Facilities Engineering

Standards for Base Camps

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Summary. This regulation provides construction standards for contingency locations, forward operating sites, and cooperative security location basing in USAREUR contingency areas.

Applicability. This regulation applies to commands, staffs, and personnel involved in planning, constructing, inspecting, operating, funding, and supporting base camps in the USEUCOM area of responsibility under generally permissive conditions. The initial construction standards established in this regulation will be used as a guide for planning the life-support requirements for USAREUR-led exercises. Exercise planners will use, to the extent possible, the minimum adequate standards. Exceptions to this must be approved by the USAREUR G3. Separate guidance will be provided for contingency basing, if required, for nonpermissive environments.

Records Management. Records created as a result of processes prescribed by this regulation must be identified, maintained, and disposed of according to AR 25-400-2. Record titles and descriptions are on the Army Records Information Management System website at https://www.arims.army.mil.

Supplementation. Organizations will not supplement this regulation without approval of the Deputy Chief of Staff, Engineer, USAREUR (USAREUR DCSENGR).

Suggested Improvements. The proponent of this regulation is the USAREUR DCSENGR (mil 537-4590). Users may suggest improvements to this regulation by sending DA Form 2028 to USAREUR DCSENGR (AEEN), Unit 29351, APO AE 09014-9351.

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6-39. Service and Construction Standards for Transient Locations
6-40. Construction Standards for Parking Lots and Roadways
1-1. PURPOSE

   a. This regulation provides—

      (1) Standards that apply to contingency basing of forward-deployed USAREUR-assigned or
          -allocated forces, and to other forces under USAREUR administrative control (ADCON) at base camps
          throughout the USAREUR area of operations (AO). For the purpose of this document, the term “base
          camp” includes initial, temporary, and semipermanent contingency locations (CLs), cooperative security
          locations (CSLs), and forward operating sites (FOSs).

      (2) Criteria for coordinating with the other military Services when USAREUR has Title 10
          administrative and support responsibilities. Additionally, it outlines coordination requirements when
          using allied military facilities and infrastructure or facilities and infrastructure provided by the host
          nation (HN), including shared-use facilities.

      (3) Criteria for planning, developing, and administering base camps that support associated
          missions according to Joint Publication (JP) 4-04 and adheres to Army-specific guidance in
          AR 700-147. This regulation also addresses base-camp development planning for the orderly and
          efficient management and development of land, facilities, and infrastructure to support contingency
          missions. Master planning provides an integrated strategy for constructing and maintaining required
          facilities that provide commanders operational flexibility at the least possible cost. The level of detail for
          each base-camp master plan will depend on the “maturity” of the location, the urgency of the operational
          need, and the expected length of occupancy.

   b. Joint and Army doctrine and regulations have evolved to combine many aspects of base-camp
      engineering construction and logistics services under the umbrella of “Contingency Basing,” with
      significant reliance on operational contract support (OCS). USAREUR maintains this regulation (the
      “Red Book”) specifically to address engineering construction standards and space allocation.
c. The intent of this regulation is to give commanders the tools needed to provide deployed personnel with mission-capable support facilities as well as safe and adequate living and working conditions in any contingency operation. Office of the Secretary of Defense (OSD) and Joint guidance, Army regulations (ARs), and lessons learned in the field over decades of operations are the basis for authorized levels of support. The purpose of the guidance provided herein is not to restrict commanders from acting decisively in response to contingency operational needs, it is to provide commanders the information needed to make informed risk-management decisions and to recognize minimum facility standards regarding life, health, and safety (LHS).

d. This regulation does not address all aspects of the base-camp life-cycle process in detail, but refers to sources for additional information and details throughout.

1-2. REFERENCES
Appendix A lists references.

1-3. EXPLANATION OF ABBREVIATIONS
The glossary defines abbreviations.

1-4. KEY STIPULATIONS
While operating on a base camp anywhere in USAREUR, it is important to understand that state, political, and operational agreements are in effect between the various levels of the State Department, DOD, and other Governmental entities and their HN counterparts. These agreements vary by country or installation and can authorize or prohibit the actions of U.S. Forces on or within HN property. In order for a unit to conduct any demolition, alteration, or construction on HN property or to HN assets, the unit or its higher command must—

a. Have an executed agreement with the HN allowing the work.

b. Have delegated authority to conduct the work.

CHAPTER 2
CONTINGENCY BASING SPECTRUM

SECTION I
LOCATION TYPES

2-1. GENERAL

a. DOD classifies overseas basing into two types of locations: contingency and enduring locations (table 2-1). The distinction is important because the classification informs funding, policy, planning decisions, and is tactical to strategic purposes. While CLs and enduring locations (ELs) serve unique purposes in support of U.S. military objectives overseas, both are components of DOD’s overall global defense posture and allow DOD to synchronize posture management to achieve mission effectiveness and operational efficiencies.
b. CLs are typically initial operating locations that can evolve into temporary or semipermanent operating locations over time, based on mission and need. Three categories of CLs exist: initial, temporary, and semipermanent. Although the names of these categories mirror the facility construction levels in JP 3-34, no direct link exists between CL base types and facility construction levels of the same name. In other words, a temporary CL may be developed using initial, temporary, or semipermanent facility or infrastructure construction levels depending on a number of variables (for example, environmental conditions, political-military considerations, availability of materials and supplies, anticipated duration of use). When discussing CLs, it is important to distinguish clearly between a CL base type and the facility construction levels of the various infrastructure on the base.

c. Once the Commander, USEUCOM (CDRUSEUCOM), determines that a CL warrants addition to the permanent basing structure, the CDRUSEUCOM can nominate a CL to convert to an EL. Paragraph 2-3 provides guidance on nominating a CL for the enduring locations master list (ELML).

d. The U.S. Government considers main operating bases (MOBs), FOSs, and CSLs to be enduring. Paragraph 2-3 defines MOBs, FOSs, and CSLs. It is possible to propose and receive approval through the global posture process to develop an EL from inception, especially in the case of a FOS or CSL. In addition to the use, duration, and purpose of a base, the management and funding structures are key differences between CLs and ELs.

e. To the maximum extent possible, commanders should leverage infrastructure and support services at currently established ELs to support contingency activities rather than establishing new CLs. Resourcing even the smallest CLs is a challenge, especially in more remote locations, and may not be sustainable.

2-2. CONTINGENCY LOCATIONS

a. CLs support contingency or other operations as directed by the CDRUSEUCOM. Department of Defense Directive (DODD) 3000.10 categorizes CLs as initial, temporary, or semipermanent. CLs are intended to be temporary in nature. If a CL is meeting an enduring requirement, as determined by USEUCOM and in accordance with global force-posture decisions, it may transition to an EL. However, there are scenarios where CLs continue to exist indefinitely with semipermanent construction standards (for example, Camp Bondsteel, Kosovo, was constructed in 1999 and is still recognized as a CL).

b. The fundamental purpose of CLs is to provide the support, facilities, and infrastructure systems necessary to receive, stage, and facilitate local operations, or the onward movement and operations of deployed forces. Although the timelines associated with each CL base type provides a framework for the evaluation and potential transition of facility construction levels, the actual trigger for transition is based on mission requirements, conditions on the ground, HN coordination, or other relevant factors that may accelerate or delay advancing the construction standards. Expected CL mission duration (table 2-2) will inform the commitment of resources and can affect the construction levels used for facilities and infrastructure.
Table 2-2
Mission Duration and Base-Camp Classification

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Base Type</th>
<th>Mission Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contingency Location</td>
<td>Initial CL</td>
<td>&lt; 9 Months</td>
</tr>
<tr>
<td>Temporarily CL</td>
<td>Up to 24 Months</td>
<td></td>
</tr>
<tr>
<td>Semipermanent CL</td>
<td>Up to 60 Months</td>
<td></td>
</tr>
<tr>
<td>Enduring Location</td>
<td>FOS/CSL/MOB</td>
<td>&gt; 60 Months</td>
</tr>
</tbody>
</table>

NOTE: Summarized from Joint Publication 4-04, section II.2.

c. If joint forces plan to use the CL, the level and quality of support services provided to receivers will be equivalent to the level and quality of support the supplier furnishes to its own mission. The supplier and receiver must agree to the level and quality of support if the level and quality differ from what the supplier furnishes to its own component’s organizations. USEUCOM has the responsibility to designate the lead Service component at a Joint use initial CL.

NOTE: While this regulation provides guidance on these decisions, ultimately the commander decides which standards to implement, with the exception of specific life, health, or safety standards, which may require waiver approvals (para 6-69).

d. The three CL base types are as follows:

   (1) Initial. An initial CL is characterized by rapid development intended for limited-duration use by operational units en route to or arriving initially in theater. It is designed and constructed on an expedient basis using organic unit capabilities with minimal augmentation and is characterized by austere facilities requiring minimal engineering to initiate mission operations (for example, U.S. Army’s Force Provider expeditionary basing systems). Common facility types include tents, containers, and fabric shelters. Organic unit capabilities plus those of other operational units assigned to an initial CL dictate the basic quality-of-life (QOL) conditions at the CL. Typically, initial CLs have little or no contracted support for QOL services.

   (2) Temporary.

(a) A temporary CL is appropriate for missions expected to last up to 24 months. While semipermanent and permanent construction standards are not typical during the contingency phase of an operation, at times, semipermanent construction standards are appropriate in place of initial or temporary construction. USEUCOM, in coordination with USAREUR (and other Services in case of a Joint operation), specifies the construction levels for facilities in the theater to prioritize the engineering effort expended on infrastructure construction while ensuring the facilities are adequate for mission accomplishment and the health and safety of the occupants.
(b) Temporary-facility construction levels are typical of temporary CLs (chap 2, sec II). Construction methods are normally low-cost and expedient, using locally available materials and equipment. For example, modular or prefabricated structures can accommodate critical facilities, and buried water lines, overhead or buried electrical distribution, buried or protected communications from outside plant infrastructure (that is, fiber or cable), pole-mounted lighting, buried sewer lines, and collection tanks and pumping systems can meet infrastructure requirements. Living spaces and administrative functions may receive hard floors and walls or be replaced with modular facilities as CLs grow and mission duration requires. These construction levels should enhance personnel readiness, efficiency of operation, safety, force protection (FP), durability, morale, and health standards for deployed personnel.

(c) Enhanced QOL, though still minimized and relatively austere, exceeds support and services available organically through operational unit capabilities and involves a limited level of contracted support. Enhanced QOL reduces stress on personnel deployed for longer periods and sustains personnel readiness. Commanders should therefore explore opportunities to support or provide reasonable QOL enhancements with existing or emerging technologies when warranted by mission conditions.

(d) USEUCOM designates the lead Service component for temporary CLs. If designated as the lead, USAREUR-assigned or -allocated units will coordinate the basing requirements for the other Service components. Likewise, if USEUCOM designates another Service as the lead, the USAREUR units will be tenants on the CL. Paragraph 3-19 describes roles for both scenarios as the base operating support-integrator (BOS-I).

(3) Semipermanent.

(a) A semipermanent CL supports extended-duration contingencies, typically lasting 24 to 60 months, and is characterized by enhanced infrastructure, services, and QOL compared to a temporary CL. A semipermanent CL enables sustained operations and reduces sustainment costs by using more durable construction methods, better energy systems, and master planning efforts. Once designated semipermanent, the CL may require enhancements to FP or infrastructure that better support operational reach and readiness and ideally reduce the inefficiencies and labor force required to operate and maintain the CL under initial conditions.

(b) Enhanced facilities and infrastructure reduce sustainment costs by using materials and systems that improve energy and water efficiency, maintenance costs, and waste treatment. For example, the use of semipermanent shelters in place of tents reduces energy consumption while improving QOL.

(c) Services and QOL at a semipermanent CL may approach those at an EL. However, because of the nonenduring nature of the location, keep support and services to the minimum military requirement to maintain readiness.

(d) For other mission-support services, semipermanent CLs may also have increased medical support functions, expanded emergency-management and emergency-support functions, established communications infrastructure to include communications-distribution services, as well as logistics or fueling points and ammunition storage areas that are more robust.

(e) USEUCOM designates the lead Service for Joint CLs at semipermanent locations the same as for initial and temporary CLs ((1) and (2) above). USEUCOM transmits lead-Service recommendations through an annual update to the contingency location master list (CLML) managed at DOD. The CLML records DOD’s nonenduring overseas footprint and formally designates the lead Service for each semipermanent CL.
2-3. ENDURING LOCATIONS

a. When USEUCOM determines that the DOD requirement for the CL is likely to extend beyond 60 months, USEUCOM should nominate the site as an EL in accordance with the procedures outlined in Department of Defense Instruction (DODI) 3000.12 or request an exception to continue maintaining the CL status. The Global Posture Executive Council (GPEC) and the Contingency Basing Executive Council (CBEC) should adjudicate all exceptions in coordination with USEUCOM and USAREUR. (DODI 3000.12 and DODD 3000.10 provide more information.)

b. ELs enable ongoing operations activities and interests, which may or may not require a continuous force presence and provide strategic access to support U.S. strategic interests and response to regional and global contingencies. The U.S. Government considers MOBs, FOSs, and CSLs as enduring. All three base types may comprise more than one distinct site.

(1) Main Operating Base. A MOB is a facility outside the United States and its territories with permanently stationed operating forces and robust infrastructure often including Family support facilities. Contingency operations may use portions of MOBs, specifically when designated as a power projection platform (P3) or mobilization force generation installation. In such instances, contingency standards will apply. Examples of MOBs include Grafenwoehr and Wiesbaden, Germany.

(2) Forward Operating Site. A FOS is a scalable location outside the United States and its territories intended for rotational use by operating forces. FOSs support rotational rather than permanently stationed forces and provide for bilateral and regional training opportunities with infrastructure and QOL amenities consistent with that presence, capable of providing forward-staging for operational missions and support to regional contingencies. Examples of FOSs include Powidz, Poland, and Mihail Kogâlniceanu (MK), Romania.

(3) Cooperative Security Location. A CSL is a facility located outside the United States and its territories with little or no permanent U.S. military presence that is maintained by periodic Service, contractor, or HN support. A CSL may have a periodic presence of allocated U.S. forces. CSLs provide contingency access, logistic support, and rotational use by operating forces and are a focal point for security-cooperation activities. Examples of CSLs include Adazi, Latvia, and Pabrade, Lithuania.

2-4. POLITICAL DESIGNATION OF LOCATIONS
The U.S. Forces may designate operating sites in allied or other HNs as CLs, but the HN may consider the same sites to be ELs, or vice versa. Political acceptance in the HN may dictate a different characterization of the base for internal or regional political reasons. For the purpose of this regulation, the location-type characterization in accordance with the GPEC governs the construction and other standards authorized for the location.

SECTION II
FACILITY CONSTRUCTION LEVELS

2-5. GENERAL

a. The CDRUSEUCOM, in coordination with Service components and the Services, specifies the construction standards (table 2-3) for facilities in the theater to optimize the engineer effort expended on any given facility while ensuring that the facilities are adequate for health, safety, and mission accomplishment (Army Techniques Publication (ATP) 3-37.10). The standards ensure that projects support the commander’s intent and concept of operations (CONOP). The intent of these standards is to minimize the engineering effort on any given facility while ensuring that the quality of the facilities supports mission accomplishment and provides adequate protection, health, and safety standards.
Table 2-3
Base-Camp Construction Standards

<table>
<thead>
<tr>
<th>Location Type</th>
<th>Construction Standard</th>
<th>Expected Facility Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contingency Location</td>
<td>Organic</td>
<td>Up to 90 days</td>
</tr>
<tr>
<td></td>
<td>Initial</td>
<td>Up to 6 months</td>
</tr>
<tr>
<td></td>
<td>Temporary</td>
<td>Up to 5 years</td>
</tr>
<tr>
<td></td>
<td>Semipermanent</td>
<td>2-25 years</td>
</tr>
<tr>
<td>Enduring Location</td>
<td>Permanent</td>
<td>5 years or longer</td>
</tr>
</tbody>
</table>

**NOTE:** The source is ATP 3-37.10.

b. When determining the facility construction level, considering the rotation duration may be beneficial to obtaining optimal operational efficiency while maintaining positive troop morale, with the potential of overall cost savings. For example, facilities supporting shorter rotation durations (less than 90 days) can be accommodated by austere, organic construction standards; however, living and working in austere facilities requires significant diversion of troop labor towards maintaining these spaces or increased contractor costs. Longer rotation durations, especially at base camps or facilities with longer expected durations, may justify facilities that support a higher QOL, provide cost savings through energy efficiencies and lower operations and maintenance (O&M) costs, and contribute to positive troop morale. The facility construction level must balance the facility construction and operating costs with the expected rotation and installation duration.

c. Current USEUCOM policy requires all locations, with few exceptions (for example, Camp Bondsteel, Kosovo), to be on the ELML before authorizing any non-exercise-related construction. Therefore, although a site may be on the ELML and considered “enduring,” it may not warrant permanent or semipermanent facility construction based on the anticipated mission, rotation, and base durations. Due to the fluid nature of missions and rotations using base camps, base camps may have a variety of facilities that span and often transition through the spectrum of construction standards. The mission commander designates the construction standard primarily based on mission requirements and in accordance with USEUCOM directives. JP 3-34 (pgs IV-30 thru IV-32) states that many factors may influence the selection of the construction standard, including local costs to develop, and O&M costs to sustain a facility.

2-6. ORGANIC
Organic construction is set up on an expedient basis with no external engineer support, using unit organic equipment and systems or HN resources. Intended to be used for up to 90 days, it may be used for up to 6 months. It typically provides for initial force presence and maneuver activities until force flow supports the arrival of engineer resources.

2-7. INITIAL
Initial construction is characterized by facilities set up on an expedient basis with minimal external engineering design support, using Service, HN, or contracted equipment and systems. Initial standard construction is intended for immediate use on a unit’s arrival in theater and for up to 6 months. Typical to transient mission activities, it may require system upgrades or replacement by more substantial or durable facilities during the course of operations.
2-8. TEMPORARY
Temporary buildings and facilities are designed and constructed to serve a life expectancy of 5 years or less. A temporary facility is a minimal facility intended to increase the efficiency of operations and to moderately improve QOL for occupants. Maintainability is a secondary consideration. Construction features are characterized by low cost, expedient construction using locally available materials, construction methods, and equipment. Typically, it is not economical to convert temporary construction to a higher construction level. Temporary standard construction can be used from the start of an operation if directed by the CDRUSEUCOM. It is typical for nontransient mission activities.

2-9. SEMIPERMANENT
Semipermanent buildings and facilities are designed and constructed to serve a life expectancy of more than 5 years, but less than 25 years; to be energy efficient; and with finishes, materials, and systems selected for a moderate degree of maintenance using a life-cycle approach. Semipermanent facilities are intended for a more enduring presence than temporary facilities, with operational characteristics and functional performance similar to permanent construction. The types of structures built to semipermanent standards should be based on function and intended duration.

2-10. PERMANENT
Permanent buildings and facilities are designed and constructed with finishes, materials, and systems selected for high energy efficiency and low maintenance and life-cycle costs typically reserved for ELs. Permanent standard construction has a life expectancy of more than 10 years. It may be used initially if directed by the CDRUSEUCOM and after carefully considering the operational requirements, intended duration, political situation, cost, QOL, and other criteria, even though the specific base is considered a CL. Construction standards should also consider the final disposition and use of facilities and any long-term goals for these facilities to support HN reconstruction. USEUCOM must specifically approve the use of permanent construction standards at locations not on the ELML.

SECTION III
BASE-CAMP LEVELS OF SERVICE

2-11. GENERAL
Three increasing levels-of-service standards for base camps exist: basic, expanded, and enhanced (ATP 3-37.10) (fig 2-1). Service standards describe the characteristics of a base camp in terms of the support and services (and overall QOL) that are provided and the nature of the construction applied, commensurate with the anticipated duration of the mission. No direct link exists between construction standards and QOL standards. For example, a base camp may have initial construction standards with expanded QOL standards. The CDRUSEUCOM sets QOL standards for each level depending on local conditions. Doctrinally, the BOS-I determines the level of service (JP 4-04, pg III-9). Base camps in support of short-duration missions are more austere and require fewer resources to be established and operated, while those for longer-duration missions generally require greater resources. Not all similar-sized base camps offer the same services, and the implementation of these services is not directly linked to operational phases. Levels of service typically increase during an operation. While not necessarily essential to mission effectiveness, increased levels of service can enhance mission performance efficiency. They do, however, require greater support, and usually infrastructure, and are related to, but not tied to levels of construction.
2-12. BASIC
Basic services are established as part of the initial entry and are primarily implemented using organic capabilities and prepositioned stock. Basic services are those functions and services that are considered essential for sustaining operations for at least 60 days. Basic services are characterized by rapid deployment and emplacement. Basic facilities and infrastructure are highly flexible and movable and are constructed with minimal engineering effort. The construction of these facilities takes full advantage of unit organic capabilities. The facilities are intended for operational use immediately on a unit’s arrival and for up to 6 months. Basic facilities will follow initial construction standards.

2-13. EXPANDED

a. Expanded services are those that have been improved to increase efficiencies in providing base-camp support and services and expanded to sustain operations for at least 180 days. Expanded facilities are constructed using additional engineering above the basic facility standards. They are intended to increase operational efficiency for up to 2 years and may be used to meet requirements for up to 5 years. Since temporary construction is not intended for long-term use, extending the life of these facilities and infrastructure through modifications and increased maintenance and repairs is generally more expensive than building semipermanent facilities and infrastructure from the start.

b. Expanded facilities comply with initial or temporary joint construction standards. For example, a prime power system may be installed, a water-bottling plant may replace imported bottled water, or an existing facility may be upgraded to replace tents. Engineer units or contracted support may be used to achieve the desired results. JP 4-10 provides more information on contracted support.

c. The expanded QOL standard is based on support and services beyond operational unit capabilities and involves contracted support or specialized military units and organizations. The expanded QOL is intended to decrease the stress on personnel deployed for longer periods.
2-14. ENHANCED

a. Enhanced services surpass expanded services. They have been improved to operate at optimal efficiency and sustained operations for an unspecified duration. These services are flexible, durable, nearly self-sustaining, and primarily implemented through contracted support. Many functions, facilities, and services and much of the support resemble those of a permanent base or installation.

b. Enhanced facilities allow for finishes, materials, and systems selected for moderate energy efficiency, maintenance, and life-cycle cost. They are intended for a life expectancy of more than 2 and up to 10 years.

c. Enhanced facilities comply with semipermanent or permanent joint construction standards. DOD construction agents are the principal agents to design, award, and manage construction contracts in support of enduring facilities according to the applicable unified facilities criteria (UFC).

d. The enhanced QOL standards approach those of an MOB. Normally, these enhanced QOL standards should not exceed those of a permanent base or installation.

SECTION IV
BASE-CAMP MANAGEMENT

2-15. BASE-CAMP MANAGEMENT RESPONSIBILITIES

a. As base camps evolve, management responsibilities increase. In initial and temporary CLs, a unit mayor cell (para 2-16) should be designated to manage the base. When the base evolves into a semipermanent CL or EL, such as a FOS or CSL, management responsibilities may be elevated to an area support team (AST) or area support group (ASG). Once a base camp evolves into an MOB, management will be elevated to the United States Army Installation Management Command (IMCOM) level, on HQDA’s direction.

b. USAREUR, corps, division, and brigade combat team (BCT) commanders will establish and maintain a base-camp command matrix for Army base camps within their respective areas of operations (AOs) to track which Army units are responsible for base-camp operations. Commands will update this matrix at least annually or as changes occur. A sample command matrix is provided in appendix B. All commands will send their base-camp command matrices through G-4 or S-4 channels to USAREUR for consolidation.

c. Table 2-4 provides the USAREUR Base-Management Template. The glossary defines acronyms used in the table.

d. At each echelon of command, specific units have direct responsibility for operating and managing base camps. These units are as follows:

(1) Brigade Combat Teams. BCTs may establish a main brigade base camp and, based on mission requirements, one or more battalions, companies, and platoon-size base camps within their AO. Each lower-echelon commander within the BCT operates these smaller base camps using organic personnel. Staff augmentation of these tactical units for base-camp operations will be limited to what the BCT can provide, using the hub-and-spoke method, in accordance with ATP 3-37.10.
Table 2-4
USAREUR Base-Management Template

<table>
<thead>
<tr>
<th>Base Type</th>
<th>Applicable Appropriations (Base/OCO)</th>
<th>Base-Management Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial CL</td>
<td>O&amp;M, Procurement</td>
<td>Tactical unit w/ organic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>capabilities</td>
</tr>
<tr>
<td>Temporary CL</td>
<td>O&amp;M, Procurement</td>
<td>Tactical unit w/ organic and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HN capabilities</td>
</tr>
<tr>
<td>Semipermanent CL</td>
<td>O&amp;M, Procurement</td>
<td>MTOE solution (ASG/AST)</td>
</tr>
<tr>
<td>CSL (Periodic Presence)</td>
<td>O&amp;M, Procurement, MILCON</td>
<td>MTOE solution (ASG/AST) or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IMCOM element or hybrid</td>
</tr>
<tr>
<td>FOS (Permanent Presence/Rotational Forces)</td>
<td>O&amp;M, Procurement, MILCON</td>
<td>MTOE solution (ASG/AST) or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IMCOM element or hybrid</td>
</tr>
<tr>
<td>MOB (Assigned Forces)</td>
<td>O&amp;M, Procurement, MILCON</td>
<td>IMCOM</td>
</tr>
</tbody>
</table>

Regional Support Groups (RSGs): Can be requested for locations that support 6,000 or more personnel.

Source: Overseas Basing Slides (DAMO-SSG), 5 June 2018.

(2) Regional Support Groups. RSGs are the only Army units with the specified mission of operating support-area base camps with populations of 6,000 or more. RSGs can operate division, corps, and USAREUR support-area base camps, Joint base camps, and theater intermediate staging bases.

(3) Other Units. The Army can designate any unit to operate and manage a base camp in response to a request for forces. These units will receive base-camp management predeployment training and undergo a base-camp operations-focused mobilization-readiness exercise before deployment.

(4) Staff Assistance and Reachback. USAREUR, corps, division, and brigade commanders will provide staff assistance to base-camp commanders within their capability, using the hub-and-spoke method. In addition, the United States Army Corps of Engineers (USACE) will provide reachback support for engineering expertise (through the USACE Reachback Operations Center (UROC) in a tele-engineering capacity (https://uroc.usace.army.mil)). Also, USACE has field force engineering (FFE) elements that can deploy forward to support specialized engineering functions on the ground. These elements, including forward engineer support teams (FESTs) and contingency real-estate support teams (CRESTs), can be tailored to fit the needed functions, including, but not limited to, master planning, design, utilities, and facilities assessments. During Atlantic Resolve, a rotational FEST has supported the Office of the Deputy Chief of Staff, Engineer (ODCSENGR), HQ USAREUR, with directorate of public works (DPW) functions. HQ IMCOM will provide reachback for other garrison management functions when HQDA assigns the mission.
2-16. UNIT MAYOR CELL
Depending on the size and maturity of base camps, rotational units may be required to serve in the role of camp mayor. The unit mayor should make him- or herself fully aware of the base-camp status (for example, initial CL, temporary CL, semipermanent CL, FOS, CSL) and the associated authorized levels of construction and space allocations. The mayor-cell staff will typically be responsible for coordinating with the HN support element and with any OCS (for example, the Logistics Civil Augmentation Program (LOGCAP), other directly contracted support) and is charged with providing infrastructure support and other services at the base camp. As soon as a unit occupies the base camp, it is important that the mayor understands and communicates which element is responsible for what and how request, approval, and funding processes work. The mayor should also be familiar with the locally established processes for requesting facility- and infrastructure-related support, depending on which supporting element is responsible.

2-17. AREA SUPPORT TEAMS AND AREA SUPPORT GROUPS
As base camps mature, rotational units, with staffs and elements specifically assigned to the base camp in order to carry out required base support functions, may replace camp mayor cells. ATP 3-90.20 provides a thorough coverage of the support functions, including engineering, at base camps. While RSGs may deploy to support base camps with more than 6,000 personnel, the base-camp engineering and oversight functions described in the ATP apply to base camps of any size. USAREUR may replace unit-provided camp mayors with organizations requested from CONUS, such as RSGs (active and reserve), or may build ad-hoc organizations using personnel assigned to the ASG/AST structure in USAREUR to fulfill these roles.

2-18. UNITED STATES ARMY INSTALLATION MANAGEMENT COMMAND
Doctrinally, once a base camp transitions to a base (MOB), IMCOM becomes the command responsible for planning, programming, budgeting, and sustaining the location, with budget forecasted in the Army’s base budget, on HQDA’s designation and resource allocation. Though IMCOM may manage ELs such as FOSs or CSLs, this transition has not been made for all ELs in contingency operating areas. Additionally, the ELML may include locations in the contingency AO that USAREUR continues to manage and budget directly using overseas contingency operations (OCO) funding. The units using these locations are responsible for understanding the locations’ statuses and identifying the appropriate channels for seeking support and approval for infrastructure and related activities.

2-19. HOST NATION
In many cases, U.S. Forces occupy space within existing and active HN installations. In these instances, the HN will have its own base-management structure that will integrate the U.S. Forces. Though the HN usually has no command authority over U.S. forces, it may provide certain base-operations and logistics functions, such as security or public works. In these cases, provide and request personnel and support as the agreements that are in place between the U.S. and HN Governments require.
CHAPTER 3  
ROLES AND RESPONSIBILITIES  

SECTION I  
OFFICE OF THE SECRETARY OF DEFENSE  

3-1. OFFICE OF THE SECRETARY OF DEFENSE  

a. The OSD exercises oversight of contingency basing and approves the lead Service for a semipermanent CL and the transition of a CL to an EL by approving the ELML.  

b. The Under Secretary of Defense for Acquisition and Sustainment (USD (A&S)) co-chairs the CBEC. The CBEC is the senior governance body for the policy, capability development, direction, and synchronization regarding all aspects of contingency basing across the DOD. For a detailed discussion of CBEC responsibilities, see the Contingency Basing Executive Council Charter.  

c. The GPEC is the formal body with authority to manage GDP processes. The GPEC will designate a lead military Service for all ELs in accordance with the procedures in DODI 3000.12 to ensure appropriate site management, base-operations support, and coordination of requirements. The Deputy Secretary of Defense will approve the designation with the ELML in accordance with DODD 3000.10.  

SECTION II  
CHAIRMAN OF THE JOINT CHIEFS OF STAFF  

3-2. CHAIRMAN OF THE JOINT CHIEFS OF STAFF  
The Chairman of the Joint Chiefs of Staff (CJCS) reviews all USEUCOM recommendations for the designation of a lead Service for each semipermanent CL and provides recommendations to the USD (A&S). The Joint Staff, Logistics (J-4), Maintenance, Materials, and Services Division, is the CBEC co-chair and lead integrator. In this capacity, J-4 performs all administrative functions.  

SECTION III  
SECRETARY OF THE ARMY  

3-3. SECRETARY OF THE ARMY  
The Secretary of the Army, along with the Chief of Staff, Army, is responsible for—  

a. Developing contingency-basing capabilities that are scalable and interoperable in the Joint community.  

b. Programming and providing common-user items, logistics functions, and service support, when the Army is designated as the lead Service for a semipermanent CL.  

SECTION IV  
USEUCOM  

3-4. COMMANDER, USEUCOM  

a. The CDRUSEUCOM will designate the lead Service component responsible for initial and temporary CLs. For semipermanent CLs, USEUCOM will recommend to the CJCS the designation of a lead Service. JP 4-04, appendix A, illustrates the process USEUCOM will follow when designating a lead Service.
b. When missions at a CL are expected to exceed 5 years, the CDRUSEUCOM should evaluate transitioning the site to an EL and perform activities required to nominate the site for inclusion in the DOD ELML in accordance with DODI 3000.12.

c. The Theater Posture Plan (TPP) designates which lead Service has BOS-I responsibility for each joint base camp within the joint security area (JSA). The CDRUSEUCOM will update the BOS-I matrix annually or when BOS-I responsibility changes from one Service to another.

3-5. USEUCOM

a. USEUCOM will—

(1) Assess the operational environment at critical milestones to determine contingency-basing requirements and maintain a base-camp list for locations within the USEUCOM AOR.

(2) Establish, in coordination with the involved DOD components, contingency-basing criteria in operations plans (OPLANs) and supporting plans.

(3) Specify the common service standards for each base camp.

(4) Approve all rapid acquisition requirements in support of a specific base-camp operation.

(5) Approve master plans involving semipermanent or permanent construction.

(6) Approve individual projects of permanent construction.

b. In accordance with CJCS Instruction (CJCSI) 3110.03, the Commander, U.S. Special Operations Command, arranges Service common logistic support (including BOS) to assigned forces before those forces are allocated to USEUCOM for employment.

c. When special operations forces (SOF) are allocated to USEUCOM and lack mission-essential support capabilities at a base camp, the SOF will identify and request conventional-forces augmentation support through joint planning and force-management processes. The joint special operations task force (JSOTF) HQ commandant normally provides internal support to the JSOTF and is responsible for all aspects of HQ support activities regardless of which Service is designated as the lead Service. JP 3-05 provides more information on special operations as well as on logistics and basing support.

SECTION V
COMBAT SUPPORT AGENCIES

3-6. COMBAT SUPPORT AGENCIES

a. Combat support agencies (CSAs) play an important role in supporting USEUCOM base camps (DODD 3000.06 and JP 4-0). The Defense Logistics Agency (DLA), for example, is the executive agent for bulk petroleum; medical materials; and subsistence, construction, and barrier material, and provides other classes of supply and services. DLA Disposition Services is DOD’s lead for the disposition of surplus property and hazardous waste (HW) at base camps. DLA assists USEUCOM throughout the base-camp life-cycle with planning, operations, and closure or transition. DLA’s Joint Contingency Acquisition Support Office and rapid-deployment teams afford USEUCOM tailored, deployable support for base-camp operations. Other CSAs that frequently require space at base camps include the Defense Intelligence Agency and the National Geospatial-Intelligence Agency. Lead Service planners should coordinate with CSAs for space and facility requirements at base camps.
b. The DLA Maintenance, Repair, and Operations (MRO) Program provides supplies and services worldwide when and where needed and ensures enhanced readiness through focused logistics with a forward presence and a worldclass workforce. This program—

(1) Provides tailored support for facilities maintenance, public works, civil engineering, Family housing, and base supply customers around the world.

(2) Supports thousands of items ranging from lumber, paint, small tools, and assorted hardware and building supplies, to lighting, electrical, plumbing, heating, ventilation, and air-conditioning supplies.

(3) Is designed to allow customers to order supplies and equipment needed to fulfill their MRO missions with respect to their facilities. It constitutes a contractually controlled relationship between the ordering activity (customer), the tailored logistics support contractor, and DLA Troop Support.

SECTION VI
USAREUR

3-7. GENERAL

NOTE: AE Regulation 10-5 provides additional information about the roles and responsibilities described in this section.

a. The Department of the Army (DA) designated USAREUR as the Army service component command (ASCC) of USEUCOM (DA General Order 2006-18 and AR 10-87).

b. When USAREUR is designated as the lead Service component for a base camp, USAREUR will plan; design; establish; operate and manage; and transition, transfer, or close the base camp.

c. USAREUR has primary responsibility for programming and providing common-user items, logistics functions, and service support where designated as the lead Service. The CDRUSEUCOM may assign specific common-user logistics functions, including planning and execution, to a lead Service. These assignments may be for single or multiple common logistics functions and be based on phases or operational areas within the USEUCOM AOR. Where one Service predominantly provides forces or logistics capabilities, it may be prudent to designate that Service as the joint logistics lead for BOS-I. USEUCOM may augment the lead Service logistics organization with capabilities from another component’s logistics organizations as appropriate. Key lead-Service functions at operating areas typically include, but are not limited to, BOS-I, communications synchronization, senior airfield authority (SAA) synchronization, budget programming, real-property management, and the provision (providing and funding) of common-user items or service support. When designated as the lead Service, USAREUR may consider a commercially contracted solution to meet the requirements in addition to, or in place of, organic support.

d. Unity of effort through a lead Service eliminates the duplication of planning and execution of contingency-basing functions and maximizes the use of resources needed throughout the life-cycle of a base camp.

e. When designated as the lead Service, USAREUR is responsible for environmental and HW management in accordance with DODI 4715.22.
3-8. COMMANDING GENERAL, USAREUR
The Commanding General (CG), USAREUR, is an ASCC commander and the European theater Army commander. As the ASCC and theater Army commander, the CG executes senior-commander duties specified in AR 600-20 while reporting to two chains of command. The CG may delegate certain authorities pursuant to these duties but cannot delegate the responsibility of command.

a. The CG exercises—

(1) Operational control over Army forces in theater as directed by the CDRUSEUCOM, who takes direction directly from the Secretary of Defense (SECDEF).

(2) ADCON and responsibility over Army forces in the USEUCOM AOR on behalf of the Secretary of the Army and the Chief of Staff, Army.

b. Additionally, the CDRUSEUCOM may designate the CG, USAREUR, as a joint force commander (JFC). The joint force command may be a joint force land component command (JFLCC), a combined force (also known as coalition force) land component command, or a joint task force (JTF). In May 2016, the CDRUSEUCOM directed that USAREUR should be prepared to operate as a JFLCC for operations and training in the USEUCOM AOR.

c. Regardless of possible additional command titles, the CG always continues to carry out the roles and missions associated with being an ASCC commander and a theater Army commander according to AR 600-20 and Field Manual (FM) 3-94.

d. As commander of the Army service component, the CG, USAREUR, will—

(1) Develop basing strategies that support the CDRUSEUCOM’s theater basing strategies contained in standing concept plans (CONPLAN).

(2) Establish and maintain copies of all subordinate base-camp master plans in an automated georectified repository and provide current base-camp master plans to the USEUCOM engineer.

(3) Evaluate all available sources of support (organic military, multinational, and HN support, and strategic sources) to identify the best-value sustainment method to meet the operational parameters of the mission.

(4) Execute and coordinate base-camp logistics and sustainment support for CONOP within the USEUCOM AOR.

(5) Define and validate all known OCS requirements for base camps and determine how to meet these requirements.

(6) Develop requirements to conduct base-camp interoperability activities with Joint, interagency, and multinational partners.

(7) When designated as the lead Service for a base camp, ensure the planning, design, requirement coordination, construction, BOS provision, and operation of the location to support the mission and the tenants.
(8) When the Army is a tenant at a base camp, ensure that the senior Army unit commander coordinates BOS requirements with the lead Service and BOS-I, and that BOS-I provides Army requirements.

(9) Support USEUCOM, as required, in executing responsibilities according to DODD 3000.10.

(10) Review USEUCOM posture plans and provide input to HQDA to assist the Army in assessing feasibility, execution, programmatic issues, and resource constraints.

(11) Support USEUCOM TPP development.

(12) When USAREUR is the designated lead Service, support HQDA analyses regarding CLs that have the potential to transition to ELs.

(13) Maintain visibility of the number and the disposition of base camps where USEUCOM has designated USAREUR as the lead Service to inform global posture decisions.

(14) Designate an area commander, doctrinally the commander of a maneuver enhancement brigade (MEB), to manage the terrain in the theater support area. If USEUCOM has designated a JSA, and if USEUCOM assigns USAREUR as the Joint Security Coordinator, the area commander manages the terrain in the JSA.

(15) Maintain a copy of the USEUCOM BOS-I matrix and update it at least annually or when the BOS-I changes.

e. In addition to the above responsibilities, the CG, USAREUR, has delegated authority for O&M project approval.

3-9. SENIOR RESPONSIBLE OFFICER AUTHORITY
The CG, USAREUR, delegates senior responsible officer (SRO) authority to general officers (GOs) associated with USAREUR. From an infrastructure-oversight standpoint, SROs participate in the governance of both project selection and project execution by informing the CG about their priorities and requirements. They also execute senior-level engagements pertaining to the coordination of agreements in their assigned areas. In AE Regulation 10-5, the CG designates SROs as base-camp commanders and delegates to them additional responsibilities within the USAREUR AO.

3-10. DEPUTY COMMANDING GENERAL, USAREUR
The Deputy Commanding General (DCG), USAREUR, is the CG’s primary representative when the CG is absent or when directed, in accordance with appropriate authorities. Additionally, the DCG’s primary portfolio contains war planning, intelligence, operations, training, and readiness. The DCG—

a. Serves as the USAREUR senior leader for military construction (MILCON) and posture issues. In addition, the DCG chairs the USAREUR MILCON Board in coordination with the Director, IMCOM-Europe.

b. Acts as the primary force-protection DCG (as the USAREUR Lead Agent for the Army in Europe Antiterrorism (AT) Program) according to AE Regulation 525-13 and chairs the quarterly alternating Antiterrorism Executive Committee and Protection Executive Committee meetings.
3-11. DEPUTY COMMANDING GENERAL FOR SUSTAINMENT, USAREUR (DUAL-HATTED AS THE COMMANDING GENERAL, 21ST SUSTAINMENT COMMAND)
The Deputy Commanding General for Sustainment (DCG-S), USAREUR, oversees the portfolio of all sustainment issues, including strategic and operational movement, human resources, and area base management as required. Dual-hatted as the CG, 21st Sustainment Command (21st SC), the DCG-S oversees the sustainment function for USAREUR, advises the CG on sustainment issues, and, in coordination with the USAREUR G4, helps establish and oversee sustainment policy for the theater.

3-12. HQ USAREUR COORDINATING STAFF
To coordinate and direct day-to-day activities of the command, the USAREUR Command Group relies on and works through the command’s coordinating staff (AE Reg 10-5, chap 5).

3-13. DEPUTY CHIEFS OF STAFF
Within the Office of the Chief of Staff, HQ USAREUR, are two Deputy Chiefs of Staff (DCoSs) (that is, the DCoS, Civilian (DCoS-CIV) and the DCoS, Military (DCoS-MIL)). Both work directly for the Chief of Staff (CoS), HQ USAREUR, are usually located at the main command post, and operate as the CoS during the CoS’s absence. The DCoS-CIV, however, is the primary ASCC-focused DCOS, and the DCoS-MIL is focused primarily on OPLANs and operations. AE Regulation 10-5, paragraph 3-10c, provides additional information.

3-14. USAREUR DEPUTY CHIEF OF STAFF, ENGINEER
The USAREUR Deputy Chief of Staff, Engineer (DCSENGR), as the ASCC engineer, will—

a. Develop and maintain base-camp master plans.

b. Generate, collect, and maintain real-property records.

c. Identify requirements for and execute short- and long-range infrastructure management plans.

d. Ensure real-property maintenance activities.

e. Develop contract documents such as statements of work (SOWs) and independent government cost estimates (IGCEs).

f. Perform quality assurance and quality control (QA/QC) duties for construction and select base-operations contracts, share QA/QC documents with relevant USAREUR subject-matter expert (SME) staff (for example, G3/4, G6) for review, and compile comments.

g. Identify and implement energy-efficient basing solutions and coordinate, execute, and manage base-camp utility usage and payments.

h. Support the USAREUR G4 in preparing and executing acquisition and cross-servicing agreements (ACSAAs) for base-operations support.

i. Coordinate and implement environmental best practices for the USAREUR AO to ensure compliance with U.S. and HN environmental regulations.

j. Conduct comprehensive analysis of existing and emerging real-estate requirements.
k. Oversee and prepare real-estate actions including leases, land-use agreements, and other real-estate instruments as required and as supported by USACE Europe District Real Estate Contracting Officer (RECO).

l. Provide engineer reachback support to USAREUR ASGs and ASTs.

m. Prepare, manage, and execute annual construction budgets at existing and emerging base camps.

n. Prepare, submit, and execute NATO Security Investment Program (NSIP) projects in the USAREUR AO.

o. Support the USAREUR G3 in coordinating and supporting site nominations for the CLML, the ELML, and the USEUCOM TPP.

p. Ensure that U.S. Army forces comply with HN infrastructure approval and execution procedural requirements in accordance with standing international agreements.

3-15. USAREUR G3
The USAREUR G3 will—

a. Oversee and validate European Deterrence Initiative (EDI) spending.

b. Participate in planning, design, and construction meetings as well as in QA/QC reviews to ensure AT and physical-security requirements are properly incorporated.

3-16. USAREUR G4
The USAREUR G4 will—

a. Manage or oversee multifunctional logistical services during contingency operations and at base camps, including the provision of supply and services; petroleum, oil, and lubricants (POL); water; materiel readiness; and munitions.

b. Act as the USAREUR interface with Army Sustainment Command for executing the U.S. Army LOGCAP contract.

c. Manage the reception, staging, onward movement, and integration (RSOI) in support of contingency operations at base camps.

d. Manage and oversee ACSA execution in support of base operations.

e. Manage HW accumulation and disposal.

3-17. USAREUR G5
The USAREUR G5 will—

a. Identify base-camp locations that are required in support of OPLANs and operations policy and that support the USEUCOM theater strategy, campaign plans, OPLANs, and operation orders (OPORDs).

b. Prepare site nominations for the CLML, the ELML, and the USEUCOM TPP.
3-18. USAREUR GENERAL-OFFICER-LEVEL COMMANDS
USAREUR GO-level commands will—

a. Provide oversight of facilities within their areas of interest.

b. Inform higher-level commands of requirements and participate in project selection and governance.

3-19. BASE OPERATING SUPPORT-INTEGRATOR

a. BOS-I is a subfunction of the lead Service. The BOS-I is responsible for planning and synchronizing the efficient application of resources and contracting to facilitate unity of effort in the coordination of sustainment functions at designated base camps. When multiple Service components share a common base of operations, USEUCOM may designate a USAREUR component or JTF as the BOS-I at each base camp. USEUCOM, commensurate with SOF capacity and capability, may assign SOF the synchronization of BOS functions in specific instances where SOF and their enablers are the only forces at a base camp.

b. The designated BOS-I is responsible for coordinating common-user contract support, as well as the efficient use of other support resources, for all Joint forces at the base camp. BOS-I responsibilities include the coordination of war reserve material assets; the collection and prioritization of construction requirements; seeking infrastructure funding support; planning for and establishing facilities for common-user requirements such as morale, welfare, and recreation (MWR) centers and Army and Air Force Exchange Service (AAFES) facilities; environmental management; fire emergency services; emergency management; chemical, biological, radiological, and nuclear response; FP; and HW disposal. When shortfalls or opportunities for efficiencies occur, USEUCOM may task the CG, USAREUR, to provide or coordinate specific capabilities (for example, infrastructure, security, communications). The BOS-I must closely coordinate with the SAA or single-port or terminal manager assigned by the JFC for base-camp support activities and airfield operations. If no SAA or single-port or terminal manager is assigned, the BOS-I is responsible for their functions.

c. Considerations for assigning specific BOS responsibilities include the following:

(1) Initial forces at a location.
(2) The preponderance of forces at a location.
(3) The forces with the greatest capability to perform the function.
(4) Agreements between the affected Services or components.
(5) The anticipated duration of employment at a location.
(6) The phase of operations.

d. If the BOS-I uses a mixture of civil augmentation program (CAP) and other types of contracted support to provide base services, engineers and logisticians must plan early for these requirements to minimize burdens on the operational staff during the execution of the operation. Factors that inform the decision to use CAP support include the size of the supported force, the expected duration of employment at the base camp, the facility construction levels, security, and access requirements related to the use of the facilities.
SECTION VII
IMCOM-EUROPE

3-20. DIRECTOR, IMCOM-EUROPE
The Director, IMCOM-Europe (also known as the Region Director (RD)), serves as the CG’s senior installation and base operations (BASOPS) advisor. The RD provides advice and recommendations on all installation and BASOPS matters in support of USAREUR and establishes Army in Europe policy for select BASOPS-specific functions. The RD also serves as USAREUR’s link to HQ IMCOM and the Office of the Assistant Chief of Staff for Installation Management (ACSIM), HQDA, to ensure the Army in Europe meets all BASOPS requirements for Soldiers, Civilians, and Families in Europe, thereby helping USAREUR achieve and sustain readiness.

3-21. IMCOM-EUROPE TASKS AND OBJECTIVES

a. IMCOM-Europe key tasks:

   (1) IMCOM-Europe installations are operational platforms for Army readiness with a wartime mission.

   (2) Enabling readiness is the foundation of everything IMCOM-Europe does.

   (3) IMCOM-Europe provides the infrastructure and programs to organize, train, equip, deploy, and conduct combat operations by land forces.

   (4) Europe provides strategic access in support of U.S. global operations to protect the United States and the ability to pursue potential threats to their source.

   (5) Posturing a combat-credible force in Europe is essential to deterring future aggressors, preserving stability, and reassuring allies and partners.

b. IMCOM-Europe theater strategic objectives are as follows:

   (1) Set the Theater: Operate a P3. This includes providing resources to support garrisons so they can enable mission commanders to focus on readiness.

   (2) Posture: Station Army Growth. This includes making critical infrastructure investments, prioritizing and balancing infrastructure investments to best support readiness, accommodating force-structure growth, and addressing failing infrastructure components.

   (3) Protect. This includes clearly understanding the threat environment and applying protection capabilities efficiently and effectively to mitigate all threats.

   (4) Soldier Readiness. This includes sustaining the quantity and the quality of Soldier and Family programs and services while reducing expenses.
SECTION VIII
REGIONAL SUPPORT GROUP

3-22. REGIONAL SUPPORT GROUPS

a. An RSG is a deployable HQ that provides the command, control, and administrative support structure for operating a base camp or base clusters with a population of 6,000 or more personnel and requires services beyond basic life support (see ATP 3-90.20 for additional information). RSGs are mostly Reserve components, but may also be regular Army components.

b. As an alternative to requesting the deployment of an RSG, USAREUR may form ad-hoc ASTs or ASGs from theater-level-organization personnel to perform the same functions as RSGs.

c. These functions include—

(1) Commanding assigned or attached support units.

(2) Supporting units and personnel as directed.

(3) Defining contract requirements and assisting with contract oversight.

(4) Determining base-camp support requirements.

(5) Operating and staffing a 24/7 base defense operations center (BDOC).

(6) Commanding smaller contingency bases within the GO command’s operational area.

(7) Overseeing base-camp management and operations.

(8) Supporting joint RSOI operations as part of Defense Security Cooperation Agency operations.

SECTION IX
HEADQUARTERS, DEPARTMENT OF THE ARMY

3-23. HEADQUARTERS, DEPARTMENT OF THE ARMY

The ACSIM will—

a. Assist the Assistant Secretary of the Army (Installations, Energy, and Environment) (ASA (IE&E)) and the Army G-4 in developing policy, guidance, and standards for contingency basing operations and management. The ACSIM will also coordinate the development, implementation, and evaluation of policies, plans, and strategies for investment requirements of military facilities and comply with environmental requirements.

b. Provide reachback advisory resources through the ASCC (USAREUR).

c. Oversee and assist USAREUR with establishing real-property accountability using manual processes for Army base camps.
d. When the Army is the lead Service for a CL and when the GPEC designates the CL to be transitioned to an EL, lead Army staff efforts to establish Service base funding through the program objective memorandum or contingency funding processes (OCO) and establish real-property accountability in the General Fund Enterprise Business System (GFEBS) per DODI 3000.12.

e. Establish procedures to account for real property during CONOPs. This includes establishing a real-property database separate from GFEBS and maintaining it on a classified network.

SECTION X
UNITED STATES ARMY CORPS OF ENGINEERS

3-24. UNITED STATES ARMY CORPS OF ENGINEERS

a. The USACE—

(1) Provides standards for construction; guidance on scalability, standardization, and modularity; expertise on contingency standard designs; and management of the Army Facilities Component System (AFCS).

(2) Manages the worldwide power contingency contracts that provide power generation and electrical distribution services in conflict and disaster response locations.

(3) Provides deployable augmentation teams to support base camps (ATP 3-37.10).

(4) As part of its FFE mission, provides the following FFE teams:

(a) **FEST – Main:** This team averages 38 military and USACE civilian specialists. These specialists execute large contracts or special engineer support programs and can serve as a USACE HQ during large-scale contingencies.

(b) **FEST – Advance:** A nine-member team of various engineering specialties. The team members provide engineering planning and design support and limited infrastructure assessment.

(c) **CREST:** A four-person team of USACE specialists. These specialists assist in the acquisition, management, and disposal of real estate on behalf of the U.S. Government through the authorities granted by the Secretary of the Army to the Chief of Engineers during contingencies.

(d) **Environmental Support Team:** A four-person team of USACE environmental engineers and specialists. These engineers and specialists implement the Army’s strategy for the environment and can act as the inspection and enforcement arm of the military commander.

(e) **Logistics Support Team:** A four-person team of USACE logistics specialists. These specialists provide logistics support for FFE including reception of deploying Corps personnel, arrangement for transportation and lodging, and provision of supplies for USACE operations.

(f) **Base-Camp Development Team:** A 10- to 12-person nondeployable reachback team of Corps specialists. These specialists provide installation-level planning and facilities design expertise for intermediate staging bases, base camps, forward-operating bases, and displaced personnel camps. They also work on various technical engineering requests for information regarding contingencies, disasters, training, and exercises.
b. The CG, USACE (dual-hatted as the Chief of Engineers), will—

(1) Serve as the principal advisor to HQDA principal officials regarding policy for implementing, managing, and evaluating engineering, construction, and real property, and will develop the engineering and facilities portion of contingency plans and base-camp support.

(2) Oversee the USACE for execution; coordinate standards of design with the Army G-4 to ensure contingency-construction interoperability with contracted construction services; and coordinate contingency UFC construction standards and ensure their integration into design standards and specifications.

(3) Supervise activities of the USACE to maintain standards for contingency construction, including engineering designs and planning guides for facilities and utilities, and establish, transition, transfer, or close base camps in support of Army commands (ACOMs), ASCCs, and other Services and agencies. USACE is responsible for maintaining contingency facilities component systems according to AR 415-16.

(4) Coordinate with the Army G-4 and the United States Army Training and Doctrine Command Capability Manager–Maneuver Support to ensure base-camp planning, design, and construction policy fully addresses all identifiable gaps.

(5) Assist with and provide input for establishing, transitioning, transferring, and closing base camps to support ACOMs, ASCCs and other Services and agencies.

(6) Provide expeditionary engineering capability to develop base-camp plans, acquire real-estate rights, and manage design and contingency construction.

(7) Provide forward-deployed and reachback design support and oversight to ASCC or lower engineering staffs involved in the design and construction of base camps to ensure the timely establishment of high-quality, safe, and survivable facilities.

(8) Support the establishment of electric, water, wastewater, and other utility systems.

(9) Provide, manage, and maintain information on the location, quantity, and quality of available water resources to support CG planning efforts as requested by planners and field units. This information is maintained in an automated repository for documents and information that support the planning, design, and construction of base camps. This repository also includes the database of water-related data maintained by the Army Geospatial Center.

(10) Provide comprehensive technical reachback support to sustain the initial environmental surveillance mission.

(11) Integrate interoperability in all Army base-camp facility planning, engineering, and construction for allies and potential coalition partners, and keep the Army G-3/5/7 informed of programs with interoperability implications.

(12) Maintain a comprehensive construction-management system containing base-camp designs and construction standards.

c. The Commander, USACE, Europe District, will provide—
(1) Planning and MILCON execution support.

(2) Facilities and infrastructure sustainment as well as environmental support when sustainment, restoration, and modernization (SRM) or O&M funds are made available.

SECTION XI
AREA SUPPORT TEAMS AND AREA SUPPORT GROUPS

3-25. AREA SUPPORT TEAMS AND AREA SUPPORT GROUPS

a. ASGs—

(1) Provide life-support requirements to units and others passing through their AOs in order to alleviate tactical units from nonstandard missions, such as base-camp management. This ensures that commanders have the life-support resources that are required to enable them to perform their missions.

(2) Are capable of providing “efficient use of mission support resources” to operational and surge forces to enable mission effectiveness within the AO.

(3) Facilitate unity of effort by effectively and efficiently providing base-camp sustainment at all locations within their AOs without overly burdening leaders and operational elements.

b. ASG key tasks include the following:

(1) Integrating HN allies in the planning and execution of BOS requirements for U.S. Forces in the AO.

(2) Conducting real-property accountability.

(3) Prioritizing facility investments.

(4) Master planning.

(5) Managing camps.

(6) Establishing QOL standards (for MWR, postal, financial, and other services).

(7) Managing and supporting agreements (contracts, HN agreements).

(8) Conducting environmental management (dining facilities (DFACs)), logistics support activities (LSAs)).

SECTION XII
UNITS

At each echelon of command, specific units have direct responsibility for operating and managing base camps.
3-26. BASE-CAMP COMMANDERS
Base-camp commanders are responsible for operating, managing, protecting, and providing BOS services on base camps on a daily basis. Base-camp commanders will—

a. Provide BOS services in accordance with AR 700-147; ATP 3-37.10; and base-camp, USEUCOM, and USAREUR guidance.

b. Coordinate the provision of base-camp services and support from other service providers.

c. Establish and maintain base-camp policies in accordance with respective ARs and with USEUCOM and USAREUR policies.

d. Develop and implement base-security and -defense operations according to ATP 3-37.10.

e. Maintain the base-camp master plan established by the ODCSENGR.

f. Provide current base-camp master plans to USAREUR and USEUCOM engineering staffs.

g. Be responsible for BOS on Army base camps when the Army is the lead Service and the BOS-I.

3-27. PERMANENT PARTY
Mature base camps may have assigned permanent-party staff and organizations (short of the RSG, AST, and ASG options in paras 3-22 and 3-25) from USAREUR to reduce the administrative burden on rotating units of operating and managing base camps, especially when designated as the lead Service. Permanent-party staffs, if provided, must clearly coordinate their assigned lanes, roles, and missions with incoming rotating units to avoid duplication of effort.

3-28. ROTATIONAL UNITS

a. Commanders at Brigade Level and Above. Commanders at brigade level and above will—

   (1) Designate terrain managers to manage support areas, doctrinally MEBs at corps and division level. The BCT manages the terrain within its AO.

   (2) Develop basing strategies commensurate with their AOs that are nested within higher HQ basing strategies.

   (3) Provide base-camp support to subordinate base-camp commanders using the hub-and-spoke method.

b. Terrain Managers. Terrain managers will allocate terrain and resources and coordinate wide-area security within their assigned AO.

3-29. TENANT UNITS
Tenant commanders are commanders of units that reside and operate on or from base camps but do not fall under the direct command of the base commander. USEUCOM determines the roles and responsibilities of tenant commanders, the base commander, and the BOS-I. Typically, the BOS-I synchronizes sustainment functions and services within the base camp. Tenant commanders may provide input on levels of service and other items to the BOS-I, but the BOS-I makes the final determination based on defined roles and responsibilities.
CHAPTER 4  
FUNDING

SECTION I  
CONTINGENCY CONSTRUCTION FUNDING

AR 415-16, chapter 2, is the primary reference for contingency-construction funding and authorities. Table 4-1 provides a funding summary.

Table 4-1  
Funding Summary

<table>
<thead>
<tr>
<th>Type</th>
<th>Funding Limit</th>
<th>Approving Authority</th>
<th>Notification Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>MILCON</td>
<td>&gt;$50</td>
<td>Congress</td>
<td></td>
</tr>
<tr>
<td>MILCON (unspecified)</td>
<td>$50 Million</td>
<td>SECDEF/Service Secretary</td>
<td>Congressional Committee</td>
</tr>
<tr>
<td>Contingency Construction</td>
<td></td>
<td>SECDEF</td>
<td>Congressional Committee</td>
</tr>
<tr>
<td>Unspecified Minor MILCON</td>
<td>$6 Million1,2</td>
<td>SECDEF/Service Secretary</td>
<td>Congressional Committee</td>
</tr>
<tr>
<td>MILCON ($2–$6 Million)</td>
<td></td>
<td>ASCCC</td>
<td>Staff Judge Advocate</td>
</tr>
<tr>
<td>MILCON (&lt;$2 Million)</td>
<td>$2 Million using O&amp;M funding</td>
<td>SECDEF</td>
<td>Congressional Committee</td>
</tr>
<tr>
<td>Facility Repair</td>
<td>$7.5 Million (O&amp;M funding)</td>
<td>SECDEF/Service Secretary</td>
<td>Congressional Committee</td>
</tr>
</tbody>
</table>

**NOTES:**  
1. Projects costing more than $750,000 may not be carried out under this section unless approved in advance by the Secretary concerned.  
2. For projects costing more than $2,000,000, the Secretary concerned will notify the appropriate committees of Congress of that decision, of the justification for the project, and of the estimated cost of the project. The project may then be carried out only after the end of the 14-day period beginning on the date the notification is received by the committees in an electronic medium.  
3. In the event of a declaration of war or a Presidential declaration of a national emergency.

4.1. OPERATIONS AND MAINTENANCE FUNDING FOR CONSTRUCTION

The Army is authorized to obligate annual O&M funds for minor construction projects costing not more than $2 million (Section 2805, Title 10, United States Code (10 USC 2805), chapter 169). This is a peacetime provision, applicable during contingencies and emergencies; however, in the context of contingency operations, “life threatening” is generally considered a safety issue rather than an emergency. During combat or designated contingency operations, O&M funds may be obligated to fund construction projects exceeding these thresholds. USAREUR must consult with the USAREUR Judge Advocate (USAREUR JA) before making a determination to obligate O&M funds in such cases. Units seeking authorization must contact the ODCSENGR, HQ USAREUR, to obtain guidance and to start the approval process. The CG, USAREUR, has delegated approval authority for O&M projects.
4-2. MILITARY CONSTRUCTION FUNDING

a. Any contingency construction requirements that cannot be served by the O&M funding provision in paragraph 4-1 must be addressed through one of the MILCON authorities. MILCON, as defined in 10 USC 2801(a/b), “includes any construction, development, conversion, or extension of any kind carried out with respect to a military installation, whether to satisfy temporary or permanent requirements, or any acquisition of land or construction of a defense access road.” Several broad authorities have been established under 10 USC 2801 that enable the SECDEF or Service Secretaries to carry out contingency construction, including the procurement of materials for construction by military forces and the funding of civilian contracts. The collection of requirements is the shared responsibility of the Strategy, Posture, and Policy (SPP) Division, Office of the Deputy Chief of Staff, G5, HQ USAREUR, and the ODCSENGR. The SPP Division is the staff lead for prioritizing USAREUR MILCON requirements; the ODCSENGR is the staff lead for execution. Both the SPP Division and the ODCSENGR must submit MILCON requirements.

b. Subparagraphs (1) through (5) summarize the various MILCON authorities that may be available for supporting construction at base camps, as described in AR 415-16.

1. 10 USC 2803 authorizes the SECDEF to obligate funding (currently $50 million across DOD) per year of nonobligated appropriated funds for MILCON projects that are vital to national security or the protection of health, safety, or environmental quality and cannot wait for inclusion in the next Military Construction Authorization Act because of the level of urgency in protecting those interests. Access to these funds requires Congressional notification and availability of funds from the reprogramming of previously Congressionally approved project funds.

2. 10 USC 2804 provides that within the amount appropriated for such purpose, the SECDEF may carry out a MILCON project not otherwise authorized by law, or may authorize the Secretary of a military department to carry out such a project, if the SECDEF determines that deferral of the project for inclusion in the next Military Construction Authorization Act would be inconsistent with national security or national interest. The SECDEF may authorize a Service Secretary to carry out such a project. A project must comply with a 7-day electronic notice.

3. 10 USC 2805 authorizes the SECDEF or each Service Secretary to carry out unspecified minor MILCON (UMM) projects not otherwise authorized by law. An unspecified minor MILCON project is a MILCON project that has an approved cost equal to or less than $6 million. Projects costing more than $750,000 require Secretary approval. Projects over $2 million require Secretarial notice and justification to Congressional committees as well as a 14-day waiting period after electronic notification to Congress before proceeding. UMM projects costing less than $2 million may be funded with O&M funds.

4. 10 USC 2808 authorizes the SECDEF, in the event of a declaration of war or a Presidential declaration of a national emergency (under 50 USC 1601 and the following), to undertake (or authorize the Service Secretaries to undertake) MILCON projects that are necessary to support the use of the Armed Forces for the war or national emergency. The funds for these projects must be nonobligated, MILCON-appropriated funds. The appropriate Congressional committees must be notified of each project, but there is no waiting period before the project may begin.

5. 10 USC 2811 authorizes the obligation of available O&M funds to carry out repair-of-facilities projects. Repair projects costing more than $7.5 million require advance approval by the SECDEF or Service Secretary and Congressional notification.
c. Current USEUCOM policy requires a location to be on the ELML and an agreement to be in place with the HN that provides U.S. Forces operational control and unimpeded access before any MILCON-funded work. Figure 4-1, adapted from AR 700-147, provides a logic diagram for matching needs to the appropriate MILCON funding authorization.

SECTION II
OVERSEAS CONTINGENCY OPERATIONS FUNDING

4-3. OVERSEAS CONTINGENCY OPERATIONS FUNDING

a. OCO funds are money set aside in the Federal budget for expenses connected to overseas operations such as crisis response, infrastructure, and coalition support for contingency operations.

b. USAREUR must submit validated requirements for OCO and special contingency authorities funding to the Army Budget Office in accordance with published data calls. All submissions for OCO funding must identify the supported operations.

c. Activities must ensure that requests for OCO funds are directly related to the readiness of deploying forces and mission requirements in support of CONOPs in accordance with Office of Management and Budget guidance.

d. Each year, the Army Budget Office distributes specific instructions for submitting requirements. The Army G-4, as the appropriate HQDA functional proponent for contingency basing; the ACSIM; and the Assistant Secretary of the Army for Installations, Housing, and Partnerships must validate requirements before they are built into the budget.

e. OCO, EDI, or other funding is not always available, and resourcing may become a Service obligation. This means that tenant Services may need to pay for using the sites in reimbursable support agreements as executed by USAREUR.

SECTION III
SUSTAINMENT, READINESS, AND MODERNIZATION FUNDING

4-4. SUSTAINMENT, READINESS, AND MODERNIZATION FUNDING

a. The DA requests SRM funds for several functions, including O&M appropriations, as part of the budgeting process with Congress.

b. In the Army, SRM is generally requested for facilities on MOBs and as part of ACSIM and IMCOM asset-management programs. While base camps in the USAREUR AO are primarily funded with O&M funds provided through OCO or other supplemental funding, such as EDI, as base camps evolve toward an enduring status, the ACSIM and IMCOM may assume greater roles and responsibilities for base-camp asset management in the future. Planners at USAREUR must carefully manage this transition to ensure no underlaps between organizations when forecasting funding requirements for base camps.

c. Sustainment funds for base camps are derived from the Army real-property system of record, which considers facility type, age, size, and other factors. Contact the ODCSENGR with any questions regarding the availability and generation of sustainment funds.
Figure 4-1. Contingency Construction Funding Tree
SECTION IV
HOST-NATION FUNDING

4-5. HOST-NATION FUNDING

a. AR 700-147 directs that USAREUR must evaluate all available sources of support (organic military, multinational, HN, strategic, and contracted support) to identify the best-value sustainment method to meet the operational parameters of the mission.

b. While the HN may not have the capacity to contribute funding directly to finance base-camp construction or O&M requirements, it may have other resources that can be leveraged to reduce costs and logistical demands on USAREUR resources. Examples include requesting support from HN military engineering and sustainment organizations or from equivalent structures in the nation’s civilian institutions (including the equivalent of state and municipal organizations) for minor construction and O&M support for the base camp, particularly when a facility is shared with the HN’s forces or civilian institutions.

c. The HN may also be better suited to locally vet and procure contracted services for the same. USAREUR planners should make assessments of the capabilities and suitability of potential HN assistance and should include requests for assistance as appropriate in HN negotiations when establishing base camps in HN countries.

d. The ODCSENGR executes area-development plans with HN representatives and produces a nonbinding plan for each base. As a result of detailed planning, U.S. and HN projects complement one another. In all USAREUR forward sites, the funding strategy is to pursue HN or NATO investment before pursuing U.S. funding.

SECTION V
NATO FUNDING

4-6. NATO FUNDING

a. The NSIP is the long-term investment program that is supported by funding from all NATO nations and is therefore referred to as a common funded program. It represents one of NATO’s three resource pillars that, based on the requirements that the NATO Defense Planning Process identifies, come together to deliver the NATO capabilities required to meet the Alliance’s military level of ambition. The other two pillars are manpower and O&M.

b. Facilities and equipment required to support U.S. NATO-assigned forces and NATO operational plans will be funded, to the maximum extent possible, through the NSIP. NATO documentation for the recoupment of a prefinanced project will be submitted for authorization, once sufficient NATO support for the prefinanced project is obtained, as evidenced by inclusion of the project in a required capability. DOD asset accounts will be adjusted as appropriate. For additional information and funding procedures, see DODD 2010.5, USEUCOM Instruction (ECI) 4701.01, and AE Regulation 415-22. The ODCSENGR, HQ USAREUR, is the USAREUR proponent for identifying and submitting potential NSIP funding requests to USEUCOM for consideration at NATO.

c. Planners should monitor current guidance on accessing the NSIP and consider NATO’s documentation requirements during base-camp advance planning, as some requirements must be identified and submitted before starting basing activities for the requests to be eligible for common funding.
SECTION VI
FUNDING SUMMARY

4-7. FUNDING SUMMARY
Table 4-1 provides a summary of funding limits, approving authorities, and notification requirements.

CHAPTER 5
PLANNING AND DESIGN

SECTION I
AGREEMENTS

5-1. GENERAL

a. When planning and designing base camps, it is imperative to understand that agreements with the HN are in place at various governmental levels that dictate what U.S. Forces can and cannot do while operating within sovereign HNs. The process for establishing agreements and the stipulations of the agreements are different for each country within the USAREUR AO.

b. Agreements with the HN only allow for the use of land that the Ministry of Defense of the respective HN manages. Using privately held land requires a lease to be in place, and land managed by another government organization (for example, the Ministry of Forestry) requires further agreements and coordination time.

c. To conduct any modifications to HN assets, requesters must contact the ODCSENGR, HQ USAREUR, or the appropriate AST or ASG to verify that they have—

   (1) An executed agreement with the HN allowing the work.

   (2) Delegated authority to conduct the work.

d. The general (simplified) process for U.S. construction in a HN is as follows:

   (1) The United States presents a project to the HN through a letter of intent (LOI). USAREUR and its subordinate units prepare the LOI, and USAREUR submits it to the appropriate bilateral body.

   (2) The HN approves the project.

   (3) The United States builds the project.

   (4) The United States turns the project over to the HN.

   (5) The HN agrees to allow exclusive or joint use.

   (6) The facility must be maintained until disposal.

NOTE: The above process does not capture all possible variables and nuances and, in many cases, is fluid. Contact the ODCSENGR, HQ USAREUR, for guidance before any SRM or new construction.
e. All planning and design of projects must be within the agreed-upon facilities and areas in accordance with all of the following agreements that are in place at the time of the project.

5-2. LEGAL AGREEMENTS

a. Base camps in the USAREUR AO are constructed on land designated by the HN. The involvement of military real-estate representatives, the USAREUR JA, Joint engineers, environmental specialists, and civil-affairs personnel is essential to address legal, ethical, and moral concerns before occupying locations and especially before initiating any construction or modifications to the land or facilities.

b. Military operations are inherently disruptive to land and facilities. Units must contact the ODCSENGR, HQ USAREUR, to verify that agreements are in place to allow for desired actions, and to understand U.S. Forces liabilities for damages and the process for remediation should damages occur.

c. Land-use agreements may require a restoration to original conditions once missions are completed. Environmental remediation may be required, even if the base camp was used for a short duration. See chapter 9 for detailed guidance on environmental baseline surveys required before occupying any site, regardless of the type. Stipulations of the land-use agreements and identification of the required environmental remediation must be verified through the ODCSENGR.

5-3. DEFENSE COOPERATION AGREEMENTS
A defense cooperation agreement (DCA) establishes how U.S. forces operate within a HN and is typically broad in nature. The respective state negotiates and signs this agreement.

5-4. STATUS OF FORCES AGREEMENTS
A status of forces agreement (SOFA) defines the legal status of U.S. DOD personnel, activities, and property in the territory of another nation and sets forth rights and responsibilities between the United States and the host government. The Department of State has overall responsibility for leading the U.S. Government’s negotiation of SOFAs and shares responsibility for their implementation with DOD, which serves as the executive agent for implementing and negotiating supplemental agreements. The NATO SOFA and Partnership for Peace SOFAs apply to all NATO Allies and most Partnership for Peace partners, respectively (International Security Advisory Board, 16 January 2015).

5-5. DIPLOMATIC NOTES
Diplomatic notes establish the “equivalent of” administrative and technical protections (International Security Advisory Board, 16 January 2015) and have been used as a bridge when there is construction in a country that does not yet have a DCA or SOFA in place. Diplomatic notes are coordinated through USEUCOM with the Department of State.

5-6. SUPPLEMENTAL AGREEMENTS
A basic NATO SOFA may be supplemented, often on a bilateral basis, over time with more detailed implementing agreements for specific projects as circumstances may require. These types of bilateral agreements are coordinated through USEUCOM and concluded by the Department of State.

5-7. IMPLEMENTING ARRANGEMENTS
USEUCOM and the HN may execute an implementing arrangement, which provides specific guidance on how to accomplish the intent of a DCA. The International Agreements Division, Office of the Deputy Chief of Staff, G8, HQ USAREUR, is the USAREUR entry point for all implementing arrangements.
5-8. AGREED FACILITIES AND AREA AGREEMENT
USEUCOM, in conjunction with USACE Europe District, negotiates the Agreed Facilities and Area Agreement with the HN. This agreement is executed by the USACE RECO and defines the facilities and areas within the HN that U.S forces may occupy and control.

5-9. LETTERS OF INTENT
All projects require a LOI to be submitted in accordance with the terms of the executed agreements. USAREUR and its subordinate units are responsible for preparing the LOI. The LOI must include project documentation that is available at the time the LOI is submitted (for example, scope of work, DD Form 1391, area development plan, designs, quad chart).

5-10. ACCOMMODATION CONSIGNMENT AGREEMENTS
The USACE, Europe District, prepares and executes accommodation consignment agreements (ACAs). ACAs list the facilities that are for U.S. exclusive use and facilities that are for joint use and record the facilities’ conditions, usually through a joint inventory condition report (JICR) (para 5-12).

5-11. ACQUISITION AND CROSS-SERVICING AGREEMENTS
ACSAs are applicable worldwide to acquire logistics support, supplies, and services directly from, or provide them to, a foreign government or organization (such as NATO). These agreements are negotiated in accordance with DODD 2010.9 to implement proposed transfers. Compensation for acquisitions or transfers under these arrangements may be either on a cost-reimbursement basis or by exchange of supplies or services of equal value. ACSAs establish principles and provisions for effecting required support, but do not bind either party to any particular monetary value or number of transactions. ACSAs are the primary vehicle for HNs to seek reimbursement from the United States for the use of HN facilities and services. The authority to negotiate and sign ACSAs resides within the Office of the Deputy Chief of Staff, G4, HQ USAREUR.

NOTE: DODD 2010.9 and CJCSI 2120.01 provide complete details on responsibilities and procedures for acquiring and transferring logistics support, supplies, and services under the authority of 10 USC 2341 and 2342. The Joint Staff J4 also has a reference portal with more information on ACSAs.

5-12. JOINT INVENTORY CONDITION REPORT
After construction has been completed or before a building is occupied, HN and U.S. representatives will perform a joint inspection. A representative from the ODCSENGR, HQ USAREUR, should be present for the inspection. The findings of the inspection are recorded in a JICR, which documents the pre- and postconstruction conditions of the facility, range, building, or structure as part of the ACA (para 5-10). USAREUR is responsible for preparing and providing input for the JICR. The JICR stands as the official signing-over of a facility to authorize U.S. use of the facility.

5-13. FINAL GOVERNING STANDARDS AND STANDARDIZATION AGREEMENT 2582

a. Final governing standards (FGS) are agreements that are negotiated between the U.S. Government and HNs and that dictate the environmental standards that the U.S. Forces must adhere to when operating within the applicable HN.

b. Environmental standards during NATO-led operations are governed by Standardization Agreement 2582 (AJEPP-2).
SECTION II
PRE-ESTABLISHMENT ACTIVITIES

5-14. PRE-ESTABLISHMENT ACTIVITIES
Preliminary planning incorporates those initial activities that help planners understand the scope and magnitude of the mission while simultaneously preparing planners for follow-on actions as part of the base-camp master-planning process. Preliminary planning steps include—

a. Analyzing the mission statement and the OPORD.

b. Analyzing the supported unit’s mission and requirements.

c. Reviewing base-camp allowances and facility construction levels.

d. Analyzing operationally related variables.

SECTION III
MASTER-PLAN DEVELOPMENT

5-15. MASTER-PLAN DEVELOPMENT

a. Master planning provides an integrated strategy for the design, construction, and maintenance of required facilities and infrastructure at the best possible cost that enables scalable and sustainable base camps (ATP 3-37.10). It integrates base-camp improvements for protection, QOL for residents, and efficiencies and effectiveness. Proper master planning conserves resources, prevents wasted construction, and contributes to a more efficient execution of mission operations.

b. All base camps must establish master planning to integrate any existing facilities with the construction and maintenance of required facilities, while synchronizing resources to requirements in support of base camps. Planning for a base camp follows a path that is similar to planning for permanent installations, except it may have a shortened planning horizon and is often not prepared at the same level of detail. DOD has a robust portfolio of decision-supporting tools to assist in master planning (JP 4-04).

c. USEUCOM establishes the process for developing, approving, and implementing base master plans in the European theater. For base camps, this process should include representation from all affected Service components or coalition allies. USEUCOM validates plans that call for semipermanent and permanent construction. The Base Camp Planning Board develops and maintains the master plan and conducts long-range, short-range, and capital-investment planning. Master planning produces the requirements that USAREUR validates and funds. Additionally, HN involvement in base master planning is necessary and critical to a successful use of land, utilities, and preexisting infrastructure as well as to identifying necessary HN improvements to support requirements tied to the master plan.

d. Base planning occurs at multiple levels in an operational theater from the strategic level (TPP or a specific country basing strategy) down to the operational and tactical levels that create a unique and site-specific plan for an individual base camp. Master planning is a continuous, analytical process that begins with the initial predeployment survey and involves the evaluation of factors affecting the present and future development and operation of a base camp. This evaluation forms the basis for determining development objectives and planning proposals to meet current and future needs. Each step of the process builds on the preceding step, providing a logical framework for the planning. This process provides a means for sustainable development that supports mission requirements.
e. Although the master-planning process applies to all types of base camps, BOS staffs at smaller sites may lack the necessary capabilities for performing effective master planning. Such units may require augmentation or technical assistance from supporting Service reachback centers. Theater-level or major command engineer and Service staffs can also provide technical support and guidance for base-camp master-plan development.

f. Master plans for initial CLs may be simply a sketch of the CL, while master plans for temporary and semipermanent CLs, or FOSs, should include more developed improvement plans based on complete surveys. Planners must follow applicable OPORDs and UFCs, including UFC 2-100-01, USEUCOM AT OPORD 18-11 with Fragmentary Order (FRAGORD) 001, UFC 4-010-01, UFC 3-260-01, UFC 1-201-01, and UFC 1-201-02. Additionally, Graphic Training Aid (GTA) 90-01-011 provides a detailed consolidation of AT and FP standards from multiple sources, together with practical charts, illustrations, and examples.

g. Master planning is distinct from joint planning. Master planning does not replace planning or troop-leading procedures at the tactical level for conducting unit operations, but incorporates the tactical planning into its process to ensure necessary facilities and infrastructure are provided to support the mission. Comprehensive master planning focuses on a longer time horizon while meeting present mission requirements without compromising the ability to meet future needs. The skills and experience required for master planning are most commonly attributed to community planning and general engineering. For additional details, see JP 3-34, Air Force Doctrine Annex 3-34, ATP 3-34.40, JP 5-0, and Army Doctrine Reference Publication (ADRP) 5-0.

h. Comprehensive and collaborative planning typically results in the development of an effective base-camp master plan. The level of detail of the master plan depends on the maturity of the location, the speed at which the operational need for basing develops, and the expected duration of the base camp.

i. Base-camp planners rely on master-planning principles that establish a framework for realizing the CDRUSEUCOM’S strategic plan and address the internal organization that occupies a base camp and its relationship to other sites and commands. The following are master-planning principles:

(1) Scalability. Planners consider that base camps may change in size and duration and will require the ability to grow or downsize as appropriate.

(2) Sustainability. Planners consider the overall logistics and personnel services requirements of a base camp and those of the forces living at a location.

(3) Standardization. Although each Service is unique, planners should consider establishing common requirements at a base camp.

(4) Survivability. Planners should include AT, FP, law enforcement, counterintelligence, information security, personnel security, industrial security, operations security, and emergency management and response in a base camp.

j. Master plans should address uncertainties such as resource availability, base populations, mission duration, HN requirements and considerations, evolving threats, and consequences of alternative courses of action to the proposals within the plan, including the costs for inaction. Typically, contingency-basing master plans for base camps—
(1) Address real-estate, facility, FP, supporting infrastructure and utilities, environmental, and real-property requirements.

(2) Show changes in the mission, requirements, or direction.

(3) Forecast growth or reduction of assigned forces.

(4) Conform to HN and other land-use agreements.

(5) Document funding requirements and associated forecasted budgets.

(6) Identify existing facilities and infrastructure that are available for use and document decisions on their use in accordance with UFC 1-201-02.

(7) Identify constraints due to safety criteria (airfield, explosives safety, electromagnetic), security, environmental factors, unexploded ordnance, or other factors.

(8) Consider use of HN power resources.

(9) Mutually complement HN infrastructure and investment plans.

SECTION IV
ASSESSMENT OF EXISTING CONDITIONS

5-16. PHYSICAL ENVIRONMENT

a. Commanders must carefully and continuously address the full range of environmental considerations during base master planning. Geology, weather, hydrology, wildlife, seismic zones, natural and man-made conditions, and other environmental considerations influence many aspects of base master planning, including location selection. Planners evaluate the on-base physical environment with a particular focus on elements that may create significant limitations on the operation or construction of facilities, roadways, utility systems, airfields, and other base-camp infrastructure.

b. An environmental baseline survey (EBS) or an environmental condition study (ECS) is required during the planning process and may be required for a CL depending on the population and length of occupancy (chap 9). The EBS and ECS characterize environmental conditions and risks at base camps. They are performed in conjunction with an occupational and environmental health site assessment (OEHSA). The EBS, ECS, and OEHSA provide valuable information that supports base master-planning decisions. In addition to on-base conditions, planners must consider off-base and regional conditions that could affect base master planning, including local roads, railroads, airports, land-use issues, and population density in the base vicinity. Planners should use geospatial software planning tools, when available. JP 3-34 provides environmental considerations for staff planning. Additional environmental considerations are listed in ATP 3-34.5, which provides guidance for applying environmental considerations during planning, training, and the conduct of contingency operations.

5-17. HUMAN ASPECTS OF THE ENVIRONMENT

Planners must consider and account for the human aspects of the operational environment such as operational effects of proximity to population centers, cultural sensitivities related to the location of forces, specific land uses, economic consequences the base camp may have on the local population, and health concerns to the U.S. Forces and the local population. Proximity to local populations is not an inherently detrimental or beneficial consideration. Such proximity can aid in achieving desired sociopolitical objectives.
5-18. EXISTING STRUCTURES
Planners must identify existing facilities in the preliminary planning stage. Existing structures and facilities should be used as much as possible, consistent with operational economy and functional requirements. Every existing facility should be evaluated for life-safety hazards in accordance with UFC 1-201-02 and UFC 4-010-01 before U.S. personnel occupy the facility. Even when existing structures are not used, planners determine what effect they may still have on base-camp development, beneficial or negative (UFC 1-202-01). In addition to evaluating facilities for safety, planners must verify that the facility is not bound with restrictions due to historic or cultural significance in accordance with AE Regulation 200-2, NATO AJEPP-2, and the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict Protocols 1 and 2.

5-19. CLIMATE AND WEATHER
Planners must consider the prevailing climate and weather. While climate and weather will not normally dictate the location of a base camp, they will influence the base-camp layout, facility design, electrical power generation, and other infrastructure requirements. Climate and weather may, for example, affect the following base-camp requirements:

a. Drainage requirements (increase or decrease).

b. Dust-abatement requirements.

c. Heating, ventilation, air-conditioning, refrigeration, and associated power requirements.

d. Building-insulation requirements.

e. Water-line burial or insulation (freeze prevention).

f. Building materials (suitable for the environment and the base-camp life span).

g. Building design and construction (survivability, snow loads).

h. Internal road networks (handle excessive rainfall, accommodate snow removal).

5-20. TOPOGRAPHY
The topography influences base-camp site selection, land-use planning, and survivability. Base camps should be sited and planned to work with the existing topography and minimize earthwork. Planners should prioritize flat, well-drained sites with clear fields of fire and unobstructed observation of the surrounding area. Also, they should avoid steep slopes which inhibit development, vehicle and troop movement, and can cause drainage and erosion issues. The topography surrounding a base camp is critically important to FP. Planners should avoid locations where high ground overlooks the base camp, making it vulnerable to enemy surveillance or attack. In addition, they should lay out the base to limit outside observability of key features of the base, including command posts, POL storage, and munitions storage.

5-21. HYDROLOGY
Planners consider hydrological conditions, seasonal variations, and flood characteristics of rivers and streams near the base camp. They also consider potential flood-hazard areas and the flood-plain elevation of the site. While the availability of potable water is another important planning factor for base-camp selection, surface and subsurface drainage can affect specific site-selection decisions.
a. Surface drainage, whether from existing streambeds or from water movement over the ground’s surface, often has a significant impact on base operations. The topography, soil type, climate, and rainfall intensity affect surface drainage. Poor drainage detracts from base operations by reducing trafficability and overall QOL. In certain circumstances, flooding may even occur that can damage facilities or destroy equipment. Surface drainage from areas off the base camp may also introduce pollution and potential pathogens into the base area. Additionally, drainage of water from the base camp can carry pollutants created by operations into the surrounding areas, such as agricultural fields. Planning for drainage is one of the first steps in any construction project. Base planners integrate these concerns into site-selection and land-use planning to mitigate their adverse effects and provide assistance in the development of drainage structures and runoff management plans.

b. When subsurface drainage allows the flow of contaminants (that is, industrial chemicals, POL, and human waste) into and out of the base-camp area, it can adversely affect groundwater sources used for drinking and irrigation. Planners must understand what hazards subsurface drainage presents and integrate these considerations into planning when and where possible.

c. An adequate supply of potable water must be available for human consumption at base camps; it is important for health, safety, and QOL. Base-camp planners consider the anticipated population, the level of activity, and available water sources when determining overall base water requirements. Planners also consider the effects of base water sources and usage on local aquifers and water sources used by local populations.

5-22. NATURAL RESOURCES

a. The natural resources present in the AO may indicate the materials available for base-camp construction. The AO may also include agricultural lands or endangered species that require protection. Water resources are a particular concern in certain areas of the world. The local availability of these resources, or their availability in neighboring areas, may influence base-camp planning.

b. Generally, locating facilities in areas where they will not adversely affect natural resources is preferred. Planners, in cooperation with military and civilian agencies such as military civil-affairs teams, must ensure that all base-camp planning considers these issues.

c. When planning to use local water sources, planners must take into account the availability of water and how base-camp water usage will affect the local population.

d. Planners should consider local building or indigenous construction material and other commodities with respect to positive and negative effects on local populations, initial base-camp establishment costs, and long-term sustainment of base-camp infrastructure.

5-23. BIOLOGICAL FEATURES AND HAZARDS
Disease vectors; dust, air, water, and soil pollution; and industrial hazards such as toxic industrial material hazards will be present at many base camps. Planners should coordinate with other military and civilian agencies to identify hazards that affect base planning and operations and should develop remediation plans. Accurate and thorough EBSs, ECSs, and OEHSAs will help identify hazards.
5-24. TIME
Time is often a critical factor affecting military decisions. When planning base camps, planners often make decisions in a tight timeline and with incomplete information. Often, planners make decisions concerning the use of certain materials or construction techniques based on when the base must be operational. In some circumstances, portions of the base camp may be required for use before completing the entire base (for example, runways, housing, delivery facilities, storage facilities). Planners may consider constructing a base camp using the initial facility construction level to provide timely accommodation for forces, with a plan to improve the base to a higher construction level later when time is not as crucial. Base-camp planners integrate the different operationally related variables into base master planning with an eye on meeting time requirements.

5-25. CONSIDERATIONS REGARDING THE LOCAL POPULATION
When establishing base camps in HNs, planners should assess local economic uses and sensitivities to site locations, particularly for temporary and semipermanent CLs or ELs. Generally, planners should avoid locating bases in areas where they will have an adverse effect on economic activities or on the local population’s perceptions of U.S. forces. If situational needs require the use of such sites, planning to mitigate any adverse effects should be conducted (JP 4-04).

SECTION V
DETERMINATION OF REQUIREMENTS

5-26. DETERMINATION OF REQUIREMENTS

a. In the USAREUR AO, USAREUR and the rotational or stationed units being assigned to base camps generate base-camp requirements. These requirements are derived from Army systems of record including the Headquarters Installation Information System, the Army Stationing and Installation Plan (ASIP), and GFEBS.

b. USAREUR, as the ASCC, generates requirements for base camps and facilities that may be outside of a rotational unit’s narrow mission focus to support mission success and ensure freedom of movement. Typically, a base camp supporting rotational units is sized to support a generic unit (that is, a brigade or a battalion) and is not based on a specific unit’s stationing action.

c. Once a unit is assigned in the ASIP, space requirements are authorized. Unit requirements are based on data in the unit’s modification table of organization and equipment (MTOE) and other Army systems of record. This data is used as the basis for determining personnel and equipment space as well as sustainment requirements at base camps.

d. The determination of requirements must incorporate Joint service, HN, and allied partner requirements to ensure that adequate space and separation are available or provided to accomplish the mission. The applicable SOFA and any other interagency agreements in place for a particular location dictate the approval of stationing U.S. forces.

e. Chapter 6 provides space allowances for the USAREUR AO. A statement of requirements (SOR) form must be completed to request space from the HN (para 6-3).
SECTION VI
REAL ESTATE

5-27. REAL ESTATE

a. When designated as the lead Service real-estate component, USAREUR will complete a basic rights agreement for real-estate matters in conjunction with USEUCOM and USACE, Europe District. 10 USC 2675 provides the DA, through the Under Secretary of Defense for Installations and Environment, the authority to engage in the leasing of real property outside the United States that is needed for military purposes. USACE, Europe District, is the real-estate contracting office with delegated authority to execute leases under 10 USC 2675.

b. When designated as the lead Service, USAREUR, in conjunction with USACE, Europe District, will maintain a current list of all U.S. real-estate holdings under its control or use in their respective geographic areas. USAREUR will verify and update this list annually as directed by the designated real-estate component.

c. Components and DOD agencies will provide records and reports required to satisfy management and customer-service functions, including copies of all agreements affecting property rights, to their designated real-estate components.

d. When acquiring real property, the designated real-estate component will prepare an incoming inventory and condition report as well as a baseline environmental assessment of the real property at the time the HN relinquishes possession. In addition, the designated real-estate component will continuously update all real-property inventories and report them semiannually to the ACSIM. Whenever feasible, real-estate components should coordinate reports with authorized HN representatives before taking possession of property (AR 700-147).

SECTION VII
ENVIRONMENTAL CONSIDERATIONS

5-28. ENVIRONMENTAL CONSIDERATIONS
Environmental standards vary from location to location throughout the theater. Chapter 9 provides guidance on environmental standards.

SECTION VIII
EFFICIENCY OF OPERATIONAL ENERGY

5-29. EFFICIENCY OF OPERATIONAL ENERGY
Operational energy (OE) includes power, water, and waste. Army policy is to use OE efficiently by—

a. Maximizing the use of OE-efficient designs as base camps are expanded or enhanced and as facility upgrades are implemented. This includes implementing optimal use of sun, shade, and insulation whenever possible.

b. Using OE-efficient equipment (generators, environmental control units, and low-flow toilets and showers) and materials (thermal insulation).

c. Maximizing the use of renewable-energy sources (for example, solar power, wind power) and reusable or recyclable materials.
d. Developing sustainable facilities and infrastructure (simple and inexpensive to operate, maintain, and repair).

e. Minimizing the use of spot power generation since this typically results in generators running underloaded and inefficiently.

f. Maximizing the use of smart-power distribution systems and employing demand management.

g. Establishing planning factors and standards to improve efficiencies in spot power generation.

h. Developing and issuing guidance on when to transition from spot power generation to generation and distribution systems (grids).

SECTION IX
ANTITERRORISM

5-30. ANTITERRORISM

a. A facility routinely occupied by more than 10 DOD personnel must incorporate AT design standards. This applies to the construction of new facilities, major renovations of existing facilities (including HN facilities if inhabited by U.S. DOD personnel), and the emplacement or construction of expeditionary structures. A facility design basis threat must be performed in accordance with UFC 4-020-01 at the beginning of project planning to establish appropriate threat and protection design requirements. These requirements will be used in conjunction with UFC 4-010-01 to establish the security and AT design criteria that will serve as the basis for facility designs. AE Regulation 525-13 and the current USEUCOM AT OPORD provide additional AT design requirements that must be incorporated within the European theater. These requirements include additional threat tactics (for example, stationary and moving vehicle-borne improved explosive devices), higher levels of protection for densely populated buildings, and specifications for mitigation features (for example, vehicle barriers, double laminate windows), which add to those required by the aforementioned UFC. AT design requirements and associated costs must be established in the planning phase and incorporated into planning documents (for example, DD Form 1391, Tab G).

b. Installation master planning cognizant of AT considerations will help meet DOD and USEUCOM AT design requirements more efficiently and effectively. Inhabited buildings should be grouped into pedestrian-only cantonment areas so that vehicle barriers can be provided at cantonment area limits rather than at each individual building. Centralized parking areas and buildings that require frequent vehicle access or deliveries should be located closest to access control points to limit vehicle circulation through inhabited areas of an installation.

c. The CDRUSEUCOM is the only approving authority for relief from AT construction standards in applicable UFC and in annex D of USEUCOM OPORD 18-11 with FRAGORD 001. Local commanders are not authorized to accept risk when a condition exists that does not fully satisfy the intent of these standards and cannot be further mitigated. If conditions exist that require approval for acceptance of risk or that generate a requirement for additional compensatory measures, commanders will request relief through the process outlined in appendix 1 to annex D of the USEUCOM AT OPORD.
SECTION X
FORCE PROTECTION AND SAFETY CONSIDERATIONS

5-31. GENERAL

a. When developing a base-camp master plan, an FP assessment of the current situation is required to provide information for developing a holistic plan for a secure mission environment. The FP assessment addresses the development of FP mitigation procedures and approval processes to mitigate vulnerabilities created by temporary construction, such as fence replacement or guard-shack reconstruction. Review minimum AT standards (including hardening, standoff, and separation distances) as well as USEUCOM- and USAREUR-specific protection guidance when assessing FP requirements. For facilities that contain pilferable items, physical security of those items must be considered and planned for.

b. During the planning phase of a base camp or a specific facility on a base camp, a facility design threat analysis is required in accordance with UFC 4-010-01 and USEUCOM OPORD 18-11 with FRAGORD 001. Conduct the analysis in accordance with UFC 4-020-01 for each proposed facility, including existing HN facilities that are considered for U.S. use.

c. The requirements in paragraphs 5-32 through 5-47 must be considered when making force-protection and safety decisions.

5-32. FACILITY ACCESS

a. Select FOSs away from public roads and other uncontrolled areas.

b. Maximize the use of natural or manmade features to obscure vision from potentially threatening vantage points.

c. Limit vehicle-approach speeds.

d. Minimize vehicle-access points.

e. Provide an entry-control point with a well-defined holding area for unauthorized vehicles and vehicles that need to be searched. The holding area should be outside the prescribed minimum standoff distance (USEUCOM AT OPORD 18-11 with FRAGORD 001).

f. Separate functional areas that require frequent vehicle access (for example, kitchens, industrial areas, retail areas, refuse collection points) from billeting areas.

5-33. BASE-CAMP CHARACTERISTICS

a. Maintain good housekeeping by keeping areas within 30 feet of shelters or structures free from items other than those that are part of the infrastructure.

b. When possible, position exterior doors to prevent their being easily targeted from the base-camp perimeter or uncontrolled vantage points.

5-34. FACILITY STANDOFF OR SEPARATION
Provide standoff distance in accordance with USEUCOM AT OPORD 18-11 with FRAGORD 001.
5-35. THREAT-SPECIFIC STANDARDS
In addition to the minimum standards in paragraphs 5-32 through 5-34, the DOD Security Engineering Manual (UFC 4-020 series) provides guidance for incorporating additional measures to mitigate specific threats. That guidance includes design strategies for mitigating the effects of specific aggressor tactics to defined levels of protection and the effect that applying those measures has on building costs. The JFOB Handbook (GTA 90-01-011) provides illustrated examples of compliant solutions.

5-36. POWER GENERATION AND DISTRIBUTION
Wood or chain-link fencing is required around all generator, transformer, and consolidated generator station locations. Enclosing generators in wooden buildings is not authorized.

5-37. PERIMETER FENCING
a. Base camps will have a perimeter fence with security lighting surrounding the main cantonment area. Fences must prevent unauthorized access and provide visibility during all lighting conditions in accordance with ATP 3-39.32 and Unified Facilities Guide Specifications (UFGS) 32 31 13.53. UFC 4-022-03 requires a minimum of 7 feet of fabric height; typical DOD fence is FE7, which has double outriggers. NATO Allied Command Operations Directive 80-25 calls for an even higher standard of at least FE8 with 7 feet fabric height.

b. Berms and sniper screens are authorized to block vision. Perimeter lights are authorized. A gravel perimeter road is authorized inside the berm. Culverts underneath the perimeter fence must be caged to prevent anyone from crawling through. Drainage ditches, culverts, vents, ducts, and other openings that pass through a perimeter and have a cross-sectional area greater than 96 square inches, and whose smallest dimension is greater than 6 inches must be protected by securely fastened welded bar grills in accordance with Technical Manual (TM) 5-853-3.

5-38. CLEAR ZONES
a. Establish a minimum clear zone of 20 feet between the perimeter barrier and exterior structures, parking areas, and natural or manmade features. When possible, a clear zone of 50 feet or more should exist between the perimeter barrier and structures within the protected area, except when a building’s wall constitutes part of the perimeter barrier. Landscaping features within the clear zone will be kept to 1 foot in height or less to ensure an unobstructed view and prevent concealment for aggressors.

b. Clear zones for fences around arms and ammunition supply points (ASPs) must be in accordance with AR 190-11. Clear zones for fences around communications facilities must be in accordance with AR 190-13.

5-39. ACCESS CONTROL POINTS
Access control points (ACPs) must be able to perform visitor processing, identification checks, and vehicle inspections. Covered inspection areas at the main gates are authorized if required by weather conditions. ACPs must include a vehicle-rated final denial barrier, a ballistic-rated guard booth, and a vehicle search area in accordance with ATP 3-39.32, UFC 4-010-01, UFC 4-020-01, the Army Standard for Access Control Points, and UFC 4-022-01. Clearing barrels must be placed inside the gates.

5-40. CLEARING BARRELS
Clearing barrels must be installed at all ACPs and outside the entrances to arms- and ammunition-storage areas, medical facilities, and dining facilities.
5-41. WALKWAYS AND DECKS
Pressure-treated, rot-resistant lumber is the standard construction material for elevated walkways and decks. If this lumber is not available or is cost-prohibitive, composite decking material for constructing walkways and decks will be used. Untreated wood may be used if primed and painted. Wooden walkways will be painted with sand paint or other non-slip materials to reduce the chance of slipping, particularly in climates with snow, ice, or extended rainy periods. Lighting must be provided wherever steps cannot be seen at night.

5-42. BUNKERS
Only bunker designs approved by the USACE Engineer Research and Development Center will be used to construct bunkers. Sandbag bunkers must protect sandbags from solar radiation and protect the wooden core from rot. The design factor of 110 percent of FOS population will be used for bunkers and fighting positions. The normal planning factor is that 50 percent of the population will be on the perimeter and 50 percent in bunkers.

5-43. GUARD TOWERS
Guard towers will be placed so that personnel in each tower can see the towers to their immediate right and left. This prevents “dead space” on the perimeter. Towers must have heat, light, and be hardened against small-arms and mortar fire.

5-44. CONSTRUCTED FIGHTING POSITIONS
The TF engineer must approve the overhead-cover design for fighting positions. Fighting positions must be inspected regularly for deterioration. A digging permit from the DPW must be coordinated before any construction begins.

5-45. OTHER FACILITIES
Theaters and similar multipurpose facilities must be provided protection according to Army FP criteria.

5-46. FIRE PROTECTION
A fire-protection assessment will assess fire protection and mitigation measures, including identifying potential hazards, real-property zoning actions, building spacing, and emergency-vehicle access at basing locations. The majority of facilities for CLs adhere to initial or temporary construction standards; therefore, they typically consist of combustible materials and can pose a significant fire hazard. When planning the layout of tent facilities, it is imperative to consider the location of tie-downs to ensure that appropriate distance is provided to allow for fire-apparatus access. Additionally, within the European theater, U.S. forces occupy HN facilities that do not adhere to the same fire-protection standards as CONUS facilities and lack fire-alarm and sprinkler systems. To reduce risk while occupying these facilities, follow the fire-protection requirements in UFC 1-201-01 and UFC 1-201-02.

5-47. EXPLOSIVES SAFETY
All USAREUR explosives-safety siting is determined by evaluating the more stringent of NATO criteria (AASTP-1) and U.S. criteria (DA Pam 385-64). Airfield assets should be sited in accordance with NATO Bilateral Strategic Command Directive 85-5. Evaluate HN regulations as needed. The DOD Explosives Safety Board must approve all U.S.-sited assets.
CHAPTER 6  
FACILITY STANDARDS  

SECTION I  
GENERAL  

6-1. GENERAL  
In order for any U.S. element to conduct any demolition, alteration, or construction on or to HN property, or to HN assets, the element or their higher command must verify that there is an executed agreement with the HN allowing the work, and that the element has been delegated the authority to conduct the work. Contact the ODCSENGR, HQ USAREUR, to verify that the work is permitted and authorized.  

   a. DOD policy and Army regulations governing permanent military facilities may not apply to contingency operations or initiatives in the USAREUR AO. This regulation takes the intent of those publications, applies it to theater-specific operations, and describes the standards for security, housing, unit facilities, Soldier support facilities, and utilities.  

   b. Supported unit commanders or activity heads will not deviate from the standards herein without the written approval of the DCG, USAREUR. Requests to deviate from the standards in this regulation or to establish a new standard must be sent to the DCSENGR. The DCSENGR will coordinate the request and submit it to the DCG, USAREUR, for decision. This process will ensure effective use of resources and equitable standards for all personnel in the area of operations.  

   c. Construction standards for facilities in USEUCOM are specified by the CDRUSEUCOM. The space allocation standards provided in this section are guidelines for planning and resource allocation, and not intended to inhibit the commander’s ability to accomplish assigned missions in combat or during urgent contingency environments. The standards related to minimum LHS requirements as decreed by higher directive authorities should not be waived. Though not included in the facility construction-type options, existing HN building space may be used for any of the space types, regardless of base type, provided the space meets established criteria (sec II).  

SECTION II  
USE OF HOST-NATION FACILITIES  

6-2. GENERAL  
Within the USAREUR AO, it is common for HNs to provide U.S. Forces the use of existing HN facilities on HN military installations. These facilities may be utilized under sole-use or joint use arrangements, are commonly outdated, and often do not meet U.S. LHS standards. Additionally, space within the exiting HN facility may be constrained by the building configuration, resulting in U.S. space standards not being achieved. HN utility capabilities must be considered early in the planning process to determine if they are able to support the proposed requirements.  

6-3. STATEMENT OF REQUIREMENTS  
An SOR form is required for all incoming units. SORs are updated annually when there is a change in the existing unit’s requirements. The SOR states the unit requirements and how the HN will accommodate those requirements. This form varies by country and must be coordinated through the USAREUR G4. The process of developing a SOR is as follows:  

   a. The incoming unit initiates the SOR based on unit requirements.
b. The unit completes the SOR and submits it to the applicable senior mission commander for review.

c. The senior mission commander reviews the SOR and then submits the SOR to the USAREUR G4 for validation.

d. The USAREUR G4 validates the SOR.

e. The senior mission commander and unit G4 or S4, as applicable, meet with the HN to ensure the HN understands the requirements; and that the requirements are correct; to determine how the HN will meet the requirements; and to determine if the HN cannot meet the requirements.

f. After the requirements are finalized, the U.S. and HN proponents will sign the SOR, which is then amended to the ACSA as an agreement to provide the facilities and services outlined in it.

**NOTE:** If the HN cannot meet a requirement, and it cannot be provided through the ACSA, the unit must submit a letter of justification for the requirement to determine if it can be provided by the 409th Support Brigade (409th SB) or through the LOGCAP. If none of the above methods are feasible to meet the requirement, the unit will work with the senior mission commander to develop an alternative plan to support the requirement. If there is a facility requirement that requires a waiver or exemption, the waiver or exemption must be requested in accordance with paragraph 6-69.

### 6-4. ASSESSMENT

a. Before U.S. occupation of any HN facility, the applicable U.S. element will evaluate the facility in accordance with UFC 1-201-02, which prescribes and describes three levels of evaluation for facility occupancy: preliminary evaluation, detailed evaluation, and engineering evaluation. These evaluations assess items that affect the life, safety, and health of occupants. The successful completion of an evaluation, and the mitigation of any deficiencies, provides a level of safety to building occupants as described for the given evaluation level and the duration defined for it. If the use of the building changes or an adverse event (high winds, earthquakes, or other battle damage) affects the building systems, previous evaluations are no longer valid. In this situation, the applicable element will reevaluate the building to reestablish the desired level of safety.

b. Appendixes D and E of UFC 1-201-02 provide checklists of specific items to assess during evaluations. Table 6-1 provides a comparison of the evaluation levels and required inspector qualifications, based on the desired duration of building occupancy. Applicable units or elements should attempt to obtain construction documentation that would indicate past building usage, detailed design, and as-built drawings. The interviewing of local residents to obtain prior building usage information is also a valuable source of data.

c. Maintain copies of completed evaluation paperwork within the facility itself, and forward copies of the evaluations to the ODCSENGR, HQ USAREUR.

### 6-5. FACILITY REPORTING REQUIREMENTS

a. The ODCSENGR will conduct a JICR before occupying any facility (para 5-12).
Table 6-1
Comparison of Evaluation Levels

<table>
<thead>
<tr>
<th>UFC 1-201-02 Chapter</th>
<th>Preliminary</th>
<th>Detailed</th>
<th>Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Minimal level of safety for expedient, limited-use occupancy</td>
<td>Moderate level of safety for broader-use occupancy</td>
<td>Full compliance with all safety requirements for DOD semipermanent facilities</td>
</tr>
<tr>
<td>Evaluator</td>
<td>Nontechnical</td>
<td>Technical knowledge</td>
<td>Professional engineers</td>
</tr>
<tr>
<td>Focus</td>
<td>Extreme hazards posing imminent danger, less electrical and mechanical systems</td>
<td>Near-term risks to safety and health, including electrical and mechanical systems</td>
<td>Long-term risks from all building systems and functions</td>
</tr>
<tr>
<td>Valid period</td>
<td>90 days</td>
<td>5 years</td>
<td>10 years (extendable to 25 years)</td>
</tr>
</tbody>
</table>

b. Incoming units must report the stationing and use for each occupied facility to the ODCSENGR within the first 30 days of occupation. Units will coordinate with the ODCSENGR for the current report template.

c. Immediately report any change in facility condition that raises LHS concerns through the chain of command to the ODCSENGR. Damage or facility repairs will be contracted by the HN. The HN will seek reimbursement through the ACSA.

d. Provide an updated SOR form annually or when there is a change in unit requirements. This form must be coordinated with the USAREUR G4 and the ODCSENGR, HQ USAREUR.

6-6. FACILITY MODIFICATIONS

a. Any permanent or temporary modifications to HN facilities are not authorized unless—

(1) There is an executed agreement with the HN allowing the work.

(2) The personnel conducting the work have been delegated the authority to conduct the work.

b. Involvement by the applicable Army in Europe element is required before initiating any construction on HN-owned property to ensure compliance with U.S. and HN laws and policies. The requesting unit will also coordinate with the ODCSENGR before any work is conducted.

6-7. GOVERNANCE ESTABLISHMENT

a. The process for governance establishment in the use of HN facilities is typically dictated by USEUCOM or by higher-level international agreements. Rotational units will adhere to the governance in those agreements and fall in under those structures in place at the time of their rotation; and will contact the ODCSENGR for assistance.

b. Agreements between the U.S. and the HN for facility use and upkeep should be negotiated prior to the establishment of base camps.
(1) Understanding HN agreements is essential, as they may dictate and limit many facets of facilities, infrastructure, services, supplies, and contracting (per JP 4-04).

(2) USAREUR utilizes a SOR form to capture requirements, requests, agreements, and responsibilities for facilities and base usage between U.S. Forces and the HN. It is updated at least annually in accordance with paragraph 6-3.

6-8. WAIVER AUTHORITIES AND PROCESSES
UFC 1-201-02 governs assessments of HN-provided facilities designated for U.S. occupation. Deviations from this UFC must be in accordance with paragraph 6-69.

SECTION III
FACILITY CONSTRUCTION STANDARDS

6-9. FACILITY CONSTRUCTION STANDARDS

a. There are four levels of construction standards (initial, temporary, semipermanent, and permanent), which are driven by mission-requirements, climactic conditions, resource availability, and other economic factors including initial construction and life-cycle costs. Time is a secondary factor. Authorized facilities may progress from initial to temporary or semipermanent, or may be immediately established at any level depending on the operational requirements during the life-cycle of a base camp. Meeting the facility standards may be a progressive effort; however, the commanders will strive to meet the appropriate standards (as described above) as quickly as conditions in the operational environment permit.

b. The facility construction standards are distinct from the base type despite the similar nomenclature. For example, a semipermanent CL may contain facilities constructed to initial, temporary, or semipermanent construction standards, based on the mission needs or on other economic factors. Table 6-2 presents the construction standards authorized within each base type.

c. The initial construction standards established in this regulation will be used as a guide for planning the life-support requirements for USAREUR-led exercises. Exercise planners, to the extent possible, will use the minimum adequacy standards. Exceptions to this must be approved by the USAREUR G3.

d. The following sections provide tables for each facility type (tables 6-3 through 6-44), which show an example construction method for each authorized construction standard and provides space allocation, waiver authority, and references for that facility.

(1) Tables 6-3 through 6-43 are to be used in conjunction with table 6-2 to determine the appropriate construction standards for the base type.

(2) The construction examples are meant to be examples only and represent current common construction methods.

(3) These tables are guides and must not hinder the commanders’ ability to achieve mission success or flexibility to adapt to conditions on the ground, nor should the examples presented preclude the use of newer or innovative solutions that provide better mission capability or economic savings as construction methods evolve.
Table 6-2
Authorized Construction Standards by Base Type

<table>
<thead>
<tr>
<th>Base Type</th>
<th>ICL</th>
<th>TCL</th>
<th>SCL</th>
<th>FOS/CSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorized Construction Standard</td>
<td>I</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
</tbody>
</table>

Base Type Key:
- ICL – Initial Contingency Location
- TCL – Temporary Contingency Location
- SCL – Semipermanent Contingency Location
- FOS – Forward Operating Site
- CSL – Cooperative Security Location

NOTE: Any of these may include transient sites such as Intermediate Staging Bases (ISBs), Life Support Areas (LSA), and/or Convoy Support Centers (SCS).

Construction Standards Key:
- I – Initial
- T – Temporary
- S – Semipermanent
- P – Permanent

(4) These tables are for planning purposes: final construction standards, acquisition methods, and execution authorities will be determined on a case-by-case basis through established project validation processes.

(5) Several of the tables specify various tiers of tentage to be used for the spectrum of construction standards. The tier levels for tents are as follows:

(a) Tier I consists of a general-purpose (GP) medium field tent or equivalent (Temper, Force Provider, or commercial off-the-shelf (COTS) equivalent) (16 ft x 32 ft) with plywood floor panels.

(b) Tier II consists of a GP medium field tent or equivalent (Temper, Force Provider, or COTS equivalent) with plywood floor panels, two electric light outlets, two electrical outlets, and space heaters.

(c) Tier III consists of a GP medium field tent or equivalent (Temper, Force Provider, or COTS equivalent), full wooden frame for the tent, plywood panel sidewalls, raised insulated flooring, four electric light outlets, eight electrical outlets, and environmental control units (ECUs). Tier III tents provide better insulation than Tiers I and II and should include flame retardant material.

SECTION IV
AREA SUPPORT TEAMS AND AREA SUPPORT GROUPS

6-10. AREA SUPPORT TEAMS AND AREA SUPPORT GROUPS

a. When an AST or ASG is deployed to support a base camp, the ASG or AST will be provided space for Directorate of Logistics and DPW operations.

b. A consolidated arms- and ammunition-storage area should be available for use by the AST and ASG staff and the units rotating through the base temporarily.
### Table 6-3
Construction Standards for ASG and AST Facilities

<table>
<thead>
<tr>
<th>ASG, AST</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>None</td>
<td>Tier II-III tents, containers</td>
<td>Containers: 2 to 10 years. Masonry and pre-engineered buildings: 10 or more years.</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>512 SF (three containers) per 250 base camp-supported personnel.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>DCSENGR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>ODCSENGR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SECTION V
MAINTENANCE FACILITIES

#### 6-11. GENERAL

- a. Each maintenance facility will have a parts storage capability within 500 meters of the maintenance activity location to enable the rapid acquisition of available parts. This storage warehouse will be in compliance with all force protection and security regulations.

- b. Battalion maintenance officers require dedicated space to manage shop operations and parts management. Power and internet is required. The capability to maintain a temperature of 68 degrees Fahrenheit (°F) (20 degrees Celsius (°C)) is necessary during winter.

- c. Each maintenance clerk will be allocated a single desk for workspace. Power and Internet connectivity is required at each desk. The capability to maintain a temperature of 68 °F (20 °C) is necessary during winter.

#### 6-12. VEHICLE-MAINTENANCE FACILITIES

- a. Each vehicle-maintenance facility must have overhead lift capability. The overhead lift capability must support up to and including the largest vehicle in the inventory. In initial or temporary CLs, organic equipment, such as an M88, may provide the lift capability.

- b. The capability to maintain a temperature of 68 °F (20 °C) is necessary during winter.

- c. Ground improvements capable of supporting tracked vehicles for a minimum of 6 months without major improvements are required.

- d. The maintenance facility should be colocated with the motor pool. Maintenance can be separate from the motor pool but will be within 500 meters of it and connected with an improved road surface.

#### 6-13. SUSTAINMENT SUPPORT MAINTENANCE AND THE SERVICE AND RECOVERY SECTION

- a. Off-system component repair tasks will be performed at a sustainment maintenance level where components will be repaired to a single military service-wide standard and returned to the supply system for redistribution.
### Table 6-4
**Construction Standards for Field Maintenance Facilities**

<table>
<thead>
<tr>
<th>Vehicle Maintenance Facilities</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
<td>Tier II-III tents, Containers</td>
<td>Metal two-story pre-engineered building, masonry, or other economical local construction method on concrete base with concrete aprons</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Space Allocation</th>
<th>Per Army Standard for Tactical Equipment Maintenance Facilities 512 SF (16 ft x 32 ft) per work bay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiver Authority</td>
<td>DCSENGR (for non-MILCON projects) IAW AR 420-1 (for MILCON projects)</td>
</tr>
<tr>
<td>Reference</td>
<td>The Army Standard for Tactical Equipment Maintenance Facilities</td>
</tr>
</tbody>
</table>

b. When sustainment maintenance is authorized, the design rate will be 2,050 square feet (SF) per 1,000 base-camp personnel supported (including administration space).

c. When a service and recovery section is authorized, it will adhere to the same design rate as the sustainment facility.

### Table 6-5
**Construction Standards for Direct-Support (DS) Vehicle Maintenance Facilities**

<table>
<thead>
<tr>
<th>DS Maintenance</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
<td>Tier II-III tents, Containers</td>
<td>Metal two-story pre-engineered building, masonry, or other economical local construction method on concrete base with concrete aprons</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Space Allocation</th>
<th>2,050 SF per 1,000 base camp personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiver Authority</td>
<td>DCSENGR (for non-MILCON projects) IAW AR 420-1 (for MILCON projects)</td>
</tr>
<tr>
<td>Reference</td>
<td>The Army Standard for Tactical Equipment Maintenance Facilities</td>
</tr>
</tbody>
</table>
SECTION VI
SECURE MOTOR POOLS

6-14. SECURE MOTOR POOLS

a. During the initial stages of base camp planning, units will identify the requirements for motor pool facilities and parking areas based on the applicable unit MTOE, and will synchronize the requirements with traffic flow patterns and antiterrorism and force protection measures.

b. Requirements can include areas for conducting maintenance (enclosed facilities and pads or exterior maintenance pads), administrative functions, vehicle washing, and POL storage.

c. Construct motor pools with the capability to support tracked vehicles for a minimum of six months without major improvements. The intent is to provide a safe and suitable location for parking all vehicles and equipment to enable maintenance and ensure equipment readiness.

d. Construct parking areas with an engineered slope and drainage to minimize weather effects and improve the safety and longevity of the parking area.

e. Construct chain-link fences, including gates, with a minimum of 7-foot material, excluding the top guard. Chain-link fences must be constructed with a 9-gauge or heavier wire, be zinc-coated, and have a mesh opening not larger than 2 inches per side, with twisted and barb top selvages and knuckled bottom selvage (in accordance with ATP 3-39.32 and UFGS 32 31 13.53). Motor pools of risk level II and higher also require 6 meters of clear zone on the protected side.

f. For safety and security purposes (and in accordance with ATP 3-39.32), units will provide lighting around the fence perimeter to ensure that the entire perimeter of the motor pool is visible in all lighting conditions. In initial establishment and in CLs, lighting may be provided with generator sets. All other base types will employ fixed lighting.

g. Secure each motor pool with a lockable double gate that is large enough to accommodate the movement of the largest vehicle in the unit. Gates will be made of the same material as the fence fabric (in accordance with ATP 3-39.32 and UFGS 32 31 13.53).

h. Each motor pool will be equipped with at least one single lockable pedestrian gate to enable foot traffic. This gate will be at least 3 feet wide and will be made of the same material as the fence fabric (in accordance with ATP 3-39.32 and UFGS 32 31 13.53).

i. Motor pools are for sole use for U.S. military vehicles and equipment. If HN or other non-U.S. vehicles share the motor pool, U.S. military vehicles will be physically separated from other vehicles with fencing to ensure the security and protection of the equipment.

j. Store all motor-pool hazardous material (HAZMAT) in accordance with paragraph 6-17.

k. Each motor pool will provide a safe working environment, ensuring that all policy and regulatory guidance is met for—

(1) Safety, as per AR 385-10.

(2) The environment, as per AR 200-1.
Table 6-6
Construction Standards for Secure Motor Pools

<table>
<thead>
<tr>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction*</td>
<td>Unpaved or Gravel</td>
<td>Gravel with concrete turning pads for tracked vehicles</td>
<td>Gravel with concrete turning pads for tracked vehicles</td>
</tr>
<tr>
<td>Space Allocation</td>
<td>40 square yards per unit of equipment for approximately 75 percent of the equipment supported. Maintenance Facilities: 1,840 SF per battalion or 1,200 SF per company. Maintenance Administration: 640 SF or four containers per battalion, 320 SF or two containers per company.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Waiver Authority: DCSENGR
Reference: ODCSENGR

* NOTE: Construction materials must balance mission requirements and conditions on the ground.

(3) Personal protective equipment, as per AR 385-10.

(4) Grounding points, as per Technical Bulletin (TB) 385-4.

(5) Hearing protection, as per DA Pamphlet 40-501.

SECTION VII
WASH RACKS

6-15. WASH RACKS

a. All gray water must pass through an oil-water separator to ensure compliance with the environmental regulations in place within the AO.

b. In response to climactic considerations, a wash rack may be enclosed to ensure year round operations regardless of weather. Units will provide heating capable of maintaining a temperature of 68 °F (20 °C) during winter.

c. Wash racks should be covered under a maintenance and repair contract to ensure that systems are maintained, and that repairs are completed within 24 hours so as not to adversely affect recovery or agricultural cleaning timelines.

d. Gravel lots are to be constructed to allow contractors to emplace temporary wash racks and disinfection points.

e. Washing and disinfecting are distinct and separate functions.

(1) Disinfection is required prior to movement between certain countries and prior to movement back to CONUS.

(2) Where disinfection facilities are required, the facilities will—
Table 6-7
Construction Standards for Wash Racks

<table>
<thead>
<tr>
<th>Wash Rack</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Self-contained temporary wash rack on gravel pad</td>
<td>Self-contained temporary wash rack on gravel pad</td>
<td>Elevated, flat, and container rack with oil-water separator and graywater discharge</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>When authorized, each base camp that requires a wash rack will have at least one 45-foot-long elevated vehicle wash rack, one 100-foot flat wash rack, and one container wash rack equipped with oil-water separators. Design wash racks to fit the largest and heaviest vehicles in the fleet. Number of wash lanes are determined IAW UFC 4-214-03 Chapter 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>DCSENGR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>UFC 4-214-03</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a) Collect waste water in a storage tank and dispose as hazardous waste.

(b) Be located in a sterile yard and have a paved route to a railhead or other transportation infrastructure.

f. Where possible, wash racks should connect to HN water and sewer systems.

SECTION VIII
SUPPLY SUPPORT ACTIVITIES AND WAREHOUSE FACILITIES

6-16. SUPPLY SUPPORT ACTIVITIES AND WAREHOUSE FACILITIES

a. When a supply support activity (SSA) is required, the size of the SSA will depend on the equipment density, troop strength, and classes of supply to be supported. Each brigade-sized element is authorized a 10,000 SF warehouse in addition to the SSA.

b. Warehouses will not be used for long-term housing of excess Government property.

c. SSAs will be maintained in a covered or enclosed facility to ensure proper storage and security of all classes of supply. Where required, units will provide heating for SSAs capable of maintaining a temperature of 68 °F (20 °C) during winter.

d. Buildings of combustible construction must be limited to 9,000 SF (836 SM) in area and one story. Storage heights must be limited to a maximum of 12 feet (3.66 m).

e. Buildings of noncombustible or fire resistive construction must be limited to 17,500 SF (1,626 SM) and one story. Storage heights must be limited to a maximum of 12 feet (3.66 m).

f. SSAs and warehouse facilities will be sized based on the International Building Code (IBC), chapter 5, General Building Heights and Areas, and provided with sprinkler protection in accordance with UFC 3-600-01, Fire Protection Engineering for Facilities, and National Fire Protection Association (NFPA) 13, Standard for the Installation of Sprinkler Systems requirements.
g. Fire protection standards for warehouses must be in compliance and in accordance with UFC 1-201-01, which prescribes the following:

(1) Fire protection requirements for initial construction levels assume no active fire protection or site water supplies are to be provided.

(2) For temporary and semipermanent facility construction levels, a fire protection summary is required for all designs. Units will provide a summary discussing the minimum fire protection provisions in accordance with UFC 1-200-01, DOD Building Code (General Building Requirements), UFC 1-201-01, and UFC 3-600-01.

(a) As per UFC 3-600-01, automatic sprinkler systems may be omitted, with the approval of the designated fire protection engineer, for facilities with an area of less than 5,000 SF.

(b) Warehouse fire areas must not exceed 60,000 SF (warehouse fire areas may increase to 120,000 SF if the provisions of UFC 3-600-01, section 4-44.5.1, are met).

h. Each SSA will be capable of maintaining multiple classes of supply in an organized and easy-to-maintain fashion. Units will provide proper shelving based on the amount needed and types of supplies to be stored.

(1) Each base camp will maintain a Class IV yard to support combat-configured loads for counter-mobility operations, security needs, and general construction, as required.

(2) All class IX supplies will be ordered and maintained through standard Army procedures.

i. The DLA disposition services function will be provided at the unit-run SSA facility. DLA will provide disposition services on an on-call basis only.

(1) 1 SF per base camp employee (Soldier, U.S. civilian employee, local national (LN) employee) is necessary for DLA disposition holding areas.

(2) A gravel-holding yard of 2 SF per employee is authorized.

SECTION IX
HAZARDOUS-MATERIAL STORAGE

6-17. HAZARDOUS-MATERIAL STORAGE

a. Environmental compliance is a unit responsibility. Contact the ODCSENGR, HQ USAREUR, or unit environmental staff for support.

b. All HAZMAT will be stored in a covered area on elevated pads with secondary containment in accordance with all applicable HAZMAT and environmental standards including AR 200-1, AE Regulation 200-2, AE Regulation 200-100, DA Pamphlet 710-7, and UFC 3-600-01.

c. HAZMAT spill kits must be kept on site.

d. Base camps of 1,000 or more personnel will have a consolidated HAZMAT waste collection point to be managed by the ASG, AST, or base commander, as applicable.
Table 6-8
Construction Standards for SSA Warehouses

<table>
<thead>
<tr>
<th>SSA Warehouse</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tier I-II tents</td>
<td></td>
<td>Tier II-III tents,</td>
<td>Metal pre-engineered building</td>
<td></td>
</tr>
<tr>
<td>Space</td>
<td>Sized based on IBC chapter 5, General Building Heights and Areas, and provided with sprinkler protection in accordance with UFC 3-600-01 and NFPA 13 requirements. Interior SF is based on equipment density, troop strength, and classes of supply to be supported (13,200 NSF max). Each brigade-sized element is authorized a 10,000 SF warehouse in addition to the SSA. 1 SF per base camp employee for a covered DLA Disposition holding area. 2 SF per base camp employee for gravel DLA Disposition holding yard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allocation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver</td>
<td>DCSENGR (for nonpermanent facility construction projects) IAW AR 420-1 (for MILCON projects)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authority</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>Army Standard for the Unit SSA</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| e. | Standards for HAZMAT collection points: |
| (1) Each company-sized element will have a covered hazardous-waste collection point built on an elevated pad that is out of contact with the ground surface and a secondary containment. |
| (2) A concrete pad is authorized (although not required) for battalion-sized motor pools. |
| (3) Base camp commanders may authorize additional collection points. |
| (4) HAZMAT spill kits must be kept on site. |
| (5) A contract will be in place at each base camp to remove and process all HAZMAT. |

| f. | Complete automatic sprinkler protection must be provided throughout all HAZMAT areas regardless of area or construction type. |

SECTION X
GROUND FUEL

6-18. GROUND FUEL

| a. | Above-ground fuel tanks are authorized for storing bulk fuels. |
| (1) Tanks will be constructed according to the environmental requirements in the environmental annex of the applicable CONPLAN, and will use 20-foot containerized fuel systems for storage and distribution that will each hold 5,800 gallons. |
| (2) As above-ground storage tanks become available, fuel storage bladders will be phased out. |
Table 6-9
Construction Standards for HAZMAT Storage

<table>
<thead>
<tr>
<th>HAZMAT Storage</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Container</td>
<td>Metal pre-engineered building</td>
<td>Masonry or pre-engineered building</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>The types and sizes of storage tanks depend on safety, economics, terrorist activity, locality, and intended service. Aboveground storage tanks 5,000 gallons (19,000 L) min for POL. Provide separate storage for each type and grade of fuel.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>Projects outside the United States and its territories and possessions must comply with both the provisions of UFC 3-600-01 and HN fire-protection requirements. For conflicts between this UFC and HN fire-protection requirements, the authority having jurisdiction (AHJ) must be consulted. The AHJ for U.S. Army is the HQ USACE/CECW-CE.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>UFC 3-460-01</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(3) Where it is necessary to use fuel bladders, the fuel bladders will be placed according to environmental requirements in the environmental annex of the applicable CONPLAN, and will be surrounded with a constructed containment structure that is large enough to hold the maximum capacity of fuel (plus 10 percent) in the bladder.

b. Fuel-truck parking areas must have secondary containment pads equipped with a catchment sump and grounding rods. Units will keep hazardous-materials spill kits on site.

c. All battalions will maintain a minimum of a 3 days of supply (DOS) basic load or 50,000 gallons JP8 and 1,000 gallons DF2, whichever is higher.

d. The construction of a berm around all permanent and semipermanent fuel points for protection and security is required.

e. Spill kits must be kept on site in accordance with HAZMAT standards based on the amount of fuel stored. Environmental compliance is the unit’s responsibility. Contact the ODCSENGR, HQ USAREUR, or unit environmental staff for support.

f. All fueling operations, including bulk fuel storage, should be located away from water bodies, including drainage and sources of drinking water.

SECTION XI
AVIATION FACILITIES

Aviation facilities must comply with UFC 3-260-01 regardless of the type of base or location.

6-19. HELICOPTER LANDING ZONE

a. All base camps must have a marked helicopter landing zone with the minimum ability to land UH-60 aircraft for medical evacuations and emergency resupplies. A specialized aviation unit typically handles airfield operations. The base operations center must integrate and synchronize daily air operations to include construction and repairs.
b. Helicopter landing and parking pads must initially be surfaced with M2 matting to prevent foreign object damage (FOD).

c. Helicopter landing and parking pads should be upgraded to concrete with asphalt aprons. Asphalt aprons shall have a fuel resistant sealant applied to the surface. The pads must have adequate grounding rods and tie-downs. Units will plant all soil in the immediate area of the pads with grass or gravel large enough to mitigate against FOD hazards. “Hot pads” (pads for armed aircraft) will have earth-filled defensive barriers or similar materials to minimize damage from accidental weapons discharges.

6-20. VEHICLE PARKING AREAS
Aircraft ground-support vehicles must maintain a 10-foot distance from wingtips of supported aircraft.

6-21. LIGHTED LANDING PAD
One helicopter-landing pad on each base camp will be outfitted with nighttime landing lights. This will facilitate landing helicopters for emergency operations. As a minimum, a beanbag lighting kit must be available and operational for nighttime flight operations.

6-22. FORWARD AREA REFUEL POINT
a. If pipe is used, it must be double-walled stainless steel with a return line.

b. Use only aviation-quality fuel filters.

c. Pads must be concrete, as must be any area where fuel spills are deemed likely to occur.

d. The installation of blast protection around fueling pads is required.

e. HAZMAT spill kits must be kept on site for immediate response to HAZMAT spills.

f. For fueling projects outside the continental United States (OCONUS) and in a NATO country, units and personnel will review and comply with all appropriate NATO documents, HN regulations, and UFC 3-460-01. Where a direct conflict between the NATO documents, HN regulations, or the UFC exists, the HN regulations must be met, followed by NATO documents, and then UFC 3-460-1.

6-23. CONTROL TOWERS
Control towers—

a. Must be large enough and tall enough to provide for unobscured vision of the entire airfield.

b. Will be constructed out of either wood or metal.

c. Will be properly grounded, primed, and painted to prevent weather damage and to minimize slip hazards in bad weather.

6-24. SQUADRON OPERATIONS
10,000 SF of space (if available) is authorized per squadron.

6-25. AVIATION MAINTENANCE
a. Base the total number of aviation clamshell tents on mission requirements.

b. Pave all tow-ways from the helipads to the clamshell tents.
c. For fixed-wing and rotary-wing aircraft fuel-cell maintenance facilities; for alert; for storage; and for depot-level and general-purpose maintenance hangars, comply with UFC 4-211-01.

d. For corrosion-control hangars, comply with UFC 4-211-02.

6-26. WASH RACKS FOR HELICOPTERS AND OTHER AIRCRAFT

a. Wash racks for helicopters and other aircraft are authorized.

b. Wash racks must have storage tanks and concrete pads with drainage systems equipped with oil-water separators.

c. Environmental compliance is a unit responsibility. Units will contact the ODCSENGR, HQ USAREUR, or unit environmental staff for support.

SECTION XII
DINING FACILITIES

6-27. DINING FACILITIES

a. DFACs are staffed and resourced by the U.S. Army, LOGCAP contractors, and HN personnel and equipment.

b. Dining facilities are designed to support 50 percent of the supported population in one sitting.

c. In addition to providing dining, kitchen, and administrative space, units will ensure that adequate space is available for cleaning, for latrines, and for kitchen staff members to change clothing.

d. Provide climate controls capable of maintaining 68 °F (20 °C) regardless of the outside temperature.

e. Sanitary wall board or other waterproof material must be used in the kitchen and in the latrine (if applicable).

f. Loading docks may be concrete, asphalt, or treated lumber.

g. Handwashing stations are mandatory and should be located at the entrance of the DFAC.

h. All DFACs will transition to operational rations (at a rate of 60 percent) and to line-item A rations (at a rate of 40 percent) with a 14-day menu option ration cycle.

i. All battalions will maintain a minimum of 3 DOS of meals ready to eat and bulk water.

j. Cold storage of food with primary and emergency backup power generation id required.

k. Buildings of combustible construction must be limited to 6,000 SF (557 SM) in area.

l. Buildings of noncombustible or fire-resistive construction must be limited to 9,500 SF (883 SM) in area.

m. An exhaust hood with a listed kitchen hood fire-protection system for any commercial-type cooking operation is required.

n. One hour of rated fire-barrier separation between any cooking and serving operation and the seating areas is required.
<table>
<thead>
<tr>
<th>Aviation Maintenance</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
<td>Aviation clamshell tent with sand-filled plywood, asphalt, or concrete floor</td>
<td>Aviation clamshell tent with sand-filled plywood, asphalt, or concrete floor</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>The total number of aviation clamshell tents will be based on mission requirements. 84’x64’ Utility, Attack, and Reconnaissance Aircraft Maintenance Module. 110’x70’ Cargo Aircraft Maintenance Module. 40’x67’ UAS Aircraft Maintenance Module.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>Next Higher HQs of the SAA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>UFC 4-211-01</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aviation Fuel</th>
<th>Example Construction</th>
<th>Bladder</th>
<th>Metal tanks, steel lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Allocation</td>
<td>Aboveground storage tanks 5,000 gallons (19,000 liters) min. For aviation activities, provide a minimum of two tanks for each type of fuel.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>For specific interpretations, waivers, or exemption, contact the appropriate Service Headquarters SMEs and refer to MIL-STD-3007F for the waiver process. Substantial deviations from UFC 3-460-01 must first be presented to the appropriate Service Headquarters SMEs, and then reviewed / approved by the DOD Fuels Facility Engineering Panel.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>UFC 3-460-01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Runway and Taxiway</th>
<th>Example Construction</th>
<th>Paved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Allocation</td>
<td>See UFC 3-260-01</td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>IAW UFC 3-260-01, Appendix B, Section 1</td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>UFC 3-260-01</td>
<td></td>
</tr>
</tbody>
</table>
Table 6-11
Construction Standards for DFACs

<table>
<thead>
<tr>
<th>DFAC</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Mobile Kitchen Trailer, Tier I-II tents</td>
<td>Tier II-III tents, Containers</td>
<td>Tier III tent: 2 to 10 years. Masonry and pre-engineered buildings: 10 or more years.</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>640 SF (SF) of dining-room space and 320 total SF of kitchen, administration, and storage space per 75 authorized users. Adequate space for cleaning, latrines, and clothes-changing for local national kitchen staff. Provide 7 DOS min.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>CDRUSEUCOM (per UFC 1-201-01) or delegated authority if due to operational conditions HQ USACE for all other waivers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>UFC 1-201-01</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Food Cold Storage</th>
<th>Example Construction</th>
<th>Portable refrigeration with freezer units for medical, food, and maintenance storage</th>
<th>Refrigeration installed in temporary structures</th>
<th>Refrigeration installed in semipermanent structures: may be pre-engineered buildings.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Allocation</td>
<td>20-foot containers specifically designed for cold storage of food.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>USAREUR G4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>ODCSENGR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION XIII
AMMUNITION SUPPLY POINTS

6-28. AMMUNITION SUPPLY POINTS

a. Each base camp will have direct access to an ammunition holding area (AHA) or an ASP for the storage of ammunition.

b. ASPs can be co-used with HNs, and are established and maintained in accordance with FP requirements for security. All mandatory safety requirements will be used to protect the force.

c. The ASP, if applicable to the base camp, will use bunker storage when available. If bunker storage is not available, ammunition will be stored in containers located in bermed cells. Units will construct the ASP with bunkers or bermed cells and in compliance with the space allocations (safety requirements) to meet the net explosive weight of the ammunition planned and projected for storage. AR 385-10 and AE Regulation 385-64 govern the storage of ammunition.
Table 6-12
Construction Standards for ASPs

<table>
<thead>
<tr>
<th>Ammunition Supply Point</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Containers surrounded by securely anchored triple-strand concertina wire; bermed when possible</td>
<td>Containers to bunkers surrounded by securely anchored triple-strand concertina wire</td>
<td>Bunkers surrounded by a USACE FE7 chain-link fence secured with a 5,200-series approved medium-security lock</td>
<td></td>
</tr>
</tbody>
</table>

Space Allocation Each base camp will have direct access to an AHA or ASP for the storage of ammunition.

Waiver Authority U.S. Army Chief of Staff

Reference DA Pam 385-64

SECTION XIV
AMMUNITION HOLDING AREAS

6-29. AMMUNITION HOLDING AREAS

a. Each base camp will have direct access to an AHA or an ASP for the storage of ammunition.

b. AHAs are to remain sole-use facilities with limited access from the HN and will be maintained in accordance with FP requirements for security.

c. AHAs must be constructed according to the Department of Defense Explosives Safety Board (DDESB) Technical Paper 15, storing up to 8,818 pounds (lbs).

d. AHAs must have containment berms, a fenced and lighted perimeter, gravel access roads, and lightning protection for the entire area.

e. Ammunition must be stored in protective structures (International Organization for Standardization (ISO) containers) that are out of contact with the ground on wooden sleepers or concrete foundations.

f. Treat all captured ammunition, mixed ammunition, and unserviceable or unknown ammunition as Hazard Class/Division (HD) 1.1. Segregate captured ammunition, regardless of nation of origin, in a designated collection point and separated from war reserve ammunition using HD 1.1 distances.

SECTION XV
DEFENSE LOGISTICS AGENCY DISPOSITION SERVICES

6-30. DEFENSE LOGISTICS AGENCY DISPOSITION SERVICES

a. The DLA disposition services function will be provided at the unit-run SSA facility. DLA will provide disposition services on an on-call basis only.

b. Paragraph 6-16 provides the space requirements for DLA disposition items.
### Table 6-13
Construction Standards for AHAs

<table>
<thead>
<tr>
<th>Ammunition Holding Area</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>ISO containers surrounded by securely anchored triple-strand concertina wire (bermed when possible).</td>
<td>Earth-covered, standard, steel-reinforced bunkers on concrete pads with berms surrounded by securely anchored triple-strand concertina wire</td>
<td>Earth-covered, standard, steel-reinforced bunkers on concrete pads with berms surrounded by a USACE FE7 chain-link fence secured with a 5,200-series approved medium-security lock</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Space Allocation</th>
<th>Store IAW DDESB Technical Paper-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiver Authority</td>
<td>U.S. Army Chief of Staff</td>
</tr>
<tr>
<td>Reference</td>
<td>DA Pam 385-64 DDESB Technical Paper-15</td>
</tr>
</tbody>
</table>

**SECTION XVI
MEDICAL FACILITIES**

6-31. GENERAL

a. All plans for health clinics, dental clinics, and hospitals must be developed in coordination with the Health Facility Planning Agency, Europe Region (HFPE); the United States Army Europe Regional Medical Command; or through the Office of the Surgeon General, United States Army Health Facility Planning Agency. These organizations will assist in all aspects of design and construction management and are available to support the medical mission of the warfighter in all categories of operations worldwide. The HFPE may be contacted by telephone at military 314-590-2042.

b. The Command Surgeon, USAREUR, is the approval authority for all plans for medical facilities.

c. The guidance in paragraphs 6-32 through 6-34 will be used when planning base-camp medical- and dental-facility requirements. Actual requirements will be directly related to the medical and dental mission and the care expectations of the operational command, which should be coordinated with HFPE.

6-32. ROLE I MEDICAL FACILITIES

a. One role I medical facility is authorized per base camp.

b. The role I medical facility is provided by the regionally aligned forces unit aid station and will include—

   1. An exam room.
   2. A telehealth room.
(3) Class VIII storage.

(4) A strong box, safe, or cabinet for controlled medication storage.

c. If located in a hardstand building, the facility will be on the ground floor.

d. Sinks should be readily available for handwashing.

e. Climate control capable of maintaining 68 °F (20 °C) regardless of outside temperature is required.

f. Each base camp will provide six available nonclassified Internet protocol router (NIPR) ports and the bandwidth necessary to support a role I medical facility.

g. Consider the ease of transport of patients and the sitting of patients in the design of the aid station.

Table 6-14
Construction Standards for Role I Medical Facilities

<table>
<thead>
<tr>
<th>Role I Medical Facility</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II Medical tents</td>
<td>Tier II-III tents, Containers</td>
<td>Medical metal pre-engineered buildings: 2 to 10 years. Masonry and medical metal pre-engineered buildings: 10 or more years.</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>1 per base camp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>USAREUR Command Surgeon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>ODCSENGR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6-33. ROLE II MEDICAL FACILITIES

a. Role II medical facilities will include at least—

(1) One reception and waiting area.

(2) Four medical exam rooms.

(3) One dental exam room.

(4) Two behavioral-health exam rooms.

(5) A laboratory.

(6) Radiology.

(7) Physical therapy.
(8) A pharmacy.

(9) Climate-controlled storage.

(10) Oxygen storage.

(11) Regulated medical waste storage.

(12) A patient hold (for inpatients) capable of accommodating for four sleeping personnel.

   (a) Consider the ease of transport of patients and the sitting of patients in the design of the aid station.

   (b) Climate control capable of maintaining 68 °F (20 °C) regardless of outside temperature is required.

   (c) Provide 12 available NIPR ports and the bandwidth necessary to support a role II medical facility.

6-34. CLASS VIII STORAGE FACILITIES

   a. Covered storage is required for all class VIII storage.

   b. Provide a minimum of four air changes per hour.

   c. Class VIII storage facilities must be humidity controlled to maintain a relative humidity range of 30 to 60 percent.

   d. The summer design temperature must be 15 °F less than 1 percent of the outside design temperature but must not be less than 75 °F or greater than 78 °F.

   e. 68 °F is the design temperature for the space during heating season.

   f. High value, critical resources (and those likely to be pilfered) that are stored in class VIII storage areas or facilities must be protected in accordance with specific requirements as defined by Title 21, Code of Federal Regulations, Section 1301.72 (21 CFR 1301.72).

   g. All inbound organizations should arrive with 100 percent of the unit basic load (UBL) of expendable class III supplies to include pharmaceuticals. Units should coordinate to establish their accounts with the 8th Medical Logistics Company and the U.S. Army Medical Materiel Center-Europe before they arrive in theater.

SECTION XVII
MILITARY POLICE STATIONS

6-35. MILITARY POLICE STATIONS

Military police (MP) stations must have space for a mailroom, a conference room, platoon rooms, company headquarters elements, a supply room, a holding cell with a latrine, a latrine, an arms room, a waiting area, an evidence holding room, a communications room, administration, and a desk sergeant.
Table 6-15
Construction Standards for Class VIII Storage Facilities

<table>
<thead>
<tr>
<th>Class VIII Storage</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Container</td>
<td>Container</td>
<td>Pre-engineered metal building</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>Per MTOE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>USAREUR Command Surgeon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>UFC 4-510-01</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6-16
Construction Standards for MP Stations

<table>
<thead>
<tr>
<th>Military Police Station</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
<td>Tier II-III tents, Containers</td>
<td>Containers: 2 to 10 years. (LOGCAP) Masonry and pre-engineered buildings: 10 or more years. (Contracted)</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>No more than 4,000 SF per MP company.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>DCSENGR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>ODCSENGR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION XVIII
HOUSING

6-36. STANDARDS
Table 6-18 shows the authorized SF for unaccompanied personnel housing (UPH) billeting space for Soldiers and civilian employees. The USAREUR G4 will determine the grade equivalencies for contractor employees.

   a. Private and semiprivate billeting space for the housing of Soldiers, civilian employees, and contractor employees whose applicable tours of duty or terms of employment or contract are 180 days or greater will be considered, but not guaranteed, during base-camp planning. The ASG or AST commander or manager will resolve private-room availability for Soldiers, and for civilian and contractor employees, at base camps.

   b. All 230- and 120-volt electrical outlets will be protected by not more than a 30-milliamp ground fault circuit interrupter or other similar performing device. The highest protection level will be selected to protect against electric shock.

   c. Where practical, housing should be configured into company clusters with ablution units colocated within the clusters.
d. Maintain sufficient space between structures to allow driving space for firetrucks and other safety vehicles. As per UFC 4-010-01, include 12 feet between tents and 30 feet in between rows. These requirements can be reduced with appropriate fire mitigation measures (such as flame-retardant structure material) with approval from the AHJ. Carpet is not authorized in living or office areas.

e. Authorized furniture for deployed Soldiers and civilians includes the following:

   (1) One bunk or single bed.

   (2) One minimum 6-inch-thick mattress of single foam rubber with a nonplastic shell.

   (3) One wall locker or footlocker.

   (4) Nail boards on walls of living areas.

   (5) Locally built shelves made of plywood.

   (6) One table light.

f. As per DA Pamphlet 40-11, 72 SF per Soldier is the billeting standard for surge and mobilization. If during unexpected and unplanned surges and mobilizations, and after implementing the guidance in DA Pamphlet 40-11, paragraph D-1a, 72 SF per Soldier is not available, the standard may be temporarily reduced, allowing for less than 72 SF per Soldier. Under any such circumstances, Soldiers should still be afforded the maximum floor space possible.

g. Use minimum adequacy standards, particularly for UPH space, sparingly but as necessary. Installations may house any mobilized Soldier using excess barracks space regardless of rank. Commanders may reduce the 72 SF (6.7 SM) standard to 54 SF (5.0 SM) to meet mission requirements. This may be further reduced to 40 SF (3.7 SM) with the approval of the senior medical officer. Any approval to reduce floor space to below 72 SF per person must be reviewed every 30 days.

<table>
<thead>
<tr>
<th>Table 6-17</th>
<th>Construction Standards for Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing</td>
<td>Construction Standard</td>
</tr>
<tr>
<td></td>
<td>Initial Construction</td>
</tr>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
</tr>
<tr>
<td></td>
<td>Tier II-III tents, Containers</td>
</tr>
<tr>
<td></td>
<td>Containers: 2 to 10 years. Masonry and pre-engineered buildings: 10 or more years. (Contracted)</td>
</tr>
<tr>
<td>Space Allocation</td>
<td>See Error! Reference source not found. for space allocation</td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>Senior Mission Commander (54-72 SF per person). Senior Mission Commander in consultation with Senior Medical Officer (40-54 SF per person). Any approval to reduce floor space to below 72 SF per person must be reviewed every 30 days.</td>
</tr>
<tr>
<td>Reference</td>
<td>DA Pam 40-11 (D-1.b.6) AR 420-1</td>
</tr>
</tbody>
</table>
### Table 6-18
Housing Space Standards

<table>
<thead>
<tr>
<th>Category</th>
<th>Target Persons Per Standard GP</th>
<th>Target Persons Per Standard Container*</th>
<th>Minimum Area (SF) per Person**</th>
<th>Target Area (SF) per Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1 thru E5; GS-5 and below NF-1 and 2 Civilian WG-1 through -11 or WL-1 through -5 Contracted laborers</td>
<td>6</td>
<td>2</td>
<td>72***</td>
<td>90</td>
</tr>
<tr>
<td>E6 through E7; WO1 and CW2; O1 and O2 GS-6 to -9 NF-3 Civilian WS-1 through -7 Educators schedule C1 through C3</td>
<td>4</td>
<td>2</td>
<td>72***</td>
<td>90</td>
</tr>
<tr>
<td>E8, CW3 and CW4, O3 and O4 GS-10 through -12 NF-4 Educators schedule C4 and up, D-F, M-O and Teaching principals - schedule L</td>
<td>3</td>
<td>2</td>
<td>72***</td>
<td>180</td>
</tr>
<tr>
<td>E-9; CW5; O5 and O6 GS-13 through -15 NF-5</td>
<td>2</td>
<td>1</td>
<td>72***</td>
<td>180</td>
</tr>
<tr>
<td>O7 SES NF-6</td>
<td>1</td>
<td>1</td>
<td>72***</td>
<td>180</td>
</tr>
</tbody>
</table>

**NOTES:**

*Containers are not a standard size. Some may be 8-foot x 20-foot open living containers, others may be 9-foot x 20-foot containers with a private bathroom, and others may be 9-foot x 26-foot with separate rooms and a shared bathroom. The intent is for no person to have a private bathroom. If, however, these containers are in use, personnel in the first three categories above should be provided at least 65 SF, but no more than 85 SF of living space per person (not counting the bathroom or other space). For personnel authorized a single container, no single individual may solely occupy a container larger than 9 feet x 20 feet.

**Use minimum adequacy standards, particularly for UPH space, sparingly but as necessary. Installations may house any mobilized Soldier using excess barracks space regardless of rank. Commanders may reduce the 72 SF (6.7 SM) standard to 54 SF (5.0 SM) to meet mission requirements. This may be further reduced to 40 SF (3.7 SM) with the approval of the senior medical officer.

***Per DA Pam 40-11, 72 SF per soldier is the billeting standard for surge and mobilization. If, during unexpected and unplanned surges and mobilizations and after implementing the guidance in DA Pam 40-11 paragraph D–1a, 72 SF per Soldier is not available, the standard may be temporarily reduced, allowing less than 72 SF per Soldier. Under any such circumstances, Soldiers should still be afforded the maximum floor space possible.

---

### 6-37. SURGE HOUSING

All FOSs and CSLs will maintain the ability at all times to house 10 percent of the total population as transients and surges. During surge periods that exceed 10 percent, tier II tents (as a maximum) will be used for housing.
6-38. GUEST QUARTERS
When authorized, one GP medium field tent or two containers per 150 Soldiers assigned to the base camp may be used for guest quarters. The total space for guest quarters will not exceed 20 containers.

SECTION XIX
TOILET AND SHOWER FACILITIES

6-39. TOILET AND SHOWER FACILITIES
Toilet and shower facilities will be lighted, heated, and equipped with hot and cold water. Sanitary wallboard is the preferred wall covering for latrines. Sheetrock, if used, must be waterproof, with a waterproof finish for cleaning.

a. In accordance with UFC 1-201-01, provide a minimum of one water closet and one showerhead for every 20 occupants and a maximum of one water closet and one showerhead for every 10 occupants.

b. Toilets and shower facilities must be segregated by gender.

c. In accordance with UFC 1-201-01, provide exhaust airflows in toilet and shower facilities as per the International Mechanical Code, chapter 4.

SECTION XX
ADMINISTRATION FACILITIES

6-40. ADMINISTRATION FACILITIES
Table 6-19 provides standards for office sizes.

<table>
<thead>
<tr>
<th>Category</th>
<th>Minimum NSF Per Person</th>
<th>Maximum NSF Per Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O7+; SES; NF-6</td>
<td>96</td>
<td>300</td>
</tr>
<tr>
<td>O6, O5 commander; GS-15; TF CSM; pay band 2 of YG; pay band 3 of YA, YC, YD, TF, YK, YN, YG, YH, and YJ; pay band 4 of YJ; NF-5</td>
<td>96</td>
<td>200</td>
</tr>
<tr>
<td>O5; O4 commander; GS-13 and -14, brigade and battalion CSM; pay band 2 of YC, YF, YN, YH, and YJ; pay band 4 of YE; and YL</td>
<td>96</td>
<td>150</td>
</tr>
<tr>
<td>O4; O3 commander; CW5; GS-12; SGM; 1SG; pay band 2 of YA, YD and YK; pay band 3 of YB, YE, YL and YI; NF-4</td>
<td>96</td>
<td>100</td>
</tr>
<tr>
<td>Open Office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O1 - O3; E8; WO1 through CW4; GS-9 through -11; pay band 1 of YA, YC, YD, YF, YK, YN, YH and YJ; pay band 2 of YB, YE, YL, YM and YI; NF-3</td>
<td>28 (benching configuration)</td>
<td>110</td>
</tr>
</tbody>
</table>

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Table 6-19
Utilization Guidelines for Office Space—Continued

<table>
<thead>
<tr>
<th>Category</th>
<th>Minimum NSF Per Person</th>
<th>Maximum NSF Per Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS-7; E7; pay band 1 of YB, YE, YL, YM, and YI; NF-1 and NF-2</td>
<td>28 (benching configuration)</td>
<td>100</td>
</tr>
<tr>
<td>Stenographic and clerical positions</td>
<td>28 (benching configuration)</td>
<td>60</td>
</tr>
</tbody>
</table>

NOTES:
1. The glossary explains abbreviations.
2. This table applies only to military units, organizations, and personnel. Administration space for morale, wellness, and recreation and commercial functions are discussed separately.
3. To calculate total building size, add an additional 40 percent for central files, hallways, as well as storage, copier, mail, and conference rooms.
4. Maximum NSF based on AR 405-70.
5. Benching configuration refers to a high-density office layout that positions multiple workstations at single large desk with partitions, storage, etc. used to segment individual workspaces (5 ft x 5.5 ft).

SECTION XXI
BRIGADE, HIGHER HEADQUARTERS, BATTALION, AND COMPANY FACILITIES

6-41. BRIGADE OR HIGHER HEADQUARTERS FACILITIES
When a base camp holds a brigade element, space is authorized for the brigade headquarters. See paragraph 6-40 for office-space allocation.

Table 6-20
Construction Standards Brigade and Higher Headquarters Facilities

<table>
<thead>
<tr>
<th>BDE (or Higher) HQ Facility</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
<td>Tier II-III tents, Containers</td>
<td>Containers: 2 to 10 years. (LOGCAP) Masonry and pre-engineered buildings: 10 or more years. (Contracted)</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>5,376 NSF (33 Containers)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>Senior Mission Commander</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>ATP 3-37.10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6-42. BATTALION HEADQUARTERS FACILITIES
When a base camp holds a battalion, space is authorized for the headquarters elements of each battalion-sized unit. See paragraph 6-40 for office-space allocation.

a. The space for a battalion HQ is intended to house the battalion command group, S2 and S3 sections, tactical operations center, administrative and logistics operations center, battalion communications office, mailroom, chaplain, arms room, and the battalion maintenance officer.

b. Buildings of combustible construction must be limited to 9,000 SF (836 SM) per floor, and 3 stories above grade.
c. Buildings of noncombustible or fire-resistive construction must be limited to 23,000 SF (2,137 SM) per floor, and 3 stories above grade.

d. Buildings must be provided with a sprinkler system designed in accordance with Section 3-3.2 of UFC 1-201-01. Buildings provided with this protection must be constructed in accordance with 2009 IBC, chapter 5, General Building Heights and Areas (for limits on floor areas). The building height must be limited to 3 stories.

<table>
<thead>
<tr>
<th>Battalion HQ</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
<td>Tier II-III tents, Containers</td>
<td>Containers: 2 to 10 years. (LOGCAP) Masonry and pre-engineered buildings: 10 or more years. (Contracted)</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>3,840 NSF (24 Containers)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>Senior Mission Commander</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>ATP 3-37.10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**6-43. COMPANY FACILITIES**

When a base camp holds a company, each company-sized unit is authorized space for the administrative office; orderly rooms; nuclear, biological, and chemical (NBC) rooms; arms rooms; day room; and supply room. See paragraph 6-40 for office-space allocation.

a. Arms-storage rooms will be constructed in hardstand buildings, if available, according to AR 190-11, appendix G. Arms storage rooms will be equipped to support an intrusion detection system (IDS) and to be able to control the inside temperature and humidity.

   (1) If no hard stand is available, the use of DA-approved portable armories is mandatory.

   (2) Either type (hardstand buildings or portable armories) will be connected to IDS and meet all applicable FP and security regulations.

b. NBC rooms must have the necessary utilities to maintain stored equipment above freezing temperatures and below 76 °F.

c. Connect company operations facilities to reliable, sustained power to support daily operations.

   (1) An assessment of the HN power grid is recommended.

   (2) As needed, use LOGCAP for power supplementation.
Table 6-22
Construction Standards for Company Facilities

<table>
<thead>
<tr>
<th>Company Facilities</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
<td>Tier II-III tents, Containers</td>
<td>Containers: 2 to 10 years Masonry and prefabricated buildings: 10 or more years. (Contracted)</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>1,536 NSF (10 Containers)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>Senior Mission Commander</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>ATP 3-37.10</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION XXII
ARMS ROOMS

6-44. ARMS ROOMS

a. Provide all arms rooms in accordance with UFC 4-215-01 and AR 190-11.

b. Equip arms rooms with an IDS and a dehumidifier.

c. DA-approved portable armories equipped with an IDS may be used in lieu of constructing an arms room.

d. The unit commander may request a waiver through the CG, USAREUR, to the CDRUSEUCOM for the above or for the use of armed guards.

e. Provide arms rooms inside or adjacent to each line company or battalion HQ building, and inside MP buildings and special operations centers.

Table 6-23
Construction Standards for Arms Rooms

<table>
<thead>
<tr>
<th>Arms Room</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Armed guard</td>
<td>Removable arms room (that is, ARMAG)</td>
<td>Constructed according to AR 190-11, appendix G-2, and equipped with IDS and a dehumidifier. DA-approved portable armories equipped with IDS may be used in lieu of constructing an arms room. USAREUR may request waiver for above or use armed guards.</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>Sized to support MTOE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>CG, USAREUR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>UFC 4-215-01</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION XXIII
RANGES

6-45. GENERAL

The 7th Army Training Command (7th ATC) and the Training Support Activity–Europe (TSAE) are the SMEs for the establishment and maintenance of theater ranges. All qualification ranges must be constructed in accordance with Training Circular (TC) 25-8. The lead Army element for range design and standardization is the USACE, Engineering and Support Center, Huntsville, AL, which is designated as the mandatory range and training land program center of excellence. The Engineering and Support Center maintains the Range Design Guide, a web-based tool that provides guidance for design and construction of U.S. Army training ranges based on the training requirements of TC 25-8. It replaces the USACE CEHNC 1110-series range-design manuals. The Range Design Guide can be accessed at https://www.hnc.usace.army.mil/Missions/Installation-Support-and-Programs-Management/Range-and-Training-Land-Program/Range-Design-Guide/.

6-46. DIGITAL EQUIPMENT TRAINERS

AR 350-38 is the primary reference for digital equipment trainers.

a. TSAE receives program funding from HQDA G-3/5/7 (DA Military Operations-Training (DAMO-TR)) for the distribution and sustainment of training aids, devices, and simulators.

b. Within USAREUR, TSAE is the office of primary responsibility for the fielding and sustainment of system and nonsystem simulators. Descriptions of simulators can be found in the Program Executive Office Simulation, Training, and Instrumentation training-devices catalog or by visiting the TSAE portal.

c. System training aids, devices, simulators, and simulations (TADSS) are designed and intended to train individual and collective tasks associated with a specific system, families of systems, or system of systems (for example, UH-60 helicopters, M1A2 Abrams tanks, and Stryker vehicle variants). System TADSS may be standalone, embedded, or appended and are considered a primary component of a system’s total package fielding. System TADSS are funded by equipping the program evaluation group (PEG) resources as a part of the system acquisitions program and are fielded concurrently with that system.

d. Nonsystem TADSS are designed and intended to support general military training and non-system-specific training requirements; for example, the engagement skill trainer (EST), which supports marksmanship training. The training (PEG) plans and programs resources for the life cycle of nonsystem TADSS to include acquisition, fielding, and sustainment.

e. Digital equipment trainers provide specific digital training platforms for each type of weapons system that is specified on a given unit’s MTOE.

f. Construct using either containerized training systems or build inside a hardstand building. The facility must be climate-controlled and capable of maintaining 68 °F (20 °C) regardless of outside temperature.

g. ESTs and small arms virtual trainers are authorized.

(1) These types of training systems may be set up and operated in any room that is 25 feet x 30 feet x 8 feet or larger.
(2) The applicable room should have a way to block out all sunlight. If room lights are necessary, they must be fluorescent. Incandescent lighting or sunlight in the room will cause the system to register false laser hits.

(3) The applicable rooms must also have line of sight for satellite signals and air conditioning for computer equipment.

6-47. INTEGRATED WEAPONS TRAINING SYSTEMS
TC 3-20.0 provides a detailed description of the maneuver force’s overarching training strategy for all individual and crew-served weapons.

a. Small-Arms Ranges. Battalions must have access to small-arms ranges (9-mm, 5.56-mm, 7.62-mm, 40-mm, .50-caliber) on their base camp or within 10 kilometers (km) to support Soldier and collective training readiness in conjunction with 7th ATC.

b. Table-VI-Capable Ranges.

(1) Companies must have access to ranges that support stabilized gunnery and unstabilized gunnery table VI live-fire exercises.

(2) Provide a minimum of one range within 50 km of each company.

(3) Provide four tracking boards per battalion to enable gunnery skills training.

(4) Provide two boresight and zero ranges for all M1A1 and M1A2 Abrams assets per battalion.

(5) Provide two sites to plumb and synchronize operations in support of M1s.

(6) Table VI ranges must be capable of providing digital video and audio to support gunnery table VI scores and qualifications.

c. Combined-Arms Live-Fire-Exercise-Capable Ranges. Battalions must have access to combined-arms live-fire-exercise-capable ranges within the AO of units deployed in support of Atlantic Resolve.

SECTION XXIV
QUALITY-OF-LIFE FACILITIES

6-48. EXCHANGE FACILITIES

a. Base-camp commanders are responsible for providing space for AAFES use. Where climatic conditions dictate, AAFES facilities may require heat or air-conditioning to maintain the viability of stored products. Where this is unfeasible or uneconomical, AAFES may adjust product availability to withstand the prevailing climatic conditions.

b. For populations of less than 1,000 personnel, a unit-run AAFES imprest fund activity or tactical field exchange is authorized. See AR 215-8/AFI 34-211(I) for details.

c. AAFES mobile field exchanges (MFEs) may be available. Generally, MFEs are established for sites of more than 500 authorized customers and for limited duration (up to 90 days). Units may request an MFE during planning but availability cannot be assured.

d. When a post exchange (PX) is authorized, use a pre-engineered building with the design rate of 2,100 SF per 750 authorized users.
e. Sufficient electrical connections are authorized to ensure that safe electrical power is available for displays and other requirements.

f. If potable water and sewage services are available, these assets should be considered for connection to the PX facility.

g. Each PX administrative space is authorized 160 SF or one container per 480 authorized users.

h. Each PX warehouse is authorized 320 SF per 250 authorized users. Refrigerated and freezer storage is authorized. AAFES will determine the dry, cold, freezer configuration on a case-by-case basis.

i. Loading docks and gravel parking lots for delivery trucks are authorized. Truck access must be for up to 40-foot tractor-trailer deliveries, and must include routes for transit through the camp, and space to turning and backing up to the loading docks.

j. Provide latrine facilities within proximity to AAFES operations. Stores and other facilities that have cash on hand, and other items that have a propensity for being pilfered, may not be left unattended for extended periods for staff to travel to remotely located latrine facilities.

k. Stock on the AAFES sales floor has a propensity for being pilfered and needs to be protected. Protection may include fencing, internal walls, security lighting, and duress alarms for sales staff.

l. Where feasible, PX store floors should be designed to support a minimum of 150 pounds per SF of dead load, and 250 pounds per SF of live load. In addition, consideration must be paid to heavy surface wear from patrons and MHE. Fabric tent liners are not a sufficient floor surface for a PX store.

m. Buildings of combustible construction must be limited to 9,000 SF (836 SM) in area; and to one story. Storage heights must be limited to a maximum of 12 feet (3.66 m).

n. Buildings of noncombustible or fire resistive construction must be limited to 17,500 SF (1,626 SM); and to one story. Storage heights must be limited to a maximum of 12 feet (3.66 m).

o. Ensure sizes are based on IBC chapter 5, General Building Heights and Areas, and that facilities are provided with sprinkler protection in accordance with UFC 3-600-01 and NFPA 13 requirements.

p. Fire protection for warehouses must be established in accordance with UFC 1-201-01, which prescribes the following:

(1) Initial construction levels assume no active fire protection or site water supplies are to be provided.

(2) For temporary and semipermanent facility construction levels, a fire-protection summary is required for all designs. Provide a summary discussing the minimum fire-protection provisions in accordance with UFC 1-200-01, UFC 1-201-01, and UFC 3-600-01.

   (a) As per UFC 3-600-01, automatic sprinkler systems may be omitted for facilities with an area of less than 5,000 SF with approval of the designated fire protection engineer.

   (b) Warehouse fire areas must not exceed 60,000 SF. Warehouse fire areas may increase to 120,000 SF if the provisions of UFC 3-600-01, section 4-44.5.1 are met.
Table 6-24
Construction Standards for PX Warehouses

<table>
<thead>
<tr>
<th>PX Warehouse</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
<td>Tier III tents, containers</td>
<td>Metal pre-engineered building</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>320 SF per 250 authorized users</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>USAREUR G1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>ODCSENGR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6-49. BARBER AND BEAUTY SHOPS

a. Provide a minimum of one barber and beauty shop per base camp.

b. Provide all necessary sanitation for each barber and beauty shop in accordance with DA Pamphlet 40-11.

c. Colocate the alterations and press shop (if authorized) with the barber and beauty shop.

d. AAFES will determine the number of barbers based on the mission size and duration.

e. A beauty shop is authorized when the base camp has a population of 100 or more female personnel.

Table 6-25
Construction Standards for Barber and Beauty Shops

<table>
<thead>
<tr>
<th>Barber Shop, Beauty Shop</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>None</td>
<td>Tier II-III tents, containers</td>
<td>Containers: 2 to 10 years. Masonry and pre-engineered buildings: 10 or more years</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>Barber and beauty shops are authorized 320 SF or two containers per 1,500 authorized users, with a minimum size of 256 SF or one container. Alteration and pressing facilities may be colocated in the same facility if contractor requirements can be met. Alteration and pressing services are authorized 320 SF or two containers per 2,000 authorized users</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>USAREUR G1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>USAREUR G1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6-50. OTHER VENDORS

Coffee or snack shops, mobile phone and Internet service providers, gift shops, and other services may be requested, even in an initial CL. When units request these services, the requisite facilities for these services must be provided by the base-camp management to AAFES for AAFES to occupy and fulfill the service request.
Table 6-26  
Construction Standards for Facilities of Other Vendors

<table>
<thead>
<tr>
<th>Other Vendors</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
<td>Tier II-III tents, containers</td>
<td>Containers: 2 to 10 years. Masonry and pre-engineered buildings: 10 or more years.</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>320 SF or two (20-ft) containers per 1,500 authorized users, with a minimum size of 256 SF or one (32-ft) container.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>USAREUR G1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>USAREUR G1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6-51. MORALE, WELFARE, AND RECREATION CENTERS  
Provide a minimum of one MWR center per base camp. MWR centers will be designed for smaller base camps at a rate of 1,024 SF per 150 authorized users, with a minimum size of 1,024 SF. MWR centers for larger base camps are authorized 9,000 SF per 2,000 authorized users. Each MWR center will include a multipurpose theater space designed to seat 25 percent of the base population but no more than 500 people. The MWR center will also include an area for games, books, a television and movie room, and an Internet café and telephone center (if available).

a. Each base camp with more than 1,000 U.S. personnel should have a multipurpose theater with a 35-foot-wide by 25-foot-deep stage that has steps on both sides, and a securable storage area under the stage; two dressing rooms on both sides; climate control; and mirrors and shelves on both sides. Base camps with fewer than 1,000 personnel are not authorized a stage in the multipurpose theater. Seats for the theater area will consist of removable, folding-metal or plastic chairs. Coordinate with AAFES when planning a multipurpose theater.

b. Each MWR center will be hard-wired with two each 380-volt, 32 amp, and 220-volt, 64 amp, power supplies.

c. Provide no-cost Wi-Fi at a minimum rate of 300 megabits per second in designated MWR common areas for morale purposes (such as contacting Family members, banking, and distance education). No-cost Wi-Fi may not be provided in living quarters.

d. Provide a minimum of one American Forces Network (AFN) system per MWR center.

e. The MWR center should have double entry and exit doors capable of being secured; latrines, running water; and where climate conditions dictate, air-conditioning and heating.

f. The MWR center will have one service desk (10 ft x 8 ft) with shelving.

g. The MWR center will have a minimum of one storage room in the facility (10 ft x 8 ft).

h. MWR centers should each have an outdoor seating area with a minimum of 90 SF, and at least one pavilion.
Table 6-27
Construction Standards for MWR Facilities

<table>
<thead>
<tr>
<th>Community Activity Center</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
<td>Tier II-III tents, containers</td>
<td>Tier III tents: 2 to 10 years. Masonry and pre-engineered buildings: 10 or more years.</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>Smaller base camps can be designed at a rate of 1,024 SF per 150 authorized users, with a minimum size of 1,024 SF. Larger base camps are authorized 9,000 SF per 2,000 authorized users.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Waiver Authority: USAREUR G1
Reference: USAREUR G1

6-52. THE AMERICAN FORCES NETWORK

a. Each base camp should establish facilities for broadcast transmission of AFN services.

b. The standard AFN broadcasting pad will be at least 300 feet x 150 feet and will be located on the highest point of the perimeter or in the center of the base camp. It must include a housed power-generation or fuel source.

(1) For manned operations, the AFN pad will include a facility to house a manned affiliate operation with studios, offices, and other administrative space up to a maximum of 56 feet x 75 feet or 4,200 SF.

(2) For unmanned operations, one climate-controlled equipment shelter consisting of a minimum of 500 SF is required.

Table 6-28
Construction Standards for AFN Operations Facilities

<table>
<thead>
<tr>
<th>AFN Operations</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>None</td>
<td>Tier III tents, containers</td>
<td>Containers, metal pre-engineered building (contracted)</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>1 system per MWR One climate-controlled equipment shelter the size of three containers (480 SF) is required. For manned and unmanned operations, provide an AFN broadcasting pad of at least 300 feet x 150 feet. For manned operations, provide studios, offices, and other administrative space up to a maximum of 56 feet x 75 feet or 4,200 SF.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Waiver Authority: USAREUR G1
Reference: USAREUR G1
6-53. FIELD HOUSES OR MULTIPURPOSE FACILITIES
A field house or multipurpose facility is authorized when a base camp has 500 or more occupants. Each field house or multipurpose facility—

a. Will accommodate indoor sports, shows, and large meetings.

b. Must have a synthetic multipurpose floor specifically suited for sports activities. The floor will be lined for basketball, volleyball, and other sports activities.

c. Should, if possible, be able to have an enclosed full-sized basketball court of 50 feet x 94 feet, with an 18-foot floor-to-ceiling clearance, and at least a 5-foot safety or walking lane surrounding the playing area.

d. Should have fluorescent lighting, climate control, and separate male and female latrines.

e. Should have double entry and exit doors capable of being secured.

f. Should be collocated with or adjacent to a physical fitness center and other MWR facilities to increase operational efficiency.

Table 6-29
Construction Standards for Field Houses and Multipurpose Facilities

<table>
<thead>
<tr>
<th>Field House/Multipurpose Facility</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>None</td>
<td>Tier III tent, containers</td>
<td>Containers: 2 to 10 years. Masonry and prefabricated buildings: 10 or more years.</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>Authorized for base camps with 500 or more occupants to conduct indoor sports, shows, or large meetings. The facility must have a wooden or synthetic floor lined for basketball, volleyball, and other sports activities. If possible, the facility should be able to have an enclosed full-size basketball court of 50 feet x 94 feet with 18-foot floor-to-ceiling clearance and at least a 5-foot safety or walking lane surrounding the playing area.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>USAREUR G1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>USAREUR G1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6-54. ATHLETIC FIELDS

a. Each base camp that has 500 or more occupants is authorized athletic fields. As a minimum, two sand volleyball courts, two horseshoe pits, one paved outdoor basketball (half-court) court, and one outdoor pavilion must be provided.

b. Base camps with more than 2,000 occupants are authorized twice the amount of outdoor athletic fields listed in subparagraph a above.

c. Base camps with populations of fewer than 500 occupants are authorized one sand volleyball court, one horseshoe pit, one paved outdoor basketball (half-court) court, and one outdoor pavilion.
d. Where adequate space exists, a multipurpose athletic field with outdoor lighting suitable for flag football, softball, soccer, and track activities may be constructed.

e. Where possible, each base camp is authorized a lighted outdoor running trail up to 2 miles long with up to 8 uncovered fitness stations or a 1/4-mile improved surface track.

f. Athletic fields (minimum size of 40m x 40m) will be used to accommodate the Army Combat Fitness Test (ACFT).

g. The following equipment will be provided at the battalion level for the ACFT:

   (1) Two kettlebell sets (10 lbs, 15 lbs, 20 lbs, 25 lbs, 35 lbs, 45 lbs, 50 lbs; 2 each).

   (2) Two drag and pull sleds.

   (3) Two deadlift stations with hexagon trap bars.

   (4) Two bumper-plate sets (5 lbs, 10 lbs, 25 lbs, 35 lbs, 45 lbs plates; 2 each).

   (5) Two pull-up stations (four bars each).

   (6) Two sets of medicine balls (10 lbs, 12 lbs, 14 lbs, 16 lbs, 20 lbs; 2 each).

   (7) One 100-meter turf field for shuttle sprints.

   (8) One 1/4-mile improved surface track or designated 2-mile run route.

h. For the ACFT, battalions will provide one equipment set per testing lane. The U.S. Army Center for Initial Military Training recommends 16 ACFT testing lanes per battalion set.

<table>
<thead>
<tr>
<th>Table 6-30</th>
<th>Construction Standards for Athletic Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Athletic</strong></td>
<td><strong>Construction Standard</strong></td>
</tr>
<tr>
<td><strong>Fields</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td>Base camps with populations less than 500: Authorized one sand volleyball court, one horseshoe pit, a paved outdoor basketball (half-court) court, and one outdoor pavilion. Base camps with more than 500 occupants: One athletic field minimum with authorized two sand volleyball courts, two horseshoe pits, one paved outdoor basketball (half-court) court, and one outdoor pavilion must be provided. Base camps with more than 2,000 occupants: Authorized twice the amount of a base camp with more than 500 occupants.</td>
</tr>
<tr>
<td><strong>Space Allocation</strong></td>
<td>USAREUR G1</td>
</tr>
</tbody>
</table>
6-55. PHYSICAL FITNESS CENTERS
A physical fitness center will be provided for use by all U.S. Servicemembers for the duration of their respective rotations. Servicemembers will maintain physical readiness standards during their respective rotations. Physical fitness centers—

a. Will be sized to meet the number of Soldiers per the applicable base camp.

b. When officially designated, will provide adequate equipment to support functional fitness consisting of cardiovascular, endurance, and strength-conditioning routines.

c. Must each have rubber floor tiles and separate male and female latrines (when feasible).

d. Are authorized a service desk (10 ft x 8 ft) with shelving.

e. Are authorized a storage room (10 ft x 8 ft).

f. Must be covered facilities and must be indoors to mitigate climatic effects and protect equipment.

g. Must have climate control capable of maintaining 68 °F (20 °C) regardless of the temperature outside.

h. Must have reliable power generation to power lights and all necessary machines for 24-hour usage. Configure power generation based on the size and load of the physical fitness center.

i. Will provide 24-hour access to the Soldiers on the base camp to accommodate all work shifts.

j. Are authorized sound systems, television, and AFN equipment.

Table 6-31
Construction Standards for Physical Fitness Facilities

<table>
<thead>
<tr>
<th>Physical Fitness Facility (Gym)</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
<td>Tier II-III tents, containers</td>
<td>Tier III tents, Metal pre-engineered building: 2 to 10 years. Masonry and pre-engineered buildings: 10 or more years. (contracted)</td>
<td></td>
</tr>
</tbody>
</table>

| Space Allocation | For less than 600 personnel gyms are authorized 3 SF per person minimum (minimum of 800 SF), up to a maximum of 8 SF per Servicemember. For 600 personnel or greater, gyms are authorized 3 SF per person minimum (minimum of 1,800 SF), up to a maximum of 8 SF per Servicemember. |

| Waiver Authority | USAREUR G1 |

| Reference | USAREUR G1 |
6-56. MORALE, WELFARE, AND RECREATION WAREHOUSE AND MAINTENANCE FACILITIES

Each base camp with MWR facilities is authorized an MWR warehouse or maintenance facility that consists of 3 cubic feet per each Servicemember supported. Warehouses should be combined when supporting several base camps across a geographical area of responsibility, where feasible. MWR warehouse and maintenance facilities—

a. Will be provided 1.5 cubic feet per surge occupant capability.

b. Will be used for the repair of MWR equipment and for short-term storage of remote base-camp equipment and seasonal equipment not in use.

c. Will not be authorized for long-term storage of excess MWR equipment.

d. Should be adjacent or centrally located to support MWR programs.

<table>
<thead>
<tr>
<th>Table 6-32</th>
<th>Construction Standards for MWR Warehouses and Maintenance Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWR Warehouse, Maintenance Facility</td>
<td>Construction Standard</td>
</tr>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
</tr>
<tr>
<td>Space Allocation</td>
<td>3 cubic feet per each Servicemember supported + 1.5 cubic feet per surge occupant capability</td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>USAREUR G1</td>
</tr>
<tr>
<td>Reference</td>
<td>USAREUR G1</td>
</tr>
</tbody>
</table>

SECTION XXV
SUPPORT FACILITIES

6-57. LAUNDRY FACILITIES

Laundry facilities will be provided by LOGCAP and sized to support all units with a maximum of a 72-hour turnaround.

<table>
<thead>
<tr>
<th>Table 6-33</th>
<th>Construction Standards for Laundry Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laundry Facility</td>
<td>Construction Standard</td>
</tr>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents</td>
</tr>
</tbody>
</table>

Space Allocation
Sized to support unit at base camp. Each base camp may have a laundry collection and distribution point of 512 SF or 3 containers of space per 500 authorized users with a minimum of 256 SF or 1 container.

Waiver Authority | USAREUR G4 |
Reference | ODCSENGR |
6-58. ALTERATIONS AND PRESSING SHOPS
When an alterations and pressing shop is authorized, it will be collocated with the barber and beauty shop.

<table>
<thead>
<tr>
<th>Alterations and Pressing Shop</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>N/A</td>
<td>Tier III tents</td>
<td>Containers</td>
<td>Containers: 2 to 10 years.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Masonry and pre-engineered buildings: 10 or more years.</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>400 SF, two containers per 2,000 authorized users.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>USAREUR G4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>ODCSENGR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6-59. POSTAL SERVICES

a. General. All base camps will provide mail support to Soldiers. Unit mailrooms and unit mail services are governed by AR 600-8-3.

(1) Battalion and larger units and organizations are serviced by sustainment-brigade-operated mailrooms.

(2) Company and smaller units and organizations are serviced by unit-operated mailrooms.

b. Military Post Offices. DOD 4525.6-M, Postal Manual, chapter 13.5, provides standards for Army post-office construction. The guidance in the manual may be altered to accommodate the physical space requirements of the facilities designated to be Army post offices on contingency installations and in base camps.

c. Official Mail and Distribution Centers. Official mail and distribution centers (OMDCs), when required, may be collocated with military post offices for efficiency. AR 25-52 is the proponent for U.S. Army OMDCs.

6-60. CHAPEL

a. One chapel per base camp is authorized.

b. Size the chapel to support the units at the base camp.

c. Chapel space must be designated primarily for chapel use. The chapel may support other functions on a case-by-case basis.

d. Provide adequate storage space for hymnals, books, and other documentation.

e. Provide administrative space for the chaplain and the assistant chaplain (separated from one another) adjacent to the chapel.
Table 6-35  
Construction Standards for Chapels

<table>
<thead>
<tr>
<th>Chapel</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Tier I-II tents, “Chapel- in-a-Box”</td>
<td>Tier II-III tent, containers</td>
<td>Tier III tents, Containers: 2 to 10 years. Masonry and pre-engineered buildings: 10 or more years.</td>
<td></td>
</tr>
</tbody>
</table>

| Space Allocation | 1 per base camp; sized to support units. |
| Waiver Authority | USAREUR G1 |
| Reference | ODCSENGR |

6-61. MORGUES

Each morgue is authorized 512 SF (or three containers of workspace) and a refrigeration van. A privacy screen is authorized around the entire facility.

Table 6-36  
Construction Standards for Morgues

<table>
<thead>
<tr>
<th>Morgue</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Refrigerated container</td>
<td>Tier III tent, with Gortex for private fencing, refrigerated container</td>
<td>Tier III tents and containers: 2 to 10 years. Masonry and pre-engineered buildings: 10 or more years.</td>
<td></td>
</tr>
</tbody>
</table>

| Space Allocation | 512 SF or three containers of workspace and a refrigeration van. |
| Waiver Authority | USAREUR G1 |
| Reference | ODCSENGR |

6-62. KENNELS

When kennels are authorized, provide a lighted, climate-controlled kennel, and an exercise yard for military working dogs.

a. Kennels will have individual stalls (dog runs) for each dog and a sealed concrete floor for health reasons and for easy cleaning.

b. Kennel-floor drains should be connected to a sewer system.
Table 6-37
Construction Standards for Kennels

<table>
<thead>
<tr>
<th>Kennel</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Organic tentage, Tier I tents (AR 190-12)</td>
<td>Container adapted to AR 190-12 criteria</td>
<td>Containers adapted to AR 190-12 criteria surrounded by a USACE FE7 chain-link fence secured with a 5,200-series approved medium-security lock</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>200 SF per dog, which includes a kitchen, tack room, and interior dog run (80 SF per dog). Exterior dog runs should be 80 SF per dog with a connecting guillotine-type door to the interior dog run.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Waiver Authority: DCSENGR
Reference: ODCSENGR

6-63. EDUCATION CENTERS
When an education center is authorized, combine it with DLA and the military occupational specialty library.

Table 6-38
Construction Standards for Education Centers

<table>
<thead>
<tr>
<th>Education Center</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>None</td>
<td>Tier III tent, containers</td>
<td>Containers: 2 to 10 years. Masonry and prefabricated buildings: 10 or more years. (contracted)</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>Defense Logistics Agency, and military occupational specialty library of 512 SF or three containers is the design rate for each 300 authorized users assigned to a base camp.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Waiver Authority: USAREUR G1
Reference: ODCSENGR

SECTION XXVI
TRANSIENT LOCATIONS

6-64. TRANSIENT LOCATIONS

a. A transient location—

(1) Is a site characterized by rapid development intended to support the temporary flow of rotational, exercising, or contingency forces before arrival at initial and temporary CLs to include ISBs, tactical assembly areas, and FOSs.

(2) Can be rapidly implemented and de-scoped as per mission requirements.

(3) Can rely on the maximization of theater organic assets, existing HN facilities through ACSAs, and LOGCAP.
b. There are two major types of transient locations: theater-opening life-support areas (LSAs) and intra-theater convoy support centers (CSCs). When planning these locations, special consideration should be made for the support personnel that will be present for the duration of deployment and redeployment operations versus personnel that will be on ground for a shorter period of time.

(1) During deployment and redeployment operations, LSAs are needed to support terminal operations at seaports of debarkation/embarkation and Army prepositioned stock (APS) issue and turn-in sites. Through the theater sustainment brigade, or the attached or assigned AST or ASG (as applicable), the 21st SC establishes transient sites for personnel conducting terminal operations, for support-activity personnel, and for convoy drivers.

(2) In accordance with AE Regulation 525-1, CSCs are required to provide in-route rest-and-maintenance stops to units deploying or redeploying from theater to and from their bases or base camps. Through the theater sustainment brigade and as per regulatory requirements, the 21st SC provides two levels of CSCs to rotational, exercising, or contingency forces conducting intra-theater movements.

(3) A CSC level 1 location serves as a refuel and rest stop for units conducting RSOI convoys in theater. Personnel are not expected to spend more than 1 hour at these sites. CSC level 1 locations provide limited services to include latrines and general waste removal to avoid the accumulation of trash at HN military or civilian sites. During night operations, additional lighting may be required. Retail fuel distribution is also provided to units deploying from CONUS that have not had the appropriate HAZMAT training and equipment certification for operations in Europe in accordance with AE Regulation 55-1.
<table>
<thead>
<tr>
<th>Life Support Area</th>
<th>Transient Personnel (&gt;14 days)</th>
<th>Support Personnel (&gt;14 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Billeting</strong></td>
<td>Hardstand or tent facilities provided allow deploying Soldiers adequate rest prior to onward movement</td>
<td>Hardstand or tent facilities provided</td>
</tr>
<tr>
<td><strong>Power Generation</strong></td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td><strong>Lighting</strong></td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td><strong>Climate Control</strong></td>
<td>Provided IAW para 6-68f</td>
<td>Provided IAW para 6-68f</td>
</tr>
<tr>
<td><strong>Latrines/Handwash Stations</strong></td>
<td>1:20 personnel IAW UFC 1-201-01</td>
<td>1:20 personnel IAW UFC 1-201-01</td>
</tr>
<tr>
<td><strong>Showers</strong></td>
<td>1:20 personnel IAW UFC 1-201-01</td>
<td>1:20 personnel IAW UFC 1-201-01</td>
</tr>
<tr>
<td><strong>General Waste Removal</strong></td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td><strong>Hazardous Waste Removal</strong></td>
<td>Provided by HN, if not available, USFOR must retrograde</td>
<td>Provided by HN, if not available, USFOR must retrograde</td>
</tr>
<tr>
<td><strong>Hazardous Waste Storage</strong></td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td><strong>Retail Fuel Support</strong></td>
<td>Based on mission requirements</td>
<td>Support personnel provide/coordinate this service</td>
</tr>
<tr>
<td><strong>Bulk Fuel Support</strong></td>
<td>Based on mission requirements</td>
<td>Support personnel provide/coordinate this service</td>
</tr>
<tr>
<td><strong>Designated Refueling Space</strong></td>
<td>Based on mission requirements</td>
<td>Provided</td>
</tr>
<tr>
<td><strong>Medical Support</strong></td>
<td>Organic Role I or through HN</td>
<td>Organic Role I or through HN</td>
</tr>
<tr>
<td><strong>Class I Cycle</strong></td>
<td>A-M-A or U-M-U</td>
<td>A-M-A or U-M-U</td>
</tr>
<tr>
<td><strong>Maintenance Support</strong></td>
<td>Based on mission requirements</td>
<td>Support personnel provide/coordinate this service</td>
</tr>
<tr>
<td><strong>Designated Maintenance Area</strong></td>
<td>Based on mission requirements</td>
<td>Provided</td>
</tr>
<tr>
<td><strong>Recovery Operations</strong></td>
<td>Based on mission requirements</td>
<td>Support personnel provide/coordinate this service</td>
</tr>
<tr>
<td><strong>Staging Area</strong></td>
<td>Based on mission requirements</td>
<td>Provided</td>
</tr>
<tr>
<td><strong>Gray Water Removal</strong></td>
<td>Provided as needed</td>
<td>Provided as needed</td>
</tr>
<tr>
<td><strong>Office Space</strong></td>
<td>Provided for Mission Command</td>
<td>Provided for Mission Command/Movement Control</td>
</tr>
<tr>
<td><strong>Phone/Internet</strong></td>
<td>Provided for Mission Command</td>
<td>Provided for Mission Command/Movement Control</td>
</tr>
<tr>
<td><strong>Laundry</strong></td>
<td>Not provided</td>
<td>Provided</td>
</tr>
<tr>
<td><strong>Security</strong></td>
<td>IAW In-transit security ACSA</td>
<td>IAW In-transit security ACSA</td>
</tr>
</tbody>
</table>
### Table 6-39
Service and Construction Standards for Transient Locations

<table>
<thead>
<tr>
<th>Convoy Support Center - Level I (Support Personnel may or may not remain overnight)</th>
<th>Transient Personnel (&gt;14 days)</th>
<th>Support Personnel (&gt;14 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billeting</td>
<td>Not provided</td>
<td>Provided as available on site</td>
</tr>
<tr>
<td>Power Generation</td>
<td>Not provided</td>
<td>Provided as available on site</td>
</tr>
<tr>
<td>Lighting</td>
<td>As required for night operations</td>
<td>As required for night operations</td>
</tr>
<tr>
<td>Climate Control</td>
<td>Not provided</td>
<td>Not provided</td>
</tr>
<tr>
<td>Latrines/Handwash Stations</td>
<td>1:20 personnel (limited duration)</td>
<td>1:20 personnel (limited duration)</td>
</tr>
<tr>
<td>Showers</td>
<td>Not provided</td>
<td>Not Provided</td>
</tr>
<tr>
<td>General Waste Removal</td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td>Hazardous Waste Removal</td>
<td>Not provided</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Hazardous Waste Storage</td>
<td>Not provided</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Retail Fuel Support</td>
<td>Provided to units that are not certified IAW AE Reg 55-1</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Bulk Fuel Support</td>
<td>Not provided</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Designated Refueling Space</td>
<td>Provided for units to self-refuel</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Medical Support</td>
<td>Not provided</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Class I Cycle</td>
<td>M-M-M</td>
<td>M-M-M</td>
</tr>
<tr>
<td>Maintenance Support</td>
<td>Not provided on site</td>
<td>Not provided on site</td>
</tr>
<tr>
<td>Designated Maintenance Area</td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td>Recovery Operations</td>
<td>Not provided on site</td>
<td>Not provided on site</td>
</tr>
<tr>
<td>Staging Area</td>
<td>As needed</td>
<td>As needed</td>
</tr>
<tr>
<td>Gray Water Removal</td>
<td>Not provided</td>
<td>Not provided</td>
</tr>
<tr>
<td>Office Space</td>
<td>Not provided</td>
<td>Not provided</td>
</tr>
<tr>
<td>Phone/Internet</td>
<td>Not provided</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Laundry</td>
<td>Not provided</td>
<td>Not Provided</td>
</tr>
<tr>
<td>Security</td>
<td>IAW In-transit security ACSA</td>
<td>IAW In-transit security ACSA</td>
</tr>
</tbody>
</table>
Table 6-39
Service and Construction Standards for Transient Locations

<table>
<thead>
<tr>
<th>Convoy Support Center (Level 2)</th>
<th>Transient Personnel (&gt;14 days)</th>
<th>Support Personnel (&gt;14 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Billeting</td>
<td>Hardstand or tent billeting provided as available. Austere space as dictated for specific operations. <strong>Note:</strong> During contingencies a CSC may be upgrade to I, T, or S standards base on operations.</td>
<td>Hardstand or tent facilities provided</td>
</tr>
<tr>
<td>Power Generation</td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td>Lighting</td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td>Climate Control</td>
<td>Provided IAW para 6-68f</td>
<td>Provided IAW para 6-68f</td>
</tr>
<tr>
<td>Latrines/Handwash Stations</td>
<td>1:20 personnel IAW UFC 1-201-01</td>
<td>1:20 personnel IAW UFC 1-201-01</td>
</tr>
<tr>
<td>Showers</td>
<td>Provided as available.</td>
<td>1:20 personnel IAW UFC 1-201-01</td>
</tr>
<tr>
<td>General Waste Removal</td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td>Hazardous Waste Removal</td>
<td>Provided by HN, if not available, USFOR must retrograde</td>
<td>Provided by HN, if not available, USFOR must retrograde</td>
</tr>
<tr>
<td>Hazardous Waste Storage</td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td>Retail Fuel Support</td>
<td>Provided to units that are not certified IAW AE Reg 55-1</td>
<td>Support personnel provide/coordinate this service</td>
</tr>
<tr>
<td>Bulk Fuel Support</td>
<td>Provided to units that are certified IAW AER 55-1</td>
<td>Support personnel provide/coordinate this service</td>
</tr>
<tr>
<td>Designated Refueling Space</td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td>Medical Support</td>
<td>Organic Role I or through HN</td>
<td>Organic Role I or through HN</td>
</tr>
<tr>
<td>Class I Cycle</td>
<td>M-M-M (hot B/D if available)</td>
<td>A-M-A or U-M-U</td>
</tr>
<tr>
<td>Maintenance Support</td>
<td>MST on site</td>
<td>Support personnel provide/coordinate this service</td>
</tr>
<tr>
<td>Designated Maintenance Area</td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td>Recovery Operations</td>
<td>Provided on site for route support</td>
<td>Support personnel provide/coordinate this service</td>
</tr>
<tr>
<td>Staging Area</td>
<td>Provided</td>
<td>Provided</td>
</tr>
<tr>
<td>Gray Water Removal</td>
<td>Provided as needed</td>
<td>Provided as needed</td>
</tr>
<tr>
<td>Office Space</td>
<td>Provided for Mission Command</td>
<td>Provided for Mission Command/Movement Control</td>
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<tr>
<td>Phone/Internet</td>
<td>Not provided</td>
<td>Provided for Mission Command/Movement Control</td>
</tr>
<tr>
<td>Laundry</td>
<td>Not provided</td>
<td>Provided</td>
</tr>
<tr>
<td>Security</td>
<td>IAW In-transit security ACSA</td>
<td>IAW In-transit security ACSA</td>
</tr>
</tbody>
</table>
SECTION XXVII
INFRASTRUCTURE

6-65. GENERAL
While identifying and planning for base-camp sites, planners should seek to maximize the use of existing infrastructure. When establishing base camps in or adjacent to urban areas, integration with existing infrastructure may be possible through coordination with the HN. The use of existing infrastructure has both advantages and disadvantages.

a. The advantages of using existing HN infrastructures may include the following:

(1) Reduced time to occupy and establish a base camp.

(2) Immediate or quick use of bunkers, airfields, or storage facilities.

(3) Improved QOL.

(4) Reduced resource requirements.

(5) Rapid access to existing power, water, and waste-management systems.

(6) Greater protection through buildings than through tents or new construction.

b. Disadvantages of using existing HN infrastructures may include the following:

(1) Structures may be unsafe.

(2) Structures may present an environmental health hazard.

(3) Connecting to local utilities (such as a water system) may adversely affect the local population.

(4) Structures may not be suitable for survivability.

(5) Use may present a negative image to the HN population of U.S. forces as occupiers.

(6) Structures outside of a perimeter may overlook perimeter barriers, presenting the enemy with observation and a means to fire into the base camp.

(7) Industrial facilities can cause pollution and present health hazards.

(8) Inefficient energy infrastructure contributes to sustainment burdens and constant resupply, which may increase risks to mission accomplishment and reduce operational effectiveness.

(9) Structures may place U.S. forces in closer proximity to the local population than intended or preferred.

(10) Known sites, if previously used by U.S. forces, may be more likely to be targeted by hostile actors (JP 4-04).
6-66. ROADS AND PAVEMENT

a. The intent of this guidance is to maintain maximum maneuverability for the commander, minimize damage to Government equipment, and provide a safe transportation system for Soldiers.

b. During base camp planning, a transportation assessment is required that addresses the current basing location transportation network; that analyzes how that network might be used in support of basing missions; and that considers how that network integrates with surrounding transportation networks (JP 4-04).

(1) Primary roads identified by commanders on base camp master plans are authorized for paving with asphalt. Primary roads are considered the major arteries that support the majority of vehicle traffic through a given base camp. Concrete turning pads are authorized to prevent damage to asphalt roads.

(2) Secondary and perimeter patrol roads will be surfaced with gravel. Ideally, plan for a 30-foot roadway width with 15-foot clear space on either side of the road for utility distribution lines, drainage features, and pedestrian flow (ATP 3-37.10). When falling in on an existing HN facility, these dimensions may not be possible to achieve based on the existing infrastructure; in this situation, evaluate the existing transportation network to develop an operational movement plan and construct only the minimal changes (with authorization from the HN) necessary to meet the operational needs.

(3) All contractor asphalt projects should come with a 2-year guarantee. Conduct repairs to existing paved roads as follows:

(a) Repair potholes in asphalt surfaces and utility cuts as soon as possible to prevent accidents, vehicle damage, and further road damage. Prepare the base road course to prevent slumping.

(b) Coordinate repairs to concrete roads, bridges, and airfields with the TF engineer, who will approve repairs on an individual basis.

(c) Repair of existing paving stones for safety and equipment concerns is authorized. Repairs solely for the sake of appearances are not authorized.

(d). The use of guardrails to keep vehicles off areas are authorized. Construct barriers with treated lumber, concrete, or metal. If no guardrail previously existed, treat it as new work.

(4) The DPW (or equivalent element) will determine—

(a) How often roads need to be graded based on local conditions. Generally, conduct grading often enough to minimize potholes and “wash-boarding.” Compacting high-use areas may be cost-effective. Minimize the use of loose rock greater than 1.5 inches in diameter on roads and parking lots.

(b) The frequency of dust abatement based on local conditions. Conduct dust abatement often enough to prevent dust damage to engines and electronic components and to protect the health of Soldiers and civilians. Closely monitor dust abatement and grading costs and consider paving gravel roads if the payback period is 2 years or less.

(c) How often mud needs to be removed from paved roads. Safety should be the prime consideration. Use of lumber for parking-lot stripes on gravel parking lots is not authorized.
Table 6-40
Construction Standards for Parking Lots and Roadways

<table>
<thead>
<tr>
<th>Parking Lots</th>
<th>Construction Standard</th>
<th>Initial Construction</th>
<th>Temporary Construction</th>
<th>Semipermanent Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Construction</td>
<td>Gravel</td>
<td>Gravel with concrete turning pads for tracked vehicles</td>
<td>Paved</td>
<td></td>
</tr>
<tr>
<td>Space Allocation</td>
<td>see UFC 3-250-01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>UFC 3-250-01</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Allocation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiver Authority</td>
<td>see UFC 3-250-01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reference</td>
<td>UFC 3-250-01</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6-67. COMBAT ROADS, TRAILS, AND ACCESS ROADS

a. A combat trail is a traveled, unsurfaced way that is clear of obstacles. Roughly grade the trail with earthmoving equipment to provide a relatively smooth surface. Combat trails are usually adequate for tracked and wheeled combat vehicles.

b. Mobility is necessary for successful offensive actions. Base camps that support maneuver forces may require the improvement or construction of combat trails through areas where routes do not exist. Building combat trails and roads is a combat engineering task conducted in close support of ground maneuver forces that are in close combat; and in support of mobility. Combat engineers are responsible for combat trails and roads.

c. The construction of the access roads to a base camp may be a separate project performed by a different construction unit or part of the base camp project. Haul roads may be temporary roads used to move construction materials by the shortest economical route to the base camp construction site. Identify access roads and haul roads during the planning phase. Schedule project construction completion before or concurrently with base-camp construction (ATP 3-37.10).

6-68. UTILITIES

a. General.

(1) Base-camp utility-infrastructure designs must be sufficiently modular and scalable to respond to changes in the base camp size, capacity, and mission. Once connected to any HN utility infrastructure, base camps must maintain backup redundancy for all utilities and services (AR 700-147).

(2) U.S. forces must synchronize base camp utility infrastructure (electric, oil and gas, water and wastewater, communications, and trash and waste management) development in accordance with Engineering Pamphlet 1105-3-1. The intent is to have a base camp utility infrastructure that is independent of HN utility infrastructure, to the maximum extent possible, until HN infrastructure is mature and stable enough to support the additional load without negatively affecting the HN.
(3) The design and installation of utilities systems must be in accordance with current applicable military handbooks, technical manuals, guidance, recognized industry standards, codes, and practices. Use engineering calculations to determine the size of the systems. The USAREUR DCSENGR must approve all utility designs before installation begins. ATP 3-37.10, appendix E, provides applicable base camp planning factors to estimate requirements and capabilities.

(4) The DPW (or equivalent element) will maintain a database of all buried utilities. No job will be closed out until new underground utilities have been properly documented. No work will begin on a project until the proponent obtains a dig permit from the DPW. Digging permits should also be coordinated for communications-line clearance. Buried utilities must have caution tape at least 1 foot above the utility lines. Buried electrical lines must have signs posted at every turn in the line, and wherever else needed based on the terrain.

b. Power.

(1) Where economically supportable and practicable, connect base camp power grids to commercial power. Smaller or remote base camps that cannot economically connect to the commercial power grid are authorized to construct central power plants capable of supporting 125 percent of the base-camp maximum demand load or to use distributed generators that have enough capacity to support maximum demand loads.

(2) Base-camp power systems are as varied as the sizes, locations, and missions of the base camps they support. Identifying the power requirements of a site and integrating a generation and distribution network that is appropriate for the size and duration of a base camp are significant parts of effective base camp master planning. Reliable and sustainable power systems are composed of modular and scalable components ranging from Soldier-operated tactical power systems, to hybrid and deployable prime power systems operated by specially trained engineer Soldiers, to a sustained power system operated and maintained by civilian personnel and that may include local commercial power.

(3) During base-camp development and evolution, three types of power systems may exist concurrently on an individual base camp. The three types of power are the tactical power system, the prime power system, and the sustained power system.

(a) The tactical power system is a highly mobile system composed of MTOE-authorized generators (typically 300 kilowatts and below). It uses an electrical distribution system, such as the Power Distribution and Illumination System Electrical or the Mobile Electric Power Distribution System Replacement. COTS generators or electrical distribution equipment operated and maintained by military personnel may augment the initial power system.

(b) The prime power system is a deployable system composed of large, rapidly deployable generators (typically 500 kilowatts and larger) that can be consolidated to operate as a power plant. It uses a medium-voltage electrical distribution system capable of distributing power over the entire footprint (greater than five miles, if necessary) of the base camp. The deployable prime power system is scalable and able to supply reliable, utility-grade power needed for base camp support and services, and tenant unit operational requirements. The consolidation of electrical loads and the reduced number of generators required yields improved fuel economy and overall reduction in the O&M costs. The deployable prime power system may employ generators to provide redundant backup power. It may also be augmented with COTS generators or electrical distribution equipment that is operated and maintained by military personnel.
(c) A sustained power system supports stable, long-term operations.

1. As the situation changes and resources become available, a commander may direct a base camp to transition to a sustained power system.

2. The responsibility for the operational control, sustainment, and maintenance of the existing initial power systems and deployable prime power systems may be transferred to civilian, contracted, or HN personnel.

3. Life-cycle equipment replacement and further expansion of the power system creates a site-specific, sustained power system that comprises fixed, commercial generators (or utility power, if available), and commercial electrical equipment that is operated and maintained by civilian or contracted personnel.

(4) Tactical power systems, prime power systems, and sustained power systems will meet the following requirements and standards, as applicable:

(a) The HN Electric Code. In addition to NFPA 70 requirements, facilities and projects located outside of the United States must comply with the applicable HN standards. Exceptions may be made if a given facility or project will be solely used and maintained by U.S. or Allied Forces (in which case, the British Standard 7671 (BS-7671) or the National Electric Code (NEC) will be used, as applicable).

(b) BS-7671. For 50-hertz systems, new and existing construction shall conform to the BS-7671. The latest revisions will be in place, and the BS-7671 rules will be in effect for grandfathering procedures.

(c) NEC. For 60-hertz systems, existing construction shall conform to the NEC. The latest revisions will be in place, and BS-7671 rules will be in effect for grandfathering procedures.

(5) Power system design considerations for base camps are provided as follows:

(a) Power System Efficiency. An efficient electrical power system minimizes the sustainment and logistics support (specifically fuel) required to meet the electrical demand of the base camp.

1. Two primary considerations to optimize power system efficiency are to maximize the efficiency of the power production and distribution system (supply-side management) and to minimize the consumption of electrical power (demand-side management).

2. Planners must properly size generators to meet the electrical demand and must specify which fuel-efficient generators use electronic fuel-management systems. Design the electrical distribution system as compactly as practical to minimize electrical losses, and consolidate electrical loads to ensure generators operate with maximum efficiency. Power demand can be reduced by using energy-efficient equipment (especially generators and ECUs); by improving the thermal efficiency of structures with tent linings, building insulation, and solar shades; and by incorporating other energy conservation measures, such as lighting timers, occupancy sensors, and programmable or timer-controlled thermostats.

(b) Design. Base-camp master planning must address and manage current demand and future power system growth.
1. Base-camp power systems contain three elements: a power source, such as a generator, power plant, or batteries; a distribution system, such as that provided by power distribution panels, power cables, and transformers; and the load or consumption items, such as air conditioners, lighting, and communications equipment.

2. It is imperative that the CDRUSEUCOM decide whether the primary base camp power system will be constructed to U.S. standards (120/208 volts at 60 hertz) or to local standards (230/400 volts at 50 hertz, or other standard). However, there may be situations where both U.S. power and local standard power are required. In these cases, the separation of power systems and the use of additional equipment to convert frequency and transform voltage to the appropriate standard may be required.

3. Power-distribution systems for basic-capability-level base camps may have surface-laid power cables, which may be each covered with a protective shield when located in high-traffic areas. Expanded and enhanced-capability-level base-camp power-distribution systems will likely have either buried or overhead power cables, or both. Regardless of the voltage and frequency standard followed, or method of power distribution, appropriate safety measures must be implemented to prevent damage to cables and to reduce electrocution hazards.

4. AutoDISE is an Army computer-modeling program to assist master planners in designing power distribution, illumination systems, and electrical systems.

   (c) Generator Placement. Place generators as closely as possible to the point of demand, for spot generation, without disrupting other activities, such as meetings or sleep; to minimize the materials needed for the distribution system; and to avoid voltage drops that may impair equipment function.

   1. Position generators to allow for easy service and maintenance, particularly refueling. Allocate sufficient space for the placement of fuel bladders, safety equipment, and fire extinguishers. Planners must also account for fuel resupply at the bladder (a means to refuel the bladder).

   2. Generators must be located away from buildings, walls, or other obstructions that may impair cooling to multiple linked systems. Typically, at least 5 feet of clear space is required; at least 10 feet between generators. Consider prevailing wind direction to aid in generator cooling.

   3. Place sandbags, partitions, and barriers around generators to reduce noise, as long as they do not obstruct cooling airflow.

   (d) Generator Protection. Protect generators against attacks, unauthorized access, and the elements. Protection measures may include fencing, overhead roofs, protective walls or berms, and secondary containment measures for fuel leaks and spills. The use of protective walls or berms also helps to reduce noise pollution, as long as they do not obstruct cooling airflow.

   (e) Power-System Resources. Larger camps with expanded and enhanced capabilities typically rely on deployable prime power that uses large generator power plants with distribution systems provided by deployable prime power units or contracted services. This transition away from spot generation to power distribution systems and commercially produced power typically results in cost savings and improved fuel use efficiency. Modular base-camp life-support sets, such as Force Provider and Harvest Falcon, include organic generation capabilities that are generally sufficient for the internal components that are designed for a specific number of occupants. Use reliable commercial grid power whenever possible, with the appropriate amount of backup power generation available when needed for critical facilities. See FM 3-34 for more information on deployable prime power planning considerations. When base camp power requirements exceed a unit’s organic capabilities, there are several resources that may provide additional power system capacity:
1. The Army’s Force Provider system is a base-camp life-support module that is configured for 150-people and that is scalable up to a 3,600-person configuration; and comes with a power generation system. For larger or longer-duration operations, a Force Provider prime power kit enables the transition and connection to the deployable prime power system. See ATP 4-45 for more information.

2. The Air Force’s Basic Expeditionary Airfield Resources system is a deployable airfield operations package, which is complete with low-voltage and high-voltage power systems.

3. If funding is available, units should seek to obtain additional power system equipment and support (for missions of extended duration, and when large quantities of power system equipment are required) via resources such as the U.S. Army Materiel Command LOGCAP contract.

4. Additional power system equipment is available through the General Services Administration or through local contract sources; and may require proper system redesign to ensure safe and efficient equipment use.

(6) Planners should leverage alternative and renewable energy sources such as solar, waste-to-energy, and wind whenever possible to help make base camps more sustainable. The proper employment of renewable energy sources requires foresight during base camp-master planning.

(a) Energy-conservation measures include renewable energy systems, such as photovoltaic arrays, and solar collectors for power and hot water, that can reliably integrate into smart base-camp micro-grids without harming the grid stability or degrading the output of the renewable source. A combination of spot generation with renewable energy sources is generally not recommended.

(b) Plans should account for regional wind patterns and features, such as mountains and buildings that may block the solar resource when allocating space for renewable energy systems on base camps.

(7) Most units are not trained to establish power-distribution networks. Units may request support from specialized units such as the 249th Engineer Battalion (Prime Power), or a USACE FEST, or contract for power-system design support.

(a) The risks of electrocution and fire are substantial concerns with electrical systems, and the design must address whether the power system is to be constructed to U.S. or HN specifications. The specifications used for power-system design must be consistent with the voltage, the building materials available, and the construction methods used.

(b) Table 6-41 provides the planning factors for electrical demand at base camps as prescribed in ATP 3-37.10.

<table>
<thead>
<tr>
<th>Item</th>
<th>Basic Level of Service</th>
<th>Expanded Level of Service</th>
<th>Enhanced Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>1.5 kilowatts per person</td>
<td>2.5 kilowatts per person</td>
<td>3.5 kilowatts per person</td>
</tr>
</tbody>
</table>
**c. Water.** Components of a water-production and distribution system may include water sources, water purification, well drilling, storage, and water distribution. Sources of water include local municipal water utilities; water generation through water-purification systems and wells; water distribution through storage tanks and pipes to facilities, water trailers and blivets; and bottled water. Water purification and well drilling present more sustainable alternatives to the use of bottled water. Plastic water bottles significantly add to the generated solid waste at a base camp and present disposal challenges when local recycling is unavailable. Some operations generate effluent water that is reusable after minimal treatment. Recycling water from showers, sinks, laundries, wash racks, and other nonpotable-water sources is a considerable conservation mechanism that should be practiced whenever feasible.

1. The order of preference for potable water for all base camps is as follows:

   a. Tie into local municipalities if it is economically feasible and if doing so meets Army health and force-protection standards. Consider the installation of a water-purifying station, such as the UV-60 transportable water-purification and disinfection system in the startup cost.

   b. Installation of wells for potable water is authorized. Base-camp planners should consider installing water-storage distribution systems if economically feasible. A minimum of two wells per base camp (one primary and one for backup) is authorized. Because the expense of mobilization for drilling equipment is a major cost in providing a well, hire local contractors to drill the wells. Additional wells may be drilled based on the capability of the first two wells to supply the required amount of water. Wells should be within the base-camp boundaries.

   c. The least desirable option is to transport potable water or bottled water to the base camp. The cost of purchasing and maintaining the trucks and paying drivers as well as the recurring cost of bottled water (including purchase, transport, storage, and waste disposal) must be included in the initial cost estimate.

2. The production of bulk water is often accomplished by water purification, generally by using water-purification systems that can be operated by troops and contractors. Water-purification units require adequate operational space and must be within 5 km of a water source. The water-purification process generates wastewater that must be managed. See UFC 3-230-03, ATP 4-44, and TC 4-02.3 for more information.

3. Specialized engineer units and contractors can perform well drilling. Planners must determine the availability of well-drilling capabilities and the viability of drilling based on a hydrogeological analysis of the area. Initial information on the hydrogeology of an area is available through geospatial engineering channels or by reachback to USACE.

4. There are commercial alternative systems for large-volume water storage when military water-storage systems are not available. Advertised products are engineered for freestanding or anchored installation on sites with minimal or no preparation. Tanks can be fitted with a floating cover if desired. If this or a similar commercial solution or product is pursued, the use of a cover is recommended. A number of smaller tanks that can meet the equivalent capacity is encouraged; if a tank becomes a single point of failure, the other tanks can maintain the supply. Water plants, wells, storage tanks, and bladders must be fenced.

5. All product water or potable must maintain a chlorine residual. Numerous factors affect how quickly chlorine residual decays, such as temperature, the duration that water is stored, and the volume of water stored. Stored water requires more circulation and additional chlorination over a long period to maintain drinking water status. All drinking water must comply with TB MED 576 and TB MED 577.
(6) Table 6-42 provides the planning factors for water usage at base camps as prescribed in ATP 3-37.10.

<table>
<thead>
<tr>
<th>Item</th>
<th>Basic Level of Service</th>
<th>Expanded Level of Service</th>
<th>Enhanced Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>10-13 gallons per person per day</td>
<td>30 gallons per person per day</td>
<td>50 gallons per person per day</td>
</tr>
</tbody>
</table>

**d. Wastewater.** Design and operate all wastewater facilities and systems to ensure the protection of human health and safety. Sewage-collection tanks are authorized. During the initial assessment of a base camp, consider installation of a wastewater-treatment system based on the projected population size of the site, including allied forces and LN personnel).

(1) Coordinate with the 409th SB to determine if a connection to a municipal wastewater-treatment plant is economically feasible and environmentally sound. This is the preferred method of wastewater disposal.

(2) Upgrades to existing sewage-treatment plants may be authorized to allow for effective treatment of waste being generated on a facility. Upgrades will be limited to the expansion of current capabilities of the plant to handle the increased daily flows.

(3) Sewage may be transported to a suitable wastewater treatment plant if a connection to the municipal system is not feasible or economical.

(4) Table 6-43 provides the planning factors for wastewater usage at base camps as prescribed in ATP 3-37.10.

<table>
<thead>
<tr>
<th>Item</th>
<th>Basic Level of Service</th>
<th>Expanded Level of Service</th>
<th>Enhanced Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater</td>
<td>16 gallons per person per day</td>
<td>24 gallons per person per day</td>
<td>40 gallons per person per day</td>
</tr>
</tbody>
</table>

**e. Drainage.** The planning and design of base-camp drainage systems are conducted by higher HQ design engineers and the constructing unit. The drainage system includes the overall drainage plan, area drainage structures, individual-facility drainage structures, and temporary-construction drainage. The siting of base camps and individual facilities can have major effects on required drainage structures and their associated costs in terms of materials and construction effort. Inadequate drainage is the most common cause of road and airfield failure.

(1) Obtain data on local drainage conditions for initial planning from maps and aerial reconnaissance. Confirm this data with on-site ground reconnaissance and information from local inhabitants.

(2) See TM 3-34.48-1, TM 3-34.48-2, and AFPAM 10-219, Volume 7, for discussions on drainage-system design.

(3) The following are tips for drainage consideration:
(a) Site base camps and individual facilities in locations that minimize required drainage structures and their associated cost in terms of materials and construction efforts.

(b) Evaluate the natural and existing drainage features, expected rainfall or snowmelt, and protection of natural drainage channels.

(c) Avoid constructing facilities in areas with high water tables.

(d) Develop the drainage system and temporary drainage features in phases to ensure uninterrupted construction.

(e) Perform continuous maintenance on the drainage system.

**f. Climate Control.** All facilities where personnel live, work, and enjoy recreation must have heating. Air-conditioning is authorized only on a case-by-case basis.

(1) When possible, install ECUs. When temporary and semipermanent facilities use ECUs, the ECUs will be the proper size to ensure heating and cooling (when authorized).

   (a) The standard for maximum indoor temperature in winter is 68 °F (20 °C), and the minimum indoor temperature in summer is 78 °F (26 °C). An ECU must be able to meet these standards.

   (b) Install temperature strips in administrative areas and living spaces wherever ECUs are used.

(2) Provide central climate-control systems for large facilities such as DFACs or medical clinics.

(3) Base camps will use installed central climate-control systems where these systems already exist and when the use of these systems is economically feasible.

(4) Provide storage areas with only the heating or cooling services needed for specific storage requirements.

(5) Where central heating or cooling systems have been installed and for all other facilities (for example, hangars, recreation centers, gyms, DFACs, medical facilities), base-camp management will monitor installed thermostatic controls to maintain established temperature standards.

**g. Solid Waste.** Deployed forces can generate significant amounts of waste. The base-camp commander or BOS-I is responsible for waste management that involves collecting waste at its point of generation and transporting it from collection points to treatment, disposal, or recycling facilities to provide a healthy and sanitary environment for base-camp residents.

(1) Design waste management facilities to handle each category of waste: wastewater (gray and black water), solid waste, hazardous and special waste, and medical waste. The measures used to treat and dispose of waste vary according to the base-camp population, level of services, availability of existing facilities, contracted support, base-camp location, terrain effects, and civilian and environmental considerations. A more permanent collection, treatment, and disposal facility may be possible at expanded or enhanced base camps.
(2) Solid-waste sources consist of food, packaging materials, and other sources of trash, such as office supplies. Liquid waste can be broadly divided into three categories: gray water, black water, and industrial wastewater.

(a) Sources of gray water include waste products from showers, sinks, and laundry.

(b) Black water is composed of waste products from latrines and kitchens.

(c) An example of industrial wastewater is “reverse osmosis reject,” which is the by-product from water reverse osmosis purification. Designs for wastewater lagoons and scalable wastewater treatment package plants are available through AFCS. Extensive general engineering support or contractors are required to build and maintain such systems.

(3) The waste streams generated on a base camp place a significant demand on a unit’s resources. Reusable water containers, such as government-issued personal hydration systems, reduce waste and the added logistical strain associated with back-haul when used instead of disposable plastic bottles.

(4) Position waste storage and disposal areas downwind, downstream, and downhill from all other areas of the camp. Additionally, consider positioning waste-collection points outside of the base camp to minimize physical security risks and health hazards. See TM 3-34.56 for more detailed information on waste management.

(5) DODI 4715.19 prohibits the disposal of covered waste in open-air burn pits during contingency operations except in circumstances in which no alternative disposal method is feasible. The CDRUSEUCOM is delegated the authority to determine circumstances in which no alternative disposal method for covered waste is feasible.

h. Communications.

(1) General. Consider communications infrastructure requirements early in the planning process and address them holistically alongside other utility and facility upgrades to minimize duplication of work and system conflicts, and to provide flexibility to achieve future mission needs. When modifying existing HN facilities to accommodate communications requirements, provide cost-effective, organized solutions to cabling that meets all applicable network separation and security requirements, and that minimizes permanent modification to HN facilities. Consider providing communications infrastructure to support the maximum potential number of users during the initial planning to avoid a shortfall in the future if the space use changes. Additionally, understand that communications infrastructure and use can have a large power demand, especially where secure Internet protocol router (SIPR) networks are in use. Provide air-conditioning in all telecommunications rooms.

(a) Communications support requirements for base camps are very similar to the services provided by the network enterprise center at permanent installations. On larger base camps, the installation of a commercial communications infrastructure is necessary to replace and free up tactical resources and provide for a more robust, longer-duration network. This includes planning for environmental-control requirements, power generation, and network redundancy.

(b) Planning, installing, operating, maintaining, and managing the network architecture of a base camp, as part of the DOD Information Network, requires the right kind of equipment and personnel with the necessary technical skills. This includes NETOPS, network management, information-dissemination management, and information assurance. Most of these capabilities are organic at the RCT and BCT level and below, and may require augmentation.
(c) The communications support element determines the capabilities that are required for each base camp during each phase of the operation. Fulfill requirements exceeding the organic capabilities of the supporting communications unit through augmentation requested through the appropriate channels. Considerations include base-camp size, life-cycle, tenants, and support of transient units, as applicable.

(2) **Official Networks.** Design official, tactical networks, including SIPR and NIPR networks, in accordance with 2d Signal Brigade standards. Secure networks have additional physical requirements such as secure doors, intrusion detection, air-conditioning, and physical security.

(3) **Nonofficial Networks.** Provide wireless networks for nonofficial communications and personal use in one common area per barracks, and one common area per MWR facility.

**SECTION XXVIII**

**WAIVERS AND EXEMPTIONS**

**6-69. WAIVERS AND EXEMPTIONS**

All waiver and exemption requests are to be coordinated with the ODCSENGR and will be routed by ODCSENGR to the appropriate authority for approval in accordance with the previous tables in this chapter and the criteria noted below. Figure 6-1 shows the waiver process for occupying existing facilities.

a. A waiver provides the authority to deviate from a UFC requirement for no more than 12 months. Per DFARS 246.270-3, USEUCOM may issue waivers when it is impracticable to comply with standards under prevailing operational conditions.

b. An exemption provides the authority to deviate indefinitely from a given requirement. USEUCOM may issue exemptions when it is impracticable to comply with standards under prevailing operational conditions.

c. A waiver or exemption determination can be made by the AHJ or the lead DOD construction agent (LDCA) (HQ USACE/CECW-CE is the AHJ for the U.S. Army) on whether a proposed alternative meets UFC standards.

d. Waiver and exemption criteria are found in DOD MIL-STD-3007F and apply herein.

e. Quality requirements are defined in DFARS 246.2. All facilities, infrastructure, and equipment within the USEUCOM AOR must comply with UFC 1-200-01, specifically section 1-7, which defers to UFC 1-201-01, UFC 1-201-02, and UFC 1-202-01 for facilities in support of military operations. Requests to waive these minimum construction standards are considered only in rare situations when it is impracticable to comply with standards. A lack of funds, or cost savings, do not justify a waiver or exemption. Waivers and exemptions are granted only for specific requests and will not extend to cases with similar circumstances.

f. If a waiver or exemption request is submitted, it is the responsibility of the commander making the request to conduct a risk analysis.

g. In accordance with DFARS Clause 246.270-3, any deviation from the UFC requirements due to prevailing operational conditions must be approved by the combatant commander (CDRUSEUCOM) or by the delegated engineering authority in writing. Any deviation for reasons other than operational conditions must be approved by the appropriate Service chief engineer as outlined in DOD MIL-STD-3007G. As a minimum, the waiver or exemption request package must—
(1) Identify what is requested, a waiver or an exemption. If a waiver is requested, identify the amount of time for which the waiver is requested (such as for 90 days or for 6 months).

(2) Note the specific standard and criterion to be waived or exempted by publication, paragraph, and page (such as by UFC 3-600-01, Section 3-6.3, for the fire suppression system in a given building).

(3) Provide the rationale for the waiver or exemption. If the waiver or exemption is for operational reasons, clearly explain why it is impractical under the prevailing conditions to comply with the standard. Identify the specific impacts on the mission and to safety that are necessitating the waiver or exemption request.

(4) Provide a justification for noncompliance. Demonstrate that mitigation measures incorporated will provide an acceptable level of safety for meeting the mission. Include a copy of the signed risk-analysis documentation. Include other studies or backup information to support this assessment.

(5) Include an endorsement by an SME (such as a fire-protection engineer, fire chief, electrical engineer, or master electrician) for any LHS waiver requests. For any UFC requests before construction or beneficial occupancy, the engineer qualified to stamp the design will provide his or her professional recommendation on the issue.

h. If more substantial or durable facilities are required than those originally authorized by USEUCOM OPORDs and FRAGOs, a construction-level exemption must first be approved by the USAREUR DCSENGR and then by the USEUCOM Engineer.

(1) When requesting a temporary construction level, units must sufficiently demonstrate that the authorized construction level is either not as economically feasible or does not meet mission requirements, and that the facility will be required for more than 3 years.

(2) When requesting a semipermanent construction level, units must sufficiently demonstrate that the authorized construction level is either not as economically feasible or does not meet mission requirements, and that the facility will be required for more than 5 years.

i. Waivers are self-canceling on the expiration dates stated in the approval letters, unless an extension is requested by the user and approved in writing by the appropriate authority as determined above.
Figure 6-1. Waiver Process Flowchart for Occupation of Existing Facilities
CHAPTER 7
CONSTRUCTION

In order for any U.S. element to conduct any demolition, alteration, or construction on or to HN property, or to HN assets, the element or the element’s higher command must verify that there is an executed agreement with the HN allowing the work and that the element has been delegated the authority to conduct the work. Contact the ODCSENGR to verify that the work is permitted and authorized.

SECTION I
APPROVAL AUTHORITIES

7-1. APPROVAL AUTHORITIES
The CDRUSEUCOM, in coordination with the Service component commanders, is responsible for specifying the construction levels for facilities in the theater (JP 4-04).

a. When the Army is the lead Service, real estate required for base camps will be acquired, managed, and disposed of on behalf of the United States through the authorities granted by the Secretary of the Army to the Chief of Engineers during contingencies (AR 700-147).

b. Army senior mission commanders responsible for base camps will establish internal project management, project approval processes, and acquisition review boards to—

   (1) Ensure equitable distribution of resources according to established priorities.

   (2) Validate requirements against justifiable needs that are captured in base-camp master plans.

   (3) Ensure best value.

   (4) Prevent unnecessary or wasted construction.

SECTION II
CONSTRUCTION STANDARDS

7-2. GENERAL
Base-camp construction standards are developed using operational and mission variables. Additionally, the CDRUSEUCOM considers the unique characteristics of the region and the anticipated duration of a mission in basing standards.

a. ATP 3-37.10 provides base-camp construction standards for use as initial planning guidance.

b. In general, base-camp facilities and utilities should be constructed in accordance with UFC 1-201-01 and UFC 1-201-02 to minimize the risk of hazards that could potentially impact the local population.

   (1) All UFCs can be found at http://www.wbdg.org/ffc/federal-facility-criteria.

   (2) The unified master reference list applicable to all Services is provided at http://www.wbdg.org/ffc/dod/unified-master-reference/umrl.
7-3. APPLICABLE STANDARDS BY CONSTRUCTION TYPES
The criteria below apply to the various facility construction types.

a. Nonpermanent Facilities. Nonpermanent facilities must be constructed in accordance with UFC 1-201-01 to ensure that minimum life-safety and habitability design criteria are met. In accordance with DFARS Clause 246.270-3, any deviation from the requirements specified in UFC 1-201-01 due to prevailing operational conditions must be approved by the CRDUSEUCOM or by another engineer authority delegated in writing. As outlined in DOD MIL-STD-3007F, the appropriate Service chief engineer must approve any deviation for reasons other than for operational conditions.

b. HN Facilities.

(1) HN facilities comprise—

(a) HN facilities made available for use by the United States.

(b) U.S.-constructed facilities on HN property that are turned over to the HN on completion, with use then granted back to the U.S. Forces (the typical model used for U.S. construction on HN property).

(2) Before making any modifications to a HN facility, the work must first be authorized in accordance with the agreements executed between the U.S. and HN governments. Coordinate all requests for modifications with the ODCSENGR, HQ USAREUR.

(3) In the event that a requirement arises for U.S.-constructed facilities for sole HN use, UFC 1-202-01 governs the minimum U.S. life-safety and habitability-related design requirements. HN requirements may differ from these standards; however, the minimum standards apply if the United States is responsible for producing the facility. UFC 1-200-01 does not apply in this case. Consider all other UFC requirements as guidance and best practices. Coordinate with ODCSENGR, HQ USAREUR, if this requirement arises.

c. Existing Facilities. Existing facilities, whether permanent or nonpermanent, must be assessed in accordance with UFC 1-201-02 to determine the facility’s habitability for the intended use by the U.S. Forces. This criterion also provides options for mitigating common building deficiencies.

d. Permanent Facilities. Permanent facilities must be constructed in accordance with applicable facility-specific UFCs and UFC 1-200-01. See JP 3-34 for additional construction criteria and authorizations.

e. Waivers and Exemptions.

(1) AR 420-1, appendix G–4, outlines the waiver request process for waivers to Army standards, Army standard designs, and waivers after the start of construction.

(2) UFC waivers provide the authority to deviate from a UFC requirement for no more than twelve months. An exemption provides the authority to deviate from a UFC requirement indefinitely. Waiver and exemption criteria are stated in DOD MIL-STD-3007F. Paragraph 6-69 provides detailed instructions on waivers and exceptions of compliance with UFC and contingency construction standards in the USEUCOM AOR.
SECTION III
CONSTRUCTION PLANS AND DESIGNS

7-4. GENERAL

a. Base-camp construction standards are developed using operational and mission variables. Additionally, combatant commands consider the unique characteristics of the region and the anticipated duration of a mission in their basing standards. Use the joint contingency constructions standards provided in JP 3-34 as initial planning guidance.

b. To assist in the construction and establishment of base camps, the DOD has established construction criteria and standard designs for many of the facilities and supporting infrastructure elements required for base camps. Many of these standards are in the related UFCs and the standardized designs cataloged in automated tools such as the Joint Construction Management System (JCMS).

7-5. UNITED STATES ARMY CORPS OF ENGINEERS CENTER OF STANDARDIZATION FOR NONPERMANENT FACILITIES
The USACE Center of Standardization (COS) for Nonpermanent Facilities is a resource available to review nonpermanent construction projects to ensure life-safety compliance, and as a repository of pre-engineered nonpermanent facilities for use at base camps. The COS can perform minimum life-safety compliance reviews on all temporary and semipermanent construction-level facilities designed in support of military operations. For specific criteria, see https://mrsi.erdc.dren.mil/cos/tam/.

7-6. ARMY FACILITIES COMPONENT SYSTEM
The AFCS is the primary tool that provides engineers with the information needed to plan, design, and manage theater construction projects where austere, temporary facilities are required. For additional information, see the AFCS REDI web portal at https://redi.usace.army.mil/sites/afcs/default.aspx (or call 1-877-277-9364, 601-634-2439, mil 312-446-2439). Register on the site with your DOD common access card for access to it.

a. The AFCS and related series of publications provide a set of standard facility designs managed and supported by USACE (see also AR 415-16). The AFCS is an engineering construction support program for U.S. Army mission construction.

b. The JCMS is an interactive, unclassified system which allows planners to view facility designs, bills of materials, and construction manhours for a variety of construction missions.

c. The AFCS manages the construction data (designs, bills of material, schedules, labor and equipment estimates, and specifications) and the platforms (design management system database and JCMS software) for the warfighting engineer to provide design and construction services expeditiously and efficiently in a theater of operations.

7-7. UNIFIED FACILITIES CRITERIA
UFC and standard designs exist for many facility types; however, these specific criteria may not apply to base-camp construction. Refer to chapter 7, section II, for applicable construction standards and instructions on how to find the UFC.
SECTION IV
CONSTRUCTION EXECUTION AND CONTRACTING

7-8. GENERAL
Engineer construction units and contractors normally execute base-camp construction. The detailed construction tactics, techniques, and procedures are provided in the applicable service doctrines, organized by types and trades.

a. The following section provides resources for specific construction-execution types. The method of execution must take into account lead-times, construction standards, balance of workload, availability of contractors, cost, and availability of bills of material. Typically, the command will pursue HN and NATO funding for infrastructure requirements before defaulting to organic DOD or Army means. The funding strategy for construction execution and the order of preference to execute projects is as follows:

(1) HN.

(2) NATO.

(3) DOD and Army means (MILCON, O&M, ERC, troop construction).

b. Consider HN construction, cultural standards, and environmental practices during design. Though important, these factors alone will not dictate the standards of construction for base camps, but adhering to them will facilitate potential future use and the subsequent transfer of the facility to the HN.

7-9. TROOP CONSTRUCTION
Units use their organic construction capabilities to the fullest extent possible to construct base camps and other contingency requirements. Contingency-construction capabilities vary based on the type of unit, training, experience, and equipment available. For example, an infantry unit augmented with an engineering capability may be able to construct some facilities to the initial or temporary standard, while an engineering unit with a greater organic construction capability may be able to construct some facilities to the semipermanent standard. Area commanders ensure subordinate engineering units tasked to construct base camps have the necessary capabilities to execute contingency-construction tasks to standard, based on a troop-to-task analysis (AR 700-147).

a. Troop construction can be the fastest method of execution. The procurement and availability of bills of material, along with the capability of available units, must be weighed against the shelf-life and the intended purpose of the facility to be constructed. Units should first consider the use of locally available material for troop construction, both for ease and speed of procurement. The use of locally available material also allows for ease of repair and maintenance after construction.

b. The following stipulations exist for troop construction:

(1) Army construction units will apply construction-management processes in DA Pamphlet 420-1-2.

(2) Perform contingency construction in accordance with the unit and project-specific quality control plan.

(3) Either the unit in command of the base camp or that unit’s higher HQ is responsible for quality assurance of the construction.
7-10. OPERATIONAL CONTRACT SUPPORT
OCS planning and execution requires a programmatic approach on the behalf of the JFC and USEUCOM, Service components, CSAs, and their associated contingency contracting organizations. Planning activities can have a significant impact on OCS in later phases of the operation (JP 4-04). OCS encompasses a number of execution agents to include but not limited to the following and their various contract vehicles: USACE, the NATO Support and Procurement Agency (NSPA), the Naval Facilities Engineering Command (NAVFAC), and the Air Force Civil Engineer Center (AFCEC). Lead-time considerations for OCS will depend on the execution agent, the contract vehicle used, the complexity of design, and the construction intended. When using OCS construction, comply with the following stipulations:

   a. Provide a technically qualified contracting officer representative (COR) to execute contract and contingency-construction oversight.

   b. Ensure that contractors execute contingency construction in accordance with an approved quality control plan.

   c. The COR and construction inspectors are to provide quality assurance.


   e. Ensure all contractors supporting U.S. interests align with the applicable HN policies, as some countries in the USAREUR AO maintain lists that allow or prohibit contractors from working in that country.

7-11. LOGISTICS CIVIL AUGMENTATION PROGRAM
The LOGCAP is a U.S. Army program funded in peacetime as a component of U.S. Army readiness. The HQDA G-4 is the staff proponent, and the Army Materiel Command is the executing agent for the Army. The LOGCAP is a broad logistics and engineering contingency support contract that is suited to base-camp construction and BOS-related services. An important aspect is that a LOGCAP contractor maintains an on-call, preplanned, regionally aligned, and ready capability. The LOGCAP performance contractor demonstrates readiness through the development of a worldwide plan, supporting plans to OPLANs, specific regional plans, and participation in exercises. The LOGCAP provides integrated engineering, construction, and general logistic services. Refer to ATP 4-10.1 for more details on the LOGCAP.

   a. Contracted support is not restricted to logistics support; it may include significant nonlogistics support such as minor construction and BOS services in most operations.

   b. The LOGCAP is often the fastest contracted option.

   c. The LOGCAP is a prescriptive construction option. It is imperative that the COR ensures that the services provided are matched with operational requirements.

   d. The COR must coordinate all construction efforts with the LOGCAP administrative contracting officer and the contractor site manager.
e. Although LOGCAP is capable of applying rapid construction effects, it typically comes at increased costs. The ODCSENGR, HQ USAREUR, will determine the best method to implement construction effects.

7-12. HOST-NATION CONSTRUCTION
Where security, availability, and quality permit, the use of HN materials and personnel for contingency construction is authorized, subject to statutory restrictions. Additional criteria are dependent upon agreements in place between the U.S. and the HN Governments. All HN construction must be coordinated through the ODCSENGR, HQ USAREUR.

SECTION V
REAL-ESTATE RECORDS

7-13. GENERAL
The proper documentation of the life-cycle activities of a base camp is an essential component of accountability of Army activities during contingencies. Maintain the following real-estate documents in the automated repository:

a. Verification for maps and deeds, in English and also in the predominant language as used by the HN and in the AO.

b. Leases and other contractual documents related to real-estate acquisitions.

c. Support contract records.

d. Approved property-change notifications.

e. Real-property inventories to include the build date and acquisition cost of any real property constructed by the United States.

f. Property disposition documents.

g. As-built drawings. Submit as-built drawings of all construction projects to the ODCSENGR, HQ USAREUR, within 30 days after construction completion.

h. Inventory and condition reports (incoming and outgoing) as well as the environmental baseline study (EBS) and the ECS reports.

7-14. DD FORM 1354
DD Form 1354, Transfer and Acceptance of DOD Real Property, is designed and issued for use in connection with the transfer of military real property between the military departments and to or from other government agencies. When executing construction, a draft DD Form 1354 must be submitted to the ODCSENGR, HQ USAREUR, at least 30 days before the start of construction. After the completion of construction, a final DD Form 1354 must be submitted to the ODCSENGR or to the ASG or AST.

7-15. INVENTORY REPORTING
Facility inventories and accountability reports are maintained by the ODCSENGR, HQ USAREUR, or by IMCOM-Europe depending on the facility location and its base-management structure. Consult with the appropriate proponent for issues regarding facility inventory or accountability. Real property will be accounted for by ODCSENGR, HQ USAREUR; IMCOM-Europe; or the ASG or AST, with assistance from the lead (occupying) base staff in accordance with AR 420-1.
7-16. OTHER DOCUMENTS
In addition to the documentation previously noted, as part of the construction-project closeout, maintain records locally and provide copies of all permits and approvals, base-camp reports, operating or user manuals, and any equipment or construction warranties to the ODCSENGR, HQ USAREUR.

CHAPTER 8
OPERATIONS AND MAINTENANCE

SECTION I
GENERAL

8-1. GENERAL
In order for any U.S. element to conduct any demolition, alteration, or construction on or to HN property, or to HN assets, the element or its higher command must verify that there is an executed agreement with the HN allowing the work, and that the element has been delegated the authority to conduct the work. Contact ODCSENGR to verify that the work is permitted and authorized.

a. Base-camp O&M links the systems of all base-camp life-cycle activities from strategic planning, through construction, O&M, and transfer. Base-camp operations refers to the O&M of the physical base camp and the provision of base-camp services and support measures. Base-camp O&M provides the services, utilities, and protection needed to maintain the base-camp mission and the base camp itself. This chapter explains base-camp operations, management, organization, and capabilities needed to achieve the purpose of the base camp and to fulfill functional requirements. Table 8-1 provides a summary of operations activities that will occur in each phase of the base-camp life-cycle.

b. The base operations center (BOC) operations section controls daily base-camp operations, maintenance, and training, and is the nerve center of the base camp. Operations personnel coordinate activities and work directly with all other staff sections. The size and scope of the BOC will vary by location and base-camp development, and may include only a unit mayor cell at smaller, more austere locations up to the ASG or AST, or up to the IMCOM-Europe DPW at larger, more established locations.

SECTION II
BASE PROPONENT

8-2. BASE OPERATING SUPPORT INTEGRATOR WITH THE ARMY AS THE LEAD
When designated as the lead Service, USAREUR will—

a. Plan and program for construction, real estate, leasing, facility O&M, environmental management, and engineering support through normal service channels.

b. Ensure compliance with established basing standards.

c. Annually review the basing master plan for all approved basing locations.

d. Establish guidance to support the CDRUSEUCOM theater basing strategy.

e. Plan, program, and manage funding to support construction in accordance with USEUCOM and Service regulations.
<table>
<thead>
<tr>
<th>Base-Camp Life-Cycle Phase</th>
<th>Strategic System and Policy Integration</th>
<th>Planning and design</th>
<th>Construction</th>
<th>Operations and management</th>
<th>Transition, transfer, or closure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Identify/generate Joint and Services policies</td>
<td>Preliminary planning and site investigation</td>
<td>Construct buildings, infrastructure, and utilities</td>
<td>Supply operations</td>
<td>Archiving base camp records</td>
</tr>
<tr>
<td></td>
<td>Examine International and U.S. laws and regulations</td>
<td>Location selection</td>
<td>Establish of sustainment and services</td>
<td>Field services</td>
<td>Maintaining base camp archive</td>
</tr>
<tr>
<td></td>
<td>Understand HN and local customs and practices</td>
<td>Land-use planning</td>
<td>Provide service member support services</td>
<td>Transfer of base camps</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Determine availability or access to existing facilities or infrastructures</td>
<td>Facility structure and infrastructure requirement determination</td>
<td>Manage real property assets</td>
<td>Closure of base camps</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Antiterrorism, force protection, and survivability analyses</td>
<td></td>
<td>Provide base camp services</td>
<td>Transition to ELs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Master planning</td>
<td></td>
<td>Protection</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Generate plans, designs, cost estimates and output</td>
<td>Facility and structure maintenance</td>
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<tr>
<td></td>
<td></td>
<td>Infrastructure management</td>
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<tr>
<td></td>
<td></td>
<td>Command and control</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Mission support</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

(1) At the request of the USEUCOM staff, develop a prioritized listing of construction requirements for appropriate funding. The resulting list forms the contingency-construction priority list.

(2) Manage the construction program and related real-estate actions, in coordination with the designated real-estate and construction agents as identified in DODD 4270.5.

f. Provide common-user services and end items (classes of supply) that are necessary to support tenant-unit missions.

g. Ensure that the BOS-I closely coordinates with the SAA or single port or terminal manager. If no SAA or single port or terminal manager is assigned, the BOS-I is responsible for those functions.
8-3. BASE OPERATING SUPPORT INTEGRATOR WITH THE ARMY AS A TENANT
When USAREUR units are tenants on a USEUCOM base with another Service designated as the BOS-I, coordination must be made with the BOS-I to ensure that support functions that are the responsibility of tenant units are provided by the lead Service. Units should contact the USAREUR DCSENGR for current support agreements or for support in establishing new ones. ODCSENGR will coordinate with the lead Service and provide Service-specific capabilities in accordance with DODI 4000.19. See also DODD 3000.10.

8-4. SENIOR AIRFIELD AUTHORITY
The SAA is an individual designated by the CDRUSEUCOM or JFC, who is responsible for the control, operation, and maintenance of an airfield, including runways, associated taxiways, parking ramps, land, and facilities whose proximity directly affects airfield operations. The SAA coordinates airfield-management requirements, including aerial-port operations; refueling; crash, fire, and rescue; weather; airfield lighting; fleet-service support; and material-handling equipment. Coordination and operations of aircraft in the immediate airspace of the airfield is also the responsibility of the SAA. Air operational requirements may necessitate the deployment of navigational aids, issuing notices to airmen, and coordination with nearby land and facilities whose proximity affects airfield operations (approach overruns and obstructions). The SAA oversees flight-line access and is responsible for the safe movement of aircraft within designated aircraft movement areas. On a joint-use airfield, the SAA oversees airfield operations for all tenant aviation units and transient aircraft.

a. During the establishment of a CL during crisis or contingency operations, the U.S. Transportation Command or a component commander of USEUCOM may initially be designated as the SAA. USEUCOM may then transition SAA to the JFC once the joint force HQ can assume the responsibility. Ultimately, the delegation of the SAA normally transitions to an appropriate individual as discussed in JP 3-17.

b. In situations where U.S. Forces are not the overarching authority for airfield operations (for example, when the HN maintains airfield control or an operational civil airfield), the SAA maintains oversight for all U.S. and multinational airfield operations and is the primary coordinator with the respective airfield officials for any support required. In support of the CDRUSEUCOM and JFC, the SAA coordinates with the BOS-I and the HN to develop plans for needed airfield capability, improvements, and repairs to meet operational requirements.

c. The SAA closely coordinates with the BOS-I where airfield-management infrastructure and base operations overlap (for example, for base-camp security). Fiscal responsibility for airfield-management infrastructure may fall to a single Service or be coordinated with all stakeholders on a joint-use base camp.

d. If dual-hatted as the base commander, the SAA has control and responsibility for security operations and will exercise tactical control over all forces performing base defense within the base boundary through the command and control mechanism of the BDOC (see JP 3-10). The base commander, through the BDOC, addresses threats with attached forces within the designated base boundary, coordinates with the designated area commanders for additional support or forces, and, if required, requests joint fires within the base boundary. Within this context, clear lines of authority are required to ensure that resources are provided, that personnel are protected from ground-based attacks, and that standoff attacks are commensurate with the commander’s integrated base defense plan. Refer to JP 3-17 for more information on the SAA.
8-5. HOST-NATION FACILITIES CONSIDERATIONS
Planners must identify existing facilities in the preliminary planning stage. When available, existing HN structures and facilities should be used as much as possible, consistent with operational economy and functional requirements. Prior to any occupancy by DOD personnel, any existing facilities must be evaluated for life-safety hazards in accordance with UFC 1-201-02. Even when existing structures are not used, planners determine what effects (whether beneficial or detrimental) those structures may have on base development. See UFC 1-202-01 for more information.

SECTION III
OPERATIONS AND MAINTENANCE MANAGEMENT

8-6. GENERAL
There are a wide variety of service providers and arrangements under which O&M can be resourced and executed on base camps. It is incumbent on responsible organizations for individual contingency locations to clarify and promulgate the means to access O&M support to all stakeholders on base camps to assure safety, base resilience, and operational efficiencies.

8-7. FUNDING
Unlike construction funding and execution, which are managed at the USAREUR level, O&M is a local requirement, best organized and executed locally. Securing the funding for O&M, however, takes higher-level command involvement. Obtaining O&M funding for base camps depends on several factors, to include base ownership, proponent, and location type (contingency as opposed to enduring). In general, USAREUR is responsible for providing O&M funding for base camps for which the Army is the lead Service, and for the facilities on these base camps under Army management. The proponent for a specific base camp will evolve over time as the base camp matures and as support functions are eventually taken over by IMCOM-Europe, an ASG or AST, or another support organizations. It is also possible that the HN may have responsibility for funding O&M, particularly for HN-provided facilities.

8-8. AUTHORIZATIONS

a. 10 USC 2811 authorizes the SECDEF and military department Secretaries to use available O&M funds to carry out repairs of facilities. Repair projects over $7.5 million require congressional notification. O&M funding, a subset of SRM funds, is provided to USAREUR through the base budget, or through specifically designated contingency funds such as OCO funds, EDI funding, or exercise-related funds.

b. O&M can also be authorized by registering facilities as real property, after which the Army’s sustainment models will generate SRM funds in order to provide O&M. The funds may be routed to USAREUR for use, or through IMCOM-Europe, depending on the named proponent. This approach is typically limited to facilities built using MILCON funding. ODCSENGR manages this process with the other USAREUR staff sections. Base camp users should contact ODCSENGR for the O&M status and process for any specific base camp.

8-9. FORECASTING AND BUDGETING

a. The most important tasks in O&M forecasting and budgeting are to identify—

(1) All facilities that the command is responsible to operate and maintain.

(2) The correct types of funds to request.
b. Equally important is the coordination between base-camp proponents to ensure minimal overlap or underlap when forecasting and requesting facility O&M funding. Both can easily occur in fluid situations when the base-camp proponent shifts rapidly from one source to another.

c. The O&M forecasting and budgeting process is managed by the USAREUR staff in conjunction with the IMCOM-Europe staff.

8-10. PROPONENTS
At the base-camp level, proponents are assigned for each support function within and subordinate to the BOS-I designation. USAREUR base camps may have different proponents for different functions at the same location. For example, the USAREUR-assigned support staff, the IMCOM-Europe staff, and the HN staff can all be proponents on the same base camp, but for different functions. For a joint base, there may be functional proponents from other Services (such as USAF as the SAA). An SOR is negotiated for each base between the U.S. Forces and the HN. This form is managed at HQ USAREUR, and updated annually. The division of support responsibilities between U.S. proponents is also managed by HQ USAREUR. Base-camp tenants should contact ODCSENGR for clarification on proponent responsibilities on specific base camps.

SECTION IV
OPERATIONS AND MAINTENANCE EXECUTION

8-11. TROOP LABOR
Tenant units may occupy contingency bases that are too small or temporary to warrant externally-provided O&M support. In these cases, units may designate organic resources to assume O&M duties and responsibilities. Unit-provided O&M staffs must ensure compliance with the limitations and restrictions regarding initiating new construction works as outlined elsewhere in this regulation, and seek external assistance if any O&M requirements exceed unit technical capabilities (especially regarding LHS matters, such as electrical power, water, and wastewater management). In the absence of other support assets, the Army does have force structure in the Reserve Component to plan for it to assist rotating units for lower level O&M requirements if the contingency operation warrants such support.

8-12. OPERATIONAL CONTRACT SUPPORT
In addition to other externally provided O&M support, local OCS for O&M services is an option and can be obtained through the supporting regional contracting office. Seek out specific guidance for the use of OCS in the operations or exercise directives generating the need for the use of base camps.

8-13. LOGISTICS CIVIL AUGMENTATION PROGRAM
In addition to the construction capabilities outlined in chapter 7, the LOGCAP is a common source for O&M support on base camps. LOGCAP capabilities (fig 8-1) and support requirements are dictated by contract for specific functions and locations. Units and organizations intending to rely on LOGCAP for O&M support on base camps must coordinate through the USAREUR G4 and the supporting Army contracting command for specific requirements.

8-14. HOST-NATION FACILITIES
HN facilities are not treated as real property in U.S. systems, and U.S. systems will not generate U.S. SRM funds. Accordingly, where agreed to, O&M of HN facilities can be provided by the HN. The HN may be subsequently compensated based on the international agreements in place. The SOR form negotiated between the U.S. Forces and the HN for each base camp dictates support responsibilities and funding sources.
## Logistics Civil Augmentation Program Capabilities

LOGCAP contractor augmentation may include, but is not limited to:

<table>
<thead>
<tr>
<th>Supply Operations</th>
<th>Field Services</th>
<th>Other Operations and Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Class I (ration and water)</td>
<td>• Laundry and bath</td>
<td>• Maintenance</td>
</tr>
<tr>
<td>• Class II (organizational clothing and equipment)</td>
<td>• Clothing exchange</td>
<td>• Transportation</td>
</tr>
<tr>
<td>• Class III (POL-bulk and packaged)</td>
<td>• Clothing repair</td>
<td>• Medical services</td>
</tr>
<tr>
<td>• Class IV (construction materials)</td>
<td>• Food service</td>
<td>• Engineering and construction</td>
</tr>
<tr>
<td>• Class V (ammunition)</td>
<td>• Mortuary affairs</td>
<td>• Signal</td>
</tr>
<tr>
<td>• Class VI (personal demand items)</td>
<td>• Sanitation</td>
<td>• Sanitation</td>
</tr>
<tr>
<td>• Class VII (major items)</td>
<td>• Facilities management</td>
<td>• Power generation and distribution</td>
</tr>
<tr>
<td>• Class VIII (medical supplies)</td>
<td>• Morale, welfare, and recreation</td>
<td>• STAMIS operations</td>
</tr>
<tr>
<td>• Class IX (repair parts)</td>
<td>• Information management</td>
<td>• Physical security</td>
</tr>
<tr>
<td></td>
<td>• Personnel support</td>
<td>• Emergency fire and spill response (hazardous waste and POL) services</td>
</tr>
</tbody>
</table>

**Limitations:** Services not commodity item source: no personal services

**Legend**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOGCAP</td>
<td>logistics civil augmentation program</td>
</tr>
<tr>
<td>POL</td>
<td>petroleum, oils, and lubricants</td>
</tr>
<tr>
<td>STAMIS</td>
<td>Standard Army Management Information System</td>
</tr>
</tbody>
</table>

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**Figure 8-1. LOGCAP Program Capabilities**
CHAPTER 9
ENVIRONMENTAL

SECTION I
GENERAL

9-1. GENERAL
In order for any U.S. element to conduct any demolition, alteration, or construction on or to HN property, or to HN assets, the element or its higher command must verify that there is an executed agreement with the HN allowing the work, and that the element has been delegated the authority to conduct the work. Contact the ODCSENGR to verify that the work is permitted and authorized.

a. When planning for the development of a base camp within the USAREUR AO, it is critical to understand early in the planning process that operations are occurring in developed nations that typically have progressive environmental standards that the U.S. Forces must respect. Environmental standards for a base camp will reflect a combination of U.S. and HN regulations. Which nation’s environmental standards govern or take precedence will vary from location to location depending on the base designation and activity type; therefore, it is imperative to understand the base designation and activity type in order to identify which environmental criteria govern.

b. This chapter identifies the compliance requirements applicable to U.S. Army garrisons, facilities, and activities in Europe. Table 9-1 provides a summary of the relevant policy and environmental criteria based on the location’s base designation and activity type.

c. Treat base camps, if not assigned to IMCOM-Europe, as off-installation exercise locations. AE Regulation 200-2 lists the environmental standards for base camps in the USAREUR AO.

NOTE: Table 9-1 does not apply to operations resulting from actual or threatened hostilities, peacekeeping missions, or relief operations.

SECTION II
COMPLIANCE

9-2. LEGAL COMPLIANCE
The degree to which the U.S. Forces are obligated to comply with HN environmental laws and regulations is determined by the types of agreements that are in place between the HN and U.S. Governments; published final governing standards; and applicable DOD and Army regulations. The main agreement used is the NATO SOFA. The U.S. Forces interpret the NATO SOFA obligation to mean that they will respect the substantive provisions of HN law to the extent necessary to achieve the objective of that law, but not the procedural or administrative provisions of such law (for example, applying for permits, making reports, keeping records).

9-3. SUPPLEMENTARY AGREEMENT TO THE NATO STATUS OF FORCES AGREEMENT (IN GERMANY)
A revised supplementary agreement (SA) to the NATO SOFA went into effect on 29 March 1998. Refer to AE Regulation 200-1, appendix B, for a summary of the key provisions of the revised SA to the NATO SOFA.
### Table 9-1
Environmental Planning Abroad

<table>
<thead>
<tr>
<th>Base Designation/Activity Type</th>
<th>Relevant Basing and Environmental Policy/Guidance</th>
<th>Governing Environmental Criteria (ATP 3-34.5, Appendix B provides a comprehensive list of environmental regulations, laws, and treaties)</th>
<th>Environmental Study Types</th>
</tr>
</thead>
</table>
| **Enduring Locations** (for example, FOS/CSL) | • EO 12114  
• DODI 4715.05  
• DODI 4165.69  
• Service Policies | • Country-Specific FGS  
• OEBGD (where FGS is not established) | • ES, ER, EIS (EO 12114)  
• ESCS (e.g., site return)  
• EBS, ESA (e.g., EDI sites) |
| **Nonenduring Locations** (Contingency Locations) | • DODD 3000.10  
• DODI 4715.22  
• OPLAN Annexes  
• NATO AJEPP-6 | • CLES  
• AJEPP-2  
• Environmental Annex L to OPLAN | • ECS (initial condition and final condition at closure, e.g., EBS, study, report)  
• EBS, EIA, ESCS |
| **Exercises and Training** | • Bi-/Multi-Lateral Agreements  
• Service Policies | • HN Requirements  
• EXPLAN Annexes | • EBS (before occupancy)  
• ESCS (upon redeployment) |
| **Claims** | • NATO SOFA-Art VIII  
• DODI 5515.08 | • Function of Site/Activity | • EBS (prior condition)  
• ESCS (closure) |

**Related Terms and Acronyms:**
- **CLEs** – Contingency Location Environmental Standards
- **ECS** – Environmental Condition Study
- **EBs** – Environmental Baseline Survey
- **ESCS** – Environmental Site Closure Survey
- **ES** – Environmental Study
- **ER** – Environmental Review
- **EIS** – Environmental Impact Statement
- **ESA** - Environmental Site Assessment
- **ECR** – Environmental Condition Report
- **EIA** - Environmental Impact Assessment
- **EBS** – Environmental Baseline Study
- **FGS** – Final Governing Standards

**Source:** USAREUR

#### 9-4. LOCATIONS WITHOUT FINAL GOVERNING STANDARDS

U.S. Army facilities in a country with no FGS will comply with applicable international agreements, applicable HN environmental standards pursuant to Executive Order 12088, appropriate sections of the DOD 4715.05-G, and, in case of conflicting requirements, with the standard that is more protective of human health or the environment. The heads of U.S. Army facilities will consult through command channels with USEUCOM on actions that involve a substantial commitment of funds or that could set a precedent (AE Reg 200-1).

#### 9-5. LOCATIONS WITH FINAL GOVERNING STANDARDS

The U.S. Army will comply with the current country-specific FGS developed by the DOD Environmental Executive Agent (EEA) and with any guidance by the EEA regarding new applicable HN requirements provided in accordance with USEUCOM Instruction 4804-01. Table 9-2 lists the countries that have an FGS in place and identifies the lead environmental component (LEC) for each location.
Table 9-2
Countries Requiring FGS and Designated LECs in the USEUCOM AOR

<table>
<thead>
<tr>
<th>Country</th>
<th>Lead Environmental Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azores</td>
<td>Secretary of the Air Force</td>
</tr>
<tr>
<td>Belgium</td>
<td>Secretary of the Army</td>
</tr>
<tr>
<td>Germany</td>
<td>Secretary of the Army</td>
</tr>
<tr>
<td>Greece</td>
<td>Secretary of the Navy</td>
</tr>
<tr>
<td>Greenland</td>
<td>Secretary of the Air Force</td>
</tr>
<tr>
<td>Iceland (Doesn’t require an FGS)</td>
<td>Secretary of the Navy</td>
</tr>
<tr>
<td>Italy</td>
<td>Secretary of the Navy</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Secretary of the Army</td>
</tr>
<tr>
<td>Spain</td>
<td>Secretary of the Navy</td>
</tr>
<tr>
<td>Turkey</td>
<td>Secretary of the Air Force</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Secretary of the Air Force</td>
</tr>
<tr>
<td>Bulgaria*</td>
<td>Secretary of the Army</td>
</tr>
<tr>
<td>Israel*</td>
<td>Secretary of the Army</td>
</tr>
<tr>
<td>Poland*</td>
<td>Secretary of the Navy</td>
</tr>
<tr>
<td>Romania*</td>
<td>Secretary of the Navy</td>
</tr>
</tbody>
</table>

* FGS under development; refer to the latest version of DODI 4715.05 for a current list

**Source:** DODI 4715.05, appendix to enclosure 3 (modified)

9-6. ASSISTANCE
On request, the ODCSENGR Environmental Chief can help determine applicable standards.

SECTION III
ENVIRONMENTAL DOCUMENTATION

9-7. GENERAL

a. Units occupying or leaving a base camp or conducting off-installation exercises must complete, at least an EBS and an environmental site closure survey (ESCS). These two reports document the environmental conditions of the site, respectively, before the U.S. Forces occupy a site and after they depart and close a site. The U.S. Government uses these reports—

   (1) To alert U.S. commanders, before site occupation, about the presence of any environmental conditions that may impede the mission.

   (2) To document changes over the use period of a site by the U.S. Forces.

   (3) As a protective measure from illegitimate environmental claims of damage.

b. Environmental documentation of off-installation exercise sites and base camps will include the following:
(1) EBSs.
(2) ESCSs.
(3) OEHSAs.
(4) Maneuver-damage reports.
(5) Post-exercise environmental documentation.
(6) Spill reports and documentation of emergency response actions.

9-8. ENVIRONMENTAL BASELINE SURVEY

a. An EBS is essential to determine and document preoccupation environmental conditions for safety determination, for the protection of personnel health and safety, and to protect the U.S. Government from illegitimate third-party claims at closure. Complete EBSs using DD Form 2993 and DD Form 2994. Complete the EBS during the planning and predeployment phases.

b. When designated as the BOS-I, the ODCSENGR will—

(1) Coordinate the scope of work for the EBS with USAREUR OJA and the U.S. Army Claims Service, Europe (USACSEUR), to ensure that the U.S. Government has adequate protection from third-party claims and related matters.

(2) Consult the OEHSA to mitigate duplications of effort.

(3) Manage the execution of the EBS by directing the efforts of personnel performing fieldwork. The ODCSENGR will coordinate with OJA (through USACSEUR), the U.S. Army Public Health Command, Europe Region; and any other applicable U.S. Government agencies.

9-9. OCCUPATIONAL AND ENVIRONMENTAL HEALTH AND SAFETY ASSESSMENT

Initiate an OEHSA within 30 days after occupying an off-installation site and complete the OEHSA within 3 months as outlined in ATP-4-02.82/NTRP 4-02.9/AFTTP 3-2.82IP. An OEHSA helps commanders determine whether conditions are safe for site occupation.

a. The task-force surgeon will conduct an OEHSA to determine any known imminent and substantial endangerments (KISE) to human health and safety located on or emanating from a site (for example, unexploded ordnance, stockpiled munitions, containers of HW, unsafe drinking water).

b. Report any KISE to the appropriate site commander for action.

9-10. MANEUVER DAMAGE REPORTS

Documentation is required each time an off-installation exercise-related maneuver causes damage to the environment (for example, environmental assets, life, resources, structures). The environmental officer is responsible for sending the completed AE Form 350-22A according to AE Regulation 350-22.

9-11. POSTEXERCISE DOCUMENTATION

The environmental officer will—
a. Be responsible for coordinating and closing environmental questions or issues with HN environmental representatives.

b. Document the results of all HN coordination.

c. Send a copy of all environmental documentation to the ODCSENGR and USAREUR OJA (through USACSEUR).

9-12. SPILL REPORTS
The environmental officer is responsible for completing and forwarding spill-response reports in accordance with AE Regulation 200-2 to the Facilities and Construction Division, ODCSENGR, HQ USAREUR, as soon as possible after the spill. Along with the EBS and ESCS, spill-response reports can protect the United States from illegitimate claims during site closure.

9-13. ENVIRONMENTAL SITE CLOSURE SURVEY
The completed DD Form 2995, ESCS, conducted in accordance with ATP 3-34.5, is required to document the final environmental condition for all base camps, including training areas associated with base camps, locations that are transitioning to another user, or are closing; and locations being dismantled or abandoned. Initiate this process sufficiently in advance of the transfer or the closure to allow the identified environmental followup items to be completed before the actual transfer or closure of the base camp. The ESCS is then finalized at the time of transfer or closure after all corrective actions have been completed. Refer to AE Pamphlet 525-200 for additional information.

SECTION IV
EXCEPTION AUTHORITY

9-14. EXCEPTION AUTHORITY
As per AE Regulation 200-2, commanders at all levels will ensure that applicable environmental standards are being met and that all applicable activities comply with AE Regulation 200-2. Send requests for exception to this regulation through the ODCSENGR, HQ USAREUR, to the DCG, USAREUR, for approval.

CHAPTER 10
TRANSITION, TRANSFER, AND CLOSURE

SECTION I
GENERAL

10-1. GENERAL
In order for any U.S. element to conduct any demolition, alteration, or construction on or to HN property, or to HN assets, the element or its higher command must verify that there is an executed agreement with the HN allowing the work, and that the element has been delegated the authority to conduct the work. Contact the ODCSENGR to verify that the work is permitted and authorized.

a. The CDRUSEUCOM develops the policies and procedures for transfers and closures as part of the theater basing strategy. The lead Service is directly responsible for oversight of the transfer or closure of all base camps assigned. The base commander or BOS-I is directly responsible to the lead Service for execution.
b. Guidance pertaining to transitions, transfers, and closures is based on operational variables; mandated timelines for force reductions, retrograde, and withdrawal as part of the exit strategy; cost-benefit analyses; existing U.S. and HN laws and regulations; and agreements and negotiations with HNs and private land owners. It is developed in cooperation with multinational forces and governmental and nongovernmental organizations and is adjusted as needed. Proper transfer and closure efforts support operational priorities. The timely retrograde or withdrawal of joint forces reduces costs, prevents undue environmental liabilities, and protects U.S. interests, while also addressing the expectations of the HN (JP 4-04).

c. Determine the final disposition of a base camp based on mission requirements and the theater basing strategy. Depending on the planned disposition, location, size, and complexity of the camp, the entire process can take between 90 days and more than 1 year. The related individual supporting tasks consist of parallel lines of effort leading to the final transition, transfer, or closure; and to the completed end-state documentation. These major process areas include real-estate management and disposal actions, contracted support and logistics actions, property actions, and environmental actions, each having necessary process steps with specific documentation and recordkeeping requirements. During transition, transfer, or closure of a base camp, commanders must account for and properly dispose of or transfer all real estate, property, and contracts with minimal environmental impact caused by DOD actions (AR 700-147). AE Pamphlet 525-200 provides specific base-camp closure policies and procedures for the Army in Europe.

SECTION II
DISPOSITION OPTIONS

10-2. TRANSITION
A base camp may transition from a CL to an EL if it is determined that the location is required to support the long-term strategic and operational objectives for the theater or AO for the foreseeable future as established by the CDRUSEUCOM (AR 700-147). The CDRUSEUCOM may propose to the Office of the Under Secretary of Defense (Policy) that a CL transitions to an EL using the ELML change nomination process outlined in DODI 3000.12. Once the GPEC validates the request and the Deputy Secretary of Defense approves the addition of the CL to the ELML, the process will generally take 90 to 365 days to complete, depending on the size, location, and mission of the CL (JP 4-04).

10-3. TRANSFER
Transfer involves turning over all or portions of the real estate on a base camp to another U.S. commander, U.S. Government department or agency, a multinational partner, the HN, or a private land owner (JP 4-04). In certain cases, the Army will transfer a base camp to another military or civilian entity for continued operations. Many of the necessary actions for conducting these transfers of base-camp ownership and command responsibilities will be the same in all types of transfers.

a. Transfers to Other DOD Components, U.S. Agencies, and Allies. All base-camp areas and facilities must be available to support both outgoing and incoming entities. This includes items such as maintenance areas, HAZMAT storage sites, ammunition storage, waste treatment, power generation, and contracted support services.

b. Transfers to HNs. The transfer of a base camp to a HN requires that a process be established between the Department of State and the HN. Many parts of a base camp can possibly remain intact where only essential or identified equipment must be removed or replaced, and key identified or negotiated elements returned to the preexisting site conditions or an agreed-upon state (AR 700-147).
10-4. CLOSURE
If the base camp is determined to be no longer necessary to support operations, it may be closed and the land returned to the HN or a private LN landowner (AR 700-147). The assigned BOS-I is responsible for all aspects of the closing of the location to include removal and remediation of all HAZMAT, HW, wastewater, and solid waste. Location closures will not begin until real-estate transactions are finalized and executed in accordance with applicable Service regulations, and U.S. and HN laws and agreements. Included in the closure of the basing location is a post occupation survey and an ESCS.

10-5. ABANDONMENT
In emergency situations, the base camp may be abandoned or destroyed (JP 4-04). Commanders establish procedures for abandoning or destroying base camps in response to an emergency or controlled evacuation. In both scenarios, account for sensitive items and either remove or destroy them to prevent their capture or use by threat forces. The base-camp commander will establish local procedures, including evacuation routes, rallying points, and personnel accountability actions, and will ensure tenant and transient units understand their requirements. If conditions and time permit, conduct an ESCS using DD Form 2995, and an environmental site closure report to document the final status and condition of the site. If conditions and time do not permit, the most recent ECS will serve as the document of record (AR 700-147).

SECTION III
REAL-ESTATE ACTIONS

10-6. REAL-ESTATE ACTIONS

a. Diplomatic agreements between the United States and the HN dictate the authority to negotiate and enter into agreements on behalf of the U.S. Government to acquire and dispose of real estate, administer real-estate contracts, and negotiate restoration or damage settlements, if any, at the termination of the U.S. occupancy of the property (AE Pam 525-200). In most nations in the USAREUR AO, RECOs are required for ACAs, leases with private owners, and for some land-use agreements with HNs. The Army RECO in the USAREUR AO resides at the USACE, Europe District. All real-estate actions should be coordinated through the ODCSENGR, HQ USAREUR.

b. There may be a mix of HN government and private landowners for the real-estate properties in a base camp’s footprint. One critical task is to identify the rightful landowners to have the necessary negotiations and make the final lease payments. Depending on the ability of the HN government and the availability of land records, forces may need to research and verify ownership through deed and title verifications to facilitate the timely disposal, return of real estate, or closure of lease agreements (AR 700-147).

c. Based on HN agreements and negotiations with landowners, it may be necessary to restore land areas to certain specified conditions (AR 700-147). This may include removing gravel surfaces, concrete pads and footings, and FP measures (for example, berms, defensive fighting positions, barriers, obstacles). Areas used as ranges and ammunition supply or storage points may require clearance actions to remove or mitigate explosive hazards (JP 4-04). However, do not assume that restoring land to its original use is required. Consult the ODCSENGR to gather the applicable agreements and seek advice from the servicing staff judge advocate (AR 700-147).

d. General real-estate action steps are as follows:
(1) Submit the real-estate camp-closure or -transfer request form to the ODCSENGR, HQ USAREUR, for review and coordination with USACE, Europe District, Real Estate Branch (90 days before the planned execution).

(2) The unit provides approved real-estate hand-receipts and transfer documents to the ODCSENGR, HQ USAREUR, for review and coordination with the USACE, Europe District, Real Estate Branch (45 days before the planned execution).

(3) The USACE Europe District Real Estate Branch prepares paperwork for leased land, HN, or unknown land (30 days before the planned execution).

e. The documentation that the USACE Europe District Real Estate Branch maintains in applicable real-estate files consists of the following:

(1) Real-estate camp-closure or -transfer requests.

(2) Approved property hand-receipts.

(3) Real-estate transfer documents.

(4) Lease termination notices (for example, ACAs, leases, land-use agreements).

(5) Handover certificates (as per JP 4-04).

(6) Inventory and condition reports, both incoming and outgoing, and environmental reports (EBS, ECS).

SECTION IV
CONTRACTOR SUPPORT AND LOGISTICS ACTIONS

10-7. GENERAL

a. Commanders determine which contracts to retain (and for how long) to sustain essential support and services, while reducing the scope and closing out unnecessary contracts to reduce costs and ensure that the transition, transfer, or closure stays on track. This begins by identifying the number and variety of open contracts, including any ongoing material requisitions. Review construction contracts to determine those that should continue to move forward, and those to terminate based on cost-benefit analysis and the base camp’s planned transition, transfer, or closure date, and the follow-on mission or use of the base camp.

b. Base-camp service and support contracts should be commensurately reduced in scope or right-sized as the camp population decreases. Commanders coordinate with requirement owners and determine which contracted services or support is mission-essential or necessary for continued LHS support. Commanders of remaining base camps must ensure that the necessary support and services contracts are adjusted to handle increased demands based on population expansion due to the realignment and consolidation of forces. Give contractors and vendors adequate advance notice of closures so they can plan and execute their own recovery and redeployment activities. Commanders must ensure the accountability of contractors as contracts are closed and camps are transferred and closed so that unauthorized personnel do not remain on camps or in theater (AR 700-147).
c. The general overview steps for contractor support and logistics actions are as follows:

(1) Request project planning and a contractor estimate (90 days before the planned execution).

(2) Issue a notice to proceed (NTP) to contractors for the closure or transfer of contracts (60 days before the planned execution); and commensurate modifications to contracts at the base camps that will remain if the population will expand and if service demands will increase.

(3) Plan for a reduction in services, of available property, and of contract personnel (30 days before the planned execution).

(4) Issue an NTP on new-start contracts or for final modifications (15 days before the planned execution).

d. The documentation for contractor support and logistic actions consists of the following:

(1) Approved and signed hand-receipts for equipment (if transferred).

(2) Canceled contracts (as per JP 4-04).

10-8. WARM AND COLD BASING

The closure of a base camp within the USAREUR AO may be referred to as “warm” or “cold” basing, as it relates to contractor-support-provided facilities and services, typically at a CL, FOS, or CSL. “Warm base” and “cold base” are USEUCOM theater-specific terms.

a. Warm basing typically occurs when there is a period of inactivity at a location that is expected to last for fewer than 2 months (60 days). When a location is warm-based, contracted tentage and facilities remain, and a small presence of contractors remain on site for continued maintenance and upkeep of facilities and infrastructure, while a designated number of Soldiers remain for FP and equipment accountability during the period of inactivity.

b. Cold basing occurs when there is a period of inactivity at a location that is expected to last for 2 months (60 days) or longer. When a location is cold-based, all contracted tentage, which is included in the total contracted cost of the base camp, is brought down, and all Soldiers and contractors are removed. When reestablishing a warm base or full operations after cold basing, costs will be incurred that are associated with the reestablishment of previously downgraded or removed facilities or capabilities.

c. The decision to warm- or cold-base a location typically comes down to cost. If the cost to demobilize and then remobilize a site exceeds the cost of keeping the leased equipment, and keeping the base camp in a caretaker status for a short duration, the base camp should be warm-based. If lease and caretaker costs exceed the cost to mobilize and demobilize, then the base camp should be cold-based.
SECTION V
MATERIAL PROPERTY ACTIONS

10-9. MATERIAL PROPERTY ACTIONS
Commanders at all levels share the responsibility for implementing the necessary controls to ensure accurate and complete official records are maintained for all property transfers. Plans must account for all equipment and property, including government property and equipment managed by contractors, contractor-acquired property, and theater-provided equipment (JP 4-04). The types of property to be addressed during transfers and closures include all U.S. and HN-owned property associated with the base camp. In preparation for transfers and closures, base-camp commanders begin by conducting hand-receipt inventories to start the related processes and to recognize and plan for the various dispositions of the property (AR 700-147).

a. Base-camp commanders, the BOS-I, and tenant-unit commanders must conduct property inventories and identify excess property. Excess property is property that is not included in the base-camp transfer and is not contractor-owned or part of a unit MTOE. Serviceable or repairable excess property may be redistributed or cross-leveled to other base camps to fill shortages or be turned in to a DLA disposition services facility. Unrepairable and nonrecoverable excess property is disposed of through recycling or an approved waste-disposal facility. Some items may require demilitarization or destruction before the transfer or disposal to prevent reuse or exploitation. Supporting contracting elements require supporting contractors to prepare to transport or properly dispose of any contractor-owned property (JP 4-04).

b. Assigning proper responsibilities and accountability for the property, infrastructure, and facilities on the base camp enables proper transitions, transfers, or closures and can reduce costs, prevent undue liabilities, and protect U.S. interests while meeting the expectations of the gaining service, unit, or the HN.

(1) Refer to AR 735-5 for all special situations involving real or personal property.

(2) Regarding the approval authority for non-U.S. Army recipients, the transfer of real or personal property, including constructed facilities, to non-U.S. Army organizations (for example, to other Services and agencies, the HN, or nongovernmental organizations) must have proper legal review and must be endorsed by the chain of command and USEUCOM in coordination with the local embassy, when applicable, before the transfer.

(3) The logistics staff leads property- or material-disposal efforts in close coordination with the legal officer. The amount and planned disposition of the material items comprising the base camp (whether sold, donated, transferred, destroyed, or shipped back to the home-station location) will determine the level of detailed planning and effort required.

(4) Deconstruct buildings, structures, pads, pavements, hardstands, and utility systems, and dispose of their waste products as required by the original lease, real-estate, or land-use agreements, and by subsequently negotiated agreements.

(5) Remove or properly dispose of all materials not earmarked for transfer to the gaining command or HN (for example, HAZMAT, POL). Appropriately clean or close all waste-management areas and any remaining spill sites; agreements with the HN may specify requirements to be met before an area is closed, such as landfills and wastewater treatment systems (AR 700-147).
c. The general overview steps for material property actions are as follows:

(1) Conduct a 100-percent inventory of all equipment and unit property (180 days before the planned execution).

(2) Develop a consolidated list of excess personal and unit property (90 days before the planned execution).

(3) Redistribute personal and unit property to the HN or NATO, as applicable (60 days before the planned execution).

d. The documentation for material property actions consists of the following:

(1) An equipment inventory.

(2) Documentation that identifies the excess material and equipment.

(3) Adjustments to the property book, as applicable (JP 4-04).

SECTION VI
RELIGIOUS SUPPORT FACILITY CONSIDERATIONS

10-10. RELIGIOUS SUPPORT FACILITY CONSIDERATIONS
In preparation for transfers and closures, base commanders should coordinate with the chaplain regarding proper disposal, redistribution, or retrograde of sacred texts, consecrated religious items, and ecclesiastical supplies that are both sensitive in nature and potentially controlled by policy (JP 4-04).

SECTION VII
ENVIRONMENTAL ACTIONS

10-11. ENVIRONMENTAL ACTIONS
The base-camp commander is responsible for the timely identification and mitigation of negative environmental impacts occurring on the base camp by conducting the necessary ECS and documenting both the corrective actions taken and the final site conditions in the appropriate survey or report. Refer to DODI 4715.22, ATP 3-34.5, and the Environmental Surveys Handbook: Contingency Operations (Overseas) 2013, for more information on the related environmental considerations for transition, transfer, or closure of the base camp.

a. Remediation is not authorized for the transition, transfer, or closure of a base camp unless explicitly required in an international or leasing agreement per DODI 4715.22.

b. Review previously completed or archived environmental data including all related ECSs, spill reports, and other (pertinent environmental) archived data. This helps identify the potential areas of concern for more extensive study or for clean-up actions.

c. Complete an initial ESCS, using DD Form 2995 in accordance with ATP 3-34.5, to ensure the timely identification and applicable mitigation of negative environmental impacts caused by U.S. forces during the occupation of the base camp. Submit the ESCS to the base-camp commander’s supporting environmental staff for the development of the corrective action plan.
d. The base-camp commander will determine the standards and requirements for environmental actions for camp transition, transfer, or closure per regulatory statutes or the established standards. There are several legal and regulatory statutes, based on U.S., international, and HN laws, that will influence and impact the requirements for base-camp environmental transition, transfer, or closure actions; and that influence or impact the level or standards that must be met (AR 700-147).

e. As per JP 4-04, the BOS-I will—

(1) Determine that the proper personnel, supplies, and equipment are accounted for (such as waste managers, equipment operators, containers, labels, placards, safety datasheets, personal protective equipment).

(2) Determine the proper accumulation, collection, transport, management, treatment, and disposal of all waste.

(3) Determine the locations, access, and transfer routes.

(4) Determine the transfer and closure requirements, including the return of sites to preexisting or specified conditions.

(5) Complete all environmental documentation and archive the records (consult the USEUCOM J-4 or the IMCOM-Europe Environmental Branch, as needed, for requirements).

(6) Complete the EBS.

(a) The EBS documents the preoccupation environmental conditions.

(b) The EBS is completed during the base-camp planning and predeployment phases.

(c) DD Form 2993 and DD Form 2994 will be used.

(7) Complete an ECS.

(a) The ECS documents changes to environmental conditions and incidents affecting the environment.

(b) The ECS is archived with the EBS.

(c) The ECS is completed during base-camp establishment, operations, sustainment, and maintenance, as needed.

(d) The Environmental Surveys Handbook: Contingency Operations (Overseas) provides the format for an ECS.

(8) Complete the environmental records. These records—

(a) Document appointment orders, inspections, training (with certification), lab results, and spill reports.

(b) Are completed throughout the base-camp life-cycle, as needed.
(c) Consist of a variety of formats. Consult the ODCSENGR, HQ USAREUR, for requirements.

(9) Complete the ESCS. The ESCS—

(a) Documents the environmental conditions, provides information to determine closure actions required to meet the negotiated standards for transfer and closure, and facilitates the development of the environmental corrective action plan and request for resources.

(b) Is completed upon base-camp transfer and closure notification (the initial survey); 30 days before the transfer and closure (the preliminary survey); and upon correcting findings from the preliminary survey and subsequent environmental corrective action plans (the final survey) using DD Form 2995.

(10) Complete the environmental corrective-action plan.

(a) This plan documents the environmental standards that must be met and the tasks that must be performed for proper base-camp transfer and closure.

(b) The plan must be completed after the initial ESCS and updated after the preliminary ESCS.

(c) Consult the theater command for requirements and see the guidance in the Environmental Surveys Handbook: Contingency Operations (Overseas).

(11) Complete the environmental site-closure report.

(a) This report documents the final environmental condition of the base camp at transfer or closure.

(b) The report is completed at the time of transfer or closure, and after all corrective actions have been completed.

(c) The Environmental Surveys Handbook: Contingency Operations (Overseas) provides the format for the report.

(12) Identify and mitigate the negative environmental effects on the base camp (closing ranges and cleaning up HAZMAT, HW, and POL spills).

(13) Remove the FP measures including protective berms, fighting positions, and wire and vehicle barriers.

(14) Ensure the establishment and the subsequent closure of equipment decontamination sites (for hazardous and biological contamination).

(15) Ensure the closure of the maintenance facilities and the vehicle and aircraft wash racks.

(16) Ensure the closure of the waste-management facilities (solid, hazardous, medical, wastewater, and special wastes).
(17) Ensure the proper accumulation, collection, transport, management, treatment, and disposal of all waste.

f. Base-camp environmental officers must contact the ODCSENGR, HQ USAREUR, environmental officer upon the transfer or closure notification for guidance related to the removal of hazardous materials, waste, and special waste. This guidance will consist of instructions for the—

(1) Disposition of reusable and recyclable materials.

(2) Requirements for packaging, inventorying, labeling, and turning in hazardous and special waste for the disposal and cleaning up of HW accumulation areas.

(3) Termination of waste-management contracts, removal of contractor-furnished equipment, and cleanup of the surrounding area.

(4) Disposition of empty HW and special-waste containers.

(5) Removal of fuel bladders, fuel blivets, secondary containment liners, and associated fuel-distribution equipment; and the establishment of cleanup standards for any affected areas.

(6) Disposition of secondary containment and protective berms.

(7) Disposition of waste material generated from base-camp deconstruction.

(8) Closure and cleanup of all waste-management areas, such as incinerators, landfills, recycling operations, composting sites, and land farming operations.

(9) Disposition of medical waste.

(10) Proper shutdown of water-purification systems, the disposition of the wastewater and brine lagoon, and the need for a water survey.

(11) Disposition of wastewater treatment systems.

(12) Disposition of above-ground and underground storage tanks.

(13) Closure and marking of all latrines, soakage pits, landfills, trash burial sites, and septic systems.

(a) Units will record and archive each location.

(b) While methods may involve only covering some areas with earthen material, agreements with the HN may require methods that are more detailed.

(c) A form of long-term monitoring to detect potential groundwater contamination may be required.

(d) In the absence of formal guidance, use best management practices, which may require consultation with environmental experts.
(e) See TM 3-34.56 and ATP 3-34.40 for more information.

(14) Recording of all grid coordinates and the archiving of all digital photographs of each waste-management site upon final transfer or closure. Incorporate this information into the environmental site-closure report.

(a) Conduct an initial ECS, review current environmental documentation, and develop a plan as needed (180 to 90 days before the planned execution).

(b) Conduct and oversee environmental mitigation actions (60 days before the planned execution).

(c) Revise and update the plan and ensure that actions are complete (30 days before the planned execution).

(d) Complete the final environmental documents (7 days before the planned execution). These consist of the initial ECS; the environmental plan; and the environmental closure approval, which will include all of the required final signatures (JP 4-04).

SECTION VIII
RECORDS AND DOCUMENTATION

10-12. RECORDS AND DOCUMENTATION

a. If the base camp is to be closed or transferred to another ally, partner nation, or HN, submit all of the required documentation (in addition to any documents that are provided to the gaining entity at closure or transfer) through the chain of command to the base-camp document repository. This will serve as the historical base-camp documentation package for that specific base camp (AR 700-147).

b. Base-camp commanders maintain and archive base-camp records and documents to provide a historical record that facilitates base transfers, base closures, and the development of lessons learned. These records and documents establish the baseline for that location in the event that follow-on operations or legal actions are required. The CDRUSEUCOM confirms standards of master plans and as-built documentation and archives in a DOD repository.

c. Units will maintain and transfer base-camp master plans (including as-built drawings) to incoming commanders, and will archive the base-camp master plans upon base-camp closure.

d. Units will maintain and transfer environmental documentation to incoming commanders, and will archive the environmental documentation upon base-camp closure. The environmental documentation consists of the—

(1) EBS.

(2) Environmental Condition Report.

(3) ESCS and resulting corrective-action plans.

(4) Environmental closure reports. See the EBS/Occupational and Environmental Health Site Assessment (OESHA) Handbook.
(5) Sampling reports, including change-of-custody forms and analysis results.

(6) Spill response actions and reports.

(7) Results of environmental inspections.

(8) Waste turn-in documents and the removal manifest for HW.

(9) Documentation of solid waste disposed in burn pits, incinerators, and landfills.

e. Units will maintain and transfer applicable real-estate documents to incoming commanders, and will archive the real-estate documents upon base-camp closure. The real-estate documents consist of the—

(1) Deed verification, and deeds in English and in the predominant language of the HN and AO.

(2) Leases and other contractual documents related to real-estate acquisitions.

(3) Construction documentation.

(4) Inventory and condition reports (incoming and outgoing).

(5) Transfer or disposal documentation.

(6) Support-contract records including any memorandums of agreement.

(7) Approved property-change notifications.

(8) Property inventories.

(9) Property-disposition documents.

(10) Final closure or transfer documents.

(11) Legal reviews, comprising the following:

   (a) Base security plans.

   (b) Base fire-protection plans.

   (c) Base regulations.

   (d) Communications documentation.

   (e) Preliminary excess personal property inventory.

f. Accurate records facilitate the transfer of base camps by providing the new base camp-commander with detailed information on master plans, building plans, infrastructure locations, and environmental considerations. Base-camp records are essential for closures by providing information on base infrastructure that is to be dismantled, by assisting in the planning process, and by helping to mitigate safety and environmental issues. In addition to facilitating closure or transfer actions, maintaining base-camp archives provides information that can assist base-camp planners in the future by providing planning and operational information and lessons learned (JP 4-04).
APPENDIX A
REFERENCES

SECTION I
AGREEMENTS, LAWS, AND PUBLICATIONS

A-1. INTERNATIONAL AGREEMENTS


NATO Status of Forces Agreement (SOFA)

Revised Supplementary Agreement to the NATO SOFA

International Building Code

International Mechanical Code

International Security Advisory Board: Report on Status of Forces Agreements

A-2. EXECUTIVE ORDERS AND UNITED STATES CODES

Executive Order 12088, Federal Compliance with Pollution Control Standards

Executive Order 12114, Environmental Effects Abroad of Major Federal Actions


10 USC 2341, Authority of acquire logistic support

10 USC 2342, Cross-servicing agreements

10 USC 2675, Leases: foreign countries

10 USC 2801, Scope of chapter; definitions

10 USC 2803. Emergency construction

10 USC 2804. Contingency construction

10 USC 2805, Unspecified minor construction

10 USC 2808, Construction authority in the event of a declaration of war or national emergency

10 USC 2811, Repair of facilities

50 USC 1601, Termination of existing declared emergencies
A-3. CODES OF FEDERAL REGULATIONS

21 CFR 1310.73, Physical security controls for non-practitioners; compounders for narcotic treatment programs; manufacturing and compounding areas.

29 CFR 1910, Occupational Safety and Health Standards

29 CFR 1926, Safety and Health Regulations for Construction

A-4. NATO PUBLICATIONS

NATO AJEPP-2 (Standardization Agreement 2582), Environmental Protection Best Practices and Standards for Military Camps in NATO Operations

NATO AJEPP-6, NATO Environmental File During NATO-Led Activities

NATO AASTP-1, Manual of NATO Safety Guidelines for the Storage of Military Ammunition and Explosives

NATO Bilateral Strategic Command Directive 85-5, NATO Approved Criteria and Standards for Airfields

NATO Allied Command Operations Directive 80-25 (available by contacting the proponent of this regulation)

A-5. FEDERAL ACQUISITION REGULATIONS AND SUPPLEMENTS

Defense Federal Acquisition Regulation Supplement (DFARS) Subpart 246.2, Contract Quality Requirements

A-6. JOINT PUBLICATIONS

CJCSI 2120.01D, Acquisition and Cross-Servicing Agreements

CJCSI 3110.03E, (U) Logistics Supplement (LOGSUP) for the Joint Strategies Capabilities Plan (JSCP)

JP 3-05, Special Operations

JP 3-10, Joint Security Operations in Theater

JP 3-17, Air Mobility Operations

JP 3-34, Joint Engineer Operations

JP 4-0, Joint Logistics

JP 4-04, Contingency Basing

JP 4-10, Operational Contract Support

JP 5-0, Joint Planning
A-7. DEPARTMENT OF DEFENSE PUBLICATIONS

DODD 2010.05, The North Atlantic Treaty Organization (NATO) Security Investment Program
DODD 2010.9, Acquisition and Cross-Servicing Agreements
DODD 3000.06, Combat Support Agencies (CSAs)
DODD 3000.10, Contingency Basing Outside the United States
DODD 4270.5, Military Construction
DODI 3000.12, Management of U.S. Global Defense Posture (GDP)
DODI 4000.19, Support Agreements
DODI 4165.69, Realignment of DoD Sites Overseas
DODI 4715.05, Environmental Compliance at Installations Outside the United States
DODI 4715.19, Use of Open-Air Burn Pits in Contingency Operations
DODI 4715.22, Environmental Management Policy for Contingency Locations
DODI 5515.08, Assignment of Claims Responsibility
DOD 4525.6-M, Department of Defense Postal Manual
DOD 4715.05-G, Overseas Environmental Baseline Guidance Document
DOD Explosives Safety Board Technical Paper 15, Update and Standard ECM Designs Approved for New Construction

A-8. DEPARTMENT OF THE ARMY PUBLICATIONS

DA General Order 2006-18, Designation of the United States Army Europe as an Army Service Component Command
AD 80-25, Allied Command Operations Force Protection Directive
AR 10-87, Army Commands, Army Service Component Commands, and Direct Reporting Units
AR 25-400-2, The Army Records Information Management System (ARIMS)
AR 190-11, Physical Security of Arms, Ammunition, and Explosives
AR 190-12, Military Working Dog Program
AR 190-13, The Army Physical Security Program
AR 190-51, Security of Unclassified Army Resources (Sensitive and Nonsensitive)
AR 200-1, Environmental Protection and Enhancement
AR 215-8/AFI 34-211(I), Army and Air Force Exchange Service Operations
AR 350-38, Policies and Management for Training Aids, Devices, Simulators, and Simulations
AR 385-10, The Army Safety Program
AR 405-45, Real Property Inventory Management
AR 405-70, Utilization of Real Property
AR 415-16, Army Facilities Components System
AR 420-1, Army Facilities Management
AR 600-8-3, Postal Operations
AR 600-20, Army Command Policy
AR 700-147, Contingency Basing
AR 735-5, Property Accountability Policies
DA Pamphlet 40-11, Preventive Medicine
DA Pamphlet 40-501, Army Hearing Program
DA Pamphlet 385-16, System Safety Management Guide
DA Pamphlet 385-26, The Army Electrical Safety Program
DA Pamphlet 385-64, Ammunition and Explosive Safety Standards
DA Pamphlet 420-1-2, Army Military Construction and Nonappropriated-Funded Construction Program Development and Execution
DA Pamphlet 710-7, Hazardous Material Management Program
ATP 3-34.5, Environmental Considerations
ATP 3-34.22, Engineer Operations - Brigade Combat Team and Below
ATP 3-34.23, Engineer Operations - Echelons Above Brigade Combat Team
ATP 3-34.40, General Engineering
ATP 3-37.10, Base Camps
ATP 3-39.32, Physical Security
ATP 3-90.20, Regional Support Group
ATP 4-02.82/NTRP 4-02.9/AFTTP 3-282_IP, Occupational and Environmental Health Site Assessment
ATP 4-10.1, Logistics Civil Augmentation Program Support to Unified Land Operations
ATP 4-44, Water Support Operations
ATP 4-45, Force Provider Operations
ADP 5-0, The Operations Process
TB 385-4, Safety Requirements for Maintenance of Electrical and Electronic Equipment
TB MED 576, Occupational and Environmental Health Sanitary Control and Surveillance of Water Supplies at Fixed Installations
TB MED 577, Sanitary Control and Surveillance of Field Water Supplies
FM 3-34, Engineer Operations
FM 3-94, Theater Army, Corps, and Division Operations
TM 3-34.48-1, Theater of Operations: Roads, Airfield, and Heliports - Road Design
TM 3-34.48-2, Theater of Operations: Roads, Airfields, and Heliports - Airfield and Heliport Design
TM 3-34.56, Waste Management for Deployed Forces
TM 5-853-3, Security Engineering Final Design
TC 3-20.0, Integrated Weapons Training Strategy
TC 4-02.3, Field Hygiene and Sanitation
TC 25-8, Training Ranges
Army Standard for Access Control Points
Army Standard for an Operational Readiness Training Complex
Army Standard for the Tables of Organization and Equipment Supply Support Activity
ATGP Overseas Basing Slides (DAMO-SSG) (available by contacting the proponent of this regulation)
A-9. DEPARTMENT OF THE AIR FORCE PUBLICATIONS

Air Force Doctrine Annex 3-34, Engineer Operations

Air Force Pamphlet 10-219, Volume 7, Expedient Methods

A-10. USEUCOM PUBLICATIONS

USEUCOM OPORD 18-11, Antiterrorism (with FRAGORD 001)

USEUCOM Instruction (ECI) 4701.01, NATO Security Investment Program (NSIP) Management

USEUCOM Instruction (ECI) 4804.01, Environmental Security

A-11. ARMY IN EUROPE PUBLICATIONS

AE Regulation 10-5, Headquarters, United States Army Europe

AE Regulation 55-1, United States Military Motor Vehicle Operations on European Public Roads

AE Regulation 200-1, Army in Europe Environmental Quality Program

AE Regulation 200-2, Environmental Guidance for Military Exercises

AE Regulation 200-100, Environmental Management

AE Regulation 350-22, Off-Installation Maneuver and Field Training Exercise Coordination in Germany

AE Regulation 385-64, Explosives Safety

AE Regulation 415-22, NATO Security Investment Program

AE Regulation 525-1, Deployment and Redeployment Operations

AE Regulation 525-13, Antiterrorism

AE Pam 525-200, Base Camp Closure Guide

A-12. UNIFIED FACILITIES CRITERIA

UFC 1-200-01, DOD Building Code

UFC 1-201-01, Non-Permanent DOD Facilities for Use in Support of Military Operations

UFC 1-201-02, Assessment of Existing Facilities for Use in Military Operations

UFC 1-202-01, Host Nation Facilities in Support of Military Operations

UFC 2-000-05N, Facility Planning Criteria for Navy/Marine Corps Shore Installations
UFC 2-100-01, Installation Master Planning, with Change 2
UFC 3-230-03, Water Treatment, with Change 1
UFC 3-250-01, Pavement Design for Roads and Parking Areas
UFC 3-260-01, Airfield and Heliport Planning and Design
UFC 3-460-01, Design: Petroleum Fuel Facilities
UFC 3-600-01, Fire Protection Engineering for Facilities, with Change 4
UFC 4-010-01, DOD Minimum Antiterrorism Standards for Buildings
UFC 4-020-01, DOD Security Engineering Facilities Planning Manual
UFC 4-022-01, Security Engineering: Entry Control Facilities / Access Control Points
UFC 4-022-03, Security Fences and Gates
UFC 4-211-01, Aircraft Maintenance Hangars, with Change 1
UFC 4-211-02, Aircraft Corrosion Control and Paint Facilities
UFC 4-214-03, Central Vehicle Wash Facilities
UFC 4-215-01, Armories and Arms Rooms
UFC 4-229-01N, Design: General Maintenance Facilities
UFC 4-510-01, Design: Military Medical Facilities, with Change 2

A-13. UNITED STATES ARMY CORPS OF ENGINEERS PUBLICATIONS

USACE Engineer Pamphlet 1105-3-1, Planning: Base Camp Development in the Theater of Operations
USACE Engineer Manual 385-1-1, Safety and Health Requirements

A-14. MISCELLANEOUS PUBLICATIONS

1st Infantry Division, Mission Command Element, FOS Objective Standards (available by contacting the proponent of this regulation)

Conducting an Environmental Baseline Survey in Contingency Operations by Lieutenant Colonel David M. Wilkins (The Military Engineer, Oct–Dec 04)

Contingency Basing Executive Council Charter (available by contacting the proponent of this regulation)

Environmental Surveys Handbook: Contingency Operations [Overseas]
Environmental Toolbox for Deploying Forces

Graphic Training Aid 90-01-011, Deployed Forces Protection Handbook (JFOB Handbook), Seventh Edition

National Fire Protection Association Standard 13, Standard for the Installation of Sprinkler Systems

Statement of Requirements (Varies by country. Coordinate through the USAREUR G4.)

Unified Facilities Guide Specifications 32 31 13.53, High-Security Fences (Chain Link and Ornamental) and Gates

SECTION II
FORMS

DD Form 1354, Transfer and Acceptance of DOD Real Property

DD Form 1391, FY_ Military Construction Project Data

DD Form 2993, Environmental Baseline Survey (EBS) Checklist

DD Form 2994, Environmental Baseline Survey (EBS) Report

DD Form 2995, Environmental Site Closure Survey

DA Form 2028, Recommended Changes to Publications and Blank Forms

AE Form 350-22A, Maneuver Environmental Damage Incident Report
## APPENDIX B
SAMPLE BASE OPERATING SUPPORT-INTEGRATOR PLANNING MATRIX

![Notional BOS-I Planning Matrix](image)

**Figure B-1. Notional BOS-I Planning Matrix**
GLOSSARY

> greater than
< less than
°C degree Celsius
°F degree Fahrenheit
24/7 24 hours a day, 7 days a week
1SG first sergeant
7th ATC 7th Army Training Command
21st SC 21st Sustainment Command
409th SB 409th Support Brigade
AAFES Army and Air Force Exchange Service
ACA accommodation consignment agreement
ACFT Army Combat Fitness Test
ACOM Army command
ACP access control point
ACSA acquisition and cross-servicing agreement
ACSIM Assistant Chief of Staff for Installation Management
ADCON administrative control
ADRP Army doctrine reference publication
AE Army in Europe
AFCS Army Facilities Component System
AFN American Forces Network
AHA ammunition holding area
AHJ authority having jurisdiction
AO area of operations
AOR area of responsibility
APO Army post office
APS Army prepositioned stock
AR Army regulation
Army G-3/5/7 Deputy Chief of Staff, G-3/5/7, Department of the Army
Army G-4 Deputy Chief of Staff, G-4, Department of the Army
ASA (IE&E) Assistant Secretary of the Army (Installations, Energy, and Environment)
ASCC Army service component command
ASG area support group
ASIP Army Stationing and Installation Plan
ASP ammunition supply point
AST area support team
AT antiterrorism
ATP Army techniques publication
BASOPS base operations
BCT brigade combat team
BDOC base defense operations center
BOC base operations center
BOS base operating support
BOS-I base operating support-integrator
BS British standard
CAP civil augmentation program
CBEC Contingency Basing Executive Council
CDRUSEUCOM Commander, United States European Command
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>EDI</td>
<td>European Deterrence Initiative</td>
</tr>
<tr>
<td>EEA</td>
<td>[Department of Defense] Environmental Executive Agent</td>
</tr>
<tr>
<td>EL</td>
<td>enduring location</td>
</tr>
<tr>
<td>ELML</td>
<td>enduring locations master list</td>
</tr>
<tr>
<td>EO</td>
<td>executive order</td>
</tr>
<tr>
<td>ESCS</td>
<td>environmental site closure survey</td>
</tr>
<tr>
<td>FEST</td>
<td>forward engineer support team</td>
</tr>
<tr>
<td>FFE</td>
<td>field force engineering</td>
</tr>
<tr>
<td>FGS</td>
<td>final governing standards</td>
</tr>
<tr>
<td>fig</td>
<td>figure</td>
</tr>
<tr>
<td>FM</td>
<td>field manual</td>
</tr>
<tr>
<td>FOD</td>
<td>foreign object damage</td>
</tr>
<tr>
<td>FOS</td>
<td>forward operating site</td>
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<tr>
<td>FP</td>
<td>force protection</td>
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<tr>
<td>FRAGORD</td>
<td>fragmentary order</td>
</tr>
<tr>
<td>ft</td>
<td>foot, feet</td>
</tr>
<tr>
<td>GDP</td>
<td>global defense posture</td>
</tr>
<tr>
<td>GFEBS</td>
<td>General Fund Enterprise Business System</td>
</tr>
<tr>
<td>GO</td>
<td>general officer</td>
</tr>
<tr>
<td>GP</td>
<td>general purpose</td>
</tr>
<tr>
<td>GPEC</td>
<td>Global Posture Executive Council</td>
</tr>
<tr>
<td>GS</td>
<td>General Schedule</td>
</tr>
<tr>
<td>GTA</td>
<td>graphic training aid</td>
</tr>
<tr>
<td>HAZMAT</td>
<td>hazardous material</td>
</tr>
<tr>
<td>HD</td>
<td>hazard division</td>
</tr>
<tr>
<td>HFPE</td>
<td>Health Facility Planning Agency, Europe Region</td>
</tr>
<tr>
<td>HN</td>
<td>host nation</td>
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<tr>
<td>HQ</td>
<td>headquarters</td>
</tr>
<tr>
<td>HQDA</td>
<td>Headquarters, Department of the Army</td>
</tr>
<tr>
<td>HQ IMCOM</td>
<td>Headquarters, United States Army Installation Management Command</td>
</tr>
<tr>
<td>HQ USAREUR</td>
<td>Headquarters, United States Army Europe</td>
</tr>
<tr>
<td>HW</td>
<td>hazardous waste</td>
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<tr>
<td>IAW</td>
<td>in accordance with</td>
</tr>
<tr>
<td>IBC</td>
<td>International Building Code</td>
</tr>
<tr>
<td>IDS</td>
<td>intrusion detection system</td>
</tr>
<tr>
<td>IGCE</td>
<td>independent government cost estimate</td>
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<td>IMCOM</td>
<td>United States Army Installation Management Command</td>
</tr>
<tr>
<td>IMCOM-Europe</td>
<td>United States Army Installation Management Command Europe</td>
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<tr>
<td>ISB</td>
<td>intermediate staging base</td>
</tr>
<tr>
<td>ISO</td>
<td>International Organization for Standardization</td>
</tr>
<tr>
<td>J-4</td>
<td>Joint Staff, Logistics</td>
</tr>
<tr>
<td>JCMS</td>
<td>Joint Construction Management System</td>
</tr>
<tr>
<td>JFC</td>
<td>joint force commander</td>
</tr>
<tr>
<td>JFLCC</td>
<td>joint force land component command</td>
</tr>
<tr>
<td>JICR</td>
<td>joint inventory condition report</td>
</tr>
<tr>
<td>JP</td>
<td>joint publication</td>
</tr>
<tr>
<td>JSA</td>
<td>joint security area</td>
</tr>
<tr>
<td>JSOTF</td>
<td>joint special operations task force</td>
</tr>
<tr>
<td>JTF</td>
<td>joint task force</td>
</tr>
<tr>
<td>KISE</td>
<td>known imminent and substantial endangerments</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>---------</td>
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</tr>
<tr>
<td>POL</td>
<td>petroleum, oil, and lubricants</td>
</tr>
<tr>
<td>PX</td>
<td>Post Exchange</td>
</tr>
<tr>
<td>QA/QC</td>
<td>quality assurance and quality control</td>
</tr>
<tr>
<td>QOL</td>
<td>quality of life</td>
</tr>
<tr>
<td>RD</td>
<td>Region Director [United States Army Installation Management Command Europe]</td>
</tr>
<tr>
<td>RECO</td>
<td>real estate contracting officer</td>
</tr>
<tr>
<td>RHCE</td>
<td>Regional Health Command Europe</td>
</tr>
<tr>
<td>RSG</td>
<td>regional support group</td>
</tr>
<tr>
<td>RSOI</td>
<td>reception, staging, onward movement, and integration</td>
</tr>
<tr>
<td>SA</td>
<td>supplementary agreement</td>
</tr>
<tr>
<td>SAA</td>
<td>senior airfield authority</td>
</tr>
<tr>
<td>sec</td>
<td>section</td>
</tr>
<tr>
<td>SECDEF</td>
<td>Secretary of Defense</td>
</tr>
<tr>
<td>SES</td>
<td>Senior Executive Service</td>
</tr>
<tr>
<td>SF</td>
<td>square feet</td>
</tr>
<tr>
<td>SGM</td>
<td>sergeant major</td>
</tr>
<tr>
<td>SIPR</td>
<td>secure Internet protocol router</td>
</tr>
<tr>
<td>SM</td>
<td>square meters</td>
</tr>
<tr>
<td>SME</td>
<td>subject-matter expert</td>
</tr>
<tr>
<td>SOF</td>
<td>special operations forces</td>
</tr>
<tr>
<td>SOFA</td>
<td>status of forces agreement</td>
</tr>
<tr>
<td>SOR</td>
<td>statement of requirements</td>
</tr>
<tr>
<td>SOW</td>
<td>statement of work</td>
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<tr>
<td>SPP [Division]</td>
<td>Strategy, Posture, and Policy Division, Office of the Deputy Chief of Staff, G5, HQ USAREUR</td>
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<tr>
<td>SRM</td>
<td>sustainment, restoration, and modernization</td>
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<td>SRO</td>
<td>senior responsible officer</td>
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<tr>
<td>SSA</td>
<td>supply support activity</td>
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<tr>
<td>TB</td>
<td>technical bulletin</td>
</tr>
<tr>
<td>TB MED</td>
<td>technical bulletin medical</td>
</tr>
<tr>
<td>TC</td>
<td>training circular</td>
</tr>
<tr>
<td>TF</td>
<td>task force</td>
</tr>
<tr>
<td>TM</td>
<td>technical manual</td>
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<tr>
<td>TPP</td>
<td>Theater Posture Plan</td>
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<tr>
<td>TSAE</td>
<td>Training Support Activity–Europe</td>
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<tr>
<td>UBL</td>
<td>unit basic load</td>
</tr>
<tr>
<td>UFC</td>
<td>unified facilities criteria</td>
</tr>
<tr>
<td>UFGS</td>
<td>unified facilities guide specifications</td>
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<tr>
<td>UMM</td>
<td>unspecified minor military construction</td>
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<tr>
<td>UPH</td>
<td>unaccompanied personnel housing</td>
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<tr>
<td>UROC</td>
<td>United States Army Corps of Engineers Reachback Operations Center</td>
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<td>U.S.</td>
<td>United States</td>
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<tr>
<td>USACE</td>
<td>United States Army Corps of Engineers</td>
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<tr>
<td>USACSEUR</td>
<td>United States Army Claims Service, Europe</td>
</tr>
<tr>
<td>USAF</td>
<td>United States Air Force</td>
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<td>USAREUR</td>
<td>United States Army Europe</td>
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<td>Deputy Chief of Staff, G1, United States Army Europe</td>
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<td>Deputy Chief of Staff, G3, United States Army Europe</td>
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