iraq to survey the condition of the water tower.

This FIGHT is PERSONAL

Story by Grant Sattler

Recently returned from four months duty in Operation Iraqi Freedom, one Wiesbaden-based Army civilian relishes the opportunity to have been able to support America's Army.

Working as an architect deployed with a Forward Engineer Support Team from the U.S. Army Corps of Engineers Europe District, Fernando Bautista was involved in master planning for 17 airfields, including Balad airfield where V Corps Rear is now located, assessing all of the Balad airfield buildings for safety and usefulness, and generating floor plans of existing buildings.

But it is not just the contribution of his team to the war effort that gives Bautista a reason to feel pride. It is the sense that he has in his way helped strike back for the terrible attacks of Sept. 11, 2001, particularly the attack on the World Trade Center.

"I'm a New Yorker, and I feel great about it," the 20-year resident of the Big Apple said.

"I am an American. I am a New Yorker. I had to do something."

And like all New Yorkers, Bautista had his personal experience

on the day of the attack, one that the catharsis of duty in the desert has begun to heal.

A building designer for seven years with the U.S. Army Corps of Engineers New York District, Bautista was one of a group of architects and engineers working feverishly on final deadline for a complicated facility design on Sept. 11, 2001.

"We were working around the clock, by the second, because the fiscal year was coming to a close," Bautista said of the Corps of Engineers team working on the 20th floor of 26 Federal Plaza. They heard a big bang and felt a shake, but members of the architectural section kept working. They were so intent on the task at hand that the section lead was miffed and hung up the phone on what he thought was a minor incident when a friend called with news that the Twin Towers seven blocks away had been struck by an airplane.

The friend called again, and as the realization that the interruption was of real importance dawned, the section lead asked Bautista to go to the other side of the building and see what was happening.

"I could see the upper floors of the North Tower, and the gaping hole between the 80th and 100th floors," Bautista said. He reported what he'd seen, was handed the chief architect's personal camera, and headed outside into a surreal scene. He headed toward the Twin Towers and snapped a few photos as emergency vehicles sped by. "We are used to a rush hour, but this was 100 times worse, it was crazy," he said.

Bautista would not learn until days later that one of the fire trucks carried the fiancé of a niece to what would be his last emergency response. Christopher Santora would perish as a hero with the first fire fighters to enter the North Tower.

Out of film, Bautista returned to 26 Federal Plaza to find it already evacuated, and his identification, wallet, and keys locked in the office. He found himself compelled to return to the Twin Towers, and had approached to within two blocks when the South Tower was struck.

"We were just standing still, watching the development of this catastrophe," he said. Then the first of the towers collapsed. "Then came a very tall, thick cloud trying to find a way out through the streets at a roller coaster speed," Bautista said. Realizing he should run for his life, he turned. "I saw everybody going uptown, three, maybe four thousand people going the same direction." In his flight, he tripped and was trampled, severely injuring an ankle. Covered in dust, he had to walk home.

After a painful half-day hike out of Manhattan and across the Williamsburg Bridge to his home in Astoria, Queens, he found his spare keys in the garage, sought medical aid, and lived off of his collection of pocket change until the city began to function two weeks later.

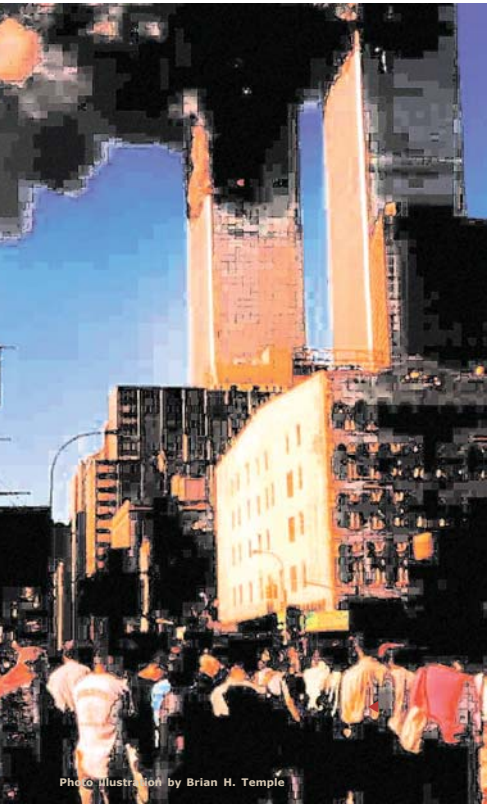


Photo illustration by Brian H. Temple

Photo by Fernando Bautista

▲ **Fernando Bautista assesses the demolition of a fire station damaged by bombs at the Balad Air Field in Iraq. The D-9 armored Caterpillar was used to level damaged buildings in a three day operation involving the Corps FEST.**

◄ **Bautista's vantage point where he snapped this photo on Sept. 11, 2001.**

Photo by Fernando Bautista

Bautista inputs data with AutoCadd (Computer Assisted Design and Drafting) software at Balad Air Field. His drawings communicated existing conditions of buildings such as barracks, a hospital, and more.

The Corps' New York District worked out of an alternate location for a time, and then returned to 26 Federal Plaza. Life slowly crept back to the way things had been before. "But things were different," Bautista said. He became restless for a change, and after a year took a job with the U.S. Army Corps of Engineers in Wiesbaden, Germany, where he had served twice before on temporary duty assignments.

Within two months of his arrival in January 2003, he read an e-mail soliciting volunteers to participate in the District's Field Force Engineering program.

"I said 'wow,' this is the best way for me to revenge these guys," he said. "I said to the chief architect, 'Even if I have to wipe the floors, will you let me go?'"

"I really experienced being a part of the greatest Army in the world. We were supporting our troops. And now I also feel I accomplished something personal … for the Army."

Just two days later Bautista was selected to join a Forward Engineer Support Team. His household goods were delivered March 16th and the next day he and the team of five were deployed to Kuwait, arriving at Doha on March 20th, just as combat began.

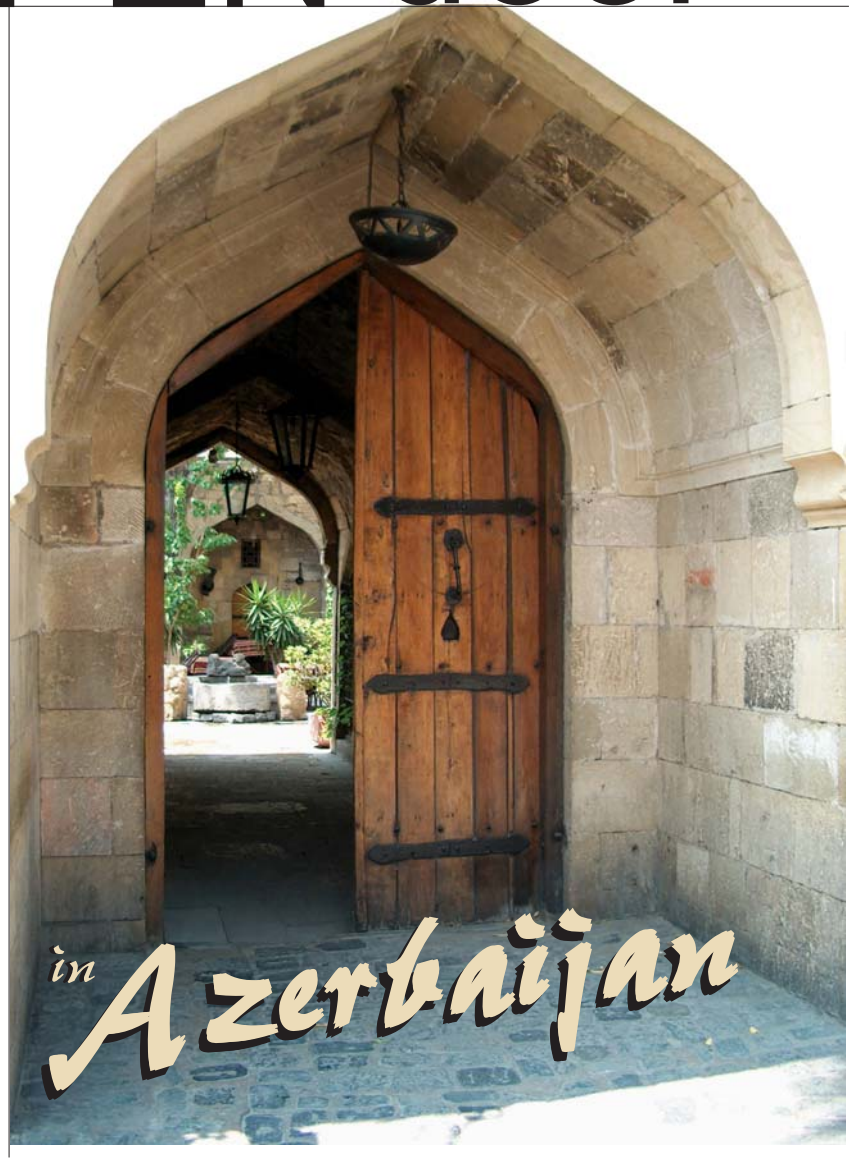
"I really experienced being a part of the greatest Army in the world," Bautista said. "We were supporting our troops. And now I also feel I accomplished something personal … for the Army."

Although he did not directly take up arms in the fight against terrorists and those who support them, Bautista feels he contributed with his laptop computer and dedicated labor.

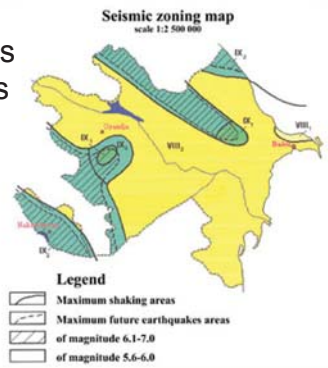
"It has been one of the greatest things I have done in my professional life," Bautista said. "I am an American, I am a New Yorker. I had to do something."

OPEN door

Partnership in Azerbaijan



In November 2000, an earthquake rocked Azerbaijan's capital Baku, sending residents fleeing from buildings in panic. Ambulances rushed to the scene, and more than 20 lives were lost. Millions of dollars in damage were left in the wake of the 6.3 magnitude earthquake. GRANT SATTLER tells of the Corps' involvement helping coordinate future relief in earthquake-prone Transcausasia.



It can take critical hours to airlift European or American rescue and recovery teams thousands of miles to earthquake-prone Transcaucasia.

Saving lives by enabling faster response to natural disasters through cooperation in the region was the aim of U.S. Army Corps of Engineers participation in a recent Civil-Military Emergency Planning (CMEP) event in Baku, Azerbaijan. Held in July 2003, the four-day CMEP program workshop hosted by the Civil Defense Department of Azerbaijan's Ministry of Defense brought together military and civil response agencies of the GUUAM nations. GUUAM is an acronym standing for the participant countries of Georgia, Ukraine, Uzbekistan, Azerbaijan, and Moldova.

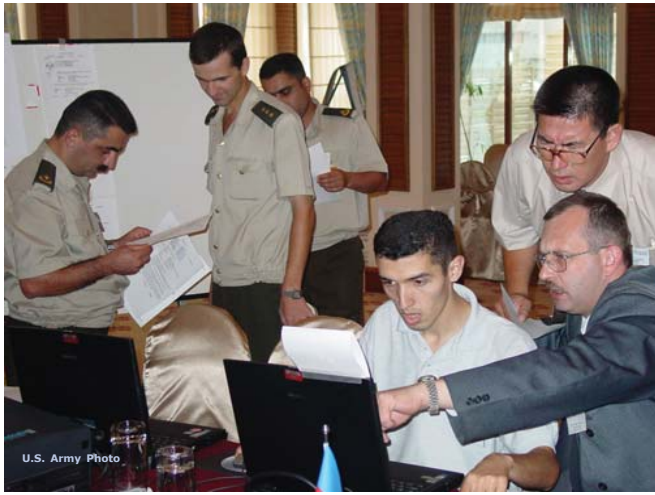
"Most of these nations have internal capability for handling a disaster within their borders," said David MacPherson from Europe District's International Engineering Center. Typically, he explained, these countries have first responded to natural disasters with local forces, calling in national resources if the situation is beyond the capability of local emergency operations. If the problem is too big, however, they have turned to the international community rather than their neighbors.

"CMEP is promoting that they work with their neighbors — nations they have developed relations with — to request assistance and handle emergencies [collectively] without western Europe or the U.S.," MacPherson said. "With a regional response, they can respond much more quickly."

The CMEP program provides services to Emergency Management and Defense Agencies in nations working together to develop cooperative, trans-border agreements and plans for mutual support during catastrophic disasters, said Annabeth Lee, from the U.S. Army Corps of Engineers Southwestern Division headquartered in Dallas. While its focus is civil-military disaster response, the ultimate CMEP goal is to have all of the U.S. European Command Partnership for Peace (PfP) countries cooperating. MacPherson said, "They will be working together even more as they eventually join NATO."

Lee said she and other participants from Southwestern Division, Europe District, and the Engineer

Members of the U.S. Army Corps of Engineers joined civilian and military teams from Georgia, Ukraine, Uzbekistan, Azerbaijan, Moldova, Turkey, and Bulgaria in a Civil-Military Emergency Planning event in Baku, Azerbaijan in July. The CEMP promotes joint emergency response from neighboring nations.


U.S. Army Photo

U.S. Army Photo

Members of the Azerbaijan military post technical seismic and emergency data during a joint exercise in Baku, Azerbaijan in July. Teams from Georgia, Ukraine, Uzbekistan, Moldova, Turkey and Bulgaria joined in this Civil-Military Emergency planning.

Research Development Center (ERDC) in Hanover, New Hampshire, were proud to be involved in a program supporting Corps of Engineers professional capabilities in worldwide emergency management development.

As the USACE Emergency Operations Representative to the GUUAM, Southwestern Division's Royce Swayne attended the main planning conference and the workshop. Doug Sommer, Europe District's Chief, International Engineering Center, was the senior Corps representative for the workshop.

Additionally, Maj. Joel Potts represented the Oklahoma Army National Guard, Azerbaijan's Partner State in EUCOM's PfP program, in developing the exercise scenario and standard operating procedures used for communication between the GUUAM nations.

"The Standard Operating Procedures developed messages in a specified format so when one nation requests assistance from another, they are familiar with the format and can respond with a message offering resources, answered by an acceptance message," MacPherson said.

Although not part of GUUAM, representatives from Turkey and Bulgaria attended as observers and facilitators. "It was the first time that Turkey has participated," MacPherson said of the NATO member state. "It was a big step because it shows they have a desire to work with other nations outside of southeast Europe."

"The representatives were brilliant, and we all learned from each other."

Courtesy of The University of Texas at Austin

The workshop familiarized participants with use of the Partnerships for Peace Information System, or PIMS.

"The workshop improved communication with PIMS, which is computer based with internet connectivity, so that they can communicate from one nation to another during an emergency," MacPherson said. "Each country will have PIMS connectivity installed in their Emergency Operations Center." Three representatives of the PIMS led by Anne Bentley ensured essential support.

Lee said she saw highly effective and enthusiastic working relationships developing for emergency planning among the GUUAM nations. She said national representatives expressed a strong interest in developing some more formal basis by agreement for lasting cooperation in emergency planning and response. MacPherson said "They are working on draft agreements, modeled after a Ukraine-Moldova agreement, which would cover all the GUUAM countries… ."

U.S. Army Photo

▲ **David MacPherson (left) with Doug Sommer.**

▶ **Earthquakes in the Transcaucasia region take lives and cause millions of dollars in damage. Members of the U.S. Army Corps of Engineers, Euope District joined with other Corps teams in Baku, Azerbaijan in July to help these nations plan for emergency operations.**

Lee, who facilitated a Geographic Information System (GIS) working group along with ERDC's Andy Bruzewicz, said that although technological competence varied, there is a strong interest by the GUUAM nations to cooperate in USACE-led-GIS and database applications for civil-military emergency planning.

When Lee first heard about the Baku workshop she said, "My first reaction … was that I should not go anywhere that I cannot spell." But she was soon involved in the multi-national cooperative project and exchanged information on the use of GIS in emergency operations. "It was challenging to discuss GIS in Russian with English software," she said of the effort supported by interpreters. "The representatives were brilliant, and we all learned from each other. GIS sessions took twice as long because of the interpretation. Many of the technical terms were difficult to translate because there are not comparable words in Russian." Most workshop participants spoke Russian, although the Russian language has not been taught in Azeri schools for the last dozen years.

ERDC's Remote Sensing/GIS Center has been providing GIS support to the CMEP program since 1999 and has developed a multinational database that is serviced from a server at the Corps' Cold Regions Research and Engineering Laboratory in Hanover, N.H., Bruzewicz said.

The GIS data has been increased through each of the CMEP workshops, he explained, making these data available for use by each country as part of disaster-related activities.

The July workshop also provided a forum to demonstrate to Azeri regional leadership and news media the value of the computer-based multi-national emergency planning in response to a simulated earthquake in the Caspian Sea. Baku is located on the western shore of the Caspian Sea (the world's largest inland body of water) and is the largest city in Azerbaijan.

Practical exercises, such as this one in Uzbekistan, are essential for training.

U.S. Army Photo

"I am an American. I am a New Yorker. I had to do something."

Fernando Bautista - Field Force Engineer

After witnessing the World Trade Center collapse, Fernando Bautista was stranded. Covered in dust, and with an injured ankle, he spent half a day limping back to his home in Astoria, Queens. He became restless over the following year and needed a change. The U.S. Army Corps of Engineers Europe District was the answer.

Two months after his arrival to Germany, he volunteered to join the Foward Engineering Support Team in Iraq. Although he did not take up arms directly in the fight against terrorism, Bautista has made a difference. Civilian engineers are actively supporting those in combat. For more on their valuable contributions see "Filling the Void" on page 17.