

## **CHAPTER 100: MEDICAL / SURGICAL PATIENT CARE UNIT (MS PCU)**

|   |                                                 |        |
|---|-------------------------------------------------|--------|
| 1 | PURPOSE AND SCOPE .....                         | 100-2  |
| 2 | DEFINITIONS.....                                | 100-2  |
| 3 | OPERATING RATIONALE AND BASIS OF CRITERIA ..... | 100-7  |
| 4 | INPUT DATA STATEMENTS (IDS) .....               | 100-9  |
| 5 | SPACE PLANNING CRITERIA.....                    | 100-10 |
| 6 | PLANNING AND DESIGN CONSIDERATIONS.....         | 100-18 |
| 7 | FUNCTIONAL RELATIONSHIPS.....                   | 100-20 |
| 8 | FUNCTIONAL DIAGRAM .....                        | 100-21 |



## 1 PURPOSE AND SCOPE

This document outlines Space Planning Criteria for Chapter 100: Medical and Surgical Patient Care Units (MSPCU). It applies to all medical facilities in Veterans Affairs (VA).

Services which are accommodated in the units listed above include, but are not limited to, those focused on Cardiac, Cardiac Step Down, Neurological, and Orthopedic patients.

Refer to the following chapters for additional programming data:

Chapter 102 – Intensive Care Patient Care Units (ICPCUs)

## 2 DEFINITIONS

Inpatient Care Unit: A dedicated unit for inpatient accommodations, providing direct health care, support services, and institutional services. The minimum number of beds, of all types, to generate one Inpatient Unit is seventeen (17), and the maximum number of beds allowed on one Inpatient Unit is thirty-three (33).

Medical Patient Care Unit: This unit provides for the care of patients with medical (non-surgical) disease or illness.

Neurological Patient Care Unit: This unit provides for the care of patients whose primary treatment is for the injury or dysfunction of the brain, spinal cord, and/or nervous system.

Orthopedic Patient Care Unit: This unit provides for care to the surgical and/or medical orthopedic patients, allowing consolidation of all specialized orthopedic equipment (beds, frames, crutches, etc.) on one unit.

Picture Archiving and Communication System (PACS): The digital capture, transfer, and storage of diagnostic images. A PACS system consists of workstations for interpretation, image/data producing modalities, a web server for distribution, printers for file records, image servers for information transfer and holding, and an archive of off-line information. A computer network is needed to support digital imaging devices.

Provider: An individual who examines, diagnoses, treats, prescribes medication, and manages the care of patients within his or her scope of practice as established by the governing body of a healthcare organization.

Step Down Patient: A general medical, surgical, or coronary care unit can provide care to those patients discharged from an intensive care unit who require more care than that provided on a general Inpatient Care unit. Step Down patients require telemetry monitoring.

Surgical Patient Care Unit: This unit provides for the care of patients whose primary treatment was an invasive procedure.

Telemetry Unit: See Step-Down Patient Care Unit.

### Space Planning / SEPS

Accessible: A site, building, facility, or portion thereof that complies with provisions outlined in the Architectural Barriers Act of 1968 (ABA).



Architectural Barriers Act (ABA): A set of standards developed to ensure that all buildings financed with federal funds are designed and constructed to be fully accessible to everyone. This law requires all construction, renovation, or leasing of sites, facilities, buildings, and other elements, financed with federal funds, to comply with the Architectural Barriers Act Accessibility Standards (ABAAS). The ABAAS replaces the Uniform Federal Accessibility Standards (UFAS).

Average Length of Encounter (ALoE): Averaged length of time, in minutes, a patient spends in an Exam / Treatment Room interacting with a provider and the clinical support team. It is accounted from room “set-up” to “clean-up” by staff. This metric is used to determine the number of annual patient / provider encounters that take place in an Exam / Treatment Room which, in turn, is used to calculate the number of Exam / Treatment Rooms needed in a facility based on projected annual workload. The ALoE is determined with VHA SME input during a PG-18-9 clinical chapter revision / update.

Average Length of Stay (ALoS): The average number of days a patient Veteran stays in an inpatient care unit. The ALoS is used to calculate the number of patient bedrooms for a specialty by dividing the site’s projected workload by the ALoS.

Building Gross (BG) Factor: A Factor applied to the sum of all the Departmental Gross Square Footage (DGSF) in a project to determine the Building Gross Square Footage. This factor accounts for square footage used by the building envelope, structural systems, horizontal and vertical circulation including main corridors, elevators, stairs and escalators, shafts, and mechanical spaces. The Department of Veterans Affairs has set this factor at 1.35 and included guidance in case of variance when developing a Program for Design (PFD) in SEPS.

Clinic Stop: Per these criteria, a clinic stop is the workload unit of measure for space planning. Clinic Stops are codified by VSSC, when applicable, they are referenced by number in the calculation of workload driven patient care spaces in this document.

Department Net to Gross (DNTG) Factor: A parameter, determined by the VA for each clinical and non-clinical department PG-18-9 space planning criteria chapter, used to convert the programmed Net Square Feet (NSF) area to the Department Gross Square Feet (DGSF) area.

Encounter: An interaction between a patient Veteran and a VA provider or providers in an Exam Room / Treatment Room / Consultation Room / Procedure Room, spaces where a patient Veteran received clinical care.

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 combined time commitment equals that of one full-time employee (i.e., 40 hours per week).

Functional Area (FA): The grouping of rooms and spaces based on their function within a clinical service or department.



Functional Area Criteria Statement (FACS): A verbalized mathematical / logical formulation assigned to a FA incorporating answers to Input Data Statements (IDSs) to determine the condition for providing the rooms / spaces listed in the FA in the baseline space program or Program for Design (PFD) for a project. Certain rooms / spaces may or may not have additional conditions.

Input Data Statement(s): A question or set of questions designed to elicit information about the healthcare project to generate a Program for Design (PFD) based on the parameters set forth in this set of documents. This information is processed through mathematical and logical operations in the VA Space and Equipment Planning System (SEPS).

JSN (Joint Schedule Number): A unique five alpha-numeric code assigned to each content item in the PG-18-5 Standard. JSNs are defined in DoD's Military Standard 1691 and included in SEPS Content Table.

Net Square Feet / Net Square Meters (NSF/NSM): The area of a room or space derived from that within the interior surface of the bounding walls or boundaries.

Patient Unique: (or Unique Patient), A Veteran patient counted as a unique in each division from which they receive care. Patient Uniques are included in the Registry for a VA Medical Center.

Program for Design (PFD): A project specific itemized listing of the spaces, rooms, and square foot area required for the proper operation of a specific service / department, and the corresponding area for each. PFDs are generated by SEPS based on the PG-18-9 Standard.

PG-18-5: A Department of Veterans Affairs' Equipment Guidelist Standard for planning, design, and construction of VA healthcare facilities; a Program Guide (PG) that lists assigned room contents (medical equipment, furniture, and fixtures) to each room in PG-18-9. PG-18-5 follows PG-18-9's chapter organization and nomenclature.

PG-18-9: A Department of Veterans Affairs' Program Guide for the Space Planning Criteria Standard use to develop space planning guidance for the planning, design, and construction of VA healthcare facilities; a Program Guide (PG) that provides space planning guidance for VA Medical Centers (VAMCs) and Community Bases Outpatient Clinics (CBOCs). PG-18-9 is organized by chapters, as of September 2021 there are 56 clinical and non-clinical PG-18-9 chapters; they are implemented and deployed in SEPS so that space planners working on VA healthcare projects can develop baseline space programs.

PG-18-12: A Department of Veterans Affairs' Design Guide Standard for planning, design and construction of VA healthcare facilities, a Program Guide (PG) that provides design guidance for VA Medical Centers (VAMCs) and Community Bases Outpatient Clinics (CBOCs). The narrative section details functional requirements and the Room Template section details the planning and design of key rooms in PG-18-9. Not all PG-18-9 chapters have a corresponding PG-18-12 Design Guide; one Design Guide can cover more than one PG-18-9 chapter.



Provider: An individual who examines, diagnoses, treats, prescribes medication, and manages the care of patients within his or her scope of practice as established by the governing body of a healthcare organization.

Room Area: The square footage required for a clinical or non-clinical function to take place in a room / space. It takes into account the floor area required by equipment (medical and non-medical), furniture, circulation, and appropriate function / code-mandated clearances. Room area is measured in Net Square Feet (NSF).

Room Code (RC): A unique five alpha-numeric code assigned to each room in the PG-18-9 Standard. Room Codes in PG-18-9 are unique to VA and are the basis for SEPS's Space Table for VA projects.

Room Criteria Statement (RCS): A mathematical / logical formulation assigned to each room / space included in PG-18-9 incorporating answers to Input Data Statements (IDSs) to determine the provision of the room / space in the baseline space program or Program for Design (PFD) for a project.

Room Efficiency Factor: A factor that provides flexibility in the utilization of a room to account for patient delays, scheduling conflicts, and equipment maintenance. Common factors are in the 75% to 85% range. A room with 80% room efficiency provides a buffer to assume that this room would be available 20% of the time beyond the planned operational practices for this room. This factor may be adjusted based on the actual and/or anticipated operations and processes of the room/department at a particular facility.

SEPS: Acronym for Space and Equipment Planning System which produces equipment lists and Program for Design for a healthcare project based on specific information entered in response to Input Data Questions.

SEPS Importer: A style-based format developed to allow upload of RCSs and IDSs to SEPS to implement and operationalize space planning criteria in PG-18-9 in the SEPS digital tool. This format establishes the syntax used in the RCSs and allows the use of Shortcuts. Shortcuts allow developers of space planning criteria statements to simplify RCSs making full use of their logical and mathematical functionality. A shortcut can refer to an RCS, a room in any FA or a formula. Shortcuts are [bracketed] when used in FAs and RCSs and are listed along with their equivalences at the end of the Space Planning Criteria section.

Space Planning Concept Matrix (SPCM): A working document developed during the chapter update process. It lists all the rooms organized by Functional Area and establishes ratios between the directly and the indirectly workload driven rooms for the planning range defined in this document. The matrix is organized in ascending workload values in ranges reflecting existing facilities and potential future increase. Section 5 of this document Space Planning Criteria reflects the values in the SPCM.

Stop Code: A measure of workload including clinic stops forecasted by the Office of Policy and Planning (OPP) for all Strategic Planning Categories at Medical Center and Outpatient Clinic levels.



Telehealth: The use of technology, such as computers and mobile devices, to manage healthcare remotely. It includes a variety of health care services, including but not limited to online support groups, online health information and self-management tools, email and online communication with health care providers, remote monitoring of vital signs, video, or online doctor visits. Depending on the concept of operations for this space, it may be equipped as an exam room or as a consult room with video/camera capability.

Utilization Rate: A factor used in the calculation of a directly workload-driven room throughput. It represents, in a percent value, the room is idle based on the planning assumptions. For example, if a directly workload-driven room is available for use 8 hours a day, the Utilization Rate represents the assumed time it will be used, an 85% utilization rate indicates, for planning purposes, the room will be used 6.8 hours a day. An additional directly workload-driven room will be provided in the calculation once the previous room has reached 100% utilization. The utilization Rate is embedded in the Room Throughput value calculated in Section 3 of this document.

VA Room Family (VA RF): An organizational system of rooms / spaces grouped by function, a 'Room Family'. There are two "Orders" in the VA RF: Patient Care and Patient Care Support; Patient Care features four sub-orders: Clinical, Inpatient, Outpatient and Residential Clinical. There are also four sub-orders in the Patient Care Support order: Building Support, Clinical Support, Staff Support and Veteran Support. Each room in a Family has a unique Room Code and NSF assigned based on its Room Contents and function which correspond to the specific use of the room. The same RC can be assigned to different Room Names with the same function in this document and can be assigned an NSF that varies based on the PG-18-5 Room Contents assigned to the room.

VA Technical Information Library (TIL): A resource website maintained by the Facilities Standards Service (FSS) Office of Construction and Facilities Management (CFM) containing a broad range of technical publications related to the planning, design, leasing, and construction of VA facilities. VA-TIL can be accessed at: <https://www.cfm.va.gov/TIL/>

Workload: Workload is the anticipated number of procedures, clinic stops, clinic encounters etc. that is processed through a department/service area. The total workload applied to departmental operational assumptions will determine overall room requirements by modality.

Workstation: Area outfitted with equipment and furnishings, typically allocated 56 NSF each. Managers and other staff with no direct reports as well as part-time, seasonal, and job-sharing staff may qualify for a workstation. Such environments are particularly conducive to team-oriented office groupings. These environments work best when they have access to conference and small group meeting spaces.

### 3 OPERATING RATIONALE AND BASIS OF CRITERIA

- A. Space planning criteria included in this Standard have been specifically developed for this Department / Service in a Department of Veterans Affairs healthcare facility based on established VHA policy and guidelines to define the scope of services provided for



the veterans existing workload demand as well as that in the foreseeable future. Rooms and Functional Areas are provided based on research of clinical and non-clinical activities performed in this Department.

- B. Development / update of VA's Program Guide (PG) standards is a research based effort executed with participation of VHA Subject Matter Experts (SMEs), VA-Construction and Facilities Management Office (CFM) professional staff and specialty consultants hired for the task. These space planning standards are based on current applicable VHA policies and guidelines, established and/or anticipated best practice standards, and latest medical technology developments. Workload metrics were tailored to satisfy current and anticipated veteran workload demand.
- C. The space planning component of PG-18-9 is based on the Space Planning Concept Matrix (SPCM) which lists all the rooms organized by Functional Area and assigns room quantity (Q) and area (NSF) for a series of ranges corresponding to the smallest to the largest department for this service in the VA healthcare system in incremental sizes; each range corresponds to a workload parameter which determines the number and area of each directly workload-driven room. The remainder of the rooms in the range i.e., waiting, storage, staff workstations, etc. are determined by ratios to the resulting number of or NSF of the workload-driven rooms.
- D. Sections 4 and 5 of these space planning standards as well as the PG-18-5 standard are implemented in the Space and Equipment Planning System (SEPS) and hosted at the MAX.gov website so planners working on VA Construction projects can develop single or multi-department projects based on these -PG-18-9- and the PG-18-5 standards. Output from SEPS is through Space and Contents Reports; the Space Report is the Program for Design (PFD), the Content Report is the Project Room Contents (PRC). Inclusion of a Functional Area as well as Room quantity (Q) and determination of the room area (NSF) in the PFD is based on the projected Workload input which triggers calculations included in the Room Criteria Statements (RCSs). The RCSs are placed immediately after each room name, room code and baseline area (NSF). The PRC list the medical equipment, furniture and fixtures associated to each Room Code in the project. The PFD & PRC are the baseline requirements for the planning phase of a VA project based on a site's projected workload for the target planning year. This chapter's corresponding PG-18-12, Design Guide -if available- is intended for use during the design phase of the project.
- E. Space Planning parameters and metrics in this document are based on the Medical & Surgical Patient Care Units (MS PCUs) Space Planning Criteria Matrix (SPCM) developed as the basis for this chapter. The MS PCUs SPCM lists all the spaces a VA MS PCUs site would require; the quantity and NSF for each room is calculated based on the MS PCUs projected workload or number of FTE positions authorized. The SPCM is organized in 8 ranges, each range represents an incremental workload value of 32 patient rooms, this way all current VA MS PCUs sites are covered, the upper ranges are calculated for future facilities in case a higher projected workload or FTE positions authorized than those at the present time for MS PCUs.



- F. The SPCM metrics are translated into one (or more) Room Criteria Statement (RCS) for each room in Section 5 of this document. The SPCM Planning Range, the maximum number of directly workload-driven patient bedroom, in this document is 267. If a project shall require provision of workload driven rooms above the maximum range value) refer to CFM for guidance. Rooms in this space planning document are organized in 8 Functional Areas (FAs).
- G. Based on its intended function, each room / space is assigned a:
  - 1. Room Name (RN),
  - 2. Room Code (RC),
  - 3. Room Area, the Net Square Feet (NSF) and its corresponding “soft metric” Net Square Meters (NSM),
  - 4. Unique Room Criteria Statement(s) (RCSs) correlated to answers to Input Data Statements (IDSs), and
  - 5. Room Comment as needed.
- H. The Room Codes included in this chapter stem from the VA Room Family. A unique support space, that may have variable area, is assigned a unique Room Code and adopts the square footage, as needed, correlated to the room contents assigned which in turn correspond to the range for those rooms. A unique clinical space or a direct clinical support room, i.e., control room, system components room, etc. typically does not feature variable NSF. Patient Care room names for rooms unique to this chapter end in “, MS PCU”. Patient Care Support room names end in “, Bldg Sprt”, “Clncl Sprt”, “Stff Sprt”, or “, Vet Sprt”, correlating to Building, Clinical, Staff or Veteran Support room families.
- I. Section 5, Sub-Section I lists the SEPS Importer Shortcuts used for implementation of Sections 4 & 5 in SEPS. These shortcuts are inserted into the Room Criteria Statement (RCS) for each room which upon upload into the Space and Equipment Planning System (SEPS) allowing planners developing VA healthcare projects to determine quantity and square footage of each room by performing mathematical or logical calculations. Shortcuts refer to Input Data Statements (IDSs), Rooms, or calculation parameters stemming from the SPCM.
- J. SEPS is accessible to government healthcare planners and private sector consultants working on VA HC projects during their Period of Performance (PoP) through the MAX.gov website.
- K. SEPS incorporates a Net-to-Department Gross factor (NTDG) factor of **1.65** for Medical & Surgical Patient Care Units (PCUs) and a Building Gross factor of 1.35 in the space calculation to generate the Department Gross Square Feet (DGSF) and the Building Gross Square Feet (BGSF) respectively for the project based on the aggregate resulting Net Square Feet (NSF) for each range. Planners can adjust the BGSF factor in SEPS; the NTDG factor is fixed.
- L. Refer to the chapter corresponding PG-18-5 Equipment Guidelist for the Room Content assignment for each room during the planning phase of a project.





- M. Refer to the chapter corresponding PG-18-12: Design Guide, if available, during the planning and design phases of a project. Not all PG-18-9 clinical chapters have a corresponding PG-18-12 document, please refer to the VA-TIL.
- N. The space planning and design Program Guides: PG-18-9, PG-18-5, and PG-18-12 are available at the [Department of Veterans Affairs Office of Construction and Facilities Management \(CFM\) Technical Information Library \(TIL\)](#) website.

#### 4 INPUT DATA STATEMENTS (IDS)

- A. How many Acute Inpatient Medical / Surgical patient beds are projected? (W) (Values: 17 to 267)

#### 5 SPACE PLANNING CRITERIA

##### A. FA 1: MEDICAL / SURGICAL INPATIENT UNIT CALCULATION

- 1. **Number of MS PCUs, Clncl Sprt (SC131)..... 0 NSF (0 NSM)**
  - a. Provide one if [Acute Inpatient Medical / Surgical patient beds projected] is between 17 and 33
  - b. Provide two if [Acute Inpatient Medical / Surgical patient beds projected] is between 34 and 66
  - c. Provide three if [Acute Inpatient Medical / Surgical patient beds projected] is between 67 and 99
  - d. Provide four if [Acute Inpatient Medical / Surgical patient beds projected] is between 100 and 132
  - e. Provide five if [Acute Inpatient Medical / Surgical patient beds projected] is between 133 and 165
  - f. Provide six if [Acute Inpatient Medical / Surgical patient beds projected] is between 166 and 198
  - g. Provide seven if [Acute Inpatient Medical / Surgical patient beds projected] is between 199 and 231
  - h. Provide eight if [Acute Inpatient Medical / Surgical patient beds projected] is between 232 and 267

##### B. FA 2: MEDICAL / SURGICAL INPATIENT UNIT RECEPTION AREA

- 1. **MS PCU Waiting, Bldg Sprt (SB003) .....330 NSF (30.7 NSM)**
  - a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]

This space can be aggregated with waiting space required for other similar adjacent units to serve all of the resulting Medical and Surgical Patient Care Units adequately.
- 2. **MS PCU Consult Room, Clncl Sprt (SC271) .....120 NSF (11.2 NSM)**
  - a. Provide two per each [Number of MS PCUs, Clncl Sprt (SC131)]

This room provides privacy for grieving or counseling. Provide access from both Waiting and an adjacent corridor.



- 3. MS PCU Family Lounge, Bldg Sprt (SB086) .....120 NSF (11.2 NSM)**  
*a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]*

Consider combining the Family Lounge with the Family Pantry as appropriate.  
Consider sharing family services with an adjacent Medical / Surgical Inpatient Unit.

- 4. Family Pantry, MS PCU (IMS11) ..... 80 NSF (7.5 NSM)**  
*a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]*

Consider combining the Family Pantry with the Family Lounge as appropriate.  
Consider sharing family services with an adjacent Medical / Surgical Inpatient Unit if possible.

- 5. MS PCU Patient Education Workstation, Clncl Sprt (SC170) .....40 NSF (3.8 NSM)**  
*a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]*

Patient Education Workstation to be used for private patient education needs and also as a medical information resource, which may include electronic and hard copy material, for patients and visitors. Locate accessible to Waiting.

- 6. MS PCU Visitor Toilet, Bldg Sprt (SB191) ..... 60 NSF (5.6 NSM)**  
*a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]*

Allocated NSF accommodates one accessible toilet @ 25 NSF, one wall-hung lavatory @ 12 NSF, ABA clearances, and circulation.

- 7. MS PCU Family Toilet, Bldg Sprt (SB136) ..... 80 NSF (7.5 NSM)**  
*a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]*

**C. FA 3: MEDICAL / SURGICAL INPATIENT UNIT PATIENT AREA**

- 1. Patient Bedroom, MS PCU (IMS21) .....280 NSF (26.1 NSM)**  
*a. Provide 24 if [Number of MS PCUs, Clncl Sprt (SC131)] is 1*  
*b. Provide 45 if [Number of MS PCUs, Clncl Sprt (SC131)] is 2*  
*c. Provide 69 if [Number of MS PCUs, Clncl Sprt (SC131)] is 3*  
*d. Provide 93 if [Number of MS PCUs, Clncl Sprt (SC131)] is 4*  
*e. Provide 114 if [Number of MS PCUs, Clncl Sprt (SC131)] is 5*  
*f. Provide 138 if [Number of MS PCUs, Clncl Sprt (SC131)] is 6*  
*g. Provide 162 if [Number of MS PCUs, Clncl Sprt (SC131)] is 7*  
*h. Provide 186 if [Number of MS PCUs, Clncl Sprt (SC131)] is 8*

- 2. MS PCU Patient Toilet / Shower, Bldg Sprt (SB147) ..... 70 NSF (6.6 NSM)**  
*a. Provide one per each [Patient Bedroom, MS PCU (IMS21)]*

Allocated NSF accommodates one accessible toilet @ 25 NSF, one accessible counter lavatory @ 16 NSF, one accessible shower @ 28 NSF, ABA clearances, and circulation.



- 3. Airborne Infection Isolation (All) Bedroom, MS PCU (IMS23) .....240 NSF (22.3 NSM)**
- a. Provide 3 if [Number of MS PCUs, Clncl Sprt (SC131)] is 1
  - b. Provide 7 if [Number of MS PCUs, Clncl Sprt (SC131)] is 2
  - c. Provide 10 if [Number of MS PCUs, Clncl Sprt (SC131)] is 3
  - d. Provide 13 if [Number of MS PCUs, Clncl Sprt (SC131)] is 4
  - e. Provide 17 if [Number of MS PCUs, Clncl Sprt (SC131)] is 5
  - f. Provide 20 if [Number of MS PCUs, Clncl Sprt (SC131)] is 6
  - g. Provide 23 if [Number of MS PCUs, Clncl Sprt (SC131)] is 7
  - h. Provide 27 if [Number of MS PCUs, Clncl Sprt (SC131)] is 8

Negative Pressure.

- 4. Airborne Infection Isolation (All) Anteroom, MS PCU (IMS24) ..... 65 NSF (6.1 NSM)**
- a. Provide one per each [Airborne Infection Isolation (All) Bedroom, MS PCU (IMS23)]

- 5. Protective Environment Isolation Patient Bedroom, MS PCU (IMS25) .....240 NSF (22.3 NSM)**

- a. Provide 3 if [Number of MS PCUs, Clncl Sprt (SC131)] is 1
- b. Provide 7 if [Number of MS PCUs, Clncl Sprt (SC131)] is 2
- c. Provide 10 if [Number of MS PCUs, Clncl Sprt (SC131)] is 3
- d. Provide 13 if [Number of MS PCUs, Clncl Sprt (SC131)] is 4
- e. Provide 17 if [Number of MS PCUs, Clncl Sprt (SC131)] is 5
- f. Provide 20 if [Number of MS PCUs, Clncl Sprt (SC131)] is 6
- g. Provide 23 if [Number of MS PCUs, Clncl Sprt (SC131)] is 7
- h. Provide 27 if [Number of MS PCUs, Clncl Sprt (SC131)] is 8

Positive Pressure.

- 6. Protective Environment Isolation Anteroom, MS PCU (IMS26) ..... 65 NSF (6.1 NSM)**
- a. Provide one per each [Protective Environment Isolation Patient Bedroom, MS PCU (IMS25)]

- 7. MS PCU Patient Isolation Toilet / Shower, Bldg Sprt (SB147) ..... 70 NSF (6.6 NSM)**

- a. Provide 6 if [Number of MS PCUs, Clncl Sprt (SC131)] is 1
- b. Provide 14 if [Number of MS PCUs, Clncl Sprt (SC131)] is 2
- c. Provide 20 if [Number of MS PCUs, Clncl Sprt (SC131)] is 3
- d. Provide 26 if [Number of MS PCUs, Clncl Sprt (SC131)] is 4
- e. Provide 34 if [Number of MS PCUs, Clncl Sprt (SC131)] is 5
- f. Provide 40 if [Number of MS PCUs, Clncl Sprt (SC131)] is 6
- g. Provide 46 if [Number of MS PCUs, Clncl Sprt (SC131)] is 7
- h. Provide 54 if [Number of MS PCUs, Clncl Sprt (SC131)] is 8

Allocated NSF accommodates one accessible toilet @ 25 NSF, one accessible counter lavatory @ 16 NSF, one accessible shower @ 28 NSF, ABA clearances, and circulation.



- 8. Bariatric / Physical Disabilities**
- Patient Bedroom, MS PCU (IMS27) .....280 NSF (26.1 NSM)**
- a. Provide 3 if [Number of MS PCUs, Cncl Sprt (SC131)] is 1
  - b. Provide 7 if [Number of MS PCUs, Cncl Sprt (SC131)] is 2
  - c. Provide 10 if [Number of MS PCUs, Cncl Sprt (SC131)] is 3
  - d. Provide 13 if [Number of MS PCUs, Cncl Sprt (SC131)] is 4
  - e. Provide 17 if [Number of MS PCUs, Cncl Sprt (SC131)] is 5
  - f. Provide 20 if [Number of MS PCUs, Cncl Sprt (SC131)] is 6
  - g. Provide 23 if [Number of MS PCUs, Cncl Sprt (SC131)] is 7
  - h. Provide 27 if [Number of MS PCUs, Cncl Sprt (SC131)] is 8

- 9. MS PCU Bariatric Toilet / Shower, Bldg Sprt (SB161) ..... 85 NSF (7.9 NSM)**
- a. Provide one per each [Bariatric / Physical Disabilities Patient Bedroom, MS PCU (IMS27)]

Allocated NSF accommodates one bariatric toilet @ 25 NSF, one bariatric lavatory @ 21 NSF, one bariatric shower @ 30 NSF, ABA clearances, and circulation.

- 10. Dayroom, MS PCU (IMS31).....240 NSF (22.3 NSM)**
- a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]

This room to be used for veteran socialization outside the patient room and can be used for group education for clinical issues such as medications, hypertension, diabetes, nutrition, mental health, and detoxification.

**D. FA 4: MEDICAL / SURGICAL INPATIENT SUPPORT AREA**

- 1. MS PCU Nurse Station, Cncl Sprt (SC152).....160 NSF (14.9 NSM)**
- a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]

Allocated NSF can be decentralized to promote delivery of safe and efficient patient care.

- 2. Telemetry Monitoring Alcove, MS PCU (IMS44) ..... 80 NSF (7.5 NSM)**
- a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]

- 3. MS PCU Medication Room, Phrm Svc (SV583) ..... 100 NSF (9.3 NSM)**
- a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]

Allocated NSF can be decentralized to promote delivery of safe and efficient patient care.

- 4. MS PCU Nourishment Room, F&N Svc (SV272) ..... 100 NSF (9.3 NSM)**
- a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]

Allocated NSF can be decentralized to promote delivery of safe and efficient patient care.

- 5. MS PCU Nurse Workroom, Cncl Sprt (SC231).....120 NSF (11.2 NSM)**
- a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]



- 6. MS PCU Clean Utility Room, Lgstcs Svc (SB737) .....120 NSF (11.2 NSM)**  
*a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]*

This room is used for storage of sterile and non-sterile medical supplies. Allocated NSF can be decentralized to promote delivery of safe and efficient patient care.

- 7. MS PCU Soiled Utility Room, Lgstcs Svc (SB743) .....120 NSF (11.2 NSM)**  
*a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]*

This room provides an area for pre-cleaning of medical equipment, instruments, and for disposal of waste material. Allocated NSF can be decentralized to reduce travel distances for staff.

- 8. MS PCU Clean Linen Room, EMS (SC471)..... 100 NSF (9.3 NSM)**  
*a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]*

This room is used for storage of clean linen. Allocated NSF can be decentralized to reduce travel distances for staff.

- 9. Equipment Storage Room, MS PCU (IMS81) .....180 NSF (16.8 NSM)**  
*a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]*

Allocated NSF can be decentralized to reduce travel distances for staff.

- 10. Medical Gas Storage Room, MS PCU (IMS83) ..... 50 NSF (4.7 NSM)**  
*a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]*

This room is for storage of medical gas cylinders.

- 11. MS PCU Crash Cart Alcove, Cncl Sprt (SC052)..... 20 NSF (1.9 NSM)**  
*a. Provide two per each [Number of MS PCUs, Cncl Sprt (SC131)]*

- 12. Mobile X-Ray Machine Alcove, MS PCU (IMS85) ..... 40 NSF (3.8 NSM)**  
*a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]*

- 13. MS PCU Wheelchair / Stretcher Alcove, Bldg Sprt (SB252)..... 50 NSF (4.7 NSM)**  
*a. Provide two per each [Number of MS PCUs, Cncl Sprt (SC131)]*

- 14. MS PCU Housekeeping Aides Closet (HAC), Bldg Sprt (SB244)..... 60 NSF (5.6 NSM)**  
*a. Provide one per each [Number of MS PCUs, Cncl Sprt (SC131)]*

**E. FA 5: MEDICAL / SURGICAL INPATIENT STAFF AND ADMINISTRATIVE AREA**

- 1. MS PCU Nurse Manager Office, Stff Sprt (SS204)..... 100 NSF (9.3 NSM)**  
*a. Provide one if [Number of MS PCUs, Cncl Sprt (SC131)] is between 1 and 4*  
*b. Provide two if [Number of MS PCUs, Cncl Sprt (SC131)] is between 5 and 8*

- 2. MS PCU Nurse Supervisor Office, Stff Sprt (SS204) ..... 100 NSF (9.3 NSM)**  
*a. Provide one if [Number of MS PCUs, Cncl Sprt (SC131)] is between 1 and 2*  
*b. Provide two if [Number of MS PCUs, Cncl Sprt (SC131)] is between 3 and 4*  
*c. Provide three if [Number of MS PCUs, Cncl Sprt (SC131)] is between 5 and 6*  
*d. Provide four if [Number of MS PCUs, Cncl Sprt (SC131)] is between 7 and 8*



- 3. MS PCU Social Worker Workstation, Stff Sprt (SS218) ..... 56 NSF (5.3 NSM)**
  - a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 4
  - b. Provide two if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 8
- 4. MS PCU Dietician Workstation, Stff Sprt (SS218) ..... 56 NSF (5.3 NSM)**
  - a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 4
  - b. Provide two if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 8
- 5. MS PCU Ward Clerk Workstation, Stff Sprt (SS218) ..... 56 NSF (5.3 NSM)**
  - a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]
- 6. MS PCU Staff Conference Room, Educ Svc (SS101) .....300 NSF (27.9 NSM)**
  - a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]

Allocated NSF accommodates ten conference chairs @ 7.5 NSF each, four 5'-0" x 2'-0" tables at 10 NSF each, one credenza @ 8 NSF, and circulation: total ten people.
- 7. MS PCU Copy / Supply Room, Stff Sprt (SS272) ..... 80 NSF (7.5 NSM)**
  - a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]
- 8. MS PCU Staff Breakroom, Stff Sprt (SS262) .....160 NSF (14.9 NSM)**
  - a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]
- 9. MS PCU Female Staff Locker Room, Stff Sprt (SS232) ..... 100 NSF (9.3 NSM)**
  - a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]
- 10. MS PCU Male Staff Locker Room, Stff Sprt (SS241)..... 100 NSF (9.3 NSM)**
  - a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]
- 11. MS PCU Staff Toilet, Bldg Sprt (SB191) ..... 60 NSF (5.6 NSM)**
  - a. Provide two per each [Number of MS PCUs, Clncl Sprt (SC131)]

Allocated NSF accommodates one accessible toilet @ 25 NSF, one wall-hung lavatory @ 12 NSF, ABA clearances, and circulation.

**F. FA 6: COMMON SUPPORT AREA**

- 1. MS PCU Patient Discharge Lounge, Bldg Sprt (SB086).....200 NSF (18.6 NSM)**
  - a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 4
  - b. Provide two if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 8
- 2. MS PCU Clean Materials Handling Room, Lgstcs Svc (SB695) ..... 80 NSF (7.5 NSM)**
  - a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 2
  - b. Provide one at 100 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 3 and 4
  - c. Provide one at 120 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 6
  - d. Provide one at 140 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 7 and 8

Space designated for access to the Clean Materials lift.



- 3. MS PCU Soiled Materials Handling Room, Lgstcs Svc (SB701) ..... 80 NSF (7.5 NSM)**
  - a. *Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 2*
  - b. *Provide one at 100 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 3 and 4*
  - c. *Provide one at 120 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 6*
  - d. *Provide one at 140 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 7 and 8*

Space designated for access to the Soiled Materials lift.

- 4. MS PCU Waste Disposal Chute Room, Clncl Sprt (SC257) ..... 40 NSF (3.8 NSM)**
  - a. *Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 2*
  - b. *Provide one at 60 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 3 and 4*
  - c. *Provide one at 80 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 6*
  - d. *Provide one at 100 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 7 and 8*
- 5. MS PCU Soiled Linen Chute Room, Clncl Sprt (SC213) ..... 40 NSF (3.8 NSM)**
  - a. *Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 2*
  - b. *Provide one at 60 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 3 and 4*
  - c. *Provide one at 80 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 6*
  - d. *Provide one at 100 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 7 and 8*
- 6. Multipurpose / Specialty Storage Room, MS PCU (IMS86).....160 NSF (14.9 NSM)**
  - a. *Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 2*
  - b. *Provide one at 200 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 3 and 4*
  - c. *Provide one at 240 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 6*
  - d. *Provide one at 280 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 7 and 8*



- 7. MS PCU Environmental Management Service**  
**Storage Room, Bldg Sprt (SB212) ..... 80 NSF (7.5 NSM)**
- a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 2
  - b. Provide one at 100 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 3 and 4
  - c. Provide one at 120 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 6
  - d. Provide one at 140 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 7 and 8

This space provided for storing bulk supplies and large equipment used by Environmental Management Services.

- 8. MS PCU Recycling Room, Bldg Sprt (SB267)..... 80 NSF (7.5 NSM)**
- a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 2
  - b. Provide one at 100 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 3 and 4
  - c. Provide one at 120 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 6
  - d. Provide one at 140 NSF if [Number of MS PCUs, Clncl Sprt (SC131)] is between 7 and 8

**G. FA 7: COMMON STAFF AND ADMINISTRATIVE AREA**

- 1. MS PCU Physician Workstation, Stff Sprt (SS218) ..... 56 NSF (5.3 NSM)**  
a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]
- 2. MS PCU Physician Assistant Workstation, Stff Sprt (SS218) ..... 56 NSF (5.3 NSM)**  
a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]
- 3. MS PCU Nurse Clinician Workstation, Stff Sprt (SS218)..... 56 NSF (5.3 NSM)**  
a. Provide one per each [Number of MS PCUs, Clncl Sprt (SC131)]
- 4. MS PCU Consultant Workstation, Stff Sprt (SS218)..... 56 NSF (5.3 NSM)**
- a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 2
  - b. Provide two if [Number of MS PCUs, Clncl Sprt (SC131)] is between 3 and 4
  - c. Provide three if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 6
  - d. Provide four if [Number of MS PCUs, Clncl Sprt (SC131)] is between 7 and 8
- 5. MS PCU Clinical Researcher Workstation, Stff Sprt (SS218) ..... 56 NSF (5.3 NSM)**
- a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 4
  - b. Provide two if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 8
- 6. MS PCU Clinical Pharmacist Workstation, Stff Sprt (SS218) ..... 56 NSF (5.3 NSM)**
- a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 2
  - b. Provide two if [Number of MS PCUs, Clncl Sprt (SC131)] is between 3 and 4
  - c. Provide three if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 6
  - d. Provide four if [Number of MS PCUs, Clncl Sprt (SC131)] is between 7 and 8





- 7. MS PCU Administration Workstation, Stff Sprt (SS218) ..... 56 NSF (5.3 NSM)**
  - a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 2
  - b. Provide two if [Number of MS PCUs, Clncl Sprt (SC131)] is between 3 and 4
  - c. Provide three if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 6
  - d. Provide four if [Number of MS PCUs, Clncl Sprt (SC131)] is between 7 and 8

#### **H. FA 8: EDUCATION AREA**

- 1. MS PCU Residency Director Office, Stff Sprt (SS204) ..... 100 NSF (9.3 NSM)**
  - a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 8
- 2. MS PCU Intern / Fellow / Resident Workstation, Stff Sprt (SS217) ..... 48 NSF (4.5 NSM)**
  - a. Provide two per each [Number of MS PCUs, Clncl Sprt (SC131)]
- 3. MS PCU Instructor Workstation, Stff Sprt (SS218) ..... 56 NSF (5.3 NSM)**
  - a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 4
  - b. Provide two if [Number of MS PCUs, Clncl Sprt (SC131)] is between 5 and 8
- 4. MS PCU Resident Training Room, Educ Svc (SS111) .....545 NSF (50.7 NSM)**
  - a. Provide one if [Number of MS PCUs, Clncl Sprt (SC131)] is between 1 and 8

#### **I. SEPS IMPORTER SHORTCUTS**

The following shortcuts are used in the Room Criteria Statements in the Medical & Surgical Patient Care Units Functional Areas. These shortcuts are used during upload of this document into the Space and Equipment Planning System (SEPS) software during implementation of the space planning parameters contained herewith to allow for mathematical or logical calculations to be performed. Input Data Statements (IDSs), Rooms or a partial calculation formula can have a shortcut.

1. *Acute Inpatient Medical / Surgical patient beds projected:* [How many Acute Inpatient Medical / Surgical patient beds are projected?]

### **6 PLANNING AND DESIGN CONSIDERATIONS**

- A. Separation of patient, visitor, and support traffic should be considered to the greatest extent possible and should be considered in the placement of the bed tower and in connections to ancillary services.
- B. Standardization of Bedrooms and modular design should be considered to allow flexibility to adapt to new technologies and respond to changes in patient volumes.
- C. Design should accommodate patient privacy and confidentiality in all areas, and in reception and patient care areas. This includes visual and auditory considerations.
- D. Where possible, the department should be configured to limit the mix of patient and service functions, and to maintain clear separation of clean and dirty functions to avoid cross contamination.



- E. Corridors should be designed to a minimum of 8 feet clear width to accommodate passage of equipment or beds and two stretchers and/or wheelchairs.
- F. Administration and support areas should be located and designed to maximize staff and space efficiency, and reduce staff travel distances.
- G. Refer to Department of Veterans Affairs (VA) Office of Construction and Facilities Management Technical Information Library ([www.cfm.va.gov/til/](http://www.cfm.va.gov/til/)) for additional technical criteria.
- H. Refer to Design Guide for Medical/Surgical Inpatient Units for a detailed discussion of functional and design considerations.



## 7 FUNCTIONAL RELATIONSHIPS

Relationship of Medical and Surgical Patient Care Units to services listed below:

**TABLE 1: FUNCTIONAL RELATIONSHIP MATRIX**

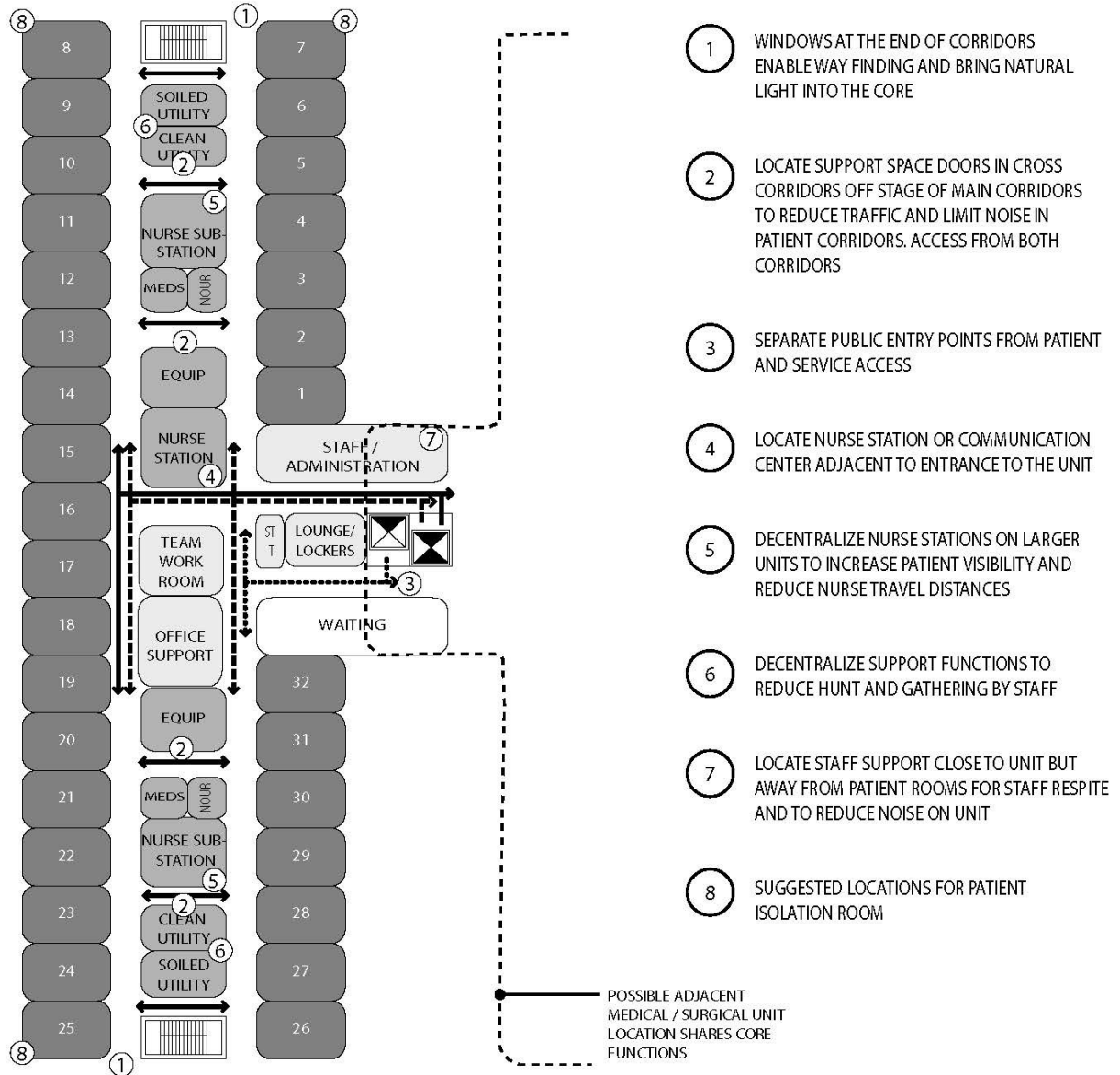
| SERVICES                                              | FUNCTIONAL RELATIONSHIP |
|-------------------------------------------------------|-------------------------|
| VET SPRT: PHRM Svc: Inpatient                         | 1                       |
| VET SPRT: Social Work                                 | 1                       |
| CLNCL: Cardiology                                     | 2                       |
| CLNCL: Clncl Svc Adm: Neurology                       | 2                       |
| CLNCL: Emergency                                      | 2                       |
| CLNCL: Urgent Care                                    | 2                       |
| CLNCL: Pulm Svc: Pulmonary / Respiratory Care         | 2                       |
| CLNCL: Pulm Svc: Bronchoscopy                         | 2                       |
| CLNCL: PMR Svc: Physical Therapy (PT)                 | 2                       |
| CLNCL: Surg Svc: Inpatient Surgery                    | 2                       |
| BLDG SPRT: Lobby                                      | 2                       |
| CLNCL SPRT: Quarters-on-Call                          | 2                       |
| VET SPRT: Chaplain Svc: Worship                       | 2                       |
| VET SPRT: F&N Svc: Main Kitchen: Patient Tray Service | 2                       |
| CLNCL: Clncl Svc Adm: Oncology                        | 3                       |
| CLNCL: GI-Endoscopy                                   | 3                       |
| CLNCL: Imgng Svcs: Radiography                        | 3                       |
| CLNCL: Imgng Svcs: MRI                                | 3                       |
| CLNCL: Imgng Svcs: Computed Tomography (CT)           | 3                       |
| CLNCL: Imgng Svcs: Magnetic Resonance Imaging (MRI)   | 3                       |
| CLNCL: Imgng Svcs: Nuclear Medicine (NM)              | 3                       |
| CLNCL: Imgng Svcs: PET/ CT                            | 3                       |
| CLNCL: Imgng Svcs: PET/MRI                            | 3                       |
| CLNCL: Path Svc: Autopsy                              | 3                       |
| CLNCL: Radiation Therapy                              | 3                       |
| CLNCL: PMR Svc: Prosthetics                           | 3                       |
| CLNCL: PMR Svc: Occupational Therapy (OT)             | 3                       |
| BLDG SPRT: ENG: Engineering Service (all specialties) | 3                       |
| BLDG SPRT: Logstcs Svc: Warehouse                     | 3                       |

**Legend:**

1. High
2. Moderate
3. Minimal



**8 FUNCTIONAL DIAGRAM**



**LEGEND**

