



## DoD SPACE PLANNING CRITERIA

### CHAPTER 110: GENERAL

JUNE 24, 2021

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**Originating Component:** Defense Health Agency Facilities Enterprise

**Effective:** June 24, 2021

**Releasability:** No Restrictions

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**Purpose:** This issuance: To provide space planning criteria guidance in support of planning, programming and budgeting for military Medical Treatment Facilities (MTFs) that fall under the authority of the Defense Health Agency (DHA).

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# ***SUMMARY of CHANGE***

This revision, dated June 24, 2021 includes the following changes:

- Terminology revised to reflect current Branch and Section titles in Defense Health Agency Facilities Enterprise.
- Table 1 reflects correct space criteria chapter names.
- Change requests for space planning criteria updated with CSM email.
- Hyperlinks updated.
- Added a Glossary section.

## **SECTION 1: PURPOSE AND SCOPE**

The Office of the Assistant Secretary of Defense for Health Affairs (ASDHA) and the Defense Health Agency, Facilities Enterprise (DHA-FE), has primary responsibility for establishing functional space and equipment planning criteria and standards for all facilities in the Military Health System (MHS). The purpose of this document is to outline how Space Planning documents are organized in order to facilitate planning, programming, and budgeting for DHA military Medical Treatment Facilities (MTFs). Space Planning Criteria is organized by chapter. A chapter corresponds to a service or departments with similar clinical functions in a healthcare facility, or to a facility type. The intent of the Space Planning Criteria chapters and their implemented version in the Space and Equipment Planning System (SEPS) is to aid the facility planner working on a DHA project to create a Program for Design (PFD), and a Project Room Contents (PRC) list using DoD approved standards.

The Space Planning Criteria chapters are available on the Whole Building Design Guide website at the following link: <https://www.wbdg.org/ffc/dha>. The chapters are accessible from the home page under “DHA Facilities Enterprise (DHA-FE) Criteria & Standards, Category” and selecting “Military Health System (MHS): DoD Space Planning Criteria for Health Facilities.” They can also be found on the World-Class Facilities website at the following link: <https://facilities.health.mil/home/>. The chapters are accessible from the home page under “CONNECT” and selecting the SPC icon.

## **SECTION 2: SPACE PLANNING CRITERIA ORGANIZATION AND OVERVIEW**

1. Workload projections and planned services / modalities for a specific DHA facility project are sought by the planner in order to develop a project based on these Criteria. Planners working on military MTFs or other type of facility that supports medical services utilize and apply workload-based criteria set forth herein for identified services and modalities in determining space requirements.
2. Space planning criteria have been developed on the basis of an understanding of the activities involved for a healthcare department or service, and its relationship with other services of an MTF. These criteria are predicated on established and/or anticipated best practice standards, as adapted to provide environments supporting the highest quality health care for MHS beneficiaries.
3. These criteria are subject to modification relative to equipment, medical practice, vendor requirements, and subsequent planning and design. The final selection of the size and type of furniture, fixtures and equipment (FF&E) is determined during the design process.
4. Calculation of the number and -in some cases- the area (NSF) of rooms is performed in one of the following methods:
  - a. Directly workload-driven. The directly workload-driven rooms are based on workload projections entered in response to the workload Input Data Statements (IDSs) included in Section 4. Examples of directly workload driven rooms include the total number of exam rooms, including General Exam Rooms, Airborne Infection Isolation (AII) Exam Rooms, and Telehealth Exam Rooms; operating rooms, and radiology imaging rooms.
  - b. Indirectly workload-driven. The indirectly workload-driven rooms are derived from the preceding group. They are typically in the Reception and Support Functional Areas. Examples are Waiting, Medication Room, Clean Utility or Equipment Storage.
  - c. Mission or Staffing-driven. The mission / staffing-driven rooms are created based on Boolean 'yes/no' or numeric responses to the Mission and Staffing IDSs.
5. The Net Square Feet (NSF) and Room Code (RC) for each room in Section 5: Space Planning Criteria of each chapter was provided by or approved by the DHA Facilities Enterprise (DHA-FE), Capital Strategy Management (CSM) Branch, Asset Optimization Section.
6. Section 4: Input Data Statements and Section 5: Space Planning Criteria have been implemented and tested in the Space and Equipment Planning System (SEPS). SEPS is a digital tool developed by the Department of Defense (DoD) and the Department of Veterans Affairs to generate a Program for Design (PFD) and a Project Room Contents (PRC) list for a project based on information entered by a planner in response to the IDSs. SEPS is a proprietary tool and requests for a DoD SEPS user account are limited to planners supporting DHA facility projects or on other criteria established by DHA-FE, CSM. To request a DoD

SEPS user account, the requestor will need to have 1) a MAX.GOV registration AND 2) complete a New User Registration request in the SEPS application at: <http://seps.max.gov>

7. There are currently thirty-four (34) Space Planning Criteria chapters in the following categories:
- a. General
  - b. Clinical
  - c. Clinical Support
  - d. Non-Clinical

**TABLE 1: DoD SPACE PLANNING CRITERIA CHAPTERS**

CHAPTER NUMBER	CHAPTER NAME	
110	General	General
120	Occupancy Rates	General
130	Net to Gross Conversion Ratios	General
210	General Administration	Non-Clinical
230	Education and Training	Non-Clinical
240	Information Management	Non-Clinical
250	Health Benefits & Patient Administration	Non-Clinical
301	Primary Care / Patient Centered Medical Home (PCMH)	Clinical
302	Patient Centered Medical Home (Freestanding)	Clinical
303	Pediatric Clinic	Clinical
310	Audiology, Hearing Conservation, Speech-Language Pathology, and ENT Clinic	Clinical
311	General and Specialty Surgical Clinics	Clinical
312	Orthopedics, Podiatry, PM&R, Chiropractic and Sports Medicine	Clinical
313	Ophthalmology / Optometry Clinic	Clinical
315	Specialty Medical Clinics	Clinical
316	Cardiology / Pulmonary Services / Sleep Disorders Center	Clinical
318	Behavioral Health Clinic	Clinical
319	Preventive Medicine	Clinical
320	Dental Clinic	Clinical
350	Emergency and Ambulance Services	Clinical
360	Women's Health Clinic	Clinical
380	Occupational Therapy Clinic	Clinical
390	Physical Therapy	Clinical
410	Nursing Units	Clinical
420	Labor and Delivery / Obstetric Units	Clinical
430	Neonatal Intensive Care Units (NICU)	Clinical
440	Surgical / Interventional Services & Ambulatory Surgery Center (ASC)	Clinical
450	Sterile Processing	Clinical Support
460	Inpatient Behavioral Health / Partial Hospitalization / Substance Abuse & Alcohol Rehab	Clinical
510	Food Service	Clinical Support
520	Logistics	Non-Clinical

530	Pathology and Clinical Laboratory	Clinical Support
540	Radiology, Nuclear Medicine and Radiation Oncology	Clinical
550	Pharmacy (Inpatient and Outpatient)	Clinical Support
560	Veterinary Services	Clinical Support
570	Worship-Meditation and Chaplain Services	Non-Clinical
610	Common Areas	Non-Clinical

8. Each Chapter is organized by Purpose and Scope, Planning and Programming Requirements, Design Considerations, Program Data Required, Space Planning Criteria, Functional Relationships, Functional Diagram and a Glossary.
9. The General chapters provide an over view of the planning and programming process, established guidance, and planning parameters.
10. The Clinical chapters include all the inpatient and ambulatory care (outpatient) services, and are primarily driven by workload inputs.
11. The Clinical Support chapters include the departments that support patient care services in a healthcare facility. Non-Clinical chapters include non-clinical services that support facility services such as administration, education, food service, information management and logistics.
12. As policy and/or planning requirements change, it is expected that these criteria will be updated on a cyclical basis. The DHA-FE, Capital Strategy Management Branch is responsible for the maintenance of these documents and will coordinate changes between the Military Departments and other Directorates in DHA.
13. Requests for changes to the space planning criteria will identify the deficiency, and describe the recommended change. Provide references to changes in standards, codes, and policy when applicable. Change requests will be submitted via the SEPS tool “Dashboard,” or via email to: [dha.ncr.facility-plan.mbx.dha-fe-csm@mail.mil](mailto:dha.ncr.facility-plan.mbx.dha-fe-csm@mail.mil)

### SECTION 3: SPACE PLANNING BASIS AND PARAMETERS

1. Outcomes of the Clinical chapters are driven mostly by Workload Input Data Statements. Depending on the chapter, workload is expressed in number of projected annual in-person encounters, procedures, beds, etc. These inputs typically determine the number of “direct workload driven rooms” (e.g., exam rooms, operating rooms, etc.) which in turn determine the number or net square footage (NSF) of the “indirect workload driven rooms” (e.g., waiting areas, consult rooms, patient toilets, support spaces, etc.). Mission Input Data Statements determine the presence of certain rooms required for a particular clinical function, (e.g., a Hybrid Operating Room or a Point of Care Laboratory). Staffing Input Data Statements generate the number of lockers spaces or staff toilets based on staffing number inputs.
2. In the ambulatory/outpatient Clinical chapters, the workload driven rooms are calculated based on the following parameters:
3. Calculation of each of the directly workload-driven room types in Section 5 is implemented in SEPS based on the following formulae:

Formula 1: Annual Room Workload Capacity

$$\frac{(\text{Operating Days per year})(\text{Hours of Operation per Day})}{\frac{\text{Average Length of Encounter (ALOE) in Minutes}}{60 \text{ Minutes}}}$$

Where:

- a. Operating Days per Year is a fixed value: 240 days (unless noted otherwise in an individual space planning criteria chapter)
- b. Hours of Operation per Day is a fixed value: 8 hours
- c. Average Length of Encounter (ALOE) is fixed value: 40 minutes (unless noted otherwise in an individual space planning criteria chapter)

Formula 2: Project-Based Annual Room Workload Capacity:

$$(\text{Annual Room Workload Capacity})(\text{Room Utilization Factor})$$

Where:

- d. Room Utilization Factor: 65% (unless noted otherwise in an individual space planning criteria chapter)

Typically, a workload value 20% above the Project-based Annual Room Workload Capacity generates an additional Room.

Formula 3: Number of directly workload-driven rooms:

$$\frac{(\text{Number of Projected Annual Encounters})}{(\text{Project based Annual Workload Capacity})}$$



Example: Calculation of the number of PCMH Exam Rooms is based on the following parameters:

- a. Operating Days per Year: 240
- b. Hours of Operation per Day: 8
- c. Average Length of Encounter: 40 minutes
- d. Room Utilization Factor: 65%
- e. Projected workload: 20,000 annual PCMH Exam Room encounters

**Step 1:** PCMH Exam Rooms Workload Capacity calculation.

$$\frac{(240)(8)}{\frac{40}{60}} = 2,865 \text{ Encounters}$$

**Step 2:** Project-based PCMH Exam Rooms Workload Capacity calculation.

$$(2,865)(0.65) = 1,863 \text{ Encounters}$$

**Step 3:** Number of PCMH Exam Rooms.

$$\frac{20,000}{1,863} = 11 \text{ PCMH Exam Rooms}$$

4. In the inpatient Clinical chapters, workload constitutes the number of projected patient beds. This projection determines the number of “Patient Care Units”. A Patient Care Unit is a group of patient beds and their support spaces. Support spaces are then sized, in number and area (NSF), based on the resulting number of patient beds in the Patient Care Unit. Guidance on the methodology to determine the projected number of patient beds is included in each inpatient chapter.

The resulting SEPS Program for Design (PFD) is organized by Functional Area (FA). Clinical chapters typically have the following functional areas:

- a. Reception
- b. Patient Exam Area
- c. Patient Treatment Area
- d. Support
- e. Staff and Administration
- f. Others as defined by the project

## **SECTION 4: SPACE PLANNING USING SEPS**

**4.1 DATA ANALYSIS AND REQUIREMENTS DEVELOPMENT.** MHS goals / objectives and service product lines drive departments and chapters used in SEPS; then Input Data Statements (IDSs) are answered based on Mission, Staffing, Workload and Miscellaneous. A planner should perform preliminary research aimed at determining the answers to the IDSs. The SEPS's Program for Design (PFD) will directly rely on these inputs; therefore, the planner must verify all data and data sources.

**4.2 CREATING THE PROGRAM FOR DESIGN (PFD).** Once the project, with one or more departments, is created; the planner will enter the answers to the IDSs into SEPS. Upon completion and saving, SEPS will generate the baseline PFD, based on the Space Planning Criteria and the answers entered. The planner can then refine the space program by adding, deleting spaces and/or changing room names and NSF's. SEPS will highlight any NSF changes above or below 10% of the SEPS default value. All variances from the default value must be justified by comments in the PFD so that deviations from criteria can be validated, and used for continuous criteria process improvement.

**4.3 CREATING PROJECT ROOM CONTENTS (PRC).** Once a PFD is generated, the planner can build the room contents (i.e., furniture, fixtures and equipment) and then produce the Project Room Contents (PRC) report. SEPS will align all generic room contents with their associated Room Code(s).

## **GLOSSARY**

Average Length of Encounter (ALOE): In these space criteria, an encounter is defined as a face-to-face, in-person professional contact between a patient and a provider vested with responsibility for diagnosing, evaluating, and treating the patient's condition. The Length of Encounter is the time between set-up and clean-up of an Exam / Treatment Room. The Average Length of Encounter is used to capture variations in Length of Encounter among similar clinical encounters that will take place in an Exam Room.

Encounter: A contact between an eligible beneficiary and a credentialed provider. An encounter may consist of examination, diagnosis, treatment, evaluation, consultation or counseling or a combination of the above. The encounter will take place in an exam room, or in other treatment or observation areas. Encounter volume used to generate exam room or other workload driven rooms will not include telephone encounters.

Full-Time Equivalent (FTE): A staffing parameter equal to the amount of time assigned to one full time employee. It may be composed of several part-time employees whose total time commitment equals that of a full-time employee. One FTE equals a 40-hour a week workload. The FTE measure may also be used for specific workload staffing parameters such as a clinical FTE; the amount of time assigned to an employee providing clinical care. For example, a 0.5 clinical FTE for a healthcare worker would indicate that the healthcare worker provides clinical care half of the time per a 40-hour work week.

Functional Area (FA): The grouping of rooms and spaces based on their function within a service. Functional Areas in this chapter are Main Lobby / Reception, Retail Service, Retail Food, Employee Support, Public Toilets, Building Service, and Conference Rooms.

Hours of Operation per Day: These are the hours of operation within a department, or a facility. For example, a hospital nursing unit and an emergency department will operate 24 hours per day; whereas a clinic or an ambulatory care center may be operational 8 hours or more.

Input Data Statement: A set of questions designed to elicit information about the healthcare project in order to create a Program for Design (PFD) (see definition below); based on the space criteria parameters (refer to Section 5) set forth in this document. Input Data Statements are defined as Mission, Workload, Staffing or Miscellaneous.

Operating Days per Year: The number of days per calendar year a facility is operational for patient care.

Net-to-Department Gross Factor (NTDG): A parameter used to calculate the Department Gross Square Foot (DGSF) area based on the programmed Net Square Foot (NSF) area. Refer to Section 3.

Program for Design (PFD): A listing of all of the rooms / spaces generated based on answers to the Input Data Statements (see Section 4) and the space planning criteria outlined in this document (Section 5) in SEPS. The list is organized by Functional Area and includes the Room Quantity, Room Code, Room Name and generated Net Square Feet (NSF), Construction Phase and Construction Type.

Project Room Contents (PRC): A listing of the assigned contents (medical equipment, FF&E, etc.) for each room in a PFD generated by SEPS.

Room Utilization factor: The percentage of time that a room is in use to the time it could be in use over the course of a year. This factor provides flexibility to accommodate variability caused by other resources and processes involved in patient encounters. Smaller clinics like this one-team PCMH facility should assume a lower utilization factor than larger clinics, because operational issues like provider and support staff absences and seasonal demand fluctuations have more significant impacts on patient scheduling.

Space and Equipment Planning System (SEPS): A digital tool developed by the Department of Defense (DoD) and the Department of Veterans Affairs to generate a Program for Design (PFD) and a Project Room Contents list (PRC) for a DoD project based on approved Space Planning Criteria, the chapter and specific project-related Mission, Workload and Staffing information entered in response to the Program Data Required - Input Data Statements (IDSs).

Workload: Space Planning Criteria per DHA Policy takes projected workload into account. In-person patient encounter projections divided by the throughput range included in this document for each exam room assists planners with estimating the quantity of rooms needed to satisfy the projected workload demand.