

UNIFIED FACILITIES CRITERIA (UFC)

ADMINISTRATIVE FACILITIES



APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

UNIFIED FACILITIES CRITERIA (UFC)

ADMINISTRATIVE FACILITIES

Any copyrighted material included in this UFC is identified at its point of use.

Use of the copyrighted material apart from this UFC must have the permission of the copyright holder.

Indicate the preparing activity beside the Service responsible for preparing the document.

U.S. ARMY CORPS OF ENGINEERS

NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND (Preparing Activity)

AIR FORCE CIVIL ENGINEER CENTER

Record of Changes (changes are indicated by \1\ ... /1/)

Change No.	Date	Location
1	15 April 2021	2-3.2.3 to 2.3.2.13 reordered paragraphs; 4-2.4 to 4-2.6; new planning guidance on telework and workstation sharing. Edits to Table 4-3, 4-4, 4-5, and 4-26; new Table 4-24 Focus Room; A-2.1. Tables were reordered to group similar spaces. Editorial changes throughout.

This UFC supersedes UFC 4-610-01, dated 6 May 2008, with Changes 1-2 dated 21 May 2014.

FOREWORD

The Unified Facilities Criteria (UFC) system is prescribed by MIL-STD 3007 and provides planning, design, construction, sustainment, restoration, and modernization criteria, and applies to the Military Departments, the Defense Agencies, and the DoD Field Activities in accordance with [USD \(AT&L\) Memorandum](#) dated 29 May 2002. UFC will be used for all DoD projects and work for other customers where appropriate. All construction outside of the United States is also governed by Status of Forces Agreements (SOFA), Host Nation Funded Construction Agreements (HNFA), and in some instances, Bilateral Infrastructure Agreements (BIA). Therefore, the acquisition team must ensure compliance with the most stringent of the UFC, the SOFA, the HNFA, and the BIA, as applicable.

UFC are living documents and will be periodically reviewed, updated, and made available to users as part of the Services' responsibility for providing technical criteria for military construction. Headquarters, U.S. Army Corps of Engineers (HQUSACE), Naval Facilities Engineering Systems Command (NAVFAC), and Air Force Civil Engineer Center (AFCEC) are responsible for administration of the UFC system. Defense agencies must contact the preparing service for document interpretation and improvements. Technical content of UFC is the responsibility of the cognizant DoD working group. Recommended changes with supporting rationale may be sent to the respective DoD working group by submitting a Criteria Change Request (CCR) via the Internet site listed below.

UFC are effective upon issuance and are distributed only in electronic media from the following source:

- Whole Building Design Guide web site <http://www.wbdg.org/ffc/dod>.

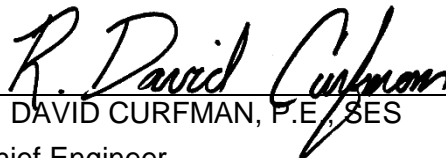
Refer to UFC 1-200-01, *DoD Building Code*, for implementation of new issuances on projects.

AUTHORIZED BY:



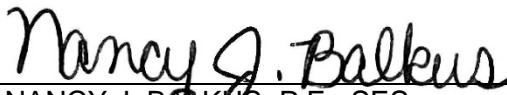
CHRISTINE T. ALTENDORF, PhD, P.E.,
SES

Chief, Engineering and Construction
U.S. Army Corps of Engineers



R. DAVID CURFMAN, P.E., SES
Chief Engineer

Naval Facilities Engineering Systems Command



NANCY J. BALKUS, P.E., SES

Deputy Director of Civil Engineers
DCS/Logistics, Engineering &
Force Protection (HAF/A4C)
HQ United States Air Force



MICHAEL McANDREW

Deputy Assistant Secretary of Defense
(Construction) and Acting Deputy Assistant
Secretary of Defense (Housing) Office of the
Assistant Secretary of Defense (Sustainment)

**UNIFIED FACILITIES CRITERIA (UFC)
REVISION SUMMARY SHEET**

Document: UFC 4-610-01, *Administrative Facilities*

Superseding: UFC 4-610-01, *Administration Facilities*, dated 6 May 2008, with Changes 1-2, dated 21 May 2014

Description: This UFC provides planning and design criteria for Administrative Facilities. It outlines methods of space allocation and typical functional spaces to accommodate the executive and staff functions of an installation or particular organization.

Reasons for Document:

- To provide a unified approach to effectively planning, allocating space and designing, administrative facilities with updated methodologies and technologies, and incorporate the integrated design process.

Impact:

The following direct benefits will result from publication, revision and change of the UFC.

- More consistency in the design of administrative facilities with better work environments for higher productivity, efficiency and worker satisfaction.
- Lower initial cost due to better coordination and design efficiency.
- Lower Life cycle cost due to more refined definition of requirements.
- Easier, more efficient maintenance.
- Better safety and security.

Unification Issues:

- Each Service has specific planning, location and space programming requirements
- The Navy and Marine Corps have specific requirements for Austere Administrative Facilities. See Appendix B.

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION	1
1-1 BACKGROUND.	1
1-2 PURPOSE AND SCOPE.	1
1-3 APPLICABILITY.	1
1-3.1 Users of this Document.	1
1-4 GENERAL BUILDING REQUIREMENTS.	2
1-5 CYBERSECURITY.	2
1-6 AUSTERE ADMINISTRATIVE FACILITIES (NAVY ONLY).	2
1-7 GLOSSARY.	2
1-8 REFERENCES.	2
CHAPTER 2 PLANNING AND PROGRAMMING	3
2-1 SCOPE OF FACILITY.	3
2-2 LOCATION DETERMINANTS.	3
2-3 ADMINISTRATIVE SPACE TYPES.	3
2-3.1 Administrative Personnel.	3
2-3.2 Administrative Support Spaces.	4
2-3.3 Assembly Spaces.	6
2-3.4 Equipment and Storage Spaces.	7
2-3.5 Secure Spaces.	8
2-4 SPACE PLANNING PROGRAM.	8
2-4.1 Circulation.	9
CHAPTER 3 GENERAL DESIGN CRITERIA.	11
3-1 BUILDING CONFIGURATION AND LAYOUT.	11
3-1.1 Building Core.	11
3-1.2 Floor Depth.	11
3-1.3 Structural Bay Spacing.	11
3-2 ARCHITECTURE AND INTERIOR DESIGN.	12
3-2.1 Exterior Design.	12
3-2.2 Entrance.	12
3-2.3 Windows and Natural Lighting.	13
3-2.4 Raised Access Floor Systems.	13
3-2.5 Demountable and Operable Partitions.	13

3-2.6	Interior Signage.	13
3-2.7	Interior Design and Finishes.	13
3-2.8	Acoustics.	14
3-2.9	Technology and Connectivity.	14
3-2.10	Ergonomics.	15
3-3	TELECOMMUNICATIONS.	15
3-4	ELECTRONIC SECURITY SYSTEMS (ESS).	15
3-5	ALTERATIONS TO EXISTING FACILITIES.	15
CHAPTER 4	SPECIFIC DESIGN CRITERIA.	17
4-1	DESIGN AND SPACE PLANNING.	17
4-1.1	Recognizing and Planning for Different Work Modes.	17
4-1.2	Zoning Work Activities.	18
4-1.3	Choice of Workspace.	18
4-2	SPACE UTILIZATION AND MANAGEMENT.	19
4-2.1	Right-Sizing Spaces and Circulation.	19
4-2.2	Flexibility and Modularity.	19
4-2.3	Multi-Purpose Uses.	20
4-2.4	Teleworking, Office and Workstation Sharing.	20
4-2.5	Office and Workstation Sharing.	21
4-2.6	Hoteling.	21
4-2.7	Command Suite.	21
4-3	FUNCTIONAL DATA SHEETS.	22
4-3.1	Interior Construction/Built-in Equipment.	22
4-3.2	Furnishings and Equipment.	22
4-3.3	Table Format and Usage.	22
APPENDIX A	BEST PRACTICES.	83
A-1	BUILDING CONFIGURATION AND LAYOUT.	83
A-2	SPACE PLANNING AND OFFICE DESIGN.	85
APPENDIX B	AUSTERE ADMINISTRATIVE FACILITIES (NAVY ONLY).	87
B-1	PURPOSE.	87
B-2	DEFINITION AND SCOPE.	87
B-3	APPLICABILITY.	87
B-4	MODIFICATIONS.	87

APPENDIX C GLOSSARY	101
C-1 ACRONYMS AND ABBREVIATIONS.	101
APPENDIX D REFERENCES.....	105

FIGURES

Figure 3-1 Sample Building Layout.....	12
Figure 4-1 Zoning Work Activities.....	18
Figure 4-2 Choice of Workspace	19
Figure A-1 Circulation Case Study 0/100	84
Figure A-2 Circulation Case Study 33/67	84
Figure A-3 Circulation Case Study 80/20	85
Figure A-4 Circulation Case Study 100/0	85

TABLES

Table 4-1 Private Office.....	22
Table 4-2 Semi-Private Office.....	25
Table 4-3 Open Office – Full Time Staff.....	27
Table 4-4 Private Flex Office	29
Table 4-5 Open Office – Flex Staff	31
Table 4-6 Vestibule.....	33
Table 4-7 Reception and Waiting	35
Table 4-8 Mail Center	37
Table 4-9 Shipping and Receiving.....	38
Table 4-10 Trash and Recycling Room.....	40
Table 4-11 Large Format Production Room.....	42
Table 4-12 Break Room.....	44
Table 4-13 Break Area.....	46
Table 4-14 Nursing Mothers Room	48
Table 4-15 Toilet Room	50
Table 4-16 Janitor’s Closet.....	53
Table 4-17 Locker Room.....	55

Table 4-18	Shower Room.....	57
Table 4-19	Fitness Room.....	59
Table 4-20	Auditorium.....	61
Table 4-21	Classroom/Training Room.....	63
Table 4-22	Conference/Training Room.....	65
Table 4-23	Team/Collaboration Room.....	67
Table 4-24	Focus Room.....	69
Table 4-25	General Filing and Storage Room.....	71
Table 4-26	Technical Equipment Room.....	73
Table 4-27	Controlled Entry/Quarterdeck.....	75
Table 4-28	Secure Visitor Space.....	77
Table 4-29	SCIF.....	79
Table 4-30	Vault Room.....	81
Table B-1	Austere Private Office (Replaces Table 4-1).....	89
Table B-2	Austere Open Office (Replaces Table 4-3).....	91
Table B-3	Austere Toilet Rooms (Replaces Table 4-8).....	93
Table B-4	Austere Janitor’s Closet (Replaces Table 4-9).....	95
Table B-5	Austere Classroom/Training Room (Replaces Table 4-17).....	97
Table B-6	Austere General Filing and Storage Room (Replaces Table 4-22).....	99

CHAPTER 1 INTRODUCTION

1-1 BACKGROUND.

An Administrative Facility is a building or portion of a building in which the administrative affairs of a military establishment are conducted. It accommodates the executive and staff functions of an installation or particular organization. The functions performed in an Administrative Facility may include logistics, personnel management, and in some cases, operational functions classified in other category codes.

1-2 PURPOSE AND SCOPE.

This UFC provides requirements for evaluating, planning, and designing basic Administrative Facilities for all new construction projects to include additions, alterations, and renovation projects in the continental United States (CONUS) and outside the continental US (OCONUS). Program and design these facilities to enhance the mission or organizational functions. In addition, design administrative spaces to be flexible, cost-effective, and create an atmosphere that increases morale, productivity, and collaboration.

1-3 APPLICABILITY.

This UFC applies to all military service elements, civilians, and contractors involved in the design and construction of Administrative Facilities, including the procurement of design-build services for the above-noted projects. For Army projects, in the event of a conflict between this UFC and an applicable Army standard design, the criteria in the Army standard design will take precedence.

When administrative space represents a portion of a larger building, this UFC applies only if administrative functions are performed in that space and no other specific criteria addresses the function. Administrative office space provided within an operational facility, such as a warehouse or a recreational facility, is planned under the category code of the primary facility. For example, space in a general warehouse that is partitioned off and assigned to a clerk for administrative duties associated with that warehouse, is planned as warehouse space and is not governed by this UFC.

1-3.1 Users of this Document.

1-3.1.1 Planning/Programming Personnel.

Planning and programming personnel will use the UFC for pre-design planning or to assess the extent of improvements required in an existing facility in order to achieve the standard established herein.

1-3.1.2 Architects, Engineers, and Interior Designers.

Professional architects, engineers, and interior designers will provide design services under the direction of the individual design agencies and this UFC.

1-3.1.3 Service-specific Users and Distribution of Responsibilities.

When Service criteria varies from standard criteria, it is noted in the text as a “Service Exception” or a “Service-specific” criteria.

Since numerous and different program offices and functions may be housed in Administrative Facilities, refer to the appropriate overseeing program office for the specific users and distribution of responsibilities to be housed in the facility. For more general planning questions, refer to the following Service-specific governing documents:

- **Army.** AR 405-70
- **Navy and Marine Corps.** FC 2-000-05N
- **Air Force.** AFMAN 32-1084

1-4 GENERAL BUILDING REQUIREMENTS.

Comply with UFC 1-200-01, *DoD Building Code*. UFC 1-200-01 provides applicability of model building codes and government unique criteria for typical design disciplines and building systems, as well as for accessibility, antiterrorism, security, high performance and sustainability requirements, and safety. Use this UFC in addition to UFC 1-200-01 and the UFCs and government criteria referenced therein.

1-5 CYBERSECURITY.

All control systems (including systems separate from an energy management control system) must be planned, designed, acquired, executed, and maintained in accordance with UFC 4-010-06, and as required by individual Service Implementation Policy.

1-6 AUSTERE ADMINISTRATIVE FACILITIES (NAVY ONLY).

APPENDIX B contains requirements for Administrative Facilities that are specifically designated as “austere”. Austere construction is intended for facilities in locations determined by CNIC and approved by OPNAV to be eligible for austere construction. The austere standards are intended to be applied flexibly and in varying degrees to all facilities at locations designated as austere. Allow flexibility to ensure the criteria are appropriate for individual austere locations.

1-7 GLOSSARY.

APPENDIX C contains acronyms and abbreviations.

1-8 REFERENCES.

APPENDIX D contains a list of references used in this document. The publication date of the code or standard is not included in this document. Unless otherwise specified, the most recent edition of the referenced publication applies.

CHAPTER 2 PLANNING AND PROGRAMMING

2-1 SCOPE OF FACILITY.

This chapter establishes space planning and programming criteria and assignment guidelines for administrative facilities. These parameters assist in designing facilities to enhance the main mission or functions of an organization and increase morale, productivity, and collaboration. Additional design considerations include flexibility, initial cost, life cycle costs, and ease of maintenance.

2-2 LOCATION DETERMINANTS.

Determine facility location in accordance with the installation land use plan and/or Installation Development Plan and the following Service-specific planning documents.

- **Army.** UFC 2-100-01
- **Navy.** UFC 2-100-01
- **Air Force.** AFI 32-1015
- **Marine Corps.** MCO P11000.12C

2-3 ADMINISTRATIVE SPACE TYPES.

An Administrative Facility is planned to accommodate general administrative personnel space, support and special purpose spaces, circulation, and building core spaces. An Administrative Facility may contain more than one organization with different functional and space needs. Space requirements must be calculated for each organization and for shared spaces between the organizations.

The following space types are described functionally and may be organized or categorized differently than the Service specific planning guides. Plan and design in accordance with the following Service-specific planning criteria.

- **Army.** AR 405-70
- **Navy-Marine Corps.** FC 2-000-05N
- **Air Force.** AFMAN 32-1084

2-3.1 Administrative Personnel.

Administrative personnel require private offices, open office space, or flexible office space. Allocate space based on the personnel position and functional requirements. For example, if personnel are rarely in the office, or work remotely through a telework agreement three or more days a week, they may be located in a Flex Office or Open Office Flex Workstation. If they have a high level of interaction with others in the office, and require visual and acoustic privacy, they may be placed in a private office with conferencing space or in a private office adjacent to conferencing space. Semi-Private

Office spaces are useful for personnel whose positions do not warrant a Private Office, or may be used for a special team requiring separation from open office areas.

2-3.2 Administrative Support Spaces.

Administrative Support spaces include all office functions not included in personnel office space. Some of these spaces could be shared between multiple administrative organizations within a facility.

The design approach can consolidate some of these functions in a central area within an organization, spread them throughout the organization in a decentralized arrangement, or use some combination of these approaches. The relationship requirements of support to the administrative function must be carefully considered prior to determining the design approach. Space allocations for some of these functions are derived based on the number of staff within an organization.

2-3.2.1 Vestibule.

A building entrance vestibule both helps mitigate temperature differences between the indoor and outdoor environment and provides an area where people entering the building can wipe their feet on an appropriate surface.

2-3.2.2 Reception and Waiting Areas.

Reception and waiting areas are planned for organizations where outside visitors come to meet with personnel within the organization. The size and type of the organization and its function will determine the of reception and waiting areas requirements. The area may be staffed or just provide seating for visitors. To accommodate security concerns, the area may have intercom requirements for contact into the organization or locker requirements for cellphones or other electronic devices to be secured.

2-3.2.3 Mail Center.

This space accommodates processing and distribution of the facility's incoming and outgoing mail and parcels. It may accommodate screening requirements. Ensure adequate storage and work area to include mail sorting stations, packaging material, postage machines, scales, storage for materials, and workspace. Mailrooms may be staffed and include workstation(s). The mailroom must be adjacent to and provide direct access to the shipping/receiving area. Consult with the appropriate Installation authority to determine how mail is delivered, inspected and sorted to determine the mailroom size, design and safety requirements

2-3.2.4 Shipping and Receiving.

This area accommodates loading and unloading of a wide variety of supplies and services necessary for the operation of the facility. Material may be stored on pallets in open areas or on pallet racks. Plan for workbenches, packaging equipment, charging stations, and pallet lifts or forklifts. It includes an exterior entrance located for easy access by delivery trucks and may include a loading dock. This entrance must not be

visible from the building's main entrance. In multistory structures, shipping/receiving must have direct access to a freight elevator. Ensure the width, depth, and height of the bays accommodate the trucks that can be reasonably anticipated for the specific location and the shipping and receiving functions within the facility.

2-3.2.5 Trash and Recycling Room.

This interior room provides a central collection point for trash and recyclable materials such as glass, plastic, aluminum, and paper. The main trash/recycling area is adjacent to the shipping/receiving area where recyclables from the floors can be consolidated and stored for pick-up. In multistory buildings, locate remote trash/recycling areas adjacent to break rooms, copy rooms, vending, and other similar areas. Locate containers such that they do not interfere with required egress widths.

2-3.2.6 Large Format Production Room.

This room provides space for large-format production equipment such as large, high capacity copiers and printers, plotters, and scanners. It includes work surfaces to handle the material and storage cabinets for associated paper, toner and other printing materials. Consider indoor air quality and HVAC requirements based on type and size of equipment.

Design the room to be conducive to computer-based design work and have space for document production and pallet-based paper storage. Incorporate double doors to accommodate movement of pallets of equipment and supplies. The room must be enclosed with partitions which extend from finished floor to the structure above. Provide acoustical treatment.

2-3.2.7 Break Rooms.

Breakrooms provide staff-only space for dining and breaks, minimal food preparation and often vending. Consider the size of the organization when planning space for refrigerators, microwaves, coffee makers, or other appliances. Ensure appropriate utilities for appliances. Some breakrooms are enclosed and require space for comfortable tables and chairs. These spaces can also be utilized as casual meeting space if necessary. Some break areas are unenclosed with fewer amenities, such as those in an open office or flex space, or within spaces designated for teleworkers who occasionally work from the office.

2-3.2.8 Nursing Mothers Room.

Nursing Mothers rooms must be in a safe area accessible to all, shielded from view, and in close proximity to the toilets in a facility. Consideration must be given to acoustics with respect to adjacent spaces. The size of the organization or facility will determine if multi-station lactation rooms are required. Reference GSA PBS-P100 and ECB 2019-4 for multi-station lactation room requirements.

2-3.2.9 Toilets.

Toilets and restrooms can be located within an organization's space with the locker room, shower room, and nursing mothers room. They can also be accessible only from within the organization's perimeter, as opposed to public restrooms being accessible as part of the building core.

2-3.2.10 Janitor's Closet.

A janitor's closet accommodates equipment and supplies, mop basin, mop rack, and shelving. This closet can be located within an organization's space with the toilets, locker room, shower room, and nursing mother's room. It can also be accessible only from within the organization's perimeter, as opposed to being publicly accessible as part of the building core.

2-3.2.11 Locker Room.

Locker rooms are provided for organizations with 24-hour/7-day operations, to support physical training requirements and security personnel. They provide storage space for personal items and change of clothes.

2-3.2.12 Shower Room.

A shower room is planned when a facility does not have access to a fitness facility or has 24-hour/7-day operations. The number of showers is determined by the number of personnel. Shower rooms are usually adjacent to locker rooms and toilets.

2-3.2.13 Fitness Room.

Small Fitness rooms can be planned for administrative facilities not located near Fitness Centers. These spaces must be in areas accessible to all and in close proximity to locker and shower facilities.

2-3.3 Assembly Spaces.

Assembly spaces include auditoriums, conference rooms, training rooms, team rooms, breakrooms, and open collaboration spaces.

2-3.3.1 Auditoriums.

Auditoriums accommodate 50 or more people for large presentations and include a tiered floor with fixed seating and a stage or raised platform. Accommodate built-in presentation equipment, a sound system, and specialized lighting. An auditorium must be enclosed with partitions that extend from the finished floor to the structure above. Include the services of specialized engineering disciplines to address issues of lighting, acoustics, audiovisual systems, and other technology requirements. Include these consultants as part of the design team when auditoriums are required in administrative office buildings.

2-3.3.2 Conference, Classrooms and Training Rooms.

Conference rooms, classrooms, and training rooms provide space for meetings, briefings and training. When planning these spaces, consider acoustic privacy, social distancing and visibility requirements, as well as audiovisual and technology requirements. These spaces may be grouped together as a centralized conference center and be isolated from quiet areas within the office space.

A classroom/training room may be planned for general training or dedicated for computer training. The classroom/training room accommodates a flexible arrangement of settings for many uses. The computer training room includes dedicated computer workstations in a more fixed arrangement. Plan for built-in projector and projector screen, or multiple monitors as indicated by the audio-visual requirements.

2-3.3.3 Team/Collaboration Areas.

Team rooms and open collaborative areas strategically placed in an office plan can be useful for casual, unscheduled impromptu meetings and collaboration. Meeting styles can range from the stand-up/touch down high-top tables and stools to low comfortable lounge seating. Include technology connectivity and acoustic design requirements in these spaces. Small team/collaboration areas can also be used for alternate work areas to support an occasional influx of teleworkers within the office environment.

2-3.4 Equipment and Storage Spaces.

2-3.4.1 General Filing and Storage Room.

This space can be open or closed space for an organization's office supplies and equipment storage, day locker storage, conference room equipment (chairs and tables) and AV storage, lecterns, and other mobile presentation items. Group files, technical libraries, and similar materials are those not included in private offices or within workstations.

2-3.4.2 Archival Storage.

Archival storage is for retention of various types of records specific to an organization's mission or functions performed. It may have letter or legal file cabinets, flat files, or high-density filing systems. This is a different type of space than a general filing and storage room or filing and storage incorporated into offices and workstations. Depending on the type of material and the timeframe it is to be stored, these spaces may require specialized climate control, fire protection, and ESS controls. Reference FC 4-760-10N for archival storage requirements.

2-3.4.3 Computer Room.

Plan computer rooms to accommodate an organization's servers or LAN cabinets, and associated mechanical, electrical, and data design requirements. Coordinate the planning and design with the appropriate IT personnel.

2-3.4.4 Technical Equipment Room.

Plan this space to accommodate the organization's technical equipment requirements, including mechanical, electrical, and data. For example, it may accommodate equipment charging stations and check-in and check-out functions for government provided equipment. Plan space to be located near technology support personnel when applicable. Plan space for queuing and circulation for personnel and equipment when applicable.

2-3.5 Secure Spaces.

2-3.5.1 Controlled Entry/Quarterdeck.

A controlled entry area or quarterdeck may be required for secure facilities to allow for orderly check-in and check-out. The entry control area provides for one entry and one exit channel adjacent to one or more security watch stations. A security watch station is usually adjacent to house a security officer(s) and security system equipment.

2-3.5.2 Secure Storage.

A secure storage room provides lockable space to store sensitive or high value items. Size and furnish the room appropriately to accommodate the specific organizational requirements.

2-3.5.3 Secure Visitor Space.

A secure visitor space may be required for secure facilities where individuals must be separated from the organization awaiting an interview or an escort.

2-3.5.4 Sensitive Compartmented Information Facilities (SCIF).

A SCIF is an accredited area, room, group of rooms, buildings, or installation where sensitive compartmentalized information is stored, used, discussed, and/or electronically processed.

2-3.5.5 Vault Room.

A secure storage and workspace for classified materials may include storage and file cabinets, worktables, and workstations for staff. This space will likely have secure networks, hardware and construction requirements specific to the organization's function or mission; however, it may not be accredited.

Depending on the level of classification, refer to requirements for classified facilities requiring more stringent security requirements and specific design guidance such as Open Storage Secret (OSS), Sensitive Compartmented Information Facility (SCIF), Special Access Program Facilities (SAPF), and Top Secret/Sensitive Compartmented Information (TS/SCI).

2-4 SPACE PLANNING PROGRAM.

A space planning program can be calculated in general terms based on the number of occupants or based on a detailed accounting of each type of personnel space and support space. Space planning programs should take into account job-sharing programs, office/workstation sharing, and out-of-office remote working through telework agreements when approved by the Command. The stage in the process of planning and design determines the level of detail required for calculating the space program. Refer to the following for Service-specific criteria.

- **Air Force**, AFMAN 32-1084
- **Army**, AR 405-70
- **Navy and Marine Corps**, FC 2-000-05N

A space program can be developed through use of an interactive spreadsheet to serve as a baseline for the planning team. This spreadsheet is available as a downloadable Microsoft® Excel file from the Whole Building Design Guide (WBDG) website: <https://www.wbdg.org/ffc/dod/unified-facilities-space-program-sustainability-spreadsheets>.

2-4.1 Circulation.

Building design must allocate for primary circulation space in the building core and secondary circulation space as determined by the interior configuration of personnel and support /special spaces. Plan for secondary circulation in and around the private offices, open office space, flex space, and the administrative support and special spaces. A higher secondary circulation factor is required when there is more open office space and less private office or enclosed space. The General Services Administration (GSA) has conducted studies to determine the circulation required when utilizing open office design versus private office configurations. Refer to Appendix A for examples for planning circulation based on building layout and configuration.

This Page Intentionally Left Blank

CHAPTER 3 GENERAL DESIGN CRITERIA

3-1 BUILDING CONFIGURATION AND LAYOUT.

Building size, shape, and area-to-perimeter ratio have a direct impact on the cost and efficient space utilization of the facility, and these aspects must be considered during planning and design. A simple shape with an efficient structural layout and a high area-to-perimeter ratio yields the most economical and flexible facility.

Limit permanent interior partitions to those required for building core elements, private offices and special purpose spaces to allow flexibility in reconfiguration. Critical elements of an efficient layout include the design of the building core, the dimensions of floor depth and bay spacing, and the workstation design and layout.

3-1.1 Building Core.

The building core may include the following elements: vestibules; lobbies; passenger and freight elevators; primary corridors; stairs; toilets and restrooms; telephone, telecom, and electrical rooms; custodial closets; vending rooms; and mechanical rooms. Typically, these spaces are centralized and/or stacked in a building to provide greater efficiency in floor-plan layout, design, and utility distribution.

3-1.2 Floor Depth.

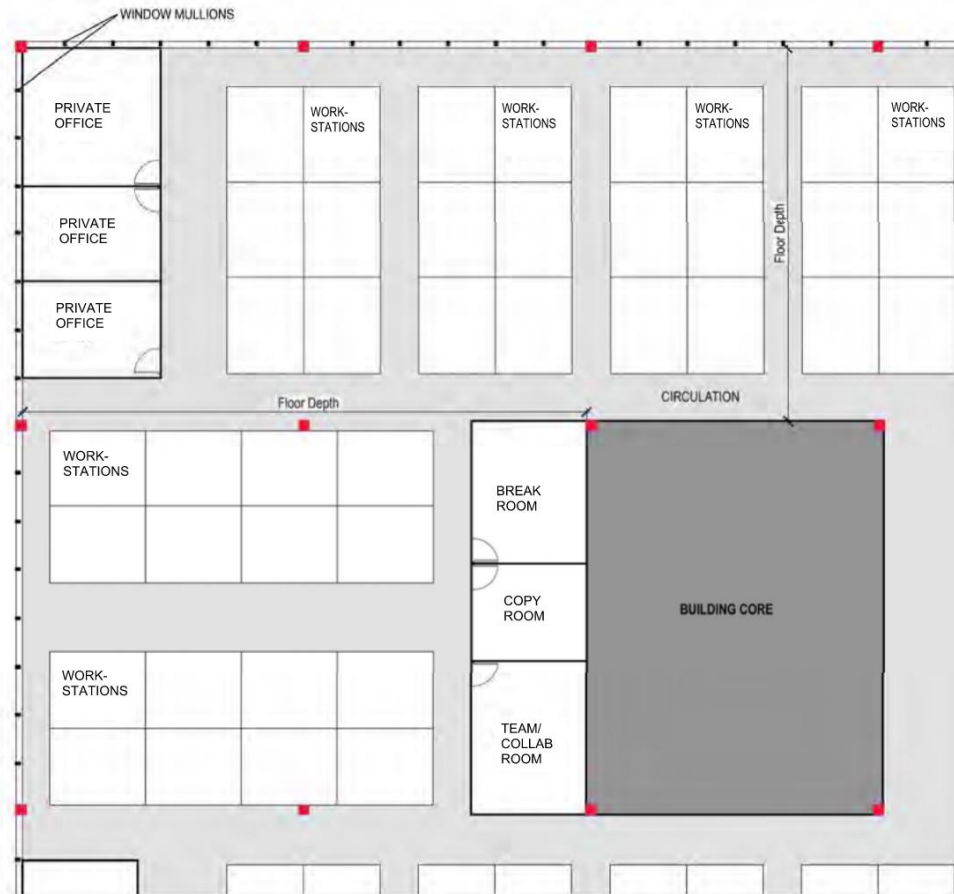
The floor depth is defined as the distance from inside face of the exterior wall to outside face of the building core. Floor depth affects the office and workstation sizing and configuration, and must be carefully coordinated with private office furniture and the open office furniture systems. In addition to its effect on workstation and office sizing, floor depth affects the admission of natural light. Too great a floor depth will preclude access to daylight by building occupants near the building core. Locate spaces not regularly occupied with personnel near the core of the building. Refer to Figure 3-1 for an illustration of the use and effects of working with a building's floor depth.

3-1.3 Structural Bay Spacing.

The structural bay spacing plays a critical role in workspace layout efficiency as well as building primary circulation. The open area between structural columns is commonly referred to as a structural bay. The size and shape of the structural bays will directly affect the number of offices and workstations of a particular size that can be accommodated. Refer to Figure 3-1 for an illustration of the use and effects of working with a building's structural bay spacing.

In this example, private offices are sized to align with the window mullions as well as having at least one dimension in common allowing for efficient construction and space utilization. The workstations are sized and aligned with the structural grid to accommodate the maximum number for this footprint. (structural columns are indicated as a red rectangle). This sample layout is an efficient use of space and adequate amount of secondary circulation.

Figure 3-1 Sample Building Layout



3-2 ARCHITECTURE AND INTERIOR DESIGN.

3-2.1 Exterior Design.

Exterior design must comply with the individual installation's architectural and design standards and the installation's development plans. This involves material and color selection for exterior walls, doors, and window elements, glazing, and roofing, as well as placement of mechanical units and landscaping.

3-2.2 Entrance.

Provide a main entrance with a clearly identifiable point of reference or landmark that serves as a welcome and a transition. Provide a canopy (or a recess) at required egress doors to ensure that doors can open completely without obstruction.

3-2.3 Windows and Natural Lighting.

Provide for the admission of natural light in the design of the window systems and in the design of the overall footprint and floor depth. Locate spaces not regularly occupied, such as Mail Centers and Large Format Production rooms, at the core of the building. Incorporate light-transmitting building elements to allow light to penetrate the space. Coordinate the selection of furniture systems that maximize the admission of natural light into the facility.

3-2.4 Raised Access Floor Systems.

A raised floor system is recommended, as it allows for easy access to utilities and flexibility in reconfiguration of the entire space. This system is particularly useful in spaces with high levels of data systems and power requirements. If such a system is used, mechanical air distribution may be incorporated into the floor cavity. Floor-supplied HVAC provides greater occupant comfort, which can lead to increased productivity.

3-2.5 Demountable and Operable Partitions.

Consider using demountable partitions and/or movable walls when reconfigurations are expected. Systems that are independent of the floor finish and ceiling grid will reduce configuration cost. If office or conference modules are repetitive, consistent sizes of panels allow for the maximum re-use of panels. These partitions and walls give facility managers flexibility to rearrange offices without the disruption or expense of construction. They have a higher initial cost than typical gypsum wallboard and steel stud partitions, but may be life-cycle-cost effective where reconfigurations are expected.

Dual-purpose features of some demountable and/or movable partitions include glazing for daylighting transfer, marker board and tack board surfaces, acoustical surfaces and slotted standards to receive systems furniture components. Multiple doors or telescoping sliding panels can open to adjacent spaces for alternate functions. Power and data can be managed easily with removable access panels.

3-2.6 Interior Signage.

Interior signage identifies spaces, organizations, and persons, as well as providing wayfinding and directories. Signage must comply with UFC 3-120-01 and Installation requirements. Sign placement and type are site-specific, but signs must be strategically located, adequately lit, and of sufficient size and contrast to permit proper viewing.

3-2.7 Interior Design and Finishes.

In addition to planning and designing for an organization's space needs and functionality, provide interior construction elements such as casework, column enclosures, floor and wall accents, soffits, and ceiling features. Design interior finishes to support a professional image and incorporate the organization's theme or mission. Coordinate interior finishes with the Functional Data Sheet Tables in Chapter 4. Provide

easily cleanable, maintainable, and durable finishes with material characteristics to support sustainability requirements and infectious disease control.

3-2.8 Acoustics.

Design facilities with acoustical treatments to provide a comfortable acoustical environment. Design acoustical control within the office environment to address sound isolation, transmission, and sound absorption appropriate for each type of space. Each of these characteristics are emphasized differently, depending on the use of the space, whether it is a private office or conference room, or a large open office setting. Consult with acoustical engineers and/or industry representatives to evaluate effective acoustical solutions for noise control. With space being a premium, workplaces are very densely populated and consequently require noise control.

3-2.8.1 Open Offices.

Use materials on ceilings, partitions, and floors that absorb sound and reduce noise reflection. These materials have a high Noise Reduction Coefficient (NRC) and are manufactured specifically for open office environments. Consider the acoustics when selecting a location for and designing the finishes adjacent to office equipment, such as copiers, printers, scanners, shredders, and facsimile machines.

The use of sound masking systems generates background noise to disguise speech. These are applied with noise generators strategically placed within the space. Consult with an acoustical engineer before designing an open office environment where a sound masking system will be used.

3-2.8.2 Multi-Purpose Spaces.

Design acoustical treatments in multipurpose spaces that have different acoustical needs depending on the configuration in use. For example, a conference room adjacent to a break room will need acoustic isolation from the break room. If the partition between the rooms is operable, and the rooms are opened to each other for a larger event, the acoustic treatment or design needs to accommodate the dual use.

3-2.9 Technology and Connectivity.

Technology and connectivity are some of the most frustrating and most important issues in the design and subsequent use of a facility. Identify telecommunications requirements early in the design process. Determine if an organization has special requirements, involve the appropriate IT personnel early on and engage them on lessons learned and challenges to overcome. Design building spaces and furniture selection to accommodate telecommunications distribution and access.

Plan assembly spaces of all types and sizes for power and data capabilities that can accommodate various uses such as presentations, instruction, or collaboration. Include technology and connectivity in collaboration spaces to increase multipurpose use and add productivity.

3-2.10 Ergonomics.

Provide an ergonomic work environment. Design features for an ergonomic environment include correct lighting for the space, comfortable noise levels, and adequate climate control and ventilation. Incorporate furniture design solutions with adjustable height worksurfaces with independently adjustable keyboard platforms and computer monitor mounting components. Ensure task seating includes a high level of adjustability to meet personnel requirements, including worker sizes and physical disabilities or characteristics.

Design facilities to reduce or eliminate work-related musculoskeletal (WMSD) injuries and risk factors or stressors due to processes, job tasks, and materials utilized in the workplace. Refer to the following for service-specific guidance:

- **Air Force**, *Air Force Interior Design Guide*, (update pending)
- **Army**, EP 385-1-96
- **Navy and Marine Corps**, OPNAVINST 5100.23G

3-3 TELECOMMUNICATIONS.

Coordinate the distribution of voice and data lines with the workstation and office layout and with installation communications personnel. Determine if accommodating a wireless network for data transfer is a requirement. All networks must meet the applicable Department of Defense and Service component information assurance certification and accreditation processes.

3-4 ELECTRONIC SECURITY SYSTEMS (ESS).

Determine electronic security systems requirements for providing ESS for access control, intrusion detection, and closed-circuit television (CCTV). If required, these systems protect personnel, equipment, and other assets. Provisions for alarm systems and access control features must be justified during the planning/programming process and included in project costs.

3-5 ALTERATIONS TO EXISTING FACILITIES.

Special attention must be given to selecting suitable existing facilities for adaptation to administrative functions. In retrofit projects, the column spacing, floor depth, and building configuration is already established. If the selected building or space has inefficient key elements such as floor depth and bay spacing, fewer workstations and office layouts can be accommodated than were planned for based solely on the gross area. In other words, inefficiency in building configuration and layout increases the circulation and net-to-gross multipliers so that fewer personnel can occupy the same gross building area when compared to efficiently designed facilities. The layout and capacity of existing electrical, communications, and other building distribution systems may also limit the feasibility and flexibility of the layout. Alteration and renovation projects must update existing facilities to meet the guidance and criteria in this UFC.

This Page Intentionally Left Blank

CHAPTER 4 SPECIFIC DESIGN CRITERIA

4-1 DESIGN AND SPACE PLANNING.

The following are design parameters to incorporate in determining space calculations and program requirements for administrative facilities.

4-1.1 Recognizing and Planning for Different Work Modes.

Workplace design has evolved from static spaces to dynamic, interconnected spaces comprised of a variety of work modes. The designer must acknowledge and identify the various work modes within an organization: Focused, Learning, Collaborative and Social. All of these are present whether private offices or open office spaces are planned.

4-1.1.1 Focused Work Mode.

Focused spaces are enclosed offices or open office workstations that provide visual or auditory privacy from other workstations. Personnel are usually doing heads-down work and require few distractions to be productive. These need to be located away from the busy circulation areas and meeting spaces.

4-1.1.2 Learning Work Mode.

Learning spaces are conference rooms, training rooms or classrooms where a group of people gather for information sharing or instruction. These spaces must have limited distractions and are usually enclosed. Glazed walls are beneficial for daylighting, however not ideal for projection, video display and distractions.

4-1.1.3 Collaborative Work Mode.

Collaborative spaces, enclosed or not, are where a group of people can interact on the task. These gathering spaces can range from being as structured as a conference room, to a collaborative area of the offices that has low or no barriers between workstations, to as simple as an impromptu gathering around a central files counter or a lounge area for relaxing the body and mind. Consider a variety of collaborative spaces within a workplace for choices to support appropriate levels of visual and acoustic privacy and physical comfort. Consider providing communication, data, and electrical outlets for multiple users.

In some organizations, collaboration happens within the open office areas when workstations are designed for teams that regularly collaborate.

4-1.1.4 Social Work Mode.

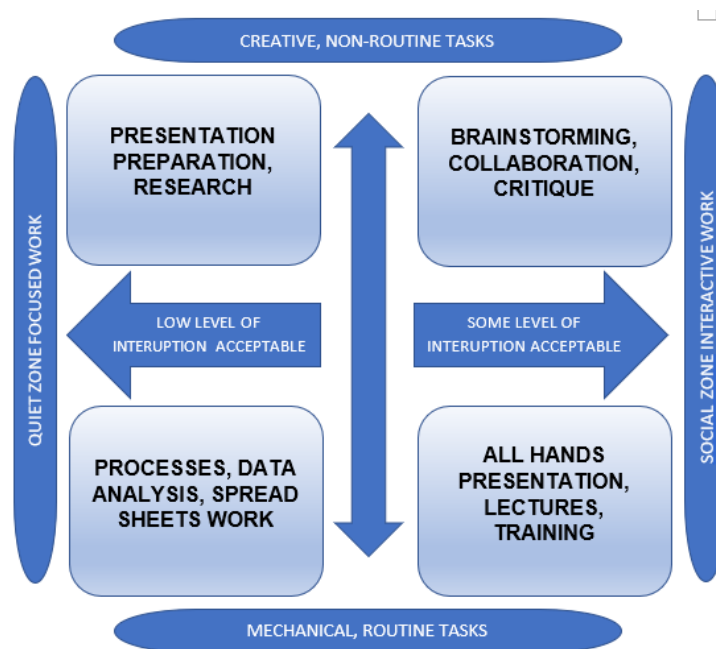
Socialization happens in variety of settings whether in breakrooms, coffee nooks or collaboration spaces. A group of people may interact on a daily basis and may require a social configuration of workspaces to facilitate communication. Social workspaces would also accommodate transactional operations within an organization. Locate

appropriately designed spaces away from focused workspaces to reduce distraction and help with worker productivity.

4-1.2 Zoning Work Activities.

In space planning for administrative facilities, proper zoning of work activities can significantly influence the quality of noise control and increase worker productivity and satisfaction. Organizational adjacency requirements may or may not be consistent with the following Figure 4-1. The design must reach a balance of interaction, separation and acoustic control.

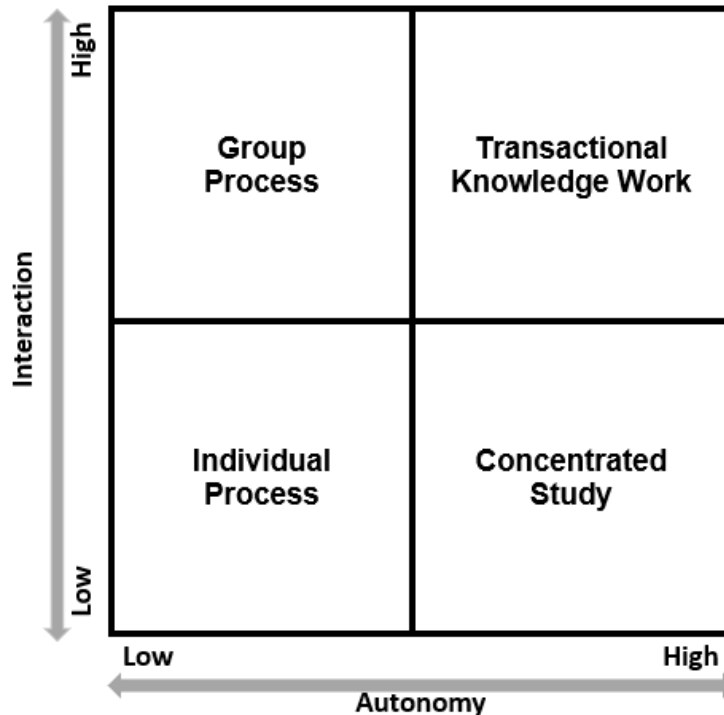
Figure 4-1 Zoning Work Activities



4-1.3 Choice of Workspace.

Plan a variety of spaces and flexible work areas where workers can move to for specific purposes or for the “change of scenery” effect. For example, Lounge spaces or alternate workstations are useful and can double as collaboration spaces. Choice of workspace also includes appropriate levels of autonomy and interaction required for work activities. Choice and flexibility can increase worker productivity and satisfaction when used properly. This also becomes part of the culture of the organization and must be managed.

Figure 4-2 Choice of Workspace



4-2 SPACE UTILIZATION AND MANAGEMENT.

4-2.1 Right-Sizing Spaces and Circulation.

Right-Sizing spaces, offices, workstations, conference and collaboration, is a method to utilizing space efficiently. For example, it is inefficient to provide a 200 square foot (18.6 square meter) private office when the only furniture required is a desk, credenza, and task and guest chairs. We are not a paperless society yet, however, filing and book storage requirements are typically less than they used to be. Space within an office or workstation previously required for paper storage has been replaced by technology requirements such as multiple computer displays. Design to the functional requirements of each worker or space and not to their position in the organization. Realistic circulation allowances also provide efficiencies in space utilization and productivity.

4-2.2 Flexibility and Modularity.

Design the interior of Administrative Facilities for flexibility of use. Maximize the use of an open floor plan and provide well-designed furniture systems that will allow adjustments to workspace to meet job functional requirements and ergonomic needs. Minimize the use of private offices and fixed partitions to the degree possible. This increases the number of personnel that can be accommodated within the space as well as allows more flexibility in reconfiguring the space. Also, minimize the number of different workstation and offices sizes. Use workstation and office sizes with a common

dimension to facilitate grouping stations and or offices of different sizes. This will ease the planning process and provide greater flexibility in the final design.

4-2.3 Multi-Purpose Uses.

Design spaces with compatible multi-functional features. Utilizing operable partitions in adjacent conference spaces and break rooms would provide rooms for small or large gatherings such as all staff meetings or events.

Conference spaces must have modular furniture reconfigurable for different types of purposes such as presentations, instruction or collaboration. Larger conference spaces and classrooms must have auxiliary storage nearby for storing folding or nesting tables and chairs, mobile screens and marker boards. \1\

4-2.4 Teleworking, Office and Workstation Sharing.

Many organizations allow employees to work outside the office, or the position requires a certain amount of teleworking. Determine workstation or office requirements based on the amount of time these workers are physically in the office. Offices that participate in a robust teleworking program where employees routinely telework at least three scheduled days per week may consider reducing the number of individually assigned workstations and utilize shared workstations. Instead of providing one workstation for each individual, consider providing one workstation for every two regularly scheduled teleworkers. Consider technology and connectivity requirements in these spaces. Ensure that workstations or offices are designed with a high degree of adjustability to properly accommodate the different users. Consider the use of freestanding, electric, height-adjustable primary worksurfaces with or without modesty panels and attached privacy/sanitary screens to maintain the safety of nearby occupants. Secure, individually assigned lockers, file drawers, bins, mobile pedestals and other types of storage units may be required for storage of personal and work-related items used while in the office. Consider teleworking, office and workstation sharing as a space planning strategy when programming administrative facilities to minimize space requirements, construction costs and operating costs. To be effective in achieving measurable scope and cost savings, this planning strategy must be applied during the DD1391 project development process.

4-2.4.1 Situational Teleworking.

Situational telework is approved on a case-by-case basis, where the hours worked are NOT part of a previously approved, ongoing and routine telework schedule. Examples of situational telework include telework as a result of inclement weather, personal appointments, special work assignments, and is sometimes referred to as episodic, intermittent, unscheduled, or ad-hoc telework.

4-2.4.2 Routine Teleworking.

Routine telework is telework that occurs as part of an ongoing, regular schedule, occurring up to two scheduled days per week. The frequency of routine telework is determined by each individual Command.

4-2.4.3 Robust Teleworking.

Robust telework is a type of routine teleworking where workers regularly telework at least three scheduled days per week. The frequency of robust telework is determined by each individual Command. Where Commands authorize a robust teleworking program, flex workstations and office sharing may be implemented.

4-2.5 Office and Workstation Sharing.

A shared office or workstation, often referred to as a flex workstation, utilizes a “buddy system” for sharing an office or workstation between two or more persons if Command telework policy allows, and if individual work schedules can be aligned to accommodate. Shared office and workstation policy is determined by each individual Command.

4-2.6 Hoteling.

/1/Hoteling is an office management strategy that considers certain office resources, such as workspaces and equipment, to be shared assets, rather than assets 'owned' or dedicated to specific individuals within an organization. By sharing assets between personnel, an organization can optimize the efficiency of their offices; reduce their space requirements and operating costs by accommodating more people in the same space. Hoteling is typically characterized by reservation and check-in processes.1\ When planning office hoteling areas, consider the need for different Work Modes as described earlier in this chapter. /1/Consider hoteling as a space planning strategy when programming administrative facilities to minimize space requirements, construction costs and operating costs. To be effective in achieving measurable scope and cost savings, this planning strategy must be applied during the DD1391 project development process.

4-2.7 Command Suite.

The command suite is an office area that houses a Commanding Officer of an installation or activity or a Grade O7 or equivalent with command authority. It is typically an enclosed suite consisting of private offices, administrative support, special purpose spaces, and a secure entry point. The command suite typically includes the following spaces, but other spaces may be provided based on specific tenant needs (actual spaces to be provided and position titles vary by Service and mission):

- Commanding Officer's (CO) office,
- Deputy Commander/Executive Officer's office,
- Chief of Staff's office,
- Command Noncommissioned Officer's office,
- Visitor's office,
- Reception/waiting area,
- Aides' offices,
- Administrative support,
- Coffee Nook or Kitchenette and
- Conference room.

For details on the individual spaces, see the appropriate FDS Tables in Chapter 4. In general, finishes will be of a higher quality and tailored to meet the level of importance or rank of the suite’s occupants.

4-3 FUNCTIONAL DATA SHEETS.

The Functional Data Sheets provide the minimum requirements for the respective rooms and spaces for the designer, planner, or RFP preparer. These minimum requirements apply in addition to the requirements of this criteria document and the referenced documents. This chapter identifies minimum and specific design requirements for the most common functional areas associated with Administrative Facilities. Not all of these spaces may be required in an administrative facility. Conversely, additional spaces with specialized functions may be required, depending on the organization’s function and mission requirements.

4-3.1 Interior Construction/Built-in Equipment.

The Interior Construction/Built-in Equipment category includes anything physically attached or plumbed to the building such as counters, cabinets, casework, toilet accessories, window shades or blinds, and recessed projection screens.

4-3.2 Furnishings and Equipment.

The Furnishings and Equipment category includes loose or moveable items that have no permanent connection to the structure of a building, or utilities such as desks, chairs and tables, and cabinets.

4-3.3 Table Format and Usage.

The following tables provide this data in a standard Functional Data Sheet. Items enclosed in brackets [xx] are potential anticipated requirements. On design-build projects, the RFP preparer must either select from these bracketed items or include other specific requirements in the RFP. Where the requirements in a design-build RFP differ from this UFC, the RFP content takes precedence. “As required” designates there are no additional specific requirements other than the requirements in UFC 1-200-01 and the core UFCs.

Table 4-1 Private Office

Description/ Usage	Provide enclosed space for one person with visual and/or acoustic privacy based on assignment or functional requirements.
Ceiling Height	9 ft. (2.7 m) minimum.

Windows	Provide daylighting.
Doors	Door with minimum 35 STC rating or as required. Privacy lock or passage set.
Interior Construction / Built-in Equipment	Provide markerboard, changeable room signage acoustical treatment [demountable partitions].
Finishes	Walls Painted gypsum wallboard or demountable partitions extended from finished floor to suspended ceiling; for higher privacy requirements, extend partitions to structure. Minimum 40 STC.
	Floor Carpet tile with attached cushion, low maintenance, rated for heavy traffic.
	Base Rubber wall base [Wood base].
	Ceiling SAPC.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide two quad electrical receptacles on separate walls or as needed to support the required equipment.
Lighting	Provide general lighting.
Telecommunications	Telephone Provide one line with internal two-way communication.
	Data Provide a minimum of two lines/outlets or more to support the required equipment.
	CATV As required by organization function or mission.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide a minimum 40-45 STC depending on occupant privacy requirements.
Furnishings and Equipment	Office desk/workstation, ergonomic task chair, filing and book storage, task lighting, [wardrobe], two guest chairs. Consider the use of freestanding, electric, height-adjustable primary worksurface with attached modesty panel.
Special Requirements	As required by organization function or mission. May be an executive private office as part of a command suite and require upgraded finishes.

Adjacencies / Location within Facility	As required by organization function or mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table 4-2 Semi-Private Office

Description/ Usage	Provide enclosed space for two or more persons with visual and/or acoustic privacy based on assignment or functional requirements
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	Provide daylighting.
Doors	Door with minimum 35 STC rating or as required. Privacy lock or passage set. Lock if required.
Interior Construction / Built-in Equipment	Provide marker board, changeable room signage, demountable partitions.
Finishes	Walls Painted gypsum wallboard or demountable partitions, extended from finished floor to suspended ceiling. Minimum 40 STC.
	Floor Carpet tile with attached cushion; low maintenance, rated for heavy traffic.
	Base Rubber wall base.
	Ceiling SAPC.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide a quad electrical receptacle per person or as needed to support the required equipment.
Lighting	Provide general and task lighting.
Telecommunications	Telephone Provide one line with internal two-way communication per person.
	Data As required.
	CATV As required by organization function or mission.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide a minimum of 40 STC.
Furnishings and Equipment	Office desks or workstations, ergonomic task chairs, filing and book storage, task lighting, [wardrobes], one guest chair per person or as required. [Collaboration table/space]. Consider the use of freestanding, electric, height-adjustable primary worksurface with attached modesty panel.
Special Requirements	As required by organization function or mission.
Adjacencies / Location within Facility	As required by organization function or mission. Command Suites require upgraded finishes and appurtenances.

	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft ² (m ²)	

Table 4-3 Open Office – Full Time Staff

Description/ Usage	Open office space for full-time staff includes systems furniture workstation clusters, filing and storage, and informal meeting spaces. \1\ For Navy and Marine Corps projects, this space usage corresponds with Workstation Type 1 (WST1) in UFC 2-000-09N, Series 600, Table 61010-5.1 /1/
Ceiling Height	10 ft. (3.0 m) minimum.
Windows	Provide daylighting.
Doors	Provide doors at the perimeter walls of the open office space.
Interior Construction / Built-in Equipment	Interior wayfinding and workstation signage, marker boards, tack boards, bulletin display cases, casework, [acoustic treatment to aid in noise control] [demountable partitions].
Finishes	Walls Painted gypsum wallboard or demountable partitions of varying materials for various levels of visual and acoustical privacy.
	Floor Carpet tile with attached cushion for noise reduction; low maintenance, rated for severe traffic.
	Base Rubber wall base.
	Ceiling SAPC with high Articulation Class (AC) and Noise Reduction Coefficient (NRC) ratings.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide multiple circuits to the space to connect systems furniture workstations to building power. Exposed wiring is [and power poles are] not allowed. Plan power capacity for a minimum of four receptacles per person per workstation, or as required.
Lighting	Provide general lighting.
Telecommunications	Telephone Provide one line with internal two-way communication per person. Coordinate communication distribution through the systems furniture and as required.
	Data Provide one outlet per staff unless multiple systems are required. Provide additional outlets for each printer, copier, scanner, shredder, and other similar equipment. Coordinate data distribution through the systems furniture and as required.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV As required by organization function or mission.
Acoustics	Provide acoustical treatment in accordance with ASTM E1130-16 for open office spaces.

Furnishings and Equipment	Provide workstations sized for staff assignments and functionality; ergonomic task seating, guest seating, task lighting, lateral file cabinets, counter-height work/storage/meeting islands for files and supplies. Provide worksurfaces for printers, scanners, and other equipment as required to be used in the open office area. Consider the use of freestanding, electric, height-adjustable primary worksurface with attached modesty panel.
Special Requirements	Coordinate telecom and data distribution, equipment, and connection points requirements with workstation configurations and open office layouts.
Adjacencies / Location within Facility	As required by organization function or mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table 4-4 Private Flex Office

Description/ Usage	Private office space set aside for intermittent use by transient or teleworking staff or visiting dignitaries occasionally needing space in the office.\1\ Offices may be shared by two or more persons depending on individual work schedules and demand./1/
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	Provide daylighting.
Doors	Door with minimum 35 STC rating or as required. Privacy lock or passage set.
Interior Construction / Built-in Equipment	Provide markerboard, changeable room signage [demountable partitions].
Finishes	Walls Painted gypsum wallboard or demountable partitions, with varying materials for various visual and auditory privacy. Extend from finished floor to suspended ceiling. Minimum 40 STC.
	Floor Carpet tile with attached cushion, low maintenance, rated for heavy traffic.
	Base Rubber wall base.
	Ceiling SAPC.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide two quad electrical receptacles on separate walls or as needed to support the required equipment.
Lighting	Provide general and task lighting.
Telecommunications	Telephone Provide one line with internal two-way communication.
	Data Provide a minimum of two lines/outlets or more to support the required equipment.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide a minimum of 40 STC.
Furnishings and Equipment	Office desk, ergonomic task chair, filing and book storage, task lighting, [wardrobe], two guest chairs, [small meeting table]. Consider the use of freestanding, electric, height-adjustable primary worksurface with attached modesty panel. \1\ Provide individual, lockable storage units for daily storage of personal items. /1/
Special Requirements	As required by organization function or mission. If located in a Command Suite, provide upgraded finishes and appurtenances.

Adjacencies / Location within Facility	As required by organization function or mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table 4-5 Open Office – Flex Staff

Description/ Usage	Open office space set aside for intermittent use by transient or teleworking staff occasionally in the office. Includes systems furniture workstation clusters, informal meeting spaces. \1\ For Navy and Marine Corps projects, this space usage corresponds with Workstation Type 2 (WST2) in UFC 2-000-09N, Series 600, Table 61010-5.1 /1/
Ceiling Height	10 ft. (3.0 m) minimum.
Windows	Provide daylighting.
Doors	Provide doors at the perimeter walls of the open office space.
Interior Construction / Built-in Equipment	Wayfinding and workstation signage, marker boards, tack boards, bulletin display cases [demountable partitions].
Finishes	Walls Painted gypsum wallboard; demountable partitions of varying materials for various levels of visual and acoustical privacy.
	Floor Carpet tile with attached cushion for noise reduction; low maintenance, rated for severe traffic.
	Base Rubber wall base.
	Ceiling SAPC with high Articulation Class (AC) and Noise Reduction Coefficient (NRC) ratings.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide multiple circuits to the space to connect systems furniture workstations to building power. Exposed wiring is [and power poles are] not allowed. Plan power capacity for a minimum of four receptacles per flex workstation or as required.
Lighting	Provide general and task lighting.
Telecommunications	Telephone Provide one line with internal two-way communication per person.
	Data Provide one outlet per staff unless multiple systems are required. Provide additional outlets for each printer, copier, scanner, shredder, and other similar equipment.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide acoustical treatment in accordance with ASTM E1130-16 for open office spaces.
Furnishings and Equipment	Provide desks or workstations, sized for staff assignments and functionality; ergonomic task seating, guest seating, lateral file cabinets, counter-height work/storage/meeting islands for files and

	supplies. Consider the use of freestanding, electric, height-adjustable primary worksurface with attached modesty panel. \1\ Provide individual, lockable storage units for storage of personal items for day use. /1/ Provide worksurfaces for printers, scanners, and other equipment as required to be used in the open office area.
Special Requirements	Coordinate telecom and data distribution, equipment, and connection points requirements with workstation configurations and open office layouts.
Adjacencies / Location within Facility	As required by organization function or mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table 4-6 Vestibule

Description/ Usage	Airlock enclosure at the entrance to a building. Building security may be performed in this space.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	As required.
Doors	Exterior and interior double doors.
Interior Construction / Built-in Equipment	Recessed entrance mat, soil collection; interior signage, [wall protection].
Finishes	Walls Durable, easily maintained walls of [painted gypsum wallboard,] [split faced CMU], [clay masonry], [porcelain tile].
	Floor Durable, weather-resistant material, such as ceramic tile or vinyl tile, rated for severe traffic.
	Base: Resilient or tile to match floor material.
	Ceiling Durable, humidity-resistant material ,such as acoustic tile or painted gypsum wallboard.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide a minimum of one outlet, additional as required.
Lighting	Provide general lighting.
Telecommunications	Telephone As required if building security to be managed in this space.
	Data As required if building security to be managed in this space.
	CATV None required.
Security	IDS As required.
	ACS As required.
	CCTV As required.
Acoustics	As Required.
Furnishings and Equipment	None required.
Special Requirements	None required.
Adjacencies / Location within Facility	Where applicable, locate controlled entry, quarterdeck, watch, reception, waiting room, or secure visitor spaces near the entrance vestibule.
	For Use during project execution by appropriate Service
Occupancy	Staff

	Other
Min. net Ft ² (m ²)	

Table 4-7 Reception and Waiting

Description/ Usage	Space or Room at organization entrance to receive visitors, usually staffed. Building security may be performed at reception via a check point. May include a seating area for visitors. May be an entry into a Command Suite.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	As required.
Doors	As required.
Interior Construction / Built-in Equipment	[Built-in reception desk], [organization directory], [command board,] [enclosed bulletin board,] interior signage [demountable partitions].
Finishes	Walls Painted Gypsum wallboard or demountable partitions, accent/feature wall.
	Floor Carpet [tile,] [, broadloom,] [porcelain tile,] or luxury/solid vinyl tile; low maintenance, rated for severe traffic.
	Base Rubber wall base {Wood base} or base to match/coordinate with flooring.
	Ceiling SAPC, [mid-quality], [high quality], [decorative] ceiling.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	As required. Provide a minimum of one quad outlet at reception desk.
Lighting	Provide general, decorative and task lighting.
Telecommunications	Telephone Provide a minimum of one line with internal two-way communication.
	Data Provide an outlet at reception desk, [electronic directory] [flat screen monitor] or as required.
	CATV As required.
Security	IDS As required.
	ACS As required.
	CCTV As required.
Acoustics	As required.
Furnishings and Equipment	As required by organization function or mission. [Reception desk, ergonomic task seating, guest seating, display units for literature, memorabilia, artwork, lamps, flags].
Special Requirements	As required by organization function or mission. May require electronic storage lockers for cell phones. Command Suites require upgraded finishes and appurtenances.

Adjacencies / Location within Facility	Vestibule, entrance, main corridor, waiting.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table 4-8 Mail Center

Description/ Usage	Room for processing and distribution of the facility's incoming and outgoing mail and parcels.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	As required.
Interior Construction / Built-in Equipment	Built-in solid surface counters and plastic laminate wall and base cabinets (if not freestanding mailroom products) for equipment and supplies, marker boards, interior signage, mailboxes.
Finishes	Walls Painted gypsum wallboard.
	Floor Luxury/solid vinyl tile or rubber tile; low maintenance, rated for severe traffic.
	Base Rubber wall base.
	Ceiling SAPC.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general and dedicated outlets as needed for the required equipment.
Lighting	Provide general lighting.
Telecommunications	Telephone Provide one line with internal two-way communication.
	Data As required to support equipment and staff.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide a minimum STC of 40.
Furnishings and Equipment	As required by Installation authority for mail delivery, sorting, packaging, and distribution. Provide counters and cabinets for equipment and work area and storage for supplies. [Provide workstation, ergonomic task chair, personal storage.]
Special Requirements	May accommodate screening requirements.
Adjacencies / Location within Facility	Direct access to Shipping and Receiving or as required by organization function and mission.
	For Use during project execution by appropriate Service
Occupancy	Staff

	Other
Min. net Ft ² (m ²)	

Table 4-9 Shipping and Receiving

Description/ Usage	Accommodates loading and unloading of supplies and services necessary for the operation of the facility.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	Exterior entrance not visible from the front entrance.
Interior Construction / Built-in Equipment	Interior signage, [wire cages,] [pallet/heavy duty shelving].
Finishes	Walls Painted Gypsum wallboard, CMU or other highly durable, impact resistant wall construction [wall protection].
	Floor Sealed concrete [resinous epoxy flooring].
	Base Rubber wall base.
	Ceiling Exposed structure, [SAPC].
Plumbing	As required. [water fountain with bottle filler], [utility sink].
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and outlets as needed to support required equipment.
Lighting	Provide general lighting.
Telecommunications	Telephone Provide one line with internal two-way communication.
	Data As required to support equipment.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	As required.
Furnishings and Equipment	As required by Installation authority for delivery, staging and distribution. Provide shelving, forklifts, carts, and hand trucks as required. [Provide counters and cabinets.] [Provide workstation, ergonomic task chair, personal storage.]
Special Requirements	May accommodate screening requirements. May require loading dock, covered access, or sized to accommodate trucks inside.
Adjacencies / Location within Facility	Direct access to Mail Room and freight elevator in multi-story facilities or as required by organization function and mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other

Min. net Ft ² (m ²)	
--	--

Table 4-10 Trash and Recycling Room

Description/ Usage	Provides a collection point for trash and recyclable materials such as glass, plastic, aluminum, and paper. Size and number of rooms based on size and configuration of facility.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	As required.
Interior Construction / Built-in Equipment	Interior signage.
Finishes	Walls Painted Gypsum wallboard [wall protection].
	Floor Sealed concrete, [Luxury/solid vinyl tile; low maintenance, rated for severe traffic].
	Base Rubber wall base.
	Ceiling Exposed Structure, [SAPC].
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets.
Lighting	Provide general lighting.
Telecommunications	Telephone None required.
	Data None required.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	None required.
Furnishings and Equipment	Trash and recycling receptacles; sized and marked appropriately for central and/or remote location within the facility.
Special Requirements	Coordinate with agency for trash and recycling procedures.
Adjacencies / Location within Facility	Main trash/recycling area is adjacent to the shipping/receiving area where recyclables from the floors can be consolidated and stored for pick-up. In multistory buildings, locate remote trash/recycling areas adjacent to break rooms, copy rooms, vending, and other similar areas.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other

Min. net Ft ² (m ²)	
--	--

Table 4-11 Large Format Production Room

Description/ Usage	Provides space for a large, production-quality copy machine and/or for staff to design and assemble reports, brochures, and informational pamphlets. It must be conducive to computer-based design work and have space for document production and pallet-based paper storage
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	Door(s) with a minimum 35 STC rating.
Interior Construction / Built-in Equipment	Built-in solid surface counters and plastic laminate wall and base cabinets for equipment and storage, marker boards, tack boards, acoustic treatment, interior signage.
Finishes	Walls Painted gypsum wallboard, extend partitions from finished floor to structure above.
	Floor Luxury/solid vinyl tile or rubber tile; low maintenance, rated for severe traffic.
	Base Rubber wall base.
	Ceiling SAPC.
Plumbing	None required.
HVAC	As required to support staff and equipment.
Fire Protection and Life Safety	As required.
Power	As required to support staff and equipment.
Lighting	Provide general lighting.
Telecommunications	Telephone Provide one line with internal two-way communication or additional as required.
	Data Provide outlets to support staff and equipment required.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide a minimum of STC 40.
Furnishings and Equipment	Work tables, workstations for staff, ergonomic task seating, cabinets and carts for material storage and handling, storage cabinets for supplies.
Special Requirements	May have additional HVAC and power requirements due to size and function of production equipment.
Adjacencies / Location within Facility	As required by organization function and mission.
	For Use during project execution by appropriate Service

Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table 4-12 Break Room

Description/ Usage	Staff-only space used for breaks and lunches to accommodate storage, vending, warming, and minimal preparation of food. Provide a comfortable space with tables and chairs.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	Provide exterior views.
Doors	Door(s) with minimum 35 STC rating or as required.
Interior Construction / Built-in Equipment	Built-in plastic laminate wall and base cabinets with solid surface countertops, marker boards, tack boards, interior signage.
Finishes	Walls Painted gypsum wallboard, [wall protection or wainscot]. Provide cleanable wall finish above counter, such as solid surface or ceramic tile.
	Floor Luxury/solid vinyl tile or porcelain tile; low maintenance, rated for severe traffic.
	Base Rubber or tile wall base to match/coordinate with flooring.
	Ceiling SAPC with a high CAC rating.
Plumbing	Provide for sink, hot and cold water, plumbed appliances.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and as required for appliances and vending.
Lighting	Provide general lighting.
Telecommunications	Telephone Provide one line with internal two-way communication.
	Data As required.
	CATV As required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide a minimum STC 45.
Furnishings and Equipment	Coffee maker(s), microwave(s), undercounter or full-size refrigerator(s), café tables, chairs, trash/recycle bins.
Special Requirements	May double as a touch-down space with power/data connectivity or for informal meetings and collaboration. May include vending within break room. May require a full kitchen with stove for 24/7 operations. If located in a Command Suite, provide upgraded finishes and appurtenances.
Adjacencies / Location within Facility	As required for organization function and mission. Locate near vending and conference spaces.
	For Use during project execution by appropriate Service
Occupancy	Staff

	Other
Min. net Ft ² (m ²)	

Table 4-13 Break Area

Description/ Usage	Staff-only space used for breaks and lunches to accommodate storage, warming and minimal preparation of food.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	None required.
Interior Construction / Built-in Equipment	Built-in plastic laminate wall and base cabinets with solid surface countertops, marker boards, tack boards, interior signage [demountable partitions].
Finishes	Walls Painted Gypsum wallboard or demountable partitions, [wall protection]. Provide a cleanable finish surface above counter such as solid surface or ceramic tile.
	Floor Luxury/solid vinyl tile or porcelain tile; low maintenance, rated for severe traffic.
	Base Rubber or tile wall base.
	Ceiling SAPC.
Plumbing	Provide for sink, hot and cold water, plumbed appliances.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	As required for appliances.
Lighting	Provide general lighting.
Telecommunications	Telephone None required.
	Data None required.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	As required.
Furnishings and Equipment	Coffee maker(s), microwave(s), undercounter or full-size refrigerator(s), trash/recycling bins.
Special Requirements	If located in a Command Suite, provide upgraded finishes and appurtenances.
Adjacencies / Location within Facility	As required for organization function and mission. May be placed near large open office areas, near mail/copy rooms or near conference spaces.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other

Min. net Ft ² (m ²)	
--	--

Table 4-14 Nursing Mothers Room

Description/ Usage	Nursing and lactation room, shielded from view and free from intrusion by others.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	Door with minimum 35 STC, privacy lock.
Interior Construction / Built-in Equipment	Provide solid surface counter and plastic laminate base cabinets for minimal storage, full-length mirror, coat hooks, tack board, interior signage with occupancy indicator.
Finishes	Walls Painted gypsum wallboard, minimum eggshell finish.
	Floor Hard or resilient flooring such as luxury/solid vinyl tile; low maintenance, rated for severe traffic, suitable for regular mopping and sanitizing.
	Base Rubber wall base.
	Ceiling SAPC.
Plumbing	Provide a small utility type sink with hot and cold water with high neck faucet.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets for breast pump and other items, GFCI at sink.
Lighting	Provide general and decorative, dimmable lighting.
Telecommunications	Telephone Provide one line with internal two-way communication convenient to chair and counter.
	Data Provide one line.
	CATV As required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide minimum STC 35.
Furnishings and Equipment	Comfortable chair with worksurface for lactation equipment, trash receptacle, refrigerator with freezer section for breast milk storage, [microwave for sterilization,] clock.
Special Requirements	Reference GSA PBS-P100 and ECB 2019-4 for multi-station lactation room requirements.
Adjacencies / Location within Facility	Toilets.
	For Use during project execution by appropriate Service
Occupancy	Staff

	Other
Min. net Ft ² (m ²)	

Table 4-15 Toilet Room

Description/ Usage	Toilet rooms are sized per code and occupancy and may be single or multiple fixture toilets. Toilets may be located within an organization's perimeter, or public toilets accessible through the building core.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	Doors as required
Interior Construction / Built-in Equipment	Toilet compartment partitions and accessories, hand [and hair] dryers, built-in solid surface counters, interior signage.
Finishes	Walls Durable, low maintenance, water-resistant materials, such as porcelain tile.
	Floor Durable, low maintenance, water-resistant materials, such as porcelain tile, epoxy flooring.
	Base To match/coordinate with flooring.
	Ceiling Durable, humidity resistant material such as painted gypsum wallboard [or SAPC].
Plumbing	Sinks, toilets, urinals.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and outlets to support required equipment such as hand dryers and hair dryers.
Lighting	Provide general and decorative lighting.
Telecommunications	Telephone None required.
	Data None required.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	As required.
Furnishings and Equipment	Waste receptacles (if not included in construction).
Special Requirements	
Adjacencies / Location within Facility	Collocate with showers, locker rooms and fitness rooms.
	For Use during project execution by appropriate Service
Occupancy	Staff

	Other
Min. net Ft ² (m ²)	

Table 4-16 Janitor's Closet

Description/ Usage	A janitor's closet accommodates equipment and supplies for the maintenance of the toilets and building. Usually part of the building core, it may be located within an organization's perimeter.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	Doors as required.
Interior Construction / Built-in Equipment	Mop rack and shelving, interior signage.
Finishes	Walls Durable, low-maintenance, water-resistant materials, such as fiberglass reinforced wall panel, stainless steel, or porcelain tile.
	Floor Durable, low-maintenance, water-resistant materials, such as porcelain tile, epoxy flooring.
	Base To match/coordinate with flooring.
	Ceiling Durable, humidity-resistant material, such as painted gypsum wallboard [or SAPC].
Plumbing	Mop basin, [Utility sink].
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and outlets to support required equipment.
Lighting	Provide general lighting.
Telecommunications	Telephone None required.
	Data None required.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	As required.
Furnishings and Equipment	Waste receptacles (if not included in construction).
Special Requirements	May be incorporated inside toilets or locker rooms as required.
Adjacencies / Location within Facility	Collocate with toilets, locker rooms, shower rooms.
	For Use during project execution by appropriate Service
Occupancy	Staff

	Other
Min. net Ft ² (m ²)	

Table 4-17 Locker Room

Description/ Usage	Space or room for staff to store and secure personal items in condensed open office areas, or for transient/teleworking staff periodically in the office. May be used in conjunction with shower rooms and fitness rooms.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	None required.
Interior Construction / Built-in Equipment	Built-in locker system, plastic laminate, phenolic, metal or composite finish, interior signage, demountable partitions.
Finishes	Walls Painted gypsum wallboard or demountable partitions.
	Floor Carpet tile with attached cushion, rubber or porcelain tile or luxury/solid vinyl tile; low maintenance, rated for severe traffic.
	Base Rubber or tile wall base.
	Ceiling Durable, humidity-resistant material ,such as painted gypsum wallboard [or SAPC].
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	As required.
Lighting	Provide general lighting.
Telecommunications	Telephone None required.
	Data None required.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	As required.
Furnishings and Equipment	Provide freestanding day locker system (if not included in construction).
Special Requirements	Consider providing power ports for charging devices.
Adjacencies / Location within Facility	Locate near open office space, break rooms, fitness rooms.
	For Use during project execution by appropriate Service
Occupancy	Staff

	Other
Min. net Ft ² (m ²)	

Table 4-18 Shower Room

Description/ Usage	Single or Multi-user shower space, if fitness or wellness areas are not nearby.
Ceiling Height	9 ft. (2.7 m) minimum
Windows	None required.
Doors	Doors as required
Interior Construction / Built-in Equipment	Shower partitions and accessories, hand and hair dryers, built-in benches and solid surface counters, interior signage.
Finishes	Walls Durable, low maintenance, water-resistant materials, such as porcelain tile.
	Floor Durable, low maintenance, water-resistant materials, such as porcelain tile, epoxy flooring.
	Base To match/coordinate with flooring
	Ceiling Durable, humidity-resistant material ,such as painted gypsum wallboard or SAPC].
Plumbing	Showers, sinks, [toilets].
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and outlets to support required equipment, such as hand dryers and hair dryers.
Lighting	Provide general and decorative lighting.
Telecommunications	Telephone None required.
	Data None required.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	As required.
Furnishings and Equipment	Waste receptacles (if not included in construction), shower curtains, benches.
Special Requirements	May be incorporated inside toilets or locker rooms as required.
Adjacencies / Location within Facility	Collocate with toilets, locker rooms, fitness rooms.
	For Use during project execution by appropriate Service
Occupancy	Staff

	Other
Min. net Ft ² (m ²)	

Table 4-19 Fitness Room

Description/ Usage	Optional area with several fitness machines for staff use, if fitness or wellness facilities are not nearby.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	Provide an interior window to the corridor at 42 in. (1.07 m) above finished floor, a minimum of 36 in. (0.91 m) high and a minimum of 10 sq. ft. (0.93 sq. m.) total window area.
Doors	Lockable entrance door with a vision panel.
Interior Construction / Built-in Equipment	Provide a minimum of one wall- or ceiling-TV mount. Provide an 8 ft. (2.4 m) high mirror covering one full wall. interior signage.
Finishes	Walls Painted gypsum board, double layer (impact side).
	Floor Durable, low maintenance, resilient seamless rubber sheet flooring.
	Base Rubber wall base.
	Ceiling Durable, humidity-resistant material, such as SAPC or painted gypsum wallboard.
Plumbing	Provide an electric water cooler with bottle filler.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and properly sized and placed outlets to support required equipment. Provide outlet(s) for wall- or ceiling-mounted televisions.
Lighting	Provide general and decorative lighting.
Telecommunications	Telephone Provide one line with internal two-way communication.
	Data None required.
	CATV Provide outlets for wall- or ceiling-mounted TV(s). Coordinate with selected fitness equipment to accommodate equipment with built-in or attached TV(s).
Security	IDS None required.
	ACS None required.
	CCTV Provide outlets for full cameral coverage.
Acoustics	Provide partition construction with a minimum STC rating of 52.
Furnishings and Equipment	Waste and recycling receptacles (if not included in construction), benches.
Special Requirements	
Adjacencies / Location within Facility	Collocate with toilets, locker rooms, shower rooms.

	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft ² (m ²)	

Table 4-20 Auditorium

Description/ Usage	Auditoriums accommodate 50 or more people for large presentations, ceremonies or distance learning.
Ceiling Height	Varies with size and function of auditorium space.
Windows	Not required.
Doors	Doors with minimum 50 STC rating or as required.
Interior Construction / Built-in Equipment	Tiered floor with fixed seating [and lecture hall tables] and a stage or raised platform, [projection screens,] acoustic treatment, interior signage.
Finishes	Walls Structural partitions that extend from finished floor to structure above, acoustically engineered to support the room function.
	Floor Carpet tile with attached cushion or luxury/solid vinyl tile; low maintenance, rated for severe traffic; wood or simulated wood flooring for stage or raised platform.
	Base Rubber or wood wall base.
	Ceiling Provide an acoustically engineered ceiling system.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general and specialized power to support required equipment. May require floor receptacles to accommodate power requirements at seating [and fixed lecture hall tables].
Lighting	Provide general, decorative, and special lighting to support the functions of the room.
Telecommunications	Telephone Provide multiple lines with internal two-way communication as required. May require floor receptacles to accommodate telephone requirements at seating [and fixed lecture hall tables].
	Data Provide outlets to support the required equipment such as VTC, flat screen monitors, projector, and other similar equipment. May require floor receptacles to accommodate data requirements at seating [and fixed lecture hall tables].
	CATV As required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide STC 55 or greater.
Furnishings and Equipment	FF&E Package: Lecture hall tables and seating if not fixed and in construction.

	AV package: Flat screen monitors, projectors, screens, VTC systems, smart lectern, or as required.
Special Requirements	Provide an integrated, multi-disciplined design solution for effective acoustics, lighting, and audiovisual displays.
Adjacencies / Location within Facility	As required for organization function or mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table 4-21 Classroom/Training Room

Description/ Usage	Enclosed conference or training space for 30 - 50 people for flexible arrangements of conference and classroom settings. May be used for extended or daylong meetings, ceremonies, or distance learning.
Ceiling Height	10 ft. (3.0 m) minimum.
Windows	Not required.
Doors	Door(s) with minimum 35 STC rating or as required.
Interior Construction / Built-in Equipment	Provide marker boards, tack boards, projection [surfaces,] [screens,] Built-in casework for equipment or buffet; acoustic treatment, interior signage.
Finishes	Walls Painted gypsum wallboard. Provide partitions that extend from the finished floor to the structure above. Provide acoustical insulation in the partitions to achieve a minimum 50 STC rating.
	Floor Carpet tile with attached cushion; low maintenance, rated for severe traffic.
	Base Rubber wall base.
	Ceiling SAPC.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and outlets to support the required equipment. May require floor receptacles to accommodate power requirements at the conference table.
Lighting	Provide multiple lighting solutions to include general lighting, accent lighting, and dimmable lighting.
Telecommunications	Telephone Provide one line with internal two-way communication, or as required. May require floor receptacles to accommodate telephone requirements at the conference table.
	Data Provide for computer, projection, flat monitor or lectern connectivity as required. May require floor-mounted receptacles to accommodate data requirements at the conference table.
	CATV As required by organization function or mission.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide STC 45 or greater.
Furnishings and Equipment	FF&E Package: Modular conference tables to be configured for conference, seminar or classroom settings with power and data connectivity; seminar chairs or swivel conference seating, [upholstered, flexible backs, casters] mobile marker boards.

	AV package: Flat screen monitors, projectors, screens, VTC systems, smart lecterns or as required.
Special Requirements	Presentation or VTC functions; instructional or distance learning; power and data connectivity.
Adjacencies / Location within Facility	As required for organization function or mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table 4-22 Conference/Training Room

Description/ Usage	Enclosed space for 10 - 30 people for meetings, presentations, training, and occasional social or ceremonial functions.
Ceiling Height	10 ft. (3.0 m) minimum.
Windows	None required.
Doors	Door with minimum 35 STC rating or as required.
Interior Construction / Built-in Equipment	Provide acoustic wall treatment to achieve the required acoustical performance in addition to wall construction. Provide marker boards, [projection screen,] interior signage.
Finishes	Walls Painted gypsum wallboard. Provide partitions that extend from the finished floor to the structure above. Provide acoustical insulation in the partitions to achieve a minimum STC of 50.
	Floor Carpet tile with attached cushion; low maintenance, rated for severe traffic.
	Base Rubber wall base.
	Ceiling SAPC; provide a ceiling with a high Ceiling Attenuation Class (CAC) rating capable of reducing sound transmission.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and outlets to support the required equipment. May require floor receptacles to accommodate power requirements at the conference table.
Lighting	Provide multiple lighting solutions to include general lighting, accent lighting and dimmable lighting.
Telecommunications	Telephone Provide one line with internal two-way communication, or as required. May require floor receptacles to accommodate telephone requirements at the conference table.
	Data Provide for computer, projection, flat monitor, or lectern connectivity as required. May require floor mounted receptacles to accommodate data requirements at the conference table.
	CATV As required by organization function or mission.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide STC 45 or greater.
Furnishings and Equipment	FF&E package: Conference table, swivel conference chairs, side seating, credenza for AV equipment, podium, artwork, [logos].

	AV package: Flat monitor(s), projector, screen, smart lectern, VTC system or equipment as required by the organization function and mission.
Special Requirements	For VTC, provide appropriately placed outlets, room dimensions, and furniture selection. Accommodate a built-in projector and projection screen if required. If located in a Command Suite, provide upgraded finishes and appurtenances.
Adjacencies / Location within Facility	As required by the organization function and mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table 4-23 Team/Collaboration Room

Description/ Usage	Enclosed space for 6-10 staff for meetings and collaboration.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	Not required.
Doors	Door with minimum 35 STC rating or as required.
Interior Construction / Built-in Equipment	Provide marker boards, tack boards, interior signage, acoustic treatment, [demountable partitions,] [projection screen].
Finishes	Walls Painted gypsum wallboard or demountable partitions, Minimum 45 STC.
	Floor Carpet tile with attached cushion; low maintenance, rated for severe traffic.
	Base Rubber wall base.
	Ceiling SAPC; provide a ceiling with a high Ceiling Attenuation Class (CAC) rating capable of reducing sound transmission.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and outlets to support the required equipment.
Lighting	Provide general and dimmable lighting.
Telecommunications	Telephone Provide one line with internal two-way communication.
	Data Provide connectivity in this space as determined by the organization function and mission.
	CATV As required by organization function or mission
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide a minimum of 45 STC.
Furnishings and Equipment	FF&E package: Conference table for 6 -10 people, swivel conference chairs; or individual or group lounge seating for relaxed collaboration. AV package: Flat screen monitors, projectors, screens, VTC systems, or as required.
Special Requirements	May be used for small scale VTC room. If located in a Command Suite, provide upgraded finishes and appurtenances.
Adjacencies / Location within Facility	As required by the organization function and mission.

	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft ² (m ²)	

Table 4-24 Focus Room

Description/ Usage	Enclosed space for 1-2 staff for privacy and collaboration.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	Not required.
Doors	Door with minimum 35 STC rating or as required.
Interior Construction / Built-in Equipment	Provide marker boards, tack boards, interior signage, acoustic treatment, [demountable partitions,] [clear and/or frosted glass partition(s)].
Finishes	Walls Painted gypsum wallboard or demountable partitions, Minimum 45 STC.
	Floor Carpet tile with attached cushion; low maintenance, rated for severe traffic.
	Base Rubber wall base.
	Ceiling SAPC; provide a ceiling with a high Ceiling Attenuation Class (CAC) rating capable of reducing sound transmission.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and outlets to support the required equipment.
Lighting	Provide general and dimmable lighting.
Telecommunications	Telephone Provide one line with internal two-way communication.
	Data Provide connectivity in this space as determined by the organization function and mission.
	CATV As required by organization function or mission
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide a minimum of 45 STC.
Furnishings and Equipment	FF&E package: height-adjustable worksurface or table, 2 task or conference chairs; or individual or lounge seating for relaxed collaboration; task lighting, as required. Consider prefabricated focus room units. AV package: Flat screen monitors, as required.
Special Requirements	

Adjacencies / Location within Facility	As required by the organization function and mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table 4-25 General Filing and Storage Room

Description/ Usage	Storage of files, supplies, and equipment. Provide a separate lockable room for storage of sensitive or high-value equipment.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	Doors with passage lock [access control].
Interior Construction / Built-in Equipment	Interior signage, [high density filing,] [plastic laminate clad wall and base cabinets with counters], [demountable partitions].
Finishes	Walls Painted gypsum wallboard or demountable partitions or as required depending on the agency and the level of security required.
	Floor Carpet tile with attached cushion, rubber tile or luxury/solid vinyl tile; low maintenance, rated for severe traffic.
	Base Rubber wall base.
	Ceiling SAPC [Exposed structure].
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets.
Lighting	Provide general lighting.
Telecommunications	Telephone As required.
	Data As required.
	CATV As required.
Security	IDS As required.
	ACS As required.
	CCTV As required.
Acoustics	None required.
Furnishings and Equipment	Open utility shelving, file cabinets, or specialized storage systems as required by organization function and mission.
Special Requirements	Additional structural support for concentrated loads. ESS depending on security level.
Adjacencies / Location within Facility	As required by organization function and mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other

Min. net Ft ² (m ²)	
--	--

Table 4-26 Technical Equipment Room

Description/ Usage	Room for specialized equipment specific to an organization's function and mission such as an IT laboratory/service shop, energy monitoring and control functions, or radio and equipment check out and charging.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	Doors with minimum STC 35. Lockable for high value equipment.
Interior Construction / Built-in Equipment	As required for organization function and mission.
Finishes	Walls Painted gypsum wallboard or demountable partitions
	Floor Carpet tile with attached cushion or luxury/solid vinyl tile; [rubber tile,] [static dissipative tile,] low maintenance, rated for severe traffic.
	Base Rubber wall base.
	Ceiling SAPC.
Plumbing	As required for organization function and mission.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and outlets to support required equipment.
Lighting	As required.
Telecommunications	Telephone Provide one line with internal two-way communication.
	Data Provide general outlets and outlets to support required equipment.
	CATV Non required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide minimum STC 35.
Furnishings and Equipment	As required for organization function and mission.
Special Requirements	As required for organization function and mission.
Adjacencies / Location within Facility	As required for organization function and mission.
	For Use during project execution by appropriate Service
Occupancy	Staff

	Other
Min. net Ft ² (m ²)	

Table 4-27 Controlled Entry/Quarterdeck

Description/ Usage	Secure space to control the access of personnel into a facility or area within the facility. May include display of flag or organizational memorabilia. May be staffed.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	As required.
Doors	Door(s) with integrated access control system in hardware.
Interior Construction / Built-in Equipment	Provide main facility signage and/or directory, chain of command board (if not in Lobby); [transaction window,] [entrance mat,] [casework,] [reception desk,] Interior signage, and as required by organization function or mission.
Finishes	Walls Painted gypsum wallboard [with architectural feature wall panel system using material such as acrylic, wood, metal or other upgraded durable panel material].
	Floor Provide low maintenance, durable flooring such as stone, terrazzo or porcelain tile. [provide carpet or luxury/solid vinyl tile with low maintenance, with severe wear rating.] Provide walk-off mat at entrance as an extension of the entrance vestibule.
	Base Resilient or tile to match/coordinate with floor material.
	Ceiling Durable, humidity resistant material such as acoustic tile or painted gypsum wallboard [metal,] [decorative,] [specialty ceiling].
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general electrical outlets and outlets to support required equipment. [Provide a minimum of a quad outlet at reception desk.]
Lighting	Provide general, decorative and task lighting.
Telecommunications	Telephone Provide one line with internal two-way communication.
	Data Provide an outlet at reception desk, [electronic] [directory] [flat screen monitor] or as required.
	CATV As required.
Security	IDS As required by organization function or mission.
	ACS As required by organization function or mission.
	CCTV As required by organization function or mission.
Acoustics	As required.
Furnishings and Equipment	As required by organization function or mission. [Ergonomic task seating; reception desk, workstation, guest seating, flags, artwork, display cases.]

Special Requirements	May require a transaction counter or window or CCTV, speaker, phone for visibility or communication between visitor and personnel. May require adjacent bunkroom if a 24/7 facility.
Adjacencies / Location within Facility	Vestibule, main corridor, departmental entrance, reception, waiting.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table 4-28 Secure Visitor Space

Description/ Usage	Secure space for visitors to wait until received by personnel. Requirement for this space based on organization's function or mission.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	As required.
Doors	As required.
Interior Construction / Built-in Equipment	Interior signage.
Finishes	Walls Painted gypsum wallboard partitions.
	Floor Carpet tile with attached cushion or luxury/solid vinyl tile; low maintenance, rated for severe traffic.
	Base Rubber wall base.
	Ceiling SAPC.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets, or as required.
Lighting	Provide general lighting.
Telecommunications	Telephone Provide one line with internal two-way communication.
	Data Provide one outlet or as required.
	CATV
Security	IDS As required by organization function or mission.
	ACS As required by organization function or mission.
	CCTV As required by organization function or mission.
Acoustics	As required.
Furnishings and Equipment	Seating; occasional tables; lamps; artwork, display units for literature, bulletins, or memorabilia.
Special Requirements	As required by organization function or mission.
Adjacencies / Location within Facility	Vestibule, entrance, main corridor, reception.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other

Min. net Ft ² (m ²)	
--	--

Table 4-29 SCIF

Description/ Usage	Sensitive Compartment Information Facility (SCIF); an accredited area, room, or group of rooms, where sensitive compartmentalized information is stored, used, discussed, or electronically processed
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	Comply with UFC 4-010-05.
Interior Construction / Built-in Equipment	Acoustic treatment, interior signage, raised access flooring. Comply with UFC 4-010-05.
Finishes	Walls Painted gypsum wallboard.
	Floor Carpet tile with attached cushion; low maintenance, rated for heavy traffic.
	Base Rubber wall base.
	Ceiling SAPC.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	As required.
Lighting	Provide general lighting.
Telecommunications	Telephone Provide one line with internal two-way communication, and as required for secure communication.
	Data As required.
	CATV As required.
Security	IDS As required by organization function or mission.
	ACS As required by organization function or mission.
	CCTV As required by organization function or mission.
Acoustics	Comply with UFC 4-010-05.
Furnishings and Equipment	As required by organization function or mission.
Special Requirements	Comply with UFC 4-010-05. If located in a Command Suite, provide upgraded finishes and appurtenances.
Adjacencies / Location within Facility	As required by organization function or mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other

Min. net Ft ² (m ²)	
--	--

Table 4-30 Vault Room

Description/ Usage	A vault room is a secured area for handling classified material. Depending on the level of classification, refer to requirements for classified facilities requiring more stringent security requirements and specific design guidance such as Open Storage Secret (OSS), Sensitive Compartmented Information Facility (SCIF), Special Access Program Facilities (SAPF) and Top Secret/Sensitive Compartmented Information (TS/SCI).
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	Doors with passage lock [access control].
Interior Construction / Built-in Equipment	Acoustic treatment, interior signage, raised access flooring.
Finishes	Walls Painted gypsum wallboard.
	Floor Carpet tile with attached cushion; low maintenance, rated for heavy traffic.
	Base Rubber wall base.
	Ceiling SAPC.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	As required.
Lighting	Provide general lighting.
Telecommunications	Telephone Provide one line with internal two-way communication, and as required for secure communication.
	Data As required.
	CATV As required.
Security	IDS As required by organization function or mission.
	ACS As required by organization function or mission.
	CCTV As required by organization function or mission.
Acoustics	As required.
Furnishings and Equipment	As required by organization function or mission.
Special Requirements	If located in a Command Suite, provide upgraded finishes and appurtenances.
Adjacencies / Location within Facility	As required by organization function or mission.
	For Use during project execution by appropriate Service

Occupancy	Staff
	Other
Min. net Ft² (m²)	

APPENDIX A BEST PRACTICES

A-1 BUILDING CONFIGURATION AND LAYOUT.

Critical elements of an efficient administrative building layout include the design of the building core, the dimensions of floor depth, structural bay spacing, and the office and workstation design and layout. A rectangular floor plan is generally preferred because it facilitates more efficient space planning. The simple shape with a high area-to-perimeter ratio yields the most economical facility.

A-1.1 Building Core.

To permit efficiency in floor plan design, the width of the building core is typically 20 to 40 ft. (6.1 to 12.2 m.). The length of the building core will vary depending on building requirements; 40 ft. (12.2 m.) is a suggested minimum.

A-1.2 Floor Depth.

The suggested floor depth for initial planning purposes is between 35 ft. (10.7 m.) and 40 ft. (12.2 m.). Floor depths of approximately 50-65 ft. (15.2 to 19.8 m.) can be configured at the ends of the building core to accommodate programmed space that is not dependent on natural light, such as computer or file storage rooms.

A-1.3 Structural Bays.

Consider the size and shape of the structural bays to allow for flexibility in workstation layout. Consider clear spans and columns beyond workstation footprint to improve the efficiency of interior space. This impacts the number and size of workstations that can be accommodated. For example, there may be the overall square footage of space to accommodate a certain number of workstations, but if the location of a structural column interferes with the location of a workstation, the actual number of workstations will be lower than the planning number. Because the bay dimension is repeated on each building floor, the results of poorly coordinated bay design is multiplied by the number of building floors with office layouts.

Typical bay spacing ranges from 20 to 30 ft. (6.1 to 9.1 m). However, this can vary depending upon the structural system employed, such as structural steel, reinforced concrete, precast concrete.

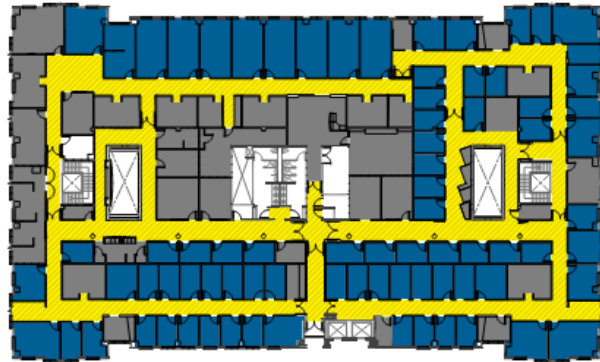
A-1.3.1 Circulation.

Circulation in Administrative Office planning is highly dependent on the mixture of enclosed and open spaces. As mentioned previously, facilities with more open office workstations and collaboration areas will require a higher circulation factor than a facility with more enclosed offices and conference rooms. The following excerpts from a GSA study "Circulation: Defining and Planning" illustrate this relationship.

Figure A-1 Circulation Case Study 0/100

CASE STUDY #1

0% OPEN / 100% ENCLOSED | USABLE AREA: ~23,000 USF



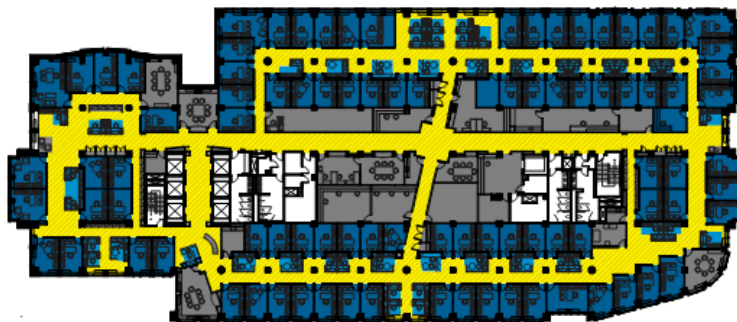
ENCLOSED OFFICES OPEN WORKSTATIONS SUPPORT SPACE CIRCULATION BASE PLAN

OBSERVATION	FLOOR CALCULATIONS	CIRCULATION CALCULATIONS						
A floor plan with a large number of private offices and enclosed spaces requires less circulation, but also accommodates fewer headcount.	<table border="1"> <tr> <td>OPEN 0%</td> <td>ENCLOSED 100%</td> </tr> <tr> <td colspan="2">79 SEAT COUNT</td> </tr> </table>	OPEN 0%	ENCLOSED 100%	79 SEAT COUNT		<table border="1"> <tr> <td>1.39 MULTIPLIER</td> <td>28% FACTOR</td> </tr> </table>	1.39 MULTIPLIER	28% FACTOR
OPEN 0%	ENCLOSED 100%							
79 SEAT COUNT								
1.39 MULTIPLIER	28% FACTOR							

Figure A-2 Circulation Case Study 33/67

CASE STUDY #2

33% OPEN / 67% ENCLOSED | USABLE AREA: ~33,000 USF



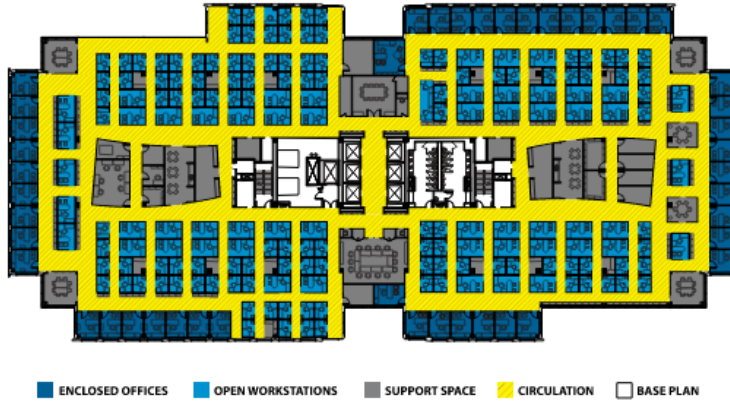
ENCLOSED OFFICES OPEN WORKSTATIONS SUPPORT SPACE CIRCULATION BASE PLAN

OBSERVATION	FLOOR CALCULATIONS	CIRCULATION CALCULATIONS						
Even workplaces with an open to enclosed ratio of 1:2 can possess a fairly low Circulation Area because the floor plan is predominantly enclosed offices.	<table border="1"> <tr> <td>OPEN 33%</td> <td>ENCLOSED 67%</td> </tr> <tr> <td colspan="2">138 SEAT COUNT</td> </tr> </table>	OPEN 33%	ENCLOSED 67%	138 SEAT COUNT		<table border="1"> <tr> <td>1.41 MULTIPLIER</td> <td>29% FACTOR</td> </tr> </table>	1.41 MULTIPLIER	29% FACTOR
OPEN 33%	ENCLOSED 67%							
138 SEAT COUNT								
1.41 MULTIPLIER	29% FACTOR							

Figure A-3 Circulation Case Study 80/20

CASE STUDY #3

80% OPEN / 20% ENCLOSED | USABLE AREA: ~45,000 USF

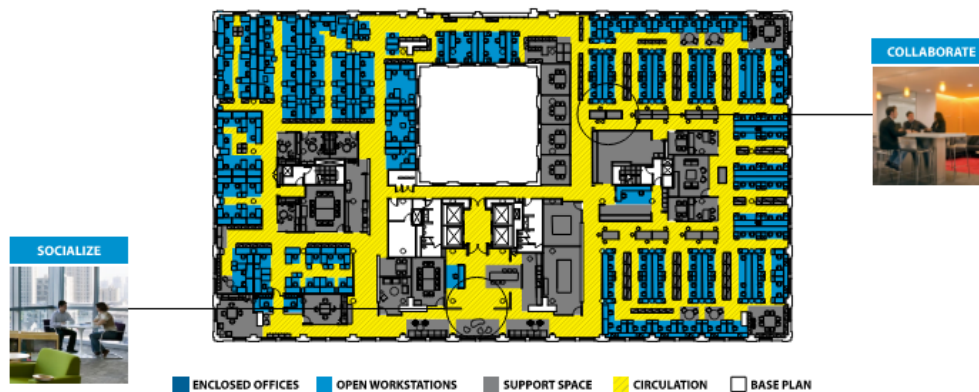


OBSERVATION	FLOOR CALCULATIONS	CIRCULATION CALCULATIONS						
A predominantly open plan requires a higher percentage of Usable Area for circulation, but also accommodates a higher capacity of seats on a floor.	<table border="1"> <tr> <td>OPEN 80%</td> <td>ENCLOSED 20%</td> </tr> <tr> <td colspan="2" style="text-align: center;">221 SEAT COUNT</td> </tr> </table>	OPEN 80%	ENCLOSED 20%	221 SEAT COUNT		<table border="1"> <tr> <td>1.61 MULTIPLIER</td> <td>38% FACTOR</td> </tr> </table>	1.61 MULTIPLIER	38% FACTOR
OPEN 80%	ENCLOSED 20%							
221 SEAT COUNT								
1.61 MULTIPLIER	38% FACTOR							

Figure A-4 Circulation Case Study 100/0

CASE STUDY #4

100% OPEN / 0% ENCLOSED | USABLE AREA: ~29,000 USF



OBSERVATION	FLOOR CALCULATIONS	CIRCULATION CALCULATIONS						
In addition to addressing necessary open plan circulation, a higher Circulation Multiplier can also provide impromptu meeting spaces for socializing, learning, and collaboration.	<table border="1"> <tr> <td>OPEN 100%</td> <td>ENCLOSED 0%</td> </tr> <tr> <td colspan="2" style="text-align: center;">203 SEAT COUNT</td> </tr> </table>	OPEN 100%	ENCLOSED 0%	203 SEAT COUNT		<table border="1"> <tr> <td>1.62 MULTIPLIER</td> <td>38% FACTOR</td> </tr> </table>	1.62 MULTIPLIER	38% FACTOR
OPEN 100%	ENCLOSED 0%							
203 SEAT COUNT								
1.62 MULTIPLIER	38% FACTOR							

The basic building blocks of an administrative facility are the workstations and private offices. The sizes and features of these elements are critical to the efficiency of each worker, and the grouping or layout is critical to the efficiency of the organization. It is essential to understand the relationships between workstation/office design and the building design and systems.

A-2.1 Design for Flexibility.

Design the interior of Administrative Facilities for flexibility of use. Minimize the number of different workstation and offices sizes. This will ease the planning process and provide greater flexibility in the final design. Design the workstation for the task being performed and the size of the user, to the best extent possible. Make sure the furniture fits the user, supports them properly, and adjusts to their activities; use furniture systems that can be reconfigured easily for different users. Consider teleworking, shared workspaces, flex workstations, hoteling, and secure storage for daily personal items when selecting furniture. */1/*

With furniture systems, it is possible to construct stations of any size or configuration—when necessary, consider larger workstations that accommodate meeting space. However, the open office environment can quickly become noisy and distracting if too many conversations occur. Meetings are best conducted in specifically designed meeting space.

A-2.2 Design for Modularity.

Design workstation sizes with a common dimension to facilitate grouping stations of different sizes. Two appropriate workstation sizes that can accommodate just about any office function are 8 ft. x 8 ft. (2.4 m x 2.4 m) and 8 ft. x 10 ft. (2.4 m x 3.0 m). Individual workstations should not be less than 6 ft. x 8 ft. (1.8 m x 2.4 m) and workstations in team work areas should not be less than 6 ft. x 6 ft. (1.8 x 1.8 m).

These same rules apply to private offices. Three appropriate office sizes are 10 ft. x 12 ft. (3.0 m x 3.7 m), 15 ft. x 12 ft. (4.6 m x 3.7 m), and sometimes 20 ft. x 12 ft. (6.1 m x 3.7 m.). If private offices are located against exterior window walls, coordinate the office sizes with the window mullion spacing so that office partitions occur at a mullion or solid wall component. Common mullion spacing is 5 ft. (1.5 m), which accounts for the common denominator of one dimension of the office sizes noted above.

A-2.3 Natural Daylight and Views.

Design the workstations and offices to maximize the admission of natural daylight and views. If private offices are on the exterior window walls, design interior partitions with glazing or sidelights or place the private offices against the building core. Ensure that the entire exterior wall is not blocked by private offices to maximize natural daylight admission and views into the building. Consider issues such as the even distribution of light, glare control, and heat gain and loss when designing space with good natural light qualities.

APPENDIX B AUSTERE ADMINISTRATIVE FACILITIES (NAVY ONLY)

B-1 PURPOSE.

The purpose of this appendix is to provide implementation requirements for the austere construction established by Commander, Navy Installations Command (CNIC). These requirements were developed to address construction of support facilities in CNIC designated operating environments.

B-2 DEFINITION AND SCOPE.

An austere facility is defined as a structure designed and constructed with minimal infrastructure, footprint area, and finishes, incorporating applicable building codes and facility criteria to assure adherence to all health, accessibility, and life safety standards and regulations required to fulfill the mission, including Anti-Terrorism Force Protection appropriate to each site. Austere facilities must be built with the least total ownership costs (TOC) possible, including purchase, maintenance, and use of consistently available alternative local goods.

B-3 APPLICABILITY.

Austere construction is intended for facilities in locations determined by CNIC and approved by OPNAV to be eligible for austere facilities construction. The austere standards are intended to be applied flexibly and in varying degrees to all facilities at locations designated as austere. This flexibility must be allowed to ensure the criteria are appropriate for individual austere locations.

Design these facilities with consideration of a timeframe appropriate to austere facilities, regionally appropriate acquisition of equipment, Base Operating Support (BOS) difficulties, and logistical difficulties.

B-4 MODIFICATIONS.

For austere design and construction use UFC 4-610-01, Administrative Facilities with the following (generally deductive) modifications of this appendix.

CHAPTER 2 PLANNING AND PROGRAMMING

2-3.1 Administrative Personnel.

Limit austere facilities to one Private Office with all other personnel in open office space. Delete these spaces unless mission-required:

- Semi-Private Office
- Private Flex Office
- Open Office – Flex Staff
- Command Suite

2-3.2 Administrative Support Spaces.

Delete these spaces unless mission-required:

- Reception and Waiting Area
- Locker, Shower, Fitness Rooms
- Nursing Mother's Room
- Shipping and Receiving (centralized location assumed)
- Trash and Recycling (centralized location assumed)

2-3.3 Assembly Spaces.

Limit austere facilities to one conference room unless mission required. Delete these spaces:

- Auditorium
- Large Conference Rooms
- Team/Collaboration Room
- Break Room/Areas

2-3.4 Equipment and Storage.

Delete these spaces unless mission-required:

- Large Format Production room
- Mail Center
- Technical Equipment Room

2-3.5 Secure Spaces.

Delete all spaces unless mission-required.

CHAPTER 3 GENERAL DESIGN CRITERIA

3-1 BUILDING CONFIGURATION AND LAYOUT.

Add the following:

For austere facilities, limit permanent interior partitions to those required for a single private office and a single conference room. Maximize the use of an open floor plan and provide well-designed furniture systems.

3-1.1 Building Core.

Use this paragraph with the following exception:

Elevators are prohibited in austere facilities.

3-2.2 Entrance.

Add the following:

Canopies will not be used in austere facilities unless needed for weather conditions.

3-2.4 Raised Access Floor Systems.

Raised access floor systems are prohibited in austere facilities unless mission-required.

3-2.5 Demountable and Operable Partitions.

Demountable and Operable Partitions are prohibited in austere facilities.

CHAPTER 4 SPECIFIC DESIGN CRITERIA

4-3 FUNCTIONAL DATA SHEETS.

Replace all FDSs with the following:

Table B-1 Austere Private Office (Replaces Table 4-1)

Description/ Usage	Provide enclosed space for one person with visual and/or acoustic privacy based on assignment or functional requirements.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	Provide daylighting.
Doors	Door with minimum 35 STC rating or as required. Privacy lock or passage set.
Interior Construction / Built-in Equipment	Provide markerboard, changeable room signage.
Finishes	Walls Painted gypsum wallboard extended from finished floor to suspended ceiling; for higher privacy requirements, extend partitions to structure. Minimum 40 STC.
	Floor Sealed concrete.
	Base Rubber wall base.
	Ceiling Exposed ceiling, painted or SAPC.
Plumbing	None required.
HVAC	As required.

Fire Protection and Life Safety	As required.
Power	Provide two quad electrical receptacles on separate walls or as needed to support the required equipment.
Lighting	Provide general lighting.
Telecommunications	Telephone Provide one line with internal two-way communication.
	Data Provide a minimum of two lines/outlets or more to support the required equipment.
	CATV As required by organization function or mission.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide a minimum 40-45 STC depending on occupant privacy requirements.
Furnishings and Equipment	Limit private office to 10 ft. x 12 ft. (3.0 m x 3.7 m). Office desk/workstation, ergonomic task chair, filing and book storage, task lighting, [wardrobe], two guest chairs.
Special Requirements	As required by organization function or mission.
Adjacencies / Location within Facility	As required by organization function or mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table B-2 Austere Open Office (Replaces Table 4-3)

Description/ Usage	Open office space for full-time staff includes systems furniture, workstation clusters, filing and storage, and informal meeting spaces.
Ceiling Height	10 ft. (3.0 m) minimum.
Windows	Provide daylighting.
Doors	Provide doors at the perimeter walls of the open office space.
Interior Construction / Built-in Equipment	Interior wayfinding and workstation signage, marker boards, tack boards, casework.
Finishes	Walls Painted gypsum wallboard.
	Floor Sealed concrete.
	Base Rubber wall base.
	Ceiling Exposed ceiling, painted or SAPC.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide multiple circuits to the space to connect systems furniture workstations to building power. Exposed wiring is [and power poles are] not allowed. Plan power capacity for a minimum of four receptacles per person, per workstation or as required.
Lighting	Provide general lighting.
Telecommunications	Telephone Provide one line with internal two-way communication per person. Coordinate communication distribution through the systems furniture and as required.
	Data Provide one outlet per staff unless multiple systems are required. Provide additional outlets for each printer, copier, scanner, shredder, and other similar equipment. Coordinate data distribution through the systems furniture and as required.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV As required by organization function or mission.
Acoustics	None required.
Furnishings and Equipment	For Austere Facilities, limit workstations to 6 ft. x 8 ft. (1.8 m x 2.4 m) configured for staff assignments and functionality; ergonomic task seating, guest seating, task lighting, lateral file cabinets, counter height work/storage/meeting islands for files

	and supplies. Provide worksurfaces for printers, scanners and other equipment as required to be used in the open office area.
Special Requirements	Coordinate telecom and data distribution, equipment, and connection points requirements with workstation configurations and open office layouts.
Adjacencies / Location within Facility	As required by organization function or mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table B-3 Austere Toilet Rooms (Replaces Table 4-8)

Description/ Usage	Toilet rooms are sized per code and occupancy and may be single or multiple fixture toilets. Usually part of the building core, toilets may be located within an organization's perimeter.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	Doors as required
Interior Construction / Built-in Equipment	Toilet compartment partitions and accessories, hand [and hair] dryers, built-in solid surface counters, interior signage.
Finishes	Walls Durable, low maintenance, water resistant materials such as porcelain tile.
	Floor Durable, low maintenance, water resistant materials such as porcelain tile, epoxy flooring.
	Base To match/coordinate with flooring.
	Ceiling Durable, humidity-resistant material, such as painted gypsum wallboard [or SAPC].
Plumbing	Sinks, toilets, urinals.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and outlets to support required equipment such as hand dryers and hair dryers.
Lighting	Provide general and decorative lighting.
Telecommunications	Telephone None required.
	Data None required.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	As required.
Furnishings and Equipment	Waste receptacles (if not included in construction).
Special Requirements	
Adjacencies / Location within Facility	Collocate with toilets, locker rooms, fitness rooms.
	For Use during project execution by appropriate Service
Occupancy	Staff

	Other
Min. net Ft ² (m ²)	

Table B-4 Austere Janitor’s Closet (Replaces Table 4-9)

Description/ Usage	A janitor’s closet accommodates equipment and supplies for the maintenance of the toilets and building. Usually part of the building core, it may be located within an organization’s perimeter.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	Doors as required
Interior Construction / Built-in Equipment	Mop rack and shelving, interior signage.
Finishes	Walls Durable, low maintenance, water-resistant materials such as fiberglass reinforced wall panel, stainless steel, or porcelain tile.
	Floor Durable, low maintenance, water-resistant materials such as porcelain tile, epoxy flooring.
	Base To match/coordinate with flooring.
	Ceiling Durable, humidity-resistant material such as painted gypsum wallboard [or SAPC].
Plumbing	Mop basin, [Utility sink].
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and outlets to support required equipment.
Lighting	Provide general lighting.
Telecommunications	Telephone None required.
	Data None required.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	As required.
Furnishings and Equipment	Waste receptacles (if not included in construction).
Special Requirements	May be incorporated inside toilets or locker rooms as required.
Adjacencies / Location within Facility	Collocate with toilets, locker rooms, shower rooms.
	For Use during project execution by appropriate Service
Occupancy	Staff

	Other
Min. net Ft ² (m ²)	

Table B-5 Austere Classroom/Training Room (Replaces Table 4-17)

Description/ Usage	Enclosed conference or training space for 30-50 people for flexible arrangements of conference and classroom settings. May be used for extended or daylong meetings, ceremonies, or distance learning.
Ceiling Height	10 ft. (3.0 m) minimum.
Windows	Not required.
Doors	Door(s) with minimum 35 STC rating or as required.
Interior Construction / Built-in Equipment	Provide marker boards, tack boards, Projection [surfaces,] [screens,] Built-in casework for equipment or buffet; Interior signage.
Finishes	Walls Painted gypsum wallboard. Provide partitions that extend from the finished floor to the structure above. Provide acoustical insulation in the partitions to achieve a minimum 50 STC rating.
	Floor Sealed concrete.
	Base Rubber wall base.
	Ceiling Exposed ceiling, painted or SAPC.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets and outlets to support the required equipment. May require floor receptacles to accommodate power requirements at the conference table.
Lighting	Provide multiple lighting solutions to include general lighting, accent lighting, and dimmable lighting.
Telecommunications	Telephone Provide one line with internal two-way communication, or as required. May require floor receptacles to accommodate telephone requirements at the conference table.
	Data Provide for computer, projection, flat monitor, or lectern connectivity as required. May require floor-mounted receptacles to accommodate data requirements at the conference table.
	CATV As required by organization function or mission.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	Provide STC 45 or greater.
Furnishings and Equipment	FF&E Package: Modular conference tables to be configured for conference, seminar, or classroom settings, with power and data connectivity, seminar chairs or swivel conference seating [upholstered, flexible backs, casters], and mobile marker boards. AV package: Flat screen monitors, projectors, screens, VTC systems, smart lecterns, or as required.

Special Requirements	Presentation or VTC functions, instructional or distance learning, power and data connectivity.
Adjacencies / Location within Facility	As required for organization function or mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other
Min. net Ft² (m²)	

Table B-6 Austere General Filing and Storage Room (Replaces Table 4-22)

Description/ Usage	Storage of files, supplies, and equipment. Provide a separate lockable room for storage of sensitive or high-value equipment or archives.
Ceiling Height	9 ft. (2.7 m) minimum.
Windows	None required.
Doors	Doors with passage lock [access control].
Interior Construction / Built-in Equipment	Interior signage, plastic laminate-clad wall and base cabinets with counters.
Finishes	Walls Painted gypsum wallboard as required, depending on the agency and the level of security required.
	Floor Sealed concrete.
	Base Rubber wall base.
	Ceiling Exposed ceiling, painted or SAPC.
Plumbing	None required.
HVAC	As required.
Fire Protection and Life Safety	As required.
Power	Provide general outlets.
Lighting	Provide general lighting.
Telecommunications	Telephone None required.
	Data None required.
	CATV None required.
Security	IDS None required.
	ACS None required.
	CCTV None required.
Acoustics	None required.
Furnishings and Equipment	Open utility shelving, file cabinets, or specialized storage systems as required by organization function and mission.
Special Requirements	Additional structural support for concentrated loads. Access control depending on security level.
Adjacencies / Location within Facility	As required by organization function and mission.
	For Use during project execution by appropriate Service
Occupancy	Staff
	Other

Min. net Ft ² (m ²)	
--	--

APPENDIX C GLOSSARY

C-1 ACRONYMS AND ABBREVIATIONS.

AC	Articulating Class
ACS	Access Control System
AFCEC	Air Force Civil Engineer Center
AFI	Air Force Instruction
AFMAN	Air Force Manual
AR	Army Regulation
AV	Audio Visual
ASTM	American Society for Testing and Materials
BIA	Bilateral Infrastructure Agreement
BOS	Base Operating Support
CAC	Ceiling Attenuation Class
CATV	Cable Television
CCR	Criteria Change Request
CCTV	Close Circuit Television
CMU	Concrete Masonry Unit
CNIC	Commander, Naval Installations Command
CO	Commanding Officer
CONUS	Continental United States
DD1391	U.S. Department of Defense Form, FY__ Military Construction Project Data
DoD	Department of Defense
ECB	Engineering and Construction Bulletin
EP	Engineer Pamphlet
ESS	Electronic Security System

FC	Facility Criteria
FDS	Functional Data Sheet
FF&E	Furnishings, Fixtures and Equipment
Ft.	Foot or Feet
GFCI	Ground Fault Circuit Interrupter
GSA	General Services Administration
HQUSACE	Headquarters, U.S. Army Corps of Engineers
HNFA	Host Nation Funded Construction Agreements
HVAC	Heating Ventilation Air Conditioning
IDS	Intrusion Detection System
In.	Inch
IT	Information Technologist
LAN	Local Area Network
m.	Meters
MCO	Marine Corps Order
MIL-STD	Military Standard
NAVFAC	Naval Facilities Engineering Systems Command
NAVFACINST	Naval Facilities Instruction
NRC	Noise Reduction Coefficient
OCONUS	Outside Continental United States
OPNAV	Navy Operations
OPNAVINST	Navy Operations Instruction
OSS	Open Storage Secret
PBS	Public Building Services
PM	Program Manager
SAPF	Special Access Program Facilities

SAPC	Suspended Acoustical Panel Ceiling
SCIF	Sensitive Compartmented Information Facility
SOFA	Status of Forces Agreements
Sq.	Square
STC	Sound Transmission Coefficient
TI	Technical Instruction
TOC	Total Ownership Cost
TS/SCI	Top Secret/Sensitive Compartmented Information
TV	Television
UFC	Unified Facilities Criteria
U.S.	United States
USD	Under Secretary of Defense
VTC	Video-Teleconferencing
WBDG	Whole Building Design Guide

This Page Intentionally Left Blank

APPENDIX D REFERENCES

ASTM INTERNATIONAL

<https://www.astm.org>

ASTM E1130-16 *Standard Test Method for Objective Measurement of Speech Privacy in Open Plan Spaces Using Articulation Index*

GENERAL SERVICES ADMINISTRATION

PBS-P100 *Facilities Standards for Public Buildings Service*,
<https://www.wbdg.org/ffc/gsa/criteria/pbs-p100>

Study: *Circulation: Defining and Planning*, [www.gsa.gov/cdnstatic/Circulation -
Defining and Planning %28May 2012%29.pdf](http://www.gsa.gov/cdnstatic/Circulation-_Defining_and_Planning_%28May_2012%29.pdf).

MILITARY STANDARD

MIL-STD 3007G *Standard Practice for United Facilities Criteria and United Facilities Guide Specifications*, <https://www.wbdg.org/ffc/dod/federal-military-specifications-standards/mil-std-3007>

USD (AT&L) Memorandum dated 29 May 2002,
https://www.wbdg.org/FFC/DOD/ufc_implementation.pdf

UNITED STATES AIR FORCE

<http://www.afcec.af.mil/>

AFMAN 32-1084, *Facility Requirements*, <https://www.wbdg.org/ffc/af-afcec/manuals-afm/afman-32-1084>

AFI 32-1015, *Integrated Installation Planning*
https://static.e-publishing.af.mil/production/1/af_a4/publication/afi32-1015/afi32-1015.pdf

Air Force Interior Design Guide (update pending) <https://www.wbdg.org/ffc/af-afcec/design-guides-standards/us-air-force-interior-design-2002>

HQ USAF/A4CF *Program Management Plan for Air Force MILCON Execution*,
https://www.wbdg.org/FFC/AF/POLICY/haf_afcec_pmp.pdf

UNITED STATES ARMY, U.S. ARMY CORPS OF ENGINEERS

AR 405-70, *Utilization of Real Property*,

https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/r405_70.pdf

TI 800-01, *Design Criteria*,

https://www.wbdg.org/FFC/ARMYCOE/COETI/ARCHIVES/ti800_01.pdf

EP 385-1-96, *USACE Ergonomics Program Procedures*,

https://www.publications.usace.army.mil/Portals/76/Publications/EngineerPamphlets/EP_385-1-96.pdf

ECB 2019-4, *USACE Design for Nursing Mothers in Federal Employment*,

<https://www.wbdg.org/ffc/dod/engineering-and-construction-bulletins-ecb/usace-ecb-2019-4>

UNITED STATES NAVY AND MARINE CORPS

MCO P11000.12C, *Real Property Facilities Management Volume II - Facilities Planning and Programming*,

<http://www.marines.mil/Portals/59/Publications/MCO%20P11000.12C%20W%20CH%201.pdf>

OPNAVINST 11010.20H, *Facilities Projects Manual*,

<https://www.secnav.navy.mil/doni/Directives/11000%20Facilities%20and%20Land%20Management%20Ashore/11-00%20Facilities%20and%20Activities%20Ashore%20Support/11010.20H%20-%20CH-1.PDF>

OPNAVINST 5100.23G, *Navy Safety and Occupational Health Program Manual*,

<https://www.secnav.navy.mil/doni/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.23G%20w%20CH-1.pdf>

UNITED STATES DEPARTMENT OF DEFENSE, UNIFIED FACILITIES CRITERIA

http://www.wbdg.org/ccb/browse_cat.php?o=29&c=4

UFC 1-200-01, *DoD Building Code*

FC 2-000-05N, *Facility Planning Criteria for Navy and Marine Corps Shore Installations*

UFC 2-100-01, *Installation Master Planning*

UFC 3-120-01, *Design: Sign Standards*

UFC 4-010-05, *Sensitive Compartmented Information Facilities Planning, Design and Construction*

UFC 4-010-06, *Cybersecurity of Facility-Related Control Systems*

UFC 4-020-01, *DoD Security Engineering Facilities Planning Manual*

UFC 4-021-02, *Electronic Security Systems*

FC 4-760-10N, *Navy Museums and Historic Resource Facilities*