



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

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MAR 12 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: Army Standard for the Echelon Above Brigade (EAB) Command and Control Facility (C2F)

1. The enclosed Army Standard for EAB C2F are approved for implementation. The standards apply to all Army Components. Only the Assistant Chief of Staff for Installation Management has authority to approve exceptions to this standard. Waivers from the Army Standard must be approved in accordance with AR 420-1.
2. These standards are mandatory for Military Construction, Army (MCA) projects in FY08 and beyond. Designs based on these Army Standards, Standard Design, and Standard Criteria will be developed consistent with MILCON Transformation methodologies.
3. The co-chairs for Facilities Design Team (FDT) for the EAB C2F are LTC Roosevelt Samuel, DCS G-3 (DAMO-CIR), roosevelt.samuel@hqda.army.mil, 703-692-8019, Mr. Claude Matsui, OACSIM (DAIM-ODO), claudematsui@hqda.army.mil, 703-601-0391, and Mr. Jack Schupp, OACSIM (DAIM-ODC) john.schupp@hqda.army.mil, 703-604-2411.
4. The FDT POCs at the USACE Center of Standardization for C2Fs are (Division and Corps) Mr. Tom Brockbank, CESAS, thomas.r.brockbank@usace.army.mil, 912-652-5212, or (all echelons above Corps) Mr. Ron Kalifeh, CESAM, ronald.j.kalifeh@usace.army.mil, 251-694-3738.

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Enclosure
as



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**Army Standard for Echelons Above Brigade (EAB)
Command and Control Facilities (C2F)**

28 February 2008

Description: Command and control facility for Echelons Above Brigade (EAB) to include Tables of Distribution and Allowances (TDA) organizations to meet all command and control functions and tasks across the full spectrum of military missions and operations, as well as throughout unit deployments in support of reach operations. The buildings provide the physical space and the global information grid (GIG) connectivity as needed to meet the Army's mission.

Applicability:

- The Command and Control Facilities (hereafter referred to as C2F) Army Standard applies to the planning, design, and construction of all headquarters elements above Brigade level. It includes Army Division (DIV), Corps (CORPS), Numbered Army (#A), Army Service Component Command (ASCC), Direct Reporting Units (DRU), and Army Command (ACOM) Headquarters.
- Army DIV and CORPS shall adhere to the specified layout, configuration, and spatial adjacencies contained in the C2F Standard Design.
- This Army Standard applies equally to Active Component Tables of Organization and Equipment (TOE) unit requirements worldwide and Reserve Component TOEs when fielded as stand alone, dedicated C2F facilities other than those described above.
- This Army Standard shall also apply equally to other TDA C2F not specifically cited above and shall be used to the maximum extent in order to maximize the benefits of standardization and preclude the need to develop a separate Army Standard for every facility type.
- This Army Standard supersedes space allowance standards and/or contained in AR 405-70 and serves as the primary authority for C2F worldwide.

Waivers:

- Only the Assistant Chief of Staff for Installation Management has authority to approve exceptions to the Army Standard.
- Waivers from Army Standards must be requested in accordance with the AR 420-1 and the Army Facilities Standardization Program Charter, latest edition.
- 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 Facility Design Team 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 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.

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

ARMY STANDARD

Item	Mandatory Criteria
Site Selection & Planning (Division (DIV) & Corps (CORPS) only)	Site primary and supporting facilities (e.g., Special Troops Battalion Headquarters, Company Operations Facility, and Tactical Equipment Maintenance Facility) for DIV and CORPS C2F shall be sited on NLT 30 contiguous acres of land or land area reserved on installation master plans.
Access Security (DIV through #A only)	All external access points to the C2F shall be positively controlled at all times via physical and mechanical means consistent with the appropriate level of security.
C2F Space Allocation (General)	<ol style="list-style-type: none"> 1. Primary facility/building sizing will be based on Army doctrine, HQDA approved missions statements, manning documents (e.g., OTOE, TDA, TDA Augmentation, MTOE), and contractor support when provided as authorized Government Furnished Facilities by the Functional Proponent. Includes all special mission authorizations and/or non-US augmentation validated by HQDA. 2. Space allocation shall be based on Functionally-oriented (e.g., G-staff) or Operationally-oriented (Warfighting) as determined by doctrine and allocated in Open Office Space or Work Areas that fall within a single security zone. Special use operations area space will support more than one Work Area. 3. Not More Than (NMT) 25% of the total building net square footage (NSF) calculated by the Facility Planning System (FPS) shall be devoted to collaborative workspace (e.g., conference rooms, team rooms, and/or classrooms). 4. The C2F shall not exceed 230 GSF per occupant. Actual building size for all C2Fs is determined by the COS validation process and algorithms (see <i>Guidance Section</i> for application definition). 5. All deviations, non-specified space requirements, or application of this Army Standard must be validated by HQDA Functional Proponent. 6. Mission space shall be additive when combining multiple HQ in a single facility. Common use space will be optimized whenever possible. 7. The C2F shall use raised flooring throughout the building except for bathrooms and mechanical spaces.

	<p>For application of this Army Standard, the following definitions are used.</p> <p><u>Directorate Equivalent:</u> A coordinating, personal or special staff element whose senior officer position reports directly to the CoS or equivalent</p> <p><u>Division Equivalent:</u> A staff element whose senior officer reports to a Directorate equivalent staff officer</p>
Physical Security Zones	<p>The C2F will be constructed in security zones based on Work Areas allocated to a distinct organizational element or operational function that fall within a single security zone. Regardless of configuration, all Open Office Space or Work Areas will meet validated mission requirements as described herein. The following levels of security access will be met.</p> <p>Security Zone 1 (SZ 1): Limited Access – Personal security focus allowing access for support staff and limited public access.</p> <p>Security Zone 2 (SZ 2): Controlled Access – Operational and information security focus with electronic or mechanical access controls.</p> <p>Security Zone 3 (SZ 3): Restricted Access (OPEN STORAGE) – Authorized Operational Staff only with a centralized access control point NMT 88 NSF with electronic or mechanical access control. SZ 3 includes the:</p> <ul style="list-style-type: none"> – Operations Center (OC) [SECRET(S)] – (EAC only) Special Access Program (SAP) [TOP SECRET (TS)] – (EAC only) Special Technical Operations (STO) [TOP SECRET-SENSITIVE COMPARTMENTED INFORMATION [TS-SCI]] – Senior Leader Planning Room [TS] – Logistics and Movement Operations Center (LMOC) [S] – Network Operations Center (NOC) [TS] – Sensitive Compartmented Information Facility (SCIF) [TS-SCI] – (Deployable HQ only) Tactical SCI Vehicle Area (TSVA) [TS-SCI] <p>Security Zone 4 (SZ 4): Augmentation staff not cleared for access into SZ 2 and 3 – Controlled access space provided for non-US staff habitually supporting the Command with security classification level equivalency determined by theater requirements. Electronic or mechanical access control are provided when validated by local security assessment. SZ 4 is located on first floor to the maximum extent feasible with positive access safeguards to prevent inadvertent entry to US security zones. SZ 4 space will be used for those commands with Army procurement authority requiring regular contractor negotiations or deliberations to maintain a competitive environment.</p>
Special Use Operations Areas Area – General	<p>General. Applies throughout SZ 3:</p> <ul style="list-style-type: none"> – The special use operation area includes the OC, SCIF, NOC, and an exterior TSVA (Vans, Shelters and Vehicles).

<p>(Secure Access)</p>	<ul style="list-style-type: none"> – SZ 3 shall have a single point access utilizing mechanical and electronic access controls commensurate with classification levels to include an intrusion detection system. – OC and SCIF will be provided with secure VTC capability commensurate with the certified classification level of the work space. – NMT 70% of TOE/TDA assigned staffing positions within the Special Use Operations Area are seated in the OC unless a waiver is obtained. – SZ 3 Open Office Work Area will use the General Purpose (GP) Workstation (commensurate with the echelon of command limits below) for full-time (permanently assigned) positions as their primary place of duty. No space allowance duplication is authorized. – Private Offices within Special Use Operations Areas are sized the same as those provided in Open Office Work Areas and allocated based on the COS validation process and algorithms for C2Fs. – Provide a minimum of two A/V control rooms – one for the SCIF and one for TS and below. Provide other A/V control rooms outside of SZ3, as required. – Provide Satellite or cable television (CATV) connectivity capability in all Special Use Operations Areas (except the Tactical SCI Vehicle Area), all planning rooms, all conference rooms, Command Suite, staff principal offices, Public Affairs Office (PAO), and Command Management Office (CMO) <p>Operations Center. Applies only to OC within SZ 3:</p> <ul style="list-style-type: none"> – Provide NMT four (4) Operations Planning Rooms within the OC NTE 500 NSF per room. All planning rooms include both secure and non-secure data, voice, and LAN (NIPR/SIPR) connectivity. – Provide duty station consoles in the OC Command Center for shift personnel NMT 4 feet x 5 feet at a ratio of 1:2 (one for every two individuals) of total personnel authorized by mission task or function. Console includes is a lockable, 2-drawer working file storage unit. – Provide secure VTC capable to SECRET in OC Conference Rooms. <p>Secure Compartmented Information Facility. Applies only to SCIF in SZ 3:</p> <ul style="list-style-type: none"> – The SCIF will be the only space in SZ3 with an external or outside access directly to the TSVA with appropriate access, intrusion, and monitoring controls. – Provide NMT two (2) Mission Planning Rooms will be within the SCIF but physically separated from the main SCIF area. Each room shall not exceed 500 NSF. They will meet stand alone acoustic certification requirements similar to classified conference rooms (see <i>Guidance Section</i> below). Rooms are
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	<p>sized to accommodate NMT 20 persons per room and shall include both secure and non-secure communications and data connectivity. All planning rooms shall include both secure and non-secure data, voice, and LAN (NIPR/SIPR/JWICS) connectivity.</p> <ul style="list-style-type: none"> – Provide secure VTC capable to TOP SECRET/SENSITIVE COMPARTMENTED INFORMATION (TS/SCI) in SCIF Conference Rooms.. <p>(EAC only) Special Access Program (SAP). Applies only when SAPs are assigned to be managed by the command. Applies to separate space in SZ 3:</p> <ul style="list-style-type: none"> – SAP space will be physically separated from the other areas within SZ 3. – Central access is accomplished through the SZ 3 access control point. – Provide separate access controls for entry into the SAP space. – SAP space will meet stand alone acoustic certification requirements similar to classified conference rooms (see <i>Guidance Section</i> below). <p>(EAC only) Special Technical Operations (STO). Applies only when SAPs are assigned to be managed by the command. Applies to separate space within the SCIF in SZ 3:</p> <ul style="list-style-type: none"> – STO space will be physically separated and compartmentalized within the SCIF. – Central access is accomplished through the SZ 3 access control point. – Provide separate access controls for entry into the STO space. – STO space will meet stand alone acoustic certification requirements similar to classified conference rooms (see <i>Guidance Section</i> below). <p>Network Operations Center. Applies only to NOC in SZ 3:</p> <ul style="list-style-type: none"> – Dedicated Computer Room shall be provided for Special Use Operations Area. – Provide separate computer room for JWICS and special mission networks. – Provide a minimum of two A/V control rooms – one for the SCIF and one for TS and below. – Provide A/V control rooms outside SZ 3 as required. – At a minimum, provide a 12 foot x 14 foot telecommunications room for the SCIF (unclass/S/TS). – At a minimum, provide a 14 foot x 14 foot telecommunications room for the SCIF (unclass/S/TS/SCI). – Provide Satellite or cable television (CATV) connectivity capability in all Special Use Operations Areas (except the Tactical SCI Vehicle Area), all planning rooms, all conference
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	<p>rooms, Command Suite, staff principal offices, Public Affairs Office (PAO), and Command Management Office (CMO).</p> <ul style="list-style-type: none"> – Provide Non-secure and secure internet protocol networks (NIPR/SIPR) throughout the C2F. <p>Tactical SCI Vehicle Area. Applies only to TSVA in SZ 3 (DIV, CORPS, deployable Army Service Component Command (ASCC) only):</p> <ul style="list-style-type: none"> – Exterior TSVA shall not exceed parking and circulation for more than six (6) High Mobility Multipurpose Wheeled Vehicle-sized vehicles. – The TSVA is a fenced compound provided to DIV through # Army with CCTV providing 24/7 monitoring, GSA approved locks and/or access control and intrusion detection systems. <p>Other Special Use Space. Applies to other dedicated space in SZ 3:</p> <ul style="list-style-type: none"> – The Senior Leader Planning Room War Room is for General Officers (GO) or equivalent and is separate from the rest of Security Zone 3 activities. It is for NMT 12 persons with full secure and non-secure connectivity. It includes an audio visual (A/V) projection control console. – (EAD only). SAP and STO space will be separated and compartmentalized within the SCIF with access accomplished through the SZ 3 access control point. They will meet stand alone acoustic certification requirements similar to classified conference rooms (see <i>Guidance Section</i> below). – (Authorized Army procurement activities only) When SZ 4 space is used for contract sensitive discussions or used to maintain Competitive Source Selection environment, provide NMT two (2) interior rooms with acoustic and physical separation.
<p>System Redundancy & Emergency Power</p>	<ol style="list-style-type: none"> 1. Redundant power via an auto-start emergency power generator with an automatic transfer switch will be provided throughout the building. 2. Mechanical redundancy is limited to the Special Use Operations Areas, Commander's Suite, Telecommunication Equipment Rooms (TER)/Computer Rooms, entrance room, and telecommunications rooms (TR). <p>Basis of allocation:</p> <ul style="list-style-type: none"> – At a minimum, a standby generator shall be provided to serve all loads located in and equipment supporting the redundant power areas and life safety loads. – Mission critical areas (e.g., Special Use Operations Areas, Executive Conference Room in the Command Suite, Telecommunication Equipment Rooms (TER)/Computer Rooms, audio visual control rooms, entrance room, and telecommunications rooms (TR)) will be serviced by an Uninterruptible Power Source (UPS). The UPS shall provide a

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	<p>minimum of 5 minutes of power for the full load of the mission critical requirement.</p>
Lobby Area with Access Control Workstation (Special Use Space)	<ol style="list-style-type: none"> 1. A lobby shall be provided at the primary entrance of the C2F and serve as both a holding area and controlled access entry point NTE 2000 NSF. 2. A GP Workstation for NMT two (2) persons is provided in the lobby allocation for building access control adjacent to the entrance lobby with voice and LAN connectivity, visual monitoring, and key control storage. <p>See C2F Space Allocation Table below for size</p>
Command Briefing Room	<p>(Army Command (ACOM), ASCC, # A, and CORPS only) NTE 2250 NSF. This room will be certified up to SECRET. One break area shall be situated within close proximity (see Guidance Section).</p> <p>See C2F Space Allocation Table below for size</p>
Command Suite	<ol style="list-style-type: none"> 1. A Command Suite shall consist of Private Offices for the Commanding General, Deputy Commanding General, Command Sergeant Major, Chief of Staff, and Executive Officers. The Command Suite shall also include dedicated features such as a reception area with a private entrance, controlled access, etc. tailored to the TOE or TDA documentation for each command echelon. 2. A separate shower and latrine shall be provided, one each, for the Commanding General, Deputy Commanding General, and Command Sergeant Major. 3. Command Suites will include all Private Offices identified in item 1 above, an Executive Conference Room, an Executive Latrine, reception area, and a limited service kitchenette (see Guidance Section). 4. The Executive Conference Room in the Command Suite shall be constructed to TOP SECRET requirements. <p>See C2F Space Allocation Table below for size</p>
Private Offices	<ol style="list-style-type: none"> 1. Provide Private Offices for Commander, Deputy Commanders, Command Sergeant Major, and staff principals (Assistant/Deputy Chiefs of Staff and their senior officer assistant, senior enlisted advisor, human resources assistant when present, and Division Chiefs with supervisory authority) as identified in the approved OTOE or TDA. 2. (EAC only) Private Offices may be provided to Branch or Section Chiefs with supervisory responsibilities over 10 or more assigned personnel all of the conditions below are met: <ul style="list-style-type: none"> – Assigned personnel are validated by approved manning documents; – Allocation of offices does not exceed 230 GSF per occupant threshold; – No additional scope is required; and, – Provision of said offices does not displace functions or occupants be authorized in other facilities.

	<p>3. Provide Private Offices to individuals when required by regulation, or in cases where that routinely involve sensitive discussions including the Inspector General and the Equal Opportunity/Equal Employment Opportunity offices and similar positions.</p> <p>4. (ACOM only) A visiting GO office shall be provided a Private Office adjacent to the Command Suite and include a GP Workstation outside the office.</p> <p>5. (ACOM and DRU) When the approved TDA includes General Officer (GO) or equivalent Department of the Army Civilian (DAC) positions not located in the Command Suite or assigned Private Office authorizations, the original allocated space may be reconfigured to accommodate GO Office Suites. Space must be achieved through either building layout efficiencies or decremented from specified areas (see <i>Guidance Section</i>) and space allocated to mission or operational areas (e.g., SZ 3) are not authorized for decrement. GO Office suite allowances are limited:</p> <ul style="list-style-type: none"> – GO equivalent office NMT 200 NSF – Staff Sergeants Major for 2-star GOs NMT 200 NSF – Small reception area NMT 80 NSF – Two (2) General Purpose Workstations (6 x 8) – Reconfigured space cannot exceed the original building space allocation. – No additional scope is authorized for this option nor will displaced functions or occupants be authorized in other facilities. <p>See C2F Space Allocation Table below for size</p>
Open Office Space (within Work Area)	<p>1. (All Command Echelons Corps and BELOW) Individuals not authorized Private Office space are allocated 6 feet x 8 feet GP Workstations in the Open Office Space in the Work Area.</p> <p>2. (EAC only) Individuals not authorized Private Office space are allocated 8 feet x 8 feet GP Workstations in the Open Office Space in the Work Area.</p> <p>See C2F Space Allocation Table below for size</p>
General Purpose, (GP) Multi-functional Rooms (Small)	<p>GP Multi-functional Rooms (Small) or Team rooms are dedicated rooms for general access and provided within open office areas sized to accommodate NMT 8 persons per room NTE 120NSF.</p> <p>Basis of allocation is:</p> <ul style="list-style-type: none"> – One (1) for every 50 staff positions within the open office or Work Areas validated by the COS process and algorithms for C2Fs – NMT 1 per Work Area for a Division Equivalent of 20-49 positions – Location of rooms shall maintain Security Zone integrity and shall not require dedicated access controls <p>See C2F Space Allocation Table below for size</p>

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Distributed/Computer-Based Training Room (DT/CBT Room)	Dedicated, computer enabled digital training room providing a maximum of two (2) six (6)-person stations equipped with Classroom XXI technology for Soldier skills or small group training using computer terminal linkage with training and knowledge centers across the Global Information Grid (GIG). DT/CBT Room shall not exceed 572 NSF.
Conference Rooms with VTC	<p>Conference Rooms are based on organizational assignment.</p> <p>Basis of allocation in Security Zone (SZ) 1, 2 & 4:</p> <ul style="list-style-type: none"> – NMT one (1) Executive Conference Room per Command Suite – (EAC only) NMT one (1) extra large (60 person) conference room per command – NMT one (1) large (35 person) per Directorate or Equivalent – NMT one (1) medium (24 person) per Division or Equivalent – NMT one (1) small (12 person) per Special Staff (when aligned with Directorate Equivalents consisting of 3 or more Division Equivalents) or each separate Work Area – NMT one (1) small within SZ 4 – Conference room capacity for Division and Directorate Equivalent NTE 50% of authorized strength. A team room will be substituted for a small conference room for Division Equivalents with fewer than 24 personnel <p>See C2F Space Allocation Table below for size</p>
File Storage Area	<p>Files Storage Areas shall not exceed 88 NSF.</p> <p>Basis of allocation is:</p> <ul style="list-style-type: none"> – One (1) for every 30 staff positions within the Open Office Space of a Work Area validated by the COS process and algorithms for C2Fs – One (1) additional File Storage allocation for PAO, contracting, legal, and IG. – NLT two (2) but NMT four (4) File Storage Areas shall be provided for each Special Use Operations Area. <p>See C2F Space Allocation Table below for size</p>
General Purpose (GP) Storage Room	<p>GP Storage Rooms shall not exceed 96 NSF.</p> <p>Basis of allocation is:</p> <ul style="list-style-type: none"> – One (1) for every 100 staff positions within the Open Office Space of a Work Area when validated by the COS process and algorithms for C2Fs – No GP Storage Area is provided for Work Areas with less than 20 staff positions – NLT one (1) GP Storage Area shall be provided for each Special Use Operations Area <p>See C2F Space Allocation Table below for size</p>
Printer/Copier Station	Printer/Copier Stations shall be allocated one (1) for every 25 staff positions NTE 96 NSF. Each Open Office Work Area shall be

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	<p>issued NLT one (1) Printer/Copier Station when validated by the COS process and algorithms for C2Fs.</p> <p>See C2F Space Allocation Table below for size</p>
Food Concession (TDA Organizations only)	Provide roughed out area for food services of NMT 1500 NSF.
Prayer Room (C2F NOT located on a military installation only)	Provide a prayer room (non-denominational) at one (1) per C2F of NMT 120 NSF.
Break Area	<p>Break Area space of NMT 108 NSF shall be allocated based on the following:</p> <p>Basis of allocation is</p> <ul style="list-style-type: none"> – SZ 1, 2, and 4 - All Break Areas are provided at a ratio of one (1) for every 100 staff positions – SZ 3 - NMT one (1) consolidated Break Area will be dedicated to the SZ 3 personnel. It will be immediately adjacent to but outside the SZ 3 Work Area. This area shall be sized based on the COS validation process and algorithm with a seating capacity NTE 15 persons at any one time <p>See C2F Space Allocation Table below for size</p>
Operational Support Facilities or Areas	<p>Operational Support Facilities or Areas are exterior requirements adjacent to and within the security line as a component of the C2F land area reservation. They are authorized when the following conditions are validated.</p> <ul style="list-style-type: none"> – (DIV, CORPS, and deployable # Army only) Organizational Vehicle Parking Area – Parking for not less than (NLT) 18 tactical command and GO non-tactical vehicles (size based on HMMWV) are required to support movement into the training complex, in preparation for deployment, and/or other transportation source. – (# Army and above; OCONUS locations) When theater or regional operations require forward or strategic separation of functions away from the primary or parent organization's C2F; supported by Warfighter doctrine; and, validated by an approved Command Plan, the space allowances contained in C2F standardization documents will apply equally for sizing an adjunct C2F building at that separate location.
Showers	<p>Showers provided in this facility shall be located on the ground floor.</p> <p>Basis of Allocation is:</p> <ul style="list-style-type: none"> – NLT three (3) each (male/female) – NMT 10 female and 10 male shower at a ratio of 1:250 – 3:1 lockers for each shower
Telecommunication Spaces	1. Telecommunications Telecommunications spaces shall be designed in accordance with TIA/EIA-569-B and the Information

	<p>Infrastructure Architecture (I3A) Technical Guide.</p> <ol style="list-style-type: none"> 2. An Entrance Room (ER) shall be provided to serve as the main telecommunications entry point (service entry) into each C2F. 3. A minimum of one Telecommunications Equipment Room (TER)/Computer Room shall be provided to house telecommunications equipment supporting the unclassified, SECRET, and TS levels. 4. Provide a separate dedicated TS-SCI level TER/Computer Room within the SCIF for JWICS and special mission networks. 5. Telecommunications Rooms (TR) shall be provided IAW TIA/EIA-569-B and the I3A Guide (see Guidance Section). Basis of allocation is one (1) per 10,000SF area or a minimum of one per floor as determined by the COS validation process and algorithms and certified by the appropriate certification agency.
Telecommunications Connectivity & Distribution	<ol style="list-style-type: none"> 1. Telecommunications infrastructure, cabling, outside plant connectivity and outlets will be designed and allocated IAW ISEC, NSA, and DISA guidance consistent with the Army Installation Information Infrastructure (I3A) 2. Each C2F shall be connected to a minimum of two distribution nodes with single mode fiber optic cabling, by diverse paths, and shall be considered as an Area Distribution Node (ADN) for design purposes. 3. Outside plant fiber optic cabling shall be sized to support the common user systems and C2 critical systems. At a minimum, 192 strands of single mode fiber shall be used to connect the C2F to the installation backbone through a concrete encased entry duct and manhole system (see <i>Guidance Section</i>) 4. Distribution within the building shall be determined during design with the Army's preferred alternative is fiber optic connectivity using end-point (e.g., NIC) transition solutions in lieu of in-wall solutions. 5. A minimum of 12 strands of single mode fiber shall be used between TERs and telecommunications rooms for each classification level 6. Provide Satellite or cable television (CATV) connectivity capability in all Special Use Operations Areas (except the Tactical SCI Vehicle Area), all planning rooms, all conference rooms, Command Suite, staff principal offices, Public Affairs Office (PAO), and Command Management Office (CMO). 7. Provide Non-secure and secure internet protocol network (NIPR/SIPR) connectivity throughout the C2F.
Privately Owned Vehicle (POV) Parking	<ol style="list-style-type: none"> 1. Parking space is predicated on providing space for 90% of all assigned personnel within a quarter mile radius of the facility. 2. Additionally, NMT 15 spaces for visitor parking.
Energy Policy Act 2005 (EPACT 05) / Executive Order 13423 (E.O. 13423)	<p>Facilities shall be designed in compliance with requirements for federal facilities IAW EPACT 05 and E.O. 13423.</p>

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Sustainable Design Development	Facilities shall be designed to meet current sustainable development and design policy requirements as established by the Department of the Army.
Accessibility	The Americans with Disabilities Act Accessibility Guidelines (ADAAG) will be met.
C2F Space Allocation (by Function or Type)	Key applications of space allowances to execute this Army Standard are contained in C2F Space Allocation Table and adjusted by Work Area assignment to meet assigned C2F functions and tasks. A Work Area includes the appropriate number of Workstations, Private Offices, and support space (e.g., Storage, Printer, Conference, Team Rooms, etc) necessary to meet validated mission requirements.

C2F Space Allocation Table (by function)

TYPE SPACE	PROGRAM CODE	CAPACITY	NSF
Private Office 01 (Commander)	P1	1	400
Private Office 02 (XO, Dep CDR; DAC Equiv; Command Sergeants Major)	P2	1	300
Private Office 03 (O-6/7; DAC Equiv; GO Staff Sergeants Major; and above)	P3	1	200
Private Office 04 (O-5; DAC Equiv)	P4	1	150
Private Office 05 (O-4; DAC Equiv)	P5	1	110
Visiting GO Private Office (ACOM & Numbered Army ONLY) with Aide and XO Workstation	P6	3	300
EXECUTIVE ADMIN ASSISTANT	X	1	64
OPEN Space, General Purpose Workstation	OR	1	64
Special Use Operations Area (except TSVA) Primary duty General Purpose Workstation)	SO	1	48
Special Use Operations Area Shift Console	SS	1	16
Senior Leader Planning Room (General Officer or equivalent) with A/V Projection Operator Control Console	SP	12	600
OC Mission Planning Rooms	OP	15	500
SCIF Secure Planning Rooms	SP	20	500
Command Briefing Room	CB	150	2250
Executive Conference Room	EC	35	805
60 Pers Conference Room /VTC (Extra Large)	CE	60	1600
35 Pers Conference Room /VTC (Large)	CL	35	805
24 Pers Conference Room/VTC (Medium)	CM	24	572
12 Pers Conference Room/VTC (Small)	CS	12	255
General Purpose, Multi-functional (Team) Room - Small	TE	8	120
Distributed/Computer Based Training Room/ Classroom XXI (DT/CBT Room)	DT	16	572
Files Storage	FC	NA	88
Printer/Copier Station	PC	NA	96

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General Purpose (GP) Storage	ST	NA	96
Reception Area	RA	25	250
Breakroom	BR	NA	108
Lobby Area with Access Control	CE	NA	2000
Executive Latrine (Command Suite ONLY)	CT	1	54

	Quantified allowance not previously provided except by non-standard determination or as lump sum percentage by 405-70 under FCC 610 50		
	Quantified allowance with basis of allocation provided as "Net Assigned" space within work area/modules at a higher density than previously provided under FCC 610 50		
	Quantified allowance standardized across multiple functional and mission applications		
Command Suite Kitchenette	KT		96
NOT USED			

GUIDANCE

General. The following guidance for application of the Echelon Above Brigade Command and Control Facilities (EAB C2F) Army Standard is provided for design agent use in coordination with the Garrison Department of Public Works or equivalent (Installation Management Command Regional Office for Army units on non-Army installations). All design agents shall incorporate the key mandatory design features described herein in close coordination with the US Army Corps of Engineers (USACE) designated Centers of Standardization (COS) for C2Fs (DIV & CORPS – Savannah District; Echelons Above Corps – Mobile District). All C2F 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 the mandatory requirements and thresholds established in this standard. The COS, in coordination with the C2F Facility Design Team (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 C2F 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 C2F Army Standard represents the first generation 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 equally 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.
3. The C2F is a major reach operations facility with overarching responsibilities for deployed Brigade Combat Teams (BCT). Functional, operational, and spatial relationships critical to meeting mission planning, rehearsal, 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 C2F and its Warfighter requirements.

Design Philosophy.

1. Army Transformation depends on the capability to rapidly project forces from homestation locations placing significant demands on installations and how functional and operational requirements are “packaged” to maximize training, mission planning, sustaining, and deploying/re-deploying combat power.
2. The C2F Army Standard and the C2F Standard Design ensures that primary facility and support structures will provide the desired adjacencies to meet Warfighter functional and operational requirements. Critical to the 24/7 operations conducted in the C2F is the identification of secure special use and operational/mission plans space and establishing parameters for utility systems and system redundancy requirements. Security/access zones based on operational requirements were developed that minimized the facility footprint as well as recognize OCONUS requirements regarding foreign or local national support.
3. There are instances where C2Fs are assigned additional mission responsibilities or staffing augmentation. As such, the C2F Army Standard was developed to address the space allocations and functional adjacencies that meet the basic mission requirement for a C2F fully staffed IAW Army authorization documents for the organization supported (e.g., Objective Tables of Organization and Equipment (OTOE), Tables of Distribution and Allowances (TDA), TDA Augmentation).
4. For Echelon Above Brigade (EAB) Tables of Organization and Equipment (TOE) organizations, the baseline for determining space requirements is the OTOE plus any Headquarters Department of the Army (HQDA) validated mission requirements specific to the unit to be supported. For TDA organizations, the baseline requirements are established by the approved HQDA mission description document in force, usually a base TDA. When additional staffing is supported by the Command Manager, other TOEs, AUGTDAs, or permanent attachment orders will be used to adjust staffing space allocations of the C2F. All mission dictated permanent augmentations delineated by the commander may be incorporated when approved by the HQDA Functional Proponent.
5. Consideration of technology insertions to maintain technological superiority, enhanced information security, and provide leap ahead capabilities to conduct operations have been incorporated (albeit not in the Warfighter unit's current authorization documents) to disruption construction imposes on the Soldier and unit readiness. Adaptive, multipurpose design philosophy is used to reduce the disruption construction imposes on the Soldier and unit readiness. For example, space reconfiguration and flexibility to adjust to mission requirements is provided through the use of a raised floor system and open floor plans or Work Areas.
6. This facility is an operational facility and critical element for implementing the Army's force design as a brigade-centric, expeditionary Army. It supports the entire mission spectrum of the Army's assigned C2 functions under the National Military Strategy to include pre-deployment virtual teaming between and amongst modular units via the Operations Center (OC) and connectivity to the Global Information Grid (GIG). As such, the C2F is a critical enabler for providing continuous support to deployed forces from home station to foxhole and return as it

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provides operational and strategic operations command and control from homestation or in conjunction with organic deployable elements.

7. The Sensitive Compartmented Information Facility (SCIF), Tactical SCI Vehicle Area (TSVA), Operations Center (OC), and Network Operations Center (NOC) have been expanded to incorporate space-based platforms and joint battle command assets. These components enable reach operations and implementing the Army's force design in support of a brigade-centric, expeditionary Army.

8. The C2F Army Standard also simultaneously resolves past issues, current needs, and the capability to accommodate future requirements without the need for new construction thereby reducing construction disruption on readiness activities.

9. Two fundamental concerns have resulted in the development and use of a COS validation process for this facility category. First, is the evolving mission for command and control facilities and the inability for traditional facility engineering systems and databases (e.g., RPLANS, FPS, ASIP) to keep pace with Army Transformation and Technology Insertion decisions. Second, given the number of critical functional and operational variables associated with this facility type, especially at echelons above Corps, an automated and manual verification process is used to determine actual requirements for a given OTOE, TDA, and AUGTDA. The majority of the process is based on computer algorithms and formulas based on this Army Standard and applied to specific UICs. Once a base calculation of space allowances has been completed, a manual, on-site verification is conducted by the COS or the COS's designated representatives. Clarification and adjudication is accomplished within the authorizations of this Army Standard with discrepancies or issues forwarded to the C2F FDT Co-Chairs for further deliberation, adjudication, or recommendations for higher authority review.

Specific MILCON Transformation Design Consideration:

- Maximum use of natural light so that facilities remain usable during periods of lost utility support
- Economy of construction
- Durable facilities to withstand the rigors of multiple users
- Pre-fabricated construction components and/or modular construction that satisfies facility durability and functional requirements

Application Guidance.

1. Site Selection and Planning. The C2F must be located on the installation considering functional relationships to other operations complex facilities. Site selection for the C2F includes adjacency to the supporting Special Troops Battalion (STB), Company Operations (COF), and Tactical Equipment Maintenance (TEMF) Facilities of the C2F headquarters elements. Access security should be established that ensures positive pedestrian or vehicle control. When applicable, a security line may divide the site front (community side) and rear (secured side) of the administration portions of the Battalion/COF building(s) from the TEMF and the readiness module of the COF similar to that provided for Brigade Combat Teams (see Battalion-Brigade Army Standard). Force Protection measures must be met. However, additional building hardening above the minimum requirements outlined in Force Protection directives are not required as long as established setback distances are met. When local

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conditions or actual site limitations preclude “walking distance” accessibility, options or alternatives considered should be documented in the installation real property master plan.

2. C2F Space Allocation (General Considerations). Space allowances are dictated by the approved mission for the command and any other validated requirements approved by HQDA, G-3. When mission conditions for a specific command cannot be adequately met by this Army Standard, the compelling functional and operational requirements shall be cited and justified prior to incorporation into any project programming or design. Deviations, including user requests, are considered waivers to Army standardization documents and will be adjudicated as cited above.

a. For application within this Army Standard, the 230 GSF per occupant allowance does not include vertical penetrations (e.g., elevators, stairwells, pipe shafts), exterior walls, void areas, building core and service areas such as lobbies, custodial closets, latrines, and utility spaces (i.e., mechanical, electrical, telecommunications/data) space.

b. Space allocation is based on Functionally-oriented (e.g., G-staff) or Operationally-oriented (Warfighting) as determined by doctrine. Regardless of configuration, maximum use of open office space will be used to provide reconfigurability with minimal to no construction. Therefore, space allocations within this standard are based on Work Areas. By definition:

- A Work Area is allocated to a distinct organizational element (e.g., G-3) or operational function (e.g., Operations Center) that will ideally provide contiguous space for private offices, workstations, meeting spaces (when authorized) and support space for that element.
- Work areas are normally established for the command group, directorate equivalent lead elements and divisions of the coordinating staff. Depending on the size of the elements allocated a work area some special spaces may support more than one work area
- Directorate Equivalent: A coordinating, personal or special staff element whose senior officer (or DAC equivalent) position reports directly to the CoS or equivalent
- Division: A staff element whose senior officer (or DAC equivalent) reports to a Directorate equivalent staff officer
- Operational Function: Areas such as the SCIF, Operations Center, Network Operations Center that are defined by function rather than organizational element.
- Work Areas must fall within a single security zone. If a division has personnel or missions that are divided between Security Zone 3 and another security zone the portion in Security Zone 3 will be included in the overall requirement for the appropriate work area

c. Directorates with fewer than 45 personnel authorized will be treated as a single work area regardless of the number of division assigned shall include, at a minimum, the appropriate number of workstations, private offices, and support space (e.g., storage, printer, planning rooms, conference rooms, team rooms, etc) necessary to meet validated mission requirements as described herein. Actual gross square footage (GSF) for all C2Fs will be determined by the COS validation process and as determined by the space planning/design algorithms published by the COS.

d. For EAB units, the criteria contained in this Army Standard shall apply for all headquarters facilities based on mission or theater of operations considerations. As such, the command mission statement approved by HQDA shall serve as the baseline requirement. The

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HQDA Command Manager (G-3) shall verify additional mission requirements to be validated by the Functional Proponent of this facility type prior to authorization and notification to the COS and supporting engineer district for execution.

e. The adjacency requirements and space program for the C2F are part of the Army Standard. Space allowances for additional mission staffing or augmentation is authorized but must be reviewed in advance of application to a project (waiver granted only when validated permanent population exceeds building design capacity by more than 5%) citing Army authorization documentation approved/validated by the Functional Proponent for this facility type. All other adjustments to space allowance authorizations will be accomplished in accordance with the Army Facility Standardization waiver process.

f. (DIV and CORPS ONLY) The C2F is baselined in a common Standard Design layout for both the Corps and Division Headquarters. The Corps Headquarters is similar in size to a Division, but has only three deployable command posts as opposed to four for the Division Headquarters thereby affecting space allocations by staff component. Consideration has been made for Department of the Army Civilians (DAC) and documented Contractor support.

g. (Numbered Army and Above) Additional missions to fulfill a HQDA assigned, validated, or endorsed requirement not stipulated above or generated by authorization documents of the primary occupant of the C2F must be approved in advance by Army authorization documentation or approved/validated by the Functional Proponent for this facility type prior to sizing the C2F.

h. Many areas that support C2F mission requirements are based on two or more factors of consideration in order to determine Basis of Allocation (size, command hierarchy, etc). As such, this Army Standard establishes definitions that are used ONLY within the context of defining space allowances and allocation for a C2F and may have little relevance to operational definitions using the same labels. For application of this Army Standard, the following definitions are used.

Directorate or Equivalent: *A coordinating, personal or special staff element whose senior officer position reports directly to the CoS or equivalent. This is generally a General Officer or equivalent staff element often comprised of two or more Divisions. Titles for the senior officer are often referred to (but not limited to) as the Deputy Chief of Staff or Assistant Chief of Staff. Essentially, these staff elements represent the personal staff to the Commanding General as defined in FM 6-0. The COS validation process and algorithms establish the basic allowances based on this definition. Exceptions to the calculated allowances must be reviewed and approved by the FDT prior to incorporation into a project or approved as a waiver to this Army Standard before incorporation into a project.*

Division or Equivalent: *A staff element whose senior officer reports to a Directorate equivalent staff officer. This staff element may be a component of a Directorate or equivalent staff element reporting through a Director to the CoS. Essentially, these staff elements provide special staff or functions that support a larger mission capability or specialized mission capability within the organization. The COS validation process and algorithms establish the basic allowances based on this definition. Exceptions to the calculated allowances must be reviewed and approved by the FDT prior to incorporation into a project or approved as a waiver to this Army Standard before incorporation into a project.*

Special Staff. Special Staffs provide a specialized mission capability generally focused on a specialty or function. They may be under the supervision of a Division or Directorate or report directly to the CoS. They are often smaller than a Division or Directorate.

3. Physical Security Zones and Access Levels. The C2F reduces overall facility footprint by meeting physical, information, communication, and intelligence security through horizontal and vertical separation or barriers with controlled access. Spatial adjacencies within the C2F Standard Design shall be consistent with the Security Zone requirements contained in this Army Standard and apply equally to C2F design and construction. These zones are first delineated by physical security and electronic access controls then by information handling/ classification limitations access considerations. Space allocations within this standard are based on Work Areas allocated to a distinct organizational element or operational function that fall within a single security zone, and ideally provides contiguous space for Private Offices, Workstations, meeting (when authorized) and support spaces for that element as allocated and defined in the *Guidance Section* that follows. Some special spaces may support more than one Work Area depending on the size of the elements allocated. Regardless of configuration, all Open Office Space or Work Areas will meet validated mission requirements as described herein. The following levels of security access are required to maintain a compact, flexible footprint.

Security Zone 1 (SZ 1) – Limited access for physical and personnel security

Security Zone 2 (SZ 2) – Controlled access for operational & information security

Security Zone 3 (SZ 3) – Restricted access area for classified operational & information security and certified for Open Storage as specified in paragraph 4 below.

Security Zone 4 (SZ 4) – Controlled access area for staff augmentation not cleared for access into SZ 2 & 3. Acoustic (STC) controls may be provided when validated by the Commander for foreign nationals

4. Special Use Operations Areas: The Special Use Operations Area is an OPEN STORAGE restricted access secure area. It is comprised of the following mission space:

a. Operations Center (OC) (Security Zone (SZ) 3). The OC is similar to an emergency operations center in a local city or county. It provides for interdisciplinary collaboration by specialists from the various staff elements as well as personnel from other services or allied forces. The OC is divided into two separate areas: Open Office Work Area and the Command Center. Workstations within the Open Office Work Area shall use the GP Workstation. Workstations in the Command Center are manned by shift or reach operations coordination personnel and are provided a duty station NMT 4 feet x 4 feet with lockable, 2-drawer working file storage at a ratio of 1:2 authorized staff positions.

- 1) Complimentary security technological (i.e., card access) and procedural methods are used to control access. It has work stations connected to all critical networks that are manned by representatives of the various staff agencies. In addition to the main floor, the OC may provide areas adjacent to the floor for smaller collaborative meetings. It should have access to a loading area to assist in transferring equipment to vehicles or trailers during deployments.
- 2) Provide NMT four (4) planning rooms of approximately five hundred net square feet each are provided adjacent to the Operations Center (OC). The rooms provide work space cleared for OPEN STORAGE of SECRET material and are used for classified

meetings and coordination cells related to operations in the OC, but which would interfere with normal operations in the OC.

- 3) Activities in this space include current operations, future plans, contingency response, action management teams, special operations, joint or combined management cells and other similar functions. It also provides space for concurrent operations when the headquarters is involved in or planning for more than one contingency or operation.
- 4) OC Planning Rooms should have the ability to view the OC area, but also to be isolated visually and audibly, through screens or blinds, from the OC. Secure Video Teleconferencing VTC capability and other telecommunications features.

b. Sensitive Compartmented Information Facility (SCIF) (SZ 3). This portion of the facility is supervised by and primarily supports the G-2 staff section. It is a restricted space that shall be afforded protection from 1) Surreptitious entry 2) Forced entry, 3) Classified discussions being overheard outside the SCIF (acoustic), 4) Implantation of technical Surveillance devices, 5) Visual observation, and 6) Stand-off technical attack (TEMPEST). SCIFs must have an access control and intrusion detection system installed for monitoring and controlling of access to the SCIF.

- 1) Provide NMT two (2) secure mission planning/team rooms sized NMT 500 NSF are provided within the SCIF. These rooms provide work space cleared for OPEN STORAGE of TS-SCI material and used for classified meetings with physical and acoustical separation from other SCIF areas or personnel not directly related or otherwise authorized access to the compartmented information being used. No special connectivity requirements apply to these rooms without approved waiver given the "open secure storage" environment of the SCIF.
- 2) All SCIFs shall meet the requirements outlined in DCID 6/9.
- 3) For access to the Tactical SCI Vehicle Area this facility must have ground level access.
- 4) Provide a separate TS-SCI level Telecommunications Equipment Room (TER)/Computer Room within the SCIF to support JWICS and special mission networks.

c. Network Operations Center (NOC) (SZ 3). The NOC is the area where G-6 personnel and personnel from supporting activities perform network control operations as defined to meet NETOPS mission assignments IAW FMI 6-02.71. Command and control information (C2IN) network architecture is supported by NETOPS G-6 section NETOPS (network management, IDM and IA) and by the network transport personnel and assets who install, operate, maintain, manage and defend the federations of networks. It includes workstations for each individual working within the area. It is a restricted access area that directly supports the SCIF and the BOC as well as providing general support to the internal communications of the rest of the headquarters building. Complimentary technological and procedural methods are used to control access.

d. Tactical SCI Vehicle Areas (TSVA) (SZ 3). Must be installed adjacent to the permanent SCIF. Operating SCI Tactical Systems provided within this area must meet requirements outlined in DCID 6/9 or replacement Intelligence Community Directive 704. SCI telecommunication connectivity must be routed through a DIA/DAC-2A2 approved Protective Distribution System (PDS) from the permanent SCIF to the TSVA.

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- 1) The TSVA must be in a fenced compound, Closed Circuit Television (CCTV) Cameras with 24/7 monitoring, GSA approved locks and/or access control and intrusion detection systems. This requirement is for all combat and combat support brigades with approved equipment for daily use within the Objective Tables of Organization and Equipment (OTOE).
- 2) Provide duct bank pathway system for telecommunications connectivity and power through pathways to the classified vehicle parking area adjoining the SCIF.
- 3) Provide line-of-sight to geostationary equatorial satellites to accommodate intell system antennas.

e. Senior Leader Planning Room (War Room) (SZ 3). A separate planning room of NMT 600SF shall be provided separate from the rest of Security Zone 3 activities.

- 1) Security Classification shall meet OPEN STORAGE up to TOP SECRET. Space is provided for NMT 12 General Officers or equivalent with full secure and non-secure connectivity.
- 2) Acoustic separation from activities conducted elsewhere in SZ 3 shall be provided and includes an audio visual operator space. Electronic or mechanical access control may be provided by exception consistent with applicable Army policies.

f. Security Zone 4 (SZ 4). SZ 4 is dedicated to use by personnel not cleared for SZ 2 & 3 data, information, or communications access. Generally found (but not limited to) in OCONUS facilities or facilities that habitually conduct operations or discussions with foreign nationals, local nationals, Non-Governmental Organizations, or other groups on a regular basis.

- 1) This is a controlled access area not cleared for Open Storage. All shielding, acoustic, and physical security considerations used for SZ 3 shall apply equally to SZ 4 with the only distinction being who has access. Ideally, SZ 4 should be located on the ground floor.
- 2) This space may also be used for contract sensitive discussions or use by Contractors when the need to maintain a Competitive Environment or Source Selection is required but limited to ONLY Authorized Army procurement activities (e.g., AMC, MEDCOM, USACE). When applied in this scenario, determination of the number of simultaneous activities by separate vendors will be conducted to ensure adequate separation and non-disclosure of sensitive competition information. The number of separate SZ 4 rooms dedicated to this purpose shall not exceed two (2) without waiver.

5. Command Suite. The Command Suite is a dedicated Work Area with special purpose space (e.g., executive conference room, the command toilet, reception area, limited service kitchenette, and visiting GO Private Office with dedicated GP workstation. The kitchenette is intended to serve as a service area for organizing and presenting food and beverages for distinguished visitors, ceremonies, or command gatherings. It is not intended to provide the capability to prepare or cook food. As such it is limited to refrigerators, microwaves, counter space, cabinetry storage and coffee service. When a kitchenette is provided, no breakroom is authorized for the Command Suite.

6. Private Offices. Authorized sizing of the Private Offices for Division through ACOM headquarters with command and control functions consistent with Modular Force Design shall use the C2F COS validation process and algorithms available from the COS to determine actual allowances.

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a. When the approved TDA includes General Officer (GO) or equivalent Department of the Army Civilian (DAC) positions not located in the Command Suite or assigned Private Office authorizations, the original allocated space may be reconfigured to accommodate GO Office Suites. When the Command determines a need for reconfiguration, the Army's first preference is to optimize efficiencies within the internal building layout using a portion of the programmed circulation space. If this first course of action is insufficient to achieve reconfiguration, only space authorized for File Storage, break areas, team rooms, or Conference Rooms within SZ 1, 2 & 4 may be decremented and the final reconfigured space cannot exceed the original building space allocation. Space allocated to mission or operational areas (e.g., SZ 3) are not authorized for decrement in order to achieve reconfigured space. No additional scope is authorized for this option nor will displaced functions or occupants be authorized in other facilities.

b. Echelons Above Corps (EAC) organization may elect to provide offices down to the Branch or Section Chief level when supervisory authority is conveyed on the position and the number of assigned personnel on approved Army manning documentation is 10 or more. When this option is exercised, the total building occupancy ration cannot exceed 230 GSF per occupant. Additionally, space allocated to mission or operational areas (e.g., SZ 3) are not authorized for decrement in order to achieve reconfigured space. No additional scope is authorized for this option nor will displaced functions or occupants be authorized in other facilities.

7. Open Office Space (within Work Area). The Open Office Work Area is composed of GP Workstations. These workstations provide work space for all permanently assigned individuals not authorized Private Office space and serves as the primary duty station for these individuals. Allocation of GP Workstation sizes may not be reconfigured without waiver. Space is assigned for each building occupant not assigned any other space under the provisions of this Army Standard **and** when validated by Army approved command mission and manning documentation on the basis of:

- (All Command Echelons EXCEPT ACOM) The GP Workstation is 6 feet x 8 feet.
- (ACOM only) The GP Workstation is 8 feet x 8 feet.

8. GP Multi-functional Rooms (Small). GP Multi-functional Rooms (Small) or team rooms are dedicated rooms for general access and provided within open office areas sized to accommodate NMT 10 persons per room. Basic voice, data, and LAN (NIPR/SIPR) are provided to include white boards. These rooms are allocated based on the C2F COS validation process and algorithms available from the COS.

9. Distributed/Computer-Based Training Room (DT/CBT Room). The DT/CBT Room is a dedicated, computer enabled digital training room providing a maximum of 16 stations equipped with Classroom XXI technology for Soldier skills or small group training. Computer terminals are linked to training and/or knowledge centers across the Global Information Grid to provide sustainment and individual professional training as well as mission planning and rehearsal capabilities. Each terminal may operate independently or in a group controlled from an instructor console. VTC and basic voice, data, and LAN (NIPR/SIPR) connectivity will be provided as well as a lectern and appropriate acoustic controls commensurate with a classroom environment.

10. Conference Rooms. Conference rooms are provided based on staff element size and organizational hierarchy. They are provided in three sizes other than the Executive Conference Room for the Command Suite which also includes special capabilities (e.g., Audio/Visual (A/V) operator console, large planning table, projection or other large data presentation capability, and secure VTC capability). All Conference Rooms (other than the Executive Conference Room) use a common allocation of space configured with seats at a planning table and seats in a gallery without table. Power outlets should be provided in a grid to service all seats including the gallery. All Conference Rooms (other than the Executive Conference Room) in SZ 1, 2 & 4 are provided non-secure VTC capabilities in addition to basic voice, data, and LAN (NIPR) connectivity to include white boards. These rooms are allocated based on the C2F COS validation process and algorithms available from the COS. Conference room capacity for divisions and directorate equivalent NTE 50% of authorized strength. A team room will be substituted for a small conference room for divisions with fewer than 24 personnel.

11. File Storage Area. File Storage is provided based on staff element size ratio and organizational hierarchy. Generally, this is dedicated floor space within an Open Office Space or Work Area. Files security is accomplished through the use of appropriate containers commensurate with security considerations. These areas are allocated based on the C2F COS validation process and algorithms available from the COS. Due to mission area file storage requirements, PAO, contracting, legal, and IG offices are authorized one (1) additional allocation.

12. General Purpose (GP) Storage Room. The GP Storage Room is provided based on staff element size ratio and organizational hierarchy. This room may be lockable with GP locking devices but will not be used as a substitute classified storage area. These rooms are allocated based on the C2F COS validation process and algorithms available from the COS.

13. Printer/Copier Station. Printer/Copier Stations are provided based on staff element size ratio and organizational hierarchy. This is dedicated floor space within an Open Office Space or Work Area for copiers, printers, plotters, faxes or other printing/reproduction equipment. Printing and reproduction is limited to non-secure data. These areas are allocated based on the C2F COS validation process and algorithms available from the COS.

14. Food Concession. A roughed out area for food concession is provided for hot and cold meal and/or snack service for TDA organizations due to absence of a DFAC sized for large DAC staff population. No seating accommodations are authorized.

15. Break Area. Break Areas are provided based on staff element size ratio and organizational hierarchy.

a. This dedicated area is sized to accommodate a wet sink, coffee service, refrigerator, microwave, and vending machines. It is not intended to serve as a substitute for a snack bar or cafeteria with lounge and seating appointments. Break Areas may be consolidated for mechanical and electrical efficiency and should be situated to provide service to all quadrants of the building floor within Security Zone (SZ) 1 & 2.

b. One (1) consolidated Breakroom is provided for SZ 3 personnel outside the SZ 3 perimeter in order to limit service vendor access into the Open Storage Area. This dedicated space will be enclosed and immediately adjacent to SZ 3 and preferably within close proximity to the SZ 3 entrance. By exception, this is the ONLY break area authorized seating NTE 15 individuals at any one time.

16. Telecommunications Spaces. Telecommunications spaces shall be designed in accordance with TIA/EIA-569-B and the Information Infrastructure Architecture (I3A) Technical Guide. An Entrance Room (ER) shall be provided to serve as the main telecommunications entry point (service entry) into each C2F. The ER will accommodate the equipment (e.g., data and voice switches, patch panels, etc.) used to transport, transition, and terminate all telecommunication services from outside the C2F. A minimum of one Telecommunications Equipment Room (TER)/Computer Room shall be provided to house telecommunications equipment supporting the unclassified, SECRET, and TS levels. A separate dedicated TS-SCI level TER/Computer Room within the SCIF for JWICS and special mission networks shall also be provided. All TERs/Computer Rooms are sized based on the building configuration and operational and security requirements as determined by the appropriate engineering and certification authority. Telecommunications Rooms (TR) shall be provided IAW TIA/EIA-569-B and the I3A Guide. The minimum sizes shall be 12 foot x 14 foot for TRs containing unclassified, SECRET, and TS equipment and 14 foot x 14 foot for SCIF TRs containing unclassified, SECRET, TS, and TS-SCI equipment. Basis of allocation is one (1) per 10,000SF area or a minimum of one per floor as determined by the COS validation process and algorithms and certified by the appropriate certification agency.

17. Telecommunications Connectivity & Distribution. Telecommunications infrastructure will meet I3A and ANSI/TIA/EIA requirements.

a. Data outlets will be provided per the I3A technical guide based on functional purpose of the various spaces within the facility as modified by user special operational requirements. Provide telecommunications spaces to accommodate both unclassified (e.g., NIPRNET, voice, video-teleconferencing (VTC)) and classified systems (e.g., JWICS, SIPRNET, secure voice, and secure VTC). 100% of all staff in each headquarters will require 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).

b. Outside plant connectivity shall be provided in accordance with the Army I3A guidance. The C2F facilities shall be connected to a minimum of two distribution nodes with single mode fiber optic cabling, and shall be considered as an Area Distribution Node (ADN) for engineering purposes. The C2F shall be connected to the two distribution nodes by diverse paths. The fiber optic cabling shall be sized to support the common user systems and C2 critical systems. For planning purposes, 192 strands of single mode fiber shall provide connectivity to the installation fiber backbone (48 strands provided for common user systems and another 48 strands for the C2 systems for EACH distribution node or a total of 192 strands for two distribution nodes). A minimum of 12 strands of single mode fiber shall be used between the Telecommunications Equipment Rooms (TER) and the Telecommunications Rooms (TR) for each classification level. A dual/diverse physical path routing into the facility for fiber to the facility should be considered for survivability. Entry to the C2F shall use a concrete encased entry duct and manhole system. Adjustments will be made during actual project design development.

c. The telecommunications infrastructure, cabling, outside plant, and outlets will be designed and allocated IAW the following references:

- Project specific USAISec Information Technology Facility Design Criteria
- USAISec Technical Guide for Installation Information Infrastructure Architecture (I3A)
- USAISec Technical Guide for the Integration of Secret Internet Protocol Router Network (SIPRNET)

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- 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.

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

- 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. 13424), Strengthening Federal Environmental Energy and Transportation Management
- IBC – International Building Code
- AR 380-5, Department of Army Information Security Program
- AR 415-15, Army Military Construction Program Development and Execution
- DA PAM 415-28, Facility Guide To Army Real Property Category Codes
- DCID 6/9, Physical Security Standards for Sensitive Compartmented Information Facilities or replacement Intelligence Community Directive 704
- 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
- UFC 4-140-01, Standard Definitive Design for C2F
- ETL 1110-3-491, Sustainable Design for Military Facilities
- D/CID 6/4, Personnel Security
- DoD 5105.21-M-1, SCI Administrative Security Manual
- NSTISSAM 2-95A Red/Black Installation Guidelines Amendment to TEMPEST
- NSTISSI 7003 Protected Distribution Systems (PDS)