Army Standard for Tactical Equipment Maintenance Facility (TEMF)

Description: Tactical Equipment Maintenance Facilities (TEMF) campus (Category Code (CATCD) 21410) is for the maintenance, repair, deployment, mission planning/rehearsal, training, and sustainment of equipment assigned to a unit other than aircraft.

Applicability:

- This Army Standard supersedes all previous versions of the TEMF Army Standard. The TEMF Army Standard applies to the planning, design, and construction of all Active Army Modified Tables of Organization and Equipment (MTOE) unit requirements worldwide.
- This Army Standard does not apply to stand alone Army Reserve facilities, which utilize CAT CODE 21409, Army Reserve Vehicle Maintenance Shop and 21418, Area Maintenance Support Activity, and built as a training facility for maintenance personnel.
- While this Army Standard does not apply to Army Reserve Tables of Distribution and Allowance (TDA) vehicle maintenance facilities, when the Army Reserve has a TDA unit with a vehicle maintenance requirement on an Active Army Installation, the Army Reserve will coordinate with the TEMF Facility Design Team (FDT) in regards to functional and operational requirements and conceptual layout prior to implementation.
- This Standard does not apply to the Army National Guard maintenance facilities. Instead, planning criteria are governed by the current versions of NG PAM 415-12 or successor publications.
- This Army Standard shall apply to other TDA TEMFs not specifically cited above or units not supported by the Logistics Readiness Center (LRC) Maintenance Division.
- Specific equipment Line Item Numbers or Military Occupational Specialties trigger select individual components that are comprised in a TEMF campus. In some cases, a specific TOE (for example, Brigade Combat Team) will generate a series of TEMF facility components packaged specifically to meet common operational and functional requirements.
- While criteria in this Army Standard (planning and programming) may inform facility decisions within Army Special Operations, plans for facilities supporting the Special Operations Command are controlled and approved by the Headquarters, Army Special Operations Command and the command's Deputy Chief of Staff – Engineering.

Waivers:

- Approval exceptions and waivers from Army Standards must be requested in accordance with AR 420-1. As the proponent, DCS G4 must validate and approve the request.

- All waiver requests to this 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 the FDT to complete review and development of recommendations or courses of action for the Army Facilities Standardization Committee to consider prior to implementation into project design. All waivers approved shall be documented in installation master plans and, as applicable, must serve as the installation's modified standards for the facility type and unit type affected.
- Late submissions or project delays are NOT sufficient stand-alone justification for accelerated review or other dispensation to meeting the Army Standard contained herein.

The Guidance section provides instructions and definitions necessary for the mandatory requirements contained in the tabular section of the Army Standard. As such, they are used in conjunction with the Army Standard to ensure the intent and embedded functionality contained herein will meet the Army's mandatory requirements set forth by this standard.

Army Standards are not intended to provide broader design criteria such as space allocation, functional layouts, or basic layouts more appropriately contained in the supporting and conforming Standard Design/Criteria. Nor are they intended to rigidly define collective facility authorizations more appropriately adjudicated by Army Requirements.

This Army Standard, associated Standard Designs, and approved Army space criteria are applied together in an iterative and co-dependent way to provide a standardized but adaptable approach to facility standardization. Each serves a different purpose to ensure mandatory functions and operability are provided uniformly and at the right size. The primary source for determining authorized allowances, in every instance is the Real Property Planning and Analysis System (RPLANS) which incorporates current criteria approved by the Army Requirements Group.

ARMY STANDARD

Item	Mandatory Criteria
Site Selection, Planning, & Design	1. The TEMF shall be sited adjacent to the supported Company Operations Facility Readiness Module (COF-RM) and oriented nearest the COF-RM covered hardstand whenever possible. - Recommend NLT minimum width of circulation traffic-way necessary for tactical vehicle ingress/egress to the primary facility CATCD 21410. 2. When organic Unmanned Arial Systems (UAS) are assigned to a battalion, a module of the TEMF should be immediately

	adjacent to the installation UAS training area if the TEMF is not so located. 3. Facilities shall be designed in compliance with requirements for federal facilities IAW EPACT 05 and EA 2020. 4. Facilities shall be designed to meet current sustainable development and design policy requirements as established by the Department of the Army. 5. Accessibility measures will be provided per the Architectural Barriers Act Standards (ABA). All TEMFs shall be designed for accessibility. *See Guidance Section Below*
Mission Planning and Physical Security; and Safety	1. Controlled access and perimeter security to the TEMF facilities and organizational vehicle parking shall be established. 2. The COF-RM covered hardstand may be within this perimeter if it is a standalone facility. *See Guidance Section Below*
Primary Facility	
General Considerations (CATCD 21410)	1. The primary TEMF facility shall be sized to provide space for core areas, repair areas, and maintenance areas in one facility. Other areas and functions may be included or adjoined to that facility or located in separate facilities within the campus and connected by hardstand surfaces. 2. TEMF facilities may be adapted to the needs of TDA units that perform field maintenance. 3. Contractor Logistics Support (CLS) space is authorized when supported by contractor UICs in ASIP. The space authorizations are for those CLS personnel document in approved TOE or TDA manning documents. Absent that information, a 12% CLS factor may be applied to personnel in the following areas. – 12% x # personnel in the Administrative and Shop Control Area – 12% x # personnel in the Consolidated Bench Area – 12% x # personnel in Repair Area *See Guidance Section Below*

Work Area Functional and Operational Requirements	1. Structural Bays: The basic component of vehicle maintenance repair areas is the structural bay. A structural bay is 32’ by 96’ feet and consists of six bays. Each bay must be a minimum of 32’ by 32’ and have a single 24’ wide overhead door. There are three categories of bays: Repair Bays, Maintenance Bays and Special Purpose Bays. Each bay has two (2) 32’ x 16’ work areas. a. Repair bays are intended for repair of vehicles, trailers and other large items that can be driven or pulled into the bay. Repair bays are allocated overhead cranes as detailed below. b. Maintenance bays are intended for performing scheduled maintenance and services and for vehicle inspections. c. Special purpose bays include welding bays and bays that are equipped to meet special purpose requirements such as RF Shielding or Anechoic Chamber standards. Special purpose spaces will not be additive to the number of structural bays calculated by RPLANS without a waiver 2. All bays will have drive-through (in/out) accessibility and be free of intermediate support columns. 3. TEMF primary facilities shall have a maintenance pit. Basis of Issue: – One (1) NLT 40’ long x 3’6” wide concrete maintenance pit per TEMF primary facility. 4. TEMF primary facilities shall provide overhead lift capability with accessibility to all Repair/special purpose Bay and Maintenance/inspection Bay work areas. Basis of Issue: – One (1) 10-ton bridge crane per TEMF connected structural bays/open area. – One (1) 35-ton bridge crane per TEMF of the Brigade / Forward Support Battalion or equivalent maintenance activity. – TEMFs with more than four (4) structural bays are authorized an additional (second) crane of equal capacity. 5. Limited internal wash areas within primary TEMF facilities. Provide equipment to enable component equipment parts cleaning and limited vehicle spot washing. 6. Fluid recovery system is authorized except in the Small

	TEMF. 7. Compressed air system that delivers compressed air to every work area as well as the consolidated bench area.
Admin Core Module (CATCD 21410 & 21413)	Each TEMF shall have an Admin Core Module to provide supporting and enabling functions necessary for the mission of the primary facility. 1) The secure storage area must provide space for three (3) separate types/levels of storage evenly. Basis of Issue: – 900 NSF / TEMF with less than 75 Combat Service Support (CSS) vehicles assigned. – The NSF / TEMF where greater than 75 CSS vehicles are assigned shall be calculated based on 50% of quantity of vehicles in excess of 75. 2) Additional space in the Admin Core Module of the Brigade Support Battalion is required above and beyond the routine spaces. Basis of Allocation: – Sufficient administrative space for the 12-person Brigade Logistics Support Team (BLST) per primary TEMF. – Private Offices are allocated 150 NSF plus 25% circulation = 180 NSF. – Open Offices are allocated 48 NSF per Occupant + 100% Circulation = 96 NSF. *See Guidance Section Below*
Supporting and Associated Facilities	
Unmanned Aircraft Systems (UAS) Maintenance (CATCD 21412)	1. Detached UAS Storage facility is allowed for those battalion size TOE units with organic Class I and Class II UAVs. Basis of Allocation: – One (1) 1,800 SF detached facility per TEMF when Class I or Class II UAVs are documented on the TOE documents. Other classes of UAVs will be stored at an airfield.

Exterior Detached Storage	1. Vehicle Storage Shed (CATCD 44262) and Vehicle Storage Building (CATCD 44263). These structures may be used for all types of vehicles for facilities located in areas of extreme climate (excessive cold or snow). - Allowance = Number of Vehicle Storage Sheds X Area per Vehicle Storage Shed = Round Up - Number of Combat Vehicles / 16 X 14,400 GSF 2. Organizational equipment storage (CATCD 24224). Allowance is based on approved Army criteria. Space is calculated separately from that of the TEMF primary building. 3. Distribution Company storage. Space is provided separately from that of the TEMF primary building. Basis of allocation: – 8,000 SF building per Quartermaster Distribution Company. – 445 SY of secure open storage. 4. Warehouse Areas. Allowed only for TDA TEMFs and based on approved Army criteria. Space is calculated separately from that of the TEMF primary building. Secured open storage (SY) is allowed for TDA TEMFs also. 5. Petroleum, oil, lubricant storage For TOE TEMF, this space may be in primary facility or a detached facility (CATCD 21470). For TDA TEMF, space should be in a detached facility. Basis of issue: – Minimum of 120 SF per TOE and TDA TEMF. – For TDA TEMF only, 60 SF per 25 vehicles maintained. 6. Hazardous Waste Storage. Allowance is based on approved Army criteria. Space is provided separately form that of the TEMF primary building (CATCD 21470).
Exterior Hardstand and Vehicle Parking Apron (CATCD 85210)	1. Access and circulation zone around primary facility must extend 65’ from facility. Other detached facilities requirements are based on purpose and equipment served. 2. Organizational (tactical) Vehicle Parking Apron shall be a contiguous concrete hardstand.

Essential elements of supporting infrastructure	
Power & Data Connectivity	1. Provide to all structural bays, and separate areas of the Admin Core Module. 2. Provide to detached buildings in which personnel are assigned and work routinely. 3. Provide to organizational (tactical) vehicle parking pads (areas) as necessary for select vehicles and equipment.
Telecommunications	1. The facility must connect to the Installation telecommunications (voice and data) system through the outside plant (OSP) underground infrastructure. Connections to the OSP cabling system shall be from each facility main cross connect located in the main telecommunications room or telecommunications equipment room to the closest OSP access point. 2. Telecommunications Room. A Telecommunications Room (TR) shall be provided for the voice and data network. Basis of issue: – There shall be a minimum of one TR on each floor. 3. Collocate a Secure Internet Protocol Router Network (SIPRNET) area within one of the telecommunications rooms.

GUIDANCE

General. The following guidance for application of the TEMF Army Standard is provided for design agent use in coordination with the Garrison DPW. All design agents shall incorporate the key mandatory design features described herein in close coordination with the USACE designated Center of Standardization (COS) for TEMFs. All TEMF projects must be reviewed by the COS.

1. This section of the Army Standard is a necessary component for determining the application and implementation of this standard. The COS, in coordination with the TEMF FDT, is the final arbitrator for any conflicts or inconsistencies in the application of these standards as well as a mandatory reviewer prior to submission of any formal waiver requests by the installation. Citing project execution delays is insufficient justification for expedited review or other accelerated dispensation for deviating from meeting the Army Standards contained herein. Late submissions must be substantiated

by unforeseen and documented life safety, health and welfare, or compelling mission imperatives that cannot be met without an approved waiver.

2. The TEMF is a major reach operations facility with functional, operational, and spatial relationships critical to meeting mission planning, rehearsal, training, deployment, and operations are embedded in the operational layout of the facility. When there is a critical need for spatial or land use consideration for siting and implementing this Army Standard, guidance is provided to minimize or preclude functional and operational impacts on the TEMF and its Warfighter requirements.

3. Where applicable, the minimum acceptable functional and operational capability is established by a **Threshold** requirement. The Army's maximum level of commitment to addressing the flexibility to adapt to future requirements is set by the **Objective** requirement. These same parameters are used by other Army activities in the doctrinal, organizational, training, and materiel domains and are adopted herein to simplify coordination and preclude misinterpretation when synchronizing requirements across the Army. They also provide definition for design flexibility, modernization objectives and benefits when applying this standard.

4. Space modules, criteria, or components of the TEMF Campus shall be used to develop space allowances or requirements for the following facility category before consideration for development of unique or specialized space allowances different from those set forth in this Army Standard. When standard space modules, criteria, or components are not used, the Functional Proponent, ICW the TEMF FDT and COS, will review and validate functional or operational requirements prior to the development of any unique or specialized space allowance(s) **and** before incorporating into a project programming document or facility design.

General Design Philosophy:

1. This standard aligns with the concept of Multi-Domain Operations to provide intelligent, robust and secure Multi-Domain Power Projection Capabilities. This 21st century facility approach provides continuity of operation under attack or disaster conditions and the ability to be rapidly restored to full operation following adverse events, as well as the capacity for cost-effective incorporation of emerging technologies.

2. The TEMF campus is a major component of the larger, overarching Brigade Combat Team (BCT) campus. Functional, operational, and spatial relationships critical to meeting mission requirements are embedded in the layout and spatial relationships of the facilities that comprise a TEMF Campus. By definition, the use of the term campus in this standard refers to multiple facility types that are "packaged" to meet the Warfighter mission objectives while optimizing the BCT footprint. When there is a critical need for spatial or land use consideration for siting and implementing this Army Standard, guidance is provided to minimize or preclude functional and operational impacts on the TEMF campus and its Warfighter requirements.

3. The TEMF campus represents a consolidation of six critical functional/mission areas as cited above. The TEMF maximizes and builds upon the increased connectivity being developed for battle command, situational awareness, and situational understanding as well as the embedded/distributed training architecture.

4. At the same time, technological insertions that will affect facility adequacy are pre-programmed at prescribed intervals. In order to reduce repetitive construction modification of facilities to accommodate change, the TEMF adopts an adaptive, multipurpose design philosophy to reduce reliance on construction and the disruption to Soldier and unit training and readiness it entails.

5. The TEMF Army Standard represents a 21st Century facility standard to simultaneously address past issues, current needs, and future requirements. As such, there are instances where a band of acceptability is allowed in the application and implementation of these standards. However, the range of acceptability is determined through a Warfighter Review process and deviation from this standard will also consider implications on future requirements embedded herein, and the potential impact of follow-on or retrofit construction activities on readiness as well as current situation.

6. Additional design considerations are:

a. Make maximum use of natural light and sustainable design principles and features so that facilities remain usable during periods of lost utility support
b. Economy of construction is a design prerequisite
c. Facilities must be durable to withstand the rigors of multiple users
d. Pre-fabricated construction components or modular construction is encouraged as long as facility durability requirements are satisfied

Application Guidance.

1. Site Selection and Planning. Site selection and real property master planning for all Active Component BCT campuses (and Reserve Component Campuses when applicable) shall meet the Brigade Operations Campus layout and configuration for spatial relationships between the Brigade Headquarters, Battalion Headquarters, Company Operations Facility, and TEMF as depicted in the Battalion-Brigade Army Standard and Standard Design to the maximum extent possible.

2. Mission Planning and Physical Security; and Safety. The Mission Security Line established between the COF and TEMF is intended to control access to the enclosed area using the COF Admin Module as the primary entry point. Primary consideration is when mission planning or rehearsal is being conducted using the embedded or distributed training connectivity provided to each parking pad or in the enclosed facilities themselves. Secondary consideration is required for personnel safety and physical security of equipment commensurate with the increasing value of technology used by Soldiers and units.

3. TEMF Campus. Determining when and how to apply the TEMF Army Standard is based on the type of unit to be supported.

Threshold: Separate *battalion-sized* TEMFs apply to all Army organizations other than as cited as the Army's Objective below.
Objective: When brigade-sized organization is intended (by doctrine) to deploy as a single unit (for example, Brigade Combat Teams), a brigade-sized campus in one contiguous area is preferred.

a. TEMF primary facility space allocation shall be based on the organic or assigned companies with maintenance capabilities. Facility allowances are sized based on the Forward Support Company (FSC) assigned to the Battalion from the Brigade Support Battalion (BSB) or equivalent maintenance capability within the organization. Space allowance is quantified by RPLANS in battalion-sized configurations or consolidated equivalent. Space allowance is then applied to one of four facility standard sizes.

b. When there are multiple units smaller than Battalion-size but with an organic or field maintenance or repair capability, they should be consolidated into a battalion-sized campus.

c. Separate Companies and units without organic maintenance capability shall be consolidated with those units being supported or having ADCON/OPCON (Administrative Control/Operational Control) responsibilities for the purposes of RPLANS space allowance calculations.

d. Ordnance companies assigned or organic to a sustainment battalion and separate ordnance companies with a mission of providing field maintenance to external units are authorized a separate TEMF.

4. Primary Facility Scope and Capacity (CATCD 21410). Structural Modules are combined with Admin Core Modules into four standard TEMF sizes: Small, Medium, Large, and Extra-Large.

Threshold: The smallest TEMF building or primary facility allowable is the standard small facility.
Objective: The largest TEMF (extra-large) is limited to sustainment maintenance/repair or consolidated requirements at echelons above brigade as stipulated by Army doctrine.

a. The throughput for a maintenance/inspection area is based on activities and tasks that are no more than 2-hours in duration. The throughput for a repair area is based on one vehicle occupying space for repair activities greater than 2 hours in duration. When a vehicle in the maintenance/inspection area is identified as requiring repair activities in excess of 2-hours, it is moved into a repair area. Hence, flow of traffic in a maintenance/inspection area is 90 degrees to a repair bay. All structural bays (consisting of a total of 4 repair areas and 2 maintenance/inspection areas) are equipped with doors along the building exterior.

b. TEMFs are authorized either a 10-ton or a 35-ton bridge crane. A second bridge crane is authorized for facilities that are more than four (4) structural bays. Structural

height of bridge cranes will be designed to accommodate the highest piece of equipment assigned to the units supported by the TEMF.

c. Pneumatic air, fluids, power, and data connectivity shall be provided to all repair modules.

5. Admin Core Module Allowance (CATCD 214 10 & 214 13). The Admin Core Module is the nucleus for additional missions to the TEMF campus such as Embedded Training, mission planning/rehearsal, and reach operations nodes. Space previously provided as separate rooms are now also consolidated (e.g., shops, supply, arms storage and telecommunications) in the Core. The TEMF Standard Design allocates functional space by authorize TEMF size.

a. The Admin Core Module of the TEMF provides space allowances previously found in Direct or General Support facilities (for example, production and quality control). The Core is optimized for containerized mission systems such as the Authorized Stockage List Mobility System (ASLMS) and Standardized Automotive Tool Set (SATS) trailers to expedite deployment timelines.

b. The Admin core also provides a maintenance/inspection corridor through the center of the core to maximize throughput for inspections as well as serve multiple functions or tasks such as distributed training, pre-deployment preparation and staging, and for scheduled, repetitive New Equipment Training as Technology Spin-outs are fielded to units.

c. Spatial and functional relationships between areas within the admin core are optimized for 2LM and CBM. Deviation from adjacencies contained in the TEMF Standard Design must be reviewed and concurred with by the TEMF COS prior to implementation.

d. Shop space for maintenance of electronic, optics and other gear is authorized in the consolidated bench area. Space authorization is dependent on the unit force structure and the MOSs assigned to provide maintenance. MOS series 25, 91, and 94 will be considered when generating space authorizations in the design standards.

6. Secure Storage: The secure storage contained within the Admin Core Module serves three separate requirements:

a. Sensitive Secure Storage (for weapons turned in for repair).

b. Non-Sensitive Secure Storage (for example: high value, pilferable, serial numbered items other than arms).

c. Telecommunications Secure (COMSEC) Storage of organic communications equipment turned in for repair.

Threshold: A minimum of 900 NSF distributed in equal amounts is provided for arms storage, COMSEC storage and Non-Sensitive Secure Storage for units with up to 75 vehicles. Units with more than 75 vehicles may require additional space.

7. Contractor Logistics Support (CLS) Allowance.

Threshold: Include CLS for contractor personnel documented in the ASIP with an appropriate function type. Each properly documented CLS position is considered as on Repair Bay position in determining the allowance of the supported unit.
Objective: Army projections for fielding high tech systems like autonomous sensors, unmanned ground vehicles, etc, primarily fielded to BCTs are expected to approach 15% grow. CLS requirement accommodation based on assigned maintenance personnel within a TOE/TDA should be planned for whenever quantifiable values can be documented by the user and validated by the Army Functional Proponent.

a. Army equipment have already been and will continue to be fielded with CLS as a standard maintenance and repair philosophy. As such, CLS space allowances are provided in the TEMF. Space allocation for the *Objective* requirement shall be based on RPLANS calculation.

b. Requests for additional space allocations will be reviewed by the COS and approved by the Army Functional Proponent **before** incorporation into programming and design documentation.

8. Tool Supply Allowance. The application guidance herein addresses how Tool Supply allowances will be incorporated into TEMF projects. In addition to internal space allowances, the Army is in the process of fielding containerized SATS (Standard Automotive Tool Set) van. While the extent and pace of fielding continues to be dictated by Army resources, some form of containerized tool supply will be fielded across the Army. As such, special considerations for exterior accessibility, circulation area for rapid deployment preparation, and proximity to interior tool storage must be considered and are incorporated into the Army Standard Designs for TEMFs.

9. Daily Supply Allowance. The application guidance herein addresses how basic load and warfighter deployment supply/repair parts allowances (for example, Class I (Packaged), II, III (Packaged), and VII) will be incorporated into TEMF projects. In addition to the 12,000 NSF of warfighter deployment load and internal CL IX storage allowances, the Army is fielding containerized ASLMS (Authorized Stockage List Mobility System) van. While the extent and pace of fielding continues to be dictated by Army resources, some form of containerized parts supply will be fielded across the Army. Special considerations for exterior accessibility, circulation area for rapid deployment preparation, and proximity to interior tool storage must be considered and are incorporated into the Army Standard Designs for TEMFs.

10. Internal Wash Area (Limited) (CATCD 21410). Internal washing is permitted within the TEMF primary structure on a limited basis. Washing of equipment is limited to component parts at the discretion of the local user if sediment collection is a concern.

a. At no time will the capacity for *limited vehicle spot washing* serve as a substitute for use of a Central Vehicle Wash Facility.

b. Requirement for a Central Wash Facility local wash rack is **not** adjunct to or a component of a TEMF Campus.

11. Unmanned Aircraft Systems (UAS) Maintenance/Storage. The smaller class UAV are co-located with the parent brigade organization closet to the training campus thereby maximizing “on-station” time for training productivity.

Threshold: At a minimum, all Class I (manpack) and Class II (generally, 12’ wing span/rotor disk or smaller) shall be stored and maintained with the Battalion-sized unit to which they are assigned to.
Objective: For BCTs, siting the TEMF campus in immediate proximity or direct access to the training area will include the capability to launch and recover UAS from the tank trail or range road whenever land use and obstruction clearances allow.

a. UAS operated and maintained at the TEMF are considered small and light enough to eliminate the need for some considerations normally afforded manned aircraft. As such, **no** overhead lift, high bay work areas, or dedicated administrative space (other than for records keeping) is authorized.

b. Larger class UAS (Class III & IV) require obstruction clearances similar to manned aircraft and are located at Army Airfields/Heliports.

12. Telecommunications. The facility shall be connected to the Installation wide area network system (WAN) and telephone system. Communications system resources will be allocated IAW the I3A Technical Guide regarding outlet amounts based on the functionality of the facility’s various component floor spaces. Telecommunications infrastructure will meet I3A and ANSI/TIA/EIA requirements. Data outlets will be provided per the I3A technical guide based on functional purpose of the various spaces within the facility as modified by operational requirements. Provide dedicated secure communication rooms to accommodate Secure Internet Protocol Routing Network (SIPRNET) access, installed in accordance with provisions of Technical Guide for the Integration of Secret Internet Protocol Router Network (SIPRNET) as required. The telecommunications infrastructure, cabling and outlets will be allocated IAW the following references:

a. Project specific USAISEC Information Technology Facility Design Criteria

b. USAISEC Technical Guide for Installation Information Infrastructure Architecture (I3A)

c. National Security Agency (NSA), Department of Defense (DoD), Defense Information Systems Agency (DISA), and Department of the Army (DA) policies, practices, and memorandum for information assurance, security, and protection.

d. Facilities must connect to the Installation telecommunications (voice and data) system through the outside plant (OSP) underground infrastructure per I3A guidance. Telecommunications rooms and telecommunications entrance facilities must be provided for unclassified network and voice equipment and cabling infrastructure throughout the facilities.

e. Provide a SIPRNET room as indicated on the facility drawings for future use.

13. Connectivity & Distribution. Outside plant connectivity shall be provided in accordance with the Army I3A guidance. The TEMF facilities shall be connected to a distribution node with single mode fiber optic cabling, and shall be considered as an Area Distribution Node (ADN) for engineering purposes. The fiber optic cabling shall be sized to support the common user systems and TEMF critical systems. For planning purposes, 24 strands of fiber shall provide connectivity to the installation fiber backbone. Adjustments will be made during actual project design development.

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

- Architectural Barriers Act (ABA) Standards
- Energy Policy Act 2005 (EPACT05)
- Energy Act 2020 (EA 2020)
- Army Sustainable Design and Development Policy Update
- IBC – International Building Code
- AR 405-70, Utilization of Real Property
- AR 420-1, Army Facilities Management
- DA PAM 415-28, Facility Guide to Army Real Property Category Codes
- UFC 1-200-01, DOD Building Code
- UFC 1-200-02, High Performance and Sustainable Building Requirements
- UFC 3-600-01, Fire Protection Engineering for Facilities
- UFC 4-010-01, DoD Minimum Antiterrorism Standards for Buildings
- UFC 4-214-02, Standard Definitive Design for Tactical Equipment Maintenance Facilities
- ETL 1110-3-491, Sustainable Design for Military Facilities
- ER 1110-3-113, Engineering and Design, Department of the Army Facilities Standardization Program