

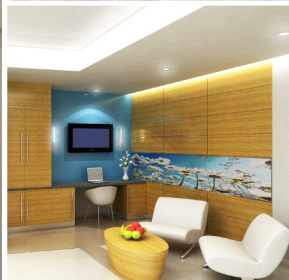
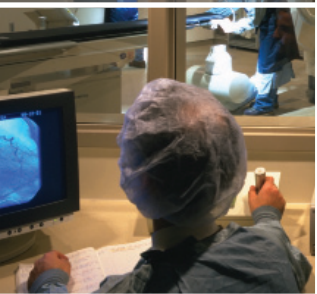
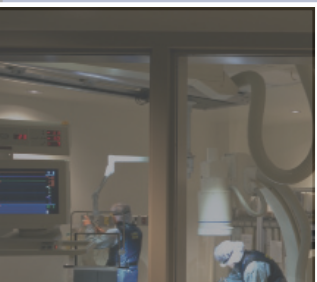


Department of
Veterans Affairs
Office of Construction & Facilities Management

design guide

NOVEMBER 29, 2011

DIGESTIVE DISEASES - ENDOSCOPY SERVICE





DIGESTIVE DISEASES-ENDOSCOPY SERVICE

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SECTION 1 - FOREWORD

FOREWORD

The material contained in the Digestive Diseases-Endoscopy Service Design Guide is the culmination of a coordinated effort among the Department of Veterans Affairs (VA), the Veterans Health Administration, the Office of Construction & Facilities Management, the Strategic Management Office, and the Capital Asset Management, Planning Service Group, and Hellmuth, Obata & Kassabaum, P.C. The goal of this Design Guide is to maximize the efficiency of the design process for VA facilities and ensure a high level of design, while controlling construction and operating costs.

This document is intended to be used as a guide and is supplementary to current technical manuals, building codes and other VA criteria in planning healthcare facilities. The Design Guide is not to be used as a standard design; it does not preclude the need for a functional and physical design program for each specific project.

The Digestive Diseases-Endoscopy Service Design Guide was developed as a design tool to assist the medical center staff, VACO Planners, and the project team in better understanding the choices that designers ask them to make, and to help designers understand the functional requirements necessary for proper operation of this procedure suite.

This Design Guide is not intended to be project-specific. It addresses the general functional and technical requirements for typical VA Healthcare Facilities. While this Guide contains information for key space types required in a Digestive Diseases-Endoscopy Service, it is not possible to foresee all future requirements of the Procedure Suite in Healthcare Facilities. It is important to note that the guide plates are generic graphic representations intended as illustrations of VA's furniture, equipment, and personnel space needs. They are not meant to limit design opportunities.

Equipment manufacturers should be consulted for actual dimensions and utility requirements. Use of this Design Guide does not supersede the project architect's and engineers' responsibilities to develop a complete and accurate design that meets the user's needs and the appropriate code requirements within the budget constraints.

Lloyd H. Siegel, FAIA
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SECTION 2 - NARRATIVE

GENERAL CONSIDERATIONS

VA operates the nation's largest healthcare system with over 5.5 million patient visits per year. While veterans' health care needs are often similar to the general population, they are also different in significant ways. For example, veterans can suffer from a higher prevalence of disabilities from traumatic injuries, post-traumatic stress disorder (PTSD) and neurological disorders. To respond to these needs, VA is in the process of developing and integrating a care delivery model focused on patient centered care specifically as it applies to veterans. This mirrors general trends in healthcare where patient centered care is part of a major understanding of how best to enhance healing and support better outcomes. To integrate knowledge derived from other industry efforts, VA is working with Planetree as a partner. Planetree's efforts are helping to lead the way to personalizing, humanizing, and demystifying the healthcare experience for patients and their families. They bring a history of integrating changes required to protocols and facilities to support patient centered care. Veteran Centered Care has been defined by VA as follows:

A fully engaged partnership of veteran, family, and healthcare team established through continuous healing relationships and provided in optimal healing environments, in order to improve health outcomes and the veteran's experience of care.

In addition, Veteran Centered Care is based on twelve core principles which are noted below. Although all are important parts of the VA approach to care, nine principles stand out because they can be supported directly or indirectly by facility design solutions. These nine principles are noted in bold.

Veteran Centered Care Core Principles

- 1. Honor the veteran's expectations of safe, high quality, accessible care.**
- 2. Enhance the quality of human interactions and therapeutic alliances.**
3. Solicit and respect the veteran's values, preferences, and needs.
4. Systematize the coordination, continuity, and integration of care.
- 5. Empower veterans through information and education.**
6. Incorporate the nutritional, cultural and nurturing aspects of food.
- 7. Provide for physical comfort and pain management.**
- 8. Ensure emotional and spiritual support.**
- 9. Encourage involvement of family and friends.**
- 10. Ensure that architectural layout and design are conducive to health and healing.**
- 11. Introduce creative arts into the healing environment.**
- 12. Support and sustain an engaged work force as key to providing veteran centered care.**

The following discussion begins with General Industry Trends followed by Veteran Centered Care Design Trends. General Industry Trends is organized around four main areas of concern: Safety and Risk Reduction, Efficiency and Flexibility, Planning that Accommodates Program Growth, and Response to Human Needs as they apply to objectives for planning and design of Digestive Diseases - Endoscopy Service.

Veteran Centered Care Design Trends is guided by an understanding of how the nine facility linked core principles of Veteran Centered Care can strengthen VA goals for care delivery in support of better patient experiences and, ultimately, outcomes.

GENERAL INDUSTRY TRENDS

1. Safety and Risk Reduction

Plan to control cross infection

Hand washing and controlled access

To enhance infection control, ensure that hand-washing stations or hands-free automated hand-rub devices are strategically located for easy access to caregivers. Organize circulation paths so that entrances to invasive procedure rooms are from a non-public, controlled access corridor.

Avoid clean/dirty circulation conflicts

Plan procedure areas to avoid circulation conflicts between patients and service traffic and between soiled and clean areas. One way to clarify movement is to provide a public side to the procedure area from which patients and families access care, and a service side which accommodates staff work areas, and from which service traffic arrives and waste leaves.

Promote staff observation of patients

Since increased observation from staff will foster a safer environment for patients, plans should seek to provide clear visualization of patients by staff. Where Prep and Recovery are required for invasive procedures, well planned locations of nurse work areas will support this objective since caregivers will be closer to patients during pre and post procedure.

Specify materials and finishes that enhance infection control

Use materials, finishes, and casework that resist microbe growth and are easily cleaned. See PG 18-14 for specific requirements.

Specify anti-microbial materials and finishes to the greatest extent possible. Minimize seams in floor and wall finishes and at floors to walls. To limit dust accumulation, avoid horizontal surfaces which are not work surfaces. Provide storage for all unpackaged items in enclosed casework.

Fully integrate Electronic Medical Records

VA uses a system of electronic medical records and bar-coding of medications. As a key initiative to improve safe care, it is important to continue to expand the implementation of electronic medical records, and improve and strengthen protocols for their use, to achieve the most beneficial results. As all records shift to a full EHR-based system, these electronic tools reduce risk and raise efficiency. In addition to quick access to comprehensive records, including imaging and test results, and consistency of patient documentation across all services, benefits include the ability to locate nurses closer to patients and enhance opportunities for more time with patients. Space efficiency benefits include a decreased need for records storage both at departmental service locations and at central storage spaces.

2. Efficiency and Flexibility

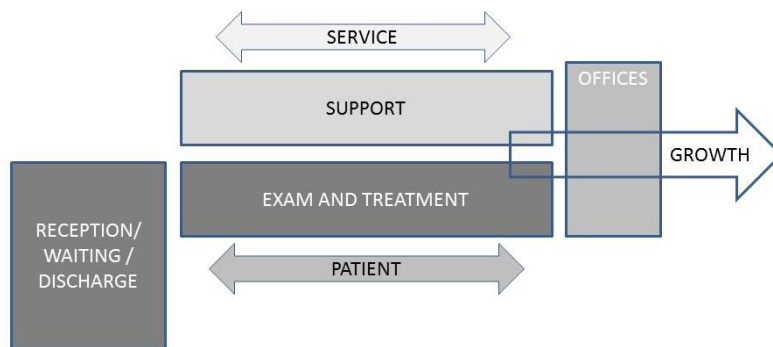
Increasing efficient operations will support VA objectives to provide quality service. Standardization of key room plans, so that items like equipment and sharps containers are always in the same location in procedure rooms, can reduce errors and speed services as staff provides care in different rooms.

Where size permits, planning of procedure areas adjacent to each other with appropriate links, will provide the opportunity to share resources among two or more services. Shared resources can include prep and recovery, waiting, linen storage, housekeeping, general storage, waste storage, and staff support areas.

3. Planning that accommodates program growth

Position non-clinical space for future growth

Planning for larger scale long term growth for key program components should be identified early in the design process. Space needed to accommodate projected growth can be addressed by first identifying the ideal direction for planned growth to occur. For procedure platforms where there is often a service access corridor parallel to a patient access corridor on opposite sides of the procedure rooms, the growth direction would be in the direction of the long axis (i.e. the direction of the service and patient access corridors). At the end furthest from patient access to the procedures platform, locate “soft” or non-clinical program space, such as offices or storage, since they can most easily be relocated to permit conversion of the space to accommodate clinical growth needs.



PLANNING FOR GROWTH

4. Response to Human Needs

Patient dignity and self-determination must be accommodated while considering operational efficiencies. Patients’ vulnerability to stress from noise, lack of privacy, poor lighting, and other causes, and the subsequent harmful effects it can have on the healing process, can be addressed by facility planning and design that recognizes these issues and proactively incorporates design solutions to support dignity, privacy, acoustic control, comfort, and patient empowerment over their environment.

In addition to control of infection discussed above, to reduce stress and increase patient privacy and dignity, outpatients and inpatients should follow separate paths into the procedures area.

Service traffic should be separate from patient traffic to the greatest extent possible so that waste, equipment movement, and housekeeping traffic are, as much as possible, separate from patient pathways and use a dedicated service corridor.

Good planning and design appeal to the spirit and sensibilities of patients and care providers alike. Opportunities exist in the design of Digestive Diseases – Endoscopy Service areas to address the above issues and to incorporate creative solutions that enhance patient comfort and contribute to positive outcomes. A primary architectural objective should be to minimize an institutional image of healthcare facilities and to surround the patient and family members with finishes and furnishings that are familiar and comforting.

Noise reduction will reduce stress. Consider use of finishes that absorb noise such as carpet in appropriate non-clinical areas and sound absorbent ceiling tiles in appropriate clinical and non-clinical areas.

Lighting design can reduce stress. Where patients are prone, such as on stretcher travel through patient corridors, choices can include cove lighting against corridor walls to prevent patients from looking into the glare of light fixtures. Wall mounted sconces can provide a similar effect and also reduce an institutional feeling.

Patient privacy from visual intrusion can be enhanced by controlling views into procedure and exam rooms. Careful planning of door swings related to patient exam or treatment positions and use of cubicle curtains at procedure room entries and any area where undressing is required should all be considered. Privacy from noise transmission – into or out of a patients' area – can be strengthened by providing solid sided bays in areas like prep and recovery. Adding doors to prep and recovery bays so they become rooms further enhances privacy.

VETERAN-CENTERED CARE DESIGN TRENDS

Safe high quality accessible care

Easy access to services

An ideal for Veteran Centered Care is point of service care where all services a patient may need on a given visit are located at or near the patient's day visit location. This ideal should be used as a guide to inform how program components could best be organized. The services to be accessed may range from exam to patient education to research linked tests, to nutrition or life style or psychological counseling.

When patients must transfer, there should be a clear and easily navigated pathway between points of service.

Women Veterans' Privacy & Security

Consideration for the privacy and security of Women Veterans will be addressed in the overall planning and design of the Digestive Diseases – Endoscopy Service to carefully assess all spaces for these needs. Of particular concern are the exam and procedure rooms which shall include the following:

Procedure rooms where a female patient may be left unattended (i.e. to dress / undress) must have locks that can be disengaged by staff from the corridor side. Procedure rooms must be located in a space where they do not open into a public waiting room or a high-traffic public corridor. Access to hallways by patients/staff who do not work in that area should be restricted. Privacy curtains must be present and functional in procedure rooms. Privacy curtains must encompass adequate space for the healthcare provider to perform the procedure unencumbered by the curtain. A changing area must be provided behind a privacy curtain. Examination tables must be shielded from view when the door is opened. Examination tables must be placed with the foot facing away from the door. Patients who are undressed or wearing examination gowns must have proximity to women's restrooms that can be accessed without going through public hallways or waiting rooms.

Sanitary napkin and tampon dispensers and disposal bins must be available in women's public restrooms. A family or unisex restroom should be available where a patient or visitor can be assisted. Baby changing tables should be available in women's and men's public restrooms.

Waiting areas should provide a private setting for women Veterans through the use of partitions and/or furniture. Refer to VHA HANDBOOK 1330.01, Health Care Services For Women Veterans, May 21, 2010.

Empower Veteran

Patient control over their environment

Patients in treatment often benefit from a sense of control of the process they are experiencing. One component will be the ability to control their treatment environment. In areas where patients may need to spend more than the time for a simple exam, such as prep and recovery, patient control can include noise, temperature, lighting level, levels of privacy, and access to media.

Access to education

Education about a patient's health issues is an important component of clinical care leading to better outcomes. Knowledge is empowering and can enhance a patient's ability to understand reasons for and benefits of specific tests and treatment. Opportunities for patient education should be planned for easy access in settings where the patient can control privacy. These can include information kiosks in waiting areas and media outlets in prep and recovery.

Enhance Human Interaction / Encourage Involvement of Family and Friends

Facility solutions that support increased interaction with caregivers and family or friends include the following:

Providing adequate space and amenities for family and friends in waiting, exam, and the procedure environment.

Providing space for a family member or friend in prep and recovery will enhance the emotional support often sought from those close to the patient.

Co-locating prep and recovery will shorten caregiver travel so that providers will be closer to patients and available for interaction about clinical or emotional needs.

Healing Environment

Planning solutions should promote patient dignity and increase privacy. This will lower stress and increase comfort in support of healing and wellness. Patient space in prep and recovery should include individual rooms where appropriate, or hard-sided cubicles, each with the ability for patients to control privacy and noise.

In procedure rooms, curtains or screens should be used to increase patient privacy. Patient diagnostic or treatment position should orient the patient's head toward the door, rather than his or her feet.

Reception and Waiting areas should include planning that provides different spaces for patients who seek social interaction and for those who seek more privacy. Smaller scale spaces with separations created by low partitions, furniture or planters will provide options for more privacy in these settings.

Access to nature and to daylight can lower stress. Areas for family respite should be provided in or near the procedure area. Where site, climate, and building configuration permit, access to outdoor space can serve as a welcome area for respite. In addition, planning that brings daylight, if not views, into the procedure area would be an important addition to support clinical outcomes.

One strategy to bring natural light deep into the building might be to use light shelves at the window wall that bounce light off ceilings thus delivering light deeper into the procedure arena. To the extent that this can be achieved, this more effective delivery of light can help the entire building become a light-filled facility for healing in which all users; patients, family, and staff, reap the benefits.

Other issues specific to planning and design for Veterans' Care include the following:

Imagery and Artwork

Veterans' military experiences require a specific approach to the selection of imagery and artwork that is healing and restorative. Commemorative settings and iconography of national and symbolic importance help veterans recover from post-traumatic stress disorder. Units with artwork and color palettes that incorporate nature imagery that are not evocative of combat settings, and that honor veterans (e.g., photography of Mount Rushmore and national parks), can calm and restore patients. Note that nature images that may be considered restorative and healing for patients in the general public can communicate exposure and vulnerability to a veteran whose military service occurred in a similar setting (e.g. savannah or desert images).

Veterans of Recent Conflicts

As a result of their injuries, many veterans of recent conflicts, Operation Enduring Freedom and Operation New Dawn, suffer from multiple traumas including traumatic brain injury, post-traumatic stress disorder, spinal cord injury, and amputation. Extremity wounds are the most common injury of veterans of recent conflicts.

VA facilities require full accessibility planning in all areas including clearances, floor finishes, floor levels with ramp transfers between different levels, hardware and plumbing fixture design.

Veterans entering the system are generally younger than veterans currently utilizing VA services from previous conflicts. Planners should consider access to contemporary information technology and entertainment, and strategies which address the lifetime prognosis for veterans suffering from multiple traumas.

REFERENCES

Advisory Board Company. Trends in VA Hospitals. Washington, DC: The Advisory Board Company; 2009.

Andeane PO, Rodriguez CE. Effects of Environmental Characteristics on Perceived Stress in Patients in Healthcare Settings. Paper presented at: The Environmental Design Research Association 40th Annual Meeting; May 28, 2009; Kansas City, MO.

American Institute of Architects. Planning for Change: Hospital Design Theories in Practice. http://info.aia.org/nwsltr_print.cfm?pagename=ahh_jrnl_20051019_change. Published October 19, 2005. Accessed March 14, 2009.

Armstrong K, Laschinger H, Wong C. Workplace Empowerment and Magnet Hospital Characteristics as Predictors of Patient Safety Climate. *J Nurs Care Qual*. 2008;19(54):1-8.

Arneill AB, Devlin AS. Perceived Quality of Care: The Influence of the Waiting Room Environment. *Journal of Environmental Psychology*. 2002;22:345-360.

Assaf A, Matawie KM, Blackman D. Efficiency of Hospital Food Service Systems. *International Journal of Contemporary Hospitality Management*. 2008;20(2):215-227.

Atwood D. To Hold Her Hand: Family Presence During Patient Resuscitation. *JONA'S Healthcare Law, Ethics, and Regulation*. 2008;10(1):12-16.

Beard L, Wilson K, Marra D, Keelan J. A Survey of Health-Related Activities on Second Life. *J Med Internet Res*. 2009;11(2):e17

Becker F, Douglass S. The Ecology of the Patient Visit: Physical Attractiveness, Waiting Times, and Perceived Quality of Care. *J Ambulatory Care Manage*. 2008;31(2):128-141.

Berwick D. What 'Patient-Centered' Should Mean: Confession Of an Extremist. *Health Affairs*. 2009;4:w555-w565.

Blank AE, Horowitz S, Matza D. Quality with a Human Face? The Samuels Planetree Model Hospital Unit. *Jt Comm J Qual Improv*. 1995;21(6):289-299.

SECTION 3 - FUNCTIONAL CONSIDERATIONS

FUNCTIONAL ORGANIZATION

A Functional Area (FA) is the grouping of rooms and spaces based on their function within a clinical service. The organization of services in this Guide follows the categories established in VA Space Planning Criteria, Chapter: 287 – Digestive Diseases - Endoscopy Service.

This service is organized in six Functional Areas:

- FA 1: Reception Area
- FA 2: Patient Area
- FA 3: Prep and Recovery Area
- FA 4: Support Area
- FA 5: Staff and Administrative Area
- FA 6: Education Area

Digestive Diseases - Endoscopy Service includes procedure and exam rooms which require specific planning considerations. Key rooms in FA 2 Patient Care accommodate a range of invasive procedures. Colonoscopy, Esophagogastroduodenoscopy (EGD), Esophageal Manometry, and Flexible Sigmoidoscopy, share the same size and room requirements and are conducted in the same room type - the Endoscopy Procedure Room.

Endoscopic retrograde cholangiopancreatography (ERCP) and Endoscopic Ultrasound require longer procedure times and a larger room for X-Ray and anesthesia services and are conducted in the ERCP/ Endoscopic Ultrasound Room.

When approved by a facility, the functional spaces described here may be incorporated as part of a more comprehensive “Digestive Diseases Center”. This might include procedure rooms discussed above as well as procedure rooms which can offer alternate non-invasive diagnostic exams using imaging modalities like MRCP and CT. Services such as patient education, nutritional guidance and support groups may also be included.

The Functional Diagram in this section and Guide Plates, Reflected Ceiling Plans, and Room Data Sheets in Section Four, show function, flow, organization, equipment, utilities and operational concepts. They should not be interpreted as preconceived floor plans, as the diagrams do not correlate exactly to all the rooms and functions available in Space Planning Criteria, nor to those which may be required or authorized for individual projects.

FUNCTIONAL RELATIONSHIPS

FA 1: Reception Area

Reception Area accommodates the initial processing and admission of all scheduled and unscheduled outpatients. These areas include registration functions, waiting, and opportunities for patient education.

The reception control area shall be strategically located to give the receptionist clear observation of waiting areas to facilitate control of outpatient traffic entering the suite and secure the department from unauthorized access. On the day of the procedure, ambulatory patients will register at the reception area. Functional considerations include location of workstation monitor screens to protect patient information, access to lockable files, and accessibility compliant work stations.

The reception control area should be organized in a way that maintains patient confidentiality. Waiting for patients and families should be organized so that separate patient circulation paths provide separate to prep and exam rooms and are separate from service traffic. Outpatient processing areas should be separate from inpatient circulation and holding areas when both outpatients and inpatients use the same exam rooms.

Waiting areas should be configured with small clusters of seating for privacy and for a less institutional environment. Veterans experiencing post-traumatic stress disorder (PTSD) prefer seating where they do not feel vulnerable from being approached from behind. Ensure that a specific complement of seats is located to support this need. The use of table lamps and appropriate furnishings and finishes allow for intimate spaces which encourage conversations and reduce stress levels in visitors.

Family waiting areas shall be located in close proximity to the exam spaces to facilitate post exam physician visits with families to discuss results and treatment options. In some instances the need to accommodate families with children may be required. This may include designating a children's area in waiting areas with appropriate furniture and content and should be addressed on a facility basis. If authorized, a Consult Room should be located adjacent to Waiting.

When possible, access to natural daylight, views of nature, and other positive distractions should be provided to improve the human experience in these spaces. While it is common practice to include television viewing capability in waiting spaces, studies have shown increased stress and blood pressure levels in persons in waiting spaces exposed to television. This should be evaluated on a project by project basis.

For smaller size services, sharing functions associated with Reception and Waiting with other similar and adjacent clinical services should be considered on a per facility basis.

FA 2: Patient Area**Procedure Room, Endoscopy**

Colonoscopy, Esophagogastroduodenoscopy (EGD), Esophageal Manometry, and Flexible Sigmoidoscopy are similar procedures permitting them to be accommodated in this procedure room based on similar clinical protocols and space and equipment requirements. Sigmoidoscopy is becoming less frequently used; current patient volumes are a low percentage of the total number of full colonoscopies.

The room is organized with a centrally located patient stretcher under a dual articulated arm ceiling-mounted boom system specifically designed to support medical equipment. One arm includes an equipment carrier for endoscopic imaging equipment with provisions for medical gases, data, video, and print capabilities for use with fiber optic (direct vision) endoscopes, and power outlets. This system takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. The other arm supports a flat screen monitor for video and data displays.

Patients may be wheeled into the room having been sedated in the prep area and may also receive further sedation in the procedure room.

The room is best organized with a patient access side through a restricted access corridor from/to Prep and Recovery, and a service access side, with a door to a staff/service corridor accessing the scope decontamination and reprocessing rooms and other support functions. Used scopes are dry-wiped down in the procedure room and packaged on a cart for transport to the decontamination and processing area that is part of the support for this procedure suite discussed in FA 4 below.

To comply with best practice guidelines and for patient dignity and safety, a patient toilet should be provided with direct access from the Endoscopy Procedure Room. Based on space or budget constraints a patient toilet may be shared between adjoining Endoscopy Procedure Rooms. An intervening vestibule between the procedure rooms and the patient toilet must be provided when toilet rooms are shared by two rooms.

Primary procedural supplies shall be stored in the procedure room. A scope storage cabinet is provided to store a small number of clean scopes within the room. Adequate wall surface area is required to support the appropriate number of storage cabinets.

Endoscopic Retrograde Cholangiopancreatography (ERCP) / Endoscopic Ultrasound

ERCP can be performed for both diagnostic and therapeutic reasons, although the development of safer and relatively non-invasive investigations such as endoscopic ultrasound as well as Magnetic Resonance Cholangiopancreatography (MRCP) has reduced the application of ERCP without therapeutic intent. ERCP enables a physician to diagnose problems in the liver, gallbladder, bile ducts, and pancreas. The procedure includes fluoroscopic video recording; endoscopic ultrasound includes ultrasound video recording.

The room is organized with the patient on a centrally located procedure table under a dual articulated arm ceiling-mounted boom system specifically designed to support medical equipment. One arm supports provisions for medical gases, power and data outlets and video signals with video and print capabilities for use with fiberoptic (direct vision) endoscopes. This system takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. The other arm includes flat screens for video and data displays.

This procedure requires sedation and, when clinically required, full anesthesia. To obtain fluoroscopic images a portable C-Arm unit is stored in the equipment room which supports this service, and wheeled into place when needed. The imaging activity requires protection from ionizing radiation for providers by use of a mobile lead-lined glazed screen. Room walls and doors and pass-throughs may require lead shielding as well, the extent of which, if any, is to be determined by the local facility's radiation physicist.

Patients may be wheeled into the room having been sedated in the prep area and also receive further sedation in the procedure room.

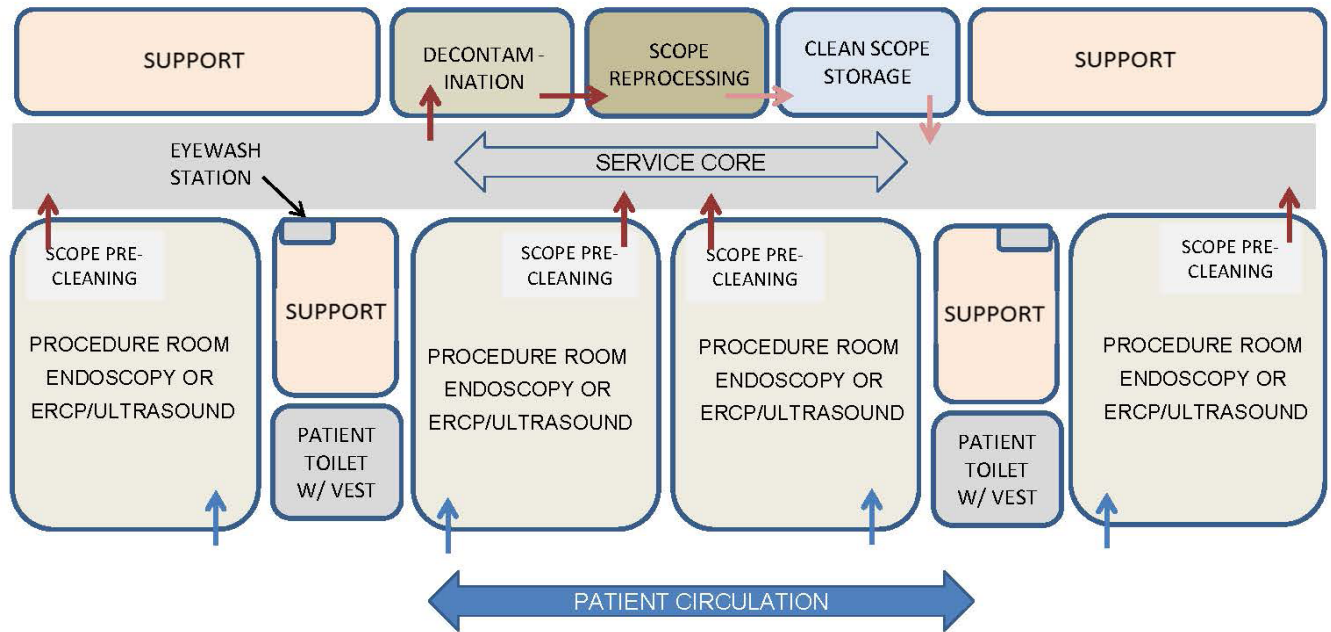
The room is best organized with a patient access side through a restricted access corridor from/to Prep and Recovery, and a service access side, with a door to a staff/service corridor accessing the scope decontamination and reprocessing rooms and other support functions. Used scopes are dry-wiped down in the procedure room and packaged on a cart for transport to the decontamination and processing area that is part of the support for this procedure suite discussed in FA 4 below.

An Electro-Surgical Unit is accommodated in each room for sterile therapeutic interventions using argon plasma coagulation.

To comply with best practice guidelines and for patient dignity and safety, a patient toilet should be provided with direct access from the ERCP Room. Based on space or budget constraints a patient toilet may be shared between adjoining ERCP or Endoscopy Procedure Rooms. An intervening vestibule between the procedure rooms and the patient toilet must be provided when toilet rooms are shared by two rooms.

Primary procedural supplies shall be stored in the procedure room. A scope storage cabinet is provided to store a small number of clean scopes within the room. Adequate wall surface area is required to support the appropriate number of storage cabinets.

The following diagram shows detailed patient and scope processing flow for suite with two or more procedure rooms.



ENDOSCOPY SUITE DETAILED FLOW WITH TWO OR MORE PROCEDURE ROOMS

Exam and Assessment Room

Exam rooms accommodate exams, capsule procedures and follow-up. These rooms should be located so that patients can move directly to them from Waiting.

FA3: Prep and Recovery Area

Prep and Recovery is the bridge for patients between public areas and the controlled environment that supports the Digestive Diseases-Endoscopy invasive procedures platform. It is comprised of patient rooms or cubicles, depending on facility needs, and monitored from a nurse station. Rooms are different from cubicles because they include sliding glass doors which permit visibility with acoustic privacy.

In alignment with Veteran Centered Care objectives, while all rooms or cubicles must provide clear visualization of each patient by nursing staff, rooms, rather than cubicles, provide maximum acoustic and visual privacy and promote patient dignity more easily. Rooms and cubicles have the same dimensions and can accommodate a family member or friend, extending opportunities for human contact at both pre- and post-procedure times. In addition, physician consults on findings from procedures can be accommodated in rooms with acoustic privacy. Both rooms and cubicles can include curtains or other screening solutions which can be easily deployed across the front for visual privacy.

A Nurse Station provides positions for nurse monitoring of prep and recovery positions as well as work and charting areas. This space should be located to provide visualization of patient positions in Prep and Recovery and permit nurses to monitor patients who may be agitated both pre- and post-procedure, and may become unstable post-procedure. Nurses also monitor patient movement to and from procedure rooms. In Prep and Recovery areas with many patient positions, to reduce nurse travel and enhance nurse visibility of patients, nurse stations may be decentralized as long as the total program net square feet for the function is not exceeded.

The nurse station shall be configured so that the location of workstation monitor screens protects patient information from public view. To accommodate disabled staff, separate accessibility compliant and ergonomically designed work stations shall be provided. Ergonomically designed work areas should be provided for all staff to reduce staff fatigue and support peak performance,

Inpatients will generally require pre-procedure preparation in Prep and Recovery and are generally monitored in Recovery before being returned to their room. Inpatients' status may be at a higher acuity level than outpatients and may require closer observation. As noted elsewhere in this Guide, inpatient and outpatient pathways shall be separate to the greatest extent possible. For both reasons, rooms or cubicles in Prep and Recovery which are slated for inpatients pre- and post-procedure should be identified and allocated in close proximity to nurse positions.

Prep and Recovery includes support spaces within its area. These include Medication and Nourishment spaces, Clean and Soiled Utility Rooms, and Equipment Storage space. Without exceeding their programmed area, all of these may be decentralized to reduce staff travel distance.

To increase space and staff efficiency, Prep and Recovery areas can be considered on a per facility basis for consolidation with Prep and Recovery areas required by other similar and adjacent services.

FA4: Support Area**Scope Processing**

Processing dirty scopes for reuse is a multi-step process which requires the accommodation of robust protocols to prevent cross infection. The plan should include a clear path for dirty to clean scopes that reduces the risk of cross infection to be as low as possible. The three-step path includes 1. Intake of dirty scopes/ decontamination, 2. Sterilization in the Reprocessing Room, and 3. Packaging and storage of clean scopes awaiting return to procedure rooms for reuse.

Scopes are wiped down in the Procedure Room. The scope is then placed in a closed container for transport to a Decontamination Room. The Decontamination space shall be equipped with a soaking sink, a rinse sink, a hand washing sink, and work counter space. Decontamination includes washing/brush-down under water; leak testing, then passing scopes through to the Reprocessing Room, via a pass-through or door or combination door with pass-through. Use of a pass-through built into a door will permit maximum flexibility and efficiency to align staff work flow with scope cleaning volumes. The number of procedure rooms requiring scope decontamination and processing will be one determinant for selecting the transport method.

Physical barriers are provided between each area to prevent droplet contamination on the clean side. The Reprocessing Room, includes high level automatic disinfectant processors, the number to be determined on a per facility basis. After reprocessing, the scopes are packaged and passed to a Clean Scope Storage Room.

Transport of scopes from Procedure room to the Decontamination Room can be via a pass-through directly into decontamination (efficient for services with only one or two procedure rooms) or through a door on a cart through the staff/service corridor.

Other support functions include a Sterile Storage Room, to store items which require a high level of protection from contamination, a Medication Area, located in proximity to the nurse station, Clean and Soiled Utility Rooms, Equipment Storage, and Housekeeping Aides Closet.

In addition to the eyewash station in the Scope Processing Room, eyewash stations should be strategically located along the staff/service corridor near all scope cleaning functions.

In large facilities Clean and Soiled Utility Rooms may be decentralized to maximize efficient operation of the service, without exceeding the total program area for those rooms.

FA 5: Staff and Administrative Area

Enclosed office spaces and technician cubicles shall be provided per number and square feet authorized for the service. Key offices include those for the Chief of Digestive Diseases, Physician Offices as authorized, and offices as authorized for the Nurse Manager, Nurse Practitioner(s) and Physician Assistant(s).

In planning for future flexibility of spaces, it is beneficial to plan for a modular (i.e. same size/same proportion) approach for offices to allow the spaces to be reallocated without significant reconfiguration. In addition, consider grouping clinician/staff offices and cubicles into team work areas to promote multidisciplinary interaction which leads to improved quality of care and efficiency of care. Access to and control of natural light should be considered in designing these spaces for staff satisfaction and stress reduction.

Administrative areas include a Conference/Classroom which should be accessible to physicians and nursing staff and located with easy access from the procedure area and team work area. Consider co-locating the Conference/Classroom with the same room from an adjacent similar program. The rooms may be joined with an acoustic retractable wall between them allowing for larger group meetings.

The Staff Lounge and Staff Locker Room are important as respite areas which reduce stress and enable staff to maintain a high level of quality service when clinics are active. The Staff Lounge shall be conveniently located to staff work areas but separate from patient areas. Provision of a separate locker room from the staff lounge is desirable for staff privacy and noise reduction. Staff toilets should be located with immediate adjacency to the staff lounge but should not open into it. These staff support functions should be considered for sharing with other adjacent services as appropriate.

FA 6: Education Area

Spaces for Education are required when a residency program is authorized. When authorized, they may include an Office for the Residency Program Director, cubicles for Residents, Interns, and Fellows, and a Conference/Classroom.

OTHER FUNCTIONAL CONSIDERATIONS

General Considerations

The planning approach should locate high volume short duration services closer to patient waiting areas. This will decrease patient travel time and distance and reduce staff travel time and distances permitting more staff time with patients. Procedures with low volume or longer duration times may be further inside patient areas.

The physical design of all areas must meet patient privacy and patient rights requirements as well as employee safety and ergonomics standards as adopted by VA.

All spaces shall be designed to reduce risk of infection. The hospital's Infection Control Risk Assessment (ICRA) shall establish and review infection control measures.

Physical Security

Security is a key objective when patients are undergoing procedures and when they are preparing or recovering from them. During procedures patients may feel vulnerable. Attention to traffic unrelated to the procedure, and the intrusion of noise unrelated to the patient's care, are issues which planning and design choices can help control.

As previously stated, exam and procedure rooms should be organized to provide entry from a controlled access corridor, limited to patients and related clinical staff. Patient positions in exam rooms should generally be located so that people entering the room approach from the patient's side with the patient's head in view.

Patients who require changing out of street clothes in an exam room, should be provided with control of access, privacy, such as a lockable door, and cubicle curtains, shades or screens.

Flexibility

The design of healthcare facilities must respond to changes in technology, changing workloads, and operational efficiency objectives. To facilitate easy and more cost effective future adaptability, designers should consider the use of spaces of standard size and proportions sized to accommodate a range of related functions. Use of a standard planning module (grid) throughout a clinical procedures area is encouraged. Spaces with special requirements, special equipment, or unusual sizes should be grouped where possible and designed to accommodate change with minimal disruption to the remainder of the suite.

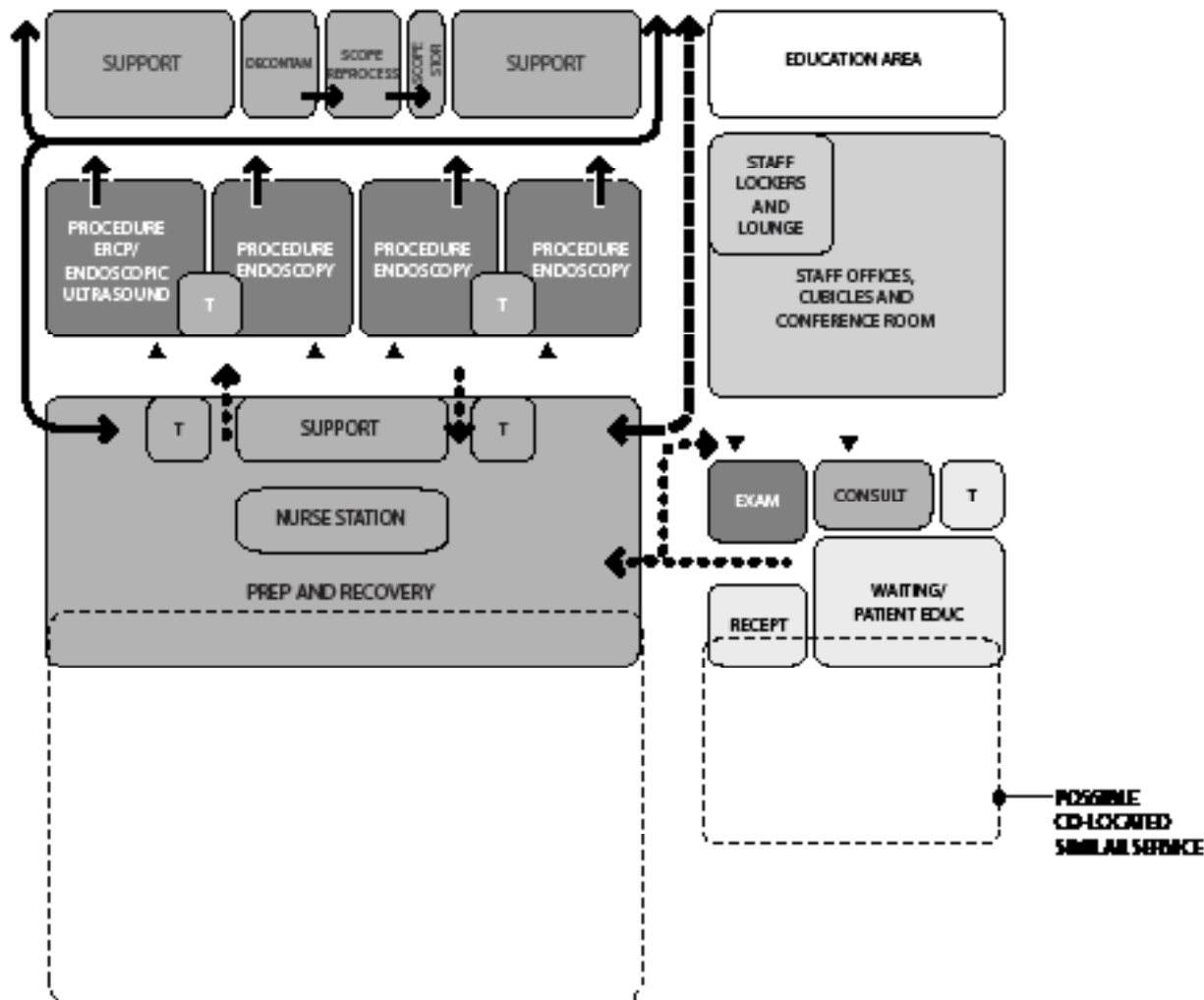
Efficiency

VA is committed to efficient use of resources including energy, materials, equipment, and staff. Refer to Sustainable Design and Energy Reduction Manual on VA Technical Information Library (TIL).

Accessibility

Accessibility is accommodated by the application of PG 18-13, VA Barrier Free Design Guide; Architectural Barriers Act Accessibility Standards (ABAAS), Appendices C and D to 36 CFR Part 1191 (adopted by GSA and supersedes Uniform Federal Accessibility Standards, UFAS); and ADA Standards for Accessible Design (28 CFR Part 36) to space and fixed equipment layouts.

FUNCTIONAL DIAGRAM



Digestive Diseases - Endoscopy Service

LEGEND

- EXAM TESTING PROCEDURE
- PREP RECOVERY SUPPORT
- STAFF AND ADMINISTRATIVE AREA
- RECEPTION AREA
- EDUCATION AREA
- STAFF SERVICE
- OUTPATIENT
- INPATIENT
- PATIENT ENTRY

RELATIONSHIP MATRIX

SERVICE	RELATIONSHIP	REASONS
ICU	3	C, G
MS&N Patient Care Units	3	C, G
Patient Prep and Recovery	N	
Emergency Department	3	C, G
Main Entrance	3	H
Cardiovascular Labs	1	A
Endoscopy	N	
Ambulatory Surgery/ Minor Procedure	1	A
Radiology	1	C, G, I
Diagnostic Testing	1	C, I
Pulmonary Clinic / Testing	N	
Cardiology Clinic / Testing	N	
Digestive Disease Clinic/Testing	N	
Neurology Clinic/Testing	N	
Ventilator Storage	N	
Respiratory Therapy	N	
Pharmacy	5	B
Laboratory	4	H
Social Work / Case Management	4	H
PT/OT	N	
Food Service / Kitchen	5	B
SERVICES		
RELATIONSHIP	REASON	
Sterile Processing Department (SPD)	5	B, I
Staff On-Call Rooms	3	C
Linen Storage	5	B
Waste Management	5, X	B, E, F
Loading Dock	5, X	B, D

LEGEND

Relationship:

- 1. Adjacent
- 2. Close / Same Floor
- 3. Close / Different Floor Acceptable
- 4. Limited Traffic
- 5. Connection Needed
- N. Not Applicable
- X. Separation Desirable

Reasons:

- A. Common use of resources
- B. Accessibility of supplies
- C. Urgency of contact
- D. Noise or vibration
- E. Presence of odors or fumes
- F. Contamination hazard
- G. Sequence of work
- H. Patient convenience
- I. Frequent contact
- J. Need for security
- K. Closeness inappropriate
- L. Interference

SECTION 4 - DESIGN STANDARDS

INTRODUCTION

This section covers technical considerations for planning and designing the Digestive Diseases - Endoscopy Service. The discussion includes detailed technical considerations for architectural, mechanical systems and other related components. To support this discussion, selected rooms are detailed in the form of Guide Plates. Each Guide Plate includes a floor plan, reflected ceiling plan, room data sheet, and an equipment list which provides a comprehensive overview of space planning and utility requirements for the key rooms in this service.

Guide Plates for the following key rooms in this section are as follows:

Procedure Room, Endoscopy (TREE1)

Procedure Room, ERCP / Endoscopic Ultrasound (TREE2)

Recovery Room, Patient Prep (RRSS1)

Reprocessing Room, Scope (USCL3)

Note that room dimensions on the floor plans closely approximate, but may not always reflect the exact programmed room area stated in the Space Planning Criteria, Chapter 287 Digestive Diseases - Endoscopy Service.

TECHNICAL CONSIDERATIONS

Architectural

Interior Design

Follow guidance in PG 18-10, Ambulatory Care/Outpatient Clinic / Interior Design Manual for New Construction and Renovations of Hospitals and Clinics, and PG 18-14, Room Finishes, Door and Hardware Schedule. Where a specific guide plate is not provided for a space or function in this Design Guide, refer to PG 18-14 and the general design information below. Coordinate interior / material finish selections with Interior Design and Way-finding concept developed on a per project basis.

The goal of the design is to provide an interior environment that fosters healing of both the patient's mind and body, and respects the public funding aspect of VA projects. Design concepts should be comprised of a few simple choices, appear clear to users, and provide a welcoming, calm setting. Materials that have natural origins or clear links to nature and use subtle patterns and colors rather than strong hues will support this goal. Minimal means – few rather than many colors, for example, should be used to achieve these goals.

Key functional and design considerations of finishes and materials include:

1. Durability and cleanliness
2. A timeless quality for materials and colors
3. Creation of a distinctive, clear lead for the planning and selecting of furnishings and art

Elements which create non-functional horizontal surfaces, like decorative moldings which become dirt catchers, or wall coverings that cannot be washed down, should be avoided.

Way-finding

Patients, visitors and staff need to know where they are, where their destination is, how to get there and how to return to their point of origin. In addition to signage, strategies for way-finding should be part of early design concepts and be integral with architectural planning and finish choices. In this way, way-finding can become a natural, intuitive part of the overall design. Refer to Interior Design Manual for New Construction and Renovations of Hospitals and Clinics and VA Signage Design Guide.

Examples of design strategies to achieve way-finding goals include:

- Utilize specific color, pattern, or artwork cues for different components in a unit or service. Based on choice of color palette, public areas can be clearly differentiated from procedure areas and further differentiated from service areas. Use of artwork can signal a department entrance
- Treat corridor ends and junctures as way-finding opportunities. Where possible, corridor ends can be sources of daylight or special graphic or color panels can be used to cue destination information from a distance.

Partitions

Partitions should generally be gypsum wallboard (GWB) on appropriately sized metal studs to accommodate different slab to slab dimensions, recessed items, and utility runs. Provide sound attenuation in accordance with PG 18-3, VA Design and Construction Procedures, Topic 11: Noise Transmission Control. Provide wall protection in accordance with the Interior Design Manual for New Construction and Renovations of Hospitals and Clinics.

Consider incorporating corner guards in corridors and other areas where the potential for wall damage from wheeled patient and cart traffic is anticipated. To reduce an institutional feeling in patient areas, corner guards should be set flush to adjacent wall surfaces, as opposed to surface mounted, and selected in a color that matches adjacent wall color. In service areas, stainless steel corner guards or guard plates can be used.

Floors

Floor finish for most spaces, including exam rooms, corridors and supply and storage spaces, should be a resilient tile with a 6 inch (150 mm) high rubber base. Floors in all endoscopic procedure rooms shall be welded seam resilient flooring with integral coved base manufactured specifically for invasive healthcare settings. For all clean and soiled utility rooms, and decontamination, probe cleaning or clean storage rooms, floor finish should be welded seam resilient flooring (WSF) with integral 6 inch integral coved base. Floors in offices, conference rooms, and waiting areas should be carpet with a 4 inch (100 mm) high rubber base. Floors in toilet rooms should be porcelain tile with a porcelain tile base.

Ceilings

In most spaces, including toilet rooms, lay-in acoustic ceiling tile should be used. Where required for sanitation or moisture resistance, such as in all endoscopic procedure rooms, clean and soiled utility rooms, scope cleaning, and clean scope storage rooms, acoustical ceiling tile shall have a washable sprayed plastic finish, designated "SP" in PG 18-14.

Interior Doors

Doors should be 1-3/4 inches (44 mm) thick, solid core, flush wood doors or hollow metal doors in hollow metal frames. Hollow metal doors should be used where high impact is a concern and where fire rated doors are required. Door widths of 48 inches (1219.2 mm) are recommended for all wheeled traffic and for bariatric wheelchair access to all patient spaces.

Since a preponderance of wheel chairs and wheeled patient transport should be expected in VA facilities, consider use of doors fully clad in solid vinyl guard sheets. These will maximize protection, add durability, ease maintenance, and lessen an institutional feeling. In non-patient service areas where hollow metal doors are to have a paint finish, solid vinyl kick or mop plates should be added to both sides of doors. Doors in the Decontamination, Scope Processing, and Clean Scope Storage Rooms should be fully clad in solid vinyl guard sheets to allow for daily cleaning with chemical disinfectants.

Millwork

Key locations such as nurse stations and departmental reception points, will be well served with the use of custom millwork to respond to individual facility designs and configurations. Millwork should be used as an architectural encasement for standard modular components, such as files and storage cabinets which are listed in the Equipment List for each relevant space. Millwork would provide both the transaction surface at stand up height as well as the work counter at normal desk height for a receptionist or nursing staff.

Transaction counters should be made of solid surface materials which resist chipping and staining. Work surfaces at desk height may be constructed of solid surface materials or plastic laminate with flush let-in vinyl edges. Consider including task lighting built under the transaction counter. Coordinate locations of computers, printers, keyboards and power and data ports as required by facility needs.

Hardware

Accessible type should be used throughout. Refer to VA PG 18-14, Room Finishes, Door and Hardware Schedule and PG 18-4, National CAD Standards and Details Detail 08 00 00-1.dwg for additional information. Lock mechanisms which can be disengaged by staff from the corridor side should be used for all spaces where patients may disrobe, including toilet rooms and exam and procedure rooms.

Security

Partitions, doors, and hardware for Procedure Suites, and other sensitive spaces have special security requirements. Refer to PG 18-3, VA Design and Construction Procedures, Topic 14: Security and latest VA directives related to safety and security for Women Veterans.

Structural

Structural design of VA facilities shall comply with the latest editions of the following:

- Reinforced concrete design - Building Code Requirements for Reinforced Concrete (ACI Standard 318-02) and Commentary (ACI-318R-02), American Concrete Institute.
- Structural steel design - Manual of Steel Construction, Load and Resistance Factor Design, Specifications for Structural Steel Buildings, American Institute of Steel Construction, Second Edition.
- International Building Code (IBC), International Conference of Building Officials.
- VA Seismic Design Requirements (H-18-8)

In compliance with Executive Order (EO) 12699, and EO 12941, all new and existing buildings constructed or leased by the Federal Government must be seismically safe.

Endoscopy and ERCP Rooms include ceiling mounted booms which require structural framing above the ceiling to support them.

Equipment

Equipment Lists are provided for the Guide Plates in this section. Additional general information and guidance is available on the VA Technical Information Library (TIL). Refer to Equipment Guide List (PG-18-5) for list of equipment, furnishings and utility requirements for each space in a functional area. Refer to Equipment Reference Manual (PG-18-6) for graphic representations of each piece of equipment to be purchased and installed by the construction contractor. Refer to equipment manufacturers' data for information specific to a particular equipment item.

PLEASE NOTE: The descriptions found in the equipment list do not match those in MIL-STD 1691, in their entirety. The JSN has been used to identify the piece of equipment however the equipment, selected for each particular project, needs to match the description found in this document in lieu of the description in MIL-STD 1691.

Casework

For planning and utilization concerns, casework systems with modular components will provide flexibility and durability. Casework systems should incorporate components dimensioned for ease of multiple re-use installation applications. Casework systems should be planned to avoid corner installations and filler panels.

Counters for all clinical and clinical support areas shall be made of either solid impervious resin materials per PG 18-14, which offer long-term durability, and resist chipping and staining from medical agents expected to be used in clinical environments, or, for areas where strong chemicals are used, such as Decontamination and Scope Processing, seamless stainless steel counters with integral backsplash. Plastic laminate veneer materials may be used in non-clinical staff and administrative areas.

Information Management Systems

Reference VA Design Guide Office of Information and Technology (OI&T) for Information Management Systems. Coordinate with local information management systems in place.

In general, ports for data access shall be distributed to all occupied spaces. Specific locations for data access will be per Guide Plates in this document and/or as required by specific project needs.

Heating, Ventilation and Air Conditioning

General

Air conditioning systems will be provided to heat, cool and ventilate the Digestive Diseases - Endoscopy Service as required to satisfy VA design criteria. Follow criteria in VA Technical Information Library (TIL) HVAC Design Manual (PG-18-10) listed on VA web site under Office of Construction & Facilities Management (CFM). Also refer to (PG-18-1) Master Construction Specifications and (PG-18-4) Standard Details and CAD Standards for items that may apply within the Digestive Diseases - Endoscopy Service. See Sustainable Design and Energy Reduction Manual (April, 2010) for additional information and requirements.

The air conditioning system serving the Digestive Diseases - Endoscopy Service shall be designed to operate in occupied/unoccupied modes to suit applicable schedules.

Room Data Sheet Criteria

The number of occupants, air conditioning temperatures, noise criteria, and room pressurization indicated on the Room Data Sheets in the Guide Plates for select rooms of this section are for the purpose of establishing general planning parameters. The design architect and engineer (A/E) shall verify the actual occupant load and air conditioning load for each specific room on each individual project. Verify equipment loads for actual equipment to be furnished within that room for the specific project. While specific outside air quantities are noted on the Room Data Sheet for each Guide Plate room, the percent of outside air shall be based on the total supply air quantities determined for each specific project.

Air Quality and Distribution

In general, clean areas shall be maintained at positive air balance and soiled areas shall be maintained at negative air balance with respect to the adjoining areas. Specific pressure requirements are noted on the Room Data Sheet for each Guide Plate room.

Corridors shall not be used to supply or exhaust/return air from adjacent rooms, except that they may be used to ventilate Housekeeping Aides Closets (HAC's) and small electrical or telephone closets opening directly onto them. Ex-filtration and infiltration from positive or negative pressure rooms adjacent to a corridor should be considered in balancing air flow.

The transfer air should not be more than 100 CFM (2.8m³/min) per undercut door within the Digestive Diseases – Endoscopy Service.

Care should be taken to minimize the short circuiting of air between supply and return or exhaust openings in rooms, with careful placement of supply registers and return grills inside rooms such as the Endoscopy Procedure Room and the ERCP / Endoscopic Ultrasound Procedure Room.

Efficient filtration is a critical element for procedure rooms in the Digestive Diseases – Endoscopy Service. Positive pressurization and filtration of supply air is required at Endoscopy and ERCP Procedure Rooms. Minimum air changes per hour required are noted on Room Data Sheets in this section.

Exhaust System

Controlling odor with proper exhaust is critical within the Digestive Diseases - Endoscopy Service. The HVAC design shall provide for exhaust air from spaces to control the transfer of odors and provide proper room pressurization and proper air changes per hour that may be required by the VA HVAC Design Manual or code standards.

Energy Conservation

The need to conserve energy is mandated by the Federal Government by Executive Order and Federal Law. In addition, 19 Federal Agencies, including VA, have signed a Memorandum of Understanding (MOU) outlining specific goals and targets for energy conservation and sustainable design. The following references apply to VA project design, with more detailed information to be found within the HVAC Design Manual for Hospital Projects:

Sustainable Design & Energy Reduction Manual (April 2010)
DOE Final Rule, and Energy Policy Act (EPACT 2005)
Energy Conservation Executive Order No. 13423 Dated January 24, 2007

Mycobacterium Tuberculosis (TB)

Centers for Disease Control (CDC) requirements for the design of public areas within buildings which accommodate mycobacterium tuberculosis patients must be addressed by architectural and mechanical disciplines. Check current requirements for transmission of mycobacterium tuberculosis and TB Criteria in the latest CDC documents. Check specific CDC requirements for the need of an isolation recovery room within the Digestive Diseases - Endoscopy Service.

Seismic Requirements

Where required, install HVAC systems with seismic provisions as outlined in the PG-18-10, HVAC Design Manual for Hospital Projects and Master Construction Specifications MCS Section 13 05 41, Seismic Restraint Requirements for Non-Structural Components.

Design Conditions

Year-round Conditions: 70 F to 75 F [21 C to 24 C] and 20% to 60% RH as defined in 2008 ASHRAE Handbook of Applications. The system shall be capable of maintaining temperatures within the range during normal working conditions. The cooling load for these spaces shall be calculated to maintain 75 F [24 C] at 60% RH and the heating load shall be calculated to maintain 70 F [21 C] at 20% RH. The year-round conditions can be used for variable air volume (VAV) or constant volume (CV) systems. Year-round design conditions shall be used for all patient areas except as noted below. See March 2011 HVAC Design Manual for further details.

Endoscopy and ERCP Procedure Rooms

Conditions in the Endoscopy Procedure Room shall be designed to maintain 68 F to 73 F [20 C to 23 C] and 30% to 50% RH. To accommodate the needs of specific procedures that are planned for Endoscopy and ERCP rooms, confirm requirements for these rooms on a per facility basis.

Plumbing

General

Plumbing systems will be provided for the Digestive Diseases – Endoscopy Service as required to satisfy VA design criteria. Follow criteria in VA Technical Information Library (TIL) Plumbing Design Manual (PG-18-10) listed on VA website under Office of Construction & Facilities Management (CFM). Also refer to (PG-18-1) Master Construction Specifications and (PG-18-4) Standard Details and CAD Standards items that may apply within the Digestive Diseases - Endoscopy Service.

Room Data Sheet Criteria

The Room Data Sheets in this section indicate typical quantities of plumbing fixtures and equipment as well as medical gas outlets to establish the general planning parameters. The architect and engineer (A/E) shall verify the exact fixtures and medical gas locations and quantities for individual projects.

Water Systems

Domestic cold and hot water shall be piped to all plumbing fixtures and equipment requiring these utilities. A hot water return system shall be provided to ensure the design temperature is met at the fixture furthest from the source.

Waste Water Systems

Plumbing fixtures and drains shall be drained by gravity through sanitary waste stacks, including required vent stacks. Fixtures located below gravity drain line shall be pumped as required by a duplex ejector system. Any special acidic waste should be drained through corrosion-resistant, flame-retardant piping into either a local or centralized acidic dilution tank.

Medical Gas Systems

Medical gas distribution is noted on guide plates for key selected rooms. The design A/E shall refer to the latest edition (2010) of the Facility Guidelines Institute (FGI) Guidelines for the Design and Construction of Healthcare Facilities for minimum quantities and locations of medical gases. Specific quantities and locations should be determined on a per project basis.

Seismic Requirements

Where required, the plumbing and medical gas systems shall be installed with seismic provisions as outlined in the PG-18-10, Plumbing Design Manual for Hospital Projects and Master Construction Specifications MCS Section 13 05 41, Seismic Restraint Requirements for Non-Structural Components.

Electrical

General

Electrical systems will be provided for the Digestive Diseases - Endoscopy Service as required to satisfy VA design criteria. Follow criteria in VA Technical Information Library (TIL) Electrical Design Manual (PG-18-10) located on VA website under Office of Construction & Facilities Management (CFM). Also refer to (PG-18-1) Master Construction Specifications and (PG-18-4) Standard Details and CAD Standards for items that may apply within the Digestive Diseases - Endoscopy Service.

Lighting

Lighting is typically provided utilizing recessed fluorescent luminaries with acrylic prismatic lenses. Recessed fluorescent fixtures with parabolic louvers may be used at the nurse station, reception, and offices to control glare on monitor screens. Consider providing under-cabinet or under-shelf fluorescent lights above the counter work surface for task lighting. The fixtures typically used are F32T8 lamps, as the minimum acceptable efficiency lamp in compliance with the Energy Policy Act (EPACT 2005). Lamps shall not be high output, and shall have a minimum color rendering index (CRI) of 70 and a color temperature of 3500 degrees Kelvin (K).

Except for invasive procedure rooms, surface mounted fixtures may be used where existing conditions or clearances above a suspended ceiling cannot accommodate recessed fixtures.

The lighting systems shall comply with Federal energy policy, VA Energy Conservation Policy, and Sustainable Design and Energy Reduction Manual.

Lighting intensities shall conform to PG-18-10, Electrical Design Manual, Appendix, Illumination Levels, the IES Lighting Handbook and IES publication RP-29-06, Lighting for Hospitals and Healthcare Facilities. Reducing patient illumination levels below established levels is not recommended. Lighting levels are noted in foot candles on Room Data Sheets for each Guide Plate room.

Lighting energy consumption can be reduced in several ways including: reducing lighting fixture count, using highly efficient fixtures, managing when lighting is used and the amount of illumination delivered, using task lighting, and selecting fixtures, lamps, and controls, such as occupancy sensors, that best meet the needs of the staff and patient occupants.

Lighting in the Digestive Diseases - Endoscopy Service shall be controlled by wall mounted switches and/or dimmers located at the entrance to each room. Ceiling mounted dual technology (Ultrasonic/Infrared) occupancy sensors shall be used in all rooms with intermittent use, including storage rooms, utility rooms Housekeeping Aides Closets, ERCP / Endoscopic Ultrasound Room, and Scope Reprocessing Room.

Lighting load densities should be verified for the actual design, as they may vary depending on the room configuration, fixture types, lamps, and ballasts used.

Supply power to selected light fixtures in the Endoscopy and ERCP Procedure Rooms from the critical branch of the emergency power system to allow for continued operation during a power outage. For facilities that do not have emergency generators, provide selected light fixtures with battery ballast.

Power

General

General purpose duplex receptacles are located per regulatory requirements on each wall of a room or a space. Dedicated duplex or special receptacles are provided for select pieces of equipment; some are energized from the emergency power system to allow for continuous operation during a power outage. Emergency power outlets are shown in Guide Plate floor plans for select rooms in this section and are addressed in PG 18-10, Electrical Design Manual.

Provide dedicated duplex receptacles energized from the emergency power system in areas where crash carts are stored.

Special Purpose

Dedicated duplex or special receptacles are provided for select pieces of equipment as follows:

Procedure Room, Endoscopy and Procedure Room, ERCP / Endoscopic Ultrasound

Dedicated power outlets mounted at service boom with quantities as indicated per room design.

Dedicated power outlets for emergency circuiting of power receptacles and equipment.

Coordinate National Electrical Manufacturers Association (NEMA) size and configuration with system equipment suppliers.

Workstations with personal computers (PC's) are typically provided with quadruplex receptacles for the PC, monitor, and printer. Junction boxes are to be provided for equipment requiring a hardwired connection.

Telephone

Telephone outlets are typically provided at each workstation or in each room. Refer to PG-18-10 for additional requirements.

Information Technology (IT)

Computer Data (Telecom) outlets are typically provided at each workstation or in each room. Specific locations and equipment for key rooms are noted on Guide Plates in this section.

Nurse Call and Code One System

The nurse call and code one systems are PC based, and consist of patient call stations, staff stations, duty stations, dome lights and head-end equipment located in signal closet. The actual system configuration is dependent on the overall layout of the department and should be coordinated with the functional design.

Clock system

Provide battery operated clocks synchronized wirelessly. Both the overall system and the specific locations will be determined on a per facility basis.

Television

Television outlets are provided at selected areas as determined by function or local facilities policy.

Public Address

Provide a system in accordance with Master Construction Specifications (MCS) Section 27 51 16, Public Address (PA) and Mass Notification Systems. The public address system is typically part of the telephone system. Speakers are generally located in corridors and public spaces. The actual system configuration will depend on the overall design layout and functional requirements. The Digestive Diseases - Endoscopy Service will not have an independent PA system. Determine whether Digestive Diseases – Endoscopy Service will be included as part of the hospital-wide PA system or have an independent system.

Fire and Life Safety Systems

Fire Protection/Sprinkler Systems

Fire Protection/Sprinkler Systems shall be designed as required to meet the needs of the Digestive Diseases - Endoscopy Service and individual rooms. Follow criteria in VA Technical Information Library (TIL) non-specific building systems manuals for Fire Protection design manual (PG-18-10) listed on VA website under Office of Construction & Facilities Management (CFM).

See reflected ceiling plans (RCP) in this section for sprinkler head locations in key rooms.

Fire Alarm System

Fire Alarm Systems shall be designed as required to meet the needs of the Digestive Diseases - Endoscopy Service and individual rooms. Follow criteria in VA Technical Information Library (TIL) non-specific building systems manuals for Fire Protection (Fire Alarm) design manual (PG-18-10) listed on VA website under Office of Construction & Facilities Management (CFM).

Waste Management

Space requirements for waste holding areas will vary with the selection of waste collection and recycling methods and systems, and need to be analyzed to determine the method to be considered for new facilities or coordinated with existing facilities. While space needs are determined by VA Space Planning Criteria on a departmental basis, space provisions for waste collection need to be distributed and dedicated for a variety of uses.

Medical Waste

Medical waste is generated in most patient care spaces as well as instrument clean up areas where it is bagged, collected and transported to the soiled utility rooms. There it is held in separate containers pending transport to the medical waste handling facility or disposal by contract.

General Waste

General waste is generated in all spaces and is held in containers for collection and/or sorting.

Recyclable Waste

Methods for sorting, collecting, transporting and disposing of recyclable products must be specifically analyzed for each facility and location. The optional use of disposable and reusable products is an important consideration in recycling and waste disposal alternatives.

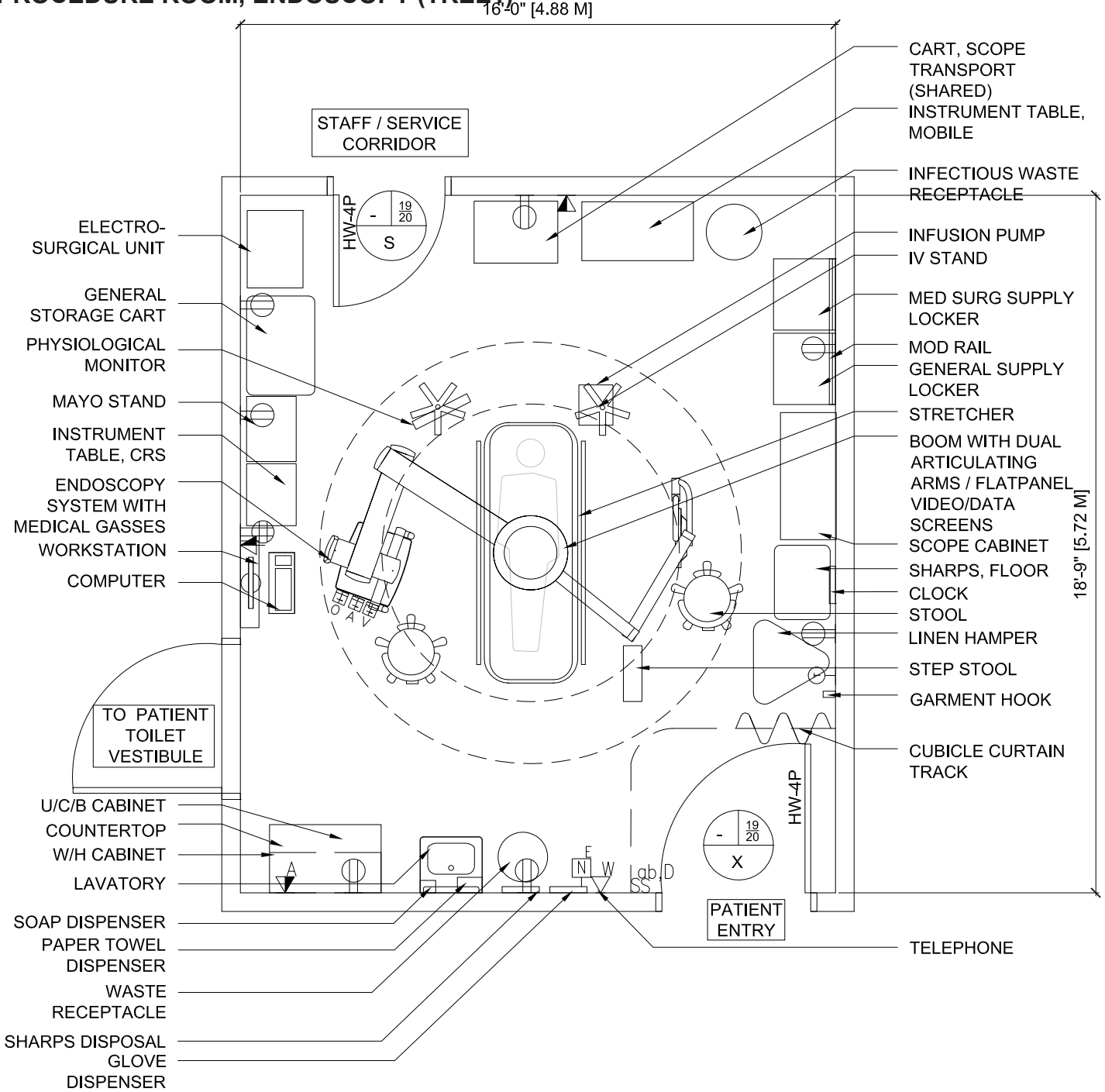
Soiled Linen

Soiled reusable linens may be generated in exam rooms, procedure spaces, and patient and staff gowning areas. Soiled linens are collected in carts or hampers (depending on volume) and are held in soiled linen rooms or in linen carts in Soiled Utility Rooms pending transport to the laundry facility. Disposable linens are included with recyclable waste or medical waste as appropriate.

Reusable Medical Equipment (RME)

Reusable utensils and instruments which are used in patient care areas are handled in different ways within the Digestive Diseases- Endoscopy Service. For both Endoscopy and ERCP rooms, endoscopes are cleaned and reprocessed for reuse on the unit. This is fully described in Section 3 Functional Areas and the Reprocessing Room, Scope is detailed in a Guide Plate in this section. For all other areas reusable utensils and instruments are pre-cleaned in a Soiled Utility Room. Utensils and instruments which require sterilization prior to reuse are packaged for transport from their pre-cleaning areas to the Sterile Processing Department. Specific protocols for utensil and instrument reprocessing shall be confirmed with each individual facility.

PROCEDURE ROOM, ENDOSCOPY (TREE1)



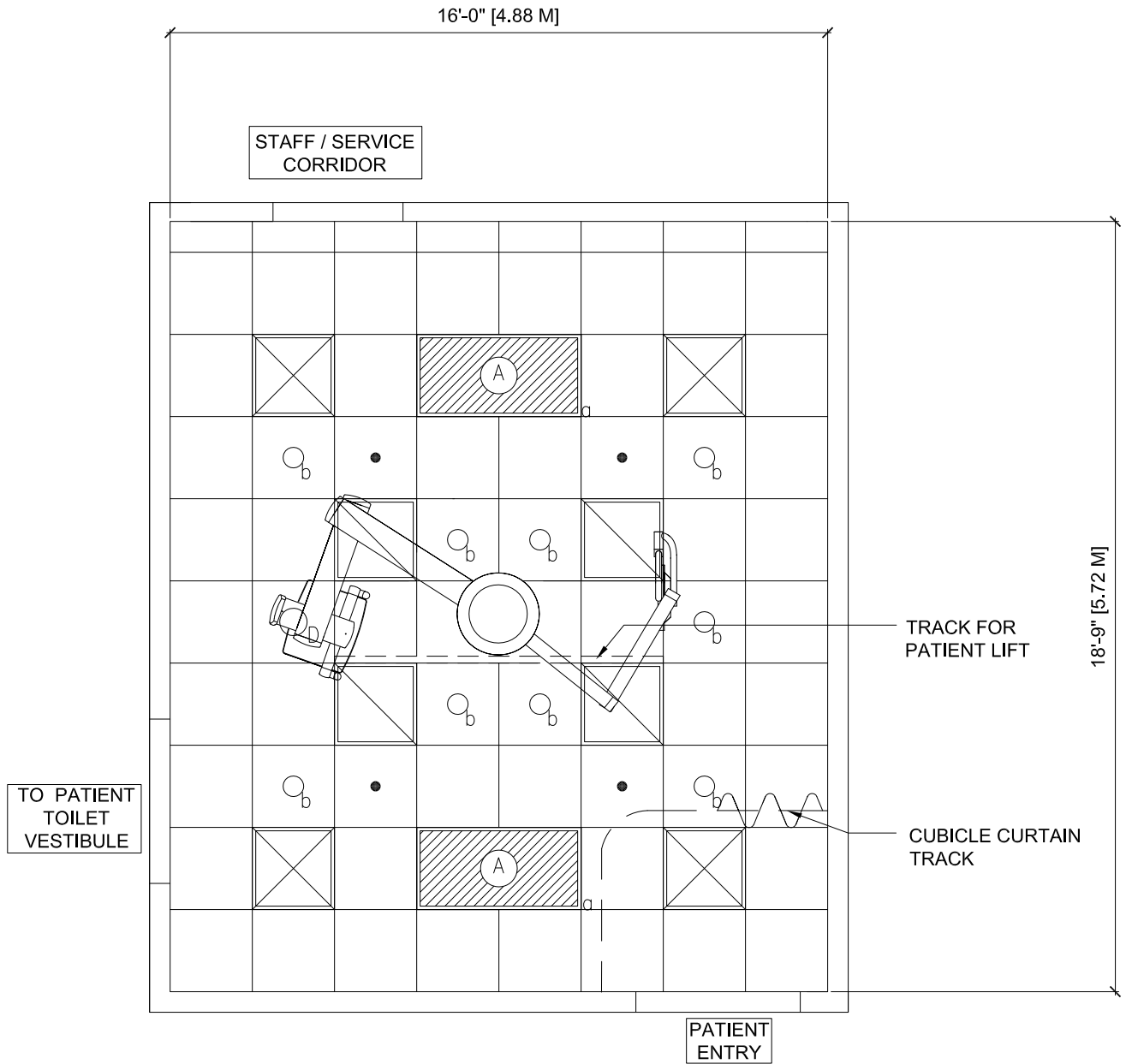
Procedure Room, Endoscopy (TREE1)

SCALE 1/4" = 1'-0"



Digestive Diseases - Endoscopy Service
Floor/Equipment Plan (300 NSF / 27.9 NSM)

NOTE: Guide plates are graphical representations of selected room types, illustrating the integration of space, components, systems, and equipment. They provide typical configurations and general technical guidance, and are not intended to be project specific. Specific infrastructure design requirements are contained in VA Design Manuals and Space Planning Criteria located in the VA Technical Information Library.



SCALE $\frac{1}{4}" = 1'-0"$

Procedure Room, Endoscopy (TREE1)



Digestive Diseases - Endoscopy Service
Reflected Ceiling Plan (300 NSF / 27.9 NSM)

NOTE: Guide plates are graphical representations of selected room types, illustrating the integration of space, components, systems, and equipment. They provide typical configurations and general technical guidance, and are not intended to be project specific. Specific infrastructure design requirements are contained in VA Design Manuals and Space Planning Criteria located in the VA Technical Information Library.

**Procedure Room, Endocopy (TREE1)
Room Data Sheet**

ARCHITECTURAL

Ceiling:	AT (SP)
Ceiling Height:	9'-0"
Wall Finish:	GWB (SC) *1
Base:	WSF
Floor Finish:	WSF
Door:	1/2 X
Hardware:	4M

Notes:

*1. See Design and Construction Procedures PG-18-3, "Noise Transmission Control"

POWER

General:	As Shown
Special:	As Shown
Emergency:	As Shown
Notes:	

COMMUNICATIONS

Patient Monitor:	Yes
Nurse Call:	Yes
Security/Duress:	
CCTV:	
Telephone:	Yes
Pub. Address:	
Radio:	
Data:	Yes
Panic Call:	Yes
Battery Operated Clock:	Yes
Intercom:	Yes
Staff/Duty Station:	Yes

LIGHTING

General:

1. Two (2) of 2'x4' (600mm x 1200mm) Fluorescent Light Fixture, Acrylic, Prismatic Lens with F32T8 Lamps, 3500°K, CRI=70 (minimum)
2. Provide Ballasts Per Fixture for Desired Switching Configuration
3. Down Lighting - Ten (10) lights, Dimmable
4. Lighting Level: Variable 10-100fc
5. Under Cabinet Light

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	68°F (20°C)
Dry Bulb Temp Heating:	73°F (23°C)
Minimum % Outside Air:	
100% Exhaust Air:	Yes
Noise Criteria:	NC 35
Steam:	
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	15
Room Pressure:	Positive (+)
AC Load Lights:	As Required

AC Load Equipment:	As Required
Number of People:	3
Special Equipment:	

PLUMBING AND MEDICAL GASES

Cold Water:	1/2 inch
Hot Water:	1/2 inch
Domestic Water (HWH):	Yes
Laboratory Air:	
Laboratory Vacuum:	
Sanitary/Vent:	Yes
Medical Air:	1 outlet
Medical Vacuum:	1 outlet
Oxygen:	1 outlet
Nitrogen Oxide:	
Nitrogen:	
Anesthesia Evac:	1 outlet
Sprinkler:	4 heads
Tempered Water:	
Water Control:	Infrared

SPECIAL EQUIPMENT

See equipment list. Gases on boom and ceiling. Endocopy System on boom.

**Procedure Room, Endoscopy (TREE1)
Equipment List**

JSN	NAME	QTY	ACQ/INS	Description
A1017	Telephone, Wall Mounted		VV	Telephone, wall mounted
A1122	Boom, Dual Arm Equipment/Flat-panel	1	CC	Dual arm ceiling mounted articulating boom system specifically designed to support medical equipment and have provisions for medical gases, electric outlets and video signals. The unit shall consist of an equipment carrier with adjustable shelves and a flat panel display arm. The boom assembly shall provide clear unobstructed access to patients.
A5075	Dispenser, Soap, Disposable	1	VV	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5080	Dispenser, Paper Towel, SS, Surface Mounted	1	CC	A surface mounted, satin finish stainless steel, single-fold, paper towel dispenser. Dispenser features: tumbler lock; front hinged at bottom; and refill indicator slot. Minimum capacity 400 single-fold paper towels.
A5108	Waste Disposal Unit, Sharps	1	VV	A container with wall mounting brackets for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5111	Waste Disposal Unit, Sharps, Floor	1	VV	The unit is designed for the disposal of sharps and complies with OSHA guidelines for the handling of sharps. The cart shall be foot operated and accommodate a 12 or 18 gallon sharps container.
A5145	Hook, Garment, Double, SS, Surface Mounted	1	CC	A surface mounted, satin finish stainless steel, double garment hook. Equipped with a concealed mounting bracket that is secured to a concealed wall plate.
A5180	Track, Cubicle, Surface Mounted, With Curtain	1	CC	Surface mounted cubicle track, with curtain. Track constructed of thick extruded aluminum. Equipped with self lubricating carriers, beaded drop chain hooks, and flame resistant curtain. To include removable end caps. Designed to be suspended around patient areas where privacy is needed.

C03F0	Cabinet, U/C/B, 1 Shelf, 2 Half DR, 2 DO, 36x30x22	1	CC	Standing height under counter base cabinet with an adjustable shelf and two half width drawers above solid hinged doors.
CE030	Cabinet, W/H, 2 SH, 2 GDO, Sloping Top, 38x30x13	1	CC	Wall hung cabinet with two adjustable shelves, framed-glass hinged doors, and sloping top.
D0710	Countertop, Epoxy Resin	1	CC	Modified epoxy resin 3/4" to 1-1/4" thick x 30" deep countertop. Width based on project specific need.
E0906	Locker, Supply, General, Wall Mtd, 23"W x 20"D	1	VV	Supply Locker w/ wire shelves, approximately 29"W x 20"D. THIS TYPICAL INCLUDES: 1 Mobile Supply Locker 1 Drawer, 6"H (152mm) 5 Wire Shelves
E0912	Locker, Supply, Med Surg, Wall Mtd, 23"W x 20"D	1	VV	THIS TYPICAL INCLUDES: 1 Locked Storage Container 4 Tray/Shelves 5 Drawers, 3"H (76mm) 2 Drawers, 6"H (152mm) 2 Tray/Shelf Dividers Drawer Organizer Bins Consider the need for an E0921 to transport the locker from place to place.
E1500	Rail, MOD, Wall Mtd	1	VV	Wall mounted rail used for hanging (mounting) supply lockers, shelves drawers on a wall. Length as required.
F0340	Stool, Adjusting w/ Back	2	VV	Self adjusting stool. Consists of a foam padded upholstered seat with attached foot rest for added comfort. Mounted on swivel casters. Designed for doctor's use during examinations.
F0345	Stool, Step, Stacking	1	VV	Use one at a time or connect multiple stools end to end, or side by side to create a larger platform. Rubber feet and rubber tread top for safety
F2017	Waste Receptacle, 24 Gal	1	VV	Rectangular steel waste receptacle with step-on lid and 24 gallon capacity. The receptacle is used to collect and temporarily store small quantities of paper refuse.

F3200	Clock, Battery, 12" Diameter	1	VV	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M0750	Flowmeter, Air, Connect w/50 PSI Supply	1	VV	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Flowmeter to be provided with appropriate adapter fitting and outlet Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	1	VV	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Flowmeter to be provided with appropriate adapter fitting and outlet Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0765	Regulator, Vacuum	1	VV	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required.
M1801	Computer, Microprocessing, w/Flat Panel Monitor	1	VV	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers.
M1802	Work Station, Computer, Retractable, Wall Mounted	1	VV	A wall mounted retractable work station. Work station is used as a computer station in treatment rooms, exam rooms and areas where physical space is limited.
M3070	Hamper, Linen, Mobile, w/Lid	1	VV	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters.
M3160	Cabinet, Storage, Hanging Scopes	1	VV	Scope hanging cabinet. Cabinet has the capacity to hold up to nine scopes. Some cabinets may have a roll top closure and optional storage drawer. Air vents top and bottom.

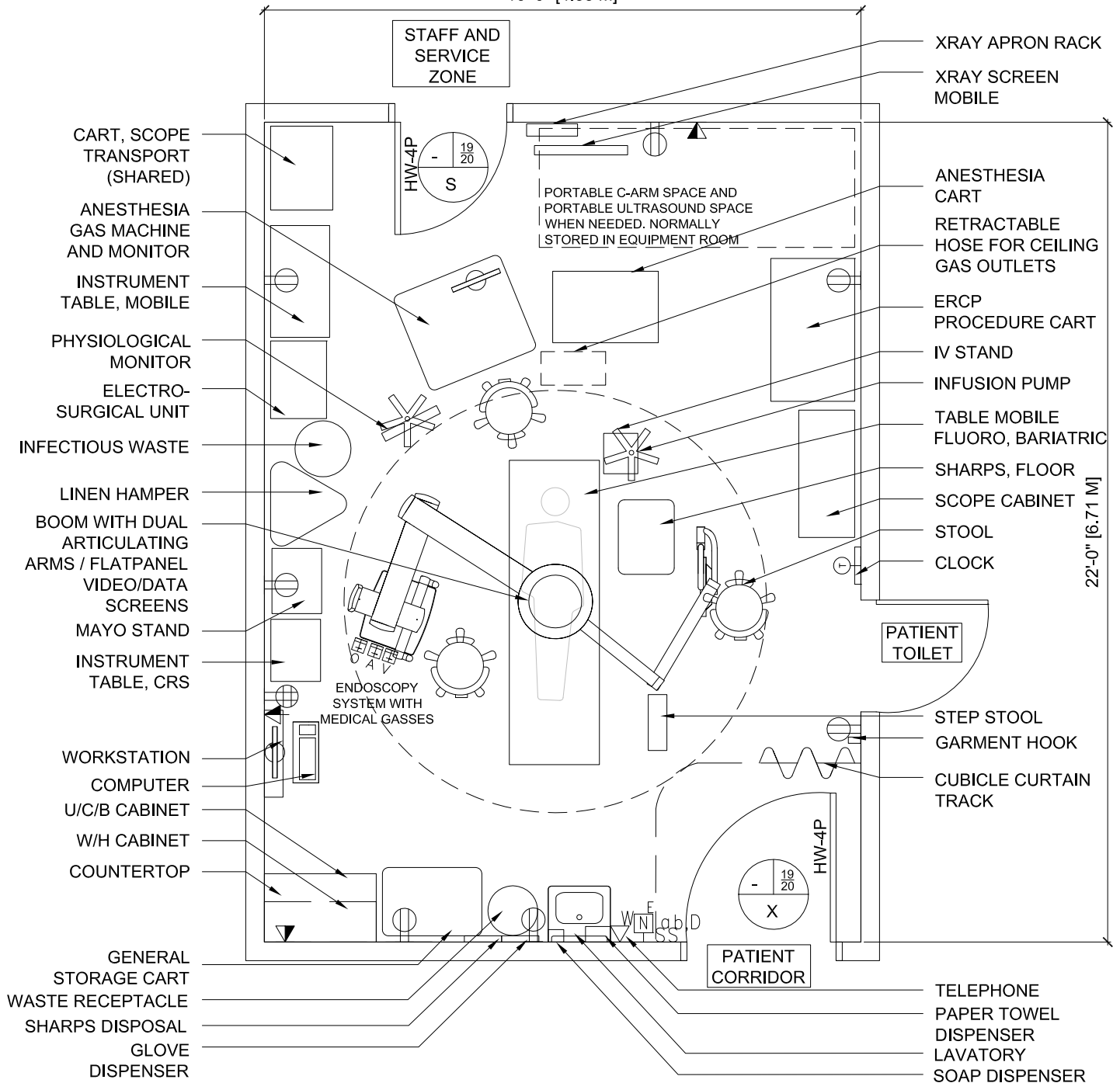
M3161	Cart, Scope Transport	AR	VV	Scope transport with 4 autoclavable trays and lids. Approximate size 27"W x20"D x44"H
M4255	Stand, IV, Adjustable	1	VV	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	1	VV	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4665	Stretcher, Recovery, Surgical	1	VV	Recovery/surgical stretcher. Strong I-beam construction type unit. The height is adjustable with manual backrest and crank operated knee gatch. Stainless or painted steel top and chassis. Features 8" or 10" conductive casters, with lock and brake, folding, tuck-away chrome side-rails and IV stand and a flame retardant antibacterial mattress. Designed for operating room transport or recovery applications.
M8820	Table, Instrument/Dressing, CRS	1	VV	Mobile instrument and dressing table, approximately 34"H x 33"W x 18"D. The cart shall be built of stainless steel and mounted on 2" swivel casters for easy mobility. The unit shall include a table top and a bottom shelf with a continuous guard rail on both surfaces.
M8830	Table, Instrument/Dressing, Mobile	1	VV	Mobile instrument/dressing table, approximately 34" H x 20" W x 16" D Corrosion resistant stainless steel mobile table with sound-deadening shelf and drawer. Unit is mounted on 2" casters. Designed for all purpose use in the hospital or clinic.
P3100	Lavatory, Vitreous China, Slab Type	1	CC	Wall mounted, slab type, vitreous china, lavatory (approximate bowl size 7"x15"x10") with: faucet holes on 4" centers; gooseneck spout; wrist blade handles; and grid strainer.
	Dispenser, Glove, Triple	1	VV	Triple glove box holder constructed of formed stainless steel for horizontal or vertical mounting.

	Cart, General Storage, Mobile with Keyless Lock, 42"H x 32"W x 22"D	1	VV	THIS TYPICAL INCLUDES: 1 Cart Body, Style-A Narrow, w/Raised Edge Top 1 Accessory Rail, Side 2 Drawers, 3" H (76mm) 4 Drawers, 6" H (152mm) Drawer Organizer Bins and Keyless Lock
	Waste Receptacle Step-on, Red 7 Gal	1	VV	7 Gallon steel infectious waste receptacle w/step-on lid
	Electrosurgical Unit, Dual Output w/Cart	1	VV	Dual output electrosurgical unit with mobile cart. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.
	Monitor, Physiological, Bedside, 4 Channel with mobile stand	1	VV	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms. Monitor to be mounted on a mobile stand.
	Endoscopy System Fiberoptic, w/ Video, Info. Mgmt.	1	VV	Boom mounted endoscopy system with video and print capabilities for use with fiberoptic (direct vision) endoscopes. System takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. A typical system shall include a light source, an insufflator, a suction unit, a heat probe unit, an electrosurgical apparatus, a digital camera converter or color video camera, a camera controller, (2) monitors, a video recorder and a color printer. This JSN does not include the endoscope; refer to the endoscopes at JSNs M8500-M8550. Each system can support one or more types of endoscope and should be specifically tailored to its intended use(s). This equipment can be configured to interface with a network endoscopy information management system; refer to JSN M8600. Database physical information and pricing is for a higher cost system containing one of each of the above components.

M8810	Stand, Mayo, Large	1	VV	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has telescopic upright adjusts from 39 inches to 60 inches with automatic locking device, and removable 13"x19" 16"x21" instrument tray. Designed for use in operating and procedure rooms.
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PROCEDURE ROOM, ERCP / ENDOSCOPIC ULTRASOUND (TREE2)

16'-0" [4.88 M]



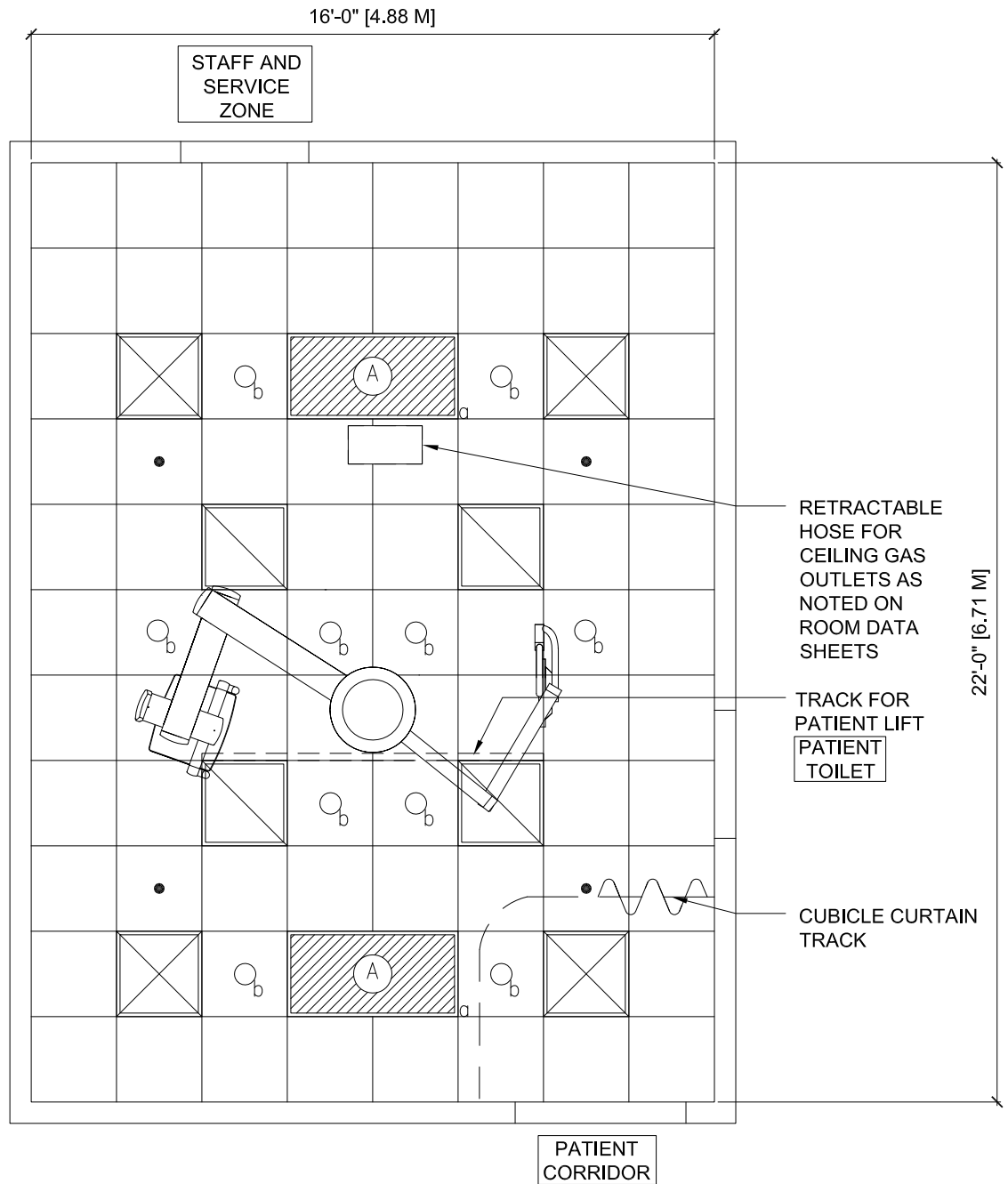
SCALE 1/4" = 1'-0"

ERCP / Endoscopic Ultrasound (TREE2)



Digestive Diseases - Endoscopy Service
Floor/Equipment Plan (360 NSF / 33.4 NSM)

NOTE: Guide plates are graphical representations of selected room types, illustrating the integration of space, components, systems, and equipment. They provide typical configurations and general technical guidance, and are not intended to be project specific. Specific infrastructure design requirements are contained in VA Design Manuals and Space Planning Criteria located in the VA Technical Information Library.



Procedure Room, ERCP / Endoscopic Ultrasound (TREE2)

SCALE 1/4" = 1'-0"



Digestive Diseases - Endoscopy Service
Reflected Ceiling Plan (360 NSF / 33.4 NSM)

NOTE: Guide plates are graphical representations of selected room types, illustrating the integration of space, components, systems, and equipment. They provide typical configurations and general technical guidance, and are not intended to be project specific. Specific infrastructure design requirements are contained in VA Design Manuals and Space Planning Criteria located in the VA Technical Information Library.

**Procedure Room, ERCP / Endoscopic Ultrasound (TREE2)
Room Data Sheet**

ARCHITECTURAL

Ceiling:	AT (SP)
Ceiling Height:	9'-0"
Wall Finish:	GWB (SC) *1
Base:	WSF
Floor Finish:	WSF
Door:	1/2 X
Hardware:	4P

Notes:

*1. See Design and Construction Procedures PG-18-3, "Noise Transmission Control"

POWER

General:	As Shown
Special:	As Shown
Emergency:	As Shown
Notes:	

COMMUNICATIONS

Patient Monitor:	Yes
Nurse Call:	
Security/Duress:	
CCTV:	
Telephone:	Yes
Pub. Address:	
Radio:	
Data:	Yes
Panic Call:	Yes
Battery Operated Clock:	Yes
Intercom:	Yes
Staff/Duty Station:	Yes

LIGHTING

General:

1. Two (2) of 2'x4' (600mm x 1200mm) Fluorescent Light Fixture, Acrylic, Prismatic Lens with F32T8 Lamps, 3500°K, CRI=70 (minimum)
2. Provide Ballasts Per Fixture for Desired Switching Configuration
3. Ten (10) Down Lights, Dimmable
4. Lighting Level: Variable 10-100fc
5. Under Cabinet Light

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	68°F (20°C)
Dry Bulb Temp Heating:	73°F (23°C)
Minimum % Outside Air:	
100% Exhaust Air:	Yes
Noise Criteria:	NC 35
Steam:	
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	15
Room Pressure:	Positive (+)
AC Load Lights:	As Required

AC Load Equipment:	As Required
Number of People:	3
Special Equipment:	

PLUMBING AND MEDICAL GASES

Cold Water:	1/2 inch
Hot Water:	1/2 inch
Domestic Water (HWH):	Yes
Laboratory Air:	
Laboratory Vacuum:	
Sanitary/Vent:	Yes
Medical Air:	2 outlet
Medical Vacuum:	2 outlet
Oxygen:	2 outlet
Nitrogen Oxide:	1 outlet
Nitrogen:	
Anesthesia Evac:	1 outlet
Sprinkler:	4 heads
Tempered Water:	
Water Control:	Infrared

SPECIAL EQUIPMENT

See equipment list. Gases on boom and ceiling. Endoscopy System on boom.

**Procedure Room, ERCP / Endoscopic Ultrasound (TREE2)
Equipment List**

JSN	NAME	QTY	ACQ/INS	Description
A1017	Telephone, Wall Mounted	1	VV	Telephone, wall mounted
A5108	Waste Disposal Unit, Sharps	1	VV	A container with wall mounting brackets for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A1122	Boom, Dual Arm Equipment/Flat-panel	1	CC	Dual arm ceiling mounted articulating boom system specifically designed to support medical equipment and have provisions for medical gases, electric outlets and video signals. The unit shall consist of an equipment carrier with adjustable shelves and a flat panel display arm. The boom assembly shall provide clear unobstructed access to patients.
A5075	Dispenser, Soap, Disposable	1	VV	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5080	Dispenser, Paper Towel, SS, Surface Mounted	1	CC	A surface mounted, satin finish stainless steel, single-fold, paper towel dispenser. Dispenser features: tumbler lock; front hinged at bottom; and refill indicator slot. Minimum capacity 400 single-fold paper towels.
A5111	Waste Disposal Unit, Sharps, Floor	1	VV	The unit is designed for the disposal of sharps and complies with OSHA guidelines for the handling of sharps. The cart shall be foot operated and accommodate a 12 or 18 gallon sharps container.
A5145	Hook, Garment, Double, SS, Surface Mounted	1	CC	A surface mounted, satin finish stainless steel, double garment hook. Equipped with a concealed mounting bracket that is secured to a concealed wall plate.
A5180	Track, Cubicle, Surface Mounted, With Curtain	1	CC	Surface mounted cubicle track, with curtain. Track constructed of thick extruded aluminum. Equipped with self lubricating carriers, beaded drop chain hooks, and flame resistant curtain. To include removable end caps. Designed to be suspended around patient areas where privacy is needed.

C03F0	Cabinet, U/C/B, 1 Shelf, 2 Half DR, 2 DO, 36x30x22	1	CC	Standing height under counter base cabinet with an adjustable shelf and two half width drawers above solid hinged doors.
CE030	Cabinet, W/H, 2 SH, 2 GDO, Sloping Top, 38x30x13	1	CC	Wall hung cabinet with two adjustable shelves, framed-glass hinged doors, and sloping top.
D0710	Countertop, Epoxy Resin	1	CC	Modified epoxy resin 3/4" to 1-1/4" thick x 30" deep countertop. Width based on project specific need.
F0340	Stool, Self Adjusting	3	VV	Self adjusting stool. Consists of a foam padded upholstered seat with attached foot rest for added comfort. Mounted on swivel casters. Designed for doctor's use during examinations.
F0345	Stool, Step, Stacking	1	VV	Use one at a time or connect multiple stools end to end, or side by side to create a larger platform. Rubber feet and rubber tread top for safety
F2017	Waste Receptacle, 24 Gal	1	VV	Rectangular steel waste receptacle with step-on lid and 24 gallon capacity. The receptacle is used to collect and temporarily store small quantities of paper refuse. Can be used in restrooms, patient areas, laboratories, pharmacies, etc.
F3200	Clock, Battery, 12" Diameter	1	VV	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M0630	Gas Machine, Anesthesia (57x37x33)	1	VV	Three gas anesthesia apparatus. Basic unit consists of steel cabinet with casters with one shallow, one medium, and one deep drawer, seven long scale eleven-inch flowmeters, five cylinder yokes, and telescoping absorber post. It includes two-canister model carbon dioxide absorber with inhalation and exhalation check valves, switch valve, switch valve elbow, side-arm Vernitrol, flow calculator, mounting kit, ventilator calculator, ventilator and an oxygen piping inlet. Also features nitrous oxide fail safe valve kit, aspirator kit, gas evacuator with vacuum and a flow meter safety cover. Used to dispense a mixture of gases during surgical procedures.

M0750	Flowmeter, Air, Connect w/50 PSI Supply	1	VV	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Flowmeter to be provided with appropriate adapter fitting and outlet Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0755	Flowmeter, Oxygen, Low Flow	1	VV	Oxygen flowmeter. Consists of a clear crystal flowtube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Flowmeter to be provided with appropriate adapter fitting and outlet Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0765	Regulator, Vacuum	1	VV	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required.
M1801	Computer, Micro-processing, w/Flat Panel Monitor	1	VV	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers.
M1802	Work Station, Computer, Retractable, Wall Mounted	1	VV	A wall mounted retractable work station. Work station is used as a computer station in treatment rooms, exam rooms and areas where physical space is limited.
M3070	Hamper, Linen, Mobile, w/Lid	1	VV	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters.
M3160	Cabinet, Storage, Hanging Scopes	1	VV	Scope hanging cabinet. Cabinet has the capacity to hold up to nine scopes. Some cabinets may have a roll top closure and optional storage drawer.

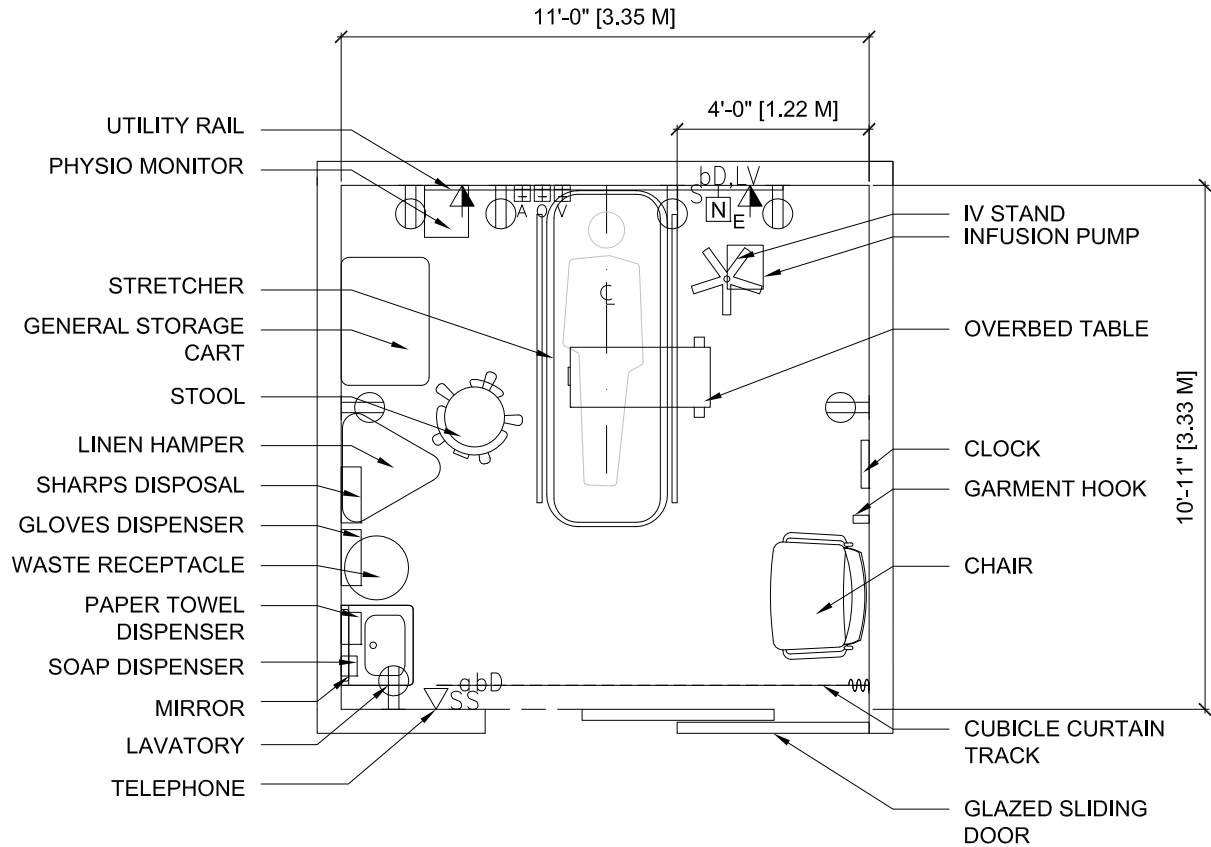
M4255	Stand, IV, Adjustable	1	VV	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	1	VV	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M7900	Monitor, Anesthesia/Respiratory Gas	1	VV	Anesthesia/respiratory gas monitor. Unit uses mass spectrometry, infrared analysis, laser analysis or other technology for quantifying levels of anesthetic agents and normal respiratory gases. The system includes a gas pump with backup, vacuum sensors, system display, detectors, exhaust for sampled gases, diagnostics and an alarm system with apnea detection. This equipment may not be required if its capability is already included in the anesthesia apparatus or in the patient physiological monitoring system.
M8800	Cart, Anesthesia	1	VV	Mobile anesthesia cart. The cart shall be built of stainless steel and mounted on 4" casters for easy mobility. It shall be capable of being equipped with bottle holders, adjustable IV pole, storage drawers, shelves and a top bar/rail.
M8820	Table, Instrument/Dressing, CRS	1	VV	Mobile instrument and dressing table, approximately 34"H x 33"W x 18"D. The cart shall be stainless steel and mounted on 2" swivel casters for easy mobility. The unit shall include a table top and a bottom shelf with a continuous guard rail on both surfaces.
M8830	Table, Instrument/Dressing, Mobile	1	VV	Mobile instrument/dressing table, approximately 34" H x 20" W x 16" D Corrosion resistant stainless steel mobile table with sound-deadening shelf and drawer. Unit is mounted on 2" casters. Designed for all purpose use in the hospital or clinic.

M8907	Endoscopy System, Fiberoptic, w/Video, Info. Mgmt.	1	VV	Boom mounted endoscopy system with video and print capabilities for use with fiberoptic (direct vision) endoscopes. System takes optical images from a single endoscope and directly records them or converts them to digital signals for recording. A typical system shall include a light source, an insufflator, a suction unit, a heat probe unit, an electrosurgical apparatus, a digital camera converter or color video camera, a camera controller, (2) monitors, a video recorder and a color printer. This JSN does not include the endoscope; refer to the endoscopes at JSNs M8500-M8550. Each system can support one or more types of endoscope and should be specifically tailored to its intended use(s). This equipment can be configured to interface with a network endoscopy information management system; refer to JSN M8600. Database physical information and pricing is for a higher cost system containing one of each of the above components.
M8916	Cart, Procedure, ERCP	1	VV	Mobile ERCP cart with tambour doors, slot shelves with adjustable dividers, hanger bar for small packages, fluorescent task light, work surface, drawers and power plug strip.
P3100	Lavatory, Vitreous China, Slab Type	1	CC	Wall mounted, slab type, vitreous china, lavatory (approximate bowl size 7"x15"x10") with: faucet holes on 4" centers; gooseneck spout; wrist blade handles; and grid strainer.
X2100	Scanner, Ultrasound, General Purpose	1	VV	High definition, diagnostic ultrasound system for Radiology, Cardiology, Vascular, ob-gyn, Perinatology, and Surgical imaging applications. The unit employs curved, phased and linear array imaging technology. The system supports colorflow, pulse and continuous wave imaging modalities. On board software measurement packages available for all imaging applications. The system is DICOM 3.0 compatible, for easy linkage to filmless image management systems and review stations. In addition, a full line of probes and conventional recording devices are available.

X3145	Screen, X-Ray Mobile 30x75 (.5MM)	1	VV	Mobile X-ray protective screen/barrier. The X-ray barrier provides optically-clear visibility while shielding medical personnel from scatter radiation. Its large clear Pb lead-plastic or acrylic window offers 0.5 mm lead-equivalent protection to the user's head and upper body. The unit is used for effective radiation protection of department personnel during vascular or other procedures. This unit can fit any application with its mobility. Adjustable screens are also available.
X3150	Rack, X-Ray Apron, Wall Mounted	AR	VV	Apron and gloves rack. This is a wall unit which holds aprons and gloves. The body is heavy gauge steel finish in gray or green baked enamel, glove and apron holding arms are aluminum. The unit's convenient on wall storage will prolong the useful life of your protection aprons by helping prevent damage to internal components.
X4890	X-Ray Unit Mobile C-Arm	1	VV	This system is a high quality radiographic/fluoroscopic mobile digital C-arm for use in orthopedics, general surgery, urology, vascular, neurosurgery, neurovascular and cardiovascular procedures. This units characteristics and components include a high frequency x-ray generator with single or dual focus x-ray tube unit, 9" or 12" multi-field image intensifier, dual 16" monitors, real time digital imaging and last image hold capabilities. The system shall be DICOM 3.0 or latest version, compatible, for easy linkage to filmless image management systems and review stations.
X5441	Table Mobile Fluoro Endo Bariatric	1	VV	600 pound distributed patient weight capacity in all tilts and extensions. Motorized height adjustment, lateral tilt, trendelenburg & reverse trendelenburg tilts, extend-retract head to foot travel. Rectangular shaped radiolucent carbon-fiber composite top, 48" metal free imaging area and wireless and wired hand-held motion control
	Dispenser, Glove, Triple	1	VV	Triple glove box holder constructed of formed stainless steel for horizontal or vertical mounting.
	Cart, General Storage, Mobile with Keyless Lock, 42"H x 32"W x 22"D	1	W	THIS TYPICAL INCLUDES: 1 Cart Body, Style-A Narrow, w/Raised Edge Top 1 Accessory Rail, Side 2 Drawers, 3" H (76mm) 4 Drawers, 6" H (152mm) Drawer Organizer Bins and Keyless Lock

	Waste Receptacle Step-on, Red 7 Gal	1	VV	7 Gallon steel infectious waste receptacle w/step-on lid
	Electrosurgical Unit, Dual Output w/Cart	1	VV	Dual output electrosurgical unit with mobile cart. Solid state power source with foot switch jacks, monopolar and bipolar outputs, and four independent modes of operation. Used in the operating room or surgicenter as an alternative to the scalpel for cutting tissue.
	Monitor, Physiological, Bedside, 4 Channel with mobile stand	1	VV	4 channel bedside physiological monitor. The unit consist of a four-channel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station. The unit monitors patients in most acute care areas, step-down units, procedure rooms and emergency rooms. Monitor to be mounted on a mobile stand.
M8810	Stand, Mayo, Large	1	VV	Adjustable instrument table. Table is corrosion resistant stainless steel construction and is mounted on two casters with two skid rails. It has a telescopic upright and adjusts from 39 inches to 60 inches with automatic locking device, and removable 16"x21" instrument tray.

RECOVERY ROOM, PATIENT PREP (RRSS1)



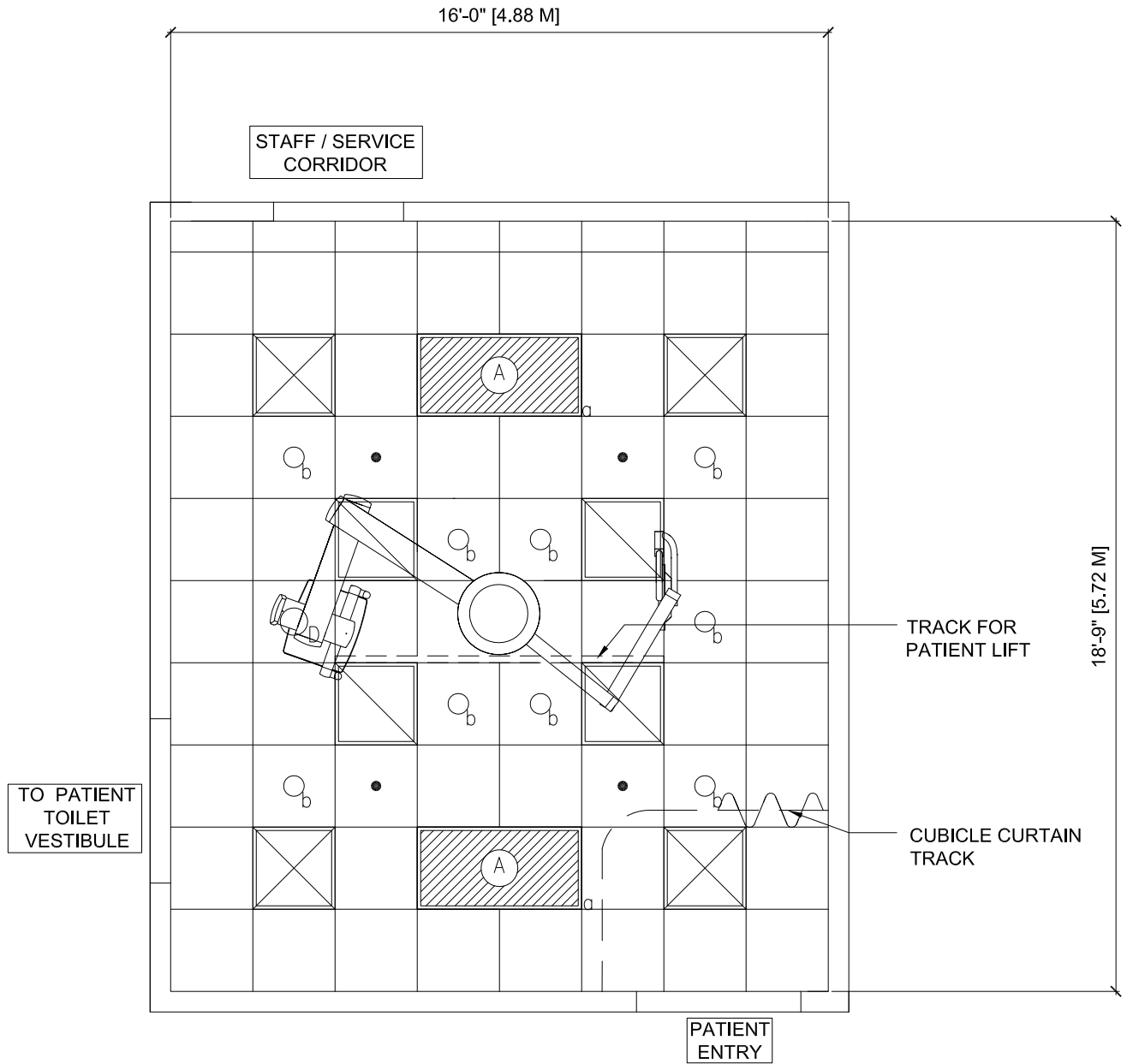
SCALE 1/4" = 1'-0"

Recovery Room, Patient Prep (RRSS1)



Digestive Diseases - Endoscopy Service
Floor/Equipment Plan (120 NSF / 11.1 NSM)

NOTE: Guide plates are graphical representations of selected room types, illustrating the integration of space, components, systems, and equipment. They provide typical configurations and general technical guidance, and are not intended to be project specific. Specific infrastructure design requirements are contained in VA Design Manuals and Space Planning Criteria located in the VA Technical Information Library.



SCALE $\frac{1}{4}'' = 1'-0''$

Procedure Room, Endoscopy (TREE1)

**Recovery Room, Patient Prep (RRSS1)
Room Data Sheet**

ARCHITECTURAL

Ceiling: AT
 Ceiling Height: 9'-0"
 Wall Finish: GWB
 Base: WSF
 Floor Finish: WSF
 Door: 4'-0"x7'-0", 2 panel glazed,
 top hung slider

Notes:

1. Wall protection

POWER

General: As Shown
 Special:
 Emergency:
 Notes:

COMMUNICATIONS

Patient Monitor: Yes
 Nurse Call: Yes
 Security/Duress:
 CCTV:
 Telephone: Yes
 Pub. Address:
 Radio:
 Data: Yes
 Panic Call: Yes
 Battery Operated Clock: Yes
 Intercom:
 Staff/Duty Station: Yes

LIGHTING

General:
 1. Two (2) of 1'x4' (300mm x 1200mm) Multi-Function Ambient/Exam Fluorescent Light Fixture, Acrylic, Prismatic Lens with F32T8 Lamps, 3500°K, CRI=70 (minimum)
 2. One (1) Down Light
 3. Provide Ballasts Per Fixture for Desired Switching Configuration
 4. Lighting Level: 50/10fc
 5. Patient Control for Multi-Function and Down Light Fixtures

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling: 75° F (24° C)
 Dry Bulb Temp Heating: 70° F (21° C)
 Minimum % Outside Air: 2
 100% Exhaust Air:
 Noise Criteria:
 Steam:
 Relative Humidity/Cooling: 60%
 Relative Humidity/Heating: 20%
 Minimum Air Changes/Hr.: 6
 Room Pressure: Neutral (0)
 AC Load Lights: As Required
 AC Load Equipment: As Required
 Number of People:
 Special Equipment:

PLUMBING AND MEDICAL GASES

Cold Water: Yes
 Hot Water: Yes
 Domestic Water (HWH): Yes
 Laboratory Air:
 Laboratory Vacuum:
 Sanitary/Vent: Yes
 Medical Air: 1 Outlet
 Medical Vacuum: 3 Outlets
 Oxygen: 2 Outlets
 Nitrogen Oxide:
 Nitrogen:
 Anesthesia Evac:
 Sprinkler: Yes
 Tempered Water:
 Water Control:

SPECIAL EQUIPMENT

**Recovery Room, Patient Prep (RRSS1)
Equipment List**

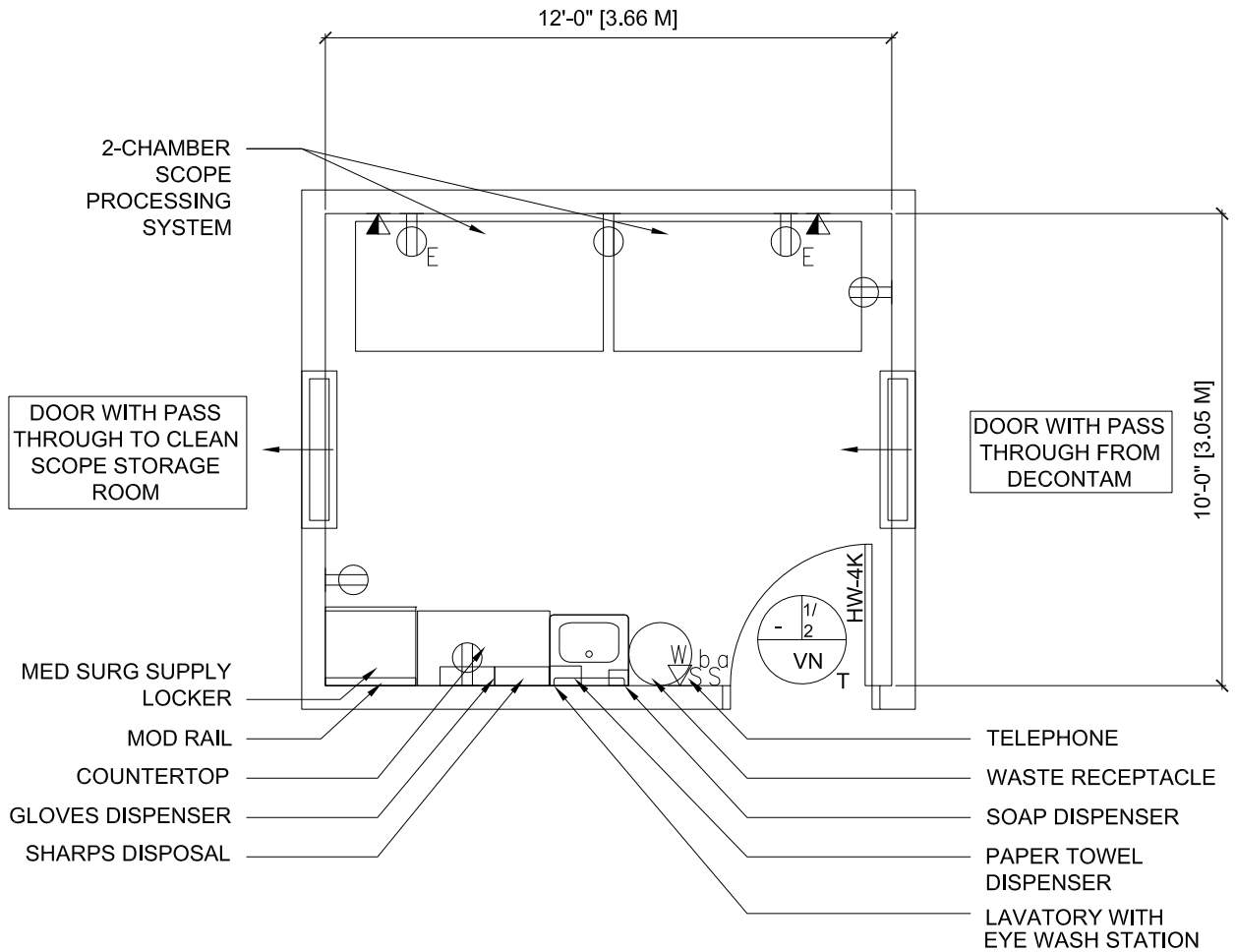
JSN	NAME	QTY	ACQ/INS	Description
A1017	Telephone, Wall Mounted	1	VV	Telephone, wall mounted
A1066	Mirror, Float Glass, With SS Frame, 36x18	1	CC	A high quality 1/4" polished float glass mirror 36X18, framed in a one-piece, bright polished, stainless steel channel frame with 90° mitered corners. All edges of the mirror are protected by absorbing filler strips. Mirror has a galvanized steel back with integral horizontal hanging brackets and wall hanger for concealed mounting.
A1107	Rail System , Utility, Gas and Electric	1	CC	The headwall rail system shall consist of three horizontal rails mounted to the patient room headwall to provide utilities and patient services; to support ancillary equipment and to include gas and vacuum. The rail system must be capable of quickly adding or relocating medical gases services and be able to accept new equipment, provide physical support to equipment, brackets, shelves and other patient support items.
A5075	Dispenser, Soap, Disposable	1	VV	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5080	Dispenser, Paper Towel, SS, Surface Mounted	1	CC	A surface mounted, satin finish stainless steel, single-fold, paper towel dispenser. Dispenser features: tumbler lock; front hinged at bottom; and refill indicator slot. Minimum capacity 400 single-fold paper towels..
A5108	Waste Disposal Unit, Sharps	1	VV	A container with wall mounting brackets for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A5145	Hook, Garment, Double, SS, Surface Mounted	1	CC	A surface mounted, satin finish stainless steel, double garment hook. Equipped with a concealed mounting bracket that is secured to a concealed wall plate.

A5180	Track, Cubicle, Surface Mounted, With Curtain	1	CC	Surface mounted cubicle track, with curtain. Track constructed of extruded aluminum. Equipped with self lubricating carriers, beaded drop chain hooks, and flame resistant curtain. To include removable end caps. Designed to be suspended around patient areas where privacy is needed.
E0949	Cart, General Storage, Mobile with Keyless Lock, 42"H x 32"W x 22"D	1	VV	THIS TYPICAL INCLUDES: 1 Cart Body, Style-A Narrow, w/Raised Edge Top 1 Accessory Rail, Side 2 Drawers, 3" H (76mm) 4 Drawers, 6" H (152mm) Drawer Organizer Bins and Keyless Lock
F0306	Chair, Bariatric	AR	VV	Upholstered side chair approximately 34 1/2" high X 31 1/2" wide X 20" deep with floor glides. Seat is non-tilting.
F0340	Stool, Self Adjusting	1	VV	Self adjusting stool. Consists of a foam padded upholstered seat with attached foot rest for added comfort. Mounted on swivel casters. Designed for doctor's use during examinations.
F2017	Waste Receptacle, 24 Gal	1	VV	Rectangular steel waste receptacle with step-on lid and 24 gallon capacity. The receptacle is used to collect and temporarily store small quantities of paper refuse.
F3200	Clock, Battery, 12" Diameter	1	VV	Clock, 12" diameter. Round surface, easy to read numbers with sweep second hand. Wall mounted unit for use when impractical to install a fully synchronized clock system. Battery operated, (batteries not included).
M0750	Flowmeter, Air, Connect w/50 PSI Supply	1	VV	Air flowmeter. Unit has a stainless steel needle valve with clear flowtube for connection to 50 PSI air outlet from central pipeline system. Flowmeter to be provided with appropriate adapter fitting and outlet Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.

M0755	Flowmeter, Oxygen, Low Flow	2	VV	Oxygen flowmeter. Consists of a clear crystal flow-tube calibrated to 3.5 or 8 LPM depending on manufacturer. For oxygen regulation in hospital settings. Flowmeter to be provided with appropriate adapter fitting and outlet Database prices reflect fittings with an attached DISS power outlet. Other outlet and adapter configurations are available.
M0765	Regulator, Vacuum	3	VV	Vacuum pressure regulator for connection to central piped vacuum system. Standard display scale is graduated at least from 0 to 200 mm Hg of vacuum. Displays on specialized regulators may cover other vacuum ranges. Regulator type (continuous, intermittent, continuous/intermittent, surgical, pediatric, thoracic, etc.) as required.
M3070	Hamper, Linen, Mobile, w/Lid	1	VV	Mobile linen hamper with hand or foot operated lid. Made of heavy tubular stainless steel with heavy gauge welded steel platform. Holds 25" hamper bags. Mounted on ball bearing casters.
M4255	Stand, IV, Adjustable	1	VV	Adjustable IV stand with 4-hook arrangement. Stand has stainless steel construction with heavy weight base. It adjusts from 66 inches to 100 inches and is mounted on conductive rubber, ball bearing, swivel casters. Stand is used for administering intravenous solutions.
M4266	Pump, Volumetric, Infusion, Multiple Line	1	VV	Volumetric infusion pump. Pump is self-regulating with automatic sensor and adjustable rate. Equipped with visual and audible alarms and up to 10 hour capacity battery. For the administration of a wide variety of therapeutic agents where precise control is required. Unit provides individual control to IV lines simultaneously.
M4665	Stretcher, Recovery, Surgical	1	VV	Recovery/surgical stretcher. Strong I-beam construction type unit. The height is adjustable with manual backrest and crank operated knee gatch. Stainless or painted steel top and chassis. Features 8" or 10" conductive casters, with lock and brake, folding, tuck-away chrome side-rails and IV stand and a flame retardant antibacterial mattress. Designed for operating room transport or recovery applications.

M7040	Table, Overbed	1	VV	Overbed table. Adjustable height table constructed of heavy gauge steel. Mounted on 2" diameter twin swivel casters with bumper caps. Table top is constructed with a high pressure plastic laminated surface that resists chipping, scratching, and staining. It includes a vanity tray and a mirror. Table is designed for use over bed, wheelchair or large chair.
M7435	Light, Overbed, Direct And Indirect	1	CC	Overbed patient room light which provides direct light for patient activity and indirect light for patient examination. The indirect portion of the light can be flipped down or redirected to provide dual intensity direct lighting. Unit is fully enclosed and is available in varying lengths. Some units feature a controlled power shut off to the light and patient bed when bumped by any item. Unit is designed to be wired directly to a junction box in the wall, a headwall service rail or patient service column. Dimensions are for a three foot light.
P3100	Lavatory, Vitreous China, Slab Type	1	CC	Wall mounted, slab type, vitreous china, lavatory (approximate bowl size 7"x15"x10") with: faucet holes on 4" centers; gooseneck spout; wrist blade handles; and grid strainer.
	Dispenser, Glove, Triple	1	VV	Triple glove box holder constructed of formed stainless steel for horizontal or vertical mounting.
	Monitor, Physiological, Bedside, 6 Channel	1	VV	6 channel bedside physiological monitor. The unit consist of a sixchannel non-fade monochrome display monitor, an alarm system and printer-recording capabilities. The monitor has color coded controls and automatic calibration. The unit displays up to six four waveforms simultaneously. The parameters to be monitored are user selectable. The monitor may be connected to a central monitoring station.

REPROCESSING ROOM, SCOPE (USCL3)



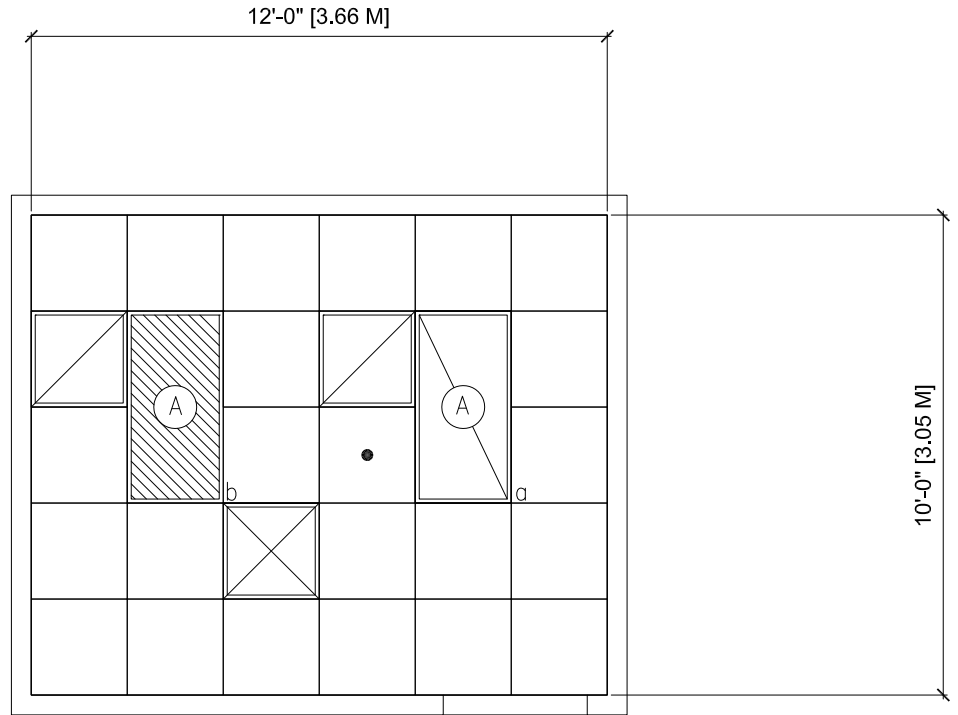
SCALE $\frac{1}{4}'' = 1'-0''$

Reprocessing Room, Scope (USCL3)



Digestive Diseases - Endoscopy Service
Floor/Equipment Plan (120 NSF / 11.1 NSM)

NOTE: Guide plates are graphical representations of selected room types, illustrating the integration of space, components, systems, and equipment. They provide typical configurations and general technical guidance, and are not intended to be project specific. Specific infrastructure design requirements are contained in VA Design Manuals and Space Planning Criteria located in the VA Technical Information Library.



SCALE $\frac{1}{4}'' = 1'-0''$

Reprocessing Room, Scope (USCL3)



Digestive Diseases - Endoscopy Service
Reflected Ceiling Plan (120 NSF / 11.1 NSM)

NOTE: Guide plates are graphical representations of selected room types, illustrating the integration of space, components, systems, and equipment. They provide typical configurations and general technical guidance, and are not intended to be project specific. Specific infrastructure design requirements are contained in VA Design Manuals and Space Planning Criteria located in the VA Technical Information Library.

**Reprocessing Room, Scope (USCL3)
Room Data Sheet**

ARCHITECTURAL

Ceiling:	AT (SP)
Ceiling Height:	9'-0"
Wall Finish:	GWB (SC)
Base:	WSF
Floor Finish:	WSF
Door:	1/2 V-W
Hardware:	4K

Notes:

POWER

General:	As Shown
Special:	As Shown
Emergency:	Yes
Notes:	
1. Dedicated outlet for Reprocessing System	

COMMUNICATIONS

Patient Monitor:	
Nurse Call:	
Security/Duress:	
CCTV:	
Telephone:	Yes
Pub. Address:	
Radio:	
Data:	Yes
Panic Call:	
Battery Operated Clock:	Yes
Intercom:	
Staff/Duty Station:	

LIGHTING

General:	
1. Two (2) of 2'x4' (600mm x 1200mm) Fluorescent Light Fixtures, Acrylic, Gasketed Lens with F32T8 Lamps, 3500°K, CRI=70 (minimum)	
2. Provide Ballasts Per Fixture for Desired Switching Configuration	
3. Lighting Level: 50fc	

HEATING, VENTILATING AND AIR CONDITIONING

Dry Bulb Temp Cooling:	75° F (24° C)
Dry Bulb Temp Heating:	70° F (21° C)
Minimum % Outside Air:	
100% Exhaust Air:	Yes
Noise Criteria:	NR 15R
Steam:	
Relative Humidity/Cooling:	50%
Relative Humidity/Heating:	30%
Minimum Air Changes/Hr.:	10
Room Pressure:	Negative(-)
AC Load Lights:	As Required
AC Load Equipment:	As Required
Number of People:	2
Special Equipment:	

PLUMBING AND MEDICAL GASES

Cold Water:	1/2 inch
Hot Water:	1/2 inch
Domestic Water (HWH):	Yes
Laboratory Air:	
Laboratory Vacuum:	
Sanitary/Vent:	Yes
Medical Air:	
Medical Vacuum:	
Oxygen:	
Nitrogen Oxide:	
Nitrogen:	
Anesthesia Evac:	
Sprinkler:	Yes
Tempered Water:	
Water Control:	Infrared

SPECIAL EQUIPMENT



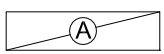
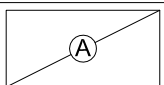
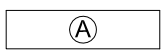

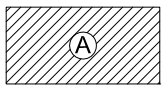

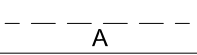




See equipment list, pass through doors

**Reprocessing Room, Scope (USCL3)
Equipment List**





















JSN	NAME	QTY	ACQ/INS	Description
A5108	Waste Disposal Unit, Sharps	1	VV	A container with wall mounting brackets for collecting and transporting syringes and other sharps for decontamination and disposal. Available in 2 gallon and 8 gallon with locking rotor. Complies with OSHA regulations for handling sharps.
A1017	Telephone, Wall Mounted		VV	Telephone, wall mounted
A5075	Dispenser, Soap, Disposable	1	VV	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
A5080	Dispenser, Paper Towel, SS, Surface Mounted	1	CC	A surface mounted, satin finish stainless steel, single-fold, paper towel dispenser. Dispenser features: tumbler lock; front hinged at bottom; and refill indicator slot. Minimum capacity 400 single-fold paper towels.
CT050	Countertop, Stainless Steel	1	CC	Stainless steel countertop (composition of heavy-gauge Type No. 304 stainless steel) having a smooth satin finish and integral 4" backsplash/curb. Also referred to as a corrosion-resistant steel work surface or work top. Available in various depths. Used in areas where excellent ease of cleaning, abrasion resistance, bacteria resistance, impact resistance, load capacity and moisture resistance, are of concern.
E0912	Locker, Supply, Med Surg, Wall Mtd, 23"W x 20"D	1	VV	THIS TYPICAL INCLUDES: 1 Locked Storage Container 4 Tray/Shelves 5 Drawers, 3"H (76mm) 2 Drawers, 6"H (152mm) 2 Tray/Shelf Dividers Drawer Organizer Bins Consider the need for an E0921 to transport the locker from place to place.
E1500	Rail, MOD, Wall Mtd	AR	VV	Wall mounted rail used for hanging (mounting) supply lockers, shelves drawers on a wall. Length as required.

F2017	Waste Receptacle, 24 Gal	1	VV	Rectangular steel waste receptacle with step-on lid and 24 gallon capacity. The receptacle is used to collect and temporarily store small quantities of paper refuse.
P3000	Lavatory, Vitreous China, Straight Back	1	CC	Wall mounted, vitreous china lavatory (approximate bowl size 7"x15"x10") with: straight-front apron, straight or contoured back; faucet holes on 4" centers; gooseneck spout; wrist blade handles; and grid strainer.
S2627	Washer, Fiber Scope	AR	CC	A low temperature sterile processing system for sterilizing immersible surgical and diagnostic scopes, cameras, instruments and accessories. The unit shall provide a digital display of cycle data and shall record and print a permanent record of cycles. Units are available in floor, counter top or cart models.
	Dispenser, Glove, Triple	1	VV	Triple glove box holder constructed of formed stainless steel for horizontal or vertical mounting.

GUIDE PLATE SYMBOLS LEGEND

SYSTEM	DESCRIPTION OF SYMBOLS	SYMBOL
Wiring devices switches	Single pole switch	S
	Single pole switch - suffix of "a", "b", or "c" indicates separate control of fixture(s) with same designation	S ^a
	Dimmer switch	S ^D
	Three-way switch	S ³
	Door switch	DS
	Emergency power off (EPO) push button	
Lighting Fixtures	2'x2' (600mm x 600mm) fluorescent fixture	
	1'x4' (300mm x 1200mm) fluorescent fixture	
	2'x4' (600mm x 1200mm) fluorescent fixture	
	Wall-mounted fluorescent fixture	
	2'x2' (600mm x 600mm) fluorescent fixture- emergency power	
	2'x4' (600mm x 1200mm) fluorescent fixture- emergency power	
	Wall-mounted fluorescent fixture-emergency power	
	Under-cabinet light fixture	
	Wall-mounted light fixture-type as noted	
	Ceiling mounted light fixture-type as noted	
	Emergency recessed light fixture	
	Recessed light fixture	

SYSTEM	DESCRIPTION OF SYMBOLS	SYMBOL
Wiring devices receptacles	Duplex receptacle, NEMA 5-20R-20 amp-mounted 18" (450mm) A.F.F. Unless otherwise noted	
	Duplex receptacle, NEMA 5-20R-20 amp-mounted above counter top/counter top back splash	
	Duplex receptacle, Dedicated	
	Duplex receptacle with ground fault interrupter, NEMA 5-20R- 20 amp-mounted 18" (450mm) A.F.F. Unless otherwise noted	
	Duplex receptacle with ground fault interrupter, NEMA 5-20R- 20 amp-mounted above counter top/counter top back splash	
	Weatherproof while in use duplex receptacle with GFI, NEMA 5-20R-20 amp-mounted 18" (450mm) A.F.F. Unless otherwise noted	
	Quadruplex outlet, NEMA 5-20R-20 amp-mounted 18" (450mm) A.F.F. Unless otherwise noted.	
	Quadruplex outlet, NEMA 5-20R-20 amp-mounted above counter top/counter top back splash	
	Quadruplex outlet with ground fault interrupter, NEMA 5- 20R- 20 amp-mounted 18" (450mm) A.F.F. Unless otherwise noted	
	Quadruplex outlet with ground fault interrupter, NEMA 5-20R- 20 amp- mounted above counter top/counter top back splash	
	Duplex receptacle on emergency power, NEMA 5-20R-20 amp-mounted 18" (450mm) A.F.F. unless otherwise noted	
	Quadruplex receptacle, NEMA 5-20R-20 amp- emergency power	
	Special receptacle of the type required	
	Single receptacle, NEMA 5-20R-20 amp	
	Single receptacle, NEMA 5-20R grounding type	
	Electrical surface mounted multi-outlet raceway assembly, NEMA 5-20R receptacles at 2'-0" (600mm) intervals, single or multiple channel as required- mounted 12" (300mm) above counter.	
Junction box - purpose and location as noted		

SYSTEM	DESCRIPTION OF SYMBOLS	SYMBOL
Auxiliary Systems	Telephone data outlet-mounted 18" (450mm) A.F.F. unless otherwise noted	
	Telephone data outlet-mounted above counter top/counter top back splash	
	Wall-mounted telephone outlet-mounted 48" (1200mm) A.F.F. unless otherwise noted	
	Video outlet type as noted in equipment list	
	Speaker-ceiling mounted	
	Intercom outlet	
	Nurse call dome light-ceiling mounted	
	Nurse call dome light-wall mounted	
	Nurse call duty station	
	Emergency nurse call	
	Nurse call staff station	
	Volume control-wall mounted	
	Security/duress-alarm button wall mounted	
	Junction box-purpose and location as noted	
Mechanical	Room thermostat-mounted 5'-0" (1520mm) A.F.F.	
	Room humidistat-mounted 5'-0" (1520mm) A.F.F.	
	Supply	
	Return	
Plumbing	Medical gas outlet (letter designates service)	
	Sprinkler	

SECTION 5 - APPENDIX

TECHNICAL REFERENCES

The references listed below are comprised of both a summary of current relevant VA standards and criteria followed by a summary of current industry standards, all of which have guided the information in this Pulmonary Medicine Service Design Guide. The Design Guide refers to the sources throughout the text when information is more detailed or extensive than would be appropriate to be included in this guide. VA sources can be accessed on VA website.

VA Standards and Criteria

VA Space Planning Criteria Chapter 212

Accessibility and Barrier-Free Design Guide PG-18-13

Design and Construction Procedures H-18-3

Equipment Information PG-18-5

Master Construction Specifications PG-18-1

Standard Details PG-18-4

Room Finishes, Door and Hardware Schedule PG-18-14

Seismic (Structural) Design Requirements H-18-8

Signage Design Guide

Space Planning Criteria PG-18-9

Sustainable Design and Energy Reduction Manual April 2010

VA Technical Criteria (PG-18-10 Design Manuals) pertaining to Architectural,

Interior Design, HVAC, Plumbing, and Electrical Ambulatory Care/Outpatient Clinic/Interior Design Manual for New Construction and Renovations of Hospitals and Clinics

Design Guide Office of Information and Technology (OI&T) for Information Management Systems Physical Security Design Manual (Final Draft)

Emergency Power & Water Supply During Natural Disasters, Phase 2

VA Fire Protection Design Manual 2009

Energy Conservation (EPACT 2005 and DOE – Final Rule)

Energy Conservation (Executive Order No. 13423 Dated January 24, 2007: Strengthening Federal Environmental, Energy, and Transportation Management)

Memorandum of Understanding (MOU): Federal Leadership in High Performance and Sustainable Buildings.

Commissioning Guidelines (issuance pending)

Industry Standards and Criteria

ADA Standards for Accessible Design 2010

International Building Code, 2009

NFPA 101, 2009

FGI Guidelines for Design and Construction of Health Care Facilities - 2010

ABBREVIATIONS & ACRONYMS

-A-		EO	Executive Order
A	Air, Medical	EPACT	Energy Policy Act
ABAAS	Architectural Barriers Act Accessibility Standards	ERCP	Endoscopic Retrograde Cholangiopancreatography
AC	Air Conditioning		
ACI	American Concrete Institute	-F-	
ADA	Americans with Disabilities Act of 1990	F	Fahrenheit or Filter
A/E	Architect/Engineer	FA	Functional Area
AIA	American Institute of Architects	FC	Footcandle
ASHRAE	American Society of Heating, Refrigeration, and Air-Conditioning Engineers	FGI	Facilities Guidelines Institute
AT	Acoustical Ceiling Tile	-G-	
		GFI, GFCI	Ground Fault Circuit Interrupter
		GSA	General Services Administration
-B-		GWB	Gypsum Wall Board System
-C-		-H-	
C	Celsius	HAC	House Keeping Aides Closet
CAB	Cabinet	HIPAA	Health Insurance Portability and Accountability Act of 1996
CAD	Computer Aided Drafting		
CCTV	Closed Circuit Television	Hr	Hour
CDC	Centers for Disease Control	HVAC	Heating, Ventilation and Air Conditioning
CFM	Construction & Facilities Management or Cubic Feet per Minute	-I-	
CRI	Color Rendering Index	IBC	International Building Code
CT	Computed Tomography	ICRA	Infection Control Risk Assessment
CV	Constant Volume	ICU	Intensive Care Unit
-D-		IES	Illuminating Engineering Society
DEPT	Department	IT	Information Technology
DGSF	Department Gross Square Feet	-J-	
DOE	Department of Energy	-K-	
DNSF	Department Net Square Feet	K	Kelvin (degrees)
DNTG	Department Net-to-Gross		
DWG	Drawing	-L-	
-E-		-M-	
EGD	Esophagogastroduodenoscopy	M	Meters
EHR	Electronic Health Record		

MCS	Master Construction Specifications	-S-	
MIN	Minimum	SP	Sprayed Plastic Finish
MM	Millimeters	SPD	Sterile Processing Department
MOU	Memorandum of Understanding	SS	Stainless Steel
MRCP	Magnetic Resonance Cholangiopancreatography	SVT	Solid Vinyl Floor Tile (Luxury Vinyl Tile)
MS&N	Medical Surgical and Nursing	-T-	
-N-		TB	Tuberculosis or Through Bolt or Towel Bar
NEMA	National Electrical Manufacturers Association	TIL	Technical Information Library
NFPA	National Fire Protection Association	-U-	
NSF	Net Square Feet	U/C/B	Under Counter Base
NSM	Net Square Meters	UFAS	Uniform Federal Accessibility Standard
-O-		-V-	
O	Oxygen	V	Vacuum
OI&T	Office of Information & Technology	VA	Veteran's Administration] or Volt
OND	Operation New Dawn		Ampere
OSHA	Occupational Safety and Health Administration	VACO	Veteran's Affairs Central Office
OT	Occupational Therapy	VAV	Variable Air Volume
		VCT	
-P-		-W-	
PA	Public Address	W	Watts, Waste or Workload (input data statements)
PC	Personal Computer or Piece or Polycarbonate or Portland Cement	WM	Wall-Mounted
PG	Program Guide or Page	WSF	Welded Seam Sheet Flooring
PRB	Profile Base		
PSG	Polysomnography	-X-	
PT	Physical Therapy		
PTSD	Post Traumatic Stress Disorder	-Y-	
-Q-		-Z-	
-R-			
RB	Resilient Base		
RCP	Reflected Ceiling Plan		
RH	Relative Humidity or Right Hand		
RME	Reusable Medical Equipment		