

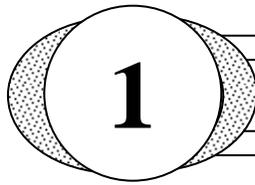
U.S. Army
Corps of Engineers
Huntsville Center
Installation Support Center of Expertise (ISCX)

Training Support Center (TSC)

Army Criteria Tracking System
Standard Information
Category Code 14129
November 2007

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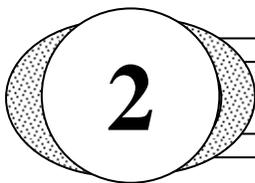
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CATEGORY CODE DATA

Chapter 1 – Category Code Data.

- 1.1 Category Code 141.29, Training Support Center (TSC)
- 1.2 Area UM = SF
- 1.3 Other UM = PN
- 1.4 Program UM = SF
- 1.5 Type = B – Building
- 1.6 Glac = 1730 – Building
- 1.7 Proponent = DCS Army G3
- 1.8 IC = 01 –Aviation & Operation Facilities
- 1.9 FCC = 141 –Operations Buildings
- 1.10 FCG = 14129 – Training Support Center
 - 1.10.1. FAC = 1732 – Training Aides Center
- 1.11 ISR Facility Class = 1100 – Operations and Training
- 1.12 ISR Category = 1120 – Training Instruction Facilities
- 1.13 ISR Subcategory = 1123 –Training/Training Support Facilities
- 1.14 DA Pam 415-28 (*Category Code*) A building that is used to fabricate, maintain, store, and issue training devices including Multiple Integrated Laser Engagement System (MILES); it also provides the administrative space for the training support division management staff.

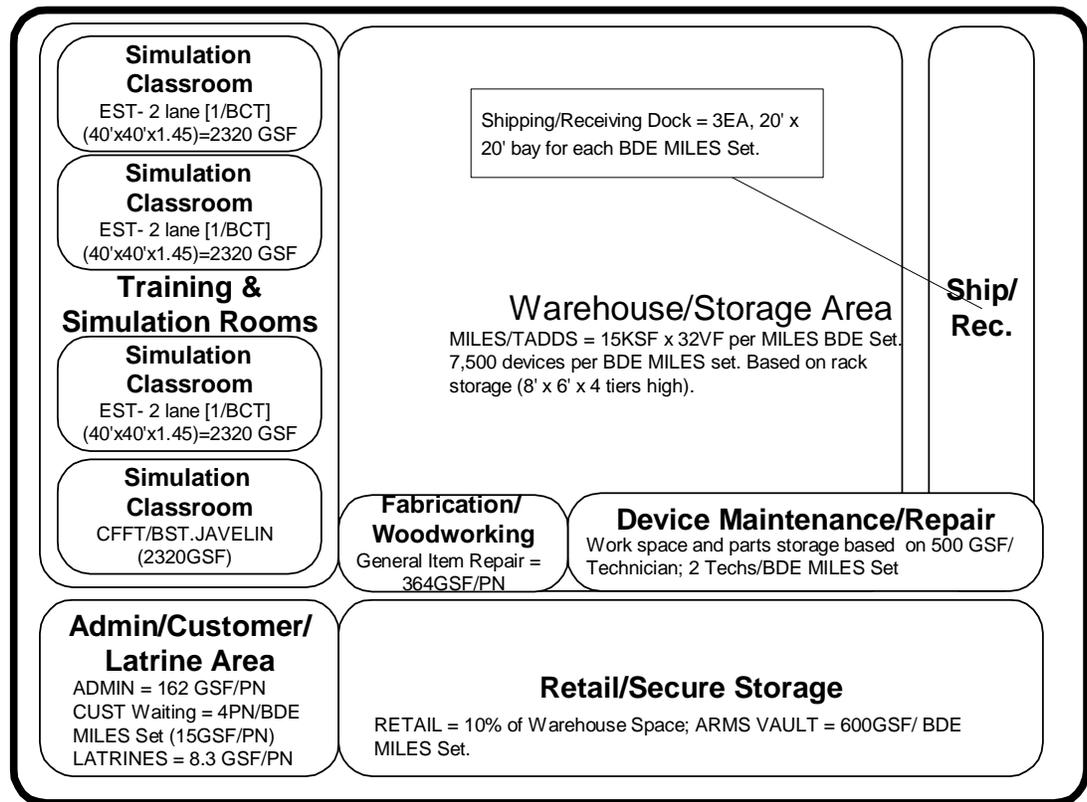


DESCRIPTION & INTERNAL FUNCTIONS

Chapter 2 – Description & Internal Functions.

2.1 DESCRIPTION. DA PAM 415-28: A building that is used to fabricate, maintain, store, and issue training devices including Multiple Integrated Laser Engagement System (MILES); it also provides the administrative space for the training support division management staff. Common training device used to establish requirement for facility is the authorized Brigade Sets of MILES equipment. The average of 5,000 components associated with a standard Brigade MILES Set is used to size Training Support Real Property as defined herein.

2.2 INTERNAL FUNCTIONAL ELEMENTS. A facility that includes primarily warehouse space for storage, issue and maintenance of training devices and components. The facility may include: warehousing space, shipping/receiving areas, device fabrication (woodworking and plastics), general item repair, general purpose administrative space, sensitive item storage (arms vaults) multi purpose classrooms/work centers, break areas, and latrines. This is a general purpose facility intended for use by installation Directorate of Plans and Training (DPT). Figure 2.2 demonstrates functional relationships of notional design space.



**Training Support Center
Notional Design.**

February 2006

Figure 2.2

2.1 INPUTS. Number of Government and Contractor support personnel found in the TDA paragraphs and contract documents; number of authorized Brigade MILES Sets.

2.1.1. Training Support Center.

2.1.1.1. TDA STAFF: The full time staff required to support Training Support Center device sustainment; store, issue, receive, account, maintain and fabricate training devices; and support all training events. This category includes contractor support and government management. Based on validated staffing metrics.

2.1.1.2. CONTRACTOR STAFF: Total number of contractors authorized to work in a TSC environment.

2.1.1.3. APPROVED BRIGADE MILES SETS: ACOM approved distribution for Brigade MILES Sets is the baseline for real property sizing. Each Brigade Set provides space for storage, issue, turn-in, maintenance, repair, and prepare for issue and turn-in and general support space. Other training devices are factored as a component of a BCT MILES Set in determining space requirements/allowances.

3

BASIC CRITERIA

Chapter 3 – Basic Criteria.

3.1 The US Army Standard Design Criteria, Army Criteria Tracking System for: General Purpose Administration, category code 61050; General and Multi Purpose Classrooms, category code 17119 & 17120; Latrines, Janitor Closets from ACTS for Category Codes 17119; and General Item Repair from ACTS for category code 21414. General Supply and Storage Category Code 44220 requirement derived from physical measurement of standard Brigade Combat Team (BCT) MILES Set, average of 5,000 components, container stored, issued and accounted for, vertical (cubic) storage and associated material handling equipment (MHE) factored. Retail space derived as a percentage (10%) of General Warehouse/Storage Category Code 44220 requirement. 10% factor derived from physical measurement of related and support components for standard BCT MILES Set and other training devices. Secure Storage (Arms Vault) derived based on large size standard weapons storage vault for each BCT MILES set authorized. Physical measurement of component storage was used to determine sizing for sensitive item storage. Device Maintenance & Repair derived by physical measurement of space associated with MILES and related training device maintenance and repair. Shipping/Receiving space derived from physical measurement of BCT MILES Set requirements for staging, issue and condition inspection device turn-in activities. Fabrication/Woodworking derived from Category Code 21414 for gross space allocation for each assigned TDA staff plus 200 gross square feet for general supplies storage and device staging. Simulation Classrooms derived from Army criteria and from physical space requirements from the simulation device material fielding plans.

3.2 STANDARD DESIGN CRITERIA.

3.2.1 TRAINING SPACE, CLASSROOM.

3.2.1.1. General instruction rooms are space that includes primarily classroom space for multipurpose training instruction. These general purpose rooms are intended for use by organizations which serve a large population for classroom and device simulation instruction. These rooms are distinct from organizational classroom areas (F17119) associated with battalion headquarters and trainee barracks. The primary method used for sizing classrooms is the Engagement Skills Trainer (EST) simulation device. Two 20 x 40 foot lanes per Brigade Combat Team (total is 40' x 40' plus 45% for circulation) equals (1600 GSF x 1.45) = 2,320 GSF for each classroom.

Figure 3.2.1.1

# BCT Sets	EST Allowance	Gross Area (SF)
1	2,320	2,320
2	2,320	4,640
3	2,320	6,960
4	2,320	9,280

3.3.1 ADMINISTRATIVE SPACES.

3.3.1.1. Customer Waiting Area. Customers factored based on 4 personnel for each Brigade Combat Team (BCT) MILES Set authorized. A factor of 15 GSF per customer used to calculate this space allowance. Figure 3.3.1.1 shows allowance:

Figure 3.3.1.1

#BCT Sets	Customers	Gross Area (SF)
1	4	60
2	8	120
3	12	180
4	16	240

3.3.1.2. Administration Offices. Space for building operations, budget, scheduling, technical support, contracting officer representative, program and training administration. A factor of 162 GSF per staff member used to calculate this space allowance Figure 3.3.1.2 shows allowance for each facility size.

Figure 3.3.1.2		
Size of TSC	Staff	Gross Area (SF)
Small	1-12	162-1944
Medium	13-22	2106-3564
Large	23-30	3726-4860

3.3.1.3. Device Maintenance and Repair Area. Device set-up, storage, maintenance and repair. Provides work bench, storage, tools storage and repair parts storage areas. Contract maintenance assumes 2 technicians for each Brigade MILES Set. Actual number of contract personnel must be used to factor actual requirement. A factor of 500 GSF per repair person used to calculate this space allowance Figure 3.3.1.3 shows allowance for each facility size.

Figure 3.3.1.3		
#BCT Sets	# of Repair PN	Gross Area (SF)
1	2	1,000
2	4	2,000
3	6	3,000
4	8	4,000

3.4.1 WAREHOUSING AND STORAGE.

3.4.1.1. Shipping/Receiving Loading Dock. A loading dock is important for new stand-alone facilities. It should be remote from the customer entrance and collocated with supply/storage area. A 20' x 20' bay size for staging MILES containers and other training devices is needed to support issue and turn-in functions. Three (3) bays are required for each Brigade MILES Set authorized.. Figure 3.4.1.1 shows allowance for each facility size.

Figure 3.4.1.1		
#BCT Sets	# of Bays	Gross Area (SF)
1	3	1,200
2	6	2,400
3	9	3,600
4	12	4,800

3.4.1.2. Device Fabrication (woodworking/plastics). Training aids are fabricated using woodworking tools, bench fabrication, tools used are saws, drills, sanders, routers. Plastics fabrication uses injection molding, roto molding, and other similar tools and setups. Installations with an Armywide fabrication mission require space for plastics manufacturing. Figure 3.4.1.2 shows allowance for each facility size where “A” designates a TSC with an Armywide fabrication mission and “L” is for TSCs with local fabrication only.

Figure 3.4.1.2		
Armywide mission/ Local	# of FABR PN	Gross Area (SF)
A	6-10	3000-5000
L	1-5	500-2500

3.4.1.3. Warehouse/Storage Area. General Purpose Warehouse requirement based on physical measurement of standard BCT MILES Set, average of 5,000 components, containerized and stored on racks four tiers high. Floor space for 4-tier racks and material handling equipment access/circulation plus other training device storage equates to 15,000 GSF/BDE Set. Figure 3.4.1.3 shows allowance for each facility size.

Figure 3.4.1.3		
#BCT Sets	MILES Set Allowance	Gross Area (SF)
1	15000	15000
2	15000	30000
3	15000	45000
4	15000	60000

3.5.1 SPECIAL FUNCTIONAL USE AREAS.

3.5.1.1. Latrines. Male and female latrines with standard fixtures. Allowance is derived from ACTS and is 8.3 GSF/PN. Figure 3.5.1.1 shows allowance:

Figure 3.5.1.1		
Size of TSC	Staff	Gross Area (SF)
Small	1-12	8.3-99.6
Medium	13-22	107.9-182.6
Large	23-30	190.9-249

3.5.1.2. Student/Staff Break Areas. Refrigerator, sink, microwave, vending, phones, television. Lounge type furniture w/ tables and with seating for personnel. Break Room/lounge allowance is 8.7 GSF/PN. Figure 3.5.1.2 shows allowance for each facility size.

Figure 3.5.1.2		
Size of TSC	Staff	Gross Area (SF)
Small	1-12	8.7-104.4
Medium	13-22	113.1-191.4
Large	23-30	200.1-261

3.5.1.3. Secure Operations Storage. Secure storage area for sensitive devices and other sensitive communication and automation components. Allowance derived using measured area and is based on standard size large weapons storage vault at 600GSF/BCT MILES Set. Figure 3.5.1.3 shows allowance for each facility size.

Figure 3.5.1.3		
#BCT Sets	Allowance Each BCT MILES Set	Net Area (SF)
1	600	600
2	600	1200
3	600	1800
4	600	2400

3.5.1.4. Retail Device Storage. Retail space derived as a percentage (10%) of General Warehouse/Storage Category Code 44220 requirement. 10% factor derived from physical measurement of related and support components for standard BCT MILES Set and all other Training Aide devices. Figure 3.5.1.4 shows allowances for each facility size.

Figure 3.5.1.4		
#BCT Sets	Warehouse Allowance	10% of Warehouse Gross Area (SF)
1	15000	1500
2	30000	3000
3	45000	4500
4	60000	6000

3.5.1.5 Hazardous Material Storage Area: Hazardous materials used by the training support center include, but not limited to, propane, polyurethane, and oxygen. Storage area will be in compliance with existing government safety regulations. This storage area will not be included in the square footage of the training support center facility, but requirements for space will be annotated on the 1391. A separate facility will be required for this storage area and this facility can be acquired through the Government Services Administration (GSA) retail catalog using OMA funding.

3.6.1 SUPPORT SPACES.

3.6.1.1. Janitor Closet. Provide one at each toilet. Allowance is based on 0.3 GSF per building occupant, from ACTS for CC17119. Figure 3.6.1.1 shows allowances:

Figure 3.6.1.1		
Size of TSC	Staff	Gross Area (SF)
Small	1-12	0.3-3.6
Medium	13-22	3.9-6.6
Large	23-30	6.9-9

3.6.1.2. Mechanical/Electrical Space. Provide dedicated interior spaces and exterior areas for plumbing, fire protection, and HVAC equipment. Allowances based on industry averages as

follows: Buildings less than 50,000 GSF use 7% of gross space; less than 100,000 GSF use 5% of gross space; greater than 100,000 GSF use 3% of gross space. Figure 3.6.1.2 shows allowance for each facility size.

Figure 3.6.1.2			
Size of TSC	Factor	Average Gross Area (SF)	Average Mechanical Space (GSF)
Small	7%	26,000	1,820
Medium	5%	70,500	3,525
Large	3%	121,000	3,630

3.7.1 Gross Area Factor. Used to convert net areas to gross 1.45.

3.8.1 OCONUS Exceptions, None.

3.9.1 PRIMARY FACILITY TOTALS.

Figure 3.9.1	
Size of TSC	Average Gross Area (SF)
S	27,820
M	74,025
L	124,630

4 DESCRIPTION AND EXTERIOR SUPPORT CRITERIA

Chapter 4 – Description & Exterior Support Criteria.

- 4.1 TRAINING SUPPORT CENTER (TSC)** is an emerging training support environment. Current exterior training support features and functional space will continue to change. The current criteria are derived from actual field investigations and surveys from how units are training in 2006 and obtaining training devices to support that training.
- 4.2** Primary functional areas are: Issue/receiving of devices with primary emphasis on MILES equipment; device fabrication mission; POV and Tactical vehicle parking associated with on-site simulation and device training.
- 4.3** Telecommunications provide access to post voice and data systems. Interior telecommunications provided voice and data services, wireless (as needed) and primary facility intercom system connectivity.

5

LAND USE CRITERIA

Chapter 5 – Land Use Criteria.

5.1 PLANNING CONSIDERATIONS – Troop Housing/Command & Control Land Use or Heavy to Light Industrial. Priority for land use is associated with moderate acreage requirements to support the full range of Training Support Center (TSC) functions. Each facility and support area must factor as a minimum 100% land area for future expansion. TSC is a training magnet of functional space and provides increasing opportunity for simulation and virtual training. Troop Housing/ Command & Control land use is first priority based on proximity to troop densities to support TSC needs. Second order priority would be for light industrial land use based on potential for large acreage tracts availability. Preferred land use is to establish a new category titled ‘Training Campus Land Use’ situated in close proximity to troop housing and light industrial land use areas. Direct access for troops is the priority for proximity. Consideration must be made for tactical vehicle access.

5.2 LAND REQUIREMENTS. Components of land requirements are: primary facility; site egress and ingress; utility access; Installation Design Guide standards; POV parking; Tactical vehicle parking; and, force protection stand-off distances. Future expansion needs should factor a minimum 100% expansion of each functional component. Figure 5.2 established site selection quantity ranges for each TSC size:

Figure 5.2

Size of TSC	Bldg (SF)	60% Occupant POV (35SY/VH)	6 VEH BCT.Set Tactical (35SY/VH)	CirculationFactor @ 15% (SY)	Gross Area (AC)
S	27,820	12 (420)	6 (210)	95	725
M	74,025	22 (770)	12 (420)	179	1369
L	124,630	30 (1050)	18 (630)	1150	2830

5.3. AFFINITIES. Training Support Centers should be located in close proximity to other training facilities: classroom and simulations. Integration of tactical vehicles for daily parking to access simulation systems evokes proximity needs for existing tactical vehicle maintenance facilities.

5.4 INFRASTRUCTURE. Utilities requirements must consider water for fire protection and potable needs; waste water treatment, electrical power, 3-phase; primary heating commodity for geographic area; and most importantly, voice and data connectivity to the post wide infrastructure.