



DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT
600 ARMY PENTAGON
WASHINGTON, DC 20310-0600

DAIM-ZA

JUN 30 2008

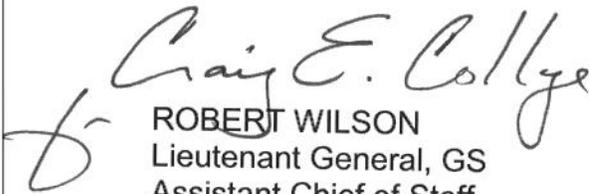
MEMORANDUM FOR

Commander, US Army Corps of Engineers (CEMP), 441 G St NW, Washington,
DC 20314
Installation Management Command (IMCOM), 2511 Jefferson Davis Highway,
Arlington, VA 22202

SUBJECT: Change 1 to Army Standard for Warriors in Transition (WT) Barracks

1. The enclosed Army Standard for WT Barracks supersedes the Army Standard dated 18 January 2008 and is hereby approved for implementation. The changes are in maximum space allowance, apartment configuration by adoption of private bath and shared bath modules, reduced closet space for the shared bath module, added shared laundry per floor for the shared bath modules, and deleted balcony requirements.
2. This standard applies to all Army Components. Only the Assistant Chief of Staff for Installation Management has the authority to approve exceptions to this standard. Waivers from the Army Standard must be approved in accordance with AR 420-1.
3. This standard is mandatory for Military Construction, Army (MCA) projects in FY08 and beyond. Designs based on these Army Standards, Standard Designs and Design Criteria will be developed consistent with MILCON transformation methodologies.
4. The co-chairs for Facilities Design Team (FDT) for WT Barracks are Ms. Brenda Williams, DCS G-1, brenda.williams@hqda.army.mil, 703-604-0622 and Mr. Charles Huffman, DAIM-ISH, charles.huffman@hqda.army.mil, 703-601-0712.
5. The FDT POC at the USACE Center of Standardization for WT Barracks is Mr. Bill Workman, CESWF, william.k.workman@swf02.usace.army.mil, 817-886-1715.

Encl
as


ROBERT WILSON
Lieutenant General, GS
Assistant Chief of Staff
for Installation Management



DEPARTMENT OF THE ARMY
ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT
600 ARMY PENTAGON
WASHINGTON DC 20310-0600

The Army Standard for Warriors in Transition (WT) Barracks

Description:

A WT Barracks is a building or portion thereof that meets or exceeds those minimum standards for assignment as housing for unaccompanied permanent party personnel. This building provides lodging for permanent party Soldiers. The facility will be accessible to individuals with disabilities, supporting the Warrior in Transition units, in accordance with the Uniform Federal Accessibility Standards (UFAS), as required by Architectural Barriers Act (ABA) (Public Law 90-480), title 42 United States Code, sections 4151 – 4157, (42 USC 4151-4157). Additional accessibility features may be added or incorporated based upon the medical needs of specific occupants as certified by the installation medical authority.

CATEGORY CODE	DESCRIPTION
72112	Unaccompanied Personnel Housing, Warriors in Transition

Applicability:

- The Army Standard applies to Active, Reserve and National Guard Component facilities on Army Installations.
- The Army Standard is mandatory for all construction projects effective in FY08 and beyond.
- All USACE geographic districts shall incorporate the key mandatory design features described herein in close coordination with the USACE designated Center of Standardization (COS), for Warriors in Transition Barracks.
- All Warriors in Transition Barracks projects must be reviewed by the COS to ensure conformance with the Army Standard.

Waivers:

- Only the Assistant Chief of Staff for Installation Management has authority to approve exceptions to the Army Standard.
- Waivers from the Army Standard must be requested in accordance with the Army Regulation (AR) 420-1 and the Army Facilities Standardization Program Charter, latest edition.
- All waiver requests to the Army Standard require COS conflict resolution prior to submission by the Garrison Commander.
- Garrison Army Standard waiver request submissions must be received in sufficient time to allow completion of Facility Design Team review and development of recommendations or courses of action for the Army Facilities Standardization Committee to consider prior to implementation into project design.
- All Headquarters, Department of the Army (HQDA) approved waivers shall be documented in installation master plans thereby serving as the installations' modified standards for the facility type affected.
- Late submissions and/or project delays are NOT sufficient stand-alone justification for accelerated review or other dispensation to meeting the Army Standard contained herein.

THE ARMY CONSTRUCTION CRITERIA FOR WARRIORS IN TRANSITION BARRACKS

ITEM	MANDATORY CRITERIA
Building Capacity	Building capacity is based on the number of 2-bedroom apartments the building provides.
Barracks and Common Spaces, Gross Area	<p>For the purposes of this limit, gross area in terms of Gross Square Feet (GSF) is defined as the total slab area of each occupied floor, without any reduced-scope allowances (e.g., balconies, stairwells, elevator shafts, open corridors).</p> <ul style="list-style-type: none"> • 1,350 Maximum GSF per 2-Bedroom, 2-Bathroom Apartment • 1,060 Maximum GSF per 2-Bedroom, 1-Bathroom Apartment <p>The percentage of each configuration shall be established on an equivalent 50/50 basis. Only minor percentage deviations will be allowed based on building design efficiencies. Any deviation exceeding 10% of the total building area shall constitute a waiver.</p>
Energy Policy Act 2005 (EPACT 05) / Executive Order 13423 (E.O. 13423)	Warriors in Transition Barracks facilities shall be designed in compliance with requirements for federal facilities IAW EPACT 05 and E.O. 13423.
Technical Design Criteria and Standards	International Building Code except where Installation Design Guide or military standards are required to meet specific operational needs.
Exterior Appearance	Comply with Installation Design Guide architectural features.
Exterior Lighting	Exterior lighting systems provided for parking areas, sidewalks, service yards, service drives, building entrances and perimeter.
Sustainability	Warriors in Transition Barracks facilities shall be designed to meet current sustainable development and design policy requirements as established by the Department of the Army.
Accessibility	Warriors in Transition Barracks will be accessible to individuals with disabilities in accordance with the Uniform Federal Accessibility Standards (UFAS), as required by Architectural Barriers Act, title 42 United States Code, sections 4151 - 4157, (42 USC 4151-4157). The U.S. Architectural & Transportation Barriers Compliance Board established the Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities in August 1994. The latest edition of these guidelines, referred to as the ADAAG, will be met whenever they provide equal or greater accessibility than UFAS.
Finishes	Finishes shall be coordinated through USACE COS to ensure use of therapeutic colors, flooring material and countertop textures.
Limited Access Areas	Accessibility is not required to elevator pits, elevator penthouses, mechanical rooms, piping or equipment catwalks, lookout galleries, electrical and telephone closets, and general utility rooms.

The Army Standard for Warriors in Transition Barracks

ITEM	MANDATORY CRITERIA
Vehicle Parking	Parking spaces will be provided for 70 percent of the rooms. In accordance with the Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines, 23 July 2004, ADA Chapter 2 Scoping Requirements, section 208.2.2, a minimum of 20 percent of the parking spaces provided will comply with section 502.
Lobby	Provide accessible primary entry and congregating area for Soldier and their visitors. Signage/way finding is required to public amenities, such as vending, public toilets, administration, public phones, elevators, and Soldier rooms by room number, and exit signage.
Emergency Notification System	Provide in room and common area notification.
CQ Station	Provide a Charge of Quarters (CQ) station in building entrance area.
Multi-Purpose Area	Provide multi-purpose space within the building. The minimum net square feet (NSF) is based on the building occupancy as listed below: Small – 250 NSF (up to 64 bedrooms) Medium – 500 NSF (65 – 100 bedrooms) Large – 750 NSF (101 – 200 bedrooms) X-Large – 1000 NSF (201 or more bedrooms)
Janitor Closet	Provide a minimum 40 NSF janitor closet with built-in sink per floor.
Public Restroom and Water Fountain	Accessible unisex public restroom with diaper changing area, and water fountain on ground floor near building entrance or lobby area.
Elevator	Elevator system provided when building is two-story or higher, and shall accommodate a mobile stretcher for medical emergencies.
Apartment Module Configuration	<ul style="list-style-type: none"> • 2-bedroom, 2-bathroom apartment, with kitchen and living room • 2-bedroom, 1-bathroom apartment, with kitchen (no living room) A minimum of 10% of the apartments shall be accessible IAW ADAAG or UFAS (whichever is more stringent), with remainder being adaptable to accessibility standards.
Apartment Module Access	All access to rooms shall be via an interior corridor. Barracks shall not have windows opening to an exterior corridor (balcony) or landing that is accessible to common traffic areas.
Doors and Hardware	Lever operated door latches using keyless entry in accordance with Army Technology Standard. Keyless entry shall be provided at all public building entrances and all individual sleeping apartments.
Bedroom	Max 183 NSF (Net Square Feet); Min 180 NSF private sleeping area.

The Army Standard for Warriors in Transition Barracks

ITEM	MANDATORY CRITERIA
Closets	<ul style="list-style-type: none"> • 2-Bedroom, 2-Bathroom Apartment – provide a minimum 50 NSF closet for each bedroom. • 2-Bedroom, 1-Bathroom Apartment – provide a minimum 32 NSF closet for each bedroom
Living Room	<ul style="list-style-type: none"> • Minimum 150 NSF living room for each 2-bedroom, 2-bathroom apartment. • 2-Bedroom, 1-Bathroom apartment does not have a living room.
Kitchen	Standard kitchen with range, microwave oven, garbage disposal, standard size refrigerator, and counter seating.
Laundry	<ul style="list-style-type: none"> • 2-Bedroom, 2-Bathroom – Washer and dryer in each apartment. • 2-Bedroom, 1-Bathroom – Shared laundry with at least one laundry per floor. In shared laundry, provide large capacity washers and dryers at a ratio of 8:1 (washers) and 6:1 (dryers).
Bathroom	<ul style="list-style-type: none"> • 2-Bedroom, 2-Bathroom Apartment – provide private bathroom for each bedroom. • 2-Bedroom, 1-Bathroom Apartment – provide bathroom per module. <p>Installation shall coordinate with local Medical Treatment Facility commander for site specific medical concerns requiring features in addition to UFAS/ADAAG requirement.</p>
Telecommunications	<ul style="list-style-type: none"> • Telephone/Teletype, TV, and Internet capability shall be provided in each barracks room and living room. • Telecommunications infrastructure will meet the United States Army Information Systems Engineering Command (USAISEC) Technical Guide for Installation Information Infrastructure Architecture (I3A) and American National Standards Institute / Telecommunications Industry Association / Electronic Industries Alliance (ANSI/TIA/EIA) 568 and 569 requirements. • The facility must connect to the Installation telecommunications (voice and data) system through the outside plant (OSP) underground infrastructure per I3A guidance. Connections to OSP cabling system shall be from each facility main cross connect located in main telecommunications room or telecommunications equipment room to closest OSP access point. • Telecommunications outlets will be provided IAW the Technical Guide for Installation Information Infrastructure Architecture (I3A Guide). Telecommunications outlets will be provided per the I3A technical guide based on functional purpose of the various spaces with the facility as modified by user special operational requirements. • Telecommunication Room. A Telecommunications Room (TR) shall be provided for voice and data network. TR(s) shall be in accordance with the I3A Guide and ANSI/EIA/TIA-569-B.

GUIDANCE

General Design Philosophy:

Consider layout and configuration for spatial relationships for wounded warriors and family assistance facility, Warrior Transition Unit Headquarters, Dining and WT barracks to minimize Soldier and visitor travel distances. All facilities should be sited within a "mini-campus" with hospital and medical facilities to facilitate Outpatient care.

Ensure accessible routes to these facilities. Soldier and Family access and ability to get to all facilities must be considered to minimize inconvenience.

Consider mass transit opportunities and other issues to minimize inconveniences.

Specific MILCON Transformation Design Considerations:

- Maximize use of natural light so facilities remain usable during periods of lost utility support.
- Economy of construction is a design prerequisite.
- Facilities must be durable to withstand the rigors of multiple users.
- Pre-fabricated construction components and/or modular construction encouraged as long as facility durability standards are satisfied.

Emergency Notification System: The emergency notification system (e.g., Fire Alarm System) will consider that a potential occupant may have visual or auditory impairments. By ensuring that strobe lights and audible alarms are in each living/sleeping room, the occupant should be aware of any emergency. In a situation where occupant has both audio and visual impairment, the Medical Treatment Facility commander will inform the CQ Station attendee so the appropriate action can be taken in the event of an emergency.

Additional Accessibility Features: Based on medical needs of specific types of occupants and as certified by the installation medical authority, additional accessibility features may be incorporated into the construction project not later than completion of 35% design review. The project files need to reflect these features and document the changes requested. The Installation Design Guide may also serve as the modified standards for the facility type affected.

Burn Centers: Adequate control of air and water temperature in the WT barracks is very important. If required in support of the local medical authority for outpatient care, garrison barracks projects should consider at a minimum, the following special features for incorporation into the design process. The WT Barracks COS will work to include those features the installation medical authority deems appropriate.

- Water temperature regulators
- Room temperature regulators
- UV filtration on windows
- Room Humidity Control

Other Accessibility Features: Garrison barracks projects' designs should consider the following impairments as basis for incorporating special accessibility features into the designs if required by the local Medical Treatment Facility commander. The WT Barracks COS will endeavor to ensure that these impairments are considered as accessibility features are included in the barracks' design as the installation Medical Treatment Facility commander deems appropriate.

- Traumatic Brain Injuries (TBI)
- Hearing Impaired
- Visually Impaired
- Amputees

The Army Standard for Warriors in Transition Barracks

Apartment Accessible vs. Adaptable Percentage: The minimum percentage of accessible rooms may increase based on the installation needs. All rooms will be designed to be adaptable to provide full accessibility if required.

ADA/ABA Compliant Apartment: The apartment must meet all ADA/ABA requirements. The apartment would need features such as countertops, restrooms, cabinets and equipment that allow easy access for a person in a wheel chair.

ADA/ABA Adaptable Apartment: The apartment meets all circulation requirements. Additionally, the rooms may have blocking in the walls to allow for easy handrail and other assist features to be installed in the event the apartment needs to be converted to fully UFAS/ADAAG compliance.

Finishes: Injured service members with Traumatic Brain Injury (TBI) or behavioral health disorders such as Post Traumatic Stress Disorder (PTSD) may be adversely affected based on issues related to their environment. For example, excessive noise, fluorescent lighting, and harsh smells may exacerbate headaches and startle responses which are associated with these conditions. The use of therapeutic colors, flooring material and/or countertop texture may help to facilitate a calming effect in an individual who is agitated. It is recommended that the design try to supply consistent fluorescent lighting, with uplighting being a possible solution, maximize natural lighting when possible, and avoid complex and/or confusing colors or patterns.

Furniture and Equipment Purchases: Furniture and equipment purchases should consider that a certain percentage of rooms require accessibility. The garrison should ensure that purchased furniture and/or equipment consider room specific requirements.

Furniture, Fixtures & Equipment (FF&E) Definition (per UFC 3-120-10, 5-1):

"... The Furniture, Fixtures & Equipment Interior Design (FF&E) includes the design, selection, specification, color coordination and procurement documentation of the required items necessary to meet the functional, operational, sustainability, and aesthetic needs of the facility. The FF&E package will include placement plans, ordering and finish information on all freestanding furnishings and accessories, and cost estimates. The Interior Designer will select and specify colors, fabrics, and furniture finishes which are coordinated with the Structural Interior Design (SID) interior finish materials. The selection of furniture style, function and configuration will be coordinated with the user/customer's requirements. Examples of FF&E items are workstations, seating, files, tables, beds, wardrobes, draperies and accessories as well as markerboards, tackboards, and presentation screens. Secondary window treatments such as sheers, draperies, top treatments, and room-darkening shades are specified as required on a project-by-project basis and are usually included as part of the FF&E package. Criteria for furniture selection will include function and ergonomic considerations, maintenance, durability, sustainability, comfort and cost. Also, the designer may have to consider reuse of and coordination with existing furnishings.

The FF&E budget, the customer's program requirements and the Furniture Footprint plans will be the basis for the FF&E Package. The designer will work directly with the using activity to assess their needs and develop a list of furnishings required for each space within the facility. The FF&E package will be developed and coordinated with the architectural design as is appropriate with the project delivery process and the FF&E acquisition strategy. Refer to Chapter 2 Interior Design Process.

The Army Standard for Warriors in Transition Barracks

Equipment not included in MILCON construction may or may not be included in the FF&E package, depending on the funding used. The user or user's consultants may specify or provide specifications for specialized equipment. ...”

Multi-Purpose Area: Provides space to perform the basic operational functions similar to a conference/business/activity room. Provisions for email, telephone and fax, and audio/visual equipment may be utilized. A storage area either within the space or located nearby should be provided in the event equipment, chairs or similar furniture needs to transition in or out of space.

Bathroom: The bathroom may require a wheelchair compliant shower to meet UFAS/ADAAG compliance requirement.

Janitor Closet: One (1) janitor closet may be provided for each floor of each building. Include standard built-in equipment and accessories such as overhead shelving, mop holders and floor sink.

Site Amenities: Includes site amenities such as vehicle service yards, access drives, and exterior utilities.

Landscaping: Landscaping design should provide an appearance similar to an apartment complex.

Sustainability: Facility is designed to meet current sustainable development and design policy requirements as established by the Department of the Army. The Army has transitioned to Leadership in Energy and Environmental Design for New Construction (LEED-NC) and the SILVER rating level is the designated new sustainable performance criteria for MILCON projects starting in FY08 and beyond. Sustainable design techniques should be considered as they relate to site design, site engineering, unit design, and unit engineering. See Army's latest guidance for sustainability requirements.

- Exterior Construction: Use sustainable, low maintenance finish materials.
- Landscaping: Provide materials natural to the area to limit irrigation and maintenance.
- Utilities: Use underground utility distribution lines, where feasible.

Antiterrorism / Force Protection: Facility is evaluated for security requirements in accordance with UFC 4-010-01, DoD Minimum Antiterrorism Standards for Buildings, latest edition.

Gross Area: The gross area limitations are calculated based on the number of 2-bedroom apartments required. Example: 48 apartments (96 bedrooms) at 50/50 ratio would equate to 57,840 maximum GSF limitation for the building. ie: $\{(24 \text{ apartments} \times 1,060 \text{ GSF}) + (24 \text{ apartments} \times 1,350 \text{ GSF})\}$.

Gross Area Calculation: Gross floor areas depicted in the “Mandatory Criteria” are calculated in accordance with the International Building Code (IBC). Gross floor areas depicted in the “Mandatory Criteria” reflect a change towards counting all space at the actual floor area despite previous guidance in TI 800-01 for considering some space at one-half the actual floor area. This change reflects the goal to go to Industry Standards which does not distinguish between half space and full space.

The Gross Area Calculation is not meant to change how the Army programs, tracks, or calculates gross area. Facility gross area conversions to account for half-space are available upon request.

The Army Standard for Warriors in Transition Barracks

Previous Gross Area Calculation Methodology (TI 800-01): Gross Floor Areas. Floor areas specified are gross floor areas measured from the exterior surface of the outside walls. These areas include the floor areas taken up by outside walls, interior partitions, stairs, toilets, halls and corridors, enclosed walks, mechanical, electrical and electronic equipment rooms (when incorporated within or attached to structures), and covered shipping and receiving platforms. Also included in the gross floor area, but computed at one-half the actual floor area, are all covered open porches, covered but not enclosed passageways and walks, and uncovered shipping and receiving platforms. (Half-space is calculated as full space in the Army Standard).

Compliance Threshold: The Army Standard may identify an Army regulation, technical guide or other written guidance as mandatory criteria. The Corps of Engineers Center of Standardization provides the first line technical compliance review. The Facilities Design Team in conjunction with the COS will resolve any issues where there may be conflicting, unclear or no compliance measurement threshold. Resolution may require senior leadership guidance or amendment of the Army Standard. The Army Standard is not intended to provide compliance criteria detailed in references, regulations, industry standards, or the standard design.

Reference Criteria: The designs should use latest editions of the following design criteria:

- Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines
- American with Disabilities Act Accessibility Guidelines (ADAAG)
- Uniform Federal Accessibility Standards (UFAS) Federal Standard 795
- Energy Policy Act 2005 (EPACT05)
- Executive Order 13423 (E.O. 13423), "Strengthening Federal Environmental, Energy and Transportation Management".
- IBC – International Building Code
- AR 405-70, Utilization of Real Property
- AR 415-15, Army Military Construction Program Development and Execution
- DA PAM 415-28, Facility Guide To Army Real Property Category Codes
- ETL 1110-3-491, Sustainable Design for Military Facilities
- UFC 3-120-10, Interior Design
- UFC 3-600-01, Design: Fire Protection Engineering for Facilities
- UFC 4-010-01, DoD Minimum Antiterrorism Standards for Buildings
- UFC 4-023-03, Security Engineering: Design to Resist Progressive Collapse
- U.S. Army Information Systems Engineering Command (USAISEC) Technical Guide (TG) for Installation Information Infrastructure Architecture (I3A)
- UFC 3-580-01 Telecommunications Bldg Cabling Systems Planning/Design
- ANSI/TIA/EIA-568-B Commercial Building Telecommunications Cabling Standard
- ANSI/TIA/EIA-569-B Commercial Building Standard for Telecommunications Pathways and Spaces