



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

The Army Standard for Brigade and Battalion Headquarters (BDE/BN HQ)

21 March 2025

Description: This consolidated Army Standard addresses both Brigade (Real Property Category Code 14182) and Battalion Headquarters (Real Property Category Code 14183) and provides mandatory requirements as either stand-alone facilities or, where directed, combined headquarters facilities for select types of brigades under the Modular Force. Specific descriptions for each type headquarters and their respective Guidance Sections are contained herein.

Applicability:

- This Army Standard applies equally to Active Component TOE unit requirements worldwide and Reserve Component TOEs, when mobilized and/or activated to backfill a deployed Active Component unit on a CONUS installation, when fielded either as a stand alone, dedicated BDE or BN HQ facilities, or when directed as a single, Consolidated BDE-BN structure.
- This Army Standard shall also apply equally to other TDA unit requirements to the maximum extent possible in order to optimize Army benefits of standardization and preclude the need to develop a separate Army Standard for every facility type.
- This Army Standard does not apply when space allowances and basis of allocation are defined for a BDE or BN HQ in another tailored Army Standard such as the Army Standard for Operational Readiness Training Complex (ORTC)

Waivers:

- Only the Army facilities Standardization Committee has authority to approve exceptions to these standards. Waivers from Army Standards must be requested in accordance with AR 420-1 and the Army Facilities Standardization Program Charter dated 24 May 06.
- All waiver requests to this Army Standard require COS concurrence of need as being unresolvable without deviation prior to submission by the Garrison Commander.
- Army Standard waiver request submissions must be received in sufficient time to allow the BDE HQ Facility Design Team to complete review and development of recommendations or courses of action for the Army Facilities Standardization Committee (AFSC) for consideration prior to implementation into project design or construction.
- All HQDA approved waivers shall be documented in installation master plans thereby serving as the installations modified standards for the facility affected type.

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.

Brigade Headquarters

Description: The Brigade Headquarters provides operational Command and Control space comprised of operational, administration, and special functions for Table of Organization and Equipment (TOE) brigade echelons of command including Regiments and Groups. May apply to other TOE or TOE/Tables of Distribution and Allowances (TDA) hybrid organizations when commanded by a Colonel O-6.

Applicability:

- The Brigade Headquarters (hereafter referred to as BDE HQ) Army Standard applies to the planning, design, and construction of all brigade and brigade equivalent TOE and hybrid TOE/TDA Headquarters.
- This Army Standard supersedes space allowance criteria contained in AR 405-70, as noted herein, and serves as the primary authority for Brigade Headquarters worldwide.

Brigade Headquarters – ARMY STANDARD

Item	Mandatory Criteria
General	<ol style="list-style-type: none"> 1. The BDE HQ is provided in five (5) sizes based on the approved manning level o the brigade staff (or staff size) as determined by TOE or TOE/TDA. 2. GSF (Gross Square feet) Deviation: Facility constructed gross area shall not exceed 105% of space allocation set forth in this document to accommodate site, construction, or environmental factors. 3. Gross Area Requirements are computed in accordance with Technical Instruction (TI) 800-01.
Planning	<ol style="list-style-type: none"> 1. (Planning) Brigade Headquarters shall be centrally located between the supporting facilities (e.g., Unaccompanied Enlisted Personnel Housing and Dining Facility) and mission facility (e.g., BDE HQ, Battalion HQ, Company Operations Facility, and Tactical Equipment Maintenance Facility Complex). 2. In-fill or existing conditions should plan to meet this requirement as plant replacement or divesture allows for re-orientation and siting of facilities to comply with the Brigade Planning Layout contained in the companion Army Standard Design from Brigade Complexes.
Site Selection	<p>Special siting conditions exist for BDE HQ buildings.</p> <ul style="list-style-type: none"> • Brigade Headquarters requires a secure outside area immediately adjacent to the building with digital and personnel access controls meeting Secure Compartmented Information (SCI) physical security requirements as defined below. • Provide accommodation for intel system antennas that provide line-of-site to geostationary equatorial satellites.

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<p>Headquarters Building Footprint</p>	<p>The BDE HQ is divided into two functional components, the special functions (operations) space and administrative support space. The special functions space includes Sensitive Compartmented Information Facility (SCIF); Brigade Operations Center (BOC); and Network Operations Center (NOC) in the Gross Square Footage (GSF) limits listed below.</p> <table data-bbox="548 426 1057 594"> <tr> <td>Extra-Large Brigade</td><td>59,200 GSF</td></tr> <tr> <td>Large Brigade</td><td>43,400 GSF</td></tr> <tr> <td>Medium Brigade</td><td>37,700 GSF</td></tr> <tr> <td>Small Brigade</td><td>34,400 GSF</td></tr> <tr> <td>Extra Small Brigade</td><td>20,400 GSF</td></tr> </table> <p>When the BOC, NOC, and SCIF are not required for an extra-small BDE HQ and said requirement is validated by HQDA G-3/5/7 (BC), the GSF is reduced to 15,100 GSF.</p>	Extra-Large Brigade	59,200 GSF	Large Brigade	43,400 GSF	Medium Brigade	37,700 GSF	Small Brigade	34,400 GSF	Extra Small Brigade	20,400 GSF
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Large Brigade	43,400 GSF										
Medium Brigade	37,700 GSF										
Small Brigade	34,400 GSF										
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<p>Consolidated Brigade and Battalion Headquarters Building</p>	<p>Brigade Combat Teams (BCT), Combat Aviation Brigades, Military Intelligence Brigades, Signal Brigades, Battlefield Surveillance Brigades, and Sustainment Brigades shall be consolidated into a sing structure as follows:</p> <ol style="list-style-type: none"> 1. For "Green Grass" sites, the Brigade and Battalion Headquarters shall be consolidated into a single building. The building gross square footage limit for Brigade, Battalion, BOC, NOC, SCIF and classrooms is 138,900 GSF. The number of classrooms shall be reduced by 50% and utilized on a shared used basis. 2. For legacy in-fill situations, real property master plans shall develop migration and consolidated schedules based on a complete plant replacement and construction project as the Brigade and its subordinate Battalions approach the 35-year useful life point in-lieu of renovation or modernization. 3. Consolidating with other facility types not identified in this Army Standard is not allowed. 										
<p>Primary Facility Scope (Special Function Space)</p>	<p>The BDE HQ provides layered security for an operational command and control building and is divided into Security Zones based on access control, security level of information used in each zone, and unassigned personnel need to know. A security line is established and commences immediately upon entry into the building. All security requirements contained shall be met.</p> <p><u>Security Zone 1</u> – Staff Duty Station providing LIMITED access for physical and personnel security for the Command Group; S1; S4; S8; Chaplain; Surgeon/Medical; Legal; Inspector General; Public Affairs; and Safety.</p> <p><u>Security Zone 2</u> – CONTROLLED access for operational & informational security for the S2; S3; S5; Support Operations; Fire & Effects; Air Defense; Engineer; MP; and Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) Sections.</p>										

	<p>Security Zone 3 – RESTRICTED access with electronic access control for the Brigade Operations Center (BOC), Network Operations Center (NOC), Secure Compartmented Information Facility (SCIF) and Tactical SCIF Vehicle Area (TSVA).</p> <ol style="list-style-type: none"> 1. The Brigade TOE will determine whether BOC, NOC, SCIF, and TSVA are required. 2. BOC, NOC, and SCIF shall have raised access flooring, and these areas, as well as the TSVA shall be located on the ground floor level.
Secure Compartmented Information Facility (SCIF)	<p>The SCIF must meet requirements outlined in Intelligence Security Directive (ICD) 705 series. At a minimum, the SCIF:</p> <ul style="list-style-type: none"> • Requires access control and intrusion detection system installed for monitoring and controlling of access to the SCIF. • Requires ground level access to the TSVA. • A restricted space that shall be afforded protection from 1) Surreptitious entry 2) Forced entry, 3) Classified discussions being overheard outside SCIF (acoustic), 4) Implantation of technical surveillance devices, 5) Visual observation, and 6) Stand-off technical attack. <p>Basis of Allocation:</p> <ul style="list-style-type: none"> - When personnel in either the S-2 or S-3 are coded in “SC” positions, primary duty location is the SCIF. No workstations for “SC” coded personnel are authorized on SZ 2 when space is provided in SZ 3. - Space for all personnel except the Special Security Officer is provided in 4’x5’ work consoles.
Tactical SCIF Vehicle Area (TSVA)	<p>Tactical SCI Vehicle Area. Applies only to TSVA in SZ 3 with assigned (MI BN, and MICO only):</p> <ul style="list-style-type: none"> - Exterior TSVA shall include parking and circulation for assigned intelligence and electronic warfare (SECRET/TOP SECRET) tactical wheeled vehicle and support equipment. - Must meet Intelligence Community Directive 705 (ICD-705) security and accreditation requirements. - TSVA must be established adjacent to a hardstand SCIF to provide network connection from Shelter to indoor work area or SCIF. - TSVA must provide an alternate power source and grounding points for shore and generator power while main vessel is shut down. - Sufficient area to accommodate antenna footprints and support equipment operation. Distance to provide line of site for associated antenna/communications equipment. - IEW Maintenance area for field and sustainment level maintenance operations of IEW systems and components.

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Secure Video Teleconferencing	Provide secure video teleconferencing in the command conference room, BOC, and SCIF.
Secure Communications Room	Provide secure communications room to accommodate Joint Worldwide Intelligence Communications System (JWICS) and Secret Internet Protocol Router Network (SIPERNET)
Aural and Visual Security Handling	Any portion of the BDE HQ that handles, stores, or discusses classified information will be designed to prevent visual and aural access to classified data through the use of various design approaches. When windows are present, non-operable windows with visual blinds are required.
Primary Facility Scope (Administrative Support)	The BDE HQ administrative support space provides standardized work areas for all assigned staff personnel on approved manning documents.
Private Offices	<p>Private Offices are limited authorized spaces and established by Senior Army Leadership (e.g., VCSA, DCS G-3, and DCS G-9). Unless specified by Army Regulation or higher authority, no deviation of the above assignment is authorized without approval waiver.</p> <p><u>Basis of Allocation for Private Offices:</u></p> <ul style="list-style-type: none"> - <u>Extra Large Brigade Headquarters:</u> Not More than (NMT) 35 Private Offices Total for the Commander, Executive Officer, Command Sergeant Major, Chaplain, Chaplain Assistant NCO, Surgeon, Senior Logistics Operations NCO, Command Judge Advocate, Senior Defense Counsel, Defense Counsel (three Offices), Operational Law Judge Advocate, Support Operations Officer, Chief Medical Support Officer, Senior Human Resources Sergeant, S1 Officer, S2 Officer, S3 Officer, S4 Officer, S6 Officer. - <u>Large Brigade Headquarters:</u> NMT 16 Private Offices Total for the Commander, Deputy Commander, Executive Officer, Command Sergeant Major, Chaplain, Chaplain Assistant NCO, Command Judge Advocate, Operational Law Judge Advocate, Senior Human Resources Sergeant, Operations Sergeant (two Offices), Field Surgeon, S1 Officer, S2 Officer, S3 Officer, S4 Officer, S6 Officer. - <u>Medium Brigade Headquarters:</u> NMT 16 Private Offices Total for the Commander, Deputy Commander, Executive Officer, Command Sergeant Major, Chaplain, Chaplain Assistant NCO, Field Surgeon, Senior Human Resources Sergeant, Command Judge Advocate, Operational Law Judge Advocate, Operations Sergeant Major, S1 Officer, S2 Officer, S3 Officer, S4 Officer, S6 Officer. - <u>Small Brigade Headquarters:</u> NMT 16 Private Officers Total for the Commander, Executive Officer, Command Sergeant

	<p>Major, Chaplain, Chaplain Assistant NCO, Command Judge Advocate, Operational Law Judge Advocate, Senior Human Resources Sergeant, Aviation Safety Officer, Flight Surgeon, S1 Officer, S2 Officer, S3 Officer, S4 Officer, S6 Officer.</p> <p>- <u>Extra Small Brigade Headquarters</u>: NMT 13 Private Offices Total for the Commander, Executive Officer, Command Sergeant Major, Chaplain, Chaplain Assistant NCO, Senior Human Resources Sergeant, Operations Sergeant, S1 Officer, S2 Officer, S3 Officer, S4 Officer, S6 Officer, Judge Advocate.</p>
Staff Duty Station	Provide one Staff Duty station in each headquarters entrance/reception area.
Open Office Area Workspace	Provide a minimum of 48 net square feet (NSF) of working area commensurate with number of assigned staff personnel not located in either SZ 3 or in Private Offices as delineated above.
Showers	Provide a minimum of 1 female shower and 2 male showers in each Headquarters.
Private Operated Vehicle (POV) Parking	Provide POV parking for the Brigade Headquarters as depicted on the Brigade Operations Complex site layout.
Telephone and Data Outlets	<ol style="list-style-type: none"> 1. Telecommunications infrastructure meets Installation Information Infrastructure Architecture (I3A) and American National Standards Institute/Telecommunications Industry Association/Electronic Industries Alliance (ANSI/TIA/E1A) 568 and 569 requirements. 2. Telecommunications lines will be underground from the installation's telecommunications system to the main distribution equipment located in the telecommunications equipment room. 3. Telecommunications outlets shall be provided in accordance with the I3A technical guide. 4. Telephone system installed within SCIF will meet requirements outlined in Director of Central Intelligence Directive (DCID) 6/9 until the replacement intelligence Community Directive (ICD) 705 is signed into policy and implemented by the Army's Office of the Deputy Chief of Staff, G-2. 5. Data outlets will be provided per the I3A technical guide based on functional purpose of the various spaces with the facility as modified by user special operational requirements.
Energy	Facilities shall be designed in compliance with prevailing policy and mandatory requirements for federal facilities and Army engineering documentation in force at time of project definition and cost estimating.
Sustainable Design Development	Facilities shall be designated to meet current sustainable development and design policy requirements as established by the Department of the Army.

Battalion Headquarters

Description: The Battalion Headquarters provides operational Command and Control space comprised of operational, administration, and special functions for Table of Organization and Equipment (TOE) battalion echelons of command including Squadrons, Detachments, or other TOE or Table of Distribution and Allowances (TDA) hybrid organizations when commanded by a Lieutenant Colonel O-5.

Applicability:

The Battalion Headquarters (hereafter referred to as BN HQ) Army Standard applies to the planning, design, and construction of all battalion and battalion equivalent TOE and hybrid TOE/TDA Headquarters.

This Army Standard supersedes space allowance criteria contained in AR 405-70, as noted herein, and serves as the primary authority for Battalion Headquarters worldwide.

Battalion Headquarters – ARMY STANDARD

Item	Mandatory Criteria						
General	<div>1. The Bn HQ is provided in four (4) sizes based on the approved manning level of the battalion staff (or staff size) as determined by TOE or TOE/TDA.</div> <div>2. GSF (Gross Square feet) Deviation: Facility constructed gross area shall not exceed 105% of space allocation set forth in this document to accommodate site, construction, or environmental factors.</div> <div>3. Gross Area Requirements are computed in accordance with Technical Instruction (TI) 800-01.</div>						
Site Selection & Planning	<div>1. (Siting) When the Battalion Headquarters is stationed on the same installation as its higher headquarters, they shall be co-located within walking distance of each other.</div> <div>2. In-fill or existing conditions should plan to meet this requirement as plant replacement or divestiture allows for re-orientation and siting of facilities to comply with the Battalion Planning Layout contained in the companion Army Standard Design from Battalion Complexes.</div>						
Headquarters Building Footprint	<div>The BN HQ is an operational facility with classified materials access, physical, auditory, and visual restrictions and limitations. Bn HQ is provided in four sizes in tow configurations: with and without classrooms:</div> <div><table><tr><td><u>Battalion Headquarters:</u></td><td><u>Without Classroom</u></td><td><u>With Classroom</u></td></tr><tr><td>Extra-Large Battalion</td><td>17,000 GSF</td><td>22,600 GSF</td></tr></table></div>	<u>Battalion Headquarters:</u>	<u>Without Classroom</u>	<u>With Classroom</u>	Extra-Large Battalion	17,000 GSF	22,600 GSF
<u>Battalion Headquarters:</u>	<u>Without Classroom</u>	<u>With Classroom</u>					
Extra-Large Battalion	17,000 GSF	22,600 GSF					

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	<p>Large Battalion 15,100 GSF 20,400 GSF</p> <p>Medium Battalion 14,100 GSF 18,600 GSF</p> <p>Small Battalion 12,200 GSF 16,000 GSF</p>
Consolidated Brigade and Battalion Headquarters Building	<p>Brigade Combat Teams (BCT), Combat Aviation Brigades, Military Intelligence Brigades, Signal Brigades, Battlefield Surveillance Brigades, and Sustainment Brigades shall be consolidated into a sing structure as follows:</p> <ol style="list-style-type: none"> 1. For "Green Grass" sites, the number of classrooms in the consolidated building shall be reduced by 50% and utilized on a shared use basis. 2. For legacy in-fill situations, real property master plans shall develop migration and consolidated schedules based on a complete plant replacement and construction project as the Brigade and its subordinate Battalions approach the 35-year useful life point in-lieu of renovation or modernization. <p>Consolidating with other facility types not identified in this Army Standard is not allowed.</p>
Primary Facility Scope (Special Function Space)	<p>The BN HQ provides layered security for an operational command and control building and is divided into Security Zones based on access control, security level of information used in each zone, and unassigned personnel need to know. A security line is established and commences immediately upon entry into the building. All security requirements contained shall be met.</p> <p><u>Security Zone 1</u> – Staff Duty Station providing LIMITED access for physical and personnel security for the Command Group; S1; S4; Chaplain; Surgeon/Medical; Legal; Public Affairs; and Safety.</p> <p><u>Security Zone 2</u> – CONTROLLED access for operational & informational security for the S2; S3; S5; S6; Support Operations; Support Operations; Fire & Effects; Air Defense; Engineer; MP; and Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) Sections.</p> <p><u>Security Zone 3</u> – RESTRICTED access with electronic access control for the Battalion Operations Center (BOC), Network Operations Center (NOC), Secure Compartmented Information Facility (SCIF) and Tactical SCIF Vehicle Area (TSVA).</p>
Secure Compartmented Information Facility (SCIF)	<p>The SCIF must meet requirements outlined in Intelligence Security Directive (ICD) 705 series. At a minimum, the SCIF:</p> <ul style="list-style-type: none"> • Requires access control and intrusion detection system installed for monitoring and controlling of access to the SCIF. • Requires ground level access to the TSVA.

	<ul style="list-style-type: none"> A restricted space that shall be afforded protection from 1) Surreptitious entry 2) Forced entry, 3) Classified discussions being overheard outside SCIF (acoustic), 4) Implantation of technical surveillance devices, 5) Visual observation, and 6) Stand-off technical attack. <p>Basis of Allocation:</p> <ul style="list-style-type: none"> When personnel in either the S-2 or S-3 are coded in "SC" positions, primary duty location is the SCIF. No workstations for "SC" coded personnel are authorized on SZ 2 when space is provided in SZ 3. <p>3. Space for all personnel except the Special Security Officer is provided in 4'x5' work consoles.</p>
Tactical SCIF Vehicle Area (TSVA)	<p>Tactical SCI Vehicle Area. Applies only to TSVA in SZ 3 with assigned (MI BN, and MICO only):</p> <ul style="list-style-type: none"> Exterior TSVA shall include parking and circulation for assigned intelligence and electronic warfare (SECRET/TOP SECRET) tactical wheeled vehicle and support equipment. Must meet Intelligence Community Directive 705 (ICD-705) security and accreditation requirements. TSVA must be established adjacent to a hardstand SCIF to provide network connection from Shelter to indoor work area or SCIF. TSVA must provide an alternate power source and grounding points for shore and generator power while main vessel is shut down. Sufficient area to accommodate antenna footprints and support equipment operation. Distance to provide line of site for associated antenna/communications equipment. IEW Maintenance area for field and sustainment level maintenance operations of IEW systems and components.
Secure Video Teleconferencing	Provide secure video teleconferencing in the command conference room, BOC, and SCIF.
Secure Communications Room	Provide secure communications room to accommodate Joint Worldwide Intelligence Communications System (JWICS) and Secret Internet Protocol Router Network (SIPERNET)
Aural and Visual Security Handling	Any portion of the BN HQ that handles, stores, or discusses classified information will be designed to prevent visual and aural access to classified data through the use of various design approaches. When windows are present, non-operable windows with visual blinds are required.
Primary Facility Scope (Administrative Support)	<p>The BN HQ administrative support space provides standardized work areas for all assigned staff personnel on approved manning documents.</p> <ul style="list-style-type: none"> The approved manning document for the battalion (staff sized) less personnel assigned: Brigade Special Functions Space determines the size of the BN HQ authorized (e.g., Small, Medium, Large, etc.). Basis of Allocation for administrative support space is based on General Purpose Workstations for all personnel except

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	when provided as authorized Private Offices for the positions delineated below or when allocated space in the BDE SCIF.
Private Offices	<p>Private Offices are limited authorized spaces and established by Senior Army Leadership (e.g., VCSA, DCS G-3, and DCS G-9). Unless specified by Army Regulation or higher authority, no deviation of the above assignment is authorized without approval waiver.</p> <p><u>Basis of Allocation:</u> All BN HQ have Not More Than (NMT) 13 Private Offices Total for the Commander, Executive Officer, Command Sergeant Major, Chaplain, Chaplain Assistant NCO, Senior Human Resources Sergeant, Operations Sergeant, S1 Officer, S2 Officer, S3 Officer, S4 Officer, and S6 Officer.</p>
Video Teleconferencing	Provide VTC in all conference rooms.
Staff Duty Station	Provide one Staff Duty station in the entrance/reception area.
Open Office Area Workspace	Provide a minimum of 48 net square feet (NSF) of working area commensurate with number of assigned staff personnel not located in either SZ 3 or in Private Offices as delineated above.
Showers	Provide a minimum of 1 female shower and 2 male showers in each Headquarters.
Private Operated Vehicle (POV) Parking	Provide POV parking for the Battalion Headquarters as depicted on the Brigade Operations Complex site layout.
Telephone and Data Outlets	<ol style="list-style-type: none"> 1. Telecommunications infrastructure meets Installation Information Infrastructure Architecture (I3A) and American National Standards Institute/Telecommunications Industry Association/Electronic Industries Alliance (ANSI/TIA/E1A) 568 and 569 requirements. 2. Telecommunications lines will be underground from the installation's telecommunications system to the main distribution equipment located in the telecommunications equipment room. 3. Telecommunications outlets shall be provided in accordance with the I3A technical guide. 4. Telephone system installed within SCIF will meet requirements outlined in Director of Central Intelligence Directive (DCID) 6/9 until the replacement intelligence Community Directive (ICD) 705 is signed into policy and implemented by the Army's Office of the Deputy Chief of Staff, G-2. 5. Data outlets will be provided per the I3A technical guide based on functional purpose of the various spaces with the facility as modified by user special operational requirements.
Energy	Facilities shall be designed in compliance with prevailing policy and mandatory requirements for federal facilities and Army engineering documentation in force at time of project definition and cost estimating.

Sustainable Design Development	Facilities shall be designated to meet current sustainable development and design policy requirements as established by the Department of the Army.
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Brigade Headquarters – GUIDANCE

General. The following guidance for application of the Brigade Headquarters (BDE HQ) portion of this Army Standard is provided for design agent use in coordination with the Garrison Directorate 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 US Army Corps of Engineers (USACE) designated Center of Standardization (COS) for BDE HQ. All BDE HQ 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 BOE HQ Facility Design Team (FDT), is the Army 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 BOE HQ 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 BDE HQ portion of this Army Standard represents the fourth 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 as defined by Not Less Than (NLT) and Not More Than (NMT) metrics. In some cases, a ceiling of acceptability is established by a Not to Exceed (NTE) value which establishes the maximum level of flexibility the Army will commit to without deviation or waiver request. Any deviation from this standard will equally consider the requested change as well as the implications on future requirements that are embedded herein and the potential impact of follow on or retrofit construction activities on readiness as well as the current situation.
3. The BDE HQ is a major warfighting 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 implement this Army Standard, guidance is provided to minimize or preclude functional and operational impacts on the BDE HQ 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. Additionally, BDE HQ Special Functions space provides critical reach operations or situational awareness for brigades assigned General Support or General Support Reinforcing alert ready-state missions. This assures brigades maintain constant contact and connectivity with units deployed so that unit critical mission environment changes, threats, or supporting functions are known. Vital strategic communications and

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preparation of follow-on forces assures units enter a threat environment prepared and ready thereby averting unnecessary loss of life or catastrophic mission failure when entering the theater or area of operations.

2. The BDE HQ portion of this Army Standard and the BDE HQ Army Standard Design ensures that primary facility and support structures will provide the desired adjacencies to meet Warfighter functional and operational requirements. For brigades who either deploy as whole brigades or deploy whole battalions in support of other brigades, the critical step in mission planning and rehearsal are the synchronization and coordination needed to change orders into action. These functions are practiced and rehearsed activities between the brigade and subordinate battalion staffs under Army Transformation doctrine and brigade centrality. Many Brigade Combat Teams and Functional brigades are no longer common mission centric were the brigade and its subordinate battalions are focused on the same mission parameters or even the same branch. In many cases, functions and tasks previously accomplished through integrated planning staffs at Divisional Command echelon have been delegated down to Brigade staffs. The integrated planning often affects several battalions within the brigade structure differently and therefore, integrated planning is imperative to mission success. As such, consolidation of certain types of brigades into a single structure is not only a mission planning and execution need, but a doctrinal need. Where those consolidations are supported by emerging or published doctrine, certain brigade types have been designated for consolidation with their subordinate battalions. When battalions maintain their autonomy, connectivity capabilities (SIPRNET) to habitually assigned or attached Brigade Task Force compositions with requisite secure (classified materiel access, physical/auditory/visual security) and non-secure space are also imperative by doctrine.

3. Critical to the operations conducted in the BDE HQ is the identification of secure data connectivity, access, and protection. Under brigade centrality, secure information formerly retained at Division Command echelon is now provided at Brigade and Battalion levels. This requires special handling and access controls not previously needed within a BDE HQ and transforms administration headquarters activities into operational headquarters activities. In order to meet this requirement, layered security access is used within the building starting immediately upon entry and progressively more difficult as activities transition to higher levels of security and classification. Hence, the BDE HQ is divided into Security Zones with increasing levels of physical, auditory, and visual security limitations.

4. Tables of Organization and Equipment (TOE) organizations. There are instances where BDE HQs are assigned additional mission responsibilities or equipment allocations tailored to the functional mission areas of the brigade. As such, the BDE HQ portion of this Army Standard was developed to address the space allocations of functional adjacencies that meet the basic mission requirements for a Brigade Combat Teams. However, specialized brigades may require additional space considerations and are reviewed on an individual, case-by-case basis ICW the BDE HQ COS and BDE HQ FDT. While the spatial and functional relationships remain relatively common under Army Modular Forces constructs, the scale and magnitude of technology insertion differs. Therefore, BDE HQ GSF thresholds are based on a banding or grouping of fully staffed supported (e.g., Objective Table of Organization and Equipment (OTOE)). Delineation of space Allowances and the Basis of Allocation used to band BDE HQ sizes is further adjusted based on SCIF requirements and vehicles needed to fully operate a SCIF.

5. Two fundamental concerns have resulted in the development and use of the Army Warfighter Validation Process. First, are the evolving requirements for mission 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 with Functional and Support Brigades, an automated and manual verification process is used to determine actual requirements. The majority of the process is based on computer algorithms and formulas based on this Army Standard and applied to specific UICs periodically to verify Army Standard metrics validity to operational, functional and readiness metrics. Once a base of calculation of space allowances has been completed, a manual verification is conducted by the FDT with various ARSTAF proponents, material PEOs and PMs, and TRADOC schools and centers. COS Post Occupancy reviews are conducted parallel to this activity as another manual verification process. Clarification and adjudication are accomplished within the authorizations of this Army Standard with discrepancies or issues forwarded to the BDE HQ FDT Co-Chairs for further deliberation, adjudication is accomplished within the authorizations of this Army Standard with discrepancies or issues forwarded to the BDE HQ FDT Co-Chairs for further deliberation, adjudication, or recommendations for higher authority review.

6. The BDE HQ Army Standard continues to simultaneously resolve past issues, current needs, and the capability to accommodate future requirements without the need for new construction thereby reducing construction disruption on readiness activities.

Specific MILCON Transformation Design Considerations:

- Maximize 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
- Prefabricated construction components and/or modular construction that satisfies facility durability and functional requirements

Application Guidance.

1. Facilities covered in this standard may have functional elements included in category codes 14161 (Brigade Operations Center), 14162 (Sensitive Compartmented Information Facility), 17119 (Classrooms) and 13115 (Information systems facility) or related category codes. The functional elements as incorporated, do not conflict with facilities consolidation mandatory criteria.

2. Brigade Operations Complex Composition: The brigade operations complex is not limited to just the Brigade and Battalion Headquarters. It consists of several facility types which include: Company Operations Facility; Vehicle Maintenance Facility; Organizational Storage; General Purpose Administration; Organizational Vehicle Parking. The brigade operations complex site considers the overall site layout, existing facilities and proximity benefits.

3. Brigade Headquarters: There are five standard size facilities. The Army Standard was developed based on staffing below; however, the number is subject to change based on mission updates. The following table provides a relative comparison of BDE HQ size and typical or habitual units which would use them. It is neither all-inclusive nor all encompassing and is illustrative in nature ONLY.

SIZE	CAPACITY	DESCRIPTION: TYPICAL USING ACTIVITY
Extra-Large	Above 225 PN	Sustainment Brigade (SB)
Large	201-224 PN	Battlefield Surveillance Brigade (BFSB)

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		Brigade Combat Team (BCT)
		Combat Support Brigade (CSB)
Medium	174-200 PN	Fires Brigade (FB)
Small	107-173 PN	Combat Aviation Brigade (CAB)
Extra-Small	Up to 106 PN	Legacy Brigades (Primary "A" and "L" Series) and Smaller CSS "F" and "G" Series Brigades

Green Grass: "Green Grass" is where the master plan is to construct the entire Brigade and Battalion Headquarters in a consolidated single building as outlined below. It is mandatory as outlined in the Army Standard mandatory criteria.

Infill: "Infill" is where the master plan is utilizing existing facilities along with constructing new facilities to meet the mission requirement. In this situation, a consolidated Brigade and Battalion outlined in the Army Standard mandatory criteria.

Adjacencies: Considered nearest in space or position; immediately adjoining without intervening space. Typically, there is a common boundary or edge, however there may be space between when several services have competing requirement to be adjacent.

4. Gross Area Calculation: Gross floor areas depicted in the "Mandatory Criteria" reflect a change towards counting all space at the actual floor area despite previous guidance in TI800-01 for considering some space at one-half the actual floor area. This change reflects the goal to go Industry Standards which does not distinguish between half space and full space. The Gross Area Calculation is not meant to change how the Army programs, tracks, or calculates gross area. Facility gross area conversions to account for half-space are available upon request.

5. Site Selection and Planning: Consolidated BDE-BN HQ shall use the Brigade Combat Team (BCT), Combat Aviation Brigade, Military Intelligence Brigades, Signal Brigades, Battlefield Surveillance Brigades, and Sustainment Brigades as delineated in the Design Philosophy above. This standard is used when technical or topographic constraints outweigh the functional requirements cited above; or precludes using a single, contiguous brigade planning block; and the higher life cycle cost of multiple buildings outweighs their use; or the functional requirements necessitate using a standalone BDE HQ building.

6. Physical Security: Physical security requirements are defined within the Standard Design. The criteria may change due to technological advancements. The mandatory criteria intent is to ensure each facility constructed incorporates the need for physical security.

7. Primary Facility (Special Functions Space):

Brigade Operations Center (BOC): The BOC is similar to an emergency operations center in a local city or county and provides for interdisciplinary collaboration by specialists from the various staff elements. It is a secure area with restricted access. It has workstations connected to all critical networks that are manned by representatives of the various staff agencies. In addition to the main floor, the BOC may provide areas adjacent to the floor for smaller collaborative meetings. The BOC is primarily managed by the S-3 staff and should be readily accessible to the section. It should be isolated from non-operational traffic to the extent possible. It should have access to a loading area to assist in transferring equipment to vehicles or trailers during deployments.

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Network Operations Center (NOC): The NOC is the area where S-6 personnel and personnel from supporting activities perform network control operations. 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.

Secure Communications Room: A minimum of 25 percent of all staff in each headquarters will require Secure Internet Protocol Routing Network access, installed in accordance with provisions of Technical Guide for the Integration of SIPRNET.

Secure Document Storage: Provide classified files secure document storage in accordance with requirements in AR 380-5.

8. Primary Facility (Administrative Support Space):

Private Offices: The Army Standard Mandatory Criteria identify the private offices common every Brigade and Battalion Headquarters respectively. The USACE Standard Design will further refine the additional private offices based on the unit mission. Additional private offices are acceptable without waiver based on unit specific mission, provided Programmed Amount (PA) and GSF are not exceeded.

Staff Duty Section: A designated reception area used to control access.

9. POV Parking: POV Parking space will be provided for IAW AR 405-70.

10. Telecommunication Spaces. Telecommunication spaces shall be designed in accordance with TIA/EIA-569-B and the Information Infrastructure Architecture (I3A) Technical Guide. A minimum of one Telecommunication 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 TER/Computer Rooms are sized based on the building configuration and operational security requirements as determined by the appropriate engineering and certification authority. Telecommunication 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.

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

Data Outlets: 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., SIPRNET, secure voice, and secure VTC). 100% of all offices in the Command Group 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).

Building Connectivity: Outside plant connectivity shall be provided in accordance with the Army I3A guidance. The BDE HQ shall be connected with fiber optic cabling sized to support the

common user systems. For planning purposes, 48 strands of single mode fiber shall provide connectivity to the installation fiber backbone. A minimum of 12 strands of single mode fiber shall be used between the Telecommunications Equipment Rooms (TER) and the Telecommunications Room (TR) for each classification level. Adjustments will be made during actual project design development.

Infrastructure: 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)
- 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.

Battalion Headquarters – GUIDANCE

General. The following guidance for application of the Battalion Headquarters (BN HQ) portion of the Army Standard is provided for design agent use in coordination with the Garrison Directorate 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 US Army Corps of Engineers (USACE) designated Center of Standardization (COS) for BN HQ. All BN HQ 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 BN HQ Facility Design Team (FDT), is the Army 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 BN HQ portion of 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 BN HQ portion of the Army Standard represents the third 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 as defined by Not Less Than (NL T) and Not More Than (NMT) metrics. In some cases, a ceiling of acceptability is established by a Not to Exceed (NTE) value which establishes the maximum level of flexibility the Army will commit to without a deviation or waiver request. Any deviation from this standard will equally consider the requested change as well as the implications on future requirements that embedded herein and the potential impact of follow-on or retrofit construction activities on readiness as well as current situation.
3. The BN HQ is a major warfighter reach operations facility. 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 BN HQ 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. Additionally, BN HQ spatial relationships provide critical reach operations or situational awareness for battalions assigned General Support or General Support Reinforcing alert ready-state missions. This assures that battalions maintain constant contact and connectivity with units deployed so that critical mission environment changes, threats, or supporting functions are known. Vital strategic communications and preparation of follow-on forces assure units enter a threat environment prepared and ready thereby averting unnecessary loss of life or catastrophic mission failure when entering the theater or area of operations.
2. The BN HQ portion of the Army Standard and the Bn HQ Army Standard Design ensures that primary facility and support structures will provide the desired adjacencies to meet Warfighter functional and operational requirements. For battalions who deploy as whole units in support of other brigades, the critical step in mission planning and rehearsal is the synchronization and coordination needed to change orders into action. These functions are practiced and rehearsed activities between the brigade and supporting battalion staffs under Army Transformation doctrine and brigade centrality. Many Functional and Multi-Functional Brigades are no longer common mission centric where all battalions are focused on the same mission parameters or even the same branch. In many cases, functions and tasks previously accomplished through integrated planning staffs at Divisional Command echelon have been delegated down to brigade staffs. The integrated planning often affects several battalions within the parent brigade or even between units that comprise a Brigade Task Force (supported brigade and all attached separate battalions and companies). Therefore, integrated planning is imperative to mission success. As such, connectivity, collaborative (mission) planning space is not only a mission planning and execution need, but a doctrinal need. Where those consolidations are supported by emerging or published doctrine, certain brigade types have been designated for consolidation with their subordinate battalions. When battalions maintain their autonomy, connectivity capabilities (SIPRNET) to habitually assigned or attached Brigade Task Force compositions with requisite secure (classified materiel access, physical/auditory/visual security) and non-secure space is also imperative by doctrine.
3. Critical to the operations conducted in the BN HQ is the identification of secure data connectivity, access, and protection. Under brigade centrality, secure information formerly retained at Division Command echelon is now provided at Brigade and Battalion level. This requires special handling and access controls not previously needed within a Bn HQ and transforms administrative headquarters activities into operational headquarters activities. In order to meet this requirement, layered security access is used within the building starting immediately upon entry and progressively more difficult as activities transition to higher levels of security and classification. Hence, the BN HQ is divided into Security Zones with increasing levels of physical, auditory, and visual security limitations.
4. Tables of Organization and Equipment (TOE) organizations. There are instances where Bn

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HQ are assigned additional mission responsibilities or equipment allocations tailored to the functional mission area of the battalion. As such, the BN HQ portion of this Army Standard was developed to address the space allocations and functional adjacencies that meet the basic mission requirements for both a Brigade Combat Team and separate Battalions as the common building block for the Modular and Objective Force. However, specialized battalions may require additional space considerations and are reviewed on an individual, case-by-case basis ICW the BN HQ COS and BN HQ FDT. While the spatial and functional relationships remain relatively common under Army Modular Force constructs, the scale and magnitude of technology insertion differs. Therefore, BN HQ GSF thresholds are based on a banding or grouping of fully staffed battalions by mission/branch category IAW Army authorization documents for the organization supported (e.g., Objective Tables of Organization and Equipment (OTOE)). Delineation of space Allowances and the Basis of Allocation used to band BN HQ sizes are further adjusted based on co-location with parent brigade when consolidated into a single structure.

5. Two fundamental concerns have resulted in the development and use of the Army Warfighter Validation Process. First, are the evolving requirements for mission 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 with Functional and Multi-Functional Brigades, an automated and manual verification process is used to determine actual requirements. The majority of the process is based on computer algorithms and formulas based on this Army Standard and applied to specific UICs periodically to verify Army Standard metrics validity to operational, functional, and readiness metrics. Once a base calculation of space allowances has been completed, a manual verification is conducted by the FDT with various ARSTAF proponents, materiel PEOs and PMs, and TRADOC schools and centers. COS Post Occupancy reviews are conducted parallel to this activity as another manual verification process. Clarification and adjudication are accomplished within the authorizations of this Army Standard with discrepancies or issues forwarded to the BDE HQ FDT Co-Chairs for further deliberation, adjudication, or recommendations for higher authority review.

6. The BN HQ portion of this Army Standard continues to simultaneously resolve past issues, current needs, and the capability to accommodate future requirements without the need for new construction thereby reducing construction disruption on readiness activities.

Specific MILCON Transformation Design Considerations:

- Maximize 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
- Prefabricated construction components and/or modular construction that satisfies facility durability and functional requirements

Application Guidance.

1. Brigade Operations Complex Composition: The Brigade operations complex is not limited to just the Brigade and Battalion Headquarters. It consists of several facility types which include: Company Operations Facility; Vehicle Maintenance Facility; Organizational Storage; General

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Purpose Administration; Organizational Vehicle Parking. The brigade operations complex site considers the overall site layout, existing facilities and proximity benefits.

2. **Battalion Headquarters:** There are four standard size facilities. The Army Standard was developed based on staffing below; however, the number is subject to change based on mission updates. The following table provides a relative comparison of BN HQ size and typical or habitual units which would use them. It is neither all-inclusive nor all encompassing and is illustrative in nature ONLY.

Green Grass: "Green Grass" is where the master plan is to construct the entire Brigade and Battalion Headquarters in a consolidated single building as outlined below. It is mandatory as outlined in the Army Standard mandatory criteria.

Infill: "Infill" is where the master plan is utilizing existing facilities along with constructing new facilities to meet the mission requirement. In this situation, a consolidated Brigade and Battalion outlined in the Army Standard mandatory criteria.

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5. Physical Security: Physical security requirements are defined within the Standard Design. The criteria may change due to technological advancements. The mandatory criteria intent is to ensure each facility constructed incorporates the need for physical security.

6. Primary Facility (Administrative Support Space):

Private Offices: The Army Standard mandatory criteria identify the private offices common to every Battalion Headquarters. The USACE Standard Design will further refine the additional private offices based on the unit mission. Additional private offices are acceptable without waiver based on unit specific mission, provided Programmed Amount (PA) and GSF are not exceeded.

Staff Duty Station: A designated reception area used to control access.

7. POV Parking: POV parking space will be provided for 90% of all assigned staff.

8. Telecommunication Spaces. Telecommunication spaces shall be designed in accordance with TIA/EIA-569-B and the Information Infrastructure Architecture (I3A) Technical Guide. A minimum of one Telecommunication 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 TER/Computer Rooms are sized based on the building configuration and operational security requirements as determined by the appropriate engineering and certification authority. Telecommunication 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.

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

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Building Connectivity: Outside plant connectivity shall be provided in accordance with the Army I3A guidance. The BN HQ shall be connected with fiber optic cabling sized to support the common user systems. For planning purposes, 48 strands of single mode fiber shall provide connectivity to the installation fiber backbone. 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. Adjustments will be made during actual project design development.

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

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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:

- Architectural Barriers Act (ABA) Accessibility Standards for Department of Defense Facilities
- Energy Policy Act 2005 (EPACT05)
- IBC – International Building Code

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- NFPA - 101 Life Safety Code
- AR 380-5, Department of Army Information Security Program
- 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
- Intelligence Community Directive 705
- UFC 1-200-01, Design: General Building Requirements
- UFC 1-200-02, High Performance and Sustainable Building Requirements
- 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
- Standard Definitive Design for Brigade and Battalion Headquarters (BDE HA /BN HQ)
- ETL 1110-3-491, Sustainable Design for Military Facilities
- D/CID 6/4, Personnel Security
- SNSSAM TEMPEST/1-13 Red / Black Installation Guidance
- CNSS 7003 Protected Distribution Systems (PDS)