



## DoD SPACE PLANNING CRITERIA

### CHAPTER 130: NET TO GROSS CONVERSION FACTORS AUGUST 7, 2015

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**Purpose:** This issuance: To provide space planning criteria guidance in support of planning, programming and budgeting for DoD Military Health System (MHS) facilities.

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

**1.1. PURPOSE AND SCOPE** The Office of the Assistant Secretary of Defense for Health Affairs (ASDHA) has primary responsibility for establishing functional space and equipment planning criteria and standards for all the facilities in the Military Health System (MHS). The purpose of this document is to outline the way the Space and Equipment Planning documents are organized in order to facilitate planning, programming, and budgeting for DoD Medical Facilities for all services. Space Planning Criteria is organized by chapter. A chapter corresponds to a department or departments with similar clinical functions in a healthcare facility. The intent of the Space Planning Criteria chapters and their implemented version in SEPS is to aid the space planner working on an MHS project to create a baseline space program, or a Program for Design (PFD), and a Program Room Contents (PRC) using DoD approved standards.

The Space and Equipment Planning documentation is available on the World-Class Facilities website at the following link: <https://facilities.health.mil/home/>. It is accessible from the home page under “CONNECT” and selecting the SPC icon.

## **SECTION 2: NET TO GROSS CALCULATION METHODOLOGY**

Once the net square footages (SF) for each room / space have been established for a project, the Departmental Net to Gross factor is applied to determine the Departmental Gross SF. Each department has a pre-determined DNTG Factor. To determine the Building SF; a second factor is applied to the total sum of the Departmental Gross SF of all the departments in the project.

**2.1. NET SQUARE FEET (NSF).** Net Square Feet (NSF) is the area of an individual room or the usable floor area that is assigned to a function in an open area. Net square feet for each room is measured from the inside finished surface of surrounding partitions or enclosing elements and from the outline of the floor area for a space in an open area. Net areas do not include partitions or structural elements such as columns or column enclosures, or circulation or access spaces.

**2.2. DEPARTMENT GROSS SQUARE FEET (DGSF).** Department Gross Square Feet (DGSF) is a measurement of an assemblage of rooms and spaces as assigned to a department or service and includes internal departmental and/or service circulation and partitions, columns and projections enclosing the structural elements of the building within the departmental space. The boundary defining DGSF is drawn from the inside finish of the permanent exterior building walls to the centerline of department-separating wall partitions or to the centerline of corridors which separate and provide access to spaces in adjoining departments.

**2.3. BUILDING GROSS SQUARE FEET (BGSF).** Building Gross Square Feet (BGSF) is the aggregate area of all enclosed floor areas and supporting structure and certain unenclosed areas which support the function of the building. BGSF includes all DGSF space, as well as the area of the exterior wall and structure; common and service spaces not assigned to a department; enclosed mechanical spaces; vertical circulation spaces including elevators, stairs, and escalators, shafts and stacks; and any other areas which make up the entire building.

### **2.4. SPACES COUNTED AS ONE-HALF OF THE ACTUAL GROSS AREA:**

1. Covered but not enclosed walkways, passageways, terraces, porches, ramps, and ambulance shelters
2. Exterior open stairs
3. Exterior canopies
4. Mechanical equipment spaces which are covered but not fully enclosed.

### **2.5. MULTI-STORY ELEMENTS COUNTED ONCE IN THE GROSS AREA PER FLOOR:**

1. Atrium or other multi-story spaces
2. Stairs, escalators, elevators and lifts
3. Mechanical, electrical, or other utility shafts connecting two or more floors

**2.6. SPACES NOT COUNTED IN THE GROSS AREA:**

1. Enclosed spaces with a ceiling height of less than seven feet (2134 mm)
2. Exterior uncovered terraces, porches, ramps, stoops, pads, balconies, and courtyards
3. Utility tunnels

**2.7. CALCULATION METHODOLOGY USED TO APPLY THESE VALUES IS AS FOLLOWS:**

- 1 Departmental Gross SF (DGSF) is calculated by using the Net SF (NSF) value and multiplying by the departmental gross factor included in each criteria chapter.  
Departmental Gross Square Feet (DGSF) = Dept. Net Square Feet (DNSF) x Dept. Net-to-Gross Factor. The departmental grossing factors are indicated in paragraph 3 of this chapter.
- 2 The Building Gross SF is determined by the One-Step or Two-Step method and indicated below:

- a. One-step method:

Net Square Feet to Building Gross Square Feet.

Define project areas further by calculating the gross components (MEP, Circulation, Walls, Half Areas and Flexibility). There are also percentage guideline values listed in the UFC 4-510-01 – Table 2-3 based on the type of facility (Outpatient Clinic versus Station Hospital versus Regional Medical Center).

Sum of Net SF (NSF) + Sum of the Gross Component SF = Building Gross SF (BGSF).

- b. Two-step method:

Departmental Net Square Feet to Departmental Gross Square Feet to Building Gross Square Feet.

Define project areas and help identify efficiencies in terms of functional characteristic, relationships and adjacencies, and floor plan design.

$$\text{(Dept Net SF (DNSF)) (Dept. Conversion factor) = Dept Gross SF}$$

$$\text{(DGSF) (Building Conversion factor of 1.35) = Building Gross SF (BGSF).}$$

The BGSF conversion factor defaults to 1.35 and is adjustable to achieve total BGSF within facility type guidelines.

TABLE 1: NET TO DEPARTMENT GROSS FACTORS

CHAPTER NUMBER		CHAPTER NAME	NTDG
OLD	NEW		
1.1	110	General	N/A
1.2	120	Occupancy Rates	N/A
1.3	130	Net to Gross Conversion Ratios	N/A
1.4	140	Medical Mobilization Requirements	N/A
3.1	301	Primary Care / Family Practice	1.40
3.2	320	Primary Care Optimization Clinic (Air Force)	1.40
3.3	330	Pediatrics	1.35
3.5	350	Emergency and Ambulance Services	1.45
3.6	360	Women's Health Clinic	1.35
3.8	380	Occupational Therapy Clinic	1.30
3.9	390	Physical Therapy	1.35
3.1	310	Audiology / Hearing Conservation / Speech Pathology / ENT Clinic	1.40
3.11	311	General and Specialty Surgical Clinics	1.40
3.12	312	Orthopedics / Podiatry / Chiropractic / Sports Medicine	1.35
3.13	313	Ophthalmology / Optometry Clinic	1.35
3.14	314	Urology	1.35
3.15	315	Specialty Medical Clinics	1.40
3.16	316	Cardiology / Pulmonary Services	1.35
3.18	318	Behavioral Health	1.40
3.19	319	Preventive Medicine	1.35
3.2	320	Dental Clinic	1.40
4.1	410	Nursing Units	1.50
4.2	420	Labor and Delivery / Obstetric Unit	1.50
4.3	430	Nursery	1.45
4.4	440	Surgery (Inpatient and Ambulatory)	1.60
4.6	460	Psychiatric Units	1.50
5.4	540	Radiology and Nuclear Medicine	1.50
4.5	450	Central Sterile	1.30
5.1	510	Food Service	1.40
5.3	530	Pathology	1.30
5.5	550	Pharmacy: Inpatient and Outpatient	1.25
5.6	560	Veterinary	1.35
5.7	570	Chapel	1.20
2.1	210	General Administration	1.40
2.2	220	Medical and Patient Libraries and Resource Centers	1.35
2.3	230	Education and Planning	1.35
2.4	240	Information Management	1.35
2.5	250	Medical Administration	1.35
5.2	520	Logistics	1.25
6.1	610	Common Areas	1.20

## SECTION 3: PLANNING EXAMPLE

### 3.1. PLANNING EXAMPLE.

#### A. Two-Step Method: Regional Medical Center

##### Step 1:

$$(\text{Departmental NSF})(\text{DNTG Factor}) = \text{Department Gross SF}$$

TABLE 2: DEPARTMENTAL GROSS SF CALCULATION

DEPARTMENT	NSF	DNTG FACTOR	DGSF
Primary Care / Family Practice	54,640	1.4	76,496
Emergency and Ambulance Services	15,600	1.45	22,620
Women's Health Clinic	1,840	1.35	2,484
Audiology / Hearing Conservation / Speech Pathology / Ear Nose and Throat (ENT) or Otorhinolaryngology Clinic	3,240	1.4	4,536
General and Specialty Surgical Clinics	16,800	1.4	23,520
Orthopedics / Podiatry / Chiropractic / Sports Medicine	1,840	1.35	2,484
Ophthalmology / Optometry Clinic	1,430	1.35	1,931
Specialty Medical Clinics	6,560	1.4	9,184
Cardiology / Pulmonary Services	3,260	1.35	4,401
Dental Clinic	7,460	1.4	10,444
Nursing Units	84,200	1.5	126,300
Surgery (Inpatient and Ambulatory)	10,340	1.6	16,544
Radiology and Nuclear Medicine	5,400	1.5	8,100
Central Sterile	3,250	1.3	4,225
Food Service	4,500	1.4	6,300
Pharmacy	8,540	1.25	10,675
General Administration	860	1.4	1,204
Information Management	460	1.35	621
Logistics	560	1.25	700
<b>TOTAL</b>	<b>230,780</b>	<b>---</b>	<b>332,769</b>

**Step 2:**

$$(\text{Total DGSF})(1.35) = \text{Building Gross NSF}$$

TABLE 3: BUILDING GROSS SF CALCULATION

<b>DEPARTMENTS</b>	<b>DGSF</b>	<b>BG FACTOR</b>	<b>BGSF</b>
Total Departmental Gross SF	332,769	1.35	449,238

B. One-Step Method: Regional Medical Center

TABLE 4: ONE-STEP METHOD CALCULATION

<b>DEPARTMENTS</b>	<b>NSF</b>	<b>BNTG FACTOR (*)</b>	<b>BNSF</b>
Total Departmental Net SF	230,780	1.93	445,405

(\*) Refer