DoD Space Planning Criteria

Chapter 440: Surgical / Interventional Services & Ambulatory Surgery Center
July 1, 2017

Originating Component: Defense Health Agency Facilities Division

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Releasability: No Restrictions

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

SUMMARY of CHANGE

This revision, dated 1 July 2017 includes the following:

- On page 13, Section 3: PROGRAM DATA REQUIRED: SURGICAL / INTERVENTIONAL SERVICES, deleted input data statement “How many Surgical / Interventional Services Post-Anesthesia Care Unit (PACU) / Phase I Recovery FTEs will work on peak shift? (Misc)”

- On page 19, section 4.4. FA4: SURGICAL SERVICES PROCEDURES, room 19, corrected room code for System Component Room, Hybrid OR to read “(XCCE1)”.

- Starting on page 20, grouped FA6 Fluoroscopy-Based Procedures and FA7 Non Fluoroscopy-Based Procedures into a combined FA5 Interventional Services Procedure functional area, to align with SEPS. Adjusted functional area numbering to align with revised sequence.

- On page 22, section 4.6 FA6 (previously listed as 4.8 FA8), corrected section title to read “SURGICAL / INTERVENTIONAL SERVICES PHASE I RECOVERY”.

- On page 24, section 4.7. FA7 (previously listed as 4.9. FA9), room 1, changed name to read “Laboratory, Operating Room (LBSP2)”.

- On page 26, section 4.8. FA8 (previously listed as 4.10. FA10), room 3, changed criteria statement to read “Provide one for Surgical / Interventional Services Staff and Administration.”

- On page 28, section 4.9. FA9 (previously listed as 4.11. FA11), room 3, changed name to read “Conference / Classroom (CRA01)”.

- On page 29, Section 3: PROGRAM DATA REQUIRED: AMBULATORY SURGURY CENTER (ASC), deleted input data statement “Is a Patient Discharge Lounge in the ASC Pre-Operative Holding / Phase II Recovery authorized? (M)”

- On page 29, Section 3: PROGRAM DATA REQUIRED: AMBULATORY SURGURY CENTER (ASC), deleted input data statement “Is a Frozen Section Laboratory for the ASC authorized? (M)”

- On page 29, Section 3: PROGRAM DATA REQUIRED: AMBULATORY SURGURY CENTER (ASC), deleted input data statement “How many ASC FTE positions are authorized? (S)”. Changed the three subsequent secondary input data statements to be primary input data statements.

- On page 37, section 4.6. FA6 ASC SURGICAL PROCEDURE SUPPORT, deleted room 1 “Laboratory, Frozen Section (LBME3)”. This room is redundant with the Operating Room Laboratory (LBSP2) and references an incorrect room code.

- On page 37, section 4.7. FA7: ASC STAFF AND ADMINISTRATION, room 3, changed criteria statement to read “Provide one for the ASC Staff and Administration.”

TABLE OF CONTENTS

SECTION 1: PURPOSE AND SCOPE 5
SECTION 2: OPERATING RATIONALE AND BASIS OF CRITERIA 7
SECTION 3: PROGRAM DATA REQUIRED: SURGICAL / INTERVENTIONAL SERVICES 13
3.1. Input Data Statements. 13
SECTION 4: SPACE PLANNING CRITERIA 15
4.1. FA1: Surgical / Interventional Services Reception. 15
4.2. FA 2: Surgical / Interventional Services Pre-Operative Holding / Phase II Recovery. 15
4.3. FA 3: Surgical / Interventional Services Anesthesia Procedures. 17
4.4. FA 4: Surgical Services Procedures. 18
4.5. FA 5: Interventional Services Procedure. 21
4.6. FA8: Surgical / Interventional Services Reception. 24
4.7. FA7: Surgical / Interventional Services Support. 25
4.8. FA8: Surgical / Interventional Services Staff and Administration. 27
4.9. FA9: Surgical / Interventional Services GME / Training. 29
SECTION 3: PROGRAM DATA REQUIRED: AMBULATORY SURGERY CENTER (ASC). 30
3.1. Input Data Statements. 30
SECTION 4: SPACE PLANNING CRITERIA: AMBULATORY SURGERY CENTER (ASC) 31
4.1. FA1: ASC Reception. 31
4.2. FA 2: ASC Pre-Operative Holding / Phase II Recovery. 31
4.3. FA 3: ASC Anesthesia Procedure. 33
4.4. FA 4: ASC Surgical Procedure. 34
4.5. FA 5: ASC Phase I Recovery 35
4.6. FA 6: ASC Surgical Procedure Support. 37
4.7. FA 7: ASC Staff and Administration. 37
4.6. FA 6: ASC GME / Training. 39
SECTION 5: PLANNING AND DESIGN CONSIDERATIONS 40
5.1. Net-to-Department Gross Factor 40
5.2. General Design Considerations 40
SECTION 6: FUNCTIONAL RELATIONSHIPS: ALL SERVICES 43
SECTION 7: FUNCTIONAL RELATIONSHIPS (INTERDEPARTMENTAL): SURGICAL / INTERVENTIONAL SERVICES 44
SECTION 8: FUNCTIONAL DIAGRAMS (INTRADEPARTMENTAL): SURGICAL / INTERVENTIONAL SERVICES / AMBULATORY SURGERY CENTER (ASC) 45
SECTION 9: FUNCTIONAL RELATIONSHIPS (INTERDEPARTMENTAL): AMBULATORY SURGERY CENTER (ASC) 46
GLOSSARY 47
G.1. Definitions 47

SECTION 1: PURPOSE AND SCOPE

1.1. PURPOSE AND SCOPE This chapter outlines space planning criteria for Inpatient and Ambulatory Surgical Services within the Military Health System (MHS). In addition to the Operating Rooms and their support spaces, this chapter includes space planning criteria for the following services.

A. Interventional Services Procedure Rooms
B. Pre-Operative Holding
C. Phase II Recovery
D. Post-Anesthesia Care / Phase I Recovery

Planners should be aware that nearly all interventional / special procedure spaces have been removed from section-specific chapters (e.g. 314: Urology, 315: Specialty Medical Clinics, and 316: Cardiology / Pulmonary) and relocated within Chapter 440 to more effectively share similar resources without unnecessary duplication. Despite the move of these space listings to Chapter 440, it remains at the planner's discretion to locate the Interventional Services Procedure spaces where they best serve the facility's concept of operations. The inclusion of special procedure areas within this chapter is not intended to change or limit a planner's flexibility.

Space planning criteria is also provided for regional anesthesia and acute pain management procedures that could be performed in the Surgical / Interventional Services Anesthesia area.

Prior to surgical / interventional procedures, patients may have a pre-surgical exam and testing (Includes lab specimens, EKGs, x-ray, information about the surgery, anesthesia consultation and patient education). It is assumed that this function will occur in the appropriate surgical clinics (Refer to Chapter 311: General and Specialty Surgical Clinics), or at the appropriate location for the patient / condition / procedure. "Pre-Op" is defined as the function that takes place the day of the surgery. The patient comes to the Surgical / Interventional Services area, registers, and is prepared for surgery.

It is important for the programmer / planner to understand that interventional procedures and ambulatory surgery are performed in more than one setting. Each of these may be performed in the hospital setting; they may also be performed in Ambulatory Surgery Centers that are located adjacent to the inpatient ORs; and they may be performed in an Ambulatory Surgery Center that is a standalone facility. Some procedures may actually be performed in the outpatient clinic, depending on the concept of operations. If Ambulatory Surgery is to be performed within the hospital setting, then the space planning criteria for Surgical / Interventional Services should be used. Otherwise, the programmer / planner should refer to the space planning criteria for Ambulatory Surgery.

If Surgical / Interventional Services and Ambulatory Surgery are provided in the same facility, consideration should be given to co-locating services in order to share staff, support and mechanical spaces, as practical to the concept of operations.

If pediatric surgery is part of the program, these patients must be separated from adults in both the preoperative and postoperative recovery phases; and provisions for parental presence must be accommodated. As well, other requirements will need to be met.

This space planning criteria applies to all Military Medical Treatment Facilities (MTFs). Policies and directives, DoD Subject Matter Experts (SMEs), established and/or anticipated best practice guidelines / standards, and the Defense Health Agency (DHA) provides the foundation for the workload based space criteria and Net Square Footages (NSF) for each space. Room Codes (RCs) in this document are based on the latest version of DoD UFC 4-510-01, Appendix B.

SECTION 2: OPERATING RATIONALE AND BASIS OF CRITERIA

2.1. OPERATING RATIONALE AND BASIS OF CRITERIA.

A. Workload projections and planned services / modalities for a specific MHS facility project shall be sought by the planner in order to develop a project based on these Criteria. Healthcare and clinical planners working on military hospitals, medical centers and clinics shall utilize and apply the workload based criteria set forth herein for identified services and modalities to determine space requirements for the project.

B. Space planning criteria have been developed on the basis of an understanding of the activities involved in the functional areas required for Perioperative Services (Pre-Operative Holding / Phase II Recovery, Utilization Factor: Also known as capacity utilization rate, this factor provides flexibility in the utilization of a room to account for patient delays, Phase I Recovery, and Operating Rooms) and their relationship with other services of a medical facility. These criteria are predicated on established and/or anticipated best practice standards, as adapted to provide environments supporting the highest quality health care for Service Members and their dependents.

C. 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 medical equipment is determined during the design process.

D. The area for each Room (NSF) in this chapter has been provided by the Military Health System (MHS) Space Template Board.

E. Calculation of the number of the Operating Rooms and Interventional Procedure Rooms, except the Hybrid Room, is derived from workload projections via the Workload and Mission Input Data Statements. The surgical support rooms are determined based on the number of Operating Rooms and Interventional Procedure Rooms generated by workload. Mission, Staffing and Miscellaneous Input Data Questions drive the rest of the spaces in this chapter.

F. Section 4: Input Data Questions and Section 5: Space Planning Criteria have been implemented and tested in SEPS II.

G. The total number of Operating Rooms is calculated based on the parameters indicated in Table 1. Provided the minimum projected surgical caseload values are reached; a project will be allocated two General ORs minimum; additional General or Sub-Specialty ORs will be provided by answering specific Mission Input Data Statements. Planner shall obtain specific site caseload information from the Health Services Data Warehouse (HSDW)

TABLE 1: WORKLOAD PARAMETER CALCULATION: OPERATING ROOMS

440: SURGICAL SERVICES					
Operating Room Type	**Driver**	**Minimum**	**GME**	**No GME**	**Ambulatory Surgery Center (ASC)**
			Provide an additional one for every increment of…		
General OR	Total number of annual projected surgical cases minus aggregate of the all sub-specialty annual projected surgical cases	2	800	1,000	1,200
Sub-Specialty OR*	Total number of annual projected sub-specialty surgical cases for each sub-specialty	0	800	1,000	1,200
Hybrid OR	Special Study / Approval	0	N/A		

* Urology / Cystoscopy, Cardiothoracic, Neurosurgical and Orthopedic

H. The total number of Interventional Services Procedure Rooms is calculated based on the parameters set forth in Table 2 and the formulae following the table.

TABLE 2: WORKLOAD PARAMETER CALCULATION: PROCEDURE ROOMS

440: INTERVENTIONAL SERVICES				
PROCEDURES	**AVERAGE LENGTH OF PROCEDURE (minutes)**	**UTILIZATION FACTOR**	**ANNUAL WRKLD PER ROOM (*)**	**MINIMUM ANNUAL WRKLD TO GENERATE ONE ROOM**
Interventional				
Interventional Procedure Room	120	85%	816	144
Urology Procedure Room	60	85%	1,632	288
Cystoscopy Procedure Room	80	85%	1,224	216
ERCP Procedure Room	120	85%	816	144
Endoscopy Procedure Room	50	85%	1,958	346
Proctoscopy / Lower GI Procedure Room	60	85%	1,632	288

(*) Values in this column are representative and are based on an 8-hour per day and a 240-day per year default value.

Formula:

$$\frac{(\text{Operating Days per year})(\text{Hours of Operation per Day})}{\text{Average Length of Procedure (ALOP) in Minutes} \div 60 \text{ Minutes}} \text{ (Utilization Factor)}$$

Fixed Values:

1. Operating Days per Year: 240
2. Hours of Operation per Day: 8
3. Interventional Services Utilization Factor: 85%

Calculation: Annual Workload for one Interventional Procedure Room:

$$\frac{(240\ Operating\ Days\ per\ Year)(8\ Hours\ of\ Operation\ per\ Day)}{120\ Minutes \div 60\ Minutes}\ (0.85) = 816$$

Minimum Annual Workload to generate a Procedure Room: 15% of Annual Workload for one Procedure Room base on Utilization Factor of 85%

Workload based room calculation examples:

Room Criteria Statement (Room 1):

Minimum one if the projected annual procedure is between 307 and 1,536; provide an additional one for every increment of 1,536 projected annual procedures greater than 1,536; the minimum workload to generate an additional room is 307.

Input Data Statement 1, Answer 1:

How many annual procedures are projected? (W) = 4,700

Step 1: Subtract the increment from the projected annual procedures to account for the "Minimum one" condition.

$$4{,}700 - 1{,}536 = 3{,}164$$

One room generated

Step 2: Divide the resulting value by the increment.

$$\frac{3{,}164}{1{,}536} = 2.05$$

Two additional rooms generated

Step 3: Multiply the whole value ("2" in the previous step) by the increment.

$$(2)(1{,}536) = 3{,}072$$

Step 4: Subtract Step 3 from Step 1.

$$3{,}164 - 3{,}072 = 92$$

Step 5: Compare Step 4 with the "minimum workload to generate an additional room" value; if higher, provide an additional room.

$$92 < 307$$

No additional rooms generated.

Total number of rooms generated by 4,700 annual procedures: 3

Input Data Statement 1, Answer 2:

How many annual procedures are projected? (W) = 15,000

Step 1: Subtract the increment from the projected annual procedures to account for the "Minimum one" condition.

$$15{,}000 - 1{,}536 = 13{,}464$$

One room generated

Step 2: Divide the resulting value by the increment.

$$\frac{13{,}464}{1{,}536} = 8.76$$

Eight additional rooms generated

Step 3: Multiply the whole value ("8" in the previous step) by the increment.

$$(8)(1{,}536) = 12{,}288$$

Step 4: Subtract Step 3 from Step 1.

$$13{,}464 - 12{,}288 = 1{,}176$$

Step 5: Compare Step 4 with the "*minimum workload to generate an additional room*" value; if higher, provide an additional room.

$$1{,}176 > 307$$

One additional room generated.

Total number of rooms generated by 15,000 annual procedures: 10

Room Criteria Statement (Room 2):

Minimum two if the projected annual procedures is between 614 and 6,144; provide an additional one for every increment of 3,072 projected annual procedures greater than 6,144; the minimum workload to generate an additional room is 614.

Input Data Statement 2, Answer 1:

How many annual procedures are projected? (W) = 12,500

Step 1: Subtract the increment from the projected annual procedures to account for the "Minimum one" condition.

$$12{,}500 - 6{,}144((3{,}072)(2)) = 6{,}356$$

Two rooms generated

Step 2: Divide the resulting value by the increment.

$$\frac{6{,}356}{3{,}072} = 2.06$$

Two additional rooms generated

Step 3: Multiply the whole value ("2" in the previous step) by the increment.

$$(2)(3{,}072) = 6{,}144$$

Step 4: Subtract Step 3 from Step 1.

$$6{,}356 - 6{,}144 = 212$$

Step 5: Compare Step 4 with the "minimum workload to generate an additional room" value; if higher, provide an additional room.

$$212 < 614$$

No additional rooms generated.

Total number of rooms generated by 12,500 annual procedures: 4

Input Data Statement 2, Answer 2:

How many annual procedures are projected? (W) = 18,000

Step 1: Subtract the increment from the projected annual procedures to account for the "Minimum one" condition.

$$18{,}000 - 6{,}144\ (3{,}072)(2) = 11{,}856$$

Two rooms generated

Step 2: Divide the resulting value by the increment.

$$\frac{11{,}856}{3{,}072} = 3.85$$

Three additional rooms generated

Step 3: Multiply the whole value ("3" in the previous step) by the increment.

$$(3)(3{,}072) = 9{,}216$$

Step 4: Subtract Step 3 from Step 1.

$$11{,}856 - 9{,}216 = 2{,}640$$

Step 5: Compare Step 4 with the "*minimum workload to generate an additional room*" value; if higher, provide an additional room.

$$2{,}640 > 614$$

One additional room generated.

SECTION 3: PROGRAM DATA REQUIRED: SURGICAL / INTERVENTIONAL SERVICES

3.1. INPUT DATA STATEMENTS. Input Data Statements are based on questions about Workload (W), Mission (M), Staffing (S) and Miscellaneous (Misc) information.

1. Is Surgical / Interventional Services authorized? (M)
2. Are Patient Dressing Cubicles in the Surgical / Interventional Services Pre-Operative Holding / Phase II Recovery authorized? (M)
3. Are Patient Personal Property Lockers in the Surgical / Interventional Services Pre-Operative Holding / Phase II Recovery authorized? (M)
4. Is a Patient Discharge Lounge in the Surgical / Interventional Services Pre-Operative Holding / Phase II Recovery authorized? (M)
5. Is a PACS Viewing Room for the Surgical / Interventional Services Pre-Operative Holding / Phase II Recovery authorized? (M)
6. Is Surgical / Interventional Services Anesthesia authorized? (M)
    a. Is an Anesthesia Clean Workroom for Surgical / Interventional Services Anesthesia authorized? (Misc)
    b. Is an Anesthesia Team Room for Surgical / Interventional Services Anesthesia authorized? (Misc)
7. Is an Anesthesia Induction Room authorized? (M)
8. Is a Satellite Laboratory for the Surgical Services Procedure authorized? (M)
9. How many annual total surgical cases are projected? (W) (Include General and Sub-Specialties)
10. Is a Surgical / Interventional Services Graduate Medical Education program authorized? (M)
    a. How many Surgical / Interventional Services Resident / Student FTE positions are authorized? (S)
11. How many annual Urology / Cystoscopy surgical cases are projected? (W)
12. How many annual Cardiothoracic surgical cases are projected? (W)
13. How many annual Neurosurgical cases are projected? (W)
14. How many annual Orthopedic cases are projected? (W)
    a. Is a Hybrid Operating Room (OR) authorized? (M)
    b. How many Hybrid Operating Rooms (ORs) are authorized? (Misc)
    c. Is a Hybrid OR System Component Room authorized? (Misc)
15. Is a Decontamination / Clean-up Area for the Surgical Services Procedure authorized? (M)
16. Is a Sterile Processing Room in the Surgical Services Procedure authorized? (M)
17. Is a Satellite Blood Bank for the Surgical Services Procedure authorized? (M)
18. Is a Transesophageal Echocardiograph Room authorized? (M)
19. Is a Bronchoscopy Procedure Room for the Interventional Services Procedure authorized? (M)
20. Is a Gastroenterology Laboratory for the Interventional Services Procedure authorized? (M)

21. Is a Portable Imaging Alcove for the Interventional Services Procedure authorized? (M)
22. Is a PACS Viewing Room for Surgical / Interventional Services Phase I Recovery authorized? (M)
23. Is a Frozen Section Laboratory for the Surgical / Interventional Services authorized? (M)
24. Is a Specimen Holding for the Surgical / Interventional Services authorized? (M)
25. Is a Satellite Pharmacy for the Surgical / Interventional Services authorized? (M)
26. Is scope processing performed in Sterile Processing? (M)
27. How many annual Interventional procedures are projected? (W)
28. How many annual Urology procedures are projected? (W)
29. How many annual Cystoscopy procedures are projected? (W)
30. How many annual ERCP procedures are projected? (W)
31. How many annual Endoscopy procedures are projected? (W)
32. How many annual Colonoscopy / Proctoscopy / Sigmoidoscopy procedures are projected? (W)
33. How many Director FTE positions are authorized? (S)
34. How many Surgical / Interventional Services FTE positions are authorized? (S)
    a. How many Surgical / Interventional Services FTE positions are authorized to have a private office? (Misc)
    b. How many Surgical / Interventional Services FTE positions are authorized to have a shared office? (S)
    c. How many Surgical / Interventional Services FTE positions are authorized to have a cubicle? (S)
35. Is additional storage space for Crash Carts for the Surgical Services Procedure authorized? (Misc)
36. How many Surgical / Interventional Services Pre-Operative Holding / Phase II Recovery Airborne Infection Isolation (AII) Room, greater than one, are authorized per the MTF's Infection Control Risk Assessment (ICRA)? (Misc)
37. How many Surgical / Interventional Services Phase I Recovery Airborne Infection Isolation (AII), greater than one, are authorized by the MTF's Infection Control Risk Assessment (ICRA)? (Misc)
38. Is a Sub-Waiting for the Surgical / Interventional Services Staff and Administration authorized? (Misc)
39. Is Patient Records storage for the Surgical / Interventional Services Staff and Administrative authorized? (Misc)
40. How many Surgical / Interventional Services Male FTEs will work on peak shift? (Misc)
41. How many Surgical / Interventional Services Female FTEs will work on peak shift? (Misc)

SECTION 4: SPACE PLANNING CRITERIA

For calculation of the number of Vending Machine areas, Public Toilets, Communication Closets, and Janitors Closets for this Chapter, please refer to DoD Space Planning Criteria Chapter 610: Common Areas.

4.1. FA1: SURGICAL / INTERVENTIONAL SERVICES RECEPTION.

1. **Waiting, Surgical / Interventional (WRC01)** **120 NSF**
   Minimum NSF; provide an additional 60 NSF for every increment of two Operating Rooms and Interventional Procedure Rooms, of any type, greater than two.

2. **Playroom (PLAY1)** **120 NSF**
   Provide one for Surgical / Interventional Services.
   This space is provided to accommodate children's play activities, maybe an open or an enclosed area, and should be included within or adjacent to Waiting.

3. **Reception (RECP1)** **120 NSF**
   Provide one for Surgical / Interventional Services.

   Allocated NSF accommodates two FTEs.

4. **Kiosk, Patient Check-in (CLSC1)** **30 NSF**
   Provide one for Surgical / Interventional Services.

5. **Consult Room (OFDC2)** **120 NSF**
   Minimum one; provide an additional one for every increment of four Operating Rooms and Interventional Procedure Rooms, of any type, greater than four.

4.2. FA 2: SURGICAL / INTERVENTIONAL SERVICES PRE-OPERATIVE HOLDING / PHASE II RECOVERY.

1. **Cubicle, Patient Dressing (DR001)** **60 NSF**
   Provide one for every increment of two Operating Rooms and Interventional Procedure Rooms, of any type if Patient Dressing Cubicles for the Surgical / Interventional Services Pre-Operative Holding / Phase II Recovery is authorized.

   Where private pre-op holding room(s) or private holding cubicle(s) are provided, a separate change area may not be required.

2. **Toilet, Patient (TLTU1)** **60 NSF**
   Minimum one for Surgical / Interventional Services; provide an additional one for every increment of four Patient Dressing Cubicles.

3. **Lockers, Patient Personal Property (LR001) 30 NSF**
   Minimum one for Surgical / Interventional Services; provide an additional one for every increment of four each Operating Room and Interventional Procedure Room, of any type if Patient Personal Property Lockers in the Surgical / Interventional Services Pre-Operative Holding / Phase II Recovery is authorized.

4. **Multi-Station, Pre-Operative Holding / Phase II Recovery (RROP2) 720 NSF**
   Minimum NSF; provide an additional 360 NSF per each Operating Room and Interventional Procedure Room, of any type, greater than two.

5. **Toilet, Pre-Operative Holding / Phase II Recovery Patient (TLTU1) 60 NSF**
   Minimum one; provide an additional one for every increment of three Operating Rooms and Interventional Procedure Rooms, of any type, greater than three.

6. **Airborne Infection Isolation (AII) Room, Pre-Operative Holding / Phase II Recovery (RRIR1) 180 NSF**
   Minimum one; provide an additional one per each Pre-Operative Holding / Phase II Recovery Airborne Infection Isolation (AII) Room, greater than one, authorized per the MTF's Infection Control Risk Assessment (ICRA).

7. **Toilet, Pre-Operative Holding / Phase II Recovery Airborne Infection Isolation (AII) Room Patient (TLTU1) 60 NSF**
   Provide one per each Pre-Operative Holding / Phase II Recovery Airborne Infection Isolation (AII) Room.

8. **Alcove, Nourishment (NCWD4) 60 NSF**
   Minimum one; provide an additional one for every increment of eight Operating Rooms and Interventional Procedure Rooms, of any type, greater than eight.

9. **Nurse Station (NSTA1) 120 NSF**
   Minimum NSF; provide an additional 30 NSF per each Operating Room and Interventional Procedure Room, of any type, greater than four.

   This space may be centralized or decentralized per individual project design.

10. **Team Collaboration Room (WRCH1) 120 NSF**
    Minimum NSF; provide an additional 30 NSF per each Operating Room and Interventional Procedure Room, of any type, greater than four.

11. **Viewing Room, Picture Archiving and Communication System (PACS) (XVC01) 120 NSF**
    Provide one if a PACS Viewing Room for the Surgical / Interventional Services Pre-Operative Holding / Phase II Recovery is authorized.

12. **Medication Room (MEDP1)** **120 NSF**
Minimum one; provide an additional one for every increment of eight Operating Rooms and Interventional Procedure Rooms, of any type, greater than eight.

13. **Utility Room, Clean (UCCL1)** **120 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of three Operating Rooms and Interventional Procedure Rooms, of any type, greater than three.

14. **Utility Room, Soiled (USCL1)** **90 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of three Operating Rooms and Interventional Procedure Rooms, of any type, greater than three.

15. **Storage, Equipment (SRSE1)** **120 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of three Operating Rooms and Interventional Procedure Rooms, of any type, greater than three.

16. **Alcove, Crash Cart (RCA01)** **30 NSF**
Provide one for the Surgical / Interventional Services Pre-Operative Holding / Phase II Recovery.

17. **Alcove, Portable Imaging (XRM01)** **30 NSF**
Provide one for the Surgical / Interventional Services Pre-Operative Holding / Phase II Recovery.

18. **Alcove, Blanket Warmer (RCA04)** **30 NSF**
Provide one for the Surgical / Interventional Services Pre-Operative Holding / Phase II Recovery.

4.3. FA 3: SURGICAL / INTERVENTIONAL SERVICES ANESTHESIA PROCEDURES.

1. **Single-Station Room, Anesthesia Procedure (ORPP1)** **180 NSF**
Provide one if Surgical / Interventional Services Anesthesia is authorized.

   Provides space in an enclosed room for anesthesiologist to perform procedures not requiring OR space or supported Procedure Room. Examples are Cardioversion, ECT and Evoked Potentials. Room will accommodate the proceduralist and the anesthesiologist with their equipment. This room shall be near the Operating Rooms but observable by staff working at a control or nursing station.

2. **Multi-Station Room, Anesthesia Procedure (ORPP2)** **240 NSF**
Minimum NSF; provide an additional 120 NSF for every increment of four Operating Rooms and Interventional Procedure Rooms, of any type, greater than four if Surgical / Interventional Services Anesthesia is authorized.

Minimum NSF provides space for two patients requiring regional blocks, line placement prior to surgery or holding following transport from the Pre-Op area or another area of the hospital. This room shall be near the Operating Rooms but observable by staff working at a control or nursing station.

3. **Nurse Station (NSTA1)** **120 NSF**
Provide one if Surgical / Interventional Services Anesthesia is authorized.

It may be centralized or decentralized per individual project design.

4. **Medication Room (MEDP1)** **120 NSF**
Provide one if Surgical / Interventional Services Anesthesia is authorized.

5. **Workroom, Anesthesia Clean (ANCW1)** **120 NSF**
Minimum NSF; provide an additional 60 NSF per each Operating Room and Interventional Procedure Room, of any type, greater than six if a Surgical / Interventional Anesthesia Clean Workroom for Surgical / Interventional Services Anesthesia is authorized and if Surgical / Interventional Services Anesthesia is authorized.

6. **Team Room, Anesthesia (WRCH1)** **120 NSF**
Minimum NSF; provide an additional 30 NSF per each Operating Room and Interventional Procedure Room, of any type, greater than three if a Surgical / Interventional Anesthesia Team Room for Surgical / Interventional Services Anesthesia is authorized and if Surgical / Interventional Services Anesthesia is authorized.

4.4. FA 4: SURGICAL SERVICES PROCEDURES.

1. **Control Desk (NSTA5)** **120 NSF**
Provide one for the Surgical Services Procedure.

2. **Workroom, Anesthesia Clean (ANCW1)** **120 NSF**
Minimum NSF; provide additional 60 NSF per each Operating Room and Interventional Procedure Room, of any type, greater than six if a Surgical / Interventional Anesthesia Clean Workroom for Surgical / Interventional Services Anesthesia is not authorized.

3. **Team Room, Anesthesia (WRCH1)** **120 NSF**
Minimum NSF; provide an additional 30 NSF per each Operating Room and Interventional Procedure Room, of any type, greater than three if a Surgical / Interventional Anesthesia Team Room for Surgical / Interventional Services Anesthesia is not authorized.

4. **Induction Room, Anesthesia (ORPP1) 180 NSF**
Minimum one; provide an additional one for every increment of two Operating Rooms and Interventional Procedure Rooms, of any type, greater than two if an Anesthesia Induction Room is authorized.

   There may be one induction room per OR, or for each group of ORs, depending on the concept of operations.

5. **Operating Room (OR), General (ORGS1) 660 NSF**
Minimum two; provide an additional one for every increment of 800 projected annual total surgical cases greater than 1,600, deduct the projected annual aggregate sub-specialty surgical cases, if a Surgical / Interventional Services Graduate Medical Education program is authorized or for every increment of 1,000 projected annual total surgical cases greater than 2,000, deduct the projected annual aggregate sub-specialty surgical cases, if a Surgical / Interventional Services Graduate Medical Education program is not authorized. (Refer to Table 1)

6. **Operating Room (OR), Urology / Cystoscopy (ORCS1) 660 NSF**
Provide one for every increment of 800 projected annual Urology / Cystoscopy surgical cases if a Surgical / Interventional Services Graduate Medical Education program is authorized or for every increment of 1,000 projected annual Urology / Cystoscopy surgical cases if a Surgical / Interventional Services Graduate Medical Education program is not authorized.

   Shielded Control vestibule is provided within the room.

7. **Operating Room (OR), Cardiothoracic (ORCT1) 900 NSF**
Provide one for every increment of 800 projected annual Cardiothoracic surgical cases if a Surgical / Interventional Services Graduate Medical Education program is authorized or for every increment of 1,000 projected annual Cardiothoracic surgical cases if a Surgical / Interventional Services Graduate Medical Education program is not authorized.

8. **Operating Room (OR), Neurosurgical (ORNS1) 900 NSF**
Provide one for every increment of 800 projected annual Neurosurgical cases if a Surgical / Interventional Services Graduate Medical Education program is authorized or for every increment of 1,000 projected annual Neurosurgical cases if a Surgical / Interventional Services Graduate Medical Education program is not authorized.

9. **Operating Room (OR), Orthopedic (OROS1) 900 NSF**
Provide one for every increment of 800 projected annual Orthopedic surgical cases if a Surgical / Interventional Services Graduate Medical Education program is authorized or for every increment of 1,000 projected annual Neurosurgical cases if a Surgical / Interventional Services Graduate Medical Education program is not authorized.

10. **Equipment Room, General OR (ORGE1)** **180 NSF**
    Minimum NSF; provide an additional 60 NSF per each General OR greater than two.

11. **Equipment Room, Cardiothoracic OR (ORCM1)** **180 NSF**
    Provide one per each Cardiothoracic OR.

12. **Equipment Room, Neurosurgical OR (ORNE1)** **180 NSF**
    Provide one per each Neurosurgical OR.

13. **Equipment Room, Orthopedic OR (OROE1)** **180 NSF**
    Provide one per each Orthopedic OR.

14. **Storage, Orthopedic OR (OROE1)** **180 NSF**
    Provide one per each Orthopedic OR.

15. **Laboratory, Satellite (LBSP2)** **120 NSF**
    Provide one if a Satellite Laboratory for the Surgical Services Procedure is authorized.

16. **Operating Room (OR), Hybrid (ORHY1)** **900 NSF**
    Provide one per each Hybrid OR authorized.

    Use of Hybrid Operating Room requires significant further investigation. Associated room sizes may need to be modified, and hybrid suite may require supporting rooms not listed for final space allocation and design. Shielding requirements will vary with imaging equipment utilized.

17. **Control Room, Hybrid OR (ORHC1)** **240 NSF**
    Provide one if a Hybrid OR is authorized; provide an additional one for every increment of two Hybrid ORs greater than two.

18. **Equipment Room, Hybrid OR (ORHE1)** **180 NSF**
    Provide one per each Hybrid OR.

19. **System Component Room, Hybrid OR (XCCE1)** **120 NSF**
    Provide one if a Hybrid OR is authorized and if a Hybrid OR System Component Room is authorized.

    Dedicated to the Hybrid ORs.

20. **Pump Room, Heart-Lung (ORHL1)** **150 NSF**
    Provide one per each Cardiothoracic and Hybrid OR.

21. **Clean Core (ORCC1)** **240 NSF**
    Minimum NSF; provide an additional 120 NSF per each Operating Room and Interventional Procedure Room, of any type, greater than two.

22. **Decontamination / Clean-up Area (ORDA1)** **120 NSF**
Provide one if a Decontamination / Clean-up Area for the Surgical Services Procedure is authorized.

23. **Sterile Processing Room (ORSR1)** **120 NSF**
Minimum one; provide an additional one for every increment of four Operating Rooms and Interventional Procedure Rooms, of any type, greater than four if a Sterile Processing Room in Surgical Services Procedure is authorized.

24. **Scrub Sink Area (ORSA1)** **60 NSF**
Provide one per each Operating Room and Interventional Procedure Room, of any type.

25. **Satellite Blood Bank (LMBB1)** **120 NSF**
Provide one if a Satellite Blood Bank for the Surgical Services Procedure is authorized.

26. **Alcove, Stretcher (SRLW2)** **60 NSF**
Minimum one; provide an additional one for every increment of two Operating Rooms and Interventional Procedure Rooms, of any type, greater than two.

27. **Alcove, Crash Cart (RCA01)** **30 NSF**
Provide one if additional storage space for Crash Carts for the Surgical Services Procedure is authorized.

28. **Storage, Gas Cylinder (SRGC2)** **60 NSF**
Provide one for the Surgical Services Procedure.

4.5. FA 5: INTERVENTIONAL SERVICES PROCEDURE.

1. **Control Desk (NSTA5)** **120 NSF**
Provide one for the Interventional Services Procedure.

   This space to permit visual observation of all traffic into the Procedure Rooms; accommodates up to four staff.

2. **Sub-Waiting (WRC03)** **60 NSF**
Minimum NSF; provide an additional 30 NSF per each Interventional Procedure Room, of all types, greater than two.

3. **Toilet, Patient (TLTU1)** **60 NSF**
Provide one for the Interventional Services Procedure.

4. **Cubicle, Patient Dressing (DR001)** **60 NSF**
Minimum one; provide an additional one for every increment of three Interventional Procedure Rooms, of all types, greater than three.

5. **Medication Room (MEDP1)** **120 NSF**
   Provide one for the Interventional Services Procedure.

6. **Interventional Procedure Room (XCCE1)** **900 NSF**
   Minimum one if the projected number of annual Interventional procedures is between 144 and 816; provide an additional one for every increment of 816 projected annual Interventional procedures greater than 816; the minimum annual workload to generate an additional Interventional Procedure Room is 144. (Refer to Section 2)

   Types of interventions performed: Interventional Cardiology: Coronary Angiography / Angioplasty / Stenting, Lower / Upper extremity Angiography, Pacemaker / Defibrillator insertion, and EP ablations, Interventional Vascular: Vascular IR, Interventional Neurology: Interventional Neurology.

7. **Control Room, Interventional Procedure (XCCC1)** **120 NSF**
   Provide one if an Interventional Procedure Room is generated.

   Locate adjacent to, and with direct circulation to, Interventional Procedure Room, with direct line of sight from the operator's console to the procedural area.

8. **System Component Room, Interventional Procedure (XCCA1)** **120 NSF**
   Provide one if an Interventional Procedure Room is generated.

   Locate adjacent to Interventional Procedure Room.

9. **Instrument Room (XCCI1)** **120 NSF**
   Provide one if an Interventional Procedure Room is generated.

   Locate approximate to Interventional Procedure Room.

10. **Procedure Room, Urology (TRGS1)** **180 NSF**
    Minimum one if the projected number of annual Urology procedures is between 288 and 1,632; provide an additional one for every increment of 1,632 projected annual Urology procedures greater than 1,632; the minimum workload to generate an additional Urology Procedure Room is 288. (Refer to Section 2)

    This room could be used for minor procedures, ultrasound procedures, circumcisions, vasectomies and prostate biopsies.

11. **Procedure Room, Cystoscopy (XDCY1)** **480 NSF**
    Minimum one if the projected number of annual Cystoscopy procedures is between 216 and 1,224; provide an additional one for every increment of 1,224 projected annual Cystoscopy procedures greater than 1,224; the minimum workload to generate an additional Cystoscopy Procedure Room is 216. (Refer to Section 2)

This room is for performing Cystoscopy and Cystoscopy with Fluoroscopy procedures. Invasive Urodynamics could also be performed in this room. This room is lead-lined, and shielded control is provided within the room. Coordinate the location of the Cystoscopy and Cystoscopy Procedure Rooms with the Urology Clinic and Surgical Services.

12. **Toilet, Cystoscopy Patient (TLTU1)** **60 NSF**
Provide one per each Cystoscopy Procedure Room.

13. **Procedure Room, ERCP (XDCY1)** **440 NSF**
Minimum one if the projected number of annual ERCP procedures is between 144 and 816; provide an additional one for every increment of 816 projected annual ERCP procedures greater than 816; the minimum workload to generate an additional ERCP Procedure Room is 144. (Refer to Section 2)

Control Room is included in NSF.

14. **Transesophageal Echocardiograph Room (TRTE1)** **300 NSF**
Provide one if a Transesophageal Echocardiograph Room is authorized.

15. **Procedure Room, Bronchoscopy (TRPE2)** **300 NSF**
Provide one if a Bronchoscopy Procedure Room is authorized.

16. **Control / Observation Area (NSTA3)** **60 NSF**
Provide one if a Bronchoscopy Procedure Room is authorized.

17. **Procedure Room, Endoscopy (TREE1)** **300 NSF**
Minimum one if the projected number of annual Endoscopy procedures is between 346 and 1,958; provide an additional one for every increment of 1,958 projected annual Endoscopy procedures greater than 1,958; the minimum workload to generate an additional Endoscopy Procedure Room is 346. (Refer to Section 2)

18. **Procedure Room, Proctoscopy / Lower GI (TRPE1)** **300 NSF**
Minimum one if the projected number of annual Colonoscopy / Proctoscopy / Sigmoidoscopy procedures is between 288 and 1,632; provide an additional one for every increment of 1,632 projected annual Colonoscopy / Proctoscopy / Sigmoidoscopy procedures greater than 1,632; the minimum workload to generate an additional Colonoscopy Procedure Room is 288. (Refer to Section 2).

19. **Laboratory, Gastroenterology (LBSP1)** **120 NSF**
Provide one if a Gastroenterology Laboratory for Interventional Services Procedure is authorized.

20. **Alcove, Portable Imaging (XRM01)** **30 NSF**
Provide one if a Portable Imaging Alcove for Interventional Services Procedure is authorized.

21. **Storage, Equipment (SRE01)** **120 NSF**
Provide one for the Interventional Services Procedure.

22. **Viewing Room, Picture Archiving and Communication System (PACS) (XVC01)** **120 NSF**
Provide one for the Interventional Services Procedure.

23. **Alcove, Crash Cart (RCA01)** **30 NSF**
Provide one for the Interventional Services Procedure.

24. **Alcove, Blanket Warmer (RCA04)** **30 NSF**
Provide one for the Interventional Services Procedure.

4.6. FA6: SURGICAL / INTERVENTIONAL SERVICES PHASE I RECOVERY.

1. **Multi-Station Room, Phase I Recovery (RRSS1)** **420 NSF**
Minimum NSF; provide an additional 420 NSF for every increment of two Operating Rooms and Interventional Procedure Rooms, of any type greater than two.

2. **Phase I Recovery, Airborne Infection Isolation (AII) Room (RRIR1)** **180 NSF**
Minimum one; provide an additional one per each Phase I Recovery Airborne Infection Isolation (AII), greater than one, authorized by the MTF's Infection Control Risk Assessment (ICRA).

   The number, location and type of Airborne Infection Isolation (AII) Phase 1 Recovery Rooms shall be determined by the Infection Control Risk Assessment (ICRA), which shall be conducted during the early planning phase of the project.

3. **Phase I Recovery, Nurse Station (NSTA1)** **120 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of two Operating Rooms and Interventional Procedure Rooms, of any type, greater than eight.

   This space may be centralized or decentralized per individual project design.

4. **Team Collaboration Room (WRCH1)** **120 NSF**
Minimum NSF; provide an additional 30 NSF per each Operating Room and Interventional Procedure Room, of any type greater than four.

5. **Viewing Room, Picture Archiving and Communication System (PACS) (XVC01)** **120 NSF**
Provide one if a PACS Viewing Room for the Surgical / Interventional Services Phase I Recovery is authorized.

6. **Medication Room (MEDP1)** **120 NSF**
Provide one for the Surgical / Interventional Services Phase I Recovery.

7. **Utility Room, Clean (UCCL1)** **120 NSF**
   Minimum NSF; provide an additional 30 NSF for every increment of two Operating Rooms and Interventional Procedure Rooms, of any type, greater than eight.

8. **Utility Room, Soiled (USCL1)** **90 NSF**
   Minimum NSF; provide an additional 30 NSF for every increment of two Operating Rooms and Interventional Procedure Rooms, of any type, greater than eight.

9. **Alcove, Crash Cart (RCA01)** **30 NSF**
   Provide one for the Surgical / Interventional Services Phase I Recovery.

10. **Alcove, Portable Imaging (XRM01)** **30 NSF**
    Provide one for the Surgical / Interventional Services Phase I Recovery.

11. **Alcove, Blanket Warmer (RCA04)** **30 NSF**
    Provide one for the Surgical / Interventional Services Phase I Recovery.

12. **Storage, Equipment (SRSE1)** **120 NSF**
    Provide one for the Surgical / Interventional Services Phase I Recovery.

13. **Toilet, Staff (TLTU1)** **60 NSF**
    Provide one for the Surgical / Interventional Services Phase I Recovery.

4.7. FA7: SURGICAL / INTERVENTIONAL SERVICES SUPPORT.

1. **Laboratory, Operating Room (LBSP2)** **120 NSF**
   Provide one if a Frozen Section Laboratory for the Surgical / Interventional Services is authorized.

   This room is utilized for the preparation and examination of frozen sections. Do not program this room if specimens are transported to the Main Lab.

2. **Specimen Holding (LBSH1)** **30 NSF**
   Provide one if a Specimen Holding for the Surgical / Interventional Services is authorized.

   This room is utilized for the holding of specimens that will be transported to the Main Lab for processing. It will have a biosafety hood and proper ventilation for the use of formalin.

3. **Pharmacy, Satellite (PHDS3)** **120 NSF**
   Provide one if a Satellite Pharmacy for the Surgical / Interventional Services is authorized.

4. **Utility Room, Clean (UCCL1) 120 NSF**
   Minimum NSF; provide an additional 60 NSF for every increment of four Operating Rooms and Interventional Procedure Rooms, of any type, greater than four.

5. **Utility Room, Soiled (USCL1) 90 NSF**
   Minimum NSF; provide an additional 60 NSF for every increment of four Operating Rooms and Interventional Procedure Rooms, of any type, greater than four.

6. **Utility, Soiled Urology / Cystoscopy Scope Wash (USCL2) 120 NSF**
   Provide one if at least one Urology or Cystoscopy Procedure Room is generated and if scope processing will not be performed in Sterile Processing.

   This room, as part of a two-room suite, is utilized for initial decontamination. It should have a pass-through to the Clean Scope Wash Utility Room for scope washing / high level disinfecting.

7. **Utility, Clean Urology / Cystoscopy Scope Wash (UCCL2) 120 NSF**
   Provide one if at least one Urology or Cystoscopy Procedure Room is generated and if scope processing will not be performed in Sterile Processing.

   This room is part of a two-room suite; it should have a pass-through from Decontamination / Scope Wash. This room is for scope washing / high level disinfecting.

8. **Utility, Soiled Bronchoscopy Wash (USCL2) 120 NSF**
   Provide one if a Bronchoscopy Procedure Room is authorized and if scope processing will not be performed in Sterile Processing.

   This room, as part of a two-room suite, is utilized for initial decontamination. It should have a pass-through to the Clean Scope Wash Utility Room for scope washing / high level disinfecting.

9. **Utility, Clean Bronchoscopy Wash (UCCL2) 120 NSF**
   Provide one if a Bronchoscopy Procedure Room is authorized and if scope processing will not be performed in Sterile Processing.

   This room is part of a two-room suite; it should have a pass-through from Decontamination / Scope Wash. This room is for scope washing / high level disinfecting.

10. **Utility, Soiled Endoscopy Scope Wash (USCL2) 120 NSF**
    Provide one if at least one Endoscopy Procedure Room is generated and if scope processing will not be performed in Sterile Processing.

This room, as part of a two room suite, is utilized for initial decontamination. It should have a pass-through from the Soiled Scope Wash Utility Room to the Clean Scope Wash Utility Room for scope washing / high level disinfecting.

11. **Utility, Clean Endoscopy Scope Wash (UCCL2)** **120 NSF**
Provide one if at least one Endoscopy Procedure Room is generated and if scope processing will not be performed in Sterile Processing.

    This room, as part of a two-room suite, is utilized for scope washing / high level disinfecting. It should have a pass-through from the Soiled Scope Wash Utility Room to the Clean Scope Wash Utility Room.

12. **Utility, Soiled Proctoscopy / Lower GI Scope Wash (USCL2)** **120 NSF**
Provide one if at least one Proctoscopy / Lower GI Procedure Room is generated and if scope processing will not be performed in Sterile Processing.

    This room, as part of a two-room suite, is utilized for initial decontamination. It should have a pass-through from the Soiled Scope Wash Utility Room to the Clean Scope Wash Utility Room for scope washing / high level disinfecting.

13. **Utility, Clean Proctoscopy / Lower GI Scope Wash (UCCL2)** **120 NSF**
Provide one if at least one Proctoscopy / Lower GI Procedure Room is generated and if scope processing will not be performed in Sterile Processing.

    This room, as part of a two-room suite, is utilized for scope washing / high level disinfecting. It should have a pass-through from the Soiled Scope Wash Utility Room to the Clean Scope Wash Utility Room.

14. **Storage, Gas Cylinder (SRGC2)** **60 NSF**
Provide one for Surgical / Interventional Services.

15. **Alcove, Wheelchair (SRLW1)** **30 NSF**
Provide one for Surgical / Interventional Services.

4.8. FA8: SURGICAL / INTERVENTIONAL SERVICES STAFF AND ADMINISTRATION.

1. **Dictation (OFA03)** **60 NSF**
Provide one for Surgical / Interventional Services Staff and Administration.

2. **On-Call Room (DUTY1)** **120 NSF**
Provide one for Surgical / Interventional Services Staff and Administration.

3. **Toilet / Shower, On-Call (TLTS1)** **60 NSF**
Provide one for Surgical / Interventional Services Staff and Administration.

4. **Scrubs Distribution Room (LCCL4)** **120 NSF**
   Provide one if a Scrubs Distribution Room for the Surgical / Interventional Services Staff and Administration is authorized.

5. **Office, Director (OFA04)** **120 NSF**
   Provide one per each Director FTE position authorized.

6. **Sub-Waiting (WRC03)** **60 NSF**
   Provide one if Sub-Waiting for the Surgical / Interventional Services Staff and Administration.

7. **Office, NCOIC / LCPO / LPO (OFA04)** **120 NSF**
   Provide one for Surgical / Interventional Services Staff and Administration.

8. **Office, Private (OFA04)** **120 NSF**
   Provide one per each Surgical / Interventional Services FTE position authorized to have a private office.

9. **Office, Shared (OFA05)** **120 NSF**
   Provide one for every increment of two Surgical / Interventional Services FTE positions authorized to have a shared office.

10. **Cubicle (OFA03)** **60 NSF**
    Provide one per each Surgical / Interventional Services FTE position authorized to have a cubicle.

    These cubicles may be collocated in a shared space or dispersed as required.

11. **Team Collaboration Room (WRCH1)** **120 NSF**
    Provide one for Surgical / Interventional Services Staff and Administration.

12. **Conference Room (CRA01)** **240 NSF**
    Minimum NSF; provide an additional 60 NSF if the total number of Surgical / Interventional Services FTE positions authorized is greater than ten.

    Planner must determine adequacy and availability of existing Conference Room space and the ability to optimize resources by sharing Conference Room space with other departments.

13. **Storage, Patient Records (FILE1)** **120 NSF**
    Provide one if Patient Records storage for the Surgical / Interventional Services Staff and Administration is authorized.

14. **Copy / Office Supply (RPR01)** **120 NSF**
    Provide one for the Surgical / Interventional Services Staff and Administration.

15. **Lounge, Staff (SL001)** **120 NSF**
Minimum NSF if the total number of Surgical / Interventional Services FTEs working on peak shift is between one and ten; provide an additional 60 NSF for every increment of five Surgical / Interventional Services FTEs working on peak shift greater than ten; maximum 360 NSF.

16. **Locker / Changing Room, Male Staff (LR002)** **120 NSF**
Minimum NSF; provide an additional 10 NSF for every increment of two Surgical / Interventional Services male FTE position authorized greater than twelve.

17. **Locker / Changing Room, Female Staff (LR002)** **120 NSF**
Minimum NSF; provide an additional 10 NSF for every increment of two Surgical / Interventional Services female FTE position authorized greater than twelve.

18. **Toilet / Shower, Male Staff (TLTS1)** **60 NSF**
Minimum one if the total number of male Surgical / Interventional Services FTE positions authorized is between one and fifteen; provide an additional one for every increment of fifteen Surgical / Interventional Services male FTE positions authorized greater than fifteen.

19. **Toilet / Shower, Female Staff (TLTS1)** **60 NSF**
Minimum one if the total number of Surgical / Interventional Services female FTE positions authorized is between one and fifteen; provide an additional one for every increment of fifteen Surgical / Interventional Services female FTE positions authorized greater than fifteen.

4.9. FA9: SURGICAL / INTERVENTIONAL SERVICES GME / TRAINING.

1. **Office, Residency Program Director (OFA04)** **120 NSF**
Provide one if a Surgical / Interventional Services Graduate Medical Education program is authorized.

2. **Resident Collaboration Room (WKTM1)** **240 NSF**
Minimum NSF; provide an additional 60 NSF per each Surgical / Interventional Services Resident / Student FTE position authorized greater than two if a Surgical / Interventional Services Graduate Medical Education program is authorized.

3. **Conference / Classroom (CRA01)** **240 NSF**
Provide one if the total number of Surgical / Interventional Services Resident / Student FTE positions is greater than five if a Surgical / Interventional Services Graduate Medical Education program is authorized.

SECTION 3: PROGRAM DATA REQUIRED: AMBULATORY SURGERY CENTER (ASC)

3.1. INPUT DATA STATEMENTS. Input Data Statements are based on questions about Workload (W), Mission (M), Staffing (S) and Miscellaneous (Misc) information.

1. Is Ambulatory Surgery Center (ASC) authorized? (M)
2. Are Patient Dressing Cubicles in the Pre-Operative Holding / Phase II Recovery authorized? (M)
3. Is a Patient Personal Property Alcove in the ASC Pre-Operative Holding / Phase II Recovery authorized? (M)
4. Is ASC Anesthesia Procedure authorized? (M)
    a. Is an Anesthesia Clean Workroom for ASC Anesthesia Procedure authorized? (Misc)
    b. Is an Anesthesia Team Room for ASC Anesthesia Procedure authorized? (Misc)
5. Is a PACS Viewing Room for the ASC Pre-Operative Holding / Phase II Recovery authorized? (M)
6. Is a Satellite Laboratory for the ASC Surgical Procedure authorized? (M)
7. Is a Decontamination / Clean-up Area for the ASC Surgical Procedure authorized? (M)
8. Is a Sterile Processing Room in the ASC Surgical Procedure authorized? (M)
9. Is a Satellite Blood Bank for the ASC Surgical Procedure authorized? (M)
10. Is additional space for storing Crash Carts for the ASC Surgical Procedure authorized? (M)
11. Is a PACS Viewing Room for the ASC PACU / Phase I Recovery authorized? (M)
12. Is a Specimen Holding for the ASC authorized? (M)
13. Is a Satellite Pharmacy for the ASC authorized? (M)
14. Is an ASC Graduate Medical Education program authorized? (M)
    a. How many ASC Resident / Student FTE positions are authorized? (S)
15. How many annual ASC surgical cases are projected? (W)
16. How many ASC FTE positions are authorized to have a private office? (S)
17. How many ASC FTE positions are authorized to have a shared office? (S)
18. How many ASC FTE positions are authorized to have a cubicle? (S)
19. How many ASC Pre-Operative Holding / Phase II Recovery Airborne Infection Isolation (AII) Rooms, greater than one, are authorized per the MTF's Infection Control Risk Assessment (ICRA)? (Misc)
20. How many ASC Phase I Recovery Airborne Infection Isolation (AII), greater than one, are authorized by the MTF's Infection Control Risk Assessment (ICRA)? (Misc)
21. How many ASC Pre-Operative Holding / Phase II Recovery FTEs will work on peak shift? (Misc)
22. Is Patient Records storage for the ASC Staff and Administration authorized? (Misc)
23. Is a Scrubs Distribution room for the ASC Staff and Administration authorized? (Misc)
24. Is Sub-Waiting for the ASC Staff and Administration authorized? (Misc)
25. How many ASC Male FTEs will work on peak shift? (Misc)
26. How many ASC Female FTEs will work on peak shift? (Misc)

SECTION 4: SPACE PLANNING CRITERIA: AMBULATORY SURGERY CENTER (ASC)

For calculation of the number of Vending Machine areas, Public Toilets, Communication Closets, and Janitors Closets for this Chapter, please refer to DoD Space Planning Criteria Chapter 610: Common Areas.

4.1. FA1: ASC RECEPTION.

1. **Waiting, Ambulatory Surgery (WRC01)** **120 NSF**
   Minimum NSF; provide an additional 120 NSF for every increment of two General Operating Rooms greater than two.

2. **Playroom (PLAY1)** **120 NSF**
   Provide one for the Ambulatory Surgery Center.

   This space is provided to accommodate children's play activities, may be an open or enclosed area, and should be included within or adjacent to Waiting.

3. **Reception (RECP1)** **120 NSF**
   Provide one for the Ambulatory Surgery Center.

   Allocated NSF accommodates two FTEs.

4. **Kiosk, Patient Check-in (CLSC1)** **30 NSF**
   Provide one for the Ambulatory Surgery Center.

5. **Patient Education (CLSC3)** **120 NSF**
   Provide one for the Ambulatory Surgery Center.

6. **Consult Room (OFDC2)** **120 NSF**
   Minimum one; provide an additional one for every increment of four General ORs greater than four.

4.2. FA 2: ASC PRE-OPERATIVE HOLDING / PHASE II RECOVERY.

1. **Cubicle, Patient Dressing (DR001)** **60 NSF**
   Provide one for every increment of two General ORs if Patient Dressing Cubicles in the ASC Pre-Operative Holding / Phase II Recovery is authorized.

2. **Toilet, Patient (TLTU1)** **60 NSF**
   Minimum one; provide an additional one for every increment of four Patient Dressing Cubicles greater than four.

3. **Lockers, Patient Personal Property (LR001) 30 NSF**
   Provide one per each General OR if Patient Personal Property Lockers in the ASC Pre-Operative Holding / Phase II Recovery is authorized.

4. **Multi-Station, Pre-Operative Holding / Phase II Recovery (RROP2)720 NSF**
   Minimum NSF; provide an additional 360 NSF per each General OR greater than two.

5. **Toilet, Pre-Operative Holding / Phase II Recovery Patient (TLTU1) 60 NSF**
   Minimum one; provide an additional one for every increment of three General ORs greater than three.

6. **Pre-Operative Holding / Phase II Recovery, Airborne Infection Isolation (AII) (RRIR1) 180 NSF**
   Minimum one; provide an additional one per each ASC Pre-Operative Holding / Phase II Recovery Airborne Infection Isolation (AII) Room, greater than one, authorized per the MTF's Infection Control Risk Assessment (ICRA).

   The number, location and type of airborne infection isolation and protective environment rooms shall be determined by the infection control risk assessment (ICRA), which shall be conducted during the early planning phase of a project.

7. **Toilet, Patient, Pre-Operative Holding / Phase II Recovery Airborne Infection Isolation (AII) (TLTU1) 60 NSF**
   Provide one per each Pre-Operative Holding / Phase II Recovery Airborne Infection Isolation (AII) Room.

8. **Alcove, Nourishment (NCWD4) 60 NSF**
   Minimum one; provide an additional one for every increment of eight General ORs greater than eight.

9. **Nurse Station (NSTA1) 120 NSF**
   Minimum NSF; provide an additional 30 NSF per each General OR greater than four.

   This space may be centralized or decentralized per individual project design.

10. **Team Collaboration Room (WRCH1) 120 NSF**
    Minimum NSF; provide an additional 30 NSF per each General OR greater than four.

11. **Viewing Room, Picture Archiving and Communication System (PACS) (XVC01) 120 NSF**
    Provide one if a PACS Viewing Room for the ASC Pre-Operative Holding / Phase II Recovery is authorized.

12. **Medication Room (MEDP1)** **120 NSF**
Minimum one; provide an additional one for every increment of eight General ORs greater than eight.

13. **Utility Room, Clean (UCCL1)** **120 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of three General ORs greater than three.

14. **Utility Room, Soiled (USCL1)** **90 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of three General ORs greater than three.

15. **Storage, Equipment (SRSE1)** **120 NSF**
Minimum NSF; provide an additional 30 NSF for every increment of three General ORs greater than three.

16. **Alcove, Crash Cart (RCA01)** **30 NSF**
Provide one for the ASC Pre-Operative Holding / Phase II Recovery.

17. **Alcove, Portable Imaging (XRM01)** **30 NSF**
Provide one for the ASC Pre-Operative Holding / Phase II Recovery.

18. **Alcove, Blanket Warmer (RCA04)** **30 NSF**
Provide one for the ASC Pre-Operative Holding / Phase II Recovery

4.3. FA 3: ASC ANESTHESIA PROCEDURE.

1. **Anesthesia Procedure Single-Station (ORPP1)** **180 NSF**
Provide one if ASC Anesthesia procedure is authorized.

   Provides space in an enclosed room for anesthesiologist to perform procedures not requiring OR space. Examples are Cardioversion, ECT and Evoked Potentials. Room will accommodate the proceduralist and the anesthesiologist with their equipment.

2. **Anesthesia Procedure Multi-Station (ORPP2)** **240 NSF**
Minimum NSF; provide an additional 120 NSF for every increment of four General Operating Rooms greater than four if ASC Anesthesia Procedure is authorized.

   Minimum NSF provides space for two patients requiring regional blocks or line placement prior to surgery or holding following transport from the Pre-Op area or another area of the hospital. This room shall be near the Operating Rooms but observable by staff working at a control or nursing station.

3. **Nurse Station (NSTA1)** **120 NSF**
Provide one if ASC Anesthesia Procedure is authorized.

This space may be centralized or decentralized per individual project design.

4. **Medication Room (MEDP1)** **120 NSF**
Provide one if an ASC Anesthesia Procedure is authorized.

5. **Workroom, Anesthesia Clean (ANCW1)** **120 NSF**
Minimum NSF; provide an additional 60 NSF per each General Operating Room greater than six if ASC Anesthesia Procedure is authorized.

6. **Team Room, Anesthesia (WRCH1)** **120 NSF**
Minimum NSF; provide an additional 30 NSF per each General Operating Room greater than three if ASC Anesthesia Procedure is authorized.

4.4. FA 4: ASC SURGICAL PROCEDURE.

1. **Control Desk (NSTA5)** **120 NSF**
Provide one for ASC Surgical Procedure.

2. **Workroom, Anesthesia Clean (ANCW1)** **120 NSF**
Minimum NSF; provide additional 60 NSF per each Operating Room and Interventional Procedure Room, of any type, greater than six if ASC Anesthesia Procedure is not authorized.

   Minimum NSF if an ASC Anesthesia Procedure is not authorized; provide an additional 60 NSF per each General Operating Room greater than six.

3. **Team Room, Anesthesia (WRCH1)** **120 NSF**
Minimum NSF; provide an additional 30 NSF per each Operating Room and Interventional Procedure Room, of any type, greater than three if ASC Anesthesia Procedure is not authorized.

   Minimum NSF if an ASC Anesthesia Procedure is not authorized; provide an additional 30 NSF per each General Operating Room greater than three.

4. **Induction Room, Anesthesia (ORPP1)** **180 NSF**
Minimum one; provide an additional one for every increment of two Operating Rooms and Interventional Procedure Rooms, of any type, greater than two if an Anesthesia Induction Room is authorized.

   Room provided for a single-room induction room model whereby patient receives anesthesia in induction room located directly adjacent to the OR. There may be one induction room per OR or per group of ORs, depending on the concept of operations.

5. **Operating Room (OR), General (ORGS1)** **660 NSF**
Minimum two if an ASC is authorized and if the number of projected annual ASC surgical cases is between 1,200 and 2,400; provide an additional one for every

increment of 1,200 annual ASC surgical cases projected greater than 2,400. (Refer to Table 1)

6. **Equipment Room, General OR (ORGE1)** **180 NSF**
Minimum NSF; provide an additional 60 NSF per each General OR greater than two.

7. **Laboratory, Satellite (LBSP2)** **120 NSF**
Provide one if a Satellite Laboratory for the ASC Surgical Procedure is authorized.

8. **Clean Core (ORCC1)** **240 NSF**
Minimum NSF; provide an additional 120 NSF per each General Operating Room greater than two.

   Allocated minimum NSF includes space to accommodate sterile supplies, tissue freezer and/or refrigerator (for tissues such as low temp allograft, tissue implants, etc.) and medication refrigerator.

9. **Decontamination / Clean-up (ORDA1)** **120 NSF**
Provide one if a Decontamination / Clean-up Area for the ASC Surgical Procedure is authorized.

10. **Sterile Processing (ORSR1)** **120 NSF**
Minimum one; provide an additional one for every increment of four General Operating Rooms greater than four if a Sterile Processing Room in the ASC Surgical Procedure is authorized.

11. **Scrub Sink (ORSA1)** **60 NSF**
Provide one per each General Operating Room.

12. **Satellite Blood Bank (LMBB1)** **120 NSF**
Provide one if a Satellite Blood Bank for the ASC Surgical Procedure is authorized.

13. **Storage Stretcher (SRLW2)** **60 NSF**
Provide one for every increment of two General Operating Rooms.

    Locate proximate to the OR entry doors.

14. **Alcove, Crash Cart (RCA01)** **30 NSF**
Provide one if additional space for storing Crash Carts for the ASC Surgical Procedure is authorized.

4.5. FA 5: ASC PHASE I RECOVERY.

1. **ASC Phase I Recovery, Multi-Station (RRSS1)** **420 NSF**
Minimum NSF; provide an additional 420 NSF for every increment of two General Operating Rooms greater than two.

2. **ASC Phase I Recovery, Airborne Infection Isolation (AII) (RRIR1) 180 NSF**
   Minimum one; provide an additional one per each ASC Phase I Recovery Airborne Infection Isolation (AII) Exam Room, greater than one, authorized by the Infection Control Risk Assessment (ICRA).

   The number, location and type of airborne infection isolation rooms shall be determined by the infection control risk assessment (ICRA), which shall be conducted during the early planning phase of a project.

3. **Nurse Station, ASC Phase I Recovery (NSTA1) 120 NSF**
   Minimum NSF; provide an additional 30 NSF for every increment of two General Operating Rooms greater than eight.

   This space may be centralized or decentralized per individual project design.

4. **Team Collaboration Room (WRCH1) 120 NSF**
   Minimum NSF; provide an additional 30 NSF per each General Operating Room greater than four.

5. **Viewing Room, Picture Archiving and Communication System (PACS) (XVC01) 120 NSF**
   Provide one if a PACS Viewing Room for the ASC Phase I Recovery is authorized.

6. **Medication Room (MEDP1) 120 NSF**
   Provide one for the ASC Phase I Recovery.

7. **Utility Room, Clean (UCCL1) 120 NSF**
   Minimum NSF; provide an additional 30 NSF for every increment of two General Operating Rooms greater than eight.

8. **Utility Room, Soiled (USCL1) 90 NSF**
   Minimum NSF; provide an additional 30 NSF for every increment of two General Operating Rooms greater than eight.

9. **Alcove, Crash Cart (RCA01) 30 NSF**
   Provide one for the ASC Phase I Recovery.

10. **Alcove, Portable Imaging (XRM01) 30 NSF**
    Provide one for the ASC Phase I Recovery.

11. **Alcove, Blanket Warmer (RCA04) 30 NSF**
    Provide one for the ASC Phase I Recovery.

12. **Storage, Equipment (SRSE1) 120 NSF**
    Provide one for the ASC Phase I Recovery.

13. **Toilet, Staff (TLTU1)** **60 NSF**
Provide one for the ASC Phase I Recovery.

4.6. FA 6: ASC SURGICAL PROCEDURE SUPPORT.

1. **Specimen Holding (LBSH1)** **120 NSF**
Provide one if a Specimen Holding for the ASC is authorized.

   This room is utilized for the holding of specimens that will be transported to the Main Lab for processing. It will have a biosafety hood and proper ventilation for the use of formalin.

2. **Pharmacy, Satellite (PHDS1)** **120 NSF**
Provide one if a Satellite Pharmacy for the ASC is authorized.

3. **Utility Room, Clean (UCCL1)** **120 NSF**
Provide one for the ASC.

4. **Utility Room, Soiled (USCL1)** **90 NSF**
Provide one for the ASC.

5. **Storage, Equipment (SRSE1)** **120 NSF**
Provide one for the ASC.

6. **Storage, Gas Cylinder (SRGC2)** **60 NSF**
Provide one for the ASC.

7. **Alcove, Wheelchair (SRLW1)** **30 NSF**
Provide one for the Ambulatory Surgery Center.

4.7. FA 7: ASC STAFF AND ADMINISTRATION.

1. **Dictation Area (NSTA2)** **60 NSF**
Provide one for the ASC Staff and Administration.

2. **On-Call Room (DUTY1)** **120 NSF**
Provide one for the ASC Staff and Administration.

3. **Toilet / Shower, On-Call Room, Staff (TLTS1)** **60 NSF**
Provide one for the ASC Staff and Administration.

4. **Scrubs Distribution Room (LCCL4)** **120 NSF**
Provide one if a Scrubs Distribution Room for the ASC Staff and Administration is authorized.

5. **Office, Director (OFA04)** **120 NSF**
   Provide one for the ASC Staff and Administration.

6. **Sub-Waiting (WRC03)** **60 NSF**
   Provide one if Sub-Waiting for the ASC Staff and Administration is authorized.

7. **Office, NCOIC, LCPO, LPO (OFA04)** **120 NSF**
   Provide one for the ASC Staff and Administration.

8. **Office, Private (OFA04)** **120 NSF**
   Provide one per each ASC FTE position authorized to have a private office.

9. **Office, Shared (OFA05)** **120 NSF**
   Provide one for every increment of two ASC FTE positions authorized to have a shared office.

10. **Cubicle (OFA03)** **60 NSF**
    Provide one per each ASC FTE position authorized to have a cubicle.

    These cubicles may be collocated in a shared space or dispersed as required.

11. **Team Collaboration Room (WRCH1)** **120 NSF**
    Provide one for the ASC Staff and Administration.

12. **Conference Room (CRA01)** **240 NSF**
    Minimum NSF; provide an additional 60 NSF if the total number of ASC FTE positions authorized is greater than ten.

    Planner must determine adequacy and availability of existing Conference Room space and the ability to optimize resources by sharing Conference Room space with other departments.

13. **Storage, Patient Records (FILE1)** **120 NSF**
    Provide one if Patient Records storage for the ASC Staff and Administration is authorized.

14. **Copy / Office Supply (RPR01)** **120 NSF**
    Provide one for the ASC Staff and Administration.

15. **Lounge, Staff (SL001)** **120 NSF**
    Minimum NSF if the total number of ASC FTEs working on peak shift is between one and ten; provide an additional 60 NSF for every increment of five ASC FTEs working on peak shift greater than ten; maximum 360 NSF.

16. **Locker / Changing Room, Male Staff (LR002)** **120 NSF**
    Minimum NSF; provide an additional 10 NSF for every increment of two ASC Male FTE positions authorized greater than twelve.

17. **Locker / Changing Room, Female Staff (LR002)** **120 NSF**
    Minimum NSF; provide an additional 10 NSF for every increment of two ASC Female FTE positions authorized greater than twelve.

18. **Toilet / Shower, Male Staff (TLTS1)** **60 NSF**
    Minimum one if the total number of ASC Male FTE positions authorized is between one and fifteen; provide an additional one for every increment of fifteen ASC Male FTE positions authorized greater than fifteen.

19. **Toilet / Shower, Female Staff (TLTS1)** **60 NSF**
    Minimum one if the total number of ASC Female FTE positions authorized is between one and fifteen; provide an additional one for every increment of fifteen ASC Female FTE positions authorized greater than fifteen.

4.6. FA 6: ASC GME / TRAINING.

1. **Office, Residency Program Director (OFA04)** **120 NSF**
   Provide one if an ASC Graduate Medical Education program is authorized.

2. **Resident Collaboration Room (WKTM1)** **240 NSF**
   Minimum NSF; provide an additional 60 NSF per each ASC Resident / Student FTE position authorized greater than two if an ASC Graduate Medical Education is authorized.

   Minimum NSF accommodates 2 residents and a collaboration / reference area.

3. **Conference /Classroom / (CLR01)** **240 NSF**
   Provide one if the total number of ASC Resident / Student FTE positions is greater than five if an ASC Graduate Medical Education is authorized.

SECTION 5: PLANNING AND DESIGN CONSIDERATIONS

The following design considerations are intended to provide planners and designers with guidance on world-class and evidence-based design strategies for new healthcare facilities and renovation of existing ones. Please refer to the World Class Checklist (https://facilities.health.mil/home/). Also refer to the "Surgical Services" in the Diagnostic and Treatment Facilities in the Specific Requirements for General Hospitals and in the Specific Requirements for Critical Access Hospitals sections as well as in the Specific Requirements for Surgical Services in the FGI Guidelines for Design and Construction of Hospitals and Outpatient Facilities by the Facility Guidelines Institute (FGI Guidelines) for additional information.

5.1. NET-TO-DEPARTMENT GROSS FACTOR.

A. The net-to-department gross factor (NTDG) for Surgical / Interventional Services and Ambulatory Surgery Center is 1.60. This number, when multiplied by the programmed net square foot (NSF) area, determines the departmental gross square feet. This factor accounts for the space occupied by internal department circulation and interior partitions as well as other construction elements not defined by the net square foot area. Refer to UFC 4-510-01, Section 2-3.4.2.2 and DoD Space Planning Criteria Chapter 130: Net to Gross Conversion Factors.

5.2. GENERAL DESIGN CONSIDERATIONS.

A. Provide same-handed patient care and treatment rooms where appropriate.

B. Interventional Procedures may be wholly located within a Surgical / Interventional Procedure, partially located within a Surgical / Interventional Procedure, or wholly located outside of a Surgical / Interventional Procedure, depending on the facility and the concept of operations. When possible, it is recommended to co-locate services with similar levels of operational / infrastructural need.

C. The Surgical Services Procedure will be divided into three distinct areas; unrestricted, semi-restricted, and restricted.

   a. Unrestricted: Street clothes are permitted, and the area is to have control point for monitoring entry for patients, staff, and materials.

   b. Semi-restricted: Surgical attire is required, and traffic is limited to authorized personnel. Storage and work areas for processing of instruments and corridors leading to the restricted areas are included.

   c. Restricted: these areas include the operating room, clean core and scrub sinks. Surgical attire and hair covering is required, along with masks where open sterile supplies are utilized.

D. The Surgical Procedure area should be restricted to the general public as well as to non-authorized staff.

E. The movement of patients and materials within the Surgical / Interventional Procedure area should be physically separated. Clean Supplies, such as medical / surgical and linen, shall be separate from the retrieval of used / unused soiled supplies and equipment (instruments).

F. Consideration should be given to the effects of building vibration, as building vibration could interfere with the accuracy of patient testing and imaging modalities, including imaging used in conjunction with surgical procedures.

G. Locate the Pre-Operative Holding / Phase II Recovery directly adjacent to the Phase I Recovery if feasible.

H. Locate all patient recovery positions to allow direct observation of the patient from the nurse station.

I. The Pre-Operative Holding Area should be co-located or merged into one shared suite with the Phase II Recovery Area to allow for more efficient use of that space. Since most surgical procedures are started in the morning, the Pre-Operative / Holding Area can occupy underutilized Phase II Recovery Space in the morning but the same area can be used for additional Phase II recovery in the afternoon.

J. If a Multi-Station Pre-Operative Holding / Phase II Recovery Room is designed, provide patient stations / cubicles in pairs to allow hand washing stations between them, refer to Space Template.

K. Provide separation of pediatric and adult patients. Consider private enclosed stations for pediatric cases. Planning should be flexible enough to allow the swing of space, sometimes used for Pediatric patients to be used for adults at other times.

L. Plan the patient flow so pre-procedure patients do not have visual contact with post-procedure patients.

M. The Phase I Recovery should be self-contained and located in close proximity to the Surgical / Interventional Procedure area; ensure direct access without crossing public hospital corridors.

N. Locate all patient recovery positions to allow direct observation of the patient from the nurse station.

O. The operating room suite will be designed with a Clean Core to have no cross traffic of clean supplies and soiled/decontaminated areas. Flow of clean and soiled / decontaminated supplies and equipment to suite itself shall be designed to not compromise universal precautions or aseptic techniques.

P. Include infrastructure to support the trend towards integration. This will help Operating Rooms remain up to date in the years to come as integration technology continues to develop.

Q. Include systems for integrated image routing. This will simplify the management of feeds from multiple video sources, and will make intra-operative imaging more efficient.

R. Design circulating nurse stations inside the Operating Rooms that collocate control of lights, booms, audiovisual and other equipment. This nurse control station provides a platform for nurses to control Operating Rooms equipment, streamlining Operating Rooms use and enhancing the work environment of surgeons and other Operating Rooms staff.

S. All floors of the Operating Rooms will be homogeneous with a coved floor base extending no less than 6” above finish floor. No floor drains are permitted.

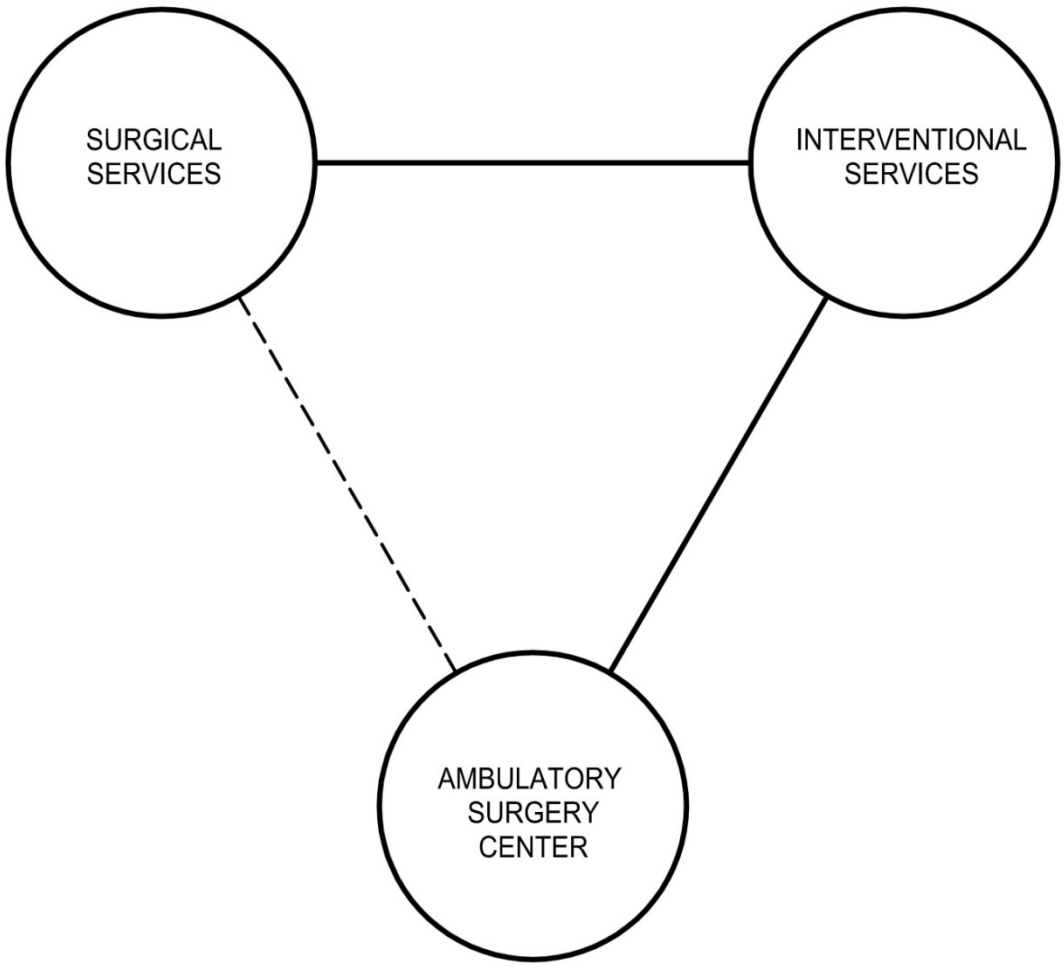
T. Intraoperative imaging is a burgeoning area of practice, rapidly changing in equipment, capabilities, and facility planning demands. At the time of the writing of this chapter, Intraoperative Imaging services are considered to be largely mission driven, as opposed to volume driven. As such, space planning and designing of Hybrid OR spaces in support of Intraoperative Imaging must take into account an unusually large number of facility- and mission-specific criteria that cannot be adequately distilled into a single space planning criteria.

U. For Hybrid ORs that make use of CT, MRI, or PET modalities, it is recommended that planners reference Chapter 540, Radiology, Nuclear Medicine, and Radiation Oncology to identify equipment, spaces and infrastructure necessary for each modality. Choices of clinical function, equipment format / vendor, shared vs. dedicated resources, and sterile environment boundaries must all be integral considerations. It is strongly recommended to enlist experts with expertise in interventional / intraoperative radiology space / facility planning.

V. Specialty OR: Includes vascular surgery, cardiac surgery, neurosurgery and orthopedic surgery and other surgeries that utilize additional personnel and/or special equipment requiring a larger space.

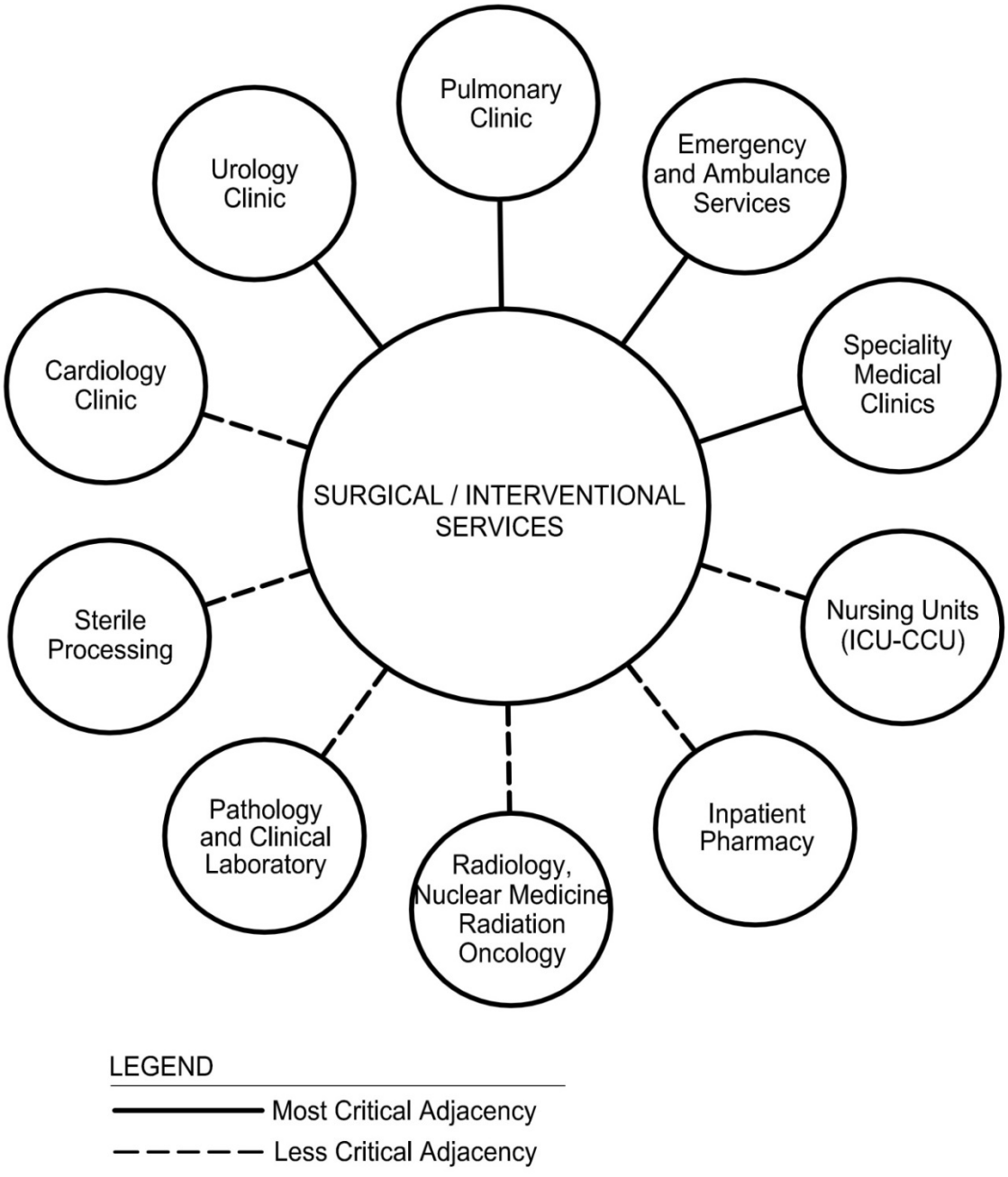
SECTION 6: FUNCTIONAL RELATIONSHIPS: ALL SERVICES

6.1. FUNCTIONAL RELATIONSHIPS.



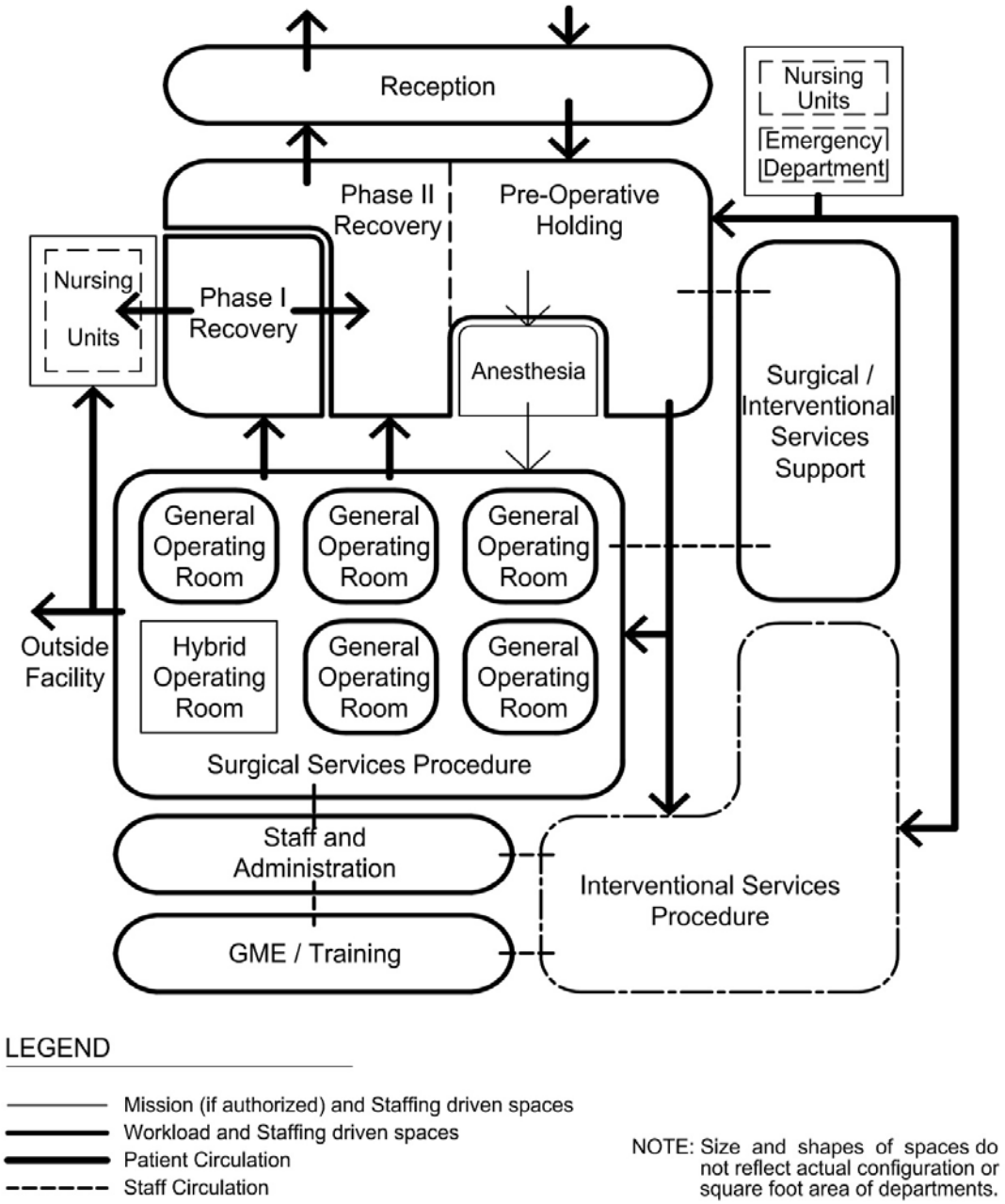
SECTION 7: FUNCTIONAL RELATIONSHIPS (INTERDEPARTMENTAL): SURGICAL / INTERVENTIONAL SERVICES

7.1. FUNCTIONAL RELATIONSHIPS. Surgical / Interventional Services will rely on a number of other services in a Military Treatment Facility (MTF) for patient care and support functions. The diagram below represents desirable relationships based on efficiency and functional considerations.



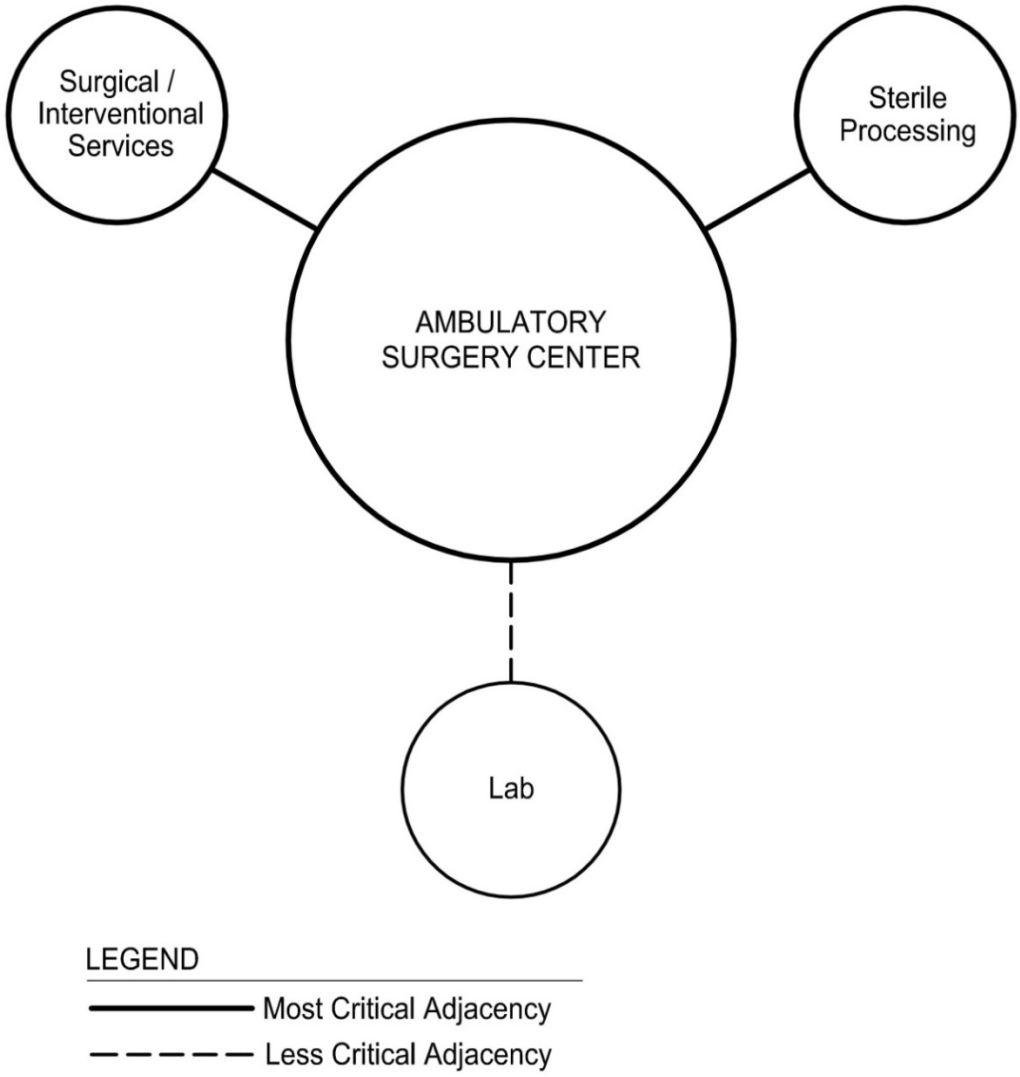
SECTION 8: FUNCTIONAL DIAGRAMS (INTRADEPARTMENTAL): SURGICAL / INTERVENTIONAL SERVICES / AMBULATORY SURGERY CENTER (ASC)

8.1. FUNCTIONAL DIAGRAMS. The diagram below illustrates intradepartmental relationships among key areas / spaces. The diagram is necessarily generic. The planner shall use this as a basis for design only and shall consider project-specific requirements for each Military Treatment Facility.



SECTION 9: FUNCTIONAL RELATIONSHIPS (INTERDEPARTMENTAL): AMBULATORY SURGERY CENTER (ASC)

9.1. FUNCTIONAL RELATIONSHIPS. Ambulatory Surgery Center (ASC) will rely on a number of other services in a Military Treatment Facility (MTF) for patient care and support functions. The diagram below represents desirable relationships based on efficiency and functional considerations.



GLOSSARY

G.1. DEFINITIONS.

Airborne Infection Isolation (AII) Room: Formerly called negative pressure isolation room, an AII Room is a single-occupancy patient-care room used to isolate persons with certain suspected or confirmed infections. Examples are tuberculosis, measles, and chicken pox. Environmental factors are controlled in AII Rooms to minimize the transmission of infectious agents that are usually spread from person-to-person by droplet nuclei associated with coughing or aerosolization of contaminated fluids. AII Rooms should be provided with negative pressure (so that air flows under the door gap into the room).

Ambulatory Surgery: Ambulatory Surgery refers to surgical or invasive diagnostic procedures performed by qualified providers in a Surgical / Interventional Service or in the outpatient setting in an Ambulatory Surgery Center (ASC) with pre-procedural and immediate post-procedure care completed on the same day, or observation without hospitalization (less than 24 hours).

Anesthesia Procedure Room: A dedicated space for anesthesia providers to perform regional blocks or line placement prior to surgery. A patient would be transported to this area or room from the Pre-Op area or another area of the hospital if applicable. If this space is authorized, it should be near the ORs but observable by staff working at a nursing station.

Anesthesia Workroom: A room with space for storing and maintaining anesthesia equipment and supplies. Includes a workstation for the anesthesia technician, space for work counter(s) and sink(s) and racks for cylinders.

Bariatrics: A branch of medicine that deals with the causes, prevention, and treatment of obesity. A bariatric patient is one that is severely obese, overweight by 100 to 200 lbs, or having a body weight of greater than 300 lbs. A Body Mass Index (BMI) of greater than 40 is considered bariatric. FGI Guidelines for Healthcare Facilities provides guidelines for the design of bariatric care units.

Bronchoscopy: An endoscopic examination / procedure for the airways in which a flexible scope is introduced through the mouth or nose.

Caseload: The total number of annual surgical cases that can be performed in an operating room, and is the metric used to describe the throughput of a general or specialty operating room.

Clean Core (Sterile Core): Operating rooms are grouped around a clean core. The clean core is used for sterile supply storage. This is the cleanest area of the entire Surgical / Interventional Services procedure area. Only staff wearing appropriate surgical attire should be allowed in the clean core.

Case Carts: Case Carts are used to bring sterile materials and instruments from the Central Sterile Department to the operating room. A typical case cart contains specific items required for each specific case, including all required surgical instruments and other supplies. After the operation is completed, used items are reloaded onto the cart and sent back to central sterile for decontamination, disposal or reprocessing. Case carts are also supplied and kept in the surgery department for most frequently performed emergency cases.

Clean Utility Room: This room is used for the storage and holding of clean and sterile supplies, and includes space for a work counter, a handwashing station, storage facilities for clean and sterile supplies (such as shelving and automated dispensing machines) and may provide space to prepare patient care items. Clean linen may be stored in a designated area in the clean utility room if space is not provided in a separate room or in an alcove.

Control Desk: A space located to permit visual observation of all traffic which enters the Surgical / Interventional Services procedure area.

Control Room: A room, associated with image-producing radiological equipment, from which a technologist operates the imaging device and collects images to aid the physician or for the patient's medical record.

Cubicle: A cubicle is a partially enclosed workspace, separated from neighboring workspaces by partitions. Managers and other staff with no supervisory responsibilities as well as part-time, seasonal, and job-sharing staff may qualify for a cubicle.

Cystoscopy: An endoscopic exam / procedure of the urinary tract in which a flexible scope is introduced through the patient's urethra.

Endoscopy: An exam / procedure in which an instrument is used to visualize the interior of a hollow organ or cavity, into which the instrument is directly inserted. Endoscopic procedures may be strictly observational, may involve biopsy, or therapeutic treatment.

Exam / Consult Room: This is a consultation room for family members to meet with physicians or other providers privately and is ideally located near the waiting room.

Frozen Section Laboratory: This is the area for preparation and examination of frozen tissue sections. The frozen section procedure is performed under a microscope by the surgical pathologist while surgery is taking place. Interpretation is rapid and results are communicated with the surgeon while patient remains on the operating room table.

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 per 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 during a 40-hour work week.

Functional Area (FA): The grouping of rooms and spaces based on their function within a clinical service. Typical Functional Areas are Reception Area, Patient Area, Support Area, Staff and Administrative Area, and Education Area.

General Operating Room: A room designed and equipped to perform a wide variety of operative procedures. This includes most types of surgical procedures but especially those involving administration of anesthesia, multiple personnel, recovery room access, and a fully controlled environment. The General Operating Room may also include endoscopic surgery, which is defined as therapeutic surgical procedures using endoscopic equipment and requiring anesthesia support.

Graduate Medical Education (GME): After a physician completes 4 years of medical school, they must then complete an internship (also called PGY1 or Post Graduate Year 1) and then a residency (also termed GME or Graduate Medical Education). An internship typically lasts one year, and a residency can last from three to seven years depending on the specialty that is chosen.

Heart-Lung Pump Room: An equipment room, located adjacent to an OR supporting cardiothoracic surgeries, from which a heart lung bypass machine may be operated.

Hybrid OR: A hybrid OR integrates the traditional surgical functions of the OR with one or more advanced imaging modalities (CT, SPECT, PET or MRI) and intervention functions. This OR may accommodate Interventional and Vascular / Neurosurgery specialties; it may also accommodate monoplane, biplane or articulated biplane for Cardiologic, Neurologic, Orthopedic, and Trauma / Vascular cases.

Immediate Use Sterilization: It is a process designed for the steam sterilization of patient care items for immediate use. Also known as “emergent sterilization” or “flash sterilization”. Sterilizers for flash sterilization should be located as close as possible to the operating rooms, preferably in a shared space adjacent to the operating rooms with immediate access from the semi-restricted corridor for service.

Induction Room: A room / area specifically planned for anesthetizing patients prior to interventional / surgical procedures.

Infection Control Risk Assessment (ICRA): An ICRA is a multidisciplinary, organizational, documented process that considers the medical facility’s patient population and mission to reduce the risk of infection based on knowledge about infection, infectious agents, and the care environment, permitting the facility to anticipate potential impact.

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 4) set forth in this document. Input Data Statements are defined as Mission, Workload, Staffing or Miscellaneous.

Interventional Procedures: Procedures performed by trained clinical disciplinary specialists (interventional radiologist, cardiologist, neurologists) that may make use of minimally-invasive techniques and may be conducted with local anesthetic and / or conscious sedation.

Interventional Cardiology: Includes Coronary Angiography, Angioplasty and Stenting; Lower / Upper extremity Angiography, Pacemaker / Defibrillator placement, and EP ablations.

Interventional Fluoroscopic Imaging: Advanced X-ray based interventional imaging technology used for real-time imaging of a patient during a variety of minimally-invasive interventional procedures, including cardiovascular and neurovascular. Single- or mono-plane x-ray systems can produce simple, 2-D fluoroscopic images, where bi-plane systems make use of two simultaneous fluoroscopic images from different axes. Bi-plane data can be read as independent 2-D images, or may be computer interpolated into 3-D.

Interventional Neurology: Includes Cerebral Aneurysms, Arteriovenous malformations, artherosclerosis, and stroke.

Interventional Vascular: Includes Coil and Stent insertions, pulmonary embolism, IVC filter placement, abdominal aortic aneurysms, and ischemia.

Instrument Room: Room dedicated to stocking / storage of prepared surgical instruments or equipment. Locate proximal to Procedure rooms.

Medication Room: Room dedicated to the storage and preparation of patient medications. Allocated space provides for work counter, sink, refrigerator and locked storage for biological agents or drugs. Also provides space for automated medication dispensing machine.

Net Square Feet (NSF): The area of a room or space derived by multiplying measurements of the room or space taken from the inside surface of one wall to the inside surface of the opposite wall.

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 DoD Chapter 130 for the NTDG factors for all Space Planning Criteria chapters.

Nourishment Room: Room in support of beverages and simple prepared nourishment for patients. Provided space includes handwashing station, work counter, refrigerator, storage cabinets, drinking water dispensing unit (separate from handwashing), and equipment for serving nourishments.

Office, Private: A single occupancy office provided for confidential communication.

Office, Shared: An office that accommodates two workstations.

Operating Days per Year: The number of days per calendar year a facility is operational for patient care (refer to Section 2).

Phase I Recovery: Phase I Recovery is a Post Anesthesia Care area dedicated to receive patients immediately following procedures involving general anesthesia regional anesthesia, or monitored anesthesia care. Phase I requires close monitoring, including airway, ventilator, and hemodynamic support. Patients are generally accommodated in a stretcher bay or cubicle.

Phase II Recovery: The patient is transitioned from Phase I recovery to Phase II recovery when intensive nursing care is no longer needed and the patient becomes more alert and functional. Phase II allows preparations to be made to progress the patient towards discharge to home. Pre-Op Holding may be part of the Phase II Recovery area to achieve maximum flexibility in managing surgical caseloads. Location of the Phase II recovery area within the Phase I post-anesthesia recovery area is permitted, but the Phase II area must be an identifiably separate and distinct part of the post-anesthesia recovery area.

Picture Archiving and Communication System (PACS) Viewing Room: A digital radiology reading room that consists of workstations for interpretation.

Pre-Operative Holding: This is where the majority of surgical patients are prepared for their surgical procedures under the care of a nurse. In this area, the patient changes into a gown, a nursing assessment is performed and teaching is provided. Belongings will be secured, and an intravenous (I.V.) line may be started. Anesthesiology will interview the patient here and may give intravenous sedation. Patient will be transported from this area to the OR. Pre-Op Holding may be part of the Phase II Recovery area to achieve maximum flexibility in managing surgical caseloads.

Procedure Room: Room for minimally-invasive interventions (see Interventional). Interventional procedures may be conducted in rooms located within the Surgical / Interventional Services Procedure area or in rooms distributed elsewhere throughout the facility.

Proctoscopy: An endoscopic exam / procedure (colonoscopy or sigmoidoscopy) for the gastrointestinal tract in which a flexible scope is introduced through a patient's colon.

Program for Design (PFD): A listing of all of the rooms / spaces generated based on answers to the Input Data Statements (see Section 3) and the space planning criteria outlined in this document (Section 4) in SEPS. The list is organized by Functional Area and includes the Room Quantity, Room Code, Room Name, 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 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 80 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 of the room. This factor may be adjusted based on the actual and/or anticipated operations and processes of the room / department.

Scrubs Distribution Room: This is a room or area to dispense and receive scrubs. Space may be provided within the locker rooms or directly adjacent to them. This may include an automated scrub management system / automated dispensing and receiving machine.

Scope Wash: Rooms dedicated to the cleaning and storage of scopes used in endoscopic procedures. Separate rooms are required for each soiled and clean scopes, as well as separate rooms for the processing of scopes introduced orally / nasally versus those introduced via colon or urethra.

SEPS: Acronym for Space and Equipment Planning System, 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 healthcare project based on specific information entered in response to Input Data Statements.

Soiled Utility Room: This space provides an area for cleanup of medical equipment and instruments, and for disposal of medical waste material. It provides temporary holding for material that will be picked up by Central Sterile or similar service. It should be readily accessible to staff.

Sterile Processing Room: This is a room accessible from the operating room(s) it serves. It may be located between two ORs or a group of adjacent ORs. This room contains a sink, a counter top, and a steam sterilizer for the purpose of immediate use ("flash") sterilization.

Surgical Cases: The sum of all historical cases plus all predictive cases for a one-year period.

System Component Room: Room dedicated to electronics and mechanical systems required for advanced imaging equipment (such as C-arm, CT, SPECT, PET or MRI). Room typically adjacent / proximal to the imaging equipment it serves.

Team Collaboration Room: This space provides staff with an environment conducive to collaboration. Room contains computer workstations for documentation and a table with chairs to hold meetings.

Urology / Cystoscopy OR: Cystoscopy is a procedure performed by a urologic surgeon or urologist and involves the examination of the inside of the urinary tract. It is carried out with a cystoscope (a thin tubular device). Abnormalities can be detected in this manner, and surgical procedures can be performed. Cystoscopy may be performed as an outpatient procedure using local anesthesia or it can be performed in the hospital using regional or general anesthesia. It depends on the type of procedure. Cystoscopy may be performed under fluoroscopy, which is "real time" imaging (x-rays) done with the assistance of dye, to help guide diagnostic and therapeutic procedures. The images are viewed on a monitor in the procedure room. This room has lead-lined walls.

Utilization Factor: Also known as capacity utilization rate, this factor provides flexibility in the utilization of a room to account for patient delays, scheduling conflicts and equipment

maintenance. A room with an 80% utilization factor provides a buffer to assume that this room would be available 20% of the time beyond the planned operational practices for this room.

Workload: Space Planning Criteria per DHA Policy shall be workload driven. Workload projections divided by the throughput determined in this document for each workload driven room determines the quantity of rooms needed to satisfy the projected workload demand.