

Public Works

DIGEST

Volume XXIV, No. 2
March/April 2012

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The two-man suites in the new barracks complexes on Schofield Barracks, Hawaii, provide Soldiers with energy-efficient shared kitchenettes. Photo by Dino W. Buchanan. Pages 19-20



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Public Works DIGEST

Volume XXIV, No. 2
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U.S. Army Installation
Management Command
2405 Gun Shed Road
Fort Sam Houston, TX 78234-1223

Public Works Digest is an unofficial publication of the U.S. Army Installation Management Command, under AR 360-1, The Army Public Affairs Program. Method of reproduction: photo-offset; press run: 1,600; estimated readership: 40,000. Editorial views and opinions expressed are not necessarily those of the Department of the Army. Mention of specific vendors does not constitute endorsement by the Department of the Army or any element thereof.

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Housing and Barracks Management



Managing challenge of 'full nest' at Fort Riley

by Jeff Williamson

The first time I drove through the front gate of Fort Riley, Kan., was almost 30 years ago when a buddy and I arrived in my old beat-up car from Memphis, Tenn., to attend ROTC Advance Camp. All I really remember was the long drive, the barracks from World War II, my amazement that Kansas actually had hills, the instructors' admonitions to stay out of Junction City and the wind.

As I drove through the front gates of Fort Riley last October, excited about my first day as the newly appointed director of Public Works, I was reminded of that first trip and utterly amazed at what I saw that afternoon. The new and renovated barracks, new headquarters, new motor pools, new and renovated buildings on the main post that maintain the style and architecture of the past while providing all the amenities of the present were a welcome surprise. Virtually, a new post! Fort Riley, a big recipient of the 2005 Base Realignment and Closure, had, in five short years, doubled its Soldier population and increased its permanent facilities by 40 percent.

Now, as the garrison struggles to meet the mission requirements with declining budgets and manpower, we face the new challenge of continuing to meet the housing needs of our Soldiers and Families. With the recent return of the 1st and 2nd brigades, along with the other units of the Big Red One, we have a "full nest."

A full nest brings new challenges that Fort Riley and our partners in the communities that support our Soldiers and Families will face together with the build-out of more than 6,400 barracks spaces and 3,800 homes for Families on the installation, leaving another 7,800 Soldiers and Families competing for safe and affordable homes in the local community. While most of the heavy lifting for Family housing on the installation has either been accomplished or planned with dedicated resources, we still have work to do with



Jeff Williamson
Photo by Peter Aiken

our community partners to ensure those 68 percent living off the installation are able to find homes that meet their needs and budgets. These challenges demand care and attention to successfully maintain the tremendous effort that has been put forth to date and to prevent any decline in quality or condition.

Fort Riley's growth from two brigades to five in such a short time frame required the purchase of relocatable buildings to meet the immediate needs of the expanding units until the Military Construction barracks were completed. I'm particularly pleased that we have moved Soldiers into state-of-the-art 1+1 barracks, and, while all of the new construction has conformed to Leadership in Energy and Environmental Design standards, one barracks has attained the coveted Gold certification.

To provide professional management and operational oversight and to ensure these new facilities are continually maintained, the First Sergeants Barracks Program was launched. Assignments, terminations and maintenance used to be managed through a comprehensive contract but are now managed by Army Civilians and military.

Despite the huge success of the FSBP program, declining fiscal dollars have forced us to consider alternative ways to deliver the full scope of services and oversight of the FSBP, including discussions about using volunteer Warrior Transition Battalion Soldiers. Whether FSBP becomes a resource to aid wounded

Acronyms and Abbreviations	
DPW	director of Public Works
BRAC	Base Realignment and Closure
FSBP	First Sergeant's Barracks Program
MILCON	Military Construction
RCI	Residential Communities Initiative

warriors' recovery while filling a void created by continued resource shortfalls, it becomes a hybrid of the original concept, or it is handed over to the first sergeants to take on the lion's share of operations, the maintenance responsibility of the barracks will remain one of my highest concerns.

Prior to BRAC, the Army had the foresight to look at the Army Family Housing program and put together a bold plan to partner with industry to develop the Residential Communities Initiative, commonly known as RCI, to address the deficits and declining conditions of housing for Soldier Families. RCI presented an entrepreneurial approach for our partners to use the Soldiers' Basic Allowances for Housing as a funding stream to provide development, financial solvency, operations, maintenance and property management with a strategy to address revitalization in the out years built into the business model.

That approach to managing and reinvesting in Family housing is something that I could never have imagined in the past. Receiving 45 percent of my sustainment requirement would have been considered a good year during my two previous assignments as a DPW, while I competed for new construction or renovation funds through the MILCON process.

Some years ago, I had the opportunity to work with the private sector in collaborating in the creation of an RCI community development and management plan. Imagine the pride and awe of returning to the installation to see the fruits of that combined labor and appreciate that the same vision has manifested itself here at Fort Riley. Truly remarkable!

We are currently discussing various ➤



Celebrating a decade of support to Army's privatization initiative

by Scott L. Whiteford

January 2012 marked the 10-year anniversary of real estate support to privatization of the Army housing, unaccompanied personnel housing and lodging programs. The U.S. Army Corps of Engineers' Norfolk District Residential Communities Initiative Real Estate Project Delivery Team successfully supported the privatization of 85,424 homes at 45 Army installations. A total of 1,394 apartments have been constructed so far under the Unaccompanied Personnel Housing initiative with the possibility of more one- and two-bedroom units to be approved for construction in the near future. Under the Privatization of Army Lodging Initiative, the Norfolk District supported the privatization of 8,052 rooms at 21 locations.

All three programs have a long-term management component that will require real estate support for the term of the ground lease — up to 50 years. The Norfolk District is responsible for developing and administering the lease, which includes ensuring all parties are in compliance with the terms specified.

In addition to the project managers from the Office of the Assistant Chief of Staff for Installation Management and Norfolk



Scott L. Whiteford
Photo by John Hoffman

District Real Estate, representatives of both the project and the installation participate in annual site visits to each project. Any issues that need to be resolved are raised at this time. The real estate team identifies actions for resolution and tracks progress with the installation and private sector partner.

An important tool in ground lease administration is an annual review of the project and of the activities on land adjacent to the project. The review examines issues such as boundary encroachments by either the lessee or the installation, compliance with environmental management plans and compliance with the ground lease's municipal services agreement.

Encroachment tends to be

the issue that most frequently impacts privatization projects. Encroachments occur when a property owner violates the property rights of a neighbor by building something on the real property owned or leased by the neighbor. Encroachments are unauthorized intrusions on the rights or possession of another and are unlawful acts.

An example of this impact occurred when land was needed for construction of child development centers that were authorized and funded by the 2009 American Recovery and Reinvestment Act. In some cases, these Military Construction projects were sited on land leased to an RCI project, land not available for such use. The RCI project area is identified jointly by the installation and the private sector partner, and is legally defined



At a Fort Belvoir, Va., RCI project, a building that had four two-bedroom Family housing units before renovation now has two five-bedroom homes with two car-garages. Photo by Casey Nolan, RCI project manager, Clark Realty Capital LLC

Acronyms and Abbreviations

PAL	Privatization of Army Lodging (program)
RCI	Residential Communities Initiative
UPH	unaccompanied personnel housing
USACE	U.S. Army Corps of Engineers

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avenues to address a deficit in available housing for our unaccompanied senior noncommissioned officers and officers, a category of housing that struggles to find affordable housing within an acceptable distance from the garrison. With the success of RCI, we will definitely engage our partners to glean their expertise in this discussion while we continue to work with the leaders and developers in the local

areas to look at all the opportunities to meet the needs of that demographic.

As our full nest requirements continue to adjust, our partners at Picerne Military Housing and the Flint Hills community continue their steadfast support of Fort Riley providing insight and assistance in fulfilling our evolving needs.

Since 1853, Fort Riley has housed Soldiers and Family members in everything from tents to 21st century facilities. Gone is the World War II wood

of my youth. Today, you can stand in the middle of Camp Forsythe and see a modern subdivision that would rival any in the United States — on a military installation or off!

As the Army again begins a new transformation, it is, indeed, a great time to be part of the Army team to help reshape the outcome to meet the needs of an installation at full nest.

Jeff Williamson is the DPW, Fort Riley.



Being more than social

by Shenise Foster

Social media have evolved from platforms on which to update friends and family about significant actions in one's life to credible sources for learning about industry practices. The Army Housing Division is capitalizing on this trend to successfully use social media to connect with customers.

The Army Housing Division's Facebook page, <http://www.facebook.com/USArmyHousing#!/USArmyHousing>, has proven to be a source of information that Soldiers and Families can access to get answers to questions about the wait list for housing, policy guidance and permanent change of station. This year marks the third year that Army Housing Division has had a presence on Facebook.

A community of more than 5,500 fans helps the Army Housing Division staff gauge the relevancy of the information provided. This platform allows the staff to measure the needs of Soldiers and Families.

The Army Housing Facebook demographics mostly comprise females who range in age from 25 to 34 and reside in the United States. Relevant information like this allows the staff to develop target messaging in the communication platforms



Shenise Foster
Courtesy photo

that are of interest to this particular demographic group.


With the success of the Army Housing Facebook page, it was decided to tap into the Twitter arena to engage with potential followers. According to Twitter statistics, this platform is heavily used by males in the 25-to-34 age bracket.

As part of its communication objectives, the Army Housing Division wants to increase engagement with males so that they are aware of the housing choices available to them whether single or married. Twitter has proven to be the best way to offer housing information to this demographic. The <http://twitter.com#!/USArmyHousing> follower base is growing steadily, and referrals from sister

Department of Defense organizations have conveyed their virtual stamps of approval for this official source for Army housing information.

The Army Housing Division is continuously looking for opportunities to connect with Soldiers and Families and provide them with accurate information about housing whether it is on or off post. Social media has been the vehicle that creates a dialogue that assists in improving Soldier and Family housing Armywide to enhance their quality of life.

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by an American Land Title Association survey. The leased land, as defined by the survey, is then used as collateral by the RCI partner to obtain a mortgage to build and renovate the privatized homes. So, it is critical that the land remain free from encroachments to protect the financial viability of the project.


To assure that projects begin construction without delay and that the RCI projects are not compromised, it is important that all parties — USACE, the installation and the RCI project asset manager — identify and resolve conflicting land uses through advanced coordination.

Fourteen leases in 2010 and 11 leases in 2011 were modified and terms renegotiated in a short time to allow for expedited award and construction of these facilities. Another eight leases were modified for other requirements in 2011. The real estate team integrated the requirements of all parties concerned, including the deputy assistant secretary of the Army for installations, housing and partnerships, and reacted quickly to facilitate timely completion of these actions.

Going forward, it is critical that teams planning installation projects that will impact RCI projects start planning early and that proper coordination occurs to

prevent delays in projects vital to the Army's mission.

The Army is just beginning to implement a plan to cut its budget as mandated by Congress. This downsizing will result in the reduction of troops and also reduction in any land or other assets. It will make it even more important for installation Directorates of Public Works and the RCI, UPH and PAL projects to work together for a successful future for all Army stakeholders.

Scott L. Whiteford is the director of Real Estate, Headquarters, U.S. Army Corps of Engineers. 



Permanent party barracks: Looking beyond buyout

by Benjamin Foo

As the permanent party barracks buyout nears completion, the Army must focus on reducing the excess inventory and sustaining or recapitalizing the aging inventory to continue to provide Soldiers with the highest quality of housing possible.

Upon completion of the barracks buyout, the Army will begin to eliminate all common area latrines, called CALs, from the inventory. Although a few installations will experience a deficit of 1+1 or equivalent barracks due to stationing decisions, all Soldiers will be moved out of CAL facilities by completion of the barracks buyout construction.

These CAL facilities must then be divested, which will reduce the Army's costs to sustain these excess facilities. If requirements exist in other facility types, such as administrative or storage space, these barracks can be converted to meet those requirements. Demolition may be required if there is no requirement for other facility type, or if the existing barracks facility is in poor condition.

Although all Soldiers will be provided adequate housing upon the completion of the barracks buyout, there will still be

a significant amount of adequate legacy barracks in the Army's inventory. These facilities can be up to 80 years old.

A large portion of these adequate legacy barracks are in the semi-private bedroom configuration. Many were former CAL barracks renovated to current standards or three-Soldier barracks rooms constructed in the 1970s when the Army was going to an all-volunteer force. These Volunteer Army-era barracks underwent substantial renovations during the 1990s, reducing the originally intended three-Soldiers-per-room configuration to two-Soldier rooms.

As funding permits, the Army will begin recapitalizing these legacy facilities through Military Construction replacement. As these facilities are replaced or further renovated, more Soldiers will be able to be assigned to private bedrooms.

The programming for replacement of these legacy facilities begins at the installation. As the Department of Defense faces a fundamentally different fiscal reality than the past years, the Army must ensure its facility requirements are thoroughly evaluated and scrutinized.

An accurate and truthful representation of the Installation Status Report ratings is absolutely critical as the Army looks to replace the worst facilities in the inventory.




At Camp Humphreys, South Korea, permanent party barracks near completion. Photos courtesy of U.S. Army Corps of Engineers

Having an Installation Status Rate rating that supports the facility condition will provide justification to the Installation Management Command region and headquarters to appropriately prioritize facility requirements in future Program Objective Memorandums.

Barracks are and will remain a top facility priority for the Army, since they have a direct impact on Soldiers' quality of life. That said, the legacy barracks replacement projects will not see the same levels of funding as the permanent party barracks buyout program.

It is unlikely that the replacement of legacy facilities will become a Headquarters Department of Army focus program, so it is up to the installation's Directorate of Public Works to properly identify facilities in need of replacement to ensure that the Army continues to provide quality housing for its Soldiers.

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Acronyms and Abbreviations

CAL	common area latrine
OACSIM	Office of the Assistant Chief of Staff for Installation Management



At Fort Stewart, Ga., permanent party barracks are under construction.



Advice for barracks renovation success in new fiscal reality

by Peter Thomas and Margit Simpson

It goes without saying that money is tight, and funded project lists are getting shorter. The Training Barracks Upgrade Program is a case in point. Some new takes on the TBUP offer hints on how to document your projects for successful funding and execution.

Approved by the vice chief of staff of the Army in the Stationing Senior Review Group in September 2009, TBUP has two components: renovation, which comes under the heading of Restoration and Modernization, or R&M; and new construction, which comes through the Military Construction program.

The R&M part of TBUP was conceived as an aggressive recapitalization of Training and Doctrine Command-managed facilities over an eight-year period. Originally, the fiscal 2012 R&M TBUP schedule comprised 27 projects at \$340 million. Realistically, that total will be closer to \$125 million.

The funding and prioritization strategy for the Barracks Upgrade Program and TBUP, previously fully funded from an R&M “headquarters withhold,” has been reformulated. Operational Order 11-362 dictates the necessity for projects to be Installation Status Report Q3 and Q4. BUP is to compete with all other R&M projects. This year, TBUP projects will be funded centrally from the withhold. Only ISR Q3 and Q4 projects will be considered.

What this may mean is that the formerly aggressive recapitalization of training barracks may revert to a typical 25-year sustainment cycle, just like most other facilities. In the meantime, documentation is critical for success.

ISR is only a piece of the required project documentation. Not all information systems talk to one another, and it is incumbent on installations to package their projects and to enter and cross-check data in several systems.

Entering these projects into the Project

Prioritization System, as noted in OPORD 11-362, is important. Depending on their size, most projects will also be entered into the Programming Administration and Execution processor known as PAX, which generates DD Form 1391s. What may not be as obvious is the dynamic nature of the ISR, PPS and PAX systems. For a project to have credibility, the systems must agree.

Among many data elements, ISR ratings change with time, as do project scopes and estimates. Make sure changes are updated in PPS and PAX so that all systems are in agreement. A multi-tiered group of stakeholders across several organizations will be looking at your project documentation, so when you submit a project package for approval, make sure the information in the package is current, accurate and cross-checked.

The final tip involves current working estimates. Anyone who works around construction contracts knows that contract bids and negotiations can have surprising results. Today’s economic climate supplies an additional layer of unpredictability. However, the lessons learned and historical data from the now mature TBUP offer an advantage. Already renovated TBUP packages — typically barracks, company operations, battalion operations and dining facilities — provide standard cost and contract modification history. Bringing stakeholders like Corps of Engineers’ program managers and resident engineers into the master planning process makes estimates more accurate. Compare similar prior year construction costs with proposed projects and adjust the current working estimate accordingly.

Some of these techniques can be used for other R&M projects and programs. The TBUP is a good model for those programs that are mature and have standard design-renovation histories.

Like most Public Works business, however, things are bound to change, and, for this fiscal year, TBUP will be funded at a fraction of its previously

Acronyms and Abbreviations	
BUP	Barracks Upgrade Program
ISR	Installation Status Report
OPORD	Operational Order
PAX	Programming Administration and Execution (system)
PPS	Project Prioritization System
R&M	Restoration and Modernization
TBUP	Training Barracks Upgrade Program

scheduled program. Competition for funds will intensify. Use historical data to craft your projects and make sure that the information systems are accurate and in agreement. This strategy will give your projects the best chance to compete successfully.

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Removed ceiling panels exposes repairs that need to be done. Photo by Peter Thomas



Furnishings Program: Changes in the works

by Gabriele (Gaby) Shelley

The Army Housing Division Furnishings Program provides furnishings with a residential feel and commercial-use quality for Soldiers and Families. The Furnishings Program's story has been a consistent success over the last decade, however changes are forthcoming.

Army Regulation 420-1 defines furnishings as household furniture (case goods), appliances, soft goods (linens), encompassing all furniture and equipment in either unaccompanied personnel housing or Family housing. Each garrison's Furnishings Management Office is responsible for the purchase, storage, accountability, transportation and disposal of the furnishings in government-owned or leased Family and UPH. All housing furnishings are accounted in eMH, the enterprise Military Housing data management system.

At continental U.S. garrisons, furnishings are authorized in government-owned UPH, and supplemental furnishings are authorized in privatized general flag officer quarters. Government-owned furnishings are not provided in off-post leased housing except in a few circumstances.

Outside the continental United States, furnishings are provided in UPH on the garrison and in leased UPH off the garrison. In Family housing, based on location, select pieces of loaner furnishings are authorized on and off the garrison until the arrival of the Family's household goods.

To bring UPH furnishings in line with industry standards, Army Housing Division turned to the U.S. Army Engineering and Support Center, Huntsville, Ala. Huntsville's Centralized Furnishings Program develops quality

construction standards for case goods, ensures appliances and soft goods meet industry standards, procures furnishings and maintains historical data.

Huntsville partnered with the General Services Administration to develop the Army UPH furnishings specification, known as the "Army Spec," which can be found on the GSA website. The Army Spec GSA Schedule has multiple vendors that manufacture case goods with style variations but maintain the Army criteria for ascetic, durable, quality standard design.

All UPH furnishings, new construction and replacement, are ordered through Huntsville. The order form package and Huntsville contact information can be found on the Engineering Knowledge Online website, <https://eko.usace.army.mil/>, under "Virtual Teams." Scroll down to "Furnishings Programs." The documents you can view and download are at the bottom of the page.

The Army spec for UPH furnishings applies to U.S. Army Reserve and Army National Guard, although different procurement sources are used.

A near-term goal that parallels the UPH furnishings effort is to develop standard specifications for Family housing furnishings.

The *Field and Garrison Furnishings and Equipment, Common Table of Allowances 50-909*, provides the authorizations and allowances of each type of furnishings and equipment in Army housing.

The CTA UPH and Family Housing Tables — tables 41-45, 51-52.1 and 77 — are being updated. The UPH tables will be completed first, followed by the Family housing tables. Authorizations are changing, and the Huntsville order form will reflect those changes. The field will be advised via social media and other formal notification after the revisions are completed.

The newest table, Warriors in Transition



Authorizations for game tables and other barracks dayroom furnishings are found in CTAs. Photo courtesy of OACSIM.

Table #77, provides authorizations, basis of issue and furnishings allowances for WT barracks. Until WT Military Construction barracks complexes are completed, WTs at some installations are housed in legacy barracks that meet their configuration requirements. Table 77 covers authorizations for game tables and other pieces found in legacy barrack dayrooms as well as for the standard design. This authorization ensures appropriate furnishings are provided to completely furnish the barracks regardless of the barracks design.

The next to be updated will be Table 42 for enlisted permanent party barracks. Some authorizations will change. For instance, the number of furnishings pieces in sleeping rooms will be reduced. These changes were driven by Soldier survey feedback.

The CTAs and other manpower and equipment documentation are now web-based at the U.S. Army Force Management Support Agency website, <https://webtaads.belvoir.army.mil/>. You must request authorization to access the site to view the CTA tables. The site's home screen has instructions.

The process to request changes to the CTA tables has been streamlined. Additions, deletions and changes are now web-based and are processed through the Standard Stock Number-Line Item Number Automated Management and Integrating System at <https://www.slamis.army.pentagon.mil/>. The link to set up

Acronyms and Abbreviations	
CTA	common table of allowances
OACSIM	Office of the Assistant Chief of Staff for Installation Management
UPH	unaccompanied personnel housing
WT	warriors in transition



Defining military housing requirements

by Sandy Randolph

The Army provides military Family housing on installations that support the Army active duty components worldwide. Have you wondered how the Army determines the number of military Family housing units to construct or maintain on an installation? Or why military Family housing is important?

Numbers

The Office of the Secretary of Defense establishes policy in the *Department of Defense Housing Manual 4165.63M* for all aspects of housing management including determining requirements. The requirements process results in an analytical report known as a housing market analysis, or HMA.

OSD policy requires that the military services look to the private sector as the primary source for providing adequate housing for Soldiers and their Families. The Army follows the OSD HMA methodology to determine if there is sufficient adequate and available housing in the community. Only when that analysis indicates there isn't sufficient community housing does the Army program to construct or maintain housing on an installation.

The HMA report is a deliberative

Acronyms and Abbreviations	
HMA	housing market analysis
OSD	Office of the Secretary of Defense

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an account to process changes is located at the middle of the header page. Once an account is established, the system provides tutorials and access to a help desk. One- and two-day classes are conducted throughout the year in Springfield, Va. The help desk can provide class dates.

The Army Housing Division Furnishings Program has made significant progress over the last decade in streamlining housing furnishings

document used by the Army to make decisions on future housing requirements. Recommendations to senior leadership and Congress are based, in part, on the assessment of current market information, specifically housing market trends at specific geographic locations, gathered in an on-site visit to the installation.

The HMA makes a five year projection of housing needs using available market data, including interviews with local developers, real estate firms and government entities. Statistics from the U.S. Census Bureau, building permits, community housing inventory, civilian population, military population projections, rents, utility costs, renter's insurance, rental vacancies and housing quality are analyzed to determine if the community can provide sufficient adequate housing.


For housing to be considered adequate, it must meet the OSD standards of affordability, location, features and physical condition. Housing that does not meet these minimum standards, defined in the OSD housing manual, will not be considered as assets that meet the military need.

Importance

The reason Family housing is important to the Army is embedded up in the *Army Family Covenant*. The covenant is a commitment to provide a level of support to Soldiers and their Families

procurement and management. The CTA housing tables update will provide another management tool. These continuing efforts enable the Furnishings Program to steadily change to meet the needs of Soldier and their Families.

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For off-post housing to be considered adequate, it must meet OSD standards of affordability, location, features and physical condition. Photo courtesy of Sandy Randolph


commensurate with their level of service.

“Quality Family housing is a key component of efforts to ensure increased retention and higher Soldier morale,” said Gen. George W. Casey Jr., former Army chief of staff. “When Soldiers are confident that their Families are taken care of in their homes and community, they are able to focus on the mission. If these needs are not fulfilled, morale is diminished and Family cohesion suffers. It is essential that the Army provide high quality homes, regardless of the type of quarters the Soldier chooses for his Family. Family housing is a readiness issue.”

That the readiness of an all-volunteer military force depends on the health of the Families is clear, and having adequate housing is important to Families.

It is critical that military housing requirements be accurately projected during these times of fundamentally changed fiscal reality. Creating excess housing capacity would risk slowing down the recovery of the private housing sector. The Army believes it is prudent to make housing investments only when requirements are clearly defined and validated in a current HMA.

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Housing Services: Local housing experts

by Megan Purkey

Traditionally, the Housing Services Office has been looked to for expertise on the community outside the installation gates. However, as part of the effort to standardize services and provide better assistance to Soldiers and Families, HSOs are becoming the single “point of entry” for all housing assistance at Army installations worldwide.

The HSO’s primary functions are to provide:

- housing counseling services,
- accurate and nondiscriminatory housing rental listings,
- information on the rental partnership and utility deposit programs,
- lease negotiation and landlord mediation, and
- military relocation assistance.

These services are invaluable, but the HSO is often minimally utilized, and Headquarters Department of the Army is determined to change that through several initiatives.

The Army is working with several government agencies on programs for service members. In 2011, Fannie Mae and Freddie Mac altered their mortgage servicing guides for lending institutions and identified military permanent changes of station as an involuntary job transfer, a hardship. By specifically identifying PCS as a hardship, service members who are current in their mortgage and who are in



Megan Purkey
Photo courtesy of the Professional Housing Management Association

receipt of PCS orders have more options available to them in a quicker timeframe than those customers not in a situational hardship.

To further assist mortgage-holding service members with PCS orders, the Army is working with HOPE NOW — an organization funded by Fannie Mae, Freddie Mac and major lending institutions — to bring outreach events to five installations in early 2012. The locations are U.S. Army Garrison Miami; Fort Gordon, Ga.; Fort Jackson, S.C.; Joint Base Lewis-McChord, Wash; and a site to be named in the Washington, D.C., area.

These outreach events are intended to assist current mortgage-holding service members who are having trouble making mortgage payments, expect to experience trouble making mortgage payments and/or have received PCS orders. More than 15 major lending institutions will be represented at the events, and current service member customers of those institutions can develop ways to work out or modify their loans on the spot. Fannie Mae, Freddie Mac and the Department of Veterans Affairs will also be in attendance to approve any actions under their purviews and answer questions about programs available to help service members at their current or future duty stations.

In 2011, HQDA began to develop an HSO certification to replicate the

Acronyms and Abbreviations	
HQDA	Headquarters Department of the Army
HSO	Housing Services Office
PCS	permanent change of station

standardization of services achieved by Army Community Services. However, after consultations with several garrison commanders and input from Installation Management Command Headquarters and G-1, the HQDA staff decided to perform an assessment in 2012 to identify the current operating environment for HSOs.

This assessment uses the same survey developed for the certification but does not apply a grading scale to the outcome. Installation HSOs will evaluate themselves in four areas: management, oversight, office setup and services. In addition, the HSOs will help HQDA identify the manpower hours it takes to complete each HSO job function identified in Army Regulation 420-1. The information gathered during this assessment will help the Army plan and program for the future of HSOs.

The most important thing to remember is that HSOs are located on just about every Army installation worldwide and are staffed to provide housing assistance to all military members, Department of Defense Civilians and military Families. HSO location information can be found on installation websites or on the Army Housing Online User Services website, <https://www.housing.army.mil/ab/default.aspx>. Many HSOs can be reached quickly through social media avenues, having established official Facebook accounts.

HSO staffs take pride in their work and are prepared to assist Soldiers, Civilians and Families with any housing concerns, questions or issues that may arise.

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Wanda Sorrells of the Fort Sill, Okla., HSO advises a Soldier on local housing options. Photo courtesy of Army Housing Division



Key management system greatly improves barracks access control

by Challen Jay Kelker

The Single Soldier Housing Office under the First Sergeants Barracks Program at Fort Irwin, Calif., manages 10 of the 18 barracks and the direct billeting care of more than 1,200 Soldiers. Last November, when Fort Irwin stood up the FSBP, it was clear that an automated key tracking system was essential.

An automated key tracking system manages keys using software and secured cabinets for key inventory. The system complements Fort Irwin's FSBP objectives while maintaining the safety and welfare of Soldiers.

Before FSBP, Fort Irwin managed barracks keys with lockboxes and handwritten logs. Securing and tracking keys had been problematic. Units managed keys with less-than-optimal control. They did not consistently comply with *Army Regulation Physical Security 190-11*, correctly fill out DA Form 5513 or conduct semi-inspections. The ability to account for every key was simply not there. Soldiers assigned to this task were generally not trained in housing management and key control, and performed those tasks as additional duties.

Fort Irwin's FSBP implementation required correction of this situation and other inadequate barracks management practices.

The automated key control system now in place for 10 barracks consists of seven steel drawers holding more than 4,000 keys that are accessible only to staff with the required fingerprint log-on. Each key is attached to a tag that lights up when requested. A date, time and user stamp is automatically recorded when a key is pulled. Information on Soldiers or contractors issued keys can be entered, and the tag can be returned to any open slot with its new location instantly updated. Army-approved reports can be pulled in seconds, and hand receipts can be printed.

Unlike the lockboxes of the past, access can be customized, and all transactions



Challen Jay Kelker
Photo by Scott Schimp, Directorate of Public Works intern, Fort Irwin

are automatically tracked. The system provides an immediately accessible, 100 percent verifiable audit trail. It reduces poor accountability practices and virtually eliminates key loss.

The key tracking system can lead to safety improvements and reduced liability for housing and contractor staff. It reduces unauthorized access to barrack rooms but permits access in case of emergency. Reports can be pulled that show who had access to what areas.

The automated key control system is not foolproof. No system can stop someone from losing a key or trying to bend the rules. It does, however, ensure a level of accountability impossible before. When tracking lost keys, mysteries can be solved. The system may also help catch and resolve problems such as unlocked doors left unattended.

Improving work efficiency is another benefit. Checking keys in or out takes only seconds, and because keys can go back in any drawer, there is no worry that a key was placed in the wrong slot. Downtime from inability to find keys is reduced, along with the time needed for automated reporting, facilities inspection and to answer command-driven inquiries. The eliminated paperwork and immediately available reporting from the software dovetail with green objectives and the operational tempo.

Some difficulties may be experienced

Acronyms and Abbreviations	
FSBP	First Sergeants Barracks Program
SSHO	Single Soldier Housing Office

in adapting initially, and more work is involved at the beginning to ensure the database is set up correctly. For a successful transition, it's imperative to explain how the automated system benefits Soldiers and management, and initial training for the staff is essential.

An automated key tracking system works very well at Fort Irwin and is a possible solution for other organizations that maintain accountability of large quantities of keys. The system solved Fort Irwin's key-control predicament and prevents the housing team from being encumbered by avoidable key management challenges. By fiscal year 2013, the housing office, if fully staffed, plans to manage all 18 barracks on post, effectively ending key control issues within the barracks housing program.

Sustaining prudent control of the keys that protect the property and welfare of Soldiers in the garrison environment is a huge responsibility. The tightly controlled access possible using an automated key control system not only significantly mitigates the risk of keys falling into



An automated key system holds and keeps track of keys for 10 barracks at Fort Irwin. Photo by Sgt. 1st Class James Elliot, noncommissioned officer in charge, SSSHO.



Army Family housing budget process

by Danny Brannon

The complexity of the Army's requirements and funding process defies explanation in a single article. However, focusing on Army Family housing funding is manageable. It is important for you to understand the big picture and what can help or hurt you.

You might hear, "What do those idiots at headquarters do all day?" Others say, "They ask me questions, I give them answers as fast as I can, and when we get our money, it is never enough!" One of those idiots at headquarters has an answer.

First, you need to know that, even if all garrisons had entered all of their requirements perfectly and on time and all were approved by each successive headquarters, there would not be enough money to fund everything. There is never enough money to go around.

Second, the process is very long, formal, complicated and tedious. To complete this process, takes hard work from housing folks at garrisons, regions, commands and Army headquarters, both staff and secretariat. In turn, the two headquarters must validate your raw requirements, apply funding by priority and try to satisfy your critical requirements — all while keeping within the limits that were previously set for the AFH budget.

How does the Army validate housing requirements? In short, it looks at your past

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the wrong hands but also saves significant time, money and stress while increasing the overall efficiency of the housing operation.

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Danny Brannon
Photo by Studio E Photography

execution of your AFH funding to predict requirements. It also adjusts to changes in your program and smoothes out year-to-year differences. Then, it fits worldwide requirements to available funding.

Who does what? On the left hand, the Army Housing Division in the Office of the Assistant Chief of Staff for Installation Management programs the funding, defends the program and the budget, and oversees execution of the appropriations. On the right hand, Installation Management Command and the U.S. Army Corps of Engineers assist in programming funds by collecting requirements, because both commands execute millions in AFH funds.

To give you some perspective on the size of this task, IMCOM will receive and execute \$460 million and USACE about \$40 million of AFH operational funds in fiscal 2012. Operational funds are "one-year" funds and must be obligated during the fiscal year. In addition, USACE will execute another \$180 million in AFH construction funds in FY 2012, spending the money over the next five years. Army Housing Division executes less than \$10 million in AFH operational funding.

At any one time, the housing folks at both IMCOM and OACSIM are involved in many budget and programming processes. In March, they were involved in executing the FY 2012 program, defending the FY 2013 president's budget

Acronyms and Abbreviations	
AFH	Army Family housing
APE	Army program element
BES	budget estimate submission
FY	fiscal year
IMCOM	Installation Management Command
MDEP	management decision package
OACSIM	Office of the Assistant Chief of Staff for Installation Management
OSD	Office of the Secretary of Defense
POM	Program Objective Memorandum
USACE	U.S. Army Corps of Engineers

and developing the FY 2014-18 Program Objective Memorandum, or POM. They had already worked past the FY 2013 budget estimate submission, known as the BES.

The process proceeds in this order: POM, BES, president's budget, appropriation and execution. It's never over; the budgeteers start again before they even finish.

Many folks do not realize the complexity and detail in the POM. Imagine a matrix with four cost levels, 10 Army programming elements, three major Army commands and 10 years. This matrix would have 1,200 boxes to fill. Luckily, many of the boxes are empty, and those for prior years are already filled.

The major beneficiaries of the funding are IMCOM, USACE and OACSIM. They build up most of the requirements from the bottom — IMCOM installations and USACE districts. In the FY 2014-18 POM, those requirements involve about 50 garrisons and other commands. Various recipients receive smaller amounts, like the \$5 million for Family housing leased residences for the Army Central Command in Qatar and Kuwait.

To develop the POM for AFH operations, the Army Housing Division takes the prior three years of expenses and finds factors that represent average costs to operate by dividing by the average inventory at the time. Then it inflates those factors to future years and multiplies by future inventory. Last, it adds the



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projected costs that are independent of inventory such as centralized housing management tools and training. This process works well for management and utilities costs.

For maintenance and repair, Army Housing Division projects requirements by using a model that determines how much each garrison should spend to sustain its inventory of housing buildings. This model uses costs per square foot, not per house. This method is more accurate and conforms to the way that maintenance and repair costs are projected for nonhousing buildings.

When Army Housing Division has the requirements for all Army Family housing, it puts the information into briefings that summarize that information by major program. Each briefing is known as a “management decision package,” or MDEP. Over time, the term “MDEP” has come to mean the program itself.

The Army Housing Division has three major MDEPs for AFH operations:

- E33H covers operations and utilities for Army-owned Family housing;
- E34H provides maintenance, repair and sustainment of Army-owned Family housing; and
- E35H holds leasing of Family housing.

Housing managers brief the MDEPs to a panel of colonels and GS-14s. Some plans are approved, and others are not. The housing managers answer questions, then regroup and pitch the final numbers that go into the POM. The POM gets worked constantly from February to September of each year.

In September, the Army Housing Division puts the most recent numbers into a formal book — the BES — that is the dress rehearsal for the president’s budget. The BES and the president’s budget have less detail, but they are more formal. After the Office of the Secretary of Defense takes a crack at the numbers

and justifications, it make changes through a process called “resource management decisions.” OSD gives money, and it taketh away. Sometimes, it is easy to see why; at other times, it is a mystery. At this stage, folks from the Army staff and secretariat work very closely.

In December, January and February, the president’s budget is prepared. As the funding bills work their way through Congress, the committees add restrictions or remove funding they consider unnecessary. Occasionally, Congress adds more funding.

That’s the short of a long process. AFH operations take three years to get from concept to actual funding. For example, the execution progress of FY 2011 funding is used to program FY 2014. The FY 2014 funding can be tweaked when FY 2012 execution comes in. In other words, it takes almost three years for any shift in execution alone to affect your funding.

Compare this to AFH-funded construction projects, where it takes two years to get a project into funding, a year to get it appropriated and then two or three years to get it built. Even when desperately needed, residences take six years to go from ideas to bricks.

Some challenges and problems do not land on the doorstep of housing managers. In the past, two or three garrisons have shared the same cost accounting center, and this factor makes it difficult for Army staffers to separate costs and makes it harder to create the cost factors.

From an Army Housing Division perspective, some actions hurt garrison efforts:

1. Don’t record your costs under the wrong accounting code or APE. Since the Army Housing Division collects and analyzes the obligations data, it can see that some locations have breakdowns in accurate reporting. Some locations report lease costs when they have no leased residences. Others with leases report lease payments

but no costs to manage the leases. Correct cost codes can be found in DFAS-IN Manual 37-100.

2. Don’t send forward a construction project with a DD Form 1391 that is only a concept, not a detailed plan. The first two pages of a DD 1391 can be prepared in less than a day, but the thinking that goes into resolving the problems that might be encountered requires more time. Projects involving dozens of residences and millions of dollars should be launched after thorough planning.


3. Don’t have inconsistent requirements. For example, a garrison might ask for construction that adds residences to the current inventory when that action is not justified by the housing market analysis. Or, a command might request long-term leasing where privatization is the chosen long-term solution.

Taking other actions can help you help yourself:

- 1. Do send your detailed future requirements to the next higher level.**
- 2. Do record your current obligations correctly by location and APE.**
- 3. Do assign and manage leased units to optimize fit for the Families and the funding.**

Remember, although your garrison is special, it is still one of many.

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Fair housing for military Families

by Matthew D. Conlan

Housing services professionals constantly strive to provide quality housing options and services for military members and their Families. Primary services are housing advocacy and counseling, which includes aiding military members with complaints of discrimination, inappropriate business practices and other concerns that create significant stress for members.

The Department of Defense and the individual services rely as much as possible on local communities for housing military Families. About 70 percent of Army Families are housed off post. This statistic means Army housing professionals must be able to help members who encounter difficulties in securing adequate, suitable housing in the community, including counseling for those who are discriminated against or treated unfairly.

On April 11, 1968, President Lyndon B. Johnson signed the Civil Rights Act of 1968, commonly known as the Fair Housing Act, which was a follow-up to the Civil Rights Act of 1964. The FHA prohibits discrimination in the sale, rental and financing of housing based on race, color, religion or national origin. In 1974, the FHA was amended to include gender discrimination and sexual harassment, and again in 1988 to add disability and familial status, i.e., having children under 18 or being pregnant.

The FHA, as amended, defines each of these protected classes. Many states and localities define additional protected classes within their statutes, including age, sexual orientation, gender identity and expression, military status, personal appearance,



Matthew D. Conlan
Courtesy photo

political affiliation, source of income and victims of domestic violence.

With the repeal of “Don’t Ask, Don’t Tell,” gay and lesbian military members are now able to serve openly. However, the Defense of Marriage Act prohibits the federal government from recognizing same-sex marriage, so same-sex partners do not qualify as dependents for many military benefits and services, including on-base Family housing.

With this situation in mind, housing services personnel may begin seeing military members with housing discrimination complaints based on sexual orientation when seeking off-base housing. Contrary to popular belief, sexual orientation is not protected under the FHA or its amendments, and the federal law does not protect gays and lesbians or other sexual minorities from discrimination in housing. However, about 20 states, the District of Columbia and more than 150 cities, towns and counties across the nation have implemented additional protections that specifically prohibit such discrimination against lesbian, gay, bisexual and transgendered individuals.

Transgender and transsexual individuals are not permitted to join the military services, and the repeal of Don’t Ask, Don’t Tell has no effect on these policies.

The U.S. Department of Housing and Urban Development recently proposed new regulations intended

Acronyms and Abbreviations	
FHA	Fair Housing Act
HUD	Housing and Urban Development

to ensure that its core housing programs are open to all eligible persons regardless of sexual orientation or gender identity. HUD requires its discretionary funds recipients to comply with local and state nondiscrimination laws that cover sexual orientation or gender identity.

In July 2010, HUD issued guidance that treats discrimination based on gender nonconformity or sex stereotyping as sex discrimination under the FHA and instructed HUD staff to inform individuals filing complaints about state and local agencies that have lesbian, gay, bisexual and transgendered-inclusive nondiscrimination laws.

Under guidance announced last year, HUD will, as appropriate, retain its jurisdiction over complaints filed by lesbian, gay, bisexual and transgendered individuals or Families but also jointly investigate or refer matters to those state, district and local governments with other legal protections. HUD maintains a webpage with links to state fair housing information at <http://portal.hud.gov/hudportal/HUD?src=/states>.

In addition, in those areas where state or local laws do not specifically include sexual orientation and gender identity as prohibited bases, a person’s experience with sexual orientation or gender identity housing discrimination may still be covered under other FHA protected classes.

Here are two examples:

- A gay service member is evicted because his landlord believes a false stereotype that he will infect other tenants with HIV or AIDS. This behavior may constitute illegal discrimination under the FHA because, in applying this stereotype, the landlord assumes the service member has a disability — HIV or AIDS, which are recognized as disabilities under FHA. ➤





Guide to constructing successful Family housing DD 1391s

by Dolat G. Desai

Housing affects the quality of life and mission readiness for Soldiers and Families. For this reason, housing is a critical component on installations and can leave a lasting impression.

The Public Works master planner is central to pulling together facility requirements for the entire installation to create a cohesive and well-thought-out plan that could save dollars in the long term. Housing managers need to know and rely on their master planners to ensure housing requirements are fully addressed in the installation's master plan and work alongside them to prioritize the installation's projects list.

Installation master planners and Housing Branch chiefs should collaborate to prepare DD Form 1391s. This collaboration will result in a well-prepared, logical, comprehensive DD 1391 that includes the necessary supporting documentations and tabs

Congress requires that DD 1391s be used to submit requirements and justification and to support funding requests for Military Construction. A systematic approach is best when preparing a DD1391. Know what is required, and visit the project site to collect information.

The DD 1391 Processor System is an application of the Programming Administration and Execution System known as PAX. PAX assists users in preparing, submitting, reviewing, correcting, printing and archiving DD 1391s according to Army Regulation



Dolat G. Desai
Courtesy photo

420-1, *Army Facilities Management*, and DA Pamphlet 420-1-2, *Army Military Construction and Non-Appropriated-Funded Construction Program Development and Execution*. The DD 1391 Processor System consists of several modules that must be completed.

Success factors

A good DD 1391 can result in a successful project. Keys to producing a good DD 1391 are:

- a clear, concise and logical statement of need;
- a current economic analysis that contains a full exploration of alternatives;
- completed environmental documentation;
- an approved site;
- a firm scope; and
- explanations of valid costs and the impact if the project is not provided.

The DD 1391 front page, Tab A, reflects the project description. There, you tell what is needed. Describe all principal features of

Acronyms and Abbreviations

PAX	Programming Administration and Execution System
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work that are included in the project detail cost — primary and support. Define the sustainable design and development and Energy Policy Act of 2005 requirements, and describe any related facility demolition or special requirements, heating and cooling systems, and accommodations for individuals with disabilities.

Other Tab A sections that must be completed are:

Requirement – Explain why the project is needed now. What is the housing requirement?

Current situation – Describe how the housing requirements are currently being met.

Impact if not provided – Explain what the impact will be if this project is not approved.

Additional – Use the standardized text available on PAX for economic justification, physical security and antiterrorism measures, and joint use. Sustainable design and development can be edited as appropriate for each project. Avoid lump sum prices. Accurately identify all items of construction and the associated costs, and provide enough detail for meaningful review.

“Primary facility cost” captures costs for principal features of work commonly referred to as “costs inside the 5-foot line” in vertical construction. Building

treatment in housing.

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- A property manager refuses to rent an apartment to a gay service member. If the housing denial is because of the prospective tenant's nonconformity with gender stereotypes, it may constitute illegal discrimination on the basis of sex under the FHA.

To be effective advocates for military members and their Families, housing

services personnel must be well-versed in federal, state and local fair housing laws. Housing personnel should make every effort to stay current in fair housing training and establish working partnerships with their state and local human rights agencies to determine the nature and spectrum of coverage of state and local laws. Through these efforts, the Army can continue to ensure that service members and their Families receive fair



Operational readiness training complexes vital to Army mission

by Larry A. Gilchrist

The Army developed operational readiness training complexes to support Reserve component annual and weekend transient training, active component training of Soldiers away from their home stations, and mobilization and demobilization for both contingency and deployment forces. The training role and facilities capacity that ORTCs provide are critical to the Army's ability to deploy trained and ready combat forces worldwide.



Larry Gilchrist
Courtesy photo

Regional collective training capability

On Oct. 25, 2011, the Army published a memorandum of instruction that affects ORTCs. The memorandum established the goal of regional collective training capability.

RCTC will optimize regional home station training support systems capabilities nationwide and support the Army Force Generation Process's rotational readiness model — reset, trained, ready, available — for the active and Reserve components. The Army identified 27 locations within the continental United States as RCTC host installations — 13 active component,

11 Army National Guard and three Army Reserve.

The RCTC installations will apply an enterprise approach to collective training, which is congruent with Office of the Secretary of Defense guidance to achieve operational and fiscal efficiencies. For RCTC to be successful, funding of two primary elements is essential: the ranges required to support the collective training of the specific units assigned and the ORTC facilities that house, feed and support the Soldiers while they are there.

Acronyms and Abbreviations	
ARFORGEN	Army Force Generation
HQDA	Headquarters Department of Army
MILCON	Military Construction
ORTC	operational readiness training complex
RCTC	regional collective training capability

Drawdown effects

The Total Army Analysis and subsequent troop and brigade combat team reductions will also have an impact on future ORTC requirements. Without question, the Reserve component will continue to provide a portion of the strategic and operational depth for the total Army.

According to the 2010 Quadrennial Defense Review, "Prevailing in today's wars requires a Reserve Component that can serve in an operational capacity — available, trained and equipped for predictable routine deployment. Preventing and deterring conflict will likely necessitate the continued use of some elements of the Reserve Component — especially those that possess high demand skill sets — in an operational capacity well into the future." ➤

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information system costs are included in unit square foot costs and are not listed separately.

"Supporting facilities costs" are commonly referred to as "costs outside the 5-foot line" in vertical construction. For information systems outside the 5-foot line, only construction costs may be added.

Facility costs should range from 15 percent to 25 percent of primary costs. If supporting facility costs exceed 25 percent of the primary facilities costs, they must be justified in the description of proposed construction.

Remember that the installation Housing Branch chief and master planner working together can create a defensible and creditable plan that can be supported

by all levels and have a strong chance of making it to the president's budget book sent to Congress for authorization and appropriation.

Help

An excellent reference for completing DD1391s is the *U.S. Army Corps of Engineers No. 2003-8 (Rev.1) Engineering and Construction Bulletin Appendix E*, DD Form 1391 Checklist, found at http://www.wbdg.org/cb/ARMYCOE/COEECB/ARCHIVES/ecb_2003_8.pdf.

For detailed instruction on how to use the PAX system, go to <http://www.hnd.usace.army.mil/paxspt/files/RefGuide.pdf>.

The PAX support web page is at <http://www.hnd.usace.army.mil/paxspt/>. The DD1391 tutorials found there guide you through the procedures for creating,

editing, monitoring and printing DD 1391 forms and support documentation. The tutorials provide excellent training for users who cannot get to the Proponent Sponsored Engineer Corps Training course, users who need a refresher or users who are having trouble with one of the system functions.

For questions, comments and suggestions, the PAX Support Helpdesk can be reached at 256-895-1838 or paxsphuntsville@usace.army.mil.

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With the drawdown in Iraq complete and the drawdown in Afghanistan proposed within the next few years, there will be a tremendous requirement to provide training facilities to support the ARFORGEN cycle necessary to ensure the Army achieves the nine-month boots-on-the-ground versus dwell-time ratios of 1:3 for the active Army and 1:5 for the Reserve components.

The simultaneous demand for transient training facilities from all three components is forcing transient Soldiers to be housed in a combination of deteriorated temporary facilities such as World War II wood or relocatables. Off-post leased hotels are being used in some locations as the only alternative at a multi-million dollar annual cost.

Investment strategy

The Army is developing a long-term, holistic plan and investment strategy for ORTCs linked with the RCTC concept, which further focuses its investment efforts.

The primary facility requirement of an ORTC is transient training barracks. Most of the Army's transient training barracks were constructed during World War II and are obsolete or inadequate.

As the Army nears completion of the buyout plans for permanent party and initial entry training barracks, transient training barracks are likely to be the next facility category to receive heavy focus from Army leadership.

The ORTC requirements will be programmed based on end strength, force structure, stationing decisions and training loads. When those decisions are finalized, the Army will develop an ORTC investment strategy that includes:

- deconstruction of excess facilities,
- sustainment of those that currently meet quality standards,
- revitalization of facilities that do not meet quality standards, and



This conceptual rendering shows an ORTC at Camp Atterbury, Ind. Graphic courtesy of CSO Architects & American Structurepoint, Inc.

- build-out of the remaining shortfall with Military Construction.

To ensure the MILCON investments provide maximum benefit at the least possible cost, the Army just approved a new standard design for the ORTC that is less expensive.

Facilities management


For the Army to make informed decisions and precise investments, the installations must ensure that they maintain real-time data in the Army's standard real property systems.

The Installation Status Report and the Requirements Planning and Analysis System are both critical tools that feed information to the decision makers at Headquarters Department of Army, and as the Army rolls-out eMH, the Enterprise Military Housing system, worldwide this fiscal year, HQDA will begin to receive the utilization data necessary to direct investments where they are needed most.

The ORTCs are key to the Army's ability to effectively generate trained and ready forces for combatant commanders at sustainable rotational levels. It is imperative that HQDA and Public Works professionals ensure that future facility

investments are deliberate and carefully prioritized as the Army builds training capability over time to better support the Reserve components and gain the training efficiencies intended with RCTC.

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Yongsan answers housing questions with renovation program

by Charles Markham and Samuel Brooks

What is behind the home's walls? How many Army Families have lived in this house? When was this house built?

These questions and many more have been asked by occupants of Army Family Housing units on U.S. Army Garrison Yongsan in Seoul, Korea. Most of these government-owned, government-operated units were built in the late 1950s and are still in use. Some unaccompanied personnel housing units were built by the Imperial Japanese Army as early as the 1930s, and they, too, are still occupied by U.S. Forces Korea personnel. Though exterior and interior renovations have taken place over the years, most of these units retain their original structural members and utility infrastructure.

Concerns and issues the Directorate of Public Works has for these cement block duplexes include: asbestos containing material; lead based paint; old wiring; deteriorating plumbing; aging heating, ventilation and air conditioning systems; nonfunctioning fireplaces; rotting wood; utility code violations; and weakening structural members. Concerns and issues occupants have include: outdated floor plans, small bedrooms, inadequate closet space, lack of insulation, mold and unreliable utilities.

The cost of apartment living in Seoul approaches \$50,000 per year, so on-post housing presents a bargain for the U.S. Army. The average annual sustainment, repair and utilities cost for a typical USAG Yongsan senior officer Army Family housing unit is \$26,169. Thus, the payback period for any renovation and upgrade work is short.

However, the quality of on-post housing does not meet the standard that Army Families find in continental U.S. privatized housing. When USAG Yongsan garrison commander Col. William "Bill" Huber took command, he wanted to change this situation. Huber initiated two pilot renovation projects targeting low-

demand and underutilized two-bedroom unaccompanied officer units and one high-demand senior bachelor enlisted unit. The goal was to develop a standard renovation package that brought these quarters to an acceptable standard of living for unaccompanied senior personnel at a reasonable cost with minimal impact to the community and with a maximum three-year return on investment.

After the pilot projects were started and their conditions found, DPW expanded the program to include nine other stand-alone UPH units and a large 23-unit UPH building using a contractor and year-end funding. DPW in-house and Korean Service Corps personnel will also fully renovate two or three units per year. This housing renovation program will continue for the near future, helping improve Yongsan's unaccompanied service members' quality of life.

Normally, DPW and Korean Service Corps personnel team to work on small-scale renovations or new construction, nothing of the scope needed to completely gut and replace the interiors of these units. New techniques, skills and equipment use were slowly learned. For example, the utility systems, electrical and plumbing were fully replaced with new, modern material and fixtures — to code, not just patched or partially replaced. The lessons learned on these pilot projects will now be used on future work throughout garrison facilities.

Many challenges were overcome throughout the projects: agreeing on floor plans; assessing structural conditions; establishing a responsive supply process; agreeing on material types, texture and color; ensuring the new construction met code; and remaining cost effective.

The projects ended in success. Housing customers received a quality product, and training for in-house workers improved



Structural and utility concerns behind the walls are uncovered during a USAG Yongsan renovation project. Photos by Bryan Dorrough.



A finished Yongsan renovation product features new utilities, wallboard, fixtures and cabinets.

their skills, knowledge and confidence. A sustainable renovation process and program was established to carry this initiative into the future, improving the quality of life for unaccompanied service members in USAG Yongsan. They will, in the future, rest assured that what is behind their walls is safe and new.

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Acronyms and Abbreviations	
DPW	Directorate of Public Works
UPH	unaccompanied personnel housing
USAG	U.S. Army Garrison



Schofield Soldiers have new places to call home

by Dino W. Buchanan and Angela E. Kershner

Barracks for nearly 600 Soldiers officially opened in December during traditional Hawaiian maile lei untying ceremonies at Schofield Barracks, Hawaii. The new barracks became home for 2nd Brigade 25th Infantry Division Soldiers after the completion of two U.S. Army Corps of Engineers' Honolulu District projects.

One unaccompanied enlisted personnel housing project consisted of designing and constructing a six-story barracks to



Ceremony attendees chat in front of newly opened unaccompanied personnel housing at Schofield Barracks. Photo by Angela E. Kershner



This 1+1 common area leads to separated rooms for greater privacy for Soldiers at Schofield's Lyman Barracks. Photo courtesy of Absher Construction

house 192 personnel in a standard 1+1 configuration. The \$29.18 million contract was awarded Sept. 24, 2009, to Hawaiian Dredging Construction Company Inc. and was completed on time and on budget without a lost-time accident. Carol Sakata of CDS International was the architect.

The other, the New Barracks Complex project, consisted of two five-story buildings each of which can accommodate about 200 Soldiers in two-man suites. The contract was awarded to Absher Construction Company of Puyallup, Wash., in 2009 for \$73,268,083. The architect was Charles Fritzemeier of Tetra Tech Inc.

"This is about much more than just the facility," said Lt. Col. Douglas Guttormsen, Honolulu District commander, during one ceremony. "It is about the Soldiers who will be using this facility. It is about the quality of life we can give these Soldiers between deployments."

A typical barracks module includes two fully furnished bedrooms, a full bath and a kitchenette. The barracks are designed and constructed to meet anti-terrorism and force protection requirements. Amenities include a central laundry unit on each floor, activity rooms and mail access areas, exterior half-basketball courts, a physical training area, covered picnic and barbeque shelters, motorcycle shelters and covered bicycle racks.

"Many of the Soldiers who occupy these barracks will have done multiple combat deployments." Guttormsen told guests at the other ceremony. "We have the opportunity through these facilities and those like them to provide these heroes the highest quality of life possible between these deployments."

Both projects have sufficient points to attain Leadership in Energy and Environmental Design Silver certification through the U.S. Green Building Council, but both contractors are pursuing Gold certification.

For its project, Hawaiian Dredging used an exterior insulation finishing system for wall construction to increase durability and sustainability. The texturized finish system is resistant to wear and tear, moisture and mold. It is a hardened, attractive finish that is meant to last. The company used fly ash in the concrete mix design, recycled concrete for the sub-base and insulated concrete forms for interior walls.

Occupancy sensors and door and window cutoff switches automatically regulate air conditioning in the rooms. LED lighting was used in the parking lot, and a chemical-free water treatment system was installed, among many other energy-saving features.

The green sustainability features employed by Absher Construction included high-efficiency, low-flow lavatory faucets, shower heads and water closets; motion sensor-operated light fixtures; and tinted anti-terrorism and force protection windows that reduce heat transfer into the barracks.

Between each of the two-man suites is a utility room where all mechanical and electrical maintenance can be performed without entering the Soldiers' rooms. This configuration saves time for both the Soldiers and for Directorate of Public Works workers. The U.S. Army Garrison Hawaii director of Public Works, Robert Eastwood, hailed this design, calling it very maintenance-friendly.

At both ceremonies, Guttormsen emphasized the importance of teamwork and planning in the construction business and how tight partnerships contributed to the overall quality of these projects.

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Garrison Hawaii builds a better Soldier housing future

by Clyde Sage

Today, U.S. Army Garrison Hawaii is a shining example of what the Army can do for its Soldiers. The roots of that success began nearly two decades ago.

History

In the early 1990s, the Army's Barracks Replacement Program was significantly underfunded. Barracks were routinely characterized as being over-aged, in deteriorated condition, and having limited living space and insufficient numbers of living quarters.

In 1993, a tri-service survey was conducted in response to congressional interest that confirmed that "privacy and separation of living areas" were primary concerns of Soldiers.

In 1994, the Army began the Barracks Modernization Program with Military Construction funding and a new "1+1" construction design standard. The standard would separate administrative, command and control, and supply functions from the barracks.

In November of 1995, the Office of the Secretary of Defense established new construction design criteria for future barracks permanent party construction. Follow-on policy issued to the services in June 2001 slightly modified the initial policy.

Then, in July 2002, the Army vice chief of staff issued New Barracks Construction Criteria. By 2003, a revision to the policy had been issued, by the assistant chief of staff for installation management, along with the U.S. Army Corps of Engineers' director of Military Programs.

The Barracks Modernization Program in Hawaii began in 1995 and gained momentum with each subsequent year. New barracks were constructed, renovations

to existing facilities completed, and efforts continued to the present day with more projects on the horizon that will fulfill Hawaii's requirement. Construction is currently in progress at Schofield Barracks, Wheeler Army Airfield and Tripler Army Medical Center, promising a brighter future for Soldiers.

Planning

A MILCON project takes roughly seven years from inception to execution. The process begins with identifying a project, establishing requirements, completing a preconstruction environmental survey, obtaining site approval, developing a DD Form 1391 with associated tabs, working through the National Environmental Policy Act process, developing a DD Form 3086 Request for Proposal and getting the eventual award.

The process typically begins with a unit requirement and involves many players from the garrison, the Directorate of Public Works, the Corps of Engineers, U.S. Army Pacific, Installation Management Command, Office of the Assistant Chief of Staff for Installation Management and Congress. The requirements are eventually submitted in the president's budget for approval and funding in the National Defense Authorization Act.

Today

The 1+1 standard separates living areas from work areas, providing far greater privacy to Soldiers without compromising command and control.

One example is the New Barracks Project complex on Lyman Road at Schofield Barracks, which became occupied earlier this year. These barracks provide modern amenities such as private rooms, ranges, microwaves, larger counter space, full-size refrigerators and consolidated laundries on each floor, to support Soldiers



Picnic areas, an amenity requested by Soldiers, provide a place for them to gather for rest and relaxation. Photo courtesy of Absber Construction



The renovated historic Quad C Barracks Complex on Schofield Barracks depicts the stunning results that can be achieved through building reuse. Photo by Ken Hayes, historic preservation specialist

in their day-to-day living accommodations, significantly enhancing their quality of life. (Editor's note: See article on page 19.)

More barracks are expected later this year. Two projects are going vertical on Schofield Barracks and one at Wheeler Army Airfield. A renovation project is under way at Tripler Army Medical Center and several more projects are programmed for FY 2013 with occupancy by 2015.

Buyout

The Army revisited its *Barracks Master Plan* in 1996 and established buyout periods for barracks construction and renovation programs, and in 1999, secured funding to complete the buyout for all Army barracks by 2008.

This timeframe was revised in 2007 as part of the *Army Barracks Strategic Plan* due to the turbulence of unit moves, deactivations and reprioritizations in funding. As a result, the buyout period ➤

Acronyms and Abbreviations

FY	fiscal year
IMCOM	Installation Management Command
MILCON	Military Construction
USAG	U.S. Army Garrison



Lewis-McChord barracks design improves Soldier quality of life

by Tanya King

Architects from the U.S. Army Corps of Engineers, Seattle District, considered more than bricks and mortar when they designed the Jackson Avenue Barracks at Joint Base Lewis-McChord, Wash., and it's had a big impact on the residents.

Though they won the 2008 *Chief of Engineers Design and Environmental Honor* and *USACE Design Team of the Year* awards for the concept, awards were not their focus.

"Enhancing the quality of life for unmarried Soldiers was a top concern for us," said Bruce Hale, lead architect for the barracks, which first housed residents in 2008.

"Any time service members have a quality living environment, it better enables them to focus on the mission," said Greta Powell, chief, JB Lewis-McChord Residential Communities Division. "The

Army has invested significant resources to replace aging facilities to ensure single and unaccompanied personnel have a quality of life commensurate with their service."

Since 1995, JB Lewis-McChord has built new barracks and renovated existing facilities, modernizing the 10,000-plus bed inventory. Remaining are 54 1950s-era barracks with common bathroom facilities and long, institutional-style corridors.

As new facilities are built, many are modeled after the Jackson Avenue Barracks' 1+1, garden-style design. They feature smaller groups living in collocated areas, with two Soldiers sharing kitchen, dining and bathroom areas.

"Increased focus on Soldier resilience has lead to increasing focus on quality of life in the barracks," Powell said. "How you design a facility determines how residents relate to one another. The design enhances the team concept and having a battle buddy. It allows them privacy while operating as a team and creates a sense of community."

"We work to keep Soldiers' interests in mind," said USACE architect intern Nathan Gregory. "We strive to improve the physical and human environment and make the facilities as livable as possible."

"Morale and welfare — it's a code people have been trying to crack for a long time when it comes to living spaces," said Leah Anderson, Military Construction



In the shared kitchen, upgraded appliances and surfaces provide ease of cleaning, and the microwave placed above the range adds counter space. Photo by Doug Symes, Portland District, USACE

project manager, JB Lewis-McChord's Planning Division. "How do you get the service members out of their rooms and interacting with others?"

"The garden-style approach is one way of doing that," she said. "The Corps of Engineers created a design where people get to know their neighbors versus the big, long corridors where you might only talk to the person whose door is across the hall."

Though the room module is standardized, Corps designers sought to further improve morale by adding interior touches. Barracks are awarded as design-build contracts, and Corps representatives evaluate proposals and consider better quality features, including countertops and floors, when selecting the contractor, according to Victor Ramos, USACE Military Construction Army program manager.

USACE designers have moved the ➤



JB Lewis-McChord's Jackson Avenue Barracks are a garden-style 1+1 design that encourages resident interaction. Photo by Doug Symes, Portland District, USACE

(continued from previous page)

was pushed to 2013, with beneficial occupancy in 2015.

USAG Hawaii is on track to meet this deadline. In spite of the state of the economy, USAG Hawaii's barracks program has continued to receive support from the highest levels of Army leadership and Congress.

All involved in the Barracks Renewal

Program there have embraced the Army's promise to Soldiers, which is in direct support of the IMCOM Campaign Plan and the commitment to Congress.

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Acronyms and Abbreviations

JB	Joint Base
USACE	U.S. Army Corps of Engineers



Fort Hood's FSBP: Making it happen with less

by Kenneth Fyffe

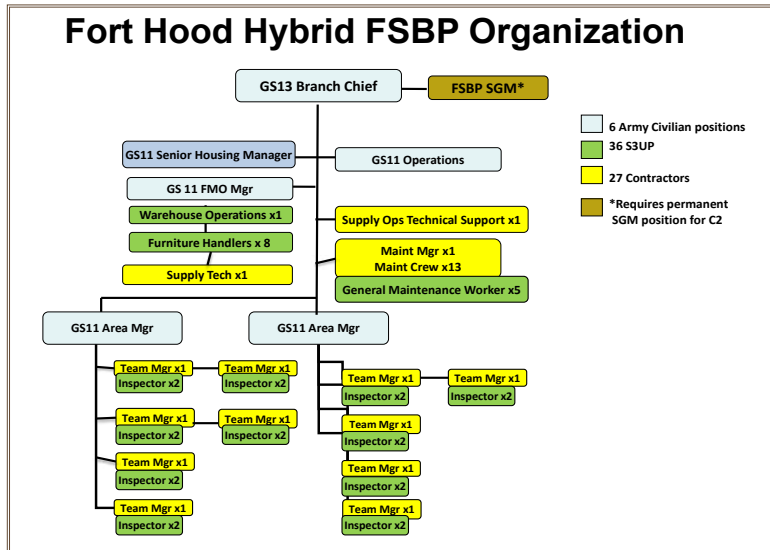
This is a time of shrinking resources and tightly managed budgets. The Army is experiencing a new reality, where more must be done with less while expectations do — and should — remain the same. One of the programs most severely impacted is the First Sergeant's Barracks Program.

Fort Hood FSBP's responsibility is to maintain quality of life for Soldiers who reside in barracks at "The Great Place." Such a broad goal, of course, encompasses a great deal of work. A great deal of work requires a dependable and substantial amount of funding and resourcing, the majority of which has, in light of budgeting concerns, been reduced. What remains is a pressing and enduring need to provide for Soldiers the continued benefits of FSBP without reducing quality or availability.

With contracts and in-sourcing support taken off the table, the burden was placed on the FSBP team to develop courses of action that would meet the needs of the program without increasing funding requirements. After coordination with

leadership and evaluation of several courses of action, Fort Hood developed a hybrid solution that creates a partnership between existing Army Civilian and Soldier support to meet the mission, provide the best possible level of service and reduce the overall cost of the program.

The benefits of FSBP are important in meeting quality of life expectations and conserving funding. These benefits include, but are not limited to, better overall management, much improved maintenance, correct certificates of nonavailability management, efficient barracks space utilization and costs savings from preventive repairs accomplished through training exercises in lieu of off-post billeting.



Combined, these benefits equate to a significant cost savings and cost avoidance. It is, therefore, understandable that a decrease in resources and funding must not impact the quality of service the FSBP provides.

"We needed to face the facts that we had to develop a positive solution to the fiscal constraints but yet still be able to serve the Soldier with the best possible level of service that we can provide," said Marty Miller, FSBP chief.

Once it was determined that Fort

Acronyms and Abbreviations

DPW	Directorate of Public Works
FSBP	First Sergeant's Barracks Program

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microwave over the range to add counter space and added carpet to bedrooms, individual thermostats and larger windows and skylights.

"Little things like carpet make a big difference," said Ramos. "It's more inviting and easier on the feet. Part of the design process is to think of these things."

Creating a more relaxing environment for the residents is carried to outdoor space as well.

"We specify in the contracts that they must keep the trees," said Ramos. "We want it to feel more like a park and less like barracks."

Buildings are arranged around a courtyard in identifiable communities with amenities such as picnic tables, grills, basketball courts, bike shelters and horseshoe pits. Residents can walk to the dining facility and work. Though there is car parking, creating sustainable neighborhoods with walkable communities where the residents live, work and play without driving is part of the master plan, according to Anderson.

"I love the sense of community that has been generated through this design," Powell said. "It's really heartwarming to see the impact the new facilities have on the residents. Once, my furnishing manager was driving his car past the

Jackson Avenue Barracks and he heard screaming inside. He stopped to investigate and found Soldiers screaming with joy because of the quality of their new housing.

"You don't really know the impact design can have until you look in the eyes of someone who has been living in an older facility and moves to a new one," she said. "And the Army and the Corps of Engineers have worked hard to give them the housing they deserve."

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At Fort Sill, Family housing neighborhood opens

by Amber McNeil

Fort Sill, Okla., is seeing the changing face of Family housing. Picerne Military Housing, the Army's privatized housing partner at Fort Sill, completed construction on the first homes in the new Buffalo Soldier Acres neighborhood, and a ribbon-cutting ceremony Jan. 11 marked the occasion.

When completed, the neighborhood will consist of 432 new homes for senior noncommissioned officers, command sergeants major, company grade officers and field grade officers. Buffalo Soldier Acres will be made up of 30 single-Family homes and 402 duplex homes, a mixture of three- and four-bedroom homes that range from about 1,800 to 2,200 square feet.

The homes will feature two living areas, upstairs washer and dryer hookups, modern fixtures and automatic garages. Site development on the neighborhood began in November 2010, and vertical construction began last summer.

"The opening of Buffalo Soldier Acres is a milestone in improving the quality of life

for Soldiers and Families at Fort Sill," said Tim Toohey, Picerne Military Housing program director. "Our goal is to provide homes and neighborhoods that promote a sense of community and that our residents are proud to call home."

Picerne actively recruited local vendors and subcontractors to work on the project. The company estimates the Fort Sill housing project, which also includes 888 renovations, 115 demolitions and construction of three neighborhood centers, will pump more than \$200 million into the local economy.

Sixteen percent of Fort Sill's military population resides in its inventory of nearly 1,400 homes. After construction and demolition activities, the on-post Family housing inventory will increase to 1,728 homes. Due to the influx of Families as a result of Base Realignment and Closure, the additional homes will not significantly change that percentage.


Military housing privatization is a public-private partnership with the primary



The first new homes in Fort Sill's Buffalo Soldier Acres are ready for Families. Photo courtesy of Picerne Military Housing

mission to improve the quality of life for military Families living on post. The Army and Picerne have formed a partnership in which the Army contributes the land in the form of a lease and Picerne contributes construction, renovation and management expertise.

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Hood urgently needed to find ways to continue the FSBP under a reduced budget, FSBP personnel met with III Corps, garrison and Directorate of Public Works leaders to develop options. Through a comprehensive brainstorming and review process, several courses of action were developed and vetted.

These solutions included:

- an all Army Civilian workforce,
- a Civilian and contractor workforce, and
- a hybrid solution that would combine Civilian workers, contractors and Soldiers.

Through a thorough review process, the hybrid course of action was chosen.

The hybrid solution is truly an Army Strong formation. Civilians will serve in their traditional role as area managers, and contractors will act as barracks management team managers. A senior

noncommissioned officer will be in charge of the Soldiers who will support the FSBP's maintenance, furniture management and barracks management teams.

To support the maintenance team, FSBP will take advantage of a U.S. Forces Command initiative, S3UP, which provides Soldiers with needed skill sets. This initiative provides Soldiers the opportunity to maintain and improve those skills while working in the garrison. Soldiers will replace inspectors, serving with the barracks management teams embedded within their respective unit's footprint. The benefits of this placement will be Soldiers' pride of ownership and increased unit interaction with the barracks management teams.

"The Fort Hood solution, which will start in April on a trial basis, is an example of fantastic cooperation and the positive attitude of the leaders of Fort Hood,"

said Hermelinda Sandifer, Fort Hood's Housing Division chief.

There is still work to be accomplished on Fort Hood's selected solution. The team is developing a method of assessing the selected course of action during the trial phase and instructions that will ensure the involved Soldiers receive the training they need.

Fort Hood developed a solution that meets the criteria of reducing the overall cost of the program by using available resources while still providing the best possible level of service to maintain the Soldier's quality of life and the benefits of FSBP. The successful development of this solution was driven by a common goal: The Soldier.

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Walter Reed's historic residences ensure tradition lives on

by Donald Brannon

When Walter Reed Army Medical Center in Washington, D.C., closed its doors Sept. 15, it seemed like the end of an era. The medical operations have been transferred to Fort Belvoir, Va., and Bethesda Naval Base, Md., but some important buildings remain and are flourishing. The remaining buildings are the Residential Communities Initiative housing on the Walter Reed campus and at nearby Glen Haven.

Two of the RCI homes at Walter Reed, Quarters 1 and 2, are used as privatized general flag officer quarters for senior Department of Defense leaders. Glen Haven, some four miles away in Wheaton, Md., provides housing for all other ranks in the local area, including Soldiers, sailors and airmen from Bethesda. The Glen Haven homes are garden-style houses ranging from three to four bedrooms with a beautiful community center and other amenities.

History

Walter Reed was the U.S. Army's flagship medical center until 2011. Located on 113 acres, it served more than 150,000 active and retired personnel from all military branches. Named after Maj. Walter Reed (1851–1902), the Army physician whose medical team confirmed that yellow fever is transmitted by mosquitoes rather than by direct contact, the center was founded on principles that integrate patient care, teaching and research.

Construction of what was then called the Walter Reed General Hospital was authorized by Congress, and the first patient was admitted May 1, 1909. Since its origins, the facility grew from 80 patient beds to about 5,500 rooms covering more than 28 acres of floor space.

World War I saw the hospital's capacity grow to 2,500 patient beds in a matter of months. Through World War II and the Korean and Vietnam wars, hundreds of thousands of service members were treated.

Senior military leaders such as Gens. Douglas MacArthur and George Marshall used the medical facility. Presidents treated there included Harry S. Truman; Dwight D. Eisenhower, who spent his last days there in 1969; and Richard Nixon.

Perhaps most notably, Nixon was treated by Walter Reed doctors with intravenous antibiotics for an infected joint after bumping his knee. Against their advice, a determined Nixon appeared on television for the first presidential debate against John F. Kennedy. Viewers thought Kennedy came across as more lively and vigorous, but political scientists have noted that Nixon's painful knee condition, unknown to television viewers, may have influenced the election's outcome.

Realignment and closure

As a result of the Base Realignment and Closure Act, the facility was combined with the Bethesda Naval Hospital in 2011 to become the Walter Reed National Military Medical Center. Now that the BRAC action is completed at Walter Reed, some of the 72 buildings at the site are being turned over to the District of Columbia's reuse commission. Other buildings will go to the State Department.

The name lives on at Bethesda, however, where the new medical care facility — the WRNMMC — combines both Walter Reed Army Medical Center and Bethesda Naval Hospital. With its 1 million square feet of clinical space, the WRNMMC serves the military community from the Washington, D.C., area and around the world, admitting 16,000 patients a year.



Quarters 1 is one of two historic homes at the former Walter Reed Army Medical Center campus that are used for senior Defense leadership housing. Photo courtesy of Balfour Beatty Communities Inc.

As part of the Army's housing privatization effort, Fort Detrick, Md., and Walter Reed were combined into one RCI privatization project, which was completed July 1, 2004. At the time, Fort Detrick and Walter Reed transferred a total of 410 houses and housing operations to GMH Military Housing LLC, now Balfour Beatty Communities, to form Fort Detrick/Walter Reed Army Medical Center Housing LLC.

The project's four-and-a-half-year initial development period ended Dec. 31, 2008, eliminating the housing deficit with an end-state inventory of 597 homes. A total of 407 new units were constructed, with 240 at Walter Reed and Glen Haven and 167 on Fort Detrick.

Enduring legacy

At the RCI's start, Walter Reed conveyed eight historic homes located within its gates to the project company. Six of the eight historic units were transferred back to the Army in the summer of 2010. The two remaining historic homes are Quarters 1 and 2.

These two beautifully appointed homes are steeped in history yet close to every modern convenience in Washington. The grand, single-family, colonial manor homes built in the 1800s once housed the surgeon general of the Army and the

Acronyms and Abbreviations

BRAC	Base Realignment Closure
RCI	Residential Communities Initiative
WRNMMC	Walter Reed National Military Medical Center



Fort Belvoir preserves, improves housing in historic villages

by Eleanor Krause, Casey Nolan, Brian Smith and John Scharl

Fort Belvoir, Va.'s history includes not only military achievements but architectural ones. As a part of the 21st century privatization of military Family housing through the Army's Residential Communities Initiative, Fort Belvoir Residential Communities LLC, a partnership between the Army and developer Clark Realty, reshaped the post housing areas while retaining their historic character.

Fort Belvoir's sense of place and character derives in part from the buildings that make up the Fort Belvoir Historic District. The district was nominated to the National Register of Historic Places and certified by the Virginia Department of Historic Resources in 1996. In addition to the buildings from the original installation development, a number of housing neighborhoods were worthy of preservation.

Working with historical architects RKtects Studio Inc., FBRC rehabilitated 170 historic houses. To plan for this work, it was important to understand how the housing areas, or villages as they are known on post, developed and what made them each special.

History

In 1917, a training post called Camp

Humphries was established on the site of the ruins of Belvoir Plantation, the colonial era home of Col. William Fairfax. The first officer housing was constructed in 1919 using surplus war materials. In 1927, a formal plan for the expanded Fort Humphries created the central parade ground and mandated a Colonial Revival architecture style. Interest in the Belvoir Plantation ruins led to renaming the fort in 1935. By the end of the 1930s, most of the construction on the original master plan had been completed.

Gerber Village was built in 1930-31 in two central blocks with large community green spaces at the centers. These smaller, one-and-a-half-story houses formed the noncommissioned officer neighborhood.

Larger two-story houses in a meandering park-like setting and with access to the historic ruins were constructed for senior officers in the mid-1930s and named Belvoir Village. By the end of the decade, single-story frame houses that had been built in 1919-21 were being replaced with brick row houses in the adjacent Jadwin Loop Village.

Planning

Months were spent in consultation with the Army, FBRC, RKtects Studio and the Virginia state historic preservation officer

Acronyms and Abbreviations	
FBRC	Fort Belvoir Residential Communities LLC
RCI	Residential Communities Initiative

to plan a project that would improve and expand the houses while maintaining the character of the Fort Belvoir Historic District. The approach they developed retained all of the units in Gerber, Belvoir and Jadwin Loop villages that contribute to the post's 1930s Colonial Revival character.

The historic houses received full interior rehabilitation, repair and upgrading primarily to mechanical, electrical and plumbing systems, the energy envelope, kitchens, bathrooms and closets. The public spaces, such as living and dining rooms, remained unaltered. Looking beyond those general improvements, each historic district village had to be examined in detail, and a rehabilitation plan developed to address the needs and the architecture of each village.

Gerber Village

In Gerber Village, the small Cape Cod style houses were enlarged with additions on the rear of each house. On the first floor, two small bedrooms and a bath were reconfigured to create a master bedroom suite with a bath and a walk-in closet and to provide a powder room.

In the living rooms, unsightly

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commander of the Army's Northern Area Regional Medical Command.

Quarters 1 and 2 were designed in 1908 by the Quartermaster General's Office to serve as officers' quarters. The two homes were essentially identical at the time of construction and, for the most part, remain so.

Located next to each other, the homes were designed in the Colonial Revival style, with prominent two-story front porches supported by six large, round columns. The homes feature a three-story, 7,032-square-foot living space that

includes eight bedrooms, two full baths, two half baths, a fully equipped modern kitchen, hardwood floors, basements and garages. Each home's infrastructure has been updated or renovated over the years.

The homes look out onto beautifully maintained lawns with mature trees from spacious front porches framed with wrought iron railings, and both homes have private gated entrances. They are an integral part of the initial establishment and development of Walter Reed Army Medical Center.

Quarters 1 and 2 were determined eligible for the National Register of

Historic Places in 1994. Through these historic homes, the legacy of the old Army Walter Reed survives. They are reminders of Walter Reed Military Medical Center's contributions, a testimonial to days gone by and a monument to the great service the center provided to millions of service members and Families. Even after they cease to be RCI housing, these homes will ensure that Walter Reed lives on.

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bulkheads were removed with a redesign of the mechanical systems. The kitchens were expanded as were the front sun porches, now large enough to use as dining rooms.

The kitchen and living room open to a spacious new family room. The family room leads to a new patio, which connects to new detached two-car garages. The garages provide space for two large vehicles and additional storage, but an innovative roof form makes the garages appear smaller than they are.

The expanded second floor contains three large bedrooms and a hall bath. Houses that still appear very small on the exterior now provide ample living space for military Families.

Other exterior rehabilitation work at Gerber Village included maintenance on painted surfaces, roofs, masonry



The additions to Gerber Village's Cape Cod homes cannot be seen from the front, helping to retain the neighborhood's architectural character.



Two-story additions to the backs of Fort Belvoir's Gerber Village homes provide the homes with a modern layout and were designed with siding, roofing and windows that make the additions blend with the original design.

and windows. Landscaping has been maintained and upgraded on an ongoing basis. The central greens were also upgraded with community facilities that include new playgrounds, lacrosse goals and a Wi-Fi-enabled outdoor pavilion.

The use of fiber cement siding, faux slate roofing and new wood windows enabled additions to appear to be part of the original homes. The new garages and alleys were carefully sited with the help of arborists and civil engineers so that the mature village green trees could be preserved.

Belvoir Village

Belvoir Village homes, built in the Colonial Revival style, are larger traditional center-hall houses. Minor changes to the layouts of these houses were made to improve closets and bathrooms, addressing typical space issues of houses built early in the 20th century.

Kitchen improvement was the primary change to these houses. They had attached garages, but the size of the garages was inadequate for the minivans and SUVs that are common on a military installation. That space was made more functional by expanding the kitchen and living space into the garage. Changes in the floor elevation and thick brick walls complicated the idea, but the final product successfully provides a spacious kitchen along with a breakfast area or informal den that the houses lacked before.

In addition, the renovations included significant infrastructure



Before renovation, the garages in Fort Belvoir's Belvoir Village homes are narrow and unable to accommodate today's family vehicles. Photos courtesy of Fort Belvoir Residential Communities LLC



After renovation, the Colonial Revival homes in Belvoir Village feature improved kitchens where the garages used to be.



The new kitchen and dining areas of Belvoir Village homes occupy the former garage space.

improvements. Although not visible, these changes are critical for long-term maintenance and comfort. Natural gas lines were installed in the neighborhood to facilitate the replacement of antiquated heating oil boilers and electric air conditioning units. The new heating, ventilation and air conditioning split systems improved comfort and lowered energy and maintenance costs. ➤



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Historic Jadwin Loop Village row houses offer updated amenities to residents.



New brick row houses in Fort Belvoir's Jadwin Loop Village are similar in scale and style to Jadwin Loop's historic buildings.



The exteriors of Jadwin Loop's six Craftsman style houses, built from prefabricated kits in the 1920s, are restored to their original character.

Electrical wiring was replaced within the homes, and new fiber optic telecommunication lines were installed within the community.

The winding roads and wooded open spaces in Belvoir Village contrast with the more formal layout of Gerber Village.

Retaining the dense tree canopy made construction of new garages very challenging, and planning for new garages has been deferred.

Jadwin Loop Village

To fulfill the need for junior officer housing in 1939, Fort Belvoir began to demolish some of the Camp Humphries-era frame houses and began construction

of brick townhouses on Jadwin Loop. Five five-plex buildings were completed when the onset of World War II stopped the project. The 1920s frame houses remained on the rest of the loop. By 2003, the frame houses were suffering from significant structural concerns exaggerated by their site on a steep hillside

The RCI concept for Jadwin Loop continued the redevelopment started in 1939, replacing the small houses with six more five-plexes. The new brick row houses are of a similar scale and style as the historic buildings. The road placement was changed slightly to allow the new buildings to be placed farther from the cliff's edge.

On the historic buildings, new decks were added, and the small detached garages were replaced with larger two-car garages.

The plans kept the village green with its mature trees as large as possible. The other significant upgrades included new playgrounds, a basketball court and picnic areas.

Between the entrances to Belvoir Village and Jadwin Loop Village, an intact row of six of the circa 1920 Craftsman style frame houses were retained and rehabilitated. Built from prefabricated kits, the exteriors were originally covered in wood panels, with small strips of wood, or battens, covering the panel seams. Later, aluminum siding had been installed.

The historic exterior character and features of these houses have now been restored, including the built-in benches on the front porches and the paneled siding. The new siding, made of a cementitious composite material to provide longer wear and lower maintenance than wood, restores the panel and batten look to the houses.

A large great room and fireplace are the most notable historic interior features. Additions added master bedroom suites, screened porches, decks and detached garages





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Park Village

Similar rehabilitation work was completed in Park Village for two remaining L-shaped frame houses from the 1920s. Not intended for long-term use, these houses had been built with inadequate foundations and roof framing. Foundations were strengthened, and additional framing members were carefully added between the existing roof framing to meet today's more stringent building codes.

The most prominent feature of these units is a fireplace inglenook in the great room. The inglenook, a popular housing feature of the late 19th and early 20th centuries, is a cozy seating area with built-in benches flanking the fireplace.

These houses were also expanded with small additions to improve the bedrooms, bathrooms and closets. Kitchen areas were reconfigured to create a small den or office and a mudroom-laundry off of the kitchen. Plank siding, metal roofing and wood windows make the homes look like homes did 50-plus years ago.

Twenty-two new houses were constructed in Park Village in a Craftsman bungalow style compatible with the historic houses. The new houses are evocative of

the 1920s era of Camp Humphreys.

A community green space was developed opposite the historic houses at the end of the loop. Houses were sited to protect and keep large trees, and their front porches and bungalow scale evoke the same old-fashioned, small town feel as the other villages within the historic district.

Quality

The Fort Belvoir Historic District RCI plan was reviewed by the state historic preservation officer and Fort Belvoir cultural resources staff to ensure that the character of each village was not adversely affected by privatization. New housing and additions reflect the materials and style of their historic neighbors but are

not imitative of them, so that a distinction between the new and the historic units may be made.

All historic houses at Fort Belvoir, like the new houses, are Energy Star rated with energy-efficient systems design based on computer modeling techniques,




The living rooms in Fort Belvoir's renovated Park Village homes feature restored inglenook fireplaces with built-in bench seating.

new mechanical systems, new appliances and better insulation. Adult shade trees, protected throughout construction, help cool houses in the summer and warm them in the winter using traditional passive solar principals.

The RCI program at Fort Belvoir has won numerous awards, including a 2010 *GreenGov Presidential Award*, a 2008 *Merit Award* in the Fairfax County Exceptional Design Awards and a *Multi-Housing News Excellence in Design Award*.

The impact of the RCI program on the Fort Belvoir Historic District is profound. Soldiers' Families now live in bucolic, historic neighborhoods surrounding the heart of the post while enjoying the amenities and features that a newly rehabilitated house provides.

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Eleanor Krause is the project's historical architect, RKtects Studio; Casey Nolan is the project director, Clark Realty Capital LLC; Brian Smith is the RCI asset manager and housing chief, Fort Belvoir; and John Scharl is with Privatization and Partnerships, Office of the Assistant Chief of Staff for Installation Management. 



New Craftsman style housing in Fort Belvoir's Park Village reflects the 1920s design of the housing area.



Billeting in a contingency environment

by Mary Schmitt

Tired, hungry and in need of sleep, you arrive at your forward operating base and find the billeting office. The billeting office assigns you a bed, provides its location and sends you on your way.

This scenario occurs hundreds of times a day on the FOBs throughout Afghanistan. What does it take to get a Soldier, Sailor, Airmen, Marine, Civilian or contractor employee a bed in a contingency environment? What are the types of billeting? How does billeting operate in Afghanistan's contingency environment?

Billeting comes under the Base Operation Sustainment – Integrator. It is operated either by the Logistics Civil Augmentation Program IV contract, known as LOGCAP, or by military personnel. Regulation 415-1, *Construction and Base Camp Development in the USCENTCOM [U.S. Central Command] Area of Responsibility*, commonly known as The Sand Book, provides the standards for housing personnel stationed on an FOB.

LOGCAP is a U.S. Army initiative for peacetime planning for the use of civilian contractors in wartime and other contingencies. Contractors perform selected services to support U.S. and coalition forces.

It is a performance-based contract, a structured method for acquiring what is required and placing the responsibility for how it is accomplished on the contractor. Statements of work are written as performance work statements defining or describing a desired end state. Services are task orders within the contract that are “turned on” after completing an approval process. The approval process for turning on a service may be initiated by the BOS-I.”

When the billeting line of the LOGCAP contract is turned on, the contractor becomes responsible for running the billeting operations. This responsibility may include transient billeting and reception, staging, onward movement and integration, which is called “RSOI.”

One of the most important things to understand is that neither the people providing oversight of the LOGCAP contractor nor the military personnel running billeting operations have

experience in billeting.

The military personnel performing these daily functions range in grade from E3 up and have diverse backgrounds from administration to heavy equipment operations. Many are National Guard or Reservists who in civilian life may ▶



Huts are one type of billeting provided at Bagram Airfield. Photos by Mary Schmitt



These tents are an example of billeting at Shindand Air Base, Afghanistan.



A containerized housing unit sleeps two in most cases.



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be auditors, mechanics or restaurateurs. Regular Army, Marine Corps or Air Force members are detailed into the positions.

They manage to provide services every day, 24 hours a day, 365 days a year, to FOB populations ranging in size from a few hundred to more than 30,000. In addition, they often find they need to provide beds to more personnel than were projected to arrive.

Often, the military personnel running billeting are tasked with functions outside the “normal” billeting operations. They may be ordering the bottled water for the entire FOB and seeing to its distribution, emptying the uniform and amnesty drop boxes, operating front-end loaders, setting up tents, building barriers or serving as the contracting officer representative to other lines of the LOGCAP contract.

Billeting offices provide such basic functions as housing for all permanent party, transient and RSOI personnel; managing waiting lists; reviewing work orders; and reporting the FOB’s

Acronyms and Abbreviations	
BOS-I	Base Operation Sustainment – Integrator
FOB	forward operating base
LOGCAP	Logistics Civil Augmentation Program
RSOI	reception, staging, onward movement and integration



At Bagram Airfield, tents (foreground) and containerized housing units (background) house service members and Civilians.

population. On larger FOBs, the office also operates or oversees billeting suboffices located throughout the base. To complicate matters, some FOBs have smaller camps within their confines — camps within a camp. Some of these camps run their own billeting and only report their populations to the BOS-I.

FOB populations are always in flux. Transient and contract personnel can be one of the most challenging areas to manage.

Transient personnel, whether on temporary duty or passing through, are at the mercy of the passenger terminal. Even if they are to leave on a specific day, they still have to make the flight manifest. If they don’t make the manifest, they need a bed. Often, personnel in this situation retain the bed by leaving the assignment paper given to them by billeting in a placard either on the bed or room door. This practice increases the workload of the billeting staff as they have to perform daily bed checks of the transient facilities.

Contractors present a unique challenge. In some respects, they are a migratory workforce. Some move from employer to employer, getting new letters of authorization that allow them to use the dining facilities and other support facilities.

Billeting facilities vary from large capacity tents for more than 100 personnel to smaller 12-man tents, containerized housing units and huts. Containerized



A Marine relaxes outside Camp Leatherneck containerized housing units.

housing units, called CHUs, are around 20 feet long and 8 feet wide. They usually house two people, but under certain conditions, they can house four. Huts are usually plywood buildings that house about six people. Partial plywood walls define the living areas inside huts.

During the first quarter of fiscal 2012, a new element was introduced in Afghanistan. Installation Management Command assumed the BOS-I functions on two FOBs — the Marine Corps’ Camp Leatherneck and the Army’s and Air Force’s Bagram Air Field. The two teams comprise volunteers from various Installation Management Command garrisons with a diverse set of skills to perform functions in the Public Works and force security arenas.

Providing billeting, takes a considerable amount of time, skill and coordination to provide a safe, secure billeting environment for the personnel serving in Afghanistan.

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Installation management in an expeditionary environment

by Hal Alguire and Col. Stewart Fearon

As U.S. forces in Afghanistan continue the surge recovery, it is increasingly important to focus the shrinking resources on the enduring bases. Installation Management Command has the expertise to help train teams to efficiently run forward operating bases, commonly called FOBs, and the right people to effectively and professionally run enduring FOBs.

At the request of U.S. Forces Afghanistan, IMCOM sent a five-person mobile training team to Afghanistan. Led by an Army colonel, the team included IMCOM's deputy provost marshal officer, two directors of Public Works and a housing specialist.

Visit

The mobile training team had four primary objectives:

- to learn how Base Operating Support-Integrator — U.S. Central Command's term for the organization tasked with providing joint base operations and services — operations are performed at FOBs in Afghanistan;
- to coach, mentor and train BOS-I personnel on techniques, tactics, procedures, regulatory requirements and best practices for base camp installation management;
- to identify critical training requirements for garrison teams prior to their assuming BOS-I responsibilities on FOBs; and
- to set the conditions for success for the follow-on IMCOM garrison commands that were to assume BOS-I at two of the larger FOBs as a pilot effort.

The team visited seven FOBs. Each FOB approached BOS-I from a different perspective. Varying degrees of success were found at Camp Leatherneck, Bagram Airfield, Kandahar Airfield, Shindand Air Base, Camp Eggers, Camp Phoenix and New Kabul Compound. Each FOB provided key lessons. This article examines the three largest FOBs visited and suggests improvements to base operations

on enduring bases in a contingency environment.

The three largest bases visited — Camp Leatherneck, Bagram Airfield and Kandahar Airfield — provided the most BOS-I challenges and should be the focus of IMCOM's future involvement. Each of these base camps approached BOS-I using different ways and means to accomplish the same ends.

Leatherneck

At Camp Leatherneck in southern Afghanistan's Helmand Province, more than 19,000 Marines, Soldiers, Airmen and contractors rely on the FOB for their daily life support. The 50-person BOS-I team is made up primarily of Marine junior noncommissioned officers with little or no formal training in installation management.

A cadre of corporals and gunnery sergeants under the command of the deputy commander BOS-I, a Marine lieutenant colonel, and the deputy commandant, a Marine major, runs the base and provides oversight of the Logistics Civilian Augmentation Program, or LOGCAP. Each Marine handles multiple responsibilities and, for the most part, learned them on the job.



Hal Alguire checks out the leased internal combustion diesel generator plant at Camp Leatherneck. Photo by Ron Kaczmarek, director of Public Works, Joint Base Myer-Henderson Hall, Va.

Acronyms and Abbreviations	
BOS-I	Base Operating Support-Integrator
FOB	forward operation base
IMCOM	Installation Management Command
LOGCAP	Logistics Civilian Augmentation Program
QA	quality assurance
RSG	Regional Support Group

The Camp Leatherneck commandant had civilian experience managing commercial rental property and is very good at getting the most out of contractors due to a thorough understanding of each contract. His experience and the backing of the senior mission commander empowers the BOS-I team to provide strong base operations support to the tenants.

The Leatherneck BOS-I team prioritizes its efforts, realizing it is short-handed and can focus on only so many services. The commandant makes it a priority to ensure everyone on Leatherneck has an acceptable place to sleep, good food and a clean place to take care of their personal hygiene. By holding the LOGCAP contractor, DynCorp, to the performance work statement, the team is able to significantly improve tenant services.

All BOS-I team members completed contract officer representative training. The team leverages the capabilities of units such as Prime Power and the Air Force's Red Horse construction battalion to complete projects using organic assets instead of relying solely on the Regional Contracting Center.

The team empowers the units in each life sustainment area to manage themselves through a mayoral system. A combat multiplier for the BOS-I, the mayoral system allows the BOS-I team to put more eyes on the contractor and determine its level of performance. It also provides an avenue for the team to put out information and to hold the mayors accountable for maintaining standards in their areas. Mayoral meetings allow the tenants to raise issues and bring problems to the commandant's attention, improving



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customer satisfaction and response time for critical concerns.

Camp Leatherneck has a comprehensive master plan with dedicated utility corridors and zoned areas for living, maintenance, equipment parks and light industry. By publishing a master plan and holding the tenants to it, Leatherneck has expanded in an orderly fashion and avoided the cobbled-together chaos found on other large FOBs.

By placing the life support areas within walking distance of the services, facilities and work locations, the BOS-I team created a pedestrian-friendly FOB, allowing the BOS-I to limit nontactical vehicles use. The secondary effects include a reduced demand for fuel, less traffic on the roadways and a mass transit system used by 60,000 riders per week.

Bagram

At Bagram Airfield in Parwan Province, the population of 28,000 is significantly larger than that of Leatherneck, and more LOGCAP services support the base. The BOS-I team comprises 66 Soldiers from the 45th Infantry Brigade Combat Team who had no prior BOS-I training. Contractor FLUOR provides the majority of the installation services. The 1st Cavalry Division staff represents the senior mission commander.

Bagram had been a Soviet air base with facilities and infrastructure in varying degrees of serviceability. Some of the facilities and infrastructure were reused while others remained unoccupied or were torn down.

The fast population growth of the last several years created a very congested and chaotic environment. Many tenants created and enforced their own standards and cultures. However, the BOS-I team's diligent, comprehensive master planning efforts over the past few years are taking hold. Although still a very crowded and somewhat disorganized place, Bagram has



Col. Stewart Fearon flies aboard a C130 from Camp Leatherneck to Bagram Airfield. Photo by Hal Alguire

started to create order out of the chaos.

The team is leading the expansion planning and execution on Bagram's west side. This development will allow the demolition of much of the aged temporary housing units on the east side that currently create force protection and safety issues. These moves also will create space for future facilities in line with the master plan. The team is improving infrastructure by constructing a waste water treatment facility and a solid waste disposal complex, and by upgrading drainage systems.

Kandahar

Kandahar Airfield, located about 17 kilometers from Kandahar City, serves as a primary theatre aerial port of debarkation. The Kandahar commander is the senior mission commander. The 645th Regional Support Group, which provides the BOS-I, falls under the Joint Sustainment Command-Afghanistan. As a result, the RSG provides BOS-I services to U.S. forces but is working for a joint headquarters that is not focused on or staffed to oversee BOS-I functions at the enduring base level. Life support services are handled either by contractor DynCorp or by the NATO Maintenance and Support Agency through a variety of contracts.

The BOS-I team is made up of dedicated and hard-working Soldiers with almost no installation management experience who have learned how to run the U.S. portion of Kandahar with a skeleton staff. The team strategically placed

coffee shops and small post exchange annexes in the life service areas to provide convenience to the Soldiers living there.

Support of unit reception, staging, onward movement and integration, known as RSOI, is efficiently planned and executed. The RSOI commander determines future training and billeting loads by pulling data a week or two out. This allows him to schedule mandatory theater training for incoming units. He has organic transportation assets and uses a tax on local units to provide drivers for each training site to quickly and efficiently accomplish the training.

Working hard

Although each BOS-I team serves different tenants and operates under a different chain of command, all are faced with similar challenges in running a base in a contingency environment.

All rely on LOGCAP for many of the services that they provide to tenants. All are managing large construction programs made up of projects being executed by a variety of engineering organizations with third world and local national contractor workforces. All have similar force protection issues to manage, and all deal with daily crises.

These three bases represent challenging environments for any BOS-I team no matter how well trained or staffed. On all three, under-resourced BOS-I teams have been pulled together from units and organizations not trained for these challenges. To their credit, the Marines at Leatherneck and the Soldiers at Bagram and Kandahar have thrown their hearts and souls into the job. But there is a better way of providing BOS-I on large enduring bases.

Recommendations

First, whether BOS-I is handled by an IMCOM garrison support team, an RSG or a hastily selected group of service members, the team needs a baseline level of training to be successful. Untrained ►



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individuals can create a situation in which money, time or materials are wasted, and that can lead to health or safety issues resulting from improper construction or mishandling of hazardous materials and waste.

Units identified to perform a BOS-I mission should receive training prior to being deployed:

- familiarization with the Central Command's 415-1 "Sand Book" with focus on Joint Facilities Utilization Board and Joint Acquisition Review Board processes;
- a thorough understanding of base camps in a contingency environment;
- contracting officer representative training;
- LOGCAP training with focus on adding facilities and infrastructure to the "density list" (more below on this), so that the LOGCAP contractor maintains them, and interpretation of performance work statements;
- familiarization with Regional Contracting Command's structure and duties;
- information on effective FOB mayorship programs;
- a class on the command structure, from U.S. Central Command down to their senior mission commander;
- training on master planning with specific analysis of the master plan for the FOB on which they will provide BOS-I;
- a command post exercise with an FOB garrison scenario.

This training could be conducted at the BOS-I's mobilization station if the organization cannot go to the IMCOM Academy in San Antonio.

Second, the BOS-I should consist of staff experienced in garrison operations. Tasking out BOS-I responsibilities to an untrained and inexperienced unit makes it appear that BOS-I is a low priority that anyone can execute. In reality, large enduring bases present some of the greatest

BOS-I challenges even to experienced professionals.

When is a base considered enduring? By definition, a contingency environment is constantly changing. A large base that has a high probability of gaining enduring status needs BOS-I leadership experienced in installation management. Early focus on master planning and delivery of basic services is critical. Less-than-optimal scoping, siting and processing decisions may be hard to undo or change at a later date and can be expensive lessons learned.

Third, maintenance and repair of real property on large enduring bases should be done through a single focused contractor separate from LOGCAP.

LOGCAP has proven its effectiveness in contingency environments over the past several years. It provides a timeline and comprehensive solution to basic services needed in a contingency environment as small patrol camps grow into large bases. At some point during an enduring base's development, LOGCAP no longer provides the most cost-effective solution for executing maintenance and repair tasks on real property.

A repeated theme reported to the IMCOM mobile training team was the frustration of BOS-I, units, leadership and LOGCAP in getting facilities on the density list. Clearly, part of the solution lies in better quality assurance by the government when a facility is first constructed or renovated.

Having experienced QA personnel is a good first step, but the LOGCAP contract does not incentivize the contractor to add facilities to the density list. Consequently, inspectors conducting technical inspections as required by LOGCAP are overly cautious in ensuring deficiencies, no matter how small, are corrected by the government before the facility is added to the density list.

This risk-adverse approach causes time



Flooding at Kandahar Air Field results from a lack of master planning and attention to drainage. Photo by Col. Stewart Fearon

delays, resource surges by government teams when problems occur in facilities not yet on the density list and general frustration. In some cases, the government pays twice for QA inspections — once by the government and then by the LOGCAP contractor — and for rework on a new facility.

Working with the LOGCAP teams, BOS-I units have developed improvements to the inspection process, but more comprehensive re-engineering is required. One approach is to award a separate maintenance and repair contract for enduring bases. IMCOM and Army Materiel Command should jointly determine the trigger points at which this contracting transition should occur.

Running a large, enduring FOB requires key individuals with the necessary skill sets to deal with the inherent ambiguities and complexities while remaining responsive to the needs of the mission commander. Meeting these needs means planning in advance for scalability as the populations fluctuate. It is imperative that BOS-I personnel have the training and experience to avoid wasting resources and to safeguard the health and safety of the FOB tenants.

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Style guide helps identify historic building architectural types

by Adam Smith and Michelle Michael

A booklet published by the U.S. Army Engineer Research and Development Center offers guidance to installation cultural resource managers who often need to identify architectural influences on historic structures. *The Architecture of the Department of Defense: A Military Style Guide*, is fully illustrated with color photos of various architectural styles used from 1700 to the present. It is available at [http://acwc.sdp.sirsi.net/client/search/asset:asset?t:ac=\\$N/1005784](http://acwc.sdp.sirsi.net/client/search/asset:asset?t:ac=$N/1005784).

The document showcases the wealth of historic architecture inside military installations' fence lines. It also serves a regulatory requirement — DoD is responsible for the stewardship of historic properties under the National Historic Preservation Act of 1966. However, many cultural resource managers do not have architectural or architectural history backgrounds.

The style guide aims to help these managers identify character-defining features and communicate effectively with stakeholders. The guide was developed under the DoD Legacy Resource Management Program.

Architectural influences

The architectural influence of a building is evident in its shape, materials, details and other features that distinguish one building type from another. Many architectural influences exist throughout the United States. These influences evolved as national trends and regional tastes changed. They can indicate the time or period of a building's construction as well as the trends of the country and region at that time.

Buildings on military installations have architectural influences reflecting the historical evolution of the site, the military service and DoD. The evolution of styles within DoD does not match the civilian dates for the same styles exactly.

Often, the military examples are later than their civilian counterparts. For example, the Main Post Chapel at Fort Lewis, Wash., was built in the Romanesque Revival style in 1934, some 30 years after the style reached popularity.

Military influences

Most buildings on military installations represent a particular building type and/or architectural influence due to DoD's use of standardized plans. Each branch of the military developed standard plans to accommodate its building needs cost-effectively through duplication. The plans created a template for installation layouts, public works systems, building types and landscaping.

The standard plans incorporated contemporary architectural influences and their associated features in elements such as the overall form of the building, interior and exterior decorative details, and floor plans. For instance, in the 1860s, the Army developed its first set of standardized designs for housing based on the fashionable architectural influences of that time — Gothic Revival, Italianate and Queen Anne. However, the plans were often simplified or adapted to reduce construction costs and increase efficiency. For this reason, buildings may have only a few features rather than fully representing an influence with all its decorative and functional features.

Style guide use

The document contains many drawings to show architectural details in addition to the photos of historic buildings across DoD.

The National Park Service describes a method

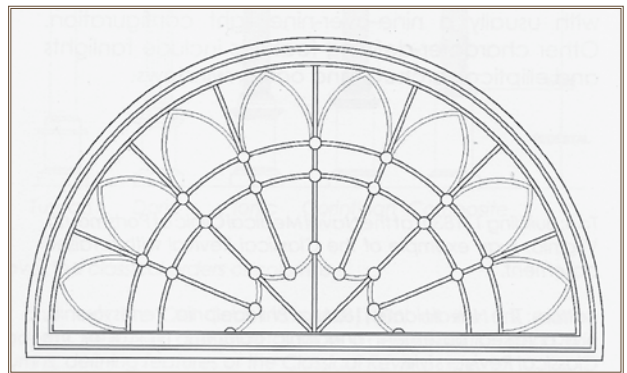


The style guide includes examples such as this 1930s officer's quarters with Colonial Revival architectural influences. Photo courtesy of U.S. Navy

for identifying architectural influence and character-defining features in its *Preservation Brief 17, Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character*. This publication, which can be found at <http://www.nps.gov/bps/tips/briefs/brief17.htm>, is a very helpful reference when managers use the style guide.

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To help identify architectural influences, the guide contains drawings of features like this fanlight that may be found on buildings with Federal influences. Graphic courtesy of ERDC

Acronyms and Abbreviations

DoD	Department of Defense
ERDC	Engineer Research and Development Center



Simple tips ensure maximum efficiency of front-loading washers

by Deb Clark and Deborah Neel

Repair issues and customer complaints have increased at installations with front-loading washing machines, but understanding the problems and following some simple suggestions can help keep the machines running and reduce costs.

The Centralized Furnishings Program, managed by the U.S. Army Engineering and Support Center, Huntsville, purchases high-efficiency, front-loading, commercial-grade washing machines with Energy Star ratings as required by policy. Products from General Services Administration Schedule 51V, 105-002 are from a variety of well-known manufacturers.

Models vary in the number of and types of problems reported. For example, the repair history for one brand of front-loading washers has been unusually high. The most frequent maintenance issues are broken door parts and pump failures.

Typical wash cycles take about 45 minutes, but HE front-loading cycles can run up to 115 minutes. A user may get frustrated and try to open the door, but it's locked throughout the cycle. Some models have only plastic clips to hold the door closed, which are easily broken when this happens.

Pump failures in some HE models can be caused by a combination of horizontal tub design and users who forget to remove small objects from their clothing. Also, using the wrong or too much detergent can cause damage over time.

To reduce avoidable repairs, post these user guidelines — courtesy of Benjamin Otte of GSA — in laundry rooms to highlight proper use of the appliances:

- **Use only a minimal amount of detergent for front-load washers.** Usually, only a tablespoon per load is needed. If you add too much detergent, you will need to run your clothes through an extra rinse cycle.
- **Do not open a front-loader once the cycle starts.** The door locks. Forcing the door open will only break the lock and the machine, and cause the water to come

out the front.

- **Empty your pockets.** Coins and paperclips can clog the drain. Pens can stain your clothes if they go through a washer and dryer cycle.

Along with user education, careful washer selection helps mitigate problems.

Placing a residential washer in a commercial setting voids all warranties. A centralized laundry room outside of a home environment requires a commercial product.

Residential laundry machines cannot handle the wear and tear of a laundry room, even if they have “commercial parts” or “commercial technology.” Make sure the units are commercial grade and not just that certain parts are labeled with that term, like “commercial grade motor.” Commercial technology means just that, and the label is usually there to make the residential machine seem better. Likewise, a “heavy duty” machine is still a residential machine unless it is specifically labeled as a commercial machine.

A commercial machine is built specifically for running multiple times every day. This durability means a longer-lasting machine and saved money in parts and service. A commercial machine also has a much better warranty. Commercial machines are simpler to operate, which means lower repair costs caused by frustrated and confused operators. Commercial machines are also easier to maintain, resulting in lower labor costs.

The commercial washers that meet Energy Star or Federal Energy Management Program standards also offer slightly higher capacity — 5 to 9 cubic feet — as compared to residential products — 3 to 4.7 cubic feet. There is no Energy Star top-load commercial washer on the market.

Design considerations, such as increasing the ratio of dryers to washers, will reduce the overall cycle time for the user and reduce frustration with the extended wait.

The Centralized Furnishings Program

Acronyms and Abbreviations

HE	high efficiency
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and GSA are asking manufacturers to incorporate design changes, such as including an emergency button to interrupt the cycle and unlock the doors, and similar features that might help reduce repairs.

The benefits of energy-efficient front- and top-loading HE washers are many. Cycle interruption due to an unbalanced load is rare. Faster spin rates extract more moisture and reduce drying time and energy consumption. Front-loading HE washers clean more efficiently using less water, and the front-loaders can be stacked, achieving space savings. No center post agitator means the clothes will be more tangled and wrinkled but dryer.

With proper washer selection and user instruction, installations can expect more successful outcomes with HE washers.

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Energy Star front-loading washers and dryers use less water and energy, and can be stacked to save space. Photo by Master Sgt. Mitch Jackson



Deep soil mixing with steam injection cleans up source area soils

by Charles Coyle, Sam Bass, Quang Le, Héctor Santiago and Mark Rothas

A team from the U.S. Army Corps of Engineers' Omaha District successfully used an innovative method of deep soil mixing to remediate an area contaminated by trichloroethylene at an Atlas missile site on the former Offutt Air Force Base near Arlington, Neb. The steam injection and auger technology used is considered relatively new and can be applied at sites that have difficult soil and groundwater conditions to clean up and where technologies that are typically used do not work well.

Thermal treatment using large-diameter auger soil mixing and placement of zero-valent iron, or ZVI, was effective in treating the source area at the Atlas missile site. The pilot study was primarily intended to address vadose-zone soils impacted with chlorinated volatile organic compounds; TCE, cis-1,2-dichloroethylene; and vinyl chloride.

The technology operates one treatment cell at a time by advancing a single 8-foot diameter auger to required depths of up to 60 feet. During active mixing, the soil is homogenized and the permeability increases, allowing for steam and hot air to be injected through ports in the auger's cutting tool.

Steam heats the contaminated soil, thermally desorbing the VOCs from soil particles and then volatilizing the desorbed chemicals. Hot air injected by the process carries some of the volatilized contamination to the surface for capture and treatment. Slurried, micro-scale zero-valent iron is also injected as the large-diameter auger is withdrawn. The ZVI helps create reducing conditions and facilitates dechlorination of the remaining, dissolved-phase

chlorinated solvents.

The treatment zone was about 6,750 square feet, and the depth interval of the treatment zone was from 10 to 40 feet below ground surface. The number of "pushes" by the large-diameter auger to achieve coverage of the treatment zone was 163.

Based on data collected after completion of treatment, the combined technology was effective in reducing TCE, cis-1,2-DCE and VC concentrations in source area soil and groundwater. A reduction in TCE and total chlorinated VOC concentrations of more than 99 percent was observed in both soil and ground water samples collected within the treatment zone.

Outside of the treatment zone, some locations had increased chlorinated solvent concentrations. These increases indicate that a limited degree of contaminant mobilization occurred during treatment. A five-fold increase in the TCE concentration in soil was observed at one location. Directly below this location, the TCE level in groundwater increased from 92.6 micrograms per liter to 10,900 micrograms per liter. This sample location was just outside of the treatment area and is one of the two monitoring well locations that are closest to the high strength portion of the source area, suggesting that the contaminant mobilization was probably limited to areas in close proximity to the treatment zone.

At some of the monitoring wells, substantial reductions in TCE were accompanied by increases in DCE. DCE is an intermediate breakdown product of TCE. Generation of DCE indicates that reductive dechlorination is occurring. Continued monitoring will be needed to confirm that complete dechlorination of DCE is occurring.

It is important to note that the contaminated groundwater at this site




The large-diameter auger's bit is visible below the off-gas collection hood as a worker repositions the vapor collection line during treatment at the former Offutt Air Force Base. Photo by Charles Coyle

will be addressed through a separate remedy. Full-scale groundwater treatment will be accomplished through in situ bioremediation via injection of organic substrate. Also, continued monitoring will be performed to confirm the effectiveness of both remedies.

The soils requiring treatment were mostly silty clay and glacial till. Some modifications to the process were required to facilitate boring through the low-permeability soils. For example, the auger bit was modified to add more aggressive teeth to the top and bottom of the bit to make it more suitable for the clay soils at the site.

Soil treatment operations began in October 2010 but were suspended in November due to winter conditions. They were resumed in March 2011 and completed in May. The contractor was paid \$2.033 million to remediate about 7,500 cubic yards, or \$271 per cubic yard. The total cost also included project oversight, management and the analytical effort. Work was performed under a performance-based contract.

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Acronyms and Abbreviations	
cis-1,2-DCE	cis-1,2-dichloroethylene
TCE	trichloroethylene
VC	vinyl chloride
VOC	volatile organic compounds
ZVI	zero-valent iron



Early integration of NEPA helps invasive plant management planning

by Matthew Hohmann

Nonnative invasive plant species pose challenges for integrated military and natural resources management on Army installations. Either directly or indirectly, nonnative invasive species, or NIS, have the potential to negatively impact military operations, reduce military carrying capacity and compromise long-term sustainability of training lands.

Although Executive Order 13112 outlines federal agency duties to prevent the introduction of invasive species, provide for their control and minimize their impacts, proposed management actions and alternatives should only be implemented after appropriate review under the National Environmental Policy Act.

When NIS management is directly included in an installation's integrated natural resources management plan, or indirectly as a component plan, NEPA review can be efficiently tiered. However, additional benefits can be gained by conducting planning-level environmental analyses.

For example, strategic integration of NEPA analysis into NIS management planning and decision making can:

- influence plan development,
- reduce the risk of ecologically and economically costly delays,
- support long-term and adaptive management, and
- eliminate redundant environmental analyses.

These benefits and a proposed method for conducting broad, yet thorough, environmental analyses of management actions are outlined in a Public Works Technical Bulletin 200-1-89, *Integrating NEPA Analysis into Army Non-native Invasive Plant Management*, available at

http://www.wbdg.org/ccb/ARMYCOE/PWTB/pwtb_200_1_89.pdf.

Although the U.S. Environmental Protection Agency prepared specific guidance for environmental analysis of many natural resources management topics, recommendations for preparing NIS management-related NEPA documentation are not available to Army or other public land managers.

To bridge this gap, the PWTB focuses on providing suggestions for strategic integration of NEPA analysis into NIS management plans and decisions.

The PWTB advocates environmental analysis of both the potential risks of adverse effects caused by NIS management actions and their anticipated benefits. An emphasis on broad environmental analysis of specific NIS treatment types and the site conditions under which the treatments will be applied, as opposed to individual case-by-case analyses, provides managers with greater ability to respond to the dynamic management problem posed by NIS.

This approach is best conducted via a formalized, objective, transparent decision-making process. The PWTB suggests using a multi-criteria decision analysis framework to aid environmental analysis and integrated NIS management planning.

MCDA evaluates the degree to which decision objectives are realized based on multiple quantifiable indicators. In the case of environmental analysis of NIS management actions, the objectives would likely be effective control with acceptable risk of negative impacts and affordable costs.

MCDA is intended to provide a rational way to help decision-makers solve complex problems objectively and can be easily extended to landscape scaled management problems using spatial datasets.

The cost relative to the benefit of applying a planning-level analysis



Different management actions for nonnative invasive plants such as Chinese tallow tree (Sapium sebiferum) pose variable risks to the environment and human health. Photo by Matthew Hohmann

to evaluate potential environmental consequences of NIS treatment alternatives depends on the complexity of the NIS management issues on a given installation and the availability of data to support the analysis. However, the cost of developing NEPA documentation in a form that supports long-term and adaptive NIS management will most likely be far less than numerous, spatially and temporally constrained, case-by-case, environmental analyses.

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Acronyms and Abbreviations	
MCDA	multi-criteria decision analysis
NEPA	National Environmental Policy Act
NIS	nonnative invasive species
PWTB	Public Works Technical Bulletin



Reserve puts sustainability charrettes at forefront of planning

by Jon Fleshman

From its first sustainability charrette in January 2010, the Army Reserve Installation Management Directorate has been working with the Corps of Engineers' Louisville District to refine the process of incorporating energy saving features into the designs for Reserve centers. ARIMD now requires all project officers and managers of Army Reserve center construction to hold a sustainability charrette before the design charrette.



Dave Dale
Photos courtesy of Louisville District



Eric Loughner

The chief of ARIMD, Eric Loughner, and Louisville District's deputy district engineer, Dave Dale, responded to questions about their organizations' collaboration on predesign charrettes to meet the federal mandates for sustainability and net-zero goals.

What's the point of another charrette before the design charrette?

Loughner: Federal leadership in environmental and energy performance, along with energy independence security, has become so important that we've had to create a separate forum to focus exclusively on sustainability strategies. And it's only logical that the design charrette comes after we've determined the potential of the project to accomplish the required energy efficiencies without exceeding the programmed amount.

The pre-design meeting has coupled the word "charrette" with "sustainability," "eco," "energy" and back to "sustainability." What's in a name?

Loughner: We've come full-circle with the scope of the predesign charrettes. Our first sustainability charrette was for the Reserve center at La Cruces, N.M. It took a broad approach that literally included the kitchen sink. We looked at how we could build energy efficiency, use passive energy

systems and renewable energy.

By the way, the Las Cruces kitchen was modeled to consume 21 percent less energy than an all-electric standard Army Reserve center kitchen.

In addition to energy, we considered net-zero water and waste, which limits the use of potable fresh water and eliminates landfills. Then, for a while, we confined our focus to charrettes that pursued energy consumption reduction, but that emphasis proved too narrow and short-changed the relationship among climate, technology, land and community.

We're back to the holistic approach that considers energy reduction, energy efficiency and renewable energy strategies in the context of space, location, life-cycle cost, carbon footprint and budget. So, we're back to using a sustainability charrette for the predesign meetings.

What goes into preparing for a sustainability charrette?

Dale: A lot. Prep time takes about four to six weeks and includes a site visit.

The technical team, usually led by a project engineer architect, can comprise architect, mechanical, electrical, civil, geotechnical and cost engineers. Its members should start with a well-defined scope of work upon which to base their data mining.

Pre-sustainability charrette activity

should include:

- confirming project requirements in the DD Form 1391;
- checking NREL [National Renewable Energy Laboratory] maps;
- reviewing concepts and technologies for energy-efficient design;
- identifying goals and strategies in energy, water, site, materials and operations and maintenance;
- good, old-fashioned brainstorming;
- modeling layouts and orientations, geometries and architectural systems;
- narrowing the alternatives to two to three models;
- identifying potential technologies for cost and energy;
- understanding energy and cost impact of changes; and
- identifying potential low-impact development strategies.

What elements make up a successful sustainability charrette?

Dale: The kind of preparation I mentioned above is the key. During the meeting itself, there should be briefings and discussion that lead to decisions or narrow the options and reduce the amount of additional research needed prior to the design charrette. The technical team's briefers should have the pertinent data at their fingertips.

If the stakeholders are new to the concept of a sustainability charrette, briefly review the executive orders [13123, 13423 and 13514] and energy policy and independent security acts [Energy Policy Act of 2005 and Energy Independence and Security Act of 2007] that describe the federal sustainability mandates.

Present your energy reduction, efficiency and production options in a format that clearly states their performance data and life-cycle costs. The technical team brings its energy modeling to the table along with the site constraints. Include a discussion of potential technologies that addresses



Acronyms and Abbreviations	
ARIMD	Army Reserve Installation Management Directorate



Quick summary of new storm-water requirements

by Elisa Soltren

The Energy Independence and Security Act 2007's Section 438 establishes new storm-water requirements for federal development and redevelopment projects. Section 438 states:

"The sponsor of any development or redevelopment project involving a federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow."

In December 2009, the Environmental Protection Agency issued technical guidance on implementing Section 438 requirements for federal projects, available at http://www.epa.gov/owow/nps/lid/section438/pdf/final_sec438_eisa.pdf.

In January 2010, the Department of Defense developed implementing guidance and established a project design objective to maintain predevelopment hydrology and prevent any net increase in

storm-water runoff, found at http://www.p2sustainabilitylibrary.mil/p2_documents/dusd_ie.pdf.

In July 2010, the Army published a memorandum that it updated in October 2010, *Sustainable Design and Development Policy Update (Environmental and Energy Performance)*. The policy establishes low-impact development as a means to manage storm water on all Army projects. Incorporation of LID to manage storm water will be required starting in fiscal 2013 for Military Construction and Sustainment, Restoration and Modernization projects. The memorandum is at <http://www.asaie.army.mil/Public/IE/doc/Sustainable%20Design%20and%20Dev%20Policy%20Update.pdf>,

LID is a technique that controls storm water at the source. Implementation will occur mainly during the design and planning phase of the project. EISA Section 438 requirements should be considered independent of storm-water requirements under the Clean Water Act, unless the state or EPA has regulations for other EISA requirements.


The Office of the Assistant Chief of Staff for Installation Management will initiate a second round of LID training in the spring for Army installation, activity



A barrel for capturing rainwater is another LID technique. Photo courtesy of Low Impact Development Center Inc.

and U.S. Army Corps of Engineers master planners, engineers, technicians and contracting officer's representatives who have direct responsibility for storm-water projects. Training sessions are expected to begin in April or May. The schedule will be disseminated through command master planning and engineering channels.

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Elisa Soltren is a biologist, Environmental Technology and Technical Services Division, U.S. Army Environmental Command. 

Acronyms and Abbreviations

EISA	Energy Independence and Security Act
LID	low-impact development

(continued from previous page)

stakeholders' preferences and maintenance issues.

It's very important that the customer sees why things happen so you can get customer buy-in. Buy-in is a big part of the charrette as well as getting the right people into the room. Walk them through each step.

We're recommending a two-day charrette that takes a holistic view of what's available to a particular site. The first day addresses all the parameters of the building, and, on the second day, the stakeholders start making decisions about what works. We're making better informed

decisions ahead of the design charrette because we know what will and what won't work.

Will the emphasis on life-cycle cost analysis and the reality of tight budgets close the door on renewable energy features like wind turbines?

Loughner: The payback period and the programmed amount will certainly impact our decisions on how we may employ such renewable sources as ground source heat pumps, photovoltaic panels and wind turbines. For example, we're learning a lot from the wind turbine we installed at the Butte, Mont., Army Reserve Center, as well as the ground source pumps and solar

panels at the Bryan, Texas, center. But clean energy and reduced dependence on the grid may not be enough to clinch the deal.

That's the importance of the sustainability charrette, a forum to identify what's doable within the latest parameters, so the design charrette starts with a slate of thoroughly researched energy features.

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Jon Fleshman is a public affairs specialist, Louisville District, U.S. Army Corps of Engineers.





Housing Management Career Program 27 update

by Deborah Reynolds and Elizabeth Liggett

The Army's Housing Management Career Program — CP-27 — has undergone several changes over the past year. We are thrilled to have Lt. Gen. Michael Ferriter, assistant chief of staff for installation management, as the functional chief for CP-27 as of Nov. 17.

Training our Civilian workforce is critical in developing and enhancing the housing and barracks work our careerists perform day in and day out. Housing personnel may be among the first people a Soldier or Family member encounters when they are new to the installation. It is important that they have a positive housing experience in the beginning. We must also make sure we have a knowledgeable staff that can answer their questions or provide a warm handoff to others when needed.

From the development of Army housing-specific training classes to the career mapping efforts currently under way, CP-27 is evolving to keep pace with the changes brought about by the Army's Civilian Workforce Transformation initiative. In response to the 2010 National Defense Authorization Act requirements, the Army's CWT Task Force worked tirelessly to ensure that 100 percent of Army employees are mapped to a career program, regardless of job series. This was a significant task, as only 40 percent of Army Civilians were in a designated career program in fiscal 2010.

As a result of these efforts, Army Civilians who are assigned to the GS-0301, 0303, 0340, 0399, 1173 or 1199 job series with primary duties in housing management are now eligible for CP-27,



Deborah Reynolds
U.S. Army photo



Elizabeth Liggett
Photo courtesy of the
Professional Housing
Management Association

regardless of grade level. Army Civilians who meet these criteria are now eligible to use Army Civilian Training, Education and Development System funds for training.

ACTEDS provides an excellent opportunity for careerists to continue their professional development, as these funds can be used for tuition, books, travel and per diem costs associated with training. An electronic copy of the CP-27 ACTEDS plan can be found at http://cpol.army.mil/library/train/actedts/CP_27/. This document will walk the reader through the housing disciplines — Family housing, barracks, privatized housing and Housing Services Offices — and the requirements, skills and recommended training for each level based on grade or position.

In addition to career mapping, the CWT sparked the development and launch of the new Army Career Tracker. ACT is the leadership development tool that integrates training, formal and informal education paths, and experiential learning gained through assignment and professional history into one personalized and easy-to-use website that can be found at <https://actnow.army.mil>.

ACT will allow users to:

- view all career-related data in one online portal;
- receive professional development recommendations from leaders, mentors or supervisors;

- identify operational, institutional and self-development requirements for advancement; and
- plan new activities designed to reach professional and personal goals.

ACT is currently available to enlisted personnel, officers and Civilians in career programs 10, 11, 12, 13, 17, 18, 22, 24, 27, 31, 32 and 34.

Given the new tools available to facilitate professional development across the Army's Civilian corps, CP-27 wants to ensure that housing careerists also have the competencies necessary to flourish within our field. With support from the CP-27 Career Planning Board, the CP-27 Program Office is carefully reviewing the functional, leadership and core competencies required for each grade level within CP-27 to ensure they account for the knowledge, skills and abilities necessary for success at each pay grade. The revised competencies will be listed in ACT by the end of FY 2012.

To eliminate existing competency gaps and provide training on policies and procedures specific to Army housing, the Office of the Assistant Chief of Staff for Installation Management is developing Army housing-specific training courses. These courses will focus on five core areas: government-owned Family housing, privatized Family housing, unaccompanied housing, housing services and off-post referrals, and general and flag officer housing.

Training and increased knowledge in these specific subject areas will significantly enhance the practitioner's ability to offer quality housing services to Soldiers and Families Armywide. By developing two course levels for each subject area, Army housing leadership will be able to gear the curriculum and practical exercises to varying levels of expertise. As a result, Army housing management personnel will be better trained and equipped to deal with issues directly impacting Soldiers and Families. All five level one courses will ➤

Acronyms and Abbreviations	
ACT	Army Career Tracker
ACTEDS	Army Civilian Training, Education and Development System
CP-27	Career Program 27, Housing Management
CWT	Civilian Workforce Transformation
FY	fiscal year
OACSIM	Office of the Assistant Chief of Staff for Installation Management



Writing advice

by Mary Beth Thompson

We are told that clear and concise communication is an element of leadership, of motivating and working with others, of accomplishing goals. Yet, brevity and clarity are surprisingly hard to accomplish.

During my writing and editing career, I gleaned the writing tips offered here. They may help you hone your writing skills.

Audience – First, identify your audience. That step cannot be overemphasized. Think about their interests. Visualize them. “Speak” directly to them.

Organization – An e-mail message differs from a magazine article, a memo, a report or an information paper. Each communication type has a purpose and an audience that is unlike the others. Learn and use the correct structure. For example, in a report, starting with the topic’s history is appropriate, but in a news article, the first paragraph should tell the reader what the article is about; there, you start with the end.

Lead paragraph – When you struggle with the first sentence, skip the lead, write the rest of the piece, and then composing the lead will be easier.

Being concise – Respect your reader’s time; do not use lots of words when a few will do.

Clarity – Readers appreciate clear language. Simple words communicate better than complex words.



Mary Beth Thompson.
Photo by F.T. Eyre

Jargon – Avoid it. Not all of your readers are familiar with your field of expertise jargon.

Bureaucratese – Avoid it. Explain the subject as if you were talking to a non-government audience.

Acronyms – Avoid them. There are always new people joining the team who do not know what they mean.

Clichés and buzzwords – Avoid these, too. They clutter good, clear writing.

Adjectives and adverbs – Use only those that add real meaning, not mere flourishes, to your sentence.

Verbs – Use active voice and strong verbs. Hint: strong verbs describe exactly what is occurring. The ever-popular “implement” and “execute” are examples of weak verbs that give only a general idea of what is happening.

Redundancy – Remove it. The sentence,

“Find it and remove it,” is technically accurate, but how can you remove it if you haven’t found it? Other examples: **future** plans, **final** results.

Repetition – Avoid using the same word twice in one sentence or one paragraph and repeatedly in an article. Use your thesaurus.

Anecdotes and metaphors – Employ judiciously to make your point easier to understand.

Quotes – Quotes make articles more interesting. Interview others and quote them. Caveats: the quote should add to the information in the article, not state a fact easily learned elsewhere; gratuitous quotes — from someone in charge saying nothing important, for example — do not engage the reader or fool anyone about why they’re there; and never quote yourself.

Polishing – Examine every word before submitting the article or sending the message. Omit unnecessary words. Smooth and rearrange text to improve clarity.

Read aloud – Hearing your words may help to identify rough areas or awkward phrasing. It can also help you make your writing more conversational and appealing to readers.

Just do it – Poise your fingers over the keyboard and get to it. Write on.

Mary Beth Thompson is the managing editor, *Public Works Digest*.

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be available in the third quarter of FY 2012, and four level two courses will be available in the fourth quarter of FY 2012.

CP-27 is proud to recognize its recent intern graduates: **Stefanie Casey**, OACSIM; **Tasha Conde**, Joint Base Lewis-McChord, Wash.; **LaShandra Gray**, Fort Jackson, S.C.; **Lynn Hammond**, Fort Leavenworth, Kan.; **Lidia Hedderman**, Fort Bliss, Texas; **Angela MacCue**, Fort Drum, N.Y.; and

Monica Richmond, Fort Campbell, Ky.

The CP-27 Intern Program has attracted another impressive group of interns for its current class: **Diana Allison**, Headquarters Installation Management Command; **Martin Dawson**, Fort Leavenworth, Kan.; and **Calvin Williams**, Fort Stewart, Ga.

The CP-27 Program Office is energized and excited about the recent developments taking place within our program and across the Army. We encourage

our careerists to continually seek out professional growth opportunities both inside and outside the classroom. We look forward to providing careerists with a wide array of new options in the coming years.

Deborah Reynolds is the functional chief representative, CP-27, and Elizabeth Liggett is the Training and Intern Program manager, CP-27, OACSIM.



Army seeds future workforce through STEM initiatives

by Jennie Ayala

Science, technology, engineering and math education and careers may indeed unleash opportunities for success and economic prosperity in this nation, but how do you drive this message home to the youth? And are they even listening?

A new Army blanket purchase agreement for STEM programs provides assistance. The BPA, executed by the U.S. Army Corps of Engineers' Sacramento District, is a contracting tool that all Army organizations and other federal agencies can use to promote STEM awareness among fifth- through 12th-grade students. An informational brochure is available at www.spl.usace.army.mil/stem.html.

"This BPA provides a huge stepping stone to help districts and federal agencies with their efforts to promote STEM awareness," said Angela Hermanson, Sacramento District contracting officer.

Access to STEM awareness programs is now only a phone call away. The sponsoring agency may choose one or more of the following:

- a two-part STEM Awareness Program for parents and students,
- STEM community event or fair support,
- school science fair support, and
- STEM impact analysis.

Social and economic barriers may differ among communities, but the need to establish a connection for students and families between STEM and everyday, real-life issues is universal. So, too, is the need to excite students about the careers available and the impact the students can make with a solid STEM foundation.

The Department of Defense and USACE are partnering to make this happen through another program, the STEM School Support Initiative Program.

In 2009, USACE's Los Angeles District awarded a performance-based contract to Great Minds in STEM. GMiS launched STEM-Up, a comprehensive community-building approach to STEM education to bring STEM college and career pathways into schools and underserved communities by providing educational and enrichment opportunities to 20 K-12 schools in the Boyle Heights community of East Los Angeles.

"Through the STEM School Support Initiative Program, the Corps works with teachers, administrators, parents and community stakeholders with one goal in mind: increasing awareness and interest in STEM to improve the future pool of quality professionals," said Col. Mark Toy, Los Angeles District commander.

"Since launching STEM-SSIP, the Los Angeles District STEM educational outreach activities have more than tripled, and the level of employee interest and involvement has grown," Toy said. "We can make a significant impact in the lives of these students by simply providing mentors and role models."

Investing in future leaders through training, education, developmental assignments and mentoring is how the Army must do business, and it needs to help the nation cultivate the next generation of competent, disciplined and resilient STEM-trained people. Through STEM educational outreach, the Army continues seeding the future workforce by mentoring youth and attracting minorities, who comprise a significant portion of its demographics.

The Army, along with the entire DoD, is focused on securing this nation's economic



Utah Middle School STEM students test the efficiency of their mechanical launchers as they compete in the Mechanical Launcher Challenge in Los Angeles Feb 10. Photos courtesy of GMiS



Col. Mark Toy (right) encourages a Roosevelt High School STEM student after the student's presentation during a Vrrva Technology program in Los Angeles Jan. 20.

future by improving the pipeline into STEM career fields.

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Jennie Ayala is the deputy public affairs officer and STEM program manager, Los Angeles District, USACE.

Acronyms and Abbreviations	
BPA	blanket purchase agreement
DoD	Department of Defense
GMiS	Great Minds in STEM
STEM	science, technology, engineering and math
STEM-SSIP	STEM School Support Initiative Program
USACE	U.S. Army Corps of Engineers



Glenn is acting chief, Housing Branch

by Mary Beth Thompson

From her first job in a U.S. Army housing office in West Berlin, Germany, in 1984, Connie Glenn absorbed a couple important concepts — customer service and collegiality. Since then, Glenn has run every type of Army housing program, and those values still shape Glenn's work life as she serves as the Housing Branch acting chief in the Public Works Division, Headquarters Installation Management Command.

In West Berlin, Glenn typed assignment and termination orders. Later, she entered the Department of Army Housing Intern Program, graduating in 1994. In her first post-intern position, she served as chief of the garrison's Unaccompanied Personnel Housing Branch in Heidelberg, Germany.

"I spent 10 years in Heidelberg in various assignments between the headquarters and the garrison and eventually, in 2001, became chief of Housing for the community of Heidelberg," Glenn said.

In 2003, Glenn left Europe to become the chief of Housing at Fort Leavenworth, Kan. She learned about privatization at the grass roots, negotiating the post's Residential Communities Initiative business documents, among her other duties.

Glenn moved to headquarters in September 2010 as the team lead for the Army Family Housing programs. She has been acting branch chief since Dec 18.

"It's challenging; it's never boring," Glenn said of her job. "The programs that we develop here help commanders and housing managers provide the best possible service they can to their Soldiers."

Glenn and her team are responsible for overseeing the programs that govern about 562,000 spaces in which Soldiers live — barracks, training barracks, Family housing, privatized housing and off-post housing. They focus on helping Army housing managers succeed in providing great customer service.



Connie Glenn
Courtesy photo

"We strive not to be bureaucrats, and we will help fight the battles they may have just trying to do their day-to-day jobs," Glenn said. "So, even though we are at the headquarters, by helping the housing managers, by extension, we're helping Soldiers and Families."

One project on which the team is working is a transition plan for the First Sergeants Barracks Program that will help garrisons develop programs for how they are going to manage single Soldier housing in the future in coordination with their unit leaders, Glenn said.

The team is also working, along with garrisons, on improving barracks utilization. Many Soldiers live off post for one reason or another, and the Army's expenditures for Basic Allowance for Housing increases with each Soldier who does. To reduce costs, the Army set a barracks utilization goal of 95 percent, and Glenn and her team are taking strong steps toward reaching that goal. At the end of fiscal 2012's first quarter, they had reached 74 percent.

"Just since 2006 through December 2011, there's been a cost avoidance in the military pay account of \$153 million," Glenn said. The team has a ways to go but is very focused on reaching the goal.

Glenn's staff is also working with the Army Housing Division, Office of the Assistance Chief of Staff for Installation Management, to develop a housing management training curriculum. Together

with the intern program, the curriculum will cover Army housing professionals from entry level to senior management positions.

"We are very cognizant of the fact that we are an aging workforce, and we are taking very deliberate steps to train the housing managers who will replace us," Glenn said.

To develop housing programs that work at an installation level, Glenn casts a wide net for expertise.

"We handpick garrison housing managers and incorporate them as part of our development team to develop processes and procedures, and then those garrisons pilot those efforts for us," she said. "In essence, rather than working in a bubble here at headquarters, we actually reach into the garrisons to capitalize on their expertise and the tools that they have, and that is paying dividends."

The relatively small housing management career field comprises only about 800 people, Glenn said. Networking is common among the close-knit community.

"It's a group of people who are generous in sharing their expertise, their knowledge and their experience, and we respond to that here in the headquarters as well," she said.

Glenn reinforced that collegial atmosphere with some advice.

"Talk to your peers and draw from their experience," she said. "Develop those relationships. Someone's probably already done it. There's no need to reinvent the wheel. And likewise, be generous with your experience."

"I really like that most housing managers I know are highly motivated, dedicated, very focused and loyal to their customers," Glenn said. "I like belonging to that team."

Mary Beth Thompson is the managing editor, *Public Works Digest*.

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