



U.S. Department  
of Veterans Affairs

Office of Construction &  
Facilities Management

Office of Facilities Planning  
Facilities Standards Service

# DESIGN ALERT

OCTOBER 14, 2022  
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## Medical Gases for Surgical OR's and Endovascular Procedure Rooms

**ISSUE:** Discrepancies in the number and types of medical gases between room criteria and graphic templates utilized for surgical and endovascular projects:

The current Surgical and Endovascular Design Guide was found to have discrepancies between the written Room Data Sheets for room templates and the graphical representation indicated within the Reflected Ceiling Plans (RCP).

**DISCUSSION:** While reviewing each specific design data sheet against its accompanying graphical template, coordination issues between the two were found that require clarification. The Room Data Sheet medical gases indicated do not correspond with the count and type of medical gases required by the Reflected Ceiling Plan. Therefore, to alleviate these discrepancies, all types, quantities, and locations of medical gas outlets will be as indicated on the Reflected Ceiling Plan. The Room Data Sheet will NOT be utilized regarding location, type and number of gas outlets.

Additionally, all proposed medical gases shall be reviewed and verified by local VA Medical Center Clinical Team Members as to type, quantity and location.

**REQUIREMENTS:** Refer attached Surgical and Endovascular Design Guide Template Corrections.

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## 4.2. PATIENT BAY, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR1)

Room Data Sheet (continued)

### HEATING, VENTILATING AND AIR CONDITIONING

General Requirement: 70-75 Degree F, 20-60%  
Relative Humidity, Room Return Air

Special Requirement:

Notes:

- 1) Six Minimum Total Air Changes
- 2) Two Minimum Outdoor Air Changes
- 3) Positive Pressure

### PLUMBING AND MEDICAL GASES

Cold Water: Yes

Hot Water: Yes

Waste: Yes

Reagent Grade Water: No

Medical Air Yes (1)

Medical Vacuum Yes (1)

Oxygen Yes (1)

**REMOVE QUANTITY**

### FIRE PROTECTION AND LIFE SAFETY

Fire Alarm: Yes

Sprinkler: Yes

Hazard Type: Light Hazard

## 4.2. PATIENT BAY, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR1)

### 4.3. PATIENT ROOM, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR2)

#### Room Data Sheet (continued)

##### HEATING, VENTILATING AND AIR CONDITIONING

General Requirement: 70-75 Degree F, 20-60%  
Relative Humidity, Room Return Air

Special Requirement:

##### Notes:

- 1) Six Minimum Total Air Changes
- 2) Two Minimum Outdoor Air Changes
- 3) Positive Pressure

##### PLUMBING AND MEDICAL GASES

Cold Water:	Yes
Hot Water:	Yes
Waste:	Yes
Reagent Grade Water:	No
Medical Air	Yes (1)
Medical Vacuum	Yes (1)
Oxygen	Yes (1)

**REMOVE QUANTITY**

##### FIRE PROTECTION AND LIFE SAFETY

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Light Hazard

### 4.3. PATIENT ROOM, PRE-OPERATIVE HOLDING / PHASE II RECOVERY (RRPR2)

**POWER**

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

Notes:

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**REMOVE QUANTITIES**

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

Notes:

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Rooms data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

Notes:

- 1) Refer to the latest version of the VA HVAC Design Manual for quantity and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes (1)
Medical Vacuum	Yes (7)
Oxygen	Yes (2)
Special Requirement:	

Notes:

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen (1), Nitrous Oxide (1), Carbon Dioxide (1)
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.5. OPERATING ROOM, GENERAL (ORGS1)**

**POWER**

Normal Power:	Connect selected receptacles and equipment to Normal power IPS.
Emergency Power:	Connect selected receptacles and equipment to Critical Branch emergency IPS.

Notes:

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**REMOVE QUANTITIES****COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

Notes:

1) Provide connections for articulating utility columns.

2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

Notes:

1) Refer to the HVAC Design Manual for number and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Drain:	No
Reagent Grade Water:	No
Medical Air	Yes (2)
Medical Vacuum	Yes (14)
Oxygen	Yes (4)
Special Requirement:	

Notes:

1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen (2), Nitrous Oxide (2), Carbon Dioxide (2).

2) For gas quantities per boom refer to the reflected ceiling plan.

3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project.

4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.6. OPERATING ROOM, ORTHOPEDIC (OROS1)**

**POWER**

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

Notes:

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**REMOVE QUANTITIES**

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

Notes:

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization.

Notes:

- 1) Refer to the HVAC Design Manual for number and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes (2)
Medical Vacuum	Yes (14)
Oxygen	Yes (4)
Special Requirement:	

Notes:

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen (2), Nitrous Oxide (2), Carbon Dioxide (2).
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.7. OPERATING ROOM, UROLOGY / CYSTOSCOPY (ORCS1)**

**POWER**

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

- Notes:
- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
  - 2) IPS Power & ground modules mounted at +24" AFF
  - 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
  - 4) Provide power connections for articulating utility columns.

**REMOVE QUANTITIES**

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

Notes:

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

- Notes:
- 1) Refer to the HVAC Design Manual for number and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Drain:	No
Reagent Grade Water:	No
Medical Air	Yes (4)
Medical Vacuum	Yes (17)
Oxygen	Yes (6)
Special Requirement:	

- Notes:
- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen (3), Nitrous Oxide (2), Carbon Dioxide (2).
  - 2) For gas quantities per boom refer to the reflected ceiling plan.
  - 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project.
  - 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.8. OPERATING ROOM, CARDIOTHORACIC (ORCT1)**

**POWER**

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

- Notes:
- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
  - 2) IPS Power & ground modules mounted at +24" AFF
  - 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
  - 4) Provide power connections for articulating utility columns.

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

- Notes:
- 1) Refer to the HVAC Design Manual for number and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Drain:	No
Reagent Grade Water:	No
Medical Air	Yes (2)
Medical Vacuum	Yes (14)
Oxygen	Yes (4)
Special Requirement:	

**REMOVE QUANTITIES**

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

- Notes:
- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen (2), Nitrous Oxide (2), Carbon Dioxide (2).
  - 2) For gas quantities per boom refer to the reflected ceiling plan.
  - 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project.
  - 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.10. OPERATING ROOM, NEUROSURGICAL (ORNS1)**



**POWER**

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

Notes:

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

Notes:

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

Notes:

- 1) Refer to the HVAC Design Manual for number and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes (2)
Medical Vacuum	Yes (14)
Oxygen	Yes (4)
Special Requirement:	

Notes:

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen (2), Nitrous Oxide (2), Carbon Dioxide (2).
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**REMOVE QUANTITIES**

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.11. OPERATING ROOM, ROBOTICS (ORRB1)**

**POWER**

Normal Power: Connect selected receptacles and equipment to Normal power IPS.

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

Notes:

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

Notes:

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

Notes:

- 1) Refer to the HVAC Design Manual for number and location of low air return grilles and ceiling diffusers.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes (2)
Medical Vacuum	Yes (14)
Oxygen	Yes (4)
Special Requirement:	

Notes:

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen (2), Nitrous Oxide (2), Carbon Dioxide (2).
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**REMOVE QUANTITIES**

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.12. OPERATING ROOM, TRANSPLANT (ORTR1)**

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

Notes:

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**REMOVE QUANTITIES**

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

Notes:

- 1) Refer to the HVAC Design Manual for number and location of low air return grilles and ceiling diffusers.
- 2) Room does not contain multiple slot diffusers and uses laminar flow perforated face outlets only for supply air.
- 3) Suggested minimum laminar flow array over the entire sterile field area as imaging equipment gantry creates excessive turbulence. Mechanical design engineer shall be responsible to design the array in such manner as to minimize turbulence and to maintain the sterile aseptic field.

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

Notes:

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes (4)
Medical Vacuum	Yes (17)
Oxygen	Yes (6)
Special Requirement:	

Notes:

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen (3), Nitrous Oxide (2), Carbon Dioxide (2).
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**4.13. OPERATING ROOM, MONOPLANE HYBRID (ORHY1)**

Emergency Power: Connect selected receptacles and equipment to Critical Branch emergency IPS.

Notes:

- 1) Provide IPS power & ground modules – 3 duplex receptacles & 3 ground jacks
- 2) IPS Power & ground modules mounted at +24" AFF
- 3) Provide Laser Receptacle Module. Module shall be connected to Special Equipment IPS located outside the Surgery Room.
- 4) Provide power connections for articulating utility columns.

**REMOVE QUANTITIES**

**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

Notes:

- 1) Refer to the HVAC Design Manual for number and location of low air return grilles and ceiling diffusers.
- 2) Room does not contain multiple slot diffusers and uses laminar flow perforated face outlets only for supply air.
- 3) Suggested minimum laminar flow array over the entire sterile field area as imaging equipment gantry creates excessive turbulence. Mechanical design engineer shall be responsible to design the array in such manner as to minimize turbulence and to maintain the sterile aseptic field.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes (4)
Medical Vacuum	Yes (17)
Oxygen	Yes (6)
Special Requirement:	

Notes:

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen (3), Nitrous Oxide (2), Carbon Dioxide (2).
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**COMMUNICATIONS**

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

Notes:

- 1) Provide connections for articulating utility columns.
- 2) Provide connections for video monitor pendants. Video monitor pendants will be part of the video integration system. The extent of the system is to be selected on a project basis.

**4.14. OPERATING ROOM, BIPLANE HYBRID (ORHY2)**

#### 4.16. CARDIAC CATHETERIZATION LABORATORY (XCCE1) INTERVENTIONAL RADIOLOGY (IR) LABORATORY (XACR1)

##### Room Data Sheet (continued)

###### PLUMBING AND MEDICAL GASES

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes (4)
Medical Vacuum	Yes (4)
Oxygen	Yes (4)
Special Requirement:	

**REMOVE QUANTITIES**

**ADD WAGD**

###### Notes:

- 1) For gas quantities per boom refer to the reflected ceiling plan.
- 2) Provide Nitrogen (2).
- 3) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the room it serves.

###### FIRE PROTECTION AND LIFE SAFETY

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

#### 4.16. CARDIAC CATHETERIZATION LABORATORY (XCCE1) INTERVENTIONAL RADIOLOGY (IR) LABORATORY (XACR1)

## 4.17. PROCEDURE ROOM, ELECTROPHYSIOLOGY (XCEP1)

Room Data Sheet (continued)**HEATING, VENTILATING AND AIR CONDITIONING**

General Requirement: Refer to Operating Room data sheet in the current version of the VA HVAC Design Manual for room temperatures, humidity range, room air change requirements, and pressurization

Notes:

- 1) Refer to the HVAC Design Manual for number and location of low air return grilles.
- 2) Room does not contain multiple slot diffusers and uses laminar flow perforated face outlets only for supply air.
- 3) Suggested minimum laminar flow array over the entire sterile field area as imaging equipment gantry creates excessive turbulence. Mechanical design engineer shall be responsible to design the array in such manner as to minimize turbulence and to maintain the sterile aseptic field.

**PLUMBING AND MEDICAL GASES**

Cold Water:	No
Hot Water:	No
Waste:	No
Reagent Grade Water:	No
Medical Air	Yes (5)
Medical Vacuum	Yes (7)
Oxygen	Yes (6)
Special Requirement:	

Notes:

- 1) Provide Waste Anesthesia Gas Disposal (WAGD), Nitrogen (2), Nitrous Oxide (1).
- 2) For gas quantities per boom refer to the reflected ceiling plan.
- 3) Nitrogen Control Cabinets are to be located on the articulating utility columns as determined by the project
- 4) Medical Gas Zone Valve Boxes are to be provided in accordance with NFPA 99. Locate this cabinet in the semi-restricted corridor near the operating room it serves.

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Ordinary Hazard Group 1

**REMOVE QUANTITIES****ADD WAGD****4.17. PROCEDURE ROOM, ELECTROPHYSIOLOGY (XCEP1)**

#### 4.18. TRANSESOPHAGEAL ECHOCARDIOGRAPH (TEE) PROCEDURE ROOM (TRTE1)

##### Room Data Sheet (continued)

#### FIRE PROTECTION AND LIFE SAFETY

Fire Alarm:	Yes
Sprinkler:	Yes
Hazard Type:	Light Hazard

#### COMMUNICATIONS

Data:	Yes
Telephone:	Yes
Cable Television:	No
Duress Alarm:	No
Electronic Access and Door Control:	Yes
Intercom:	Yes (Phone)
Motion Intrusion Detection (MID):	No
Nurse Call:	Yes
Code Blue:	Yes
Public Address:	No
Security Surveillance Television (SSTV):	No
VA Satellite TV:	No
Video Teleconferencing (VTEL):	No
Special Requirement:	

#### Notes:

#### HEATING, VENTILATING AND AIR CONDITIONING

General Requirement: Refer to the current version of the VA HVAC Design Manual for temperatures, humidity range, room air change requirements, and pressurization.

#### PLUMBING AND MEDICAL GASES

Cold Water:	Yes
Hot Water:	Yes
Waste:	Yes
Reagent Grade Water:	No
Medical Air	Yes (2)
Medical Vacuum	Yes (2)
Oxygen	Yes (2)

**REMOVE QUANTITY**

**ADD WAGD**

#### 4.18. TRANSESOPHAGEAL ECHOCARDIOGRAPH (TEE) PROCEDURE ROOM (TRTE1)