

VA



U.S. Department  
of Veterans Affairs



# Design Guide for Inpatient Mental Health & Residential Rehabilitation Treatment Program Facilities

JANUARY 2021

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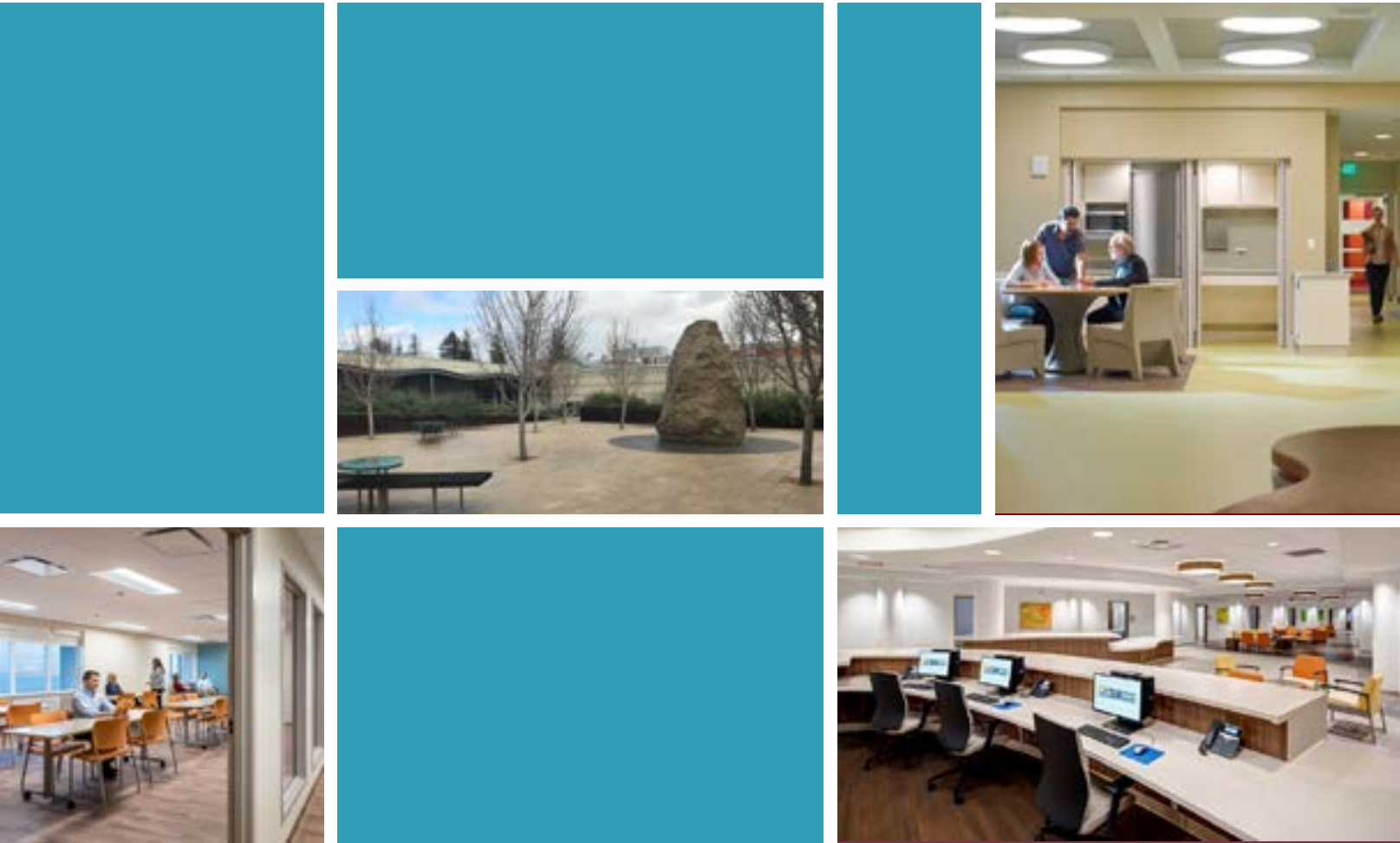
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# 1.0 GENERAL



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## **1.0 GENERAL**

### **1.1 Foreword**

VA Program Offices, project teams, designers and constructors, are obligated to our Nation's Veterans and taxpayers to make the most effective and efficient use of resources, by providing a continuum of safe, secure, high quality, high performance, and high value environments of care and service for Veterans. The VA Office of Construction and Facilities Management (CFM) supports the Department's mission through development and application of standards as a basis for disciplined planning, design, and construction of VA facilities.

VA Standards are the culmination of a partnership among the Department of Veterans Affairs (VA), the Veterans Health Administration, Program Officials, Clinicians, Industry, Academic and Research Organizations, Expert Consultants, and the Office of Construction and Facilities Management. Design Guides are developed through integration of VA-specific requirements, Federal law and regulation, benchmarking of industry best practice, evidence-based research and design, and value-based analysis of leading edge innovation. The result is the establishment of best value standards for optimum functionality, safety, operability, performance, and quality throughout the VA environment of care and service.

Design Guides (PG-18-12) are a critical component of the VA Technical Information Library (TIL) ([www.cfm.va.gov/TIL](http://www.cfm.va.gov/TIL)) which provides standards for all VA planning, design, and construction projects. Design Guides focus on selected healthcare departments and services and include an overview narrative of VA-specific planning and design principles and concepts, room templates, equipment lists, and basic technical/engineering requirements. They communicate the basis of design and are required to be utilized by project teams working on new construction and renovations of existing facilities. Design Guides will maximize the effectiveness and efficiency of the planning and design process and ensure a high level of design, while controlling construction, operating, and maintenance costs.

The material contained in Design Guides constitutes a standard for VA Planning, Design and Construction. For all VA projects, it is required that project teams comply with the following in all phases of project development:

1. All applicable VA Standards published in the VA Technical Information Library (TIL) shall be applied as a basis, foundation, and framework in planning, design, and construction. Any substantial variance from Standards shall be considered only as required to accommodate specific site, functional, and operational conditions. Upon consideration of variance CFM shall be consulted, and each Administration will function as Authority Having Jurisdiction for decision. Each substantial variance shall have a basis rationale and be documented in the project record.
2. Clinicians, providers, primary users, and other stakeholders shall be involved in all phases of project development to best adapt Standards for specific functional, operational, and site conditions, and to provide optimum service environments for Veterans. This also includes installations and modifications of systems or



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technology involving safety, security, functionality, or environmental quality.  
Stakeholder involvement shall be documented in the project record.

Design Guides are not project specific. It is impossible to foresee all rapidly evolving requirements of healthcare facilities and each site or project will have unique requirements or conditions. Site specific issues must be addressed within the context of these standards and applied to each individual project. Use of this Guide does not preclude the need for, nor absolve planners, designers, and constructors of their responsibility to provide complete, functional, safe, and secure designs suited to the unique requirements of each project, within budget, and on schedule.

Materials, equipment and systems are shown in an illustrative, performance-based format and are not intended to depict, suggest, or otherwise constitute endorsement of any specific product or manufacturer. Manufacturers should be consulted for actual dimensions, configurations, and utility requirements.

All participants in the project development process must embrace VA Planning, Design and Construction Standards as fundamental in providing optimum environments for Veterans' care and services, in fulfilling VA's mission.

Donald L. Myers, AIA, NCARB  
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### **1.3 Introduction**

When the original version of the Mental Health Design Guide was produced in 2010, it was very much a creature of its time. The various levels of mental health care in VA, such as inpatient, residential and outpatient, were all included in one volume. The promise of the recovery model of care (which holds that all persons with mental health challenges can lead a self-directed life and thereby achieve their full potential) and the struggle to advance safe and home-like environments of care were still early in their implementation. Since then we have learned a great deal about the safety issues through experience and optimal environments by comparing best practices from across the nation and beyond. The current volume focuses on inpatient and residential levels of care (outpatient care is covered in a separate recently published volume) and is designed to give as updated and complete a picture of the principles, and their application, that allow Veterans seeking mental health care the best chance of recovery. Although it is not often considered during an episode of care, the Veteran's experience directly impacts their willingness to seek these services if needed in the future – especially when (as is sometimes the case for inpatient facilities), the admission was made on an involuntary basis.

As Dr. Bradley Karlin eloquently stated in the Introduction to the 2010 Guide, “Facility design impacts the beliefs, expectations, and perceptions patients have about themselves, the staff who care for them, the services they receive, and the larger health care system in which those services are provided. Moreover, facility design can also have a significant impact on the beliefs, attitudes, and behaviors of staff and on how staff identify and interact with patients and the environment.” This is true now more than ever and explains why such a pain-staking effort is made to collect perspectives across multiple disciplines, occupations and roles to inform these recommendations for optimal facility design. The importance of making site visits to existing and planned facilities, inside and outside VA, to arriving at an understanding of the full range of others' experiences and wisdom, cannot be overestimated.

In this edition, the Inpatient section provides information to minimize opportunities for Veterans to harm themselves such as ligature risks and a lack of clear lines of sight. Both the Inpatient and Residential sections emphasize the notion of patient engagement where spaces are created to allow Veterans the opportunity to interact with staff and each other in a way that promotes recovery. An important example is the nurses' station which is comprised of an “on-stage” area that purposely avoids unnecessary separation or barriers between Veterans and staff, and a conceptually and functionally different “off-stage” area where staff work to complete tasks that do not include Veteran participation or that require privacy. Both Inpatient and Residential levels fully enshrine the notion of home-like surroundings compatible with safety, including use of muted colors, open space, light and access to the outdoors and fresh air.

Looking back in another ten, or perhaps even five, years, the authors of the next Design Guide will notice what we missed or underemphasized here and will undoubtedly correct those shortcomings. However, our hope is that, with this volume, VA will continue to lead the way for inspiring today's leaders and providers to promote the optimal environment of mental health care - one that they would want for themselves or their loved ones should the need arise..



## **1.4 VA Policies / Standards and Industry Policies / Standards**

The standards set forth herein are not intended to be project-specific, nor are they crafted as a regulatory code. The Design Guide addresses space and equipment planning, based on the functional, technical, and systems to support the operational requirements associated with the various inpatient mental health services. The narrative and graphic material developed in this document are based on the site visits of both recently built, renovated and older facilities, staff interviews, collaborative work sessions and meetings, and research of relevant publications and standards.

### **1.4.1 VA Policies/Standards** (add hyperlinks to the documents online)

1. VHA Handbook 1160.01 - Uniform Mental Health Services in VA Medical Centers and Clinics (amended Nov. 16, 2015)
2. VHA Directive 1160.03(1) – Programs for Veterans with Posttraumatic Stress Disorder (PTSD) (Nov. 16, 2017)
3. VHA Handbook 1160.04 – VHA Programs for Veterans with Substance Use Disorders (Mar. 7, 2012)
4. VHA Handbook 1160.06 – Inpatient Mental Health Services (Sept. 16, 2013)
5. VHA Handbook 1160.05 – Local Implementation of Evidence-Based Psychotherapies for Mental and Behavioral Health Conditions (revised Dec. 8, 2015)
6. VHA Handbook 1162.02 – Mental Health Residential Rehabilitation Treatment Program (MH RRTP) (Jul.15, 2019)
7. VHA Handbook 1162.09 – Health Care for Homeless Veterans (HCHV) Program (May 2, 2014)
8. VHA Handbook 1163 – Psychosocial Rehabilitation and Recovery Services (Aug. 13, 2019)
9. VHA Directive 1167 – Mental Health Environment of Care Checklist for Mental Health Units Treating Suicidal Patients (May 12, 2017)
10. VHA Directive 1172.05 – Recreation Therapy Service (Feb. 1, 2017)
11. VHA Directive 1140.11 – Uniform Geriatrics and Extended Care Services in VA Medical Centers and Clinics (Oct. 11, 2016)
12. VHA Directive 1330.01(2) – Health Care Services for Women Veterans (amended Jul. 24, 2018)
13. VA Design, Construction Standards and Tools:
  - a. Master Construction Specifications PG-18-1



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- b. Design Guides (PG-18-12)
- c. Design Manuals (PG-18-10)
- d. Equipment Guide List (PG-18-5)
- e. Room Finishes, Door, and Hardware Schedule (PG-18-14)
- f. Space Planning Criteria for VA Facilities (PG-18-9)
- g. MH RRTP Annual Safety and Security Assessment (ASSA) Tool FY19 or current
- h. VA Environmental Program Service Mental Health Guide 2014

### **1.4.2 Industry Codes/ Standards**

1. Facility Guidelines Institute: 2018 Edition
  - a. Guidelines for Design and Construction of Hospitals
  - b. Guidelines for Design and Construction of Outpatient Facilities
  - c. Guidelines for Design and Construction of Residential Health, Care, and Support Facilities
2. National Fire Protection Association (NFPA) 101 Life Safety Code
3. NFPA National Fire Codes
4. Occupational, Safety and Health Administration (OSHA) Standards
5. Architectural Barriers Act Accessibility Standard (ABAAS) for Federal Facilities, including the Barrier Free Design Standard.
6. Healthcare Insurance Portability and Accountability Act of 1996 (HIPAA) protects individual's rights to audible as well as visual privacy.
7. Behavioral Health Design Guide Edition 7.3 Feb 2018 (Formerly: Design Guide for the Built Environment of Behavioral Health Facilities) Includes REVISED Patient Safety Risk Assessment Tool to align with The Joint Commission's November 2017 Recommendations
8. Patient Safety Standards, Materials and Systems Guidelines recommended by the New York State Office of Mental Health, current edition.

### **1.4.3 HIPAA**

The Healthcare Insurance Portability and Accountability Act of 1996 (HIPAA) protects individuals rights to audible as well as visual privacy. This is especially the case with respect to protection of each individual's medical records, private information and communications. The law protects all conversations between patients and admission interviewers, caregivers, nurses, physicians and families. ARRA passed by U.S. government in 2009 enacts special provisions and legal enforcement tools for patient privacy, protection and security. Office of Civil Rights (OCR) monitors HIPAA security rule compliance based on ARRA provisions. Current penalties that can be implied by OCR for non-compliance with HIPAA are divided in four categories: (i)

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without knowledge; (ii) based on reasonable cause; (iii) willful neglect and (iv) willful neglect, not corrected. Penalties differ per violation versus maximum penalty according to these four categories and vary between \$100 and up to \$1,500,000.





## **1.5 Abbreviations**

### **Abbreviations**

A/E	Architectural / Engineering Firm
A/I	ACQ/INS
A/V	Audio Visual
AAMA	American Architectural Manufacturers Association
ACT	Acoustical Ceiling Tile
ADA	Americans with Disabilities Act
AFF	Above Finished Floor
AHJ	Authority Having Jurisdiction
AIA	American Institute of Architects
ANSI	American National Standards Institute
ASHRAE	American Society of Heating, Refrigerating & Air Conditioning Engineers
C	Degree Celsius
CC	Contractor Furnished, Contractor Installed
CCTV	Closed Circuit Television
CMS	Centers for Medicare and Medicaid Services
CFM	Office of Construction & Facilities Management
DG	Design Guide
EES	Essential Electrical System
F	Degrees Fahrenheit
FC	Foot-candle
FD	Floor Drain
FMS	Facilities Management Service
GFI/GFCI	Ground Fault Circuit Interrupter
HAC	Housekeeping Aides Closet
HIPAA	Health Insurance Portability and Accountability Act of 1996
HVAC	Heating, Ventilating and Air Conditioning

## **PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

### **Abbreviations**

HR	Hour
IPMH	Inpatient Mental Health
ISIT	Interdisciplinary Safety Inspection Team
JSN	Joint Schedule Number
LED	Light Emitting Diode
LEED	Leadership in Energy and Environmental Design
LB	Pound/Pounds
MH	Mental Health
MH RRTP	Mental Health Residential Rehabilitation Treatment Program
MHEOCC	Mental Health Environment of Care Checklist
MHS	Mental Health Services
MID	Motion Intrusion Detection
NEC	National Electrical Code
NFPA	National Fire Protection Association
NSF	Net Square Foot, Net Square Feet
NSM	Net Square Meters
OIT	Office of Information & Technology
OSHA	Occupational Safety and Health Administration
PG	Program Guide
PSDM	Physical Security Design Manual
PTSD	Posttraumatic Stress Disorder
RCP	Reflected Ceiling Plan
SER	Sentinel Event Reduction
SF	Square Foot, Square Feet
SMI	Serious Mental Illness
SS	Stainless Steel
STC	Sound Transmission Class
SUD	Substance Use Disorders
TBI	Traumatic Brain Injury



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### **Abbreviations**

TIL	Technical Information Library provided by the VA online @ <a href="http://www.cfm.va.gov/TIL/">http://www.cfm.va.gov/TIL/</a>
TV	Television
VA	Department of Veterans Affairs
VACO	Veterans Affairs Central Office
VAMC	Veterans Affairs Medical Center
VC	VA Furnished, Contractor Installed
VHA	Veterans Health Administration
VOC	Volatile Organic Compound
VV	VA Furnished, VA Installed





## 2.0 GENERAL PLANNING AND DESIGN NARRATIVE



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**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
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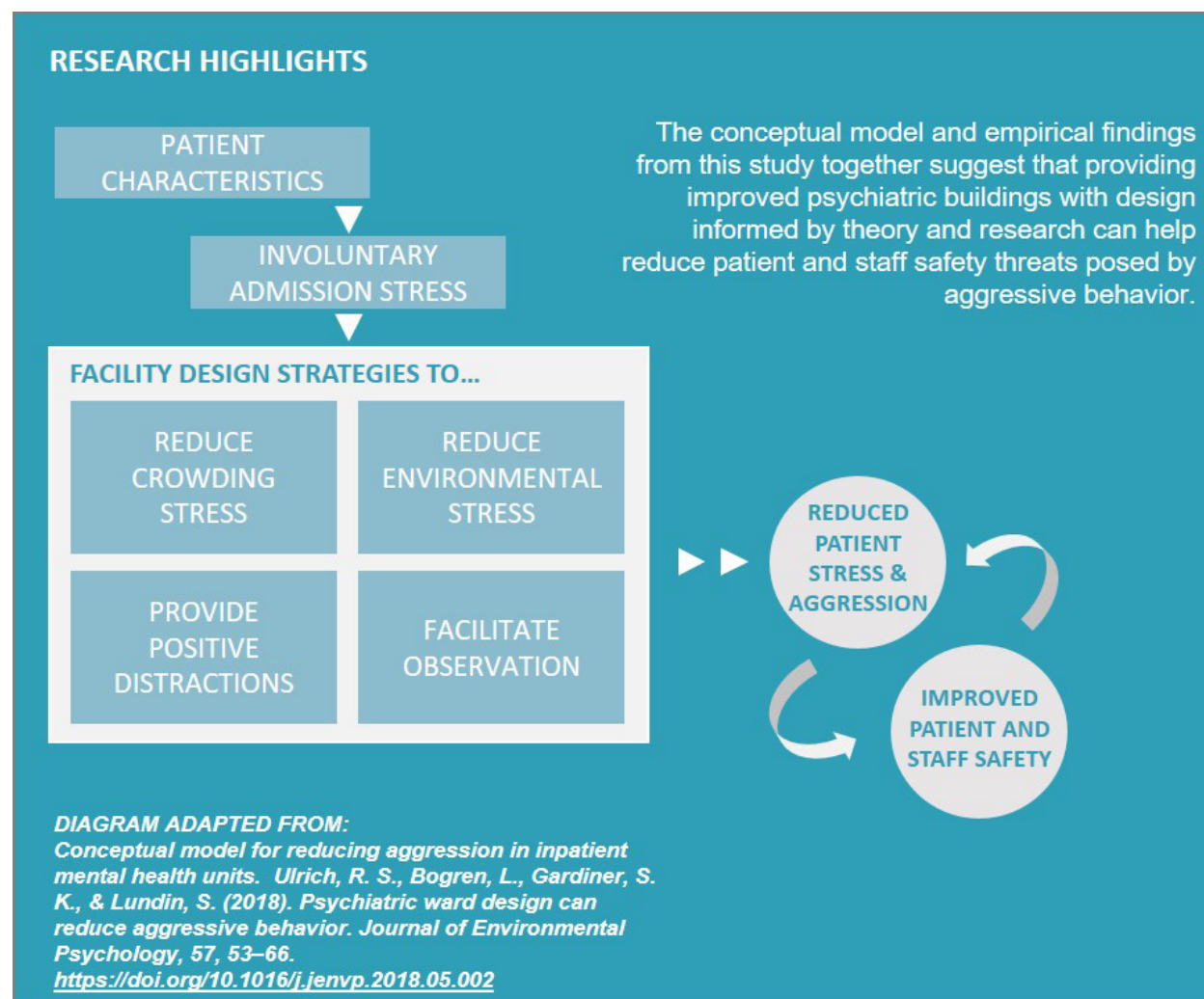
## 2.0 GENERAL PLANNING AND DESIGN NARRATIVE

### 2.1 Operational Summary

The Veterans Health Administration (VHA) is an integrated health care system that provides comprehensive mental health care among other health care services for Veterans. The continuum of VHA mental health care covers a range of mental health conditions, delivered in settings that include outpatient, intensive outpatient, residential and inpatient care, as well as community-based settings.

The information in this Design Guide provides guidance to create Inpatient Mental Health (IPMH) and Mental Health Residential Rehabilitation Treatment (MH RRTP) care facilities for Veterans with a focus on recovery care in a safe environment.

As stated in the VHA Handbook 1160 on therapeutic communities, *“Recovery” is identified as, “the single most important goal for the mental health service system...”*





## 2.2 Defining VHA Inpatient Mental Health (IPMH) and Residential Rehabilitation Treatment Program (MH RRTP)

The multiple levels of VHA Mental Health services and associated facilities supporting treatment transition and preparation for discharge are shown in Table 2.1 below. The information in this Design Guide applies to VHA Inpatient Mental Health (IPMH, Level 6) and Residential Rehabilitation Treatment Program (MH RRTP, Level 5) facilities only. Section 2.1.1 will focus on identifying the relative differences between the Level 5 and Level 6 Veteran Mental Health populations that drive facility design solutions unique to each population. While both population and facility types vary, staff and Veteran engagement in a safe environment is foundational to the planning and design concepts for both IPMH and MH RRTP facilities.

	OUTPATIENT				RESIDENTIAL	INPATIENT
LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4a	LEVEL 4b	LEVEL 5	LEVEL 6
<b>Self-directed care</b> (biblio-therapy, web-based mental health programs, etc.)	<b>PACT</b> (includes Primary Care Mental Health Integration Providers)	<b>General Mental Health</b> (e.g. Behavioral Health Inter-disciplinary Program Team-Based Care)	<b>Specialty Outpatient Programs</b> (4a.1 PCT, 4a.2 SUD/IOP, 4a.3 Special Interventions)	<b>Community-Based/ Focused Programs</b> (4b.1 PRRC, 4b.2 ICMHR, 4b.3 TSES, 4b.4 Homeless Service Centers)	<b>Residential Rehabilitation Treatment Programs (RRTPs)</b>	<b>Inpatient Mental Health Services (IPMH)</b>

**Table 2.1 LEVELS OF CARE FOR VA MENTAL HEALTH summarizes the levels of care provided by VHA Mental Health services.**

## 2.3 VA IPMH Description

The VA IPMH patient (Level of Care 6, see Table 2.1) requires inpatient acute mental health treatment, under direct medical supervision and care from clinical staff with provisions for high levels of observation and safety measures. This Veteran population is at risk of harming themselves or others and/or requires observation and monitoring in a protected environment. VA IPMH Units are ‘locked facilities’. Patients cannot leave the facility without being discharged by staff to a less secure environment.

A VA IPMH unit provides stabilization care for Veterans with acute mental health issues, while providing a broad range of clinical interventions to treat the patient according to recovery principles and prepare them for discharge to home or the next level of care. IPMH requires the greatest level of safety and security for patients and staff, due to the nature of the mental health of these patients. In the patient care continuum, the IPMH patient is most acutely ill and vulnerable to self-injury and injury to others. For this reason, the facility design must support a heightened level of safety integration with minimal compromising or detracting from the healing and therapeutic environment. Figure 2.1 provides an example of a Patient Bedroom environment for IPMH that addresses provisions for heightened patient safety.

A critical component of design on the IPMH unit is the Nurse Station, which must facilitate both positive engagement with patients as well as safety for staff. This station includes two



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sections: an “on-stage” and an “off-stage” area. The on-stage Nurse Station area is openly visible and approachable for patients, to encourage patient/staff interaction and engagement, and is designed to maximize visibility of the unit by staff at the Nurse Station and to promote milieu management. A glass partition can be used to achieve safety from patients climbing over counters but should not fully enclose the station to the ceiling. The second area, the ‘Closed Station’ is the off-stage area, referring to the rooms behind the Nurse Station which includes the Team Room, Nurse Work and Medication Room. These areas are all accessible from the ‘on-stage’ Nurse Station and should have windows for visibility to the unit when possible. It is preferable that each room have a secondary egress into one of the adjacent rooms to allow the staff an area for safety and security. Please refer to Chapter 3 for design specifications.

All materials and accessories in IPMH facilities must meet *VA Dir 1167, Mental Health Environment of Care Checklist* (MHEOCC) requirements. Please refer to Chapter 3.1.3 and 3.1.5 of this Design Guide for additional MHEOCC references.

*Note: Many photos included in the Design Guide are from facilities outside the Veterans Health Administration. These photos may include details that do not meet Mental Health Environment of Care Checklist (MHEOCC) requirements. These photos are for reference only.*



**Figure 2.1** *This example of an IPMH patient room incorporates soft colors, finishes and accessories that create a therapeutic space. Note: All IPMH areas must meet Mental Health Environment of Care (MHEOCC) requirements.* Carl T. Hayden VAMC, Phoenix, AZ (SmithGroup)

## **2.4 VA MH RRTP Description**

In contrast to the IPMH, the goal of the MH RRTP is to empower the Veteran to regain a lifestyle of self-care, independence and personal responsibility. Facilities for MH RRTP residents shall have one secure, key-less entry point allowing resident independence of access. For this reason, special design considerations should be given to concealment and access of hazardous items into the facility.

MH RRTP facilities have greater freedom in finish materials and room accessory selection to create a home-like atmosphere with finishes, colors and spatial relationships. (see Figure 2.2) The settings reflect a residential rather than institutional nature. The IPMH Environment of Care Checklist (MHEOCC) requirements do not apply to MH RRTP. For safety and security standards related to the MH RRTP refer to the VA Mental Health Residential Rehabilitation Treatment Program Directive 1162.02.



**Figure 2.2** *This resident bedroom is an example of a residential and home-like atmosphere at a MH RRTP facility.* The Next Door: Nashville, TN (Earl Swenson)

## **2.5 IPMH/MH RRTP COMPARISON**

Diagram 2.1 shows a summary comparison of service and design elements in IPMH and MH RRTP facilities. The Veteran is referred to as ‘Patient’ in the IPMH setting and ‘Resident’ in the MH RRTP setting. The average length of stay is longer in a MH RRTP facility than that of an IPMH facility, and supports freedom of access and a need to make the facility feel home-like. In an IPMH facility, patient amenities and services are provided in a secure area on the patient unit, while in a MH RRTP facility amenities are accessible, open and potentially off the unit. The percentage of private beds to provide in an IPMH facility is greater than in a MH RRTP. Consistent with the goal of the MH RRTP to assist the Veteran transition back to the community, fewer numbers of private patient rooms enhances socialization and the recovery process. Greater numbers of private rooms in IPMH units allow patients to access private space to reduce stress.

For both IPMH and MH RRTP settings, the unit is defined as the area where the Veterans safely and securely reside and are treated on a 24-hour per day, 7-day per week continuous basis. It includes bedrooms and other associated common amenity areas.

For IPMH units, amenity areas include Day Rooms, Dining Rooms and areas for relaxation. In addition, access to secure and safe outdoor areas should be provided with porches and/or courtyards.

For the purpose of this design document, ‘secure’ is defined as an area that controls access and prevents the introduction of hazardous items to the unit.

For MH RRTP units, resident common areas include exercise, recreation therapy and group therapy rooms. Outdoor areas in the MH RRTP facilities should be provided, but are not included in the facility program, because they are not required to be enclosed and securable.

IPMH and MH RRTP facilities may contain a single unit or multiple units. Refer to PG 18-9 to determine the number of units and rooms per facility and the patient/Veteran room sizes.

Additional definition of each space type is described in Section 3.0 of this Design Guide.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

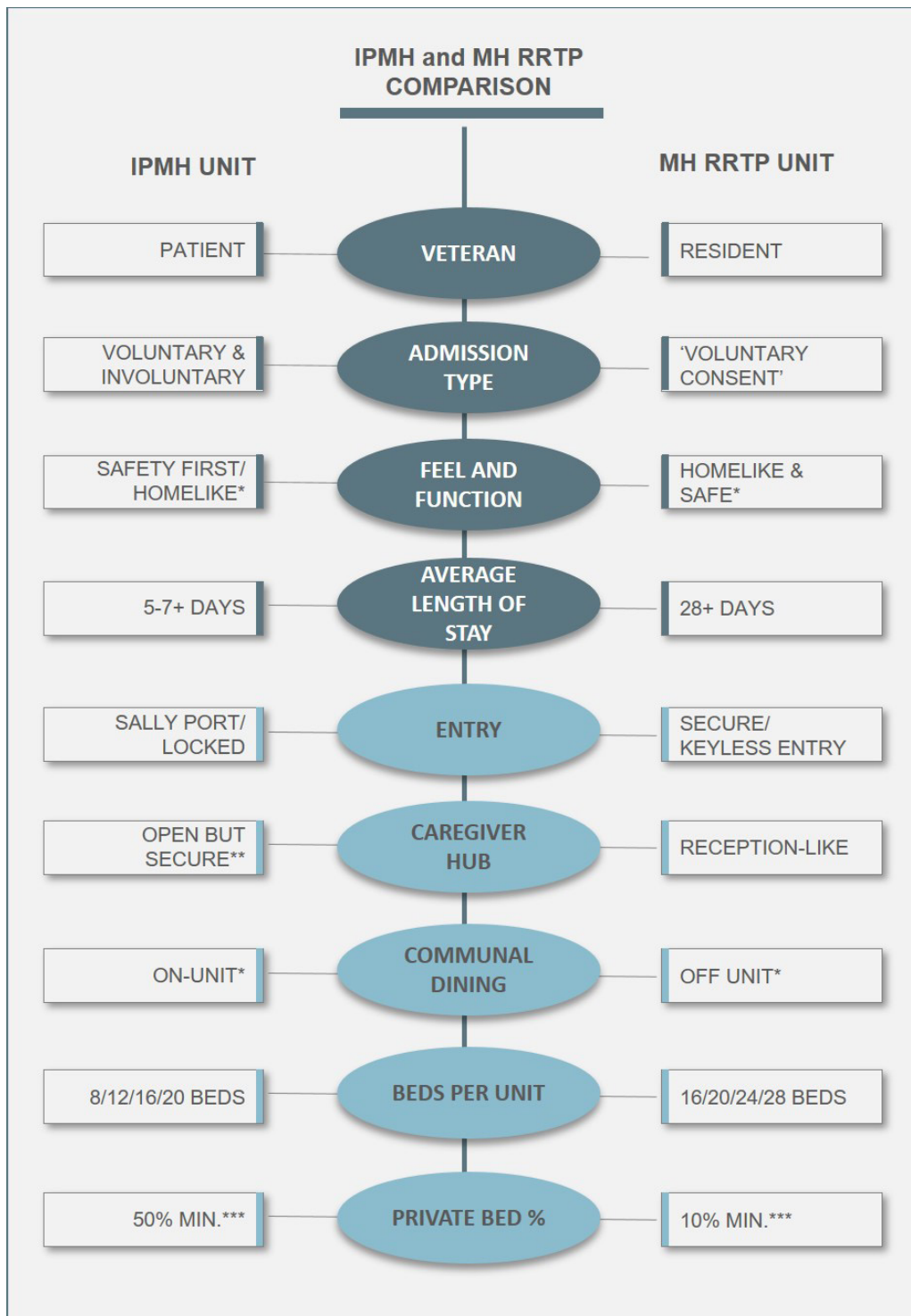


Diagram 2.1 High level comparison of VHA IPMH and MH RRTP facilities.

\* *Homelike is defined by each facility. The intention is to limit the institutional atmosphere for both staff and Veterans.*

\*\* *To be determined by facility*

\*\*\* *Semi-private rooms shall not exceed two (2) beds per room with Toilet/Shower facilities provided in each Veteran room.*



## **2.6 DESIGN CONSIDERATION FOR SPECIFIC POPULATIONS**

Special physical design features are required to accommodate the levels of care for specific populations in the IPMH environment. VHA Handbook 1160.01 provides guidance on the needs and requirements for all specific Veteran mental health populations. Specific populations that may require special operational and/or facility accommodations include but are not limited to Homeless Veterans, Women Veterans, Veterans with Spinal Cord Injury (SCI), older Veterans with specialized care needs, Veterans with substance use disorders and Veterans with medical care needs.

### **Homeless Veterans**

Separate storage for personal belongings that cannot be brought into the patient room is defined by PG 18-9. Consideration of storage on or off the unit for larger quantities of personal items shall be given consistent with local policy.

### **Women Veterans**

VA mental health facilities must address requirements for Women Veterans as defined in the VHA Directive 1330.01. All inpatient facilities must provide separate and secured patient self-locking sleeping accommodations. Should mixed gender units be provided, the design must include safe, separate and secure sleeping and Toilet/Shower facilities for this patient population. Bedrooms and/or units designated for the Women Veteran population shall be located in close proximity to staff for added oversight and should include a Lounge and Day Room.

### **Veterans with Spinal Cord Injury (SCI)**

Veterans with SCI may be treated in an IPMH facility if the patient is medically stable and does not require specialized equipment which the unit or IPMH staff cannot support. To accommodate IPMH care to medically stabilized Veterans with SCI, the facility design must provide at least one patient room per unit with a detachable hand-held shower with a minimum 6' long flexible hose. The shower hose shall be stored in a locked staff area until put in place for the patient to use. During use, the patient requires direct staff supervision. During project design, consult with National Center for Patient Safety (NCPS), as well as, Office of Nursing Service (ONS) and Office of Mental Health & Suicide Prevention (OMHSP) regarding specific situations and considerations.

### **Specialized Care Needs Common Among Older Veterans**

Some older Veterans require specialized geropsychiatric care, given medical, sensory, functional, and/or neurocognitive conditions. These physical conditions require enhanced observation and support as patients with these conditions are at higher risk for falls, disorientation, and stress in a new environment. Some younger Veterans with medical or neurocognitive disorders require similar accommodations.

Special attention shall be given to designing for fall prevention and mitigation, provision of sensible way-finding and a familiar atmosphere for patients with cognitive or memory impairment. Signage design with familiar themes, patient individualization and colors to clearly identify patient rooms can reduce Veteran confusion and improve way-finding. Ligature-free

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handrails and soft furniture with soft edges and minimal points of impact can reduce harm should patient falls occur. Ample and diffuse daylight reduces glare for improved visualization of interior spaces, and acoustic treatments to attenuate noise, which reduces stress. A home-like atmosphere creates a more familiar and approachable environment, which can reduce Veteran stress and disorientation.

A design concept based on a 'Pod' of patient rooms may facilitate safe care, observation, and storage of mobility/sensory aids for these Veterans. For further guidance about the use of medical/functional aids on IPMH units, please refer to the MHEOCC. Note that Veterans with dementia or other neurocognitive disorders who do not require the safety of an IPMH environment of care may be better served in a Community Living Center, including for short-stay dementia or mental health recovery care.

Reference *VHA Directive 1140.11, Uniform Geriatrics and Extended Care Services in VA Medical Centers and Clinics* and *VHA Office of Geriatrics and Extended Care and Office of Mental Health and Suicide Prevention (2019)* for guidance for developing or enhancing short-stay behavioral care in VHA Community Living Centers.

### **Veterans with Substance Use Disorders**

For patients admitted to IPMH and diagnosed with a substance use disorder, specific design strategies need to be implemented. The design of patient rooms and common spaces shall mitigate the concealment of items hazardous to their recovery. These areas shall have clear lines of sight for quick visual assessment by staff during rounds. To prevent the passage of hazardous items, operable windows shall not be provided. Outdoor spaces shall be designed separate from publicly accessible areas to deter hazardous item passage into the facility.

### **Veterans with Medical Care Needs**

Some Veterans requiring admission to a locked, acute IPMH unit may require treatment for chronic and relatively stable medical conditions (e.g., hypertension, diabetes, need for mobility aids), with appropriate clinical observation of medical equipment as warranted.

When it is determined that overall safety and care are not compromised by the Veteran remaining in an IPMH unit, appropriate accommodations must be provided in the mental health setting for the medical treatment. In general, special medical facility accommodations like patient headwalls/medical gases, patient lifts and isolation rooms (positive/negative pressure) will not be provided on an IPMH Unit. Local facility policy will determine what special and/or reasonable accommodations for patients with co-morbidity can be made through staff consultation with NCPS, ONS, and OMHSP.

## **2.7 THE INTERDISCIPLINARY TEAM**

The IPMH Interdisciplinary Team is comprised of healthcare professionals who collaborate as partners to provide a comprehensive and holistic treatment approach to the delivery of Mental Health care. These professionals and para-professionals, who require appropriate space when performing their duties on the unit, may include, but are not limited to:

- Psychiatrists
- Psychologists
- Social Workers
- Advance Practice Nurses/Nurse Practitioners
- Registered Nurses
- Licensed Practical Nurses
- Licensed Vocational Nurses
- Licensed Professional Counselors
- Mental Health Technicians
- Addition Therapists
- Peer Support Technicians
- Dietitians
- Chaplains
- Vocational Rehabilitation Specialists
- Rehabilitation Technicians
- Recreational Therapists

The Interdisciplinary Team offers therapeutic programming in a variety of settings. These settings support treatment, safety and recovery for each individual Veteran as well as the Veteran patient population as a whole. Therapy and recreation rooms are designed to support patient interaction with individual members of the Interdisciplinary Team. Day Rooms, Dining Rooms and Patient Lounges are designed to serve as alternative interaction spaces for Veterans and Interdisciplinary Team members. Open milieu and distributed seating areas on the patient units provide locations for unscheduled interactions to take place.

Interdisciplinary Team collaboration is supported with team rooms and quiet areas for private team collaboration. The team room is adjacent to and accessible from the Nurse Station in an “off-stage” setting, which allows for uninterrupted discussions. The nurse workroom can also serve as a space for “off-stage” Interdisciplinary Team interaction.



**Figure 2.3** *This rendering is an example of a team room that provides a space for Interdisciplinary Team collaboration.*



## **2.8 Guiding Principles for Planning and Design**

*“Mental health recovery is a journey of healing and transformation enabling a person with a mental health problem to live a meaningful life in a community of the person’s choice while striving to achieve his or her full potential.”<sup>1</sup>*

Based on this recovery-oriented foundation, there are ten components of recovery as listed below.

### **Ten Fundamental Components of Recovery<sup>2</sup>**

- Self-direction
- Individualized and person-centered
- Empowerment
- Holistic
- Non-linear
- Strengths-based
- Peer support
- Respect
- Responsibility
- Hope

Facility designs must support the work of the Interdisciplinary Team to provide recovery-oriented care by creating spaces that enable personal control of the environment (lighting, access to nature), promote self-directed peer support (porches, open milieu seating), encourage individualization (room personalization) and convey respect and hope (non-institutional atmosphere). The narratives, diagrams and room templates in this Design Guide define the spaces and space relationships required to achieve a recovery-centered design.

The Guiding Principles for Planning and Design apply to both IPMH and MH RRTP facilities unless noted otherwise.



**Figure 2.4 Example of design features, in a MH RRTP non-anti-ligature area, that promote a home-like atmosphere. These design features include natural daylighting, a fireplace, furniture selections and the use of wood on the feature wall. VA IPMH areas must comply with the MHEOCC requirements. Navos Center (Mithun)**

All information to follow is based on the Guiding Principles for Planning and Design. The Principles are guided by VHA Directives and the details of their application were discussed during workshop sessions with a cross-disciplinary team that includes architects, engineers, planners, psychiatrists, psychologists, nurses, other clinicians, patient advocates and Veterans.

**Principle #1: Mental Health Environments Are Recovery-Oriented**

VA Mental Health is patient and family-centered, rehabilitation/recovery oriented, evidence-based and focused on community reintegration.<sup>2</sup>



**Figure 2.5 Principle #1 Example: Open environments and distributed seating encourage interaction.**  
*Menninger Clinic, Houston, TX, (Kirksey)*

Examples of design techniques that enhance social interaction and support therapeutic rehabilitation and recovery include:

- Encourage and enhance Veteran and family interaction by providing family visitation rooms with associated visitor lockers to help ensure Veteran, staff, and visitor safety
- Provide secure milieu management areas to safely encourage unimpeded interaction and engagement between staff and Veterans
- Establish clear lines of sight for staff to all areas, so staff can both observe and encourage interaction (see Figure 2.5)
- Provide a mix of individual/group therapy and psycho-education classroom spaces (sizes, configurations and amenities) to allow for varying levels of socialization and interaction
- Provide smaller Veteran room groupings and co-locate specific Veteran (patient or resident) populations together
- Create access to outdoors, natural light and views of nature

**Principle #2: Mental Health Environments are Therapeutically Enriching**

A therapeutically enriching environment that is home-like, familiar and visually and physically accessible to nature promotes healing, autonomy, respect and privacy.<sup>3</sup>



**Figure 2.6 Principle #2 Example: Outdoor spaces support a therapeutic environment and personal enrichment. This example shows a labyrinth, lawn and a covered seating area to provide patients with a variety of activity spaces. Vermont Psychiatric Care Hospital, Berlin, VT (Architecture +)**

Examples of design techniques that enhance therapeutic enrichment include:

- Creating spaces that foster a sense of community between the Veterans and staff by creating non-programmed/flexible meeting spaces throughout the unit. Examples of these spaces include dining areas and lounges that offer flexibility in use throughout the day and varied seating groupings throughout the unit, including wide corridors.
- Elements and settings in the design that are familiar to the Veteran like natural materials on the interior, views of nature and artwork that is regionally focused.
- Small unit sizes (no more than 20 beds per unit for IPMH and 28 beds per unit for MH RRTP) arranged in smaller Veteran ‘sub-units’ enhances social interaction between staff and Veterans. Small unit sizes also promote Veteran co-mingling.
- Providing safe and secure access to outdoor amenities (sound, temperature, sunlight, fresh air) that allow Veterans and staff time away from the unit to refresh and relax. (see Figure 2.6)



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### Principle #3: Mental Health Environments are Safe and Secure

A safe and secure environment focuses on minimizing potential physical hazards, enhances staff visibility to all patient areas, promotes staff engagement and incorporates safety-focused materials, technologies and furnishings.<sup>2</sup>

#### IPMH Specific (the following bullet points represent IPMH only)



*Figure 2.7 Principle #3 Example: Creating clear lines of sight from a staffed central location improves unit safety. Wide and open corridors create spaces for interaction, while also improving visibility. Sun Kentucky, Erlanger, KY, (NK Architects)*

Examples of design techniques that provide a safe and secure **IPMH facility include:**

- Designing spaces that are free of hazards that can be used for self-harm and meet all requirements of the MHEOCC.
- Designing all spaces to minimize blind spots and to ensure clear visibility (example: angled walls at bedroom entry to allow direct staff visibility into the patient room, corridors and open gathering spaces on the unit that are visible from the Nurse Station, door swings and configurations that minimize blind/hiding spots).
- Arranging rooms in pods to enhance safety by separating different and potentially vulnerable specific patient populations from other general patient populations.
- Providing a central Nurse Station with clear visibility to all areas of the unit to facilitate de-escalation and immediate staff intervention. (see Figure 2.7)
- Providing one single locked Sally Port for facility entry of patients, staff, visitors and supplies.

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- Where patients have access to rooms and other areas, designing doors that swing out or are anti-ligature sliders to prevent barricading or provide other means to minimize/defeat barricading. Door swings should always be considered in design to prevent barricading.
- Installing door head alarms with pressure sensitive or optical sensors on all swinging Patient Bedroom Toilet/Shower and corridor doors as required by VHA policy and/or specify sloped tops on Toilet/Shower doors.
- Securing TV's and other wall mounted systems behind secure vision panels, and using anti-ligature fixtures, hardware, fittings, fasteners and equipment.
- Limiting sharp corners that could be used to cause physical harm if a patient hits a corner with excessive force.

### MH RRTP Specific (the following bullet points represent MH RRTP only)



**Figure 2.8 Principle #3 Example: Room configuration and an open plan improve lines of sight throughout the facility.** VA Menlo Park Geropsych, Menlo Park, CA, (Hibser Yamauchi Architects, Inc.)

Examples of design techniques that provide a safe and secure **MH RRTP facility** include:

- Arranging rooms in configurations that facilitate clear staff visibility from a centralized Staff Station and throughout the facility. An example may be providing wide and open corridors with direct visibility of each resident door and distributed seating areas. (see Figure 2.8)
- Configuring and detailing rooms to limit hazardous item concealment by avoiding and/or eliminating enclosed cabinets and acoustic drop ceilings in areas that are accessible to residents. (acoustic drop ceilings are permissible in renovation projects)
- Providing Resident Bedroom and Toilet/Shower doors that open out to prevent barricading or providing other means to minimize or defeat barricading.

**Principle #4: Mental Health Environments Support Care Integration and Coordination**

An integrated and coordinated environment promotes staff collaboration, is flexible and supports multiple acuity and co-morbidity conditions. (see Figure 2.9) It is supportive of the care continuum through technology integration and spatial relationships to enhance caregiver and Veteran interaction.<sup>2</sup>



**Figure 2.9 Principle #4 Example: Open areas in the milieu create spaces for staff and Veterans to interact. A nurse sub-work area in the milieu places staff in close proximity to Veterans to encourage interaction. Vermont State Psychiatric Hospital, Berlin, VT, (Architecture +)**

Examples of design techniques that provide an integrated and coordinated facility include:

- Providing effective collaboration spaces to support interaction between the Interdisciplinary Care Team, the Veteran and the Veteran's family. These spaces support collaboration on-site and technology for connectivity to off-site locations. (example: Multi-purpose Rooms, Day Rooms and Group Rooms that provide adequate space in group settings, private and comfortable visitation rooms for patient and family interactions)
- Integrating technology for tele-health, tele-therapy, tele-consult and tele-monitoring with proper room and furniture layout (enhances clear visibility), finish selection (provides true color in tele-consults) and telecom support (creates appropriate power and data location and supply).
- Designing “universal” bedrooms that accommodate ABBAS, general Veteran patient populations and those populations with specific needs such as, bariatric Veterans.



**Principle #5: Mental Health Environments Accommodate a Diverse Range of Veteran Patient Populations and Care Needs**

An environment that accommodates a diverse patient population, meets the needs of varying Veteran/patient groups based on clinical presentation and/or specific population needs and creates spaces focused on safety, privacy and dignity for all Veterans.<sup>2</sup>



**Figure 2.10 Principle #5 Example: Pod configuration creates a smaller inpatient community that improves socialization while also creating designations for specific populations.** Banner Health Behavioral Hospital, Tucson, AZ, (Orcutt Wilson)

Examples of design techniques that accommodate a diverse Veteran population include:

- Incorporating a universal room design enabling every room to accommodate the needs of Veteran/patient populations. This includes, but is not limited to similar room sizes, room layouts and arrangements to support the needs of Veterans/patients of size
- Configuring units in pods and sizing each unit to enable adaptability and flexibility for changes in Veteran populations. (see Figure 2.10) For example, each unit may accommodate separation by clinical diagnosis by positioning cross-corridor doors along the patient hallway, allowing units to grow or contract as required.
- Providing private rooms as required to maximize flexibility for placement of patients with differing needs while also promoting patient dignity

## **2.9 Outcomes**

The anticipated outcomes and expectations of the above Planning and Design Principles include, but are not limited to overall enhanced quality of care, improvements in safety, improved clinical outcomes and staff and patients/Veterans satisfaction.

Some specific anticipated outcomes may include a reduction of adverse events (altercations, harm, assaults by increasing visibility), fewer falls, reduced Veteran stress, minimized recidivism, reduction in the average length of stay, reduced need for medications and decreased staff stress. Other outcomes can include improved Veteran sleep and social interaction.<sup>2</sup>

### **RESEARCH HIGHLIGHTS: STAFF INTERVIEW COMMENTS FROM SITE TOURS AND SURVEYS**

**“Welcoming day/community areas with different areas that patients can relax as well as congregate and socialize. This helps normalize and facilitate peer support and encourages patients not to isolate in their rooms.”**

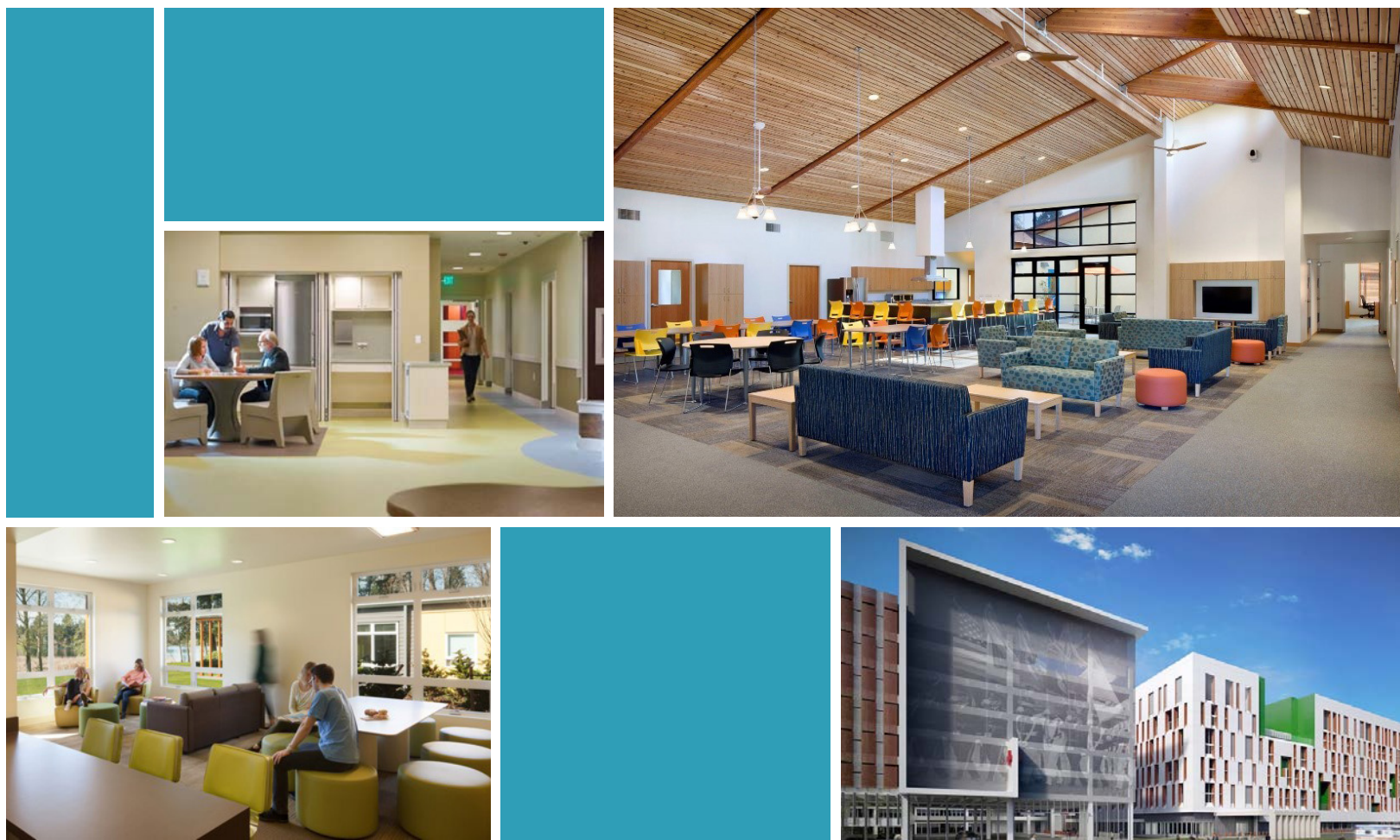
**“Aesthetics are everything when it comes to mental health hospitalization. It’s difficult to start thinking about recovery when you feel enclosed in a tiny space with limited access to sunlight and other things humans need to feel positive.”**

Applicable emerging research connecting design features to positive outcomes is provided in the Design Guide Appendix. Relevant expert opinions collected through field research (site observation, staff interviews and surveys) and lived experiences of staff working in private, state and VA facilities supports the design strategies included in this Design Guide.

Additionally, recent work by several researchers to better understand the relationship between design and positive mental health outcomes is cited and footnoted throughout the Design Guide. Footnote references are included in this Design Guide Appendix, Section 6.7.







## 3.0 PLANNING AND DESIGN



### **3.0 PLANNING AND DESIGN**

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## **3.0 PLANNING AND DESIGN OVERVIEW**

### **3.1 Inpatient Mental Health Units (IPMH)**

#### **3.1.1 Patient Safety and the Environment of Care**

IPMH requires the greatest level of safety and security for patients and staff, due to the nature of the mental health of these patients. In the patient care continuum, the IPMH patient is most vulnerable to self-injury and injury to others. For this reason, the facility design must support a heightened level of safety integration with minimal compromise or detracting from the healing and therapeutic environment.

Additional VA documents and guidance addressing specific safety and security requirements are listed below and in Section 1.4 of this Design Guide.

#### **3.1.2 Security Level Zone Plans and Definitions (IPMH)**

The purpose of Security Level Zone Plan(s) is to coordinate all safety and security requirements with each design team member engaged on the project. During renovation or new construction of an IPMH facility, Security Level Zone Plan(s) shall be prepared to identify security zones within the proposed facility. The Interdisciplinary Team and the Interdisciplinary Safety Inspection Team (ISIT) shall be consulted to identify and locate zones on the plans.

The Security Zone Level Plan(s) provides an illustration of the areas, rooms and spaces contained within each of the three Security Zones. Each Security Zone is defined by the level of staff oversight and observation of patients and design requirements necessary to keep patients and staff safe.

Table 3.1 provides a sample list of rooms/areas and their intended Security Zones.

#### **Security Zone Definitions**

**Security Zone 3** is the highest safety and security level where, at times, patients may be without direct/immediate staff supervision e.g. Patient Bedrooms and Patient Toilet/Shower Rooms. These areas must be free of all high risk hazards such as anchor points, sharp edges and suffocation hazards.

**Security Zone 2** is a moderate safety and security level where patients are observed and/or attended by staff, such as Day Rooms and Patient Lounges. Both Zones 2 & 3 require anti-ligature devices, equipment, furniture and material.

**Security Zone 1** is the lowest safety and security level. All rooms in this zone restrict patient access, providing access only with constant staff supervision. All rooms in this zone may be designed with typical non-anti-ligature type hardware, equipment, furniture and materials due to continuous staff oversight of patients in these locations.

In areas accessible to patients and not continuously observable by staff, ceilings should be solid or of a rigid, locking metal tile. Tamper resistant built-in systems like casework and desk locks should be used. In addition, if patients will be in these areas under supervision, computers, monitors and other desk-top items should be secured – see the MHEOCC criteria for utility rooms and staff offices.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**IPMH Rooms/Spaces by Zone**

COMPARATIVE CATEGORIES	SECURITY ZONE 1	SECURITY ZONE 2	SECURITY ZONE 3
<b>Definition</b>	Lowest Safety and Security Level	Moderate Safety and Security Level	Highest Safety and Security Level
<b>Security/Observation Requirements</b>	Closed and Locked: No Access to Patients	Patients are attended by staff	Patients may be alone or unobserved for less than 15 minutes
<b>Rooms/Spaces Included:</b>			
Nurse/Doctor Workrooms	X		
Team Rooms	X		
Medication Rooms	X		
Staff Offices/Lounges	X		
Spaces off the Unit as Directed	X		
Open Nurse Station (work area)	X		
Interview Rooms		X	
Patient Accessible Support Rooms		X	
Corridors		X	
Dayrooms		X	
Patient Lounge		X	
Recreational Therapy Room		X	
Occupational Therapy Room		X	
Conference/Hearing Room		X	
Intake Room		X	
Common Space w/ Direct Sight Line		X	
Common Areas		X	
Sally Ports			X
Seclusion Room (observed by staff)			X
Patient Bedrooms			X
Patient Toilet/Shower Rooms			X
Quiet Room			X
Toilet/Shower Room(s)			X
Corridors w/o Direct Sight Lines			X
Common Spaces w/o Direct Sight Lines			X

**Table 3.1 Illustrates a sample of rooms to include in each security zone. Additional rooms included in facility programs that do not appear on this list shall be reviewed with the Interdisciplinary Team and the Interdisciplinary Safety Inspection Team (ISIT)**





## **PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

### **Security Zone Specific Requirements**

Examples of design requirements for Zones 2 & 3 include but are not limited to:

- High-security anti-tamper/tamper resistant fasteners and hardware (tamper resistant screws, tapered or lever corridor door latching hardware)
- Anti-ligature and secure design for all wall protrusions, door and door hardware (sloped top and piano hinges), bathroom and shower faucets, water closets, lavatories, shower heads and accessories, air diffusers/returns, light fixtures, thermostats, electrical outlets and manual light switches, adjustable handles, corridor handrail, grab bars, and furnishings such as, shelving and cabinets without doors
- Fire alarm devices, sprinkler heads, speakers, and other notification or control devices must be selected and installed specifically for mental health use
- Resilient covers and/or secured recesses for wall hangings such as paintings, TV's and monitors
- Breakaway devices like robe and towel hooks (to break away with 5 pounds of force)
- Doors, walls, ceilings, and furnishings without anchor points
- Over the door alarms for all Patient Toilet/Shower Room and Patient Bedroom entry doors
- Sloped tops for cabinetry, book cases, furnishings
- Hardened ceilings made of drywall, tectum type systems or concrete designed with the intent to make it difficult for patients to reach and tamper with. Avoid ceiling tiles in these zones.

For additional information, consult specific Technical Considerations in Section 5.0 of this Design Guide.

### **3.1.3 IPMH Mental Health Environment of Care Checklist (MHEOCC)**

In addition to the Safety Zone Plans, the Mental Health Environment of Care Checklist (MHEOCC) was established by VA to help Architects, Planners and Designers, the Interdisciplinary Team, and VHA Clinical Staff to identify and abate environmental risks for suicide and suicide attempts while Veterans are being treated in acute IPMH units. The following delineates the use of the MHEOCC:

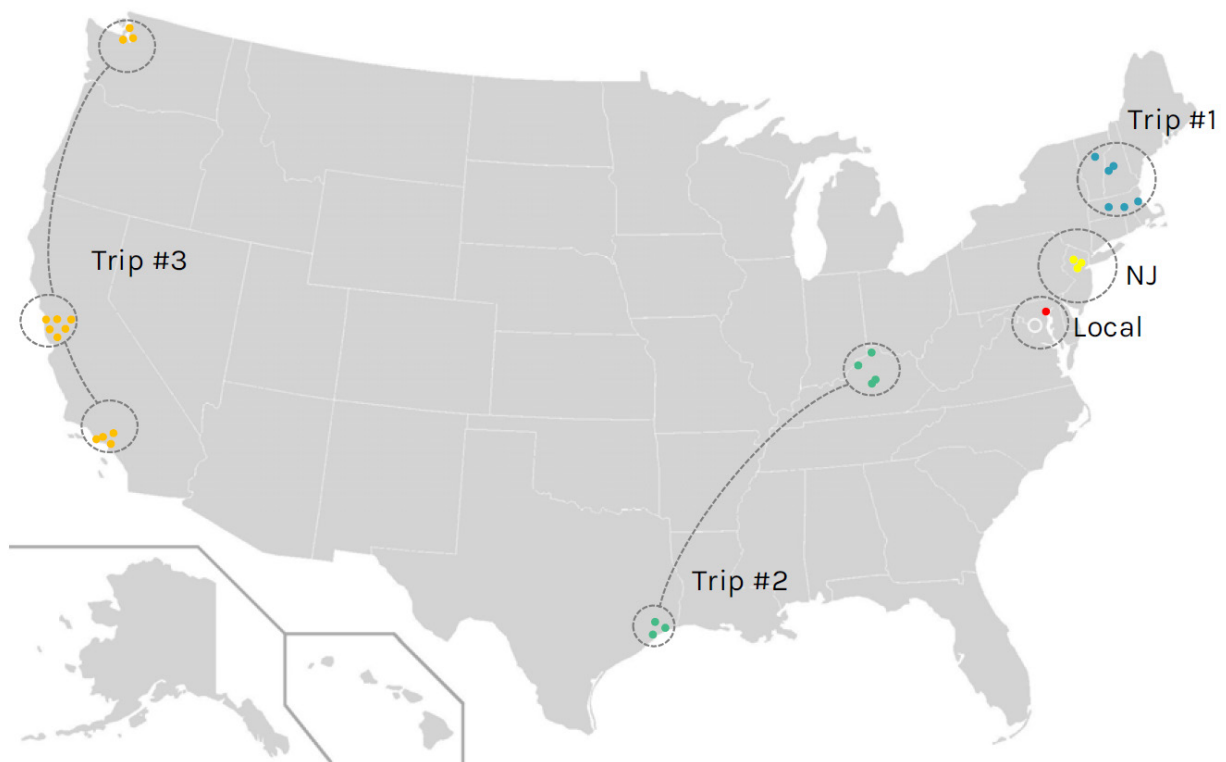
- The MHEOCC is used to assess the safety and security of all IPMH facilities to prevent harm to patients and staff. The elements in the checklist are used to approve each IPMH facility for use and occupancy.
- The latest version of the MHEOCC shall be used to obtain safety and security requirements for each project as it is planned and developed.
- The information in this Design Guide is not a replacement for regulatory requirements or intended to direct how the MHEOCC applies to each project. Architects, Planners and Designers shall use the MHEOCC as their primary guide to provide safe and secure IPMH facilities.

## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 3.1.4 Site Visit Examples of Mental Health Units

In the preparation of this Design Guide, site visits<sup>1</sup> to ten VA and thirteen non-VA IPMH facilities were made to assess and validate planning and design concepts and details in existing facilities for improved outcomes.

The following pages present facilities visited that incorporated design concepts most successful in addressing the Guiding Principles for Planning and Design. A complete profile for each facility visited is included in the Appendix of this Design Guide.



*U.S. Map defining site visit locations.*

## **Sun Behavioral Health Kentucky – Erlanger, Kentucky**

New Construction: 2016

Total Beds: 197

Unit Size: 12-30 Beds

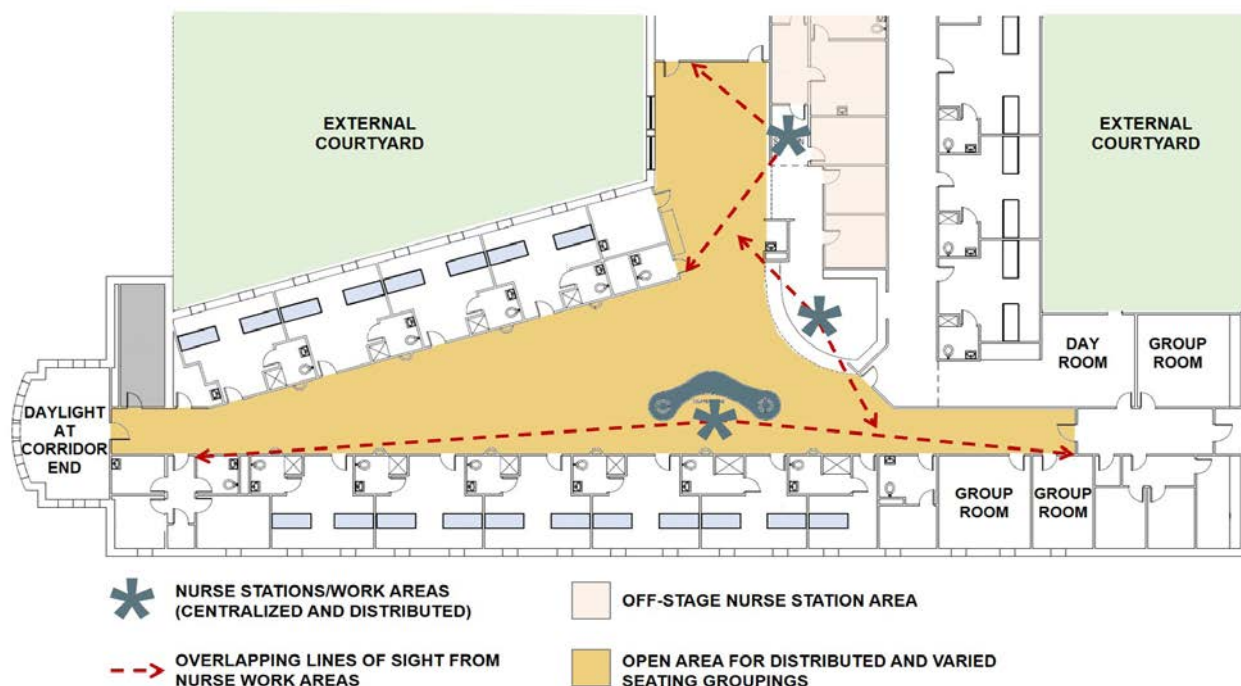
Nurse Station: Open

Outdoor Space: Yes

The floor plan for this IPMH unit incorporates a number of positive design concepts for both the patients and staff. The Nurse Station is open with clear visibility/lines of sight to all Patient Bedroom doors. The main Nurse Station is supported by distributed nurse work areas, providing additional patient visibility and enhancing staff interaction with the Veterans. The open-Nurse Station (on-stage area) is immediately adjacent and accessible to secured off-stage functions. This passive design feature allows for staff safety while providing an open Nurse Station. In addition, the open Nurse Station area has access to natural daylight from windows to the external courtyard.

By angling and widening the corridor at Patient Bedrooms, the corridor becomes a natural useable space, allowing for a variety of social interaction spaces in a fully visible location. The inpatient corridor ends at a Day Room area that allows natural daylight into the corridor and accommodates varied seating groupings.

Visual and physical access to the outdoors is provided, and additional outdoor visibility is provided in the Day Room and group rooms.



**Figure 3.1** The Sun Behavioral Health floor plan above demonstrates the use of geometry to incorporate clear lines of sight, manage sound control, reduce crowding, accommodate distributed and varied seating and provide access to daylight.

## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### VAMC Palo Alto – Palo Alto, California

New Construction: 2012

Total Beds: 60

Unit Size: 20 Beds

Nurse Station: Semi-enclosed (glass screen)

Outdoor Space: Yes

The VAMC Palo Alto IPMH design uses courtyards throughout to bring natural daylight into patient units at multiple locations. This integration of courtyards and the use of skylights creates an engaging, bright and comfortable environment.

Patient Bedrooms are organized along short corridors, creating small pods that can accommodate special populations when necessary or required. The shortened corridors create clear and direct lines of sight from the central Nurse Station.

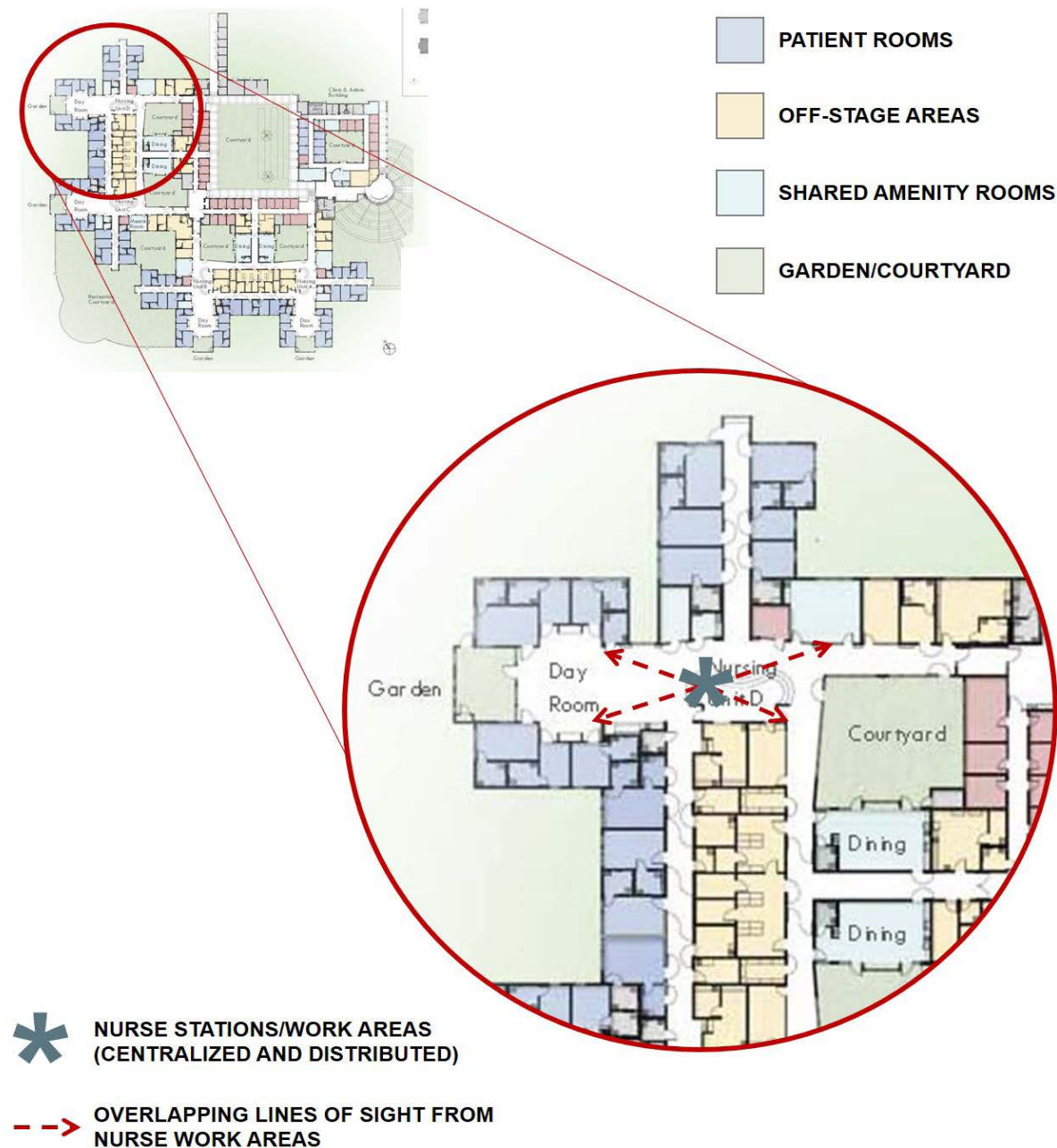
The Nurse Station is semi-enclosed providing security and clear visibility while enhancing staff to patient interactions. Support spaces are shared between Nurse Stations (shown in yellow on Figure 3.3) to limit duplication and improve efficiency.



**Figure 3.2 VAMC Palo Alto: The use of skylights provides additional access to daylight while also serving as way-finding landmarks. Glass partitions at the Nurse Station are used to create a secure area while also being open and inviting to patients (though open desks with no glass partitions are preferred). Off-stage Nurse Station areas (Medication Room, Team Room and Work Room) are immediately accessible behind the Nurse Station desk. These off-stage rooms provide an area of refuge for staff.**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 3.3 VAMC Palo Alto planning and design distributes accessible courtyards and gardens throughout the single-level facility. Patient Bedroom pods are organized around shared courtyards, gardens and Day Rooms to provide access to daylight throughout and to support interaction and a therapeutic environment. Patient pods are grouped around shared amenity areas including Dining Rooms, Group Rooms and Consult Rooms.**

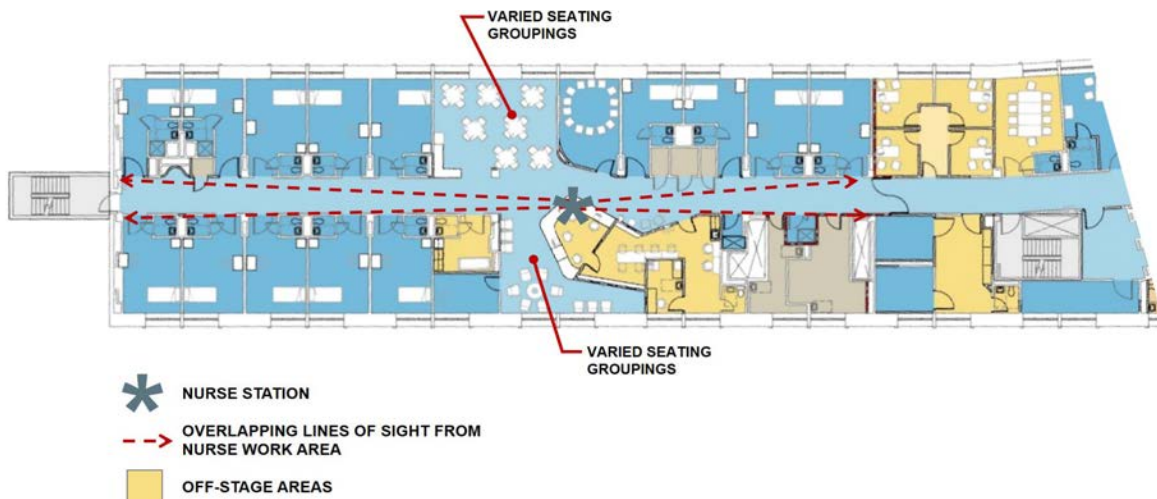
## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### MedStar Harbor Hospital – Baltimore, Maryland

Renovation: 2016  
Total Beds: 40  
Unit Size: 14-26 Beds  
Nurse Station: Open  
Outdoor Space: No

The MedStar Harbor Hospital Mental Health unit demonstrates how to provide access to daylight in public areas and control acoustics in an existing facility renovation. Daylight is introduced into the open seating area adjacent to the Nurses' Station, providing daylight and visibility to the outdoors for both patients and staff. (see Figure 3.5) The Nurse Station is central to the linear plan, providing clear lines of sight to room doors and seating areas, while providing shortened corridor access to Patient Bedrooms that facilitates the control of noise. (see Figure 3.4)

Off-stage staff work areas are located adjacent to and accessible from the open Nurse Station. Additional off-stage areas are located in a secure area of the unit and immediately down the hallway.



**Figure 3.4** This illustration shows one end of the overall unit floor plan with an open Nurse Station in the center and a short corridor of Patient Bedrooms.



**Figure 3.5** The photo shows the view from the corridor looking down the Patient Bedroom hallway. The open Nurse Station is visible on the left. This common area shares a spectacular waterfront view in this renovation project.

## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### VAMC Puget Sound – Seattle, Washington

Renovation: 2015

Total Beds: 25

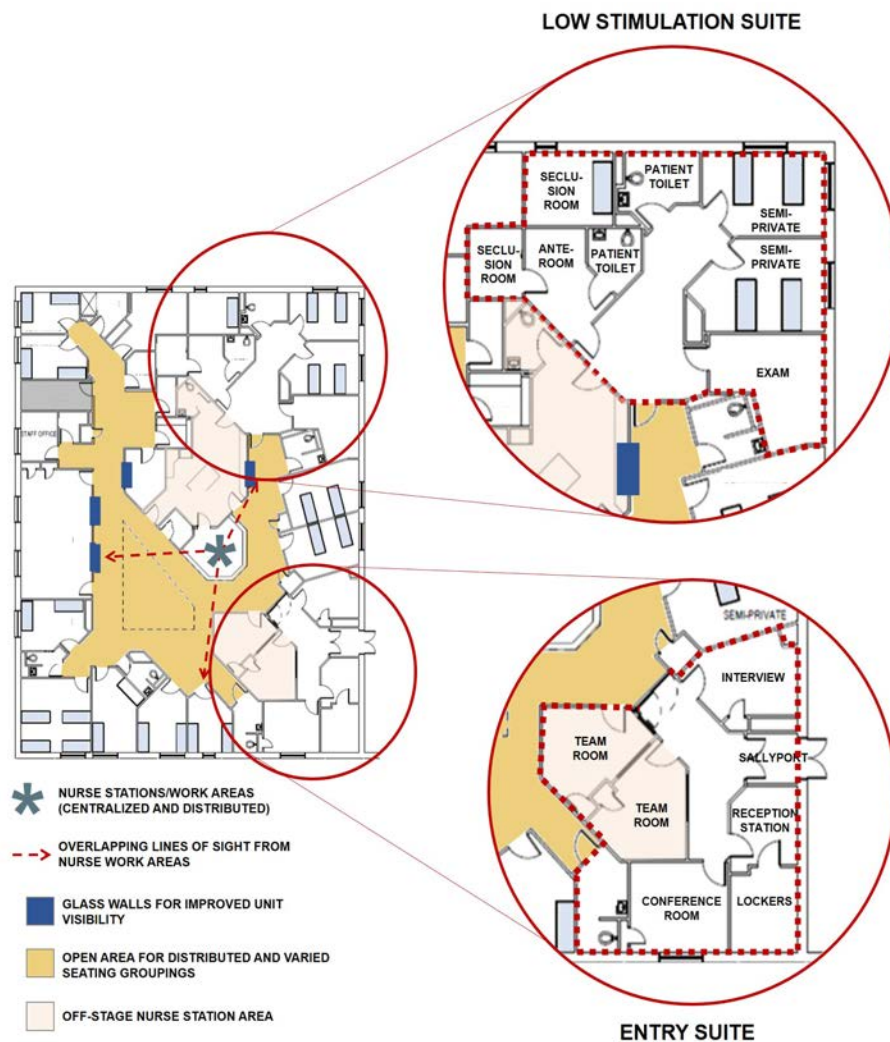
Unit Size: 25 Beds

Nurse Station: Semi-enclosed (glass screen)

Outdoor Space: No

The use of glass walls throughout the plan creates clear lines of sight to most unit locations (see glass walls highlighted in the Figure 3.7 plan). The transparency enhances staff and patient engagement. The use of electrochromatic glass at each Patient Bedroom door allows the patient to have added control of their environment, without compromising staff visibility as needed.

A low-stimulus suite, used for seclusion and as a de-escalation pod, is created on, but separate from the unit. Activity and therapy rooms are located on the unit to provide ease of access for patients. Finishes throughout the unit are considered high-end and create a warm environment.



**Figure 3.6** Open/common areas are visible from the unit Nurse Station. A 'low stimulation' suite creates a separate and quiet environment in a separate pod on the unit. The entry suite includes all rooms that





## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

*support the entry sequence in a co-located, secure area with visibility from the Nurse Station to the entry door.*

### Menninger Clinic – Houston, Texas

New Construction: 2017

Total Beds: 120

Unit Size: 24 Beds

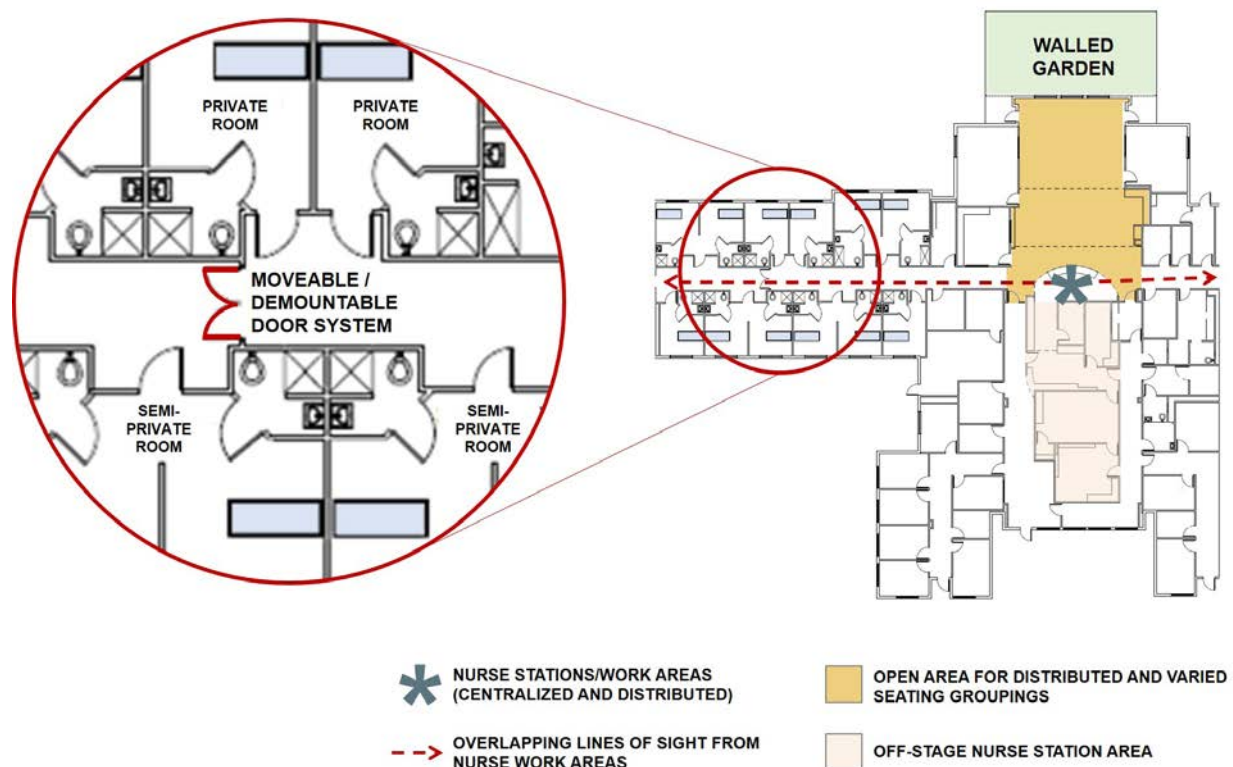
Nurse Station: Open

Outdoor Space: Yes

The Menninger Clinic in Houston is a detached low acuity IPMH facility located on a secure campus serving multiple mental health specialties. Patients can go outside of the facility with staff supervision because the campus is secure. The clinic site features multiple courtyards and extensive landscape as a main therapeutic feature.

The facility provides a residential feel in this low acuity inpatient facility. (see Figure 2.5) The use of warm colors, soft textures, muted tones and abundant access to natural daylight and nature contribute to the residential feel.

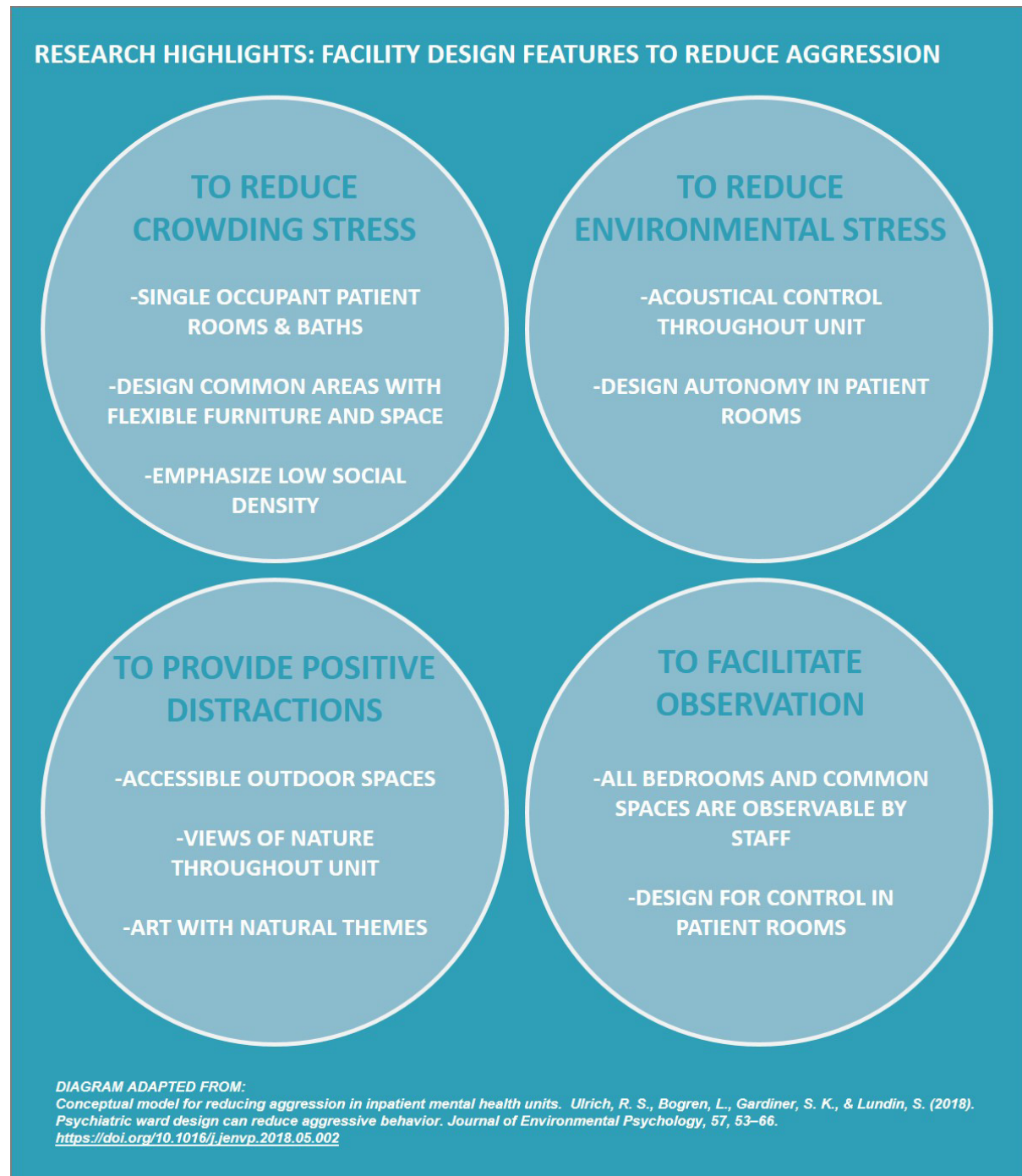
One feature of this facility is the integration of a demountable and movable door system in the patient corridor. This system allows adjacent units to flex the unit size (bed counts) to accommodate varying patient population sizes. (see Figure 3.7)



**Figure 3.7** The Menninger Clinic in Houston utilizes movable/demountable door frames in the corridors, allowing the unit to flex as needed. Safety considerations must be given in planning and design to determine if the use of these door systems is suitable for the anticipated acuity level.

## **Research Supporting Site Visit Findings**

Facility design can have a significant impact on how staff and patients identify and interact with each other and the care environment. Lessons learned from site visits, collected perspectives across multiple disciplines and literature research, like the study referenced below, all provided guidance for optimized facility design for mental health.



**Diagram 3.2 List of 10 design features to impact outcomes in an inpatient mental health unit.**

## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 3.1.5 IPMH Unit Diagrams and Descriptions

Based on the Security Level Zone Plans (Section 3.1.1), all IPMH program components (cross referenced to PG 18-9) must be located to restrict patient access at varying levels and with varied staff oversight requirements. The diagram below graphically represents general program organization by Security Zone and related level of restriction. This diagram includes some but not all program components.

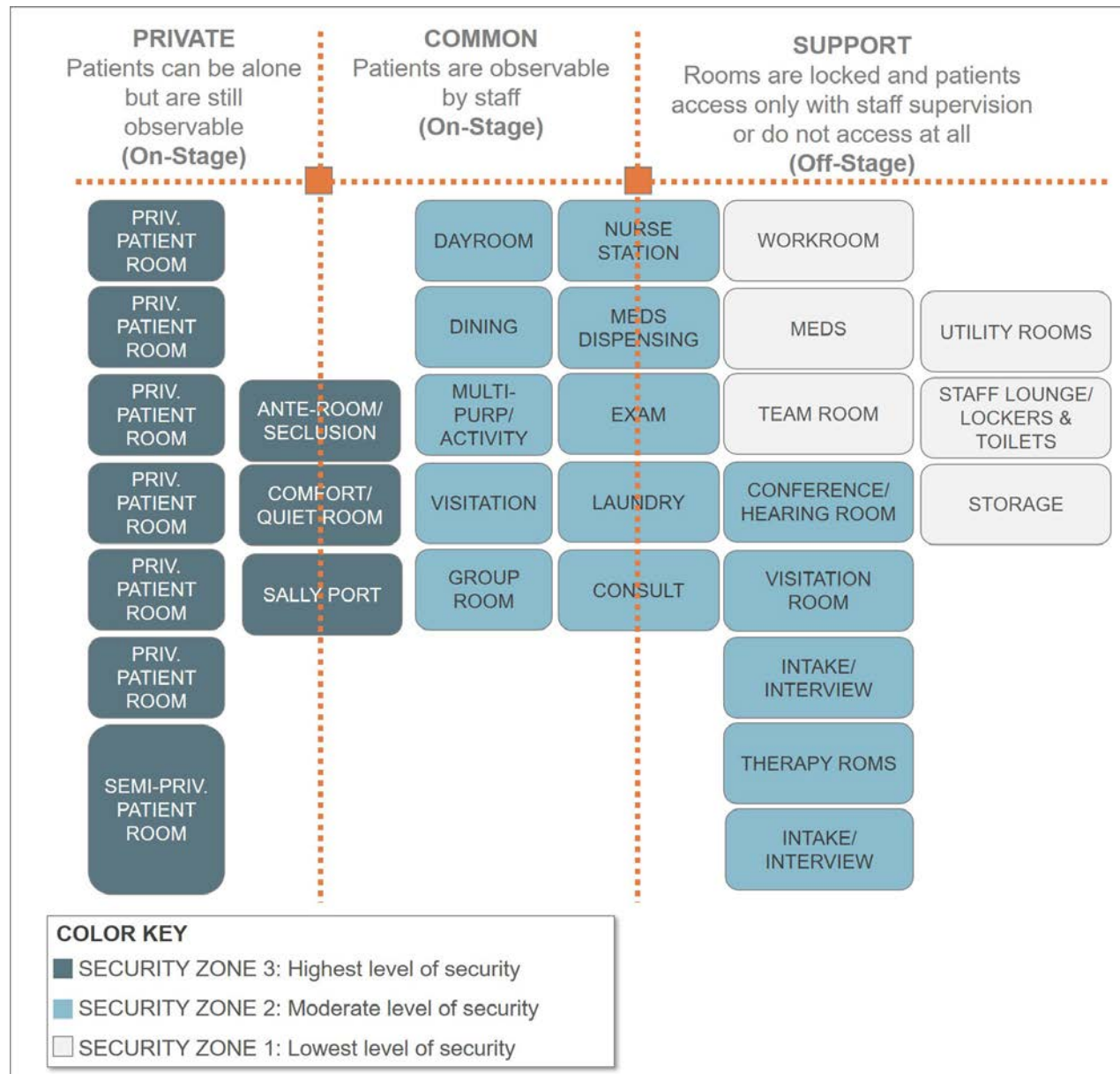
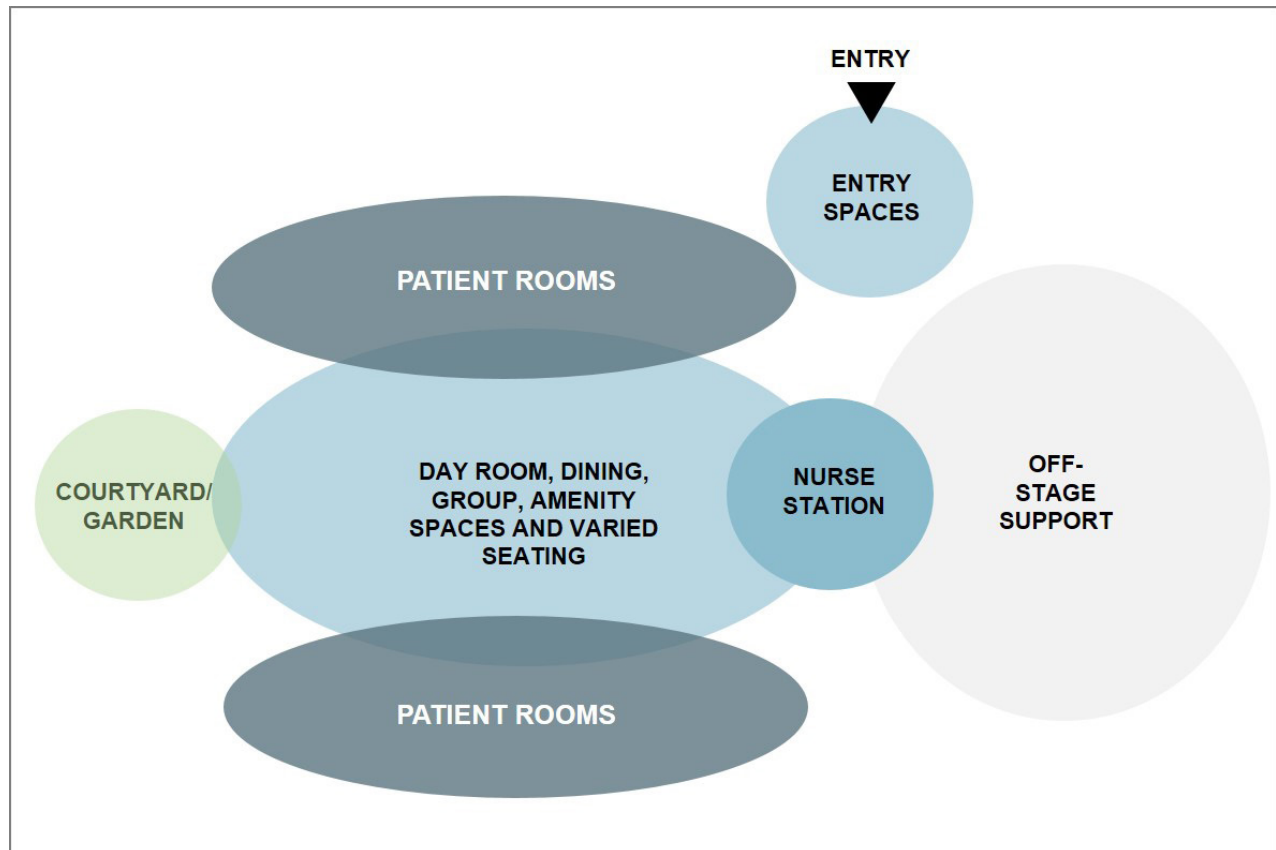


Diagram 3.3 Illustration of Security Zones and levels of patient access.

### **3.1.5.1 Relationship Diagrams**

Diagram 3.4 represents conceptual relationships of the IPMH facility program. The program shall include one point of entry, a centralized nurse station with direct lines of site to all patient care areas, courtyard(s) as a means of providing access to natural daylight and direct staff access points to off-stage support areas.



**Diagram 3.4 Illustration of IPMH program component relationships.**

Multiple configurations of program components can reflect the demonstrated relationships shown in Diagram 3.4. The following pages (See Diagrams 3.5-7) provide three potential plan configuration options. Each diagram incorporates both Planning and Design Guiding Principles for program organization and demonstrates configuration to address Security Zones. Narratives for each design concept include features that can be applied to most configuration options. These features include on-stage/off-stage areas, pod design, outdoor activity areas, open milieu areas, direct lines of site and access to natural daylight. See Diagram 3.10 for additional definition of the entry space

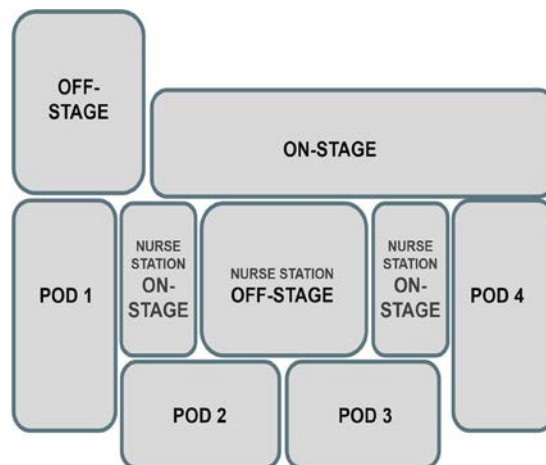
The application of these concept plan relationship diagrams (See Diagrams 3.5-7) may not be directly applicable to an IPMH renovation project. See Section 3.3 for additional definition for renovation projects.



## “Pod Concept” Narrative

Diagram 3.5 demonstrates how an IPMH unit can be divided into “Pods” to allow for separation of specific populations and/or to create small neighborhood communities of rooms.

Each pod includes Patient Bedrooms, and also provides access to a day/quiet room within the pod. Pods are directly visible from the Nurse Station on-stage area (see lines of sight, Diagram 3.6). An on-stage area is defined as space visible to and/or accessible by patients. The pod also provides access to shared amenity spaces like Dining and Group Rooms.



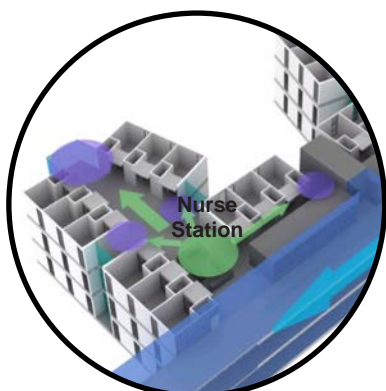
**Diagram 3.5 Pod configuration concept**

### UNIT CHARACTERISTICS

- Locate the open Nurse Station to provide clear visibility to all patient areas
- Organize unit into pods to create communities of patients by patient type or number of beds
- Reduce corridors by opening up the geometry (plan) to accommodate a variety of group seatings.

An off-stage area is defined as space for use by staff only. An area of refuge is created within the off-stage Work/Meds/Staff areas adjacent to each Nurse Station on-stage area. This allows staff to retreat into a protected and secured space while still providing an open Nurse Station area for daily patient/staff interaction.

Cross corridor doors of separation are shown on Diagram 3.6. These physical separations create flexibility to adjust pod sizes as needed. This can create pods specific to a patient type, such as women Veterans or Veterans with medical and/or functional care needs. This also enables doors to be closed during an adverse event.



**POD GROUPING(S)** Each pod of private and/or semi-private rooms, is to have direct observation from the nursing station or staff space. If needed, a pod can be dedicated to special/specific patient populations.

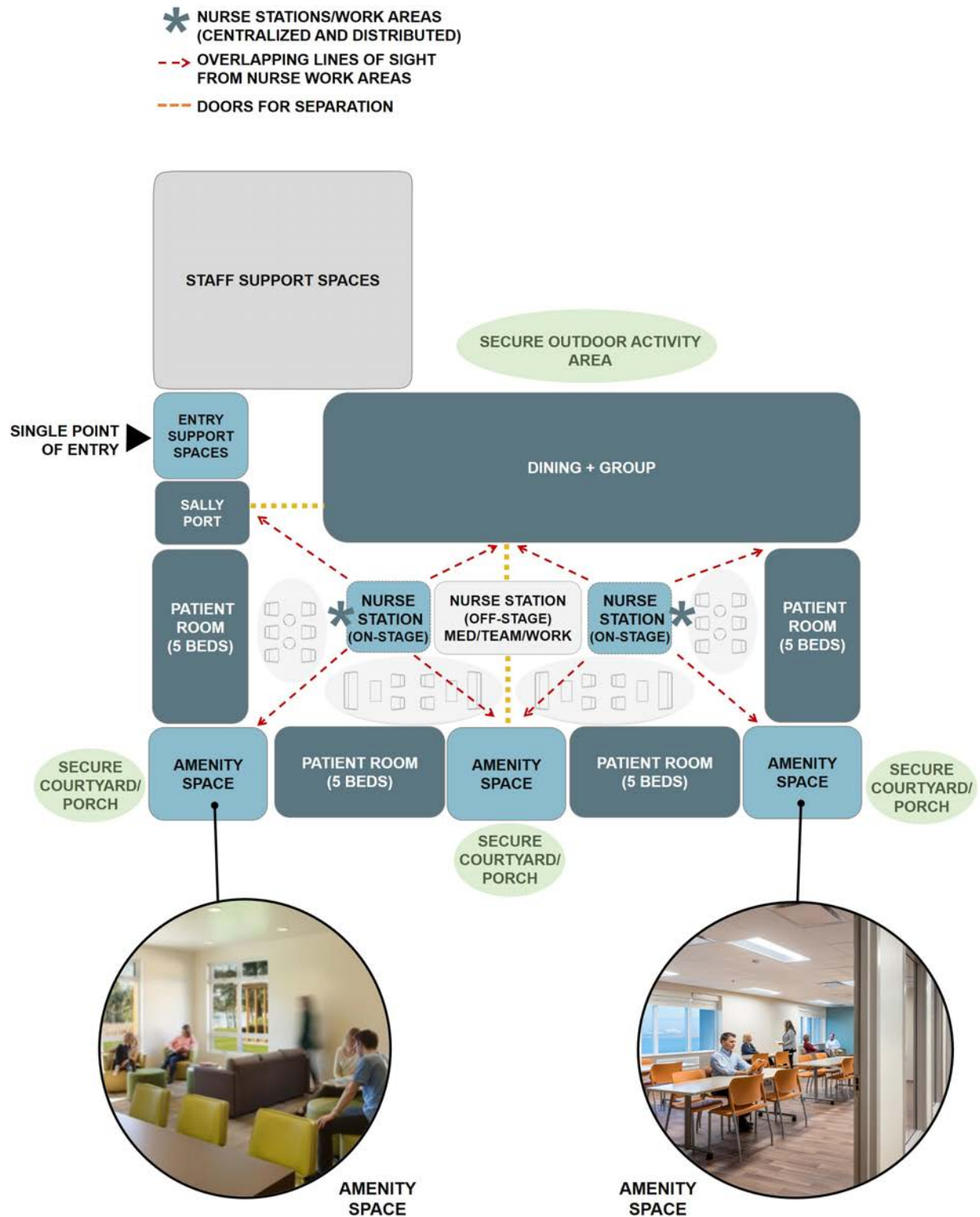


**AMENITY SPACE** The group and Day Rooms can double as Dining Rooms when a Pod is closed from the rest of the unit. Other amenity spaces may include: courtyards, gardens, meeting rooms, Day Rooms, sensory rooms or comfort quiet rooms.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**“Pod Concept” Diagram**



**Diagram 3.6 Sample relationship diagram of the Pod Concept. Pods are supported with multiple Nurse Stations with a shared “off-stage” area. Doors that separate pods can be left open or closed, depending on the patient population needs and size.**



### **Nursing “Open Corridor” Concept Narrative**

An open milieu area is an open space that allows patients and staff to interact and communicate. The nursing open corridor concept provides open milieu areas in expanded circulation areas and wider Patient Bedroom corridors. These areas promote clear visibility by staff and provide patients with choices of spaces to either gather or remain independent. The open and wide corridor configuration supports the concept of reducing crowding and environmentally induced stress.

Amenity spaces identified on the Diagram 3.7 may include the following spaces: courtyards, gardens, meeting rooms, Day Rooms, or comfort quiet rooms. Amenity areas are located at the end of the patient corridor and also adjacent to Dining and Group Multipurpose Rooms. Design of spaces in this location provide the opportunity to bring natural daylight into the patient corridor and also to provide a comfortable space close to, but separate from the immediate Patient Bedroom area. Open milieu areas located near the open Nurse Station provide access to natural daylight for staff.

Outdoor spaces can be in any number of sizes or configurations, based on site constraints and program functions. Ground level courtyards, gardens and other outdoor amenities shall be easily accessible to the unit to mitigate higher levels of staffing. If possible, patient access to outdoor spaces during dining hours or unprogrammed time gives patients further autonomy in a supervised manner. Units located on upper floors can provide roof terraces or screened porches to access light and fresh air. All outdoor spaces shall be of sufficient size to promote active use. Every outdoor area (activity, therapy, porch, courtyard) provided must meet all MHEOCC requirements.

#### **UNIT CHARACTERISTICS**

- Wide and open corridors create open milieu areas for interaction
- Create open common areas to maximize views and access to daylight for patients and staff
- Provide access to outdoors when possible (applies to all concepts)
- Separate on-stage and off stage when possible



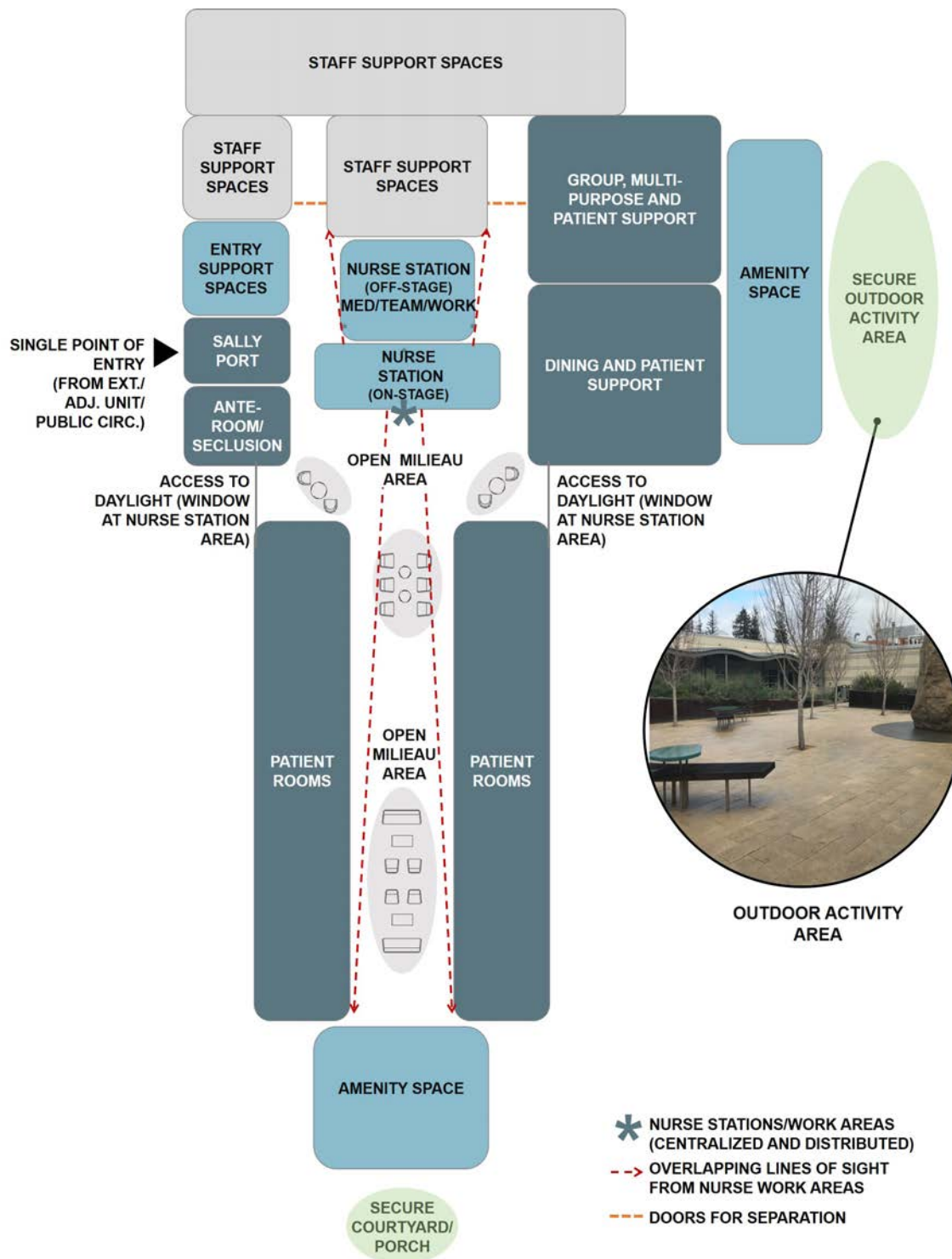
**OPEN MILIEU AREA** A variety of seating provides choice for patients and a level of autonomy. It also promotes staff engagement and positive patient interaction in the open milieu. (See Diagram 3.7)



**OUTDOOR ACTIVITY AREA** Access to nature supports a therapeutic environment for both patients and staff. Outdoor areas shall be located and designed to prevent

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**Nursing “Open Corridor” Concept Diagram**



*Diagram 3.7 Sample relationship diagram of the open corridor concept. The open corridor concept creates areas for distributed and varied seating in the widened Patient Bedroom corridor. The amenity space at the end of the corridor brings natural daylight into the corridor. Natural daylight is also accessible at the Nurse Station by providing windows in the adjacent open milieu area. Outdoor activity areas can be located in multiple locations in this concept.*

## **“Interrupted Corridor” Renovation Concept Narrative**

Many facility renovation projects are faced with existing conditions of long yet narrow corridors. Reducing the length of double-loaded corridors allows better visual management of the milieu by staff. It also provides more flexibility to create groupings of Patient Bedrooms for specific populations within a separate area,

Corridors can be shortened by locating program elements, like the Nurses’ Station and/or open milieu areas, along or central to the corridor. This configuration enables open spaces for activities and varied seating arrangements for patients in the cross-corridor areas around the Nurse Station.

### **UNIT CHARACTERISTICS**

- Locate Nurses’ Station to provide clear lines of site to all patient areas
- Create open public areas to maximize access to natural daylight
- Provide access to outdoors when possible

Maintaining direct line of sight along corridors is further improved by an interrupted corridor approach. Allowing the open Nurse Station to project into a corridor, as shown in Diagram 3.8, provides direct staff visibility to all Patient Bedroom doors. Passive observation is a key function of a Nurse Station and an open station concept allows for positive patient and staff interaction. Safety issues are mitigated by creating access to the closed portion of the Nurse Station for staff safety and security.

In addition to improved lines of sight, the interrupted corridor concept also provides an open area to bring natural daylight into the corridor. Natural light has been proven to have significant therapeutic benefits for patients and is stress relieving for staff. Renovated facilities shall strive to maximize access to natural daylight throughout the unit. Diffused and indirect lighting strategies should also be coupled with natural light to avoid glare issues.

Where possible with existing conditions, provide a screened porch or outdoor courtyard.



**NATURAL LIGHT** Allowing as much natural light into the interior of the unit as possible is preferred. Glass along corridors, through staff spaces or even with exterior access, such as an enclosed porch or rooftop terrace is recommended.

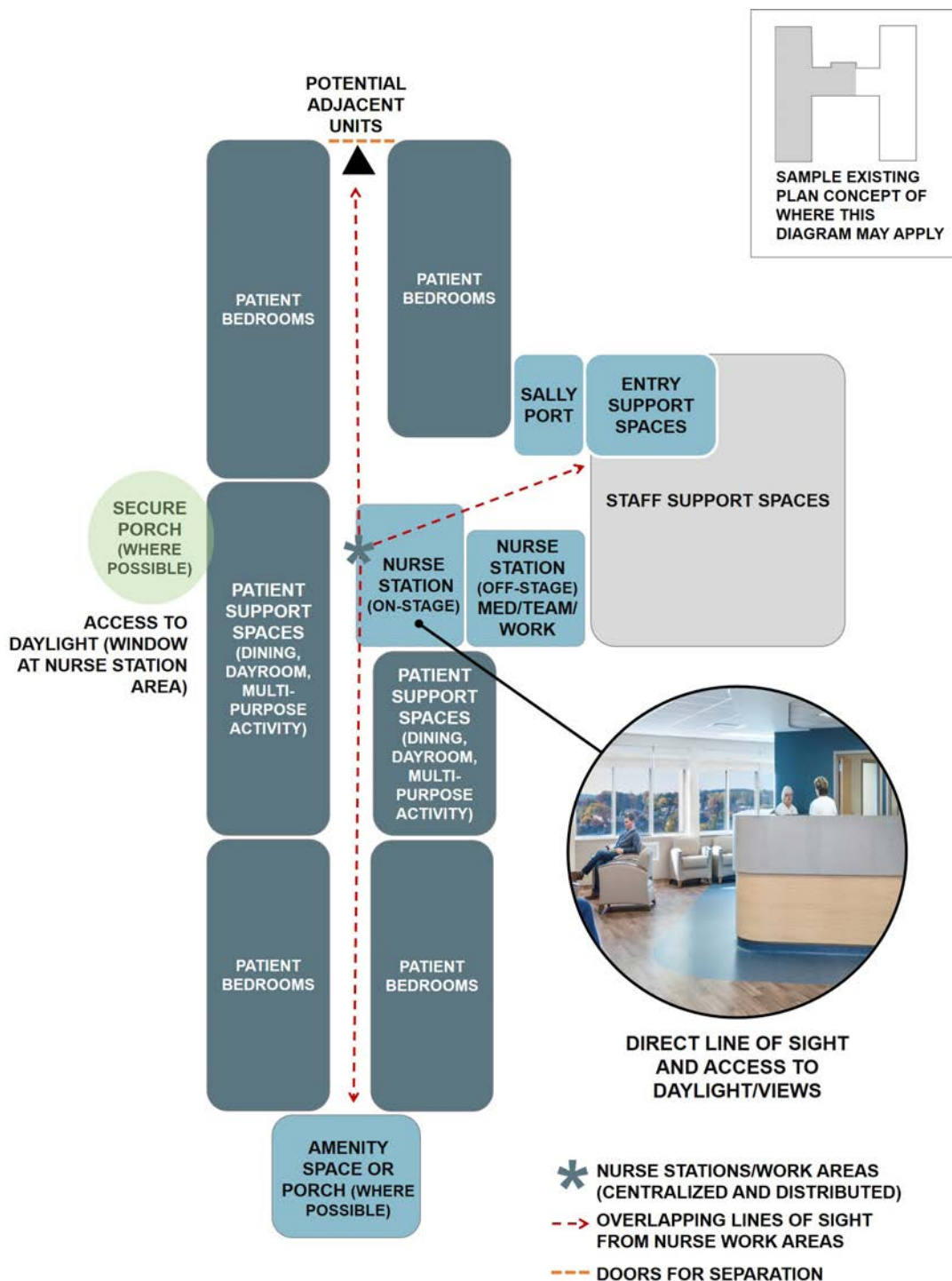


**DIRECT LINE OF SIGHT** Visibility of patient spaces is paramount. Configuring the Nurses’ Station for improved lines of sight can be achieved in a renovation.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**“Interrupted Corridor” Renovation Concept Diagram**



*Diagram 3.8 Sample relationship diagram of the interrupted corridor concept and an option for renovation of existing facilities. This concept locates support areas adjacent to the Nurse Station, providing visual access to views and access to daylight. The amenity space or porch at the end of the corridor, provides natural daylight at the corridor end.*

## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 3.1.5.2 Unit Size

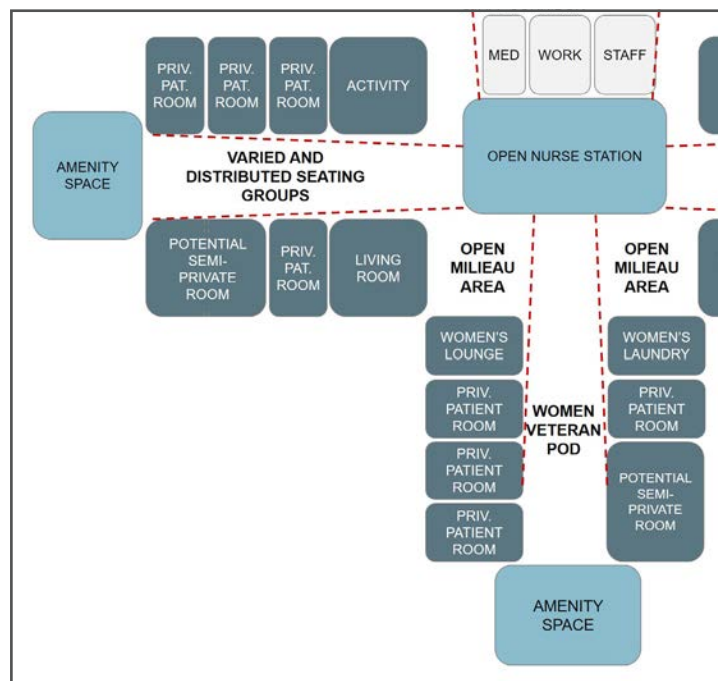
The IPMH unit sizes are defined by the number of beds. The unit size proposed and recommended by VHA and illustrated in this Design Guide are 8, 12, 16 and 20 beds per unit. The number of units in a facility are set by the specific project need and the unit size must match the clinical and therapeutic needs of both the staff and patients.

#### RESEARCH HIGHLIGHTS

Emerging research suggests that crowding is significantly associated with violent incidents, and in particular with verbal aggression.<sup>2</sup>

The unit may encounter management and therapy difficulties when the number of patients exceed recommended levels as defined in Diagram 2.1. The staffing ratio is critical to the success of the unit. Planners, designers and the facility determine the unit size (beds per unit).

Units can best be designed in wings or pods. Each wing provides a smaller community environment for patients, reduces corridor length and improves better visibility of the unit by staff when centrally located. (see Diagram 3.9)



**Diagram 3.9** The diagram represents how the IPMH facility can be designed in wings. It is possible, in this configuration, to designate a wing of rooms to a specific population (women Veterans in this example).

*The shorter corridor lengths improve staff visibility.*

#### SITE VISIT OBSERVATIONS

Unit sizes at visited facilities varied widely, from small 8-person units to those with more than 30 beds. In all cases, unit size determined the overall staffing numbers, with larger unit sizes noted to be more difficult to manage.

## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 3.1.5.3 Room Occupancy<sup>2,3</sup>

Room occupancy, in this Design Guide, refers to the ratio of private to semi-private (2 people/room) Patient Bedrooms. Though some patients prefer semi-private rooms and some clinical benefit may be realized in double occupancy rooms, private rooms are provided to promote patient respect and dignity and to manage issues patients may have with individual sleeping or toilet habits. The intent is to balance the number of semi-private rooms. It is recommended, in new construction, that a minimum of fifty percent (50%) of all Patient Bedrooms are private. Semi-private rooms in new construction shall limit room occupancy to two patients per room. Multi-Patient Bedrooms (rooms accommodating more than two patients per room) in new construction and renovation projects shall not be provided.

Semi-private rooms, two patients per room, can support staff efficiency in cases where direct one-to-one supervision is required for multiple patients (example: C-pap patients).



**Figure 3.8** Private rooms are located closest to the Nurse Station for easy accessibility, while semi-private rooms are located at the end of the unit. Off-stage and on-stage areas are completely separated in this plan, and large windows and the end of the patient corridors provide ample access to natural daylight and views. VA Roseburg Acute Psychiatric Center, Oregon (OhPD)

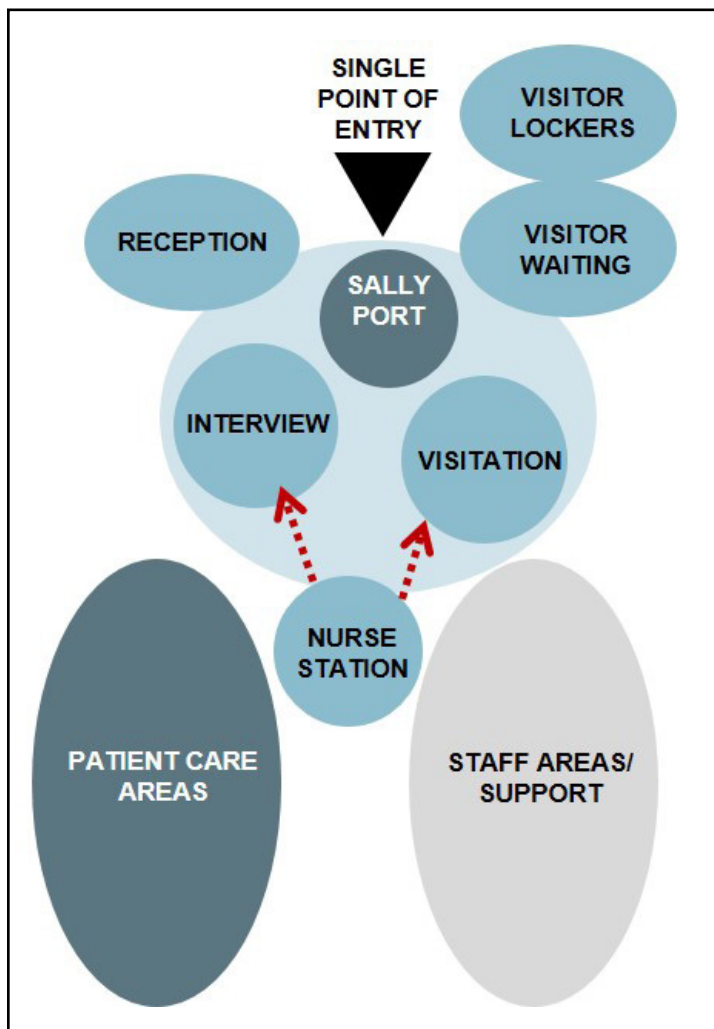
#### SITE VISIT OBSERVATIONS

Staff said they preferred private rooms because they were challenged to properly match patients that could live in the same room, control infections and accommodate special populations when semi-private rooms were provided as the norm.



### **3.1.5.4 Inpatient Entrance**

The entry to an IPMH facility must follow a specific sequence to avoid patient elopement and provide staff visibility and oversight for safety. The suggested entry sequence is represented in the Diagram 3.10. There is a single point of access that is locked 24/7. Direct visual access by staff from the Nurse Station to the Sally Port entry must be provided.



A Sally Port (secure entry vestibule) is designed with two sets of synchronized doors. Door synchronization is required to ensure only one set of doors may open at a given time. The sets of doors are to prevent patient elopement. The Sally Port should be clear of equipment and sized to accommodate patients transferred by stretcher or gurney. The Sally Port size supports patient transfers without compromising the door synchronization.

The Sally Port has two doors, and no other spaces shall open into it. Visitor lockers and waiting are located outside the Sally Port and in direct view of reception. Lockers are provided for visitors to secure items not allowed on the unit. Visitors remain in waiting until they are escorted through the Sally Port. They then remain in the visitation room and the patient is brought to them by staff.

The Sally Port entry is the single access point for all visitors, staff and supplies.

**Diagram 3.10 Entry sequence diagram demonstrating lines of sight to entry program components.**

#### **SITE VISIT OBSERVATIONS**

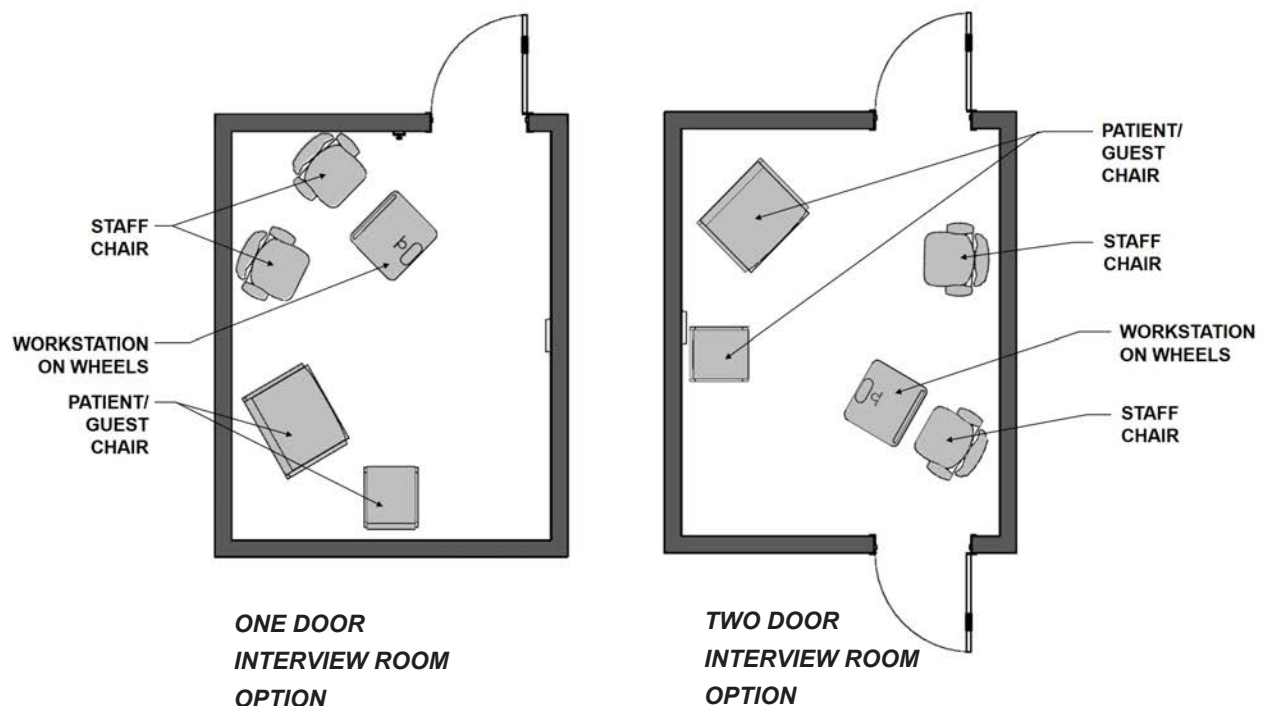
The sizes and layouts of IPMH unit Sally Ports varied greatly from one site to another. All Sally Ports were two-door passageways with each door synchronized, to open only after the other is closed and locked. The VA standard in this Design Guide is for synchronized two-door Sally Ports only.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

New patients arriving to the facility are taken through the Sally Port and into the interview room. The interview room is where initial paperwork for patient admission takes place. Due to possible patient stress upon admission, configuration and furniture layouts in the interview room must be considered. This room will contain minimal furniture for a patient and family/visitor to sit, and a workstation on wheels for staff. The room furniture layout shall provide a clear escape path for staff. Figure 3.9 below demonstrates suggested furniture layouts based on a one door and two door room design. In each option, the workstation is placed to provide a clear path of escape for staff.

If only one door is provided for entry into the interview room, the furniture is arranged to place the staff workstation closest to the door, allowing for immediate exiting. If two doors are provided, the staff workstation is configured between the two doors, allowing the staff access to either door for immediate exiting.



**Figure 3.9 Interview room furniture layouts will change if two doors are provided. The layouts are specifically for improved staff safety.**

## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

Safety and controlled access at all IPMH facility entry points is imperative. Intercoms and security cameras should be located at the entrance for after hours when reception is not staffed, allowing visitors to communicate with the Nurses' Station. Electronic access should be provided at the Sally Port which serves as the single entry/access point for patients, visitors and staff.

### MHEOCC: INPATIENT ENTRANCE

- Sally Port provided at the entrance of the unit for staff, visitors and patients
- A "panic button" is provided in the Sally Port that rings the Nurses' Station to communicate emergency situations
- Use doors with windows in the Sally Port to provide visibility
- For new units, all entrances and exits to the unit are to be in line of sight of the Nurses' Station
- Single points of entry are provided to protect against patient elopement

Reference MHEOCC for complete criteria

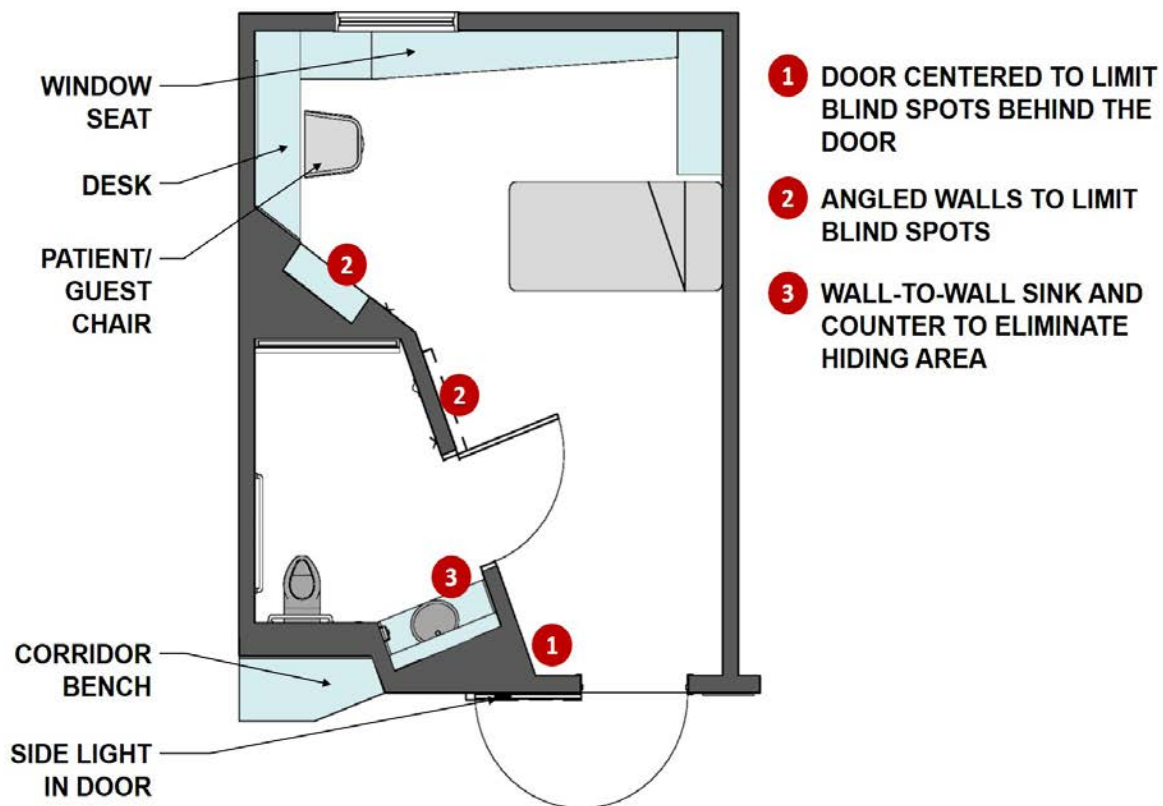


**Figure 3.10** Illustrates line of sight where staff can observe visitors and residents or patients approaching the reception area. Telecare Federal Way, WA (BCRA)

### **3.1.5.5 Patient Bedroom**

The main purpose of the patient bedroom is to give the Veteran a safe and secure place to sleep. While the bedroom can be used for the delivery of private care for the Veteran, it is not intended to provide a place to retreat, meet, conduct activities, or congregate. The Patient Bedroom<sup>4</sup> is a private area for patients but must be arranged to provide clear visibility for staff to observe the patients in their rooms. Patient Bedrooms and Toilet/Shower Rooms should not have blind spots<sup>5</sup>. Blind spots provide an area that would allow the Veterans a place to barricade themselves from staff access and locations and means to consider or attempt suicide. The layout of the bedroom and Patient Toilet/Shower Room can contribute to visibility and safety.

Figure 3.11 is a patient bedroom plan that demonstrates a configuration to minimize blind spots. The entry door placement and angled Patient Toilet/Shower Room wall eliminate or limit blind spots near the entry of the room. The angled wall in the patient storage area also limits the patient from hiding in this area. The Patient Toilet/Shower Room door placement, combined with the sink location, eliminates the blind spot behind the Patient Toilet/Shower Room entry.



**Figure 3.11 Provide clear lines of sight to the Patient Toilet/Shower to enhance staff observation without disturbing the patient. Swing doors are used and should swing out to prevent barricading.**

The patient window seat, desk and bedside table shown in Figure 3.11 are intended to be a continuous solid surface and constructed with materials that provide durability and meet the MHEOCC requirements.

## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

Design features in the Patient Bedroom shall promote control and autonomy. Spaces for storage of personal belongings shall be provided. Features can include patient-control of lighting levels, opportunities for space personalization (shelves and desk) and a window seat as shown in Figure 3.11. Windows with 7/16-inch laminated safety glazing for high-security areas with integral blinds or material window coverings with breakaway hardware shall be provided to allow patient control of daylight into the room. Windows in IPMH areas shall not be operable.

Windows and window coverings used on IPMH Patient Bedrooms should provide resistance to, or restriction of:

- escape attempts
- tampering with, or disabling locking devices
- laceration or self-harm by cutting
- pica behavior (i.e., ingestion of components, materials, or coatings)
- abrasion, prying, or cutting of frame materials
- weaponization of parts that could be removed from window assemblies
- ligature points

### MHEOCC: PATIENT BEDROOM

- All mounted fixtures are designed to prevent attachment of devices that could be used to inflict self-harm
- If required for specific populations, locks on Patient Bedrooms are to be free of anchor points and able to be opened by staff
- All Patient Bedroom mirrors shall be shatter-resistant and not able to be used as anchor point
- All beds and furniture shall be free of anchor points
- If nurse call systems are used, they shall provide no anchor points or used for self-harm

Reference MHEOCC for complete criteria

If IPMH renovation projects are providing internal blinds or shades at existing windows, specify a secondary internal polycarbonate window in an aluminum or steel frame that is hinged and lockable and meets the above requirements. An integral blind or shade with electric shade control or a cordless solution that meets requirements for anti-ligature can also be used.

The room template in this Design Guide accommodates patients of size and meets ADA clearances. One semi-private room is the same footprint and size as two private rooms.

### SITE VISIT OBSERVATIONS

Most Patient Toilet/Shower Rooms had accessible bathrooms located near the entry door to the Patient Bedroom. Facilities with Toilet/Shower Rooms near the front of the patient bedrooms were thought to help eliminate blind spots in the Patient Bedroom. Patients barricading their Patient Bedroom and toilet/shower doors was also a concern. Many new or recently renovated facilities chose to remove Toilet/Shower Room doors to minimize the chances of barricading, self-harm and risks of harm to staff.





### **3.1.5.6 Patient Toilet/Shower**

The Patient Toilet/Shower in the Patient Bedroom requires special attention to achieve patient safety. The Patient Toilet/Shower potentially creates a blind spot in the Patient Bedroom which can be mitigated by placing the Patient Toilet/Shower Room at the front of the Patient Bedroom. In addition, the configuration of the Patient Toilet/Shower Room can help reduce hiding spaces for the patient. For example, in the Patient Toilet/Shower Room layout, the sink and door opening locations are coordinated to minimize spaces to hide. In addition, doors that open out reduce the opportunity for patient barricading in the Patient Toilet/Shower. Soft suicide prevention doors can be used in the Patient Toilet/Shower Room. (see Section 4.3.3.1 for additional soft suicide prevention door information)

The Patient Toilet/Shower Room design must address issues of water entering into the Patient Bedroom area and Patient Toilet/Shower Room drainage to reduce risk of patient falls. The shower head is placed to project water away from the sliding door and to not spray into the “dryer” part of the room. A continuous drain and overall room floor slope are shown in the Patient Bedroom template.

Anti-ligature/anchor free design is required for all wall protrusions such as, door hardware, sink and shower controls, water closets, sink installations, shower heads and accessories, and grab bars. To limit anchor points, sink counters should extend from wall to wall.

When possible, provide an alcove adjacent to the sink for the patient to place toiletries. Finish materials must be durable. Epoxy floor finishes and a combination of solid surface and epoxy wall finishes are recommended.

#### **MHEOCC: PATIENT TOILET/SHOWER**

- All fixtures must be securely mounted to the ceiling, floor or wall by inaccessible fasteners or tamper resistant fasteners (or equivalent)
- Light fixtures shall have non-breakable lenses
- GFCI circuits should be used in all wet areas
- Call buttons (when provided) should be accessible to someone who has fallen on the floor and be anti-ligature with break-away bead cords
- Plumbing fixtures should be enclosed to minimize risks. Bathroom fixtures shall be shatterproof and toilets shall have integral seats
- Shower curtains hung from ceiling mounted tracks with curtains designed to tear away when a static load of 5 pounds or more is applied. Curtains should be breathable to prevent suffocation.
- SER or sliding doors should be used

Reference MHEOCC for complete criteria



#### **SITE VISIT OBSERVATIONS**

Toilet/Shower Room sizes and layouts varied by facility. Some arrangements created issues with accessibility, shower drainage and/or blind spots. The Toilet/Shower Room design was one of greatest concerns of staff members who felt special design consideration should always be given to the shower drain location and Toilet/Shower Room door design to mitigate deliberate patient barricading.

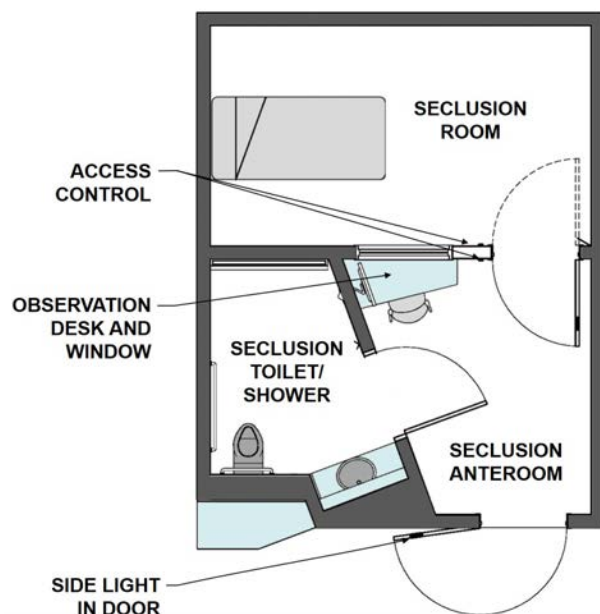
**Figure 3.12 Example of material and equipment selections appropriate for VA IPMH bathroom settings. ClearVista Treatment and Support Center, OH (Andrews Architects)**





### **3.1.5.7 Seclusion Room Suite**

The Seclusion Room is a dedicated suite of rooms designed to reduce the risk of patient self-harm, harm to others or elopement caused by aggression. The suite includes an anteroom that serves as an elopement deterrent, a Patient Toilet/Shower and the Seclusion Room with minimal furnishings. (see Figure 3.14) The anteroom is an area with a window into the Seclusion Room from which to monitor patients. The Patient Toilet/Shower should be accessed only from the ante room allowing staff to control the patient movement. The suite design shall include anti-ligature features, devoid of any anchor points throughout, and shock-resistant flooring except in the Patient Toilet/Shower (sheet vinyl, linoleum, rubber flooring is preferred). The Seclusion Room should have one door into the anteroom and the Seclusion Room anteroom has one door to the corridor, providing for flexible use of the room as a quiet room when not being used for seclusion. Entries to the ante-room and Seclusion Room should be clearly visible from the Nurse Station. The use of cameras for patient monitoring should be considered when designing the suite.



**Figure 3.13** A well designed Seclusion Room is built of robust materials and provides a safe environment for patients. Galway Hospital, Galway, Ireland (MCA Architects)

#### **MHEOCC: SECLUSION ROOM**

- Flooring in Seclusion Rooms should be seamless or have heat welded seams. Flooring should mitigate harm from falling
- Walls shall be constructed of double layer gypsum wall board or concrete masonry unit construction
- Ceilings and walls must be solid surface with no projections, no access above ceiling or behind walls. Light fixtures must be fully recessed, tamper resistant and break-resistant
- All operable devices (such as thermostat and light switches) should be outside the Seclusion Room. Light switches must be on a dimmer switch
- All glazing accessible to patients shall be 7/16-inch laminated safety glazing for high-security areas. Provide 5/16- inch laminated safety glazing for general areas
- Provide only a bed that is bolted to the floor or a mattress

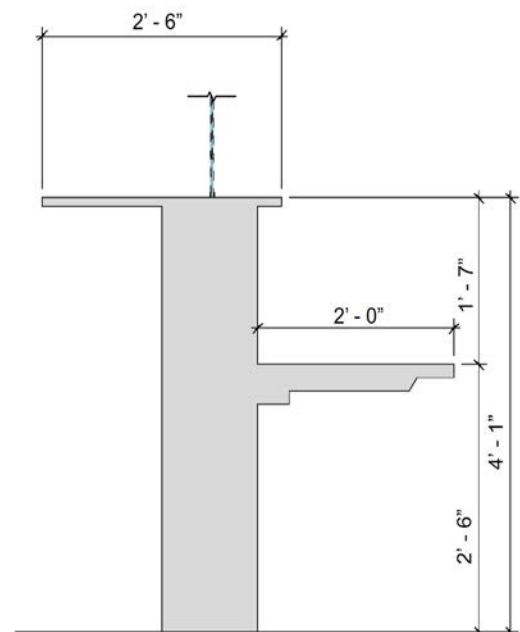
Reference MHEOCC for complete criteria

#### **SITE VISIT OBSERVATIONS**

Passive viewing is preferred, though many facilities utilized cameras and monitors for staff observations when windows were not in place. The preference of on-site staff was to provide a high window in the walls or doors of rooms where staff observations were required.

### **3.1.5.8 Nurse Station**

The Nurse Station is a centrally located staff area for patient observation, patient engagement, team collaboration, staff workspace and medication dispensing. The Nurse Station includes two distinct areas. The first area, the 'Open Station', is an on-stage area (see Figure 3.14) that refers to the workspace/desk area that is openly visible and approachable for the patients. An open Nurses' Station on-stage area is provided to encourage patient/staff interaction and engagement. The open Nurse Station concept requires the desk to be tall and deep to limit patients from jumping over the desk, but not fully enclosed with high glass partitions above the work surface. (see Figure 3.16) A panic button and a location for monitoring of security cameras shall be provided at the open Nurses' Station staff work area.



**Figure 3.14** An open Nurse Station must be designed with height and depth to deter patients from jumping and/or climbing over, as demonstrated in the detail above . Everett, WA (Boulder Assoc.)

**Figure 3.15** Nurse Station Desk Detail: A tall and deep desk helps to protect staff in an open Nurse Station. An impact-resistant glass barrier is also an option. The glass height may vary.

#### **SITE VISIT OBSERVATIONS**

Open Nurse Station desk areas, with no glass barriers, were preferred by staff in most of the IPMH units visited. Many glass partitioned Nurse Stations lacked adequate space for staff to work. Partitioned Nurse Stations were also noted to contribute to patient frustrations, agitation, and acting out. Several open Nurse Station desks were modified with extra tall and deep counters, short glass barriers, or other measures to dissuade patients from climbing or jumping over the counters and into the Nurse Stations.



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The second area, the 'Closed Nurse Station', is the "off-stage" area, referring to the rooms behind the Nurses' Station desk including the Team Room, Nurse Work and Medication Room. These areas are all accessible from the Nurses' Station desk and should have windows/glass partitions for visibility to the unit. It is preferable that each room have a secondary egress into one of the adjacent rooms to allow the staff an area for refuge.

The Team Room is accessible to the Nurses' Station and also to the patient corridor. This room is a flexible space to be used for team huddles and interdisciplinary team meetings.

The Nurse Workroom provides staff with a quiet and private area to work, chart and prepare documentation for patient care. This area shall have staff workstations, supply storage and coffee amenity options. (see Figure 3.16)

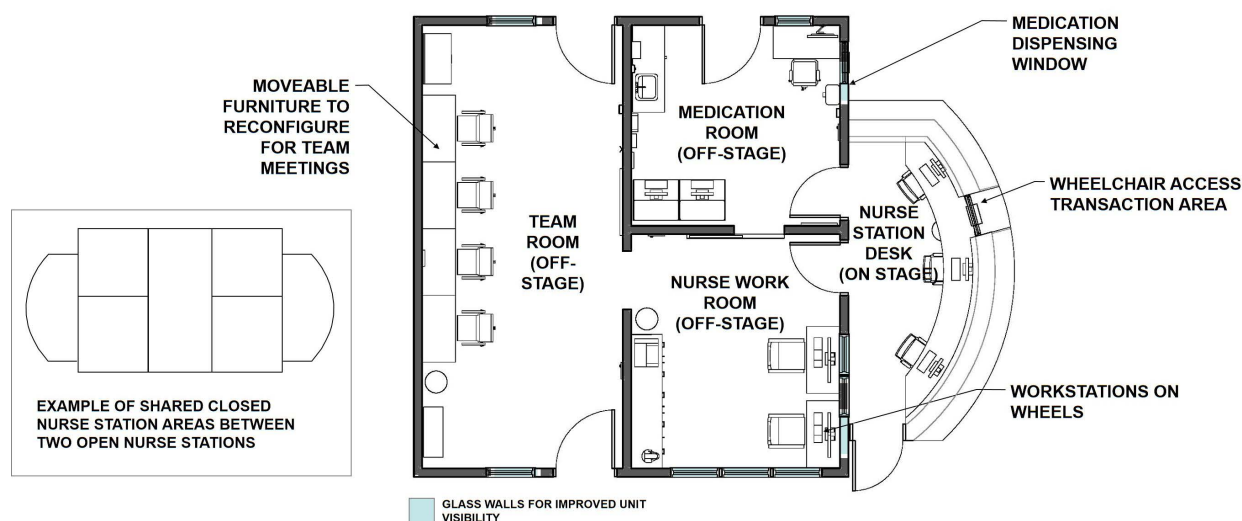
The Medication Room should provide a secured window to the patient corridor for medication distribution. In addition, this room shall include a hand washing sink and a computer allowing the staff to pull up patient information. The room will be equipped with a medication distribution system allowing staff to monitor medication dosage and restocking.

Placing the closed Nurse Station<sup>5</sup> areas between two open Nurse Station areas can provide flexibility to share resources between units. (see inset Figure 3.16)

### MHEOCC: NURSE STATION

- Walls around nursing stations should be substantial (i.e. not modular office furniture) and fixed in place. Doors should be capable of being locked.
- Counters should be tall and wide, if open above, to prevent climbing by patients
- Objects in the Nurse Station must be kept out of reach of the patients, particularly pass through openings or near counters
- Provide panic alarms for staff use in Nurse Stations along with breakaway lanyard alarms

Reference MHEOCC for complete criteria



**Figure 3.16 The Nurse Station, open (on-stage) and closed (off-stage), room configuration and door locations provide staff with areas of refuge. Windows provide visibility to corridors outside of the enclosed rooms. The open Nurse Station desk area provides an accessible height transaction surface.**

### **3.1.5.9 Interior Common Areas and Amenity Space**

Common areas created in expanded circulation areas (see Figures 3.6 and 3.7) and programmed common rooms, such as Dining Rooms, Patient Lounges and Day Rooms, are intended to encourage interaction and a feeling of community. These areas should incorporate materials and furnishings to make them feel home-like and comfortable yet sturdy and appropriate for a mental health setting. It is important that these common areas are designed for flexibility, allowing the staff to reconfigure furniture for different events. Furniture should be heavy yet movable, deterring or preventing it from being thrown by patients or used for barricading rooms. A mix of group areas and quiet zones should be considered when placing televisions and game areas.

#### **SITE VISIT OBSERVATIONS**

A review of IPMH units toured and staff interviews suggest that most successful layouts shared direct lines of sight from the Nurse Station to all (or most) of the patient-occupied areas including, Patient Bedrooms and common areas. Large, naturally lit, defined, yet discrete social spaces were preferred by patients and family members and thus, used often.

Movable/demountable door frames in the corridors also provide flexibility for adapting the size of the patient units. (see Figure 3.7) Furnishings should be designed with anti-ligature features, yet easily cleanable. Artwork should be anti-ligature and securely fastened to walls.<sup>6</sup>

Dining Rooms include a refrigerator to serve as a nutrition station for patients to get basic drinks and snacks when meals are not being served. The Dining Room can be located next to the Patient Lounge, allowing the two spaces to be accessible to each other.

Day Rooms and Lounges shall be designed to provide varied seating areas for patients to interact with groups of various sizes. These rooms shall have access to daylight and a comfortable atmosphere. (see Figure 3.18)



**Figure 3.17** This example shows a widened circulation space to create seating arrangements, allow more space for patients to circulate through the unit to avoid altercations, access to view of nature and daylight as well as providing clear lines of sight. IKM Denmark, Helsingør, Denmark (RDS/Big)





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A comfort/quiet space should be included in the unit, allowing the patient to have an area where they can self-de-escalate. Light level and color controls, access to music, scenic calming videos and comfortable seating are features that can be included in comfort/quiet space to enhance the environment. The net area of the comfort/quiet space is sized to allow for only three to four patients to use it at one time.<sup>7</sup> The Patient Bedroom portion of the Seclusion Room can be used as an additional quiet space for individual patients if direct line of sight observation is possible.

The common rooms should be in direct lines of sight of the Nurse Station. They should be open, inviting and not require the staff to open the rooms for general daily use. Open Milieu areas are considered common areas and should provide areas that encourage interaction between patients and staff.

Open Milieu areas can be designed to bring daylight into staff areas. (see Figures 3.7 and 3.8) Locating common areas on an exterior wall with windows and near the open Nurse Station provides access to views and light for staff.

**Figure 3.18** The IPMH patient corridor, shown in this figure, provides seating benches between every two



*rooms, providing a “front porch” gathering space near but outside of the room.*

### 3.1.5.10 Outdoor Spaces

#### RESEARCH HIGHLIGHTS

This study suggests that a green-micro break, brief breaks spent viewing nature, with workplace nature views, could play a part in work recovery, and in so doing, improve mood and work performance.<sup>7</sup>



## **MHEOCC: FLOORS, WALLS, CEILINGS AND DOORS**

### **FLOORS**

- Flooring material in IPMH facilities shall be secured to prevent flooring from being torn or removed by inpatients to cause harm to themselves or others.
- Door thresholds shall be secured to the floor and no higher than 1/2-inch above the floor

### **WALLS**

- No glass coverings; no sharp edges; wood frames only, no metal frames; secured to the wall; may also be frame-less; smaller is better; safe pictures are encouraged for milieu
- All wall mounted devices must be anti-ligature and include tamper proof fasteners
- Wall edges and corners should be protected by corner guards

### **CEILINGS**

- Common areas under direct staff observation shall have tamper resistant, accessible ceilings free of hanging objects
- Patient areas not directly observable by staff shall have gypsum board ceilings with a minimum height of 9'-0"
- Light fixture coverings should be secure and of break-resistant material. Tamper resistant screws/attachment devices should be used, and the light fixtures should not create an anchor point
- Louvers shall be mesh or grates or the louver should not support weight. Edges should be caulked with tamper resistant caulk to avoid being used as an anchor point
- Sprinklers shall be tamper resistant and unable to be used as an anchor point; the fusible element is designed to be breakaway

### **DOORS (New Construction)**

- For corridor doors in new construction, it is recommended to install a door and frame assembly that will permit the door to swing in both directions. Normal operation could be door swing into the room, but if necessary (e.g., patient barricaded inside the room), staff could release the door stop so that the door could swing into the corridor
- Use three point hinges designed and installed so they do not protrude, providing an anchor point for hanging. Standard butt hinges, if used, must have a "hospital tip" that is beveled
- Wherever possible, use continuous piano hinges
- Door stoppers shall be attached with tamper resistant hardware and designed to prevent self-harm or harm to others

### **DOORS (Existing)**

- For doors NOT opening to the corridor, the preferred door design is an angled top (hinge side higher) with an approximately 6-inch gap between the top of the door and the door frame
- Doors to wardrobe cabinets or closets should be removed and shelves should replace rods and hangers
- The continuous hinge must have a "hospital cut" at the top providing a sloped surface for the entire top surface of the door

Reference MHEOCC for complete criteria

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Gardens, courtyards and enclosed/secured outdoor spaces shall be included in the IPMH facility design. Outdoor environments, especially nature filled ones, help foster a therapeutic setting for recovery. Visual access to the outdoors, as well as natural artwork within the facilities, provide a similar effect and help patients relieve stress through self-regulation in conjunction with access to outdoor space.<sup>8</sup>

**Figure 3.19 Shows low plantings and small trees which help maintain line of sight. MindSprings: Grand Junction, CO (Davis Partnership Architects)**



Outdoor spaces need to be clearly visible from the Nurse Station where some staff are always stationed to prevent elopement. Direct observation in outdoor spaces is required and can be supplemented with cameras. Spaces shall exclude sloped edges, wall crenelations and untrimmed trees to deter climbing. Building facades shall not be climbable. Landscaping should be kept small to prevent hiding, and no dirt or rocks shall be included. Outdoor plantings shall be non-toxic. A good balance of nature compared to hard scape is preferred.

### **RESEARCH HIGHLIGHTS**

Recent studies suggest that visual and physical access to informal gardens and greenspaces could be effective tools for enhancing autonomic recovery, higher levels of helping behavior and increased mental restoration.<sup>8</sup>

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

Outdoor lighting switches must be located inside the building and lights must use tamper-resistant enclosures and lamp covers. All outdoor furniture must be anchored to concrete pads and located away from trees, fences and doors.

Outdoor spaces should be sized to accommodate various outdoor activities. If a courtyard space is not possible, a rooftop terrace or enclosed porch is an option to allow access to fresh air and views of the sky and/or nature. Views should include natural features or constructed natural features such as green walls if views are lacking.

***Figure 3.20 Shows fixed outdoor furniture integrated with greenery and garden space on a rooftop terrace. Eastern State Hospital, Lexington, KY***



**SITE VISIT OBSERVATIONS**

During site visits, many IPMH staff members voiced a desire for access to nature, both physically outside and visually from within the units. Those that had access to outdoor spaces, highlighted the therapeutic environment they created for patients and staff alike. Spaces that provide shelter from the elements were preferred and used more often. In some facilities where access to the outdoors was not possible, staff displayed large artwork or murals on the unit walls to create this effect visually.



## **3.2 Mental Health Residential Rehabilitation Treatment Program (MH RRTP)**

### **3.2.1 Resident Safety and the Environment of Care**

MH RRTP facilities are designed to provide intensive rehabilitation and treatment services to Veterans who are voluntarily admitted and who have mental health and substance use disorders that are often complex and co-occur with medical concerns and psychosocial needs. The residential areas are designed to provide a home-like environment and the treatment areas are designed to empower the Veteran to engage in self-care and personal responsibility with the goal of improving functional status to transition back to the community.<sup>9</sup>

Additional VA documents and guidance addressing specific safety and security requirements are referenced below and in Section 1.4 of this Design Guide.

### **3.2.2 MH RRTP Safety and Security**

MH RRTP care is a distinct level of care from VA Outpatient, Inpatient and institutional Extended Care.<sup>11</sup> MH RRTPs generally differ from acute IPMH as Veterans in MH RRTPs do not require bedside nursing care and are generally capable of self-care. Generally, there is less risk of self-harm or assault in MH RRTP compared to IPMH.

VHA Directive 1162.02 requires MH RRTP Program Managers to develop written procedures for safety, security and unit supervision, including procedures for detecting restricted items brought onto the unit. As such, written procedures and Standard Operating Procedures (SOPS) shall be in place to minimize the risk of suicide or injury in MH RRTP. Planners and Designers shall consult with Program Managers and review the written criteria when planning and designing each project.

The introduction of restricted/hazardous items being brought into the facility represents a significant safety risk and can reduce the effects of treatment. Preventing the introduction of hazardous items on the unit is part of a multi-faceted process that extends beyond formal hazardous item detection procedures. This ensures residential programs are safe and secure for patients, staff and visitors.

Restrictive/hazardous items include all articles that are prohibited on the unit. Such items may include, but are not limited to tobacco products, including paraphernalia and items related to smoking, e-cigarettes, e-cigars, vaping devices, unapproved prescription medications; over-the-counter and other non-prescription medications; illegal drugs, drug paraphernalia, including concealment containers; alcohol and liquids containing alcohol including mouthwash and hand sanitizer; knives, firearms and other weapons; pornographic materials; and other materials and objects, as determined by local policy.



### **3.2.3 Site Visit Examples of Residential Treatment Units**

In preparation of this Design Guide and the update of Space and Equipment Standards for MH RRTP, site visits to six (6) VHA and one (1) non-VHA MH RRTP facilities were made to assess and evaluate planning and design concepts for application for new VA MH facilities. The following examples from those site visits helped inform effective MH RRTP facility planning and design.



***Figure 3.21 The facility location that include this comfort/quiet space was not visited on the site tours. It is an example within an inpatient unit featuring patient controlled light level, color, temperature and privacy to aid in self-regulation and to de-stress patients. West Spring Hospital, MindSprings Health, Montrose, CO. (Davis Partnership Architects)***



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### VAMC White River Junction MH RRTP – White River Junction, VT

New Construction: 2016

Total Beds: 14

Unit Size: 14 Beds

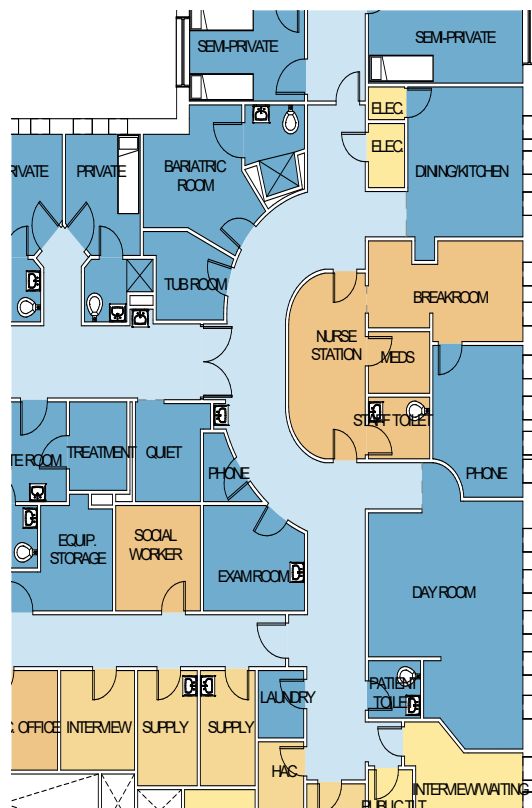
Nurse Station: Open

Outdoor Space: No

The small number of beds on the unit (14 beds) fosters good relationships between staff and residents. Residents also self-monitor, whereby one resident will assist another through their personal conflicts or tragedies. The program is set up as a structured day program over five weeks. During the course of the program, residents are not allowed to leave the campus.

The fresh appearance of the new construction and type of finishes, fixtures and furniture used make for a more home-like or less institutional feel.

The full kitchen, Dining Room and lounge are often used because, unlike many MH RRTP facilities, they are located on the unit. This arrangement promotes inter-resident socialization.



**Figure 3.22 VAMC White River Junction MH RRTP:** This example shows the open Staff Station with finish selections to create a feeling of hospitality. The Staff Station is located adjacent to on-unit common areas like the Dining Room/Kitchen and Day Room, resulting in greater utilization of those spaces by residents.

## **PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

### **Jay Mahler – San Leandro, California**

New Construction: 2017

Total Beds: 16

Unit Size: 16 Beds

Outdoor Space: Yes

Many aspects of this facility work together to create a recovery-oriented environment of care. The planning and design of this facility, provided few corridors, thus creating a more home-like and less institutional feel.

Community spaces are spacious, comfortable and inviting to support resident engagement and interaction. The community spaces also provide multiple seating options. A centralized kitchen is provided as a gathering area. A courtyard provides an outdoor space for resident interaction and activities. The introduction of natural daylight throughout further enhances the interior spaces.<sup>10</sup>



**Figure 3.23** The Jay Mahler facility living, Dining Room and kitchen use natural daylight, multiple seating options and natural finishes to invite resident interaction and engagement. The use of carpet in this room enhances the residential environment.

## **PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

### **VAMC American Lake – American Lake, Washington**

Renovation: 2011

Total Beds: 64 Beds

Unit Size: 8-24 Beds

Outdoor Space: Yes

The floor plan of this facility effectively incorporates the 'on-stage/off-stage' planning concept (see Figure 3.25). Light wells throughout bring natural daylight to the interior to enhance a warm and comfortable feel. Corridors were single-loaded which enhance the ability to bring daylight into the interior spaces. The use of home-like materials, finishes and fixtures creates the environment of care desired for a MH RRTP facility.

Veterans are encouraged to personalize Resident Bedrooms and specified common areas, enhancing the feeling of a supportive community. This personalization contributes to the home-like feeling.

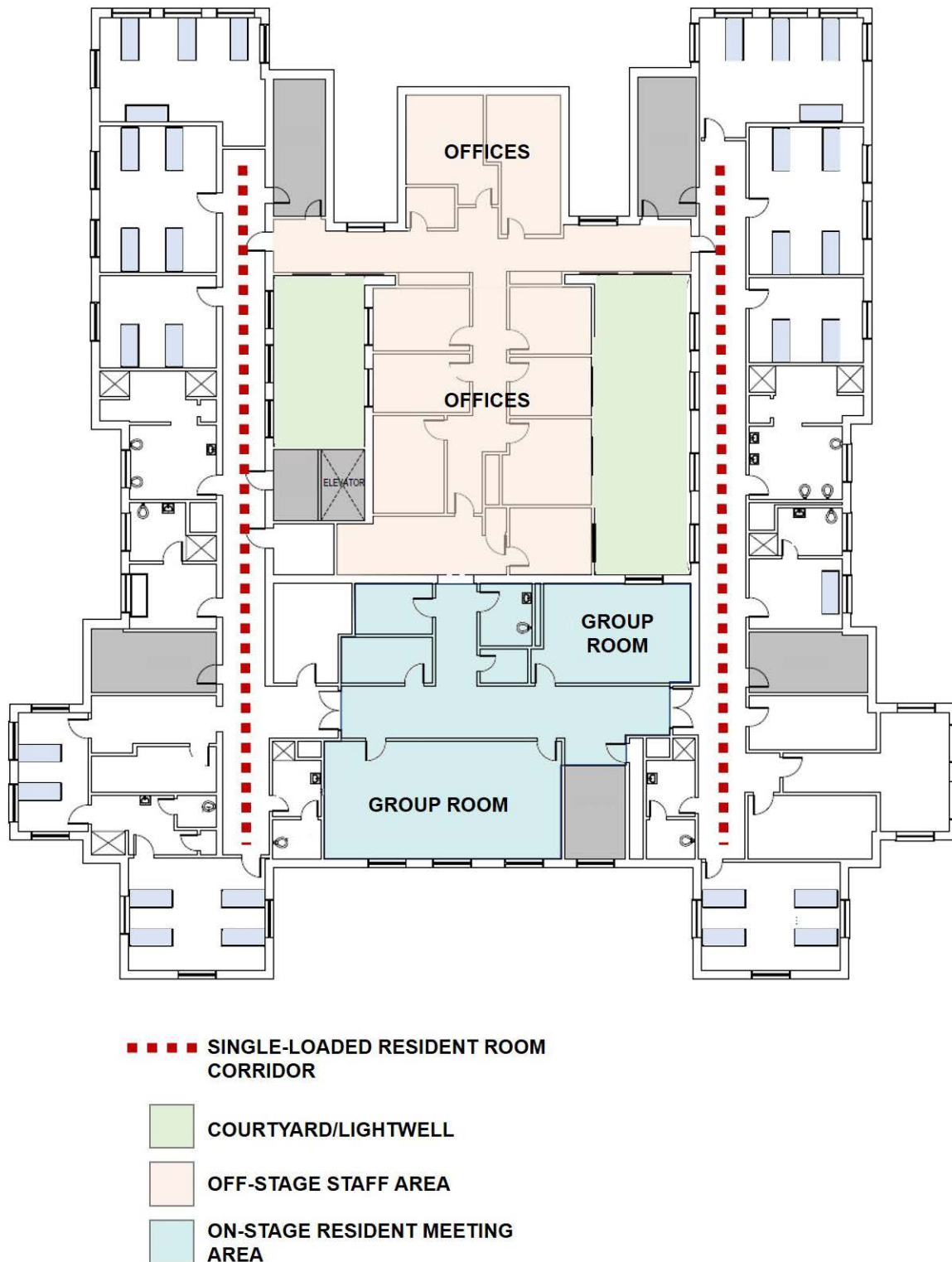
Furniture was used creatively to divide spaces in the shared Patient Bedrooms.



**Figure 3.24** The VAMC American Lake facility exhibits the use of materials, finishes and fixtures to create a home-like atmosphere.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

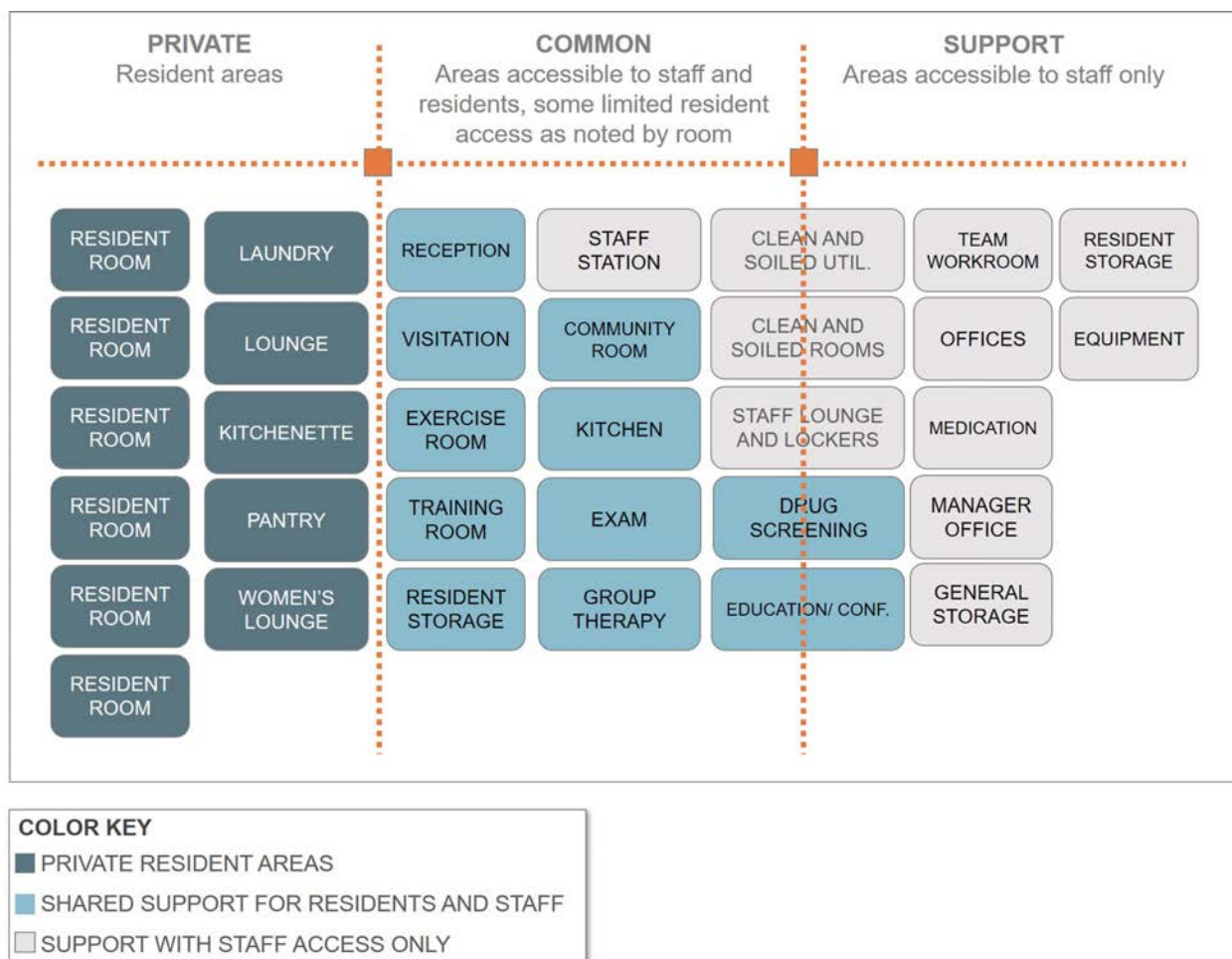


*Figure 3.25 The configuration of support spaces work well to provide off-stage staff areas as well as consolidated on-stage resident group areas. The single-loaded corridors bring daylight into the hallways while also reducing noise and congestion.*

# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

## 3.2.4 MH RRTP Unit Diagrams and Descriptions

Given the ability for residents to voluntarily come and go from the facility, the private, common and support zones identified in Diagram 3.11 reflect the level of programmatic room access. These are not considered security level zones, rather levels of resident access only. The diagram below graphically represents general program organization by resident access zone and related level of restriction. This diagram includes most but not all program components.

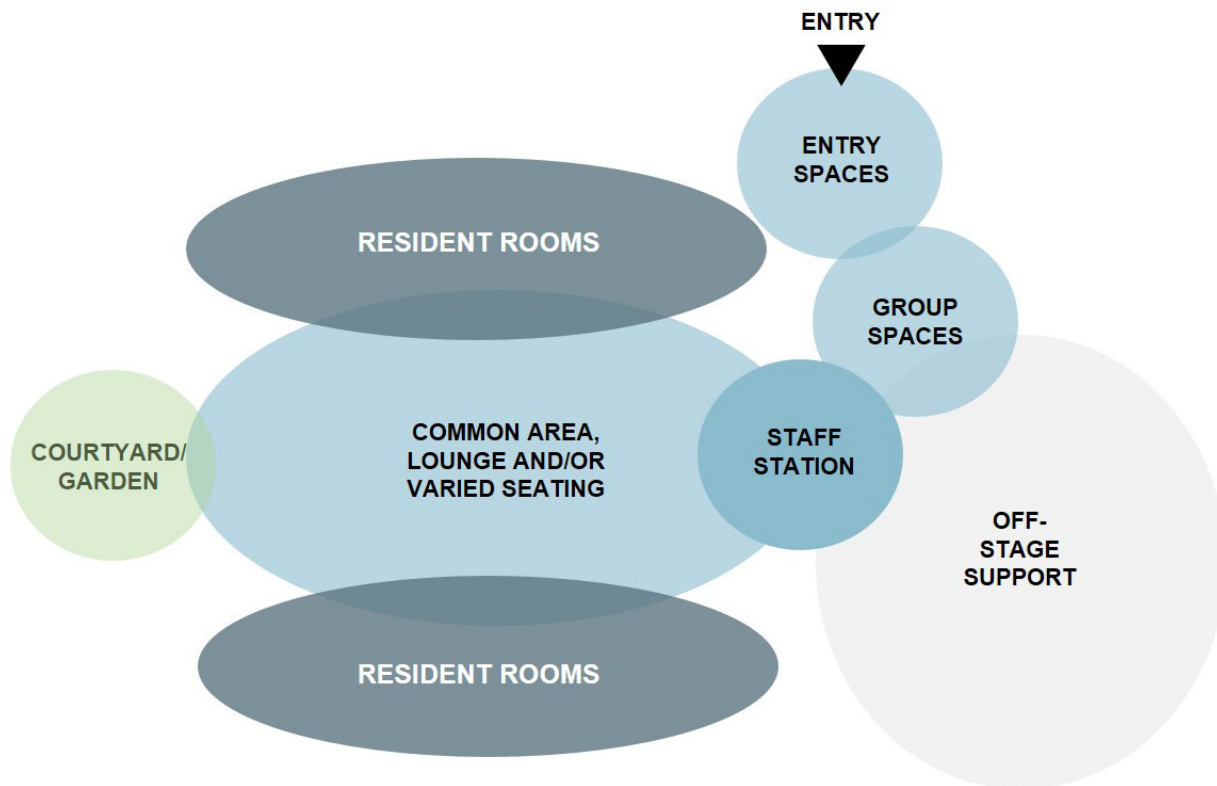


**Diagram 3.11 Illustration of staff and resident levels of access to most programmed spaces.**



### **3.2.4.1 Relationship Diagrams**

Diagram 3.12 represents conceptual relationships of the MH RRTP facility program, allowing for lines of sight to the facility entry, resident care areas and access points to off-stage support areas.



**Diagram 3.12** *Illustration of MH RRTP program component relationships.*

Multiple configurations of program components can reflect the demonstrated relationships shown on the Diagram 3.14 plan configuration concept. The diagram incorporates both Planning and Design Guiding Principles for program organization. Narratives for the design concept include features that can be applied to most configuration options. These features include outdoor activity areas, open common areas, direct lines of site and access to natural daylight. See Diagram 3.15 for additional definition of the entry space

Applications of concept plan relationships (Diagram 3.14) may not be directly applicable to a MH RRTP renovation project.

## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### MH RRTP 'Community Concept' Narrative

Open areas in the MH RRTP setting is intended to create spaces for residents to interact with staff, other residents and family/visitors. These spaces shall be home-like and provide varied seating options for various scales of interaction. Open areas can be placed along expanded circulation paths, lounges and common group areas.

Resident Bedrooms may be a combination of private and semi-private rooms. Rooms shall have a residential aesthetic.

Amenity spaces identified on the diagram may include the following spaces: courtyards, gardens, Resident Lounges, and areas for activity and dining.

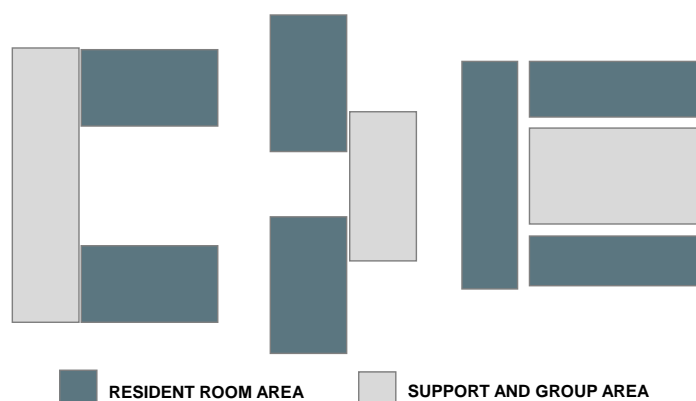
Like IPMH outdoor spaces, MH RRTP spaces can be in any number of sizes or configurations that meet resident needs, site constraints and program functions. In addition to ground level courtyards and gardens, spaces for communal activity is encouraged. These spaces may include areas for grilling, resident gardening and sporting activities.

#### UNIT CHARACTERISTICS

- Ability to separate specific population room groupings
- Centralized staff work center to provide clear visibility to all resident areas
- Open common areas with flexible functions
- Home-like environment throughout



**OPEN AREA** A variety of seating provides choices for residents with varying levels of privacy and interaction. Groupings shown are representative only.



**Diagram 3.13** Illustration of multiple plan diagram configurations that support the goal of creating smaller scale room groupings.



#### OUTDOOR ACTIVITY AREAS

Resident access to nature creates both private respite areas and communal activity areas to enhance the therapeutic environment.

## MH RRTP 'Community Concept' Diagram



### **3.2.4.2 Unit Size**

MH RRTP Unit size (measured by the number of beds) influences safety, staff's ability to effectively care for the residents, the efficiency of conducting small-group therapy sessions, the strength of community connections between all persons on the unit and ultimately the facility's overall environment of care.<sup>11</sup>

The recommended unit sizes are 16, 20, 24 and 28 beds per unit. The number of units in a facility are set by the current and future patient projections need and the unit size must match the clinical and therapeutic needs of both the staff and patients.

#### **SITE VISIT OBSERVATIONS**

MH RRTP unit sizes varied greatly between visited facilities. In most cases, VHA prefers group therapy sizes to be limited to 12 Veterans at a time. Unit sizes determine the staffing numbers, but not the group therapy populations.

### **3.2.4.3 Room Occupancy**

Room occupancy in this Design Guide refers to the ratio of private to semi-private (2 people per room) Resident Bedrooms. It is recommended, in new construction, that a minimum of ten percent of all Resident Bedrooms are private, and all semi-private rooms are limited to two beds per room. Each resident, in the Resident Bedroom, should have equal access to natural daylight (see Figure 3.26), acoustic privacy, dedicated storage and easy access to the toilet/shower.



**Figure 3.26** A semi-private MH RRTP room with a residential design and access to views and daylight. The Next Door: Nashville, TN (Earl Swenson)

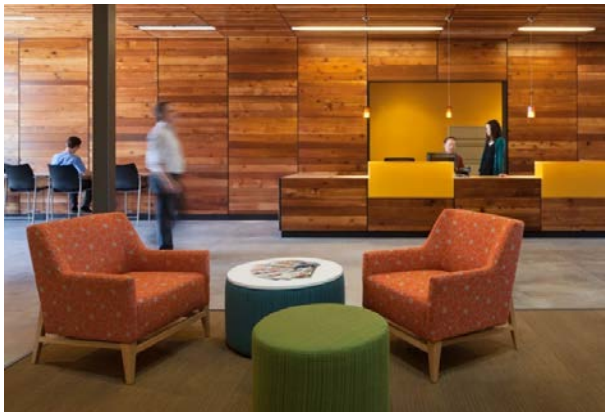


## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

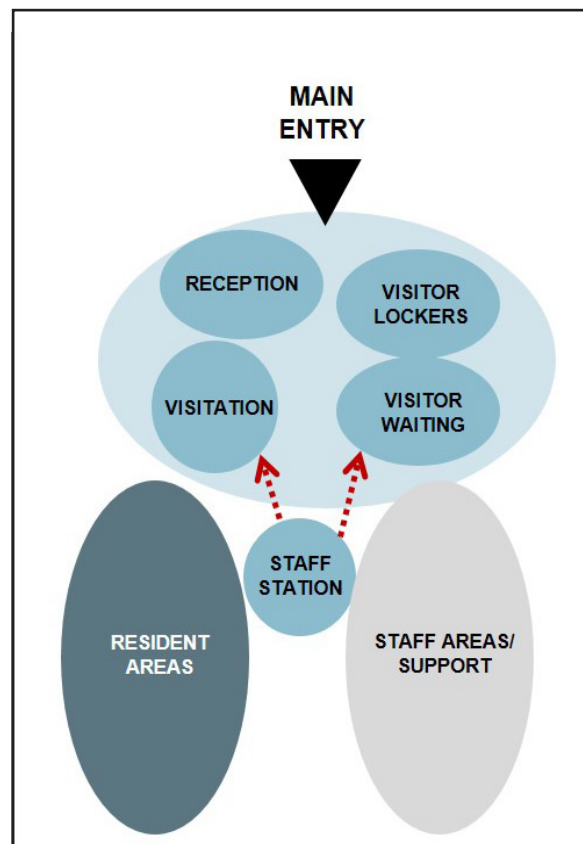
### 3.2.4.4 Entrance/Reception

Though the MH RRTP residents are free to come and go at approved times, it is recommended that a single-point of entry be provided when possible. The single point of facility entry allows staff to monitor resident traffic for control and accountability. The main entry should be secure, utilizing keyless access and should be within direct lines of sight of the staffed reception area.<sup>16</sup>

The reception area (See Figure 3.27) should be located between the facility entry and residential areas. The reception process functions as a security check for resident bags. Bags are checked at this located and visitors are asked to leave belongings in the visitor locker area. Visitor lockers should be located directly inside the entry, allowing all personal items to be secured in the visitor locker area. This helps limit hazardous items entering the facility via visitors.



**Figure 3.27 Navos Behavioral Health: Lake Burien, WA (Mithun): A welcoming entry and reception area facilitates bag checks upon arrival to the facility.**



**Diagram 3.15 Entry sequence diagram demonstrating lines of sight to entry program components.**

### SITE VISIT OBSERVATIONS

The entry/reception area should have a home-like and residential feel, while still being secure. This space serves multiple purposes like hazardous material check, security observations, reception, etc. As such, the reception area, locker arrangements and waiting spaces sized according to PG 18-9 shall be located immediately inside the facility entry and prior in sequence to entering the Resident Bedroom areas.



### **3.2.4.5 Resident Bedroom**

In MH RRTP, the Resident Bedroom is a place for resident self-reflection and rest. Dual occupancy rooms support therapeutic camaraderie with roommates. Single rooms provide privacy, quiet and the opportunity for self-regulation.



Design features that create a home-like (see Figure 3.28), autonomous and safe environment include operable integral window blinds, temperature and lighting level controls. Space to store personal belongings is provided in each room. In semi-private rooms, each resident has identified personal storage space. Furniture design and room layout should focus on limiting opportunities to conceal hazardous items. Examples of this include open shelving, hard ceilings (new construction), and anti-tamper fixtures and receptacles.

**Figure 3.28 Laureate Psychiatric Clinic & Hospital Eating Disorder Expansion, OK (Page)**

Opportunities for residents to personalize their room should be maximized, including providing magnetic/white boards, shelving and name plates. A locked self-administration medication cabinet can be provided in the casework design if authorized by the program.

Resident Toilet/Shower Rooms should be provided for every Resident Bedroom, and Resident Toilet/Shower doors should swing out to prevent resident barricading.

The Resident Bedroom template in Section 5 of this Design Guide accommodates patients of size and ADA clearances. One two-bed Resident Bedroom has the same outside footprint and size as two private Resident Bedrooms.

#### **SITE VISIT OBSERVATIONS**

Resident furniture often provided a means for creating resident privacy in a multi-Resident Bedroom. Wardrobes, dressers and desks were used to create visual and acoustic privacy between occupants. Design and configuration of the Resident Bedrooms should provide a sense of privacy.

### **3.2.4.6 Resident Toilet/Shower**

The Resident Toilet/Shower Room in the MH RRTP shall be designed to create a home-like feel. The finishes and fixtures are not required to be anti-ligature so commercial grade fixtures and finishes shall be used for maintenance and durability, but selections can be made to present a less institutional atmosphere.

Each Resident Bedroom will have access to an en suite Toilet/Shower Room, including multi-Resident Bedrooms. Adequate storage and counter space shall be provided in each Resident Toilet/Shower Room as illustrated in the Resident Bedroom templates. Lighting shall be designed to provide comfortable and home-like lighting levels.<sup>12</sup>



**Figure 3.29** *Providing a commercial grade fitting, fixtures and finishes for durability in the RRTP bathrooms doesn't require the use of anti-ligature devices. Source: West Palm Beach VAMC Domiciliary (AIA Architects + Planners, Inc.)*

Like the IPMH Patient Toilet/Shower, the Resident Toilet/Shower Room design must keep the water in the Resident Toilet/Shower Room to reduce risk of patient falls. The shower head is placed to project water away from the Resident Toilet/Shower Room door and to not spray into the “dryer” part of the room. A continuous drain and overall room floor slope is shown in the template design.

#### **SITE VISIT OBSERVATIONS**

Private Toilet/Shower Rooms were preferred at every location. The quantity of bathroom electrical outlets and counter top space were often considered insufficient. Many facilities had an institutional feel rather than creating a home-like or residential type of environment.

## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 3.2.4.7 Staff Station

Centralized Staff Stations in the MH RRTP should foster engagement and communication with residents and staff. The Staff Station should be centrally located in the unit and located with other unit amenities such as the Kitchenette and Resident Lounge.<sup>13</sup> The Staff Station is an open work area within this grouping of spaces.

Other staff work areas are provided in closed rooms, including the Team Room and Staff Workroom, for private communication and staff activities. Adjacency to a locked Medication Room for non-self-administered medications is preferred.

Staff Stations are casual in nature and approachable for residents. Staff Stations can be incorporated into other unit amenities such as the kitchenette, as shown in Figure 3.30.



**Figure 3.30** This example shows the Staff Station incorporated into the resident kitchenette and common area. Natural lighting and the mix of seating configurations makes this common area feel more home-like. Jay Mahler Recovery Center, San Leandro, CA

#### SITE VISIT OBSERVATIONS

Staff recommended staff stations that enhance staff-to-Veteran interaction and communication. For example, staff stations that were integrated with resident seating or other amenities such as, vending or cooking spaces enhanced staff and resident interaction and rapport.



### **3.2.4.8 Interior Common Areas and Corridors**

Unit corridors and programmed common spaces shall create an environment to foster interaction between staff and residents. Materials, furniture, finishes, lighting and access to natural daylight shall all be planned and designed to support the recovery-oriented and home-like environment of care (see Figure 3.31). Seating distribution and groupings shall provide options for residents to congregate in the community-oriented spaces. Corridors and common areas can be integrated to create wider spaces where seating can be provided while supporting staff visibility. Visual and physical access and adjacency of common areas to outdoor gardens and courtyards are preferred.<sup>14</sup>

There may be times when large MH RRTP staff and resident groups need to meet. The Group Therapy Room and Community Room can be co-located and separated by a movable partition to provide space for large meetings.

The sizes of other common rooms for meeting and group therapy are determined by the number of residents in the groups. Room sizes are driven by group sizes scheduled for each space.



**Figure 3.31** *The home-like environment incorporate hallways, seating and other resident amenities in an open environment. Mountainside Treatment Center: New Canaan, CT (Scott Koniecko)*

#### **SITE VISIT OBSERVATIONS**

Residents were more likely to interact and communicate in environments with a residential feel. Common areas that were adjacent to gardens and/or courtyards were more heavily used, as were spaces that allowed residents to congregate with a perception/sense of privacy. Multiple seating choices in an open environment created that feel.

### **3.2.4.9 Outdoor Spaces**

The incorporation and enhancement of outdoor spaces in an MH RRTP setting foster therapeutic treatment and resident recovery. Visual access to natural daylight and view of nature add to a home-like environment. Physical access to outdoor amenities creates additional opportunities for residents to congregate and foster a sense of a recovery-oriented community.<sup>15</sup>

MH RRTP outdoor amenities shall be created in each new facility. Due to the freedom of movement for residents, outdoor spaces can be open, fully functional and interactive. (see Figure 3.32) Areas for outdoor activities like grilling, lawn games, meditation and exercise can all be provided.

Outdoor spaces should be designed to minimize the passage of hazardous items by locating outdoor spaces in a private area within the facility grounds and distant from surrounding pedestrian walkways.

Separate outdoor spaces for special/specific populations should be provided where possible.



**Figure 3.32** *The open area between buildings provides ample seating and access to outdoor spaces, providing a visual access to nature from within the facility and recreational opportunities close to residents. Garlington Place: Portland, OR (Scott Edwards Architecture)*

#### **SITE VISIT OBSERVATIONS**

Outdoor spaces that provide shade, multiple outdoor seating options and a variety of activity areas are best suited for MH RRTP facilities. These can include exercise and sport-focused activities as well as animal and meditation therapy. Interactive spaces for grilling, artwork, gardening and card games support interactive community engagement.



### **3.3 Renovation Summary**

The intent of this Design Guide is to provide planning and design guidance for new construction and renovation. All elements identified in this design guide should be implemented into existing mental health facilities when possible. Each element can have a significant impact on patient/resident and staff satisfaction within the treatment environment. Renovations of existing spaces are to follow the same guidelines to the extent possible and include the same spaces as new construction described in the previous sections.

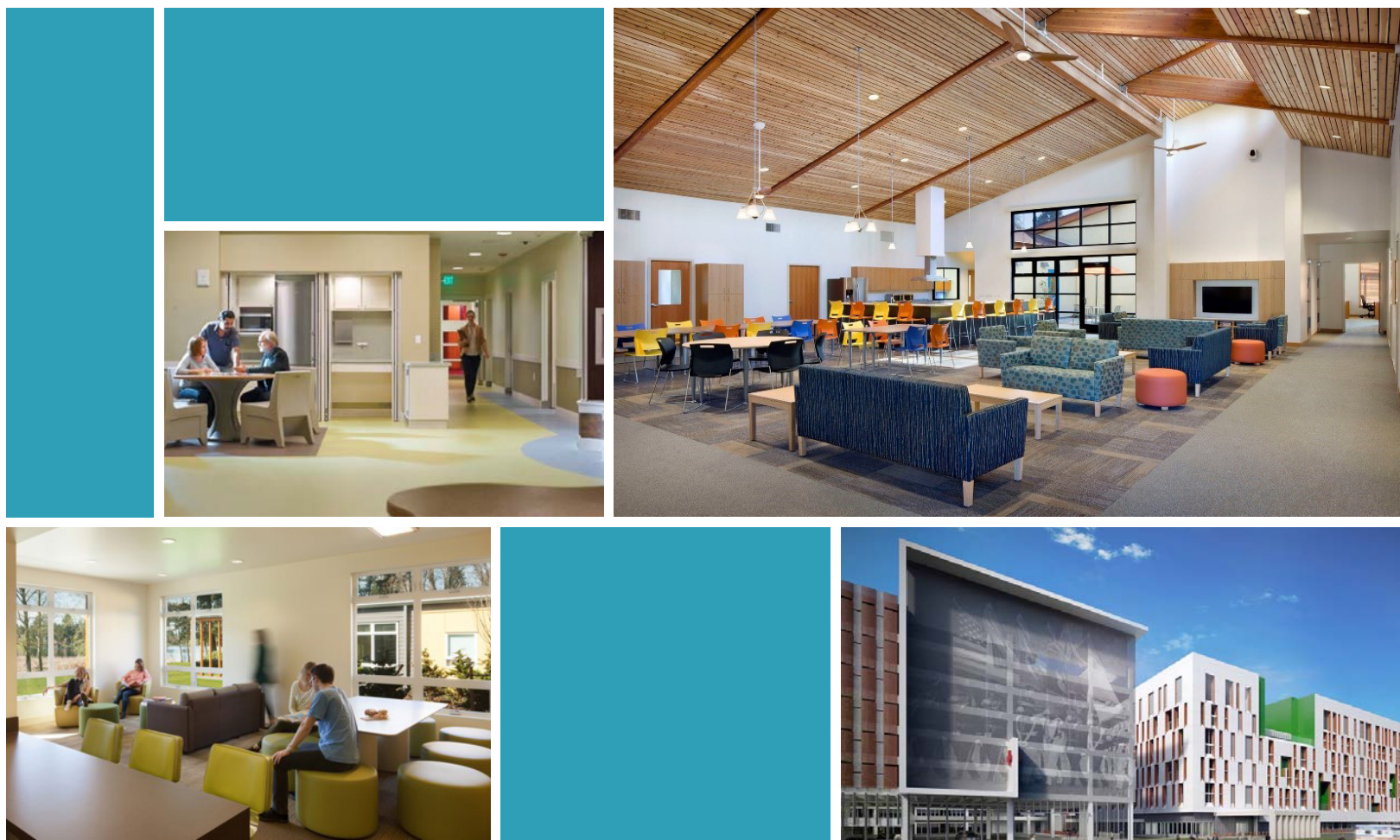
There are inherent challenges in modifying existing environments that were built for a different model of care. Challenges may be created by column bay spacing, floor-to-floor heights, access to nature, overall facility orientation and infrastructure capacities. Guiding Principles for Planning and Design, as defined in Section 2, should be accomplished within the context of these physical challenges.

In order to help alleviate these challenges, the following is a list of priorities for renovation projects.

#### **Priorities for IPMH and MH RRTP Renovations**

1. Limit number of patient or Resident Bedrooms per unit (8/12/16/20 beds per unit for IPMH and 16/20/24/28 beds per unit for MH RRTP)
2. Provide single occupancy, or at a maximum, double-occupancy patient/Resident Bedrooms. (Each patient/resident should have equal access to natural light, acoustical privacy, dedicated storage and access to the toilet/shower)
3. Break larger floor plate layouts into smaller clusters of Patient/Resident Bedrooms
4. Adapt corridors in existing facilities to accommodate open areas for the Nurse Station/ Staff Station and common seating areas with access to natural daylight
5. Provide non-institutional interior finishes, fixtures and furniture while maintaining safety and security of the environment, staff and veterans
6. Provide visual and/or physical access to outdoor spaces





## 4.0 TECHNICAL CONSIDERATIONS



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## **4.0 TECHNICAL CONSIDERATIONS**

### **4.1 Site Design**

#### **4.1.1 Introduction**

Site Design for an IPMH or MH RRTP is a factor for project success as it influences the initial perception of the facility and quality of care. The site design concepts shall create safe environments for patients, residents, staff and visitors, while also providing a residential and home-like feel, when possible. The goal of the site design is to support ease of access, clarity of way-finding, therapeutic areas of respite and/or collaboration, and shall strive to reduce the institutional feel and stigma sometimes associated with a mental health facility.

Site analysis and planning are influential to the success of a mental health facility design project. The design team shall conduct several preliminary site related analyses at the onset of a mental health facility project to determine the appropriateness of site area, site geometry, topography and access to utilities.



**Figure 4.1 Outdoor spaces support a therapeutic environment and personal enrichment. All patient areas must meet MHEOCC requirements. Menninger Clinic, Houston, TX, (Kirksey+)**



### **4.1.2 Site Planning**

When site planning a new mental health facility, the facility footprint and number of levels will be defined by the program and available site area. The site footprint needed to accommodate the facility program and required parking will factor into the decision regarding the number of floors needed for the facility.

Site selection and planning shall also consider existing site amenities like naturally occurring features on and adjacent to the properties. These features can create opportunities to enhance the “home-like” feeling of the site. These may include but are not limited to: wooded areas, open bodies of water and/or uninterrupted vistas. Facility orientation on the site shall support access to natural daylight in patient, resident and staff areas, views to landscape features and the accommodation of access to exterior courtyard spaces.

Site selection shall consider impacts of site topography on ease of facility access for patients, staff and support services. Site access and circulation shall accommodate, when possible, separate entry points to the site for patients, staff and service. On-site roadways shall limit pedestrian and vehicular conflicts, when possible, by providing safe circulation paths for pedestrians in parking areas, public transportation stops and patient/visitor drop-off areas. Both vehicular and pedestrian way-finding on the site shall be clear and supported by signage. Drop-off areas at facility entries shall be covered.

The site access of maintenance personnel, support service providers, emergency crews, and utility workers shall be accommodated to be as unobtrusive as possible for the patients, visitors, and clinical staff using the facility.

Parking on VA campuses must address the needs of VA patients, employees, and visitors. Need driven requirements for parking are defined using the demand model for patients, staff and visitors as defined in the VA Parking Design Manual and Demand Model. The VA parking demand model considers facility data, population data, peak demand and future growth/demand to determine total parking space requirements for each facility. In addition, access to public transportation to and from VA Mental Health Facilities is important for many Veteran patients and their families. Site accommodations for public transportation access and drop-off must be provided on the mental health facility site.

### **4.1.3 Topography**

Topography of a new VA facility or facility addition site may influence the orientation of site and facility access points. At grade access to the facility entry is required. Extreme topography could limit the ability for this at-grade access, and must be considered during the initial survey of the site. Topographic features may provide enhanced views from the IPMH or MH RRTP facility, and facility sight line orientation should be considered when planning and designing a new facility or facility addition. Topography must not impede views or create areas that negatively impact safety and security.

#### **4.1.4 Proximity to Adjoining Facilities**

A new IPMH facility must be either in a Medical Center/Hospital or adjacent to a Medical Center/Hospital facility. Separate IPMH buildings can be considered only if they are on a Medical Center campus and close to the hospital emergency department. IPMH patients may need access to medical facilities for co-morbidity issues and close access to the emergency department for patient transport.

New MH RRTP facilities may be located on a site not on a Medical Center/Hospital campus or located in or adjacent to an existing or new Medical Center/Hospital facility. Consideration must be given to the proximity of the MH RRTP site to a hospital facility.

When a new IPMH or MH RRTP facility located on a Medical Campus is being planned and designed, consideration shall be given to sharing, upgrading or expanding existing site access and roadways, parking and other site features to the mutual benefit of both the facility and campus.

Compatible adjoining or proximate facility site development should be considered and integrated into the site design of the IPMH or MH RRTP facility to:

- Maintain or improve existing on-site vehicular movement,
- Maintain or improve the existing campus exterior aesthetics by the use of consistent landscaping, way-finding and other site features.
- Create appropriate vehicle and pedestrian connectivity between new and existing facilities.
- Minimize unnecessary use of resources, site development costs and area of site disruption

#### **4.1.5 Shared Site Features**

The location of a new facility adjacent to a compatible existing use or shared Medical Center campus could allow several possibilities for shared site features and could impact:

- Shared access to site
- Shared site and facility connectivity
- Orientation of entrance to create a safe and private IPMH entry
- Shared location of support services (loading docks, utility plants, food service)
- Shared availability of and access to utilities



If operationally appropriate, a common service road or a common entrance to the site may be possible. If parking capacities are shared on a campus site, adequate parking counts must be provided to accommodate both facilities, based on the VA Parking Design Manual and Demand Model. Though main public entry doors may be shared on a Medical Center campus, one single point of entry via a Sally Port, must be provided into the IPMH program area. Site utilities and service delivery areas may be shared on a campus. If delivery areas are shared, delivery to the IPMH program area must be provided through a secured access point/Sally Port.

#### **4.1.6 Landscape Design**

Landscape features and design can provide an aesthetic benefit to any site or campus. Landscape design, circulation and aesthetics often provide the first impression of the facility. For IPMH and MH RRTP facilities, landscape design is especially important. Access to and views of outdoor spaces support treatment and recovery in a therapeutic, residential-like setting. Visual access to natural elements is noted to promote healing in patients.<sup>1</sup> Existing natural landscape features should be preserved whenever possible. Portions of a new facility site disrupted by construction should be limited to minimal areas outside the building footprint, roadways, parking, walks and utility trenches. Consider issues of safety and security for all site design features and elements.

Planting plan concepts and programs for IPMH and MH RRTP sites shall consider regionally appropriate plant selections with seasonal interest and a variety of color and texture. This design approach enhances the therapeutic environment, as well as provides a sustainable approach to ongoing maintenance and operations.

For IPMH outdoor environments with patient access, plant selections shall be made that are both non-toxic, non-climbable and can not be used as a weapon. All outdoor areas in an IPMH environment must be secure. (reference Section 3.1.5.10)

Landscape design for MH RRTP is less restrictive and more residential in feel. Outdoor spaces shall be designed to support recreational activities and resident interaction. Consideration shall be given to designing spaces that deter the concealment and transmission of hazardous items to residents from outside of the facility. (reference Section 3.2.4.9)

If patient or resident room windows must be located on a busy courtyard, exterior walkway or other accessible area, buffers shall be created to eliminate direct visual access into patient and resident rooms.

#### **4.1.7 Exterior Spaces**

An essential component to any IPMH facility shall be direct, yet secure access to the exterior. Whether courtyards, fenced areas or elevated secure screened porches, these contained exterior spaces shall facilitate staff observation, prevent the threat of patient elopement and be designed with hard-scape or landscape features that do not support self-harm or assaultive behavior. Safety features shall be accomplished and provided

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through a careful selection of materials and intentional configuration of space to create a 'home-like' (scale, furniture, texture, gardens), yet secure, atmosphere. Safety features may include the use of high walls, fences designed without hand holds and including sloped hinges, hardware and wall devices that dissuade climbing. Plantings and tree branches shall be trimmed to limit climbing.

Exterior spaces accessible to MH RRTP residents such as courtyards, gardens and recreation spaces shall be provided to create a therapeutic environment. These space are not required to be enclosed or secured. Recreation spaces may include areas for yard games, outdoor dining or varied seating areas to encourage either social interaction or spaces for privacy. In the MH RRTP, these exterior spaces do not require direct visual access from staff.



## **4.2 Architecture**

### **4.2.1 Introduction**

Like site design, architectural design also influences the first impression of a facility and shall strive to create a warm and home-like environment. The organization of the facility and site orientation shall strive to enhance the potential of the therapeutic experience, both inside and out. The exterior envelope design shall provide a safe and secure environment, while also respecting human scale and conveying a comfortable atmosphere.

The goal of the facility exterior ‘home-like’ design is to evoke an approachable, comfortable and inviting presence to the surrounding environment, reducing the institutional feel and stigma sometimes associated with a mental health facility.



*Figure 4.1 Site and architectural character work together to create the first impression of an IPMH or MH RRTP facility. Worcester Recovery Center and Hospital, Worcester, MA (Ellenzweig, Architecture+)*

### **4.2.2 Architectural Scale**

In new construction projects, whether an addition or a stand-alone facility, the exterior architecture may serve as the first impression of the facility for patients, their families and other visitors. Accordingly, the exterior design shall embody a warm, familiar, and comfortable aesthetic through design and scale.



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The program of the overall facility can be organized into multiple, residential-scaled and interconnected buildings or a multi-story facility, however, the building envelop design shall convey a non-institutional expression.

### **4.2.3 Covered Entry**

A covered entrance at the primary access point to a new IPMH or MH RRTP facility shall be provided. The width of the roadway under the covered entry shall accommodate one drop-off lane and one passing lane. The covered entry shall protect both sides of the drop-off vehicle from inclement weather. The height of the covered entry shall be designed to accommodate emergency vehicles.

### **4.2.4 Windows and Glazing**

#### **General Exterior Windows**

IPMH and MH RRTP windows shall be fixed with insulated double glazing. The interior face of these windows shall be laminate glazing. Reference VA Master Construction Specification (PG-18-1), Division 08 for additional details

#### **Patient and Resident Room Exterior Windows**

Exterior windows within IPMH units shall be heavy gauge commercial units with insulated double glazing. The interior glazed face shall be 7/16-inch laminated glass. Integral blinds shall be provided to allow patient control of daylight into the room. An integral blind or shade with electric control or a cordless solution that meets requirements for anti-ligature can also be used. If IPMH renovation projects are providing internal blinds or shades at existing windows, specify a secondary internal polycarbonate window in an aluminum or steel frame that is hinged and lockable and meets the MHEOCC requirements.

Window size shall be such to provide abundant access to natural daylight, and oriented to provide a view to natural calming landscaping and site features, when possible. Windows should be oriented to provide privacy for patients. **Glazing**

IPMH service areas where patients have access require security glazing assemblies, resistant to breakage and use as weapons. In secured areas and rooms, including room doors, use 11 mm (7/16-inch) laminated clear glass, clear heat strengthened glass clad polycarbonate, or clear tempered glass clad polycarbonate. Reference VA Master Construction Specification (PG-18-1) Division 08 80 00 for additional details and see Section 3.1.5.4 of this Design Guide for additional information.



## **4.3 Interior Design**

### **4.3.1 Introduction**

Interior design for IPMH and MH RRTP is a key component to achieving a successful project. The interior architecture, finishes, fixtures, furnishings, inclusion of artwork and attention to views of nature shall strive to create a therapeutic and home-like environment. Participation in treatment, rehabilitation and recovery is promoted in a warm and welcoming environment.

All IMPH interior finishes, fixtures and furnishings must provide a safe and secure environment and shall comply with the MHEOCC. (reference Section 3.1.3) Certain interior finishes can be used for self-harm or harm of others, requiring all finishes, materials and installations to be approved for mental health use. The selection of finishes shall consider the following risks: ligature prevention, hazardous item concealment, weaponization, cutting, ingestion and others as defined in the MHEOCC.

Finish and material selections shall have the ability to endure vandalism and withstand heavy duty use to ensure durability such as: impact, scratch, deformation, delamination and deterioration resistance.

The primary focus of MH RRTP interior design is to provide a therapeutic environment with a focus on controlling concealment of hazardous items. (reference Section 3.2.2)

Interior design finish, fixture and furnishing selections shall support ongoing maintenance requirements such as: be easy and fast to clean and resistant to moisture and stains.



**Figure 4.2** *This MH RRTP community room reflects an interior space that incorporates light, color and residential-like furnishings to create a flexible and inviting space for varied activities like art, music, relaxation and collaborative activities. Vermont Psychiatric Care Hospital, Berlin, VT (Architecture +)*

### **4.3.2 Sustainability**

Provide a level of design that follows the current standards set forth in the VA Sustainable Design Manual to create an IPMH and MH RRTP facility that is socially, economically, and environmentally sustainable. The specification and implementation of sustainable finishes and materials supports the health of patients, visitors, and staff.

When specifying finishes and materials, provide the following, as required by the VA Sustainable Design Manual:

- **Energy Efficient Products:** All products being installed which fall into a category covered by the Federal Energy Management Program (FEMP) designated energy efficient products program shall be FEMP-designated.
- **Low Pollutant-Emitting Materials:** Specify materials and products with low pollutant emissions, including composite wood products, adhesives, sealants, interior paints and finishes, carpet systems, and furnishings.
- **Recycled Content:** Any product being installed or used that is listed on EPA's designated product list shall meet or exceed EPA's recycled content recommendations when the product meets VA's performance requirements and is available at a reasonable cost.
- **Bio-based Content:** Any materials and equipment being installed or used that are listed on USDA's designated product list shall meet or exceed USDA's requirement for bio-based content when the materials and equipment meet VA's performance requirements and are available at a reasonable cost.

### **4.3.3 Elements of Interior Design**

The primary objective of the interior design of IPMH and MH RRTP facilities is to provide a safe and therapeutic environment. To accomplish this, experiential design properties must be addressed as well as physical design components.

Some of the main interior design properties that impact experience include positive engagement, biophilic design, way-finding and sound control. When addressed effectively during IPMH and MH RRTP planning and design, these properties can support a positive therapeutic and recovery experience.

Effective planning and design of finishes, fixtures and furnishings results in a safe and secure facility for patients, staff, families and visitors. All interior design components and details must meet Mental Health Environment of Care Checklist (MHEOCC) requirements.

#### **4.3.3.1 Positive Engagement**

A Mental Health unit must provide positive engagement to all users of the space: patients, staff and visitors. Interior design of all IPMH and MH RRTP areas and rooms shall consider the impacts of finishes (texture and color), lighting (quantity and quality), access to nature (views and physical access), and furnishings (selection and orientation) to support positive engagement and interaction.



The interior design of all patient and resident areas and rooms shall consider how positive engagement is achieved. Positive engagement attributes and examples include:

- **Areas for Self-Soothing:** Specific IPMH areas like Comfort Rooms shall be quiet, simple, and visible for patients to self-retreat and sooth themselves. Special interior considerations to achieve a soothing experience in both an IPMH and MH RRTP facility include: acoustics, lighting, colors.
- **Access to Nature:** In both IPMH and MH RRTPs, patient/resident and staff areas providing views and/or direct access to nature support stress reduction. Interior planning and design that orient view corridors and furniture to maximize views create areas of positive engagement.
- **Areas for Physical Activity:** IPMH Patient Lounges and Recreational Therapy Rooms Recreation/Activity Rooms are enhanced with design for acoustic control and varied seating grouping for both reflection and interaction. MH RRTP Community and Exercise Rooms are enhanced with the use of vibrant finishes, access to daylight and flexibility to support a variety of activities. (see Figure 4.2)
- **Areas for Casual Interaction:** In both IPMH and MH RRTPs, small but comfortable lounge areas where patients/residents can meet with clinical staff or among themselves in a semi-private area can be created with thoughtful organization of space and furniture. These areas are enhanced with varied art content, large views to nature, varied seating opportunities and/or large-scale art wall panels.

#### **4.3.3.2 Biophilic Design**

The interior design of IPMH and MH RRTP units shall adopt Biophilic Design principles to enhance spaces for patients, residents and staff. Biophilic design principles generally include multi-sensory interactions through the direct presence of nature, spacial configurations to mimic nature to replicate feelings nature may evoke and reflecting nature through the use of altered patterns or materials found in nature. Biophilic design is used to provide a mental connection to nature in a non-natural space.

##### **RESEARCH HIGHLIGHTS**

**Mental benefits [of biophilic design] range from increased satisfaction and motivation, less stress and anxiety, to improved problem solving and creativity. Positive behavioral change includes better coping and mastery skills, enhanced attention and concentration, improved social interaction, and less hostility and aggression.**

Kellert & Calabrese (2015)

It is important to apply direct and indirect biophilic interior design attributes to clinical, private, public spaces to enhance the overall unit, and spread the benefits to all users of the space. Some direct attributes include access to daylight (large windows and seating orientation to windows), access to fresh air and physical access to plants and natural ecosystems in courtyards and gardens meeting MHEOCC requirements.

Some indirect attributes include use of natural materials and finishes, simulation of natural daylight (daylight quality fixtures), use of colors from nature (green, blue, yellow) and free-form shapes and forms that mimic nature.

Examples of how these attributes shall be included are:

- Patient/Resident Rooms, Therapy Rooms and Open Milieu Areas: Use of colors found in nature and naturalistic materials (wood-like flooring) and access to daylight and exterior views.
- Day Rooms, Dining Rooms, Staff Respite Areas: Free-form shapes and forms to mimic soft forms found in nature (carpet and graphic patterns, furniture configurations), artwork and large-scale wall panels featuring images or elements of nature.
- Patient/Resident units: As possible, all units shall provide access to natural ecosystems and provide views to outdoor areas from corridors and common areas.

#### **4.3.3.3 Way-finding**

Way-finding is about empowering patients and visitors in an IPMH and MH RRTP facility to navigate throughout the space with minimal or no assistance. Clear signage with large contrasting colors for notation is required. All exterior and interior signage must comply with the current version of the VA Signage Design Guide.

An optimal way-finding strategy incorporates multiple elements of planning and design to create intuitive way-finding to and through spaces. In addition to signage, interior design can support elements by using color to identify program areas. For example, all staff off-stage areas can be identified by a consistent color. Patient units can be identified by distinct and different color palettes. Group Rooms may be identified with consistent color. Artwork is another effective way-finding element. Artwork selections and placement can personalize and identify individual patient/resident rooms. Large-scale art wall panels can identify areas for gathering or socialization. Finally, views of nature can orient patients and visitors to key destination points and provide landmarks for way-finding.

The goal is create a coordinated way-finding system that integrates multiple elements of the interior environment to support and enhance a signage way-finding program.

#### **4.3.3.4 Acoustics**

A mental health facility requires special attention to sound control. Acoustic isolation shall be provided from the units to other areas in the hospital and inside each patient and resident room to preserve privacy/confidentiality and to reduce excessive noise. Excessive noise can negatively impact a therapeutic environment for both the patient/resident and the staff. It may affect one's ability to hear or be heard in a normal speaking tone, which detracts from a calm, non-threatening environment. Excessive noise may heighten some patients' fear and anxiety levels.

Ceiling Attenuation Class (CAC) is the test that measures how much sound is blocked from traveling outside of a determined space. Noise Reduction Coefficient (NRC) is



the test that measures how much sound is absorbed by the finishes of materials to avoid sound reflection on surfaces within the space.

IPMH units require hard ceiling surfaces in several areas for safety/ligature reasons, but some mental health grade ceiling panels with clips, to discourage tampering, may be used, where possible, to meet at least the following:

- Sound Absorption (NRC) at least 0.85
- Sound Blocking (CAC) at least 35

Flooring may be specified with an acoustic sub-floor or increased backing and product thickness which absorbs noise from transferring to the floor below and is more comfortable for staff and patients. Flooring backing is often a product of recycled content from the manufacturing process vulcanized or attached to the flooring permanently. Increased acoustic properties of flooring prevent both impact and airborne sounds. Flooring should be specified to meet ASTM E2179 and ISO 140 parameters.

- ASTM E2179: Standard Test Method for Laboratory Measurement of the Effectiveness of Floor Coverings in Reducing Impact Sound Transmission Through Concrete Floors
- ISO 140: Measurement of sound insulation in buildings and of building elements

Walls shall meet STC levels appropriate to support patient and resident privacy and to limit room-to-room sound transmission that may disturb other patients, residents and staff. Appropriate wall assemblies shall be provided to accomplish STC ratings as defined on Room Data Sheets in Section 5.

Furniture, window treatments and wall finishes may also be selected to provide sound absorption and support a calming and quiet environment.

#### **4.3.3.5 Lighting**

Lighting, both natural and artificial, plays an important role in creating a safe and normalized environment. In both IMPH and MH RRTP, lighting provides a consistent level of illumination with limited glare and shadowing, enhance the safety and comfort of the environment. Light levels and light quality have been shown to improve patient and staff behavior and reduce depressive behaviors like seasonal affective disorder.<sup>1</sup> Lighting shall be designed to provide comfortable and home-like lighting levels.

The following natural and artificial lighting considerations shall be integrated into the design of both IMPH and MH RRTP facilities. As noted in Section 3.1.3, anti-ligature and secure design must be used for all lighting fixtures in IMPH settings and must meet MHEOCC requirements.

### **Natural Light (Day-lighting)**

Daylight, along with views to the exterior, provide essential sensory stimulation for inpatients, as well as reinforce the normal rhythm of a typical day. Controlled natural daylight should be maximized in the design. Natural daylighting strategies support biophilic design and described in Section 4.3.3.2.

Specific goals related to day-lighting are:

- Sun control is essential, but exposed sun control devices such as drapes, blinds and other interior shading devices shall be avoided in patient accessible IPMH patient and staff areas. Integral blinds or breakaway surface mounted material coverings shall be used in IPMH areas. (reference Section 4.2.4)
- Design to provide uniform distribution of day light in all possible areas to eliminate glare and bright or dark spots.
- Avoid sizing or positioning windows or skylights in a manner that would create undesirable heat load and glare causing visual discomfort or visual disability. To reduce heat load and glare, applied window tint may be used on windows that are out of patient reach. Fritted glass may be used for windows within the reach of patients.
- When possible, provide access to natural daylight with skylights, clerestories, and transoms. These elements can be used as way-finding elements in the facility, while providing additional daylight to interior spaces.

### **Artificial Lighting**

Artificial lighting will be required to supplement naturally day-lit areas at night and to light areas without access to daylight.

Specific goals related to artificial lighting are:

- Provide MHEOCC compliant patient lighting controls in IPMH Patient bedrooms, when possible.
- Comfort Room lighting may provide controls for variable lighting colors, enabling patients/residents to control the room color, which is found to be beneficial for the patient mood and reduction of stress.
- Design lighting levels shall be appropriate to the use of the space.
- Provide daylight sensitive controls for artificial lighting fixtures so they will automatically be turned off when not needed.
- Provide variable lighting levels in patient areas to allow different lighting levels based on the activity and time of day.

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- Provide accent lighting, both interior and exterior where appropriate. Interior accent lighting should highlight art work and other feature walls. Exterior accent lighting in spaces viewed from the inpatient unit prevents looking out into a black hole at night.
- While maintaining safety and security is essential, avoid excessive illumination in spaces such as corridors or exterior courtyards that reinforce an institutional image and interfere with normal day/night rhythms.

### **IPMH Lighting**

Light fixtures in areas accessed by patients shall be flush mounted in the ceilings, with tamper-resistant frames and break-resistant sealed lenses, securely fastened to the frame. Wall mounted sconces, pendant lighting and floor or table lamps should not be used in inpatient settings.



*Figure 4.3 Examples of a wet/vandal down-light and a standard recessed fluorescent fixture*

#### **4.3.3.6 Finishes (Flooring and Base)**

Flooring material in IPMH facilities shall be secured following manufacturer and VA installation instructions/requirements. Secure installation prevents flooring from being torn or removed by inpatients to cause harm to themselves or others. Seams shall be heat welded when using welded sheet flooring and chemically welded when using resilient sheet flooring. Floors with high glare may adversely impact visual perception for psychotic patients and older patients, therefore, should be avoided. Suitable flooring considerations include resilient sheet, linoleum and sheet vinyl flooring. Rubber and cushioned flooring products may minimize fall related injuries.

Seclusion Rooms require special attention to finish selection and installation. In the Seclusion Room, flooring with an integral base and floor-to-ceiling and wall-to-wall resilient wall protection or rigid wall panels shall be provided. (see Section 3.1.5.6)

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In order to achieve a more home-like environment, resilient sheet, rubber, linoleum and sheet vinyl flooring with wood grain appearance may be used in some areas or throughout the unit. (see Figure 4.4) Accent or other patterns are also available and may help for way-finding.

A flooring that does not require waxing is highly recommended.



*Figure 4.4 Examples of sheet flooring that do not require waxing and provide a more home-like appearance.*

### **Resinous Material**

Resinous flooring or wall finish may be used in IPMH seclusion toilet/shower rooms and IPMH or MH RRTP patient/Resident Toilet/Shower rooms. This finish material is highly durable, easy to maintain/clean and extremely water resistant and is the recommended material for IPMH applications. Resinous flooring options offer slip resistant texture and finish to increase traction. In addition, resinous material applications provide the opportunity to create a seamless and water resistant finish from floor to ceiling.

### **Porcelain Tile**

Through-body porcelain tiles carry the color and pattern through the entire thickness of the tile. This product type is impervious to wear and may be considered for waiting areas, Dining Rooms and other congregation areas where durability and maintainability are an issue.

Porcelain tile can be used on MH RRTP Resident Toilet/Shower room walls but not on IPMH toilet/shower walls. Small scale tile, recommended no larger than 2-inch x 2-inch, may be used in IPMH or MH RRTP toilet/shower rooms for floor surfaces only. Small scale floor tiles provide greater ability to accomplish floor sloping needed to prevent water infiltration into the patient/resident room. The tile should be installed with no exposed edges to prevent a patient from dislodging a tile and using it as a weapon.

Per VA's Master Construction Specifications (PG-18-1), the coefficient of friction (COF) when tested in accordance with ANSI A137.1 and measured per the TCNA

DCOF AcuTest must be equal to or greater than .42 for level interior tile floors that will be walked on when wet.

### **Carpet**

Due to its home-like feel, sound absorption, and ease of replacement, carpet tile is recommended as a flooring option in certain areas mentioned below. Carpet tile shall have an upgraded moisture guard or moisture-resistant backing system. It is recommended to use backings with a lifetime warranty to protect against delamination and edge raveling. Carpet tile shall be used only in supervised patient areas such as group therapy, Day Rooms, Dining Rooms, Intake/Interview Rooms recreation/activity areas and in staff areas such as Conference Rooms and office areas.

Woven vinyl carpet tile solutions provide the look, feel and noise control qualities of carpet, while also creating a surface to address infection control, cleaning and ease of maintenance. When carpet solutions are considered, woven vinyl solutions are recommended.

### **Solid Surface Shower Base**

Solid surface shower bases allow a durable monolithic shower floor surface that is preferable to porcelain ceramic tile in inpatient bathrooms. In IPMH Patient Toilet/Shower rooms, resinous flooring and base, coordinated with the continuous shower drain, provide a seamless and water proof finish. Special consideration shall be made in MH RRTP facilities when porcelain tile is used, to create an integrated floor and shower base that addresses water resistance.

### **IPMH Floor Base**

Reference *VA PG-18-14 Room Finishes, Door and Hardware Schedule* and Section 5 of this Design Guide for room-by-room specification of floor base materials. Floor base in all areas shall be 4" in height.

Resilient base, such as rubber or vinyl, is recommended in areas where the flooring material is carpet, resilient sheet flooring (with chemically welded seams), luxury vinyl tile, or raised rubber flooring. Minimize section cuts of resilient base to reduce risk of choking or removal of the material for use for self-harm or harm to others. To prevent removal and potential patient personal harm, resilient cove base cap molding accessory strips shall not be used. Cove bases shall only be finished with non-toxic caulking or sealant where the base meets the floor and wall.

Resilient integral base provides a seamless installation that reduces the ability for patients to remove the base and harm themselves or others.

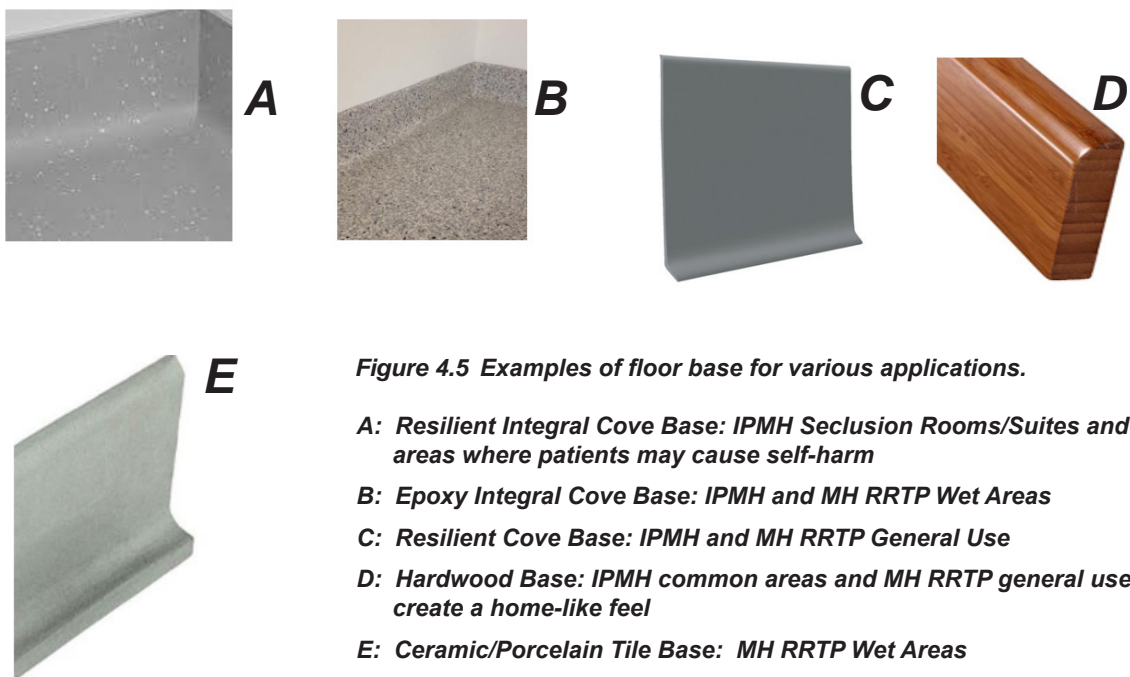
Resinous epoxy integral cove base provides a continuous surface from floor to wall with no joint or seam and is recommended in patient room toilet/shower rooms and applicable wet areas. Integral base provides a seamless installation that prevents the ability for patients to remove the base and harm themselves or others.



## **MH RRTP Floor Base**

Resilient base, such as rubber or vinyl, is recommended in areas where the flooring material is carpet, resilient sheet flooring (with chemically welded seams), luxury vinyl tile, or raised rubber flooring. Solid  $\frac{3}{4}$ -inch hardwood base may be used where a more residential aesthetic is desired.

Resinous epoxy integral cove base is recommended in toilets and shower rooms for clean-ability and maintenance; however, cove porcelain base can be installed in MH RRTP facilities where ceramic/porcelain floor is installed in toilet/shower rooms.



**Figure 4.5 Examples of floor base for various applications.**

**A: Resilient Integral Cove Base: IPMH Seclusion Rooms/Suites and areas where patients may cause self-harm**

**B: Epoxy Integral Cove Base: IPMH and MH RRTP Wet Areas**

**C: Resilient Cove Base: IPMH and MH RRTP General Use**

**D: Hardwood Base: IPMH common areas and MH RRTP general use to create a home-like feel**

**E: Ceramic/Porcelain Tile Base: MH RRTP Wet Areas**

## **Thresholds**

Thresholds between flooring materials and at transitions of doorways shall be avoided wherever possible to prevent tripping hazards and removal for use as a weapon. Where required, such as in toilet/shower rooms, thresholds shall be firmly secured to the floor with tamper resistant fasteners. Thresholds shall be no higher than  $\frac{1}{2}$ -inch above the floor.

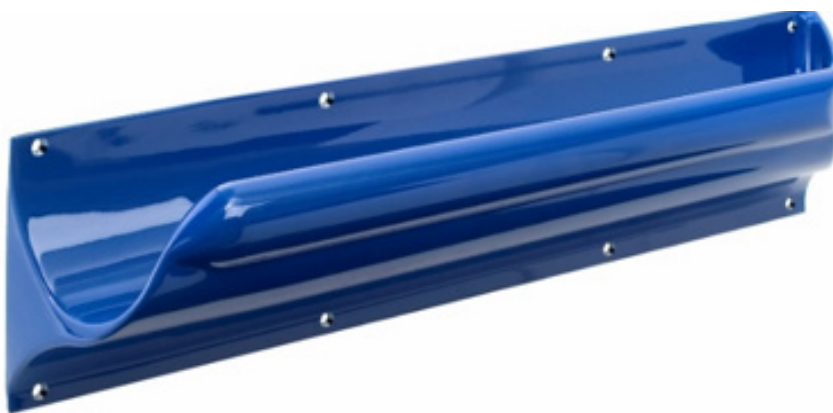
#### **4.3.3.7 Finishes (Walls)**

##### **Wall Protection and Handrails**

Reference Department of Veterans Affairs VHA Master Specifications:  
Section 10 26 00, Wall and Door Protection

Specified wall guard systems and hand/grab rails shall give special consideration to the following:

- Handrails: All patient corridors shall provide Ligature-Resistant handrails in IPMH facilities. In both IPMH and MH RRTP facilities, color/ material shall work cohesively with the design palette and specifically, the adjacent wall. (see Figure 4.5)
- Sheet Wall Protection: In both IPMH and MH RRTP facilities, rigid sheet wall protection shall be installed as wainscot on the lower 4-feet of the patient corridor walls and any walls where there is high wheelchair traffic or equipment cart movement. No added trim pieces at the top of panels shall be used to eliminate the risk of removal by residents or patients in IPMH facilities. Rigid wall protection panels shall be butt-joined with pick resistant, non-toxic and anti-ligature caulking.
- Corner guards: When required, full height resilient, shock absorbing corner guards shall be flush or surface mounted. Surface mounting is required on all fire rated walls and must maintain the fire rating of the wall. Full height cement application shall be used for corner guard installation. Color/material shall work cohesively with the design palette and specifically, the adjacent wall.
- Printed imagery over wall protection sheets can protect the walls and add art or way-finding imagery to the designed space.



**Ligature Resistant Grab Bar**

**Figure 4.6 Example of anti-ligature grab bar**

### **Wall Finish Including Paint and Vinyl Wallcovering**

Warm/grounding neutral earth tone paint colors with accent tones should be used in patient rooms and common areas. This earth tone color palette supports biophilic design theories and also enhances the calming sense of the environment. An eggshell paint finish is recommended to reduce scuffing and added maintenance requirements. Eggshell finish is easier to clean, maintain, and match when patching. A level 4 finish for drywall is required along with one coat of primer and two top coats of paint. IPMH bathrooms and patient toilet walls shall be painted with epoxy paint for clean-ability and moisture and mold resistance.

Vinyl or non-breathable wallcoverings should not be used on exterior walls due to moisture and mold concerns. Wallcovering can be used in public areas to provide texture, pattern, or color accent to the wall surface, as well as providing an easily cleanable surface.



*Figure 4.7 Examples of warm/grounding earth tones for base and accent paint selections.*

### **High Impact Paneling and Trim**

High-impact paneling and trim come in a variety of colors and textures. Paneling and trim selections and design can produce a home-like atmosphere by creating a wainscot in a corridor or a headboard look in a patient or resident room. The use of trim in a patient or resident room can promote a residential quality to the environment while also providing the functional benefit of enhanced impact resistance to walls.

### **Wood Paneling and Trim**

Wood paneling and trim create a warm and more residential environment in mental health facilities, but should be limited to areas outside the unit in IPMH, including reception and waiting.

### **Porcelain Wall Tile**

Through-body porcelain tiles are acceptable for resident shower rooms and toilet rooms in MH RRTP facilities where the potential for abuse is minimal. Porcelain wall tile use in IPMH shall be determined on a facility by facility basis.

### **Solid Surface Resinous Panels**

Solid surface resinous panels are recommended in IPMH toilet/shower rooms. This non-porous material is attractive, can mimic the look of stone, is durable, and easy to maintain.

### **Acoustic Wall Panels**

Acoustic wall panels help absorb sound in spaces with large areas of hard surface. The material of the acoustic panels shall be durable, easily cleanable and non-absorbent. These panels can be installed in MH RRTP common areas like group, activity, or Dining Rooms, or in staff spaces like offices and work rooms. Acoustic wall panels shall not be provided in IPMH patient areas.

#### **4.3.3.8 Ceilings**

##### **Gypsum board (Inaccessible) Ceilings**

Ceilings in IPMH areas where patients may be unsupervised (reference Section 3.1.2: Security Zone 3) must be finished with gypsum wall board. Ceiling mounted fixtures, panels, and devices shall be kept to a minimum and must be vandal resistant with tamper-resistant hardware. These items shall be recessed ceiling mounted. These areas include but are not limited to patient rooms, toilet/shower rooms, Seclusion Rooms, and Sally Ports. Please refer to the PG-18-14 for additional interior requirements.

##### **Ceiling Panel Systems**

Ceilings for IPMH areas where patients are always supervised (reference Section 3.1.2: Security Zone 2) may be finished with gypsum board or tamper-resistant ceiling panel systems. These ceiling panel systems may be solid or perforated for improved acoustic control and shall be mechanically fastened with tamper resistant fasteners or installed with tamper resistant clips to a ceiling grid.

The use of accessible ceiling systems in corridors and common areas allows maintenance of ceiling systems without accessing patient areas in Security Zone 3.

### **Acoustical Ceiling Tiles**

Acoustic ceiling tiles may be used in IPMH staff support areas located in Security Zone 1 (reference Section 3.1.2). IPMH staff areas where acoustic ceiling tile may be applied include but are not limited to: Nurse Work Room, Medication Room and Team Room.

Acoustic tile ceilings are typically provided in most spaces MH RRTP except for gypsum board ceilings in toilet rooms & soiled utility rooms, or in areas where the interior design concept calls out for soffits or accent ceiling types. Gypsum board ceilings should also be installed in resident rooms to support the home-like design aesthetic.

### **IPMH Ceiling Height**

Minimum recommended ceiling height of 8-feet 6-inches A.F.F. shall be used for IMPH staff areas (Nurses' Station, Nurse Work Room, Medication Room and Team Room), offices, and consultation rooms in Security Zone 1. A minimum ceiling height of 9-feet A.F.F is recommended in patient areas. Higher ceilings limit the ability of patients to reach ceilings and ceiling fixtures if standing on furniture. Ceiling heights shall be considered in design to create an appropriate scale for each room floor area.

### **MH RRTP Ceiling Height**

Minimum recommended ceiling height of 8-feet 6-inches A.F.F. shall be used for MH RRTP staff areas, offices, and consultation rooms. A minimum recommended ceiling height of 9-feet A.F.F is recommended in resident rooms. Higher ceilings limit the ability of residents to reach ceilings and ceiling fixtures to conceal hazardous items.

#### **4.3.3.9 Wall Mounted Items**

##### **Artwork**

Artwork adds a personal touch to the unit and can brighten a space. When natural imagery is used, it incorporates biophilic design, and provides positive engagement with their physical environment for patients, visitors and staff. Artwork content, color and location can also be utilized as way-finding elements. <sup>2</sup>

Special care should be taken in the following respects when planning, selecting or installing art:

- a. Avoid abstract art where shapes are not clearly defined. Photography is recommended.
- b. Consider providing a space for temporary display of patient/resident art.
- c. Consider including art by local artists, Veterans, and/or art that represents the region.
- d. Avoid art that creates optical illusions.





A resource for artwork that supports the recovery process is NARSAD (National Alliance for Research on Schizophrenia and Depression) Artworks. NARSAD Artworks products showcase museum quality art by talented artists whose lives share or have shared the common bond of mental illness.

Artwork in public corridors shall be large in scale and appropriate to the corridor dimension and scale. Still life, landscape, black and white, and architecture images are a good choice in these spaces. Public dining areas may display tranquil, restful images that provide relaxation for both patients/residents, staff and visitors.

Safety/security considerations in IPMH facilities require artwork to be installed in a manner that mitigates potential use as a weapon. Wall-mounted artwork shall have heavy duty frames securely fastened to the wall with tamper resistant fasteners. Polycarbonate glazing shall be used to protect the artwork. Care shall be taken to reduce the opportunity to attach ligatures to the frame or the joint between the top of the frame and the wall. The frame shall be beveled to slope away from the wall and the joint at the top shall be sealed with a tamper resistant sealant.

### **Corner Mirrors and Cameras**

Corner mirrors can be installed to provide visual access into blind corners of corridors and public spaces. Tamper resistant screws shall be used to securely fasten the mirrors to the wall and ceiling. Mirrors in the IPMH and MH RRTP facilities shall be made of materials resistant to breaking, including polished stainless steel and acrylic. Avoidance of blind corners and maximization of clear site lines should be considered in planning and design of all mental health facility projects.

In existing IPMH areas that do not allow for clear lines of site, cameras can be installed to provide full visibility for staff. Tamper resistant screws shall be used to securely fasten cameras to the wall and ceiling, and cameras must not provide anchor points. (reference Section 4.8.6.3)

### **Marker Boards**

Marker board wall paint is recommended in lieu of marker boards. If marker boards are provided in IPMH facilities, they shall be securely fastened to the walls with tamper resistant screws. Marker trays are not to be attached due to risk of removal and patients harming themselves or others. Bulletin boards are not to be installed in patient spaces due to risk of harm from push pins or magnets used for attaching items to the board.

### **Surface Mounted Items**

In IPMH facilities, all surface mounted items (exit signs, door stops and telephones) should be securely fastened to the walls with tamper resistant screws. Exit signs shall be wall mounted instead of ceiling mounted. Telephones shall be located in recessed architectural alcoves directly visible from the Nurse Station. Telephone cords shall be no longer than 12-inch. All accessories and equipment must be durable and easily cleaned.

### **Alcohol Hand Cleaning Dispensers**

Alcohol based gels and foam hand sanitizer shall not be located in IPMH or MH RRTP facilities due to risk of consumption.

#### **4.3.3.10 Interior Wall Partitions**

##### **Acoustics**

As referenced in Section 4.3.3.4, interior wall partition must achieve minimum NRC requirements to accomplish STC ratings as defined by room in Section 5. Interior partitions in both IPMH and MH RRTP spaces that connect between a patient/resident room and shared areas like Group Therapy Rooms or offices shall provide sound attenuation features such as insulation (fiberglass batt or spray) between studs, a double layer of gypsum board, and partitions extending to the underside of the deck above as required to accomplish STC ratings for the most restrictive area. In addition, wall penetrations such as doors, interior lights, electrical outlets and mechanical ductwork shall be detailed to avoid sound transmission that impacts STC ratings in an otherwise compliant partition system. (reference 2018 FGI Guidelines for Design and Construction)

##### **Abuse Resistance**

IPMH patient rooms and isolation/Seclusion Suites shall utilize abuse resistant gypsum board assemblies to minimize repairs due to patient abuse. The recognized industry standard for classification of abuse-resistant products is ASTM C1629/ C1629M. Within this standard there are four performance level categories, testing the level of gypsum board to withstand abuse. The four categories, testing criteria and impact testing definitions are:

- Surface Abrasion Resistance (Modified ASTM D4977): Ability to resist scratches and scuffs
- Indentation Resistance (Modified ASTM D5420): Ability to resist dents by a small hard object
- Soft-Body Impact Resistance (Modified ASTM E695): Ability to withstand a single impact of a heavy soft object



- Hard-Body Impact Resistance (Annex A1): Ability to withstand the impact of a hard object

Each of these performance levels has three levels of classification 1-3. The classifications 1-3 for soft body impact resistance are determined by ASTM test method E695 and are as follows:

- Classification Level 1: 90 ft.-lbs. (112 J)
- Classification Level 2: 195 ft.-lbs. (265 J)
- Classification Level 3: 300 ft.-lbs. (408 J)

Special consideration shall be given to Soft-Body Impact Resistant gypsum board assemblies shall be provided in IPMH Patient Rooms and Seclusion Suites.

Other areas in IPMH units and MH RRTP facilities that may also benefit from an enhanced gypsum board assembly to reduce maintenance and repair due to abuse shall be determined on a facility by facility basis.

#### **4.3.3.11 Interior Doors**

##### **General**

In both IPMH and MH RRTP facilities, interior doors shall be solid-core, flush-panel wood doors in hollow metal frames unless otherwise specified in *VA PG-18-14 Room Finishes, Door and Hardware Schedule* and Section 5. All IPMH and MH RRTP unit door openings that provide patient access shall be 42-inch in width. The opening width can be accomplished with a single or double leaf door. Hollow metal doors may be used in exterior door applications or service spaces where high impact is a concern and where required by code. All doors in IPMH patient-only spaces must provide no anchor points. Refer to the VA MHEOCC for additional IPMH door requirements.

##### **View Panels**

Provide view panels in all IPMH and MH RRTP egress doors. View panels shall also be provided in all IPMH and MH RRTP common group, meeting and activity areas. View panels shall be sized to provide staff visibility into these while also providing patient/resident privacy as needed, and shall be determined on a facility by facility basis. Laminated glass shall be used as vision panels in all IPMH units.

View panels in IPMH patient room doors allow staff to check on a patient without entering the room.

When view panels in patient room doors are provided, consider using integral blinds in the view panel, with operable controls located on the corridor for staff access. Electrochromatic (Smart Glass) may also be considered as an alternative to clear laminate glass for view panels. The use of this product shall be determined on a

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facility by facility basis. View panels with a lockable hinged door allow patient privacy to be maintained but create a correctional appearance.

### **General Door Hardware**

ABAAS compliant hardware shall be used throughout IPMH and MH RRTP units and facilities.

Closers and other hardware that could be used as a weapon shall not be accessible to IPMH patients. Refer to VA Program Guide 18-14 Room Finishes, Door and Hardware Schedule for specific hardware requirements by room type for IPMH.

### **Patient Bedroom Entry Doors & Hardware**

All IPMH facilities are required to install door top alarms on swinging corridor doors of patient rooms. Door top alarms have proven to be effective in providing timely notification to staff and preventing completion of suicide attempts. The weight sensor door top alarms detects the application of pressure to alarm staff of an incident. A photoelectric sensor detects ligature ahead of pressure application. Hardware used on IPMH bed room and bathroom doors, as well as doors in rooms where patients may be left unattended, shall follow VA Program Guide 18-14 Room Finishes, Door and Hardware Schedule requirements to provide a safe environment for mental health inpatients.

IPMH doors must swing out to reduce the opportunity for patient barricading in the toilet/shower.

### **Door Hinges**

Hospital grade hinges should be used in general applications. IPMH bedroom doors hinges and hardware must be mental health grade and ligature free.

### **Egress Doors & Hardware**

All inpatient units will be locked under normal operation. Entrances to inpatient units should have a Sally Port (secure entry vestibule) designed with two sets of synchronized doors. (see Section 3.1.5.4) Door synchronization is required to ensure only one set of doors may open at a given time. The sets of doors are to prevent patient elopement. These doors should have hardware with electronic locks to allow remote unlocking by staff, proximity card access by authorized staff and automatic unlocking in the event of an emergency. Secondary exits shall also have electronic hardware that allows these doors to be automatically unlocked in an emergency.

### **Door Swings**

IPMH Seclusion Room/Suite doors shall open out. Doors shall swing 180 degrees wherever possible.



### **Staff Doors & Hardware**

Spaces within an IPMH or MH RRTP unit that are accessed only by staff such as medication, food service, team conference, clean and soiled utility rooms and staff corridors shall be locked under normal operation and with card readers, key or key pads to allow authorized access. The door hardware shall allow these doors to close automatically.

### **Seclusion Room Hardware**

Per the VA MHEOCC, use an institutional lock with dead latch and no hardware on the inside of the Seclusion Room. (reference VA PG-18-14)

### **Emergency Patient Room Access**

IPMH patient bedroom doors in all new construction and renovated construction shall swing out. In renovation projects where there is not sufficient egress path clearance, the patient room doors may be in-swinging under normal conditions, but must be designed to be opened out in emergency circumstances when a patient has attempted to barricade themselves in the room. There are four hardware options for achieving this:

- Pivot hinge with smoke gasketing: The pivot hinge hardware selected must not create an anchor point.
- Double leaf door: This consists of a smaller door adjacent to the main door. The main door may swing into the patient room while a narrower locked side door swings into the corridor in case of an emergency. The narrower side door is unlocked by staff keys.
- Door within a door: This consists of a smaller door cut into the main door. The hardware consists of a deadbolt lock and continuous hinge that can be opened out in an emergency scenario.
- Remove hardware: There are several products on the market that allow doors to be opened out in emergency conditions. These products require special tools and/or staff to remove the hardware necessary to open the door in an emergency. When a patient attempts to barricade themselves in their room, the door needs to be opened immediately.

The pivot hinge hardware and double leaf door options have performed best in past renovation and new construction projects.





### **Patient Toilet/Shower Doors**

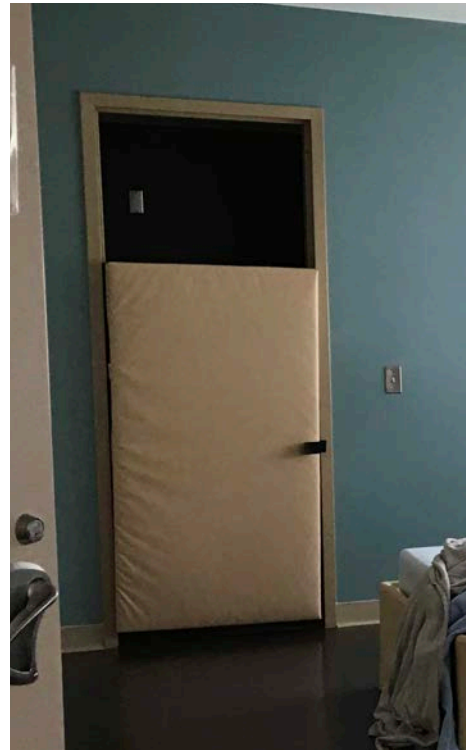
Per the updated VA MHEOCC, “A door from the patient room to the bathroom is essential for privacy, this door can be the most likely room feature to be used as an anchor point.” Listed below are three options, under consideration by VA that an individual facility may consider.

Option 1: Soft Suicide Prevention Doors

Option 2: Sliding Door

Option 3: Out-Swinging Door with Sloped Top (open top and bottom)

Soft suicide prevention doors can be used in the toilet/shower room application. The soft suicide prevention door eliminates door anchor points while contributing to the healing environment by providing a feeling of privacy without compromising staff access and patient safety. Soft suicide prevention doors also provide the opportunity to add graphics and colors to the door to enhance the therapeutic environment.



**Figure 4.8 Example of IPMH soft suicide prevention toilet/shower room doors. Graphics applied to the door can enhance the inpatient room. Magnets, velcro or anti-ligature hinges are use for this application.**

Magnetic and Velcro attached door solutions are a safe option for toilet/shower room applications as are sloped top solutions that include an open at the top and bottom of the door. (see Figure 4.9) Reference Section 3.1.5.6 for additional information about IPMH Toilet/Shower room door options.



*Figure 4.9 Example of an IPMH sloped door..*

## **Corridor Doors**

Cross-corridor doors to IPMH units require locking mechanisms to control free movement of patients. For additional information, reference VA Program Guide 18-14 Room Finishes, Door and Hardware Schedule.

### **4.3.3.12 Interior Windows and Glazing**

Interior lights should be installed in painted hollow metal frames with laminated glazing. The glazing thickness and the size of the glazing stop should be based on the size of the light. Tamper resistant screws should be utilized to secure the glass stops.

### **4.3.3.13 Furnishings**

IPMH furniture in Security Zones 2 & 3 shall be mental health grade or certified by the manufacturer to be used in locked unit settings. This furniture grade is durable, easily maintained, ligature and abuse resistant with tamper proof fasteners. Furniture shall not have sharp edges or surfaces that can be used as an anchor point.

Chairs used in patient dining areas and patient rooms shall be either weighted or very light and soft to minimize the threat of the chair being thrown or otherwise used as a weapon. It is preferred that patients be able to move furniture if desired. There is a disadvantage of weighted furniture causing harm to patients or staff when trying to move it. (see Figures 4.10 and 4.11)

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*Figure 4.10 Examples of an IPMH lounge furniture*



*Figure 4.11 Examples of an IPMH dining furniture*

## **IPMH Window Coverings**

**New Construction** – The ideal window covering for inpatient units is an integrated window blind with a patient accessible control. This ensures the safety of patients from self-harm as an anti-ligature measure. The patient shall be able to control the integrated blinds without the need for special tools or staff assistance. This allows patient control of their own personal space without staff permission and supports patient dignity. An integral blind or shade with electric control, a cordless solution or other mental health grade window coverings that meet requirements for anti-ligature can also be used.



**Integrated Blinds**



**Anti-Ligature Operator Knob**

**Figure 4.12** *Example of an IPMH window with an integrated blind and the associated anti-ligature operator knob.*

An integrated blind is the preferred window covering solution for safety, but a magnetic or mental health grade hook and loop or other anti-ligature breathable fabric window covering may be provided. This option may add color, texture or pattern to the room to provide a more home-like atmosphere.



## **4.4 Structural Systems**

### **4.4.1 Seismic Design**

The structural designed in compliance with VA Handbook H-18-8 Seismic Design Requirements, shall be implemented in new construction and renovations facilities as possible.

### **4.4.2 Physical Security**

Typically, inpatient mental health facilities will be classified as Mission Critical Facilities and as such require specialized structural design for blast resistance and prevention of progressive structural collapse. Domiciliary MH RRTP facilities are classified as LSP with MC Utilities and are required to remain functional during an emergency with minor repairs. New buildings, additions and major alterations shall be designed to meet the requirements of Physical Security Design Manual for the type of facility. The structural engineer should verify the classification of any proposed mental health facility in the earliest design stages.

## **4.5 Heating, Ventilation and Air Conditioning Systems**

The HVAC system shall comply with the current version of VA HVAC Design Manual, VA Design and Construction Procedures, VA Master Construction Specifications and VA Standard Details, where applicable. The current VA design and construction standards are available on the VA Technical Information Library (TIL). Deviations from these VA guidelines may be made provided approval is obtained from the VA.

All HVAC systems for IPMH facilities shall be designed to meet the Security Level Zones and Plans provided by the architect and as described in this Design Guide. All systems installed in Zones 2 and 3 shall be 100% anti-ligature and vandal proof with recessed flanges and hardened against damage. Systems in Zone 1 shall be as directed by the design A/E and local VA authority. All systems in MH RRTP shall preclude contraband storage.

### **4.5.1 Life Cycle Analysis**

The HVAC system shall be selected based on an economic life cycle analysis performed as outlined in the current edition of the VA HVAC Design Manual.

### **4.5.2 Energy Conservation**

The building shall meet the requirements of the current version of the VA Sustainable Design and Energy Reduction Manual, the VA HVAC Design Manual, the VA Electrical Design Manual, the Lighting Design Manual and the VA Plumbing Design Manuals.

### **4.5.3 Load Calculations**

Calculations shall be in accordance with the current version of the HVAC Design Manual. The calculations shall be documented and provided to the VA for review and concurrence.

#### **4.5.4 Exterior Design Conditions**

Exterior summer/winter design conditions and cooling tower wet bulb design temperatures shall be based on the current version of the VA HVAC Design Manual. The Architect/Engineer (A/E) may recommend more stringent outdoor climatic conditions for review and approval by the VA.

#### **4.5.5 Interior Design Conditions**

Interior design conditions for all spaces shall be maintained in accordance with the current version of the VA HVAC Design Manual.

#### **4.5.6 Supply Air Requirements**

The supply air volume shall be established to meet the heating and cooling load requirements of the occupied space. The supply volume shall, however, be modified to meet a) minimum air change requirements if this air quantity is more than the heating and cooling load requirements, b) maintain proper space pressurization relative to room exhaust requirements. For all air systems the supply air minimum airflows shall follow the current version of the VA HVAC Design Manual.

#### **4.5.7 Outdoor Air Requirements**

The HVAC design shall provide ventilation air in accordance with the current version of the VA HVAC Design Manual.

#### **4.5.8 Exhaust and Return Air Requirements**

The HVAC design for spaces shall provide return air or exhaust air as required for the spaces to control the transfer of odors and provide proper room pressurization. At a minimum, exhaust air and pressurization shall be provided as indicated in the VA HVAC Design Manual.

#### **4.5.9 Noise Criteria**

The HVAC design shall provide resulting sound levels in occupied spaces not to exceed the levels shown in the current version of the VA HVAC Design Manual. Minimize sound levels in occupied outdoor areas.

#### **4.5.10 Design Features**

Properly designed HVAC systems are essential for the Inpatient Mental Health Services staff, patients, and visitors to efficiently maintain comfort conditions.

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The design A/E shall refer to the Reflected Ceiling Plan in Section 5 – Room Templates of this Design Guide for the general placement of diffusers and grilles. However, these RCPs do not preclude the A/E from responsibility for designing a properly functioning system.

The design A/E shall refer to the VA HVAC Design Manual, Chapter 6 for specific criteria as shown in the Inpatient Mental Health Room Data Sheets.

Air devices in Security Zones 2 and 3 shall be rated for use in mental health facilities. They shall be mounted flush with walls or ceilings and secured with tamper resistant anchors. All grilles and registers in Zones 2 and 3 shall be anti-ligature, tamper-proof, and out of reach of patients. Air devices in Security Zone 1 shall be selected by the design A/E in accordance with the VA HVAC Design Manual.

#### **4.5.11 Temperature Control Criteria**

HVAC controls shall be provided, in accordance with the VA HVAC Design Manual, to efficiently maintain comfort conditions. Automatic occupancy and vacancy sensors should be considered for automatic control to reduce energy usage during unoccupied periods. Controls shall be of the electric/electronic type. As an option, consider providing wall-mounted thermostats to allow patients limited control of space temperature. These thermostats shall be tamper-proof and anti-ligature.

#### **4.5.12 Humidity Criteria**

Humidity levels for the HVAC systems shall be provided in conformance with the current version of the VA HVAC Design Manual.

#### **4.5.13 Equipment Locations**

Install indoor and outdoor equipment with clearances in accordance with the requirements of the VA HVAC Design Manual. All serviceable HVAC items in Security Zones 2 and 3 shall be concealed and tamper proof access panels shall be provided where required for maintenance. All equipment shall be located to minimize service disruptions the facility, minimize access into patient care areas, and minimize the use of ladders for service personnel. Exterior equipment shall be not be located in outdoor areas accessible to patients. Locate exterior equipment to minimize noise at outdoor areas.

### **4.6 Plumbing**

The plumbing systems should comply with the current version of VA Plumbing Design Manuals, VA Design and Construction Procedures, VA Master Construction Specifications and VA Standard Details, where applicable. Deviations from the VA guidelines may be made provided approval is obtained from the VA. In addition, the design should meet the requirements of the current version of the International Plumbing Code (IPC) and the National Fire Protection Association (NFPA).

#### **4.6.1 Domestic Water**

Design shall be in accordance with the current version of the VA Plumbing Design Manual.

#### **4.6.2 Plumbing Fixtures**

Design shall be in accordance with the current version of the VA Plumbing Design Manual and VA Specification Section 224000.

#### **4.6.3 Sanitary, Vent and Storm Water Systems**

Design shall be in accordance with the current version of the VA Plumbing Design Manual.

#### **4.6.4 Medical Gas Systems**

It is anticipated that there are no requirements for medical gases in this type of facility. However, if for care delivery to the patient population and medical gas is required, design shall be in accordance with the current version of the VA Plumbing Design Manual.

#### **4.6.5 Seismic Requirements**

Design shall be in accordance with the current version of the VA Plumbing Design Manual and H-18-8 Seismic Design Requirements.

### **4.7 Lighting and Power Systems**

#### **4.7.1 Lighting**

The VA Lighting Design Manual (LDM) provides A/E guidance for the design of lighting systems such as lighting calculations, design parameters and recommended types of luminaires. The A/E shall comply with relevant guidance for Mental Health stated in the LDM. The A/E has the option of using either fluorescent or LED lighting technology. All luminaires shall be recessed mounted with vandal resistance and anti-ligature type. The A/E shall follow the Reflected Ceiling Plan in Section 5 – Room Templates for the placement of luminaires, if the placement of luminaires meets design criteria of the project. However, the A/E shall be responsible for the final placement of luminaires as shown on contract drawings. The A/E shall select appropriate number of lamps in each luminaire to render the required illuminance level for each room and task.

Controlled natural lighting should be provided wherever possible to reduce glare and to promote a healing and energy-efficient environment. Lighting controls shall be provided to meet the therapy and tasks of the space and in compliance with the associated energy code requirements.

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Patient and resident rooms should utilize natural light as much as possible. In addition, general lighting and night lighting shall be provided as required. Provide at least one-night lighting fixture in each patient room which shall be controlled at the room entrance. All lighting controls in patient areas should be silent. All lighting fixtures used in patient areas shall be recessed mounted in the ceiling, and listed for vandal resistant construction, to avoid access to lamps. Tamper resistant screws/attachment devices should be used.

Surface mounted lighting fixtures - vandal resistance and anti-ligature type- in bathrooms may be acceptable only when a recessed type is not available.

Lighting controls in Seclusion Rooms shall be provided with dimming capability, located outside of the room and shall be controlled by staff.

### **4.7.2 Power**

The VA Electrical Design Manual (EDM) provides guidance for the design of the electrical systems. The A/E shall comply with relevant guidance for Mental Health stated in the EDM. The A/E shall provide electrical system design to serve all electrically operated equipment. The A/E shall confirm electrical requirements of all equipment to provide correct design and load calculations and shall show receptacles or hardwire connections for all electrically operated equipment. The design A/E shall follow the Floor Plan in Section 5 - Room Templates of this Design Guide for the placement of receptacles for those key spaces. In the case where there is no room template, provide receptacles or hard-wired connections as required by facility and in compliance with NEC.

## **4.8 Telecommunications, and Special Telecommunications, Monitoring and Signal Systems**

### **4.8.1 General**

The design professionals shall use as guidance on the design and installation of special systems using the Telecommunications and Special Telecommunications Systems Design Manual, Chapter 9.2 Behavioral Health and the Office of Information and Technology (OIT) for all systems described under Section 4.8.

### **4.8.2 Telecommunications network outlets**

Telecommunications outlets shall comply with the Telecommunications and Special Telecommunications Systems Design Manual.

**Telephone:** Within an inpatient unit, cordless telephones, wall mounted telephones near the nursing station or a “hands free” recessed wall mounted phone system located in a phone room should be available for patient’s use. Telephones are not to be installed in patient rooms.



Telephone outlets are typically provided at each staff work station and in each office, conference or meeting room. Wall outlets are 18" [457.2 mm] AFF and desk outlets are 48" [1219.2 mm] AFF.

**Information System:** Information system needs include computer and electrical outlets available at all work stations and decentralized charting locations. Desk or workstation outlets are 48" [1219.2 mm] AFF. Data outlets should also be provided at each supply/ medication area to allow for maintain inventory control. A locked, dedicated information systems room should be located outside the inpatient unit.

Additionally, data, phone, and electrical outlets should be installed 48" [1219.2 mm] AFF in all group rooms and other spaces as noted in Section 5 Room Templates. Data Outlets are also required in rooms not contained in Section 5 but are part of the IPMH or MH RRTP facility..

#### **4.8.3 Tele-mental health video conferencing**

Video-conferencing equipment for tele-mental health should be available in all mental health and behavioral care clinics, facilities, or units to allow for remote communication between patient and mental health professional. Typically, this video-conferencing capability will be installed in clinical offices, consultation rooms, group rooms and/or conference rooms as determined by the local facilities. VA video-conferencing units use the VA's IT network for IP-based videoconferencing. The video conferencing units are typically cart-based to allow them to be stored securely when not in use.

#### **4.8.4 Nurse call**

Nurse call systems are not required in IPMH or MH RRTP. If a facility decides to provide a nurse call system, after VA authority approval, it shall meet the requirements in the FGI Guidelines for the Design and Construction of Hospitals Call Systems section and the MHEOCC. The specific needs for call system locations should be coordinated with the functional design of the patient unit. The nurse call cords should be avoided and all hardware shall have tamper-resistant fasteners.

#### **4.8.5 Television**

Cable and electrical outlets for television should be located in lounges and Day Rooms. The cords should be less than 12 inches [304.8 mm] in length and placed out of view to prevent abuse from patients. Televisions should be flat screen and flushmounted securely to the wall or provided with tamper-resistant protected cover with slope tops to avoid ligature risks..

#### **4.8.6 Security**

Security systems design shall provide protection of the facility systems necessary to maintain operations prior to, during and after a manmade or natural event. Electronic Security Systems include Physical Access Control Systems (PACS); Video Assessment and Surveillance Systems (VASS); and Duress, Security Phones, and Intercom System

(DSPI). IPMH and RRTP facilities are considered as mission critical facilities, the design of all these systems shall comply with the VA Physical Security Design Manual for VA Mission Critical Facilities (PSDM)

Security design shall provide the level of security for the specific program and patients served. Implementing special features related to perimeter design, internal space, and safety and security cameras.

#### **4.8.6.1 Duress alarm**

Provide a wireless duress alarm system to protect healthcare personnel. This system provides immediate response during emergencies by instantly locating the specific employee under duress. With either a wall-mounted device or a small staff badge that can easily be hidden behind an employee ID badge, a healthcare personnel could discretely request assistance in a potentially threatening situation or is in need of assistance. The duress system for a unit should be monitored at the main Nurse Station and at a remote security post within the facility. In residential mental health facilities, the monitoring should be located at the central reception/security post for the facility. In addition to portable duress alarms, duress push buttons should also be located under the counter of Nurse Stations, at reception desks and in professional's offices and exam rooms where appropriate. This system shall be coordinated and integrated with the overall security protocol established in that particular facility.

#### **4.8.6.2 PACS (physical access control system)**

All staff entrances should have formal access control measures limiting ingress and egress. This should include a standalone alarm system with a way to identify who is going in and out. Provide a perimeter security system to avoid elopement, prevent contraband smuggling and control visitor access.

#### **4.8.6.3 Video Surveillance Systems**

Provide Video Surveillance Systems (VSS) which include cameras, monitors, controlling and recording equipment. In IPMH facilities to complement one-on-one visual observation of patient activity in Seclusion Rooms. It is also recommended to provide VSS as a security measure, in Sally Ports and in outdoor areas for perimeter security. Security cameras shall not be accessible to patients..

#### **4.8.7 Public Address System (PAS)**

VA has identified PAS as an emergency communications system and performs as the Primary NFPA-101, Life Safety Code - Code Blue required redundant notification(s) in an "all call-executive override". The use of a PAS for regular paging or staff communications should be avoided in the Mental Health facilities.

## **4.9 Fire Protection and Life Safety**

### **4.9.1 General**

The Fire Protection system shall comply with the most current version of Department of Veterans Affairs (VA) Fire Protection Design Manual (FPDM), VA Design and Construction Procedures, VA Master Construction Specifications and VA Standard Details, where applicable. Refer to PG-18-10 Physical Security Design Manual where applicable.

Inpatient units shall be classified as Healthcare Occupancies and stand-alone MH RRTP facilities should be classified as Residential Board and Care Occupancies. Where MH RRTP units are located in a building classified as a healthcare occupancy and they are separated by two hour rated fire resistive rated construction, they shall be classified as a residential board and care occupancy.

### **4.9.2 Automatic Sprinkler**

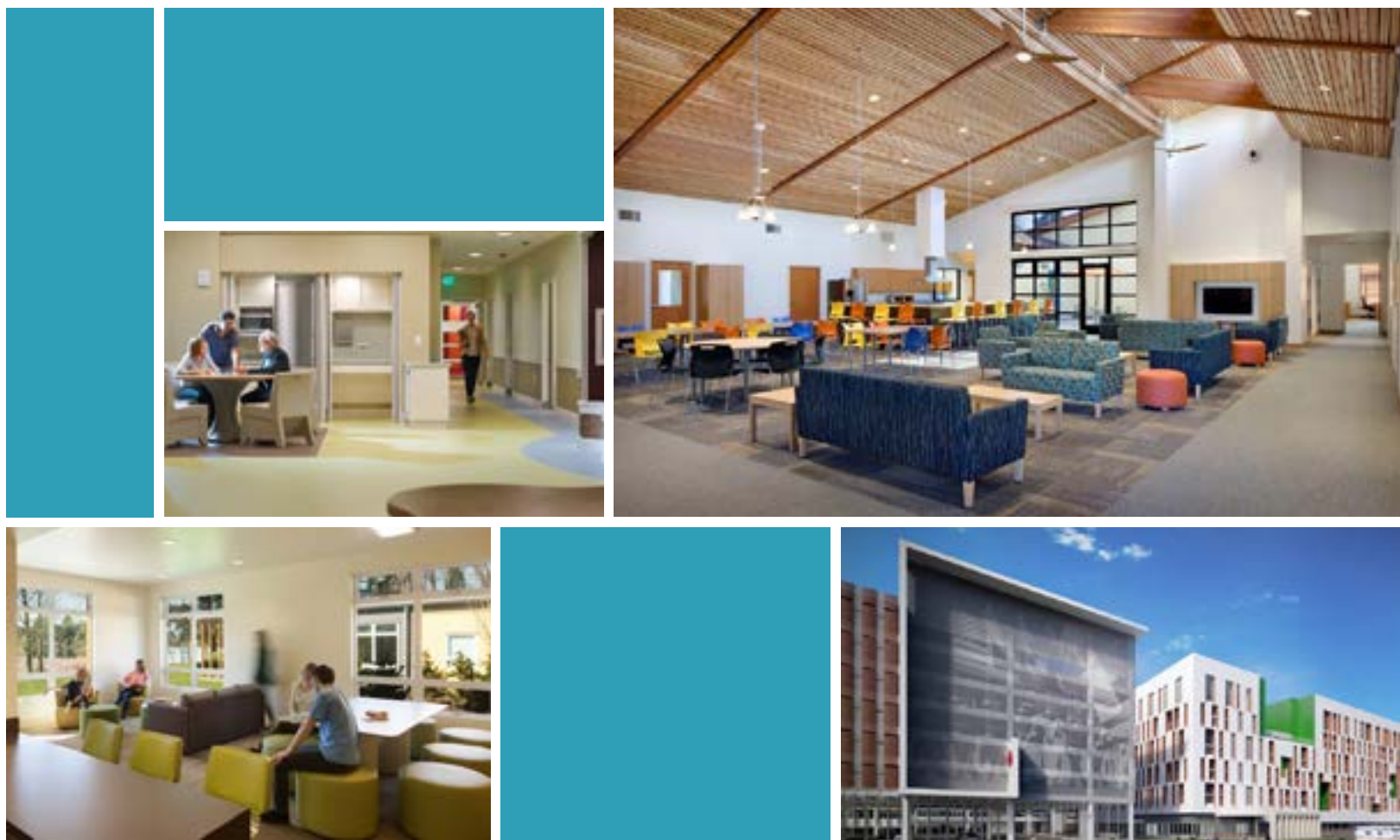
For IPMH facilities, institutional sprinklers are to be used in accordance with the VA FPDM. For RRTP facilities, non-institutional sprinklers are to be used.

### **4.9.3 Fire alarm**

Provide fire alarm systems in compliance with the VA Fire Protection Design Manual.

Fire alarm systems in IPMH facilities are to be designed to the private operating mode and the notification appliances are intended to notify the staff so that they can respond according to the facility fire response plan. A risk assessment should be done in accordance with NFPA 99 to determine where fire alarm system notification appliances are required to be located. Fire alarm equipment in healthcare occupancies may only need to be located at the nursing station. NFPA 101 has permissions to omit manual pull boxes at exits if they are located at the constantly attended locations (nurses stations) and maximum travel distances to the manual fire alarm boxes are not exceeded. Manual fire alarm boxes may need to be locked or covered with listed covers where they are accessible to patients.

Fire alarm systems for MH RRTP facilities may be designed for private operating mode as indicated above or designed for public operating mode depending on the type of facility or location of the RRTP unit. Where the RRTP facility is designed for occupants to evacuate the facility upon alarm, the fire alarm system should be designed to the public operating mode.



## 5.0 ROOM TEMPLATES



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

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**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
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## **5.0 ROOM TEMPLATES**

### **5.1 General**

#### **5.1.1 General Notes:**

The following notes apply to all templates that follow:

- a. Window placement and size dependent on facility design. This is applicable to interior walls and exterior walls.
- b. Variable casework as window seat, desk, shelving, bedside table to be determine by facility design.
- c. Vanity construction assembly (integral sink and apron) and toilet/shower accessories must comply with mental health safety requirements.
- d. Access panel for shut-off valve to be located outside of the patient/resident room.
- e. All movable accessories (lamps...) to be securely fastened.
- f. All door hardware to be anti-ligature
- g. All lighting fixture and related devices to be tamper resistant and anti-ligature.
- h. Fire alarm devices are based on project design and needs to be coordinated with existing systems in place.

#### **5.1.2 Abbreviations**

##### **Material and Finish Codes**

CMU	Concrete Masonry Units (Unit Masonry)
CPT	Carpet Tile
LVT	Luxury Vinyl Tile
PT	Porcelain Tile
RB	Resilient Base (Rubber or vinyl base with factory formed inside and outside corners)
RES	Resinous Flooring



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

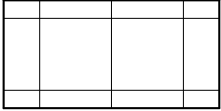
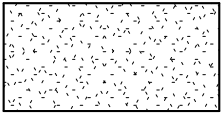
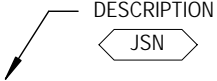




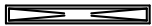


RWC	Rigid Vinyl Wall Covering
SC	High Build Glazed Coating (Special Coating)
STC	Sound Transmission Class
VT	Vinyl Tile (High Concrete Vinyl)
WSF	Welded Seam Sheet Flooring (Heat Welded with Rod)

**Hardware Descriptions**

MH1	Anti-Ligature. Non-locking. May be push/pull.
MH4	Anti-Ligature. Single Electrified lock, storeroom or closet lock, with card reader.
MH5	Anti-Ligature. Institutional lock, with dead latch.
3G	Interior, Office. May include standalone office with thumb turn or entry lock with thumb turn and deadlock.
4N	Classroom. Utility lock.
R1	Residential: Keyed lock.
R3	Residential: Privacy
SH	Electronic Security
















**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.1.3 LEGEND**

ARCHITECTURAL	2X2 ACOUSTIC CEILING TILE	
	GYPSUM WALL BOARD	
	JSN AND EQUIPMENT NAME	<div> <div>DESCRIPTION</div> <div>JSN</div> </div> 
MECHANICAL	HVAC SUPPLY	
	HVAC SUPPLY MH RATED	
	HVAC RETURN	
	HVAC RETURN MH RATED	
	LINEAR DIFFUSER	
	LINEAR DIFFUSER MH RATED	
PLUMBING	FLOOR DRAIN	FD○
	SHOWER DRAIN	
	SPRINKLER HEAD	●
	SPRINKLER HEAD MH RATED	● <sub>M</sub>
AUXILIARY SYSTEMS	COMBINATION VOICE/DATA OUTLET	▽
	COMBINATION VOICE/DATA OUTLET MH RATED	▽ <sub>M</sub>

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

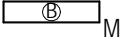











**LEGEND**

AUXILIARY SYSTEMS	COMBINATION VOICE/DATA OUTLET CEILING MOUNTED	
RECEPTACLES	DUPLEX	
	DUPLEX MH RATED	
	DUPLEX CEILING MOUNTED	
	GROUND FAULT INTERRUPTER DUPLEX	GFI 
	GROUND FAULT INTERRUPTER DUPLEX MH RATED	GFI 
	QUADRUPLUX	
	QUADRUPLUX FLOOR MOUNTED	
	SPECIAL PURPOSE RECEPTACLE	
COMMUNICATIONS	SECURITY SURVEILLANCE CAMERA	
	SECURITY SURVEILLANCE CAMERA - MH RATED	
	MOTION INTRUSION DETECTOR	
	MOTION INTRUSION DETECTOR MH RATED	
	AUDIO DEVICE SPEAKER	
	AUDIO DEVICE SPEAKER MH RATED	



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**LEGEND**

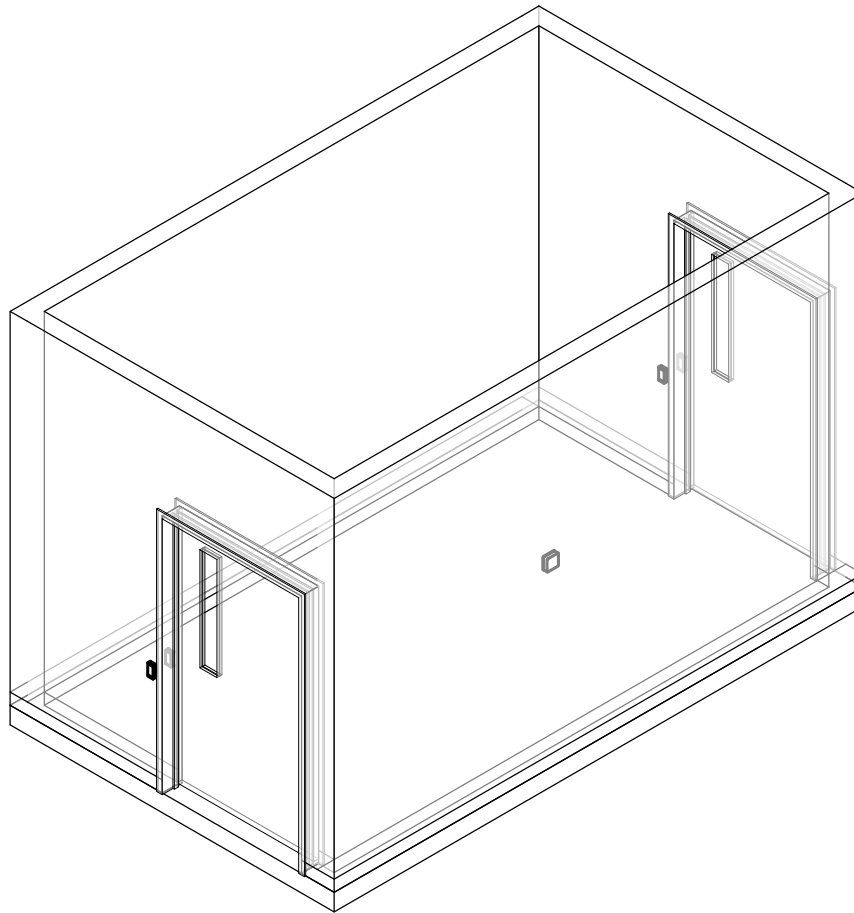
WIRING DEVICES AND SWITCHES	SINGLE POLE SWITCH (SUBSCRIPT INDICATES FIXTURE CONTROLLED)	\$
	THREE WAY SWITCH	\$3
	DIMMER SWITCH	\$D
LIGHTING DEVICES	1'X4' EFFICIENT LIGHT FIXTURE LETTER INDICATES TYPE MH RATED	
	2'X2' EFFICIENT LIGHT FIXTURE LETTER INDICATES TYPE	
	2'X2' EFFICIENT LIGHT FIXTURE LETTER INDICATES TYPE MH RATED	
	2'X2' EFFICIENT NIGHT LIGHT FIXTURE LETTER INDICATES TYPE	
	2'X4' EFFICIENT LIGHT FIXTURE LETTER INDICATES TYPE	
	2'X4' EFFICIENT LIGHT FIXTURE LETTER INDICATES TYPE MH RATED	
	2'X4' EFFICIENT NIGHT LIGHT FIXTURE LETTER INDICATES TYPE	
	RECESSED DOWN LIGHT FIXTURE LETTER INDICATES TYPE	
	RECESSED DOWN LIGHT FIXTURE LETTER INDICATES TYPE MH RATED	
	RECESSED DOWN NIGHT LIGHT FIXTURE LETTER INDICATES TYPE MH RATED	
	WALL MOUNTED LIGHT FIXTURE	
	WALL MOUNTED LIGHT FIXTURE MH RATED	



## **5.2 IPMH ROOM TEMPLATES**

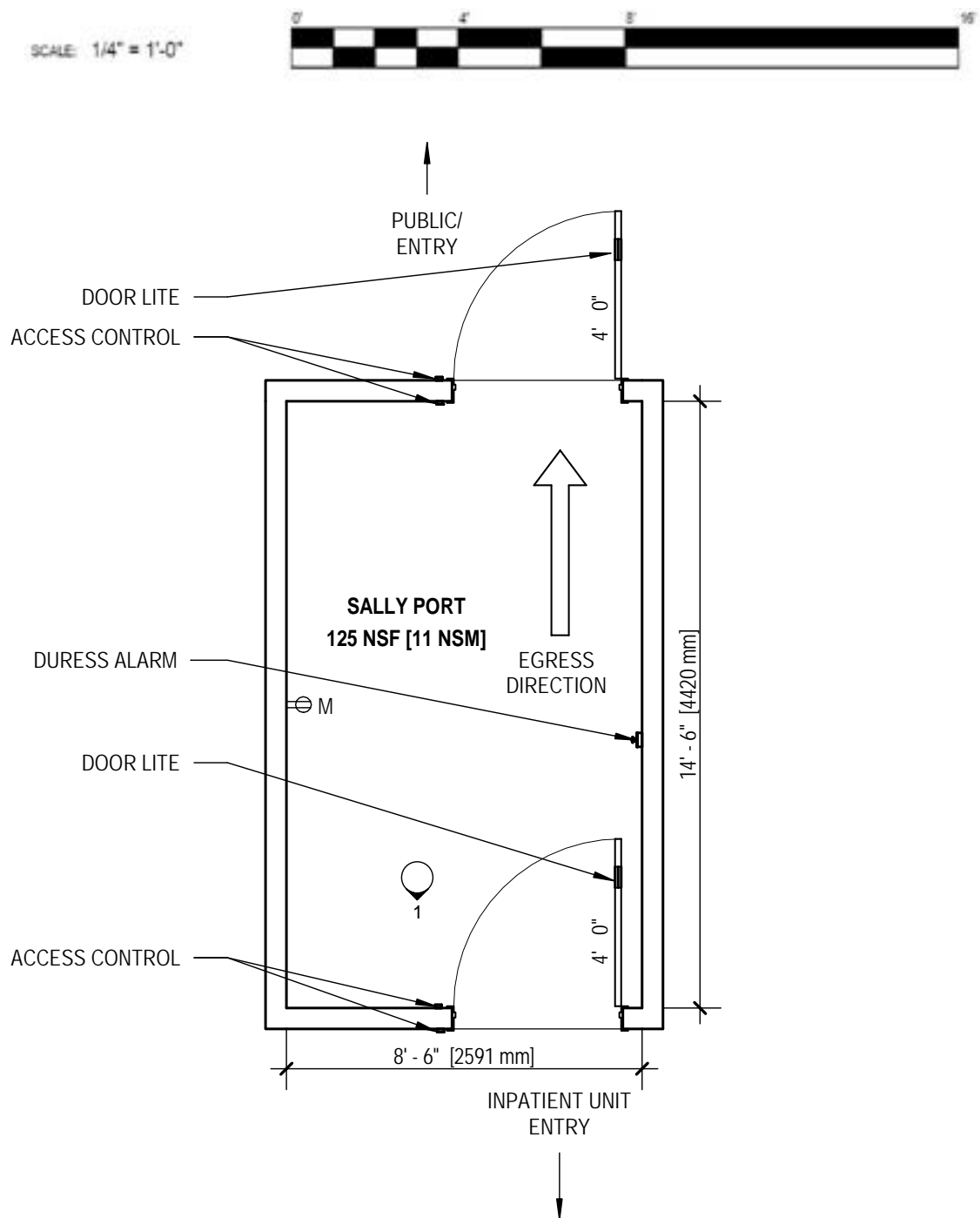
### **FA2 Patient Care Unit Staff - Patient Area**

#### **5.2.1 Sally Port (IMH11) - Axonometric**

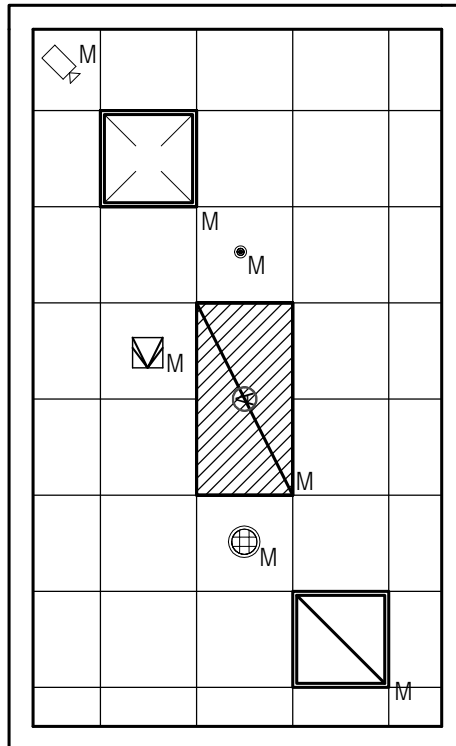


**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.1 Sally Port (IMH11) - Floor Plan**



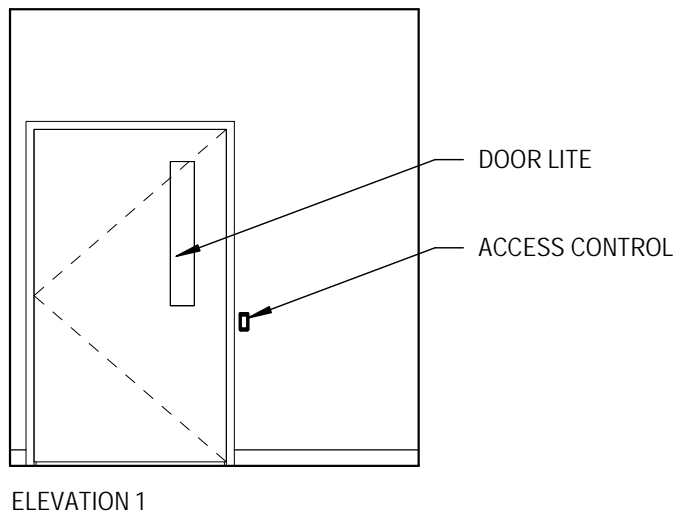
### 5.2.1 Sally Port (IMH11) - Reflected Ceiling Plan



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.1 Sally Port (IMH11) - Elevation**

SCALE: 1/4" = 1'-0"





## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.2.1 Sally Port (IMH11) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustic Ceiling Tile with Clips or Gypsum Wallboard with Paint	Data	No
Ceiling Height	9'-0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard (2 layers) with RWC	Cable Television	No
Base	RES-4"	Duress Alarm	Yes
Floor Finish	RES	Electronic Access	Yes
Slab Depression	None	Intercom	Yes
Sound Protection	STC 35 (to corridor), STC 45 (to other room)	Motion Intrusion Detection (MID)	No
Doors	4'-0" x 7'-0" metal, with laminate glass view panel.	Public Address System (PAS)	Yes
Hardware	MH4	Security Surveillance Television (SSTV)	Yes
		Clock	No
LIGHTING		HVAC	
Refer to The IESNA Lighting Handbook, Chapter 10 – Lighting Design Guide and Chapter 11 for lighting design considerations.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve means of egress and alarm systems. Critical branch of the ESS to serve selected receptacles and equipment..		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.1 Sally Port (IMH11) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

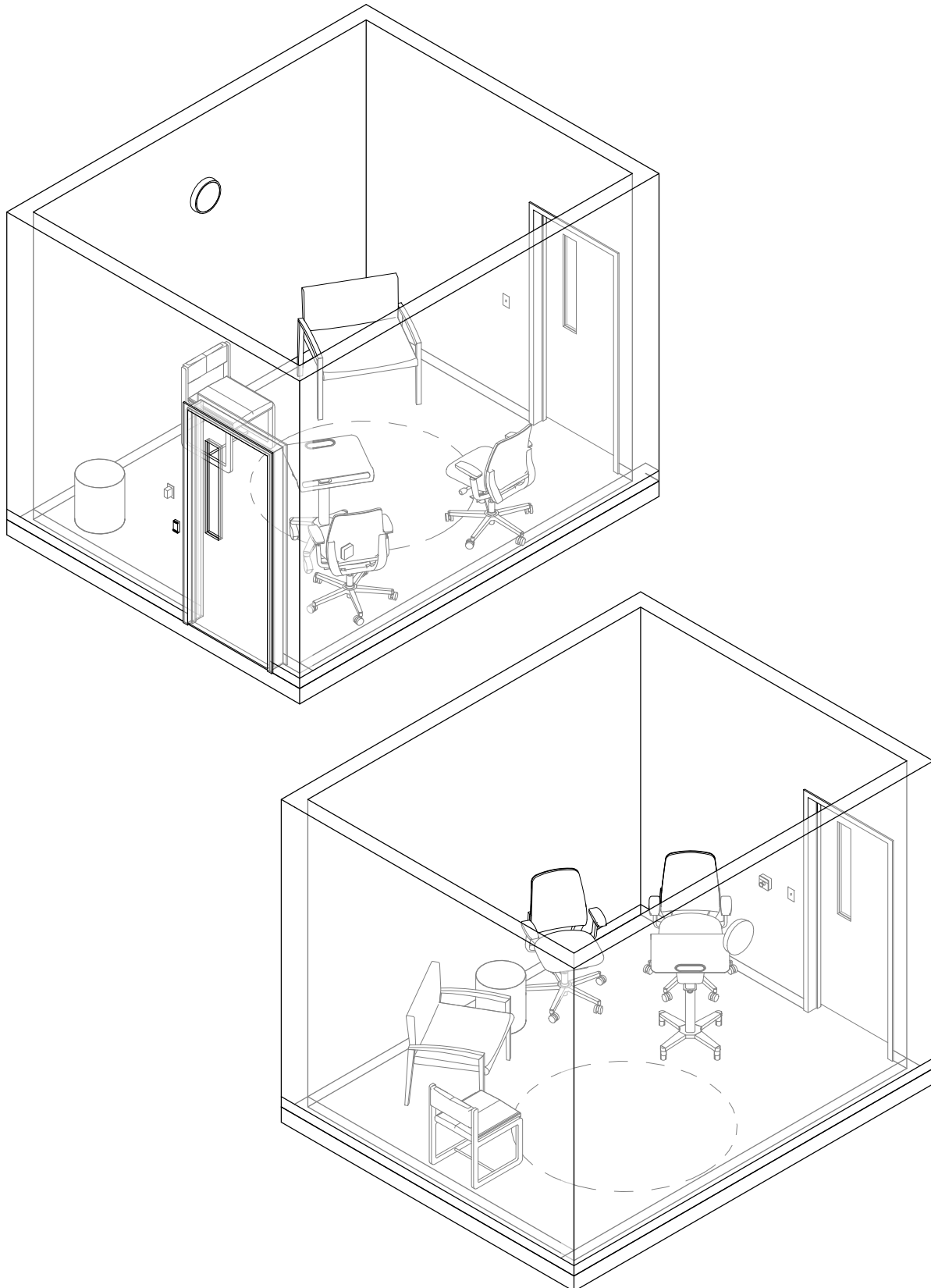
**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm System	See section 4.9
Sprinkler System	See section 4.9



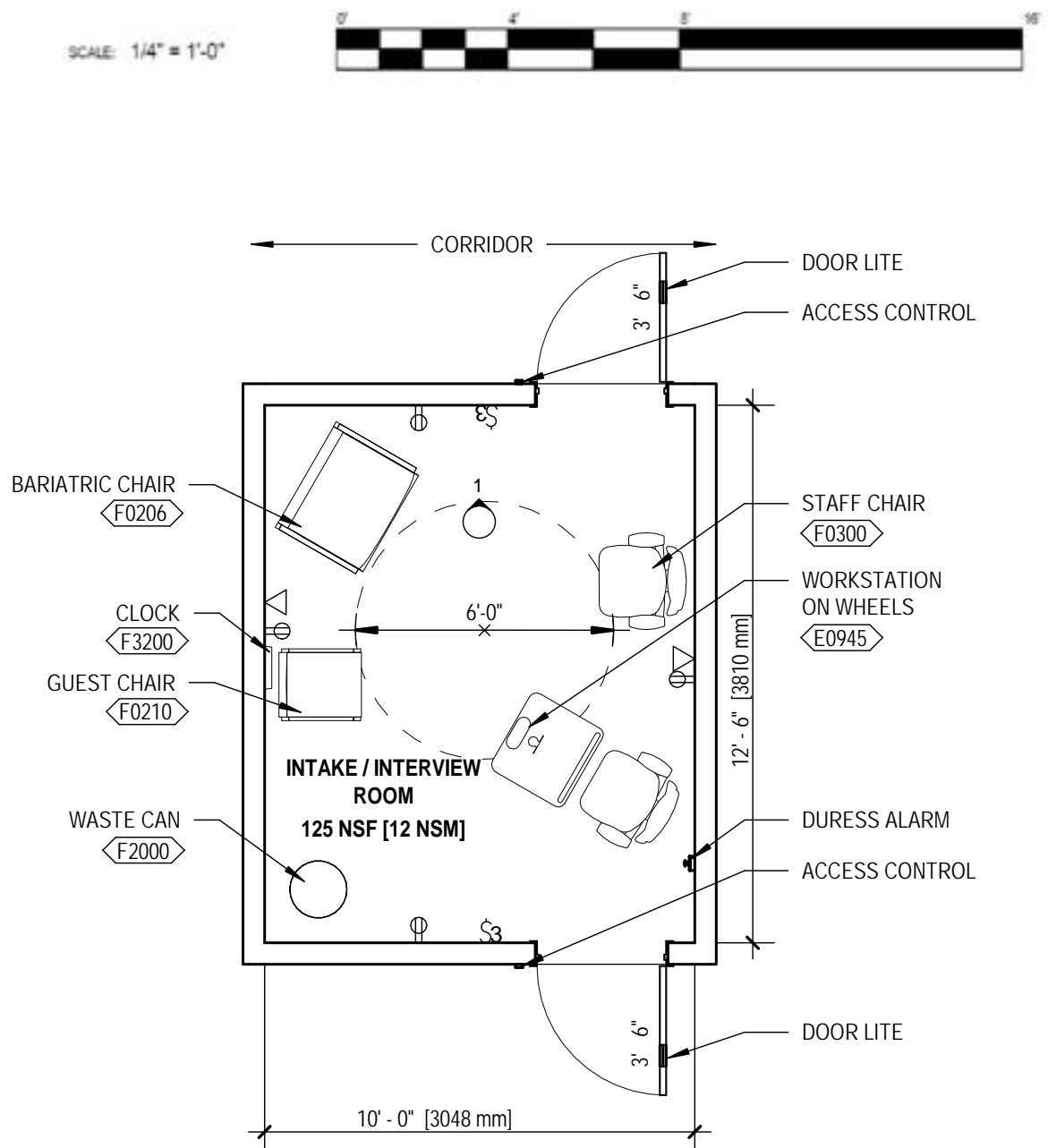
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.2 Intake / Interview Room (IMH15) - Axonometric**



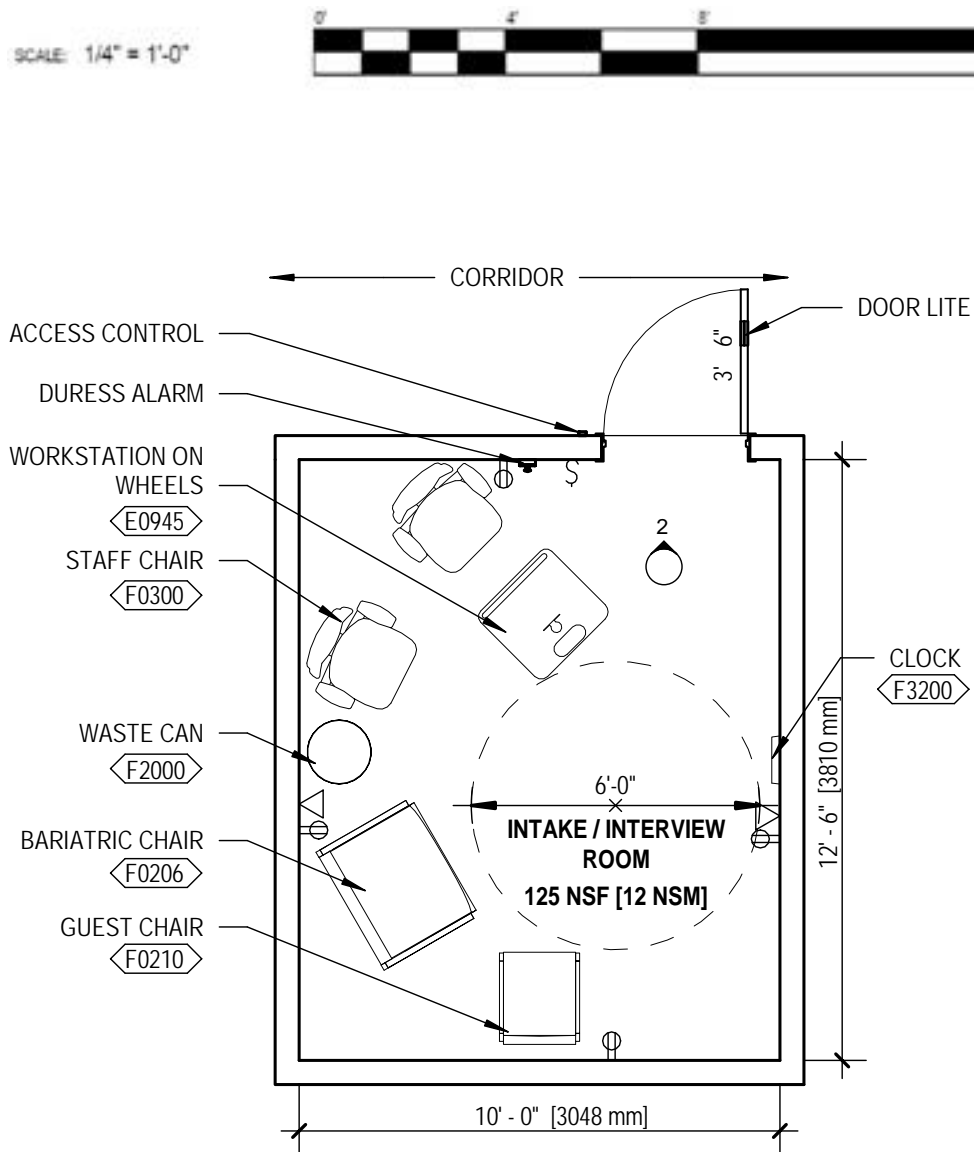
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.2 Intake / Interview Room (IMH15) - Floor Plan - Option 1**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.2 Intake / Interview Room (IMH15) - Floor Plan - Option 2**

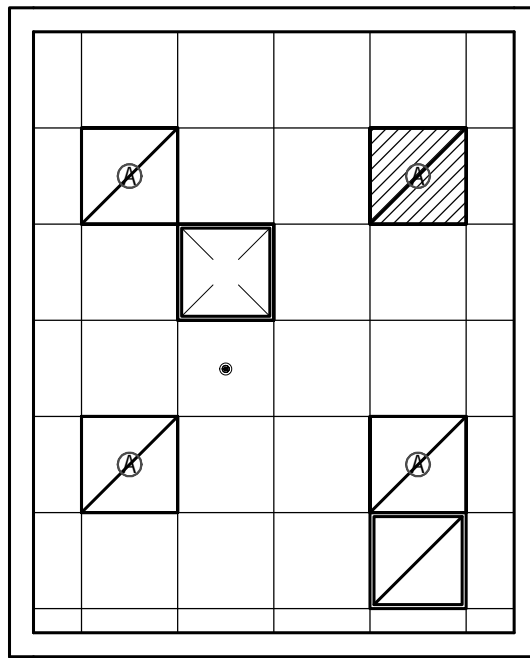




**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

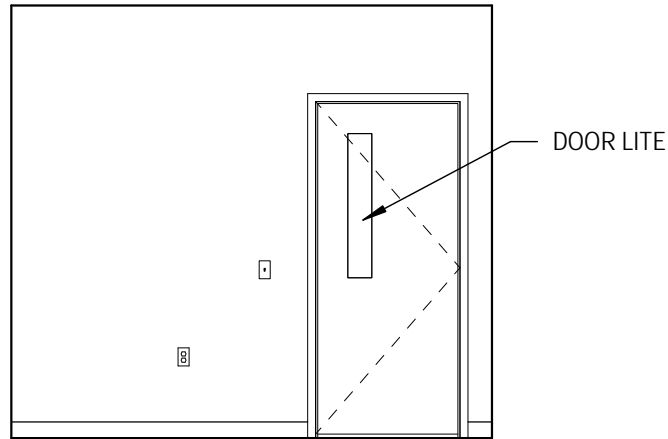
**5.2.2 Intake / Interview Room (IMH15) - Reflected Ceiling Plan**

SCALE: 1/4" = 1'-0"



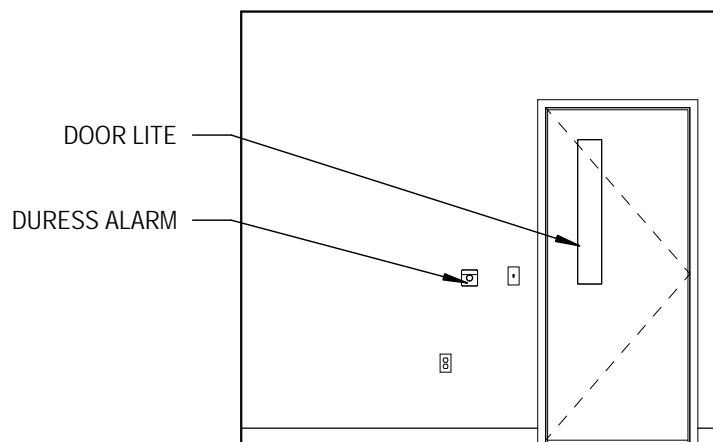
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.2 Intake / Interview Room (IMH15) - Elevations**



ELEVATION 1

OPTION #1



ELEVATION 2

OPTION #2



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.2.2 Intake / Interview Room (IMH15) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustic Ceiling Tile	Data	Yes
Ceiling Height	9'-0"	Telephone	No
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	WSF 4"	Duress Alarm	Yes
Floor Finish	WSF	Electronic Access	Yes
Slab Depression	None	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3'-6" x 7'-0" wood with laminate glass view panel.	Public Address System (PAS)	No
Hardware	3G	Security Surveillance Television (SSTV)	No
		Clock	Yes
LIGHTING		HVAC	
Refer to The IESNA Lighting Handbook, Chapter 10 – Lighting Design Guide and Chapter 11 for lighting design considerations.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the ESS to serve selected receptacles and equipment.		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.2 Intake / Interview Room (IMH15) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.2 Intake / Interview Room (IMH15) - Equipment List**

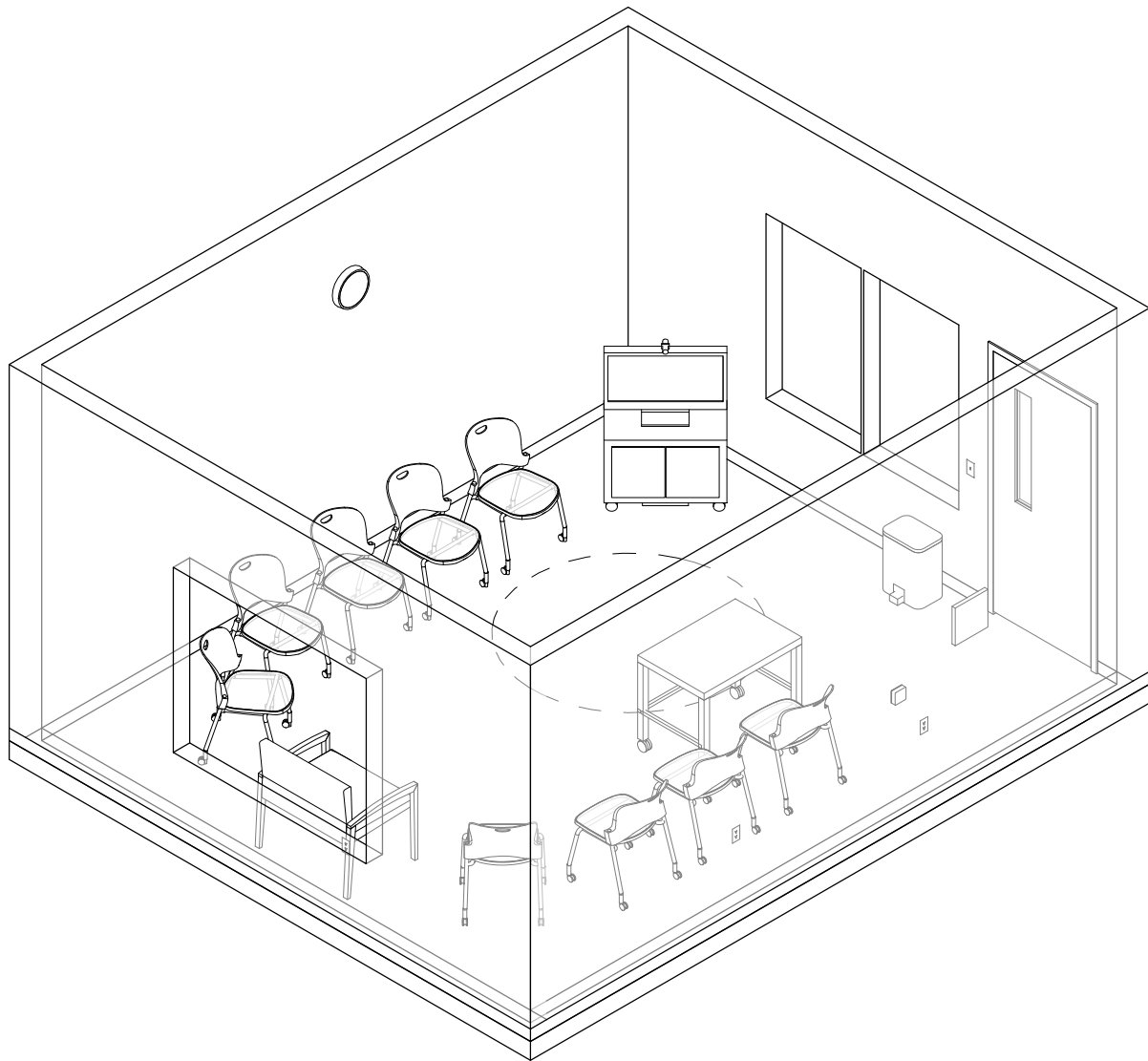
<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	1	CC	Telecommunication outlet location.
<b>F0300</b>	Chair, Office, Task, w/ Arms	2	VV	Task chair, approximately 34" H X 26" W X 22" D with adjustable arms and a five caster adjustable swivel base. Seat and back are foam padded and upholstered in woven fabric or vinyl.
<b>F0210</b>	Chair, Interiors, guest, w/o Arms	1	VV	Upholstered side chair approximately 32" high X 19" wide X 23" deep with floor glides. Seat is non-tilting and without arms.
<b>F0206</b>	Chair, Interiors, Lounge, Bariatric, Side With Arms	1	VV	A bariatric side chair with arms for use in a waiting room, lobby or other patient area. Chair will have a padded seat and back and have a capacity of 800 pounds..
<b>E0945</b>	Workstation On Wheels	1	VV	This typical includes: 1 Cart Body, w/Computer Support, Style-A Narrow, w/Raised Edge Top, 1 Chart Holder, and sometimes 3 Accessory Rail, Side.
<b>F3200</b>	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).
<b>F2000</b>	Waste Can, Open Top	1	VV	Wastepaper basket, fire resistant, approximately 40 quart capacity. This unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations. Size and shape varies depending on the application and manufacturer selected





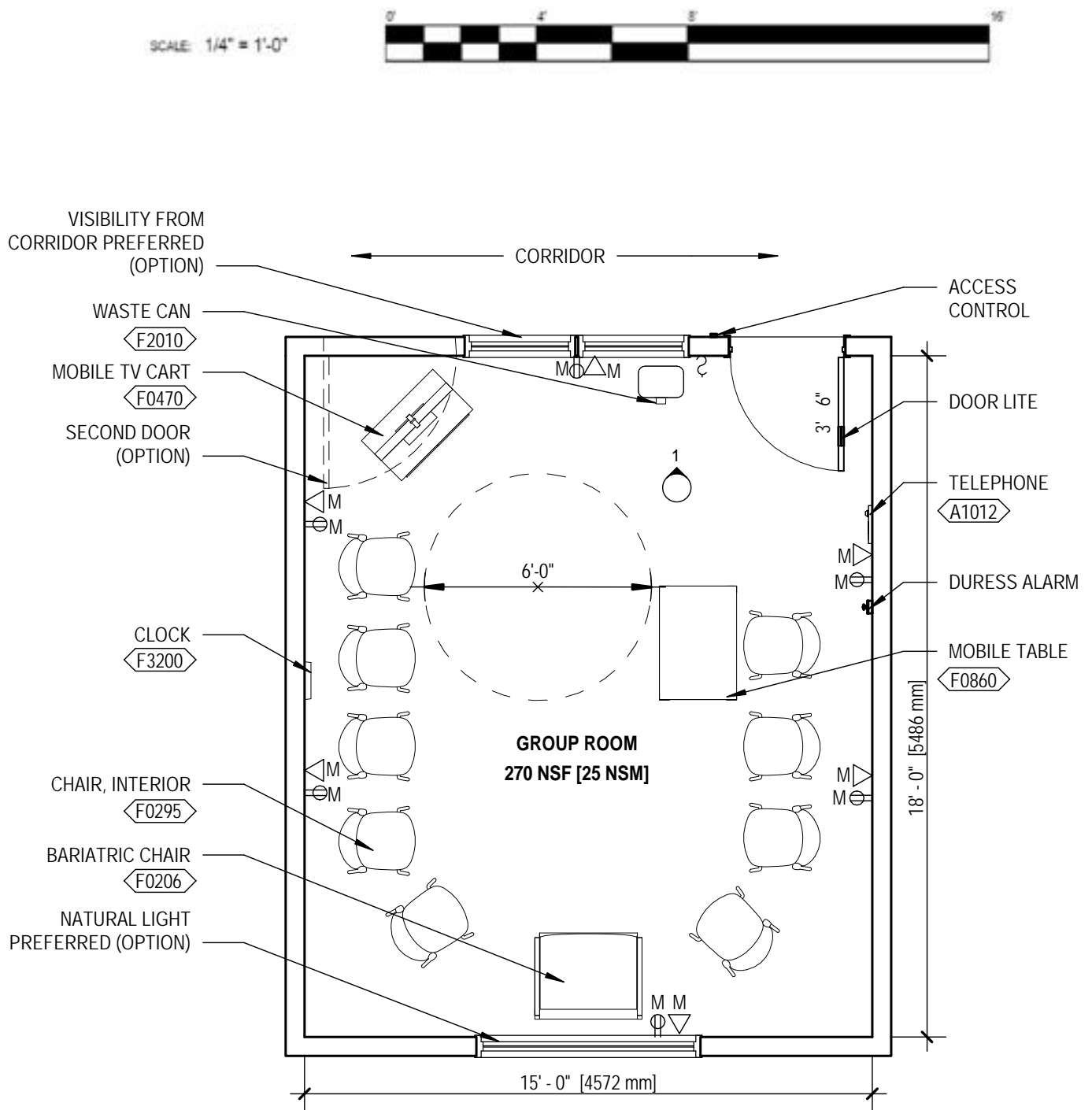
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.3 Group Room (IMH21) - Axonometric**



# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

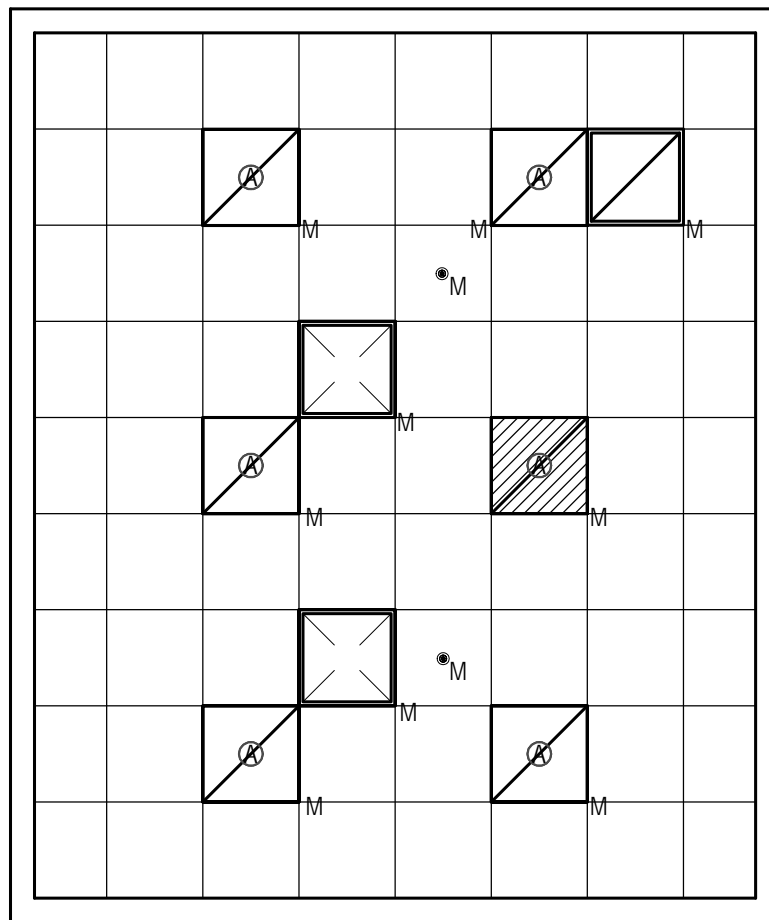
## 5.2.3 Group Room (IMH21) - Floor Plan



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

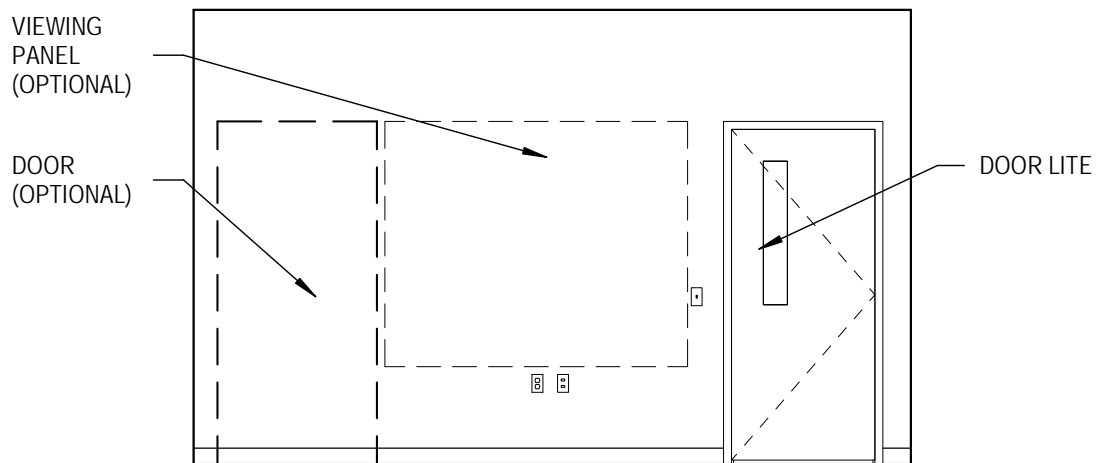
**5.2.3 Group Room (IMH21) - Reflected Ceiling Plan**

SCALE: 1/4" = 1'-0"



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.3 Group Room (IMH21) - Elevations**



ELEVATION 1



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.3 Group Room (IMH21) - Room Data Sheet**

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustic Ceiling Tile with Clips	Data	Yes
Ceiling Height	9' - 0" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	Yes
Base	RB	Duress Alarm	Yes
Floor Finish	CPT	Electronic Access	Yes
Slab Depression	None	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3' - 6" x 7' - 0" wood with laminate glass view panel	Public Address System (PAS)	No
Hardware	MH5	Security Surveillance Television (SSTV)	No
		Clock	Yes
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.5 - Group Therapy Room- for lighting design consideration.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the ESS to serve selected receptacles and equipment.		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.3 Group Room (IMH21) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9



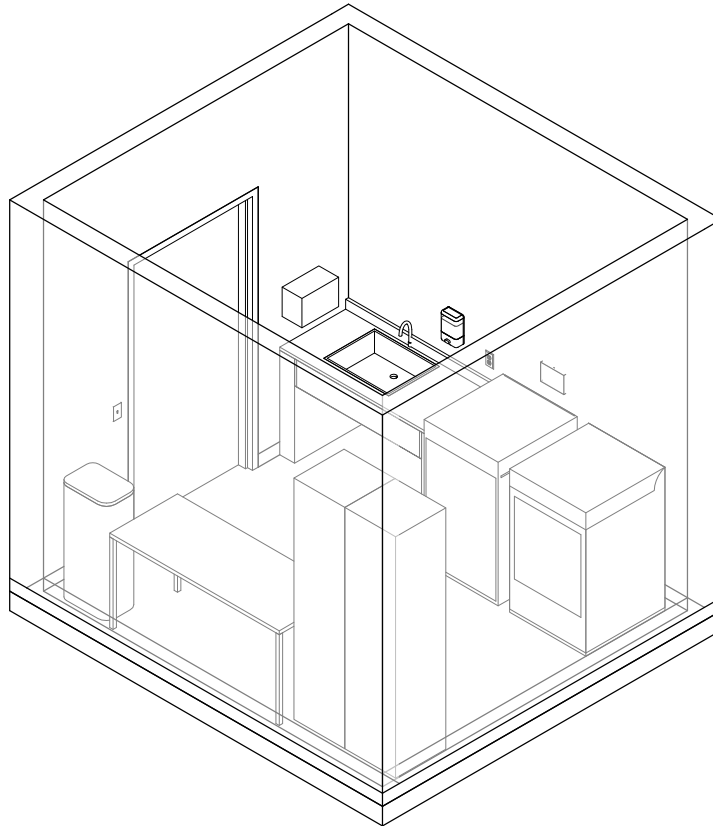
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.3 Group Room (IMH21) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1012</b>	Telephone, Wall Mounted, 1 Line	1	CC	Telephone, wall mounted, Digital, 1 line.
<b>F0470</b>	Mobile TV Cart 50-65 inch	1	VV	Wide body A/V cart for flat panel display monitor. Features 3 shelves, 6-outlet electrical assembly with surge/overload protection, 20 foot power cord with cord winder. For use with 37 - 52 inch flat panel monitors, not to exceed 100 lbs. Shelves are rated to hold 50 lbs. each. Also standard with Universal mounting bracket, top shelf with steel push handle, monitor mounting arms, and 5 inch swivel casters. Black Pumice powder paint finish. Ships unassembled. Greenguard Certified.
<b>F0206</b>	Chair, Interiors, Lounge, Bariatric, Side With Arms	1	VV	A bariatric side chair with arms for use in a waiting room, lobby or other patient area. Chair will have a padded seat and back and have a capacity of 800 pounds.
<b>F0295</b>	Chair, Interiors, Stacking w/o Arms	9	VV	Stacking chair, approximately 34"H X 21"W X 24"D. May be stacked up to 20 high depending upon the model selected. These chairs are intended primarily as overflow capacity for conference rooms.
<b>F0860</b>	Table, Mobile	1	VV	Mobile table. The unit provides mobile or isolated freestanding work surface. Characteristics and components include 3-1/2 inch casters and attached drawer bearers. Unit is used for general work applications, primarily in dry areas.
<b>F2010</b>	Waste Can, Basket, Step-On	1	VV	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.
<b>F3200</b>	Clock, Analog, Wall	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).

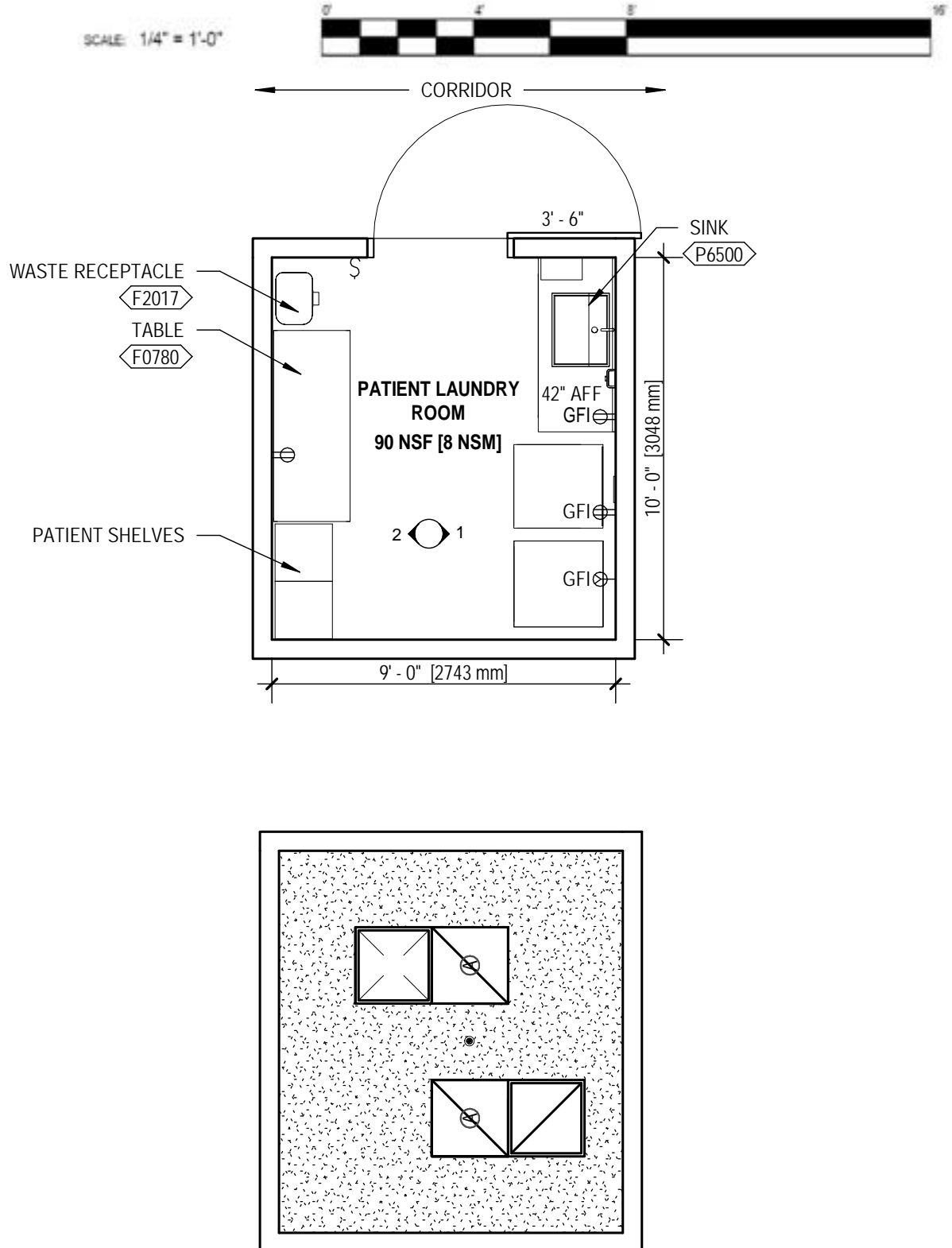


**5.2.4 Patient Laundry Room (SC450) - Axonometric**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

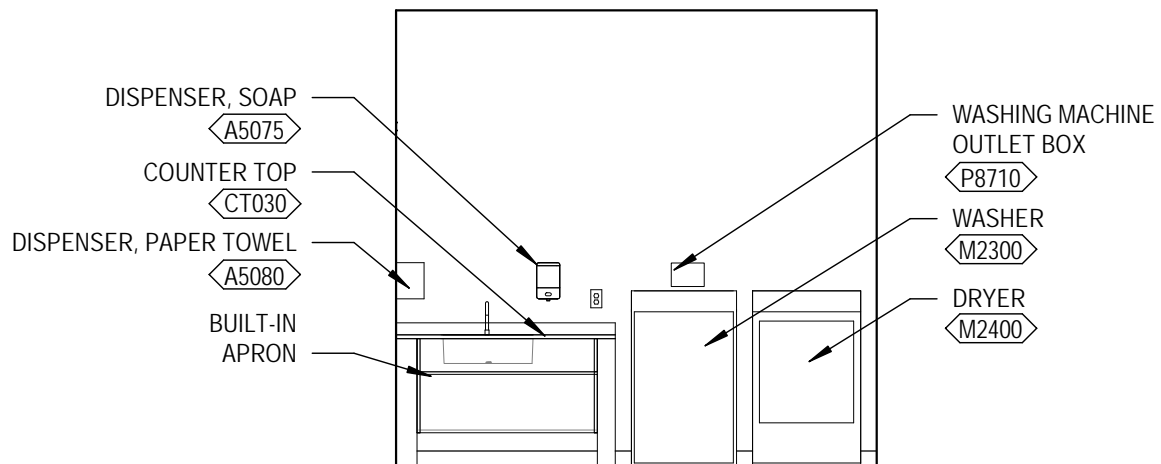
**5.2.4 Patient Laundry Room (SC450) - Floor and Reflected Ceiling Plan**



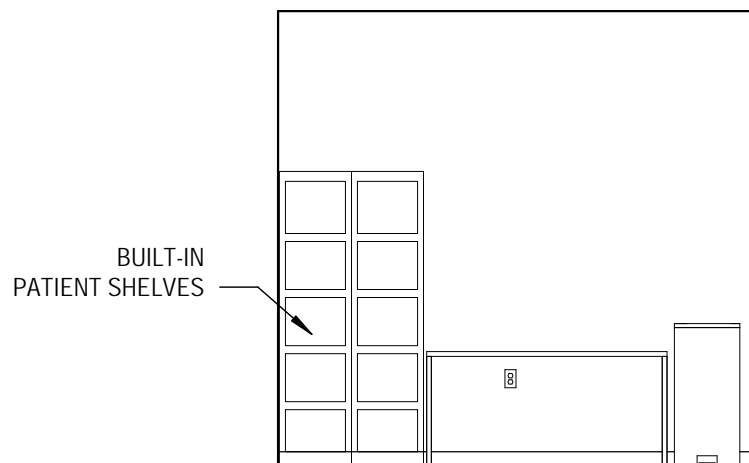
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.4 Patient Laundry Room (SC450) - Elevations**

SCALE: 1/4" = 1'-0"



ELEVATION 1



ELEVATION 2



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.4 Patient Laundry Room (SC450) - Room Data Sheet**

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Gypsum Wallboard with Paint (SC)	Data	No
Ceiling Height	9'- 0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	WSF 4"	Duress Alarm	No
Floor Finish	WSF	Electronic Access	Yes
Slab Depression	None	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3' - 6" x 7' - 0" wood with laminate glass view panel	Public Address System (PAS)	No
Hardware	MH5	Security Surveillance Television (SSTV)	No
		Clock	No
LIGHTING		HVAC	
Refer to The IESNA Lighting Handbook, Chapter 10 - Lighting Design Guide and Chapter 11 for lighting design considerations.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the ESS to serve selected receptacles and equipment.		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.4 Patient Laundry Room (SC450) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	Yes
Hot Water	Yes
Waste	Yes

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

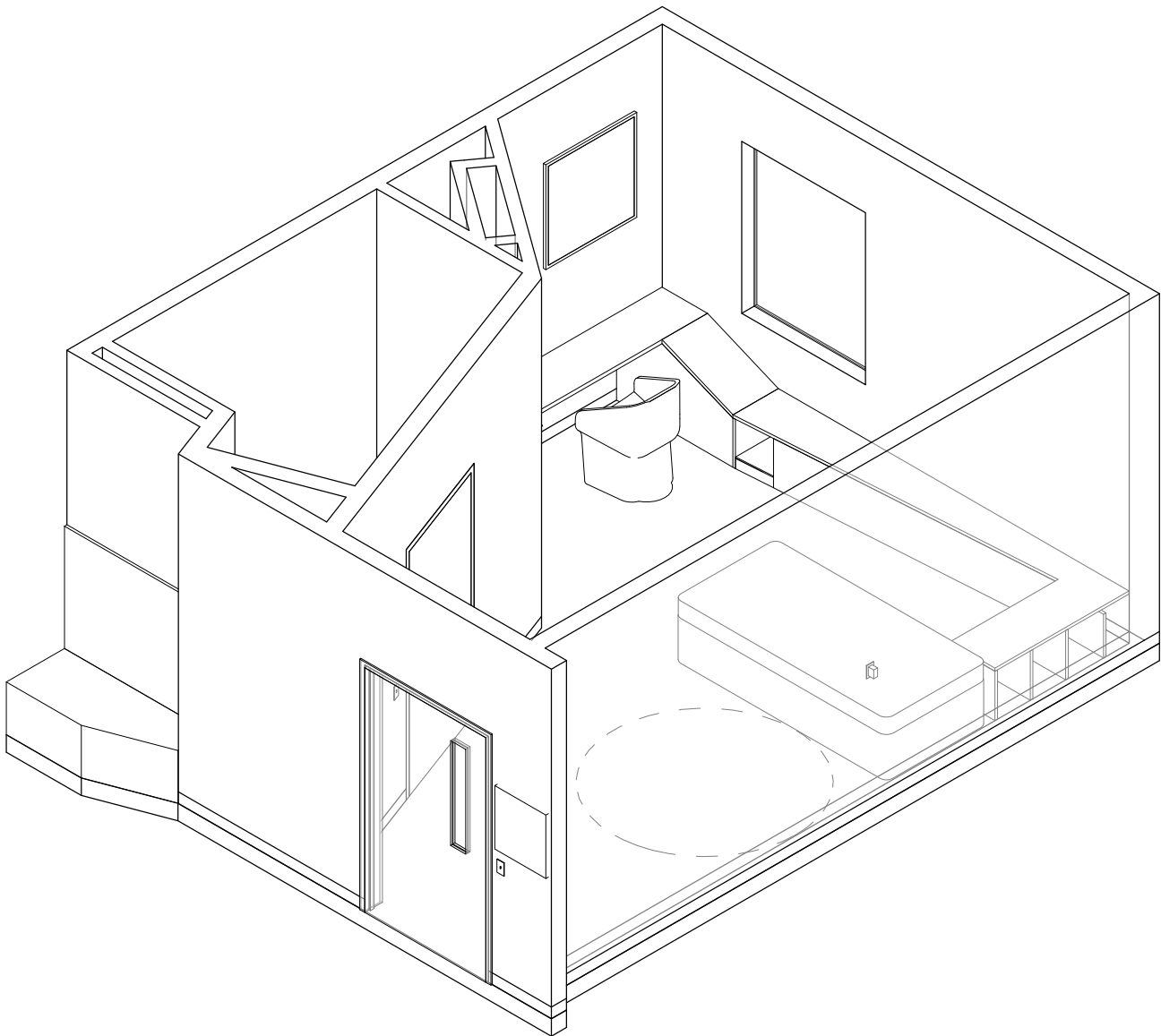
**5.2.4 Patient Laundry Room (SC450) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A5075</b>	Dispenser, Soap, Wall Mount, Disposable	1	VV	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
<b>A5080</b>	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.
<b>F0780</b>	Table, Work, 60W x 30D, Adjustable Height	1	VV	Work table approximately 29" high X 60" wide X 24" deep with top and four (4) non-folding legs.
<b>F2017</b>	Waste Receptacle, 20-31 Gallon	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.
<b>M2300</b>	Washer, Clothes, Automatic (Qty 2 for units over 8 bed)	1	VV	Large capacity automatic clothes washer with a heavy duty motor. The unit's control system programs load, cycle time, spin speed, fabric, water level and water temperature. The washer includes a bleach and/or fabric softener dispenser and a filter ring for trapping lint.
<b>M2400</b>	Dryer, Clothes, Automatic, Electric, Household (Qty 2 for units over 8 bed)	1	VV	Automatic clothes dryer. Electric unit features automatic sensi-dry control with setting for different kinds of fabrics, timed cycle, removable lint filter, drum interior light and enamel finish.
<b>P6500</b>	Sink, Service, Cast Iron	1	CC	Service sink approximately 18" D x 22" W x 20" H which includes a polished chromium-plated combination hot and cold water faucet with integral stops and extended spout. Spout will have a pail hook, 3/4 inch hose coupling thread and shall include a backflow preventer. The faucet will be provided with a top brace and wall fittings for mounting above service sink. Service sink will be made of enameled cast iron. It shall be suitable for use in Security Zone 1; areas with restricted patient access or areas where patients are under continuous observation.
<b>P8710</b>	Washing Machine Outlet Box	1	CC	Recessed wall box for plumbing connections to washing machine. Basis of design is the 'GUY GRAY BOX'. This recessed utility center provides for hot and cold water connections and a drain connection. The utility center includes shutoff valves for the water connections, a plug seal for the drain and an outside cover to provide an aesthetic appearance when connections are no longer required. This center may be installed in locations where no plumbing fixtures are included in a design as a future flexibility device for future modifications. It shall be suitable for use in Security Zone 1; areas with restricted patient access or areas where patients are under continuous observation.
<b>CT030</b>	Countertop, High Pressure Laminate	1	CC	High pressure laminate countertop (composition of wood particle core with plastic laminate surface) having a hard smooth surface finish, standard thickness of 1", and a 4" butt backsplash/curb.



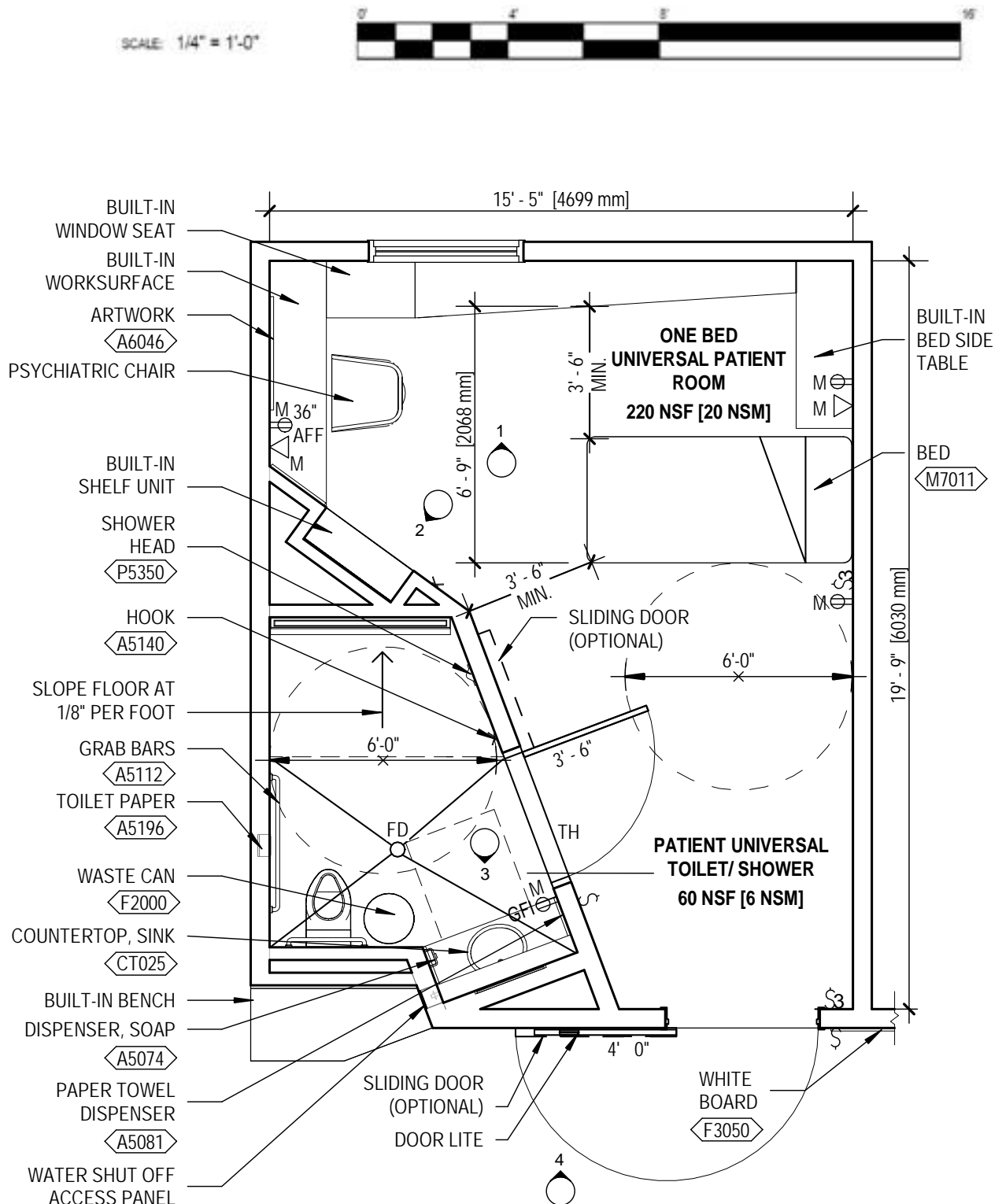
**FA3 Patient Care Unit Patient Area**

**5.2.5 One-Bed Universal Patient Room (IMH26), With Patient Universal Toilet/Shower  
(SB148) - Axonometric**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

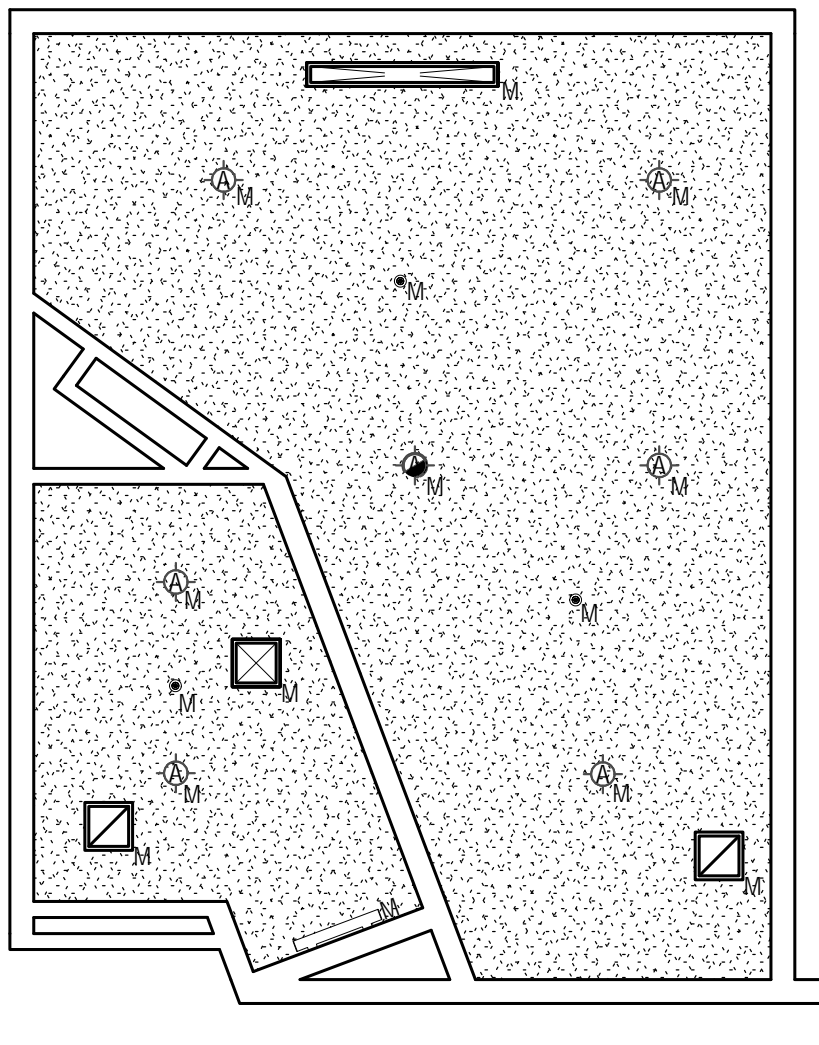
**5.2.5 One-Bed Universal Patient Room (IMH26), With Patient Universal Toilet/Shower  
(SB148) - Floor Plan**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.5 One-Bed Universal Patient Room (IMH26), With Patient Universal Toilet/Shower  
(SB148) - Reflected Ceiling Plan**

SCALE: 1/4" = 1'-0"

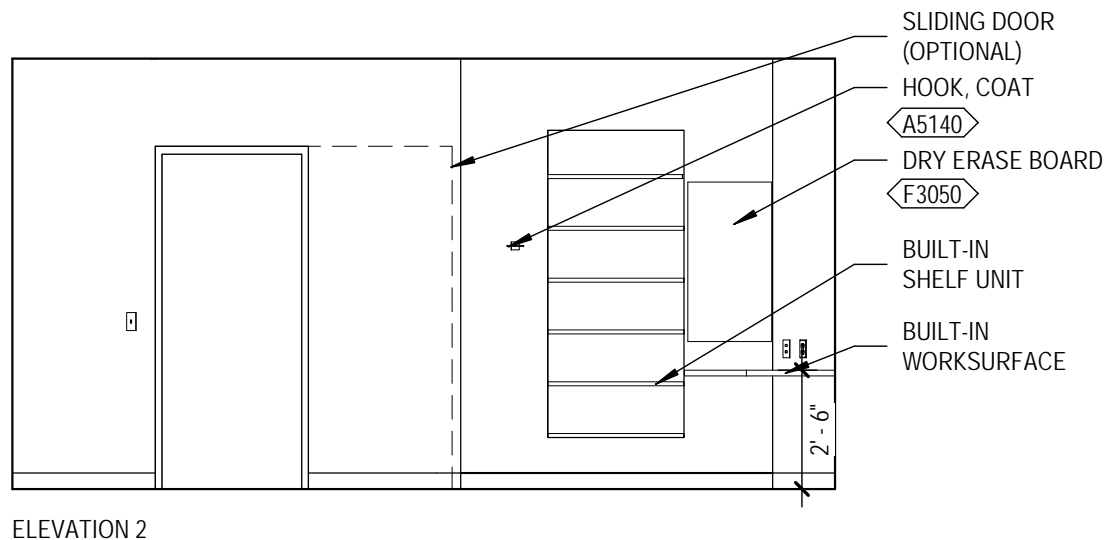
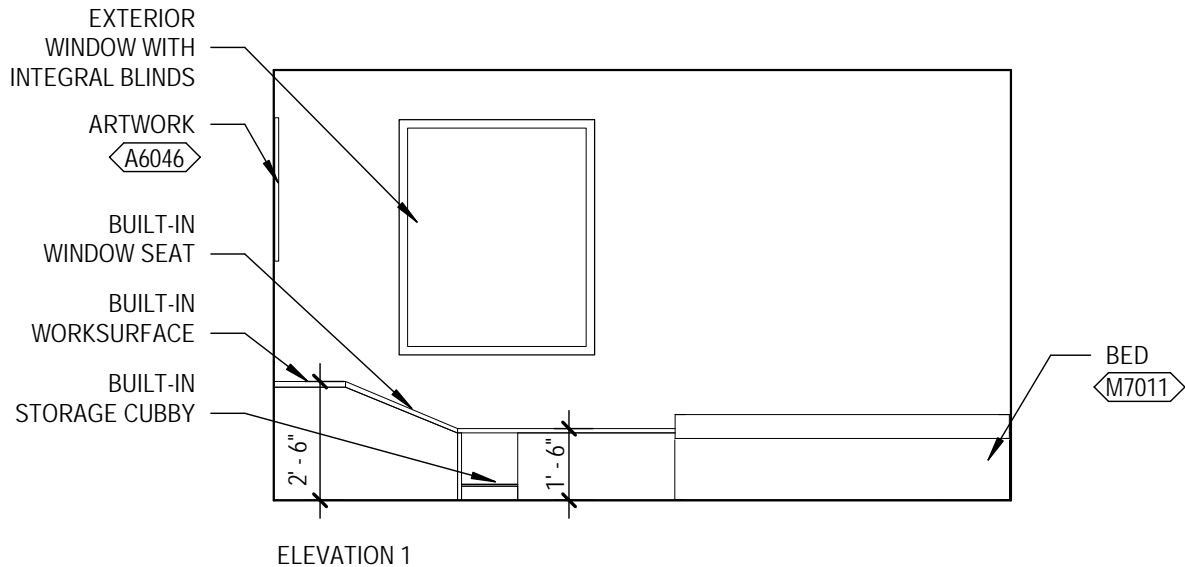




**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.5 One-Bed Universal Patient Room (IMH26), With Patient Universal Toilet/Shower  
(SB148) - Elevations**

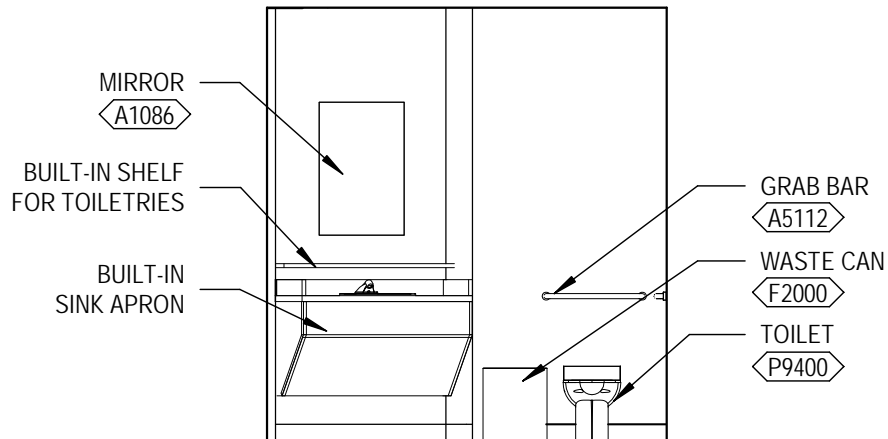
SCALE: 1/4" = 1'-0"



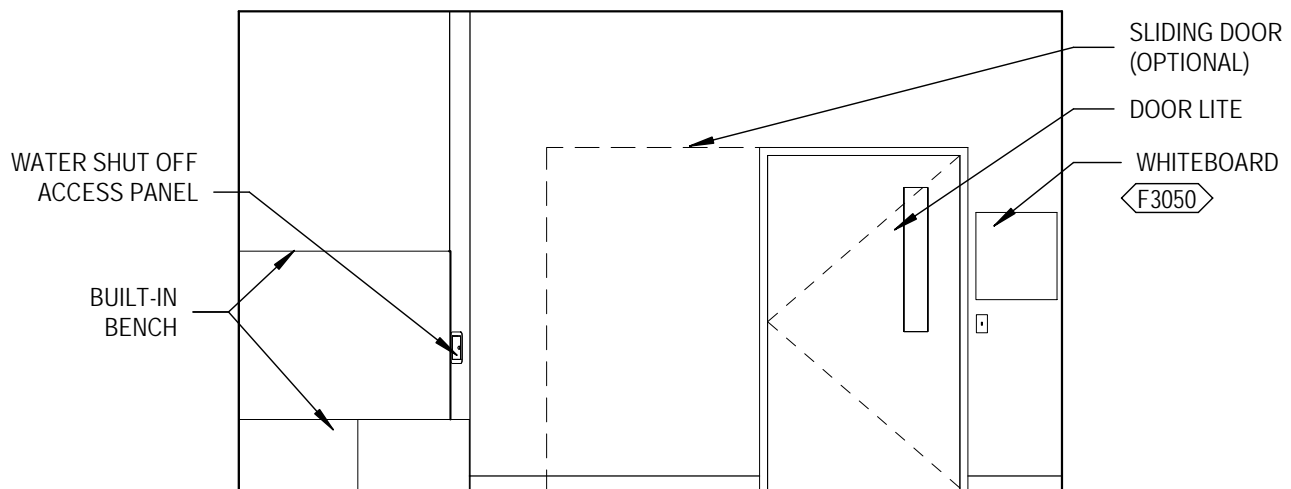
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.5 One-Bed Universal Patient Room (IMH26), With Patient Universal Toilet/Shower  
(SB148) - Elevations (Continued)**

SCALE: 1/4" = 1'-0"



ELEVATION 3



ELEVATION 4



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.5 One-Bed Universal Patient Room (IMH26) - Room Data Sheet**

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Gypsum Wallboard with Paint	Data	As shown, If approved
Ceiling Height	9'-0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	WSF 4"	Duress Alarm	No
Floor Finish	WSF	Electronic Access	No
Slab Depression	None	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	4' - 0" x 7' - 0" wood with laminate glass view panel	Public Address System (PAS)	No
Hardware	MH1	Security Surveillance Television (SSTV)	No
		Clock	No
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.1 - Patient Room - for lighting design consideration		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.5 One-Bed Universal Patient Room (IMH26) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.5 Patient Universal Toilet/Shower (SB148) - Room Data Sheet**

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Gypsum Wallboard (SC)	Data	No
Ceiling Height	9'-0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard (SC) with 4' solid surface wainscot	Cable Television	No
Base	PT 4" or RES	Duress Alarm	No
Floor Finish	PT or RES	Electronic Access	No
Slab Depression	as needed to slope to drain	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3' - 6" x 7' - 0" soft suicide prevention, sliding or out-swinging with sloped top, door height varies by type, refer to Section 4.3.3.11	Public Address System	No
Hardware	varies by door type selected	Security Surveillance Television (SSTV)	No
		Clock	No
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.2 - Patient Toilet- for lighting design consideration		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.5 Patient Universal Toilet/Shower (SB148) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	Yes
Hot Water	Yes
Waste	Yes

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm Detection	See Section 4.9
Sprinkler System	See Section 4.9





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.5 One-Bed Universal Patient Room (IMH26), With Patient Universal Toilet/Shower  
(SB148) - Equipment List**

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
<b>IMH26 - ONE-BED UNIVERSAL PATIENT ROOM</b>				
<b>A6046</b>	Digital, Recessed, Artwork, Decorative	1	VV	This JSN is to be used for determining and defining location of decorative artwork.
<b>M7011</b>	Bed, Platform, Bariatric, Without Visible Legs, Anti-ligature / Security	1	VV	Platform bed and mattress with enclosed under carriage, no visible legs. Provided with 5/8" plywood deck, eight restraint holders, two at head and foot, three at each side, concealed steel frame, and means to bolt to the floor. Sides and ends are finished wood panels.
	Psychiatric Chair	1	VV	
<b>F3050</b>	Whiteboard, Dry Erase	2	CC	Whiteboard unit, approximately 24"H x 20"W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
<b>A5140</b>	Hook, Coat/Robe, Wall Mount	1	CC	Clothes hook used in patient rooms, anti-ligature and tamper proof.
<b>SB148 - PATIENT UNIVERSAL TOILET / SHOWER</b>				
<b>A1086</b>	Mirror, Safety, Ligature Resistant	1	CC	A one-piece stamped stainless steel mirror. The mirror will be engineered and suitable for continuous daily use in a psychiatric medical environment.
<b>A5074</b>	Dispenser Soap, Recessed, SS, Anti-ligature	1	CC	A recessed stainless steel soap dish. The soap dish may be surface mounted or chase mounted thru the wall. Tamper proof
<b>A5081</b>	Dispenser, Paper Towel, SS, recessed, Anti-ligature	1	CC	A recessed stainless steel paper towel dispenser, tamper proof. The dispenser may be a recessed shelf to place paper towels to ensure the safety of patients.
<b>A5112</b>	Bar Grab, Ligature Resistant	2	CC	Grab bar with closure plate; 36" long. 304 stainless steel cylindrical tub construction; a flat closure plate is welded on to meet Ligature-Resistant requirements. ADA Compliant. Additional lengths are available 24", 30", 42" and 48" as well as left and right orientations.
<b>A5140</b>	Hook, Coat/Robe, Wall Mount	1	CC	Clothes hook used in patient rooms, anti-ligature and tamper proof.
<b>A5196</b>	Dispenser, Toilet Paper, Ligature Resistant	1	CC	A recessed single roll toilet tissue holder with anti-ligature and tamper proof characteristics.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

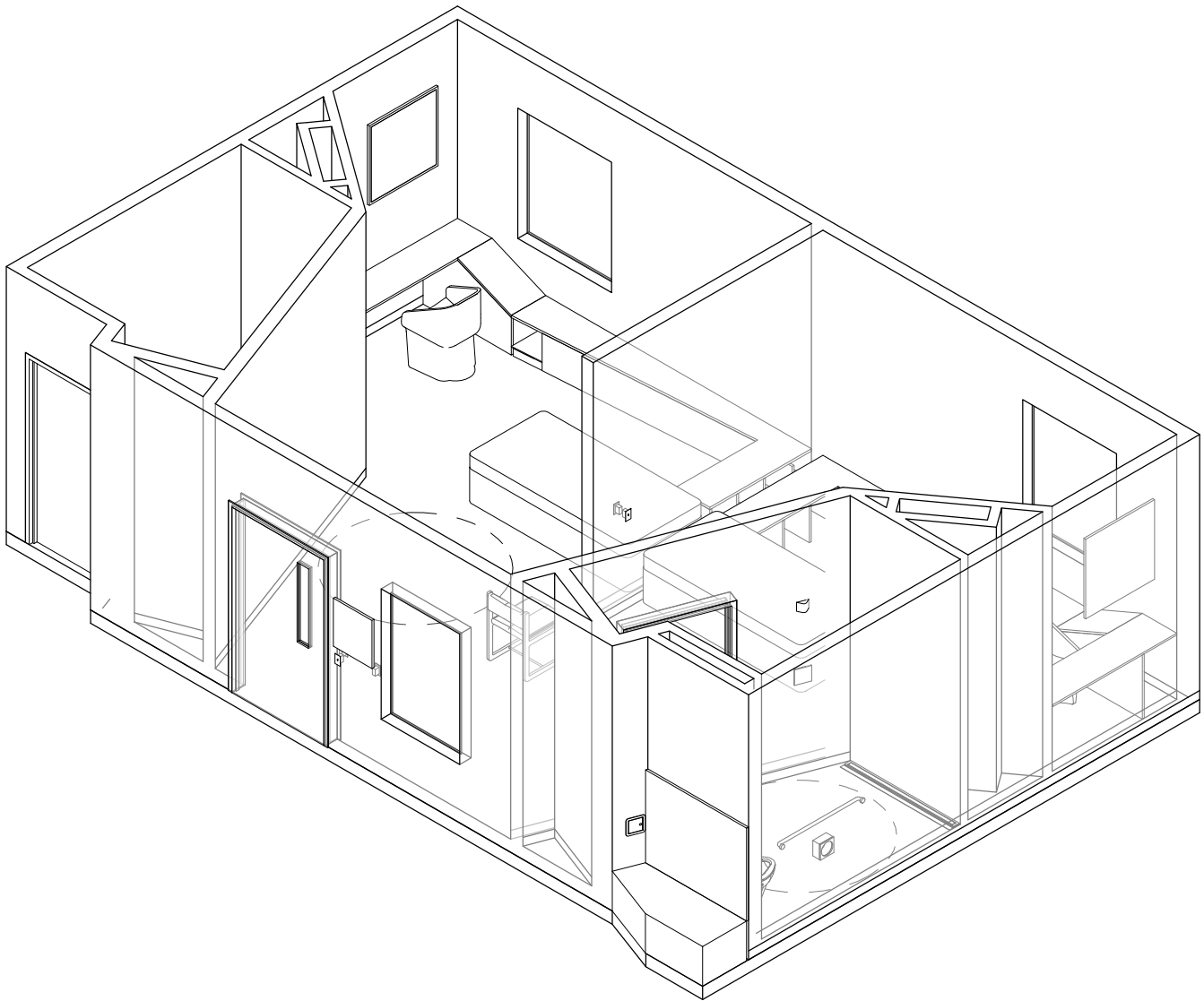
**5.2.5 One-Bed Universal Patient Room (IMH26), With Patient Universal Toilet/Shower  
(SB148) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>F2000</b>	Waste Can, Open Top	1	VV	Wastepaper basket, fire resistant, approximately 40 quart capacity. This unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations. Size and shape varies depending on the application and manufacturer selected.
<b>P5350</b>	Shower, Patient, Anti-ligature, Tamper Proof	1	CC	Flush mount ligature resistant patient shower. Installed on wall and serviced through removable 18-gage, type 304 stainless steel front panel with white powder coat finish. Furnish with vandal resistant fasteners. Provide mixing valve to automatically deliver blended water within a specific range. Provide conical shower head, control valve with ADA compliant ligature resistant tri-lever handle. The shower head shall be installed not less than 6 feet above the floor and shall deliver the spray within a 3 foot circle. It shall be suitable for use in Security Zone 3; areas where patients may be without direct staff supervision.
<b>CT025</b>	Countertop, Solid Surface with Sink Combination	1	CC	A solid, nonporous countertop approximately 36"W x 22"D with a undercounter sink combination. The countertop is an acrylic-based solid surface product with a standard thickness of 1", and a 4" butt backsplash/curb. Surfaces will be easy to clean and maintain. Also referred to as a work surface or work top with sink. Available in a choice of colors, depths and sink shapes. Used for various applications in patient rooms, restrooms and throughout the facility. Usually a part of a casework interior design program. Unit does not include the drain and faucet..
<b>P9400</b>	Toilet, Stainless Steel, Siphon Jet, Anti-ligature, Tamper Proof	1	CC	On-floor, stainless steel, siphon jet ligature resistant water closet/toilet. Constructed of 16 gage type 304 stainless steel with exposed surfaces powder coated white. This unit has a wall waste connection, an elongated bowl, back spud push button 1.28 gpf flush valve, ligature resistant toilet seat cover. It shall be suitable for use in Security Zone 3; areas where patients may be without direct staff supervision.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.6 Two-Bed Universal Patient Room (IMH27), With Patient Universal Toilet/Shower  
(SB148) - Axonometric**



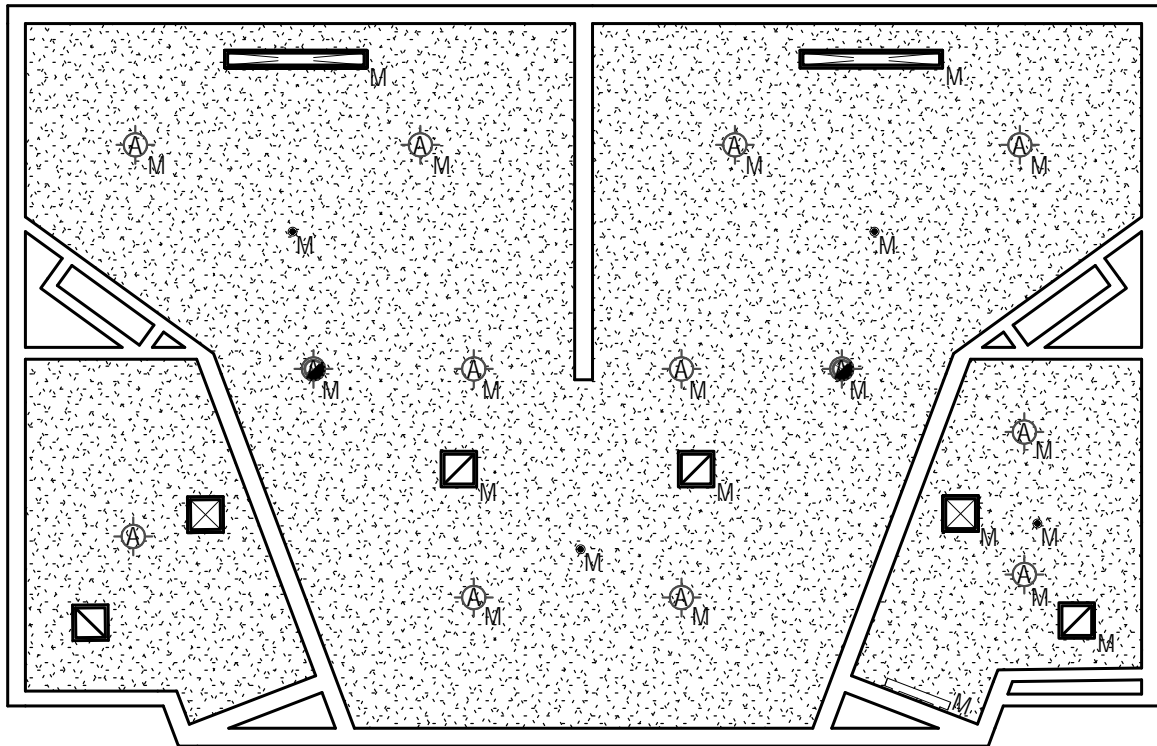
### 5.2.6 Two-Bed Universal Patient Room (IMH27), With Patient Universal Toilet/Shower (SB148) - Floor Plan



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.6 Two-Bed Universal Patient Room (IMH27), With Patient Universal Toilet/Shower  
(SB148) - Reflected Ceiling Plan**

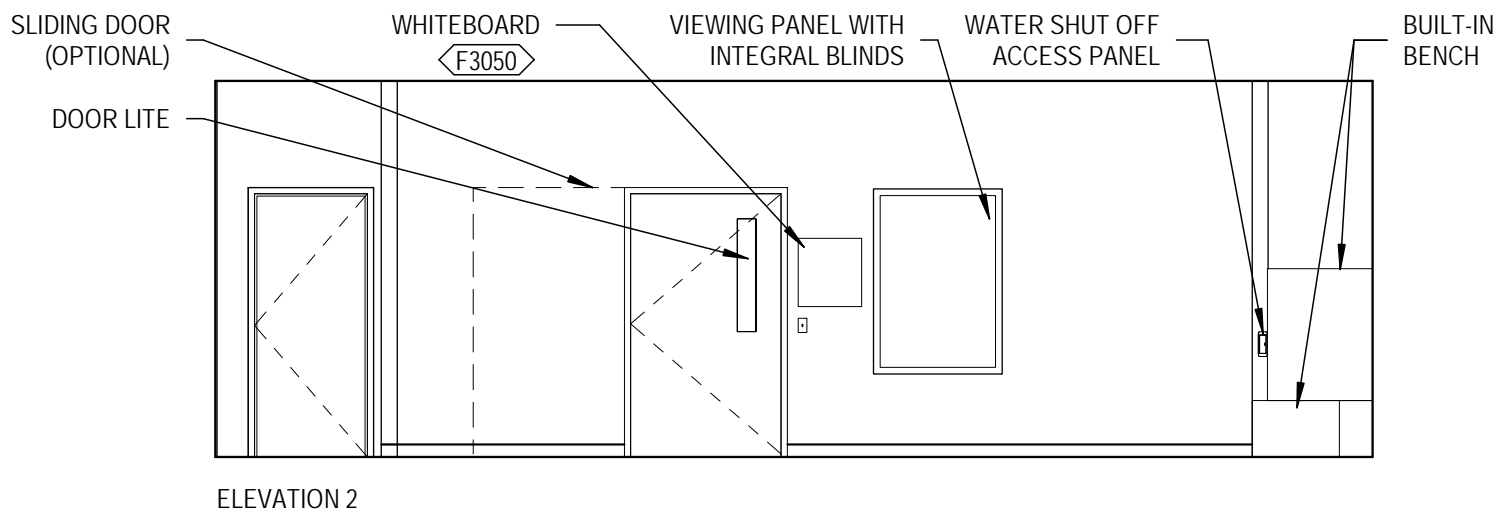
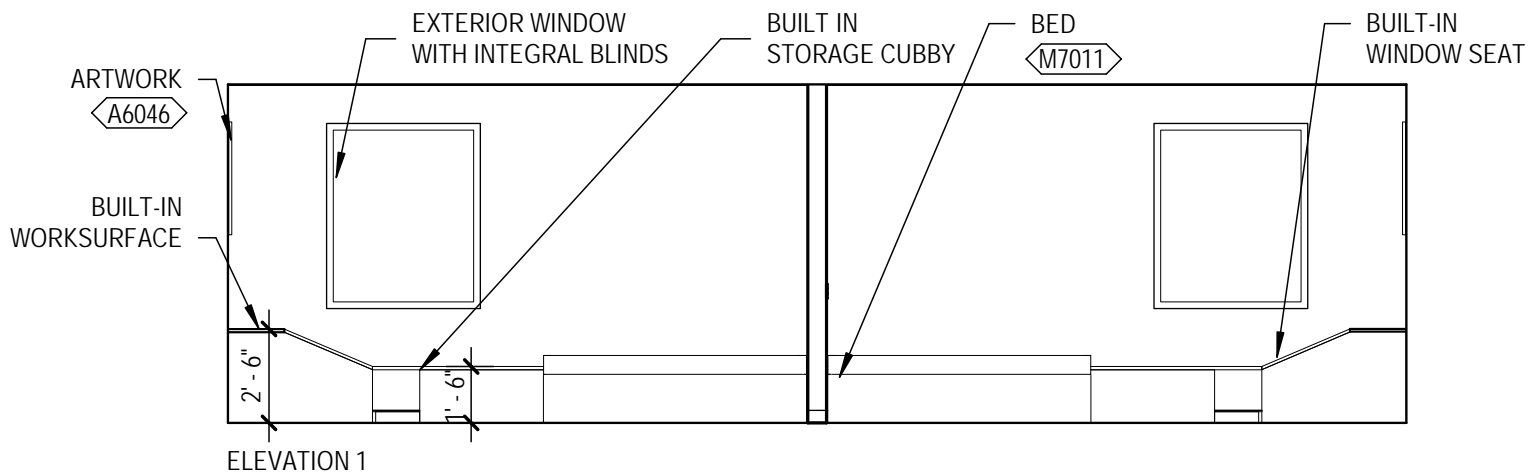
SCALE: 3/16" = 1'-0"



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.6 Two-Bed Universal Patient Room (IMH27), With Patient Universal Toilet/Shower  
(SB148) - Elevations**

SCALE: 3/16" = 1'-0"

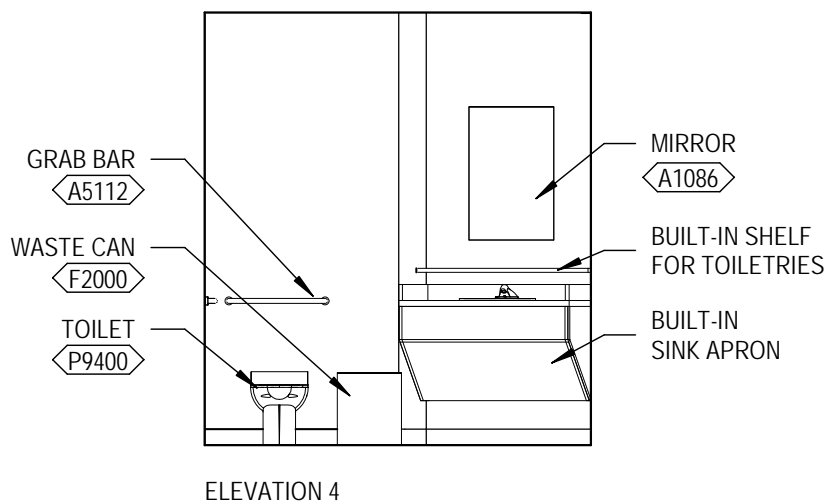
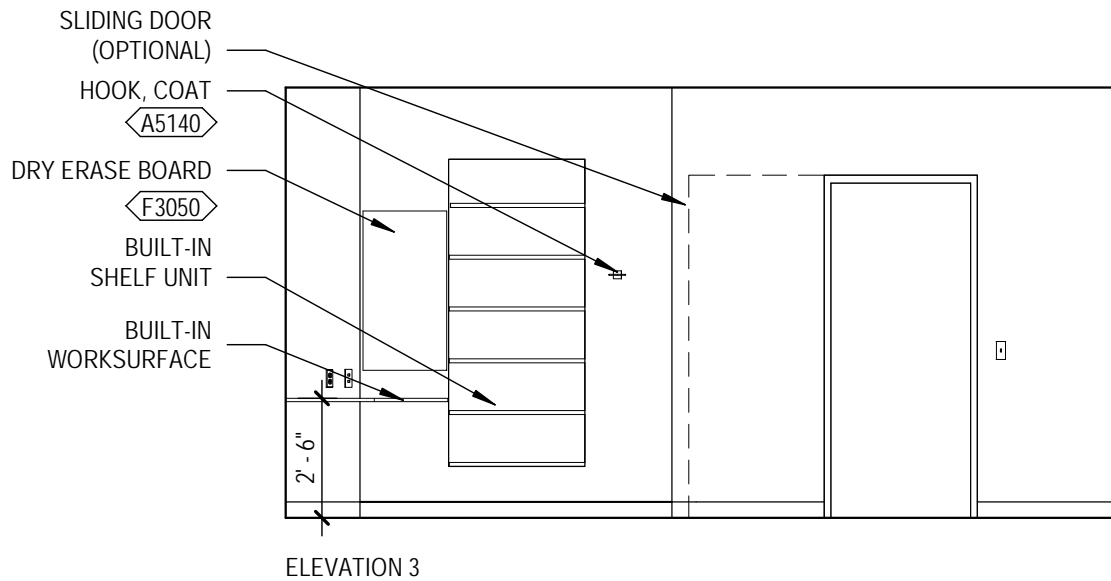




**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.6 Two-Bed Universal Patient Room (IMH27), With Patient Universal Toilet/Shower  
(SB148) - Elevations**

SCALE: 1/4" = 1'-0"



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.2.6 Two-Bed Universal Patient Room (IMH27) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Gypsum Wallboard with Paint	Data	As shown, if approved
Ceiling Height	9'-0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	WSF 4"	Duress Alarm	No
Floor Finish	WSF	Electronic Access	No
Slab Depression	None	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	4'-0" x 7'-0" wood with laminate glass view panel	Public Address System (PAS)	No
Hardware	MH1	Security Surveillance Television (SSTV)	No
		Clock	No
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.1 & 4.4.2 - Patient Room - for lighting design consideration		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.6 Two-Bed Universal Patient Room (IMH27) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9

# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

## 5.2.6 Patient Universal Toilet/Shower (SB148) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Gypsum Wallboard (SC)	Data	No
Ceiling Height	9' - 0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard (SC) with 4' solid surface wainscot	Cable Television	No
Base	PT 4" or RES	Duress Alarm	No
Floor Finish	PT or RES	Electronic Access	No
Slab Depression	as needed to slope to drain	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3' - 6" x 7' - 0" soft suicide prevention, sliding or out-swinging with sloped top, door height varies by type, refer to Section 4.3.3.11	Public Address System (PAS)	No
Hardware	varies by door type selected	Security Surveillance Television (SSTV)	No
		Clock	No
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.1 & 4.4.2 - Patient Toilet- for lighting design consideration		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.6 Patient Universal Toilet/Shower (SB148) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	Yes
Hot Water	Yes
Waste	Yes

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.6 Two-Bed Universal Patient Room (IMH27), With Patient Universal Toilet/Shower  
(SB148) - Equipment List**

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
<b>IMH27 - TWO-BED UNIVERSAL PATIENT ROOM</b>				
<b>A6046</b>	Digital, Recessed, Artwork, Decorative	2	VV	This JSN is to be used for determining and defining location of decorative artwork.
<b>M7011</b>	Bed, Platform, Bariatric, Without Visible Legs, Anti-ligature / Security	2	VV	Platform bed and mattress with enclosed under carriage, no visible legs. Provided with 5/8" plywood deck, eight restraint holders, two at head and foot, three at each side, concealed steel frame, and means to bolt to the floor. Sides and ends are finished wood panels.
	Psychiatric Chair	2	VV	
<b>F3050</b>	Whiteboard, Dry Erase	3	VV	Whiteboard unit, approximately 20" H x 24" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
<b>A5140</b>	Hook, Coat/Robe, Wall Mount	2	CC	Clothes hook used in patient rooms, anti-ligature and tamper proof.
<b>SB148 - PATIENT UNIVERSAL TOILET / SHOWER</b>				
<b>A1086</b>	Mirror, Safety, Ligature Resistant	1	CC	A one-piece stamped stainless steel mirror. The mirror will be engineered and suitable for continuous daily use in a psychiatric medical environment.
<b>A5074</b>	Dispenser Soap, Recessed, SS, Anti-ligature	1	CC	A recessed stainless steel soap dish. The soap dish may be surface mounted or chase mounted thru the wall. Tamper proof
<b>A5081</b>	Dispenser, Paper Towel, SS, Recessed, Anti-ligature	1	CC	A recessed stainless steel paper towel dispenser, tamper proof. The dispenser may be a recessed shelf to place paper towels to ensure the safety of patients.
<b>A5112</b>	Bar Grab, Ligature Resistant	2	CC	Grab bar with closure plate; 36" long. 304 stainless steel cylindrical tub construction; a flat closure plate is welded on to meet Ligature-Resistant requirements. ADA Compliant. Additional lengths are available 24", 30", 42" and 48" as well as left and right orientations.
<b>A5140</b>	Hook, Coat/Robe, Wall Mount	1	CC	Clothes hook used in patient rooms, anti-ligature and tamper proof.
<b>A5196</b>	Dispenser, Toilet Paper, Ligature Resistant	1	CC	A recessed single roll toilet tissue holder with anti-ligature and tamper proof characteristics.



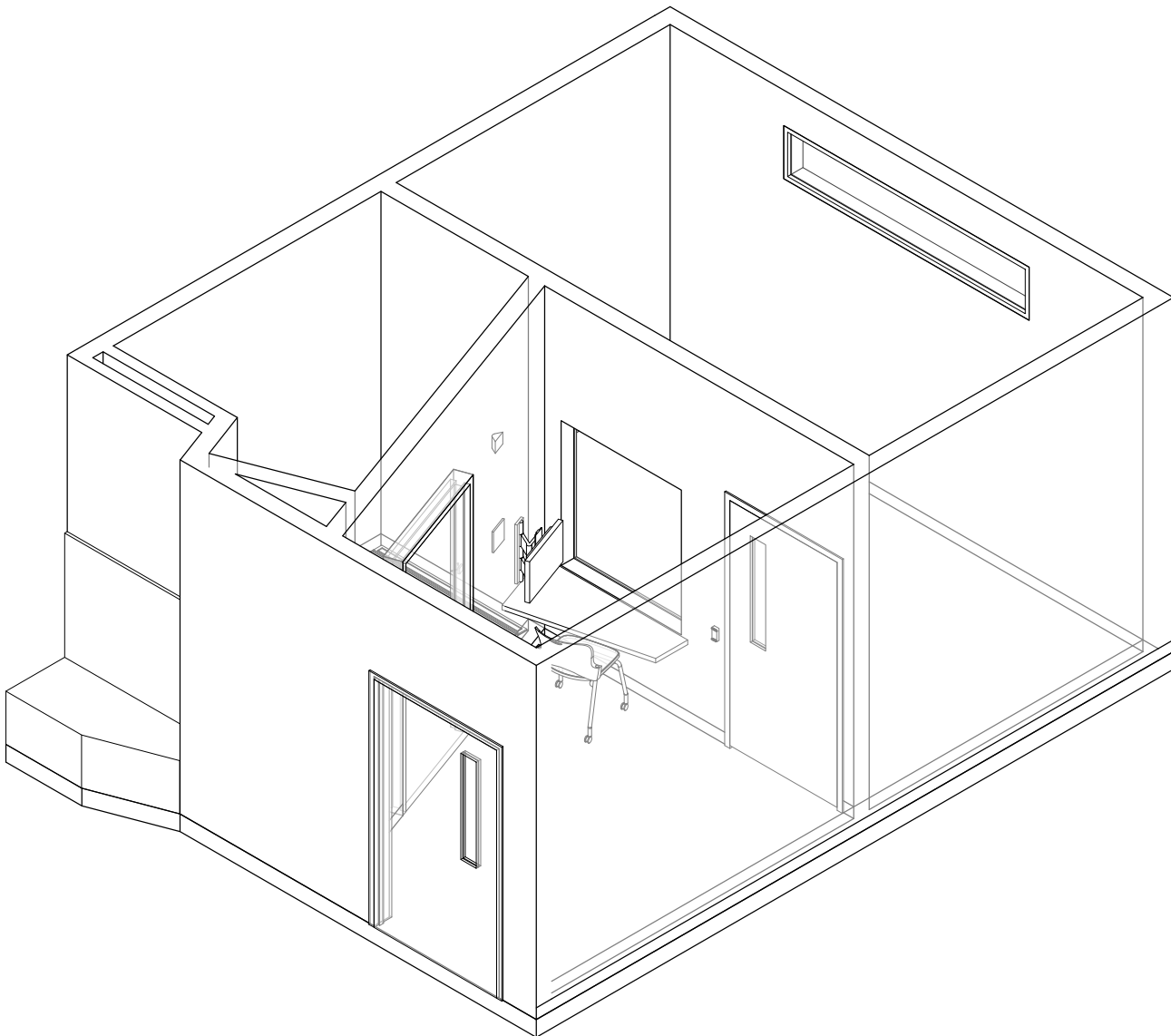


**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.6 Two-Bed Universal Patient Room (IMH27), With Patient Universal Toilet/Shower (SB148) - Equipment List**

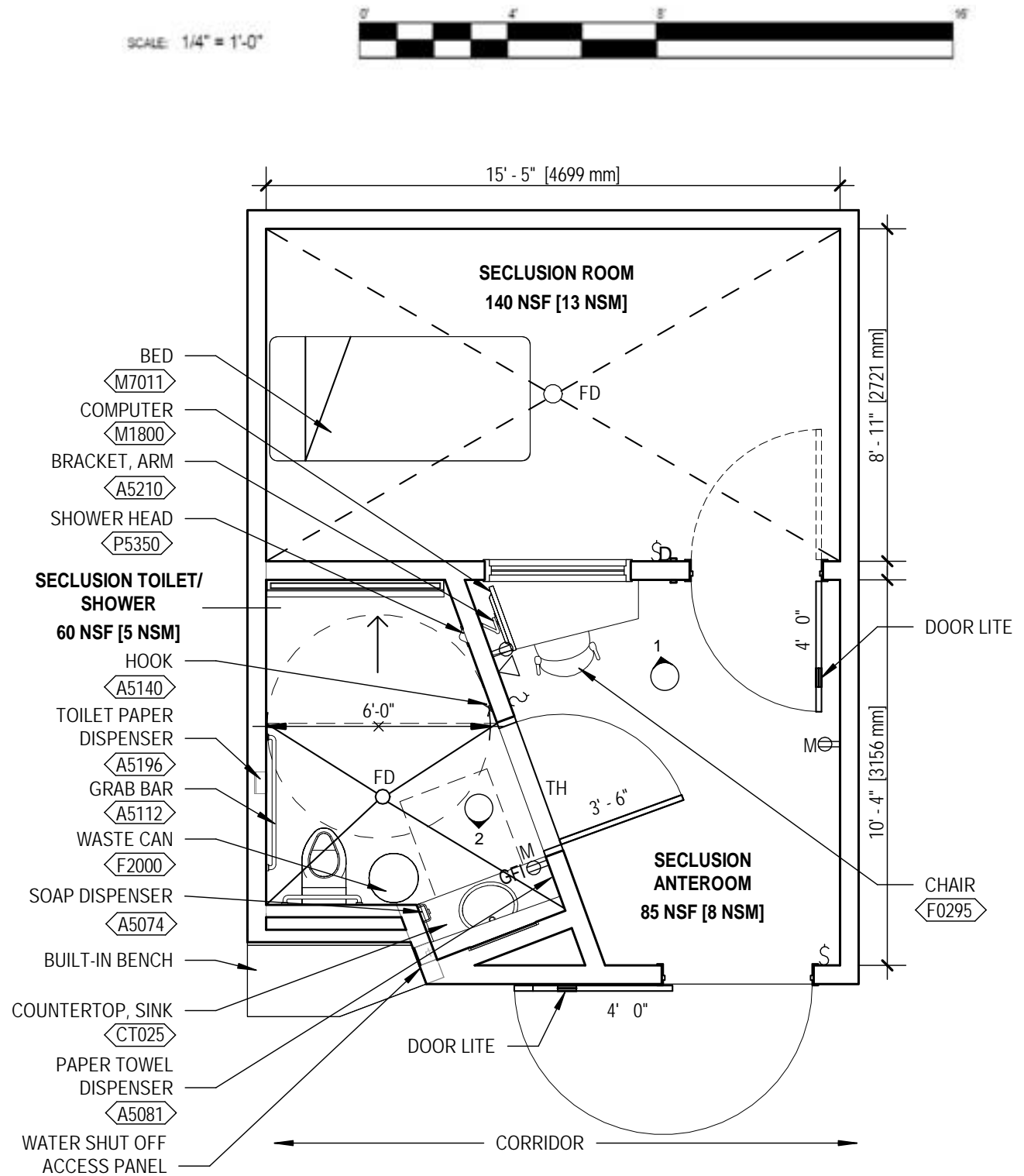
JSN	NAME	QTY	ACQ/INS	DESCRIPTION
<b>F2000</b>	Waste Can, Open Top	1	VV	Wastepaper basket, fire resistant, approximately 40 quart capacity. This unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations. Size and shape varies depending on the application and manufacturer selected.
<b>P5350</b>	Shower, Patient, Anti-ligature, Tamper Proof	1	CC	Flush mount ligature resistant patient shower. Installed on wall and serviced through removable 18-gage, type 304 stainless steel front panel with white powder coat finish. Furnish with vandal resistant fasteners. Provide mixing valve to automatically deliver blended water within a specific range. Provide conical shower head, control valve with ADA compliant ligature resistant tri-lever handle. The shower head shall be installed not less than 6 feet above the floor and shall deliver the spray within a 3 foot circle. It shall be suitable for use in Security Zone 3; areas where patients may be without direct staff supervision.
<b>CT025</b>	Countertop, Solid Surface with Sink Combination	1	CC	A solid, nonporous countertop approximately 36"W x 22"D with a undercounter sink combination. The countertop is an acrylic-based solid surface product with a standard thickness of 1", and a 4" butt backsplash/curb. Surfaces will be easy to clean and maintain. Also referred to as a work surface or work top with sink. Available in a choice of colors, depths and sink shapes. Used for various applications in patient rooms, restrooms and throughout the facility. Usually a part of a casework interior design program. Unit does not include the drain and faucet..
<b>P9400</b>	Toilet, Stainless Steel, Siphon Jet, Anti-ligature, Tamper Proof	1	CC	On-floor, stainless steel, siphon jet ligature resistant water closet/ toilet. Constructed of 16 gage type 304 stainless steel with exposed surfaces powder coated white. This unit has a wall waste connection, an elongated bowl, back spud push button 1.28 gpf flush valve, ligature resistant toilet seat cover. It shall be suitable for use in Security Zone 3; areas where patients may be without direct staff supervision..

**5.2.7 Seclusion Room (IMH31) / Anteroom (IMH32), Toilet/Shower (SB148) - Axonometric**



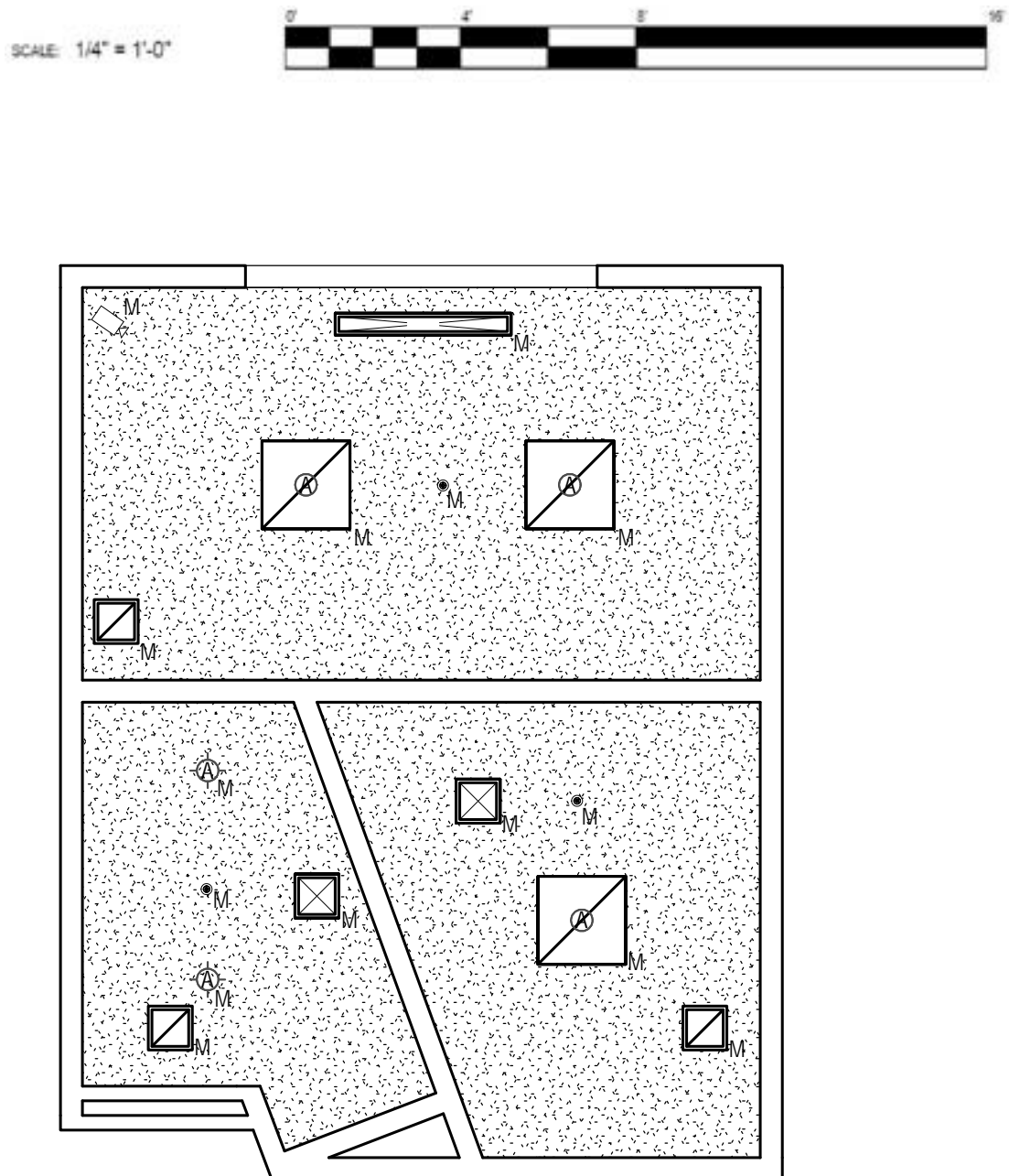
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.7 Seclusion Room (IMH31) / Anteroom (IMH32), Toilet/Shower (SB148) - Floor Plan**



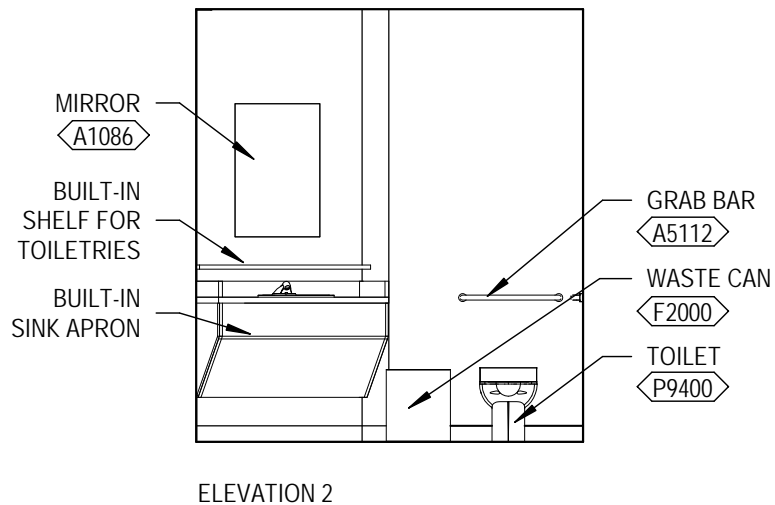
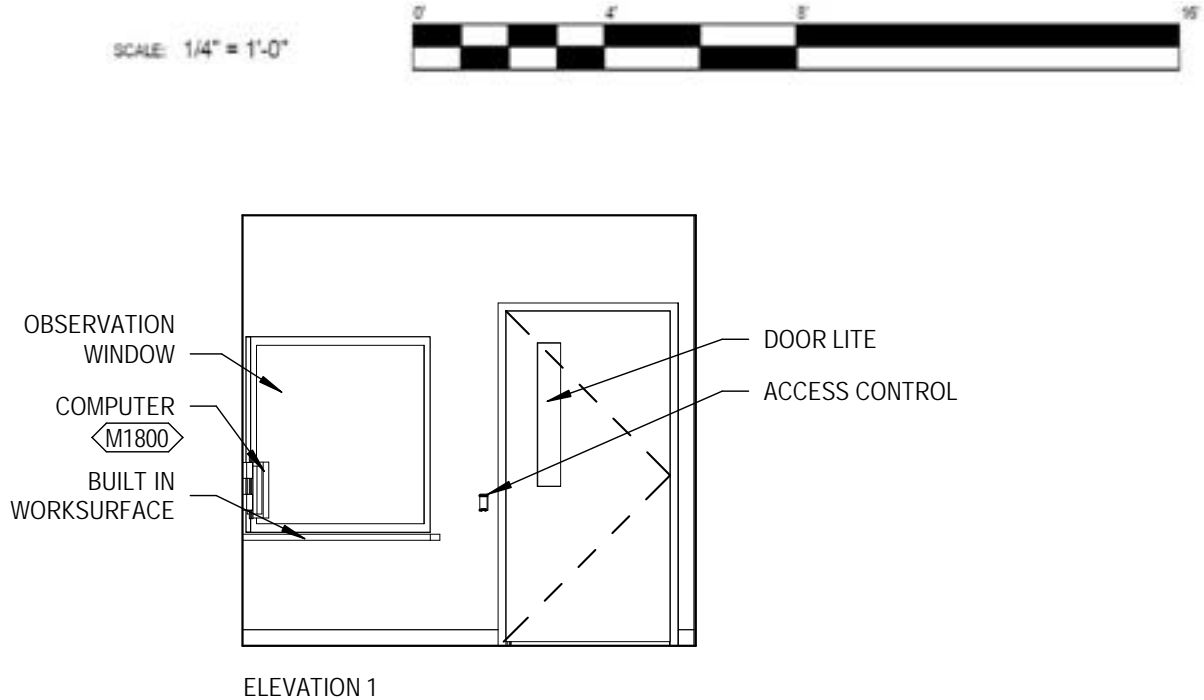
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.7 Seclusion Room (IMH31) / Anteroom (IMH32), Toilet/Shower (SB148)- Reflected  
Ceiling Plan**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.7 Seclusion Room (IMH31) / Anteroom (IMH32), Toilet/Shower (SB148) - Elevation**



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.2.7 Seclusion Room (IMH31) / Anteroom (IMH32) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Gypsum Wallboard with Paint	Data	Yes
Ceiling Height	9'-0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard (2 layers) with RWC or CMU	Cable Television	No
Base	WSF 4"	Duress Alarm	No
Floor Finish	WSF	Electronic Access	Yes
Slab Depression	as needed to slope to drain	Intercom	Yes
Sound Protection	STC 50	Motion Intrusion Detection (MID)	No
Doors	4'-0" x 7'-0" steel, with security grade hollow metal frames. Provide laminate glass view panel..	Public Address System (PAS)	No
Hardware	MH5	Security Surveillance Television (SSTV)	Yes
		Clock	No
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.3.5 - Patient Room Isolation- for lighting design consideration.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.7 Seclusion Room (IMH31) / Anteroom (IMH32) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	Yes

**FIRE PROTECTION AND LIFE SAFETY**

Alarm Detection	See Section 4.9
Sprinkler System	See Section 4.9

# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

## 5.2.7 Toilet/Shower (SB148) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Gypsum Wallboard (SC).	Data	No
Ceiling Height	9'-0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard (SC) with 4'solid surface wainscot	Cable Television	No
Base	PT 4" or RES	Duress Alarm	No
Floor Finish	PR or RES	Electronic Access	No
Slab Depression	as needed to slope to drain	Intercom	No
Sound Protection	STC 50	Motion Intrusion Detection (MID)	No
Doors	3' - 6" x 7' - 0" soft suicide prevention. sliding or out-swing with sloped top., door height varies by type, refer to Section 4.3.3.11	Public Address System (PAS)	No
Hardware	varies by door type selected	Security Surveillance Television (SSTV)	No
		Clock	No
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.2 - Patient Room Toilet- for lighting design consideration.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.7 Toilet/Shower (SB148)- Room Data Sheet (Continued)**

PLUMBING	
Cold Water	Yes
Hot Water	Yes
Waste	Yes

FIRE PROTECTION AND LIFE SAFETY	
Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.7 Seclusion Room (IMH31) / Anteroom (IMH32), Toilet/Shower (SB148) - Equipment List**

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
<b>IMH31 - SECLUSION ROOM</b>				
<b>M7011</b>	Bed, Platform, Bariatric, Without Visible Legs, Anti-ligature / Security	1	VV	Platform bed and mattress with enclosed under carriage, no visible legs. Provided with 5/8" plywood deck, eight restraint holders, two at head and foot, three at each side, concealed steel frame, and means to bolt to the floor. Sides and ends are finished wood panels.
<b>IMH32 - SECLUSION ANTEROOM</b>				
<b>M1800</b>	Monitor, Computer, LCD, 20 - 25 inch	1	CC	24" LED backlit monitor. Features 178-degree viewing angle, Customizable tilt, height adjustment, swivel, and pivot settings. 1920 x 1200 resolution. Contrast ratio Static: 1000:1; Dynamic: 5,000,000:1. 250 cd/m2. 3USB 2.0 (one upstream, two downstream), VGA, DVI-D, DisplayPort 1.2 (HDCP support on DVI and DisplayPort). Energy Star qualified.
<b>A5210</b>	Bracket, Television, Wall Mounted, w/Adjust Arm	1	CC	Wall mounted television bracket with adjustable arm. Consists of movable arm with minimum 120 degree swivel. Designed for holding wall mounted, flat panel television units in patient rooms.
<b>F0295</b>	Chair, Interiors, Stacking w/o Arms	1	VV	Stacking chair, approximately 34" H X 21" W X 24" D. May be stacked up to 20 high depending upon the model selected. These chairs are intended primarily as overflow capacity for conference rooms..
<b>SB148 - SECLUSION TOILET / SHOWER</b>				
<b>A1086</b>	Mirror, Safety, Ligature Resistant	1	CC	A one-piece stamped stainless steel mirror. The mirror will be engineered and suitable for continuous daily use in a psychiatric medical environment.
<b>A5074</b>	Dispenser Soap, Recessed, SS, Anti-ligature	1	CC	A recessed stainless steel soap dish. The soap dish may be surface mounted or chase mounted thru the wall. For use in a psychiatric medical environment.
<b>A5081</b>	Dispenser, Paper Towel, SS, Recessed, Anti-ligature	1	CC	A recessed stainless steel paper towel dispenser for use in a psychiatric setting. The dispenser may be a recessed shelf to place paper towels to ensure the safety of patients.
<b>A5112</b>	Bar Grab, Ligature Resistant	2	CC	A 36" long grab bar of stainless steel or anodized aluminum for use as a gripping surface in bathrooms, shower stalls or bath tubs. The bar comes with a gap-filler between the bar and wall and will have concealed mounting flanges or snap over flanges to conceal mounting screws. A selection of mounting kits and concealed anchor devices are available from the manufacturers for different types of installations.
<b>A5196</b>	Dispenser, Toilet Paper, Ligature Resistant	1	CC	A recessed single roll toilet tissue holder for use in psychiatric, drug abuse or alcohol rehab toilets.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

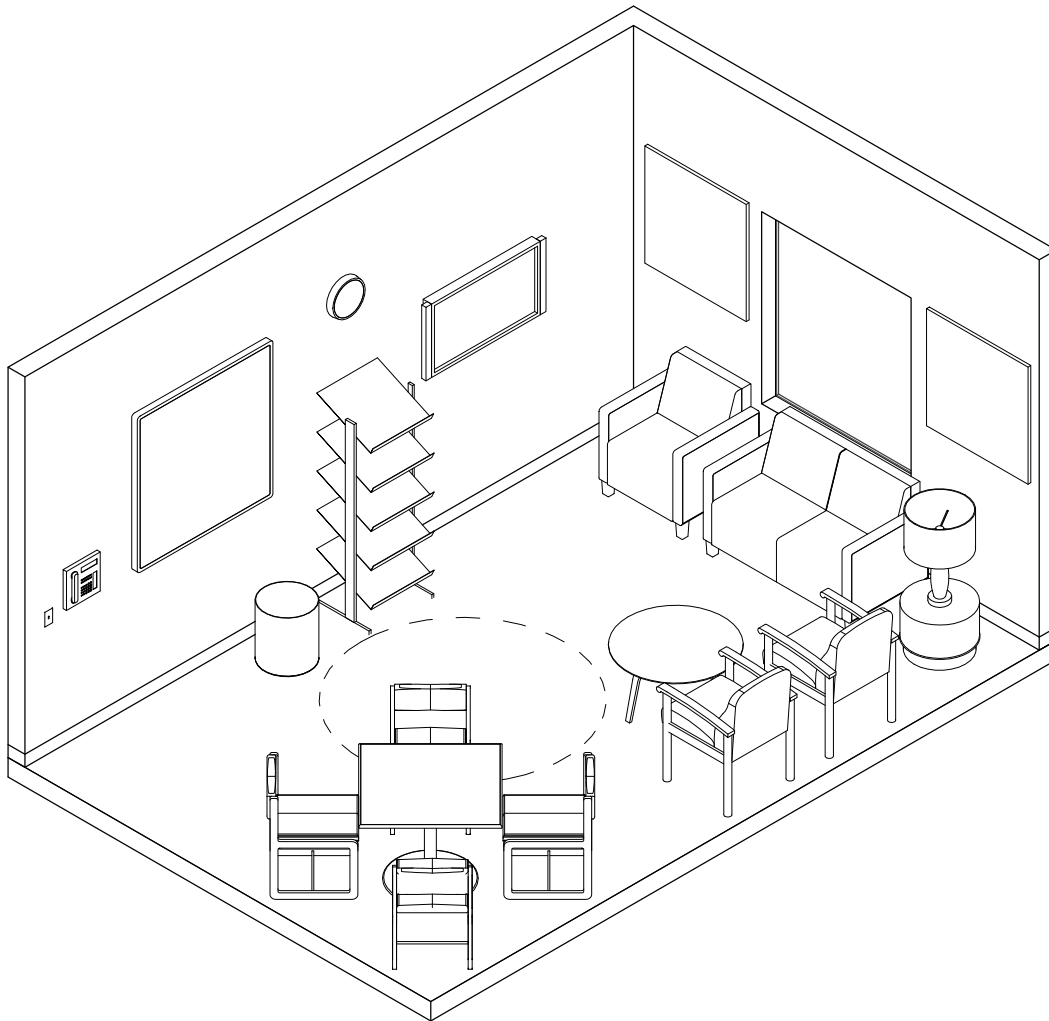
**5.2.7 Seclusion Room (IMH31) / Anteroom (IMH32), Toilet/Shower (SB148) - Equipment List (Continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A5140</b>	Hook, Coat/Robe, Wall Mount	1	CC	Clothes hook used in patient rooms, anti-ligature and tamper proof.
<b>F2000</b>	Waste Can, Open Top	1	VV	Wastepaper basket, fire resistant, approximately 40 quart capacity. This unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations. Size and shape varies depending on the application and manufacturer selected.
<b>P5350</b>	Shower, Patient, Anti-ligature, Tamper Proof	1	CC	Flush mount ligature resistant patient shower. Installed on wall and serviced through removable 18-gage, type 304 stainless steel front panel with white powder coat finish. Furnish with vandal resistant fasteners. Provide mixing valve to automatically deliver blended water within a specific range. Provide conical shower head, control valve with ADA compliant ligature resistant tri-lever handle. The shower head shall be installed not less than 6 feet above the floor and shall deliver the spray within a 3 foot circle. It shall be suitable for use in Security Zone 3; areas where patients may be without direct staff supervision..
<b>CT025</b>	Countertop, Solid Surface with Sink Combination	1	CC	A solid, nonporous countertop approximately 36"W x 22"D with a undercounter sink combination. The countertop is an acrylic-based solid surface product with a standard thickness of 1", and a 4"butt backsplash/curb. Surfaces will be easy to clean and maintain. Also referred to as a work surface or work top with sink. Available in a choice of colors, depths and sink shapes. Used for various applications in patient rooms, restrooms and throughout the facility. Usually a part of a casework interior design program. Unit does not include the drain and faucet..
<b>P9400</b>	Toilet,Stainless Steel, Siphon Jet, Anti-ligature, Tamper Proof	1	CC	On-floor, stainless steel, siphon jet ligature resistant water closet/ toilet. Constructed of 16 gage type 304 stainless steel with exposed surfaces powder coated white. This unit has a wall waste connection, an elongated bowl, back spud push button 1.28 gpf flush valve, ligature resistant toilet seat cover. It shall be suitable for use in Security Zone 3; areas where patients may be without direct staff supervision..



**FA4 Patient Care Unit Patient Common Area**

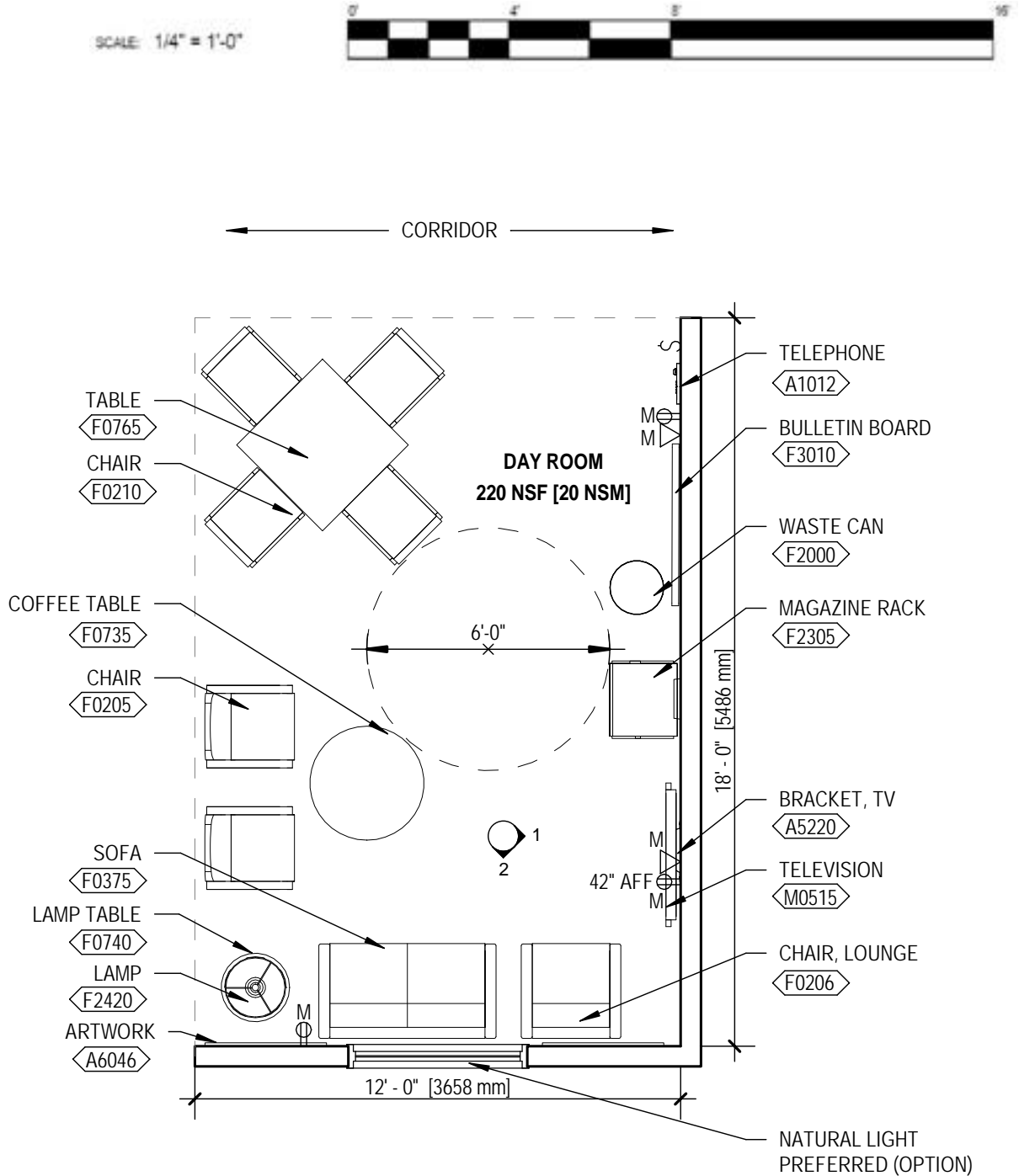
**5.2.8 Day Room (IMH41) - Axonometric**





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

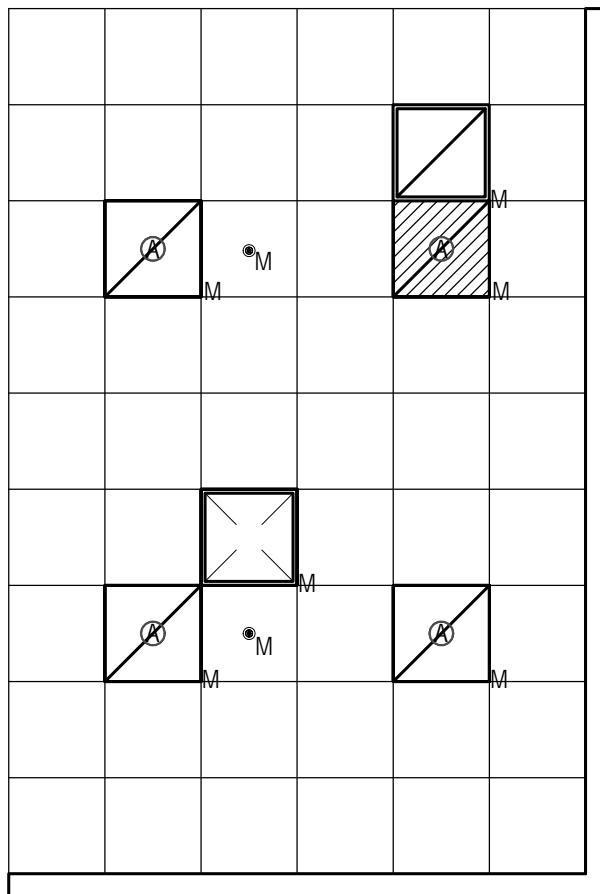
**5.2.8 Day Room (IMH41) - Floor Plan**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

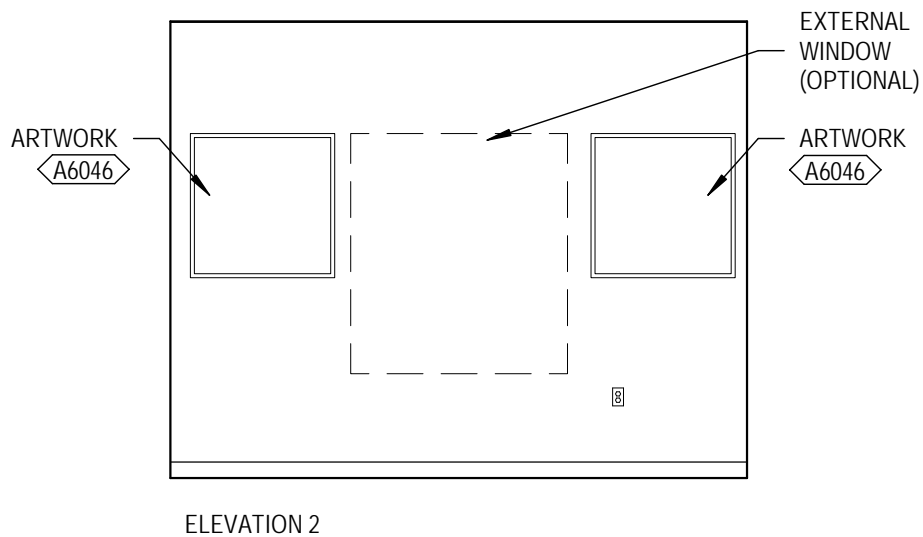
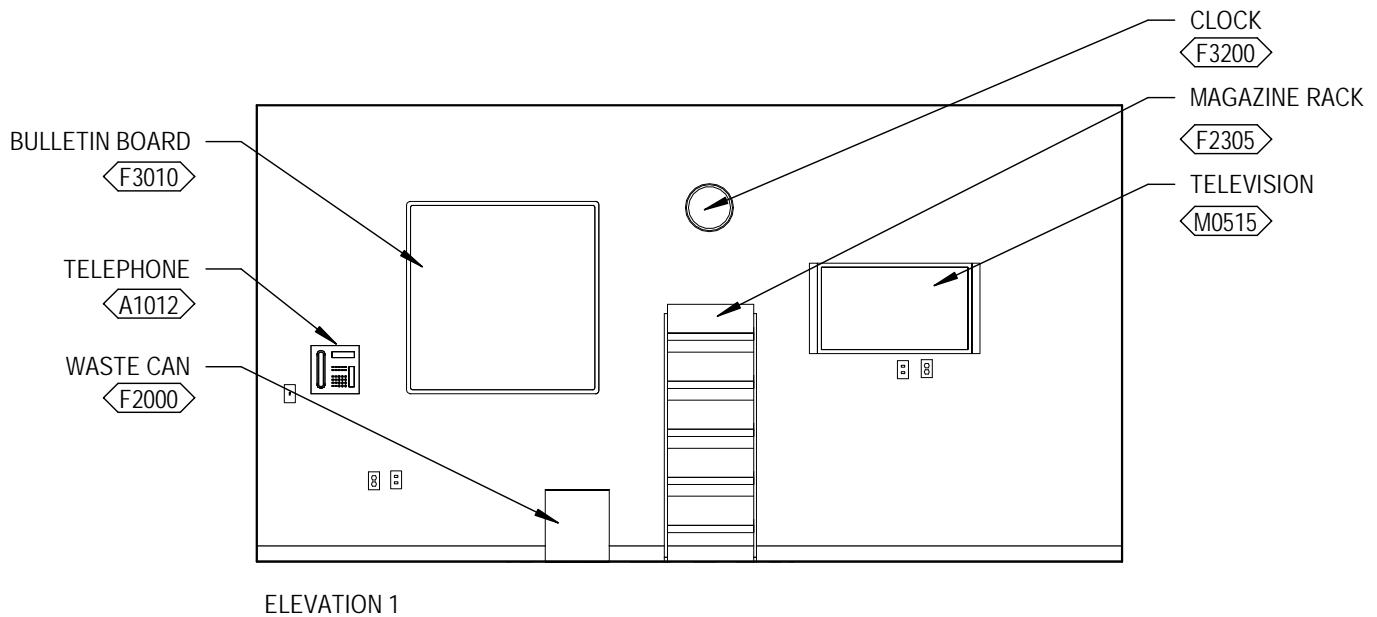
**5.2.8 Day Room (IMH41) - Reflected Ceiling Plan**

SCALE: 1/4" = 1'-0"



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.8 Day Room (IMH41) - Elevations**



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.2.8 Day Room (IMH41) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustic Ceiling Tile with Clips	Data	Yes
Ceiling Height	9'-0" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	Yes
Base	RB-4" or WSF-4"	Duress Alarm	No
Floor Finish	CPT or WSF	Electronic Access	No
Slab Depression	None	Intercom	No
Sound Protection	STC45 (to adjacent rooms)	Motion Intrusion Detection (MID)	No
Doors	None	Public Address System (PAS)	No
Hardware	None	Security Surveillance Television (SSTV)	No
		Clock	Yes
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.4 - Day Room - for lighting design consideration.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.8 Day Room (IMH41) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.8 Day Room (IMH41) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	2	CC	Telecommunication outlet location.
<b>A1012</b>	Telephone, Wall Mounted, 1 Line	1	VV	Telephone, wall mounted, Digital, 1 line.
<b>A5220</b>	Bracket, Television, Wall Backing	1	CC	Wall mounted television bracket backing which provides additional support and strength for the installation of the television bracket. Option available for interior or exterior plate and sized for 12" 16" or 24" stud spacing.
<b>A6046</b>	Artwork, Decorative, With Frame (24x36)	2	VV	This JSN is to be used for determining and defining location of decorative artwork.
<b>F0205</b>	Chair, Interiors, Side With Arms	2	VV	Upholstered side chair, 32" high X 21" wide X 23" deep with arms, padded seats and padded backs. Seat height is a minimum of 17". Available with or without sled base.
<b>F0210</b>	Chair, Interiors, Side, Without Arms	4	VV	Upholstered side chair approximately 32" high X 19" wide X 23" deep with floor glides. Seat is non-tilting and without arms.
<b>F0206</b>	Chair, Interiors, Lounge	1	VV	Armless club chair. Fully upholstered foam body covering a concealed plywood frame. Black plastic feet with non-adjustable glides. Gangable with other Swoop products (ganging kit #0A401). List price is for COM. Greenguard Certified.
<b>F0375</b>	Sofa, Lounge	1	VV	Executive sofa with woven fabric textile or vinyl upholstery, foam padded arms, steel spring and foam rubber backs and seats, and floor glides.
<b>F0735</b>	Table, Coffee	1	VV	Coffee table, approximately 18" high X 36" wide X 36" deep.
<b>F0740</b>	Table, Interiors, Accent, Anti-ligature	1	VV	Occasional lamp table (end table) approximately 20" high X 27" wide X 27" deep with choice of finishes (wood, oak veneer, or high pressure laminate). Tamper proof, Weighted Furniture.
<b>F0765</b>	Table, Interiors, Folding	1	VV	Folding table intended for a variety of uses. Designed with a flip top that allows tables to store nested to minimize needed storage space. Available in multiple laminate finish colors/patterns, bases, surface shapes (description and pricing based on a rectangle shape) and edge finish, . Available with leveling glides or casters (2 locking, 2 non-locking).
<b>F2000</b>	Waste Can, Open Top, Fire Resistant	1	VV	Wastepaper basket, fire resistant, approximately 40 quart capacity. This unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations. Size and shape varies depending on the application and manufacturer selected.
<b>F2305</b>	Rack, Magazine, F/S	1	VV	Free standing magazine rack. Used to display publications in offices, lobbies, and waiting areas.





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

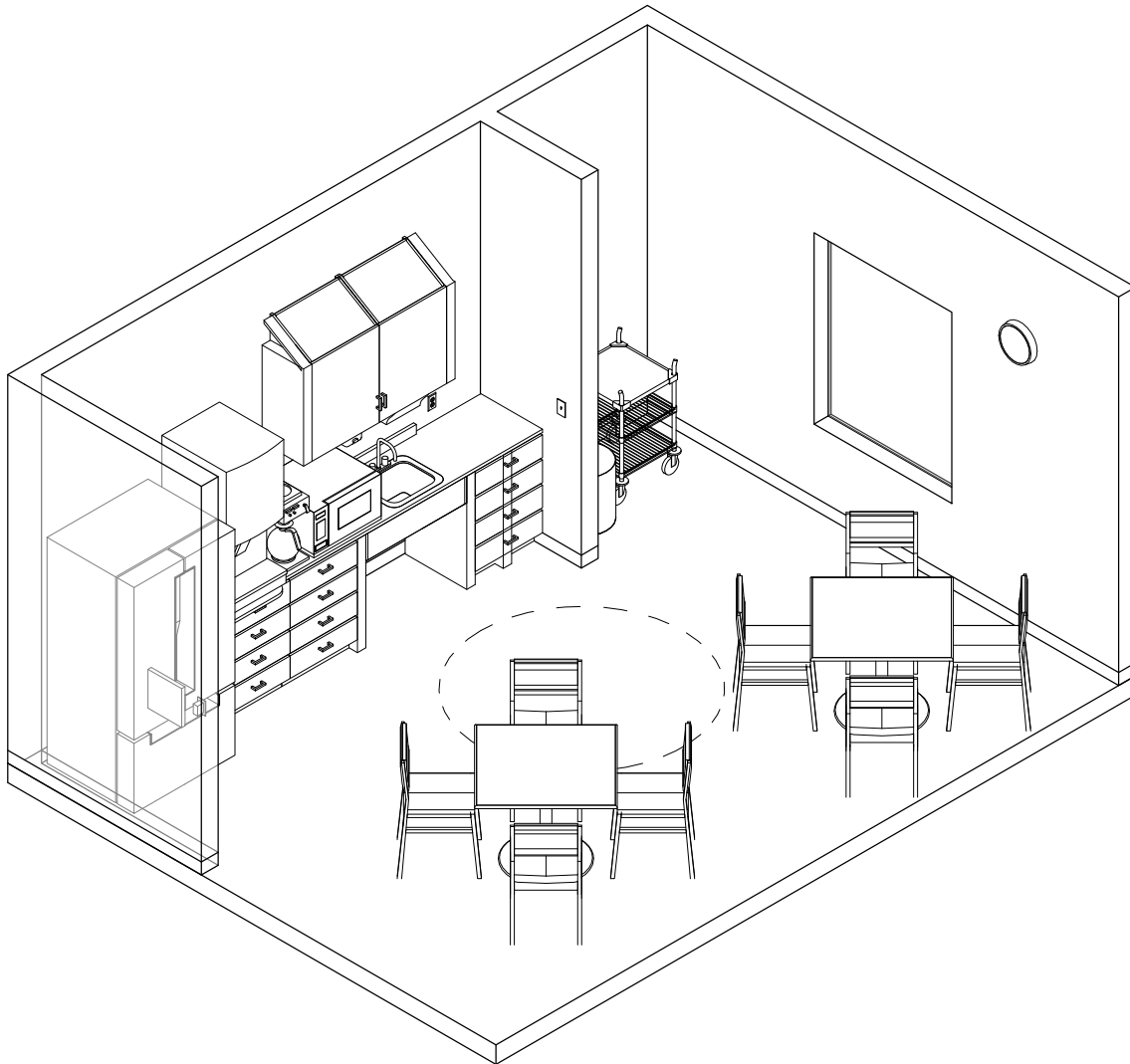
**5.2.8 Day Room (IMH41) - Equipment List (Continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>F2420</b>	Lamp, Interiors, Table, Bolted Down	1	VV	Table lamp, 27-34" high X 6" wide X 6" deep with linen shade. Convenience outlet required at point of use.
<b>F3010</b>	Board, Bulletin, 48 x 48	1	CC	Open face bulletin board. Cork posting panel with moisture proof backing. Variety of frames to choose from. Used for posting notes and messages.
<b>F3200</b>	Clock, Analog, 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).
<b>M0515</b>	Television, HD, 40" Class / Television, 46-49 in., Flat Panel With Mental Health Enclosure	1	VV	High definition (HDTV) multimedia flat panel LED 40" class display television. The TV will have a 16:9 wide screen aspect ratio, minimum of 1920 x 1080 display resolution, digital tuner, minimum refresh rate of 60Hz, minimum of two HDMI ports and 1 USB port ENERGY STAR certified.



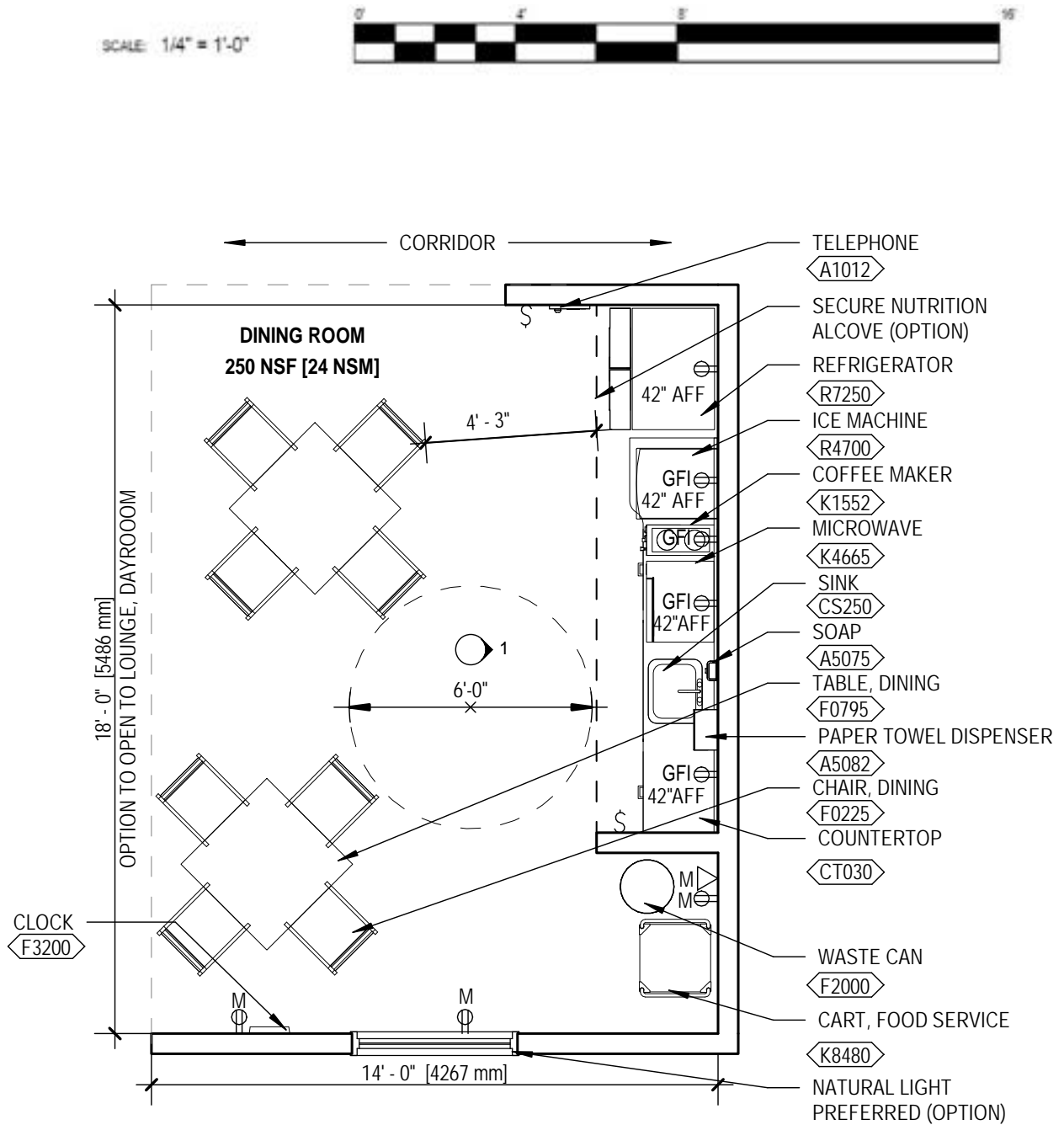
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.9 Dining Room (SV366) - Axonometric**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

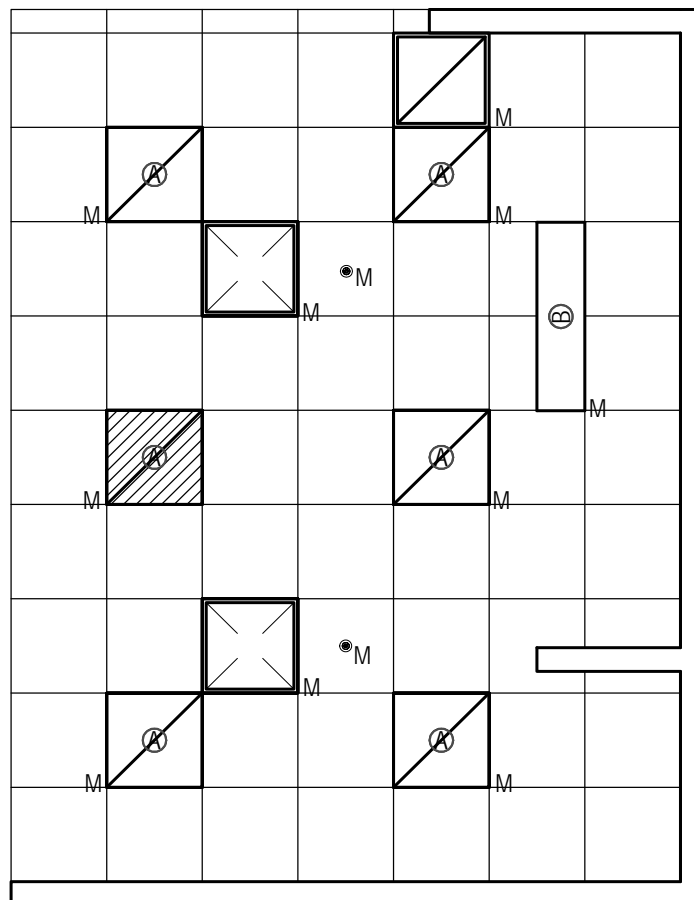
**5.2.9 Dining Room (SV366) - Floor Plan**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.9 Dining Room (SV366) - Reflected Ceiling Plan**

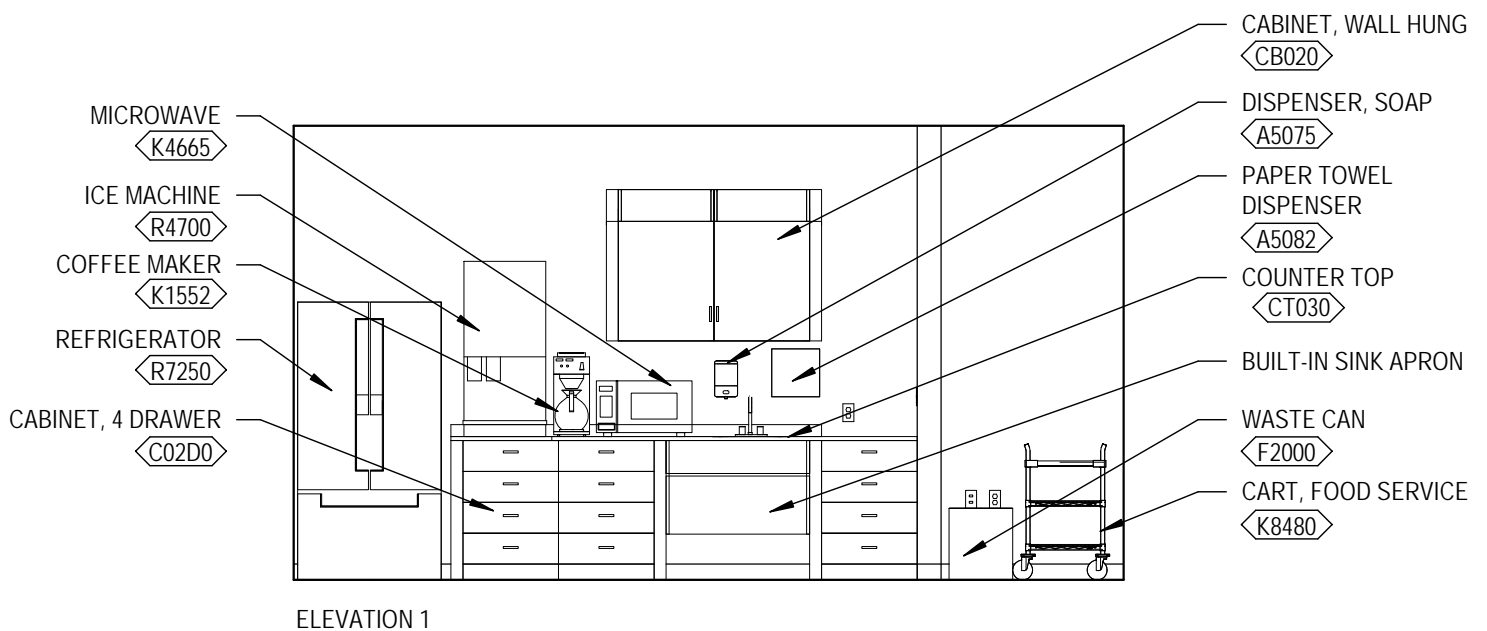
SCALE: 1/4" = 1'-0"



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.9 Dining Room (SV366) - Elevations**

SCALE: 1/4" = 1'-0"



# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

## 5.2.9 Dining Room (SV366) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustic Ceiling Tile with Clips	Data	Yes
Ceiling Height	9'- 0" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	Yes
Base	WSF-4"	Duress Alarm	No
Floor Finish	WSF	Electronic Access	No
Slab Depression	None	Intercom	No
Sound Protection	STC 45 (to adjacent rooms)	Motion Intrusion Detection (MID)	No
Doors	None	Public Address System (PAS)	No
Hardware	None	Security Surveillance Television (SSTV)	No
		Clock	Yes
LIGHTING		HVAC	
Refer to The IESNA Lighting Handbook, Chapter 10 – Lighting Design Guide and Chapter 11 for lighting design considerations.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.9 Dining Room (SV366) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	Yes
Hot Water	Yes
Waste	Yes

**FIRE PROTECTIONS AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.9 Dining Room (SV366) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	1	CC	Telecommunication outlet location.
<b>A1012</b>	Telephone, Wall Mounted, 1 Line	1	VV	Telephone, wall mounted, Digital, 1 line.
<b>A5075</b>	Dispenser, Soap, Wall Mount	1	VV	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
<b>A5082</b>	Dispenser, Paper Towel, Surface Mount	1	CC	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are placed in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.
<b>CS250</b>	Sink, Clean-up Workstation (1-sink)	1	CC	Single compartment stainless steel sink, drop-in, self-rimming, ledge-type, connected with a drain and provided with a mixing faucet. It shall also be provided with pre-punched fixture holes on 4" center, integral back ledge to accommodate deck-mounted fixtures, brushed/polished interior and top surfaces, and sound deadened. Recommended for use in suspended or U/C/B sink cabinets having a high plastic laminate or Chemsurf laminate countertop/work surface. For general purpose use throughout the facility.
<b>C02D0</b>	Cabinet, U/C/B, 4 Drawer, 36x24x22	2	CC	Standing height under counter base cabinet with four full width drawers of equal height. Also referred to as a drawer cabinet.
<b>CB020</b>	Cabinet, W/H, 2 Shelf, 1 DO, Sloping Top, 38x24x13	2	CC	Wall hung cabinet with two adjustable shelves, solid right or left-hinged door (appropriate door hinge configuration to be indicated on equipment elevation drawings), and sloping top. Also referred to as a solid hinged single door case.
<b>CT030</b>	Countertop, High Pressure Laminate, Laminate or Solid Surface	1	CC	High pressure laminate countertop (composition of wood particle core with plastic laminate surface) having a hard smooth surface finish, standard thickness of 1", and a 4" butt backsplash/curb. Also referred to as a work surface or work top. Available in a wide choice of colors, patterns, and depths. Used in general purpose areas requiring a basic work surface arrangement with limited heat resistance and poor chemical resistance. Pricing based upon a 24" depth.
<b>F0225</b>	Chair, Interiors, Dining	8	VV	Dining room chair with glides. Chair has straight legs with cushioned cloth or vinyl seat.
<b>F0795</b>	Table, Interiors, Dining	2	VV	Dining table. Round 36" diameter or square 36" X 36". Used in dining facilities and can comfortably seat up to four (4) persons..
<b>F2000</b>	Waste Can, Open Top	1	VV	Wastepaper basket, fire resistant, approximately 40 quart capacity. This unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations. Size and shape varies depending on the application and manufacturer selected.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

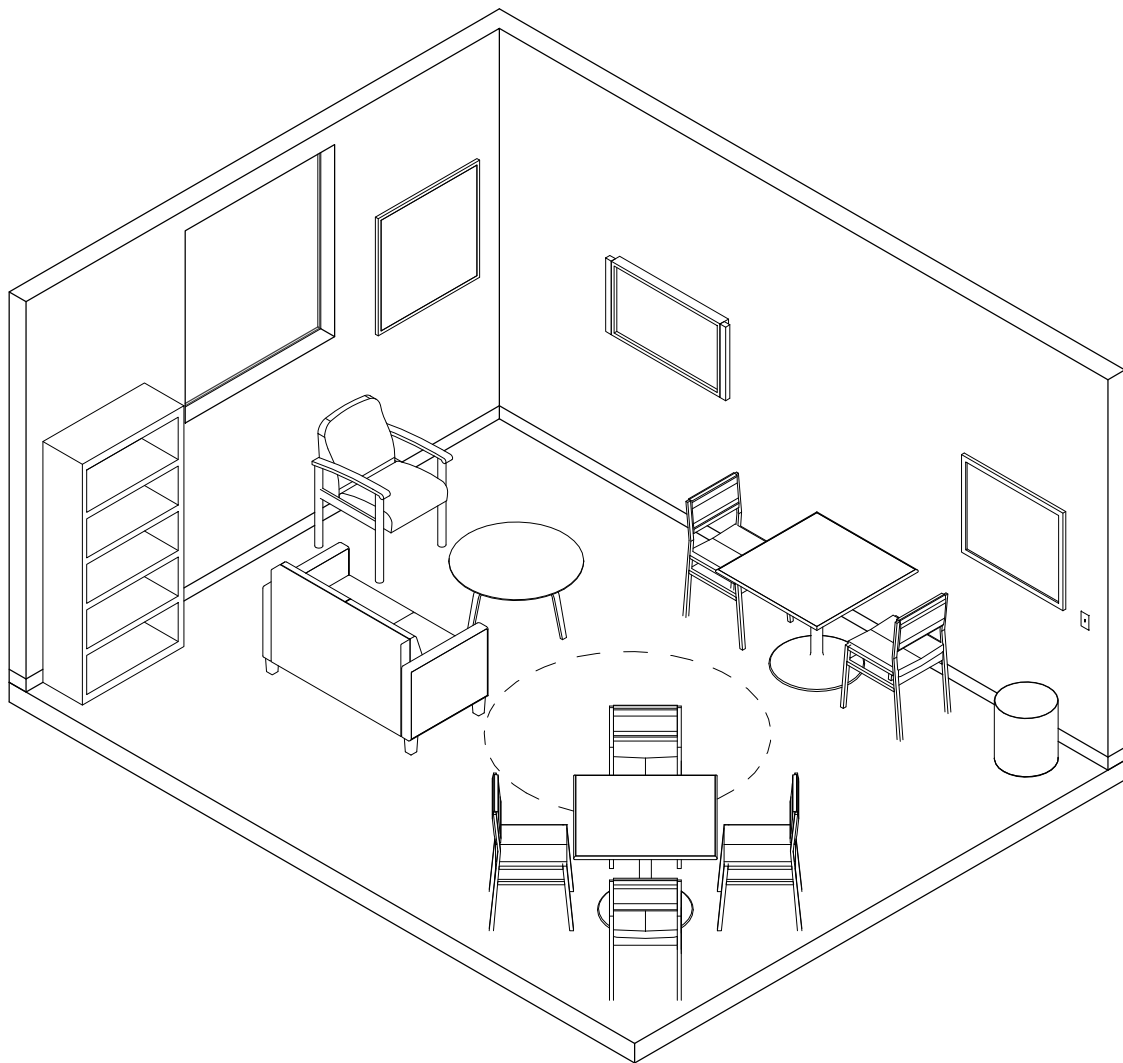
**5.2.9 Dining Room (SV366) - Equipment List (Continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>F3200</b>	Clock, Analog, 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).
<b>K1552</b>	Coffee Maker, Automatic, 3-6 Warmer	1	VV	Space saving front to back automatic coffee maker. This unit includes a heating tank, connection for a cold water supply, decanter service with three burners, funnel and a water flow controller. The unit is used for semi-automatic coffee brewing in cafeterias and commercial institutions. The unit automatically shuts off the water flow when enough has passed through to fill the pot. The unit is normally provided plumbed with a hot water faucet to the side for making other hot drinks (tea, cider, cocoa, etc.). The database height dimension does not include the clearance for coffee decanters warming on the upper burners.
<b>K4665</b>	Oven, Domestic, Microwave, Countertop	1	VV	Counter mounted microwave oven for average duty use. The exterior cabinet can be metal or heavy duty impact resistant plastic. The oven delivers instant energy for rapid heating, defrosting or prime cooking. The oven has touch pad controls, digital timer, power level selector and preprogrammed selectors for commonly cooked items. This oven is commonly found in staff lounges.
<b>K8480</b>	Cart, Foodservice, Meal/ Tray	1	VV	Foodservice tray cart. Features: Interior stainless steel welded tube framing, polymer door bumpers, full-length door handle and four 5" casters. (two fixed and two swivel, with brakes). Side loading. 5.25 in. tray spacing. 12 tray capacity.
<b>R4700</b>	Ice Machine, Dispenser, Flaker, Countertop	1	VV	Ice Maker, Dispenser, Countertop, stainless steel, 600lbs. of ice per day, automatic agitation, 60 lbs. storage hopper, self-contained, removable ice maker.
<b>R7250</b>	Refrigerator, Domestic with Freezer	1	VV	Refrigerator/freezer unit. This type unit includes a food saver system that helps keep food fresher. It also includes roll out wheels and is equipped for an optional automatic icemaker. This unit is of commercial or residential design and use.



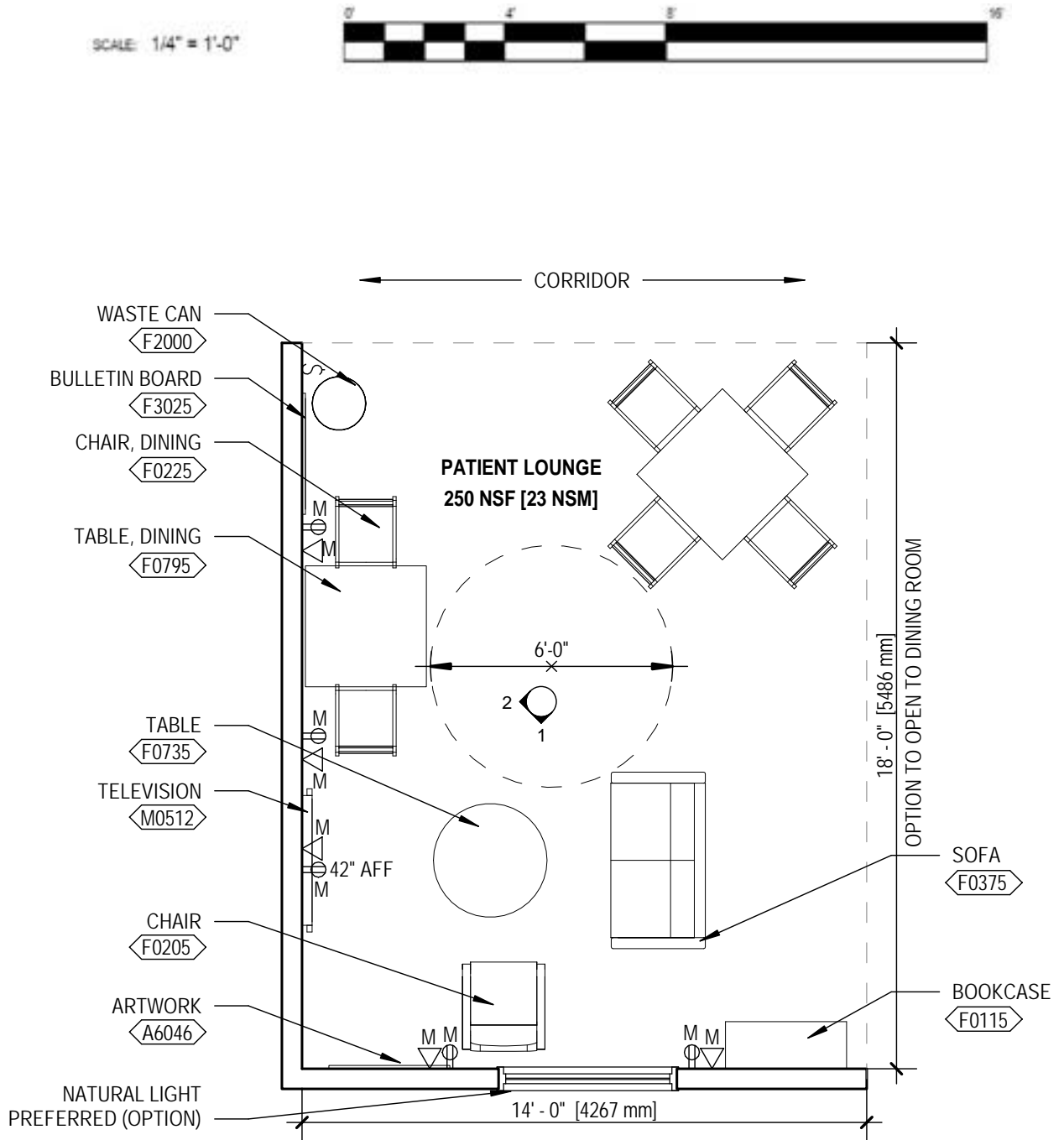
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.10 Patient Lounge (SV086) - Axonometric**

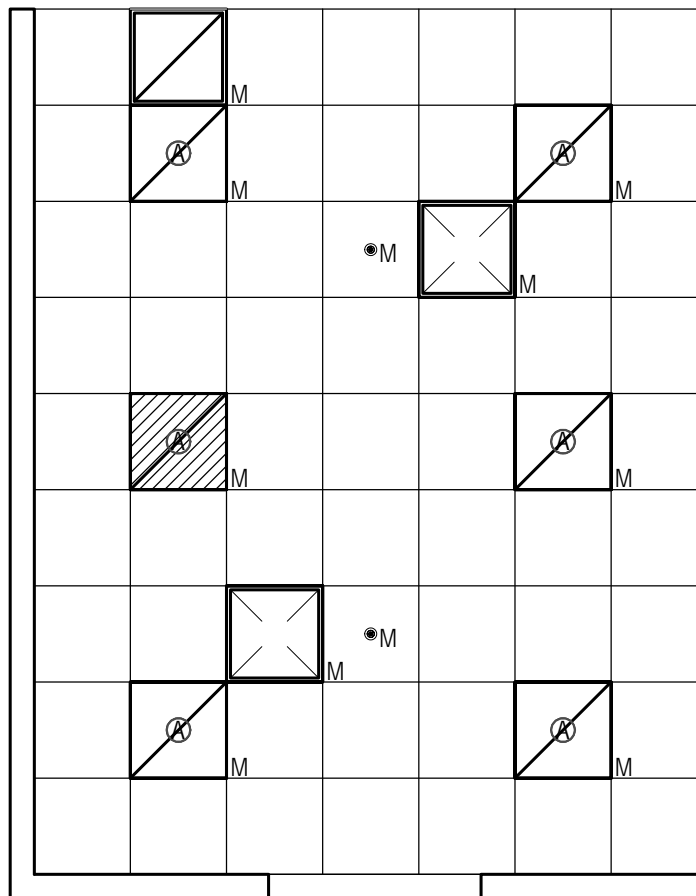


**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.10 Patient Lounge (SV086) - Floor Plan**



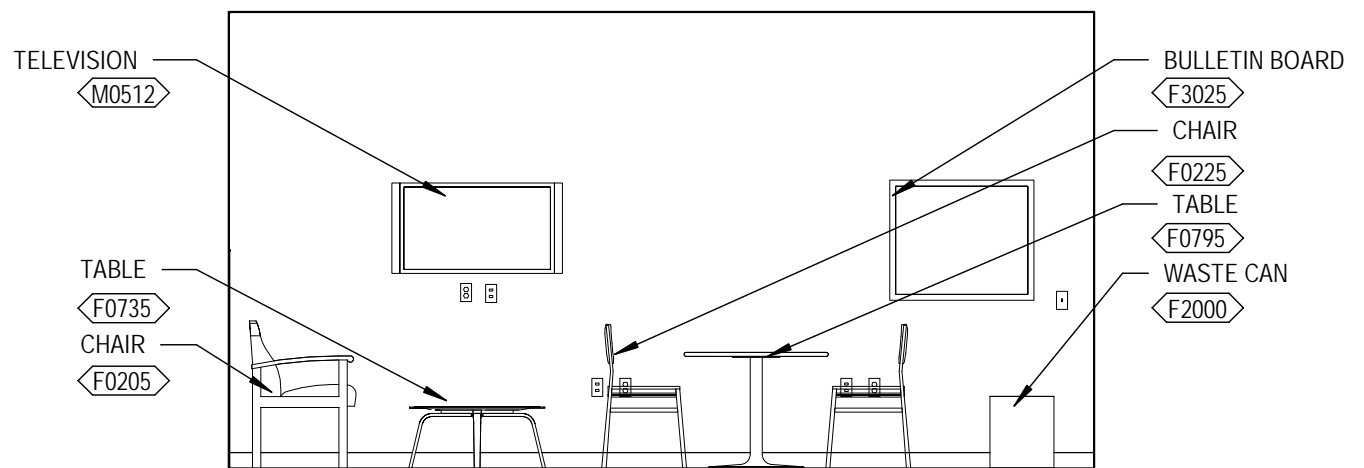
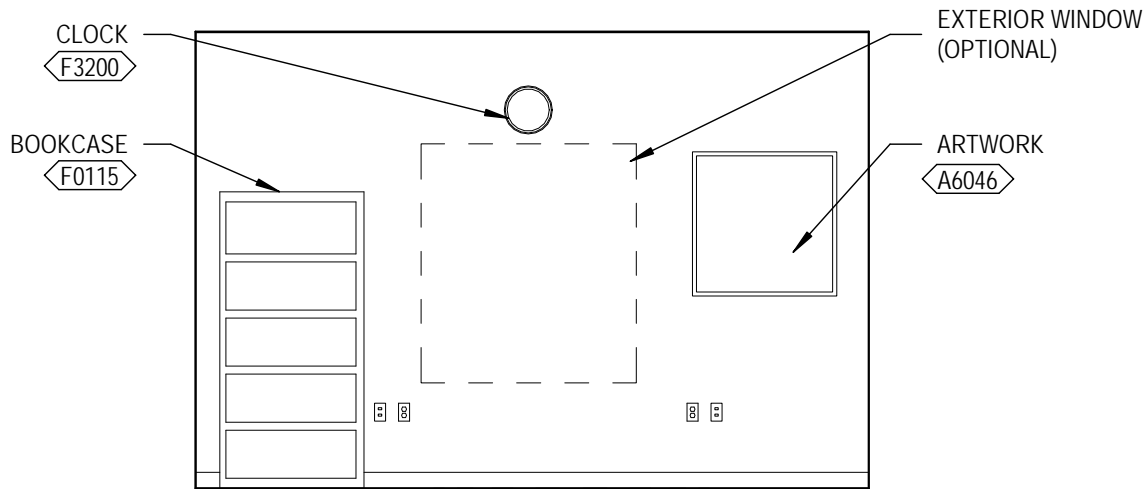
### 5.2.10 Patient Lounge (SV086) - Reflected Ceiling Plan





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.10 Lounge, Patient (SV086) - Elevations**



# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

## 5.2.10 Patient Lounge (SV086) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustic Ceiling Tile with Clips	Data	Yes
Ceiling Height	9'- 0" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	Yes
Base	RB-4" or WSF-4"	Duress Alarm	No
Floor Finish	CPT or WSF	Electronic Access	No
Slab Depression	None	Intercom	No
Sound Protection	STC 45 (to adjacent rooms)	Motion Intrusion Detection (MID)	No
Doors	None	Public Address System (PAS)	No
Hardware	None	Security Surveillance Television (SSTV)	No
		Clock	Yes
LIGHTING		HVAC	
Patient Lounge has similar lighting design considerations as Day Room. Refer to the VA Lighting Design Manual section 4.4.4 - Day Room - for lighting design consideration.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.10 Patient Lounge (SV086) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler	See Section 4.9

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

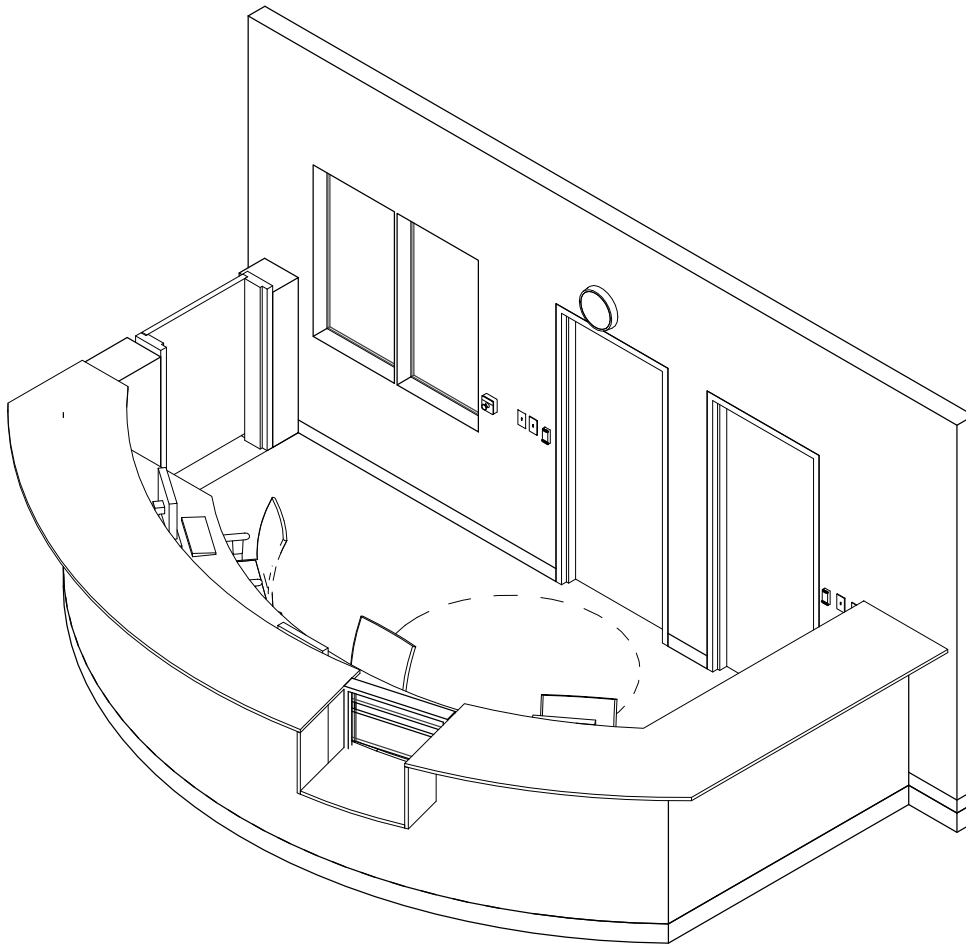
**5.2.10 Patient Lounge (SV086) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A6046</b>	Artwork, Framed	1	VV	This JSN is to be used for determining and defining location of decorative artwork.
<b>F0115</b>	Bookcase, Office	1	VV	Freestanding open shelf bookcase, approximately 82" high X 37" wide X 18" deep with 5 (five) adjustable shelves. Unit can be separate or part of a system with available add-on shelving.
<b>F0225</b>	Chair, Interiors, Dining	6	VV	Dining room chair with glides. Chair has straight legs with cushioned cloth or vinyl seat.
<b>F0375</b>	Sofa, Lounge	1	VV	Executive sofa with woven fabric textile or vinyl upholstery, foam padded arms, steel spring and foam rubber backs and seats, and floor glides.
<b>F0735</b>	Table, Interiors, Coffee	1	VV	Coffee table, approximately 18" high X 36" wide X 36" deep..
<b>F0795</b>	Table, Interiors, Dining	2	VV	Dining table. Round 36" diameter or square 36" X 36". Used in dining facilities and can comfortably seat up to four (4) persons.
<b>F0205</b>	Chair, Interiors, Side With Arms	1	VV	Upholstered side chair, 32" high X 21" wide X 23" deep with arms, padded seats and padded backs. Seat height is a minimum of 17". Available with or without sled base.
<b>F2000</b>	Waste Can, Open Top	1	VV	Wastepaper basket, fire resistant, approximately 40 quart capacity. This unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations. Size and shape varies depending on the application and manufacturer selected.
<b>F3025</b>	Board, Bulletin	1	CC	Bulletin board approximately 36"W x 24"H. Wood framed 1/2" cork posting panel with moisture proof backing. Units are factory assembled and have keyhole hangers for easy installation.
<b>F3200</b>	Clock, Analog, 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.
<b>M0512</b>	Television, 50-65 in, Flat Panel	1	VV	Television, 50-65 in, Flat Panel. The TV will have built-in speakers, NTSC tuner, a 16:9 wide screen aspect ratio, a minimum of 1280 x 768 resolution and a remote control.



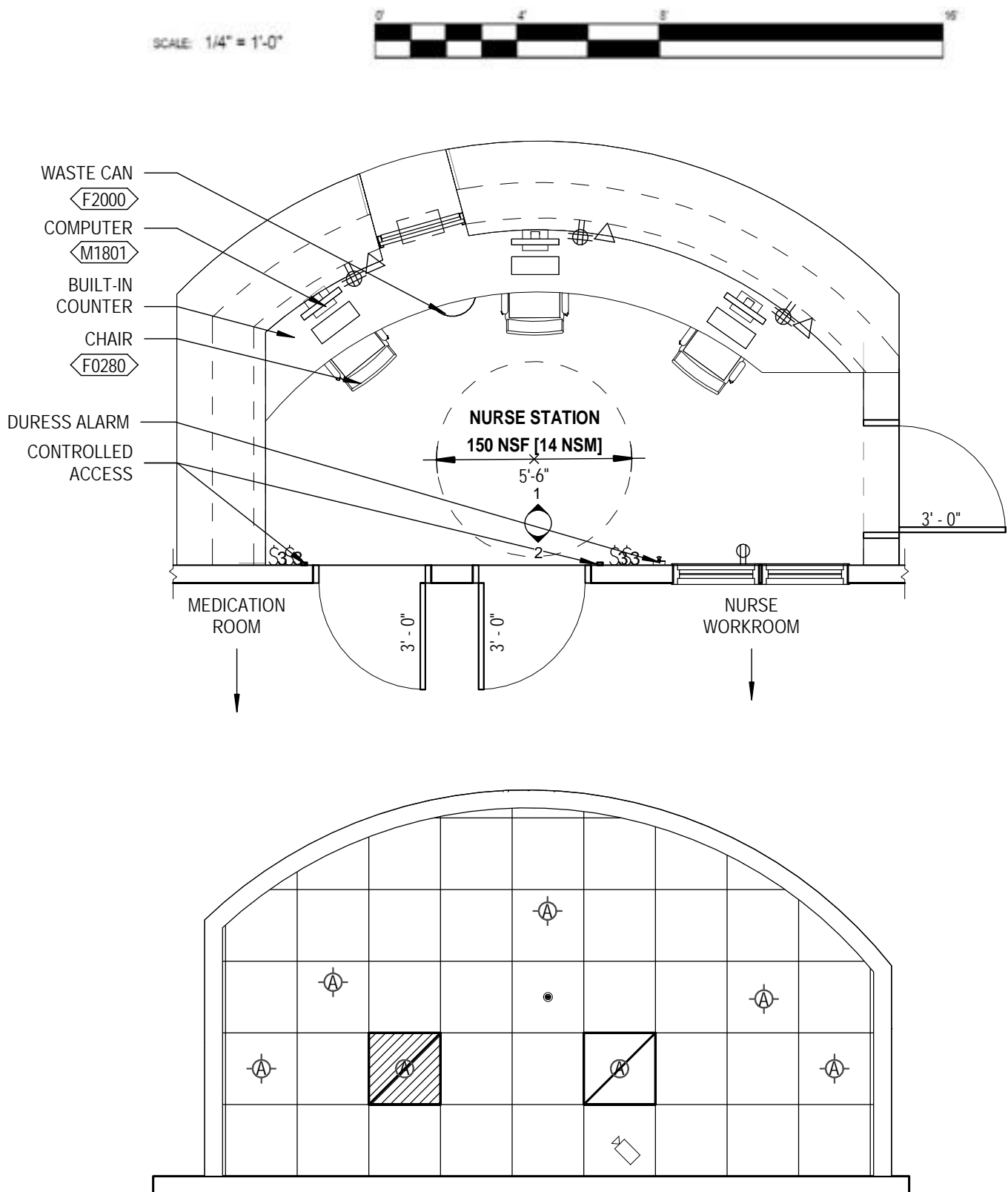
**FA6 Patient Care Unit Clinical Staff Area**

**5.2.11 Nurse Station (IMH91)- Axonometric**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

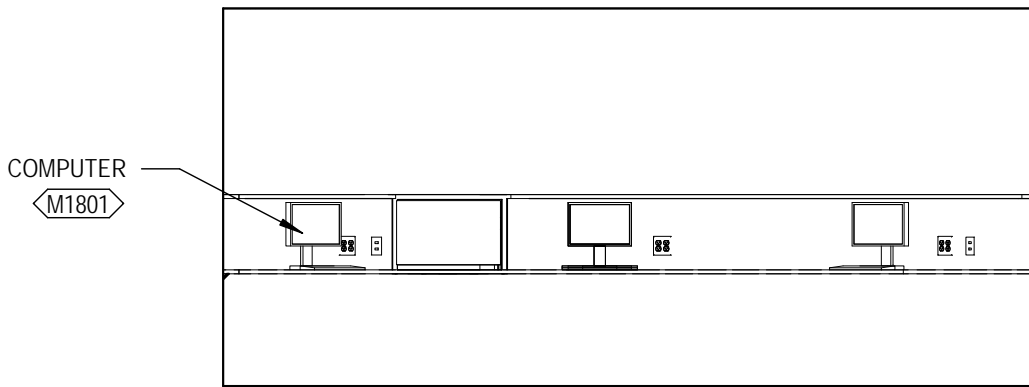
**5.2.11 Nurse Station (IMH91)- Floor and Reflected Ceiling Plan**



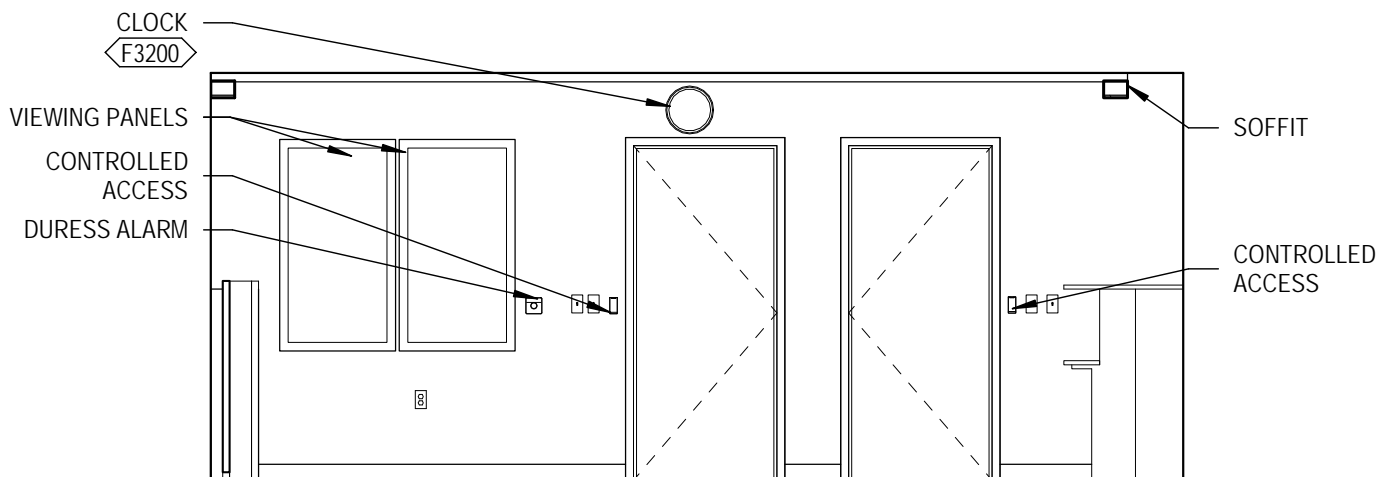


**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.11 Nurse Station (IMH91) - Elevations**



ELEVATION 1



ELEVATION 2



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.2.11 Nurse Station (IMH91) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustical Ceiling Tile with Clips	Data	Yes
Ceiling Height	8' - 6" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	WSF-4"	Duress Alarm	Yes
Floor Finish	WSF	Electronic Access	Yes
Slab Depression	None	Intercom	No
Sound Protection	N/A	Motion Intrusion Detection (MID)	No
Doors	3' - 6" width, custom door based on layout	Public Address System (PAS)	No
Hardware	anti-ligature, locked	Security Surveillance Television (SSTV)	Yes
		Clock	Yes
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.6 - Nurse Station - for lighting design consideration.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the EES to serve selected receptacles and equipment		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.11 Nurse Station (IMH91) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9

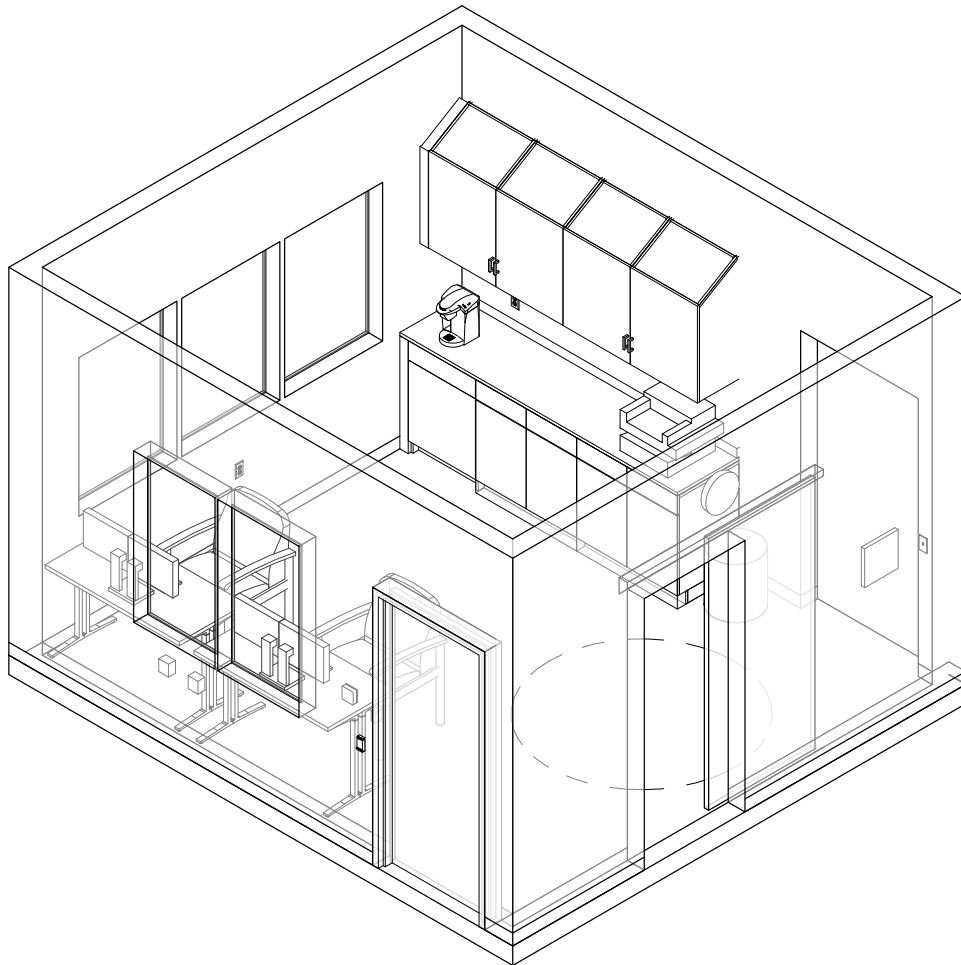
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.11 Nurse Station (IMH91) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	3	CC	Telecommunication outlet location.
<b>M1801</b>	Computer, Microprocessing, w/Flat Panel Monitor	3	VV	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROMDVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
<b>F0280</b>	Chair, Office, Low Back	3	VV	Low back contemporary swivel chair, 37" high X 25" wide X 31" deep with a five (5) caster swivel base, arms and foam padded seat and back upholstered with either woven textile fabric or vinyl.
<b>F2000</b>	Waste Can, Basket, Fire Resistant, Open Top	1	VV	Wastepaper basket, fire resistant, approximately 40 quart capacity. This unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations. Size and shape varies depending on the application and manufacturer selected.
<b>F3200</b>	Clock, Analog, 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).

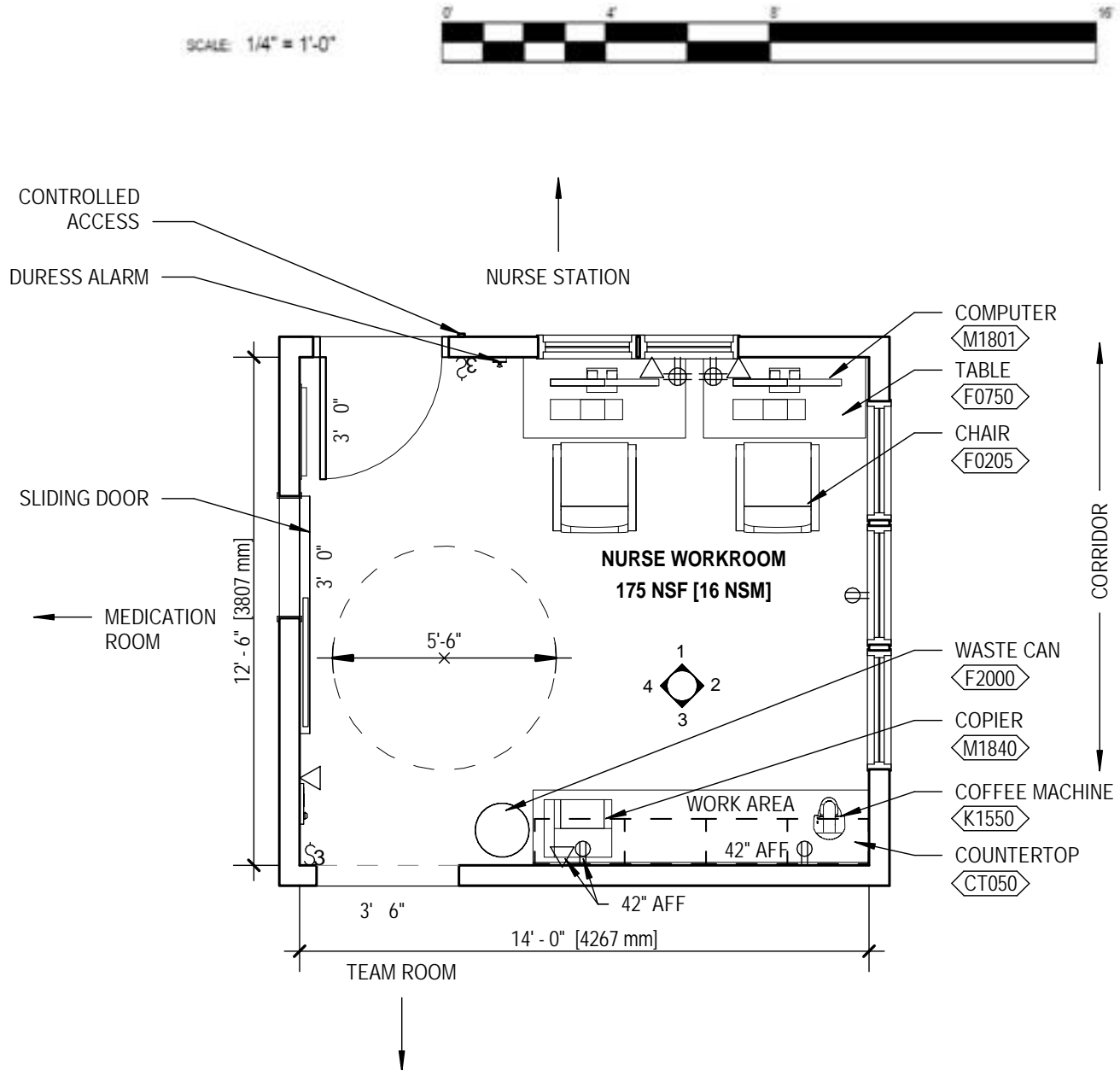


**5.2.12 Nurse Workroom (SC231) - Axonometric**



# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

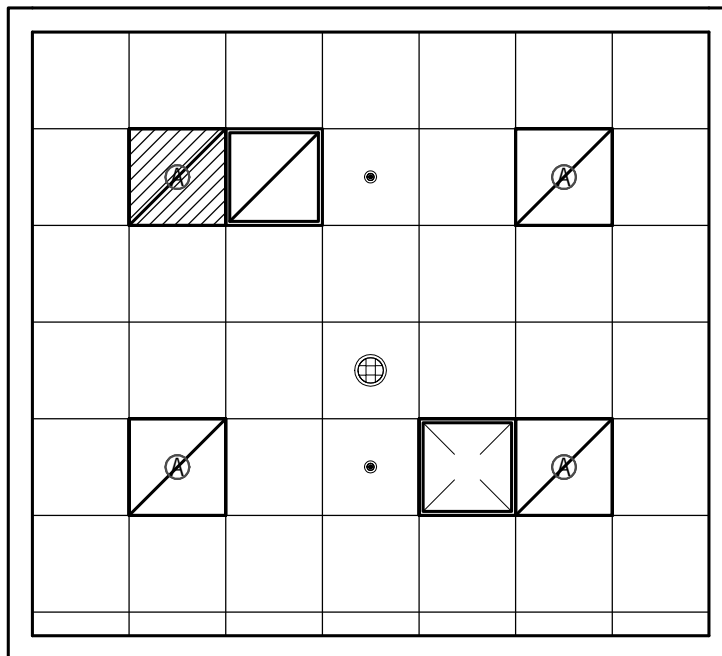
## 5.2.12 Nurse Workroom (SC231) - Floor Plan





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

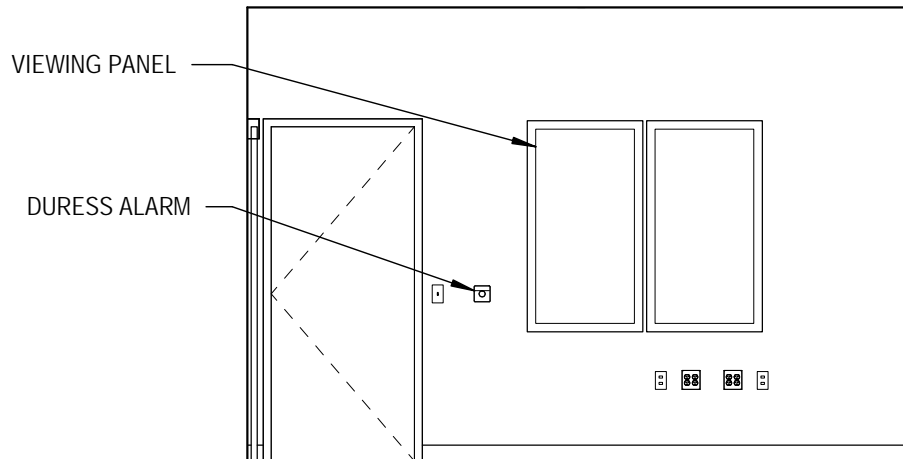
**5.2.12 Nurse Workroom (SC231) - Reflected Ceiling Plan**



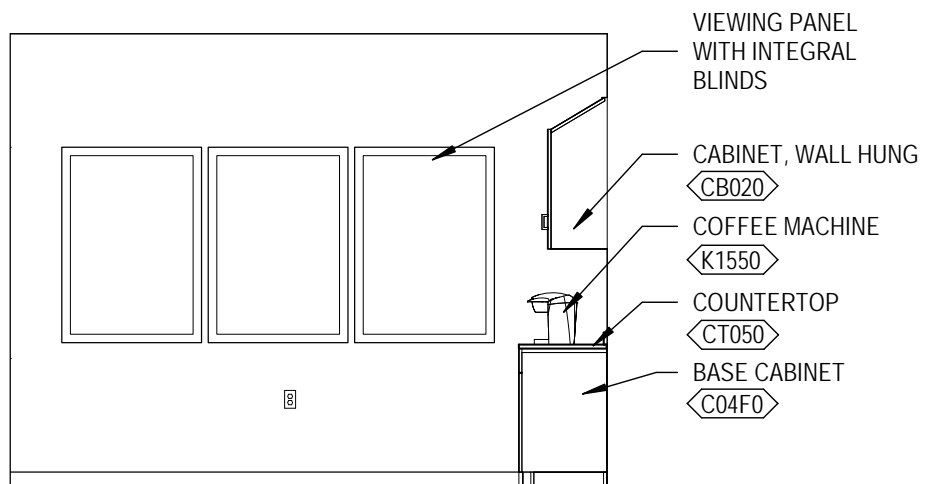
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.12 Nurse Workroom (SC231) - Elevations**

SCALE: 1/4" = 1'-0"



ELEVATION 1

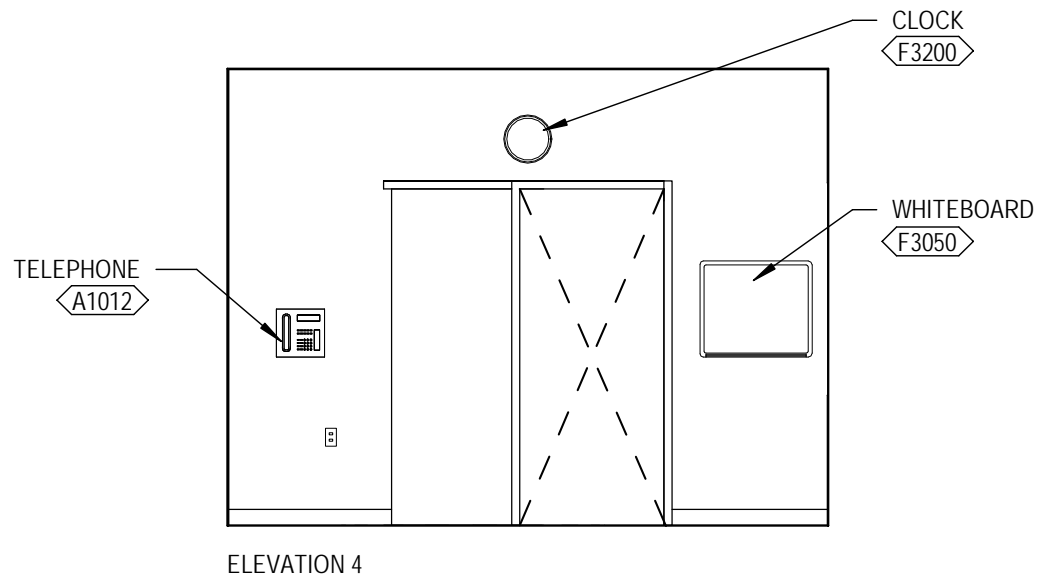
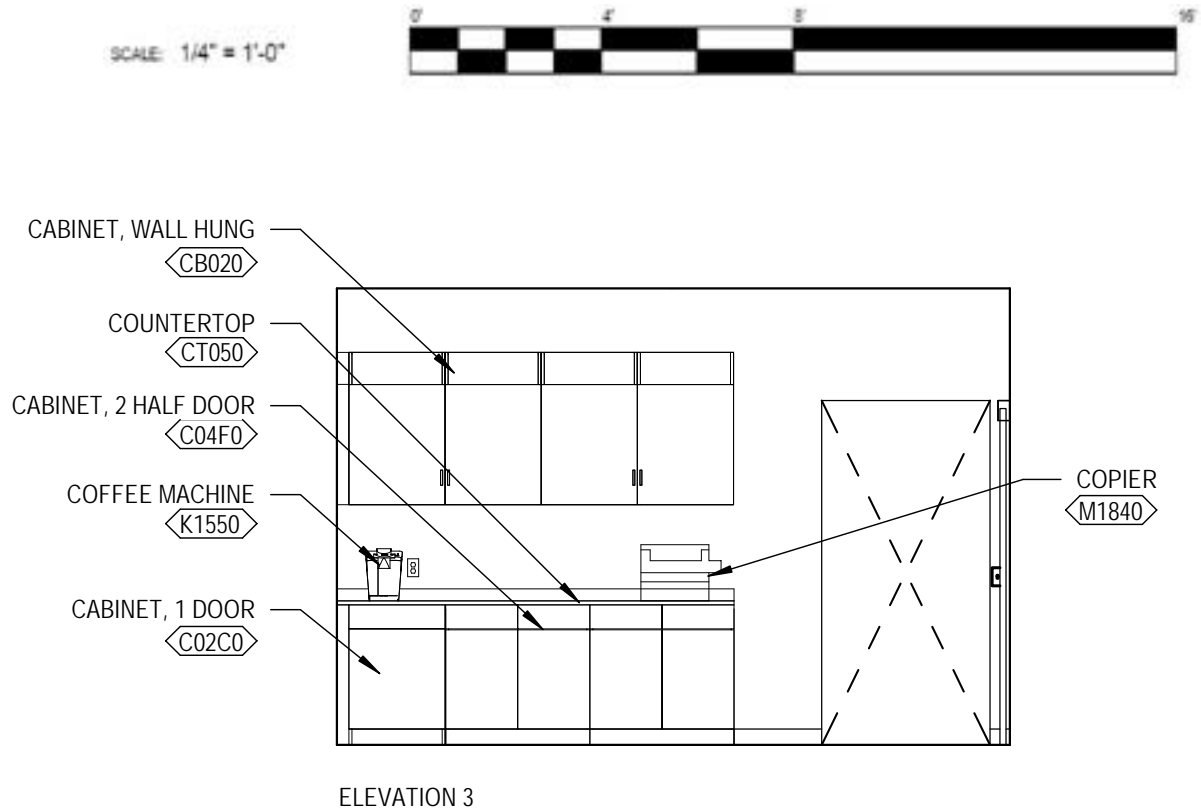


ELEVATION 2



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.12 Nurse Workroom (SC231) - Elevations (Continued)**



# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

## 5.2.12 Nurse Workroom (SC231) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustical Ceiling Tile	Data	Yes
Ceiling Height	8'- 6" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	WSF 4"	Duress Alarm	Yes
Floor Finish	WSF	Electronic Access	Yes
Slab Depression	None	Intercom	Yes
Sound Protection	STC45	Motion Intrusion Detection (MID)	No
Doors	3' - 0" x 7' - 0" wood with tempered glass view panel	Public Address System (PAS)	Yes
	3' - 0" x 7' - 0" wood sliding door	Security Surveillance Television (SSTV)	No
Hardware	MH5 (swing door), 3G (sliding door)	Clock	Yes
LIGHTING		HVAC	
Refer to The IESNA Lighting Handbook, Chapter 10 - Lighting Design Guide and Chapter 16 for lighting design considerations.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment.		
	Critical branch of the EES to serve selected receptacles and equipment		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.12 Nurse Workroom (SC231) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.12 Nurse Workroom (SC231) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	4	CC	Telecommunication outlet location.
<b>A1012</b>	Telephone, Wall Mounted, 1 Line	1	VV	Telephone, wall mounted, Digital, 1 line.
<b>F0205</b>	Chair, Interiors, Guest, w/ Arms	2	VV	Upholstered side chair, 32" high X 21" wide X 23" deep with arms, padded seats and padded backs. Seat height is a minimum of 17". Available with or without sled base.
<b>F0750</b>	Table, Interiors, Conference, Flexible	2	VV	Office table, sized as required. May be used as either a four (4) to six (6) person conference table or as an extra work surface area.
<b>F2000</b>	Waste Can, Basket, Open Top, Fire Resistant	1	VV	Wastepaper basket, fire resistant, approximately 40 quart capacity. This unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations. Size and shape varies depending on the application and manufacturer selected.
<b>F3050</b>	Whiteboard, Dry Erase	1	VV	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
<b>F3200</b>	Clock, Analog, 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).
<b>M1801</b>	Computer, Microprocessing, w/Flat Panel Monitor	2	VV	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
<b>K1550</b>	Coffee Maker, Single Cup, Plumbed	1	CC	Single cup coffee maker. Direct line plumbed for continuous use. Brews 4, 6, 8, 10 and 12 oz. cup sizes. Features removable water reservoir, 3 language options (English is standard), removable drip tray, LCD interactive.
<b>C04F0</b>	Cabinet, U/C/B, 1 Shelf, 2 Half DR, 2 DO, 36x36x22	2	CC	Standing height under counter base cabinet with an adjustable shelf and two half width drawers above solid hinged doors. Also referred to as a combination cabinet or a drawer and cupboard cabinet. For general purpose use throughout the facility.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

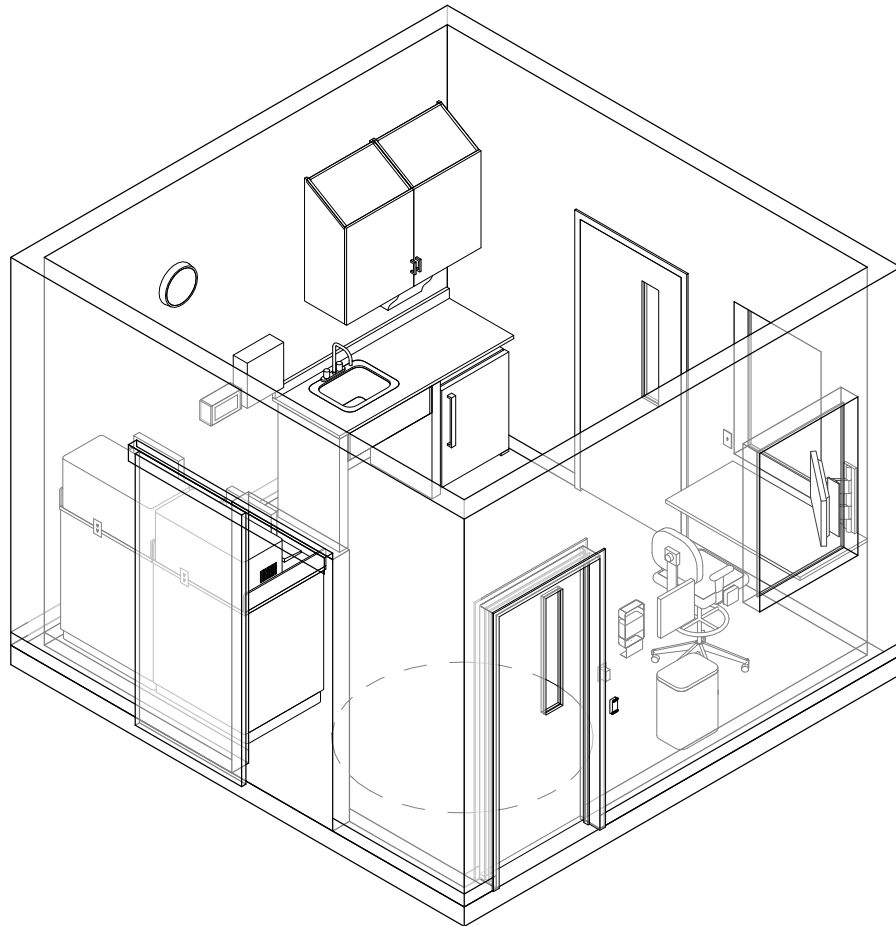
**5.2.12 Nurse Workroom (SC231) - Equipment List (Continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>C02C0</b>	Cabinet, U/C/B, 1 Shelf, 1 Drawer, 1 DO, 36x24x22	1	CC	Standing height under counter base cabinet with an adjustable shelf and a full width drawer above a solid right or left-hinged door (appropriate door hinge configuration to be indicated on equipment elevation drawings). Also referred to as a combination cabinet or a drawer and cupboard cabinet. For general purpose use throughout the facility.
<b>CB020</b>	Cabinet, W/H, 2 Shelf, 1 DO, Sloping Top, 38x24x13	4	CC	Desk Mounted Nurse Call Staff Station without Code Lever. Features 10" graphical touch screen interface and handset. Can be wall-mounted or desktop-mounted. ** Hill-Rom pricing reflected subject to changed based on the number of beds in facility or hospital size and requirements.
<b>CT050</b>	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.
<b>M1840</b>	Copier, Counter Top, Multifunction	1	VV	Multifunctional printer, fax, scanner and copier (PFC) all-in-one machine.



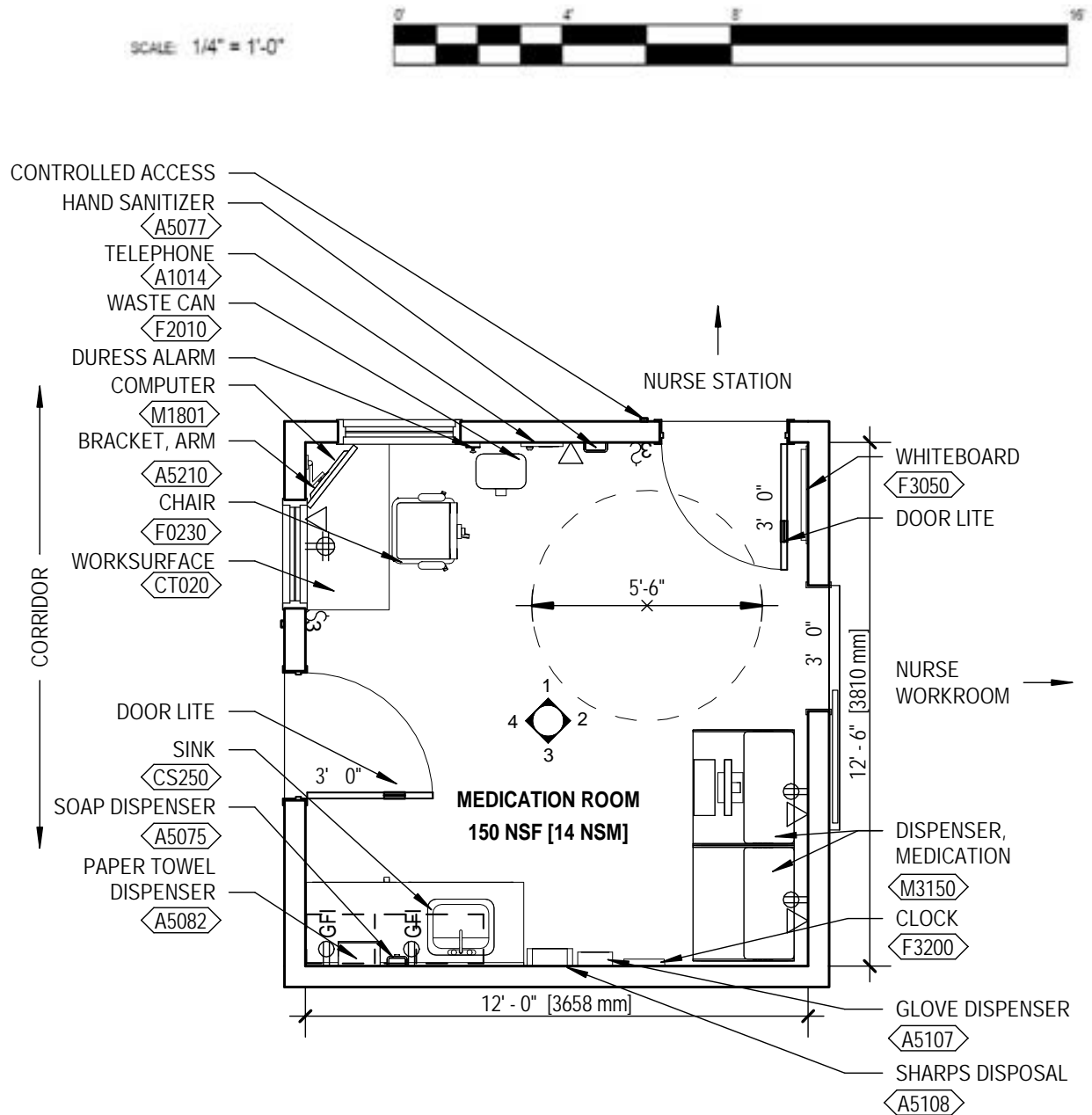


**5.2.13 Medication Room (SV583) - Axonometric**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

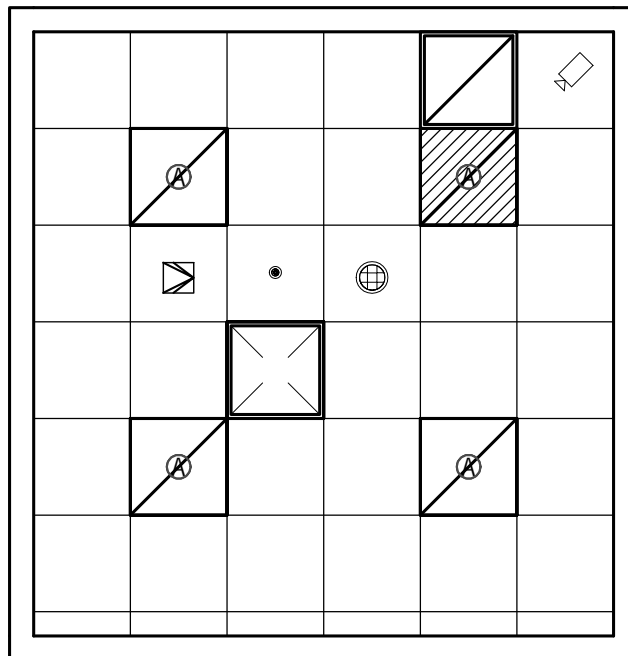
**5.2.13 Medication Room (SV583) - Floor Plan**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.13 Medication Room (SV583) - Reflected Ceiling Plan**

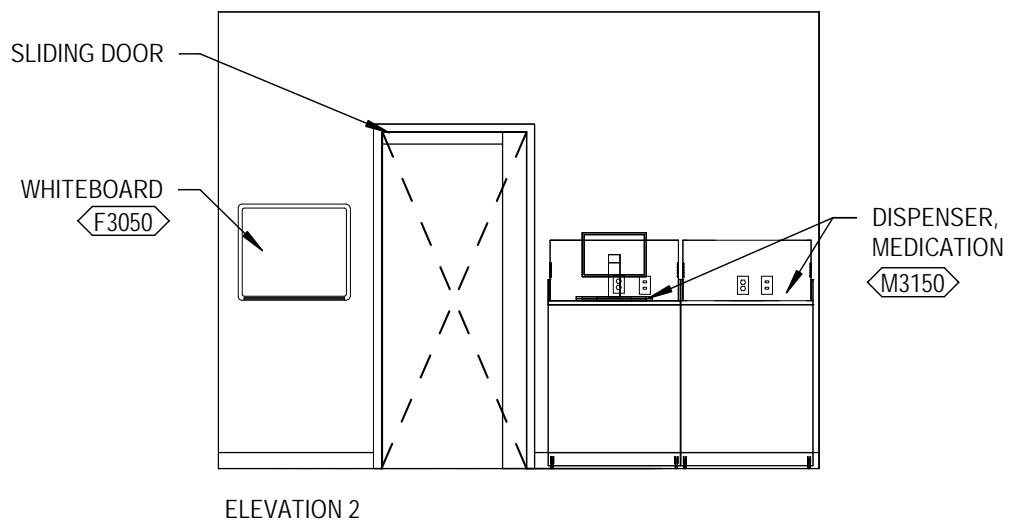
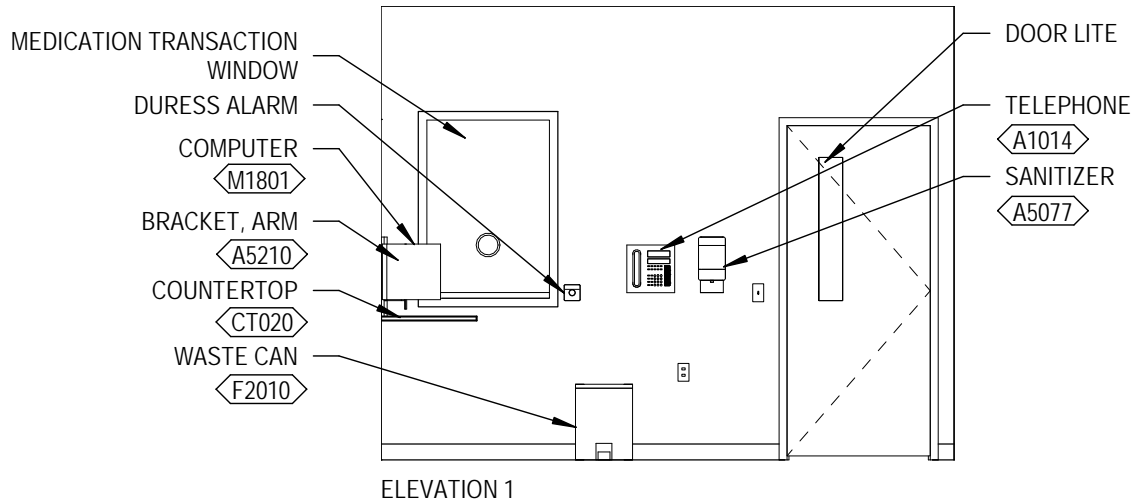
SCALE: 1/4" = 1'-0"



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

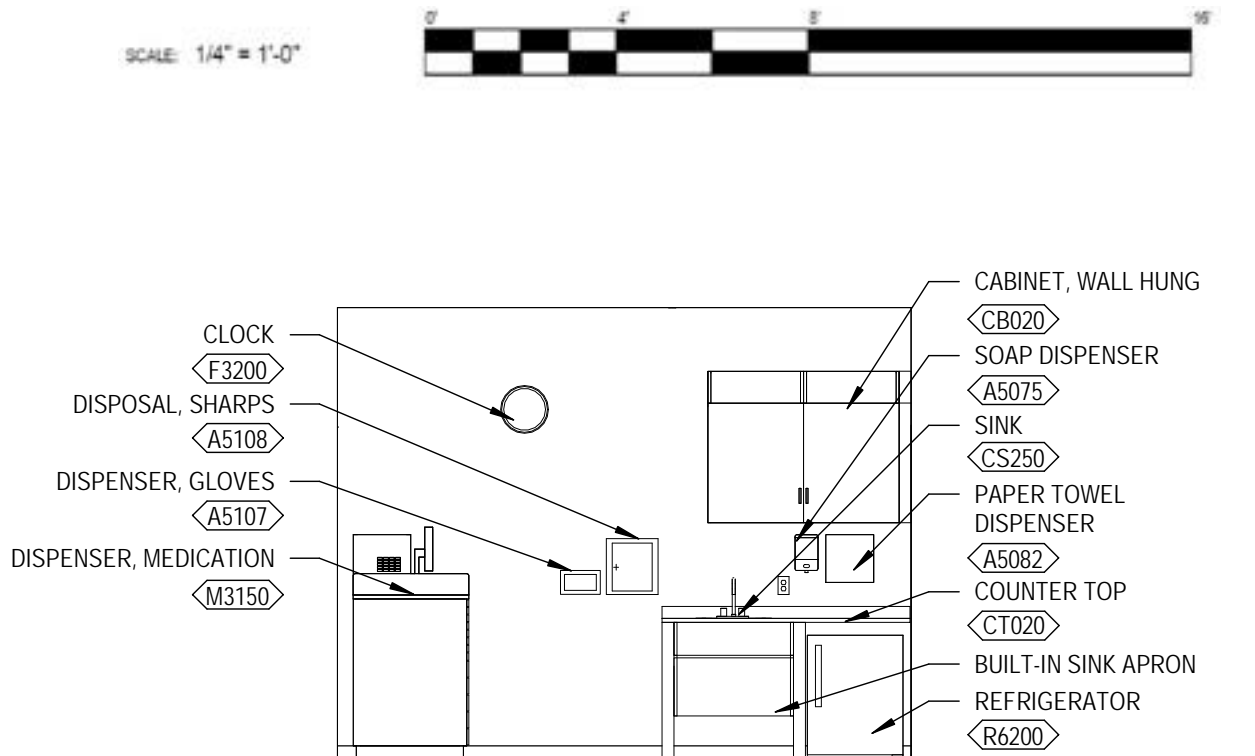
**5.2.13 Medication Room (SV583) - Elevations**

SCALE: 1/4" = 1'-0"

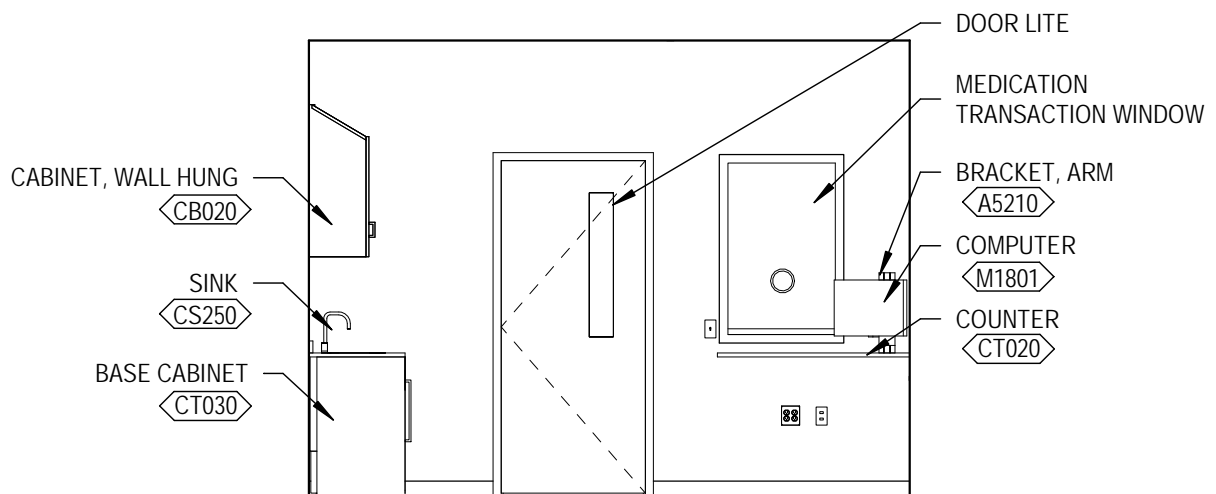


# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

## 5.2.13 Medication Room (SV583) - Elevations



ELEVATION 3



ELEVATION 4

## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.2.13 Medication Room (SV583) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustical Ceiling Tile	Data	Yes
Ceiling Height	8'-6" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	WSF-4"	Duress Alarm	Yes
Floor Finish	WSF	Electronic Access	Yes
Slab Depression	None	Intercom	Yes
Sound Protection	STC 45	Motion Intrusion Detection (MID)	Yes
Doors	3'-0" x 7'-0" wood with tempered glass view panel (both doors)	Public Address System (PAS)	Yes
Hardware	MH 5 (both doors)	Security Surveillance Television (SSTV)	Yes
		Clock	Yes
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.3.3 - Medication Room- for lighting design consideration.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the EES to serve selected receptacles and equipment		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.13 Medication Room (SV583) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	Yes
Hot Water	Yes
Waste	Yes

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.13 Medication Room (SV583) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	2	CC	Telecommunication outlet location.
<b>A1014</b>	Telephone, Wall, Digital, Single Line	1	VV	Telephone, wall mounted, 1 line, with speaker.
<b>A5075</b>	Dispenser, Soap, Wall Mount	1	VV	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
<b>A5077</b>	Dispenser, Hand Sanitizer, Wall Mount	1	VV	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
<b>A5082</b>	Dispenser, Paper Towel, Surface Mount	1	CC	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are placed in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.
<b>A5107</b>	Dispenser, Glove, Triple Box	1	VV	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
<b>A5108</b>	Disposal, Sharps, Wall Mount	1	VV	8 quart wall mounted sharps container with locking wall bracket. For use in lighter volume areas and patient rooms. Specify right or left hand locking wall bracket. Provided free of charge with disposal service.
<b>A5210</b>	Bracket, Television, Wall Mounted, w/Adjust Arm	1	CC	Wall mounted television bracket with adjustable arm. Consists of movable arm with minimum 120 degree swivel. Designed for holding wall mounted, flat panel television units in patient rooms.
<b>CB020</b>	Cabinet, W/H, 2 Shelf, 1 DO, Sloping Top, 38x24x13	2	CC	Wall hung cabinet with two adjustable shelves, solid right or left-hinged door (appropriate door hinge configuration to be indicated on equipment elevation drawings), and sloping top. Also referred to as a solid hinged single door case. For general purpose use throughout the facility.
<b>CS250</b>	Sink, SS, Single Compartment, 6x12x9 ID	1	CC	Single compartment stainless steel sink, drop-in, self-rimming, ledge-type, connected with a drain and provided with a mixing faucet. It shall also be provided with pre-punched fixture holes on 4" center, integral back ledge to accommodate deck-mounted fixtures, brushed/polished interior and top surfaces, and sound deadened. Recommended for use in suspended or U/C/B sink cabinets having a high plastic laminate or Chemsurf laminate countertop/work surface. It shall be suitable for use in Security Zone 1; areas with restricted patient access or areas where patients are under continuous observation.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

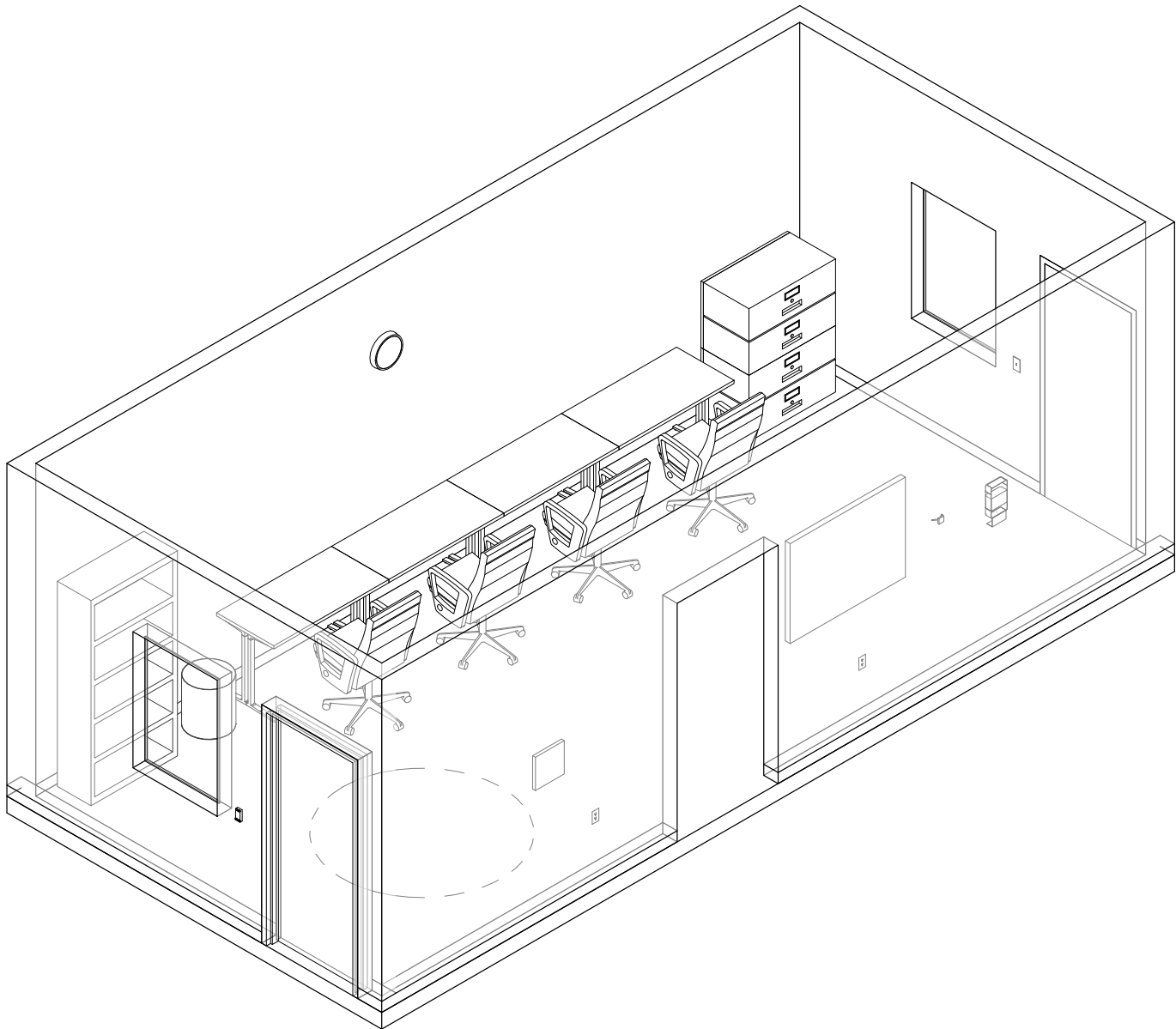
**5.2.13 Medication Room (SV583) - Equipment List (Continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>CT020</b>	Countertop, Solid Surface	1	CC	A solid, nonporous countertop with a smooth seamless appearance. Easy to clean and maintain and with proper cleaning does not support the growth of mold. An acrylic-based solid surface product. Standard thickness of 1", and a 4" butt backsplash/curb. Also referred to as a work surface or work top. Available in a choice of colors and depths. Used in lab and other hospital areas requiring optimum physical and chemical resisting properties.
<b>F2010</b>	Waste Can, Basket, Step-On	1	VV	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.
<b>F3050</b>	Whiteboard, Dry Erase	1	VV	Whiteboard unit, approximately 36" H x 48" W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
<b>F3200</b>	Clock, Analog, 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.
<b>M1801</b>	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. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
<b>M3150</b>	Dispenser, Medication, Host (Main)	1	VV	Automated medication dispenser. Main unit with 8 drawers. Stores, dispenses, tracks narcotics, floor stock & prn medications in patient care areas. Maximum capacity is 384 line items, has color touch screen monitor, full size keyboard, uninterrupted power supply and scanner port used to attach bar code scanner for medication restocking. Include Auxiliary medication dispensing cabinet, with eight drawers, up to 432 line item capacity, if needed. Also include, if required, Remote lock module for securing remote storage locations. Controlled via AcuDose-RX Large or Small main cabinet. Mounts to refrigerator door and manages medication storage units up to 50 feet away.
<b>R6200</b>	Refrigerator, Commercial, Under Counter, 5 Cu Ft /	1	VV	Utility refrigerator approximately 35" H x 24" W x 26" D. The unit has a two tray ice cube cooling system. The refrigerator fits standard architectural dimensions for undercounter installation. The unit is perfect for use in nurses' station, wards, and laboratories, pharmacies or wherever space is limited.
<b>F0230</b>	Chair High Top	1	VV	"Drafting chair approximately 47"" high X 20"" wide X 20"" deep with rotary stool and a 5 (five) star base with casters. Padded seat and back. Foot ring adjusts with chair."



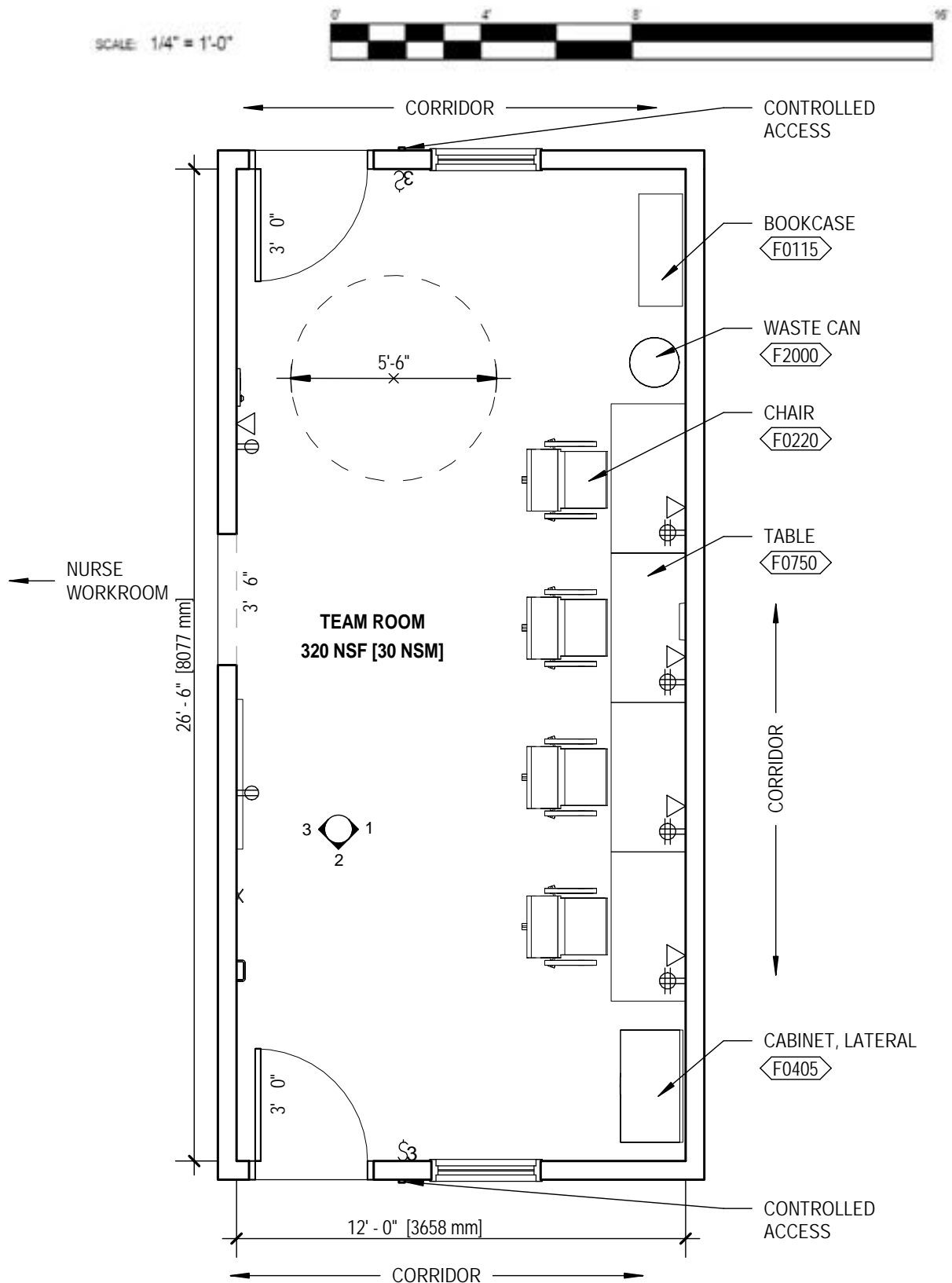
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.14 Team Room (SC243) - Axonometric**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

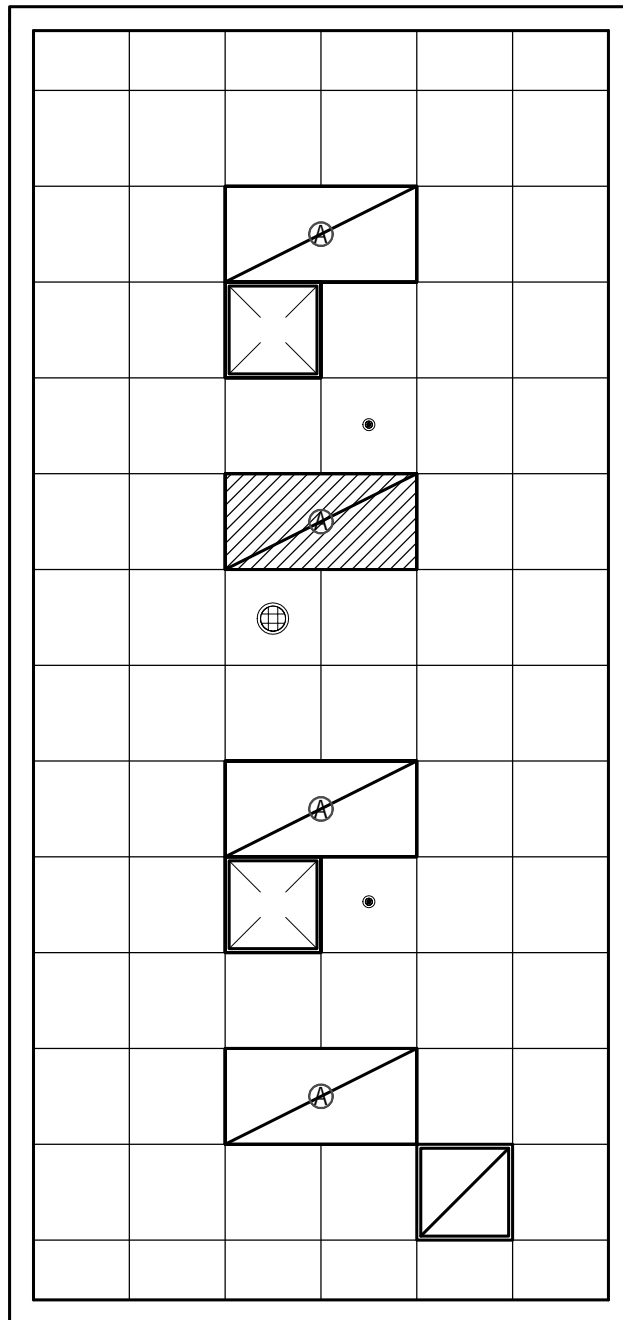
**5.2.14 Team Room (SC243) - Floor Plan**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.14 Team Room (SC243) - Reflected Ceiling Plan**

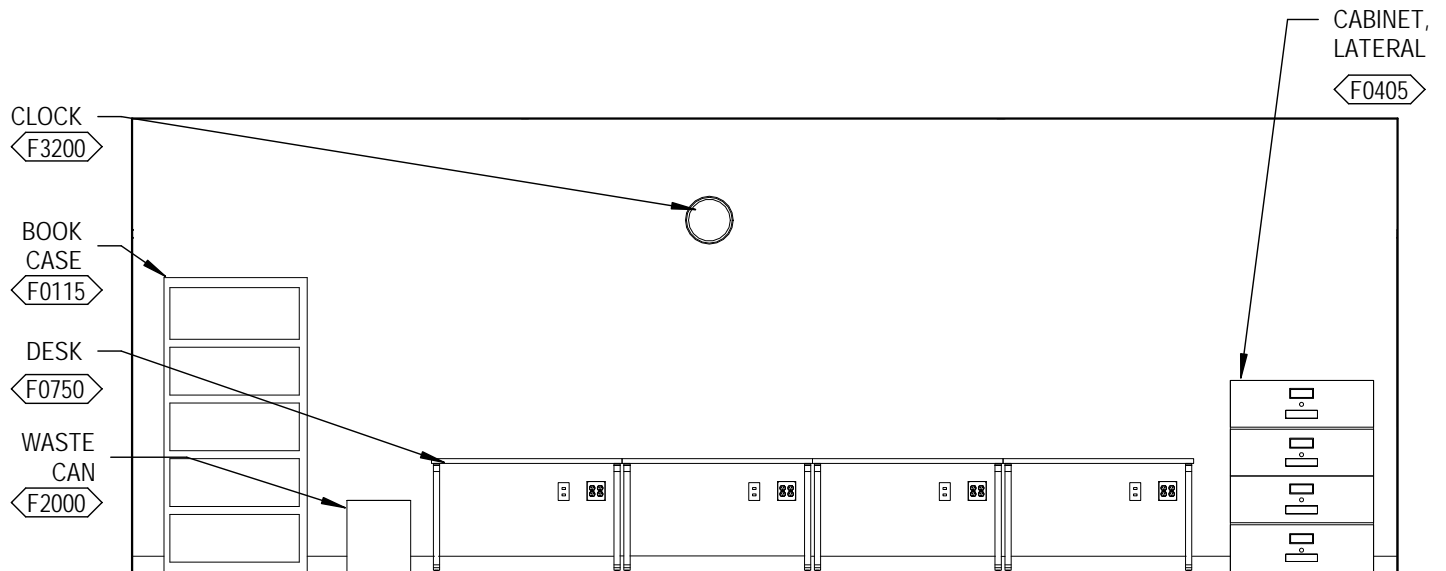
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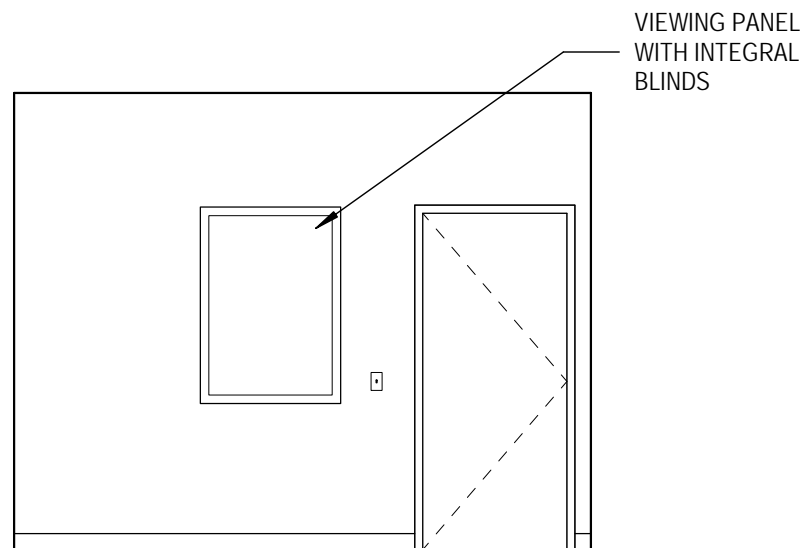
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.14 Team Room (SC243) - Elevations**

SCALE: 1/4" = 1'-0"



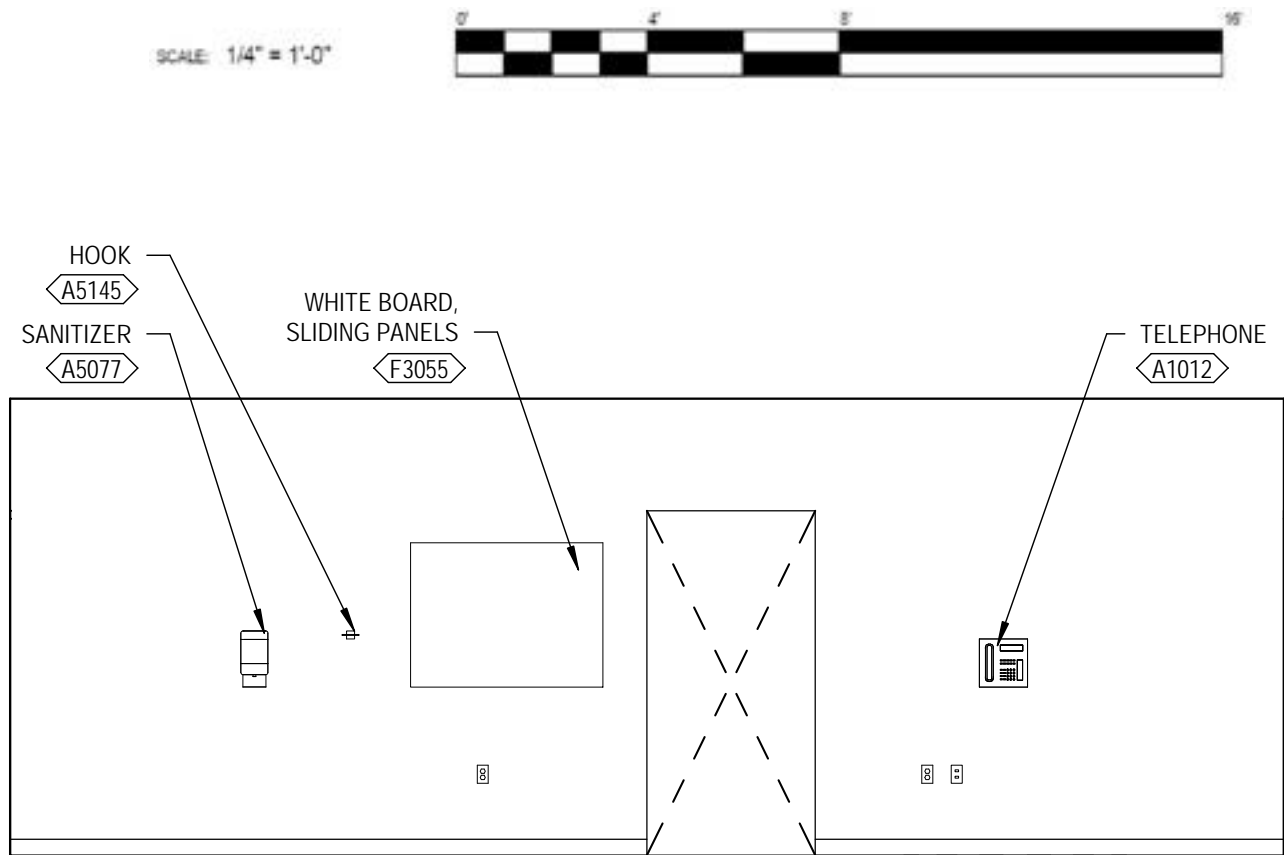
ELEVATION 1



ELEVATION 2

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.14 Team Room (SC243) - Elevations**



ELEVATION 3





## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.2.14 Team Room (SC243) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustical Ceiling Tile	Data	Yes
Ceiling Height	8'-6" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	WSF-4"	Duress Alarm	No
Floor Finish	WSF	Electronic Access	Yes
Slab Depression	None	Intercom	Yes
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3'-0" x 7'-0" wood (both doors)	Public Address System (PAS)	Yes
Hardware	MH5 (both doors)	Security Surveillance Television (SSTV)	No
		Clock	Yes
LIGHTING		HVAC	
Refer to The IESNA Lighting Handbook, Chapter 10 - Lighting Design Guide and Chapter 11 for lighting design considerations.		General Requirement:	
		Refer to Inpatient Mental Health Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the EES to serve selected receptacles and equipment		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.2.14 Team Room (SC243) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

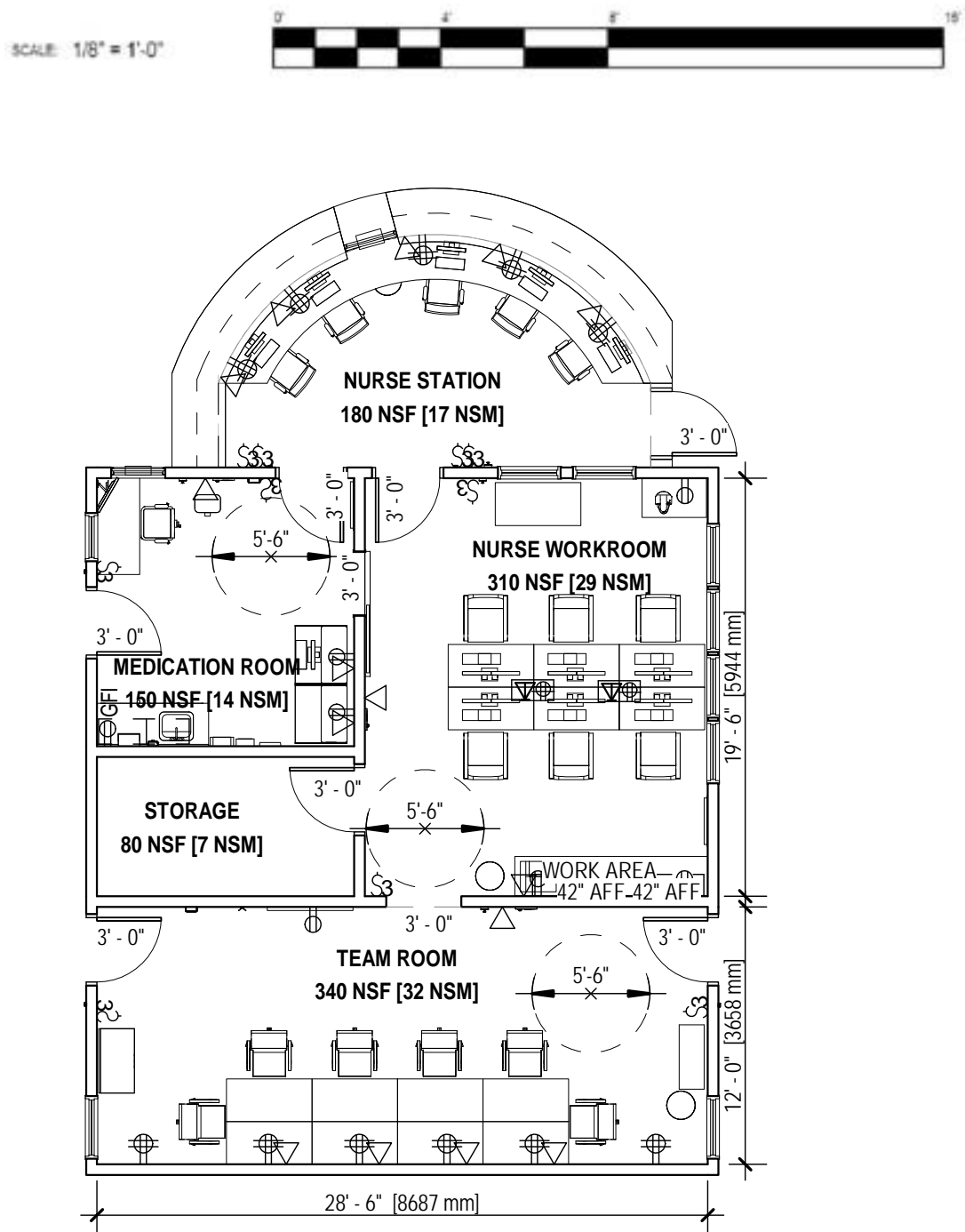
**5.2.14 Team Room (SC243) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	3	CC	Telecommunication outlet location.
<b>A1012</b>	Telephone, Digital, Wall Mounted, 1 Line	1	VV	Telephone, wall mounted, 1 line.
<b>A5077</b>	Dispenser, Hand Sanitizer, Wall Mount	1	VV	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
<b>A5145</b>	Hook, Coat/Robe, Wall Mount	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. For general purpose use throughout the facility to hang various items of apparel.
<b>F0115</b>	Bookcase, Office, Open, 5 Shelf	1	VV	Freestanding open shelf bookcase, approximately 82" high X 36" wide X 14" deep with 5 (five) adjustable shelves. Unit can be separate or part of a system with available add-on shelving.
<b>F0220</b>	Chair, Conference	4	VV	Conference chair designed to complement the executive furniture package selected. Foam rubber cushioned seats and backs covered with either woven fabric or vinyl. Base with 5 (five) swivel casters.
<b>F0405</b>	Cabinet, Filing, Full Height, 4-5 Drawer	1	VV	Four (4) or five (5) drawer letter size, vertical filing cabinet, 53" high X 15" wide X 29" deep with locking device. Each drawer has label holder, handle and roller cradle..
<b>F0750</b>	Table, Interiors, Conference, Flexible	4	VV	Office table, sized as required. May be used as either a four (4) to six (6) person conference table or as an extra work surface area.
<b>F2000</b>	Waste Can, Basket, Fire Resistant, Open Top	1	VV	Wastepaper basket, fire resistant, approximately 40 quart capacity. This unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations. Size and shape varies depending on the application and manufacturer selected.
<b>F3055</b>	Whiteboard, With Sliding Panels	1	VV	Standard installations consist of sliding panels and a fixed back panel with the choice of chalkboard, markerboard, bulletin board, or a combination of these choices.
<b>F3200</b>	Clock, Analog, 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).





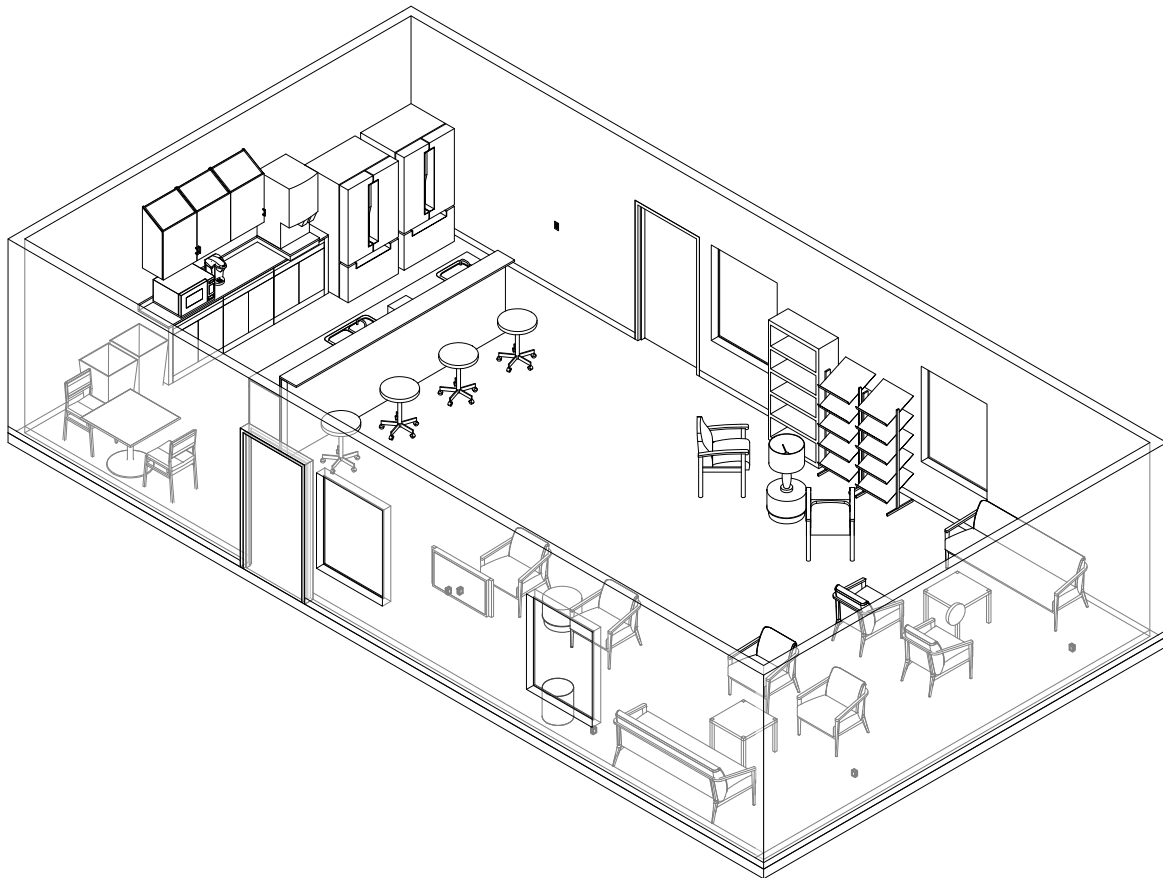
**5.2.16 Combined Nurse Station (Large) - Floor Plan**



### **5.3 MH RRTP**

#### **FA2 Common Resident Service Area**

##### **5.3.1 Community Room (RMH21), Kitchen (RMH23) - Axonometric**



### 5.3.1 Community Room (RMH21), Kitchen (RMH23) - Floor Plan

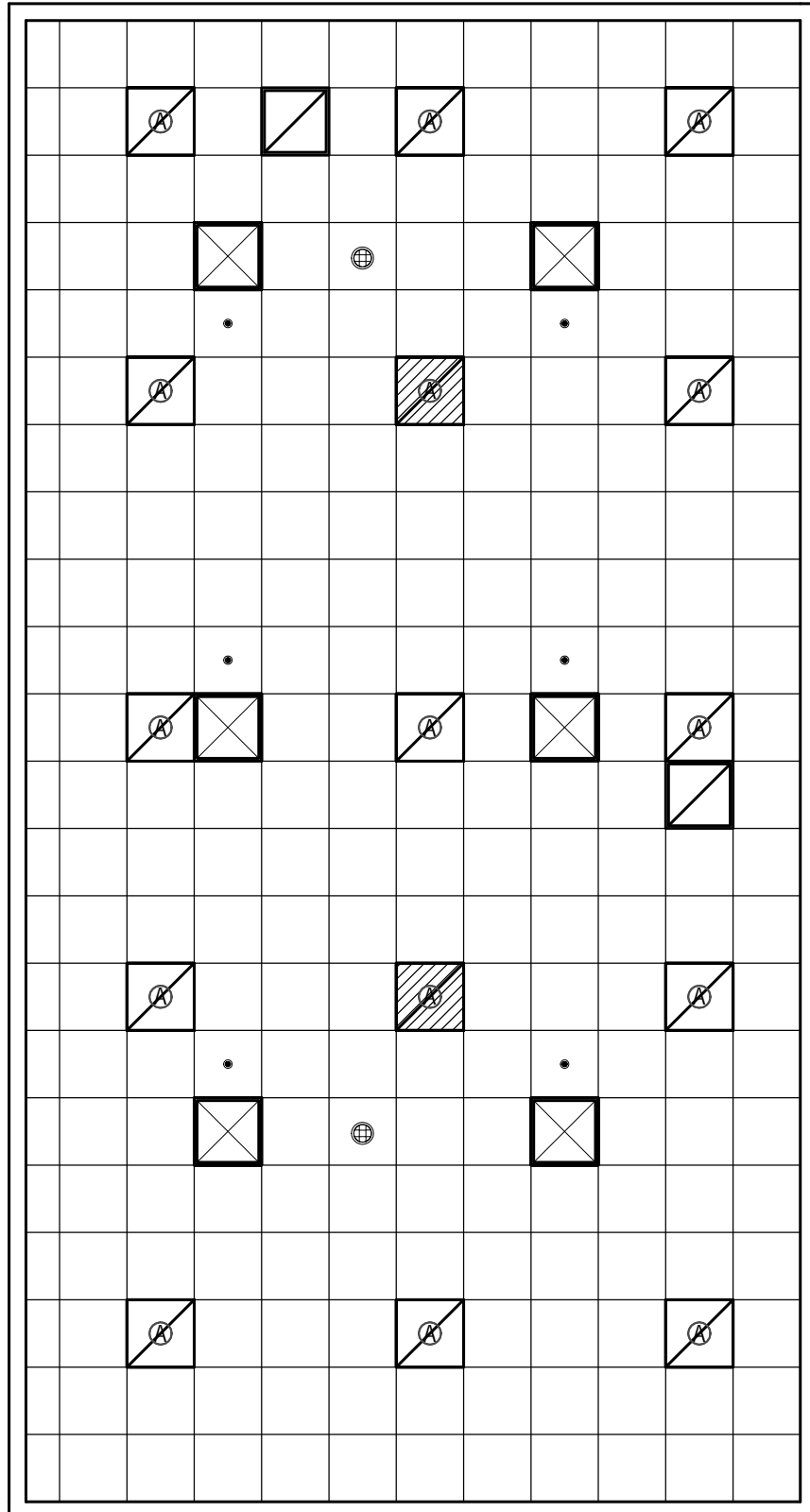




**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

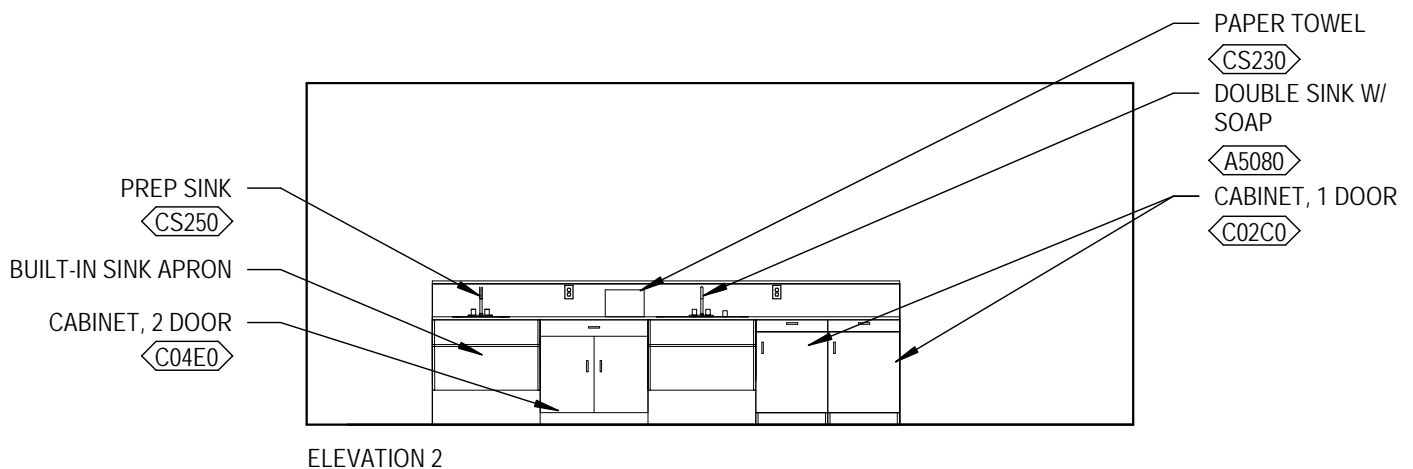
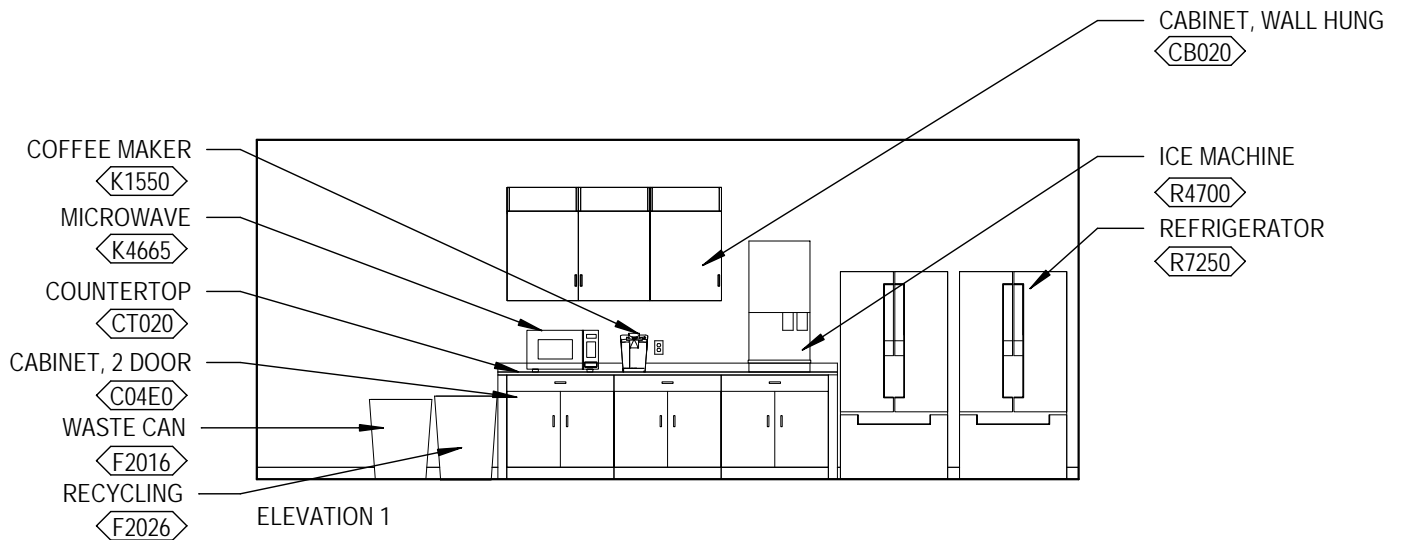
**5.3.1 Community Room (RMH21), Kitchen (RMH23) - Reflected Ceiling Plan**

SCALE: 3/16" = 1'-0"



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

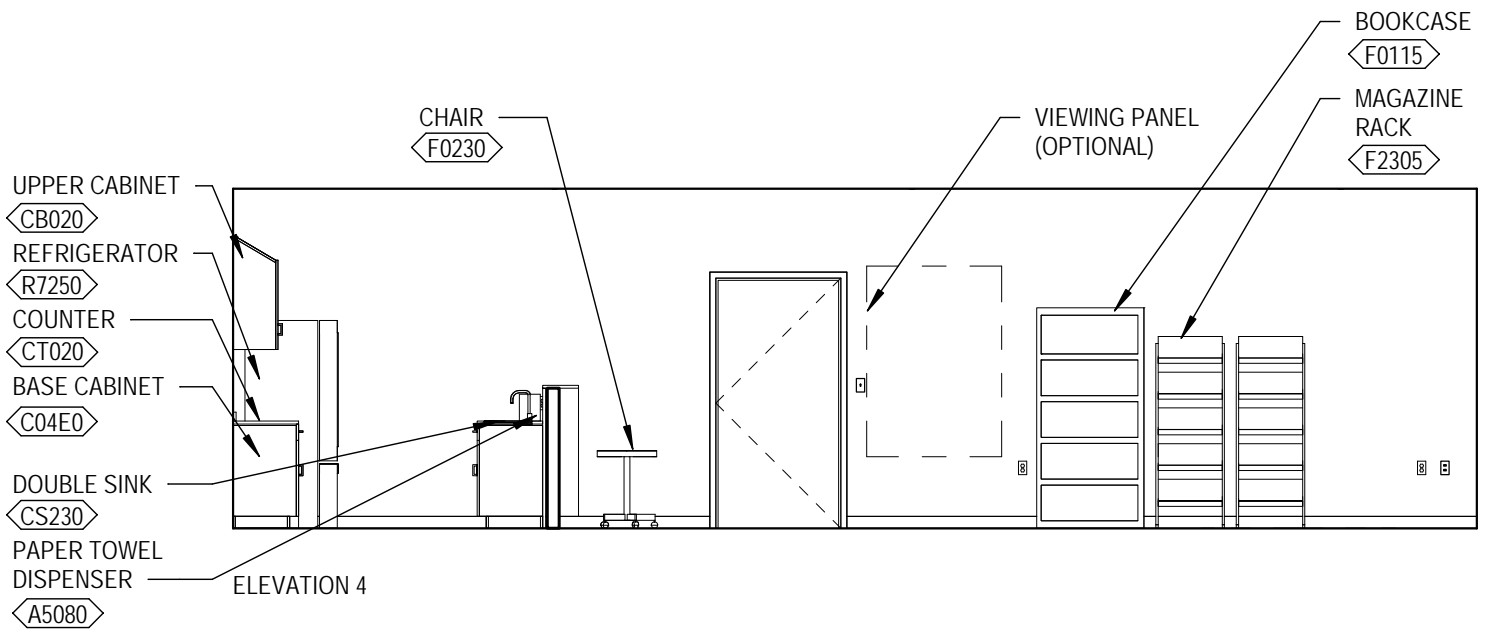
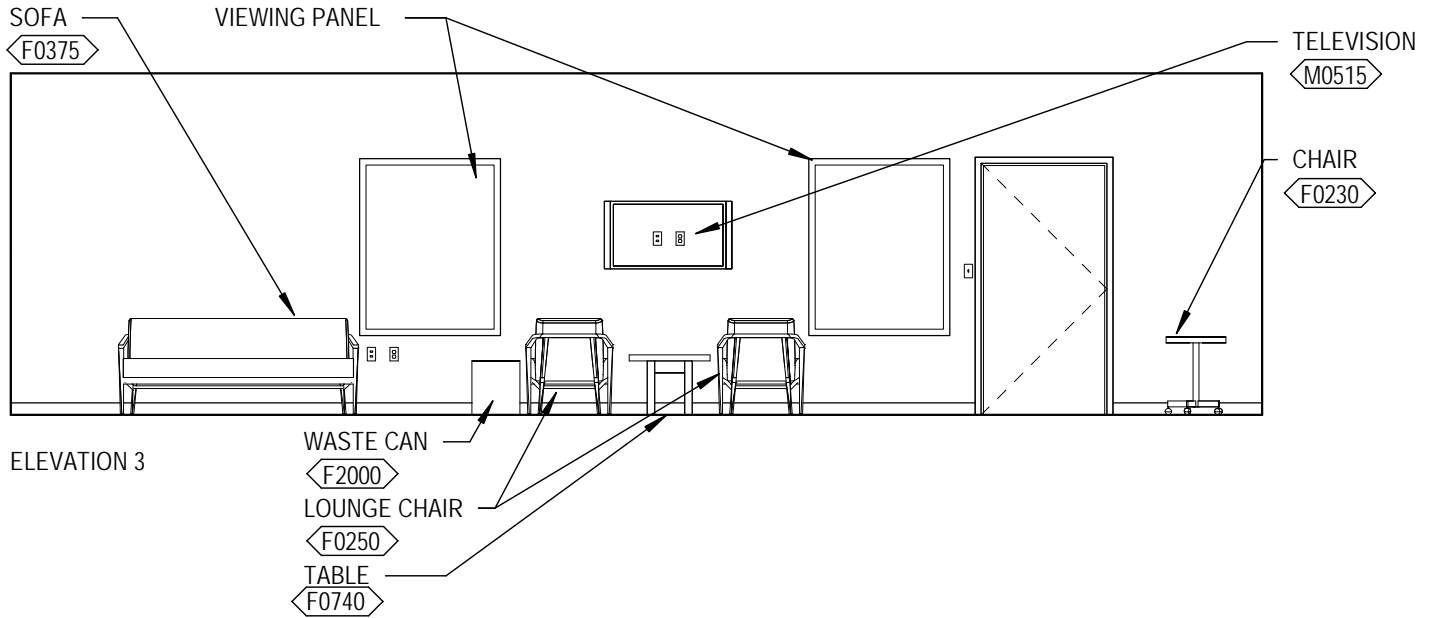
**5.3.1 Community Room (RMH21), Kitchen (RMH23) - Elevations**



# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

## 5.3.1 Community Room (RMH21), Kitchen (RMH23) - Elevations

SCALE: 3/16" = 1'-0"



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.3.1 Community Room (RMH21), Kitchen (RMH23) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustic Ceiling Tile with Clips	Data	Yes
Ceiling Height	9'- 0" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	Yes
Base	RB-4"	Duress Alarm	No
Floor Finish	LVT	Electronic Access	No
Slab Depression	None	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3' - 6" x 7' - 0" wood with laminate glass view panel	Public Address System (PAS)	Yes
Hardware	4N	Security Surveillance Television (SSTV)	No
		Clock	Yes
LIGHTING		HVAC	
Refer to The IESNA Lighting Handbook, Chapter 10 - Lighting Design Guide and Chapter 11 for lighting design considerations.		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the EES to serve selected receptacles and equipment		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.1 Community Room (RMH21), Kitchen (RMH23) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	Yes
Hot Water	Yes
Waste	Yes

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler	See Section 4.9

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.1 Community Room (RMH21), Kitchen (RMH23) - Equipment List**

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
<b>RMH21 - COMMUNITY ROOM</b>				
<b>A5212</b>	Bracket, Television, Wall, Flat Panel	1	VV	A wall mounted, tilt/angled TV bracket for 37" to 80" TVs. Mount will be a universal and VESA compliant unit with a load capacity of up to 130 lbs.
<b>F0250</b>	Chair, Interiors, Lounge	6	VV	Lounge chair approximately 33" high X 28" wide X 29" deep, with arms and floor glides. Chair completely padded and upholstered in either woven textile fabric or vinyl.
<b>F0225</b>	Chair, Dining Room	2	VV	Dining room chair with glides. Chair has straight legs with cushioned cloth or vinyl seat.
<b>F0375</b>	Sofa, Lounge	2	VV	Executive sofa with woven fabric textile or vinyl upholstery, foam padded arms, steel spring and foam rubber backs and seats, and floor glides.
<b>F0205</b>	Chair, Side With Arms	2	VV	Upholstered side chair, 33" high X 24" wide X 27" deep with arms, padded seats and padded backs. Seat height is a minimum of 17". Available with or without sled base.
<b>F0740</b>	Table, Occasional, Lamp	2	VV	Occasional lamp table (end table) approximately 20" high X 27" wide X 27" deep with choice of finishes (wood, oak veneer, or high pressure laminate).
<b>F3200</b>	Clock, Analog, 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).
<b>F2305</b>	Rack, Magazine, F/S	2	VV	Free standing magazine rack. Used to display publications in offices, lobbies, and waiting areas.
<b>F2000</b>	Basket, Wastepaper, Round, Metal	1	VV	Round wastepaper basket, approximately 18" high X 16" diameter. This metal unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations.
<b>F2420</b>	Lamp, Table, With Shade	1	VV	Table lamp, 27-34" high X 6" wide X 6" deep with linen shade. Convenience outlet required at point of use.
<b>M0515</b>	Television, 46-49 in., Flat Panel	1	VV	High definition (HDTV) multimedia flat panel LED 40" class display television. The TV will have a 16:9 wide screen aspect ratio, minimum of 1920 x 1080 display resolution, digital tuner, minimum refresh rate of 60Hz, minimum of two HDMI ports and 1 USB port ENERGY STAR certified.
<b>F0115</b>	Bookcase, Open, 5 Shelf	1	VV	Freestanding open shelf bookcase, approximately 82" high X 37" wide X 18" deep with 5 (five) adjustable shelves. Unit can be separate or part of a system with available add-on shelving.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.1 Community Room (RMH21), Kitchen (RMH23) - Equipment List (continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>F0735</b>	Table, Coffee	2	VV	Coffee table, approximately 18" high X 52" wide X 24" deep.
<b>F0795</b>	Table, Dining	1	VV	Dining table. Round 36" diameter or square 36" X 36". Used in dining facilities and can comfortably seat up to four (4) persons.
<b>RMH23 - COMMUNITY ROOM KITCHEN</b>				
<b>R4700</b>	Ice Machine, Dispenser, Flaker, Countertop	1	CC	Ice Maker, Dispenser, Countertop, stainless steel, 600lbs. of ice per day, automatic agitation, 60 lbs. storage hopper, self-contained, removable ice maker..
<b>K4665</b>	Oven, Microwave, Consumer	1	VV	Counter mounted microwave oven for average duty use. The exterior cabinet can be metal or heavy duty impact resistant plastic. The oven delivers instant energy for rapid heating, defrosting or prime cooking. The oven has touch pad controls, digital timer, power level selector and preprogrammed selectors for commonly cooked items. This oven is commonly found in staff lounges.
<b>CS250</b>	Sink, SS, Single Compartment, 6x12x9 ID	1	CC	Single compartment stainless steel sink, drop-in, self-rimming, ledge-type, connected with a drain and provided with a mixing faucet. It shall also be provided with pre-punched fixture holes on 4" center, integral back ledge to accommodate deck-mounted fixtures, brushed/polished interior and top surfaces, and sound deadened. Recommended for use in suspended or U/C/B sink cabinets having a high plastic laminate or Chemsurf laminate countertop/work surface. For general purpose use throughout the facility.
<b>CS230</b>	Sink, SS, Double Compartment, 10x14x16 ID	1	CC	Double compartment stainless steel sink, drop-in, self-rimming, ledge-type, connected with a drain and provided with a mixing faucet. It shall also be provided with pre-punched fixture holes on 4" center, integral back ledge to accommodate deck-mounted fixtures, brushed/polished interior and top surfaces, and sound deadened. Recommended for use in suspended or U/C/B sink cabinets having a high plastic laminate or Chemsurf laminate countertop/work surface. Coordinate actual outside sink dimensions with the actual clear dimension of cabinet specified to ensure that they are compatible. For general purpose use throughout the facility.
<b>C02C0</b>	Cabinet, U/C/B, 1 Shelf, 1 Drawer, 1 DO, 36x24x22	2	CC	Standing height under counter base cabinet with an adjustable shelf and a full width drawer above a solid right or left-hinged door (appropriate door hinge configuration to be indicated on equipment elevation drawings). Also referred to as a combination cabinet or a drawer and cupboard cabinet. For general purpose use throughout the facility.
<b>C04E0</b>	Cabinet, U/C/B, 1 Shelf, 1 Drawer, 2 DO, 36x36x22	4	CC	Standing height under counter base cabinet with an adjustable shelf and a full width drawer above solid hinged doors. Also referred to as a combination cabinet or a drawer and cupboard cabinet. For general purpose use throughout the facility.





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

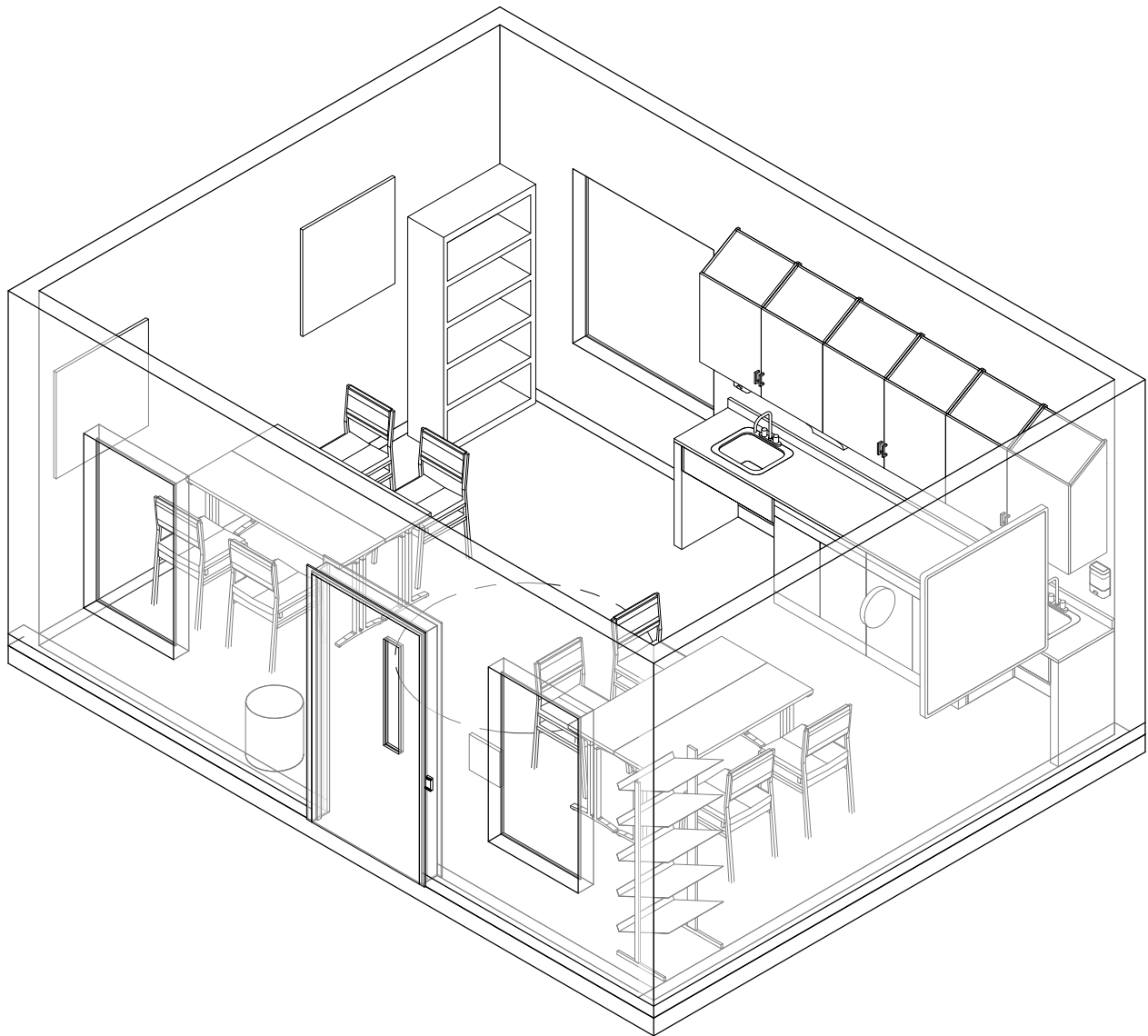
**5.3.1 Community Room (RMH21), Kitchen (RMH23) - Equipment List (continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>CB020</b>	Cabinet, W/H, 2 Shelf, 1 DO, Sloping Top, 38x24x13	3	CC	Wall hung cabinet with two adjustable shelves, solid right or left-hinged door (appropriate door hinge configuration to be indicated on equipment elevation drawings), and sloping top. Also referred to as a solid hinged single door case. For general purpose use throughout the facility.
<b>A5075</b>	Dispenser, Soap, Disposable	1	VV	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
<b>CT020</b>	Countertop, Solid Surface	3	CC	Solid surface countertop having a hard smooth surface finish, standard thickness of 1", and a 4" butt backsplash/curb. Also referred to as a work surface or work top. Available in a wide choice of colors, patterns, and depths. Used in general purpose areas requiring a basic work surface arrangement with limited heat resistance and poor chemical resistance. Pricing based upon a 24" depth.
<b>A5080</b>	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. For general purpose use throughout the facility.
<b>R7250</b>	Refrigerator/Freezer, 20 Cubic Feet	2	VV	Refrigerator/freezer unit. This type unit includes a food saver system that helps keep food fresher. It also includes roll out wheels and is equipped for an optional automatic icemaker. This unit is of commercial or residential design and use.
<b>F2016</b>	Waste Can, 32-40 Gallon	1	VV	32 gallon waste can with lid and 5 wheel dolly (twist on and off). All plastic. Capacity of 250 lbs. Gray. Cans ship 6/case. Dolly ships 2/case. Lids ship 6/case.
<b>F2026</b>	Container, Recycling, Large	1	VV	Recycling container shall be approximately 30-gallons in capacity. The container may include a lid and be Recycle Blue in color with the recycle symbol identified on the container.
<b>K1550</b>	Coffee Maker, Single Cup, Plumbed	1	CC	Single cup coffee maker. Direct line plumbed for continuous use. Brews 4, 6, 8, 10 and 12 oz. cup sizes. Features removable water reservoir, 3 language options (English is standard), removable drip tray, LCD interactive touchscreen display, fully programmable, and adjustable brew temperature. NSF certified. Requires filter kit #5572, not included, for warranty.
<b>F0230</b>	Chair, Rotary	4	VV	Drafting chair approximately 47" high X 20" wide X 20" deep with rotary stool and a 5 (five) star base with casters. Padded seat and back. Foot ring adjusts with chair.



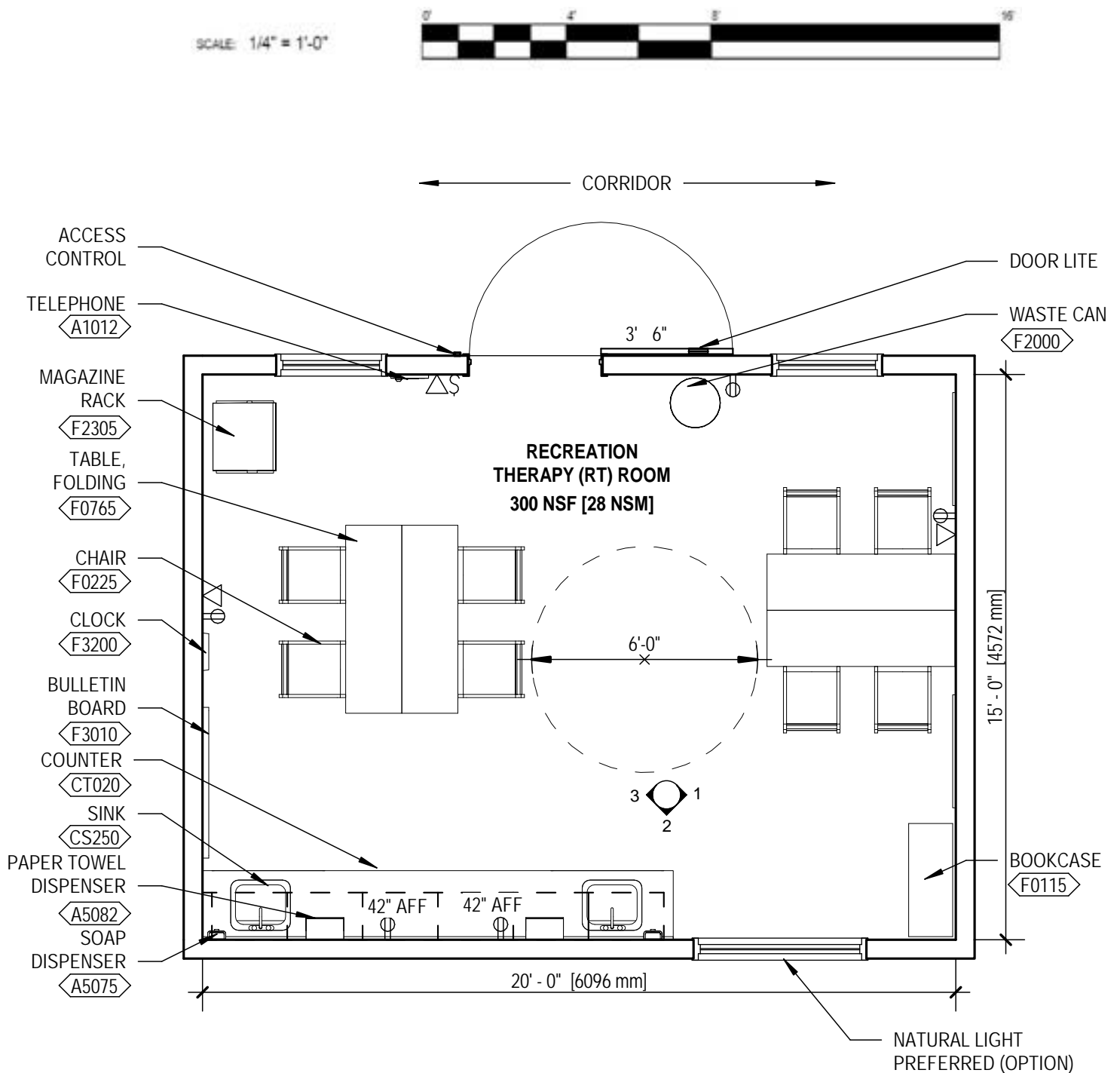
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.2 Recreation Therapy Room (RMH34) - Axonometric**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

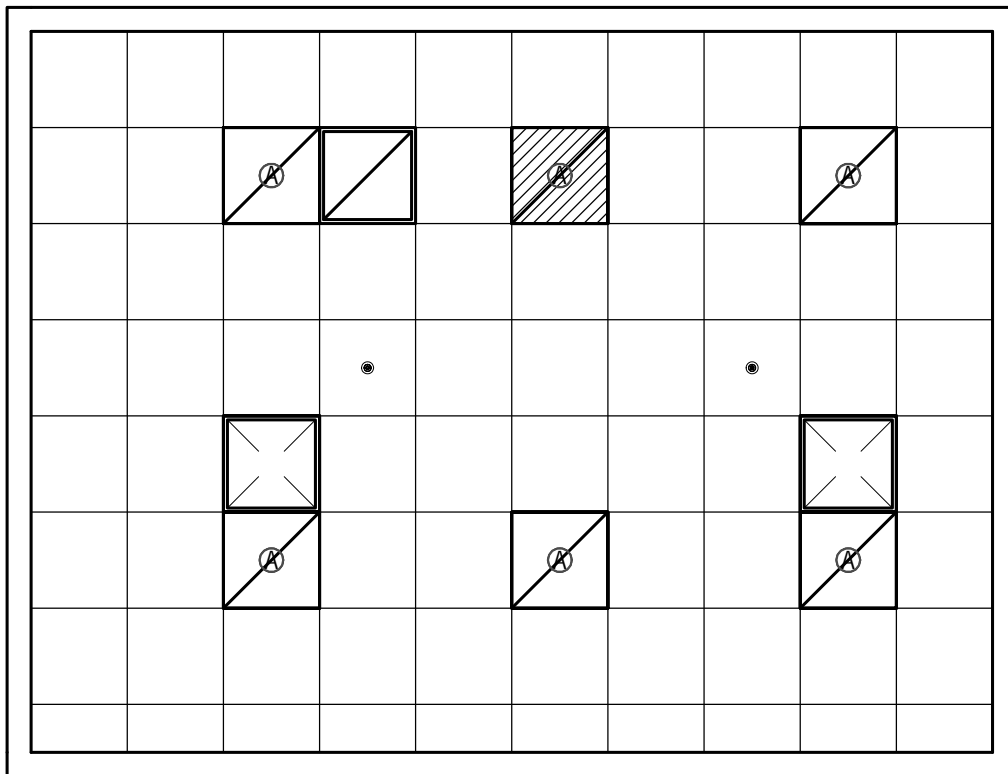
**5.3.2 Recreation Therapy Room (RMH34) - Floor Plan**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

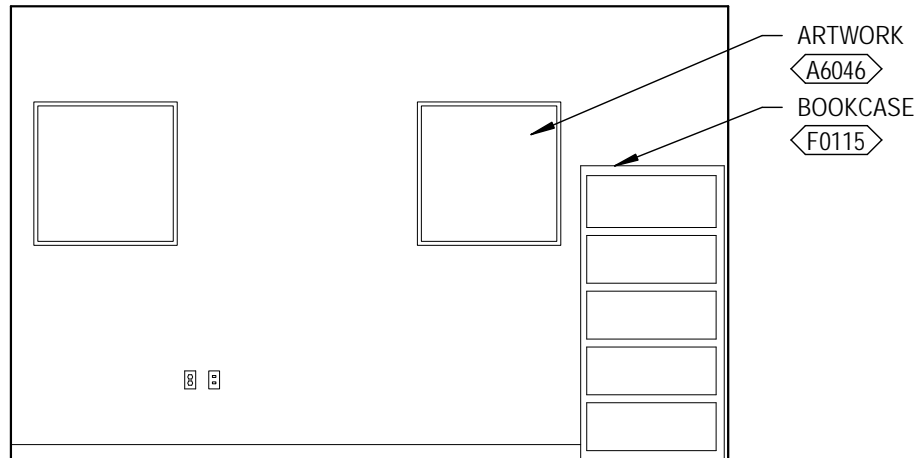
**5.3.2 Recreation Therapy Room (RMH34) - Reflected Ceiling Plan**

SCALE: 1/4" = 1'-0"

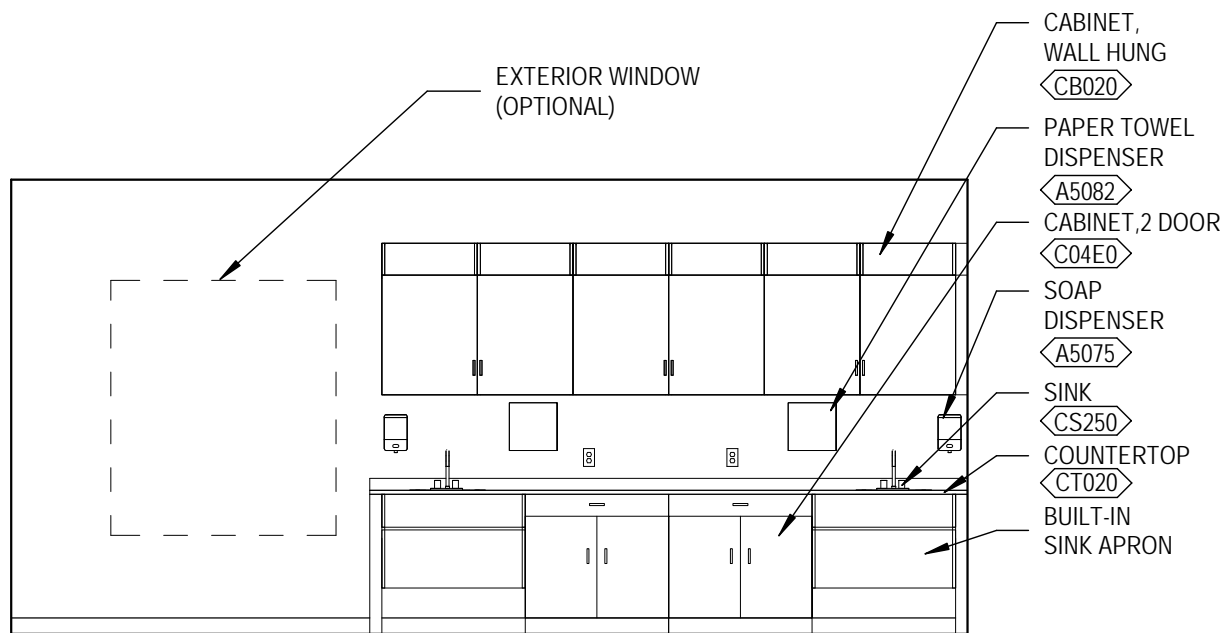


**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.2 Recreation Therapy Room (RMH34) - Elevations**



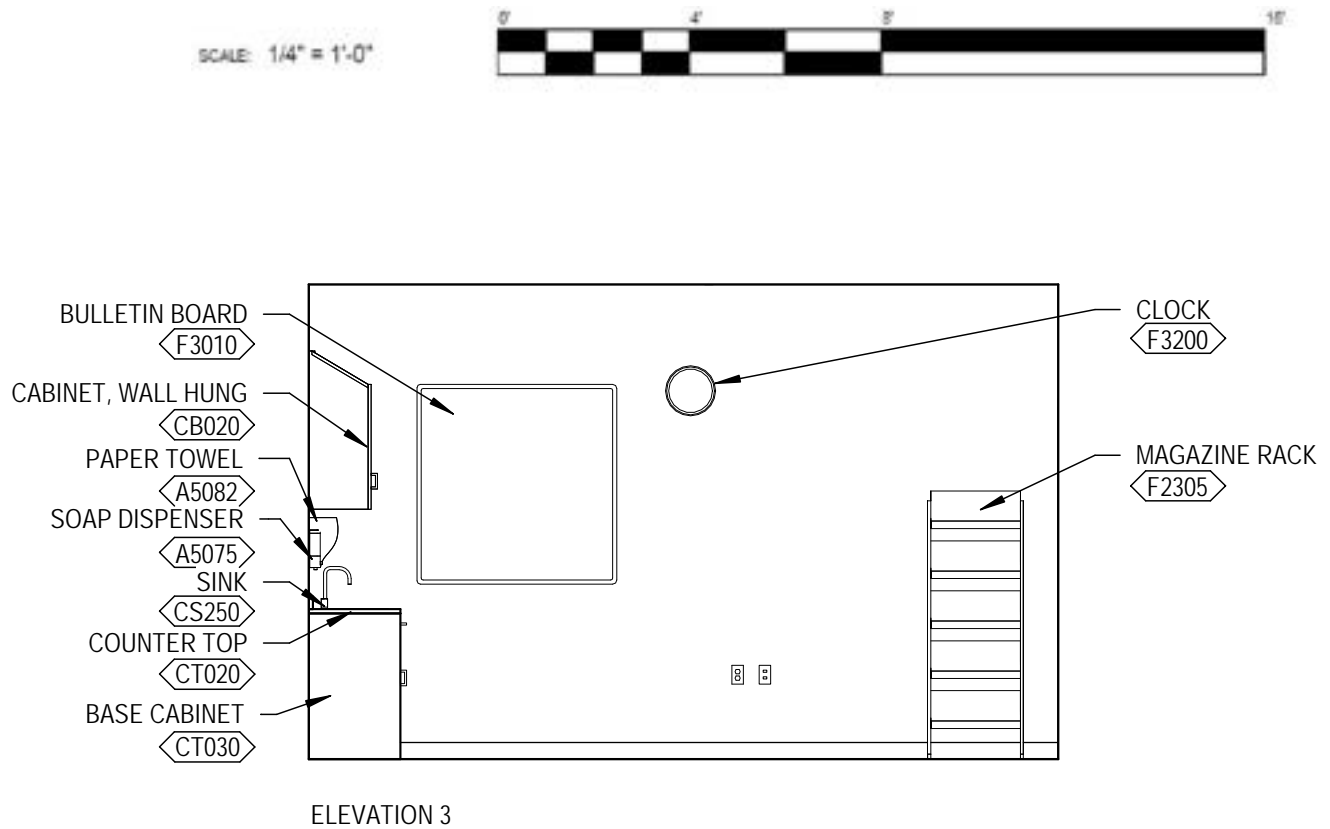
ELEVATION 1



ELEVATION 2

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.2 Recreation Therapy Room (RMH34) - Elevations**



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.3.2 Recreation Therapy Room (RMH34) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustic Ceiling Tile with Clips	Data	Yes
Ceiling Height	9'-0" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	RB-4"	Duress Alarm	No
Floor Finish	LVT	Electronic Access	Yes
Slab Depression	None	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3'-6" x 7'-0" wood with laminate glass view panel	Public Address System (PAS)	No
Hardware	4N	Security Surveillance Television (SSTV)	No
		Clock	Yes
LIGHTING		HVAC	
Refer to The IESNA Lighting Handbook, Chapter 10 - Lighting Design Guide and Chapter 16 for lighting design considerations.		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the EES to serve selected receptacles and equipment		





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.2 Recreation Therapy Room (RMH34) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	Yes
Hot Water	Yes
Waste	Yes

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.2 Recreation Therapy Room (RMH34) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	2	CC	Telecommunication outlet location.
<b>A1012</b>	Telephone, Wall Mounted, 1 Line	1	CC	Telephone, wall mounted, 1 line.
<b>A6046</b>	Artwork, Decorative, With Frame	2	VV	This JSN is to be used for determining and defining location of decorative artwork.
<b>F0115</b>	Bookcase, Open, 5 Shelf	1	VV	Freestanding open shelf bookcase, approximately 82" high X 37" wide X 18" deep with 5 (five) adjustable shelves. Unit can be separate or part of a system with available add-on shelving.
<b>F0225</b>	Chair, Dining Room	8	VV	Dining room chair with glides. Chair has straight legs with cushioned cloth or vinyl seat.
<b>F0765</b>	Table, Folding	2	VV	Folding table intended for a variety of uses. Designed with a flip top that allows tables to store nested to minimize needed storage space...
<b>CS250</b>	Sink, SS, Single Compartment, 6x12x9 ID	2	CC	Single compartment stainless steel sink, drop-in, self-rimming, ledge-type, connected with a drain and provided with a mixing faucet. It shall also be provided with pre-punched fixture holes on 4" center, integral back ledge to accommodate deck-mounted fixtures, brushed/polished interior and top surfaces, and sound deadened. Recommended for use in suspended or U/C/B sink cabinets having a high plastic laminate or Chemsurf laminate countertop/work surface. For general purpose use throughout the facility.
<b>F3010</b>	Board, Bulletin, 48 x 48	1	CC	Open face bulletin board. Cork posting panel with moisture proof backing. Variety of frames to choose from. Used for posting notes and messages.
<b>CT020</b>	Countertop, Solid Surface	1	CC	A solid, nonporous countertop with a smooth seamless appearance. Easy to clean and maintain and with proper cleaning does not support the growth of mold. An acrylic-based solid surface product. Standard thickness of 1", and a 4" butt backsplash/curb. Also referred to as a work surface or work top. Available in a choice of colors and depths. Used in lab and other hospital areas requiring optimum physical and chemical resisting properties.
<b>C04E0</b>	Cabinet, U/C/B, 1 Shelf, 1 Drawer, 2 DO, 36x36x22	2	CC	Standing height under counter base cabinet with an adjustable shelf and a full width drawer above solid hinged doors. Also referred to as a combination cabinet or a drawer and cupboard cabinet. For general purpose use throughout the facility.
<b>CB020</b>	Cabinet, W/H, 2 Shelf, 1 DO, Sloping Top, 38x24x13	6	CC	Wall hung cabinet with two adjustable shelves, solid right or left-hinged door (appropriate door hinge configuration to be indicated on equipment elevation drawings), and sloping top. Also referred to as a solid hinged single door case. For general purpose use throughout the facility.
<b>F2000</b>	Basket, Wastepaper, Round, Metal	1	VV	Round wastepaper basket, approximately 18" high X 16" diameter. This metal unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations.



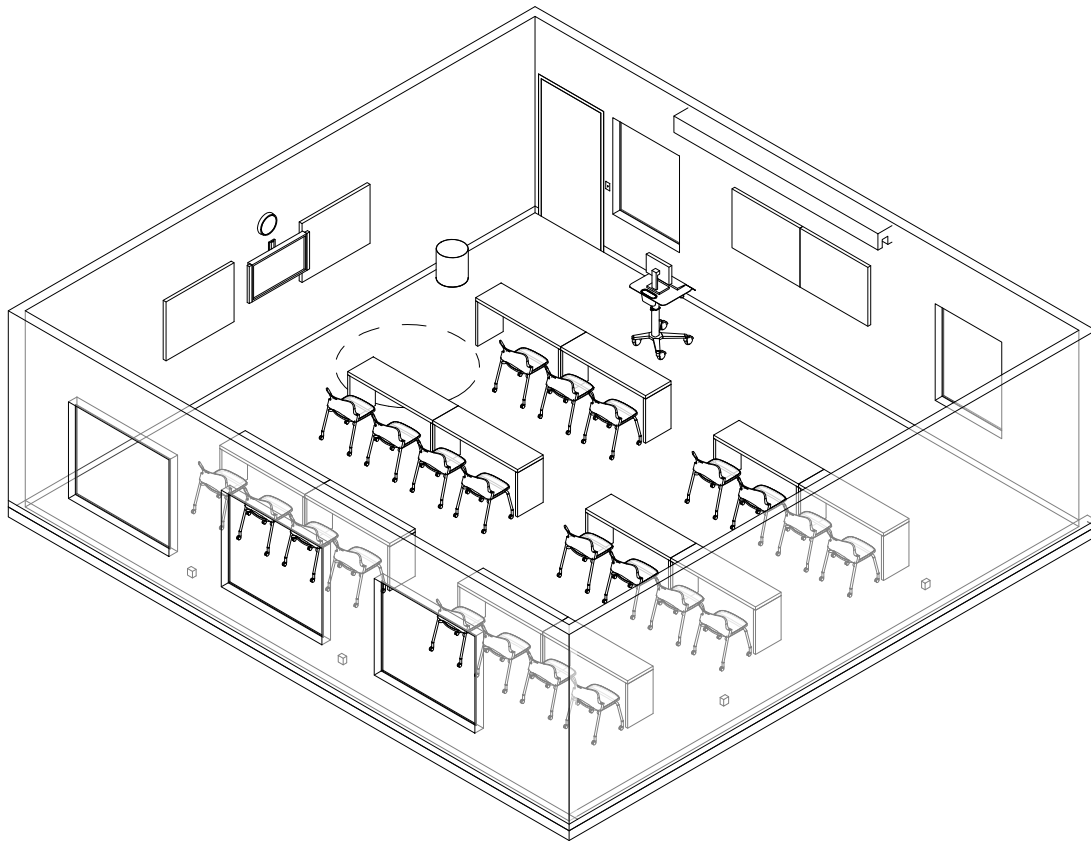
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.2 Recreation Therapy Room (RMH34) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>F2305</b>	Rack, Magazine, F/S	1	VV	Free standing magazine rack. Used to display publications in offices, lobbies, and waiting areas.
<b>F3200</b>	Clock, Analog, 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).
<b>A5075</b>	Dispenser, Soap, Disposable	2	VV	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
<b>A5082</b>	Dispenser, Paper Towel, Sensor, Hands Free	2	CC	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are placed in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.

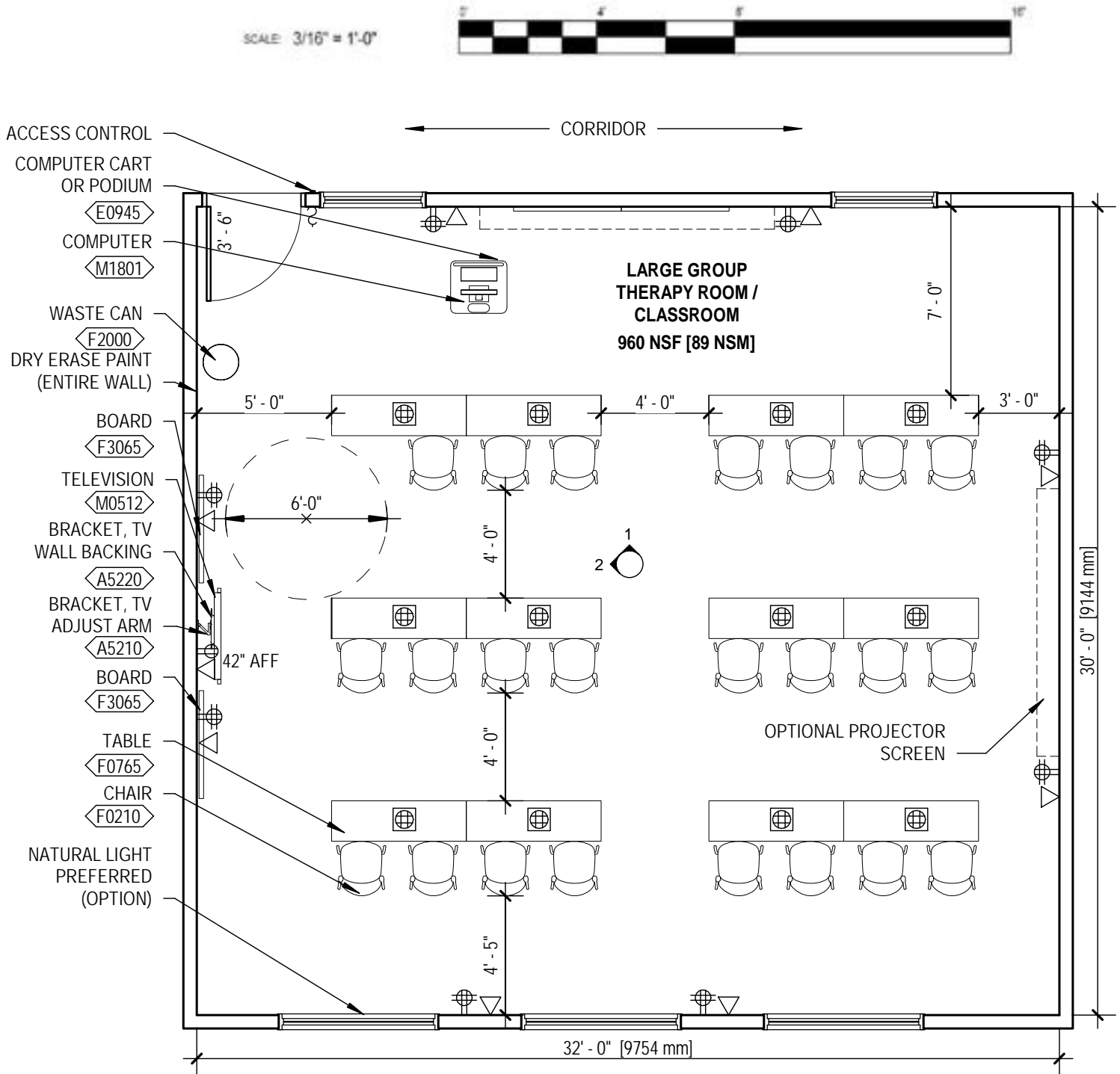


**5.3.3 Large Group Therapy Room / Classroom (RMH38) - Axonometric**



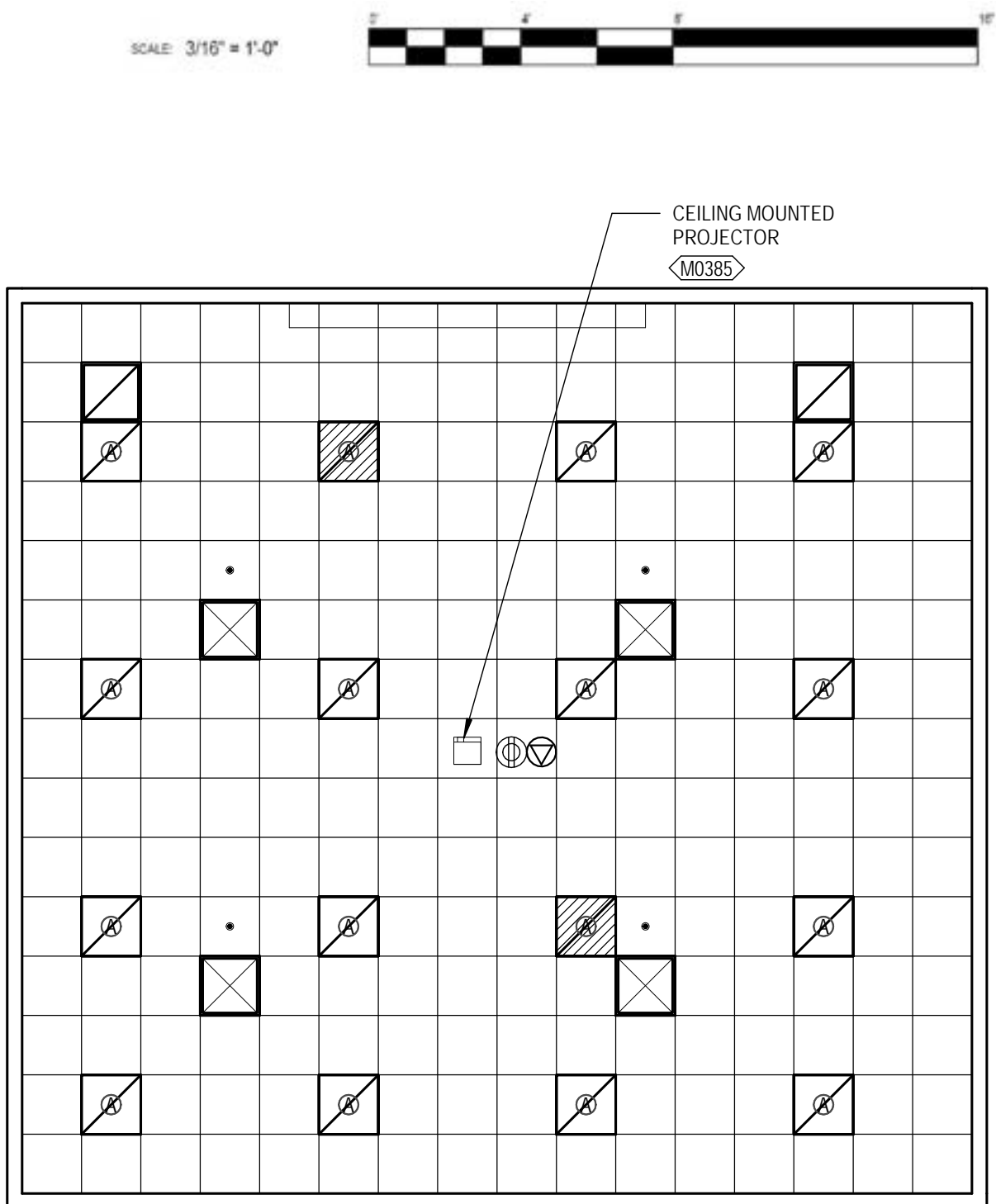
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.3 Large Group Therapy Room / Classroom (RMH38) - Floor Plan**



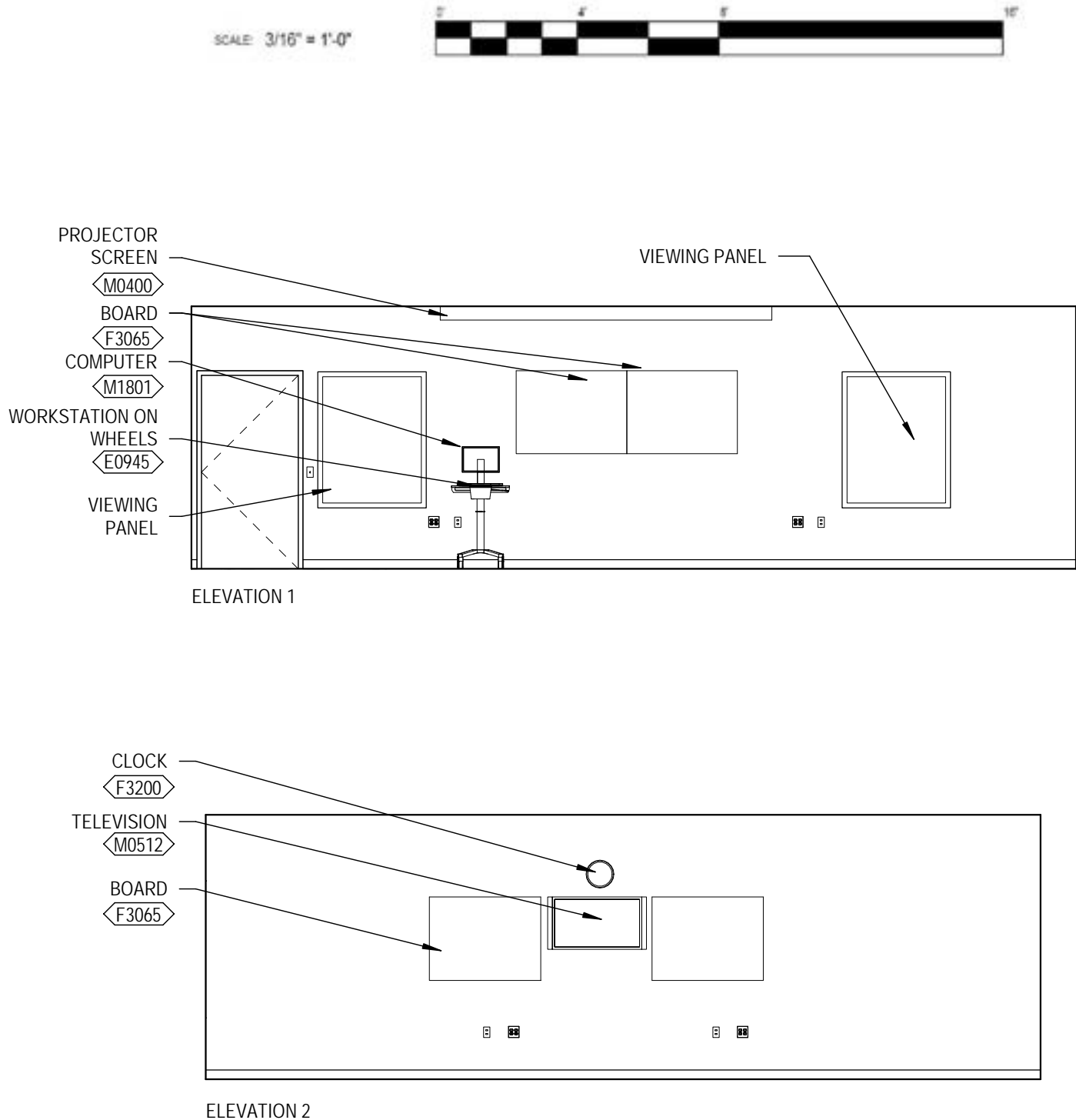
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.3 Large Group Therapy Room / Classroom (RMH38) - Reflected Ceiling Plan**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.3 Large Group Therapy Room / Classroom (RMH38) - Elevations**





## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.3.3 Large Group Therapy Room / Classroom (RMH38) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustic Ceiling Tile	Data	Yes
Ceiling Height	9'-0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard with Paint	Cable Television	Yes
Base	RB-4"	Duress Alarm	No
Floor Finish	CPT or LVT	Electronic Access	Yes
Slab Depression	None	Intercom	No
Sound Protection	SCT 45	Motion Intrusion Detection (MID)	No
Doors	3' - 6" x 7' - 0" wood with laminate glass view panel	Public Address System (PAS)	No
Hardware	4N	Security Surveillance Television (SSTV)	No
		Clock	Yes
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.5 - Group Therapy Room - for lighting design consideration.		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the EES to serve selected receptacles and equipment.		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.3 Large Group Therapy Room / Classroom (RMH38) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.3 Large Group Therapy Room / Classroom (RMH38) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A5210</b>	Bracket, Television, Wall Mounted, w/Adjust Arm	1	CC	Wall mounted television bracket with adjustable arm. Consists of movable arm with minimum 120 degree swivel. Designed for holding wall mounted, flat panel television units in patient rooms.
<b>A5220</b>	Bracket, Television, Wall Backing	1	CC	Wall mounted television bracket backing which provides additional support and strength for the installation of the television bracket. Option available for interior or exterior plate and sized for 12" 16" or 24" stud spacing.
<b>F0210</b>	Chair, Side, Without Arms	23	VV	Upholstered side chair approximately 32" high X 19" wide X 23" deep with floor glides. Seat is non-tilting and without arms.
<b>F0765</b>	Table, Folding	12	VV	Folding table intended for a variety of uses. Designed with a flip top that allows tables to store nested to minimize needed storage space. .
<b>F2000</b>	Basket, Wastepaper, Round, Metal	1	VV	Round wastepaper basket, approximately 18" high X 16" diameter. This metal unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations.
<b>F3065</b>	Whiteboard/Bulletin Board, Combination	3	CC	A combination whiteboard and bulletin board, half LCS and half cork. Available with either aluminum or wood frame. It can be used in patient rooms or in any appropriate space in the facility.
<b>F3200</b>	Clock, Analog, 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.
<b>M0512</b>	Television, HDTV, Large Screen, 60"	1	VV	A high definition (HDTV) multimedia, slim design, 60"W to 65"W color television. The TV will have a 16.9 wide screen aspect ratio with full HD 1080p resolution and HDMI connections. TV may be LED, Plasma or LCD. TV will include a stand.
<b>M1801</b>	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. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
<b>E0945</b>	Cart, Computer, Mobile	1	VV	"THIS TYPICAL INCLUDES: 1 Cart Body, w/Computer Support, Style-A Narrow, w/Raised Edge Top 1 Flip-Up Shelf 1 Sharps Container Holder 1 Wastebasket 1 Chart Holder 2 Drawers, 3" H (76mm) 2 Drawers, 6" H (152mm) 3 Accessory Rail, Side Drawer Organizer Bins"



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

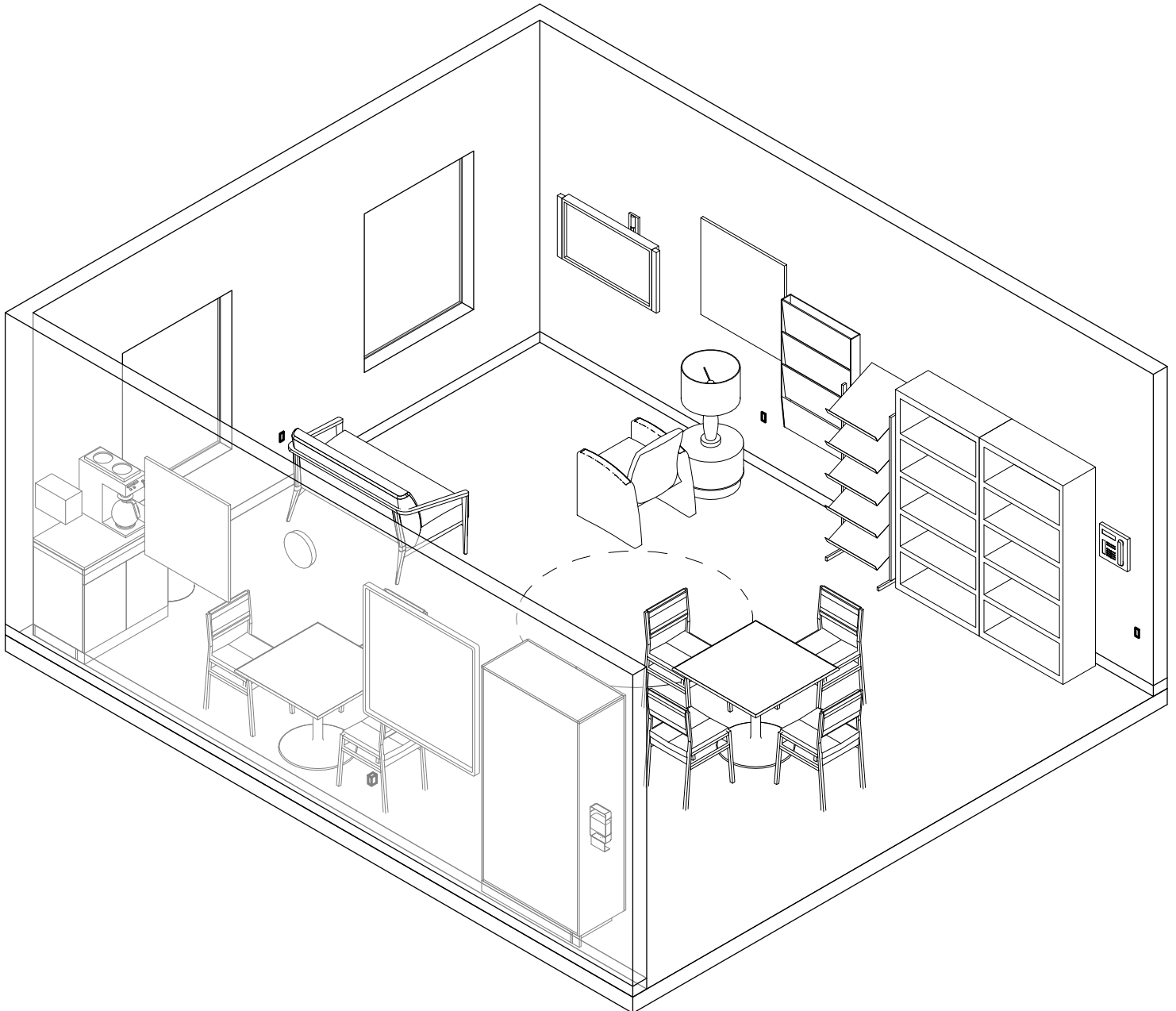
**5.3.3 Large Group Therapy Room / Classroom (RMH38) - Equipment List (Cont.)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>E0945</b>	Cart, Computer, Mobile	1	VV	<p>"THIS TYPICAL INCLUDES:</p> <ul style="list-style-type: none"> <li>1 Cart Body, w/Computer Support, Style-A Narrow, w/Raised Edge Top</li> <li>1 Flip-Up Shelf</li> <li>1 Sharps Container Holder</li> <li>1 Wastebasket</li> <li>1 Chart Holder</li> <li>2 Drawers, 3'''H (76mm)</li> <li>2 Drawers, 6'''H (152mm)</li> <li>3 Accessory Rail, Side</li> <li>Drawer Organizer Bins"</li> </ul>
<b>M0385</b>	Projector, Multimedia/ Data	1	VV	<p>The projector shall provide computer and video projections. Minimum features included: Brightness of not less than 1500 ANSI (American National Standards Institute) Lumens, and a minimum resolution format of 1024 X 768 pixels (XGA). The projector shall be portable and weigh no more than 10 pounds. It shall include a zoom lens and computer and video input ports.</p>
<b>M0400</b>	Screen, Projection, 144x144, Remote Control	1	CC	<p>Wall or ceiling mounted, roll-up type screen with remote control. Includes multiple controls to operate the screen from two or more locations, wireless remote control, adjustable preset limit switches, and black borders on all sides. Screen is housed in a solid wood or metal case with removable motor module. For a classroom, conference room, or large auditorium.</p>



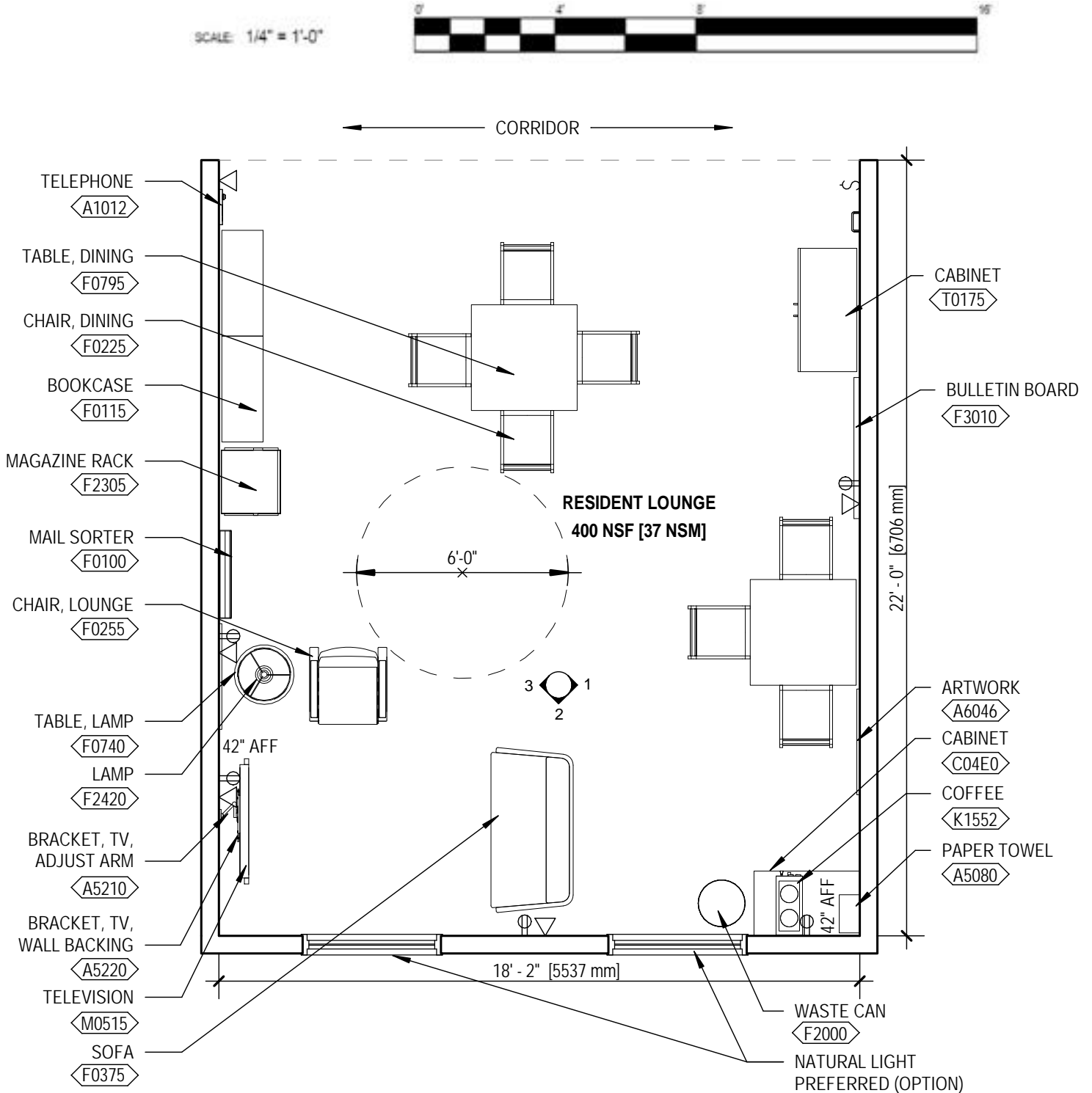
**FA4 Resident Care Unit Resident Area**

**5.3.4 Resident Lounge (SB086) - Axonometric**



# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

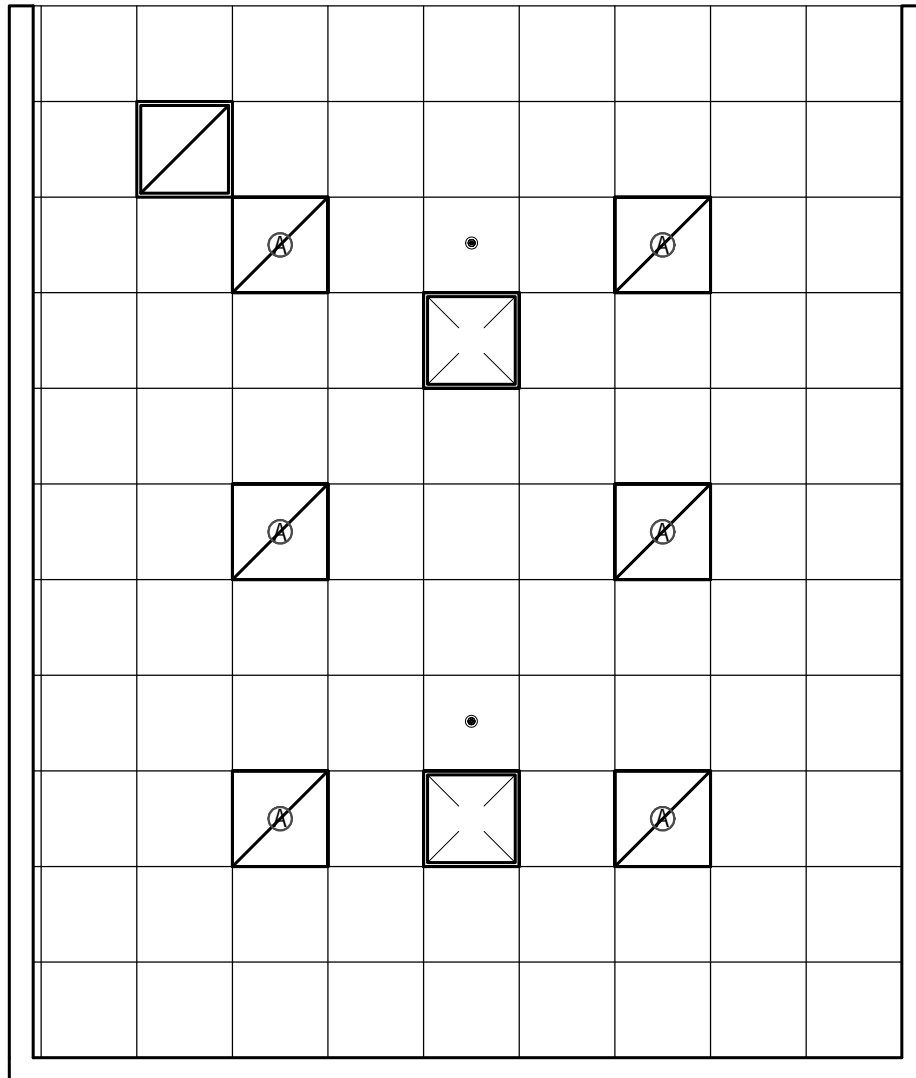
## 5.3.4 Resident Lounge (SB086) - Floor Plan



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.4 Resident Lounge (SB086) - Reflected Ceiling Plan**

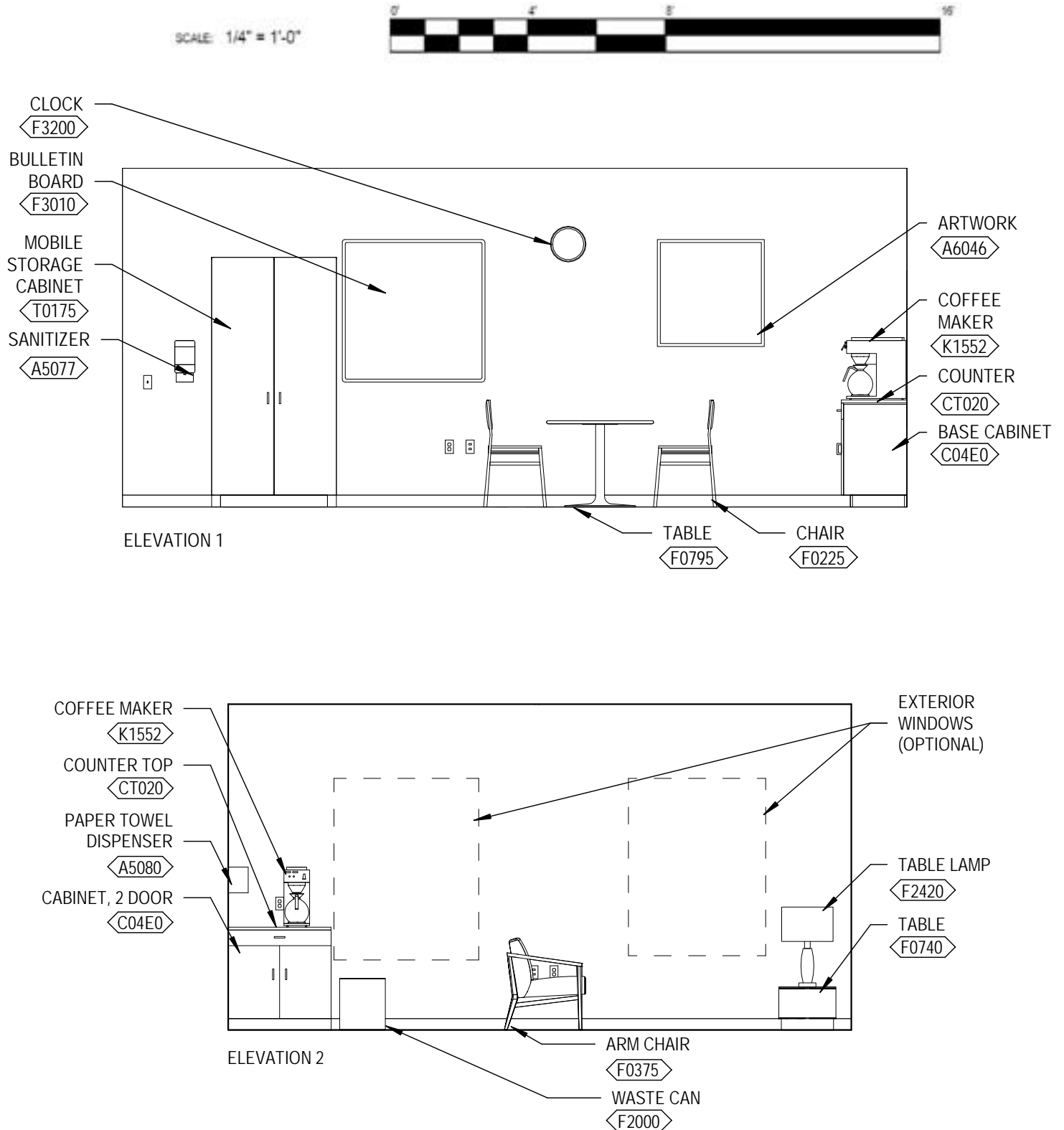
SCALE: 1/4" = 1'-0"





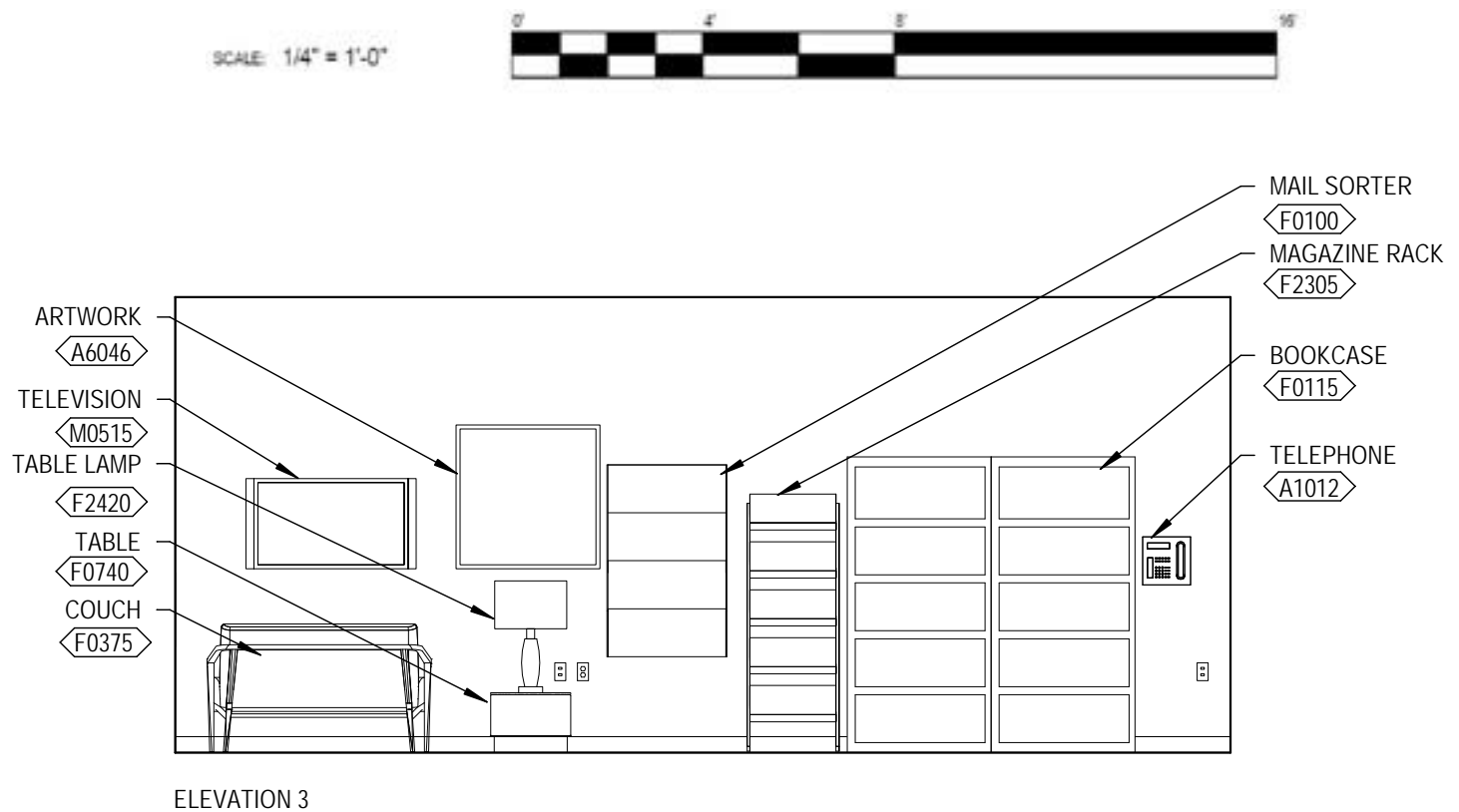
# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

## 5.3.4 Resident Lounge (SB086) - Elevations



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.4 Resident Lounge (SB086) - Elevations**



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.3.4 Resident Lounge (SB086) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustic Ceiling Tile with Clips	Data	Yes
Ceiling Height	9'-0" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	Yes
Base	RB-4"	Duress Alarm	No
Floor Finish	CPT or LVT	Electronic Access	No
Slab Depression	None	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	None	Public Access	No
Hardware	None	Security Surveillance Television (SSTV)	No
		Clock	Yes
LIGHTING		HVAC	
Refer to The IESNA Lighting Handbook, Chapter 10 – Lighting Design Guide and Chapter 16 for lighting design considerations.		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the EES to serve selected receptacles and equipment		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.4 Resident Lounge (SB086) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.4 Resident Lounge (SB086) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	2	CC	Telecommunication outlet location.
<b>A1012</b>	Telephone, Wall Mounted, 1 Line	1	CC	Telephone, wall mounted, 1 line.
<b>A5210</b>	Bracket, Television, Wall Mounted, w/Adjust Arm	1	CC	Wall mounted television bracket with adjustable arm. Consists of movable arm with minimum 120 degree swivel. Designed for holding wall mounted, flat panel television units in patient rooms.
<b>A5220</b>	Bracket, Television, Wall Backing	1	CC	Wall mounted television bracket backing which provides additional support and strength for the installation of the television bracket. Option available for interior or exterior plate and sized for 12" 16" or 24" stud spacing.
<b>A6046</b>	Artwork, Decorative, With Frame	2	VV	This JSN is to be used for determining and defining location of decorative artwork.
<b>F0115</b>	Bookcase, Open, 5 Shelf	2	VV	Freestanding open shelf bookcase, approximately 82" high X 37" wide X 18" deep with 5 (five) adjustable shelves. Unit can be separate or part of a system with available add-on shelving.
<b>C04E0</b>	Cabinet, U/C/B, 1 Shelf, 1 Drawer, 2 DO, 36x36x22	1	CC	Standing height under counter base cabinet with an adjustable shelf and a full width drawer above solid hinged doors. Also referred to as a combination cabinet or a drawer and cupboard cabinet. For general purpose use throughout the facility.
<b>CT020</b>	Countertop, Solid Surface	1	CC	A solid, nonporous countertop with a smooth seamless appearance. Easy to clean and maintain and with proper cleaning does not support the growth of mold. An acrylic-based solid surface product. Standard thickness of 1", and a 4" butt backsplash/curb. Also referred to as a work surface or work top. Available in a choice of colors and depths. Used in lab and other hospital areas requiring optimum physical and chemical resisting properties.
<b>F0225</b>	Chair, Dining Room	7	VV	Dining room chair with glides. Chair has straight legs with cushioned cloth or vinyl seat.
<b>T0175</b>	Cabinet, Storage	1	VV	Tool storage cabinet. This unit is mobile and has four separate areas to accept the different types of tools. Cabinet is used to provide the basic tools needed for "hands on" experience in wood, electricity, metal and power technology.
<b>F0255</b>	Chair, Interiors, Lounge	1	VV	Armless club chair. Fully upholstered foam body covering a concealed plywood frame. Black plastic feet with non-adjustable glides. Gangable with other Swoop products (ganging kit #OA401). List price is for COM. Greenguard Certified.
<b>F0375</b>	Sofa, Lounge	1	VV	Executive sofa with woven fabric textile or vinyl upholstery, foam padded arms, steel spring and foam rubber backs and seats, and floor glides.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.4 Resident Lounge (SB086) - Equipment List (Continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>F0740</b>	Table, Occasional, Lamp	1	VV	Occasional lamp table (end table) approximately 20" high X 27" wide X 27" deep with choice of finishes (wood, oak veneer, or high pressure laminate).
<b>F0795</b>	Table, Dining	2	VV	Dining table. Round 36" diameter or square 36" X 36". Used in dining facilities and can comfortably seat up to four (4) persons.
<b>F2000</b>	Basket, Wastepaper, Round, Metal	1	VV	Round wastepaper basket, approximately 18" high X 16" diameter. This metal unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations.
<b>F2305</b>	Rack, Magazine, F/S	1	VV	Free standing magazine rack. Used to display publications in offices, lobbies, and waiting areas.
<b>F2420</b>	Lamp, Table, With Shade	1	VV	Table lamp, 27-34" high X 6" wide X 6" deep with linen shade. Convenience outlet required at point of use.
<b>F3010</b>	Board, Bulletin, 48 x 48	1	CC	Open face bulletin board. Cork posting panel with moisture proof backing. Variety of frames to choose from. Used for posting notes and messages.
<b>F3200</b>	Clock, Analog, 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).
<b>M0515</b>	Television, HD, 36-43" Class	1	VV	High definition (HDTV) multimedia flat panel LED 40" class display television. The TV will have a 16:9 wide screen aspect ratio, minimum of 1920 x 1080 display resolution, digital tuner, minimum refresh rate of 60Hz, minimum of two HDMI ports and 1 USB port ENERGY STAR certified.
<b>K1552</b>	Brewer, Coffee, Auto, Elect, 3 Burner, Front/ Back	1	VV	Space saving front to back automatic coffee maker. This unit includes a heating tank, connection for a cold water supply, decanter service with three burners, funnel and a water flow controller. The unit is used for semi-automatic coffee brewing in cafeterias and commercial institutions. The unit automatically shuts off the water flow when enough has passed through to fill the pot. The unit is normally provided plumbed with a hot water faucet to the side for making other hot drinks (tea, cider, cocoa, etc.). The database height dimension does not include the clearance for coffee decanters warming on the upper burners.
<b>A5077</b>	Dispenser, Hand Sanitizer, Wall Mount	1	VV	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

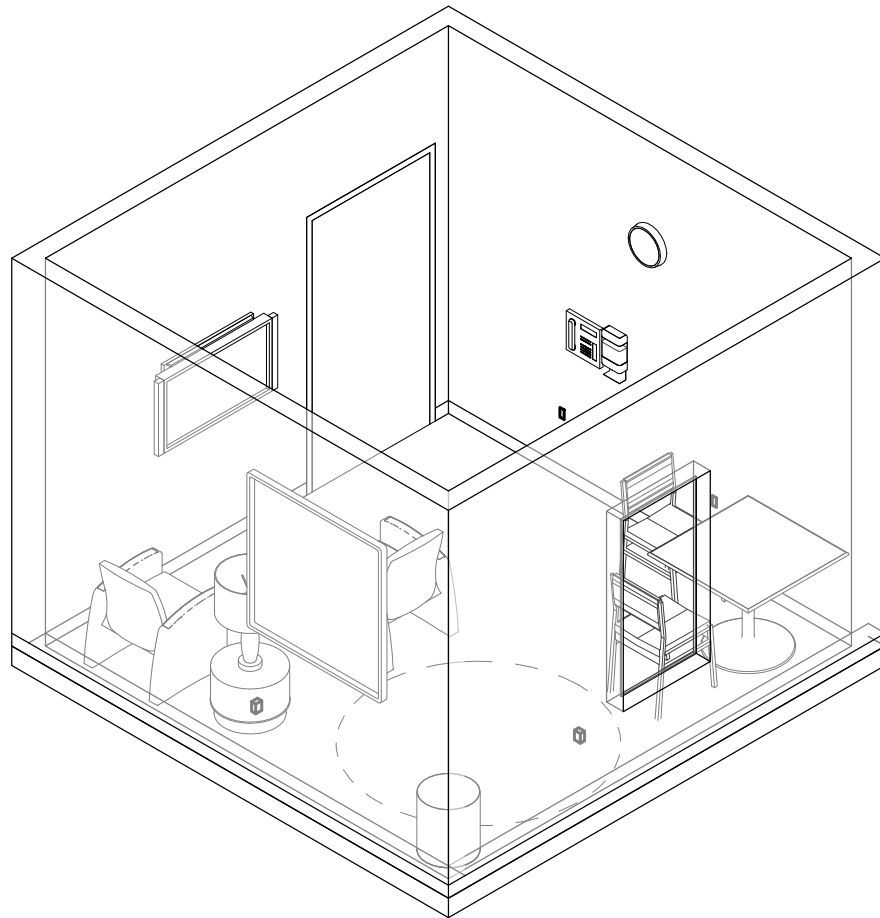
**5.3.4 Resident Lounge (SB086) - Equipment List (Continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A5080</b>	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. For general purpose use throughout the facility.
<b>F0100</b>	Sorter, Mail, Freestanding	1	VV	Floor-standing mail sorter with riser. 40 pockets (11-1/2"W x 3-1/2"H each). Each pocket is adjustable in height by 1/2" increments. Riser lifts sorter 15" above table. Heavy duty steel construction, welded with removable back. Each shelf has 3/8" lip for identifying each pocket. Powder painted and baked on finish.



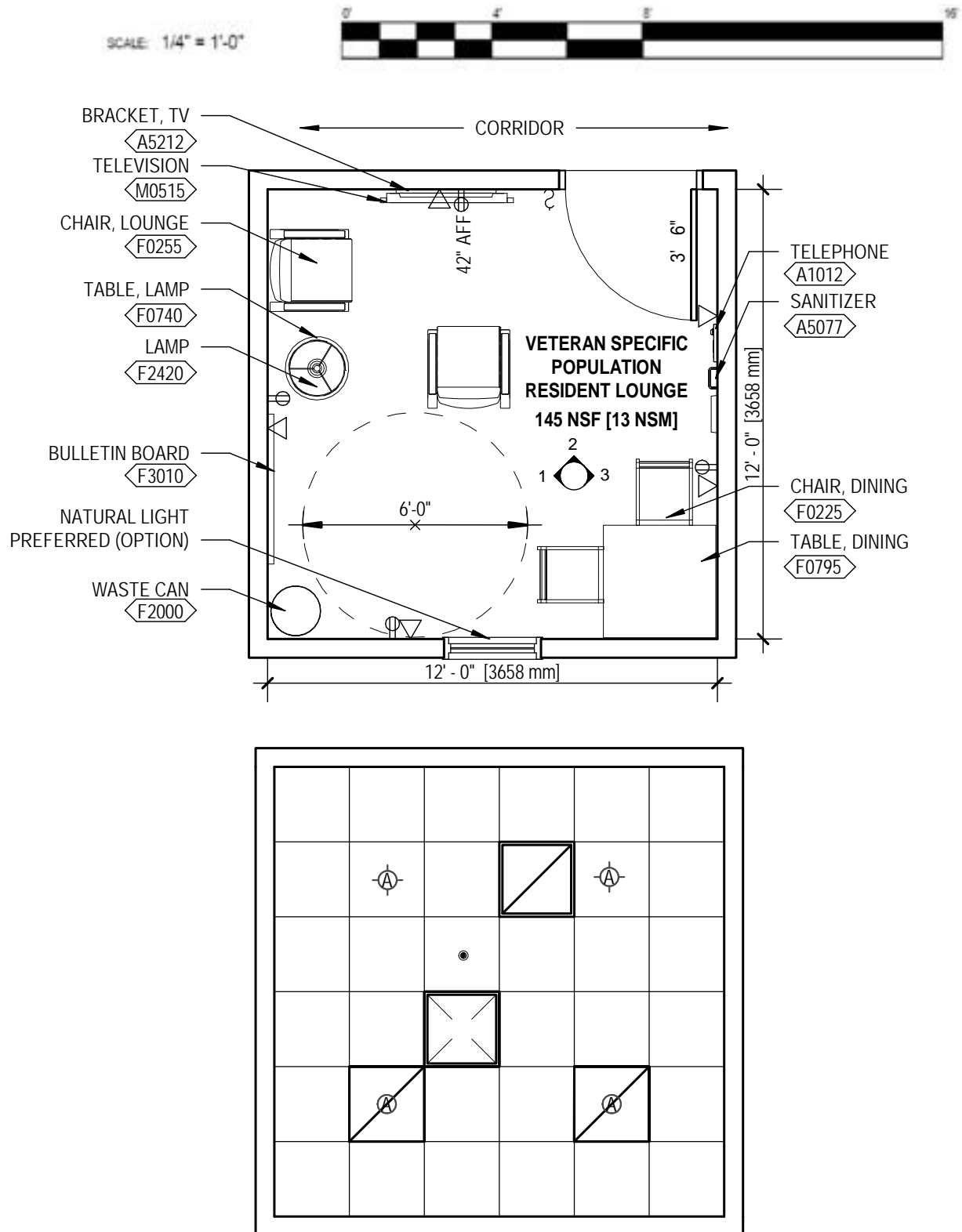


**5.3.5 Veteran Specific Population Resident Lounge (SB086) - Axonometric**



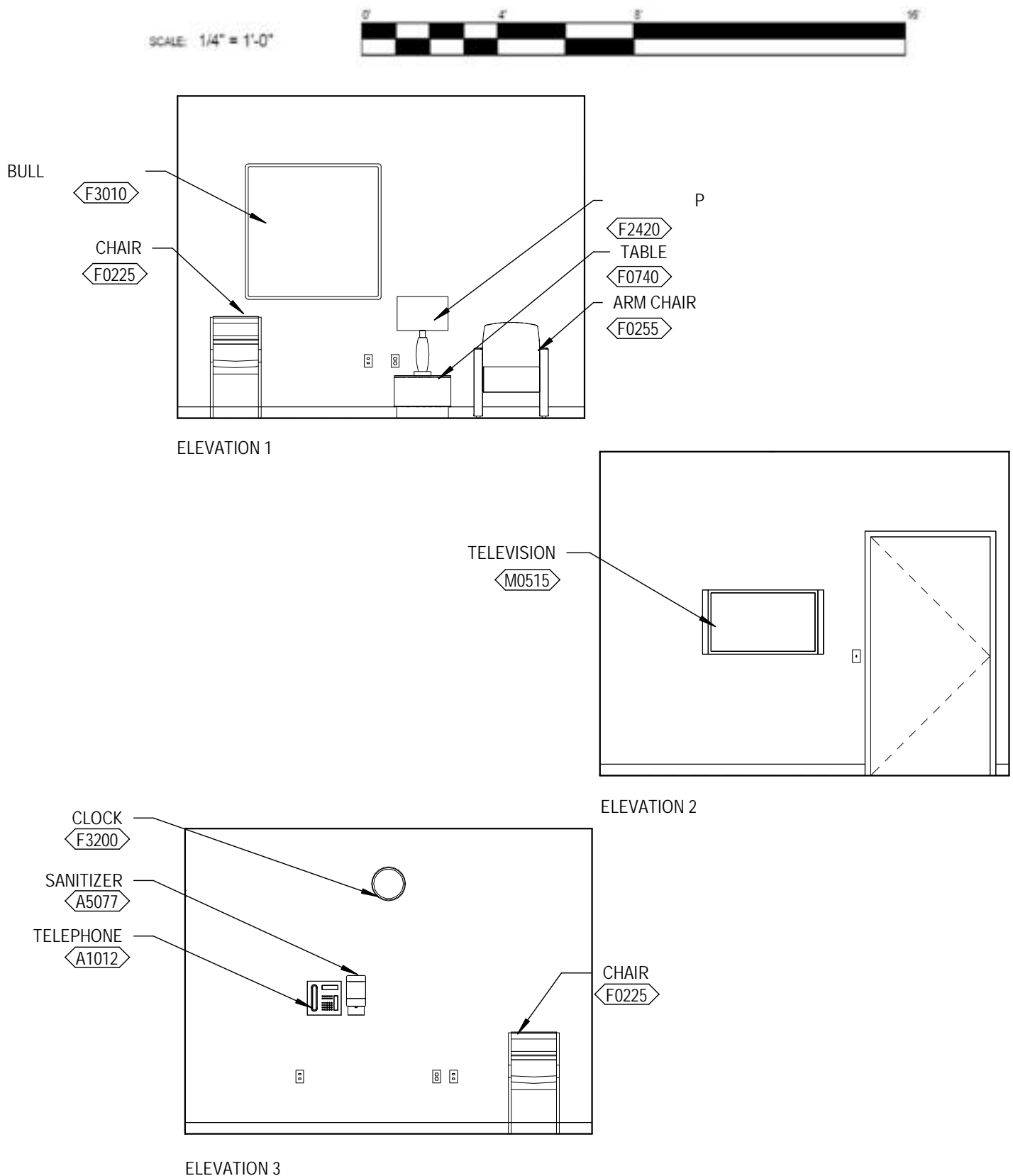
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.5 Veteran Specific Population Resident Lounge (SB086) - Floor and Reflected Ceiling Plan**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.5 Veteran Specific Population Resident Lounge (SB086) - Elevations**



# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

## 5.3.5 Veteran Specific Population Resident Lounge (SB086) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustic Ceiling Tile with Clipst	Data	Yes
Ceiling Height	9'- 0" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	Yes
Base	RB - 4"	Duress Alarm	No
Floor Finish	CPT or LVT	Electronic Access	No
Slab Depression	None	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3' - 6" x 7' - 0" wood with laminate glass view panel	Public Address System (PAS)	No
Hardware	4N	Security Surveillance Television (SSTV)	No
		Clock	Yes
LIGHTING		HVAC	
Refer to The IESNA Lighting Handbook, Chapter 10 - Lighting Design Guide and Chapter 16 for lighting design considerations.		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the EES to serve selected receptacles and equipment		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.5 Veteran Specific Population Resident Lounge (SB086) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9



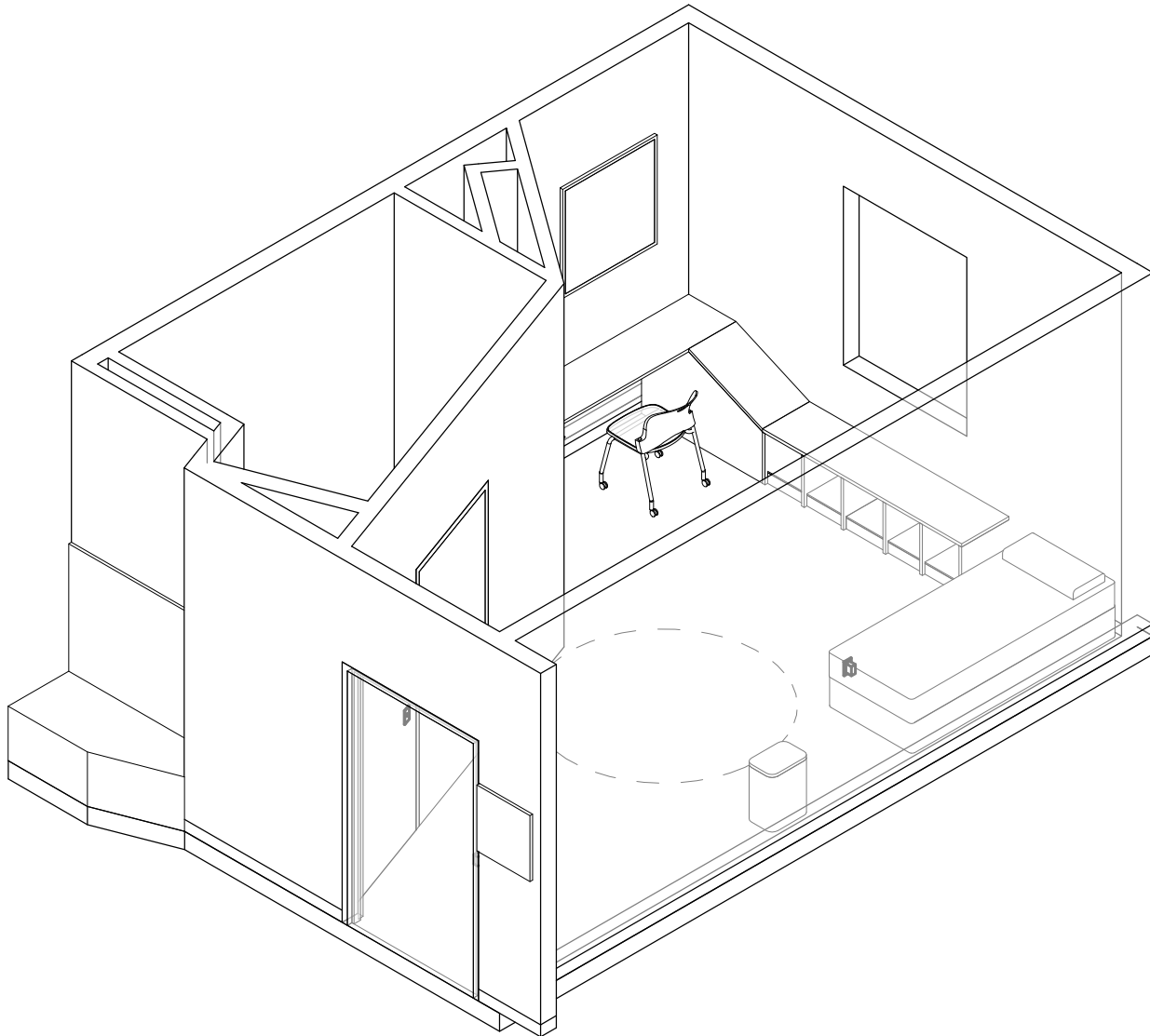
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.5 Veteran Specific Population Resident Lounge (SB086) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	2	CC	Telecommunication outlet location.
<b>A1012</b>	Telephone, Wall Mounted, 1 Line	1	CC	Telephone, wall mounted, 1 line.
<b>A5212</b>	Bracket, Television, Wall Mounted, w/Adjust Arm	1	VV	Wall mounted television bracket with adjustable arm. Consists of movable arm with minimum 120 degree swivel. Designed for holding wall mounted, flat panel television units in patient rooms.
<b>F0225</b>	Chair, Dining Room	2	VV	Dining room chair with glides. Chair has straight legs with cushioned cloth or vinyl seat.
<b>F0255</b>	Chair, Interiors, Lounge	2	VV	Armless club chair. Fully upholstered foam body covering a concealed plywood frame. Black plastic feet with non-adjustable glides. Gangable with other Swoop products (ganging kit #OA401). List price is for COM. Greenguard Certified.
<b>F0740</b>	Table, Occasional, Lamp	1	VV	Occasional lamp table (end table) approximately 20" high X 27" wide X 27" deep with choice of finishes (wood, oak veneer, or high pressure laminate).
<b>F2420</b>	Lamp, Table, With Shade	1	VV	Table lamp, 27-34" high X 6" wide X 6" deep with linen shade. Convenience outlet required at point of use.
<b>F3010</b>	Board, Bulletin, 48 x 48	1	CC	Open face bulletin board. Cork posting panel with moisture proof backing. Variety of frames to choose from. Used for posting notes and messages.
<b>A5077</b>	Dispenser, Hand Sanitizer, Wall Mount	1	VV	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
<b>F0795</b>	Table, Dining	1	VV	Dining table. Round 36" diameter or square 36" X 36". Used in dining facilities and can comfortably seat up to four (4) persons.
<b>M0515</b>	Television, HD, 36-43" Class	1	VV	High definition (HDTV) multimedia flat panel LED 40" class display television. The TV will have a 16:9 wide screen aspect ratio, minimum of 1920 x 1080 display resolution, digital tuner, minimum refresh rate of 60Hz, minimum of two HDMI ports and 1 USB port ENERGY STAR certified.
<b>F3200</b>	Clock, Analog, 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).
<b>F2000</b>	Basket, Wastepaper, Round, Metal	1	VV	Round wastepaper basket, approximately 18" high X 16" diameter. This metal unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

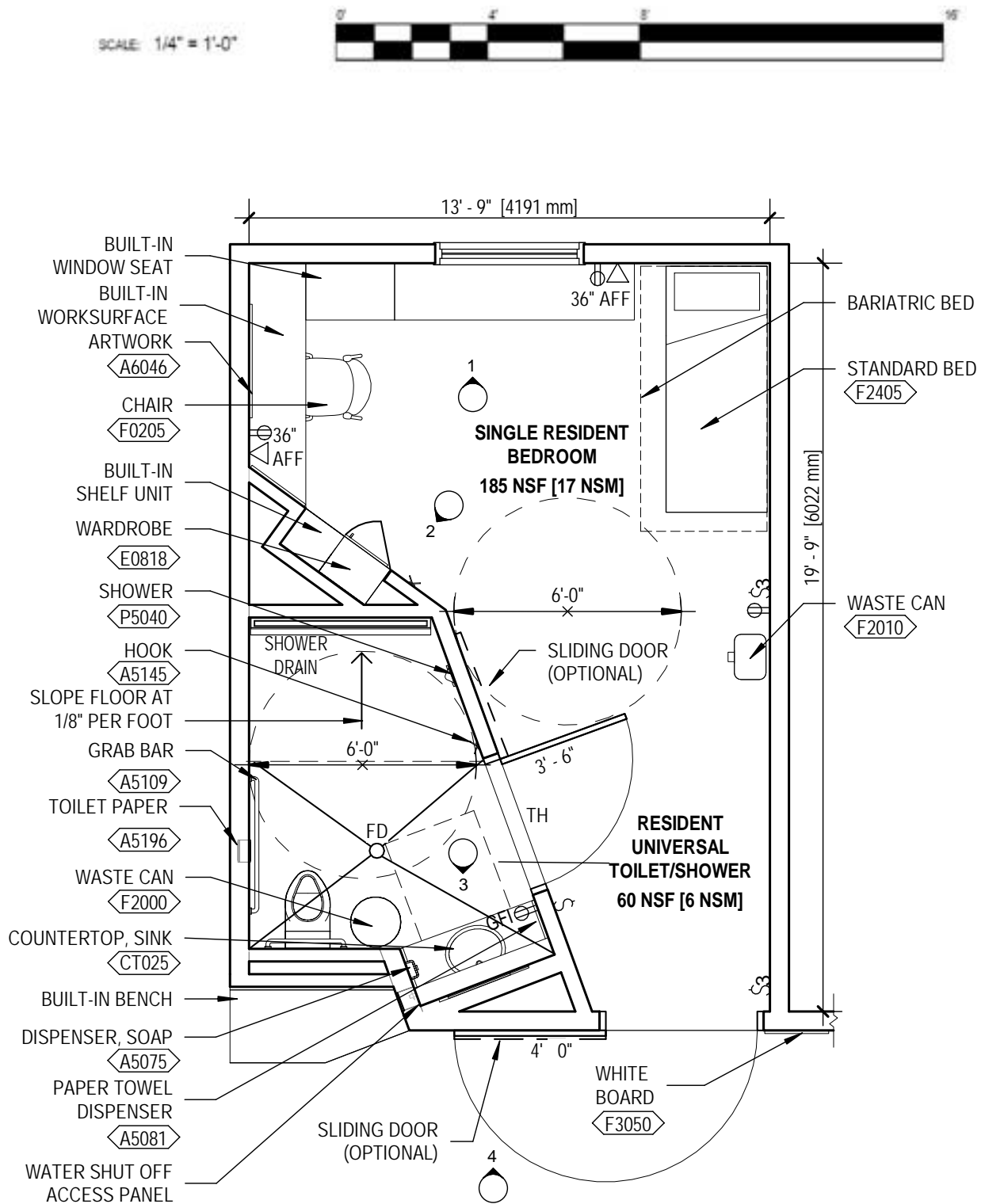
**5.3.6 One-Bed Universal Resident Bedroom (RMH61) With Resident Universal Toilet/  
Shower (SB148) - Axonometric**





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

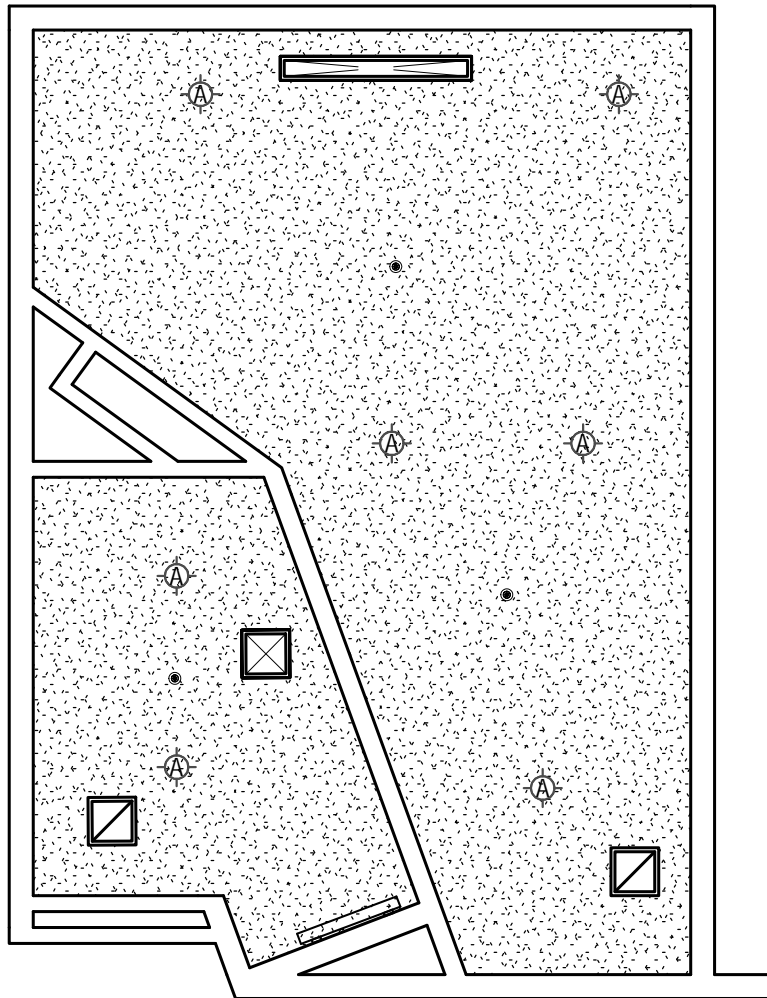
**5.3.6 One-Bed Universal Resident Bedroom (RMH61) With Resident Universal Toilet/  
Shower (SB148) - Floor Plan**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.6 One-Bed Universal Resident Bedroom (RMH61) With Resident Universal Toilet/  
Shower (SB148) - Reflected Ceiling Plan**

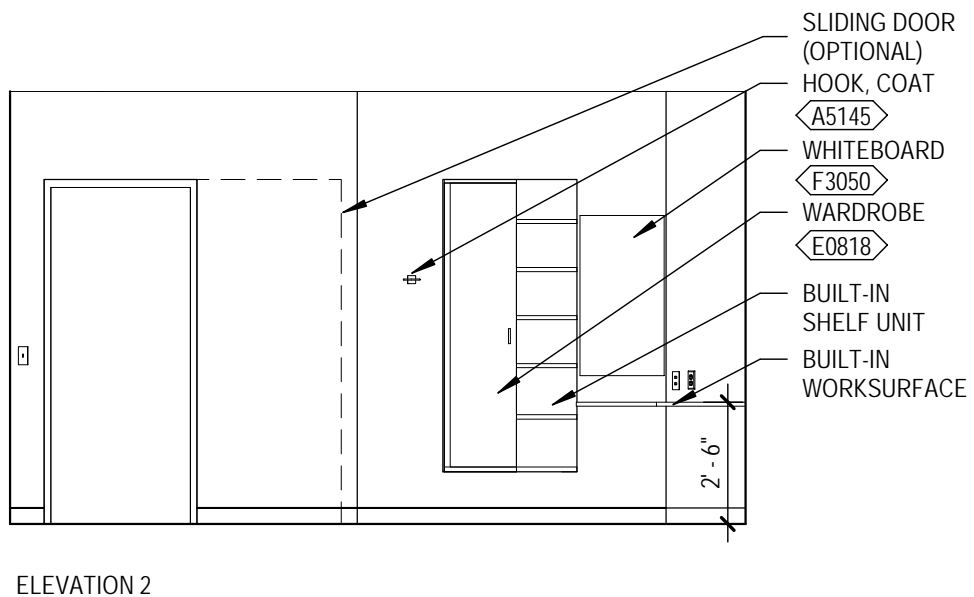
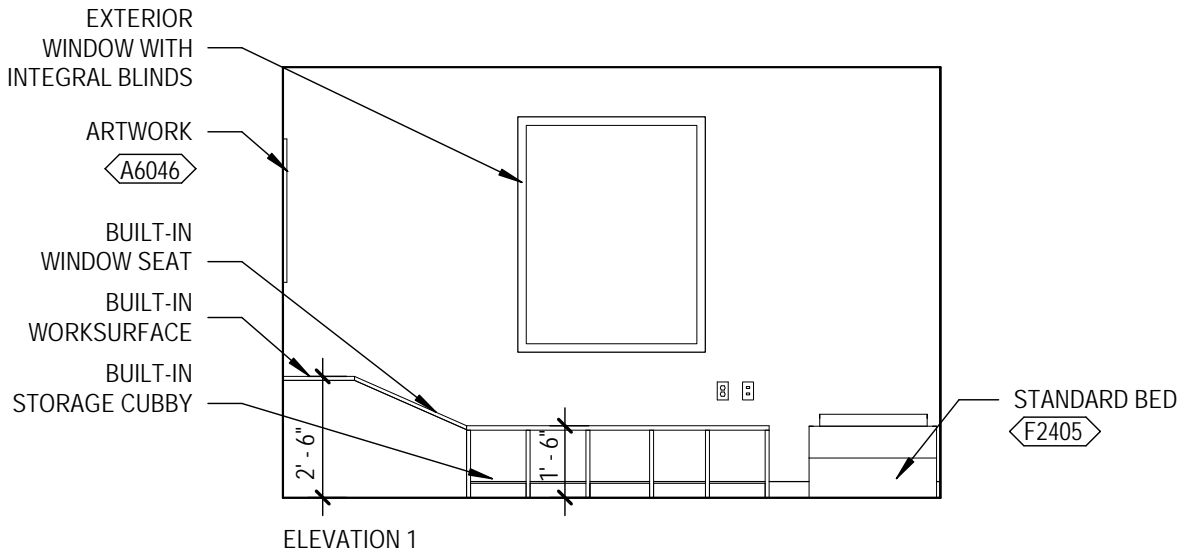
SCALE: 1/4" = 1'-0"



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.6 One-Bed Universal Resident Bedroom (RMH61) With Resident Universal Toilet/  
Shower (SB148) - Elevations**

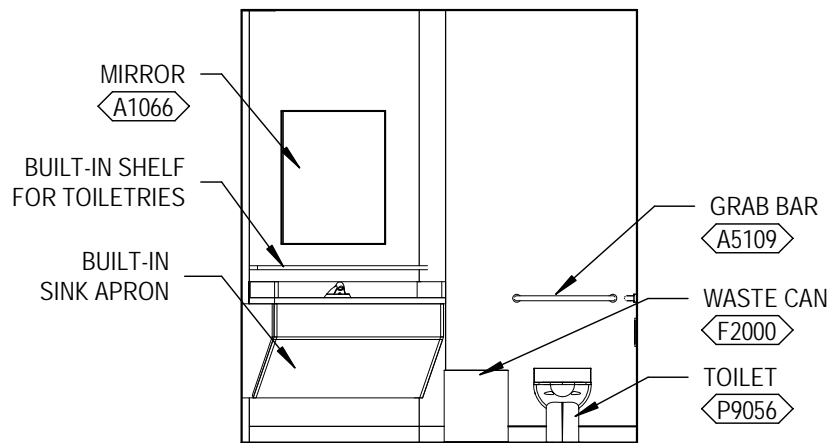
SCALE: 1/4" = 1'-0"



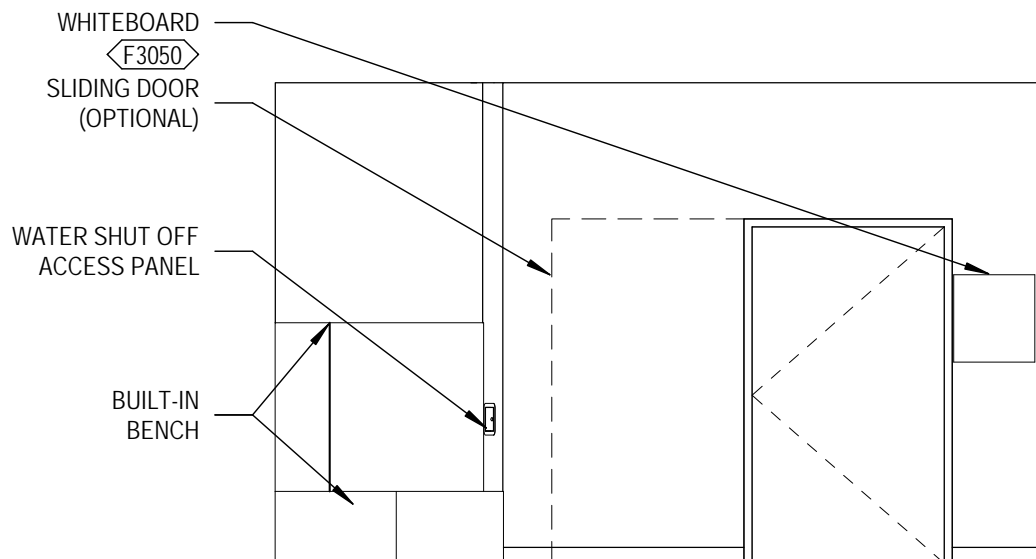
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.6 One-Bed Universal Resident Bedroom (RMH61) With Resident Universal Toilet/  
Shower (SB148) - Elevations**

SCALE: 1/4" = 1'-0"



ELEVATION 3



ELEVATION 4

## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.3.6 One-Bed Universal Resident Bedroom (RMH61) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Gypsum Wallboard with Paint	Data	Yes
Ceiling Height	9'-0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	RB-4"	Duress Alarm	No
Floor Finish	LVT	Electronic Access	No
Slab Depression	None	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	4'-0" x 7'-0" wood	Public Address System (PAS)	No
Hardware	R1	Security Surveillance Television (SSTV)	No
		Clock	No
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.8 - Patient Room - for lighting design consideration		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.6 One-Bed Universal Resident Bedroom (RMH61) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9



# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

## 5.3.6 Resident Universal Toilet/Shower (SB148) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Gypsum Wallboard (SC)	Data	No
Ceiling Height	9' - 0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard (SC) with 4' solid surface wainscot	Cable Television	No
Base	PT -4" or RES-4"	Duress Alarm	No
Floor Finish	PT or RES	Electronic Access	No
Slab Depression	as needed to slope to drain	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3' - 6" x 7' - 0" wood	Public Access	No
Hardware	R3	Security Surveillance Television (SSTV)	No
		Clock	No
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.9 - Patient Toilet/Shower- for lighting design consideration		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.6 Resident Universal Toilet/Shower (SB148) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	Yes (Toilet/Shower)
Hot Water	Yes (Toilet/Shower)
Waste	Yes (Toilet/Shower)

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.6 One-Bed Universal Resident Bedroom (RMH61) With Resident Universal Toilet/  
Shower (SB148) - Equipment List**

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
<b>RMH61 - ONE-BED UNIVERSAL RESIDENT BEDROOM</b>				
<b>A6046</b>	Artwork, Decorative, With Frame	1	VV	This JSN is to be used for determining and defining location of decorative artwork.
<b>E0818</b>	Cabinet, Patient Room, Wardrobe	1	VV	A module of a wardrobe and cabinets for use in patient bedrooms. The unit is custom configured and will have a swing door wardrobe, a desk and various storage units with overhead cabinet and shelf. The unit will be approximately 18"W x 14"D x 60"H. The wardrobe will have a top shelf with a coat rod. The module price and dimensions are for items identified in the PDF document. Many different configurations are available. Overhead lights may also be added to the module
<b>F2010</b>	Basket, Wastepaper, Step-On	1	VV	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.
<b>M3025</b>	Mattress, Pressure Reduction, Bed	1	VV	Pressure reduction mattress. Consists of polyurethane foam and air or gel cylinders to spread pressure of patient's body weight across a larger surface area. Some models have electric pumps for inflation and pressure adjustment; other manufacturers score the foam to distribute pressure. Used to prevent bed sores from developing and promote the healing of ulcers. Unit also relieves patient stress by reducing the amount of required patient turning. All-gel and all-foam mattresses as well as comparably therapeutic low air loss mattress systems are available.
<b>F2405</b>	Bed, Standard	1	VV	Single bed, approximately 18" high X 83" wide X 40" deep. Bed is used for non-inpatient stay activities (testing, visitor/staff sleeping).
<b>A5145</b>	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. For general purpose use throughout the facility to hang various items of apparel.
<b>F3050</b>	Whiteboard, Dry Erase	1	CC	Wall mounted Patient Message board. Features space saving design, marker and eraser storage slots on the side, post form end panels and 3mm edges.
<b>F0205</b>	Chair, Interiors, Patient	1	VV	High back patient chair. 18" seat height and removable seat covers. Maximum weight capacity 300 lbs. List price is for Grade 1 fabric.
<b>SB148 - TOILET / SHOWER, RESIDENT UNIVERSAL</b>				
<b>A5075</b>	Dispenser, Soap, Disposable	1	VV	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.6 One-Bed Universal Resident Bedroom (RMH61) With Resident Universal Toilet/  
Shower (SB148) - Equipment List (Continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1066</b>	Mirror, Float Glass, With SS Frame	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. For mounting above single wall mounted lavatories located in toilet areas, Doctors examination offices, etc. May also be used above double lavatories, either wall or countertop mounted, found in restroom areas.
<b>A5082</b>	Dispenser, Paper Towel, Sensor, Hands Free	1	CC	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are placed in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.
<b>A5109</b>	Grab Bar, 1-1/4" Dia., SS, 2 Wall, W/C Accessible	2	CC	A 1-1/4" diameter, satin finish stainless steel, peened gripping surface, 2 wall toilet stall/ room, grab bar with concealed mounting flanges. Snap over flanges are provided to conceal mounting screws. A selection of mounting kits and concealed anchor devices are available from the manufacturers for different types of installations. Grab bar shall comply with barrier-free accessibility guidelines for structural strength. For typical water closet applications in toilet stalls and rooms where ADA (American's With Disabilities Act) requirements must be met.
<b>A5145</b>	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. For general purpose use throughout the facility to hang various items of apparel.
<b>A5196</b>	Dispenser, Toilet Tissue, Psychiatric	1	CC	A recessed single roll toilet tissue holder for use in psychiatric, drug abuse or alcohol rehab toilets.
<b>F2000</b>	Basket, Wastepaper, Round, Metal	1	VV	Round wastepaper basket, approximately 18" high X 16" diameter. This metal unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations.
<b>CT025</b>	Countertop, Solid Surface with Sink Combination	1	CC	A solid, nonporous countertop approximately 36"W x 22"D with a undercounter sink combination. The countertop is an acrylic-based solid surface product with a standard thickness of 1", and a 4" butt backsplash/curb. Surfaces will be easy to clean and maintain. Also referred to as a work surface or work top with sink. Available in a choice of colors, depths and sink shapes. Used for various applications in patient rooms, restrooms and throughout the facility. Usually a part of a casework interior design program. Unit does not include the drain and faucet..



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

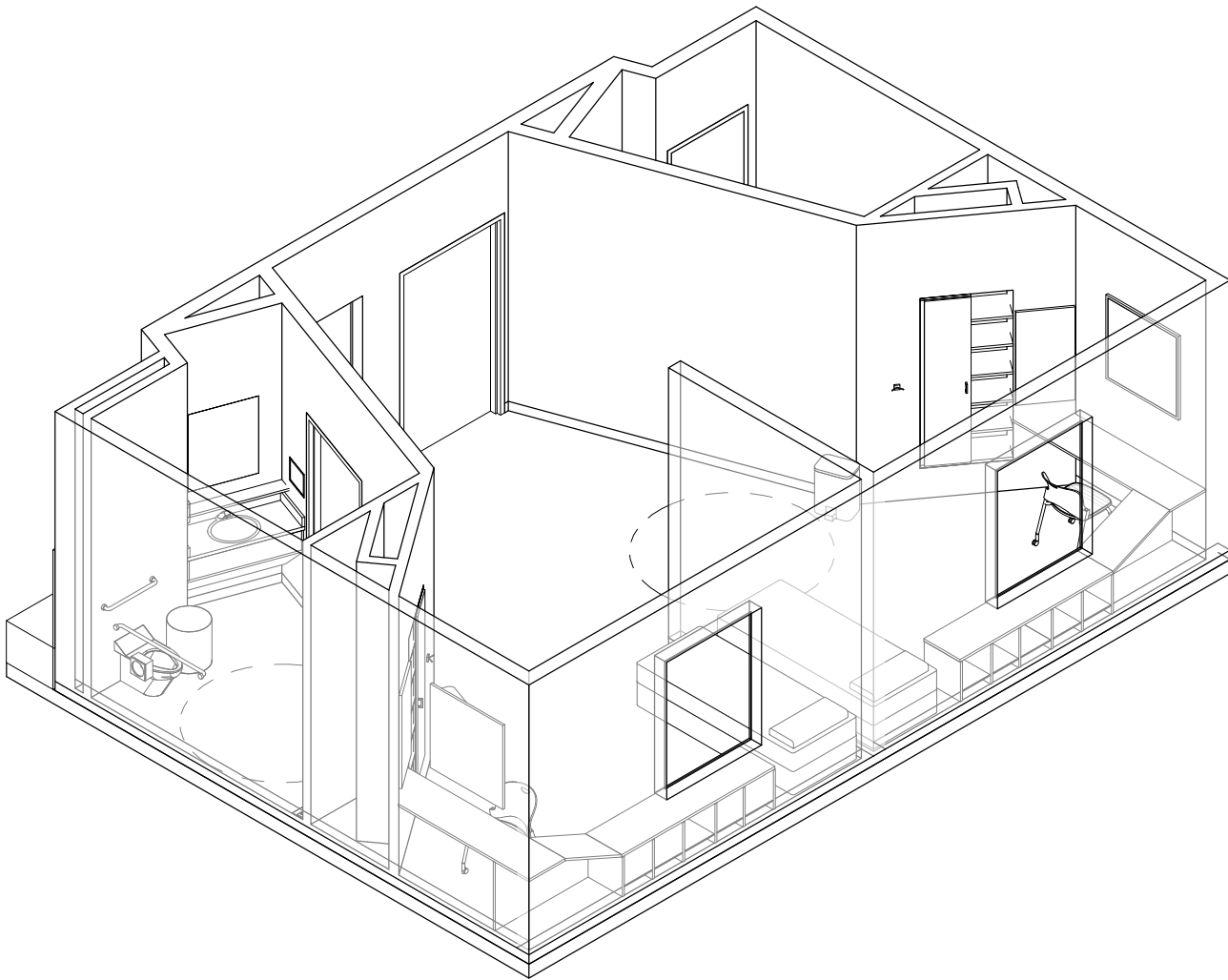
**5.3.6 One-Bed Universal Resident Bedroom (RMH61) With Resident Universal Toilet/  
Shower (SB148) - Equipment List (Continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>P5040</b>	Shower, Single, Hand-Held	1	CC	A complete, barrier-free, single hand-held, personal shower system. The shower system includes: pressure balanced mixing valve with high temperature limit stop; personal hand shower; shower hose; wall supply; and slide bar. For general purpose use throughout the facility in shower stalls.
<b>P9056</b>	Toilet, Floor Mounted, Bariatric	1	CC	Floor mounted toilet. This unit is wall hung with an elongated bowl, top spud flushometer, seat with open front and check hinge, and carrier. Used in restrooms throughout the health care facility.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

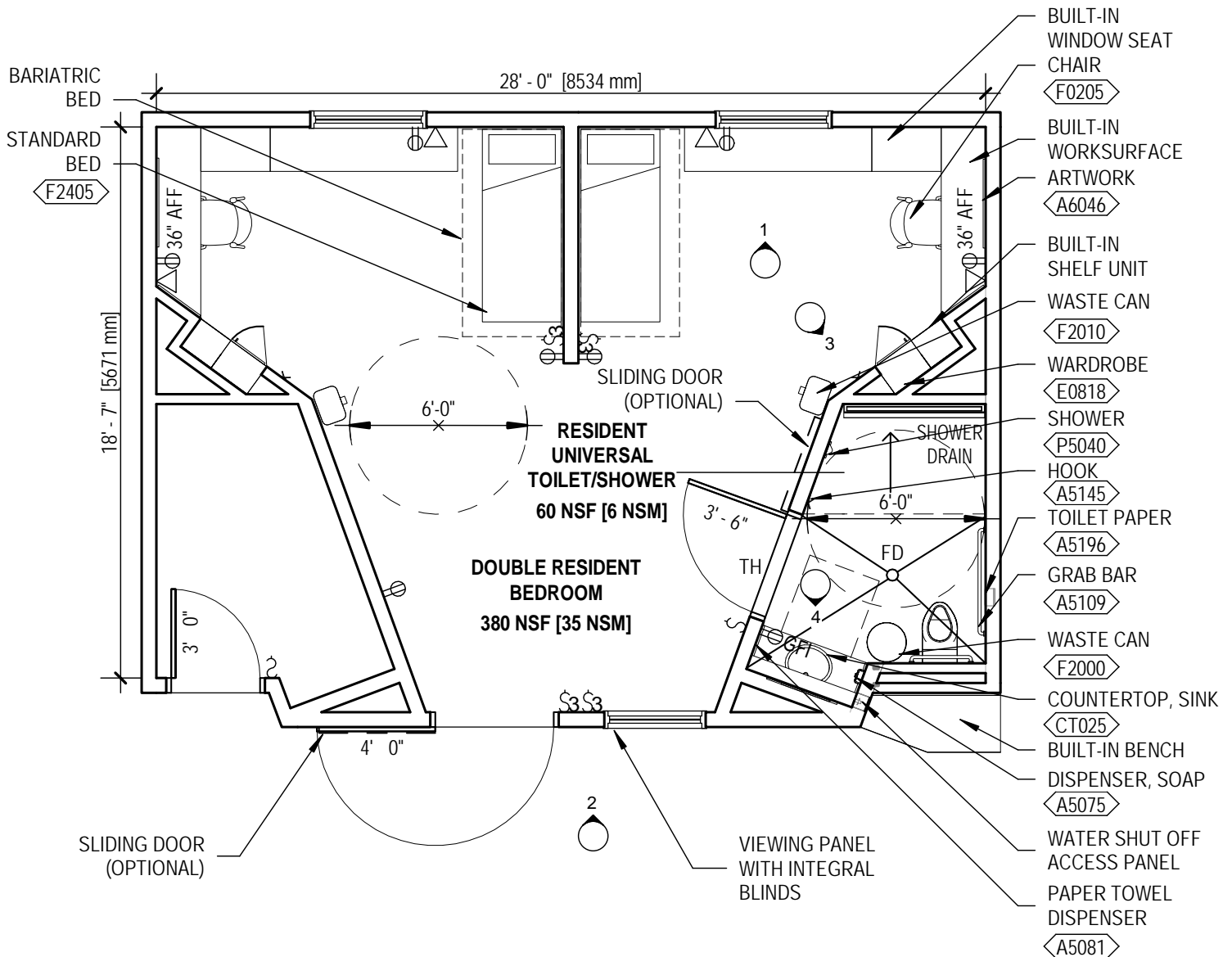
**5.3.7 Two-Bed Universal Resident Bedroom (RMH64) With Toilet/Shower, Resident  
Universal (SB148) - Axonometric**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.7 Two-Bed Universal Resident Bedroom (RMH64) With Toilet/Shower, Resident  
Universal (SB148) - Floor Plan**

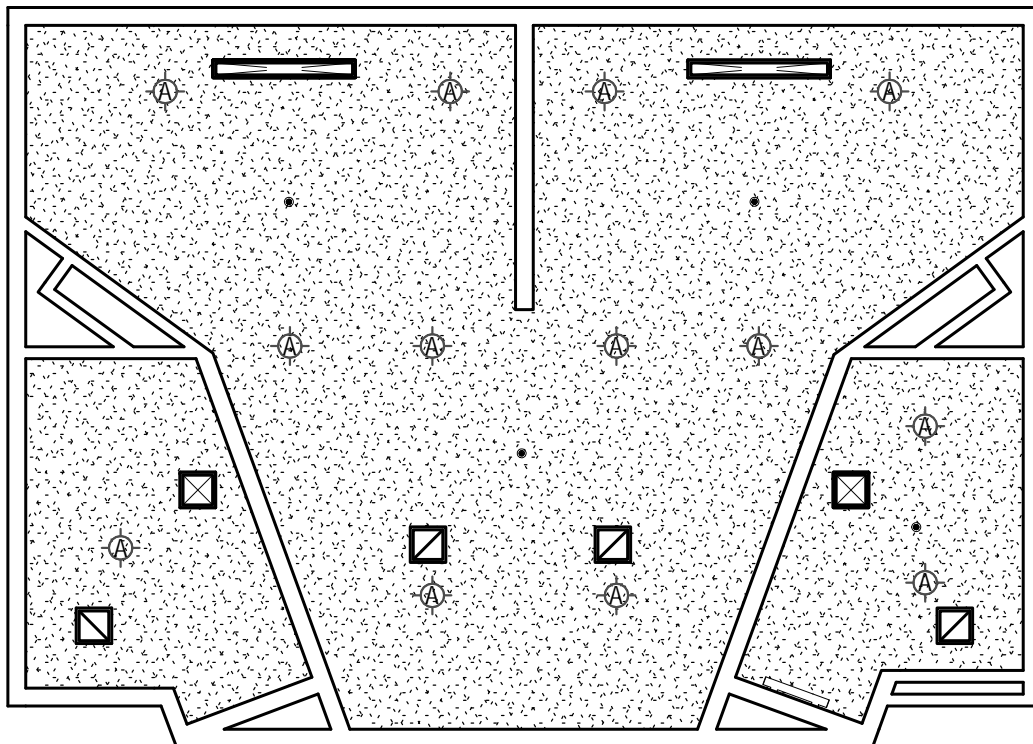
SCALE: 3/16" = 1'-0"



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.7 Two-Bed Universal Resident Bedroom (RMH64) With Toilet/Shower, Resident  
Universal (SB148) - Reflected Ceiling Plan**

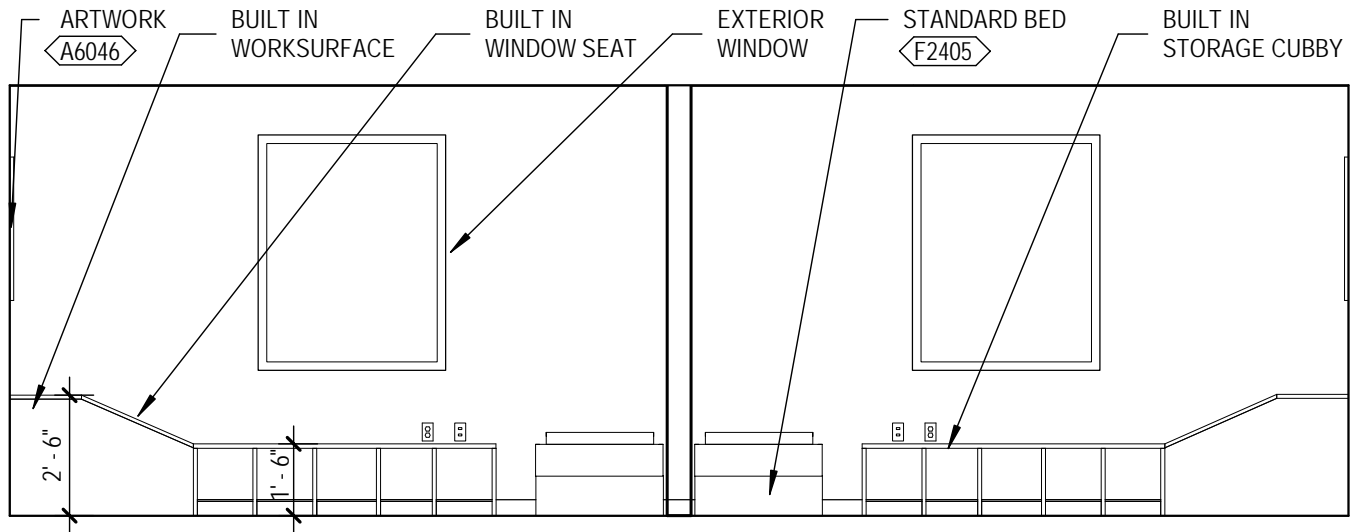
SCALE: 3/16" = 1'-0"



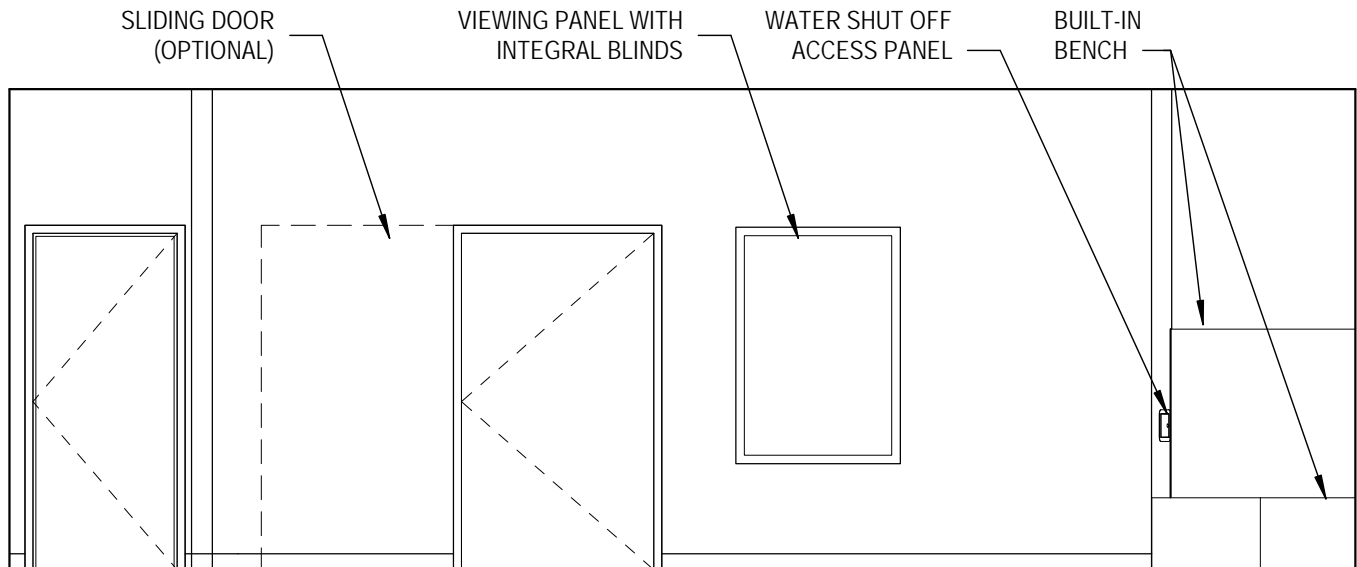
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.7 Two-Bed Universal Resident Bedroom (RMH64) With Toilet/Shower, Resident  
Universal (SB148) - Elevations**

SCALE: 1/4" = 1'-0"



ELEVATION 1

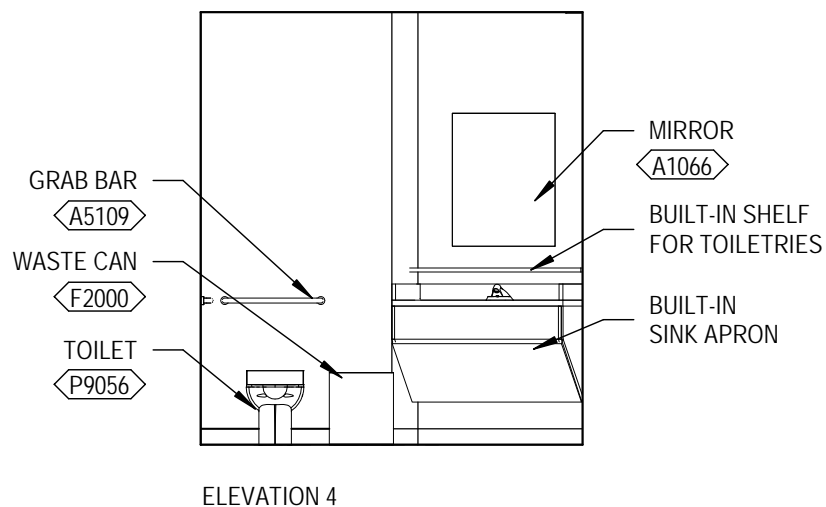
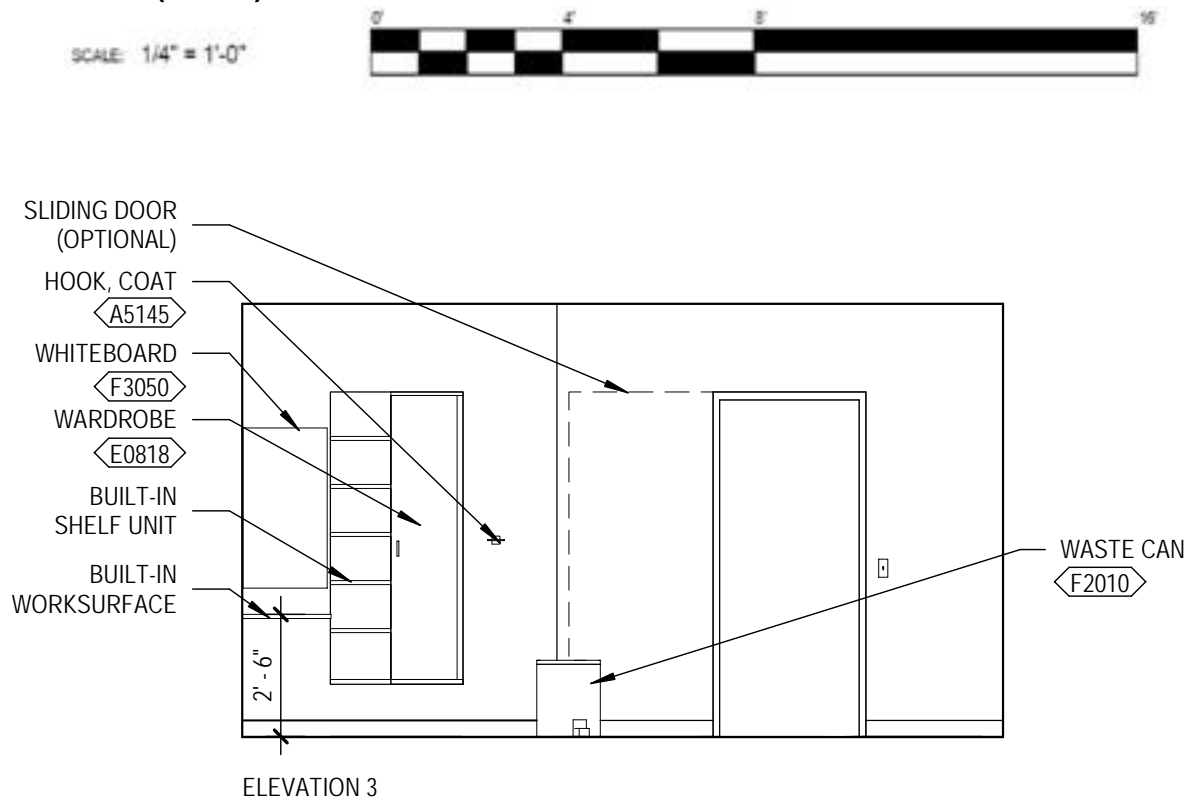


ELEVATION 2



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.7 Two-Bed Universal Resident Bedroom (RMH64) With Toilet/Shower, Resident  
Universal (SB148) - Elevations**





## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.3.7 Two-Bed Universal Resident Bedroom (RMH64) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Gypsum Wallboard with Paint	Data	Yes
Ceiling Height	9'-0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	RB - 4"	Duress Alarm	No
Floor Finish	LVT	Electronic Access	No
Slab Depression	None	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	4'-0" x 7'-0" wood	Public Address System (PAS)	No
Hardware	R1	Security Surveillance Television (SSTV)	No
		Clock	No
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.8 - Patient Room- for lighting design consideration		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.7 Two-Bed Universal Resident Bedroom (RMH64) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.3.7 Resident Universal Toilet/Shower (SB148) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Gypsum Wallboard (SC)	Data	No
Ceiling Height	9'-0" minimum	Telephone	No
Wall Finish	Gypsum Wallboard (SC) with 4' solid surface wainscot	Cable Television	No
Base	PT -4" or RES-4"	Duress Alarm	No
Floor Finish	PT or RES	Electronic Access	No
Slab Depression	None	Intercom	No
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3'-6" x 7'-0" wood	Public Address System (PAS)	No
Hardware	R3	Security Surveillance Television (SSTV)	No
		Clock	No
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.9 - Patient Toilet/Shower- for lighting design consideration		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Critical branch of the EES to serve selected receptacles and equipment		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.7 Resident Universal Toilet/Shower (SB148) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	Yes
Hot Water	Yes
Waste	Yes

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.7 Two-Bed Universal Resident Bedroom (RMH64) With Resident Universal Toilet/  
Shower (SB148) - Equipment List**

JSN	NAME	QTY	ACQ/INS	DESCRIPTION
<b>RMH64 - TWO-BED UNIVERSAL RESIDENT BEDROOM</b>				
<b>A6046</b>	Artwork, Decorative, With Frame	2	VV	This JSN is to be used for determining and defining location of decorative artwork.
<b>E0818</b>	Cabinet, Patient Room, Wardrobe	2	VV	A module of a wardrobe and cabinets for use in patient bedrooms. The unit is custom configured and will have a swing door wardrobe, a desk and various storage units with overhead cabinet and shelf. The unit will be approximately 18"W x 14"D x 60"H. The wardrobe will have a top shelf with a coat rod. The module price and dimensions are for items identified in the PDF document. Many different configurations are available. Overhead lights may also be added to the module
<b>F2010</b>	Basket, Wastepaper, Step-On	2	VV	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.
<b>M3025</b>	Mattress, Pressure Reduction, Bed	2	VV	Pressure reduction mattress. Consists of polyurethane foam and air or gel cylinders to spread pressure of patient's body weight across a larger surface area. Some models have electric pumps for inflation and pressure adjustment; other manufacturers score the foam to distribute pressure. Used to prevent bed sores from developing and promote the healing of ulcers. Unit also relieves patient stress by reducing the amount of required patient turning. All-gel and all-foam mattresses as well as comparably therapeutic low air loss mattress systems are available.
<b>A5145</b>	Hook, Garment, Double, SS, Surface Mounted	2	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. For general purpose use throughout the facility to hang various items of apparel.
<b>F2405</b>	Bed, Standard	2	VV	Single bed, approximately 18" high X 83" wide X 40" deep. Bed is used for non-inpatient stay activities (testing, visitor/staff sleeping).
<b>F3050</b>	Board Patient Information	2	CC	Wall mounted Patient Message board. Features space saving design, marker and eraser storage slots on the side, post form end panels and 3mm edges.
<b>F0205</b>	Chair, Interiors, Patient	2	VV	High back patient chair. 18" seat height and removable seat covers. Maximum weight capacity 300 lbs. List price is for Grade 1 fabric.
<b>SB148 - TOILET / SHOWER, RESIDENT UNIVERSAL</b>				
<b>A5075</b>	Dispenser, Soap, Disposable	1	VV	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.7 Two-Bed Universal Resident Bedroom (RMH64) With Resident Universal Toilet/  
Shower (SB148) - Equipment List (Continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1066</b>	Mirror, Float Glass, With SS Frame	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. For mounting above single wall mounted lavatories located in toilet areas, Doctors examination offices, etc. May also be used above double lavatories, either wall or countertop mounted, found in restroom areas.
<b>A5082</b>	Dispenser, Paper Towel, Sensor, Hands Free	1	CC	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are place in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.
<b>A5196</b>	Dispenser, Toilet Tissue, Psychiatric	1	CC	A recessed single roll toilet tissue holder for use in psychiatric, drug abuse or alcohol rehab toilets.
<b>A5109</b>	Grab Bar, 1-1/4" Dia., SS, 2 Wall, W/C Accessible	2	CC	A 1-1/4" diameter, satin finish stainless steel, peened gripping surface, 2 wall toilet stall/ room, grab bar with concealed mounting flanges. Snap over flanges are provided to conceal mounting screws. A selection of mounting kits and concealed anchor devices are available from the manufacturers for different types of installations. Grab bar shall comply with barrier-free accessibility guidelines for structural strength. For typical water closet applications in toilet stalls and rooms where ADA (American's With Disabilities Act) requirements must be met.
<b>A5145</b>	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. For general purpose use throughout the facility to hang various items of apparel.
<b>F2000</b>	Basket, Wastepaper, Round, Metal	1	VV	Round wastepaper basket, approximately 18" high X 16" diameter. This metal unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations.
<b>CT025</b>	Countertop, Solid Surface with Sink Combination	1	CC	A solid, nonporous countertop approximately 36"W x 22"D with a undercounter sink combination. The countertop is an acrylic-based solid surface product with a standard thickness of 1", and a 4" butt backsplash/curb. Surfaces will be easy to clean and maintain. Also referred to as a work surface or work top with sink. Available in a choice of colors, depths and sink shapes. Used for various applications in patient rooms, restrooms and throughout the facility. Usually a part of a casework interior design program. Unit does not include the drain and faucet..



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

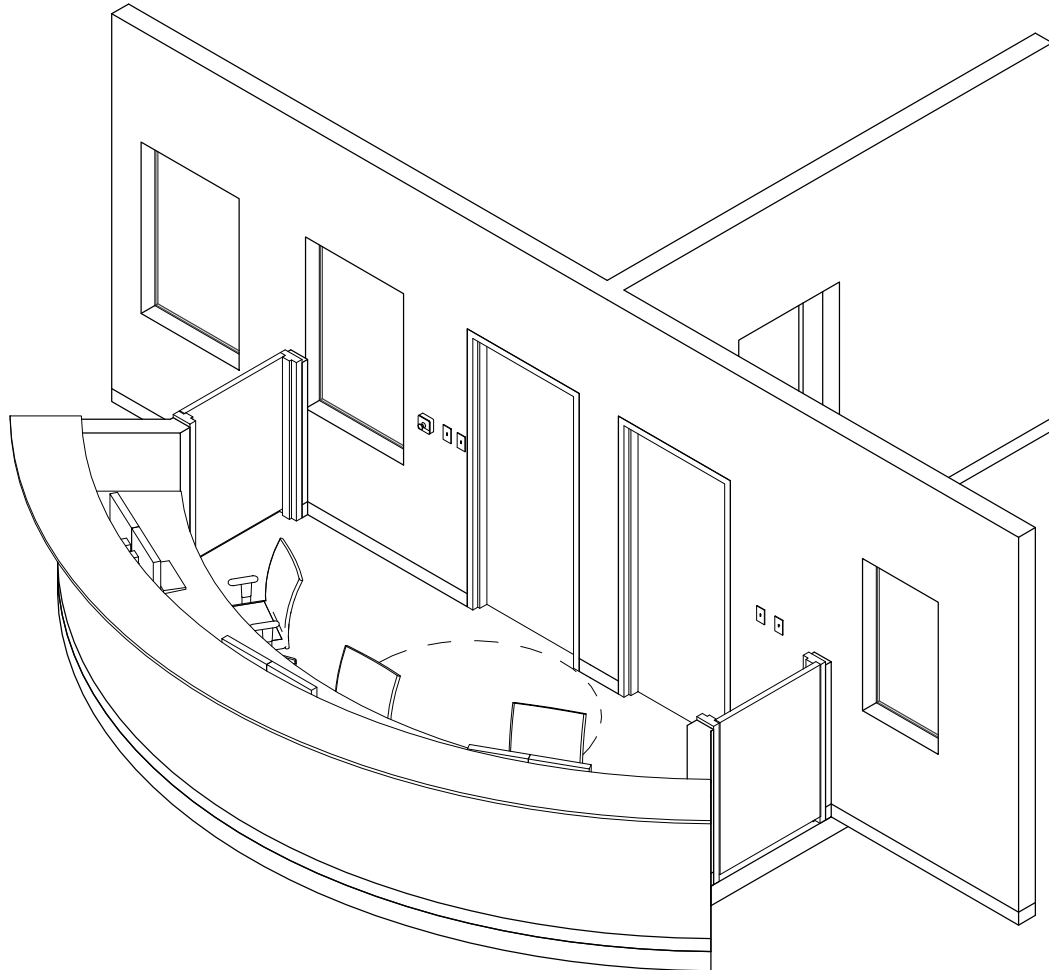
**5.3.7 Two-Bed Universal Resident Bedroom (RMH64) With Resident Universal Toilet/  
Shower (SB148) - Equipment List (Continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>P5040</b>	Shower, Single, Hand-Held	1	CC	A complete, barrier-free, single hand-held, personal shower system. The shower system includes: pressure balanced mixing valve with high temperature limit stop; personal hand shower; shower hose; wall supply; and slide bar. For general purpose use throughout the facility in shower stalls.
<b>P9056</b>	Toilet, Floor Mounted, Bariatric	1	CC	Floor mounted toilet. This unit is wall hung with an elongated bowl, top spud flushometer, seat with open front and check hinge, and carrier. Used in restrooms throughout the health care facility.



**FA5 Resident Care Unit Support Area**

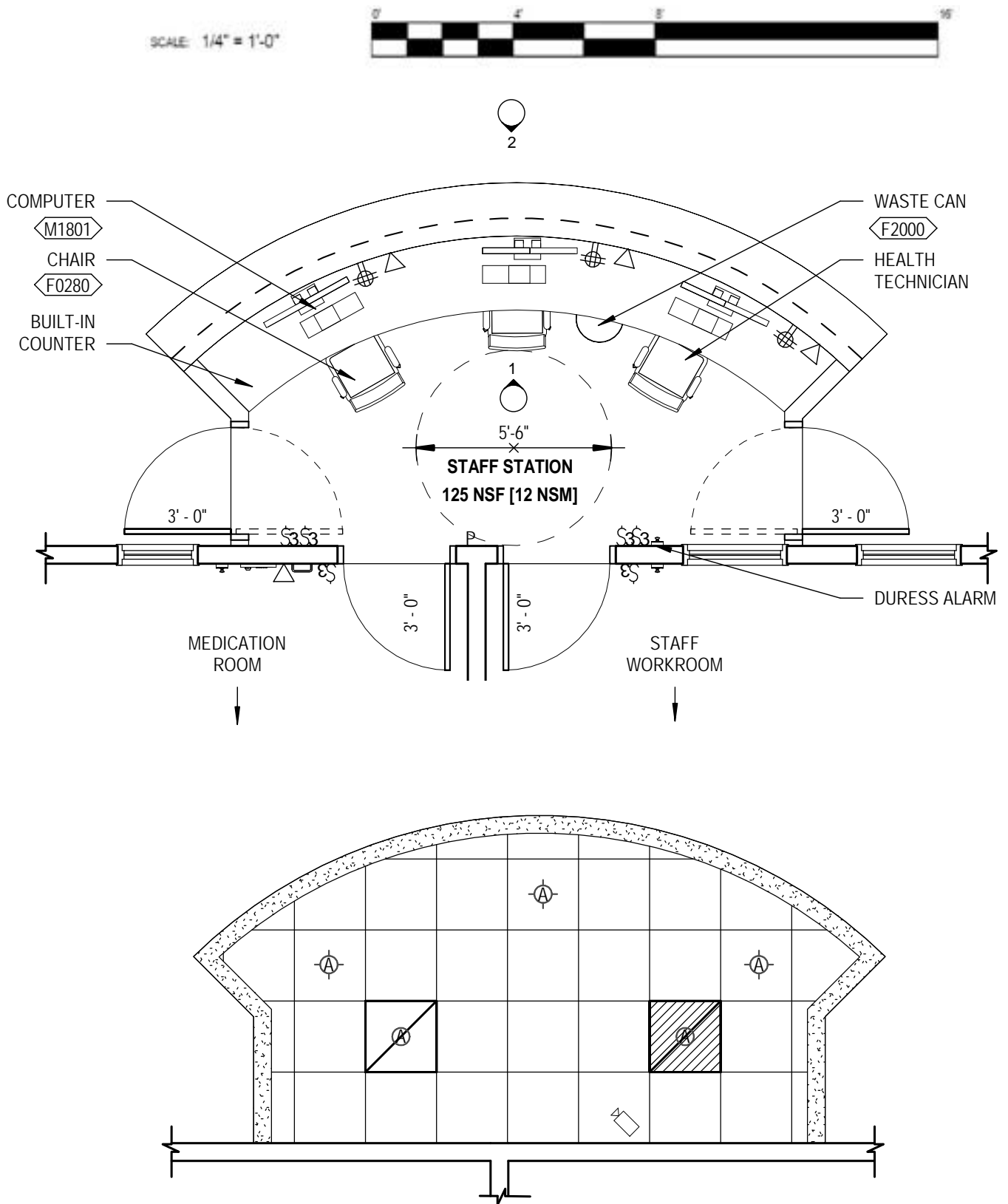
**5.3.8 Staff Station (RMH71) - Axonometric**





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

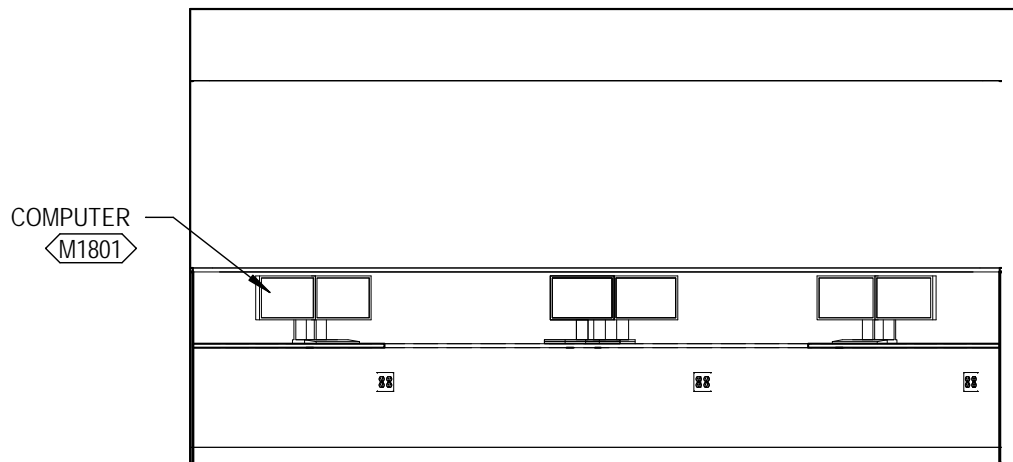
**5.3.8 Staff Station (RMH71) - Floor and Reflected Ceiling Plan**



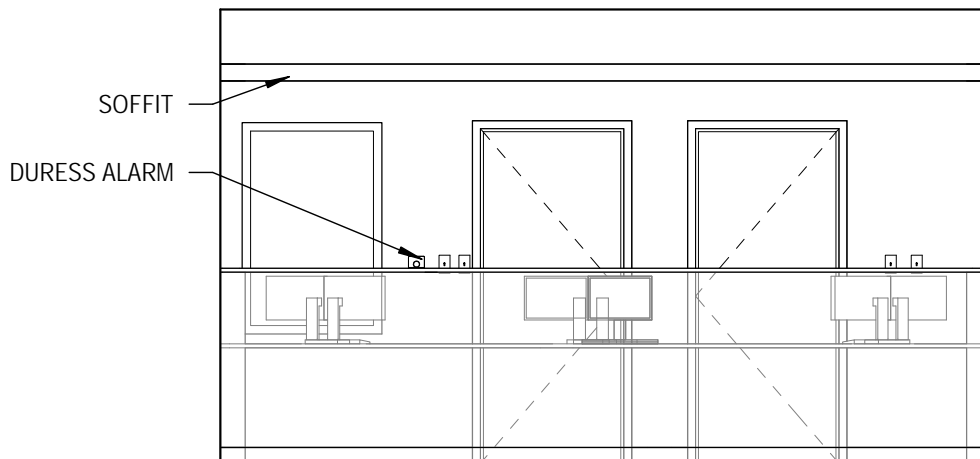
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.8 Staff Station (RMH71) - Elevations**

SCALE: 1/4" = 1'-0"



ELEVATION 1



ELEVATION 2



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.8 Staff Station (RMH71) - Room Data Sheet**

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustical Ceiling Tile	Data	Yes
Ceiling Height	8'-6" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	WSF-4"	Duress Alarm	Yes
Floor Finish	WSF	Electronic Access	Yes
Slab Depression	None	Intercom	No
Sound Protection	STC 35	Motion Intrusion Detection (MID)	No
Doors	3'-0" x 7'-0" wood	Public Address System (PAS)	No
Hardware	3G	Security Surveillance Television (SSTV)	Yes
		Clock	Yes
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.4.6 - Nurse Station - for lighting design consideration.		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the EES to serve selected receptacles and equipment.		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.8 Staff Station (RMH71) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9



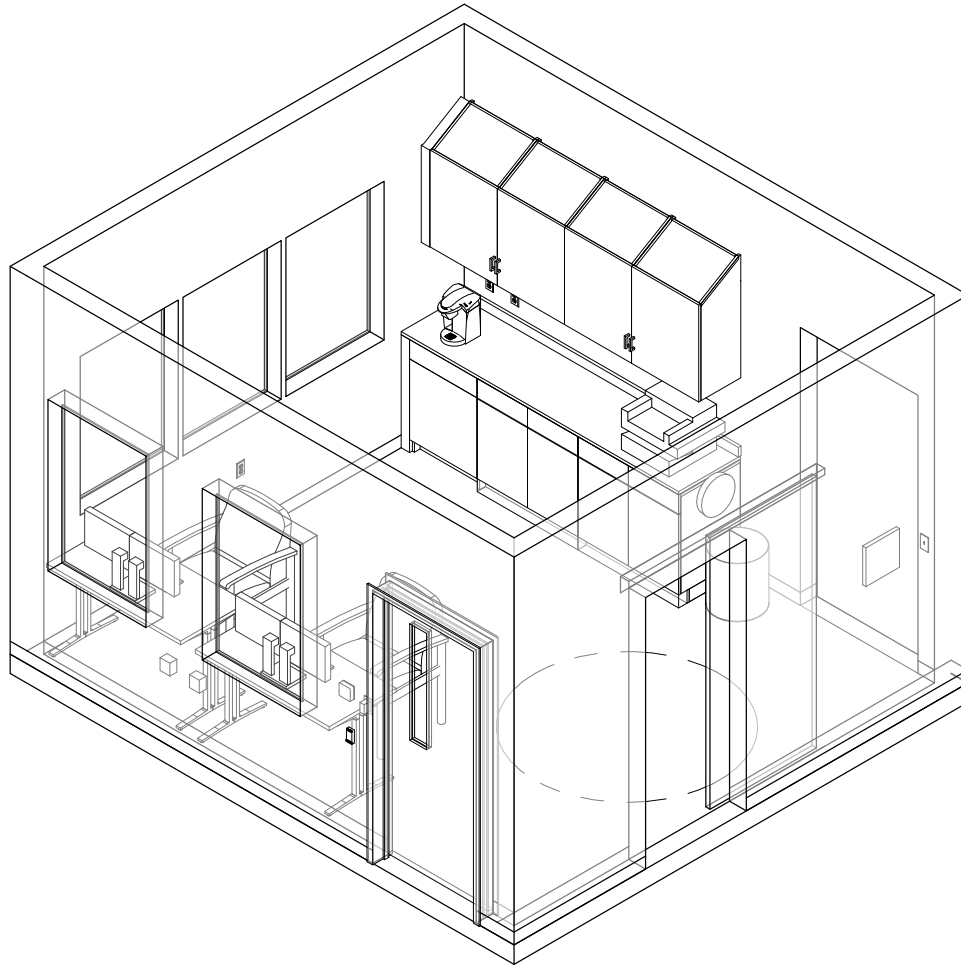
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.8 Staff Station (RMH71) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	3	CC	Telecommunication outlet location.
<b>F0280</b>	Chair, Swivel, Low Back	3	VV	Low back contemporary swivel chair, 37" high X 25" wide X 31" deep with a five (5) caster swivel base, arms and foam padded seat and back upholstered with either woven textile fabric or vinyl.
<b>F2000</b>	Basket, Wastepaper, Round, Metal	1	VV	Round wastepaper basket, approximately 18" high X 16" diameter. This metal unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations.
<b>M1801</b>	Computer, Microprocessing, w/Flat Panel Monitor	3	VV	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROMDVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.

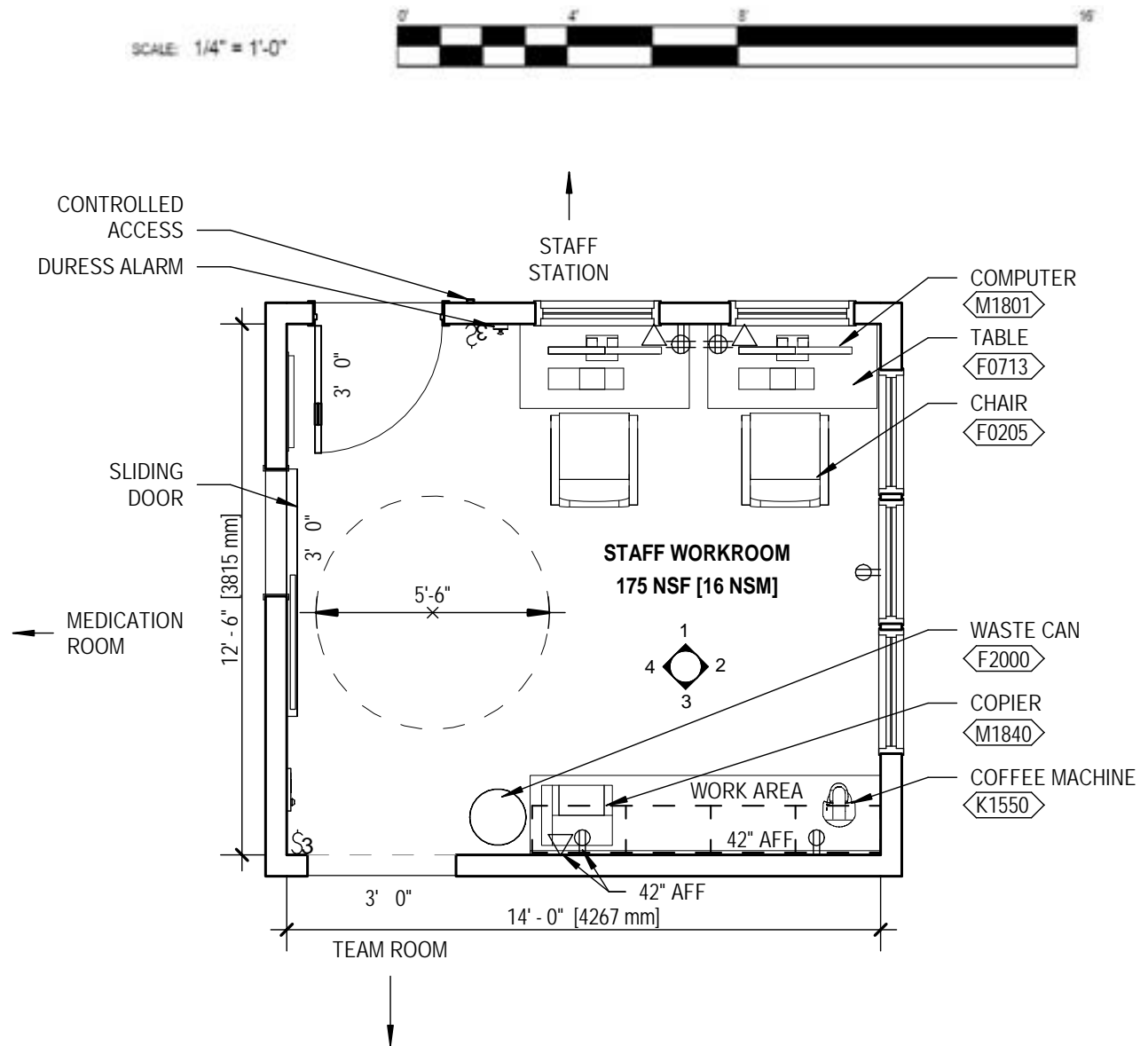


**5.3.9 Staff Workroom (SC231) - Axonometric**



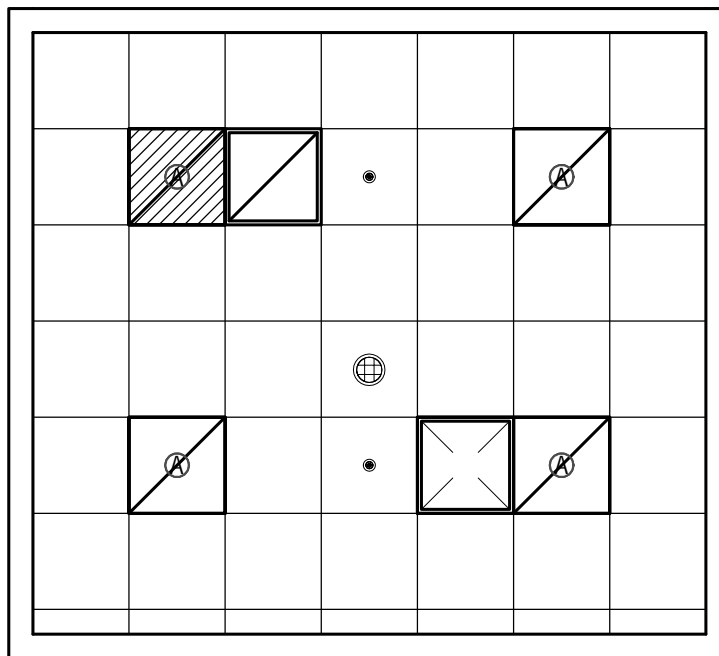
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.9 Staff Workroom (SC231) - Floor Plan**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

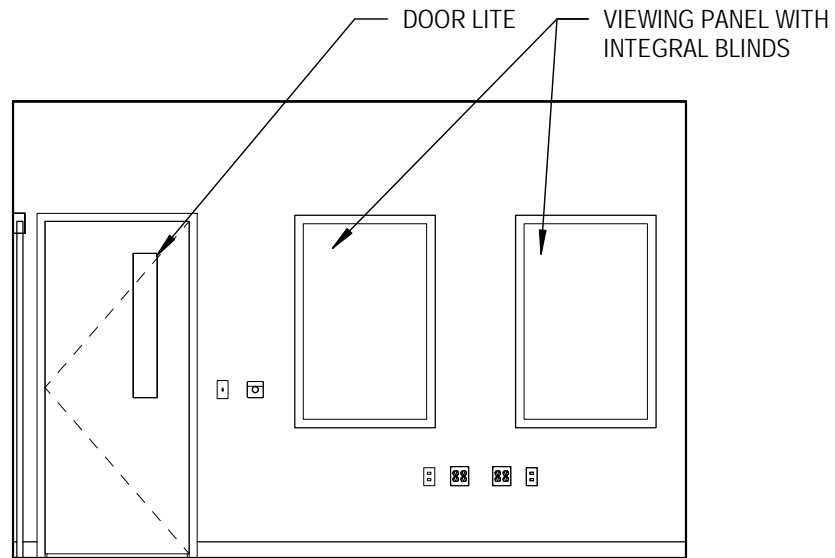
**5.3.9 Staff Workroom (SC231) - Reflected Ceiling Plan**



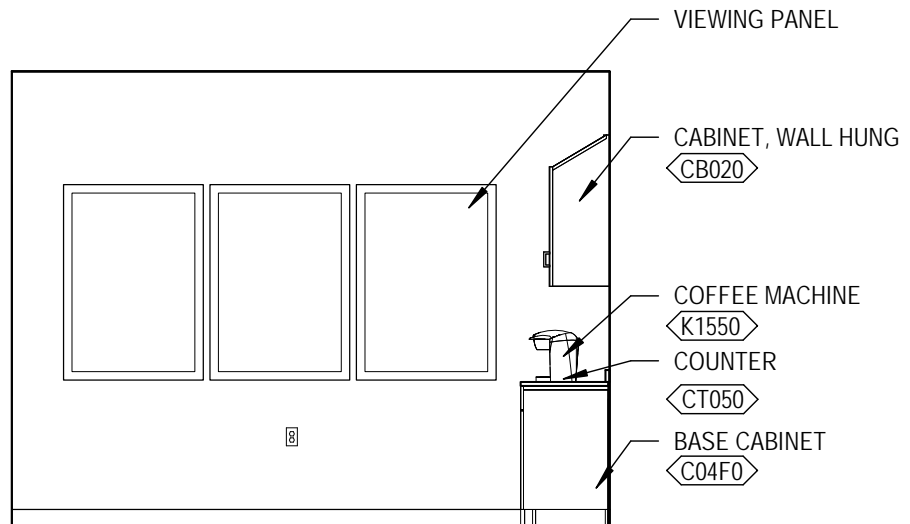


**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.9 Staff Workroom (SC231) - Elevations**



ELEVATION 1

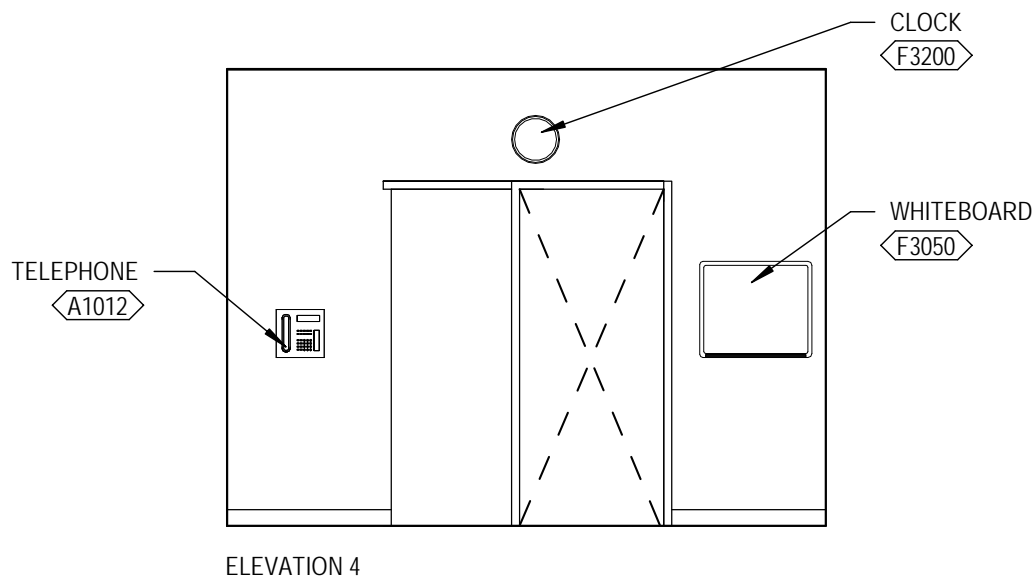
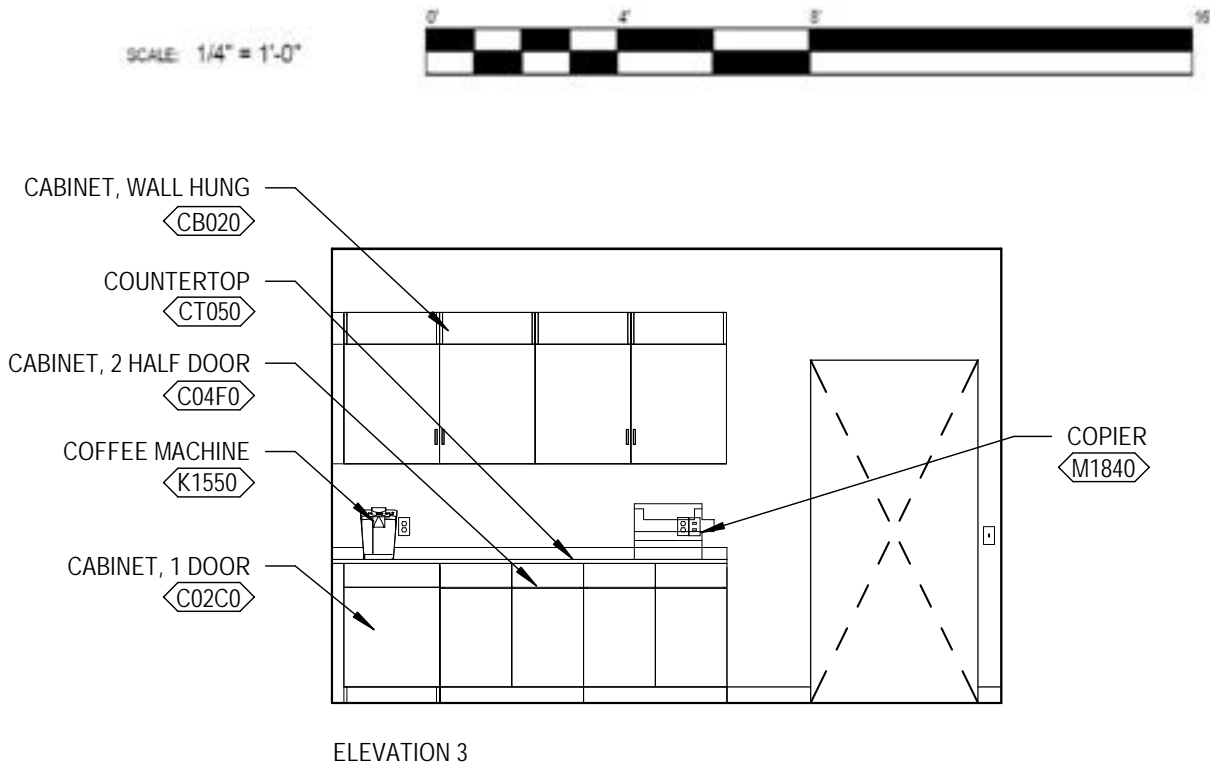


ELEVATION 2



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.9 Staff Workroom (SC231) - Elevations**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.9 Staff Workroom (SC231) - Room Data Sheet**

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustical Ceiling Tile	Data	Yes
Ceiling Height	8'-6" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	WSF-4"	Duress Alarm	No
Floor Finish	WSF	Electronic Access	Yes
Slab Depression	None	Intercom	Yes
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3' - 0" x 7' - 0" wood with tempered glass view panel	Public Address System (PAS)	Yes
	3'-0"x7'-0" wood sliding door	Security Surveillance Television (SSTV)	No
Hardware	3G (swing door)	Clock	Yes
LIGHTING		HVAC	
Refer to The IESNA Lighting Handbook, Chapter 10 – Lighting Design Guide and Chapter 11 for lighting design considerations.		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment.		
	Critical branch of the EES to serve selected receptacles and equipment.		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.9 Staff Workroom (SC231) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.9 Staff Workroom (SC231) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	5	CC	Telecommunication outlet location.
<b>A1012</b>	Telephone, Wall Mounted, 1 Line	1	CC	Telephone, Wall Mounted, 1 Line.
<b>F0205</b>	Chair, Side With Arms	2	VV	Upholstered side chair, 32" high X 21" wide X 23" deep with arms, padded seats and padded backs. Seat height is a minimum of 17". Available with or without sled base.
<b>F0713</b>	Table, Adjustable	2	VV	Office table, adjustable height, 48"W x 24"D. May be used as either a four (4) to six (6) person conference table or as an extra work surface area..
<b>F2000</b>	Basket, Wastepaper, Round, Metal	1	VV	Round wastepaper basket, approximately 18" high X 16" diameter. This metal unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations.
<b>F3050</b>	Whiteboard, Dry Erase	1	CC	Whiteboard unit, approximately 36" H x 48"W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
<b>F3200</b>	Clock, Analog, 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).
<b>M1801</b>	Computer, Microprocessing, w/Flat Panel Monitor	2	VV	Desk top microprocessing computer. The unit shall consist of a central processing mini tower, flat panel monitor, keyboard, mouse and speakers. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROMDVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
<b>K1550</b>	Coffee Maker, Single Cup, Plumbed	1	CC	Single cup coffee maker. Direct line plumbed for continuous use. Brews 4, 6, 8, 10 and 12 oz. cup sizes. Features removable water reservoir, 3 language options (English is standard), removable drip tray, LCD interactive
<b>C04F0</b>	Cabinet, U/C/B, 1 Shelf, 2 Half DR, 2 DO, 36x36x22	2	CC	Standing height under counter base cabinet with an adjustable shelf and two half width drawers above solid hinged doors. Also referred to as a combination cabinet or a drawer and cupboard cabinet. For general purpose use throughout the facility.

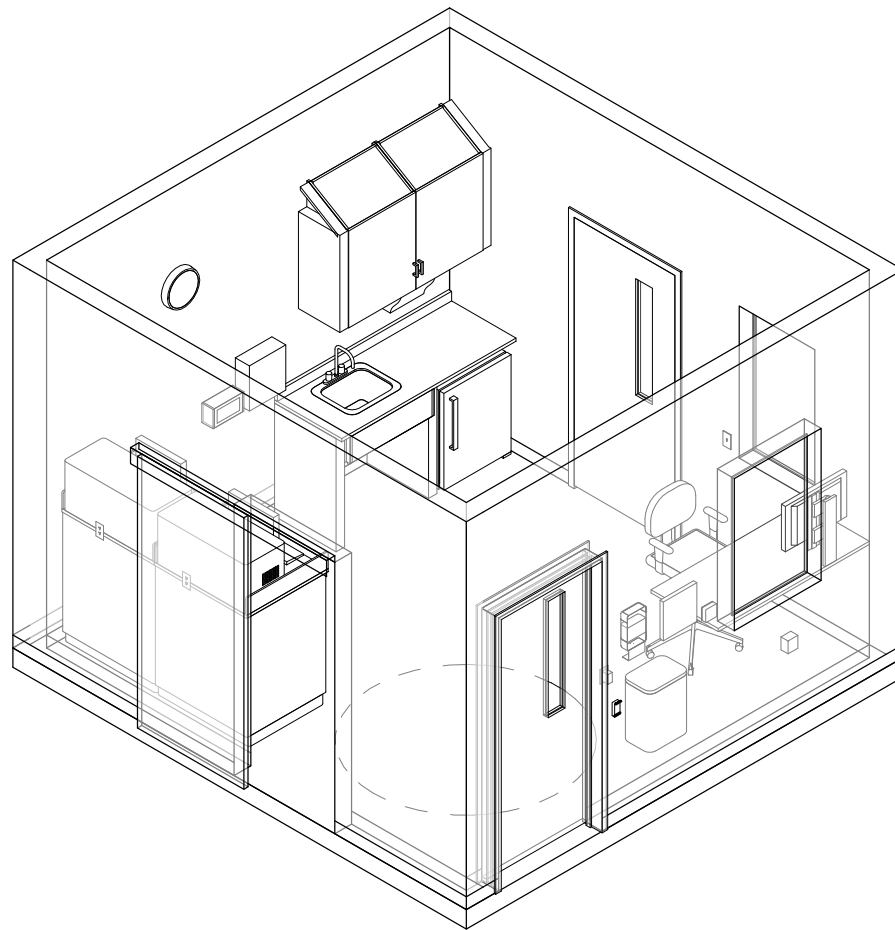
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.9 Staff Workroom (SC231) - Equipment List (Continued)**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>C02C0</b>	Cabinet, U/C/B, 1 Shelf, 1 Drawer, 1 DO, 36x24x22	1	CC	Standing height under counter base cabinet with an adjustable shelf and a full width drawer above a solid right or left-hinged door (appropriate door hinge configuration to be indicated on equipment elevation drawings). Also referred to as a combination cabinet or a drawer and cupboard cabinet. For general purpose use throughout the facility.
<b>CB020</b>	Cabinet, W/H, 2 Shelf, 1 DO, Sloping Top, 38x24x13	4	CC	Wall hung cabinet with two adjustable shelves, solid right or left-hinged door (appropriate door hinge configuration to be indicated on equipment elevation drawings), and sloping top. Also referred to as a solid hinged single door case. For general purpose use throughout the facility.
<b>CT050</b>	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. Pricing based upon a 24" depth.
<b>M1840</b>	Printer/Copier/Fax Combination	1	VV	Multifunctional printer, fax, scanner and copier (PFC) all-in-one machine.

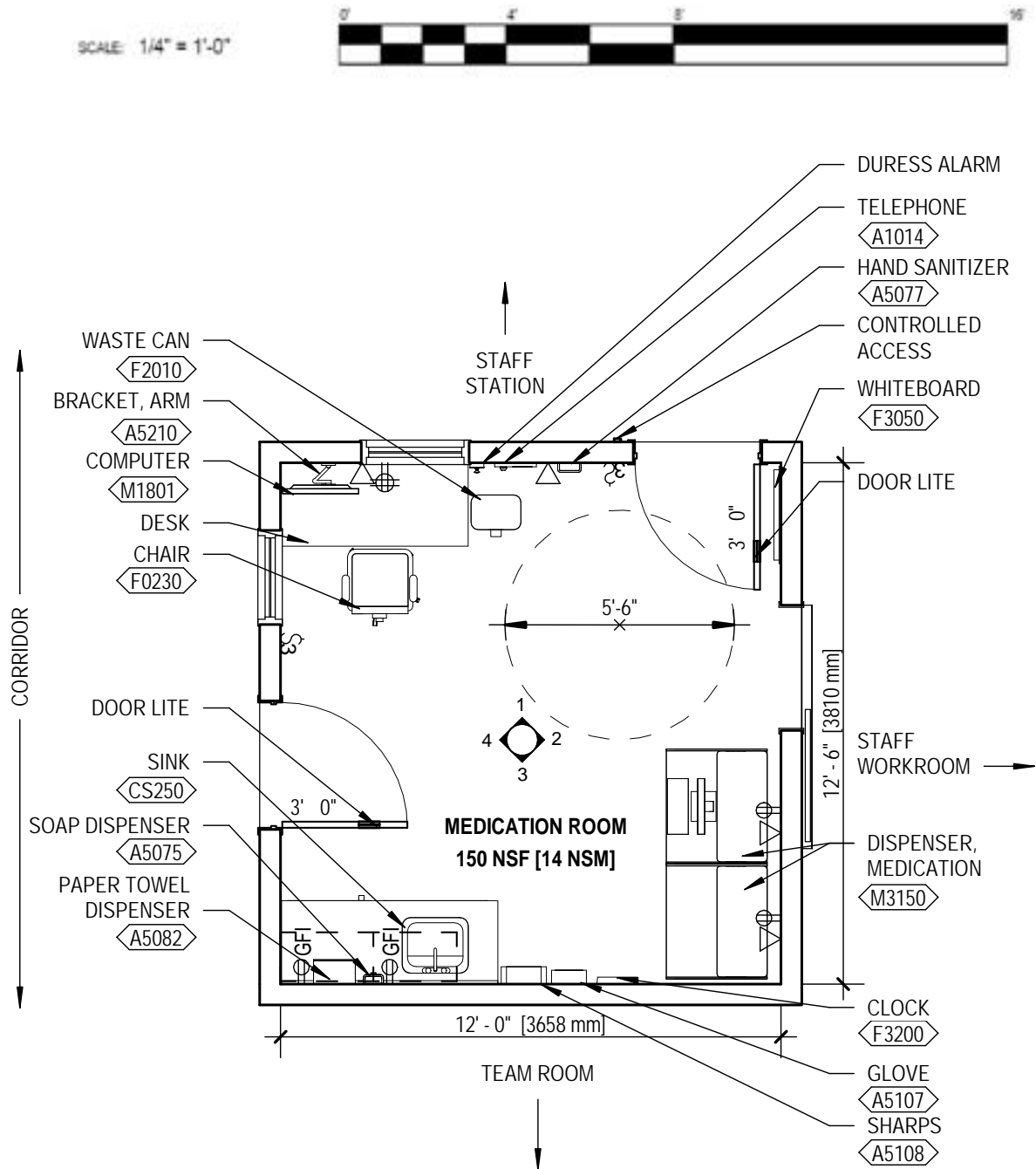


**5.3.10 Medication Room (SV583) - Axonometric**



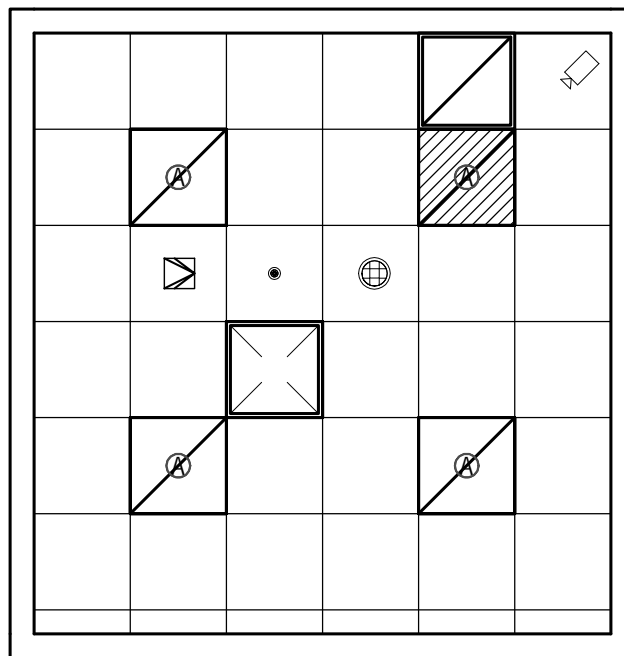
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.10 Medication Room (SV583) - Floor Plan**



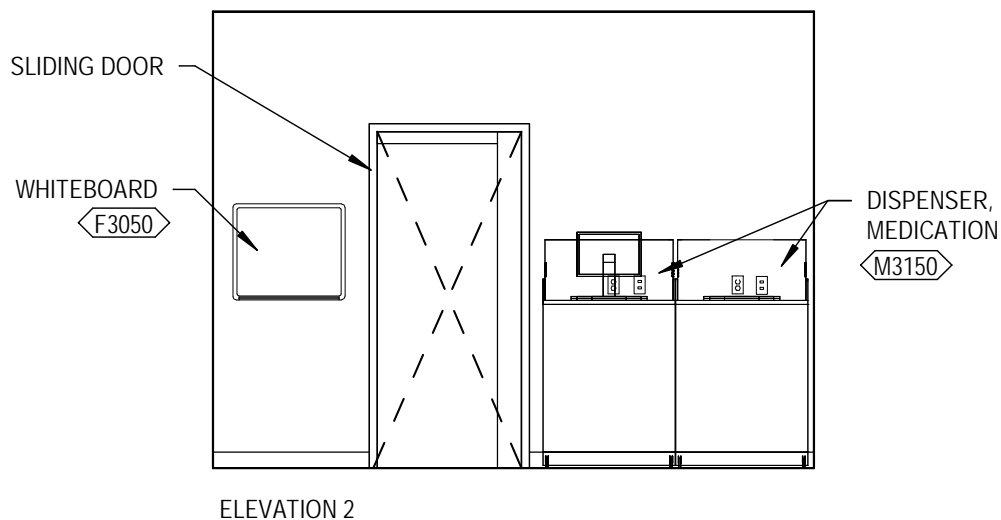
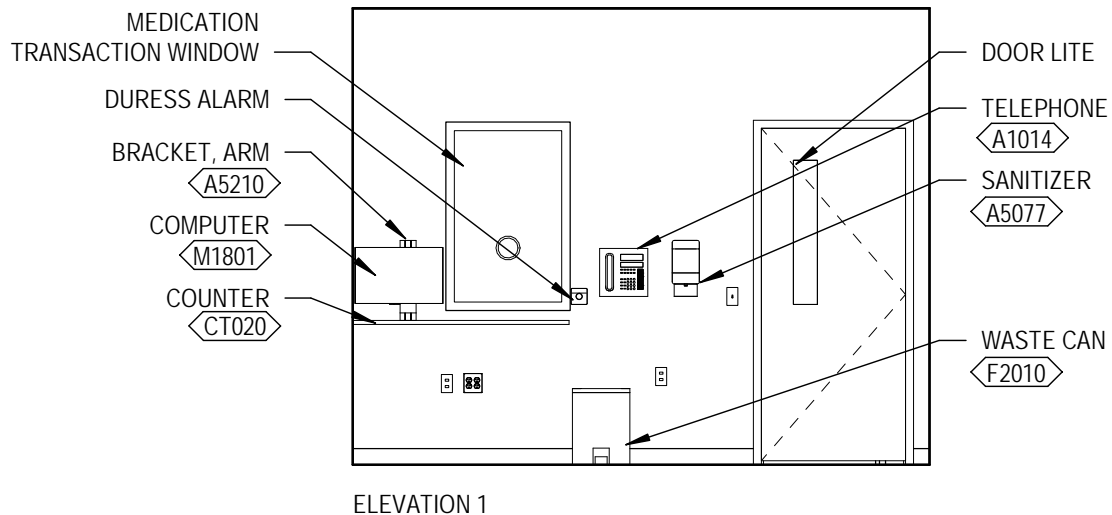


### 5.3.10 Medication Room (SV583) - Reflected Ceiling Plan



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

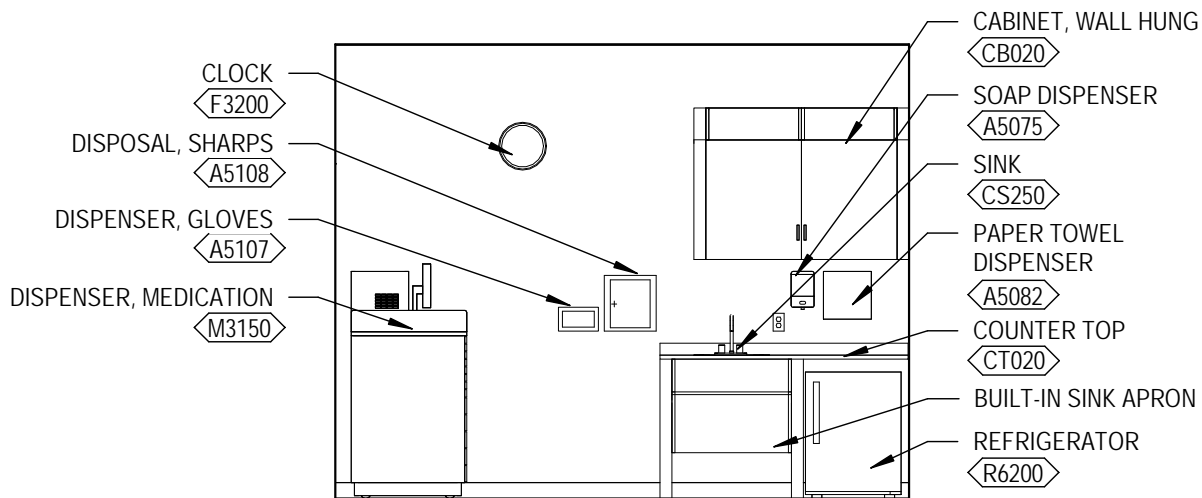
**5.3.10 Medication Room (SV583) - Elevations**



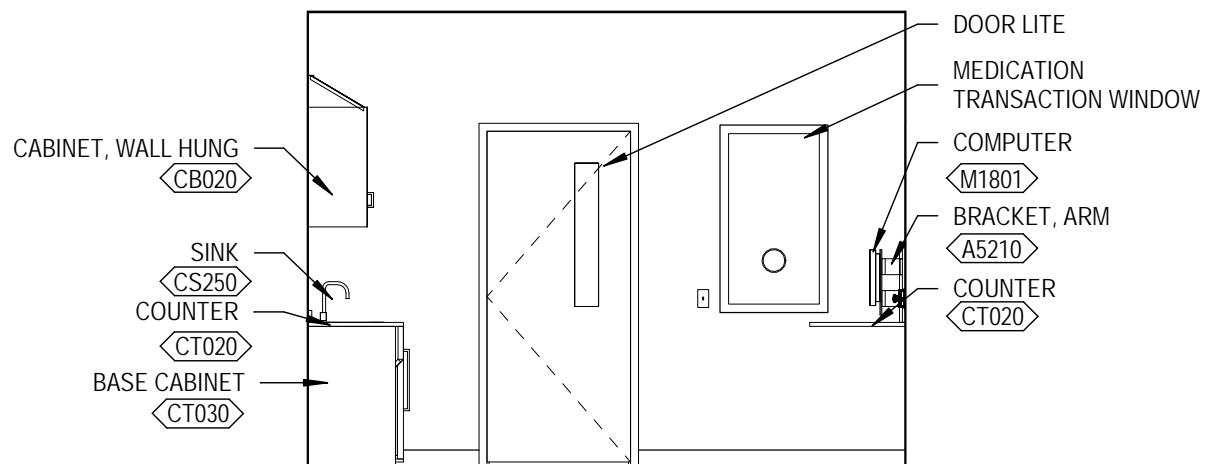
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.10 Medication Room (SV583) - Elevations**

SCALE: 1/4" = 1'-0"



ELEVATION 3



ELEVATION 4



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.3.10 Medication Room (SV583) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustical Ceiling Tile	Data	Yes
Ceiling Height	8' - 6" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	WSF-4"	Duress Alarm	Yes
Floor Finish	WSF	Electronic Access	Yes
Slab Depression	None	Intercom	Yes
Sound Protection	STC 45	Motion Intrusion Detection (MID)	Yes
Doors	3' - 0" x 7' - 0" wood with tempered glass view panel (both doors)	Public Address System (PAS)	Yes
Hardware	SH-3D (both doors)	Security Surveillance Television (SSTV)	Yes
		Clock	Yes
LIGHTING		HVAC	
Refer to the VA Lighting Design Manual section 4.3.3 - Medication Room- for lighting design consideration.		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the EES to serve selected receptacles and equipment		



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.10 Medication Room (SV583) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	Yes
Hot Water	Yes
Waste	Yes

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.10 Medication Room (SV583) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	2	CC	Telecommunication outlet location.
<b>A1014</b>	Telephone, Wall, Digital, Single Line	1	CC	Telephone, wall mounted, 1 line, with speaker.
<b>A5075</b>	Dispenser, Soap, Disposable	1	VV	Disposable soap dispenser. One-handed dispensing operation. Designed to accommodate disposable soap cartridge and valve.
<b>A5077</b>	Dispenser, Hand Sanitizer, Wall Mount	1	VV	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
<b>A5082</b>	Dispenser, Paper Towel, Sensor, Hands Free	1	CC	A surface mounted, sensor activated, automatic, roll paper towel dispenser. The unit dispenses a paper towel automatically only when hands are placed in position below the dispenser for maximum sanitation and hygiene. May include adjustable settings for sheet length, time delay, and sensor range. Unit is battery operated or with optional AC power adapter.
<b>A5107</b>	Dispenser, Glove, Surgical/Examination, Wall Mntd	1	VV	Examination glove dispenser box for wall mounting. Fabricated of either cold rolled steel with a white baked enamel finish, plastic or acrylic. Provided with wall bracket to facilitate mounting and demounting.
<b>A5108</b>	Waste Disposal Unit, Sharps	1	VV	A container 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.
<b>CB020</b>	Cabinet, W/H, 2 Shelf, 1 DO, Sloping Top, 38x24x13	2	CC	Wall hung cabinet with two adjustable shelves, solid right or left-hinged door (appropriate door hinge configuration to be indicated on equipment elevation drawings), and sloping top. Also referred to as a solid hinged single door case. For general purpose use throughout the facility..
<b>CS250</b>	Sink, SS, Single Compartment, 6x12x9 ID	1	CC	Single compartment stainless steel sink, drop-in, self-rimming, ledge-type, connected with a drain and provided with a mixing faucet. It shall also be provided with pre-punched fixture holes on 4" center, integral back ledge to accommodate deck-mounted fixtures, brushed/polished interior and top surfaces, and sound deadened. Recommended for use in suspended or U/C/B sink cabinets having a high plastic laminate or Chemsurf laminate countertop/work surface. For general purpose use throughout the facility.
<b>CT020</b>	Countertop, Solid Surface	1	CC	A solid, nonporous countertop with a smooth seamless appearance. Easy to clean and maintain and with proper cleaning does not support the growth of mold. An acrylic-based solid surface product. Standard thickness of 1", and a 4" butt backsplash/curb. Also referred to as a work surface or work top. Available in a choice of colors and depths. Used in lab and other hospital areas requiring optimum physical and chemical resisting properties.



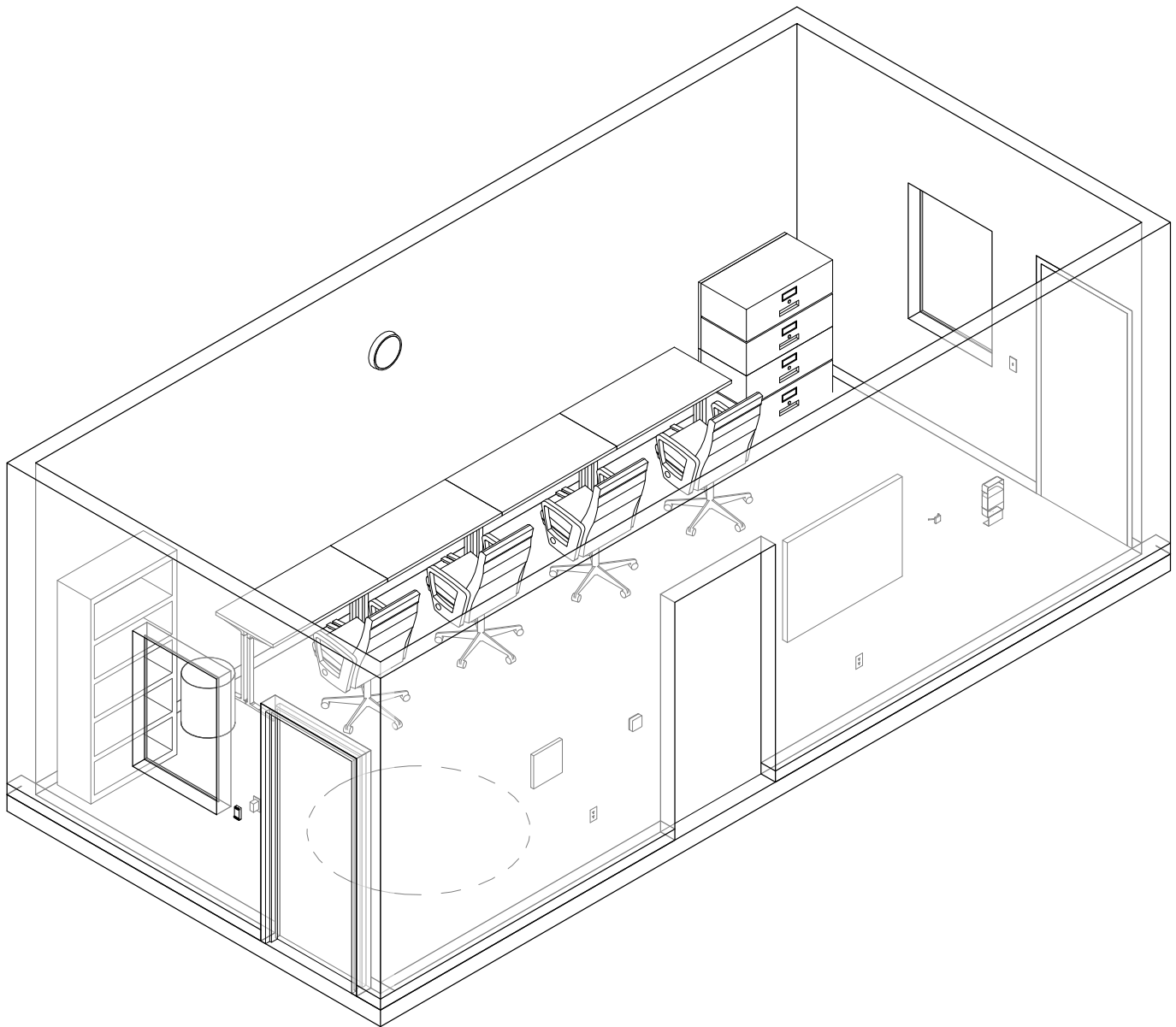
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.10 Medication Room (SV583) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>F0230</b>	Chair, Hightop	1	VV	Drafting chair approximately 47" high X 20" wide X 20" deep with rotary stool and a 5 (five) star base with casters. Padded seat and back. Foot ring adjusts with chair.
<b>F2010</b>	Basket, Wastepaper, Step-On	1	VV	"Step-on" wastepaper basket with inner liner and foot pedal activated flip top.
<b>F3050</b>	Whiteboard, Dry Erase	1	CC	Whiteboard unit, approximately 36"H x 48"W consisting of a white porcelain enamel writing surface with an attached chalk tray. Magnetic surface available. Image can be easily removed with a standard chalkboard eraser. For use with water color pens. Unit is ready to hang.
<b>F3200</b>	Clock, Analog, 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).
<b>M1801</b>	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. The system shall have the following minimum characteristics: a 2.8 GHz Pentium processor; 512 MB memory; 80GB hard drive; 32/48x CD-ROM/DVD combo; 1.44MB network interface card; video 32 MB NVIDIA; a 18 inch flat panel monitor. The computer is used throughout the facility to input, manipulate and retrieve information.
<b>A5210</b>	Bracket, Television, Wall Mounted, w/Adjust Arm	1	CC	Wall mounted television bracket with adjustable arm. Consists of movable arm with minimum 120 degree swivel. Designed for holding wall mounted, flat panel television units in patient rooms.
<b>M3150</b>	Dispenser, Medication, Host (Main)	1	VV	Automated medication dispenser. Main unit with 8 drawers. Stores, dispenses, tracks narcotics, floorstock & prn medications in patient care areas. Maximum capacity is 384 line items, has color touch screen monitor, full size keyboard, uninterrupted power supply and scanner port used to attach bar code scanner for medication restocking. Optional Auxiliary medication dispensing cabinet. Eight drawers, up to 432 line item capacity. Optional Remote lock module for securing remote storage locations. Controlled via AcuDose-RX Large or Small main cabinet. Mounts to refrigerator door and manages medication storage units up to 50 feet away.
<b>R6200</b>	Refrigerator, U/C or F/S, 5 Cu Ft	1	VV	Utility refrigerator approximately 35"H x 24"W x 26"D. The unit has a two tray ice cube cooling system. The refrigerator fits standard architectural dimensions for undercounter installation. The unit is perfect for use in nurses' station, wards, and laboratories, pharmacies or wherever space is limited.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

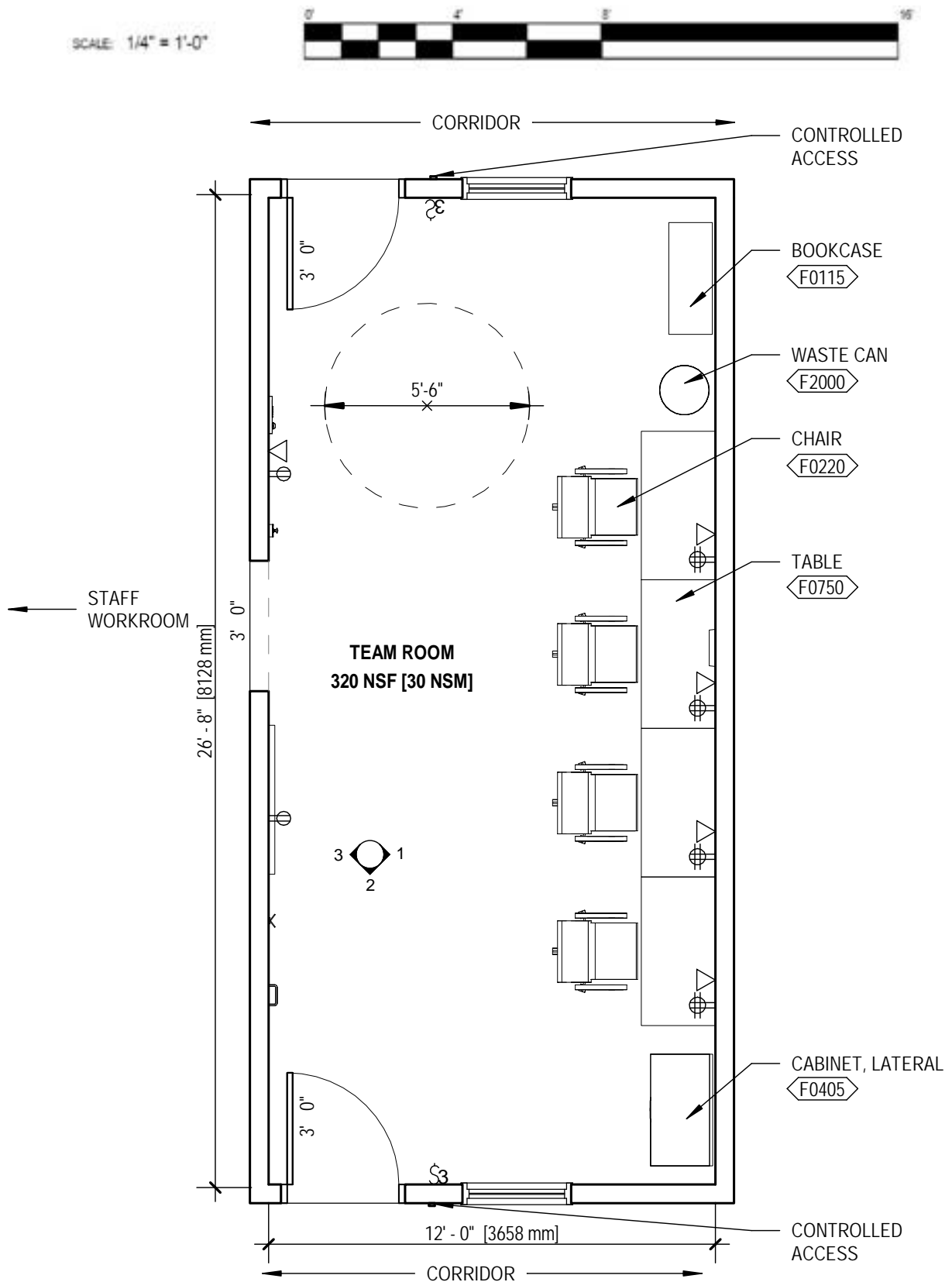
**5.3.11 Team Room (SC243) - Axonometric**





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

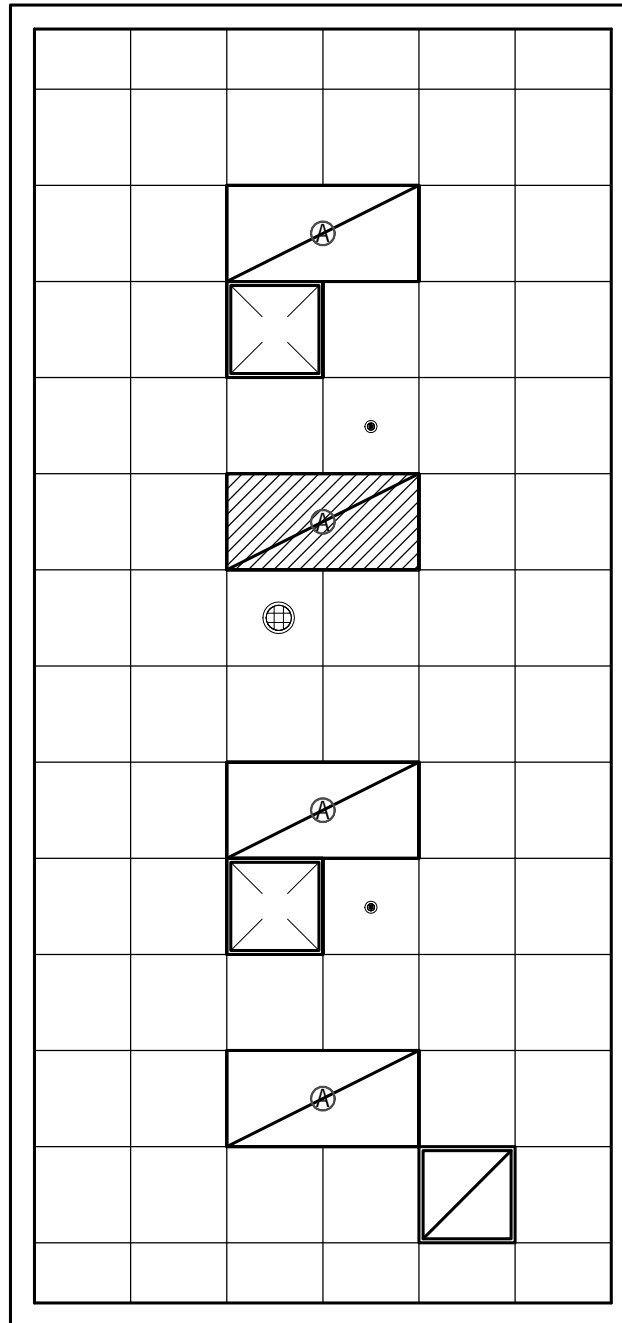
**5.3.11 Team Room (SC243) - Floor Plan**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.11 Team Room (SC243) - Reflected Ceiling Plan**

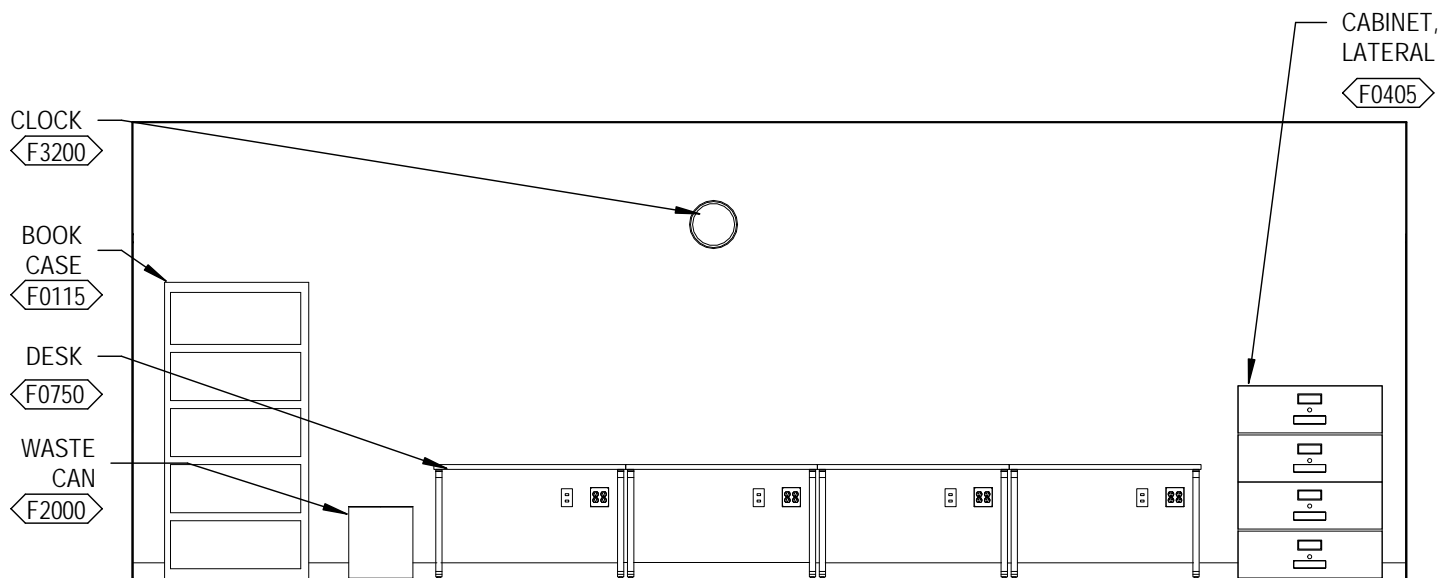
SCALE: 1/4" = 1'-0"



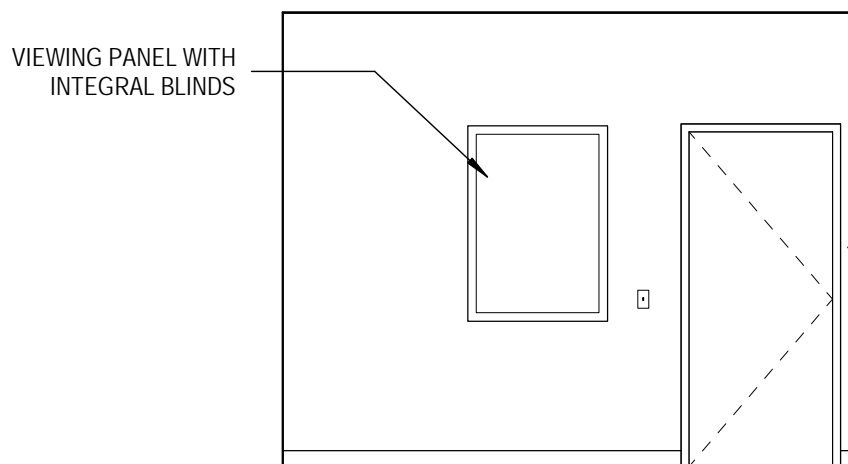
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.11 Team Room (SC243) - Elevations**

SCALE: 1/4" = 1'-0"



ELEVATION 1

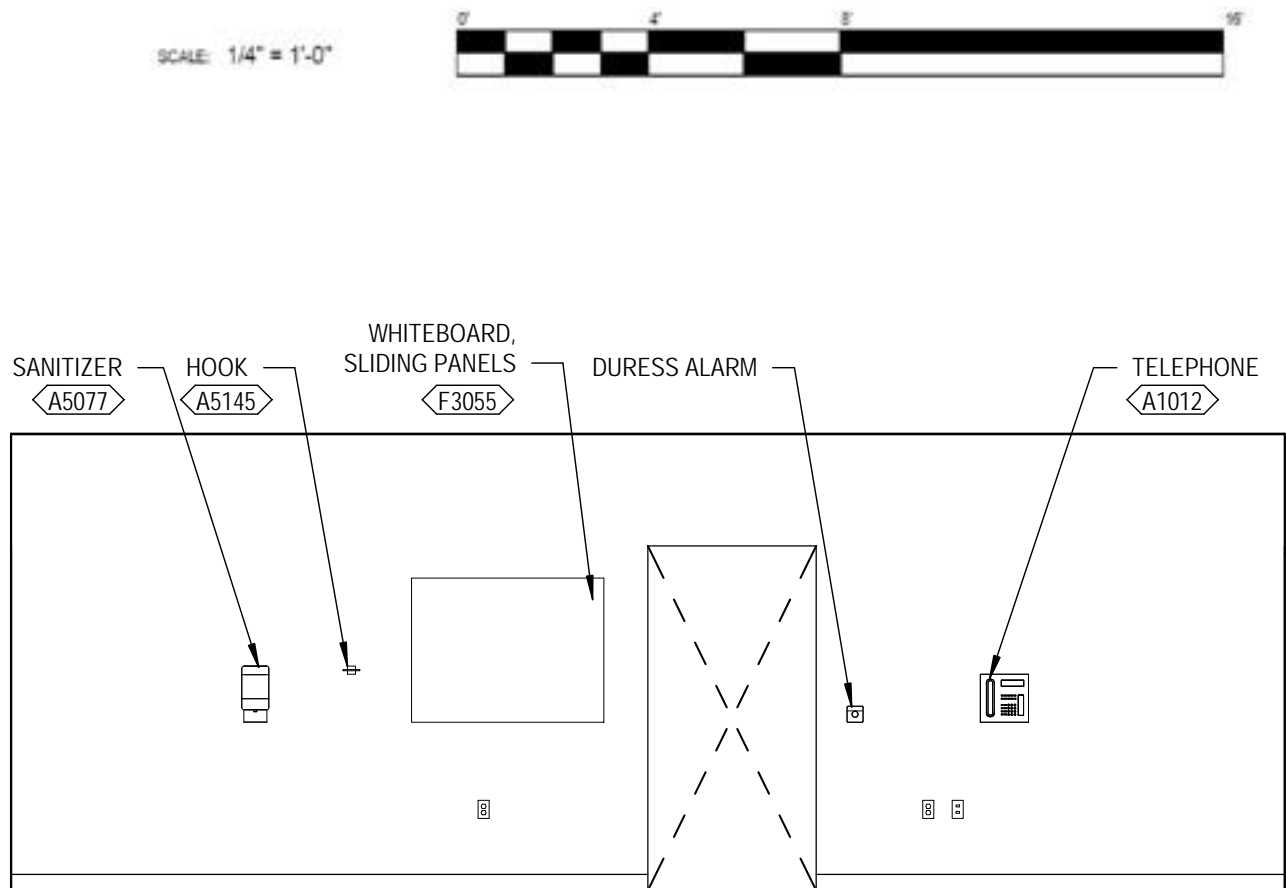


ELEVATION 2



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.11 Team Room (SC243) - Elevations**



ELEVATION 3



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### 5.3.11 Team Room (SC243) - Room Data Sheet

ARCHITECTURE & INTERIOR DESIGN		COMMUNICATIONS	
Ceiling Type	Acoustical Ceiling Tile	Data	Yes
Ceiling Height	8'-6" minimum	Telephone	Yes
Wall Finish	Gypsum Wallboard with Paint	Cable Television	No
Base	WSF-4"	Duress Alarm	No
Floor Finish	WSF	Electronic Access	Yes
Slab Depression	None	Intercom	Yes
Sound Protection	STC 45	Motion Intrusion Detection (MID)	No
Doors	3'-0" x 7'-0" wood (both doors)	Public Address System (PAS)	Yes
Hardware	3G (both doors)	Security Surveillance Television (SSTV)	No
		Clock	Yes
LIGHTING		HVAC	
Refer to The IESNA Lighting Handbook, Chapter 10 - Lighting Design Guide and Chapter 11 for lighting design considerations.		General Requirement:	
		Refer to Mental Health Residential Rehabilitation Treatment Program Room Data Sheets in the current version of the VA HVAC Design Manual – Chapter 6.	
POWER			
Normal	To serve selected receptacles and equipment		
Emergency	Life Safety branch of the EES to serve selected receptacles and equipment. Critical branch of the EES to serve selected receptacles and equipment		

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.11 Team Room (SC243) - Room Data Sheet (Continued)**

**PLUMBING**

Cold Water	No
Hot Water	No
Waste	No

**FIRE PROTECTION AND LIFE SAFETY**

Fire Alarm	See Section 4.9
Sprinkler System	See Section 4.9



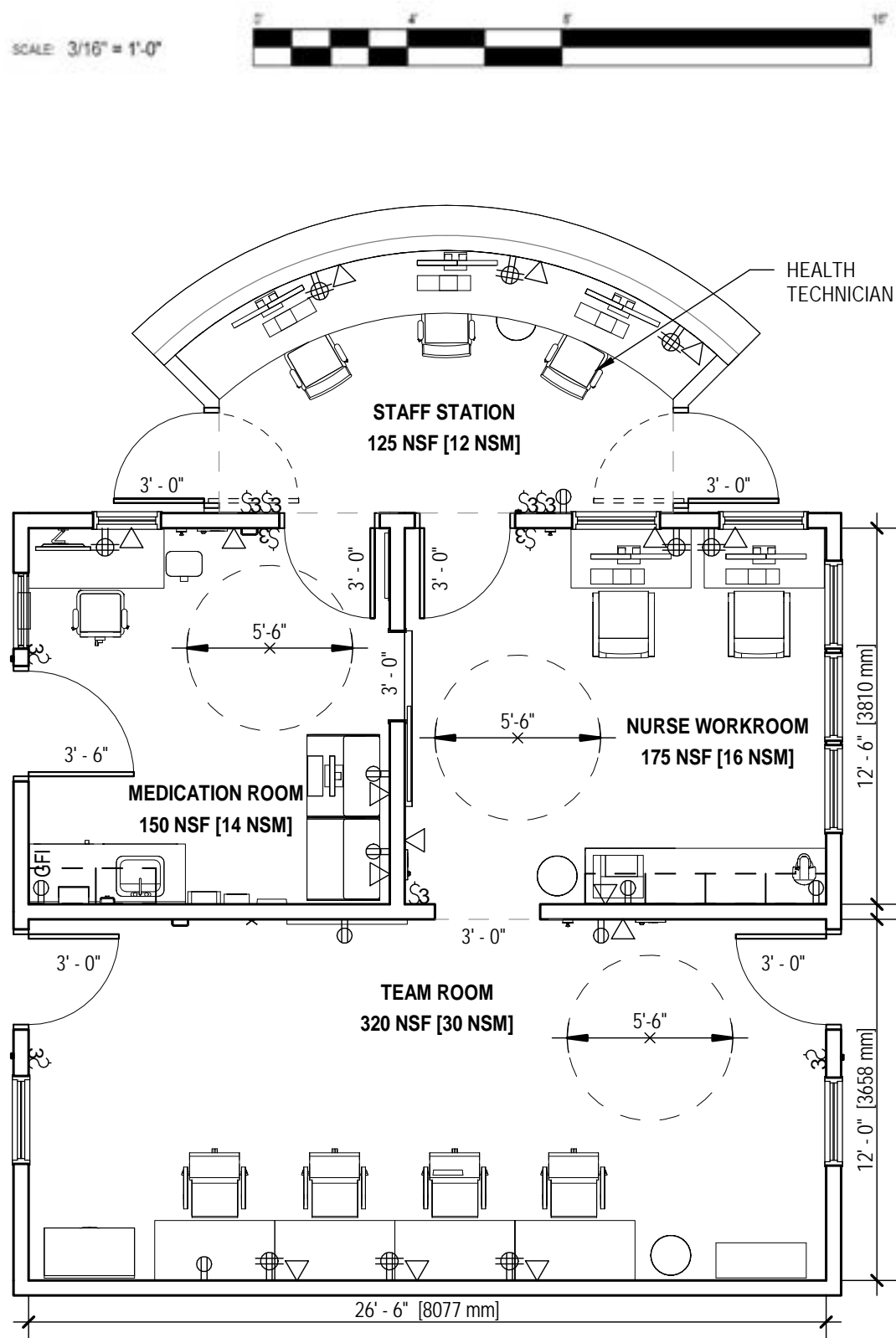
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.11 Team Room (SC243) - Equipment List**

<b>JSN</b>	<b>NAME</b>	<b>QTY</b>	<b>ACQ/INS</b>	<b>DESCRIPTION</b>
<b>A1010</b>	Telecommunication Outlet	3	CC	Telecommunication outlet location.
<b>A1012</b>	Telephone, Wall Mounted, 1 Line	1	CC	Telephone, wall mounted, 1 line.
<b>A5077</b>	Dispenser, Hand Sanitizer, Wall Mount	1	VV	A touch free wall-mounted hand sanitizer dispenser. For use throughout a healthcare facility. Unit does not include the sanitizing liquid. Units are battery operated.
<b>A5145</b>	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. For general purpose use throughout the facility to hang various items of apparel.
<b>F0115</b>	Bookcase, Office, Open, 5 Shelf	1	VV	Freestanding open shelf bookcase, approximately 82" high X 37" wide X 18" deep with 5 (five) adjustable shelves. Unit can be separate or part of a system with available add-on shelving.
<b>F0220</b>	Chair, Conference	4	VV	Conference chair designed to complement foam rubber cushioned seats and backs covered with either woven fabric or vinyl. Base with 5 (five) swivel casters.
<b>F0405</b>	Cabinet, Filing, Full Height, 4-5 Drawer	1	VV	Four (4) or five (5) drawer letter size, vertical filing cabinet, 53" high X 15" wide X 29" deep with locking device. Each drawer has label holder, handle and roller cradle..
<b>F0750</b>	Table, Office, (size as required)	4	VV	Office table, sized as required. May be used as either a four (4) to six (6) person conference table or as an extra work surface area.
<b>F2000</b>	Basket, Wastepaper, Round, Metal	1	VV	Round wastepaper basket, approximately 18" high X 16" diameter. This metal unit is used to collect and temporarily store small quantities of paper refuse in patient rooms, administrative areas and nursing stations.
<b>F3055</b>	Whiteboard, With Sliding Panels.	1	CC	Standard installations consist of sliding panels and a fixed back panel with the choice of chalkboard, markerboard, bulletin board, or a combination of these choices.
<b>F3200</b>	Clock, Analog, 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).

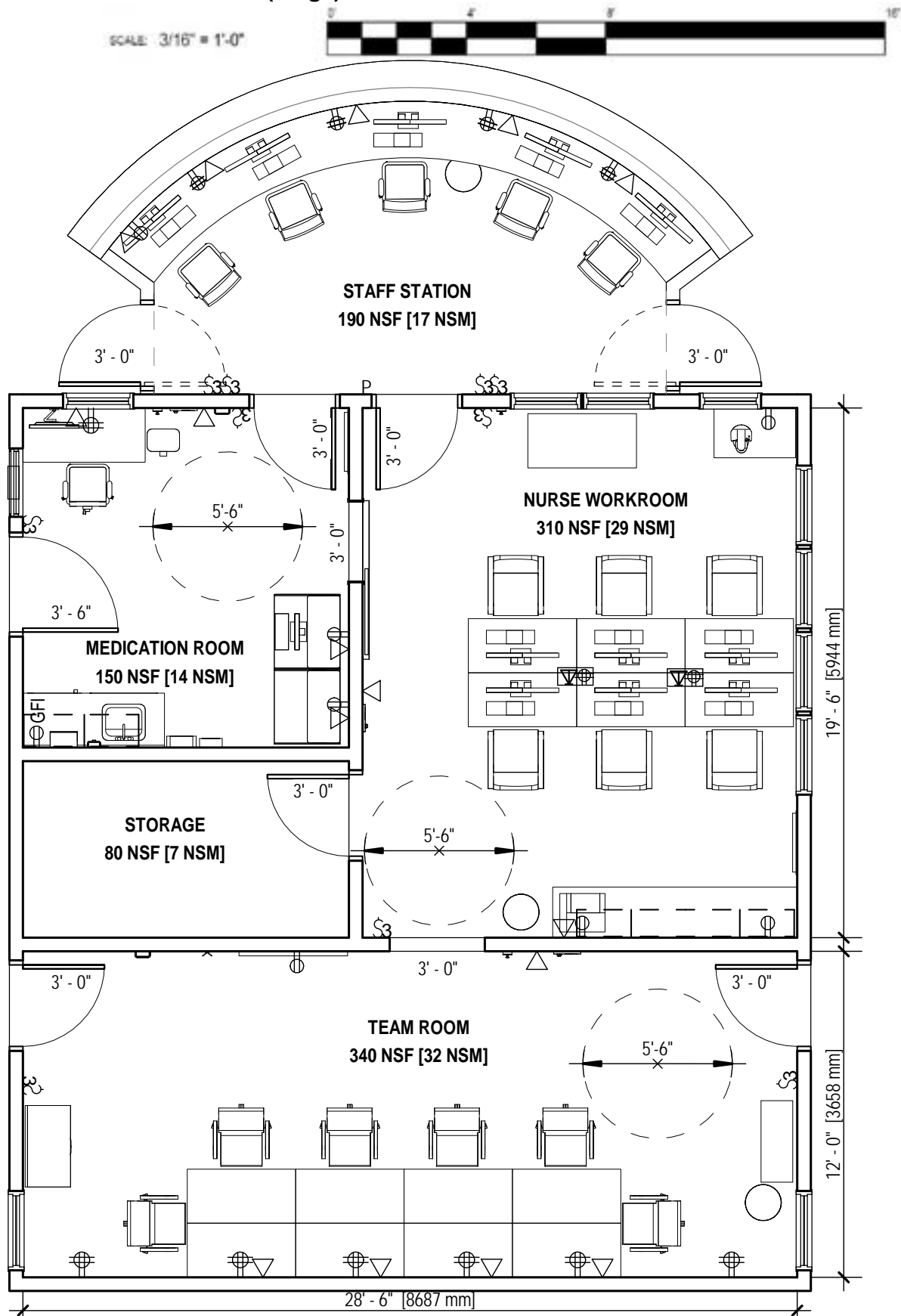
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**5.3.12 Combined Staff Hub (Small) - Floor Plan**





**5.3.13 Combined Staff Hub (Large) - Floor Plan**





## 6.0 APPENDIX

**6.0 APPENDIX**

<b>6.1 Addressing Acute Medical Care Needs.....</b>	<b>6-4</b>
<b>6.2 Site Visit Summary.....</b>	<b>6-5</b>
<b>6.3 Staff Opinion Survey Summary.....</b>	<b>6-136</b>
<b>6.4 IPMH &amp; MH RRTP Facility Workshop Summary.....</b>	<b>6-152</b>
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<b>6.6 Literature Reviews.....</b>	<b>6-173</b>
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## **6.1 Addressing Acute Medical Care Needs**

As noted in the previous section, some Veterans requiring IPMH and MH RRTP services may also require physical and/or medical health services. Treatment for chronic and relatively stable medical conditions (e.g., hypertension, diabetes, need for mobility aids) can be provided in these settings. However, when those with untreated, unstable medical comorbidities need acute medical care in addition to acute psychiatric care, care should generally take place in an acute medical care hospital environment, at the discretion of each facility, for the following reasons:

- Patients with physical, medical and mobility limitations require highly skilled medical care and staff, and an acute medical care setting is best suited to address a Veteran's immediate physical and medical care requirements
- Mental health treatment can be provided at the medical patient's bedside, allowing the Veteran's medical issues to be addressed in an acute medical care setting while also continuing with mental health treatment
- Care for patients with medical or physical needs can be provided within an inpatient mental health Unit only to the extent that it complies with local facility policy and the Veteran's safety and overall care is not compromised

Local staff and/or the Mental Health Interdisciplinary Team (see section 2.1.5) will determine when a patient requiring acute medical treatment is to be treated in IPMH or transferred to a medical care facility. Each facility has its own process for determining whether a Veteran with co-morbidity is best treated within the IPMH Unit or on another type of Unit. The decision can be made before the Veteran arrives on the Unit based on a clinical evaluation and a determination as to where the most appropriate level of care can be delivered.

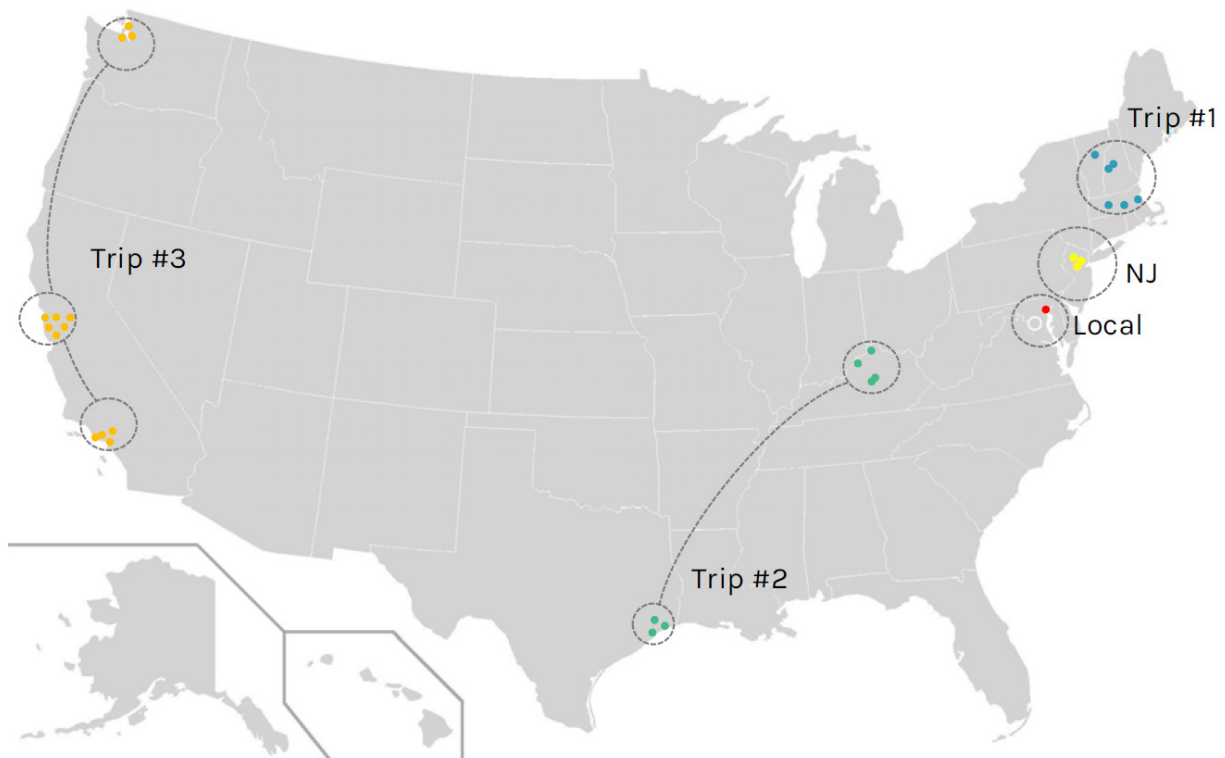
When it is determined that overall safety and care are not compromised by the Veteran remaining in an IPMH or MH RRTP Unit, appropriate accommodations must be provided in the mental health setting for the medical treatment.

In general, special medical facility accommodations like patient headwalls/medical gases, patient lifts and isolation rooms (positive/negative pressure) will not be provided in either the IPMH or MH RRTP facilities. Local staff will determine what special and/or reasonable accommodations for patients with co-morbidity can be made through staff consultation with NCPS, ONS, and OMHSP.

## **6.2 Site Visits Summaries**

As a beginning step to updating the Space Criteria and Design Guide for the Mental Health and Behavioral Patient Units and the Mental Health Residential Rehabilitation Treatment Program (MH RRTP), the team embarked on three site trips to conduct post occupancy evaluations of similar buildings/resident units. In order to gain an understanding of the way the VA currently operates, the team toured multiple VA-operated Mental Health Inpatient and RRTP units in addition to several State-operated acute psychiatric inpatient centers across the country.

A central focus for each visit was to evaluate the patient and staff experience, including review of the operational workflows as they related to the number of resident beds provided in each facility. The group also focused on adjacencies of spaces, finishes, and architectural details. The analysis was intended to be a learning experience for the design team which would translate into modifications, additions, or deletion from the existing chapter criteria and design guide.



***U.S. Map defining site visit locations.***

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**SITE VISIT 1    NORTHEAST**

6.2.1

McLean Hospital



**LOCATION:** Belmont, MA  
**BEDS:** 187  
**UNIT SIZE:** 18-23  
**TYPE:** IMPH

6-14

6.2.2

VA Central Western Massachusetts Healthcare System



**LOCATION:** Leeds, MA  
**BEDS:** 20  
**UNIT SIZE:** 20  
**TYPE:** IMPH

6-18

6.2.3

Worcester Recovery Center & Hospital



**LOCATION:** Worcester, MA  
**BEDS:** 260  
**UNIT SIZE:** 26  
**TYPE:** IMPH

6-23

6.2.4

Dartmouth-Hitchcock Medical Center



**LOCATION:** Lebanon, NH  
**BEDS:** 21  
**UNIT SIZE:** 9-12  
**TYPE:** IMPH

6-27



**SITE VISIT 1    NORTHEAST cont.**

**6.2.5            VAMC White River Junction**



**LOCATION:** White River Junction, MA  
**BEDS:**  
**UNIT SIZE:** 12  
**TYPE:** IMPH/RRTP

6-31

**6.2.6            Central Vermont Medical Center**



**LOCATION:** Berlin, VT  
**BEDS:** 15  
**UNIT SIZE:** 15  
**TYPE:** IMPH

6-35

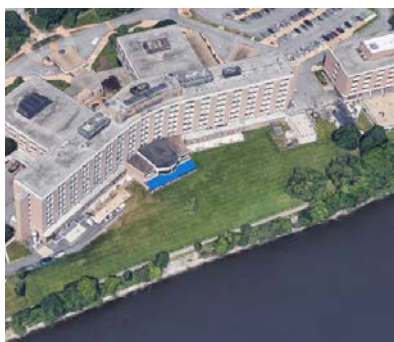
**6.2.7            Vermont State Psychiatric Hospital**



**LOCATION:** Berlin, VT  
**BEDS:** 25  
**UNIT SIZE:** 4-8  
**TYPE:** IMPH

6-38

**6.2.8            Medstar Harbor Hospital**



**LOCATION:** Baltimore, MD  
**BEDS:** 40  
**UNIT SIZE:** 14-16  
**TYPE:** IMPH

6-43





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**SITE VISIT 2    MIDWEST**

6.2.9

Sun Behavioral Houston



**LOCATION:** Houston, TX  
**BEDS:** 148  
**UNIT SIZE:** 24-26  
**TYPE:** IMPH

6-48

6.2.10

Menninger Clinic



**LOCATION:** Houston, TX  
**BED:** 120  
**UNIT SIZE:** 24  
**TYPE:** IMPH

6-52

6.2.11

VAMC Houston



**LOCATION:** Houston, TX  
**BED:** 73  
**UNIT SIZE:** 20-31  
**TYPE:** IMPH

6-56

6.2.12

VAMC Louisville



**LOCATION:** Louisville, KY  
**BED:** 22  
**UNIT SIZE:** 22  
**TYPE:** IMPH

6-60



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**SITE VISIT 2    MIDWEST cont.**

6.2.13

Sun Behavioral Kentucky



**LOCATION:** St. Elizabeth, KY  
**BEDS:** 197  
**UNIT SIZE:** 12-30  
**TYPE:** IMPH

6-64

6.2.14

VAMC Lexington



**LOCATION:** Lexington, KY  
**BEDS:** 14  
**UNIT SIZE:** 14  
**TYPE:** IMPH/RRTP

6-68

6.2.15

Eastern State Hospital



**LOCATION:** Lexington, KY  
**BEDS:** 28  
**UNIT SIZE:** 28  
**TYPE:** IMPH

6-72

6.2.16

Essex County Hospital Center



**LOCATION:** Essex County, NJ  
**BED:** 180  
**UNIT SIZE:** 28-32  
**TYPE:** IMPH

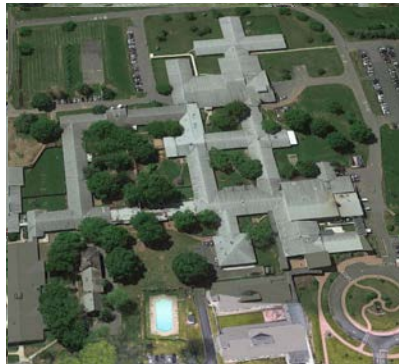
6-76



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**SITE VISIT 2    MIDWEST cont.**

6.2.17



**LOCATION:** Belle Mead, NJ  
**BED:** 296  
**UNIT SIZE:** 20  
**TYPE:** IMPH

6-80

6.2.18

VA Lyons



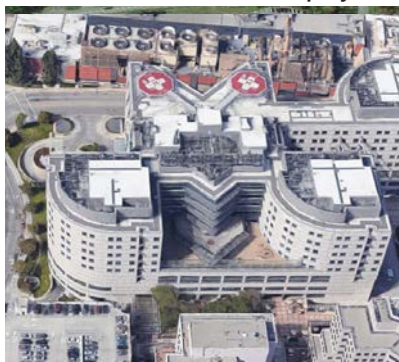
**LOCATION:** Lyons, NJ  
**BED:** 42  
**UNIT SIZE:** 16-26  
**TYPE:** IMPH/RRTP

6-84

**SITE VISIT 3    WEST**

6.2.19

UCLA Resnick Neuropsychiatric Hospital



**LOCATION:** Los Angeles, CA  
**BED:** 74  
**UNIT SIZE:** 25  
**TYPE:** IMPH

6-88





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**SITE VISIT 3 WEST cont.**

6.2.20

VAMC West Los Angeles



**LOCATION:** Los Angeles, CA  
**BED:** 46  
**UNIT SIZE:** 20-26  
**TYPE:** IMPH

6-91

6.2.21

VAMC West Los Angeles RRTP



**LOCATION:** Los Angeles, CA  
**BED:** 289  
**UNIT SIZE:** 30  
**TYPE:** RRTP

6-95

6.2.22

Willow Rock Center



**LOCATION:** San Leandro, CA  
**BEDS:** 16  
**UNIT SIZE:** 16  
**TYPE:** IMPH

6-99

6.2.23

John George Psychiatric Pavilion



**LOCATION:** San Leandro, CA  
**BED:** 23  
**UNIT SIZE:** 138  
**TYPE:** IMPH

6-103



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**SITE VISIT 3 WEST cont.**

6.2.24

VAMC Palo Alto



**LOCATION:**Palo Alto, CA  
**BEDS:** 60  
**UNIT SIZE:**20  
**TYPE:** IMPH

6-107

6.2.25

VAMC Menlo Park RRTP



**LOCATION:**Menlo Park, CA  
**BEDS:** 100  
**UNIT SIZE:**2  
**TYPE:** RRTP

6-111

6.2.26

St. Joseph Behavioral Hospital



**LOCATION:**Stockton, CA  
**BEDS:**35  
**UNIT SIZE:**3  
**TYPE:** IMPH

6-115

6.2.27

San Jose Behavioral Hospital



**LOCATION:**San Jose, CA  
**BEDS:**17-23  
**UNIT SIZE:**80  
**TYPE:** IMPH

6-119



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**SITE VISIT 3 WEST cont.**

6.2.28

Jay Mahler Recovery Center



**LOCATION:** San Leandro, CA  
**UNIT SIZE:**16  
**TYPE:** RRTP

6-121

6.2.29

Seattle Childrens Hospital

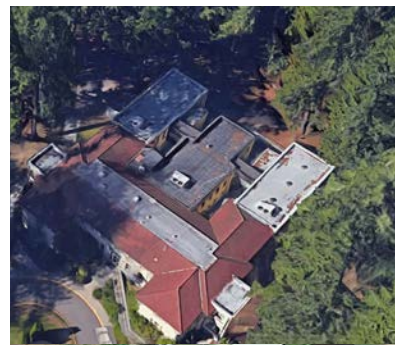


**LOCATION:** Seattle, WA  
**UNIT SIZE:**41  
**TYPE:** IMPH

6-125

6.2.30

VAMC American Lake RRTP



**LOCATION:** American Lake, WA  
**UNIT SIZE:**68  
**TYPE:** RRTP

6-129

6.2.31

VAMC Puget Sound



**LOCATION:** Seattle WA  
**UNIT SIZE:**13  
**TYPE:** IMPH

6-133





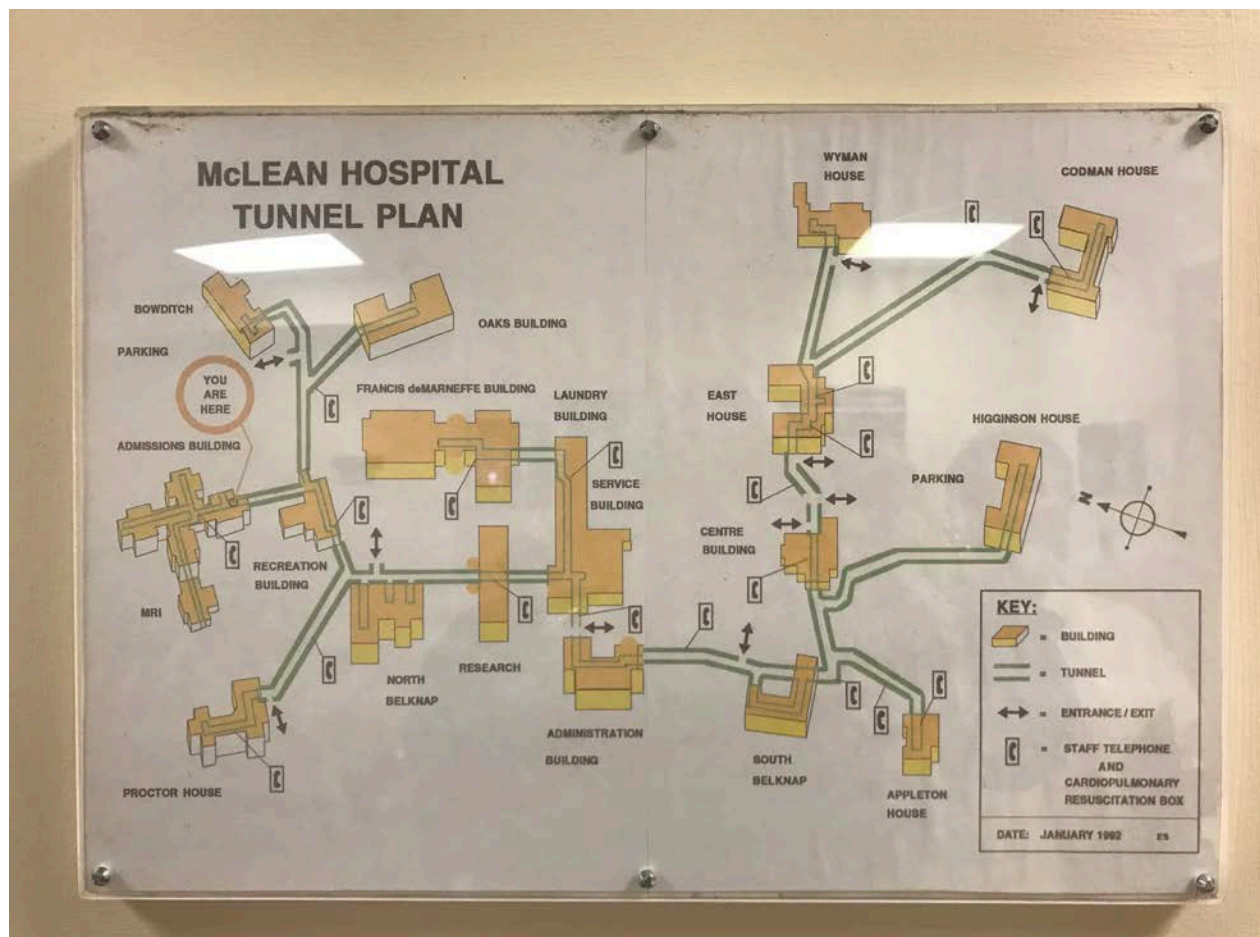
# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

## 6.2.1 McLean Hospital



**Figure 6.44** Aerial of McLean Hospital

MCLEAN HOSPITAL		
Location	Boston, MA	
Patient Type	Voluntary and Involuntary	Majority Voluntary
Average Length of Stay	10-11 days	SUD 3-5 days, ECT 13-15 days
Unit Size	18-23	Subspecialties care: Mood Disorders, Geropsych (2 units 1 dementia), Trauma, Dual Diagnosis
Beds	187 Main Campus (30 on East Campus)	
Staffing Per Unit	Based on Treatment Program	
Nurse Station	Enclosed	
Staffing	CEC: 4 RNs, 3 MH Specialists, 3 Psychiatrists	
Features	<ul style="list-style-type: none"> <li>• Harvard neuroscience research</li> <li>• Cottage plan</li> <li>• CEC (Clinical Evaluation Center) as front door</li> </ul>	
Staff Interview Feedback	more interview rooms needed	



**Figure 6.45** *Campus Plan of McLean Hospital*

## Overview

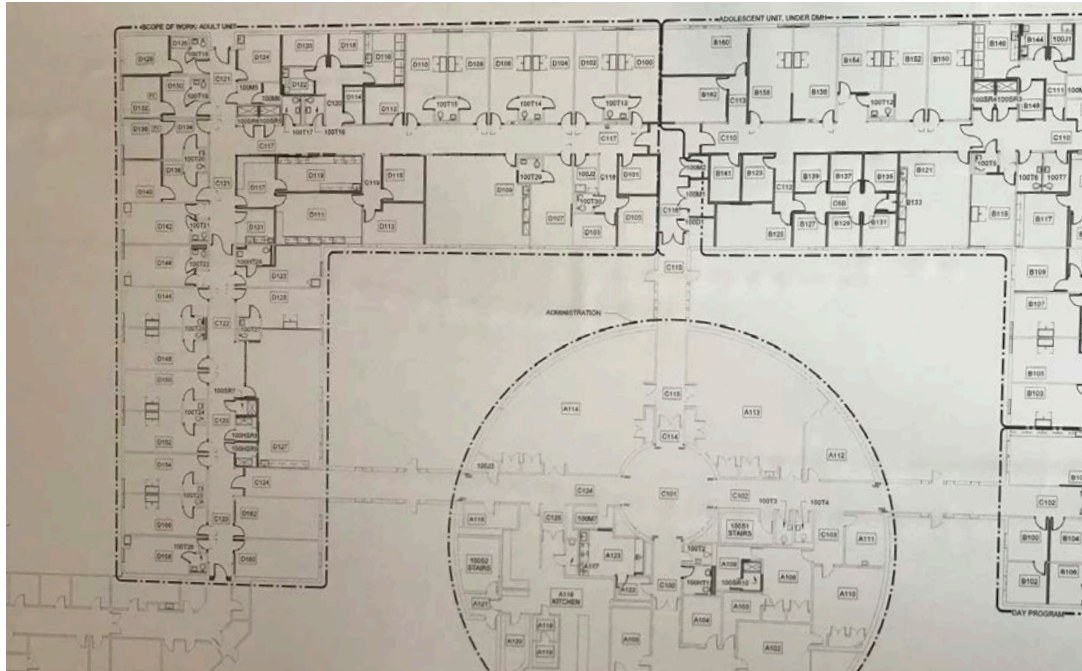
McLean Hospital is a psychiatric hospital in Belmont, Massachusetts. It is the first psychiatric hospital in New England (1811) and the third oldest in the country. McLean is noted for its ground-breaking neuroscientific and psychiatric research program in a private hospital, and is the flagship mental hospital of Harvard Medical School, an affiliate of Massachusetts General and a member of Partners HealthCare system.

“In 1888, McLean Hospital was the first psychiatric hospital in the United States to establish basic and clinical laboratories to study the role of biological factors in mental illness.” Historical fun facts McLean Hospital History and Progress.

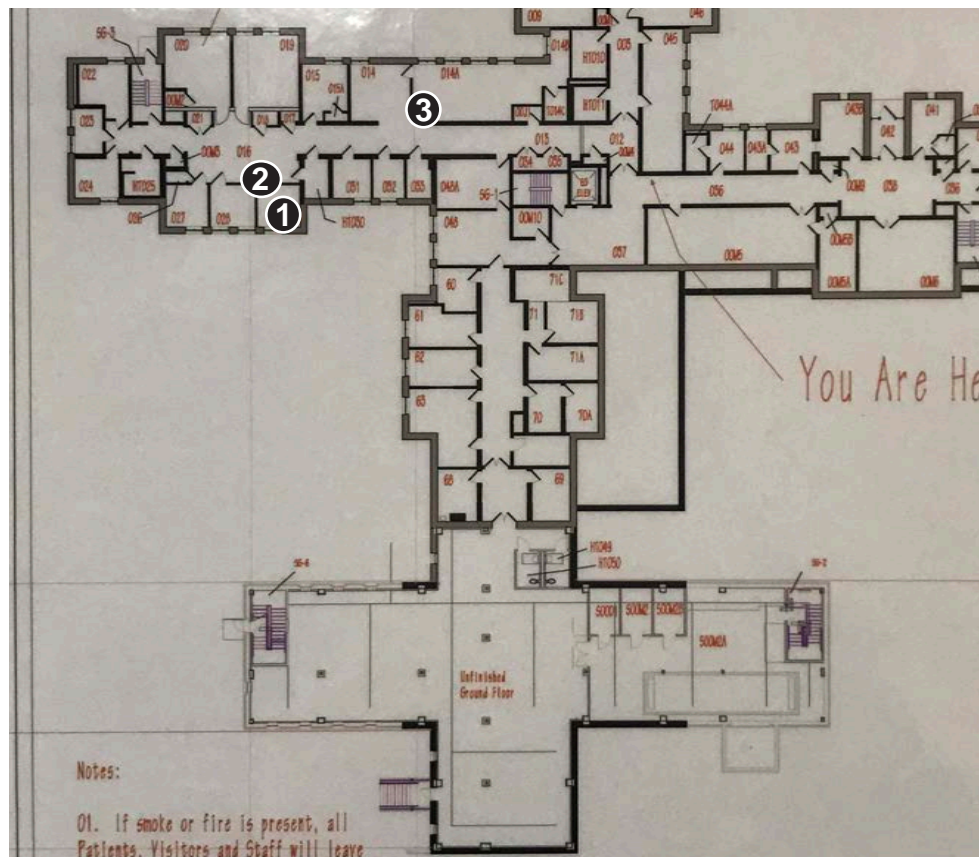
The campus style layout with a ‘cottage plan’, lends itself to a residential as opposed to institutional feel.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.46 Floor Plan of McLean Hospital, East Campus**



**Key Notes / Photo Locations:**

- 1** CEC Treatment Room
- 2** CEC Window
- 3** CEC Nurse Station

**Figure 6.47 Floor Plan of McLean Hospital, Clinical Evaluation Center Plan**

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.48 McLean Hospital CEC Treatment Room,**  
Reference Floor Plan Key Note #1



**Figure 6.50 McLean Hospital CEC Window,** Reference  
Floor Plan Key Note #2



**Figure 6.49 McLean Hospital CEC Nurse Station,**  
Reference Floor Plan Key Note #3



## 6.2.2 VA Central Western Massachusetts Healthcare System



**Figure 6.51 Aerial of VA Central Western Massachusetts**

VA CENTRAL WESTERN MASSACHUSETTS HEALTHCARE SYSTEM		
Location	Leeds, MA	
Patient Type	Voluntary and Involuntary	Acute Psychiatric
Average Length of Stay	5-14 days	
Unit Size/Type	20	
Beds	20 - private and semi private	Detox and Acute Psychiatric
Staffing Per Unit	VA	
Nurse Station	Open	
Features	Daylight - light and openness	
Staff Interview Feedback	<ul style="list-style-type: none"> <li>• Angled base at nurse station an issue</li> <li>• noise/acoustics big issue</li> <li>• need outdoor space</li> <li>• shared showers/bathroom issue</li> <li>• need more interview rooms</li> </ul>	



**Figure 6.52** *Main Entry of VA Central Western Mass.*

## **Overview**

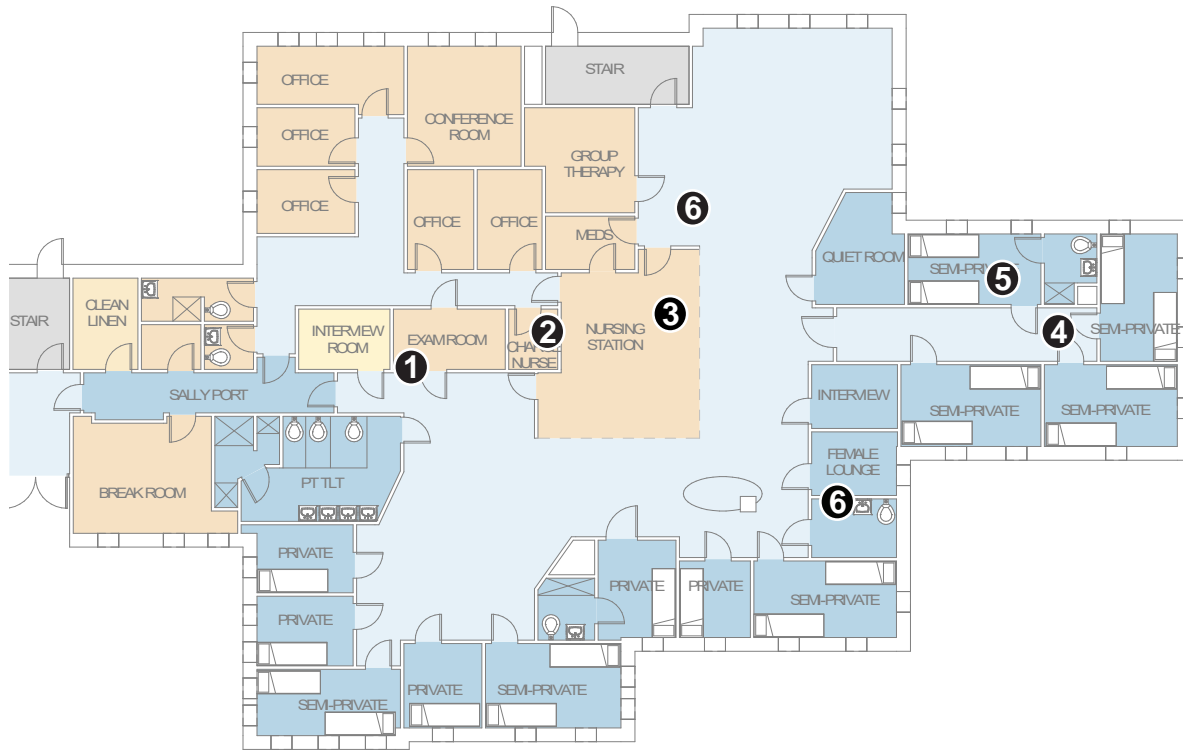
The Northampton VA Medical Center provides inpatient and outpatient mental health, nursing home/long term care, and specialty medical and surgical services.

The inpatient psychiatric unit is a renovation and expansion of a narrow corridor 2 story historic building. The design includes an open nurse station and central area with patient rooms surrounding the core.

The design is in keeping with the current design guide suggestions; open central nurse stations; private and semi-private rooms, however, issues of acoustics and lack of outdoor spaces remain topics for the center to address.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.53 VA Central Western Massachusetts, Floor Plan**

Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f0ff; border: 1px solid black;"></span> Circulation	<b>1</b> Exam Room
<span style="display: inline-block; width: 15px; height: 15px; background-color: #a0c0ff; border: 1px solid black;"></span> Patient Areas	<b>2</b> Nurse Station
<span style="display: inline-block; width: 15px; height: 15px; background-color: #fff0a0; border: 1px solid black;"></span> Staff Areas	<b>3</b> Central Circulation Space
<span style="display: inline-block; width: 15px; height: 15px; background-color: #fff0a0; border: 1px solid black;"></span> Public Areas	<b>4</b> Patient Room
	<b>5</b> Patient Bathroom
	<b>6</b> Patient Lounge





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.54** VA Central Western Mass. Exam Room, Reference Floor Plan Key Note #1



**Figure 6.56** VA Central Western Mass. Nurse Station, Reference Floor Plan Key Note #2



**Figure 6.55** VA Central Western Mass. Central Circulation Space, Reference Floor Plan Key Note #3



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.57** VA Central Western Mass. Patient Room, Reference Floor Plan Key Note #4



**Figure 6.58** VA Central Western Mass. Patient Bathroom, Reference Floor Plan Key Note #5



**Figure 6.59** VA Central Western Mass. Patient Lounge, Reference Floor Plan Key Note #6



### 6.1.3. Worcester Recovery Center & Hospital



**Figure 6.60 Aerial of Worcester Recovery Center & Hospital**

WORCESTER RECOVERY CENTER & HOSPITAL	
Location	Worcester, MA
Patient Type	Involuntary/Forensic, Geropsych
Average Length of Stay	6-9 months (some as long as 30 yrs)
Unit Size/Type	26 beds (2 Forensic, 1 Deaf/Geropsych, 7 Continuing Care)
Beds	260
Nurse Station	Enclosed
Staffing	3 RNs, 7 MH day / 2 RNs, 4 MH night
Features:	Recovery Mall concept, Private rooms and bathrooms
Staff Interview Feedback	Sight lines – curved building - visibility issues, Cross plan at units – can't see all from one spot, Therapy too remote from units (life skills, gym etc), 26-bed unit not operationalized





**Figure 6.61** *Interior of Worcester Adult Recovery Center & Hospital*

## **Overview**

The Worcester Recovery Center is an Adult Inpatient Facility that provides a design that creates respectful treatment settings while promoting active rehabilitation. It was built as a recovery hospital, with a village concept plan.

This is created by encouraging patient movement from secure units into neighborhoods of shared clinical activity (recovery halls). From there patients can graduate with more freedom to downtown spaces like gym, library, cafe and stores.

The plan layout, while achieving movement, creates visibility issues and as a result of blind corners, increases staffing and operational concerns.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.62 Worcester Recovery Center and Hospital, 1st Floor Plan**

Color Legend:	Key Notes / Photo Locations:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f0ff; border: 1px solid black; margin-right: 5px;"></span> Circulation	<b>1</b> Seminar Space
<span style="display: inline-block; width: 15px; height: 15px; background-color: #a0c0ff; border: 1px solid black; margin-right: 5px;"></span> Patient Areas	<b>2</b> Patient Room
<span style="display: inline-block; width: 15px; height: 15px; background-color: #fff0a0; border: 1px solid black; margin-right: 5px;"></span> Staff Areas	<b>3</b> Great Room
<span style="display: inline-block; width: 15px; height: 15px; background-color: #fff0e0; border: 1px solid black; margin-right: 5px;"></span> Public Areas	<b>4</b> Patient Room

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.63** *Worcester Recovery Center & Hospital Seminar Space*, Reference Floor Plan Key Note #1



**Figure 6.65** *Worcester Recovery Center & Hospital Patient Room*, Reference Floor Plan Key Note #2



**Figure 6.64** *Worcester Recovery Center & Hospital Great Room*, Reference Floor Plan Key Note #3



**Figure 6.66** *Worcester Recovery Center & Hospital Patient Room*, Reference Floor Plan Key Note #4



### 6.1.4. Dartmouth-Hitchcock Medical Center



**Figure 6.67 Aerial of Dartmouth-Hitchcock Medical Center**

DARTMOUTH-HITCHCOK MEDICAL CENTER		
Location	Lebanon, NH	
Patient Type	Voluntary Only	
Average Length of Stay	5-7 days	ECT longer stays
Unit Size/Type	12, 9	Geropsych included
Beds	21	3 semi-private rooms, 15 private
Staffing Per Unit	2 RN, 1 LNA, 3 Therapists	
Nurse Station	Enclosed	
Features	4 medical beds for geropsychiatric, no sally port - patients can elope, staff assists in walks outside	
Staff Interview Feedback	Decentralized nurse stations, Smaller areas / more quiet rooms, Computers (built in) for patients	



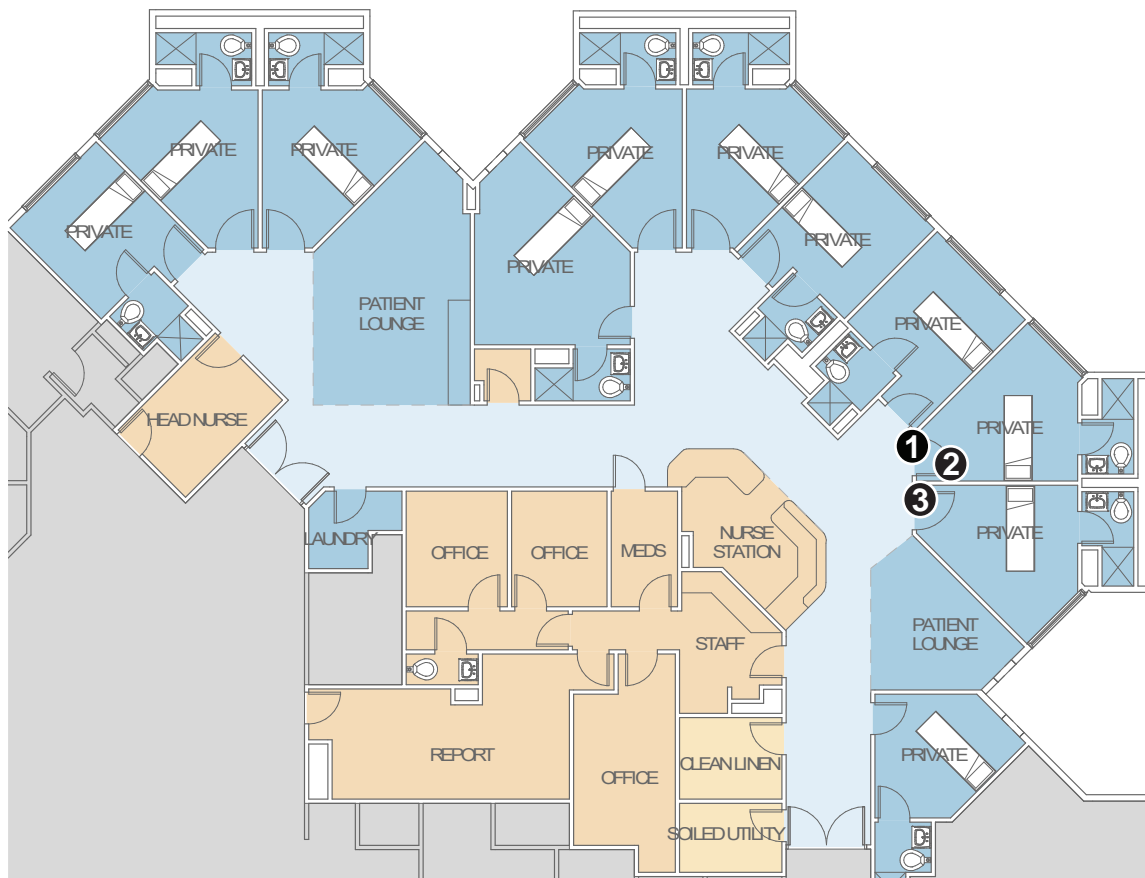
*Figure 6.68 Exterior view of Dartmouth-Hitchcock Medical Center*

## **Overview**

Dartmouth-Hitchcock, is New Hampshire's only academic health system, delivering care as its flagship hospital. DHMC is a Level I Trauma Center, one of only three in northern New England, and it includes New Hampshire's only air ambulance service. As a result, the Emergency Department is their psychiatric patients' first entry point.

A voluntary facility, the layout is less secure with manageable patient volumes never exceeding 12 patient in any one unit. Although open in concept, visibility remains a main concern with the current plan. Furniture is weighted and beds are secured to the floor, door alarms are used on rooms that are not visible to the staff station. Although they have a few semi-private rooms, overall preference is for private.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.69 Dartmouth-Hitchcock Medical Center Plan, Floor Plan**

<p><b>Color Legend:</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f2f1; border: 1px solid black; margin-right: 5px;"></span> Circulation</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #bbdefb; border: 1px solid black; margin-right: 5px;"></span> Patient Areas</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #fff9c4; border: 1px solid black; margin-right: 5px;"></span> Staff Areas</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #ffe0b2; border: 1px solid black; margin-right: 5px;"></span> Public Areas</li> </ul>	<p><b>Key Notes:</b></p> <ul style="list-style-type: none"> <li><b>①</b> Patient Room</li> <li><b>②</b> Patient Bathroom Door</li> <li><b>③</b> Patient Bathroom</li> </ul>
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**Figure 6.70 Dartmouth-Hitchcock Inpatient Patient Room, Key Note #1**



**Figure 6.71 Dartmouth-Hitchcock Inpatient Patient Bathroom Door, Key Note #2**



**Figure 6.72 Dartmouth-Hitchcock Inpatient, Patient Bathroom, Key Note #3**

## 6.1.5. VAMC White River Junction



**Figure 6.73 Aerial of White River Junction**

VAMC WHITE RIVER JUNCTION		
Location	White River Junction, MA	
Patient Type	Voluntary and some Involuntary	Detox
Average Length of Stay	5-7 day,	ECT 3-4 weeks, RRTP 5 week program
Unit Size/Type	12 beds	6 private, 3 semi-private
Beds	12 acute psych / 13 RRTP	
Staffing Per Unit	3 RNs, 1 LNA days/2 RNs, 1 LNA night; Psychiatrist 1:8 ; Social Worker 1:12	
Nursing Station	Enclosed	
RRTP	14 Beds good dynamics, Self policing	
Staff Interview Feedback	Clear lines of sight, Future outdoor area, More detox beds needed, Need for medically compromised care	





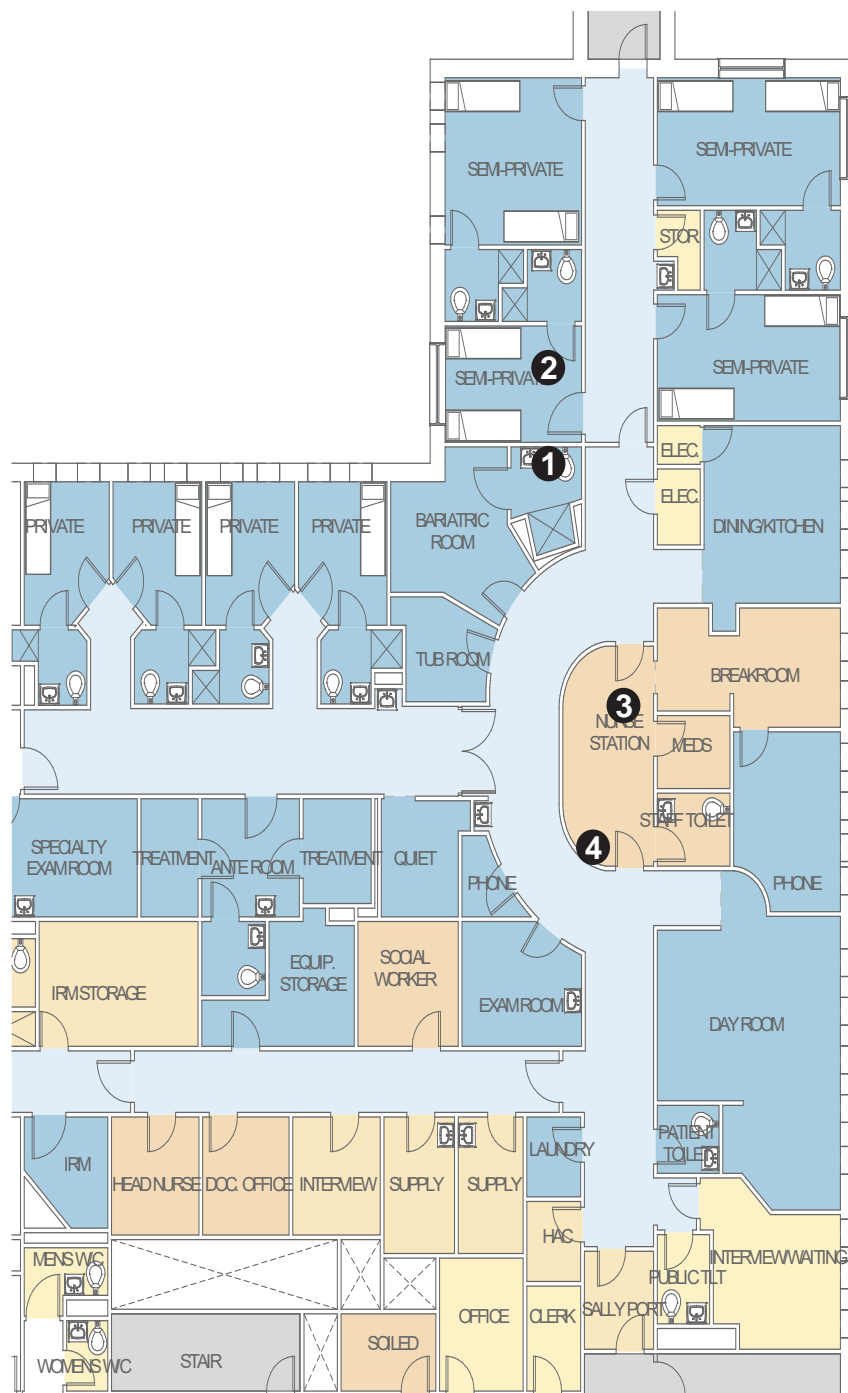
**Figure 6.74** *Main Entry of VAMC White River Junction*

## **Overview**

White River Junction VAMC Ground East is a voluntary, inpatient psychiatric unit. This short-term unit is designed to assist patients in achieving safety and stabilization. The unit can currently provide services for 10-12 patients. Services are provided by a multidisciplinary treatment team to address the individual needs of each patient.

At the request of staff, they have an enclosed nurse station. The current layout prevents visibility to all patient rooms and as a result cameras are used which are difficult to view continuously.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.75 VAMC White River Junction, Floor Plan**

**Color Legend:**

- Circulation
- Patient Areas
- Staff Areas
- Public Areas

**Key Notes:**

- ①** Patient bed
- ②** Patient bathroom
- ③** Enclosed Nurse Station, exterior
- ④** Enclosed Nurse Station, interior



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



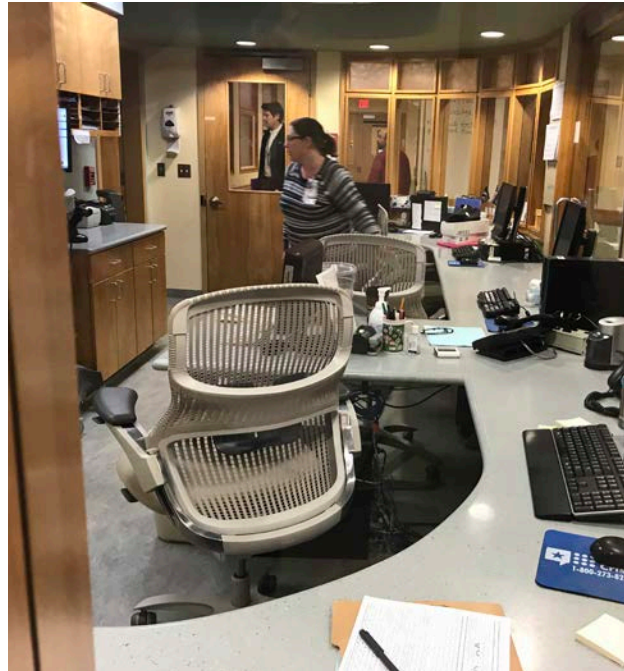
**Figure 6.76 VAMC White River Junction Patient bed,**  
Reference Floor Plan Key Note #1



**Figure 6.78 VAMC White River Junction Patient  
Bathroom,** Reference Floor Plan Key Note #2



**Figure 6.77 VAMC White River Junction Enclosed  
Nurse Satation, Exterior,** Reference Floor Plan Key  
Note #3



**Figure 6.79 VAMC White River Junction Enclosed  
Nurse Station, Interior,** Reference Floor Plan Key  
Note #4



### 6.1.6. Central Vermont Medical Center



**Figure 6.80 Aerial of Central Vermont Medical Center**

CENTRAL VERMONT MEDICAL CENTER		
Location	Berlin, VT	
Patient Type	Voluntary and involuntary	
Average Length of Stay	5-7 days	some long term
Unit Size/Type	15	Including geropsych, medically compromised
Beds	15	3 private, 12 semi-private (Crisis Stabilization)
Staffing Per Unit	3 RNs, 3-4 MH providers, 4 Psychiatrists	
Nurse Station	Closed	
Features	Shared showers off main corridor, Medically compromised patients, Porch (fresh air)	
Staff Interview Feedback	Separate entry for staff, Need to be able to separate high vs low acuity patients	



**Figure 6.81** *Main Entry of Central Vermont Medical Center*

## **Overview**

Central Vermont Medical Center is the primary health care provider for people who live and work in the 26 communities of central Vermont. The Inpatient Psychiatric Unit offers emergency, short-term stabilization and treatment for patients with a variety of psychiatric disorders.

The 15-bed unit provides a supportive and safe environment with a majority of semi-private rooms. All patient rooms have en-suite bathrooms, with shared showers off public corridors for increased safety.

The L-shaped plan layout, however, staff would prefer a pod design that would allow patients to be segregated per acuity level.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.82 Central Vermont Medical Center, Floor Plan**

**Color Legend:**

- Circulation
- Patient Areas
- Staff Areas
- Public Areas





### 6.1.7. Vermont State Psychiatric Hospital



**Figure 6.83 Aerial of Vermont State Psychiatric Care Hospital**

VERMONT PSYCHIATRIC CARE HOSPITAL		
Location	Berlin, VT	
Patient Type	Involuntary only	
Average Length of Stay	103 days	
Unit Size/Type	4	Unit A/B (2) 8 bed, Unit C/D (1) 4 bed, (1) 5 bed lower stimulation unit
Beds	25	Private
Staffing Per Unit	Per Unit	Unit A/B: 1 chg.nurse, 3 RNs, 10-11 MH spec. UNIT C/D: 1 chg nurse, 2 RNs, 8 MH spec.
Nurse Station	Enclosed	
Features	Private rooms with control by patients - Operable windows, Access to outdoor courtyards; Recovery services (Sensory rooms, Gym, Green house)	
Staff Interview Feedback	Blind spots with L-shape plan; Exposed nurse station unit to unit not good; Help desk – dangerous spot	





**Figure 6.84** *Main Courtyard of Vermont State Psychiatric Care Hospital*

## **Overview**

The Vermont Psychiatric Care Hospital is a Level 1 and Non-Level 1 involuntary program with long length of stays. The new facility draws on findings of research regarding design to promote healing and reduce aggression. The plan offers all private bedrooms with bathrooms in small nursing units with occupancy ranging from a maximum of 8 patients to as low as 4 depending on acuity levels.

All rooms have operable windows and allow patients to control their immediate environment. With high provider ratios, patients can move about the facility accompanied by staff for therapy, fitness, and use of outdoor courtyards. There is no security on staff, all Mental Health specialists are trained as 1st responders.

# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE



Figure 6.85 Vermont State Psychiatric Care Hospital , Floor Plan

<p><b>Color Legend:</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #ADD8E6; border: 1px solid black; margin-right: 5px;"></span> Circulation</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #4682B4; border: 1px solid black; margin-right: 5px;"></span> Patient Areas</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #FFFF00; border: 1px solid black; margin-right: 5px;"></span> Staff Areas</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #FFA500; border: 1px solid black; margin-right: 5px;"></span> Public Areas</li> </ul>	<p><b>Key Notes:</b></p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <p><b>1</b> Classroom</p> <p><b>2</b> Patient Room</p> <p><b>3</b> Open Nurse Station</p> </div> <div style="width: 50%;"> <p><b>4</b> Unit Entrance</p> <p><b>5</b> Window Seat</p> </div> </div>
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**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.86 Vermont State Psychiatric Care Hospital,  
Classroom, Reference Floor Plan Key Note #1**



**Figure 6.87 Vermont State Psychiatric Care Hospital  
Patient Room, Reference Floor Plan Key Note #2**

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.88 Vermont State Psychiatric Care Hospital  
Open Nurse Station, Key Note #3**



**Figure 6.89 Vermont State Psychiatric Care Hospital  
Unit Entrance, Reference Floor Plan Key Note #4**



**Figure 6.90 Vermont State Psychiatric Care Hospital  
Window Seat, Reference Floor Plan Key Note #5**



## 6.1.8. MedStar Harbor Hospital



**Figure 6.91 Aerial of MedStar Harbor Hospital**

MEDSTAR HARBOR HOSPITAL		
Location	Baltimore, MD	
Patient Type	Involuntary / Voluntary	
Average Length of Stay	3-7 days	
Unit Size/Type	2 units	26/ 14 bed units, North wing : 14 single; South wing: 8 single, 9 double
Beds	40	private, semiprivate
Staffing Per Unit		
Nurse Station	Open	
Features	Views in lieu of outdoor space	
Staff Interview Feedback	Seclusion room used as quiet rooms, lower nurse station desk	



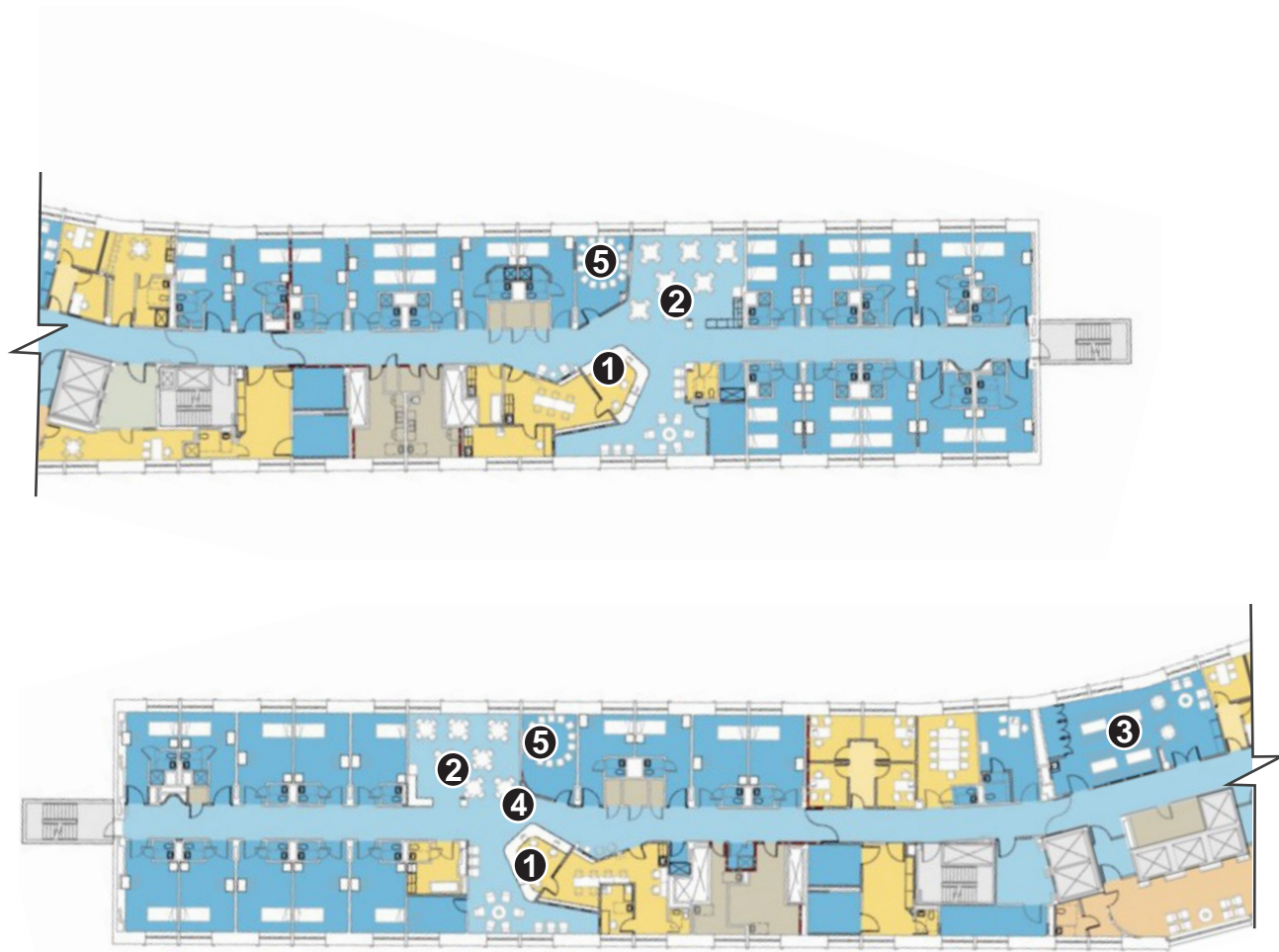
**Figure 6.92** *Main Corridor of MedStar Harbor Hospital*

## **Overview**

MedStar Health was interested in enhancing its psychiatric inpatient units to create a design that would help MedStar implement a new model of patient care ‘the small house concept’. A 40 bed Unit for both voluntary and involuntary patients, as well as an inpatient detoxification unit, it is a community of patients and a staff of mental health workers who operate using the guiding principles of autonomy and dignity.

This project was a renovation of an existing med surg inpatient unit. Strategies included the relocation of the nurse station to eliminate barriers, balance active and passive security measures to empower the patient and the create a home-like environment.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.93 MedStar Harbor Hospital, Floor Plan**

Color Legend:	Key Notes:
<ul style="list-style-type: none"> <li> Circulation</li> <li> Patient Areas</li> <li> Staff Areas</li> <li> Public Areas</li> </ul>	<ul style="list-style-type: none"> <li><b>1</b> Open nurse station</li> <li><b>2</b> Open patient space</li> <li><b>3</b> Classroom</li> <li><b>4</b> Site lines from nurse station thru corridor</li> <li><b>5</b> Group Room</li> </ul>





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.94 Harbor Hospital Open Nurse Station,**  
Reference Floor Plan Key Note #1



**Figure 6.95 Harbor Hospital Open Patient Space,**  
Reference Floor Plan Key Note #2

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.96 Harbor Health Classroom,** Reference Floor Plan Key Note #3



**Figure 6.97 Harbor Health Site Lines from Nurse Station thru Corridor,** Reference Floor Plan Key Note #4



**Figure 6.98 Harbor Health Group Room,** Reference Floor Plan Key Note #5





## 6.1.9. Sun Behavioral Houston



**Figure 6.99 Aerial of Sun Behavioral, Houston, TX**

SUN BEHAVIORAL HOUSTON		
Location	Houston, TX	
Patient Type	Voluntary/Involuntary	33% Involuntary
Average Length of Stay	Adult/Geropsych	9-10 days/14 days
Unit Size/Type	24-26 beds (semiprivate)	1st – Geriatric, Women’s, Acute Psych; 2nd – Closed, Women’s, Mood/Anxiety; 3rd – Children (6-12)/Adolescent (13-18)
Beds	148	
Staffing Per Unit	Nursing 1:4 day / 1:5 night (+ MH techs)	2-3 RNs & 3 Techs Therapist 1:10 / 1:12 Psychiatrists 1:15 / 1:20
Nurse Station	Open	
Owner	Sun Behavioral 2018 Renovation	



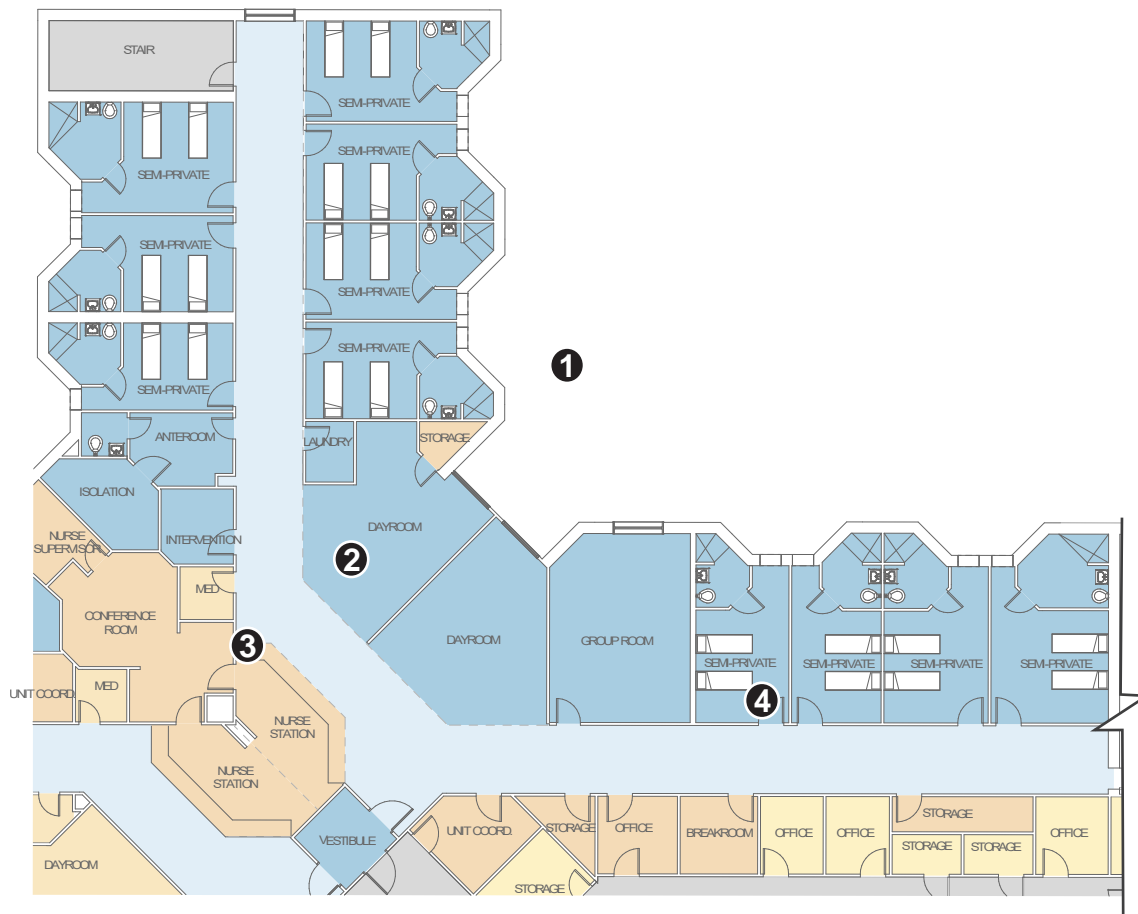
**Figure 6.100** *Main Courtyard of Sun Behavioral Houston*

## **Overview**

Sun Behavioral Houston is a 148-bed psychiatric hospital located in the Texas Medical Center in Houston, Texas. The hospital provides a full continuum of specialized care, including inpatient and day hospital services, for those suffering from mental health illness and substance use disorders. SUN Behavioral Houston offers specialized programs for children, adolescents and adults.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.101 Sun Behavioral Houston, Floor Plan**

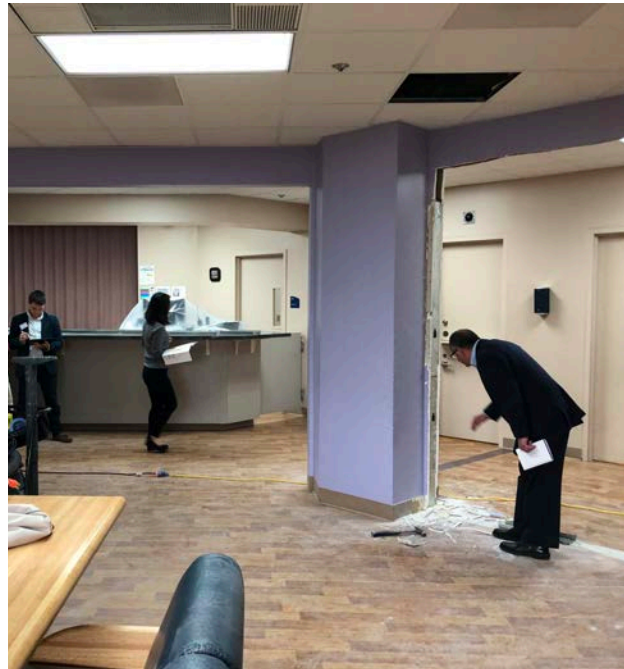
Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ADD8E6; border: 1px solid black;"></span> Circulation	<b>1</b> Ground-level yard
<span style="display: inline-block; width: 15px; height: 15px; background-color: #4682B4; border: 1px solid black;"></span> Patient Areas	<b>2</b> Dayroom
<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFFF00; border: 1px solid black;"></span> Staff Areas	<b>3</b> Open Nursing Station
<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFA500; border: 1px solid black;"></span> Public Areas	<b>4</b> Patient Bedroom



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



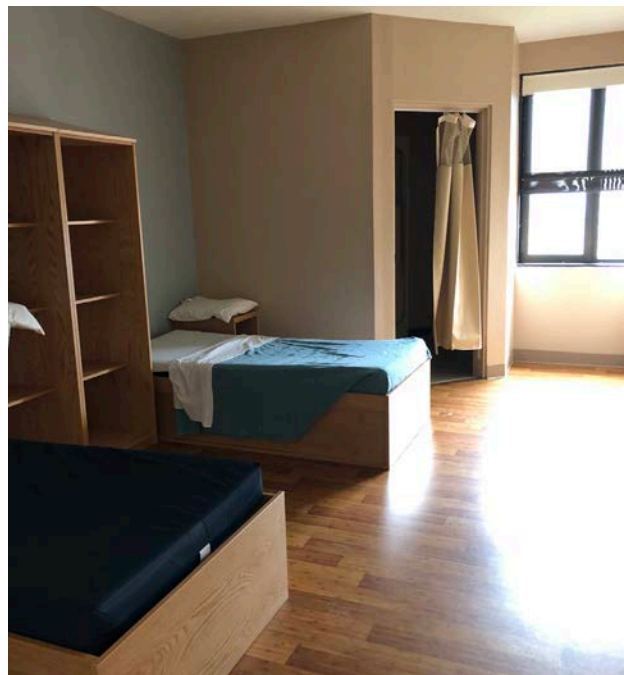
**Figure 6.102 Sun Houston Ground Level Yard,**  
Reference Floor Plan Key Note #1



**Figure 6.104 Sun Houston Day Room,** Reference  
Floor Plan Key Note #2



**Figure 6.103 Sun Houston Open Nurse Station,**  
Reference Floor Plan Key Note #3



**Figure 6.105 Sun Houston Patient Bedroom,**  
Reference Floor Plan Key Note #4

## 6.1.10. Menninger Clinic



**Figure 6.106 Aerial of Menninger Clinic, Houston, TX**

MENNINGER CLINIC		
Location	Houston, TX	
Patient Type	Voluntary only	
Average Length of Stay	6-8 week average / 3 weeks assessment	
Unit Size/Type	24	1 Bldg: Geropsych, General, Acute 2 Bldg: Assessment/Stabilization 3 Bldg: Hope (Adolescent)/ Professional
Beds	120	
Staffing Per Unit	Nursing 1:4 day 1:5 night (18 total staff)	Psychiatrist 1:8-10; Psychologist 1:6-8; Social Worker 1:6; Addictions Councilor 1:10-14
Nurse Station	Open	
Features	Flex door (can flex 10 rooms/5 on each); Dining in cafeteria; Great room in unit	
Staff Interview Feedback	future all private rooms	





**Figure 6.107** *Main Entry Hall of Menninger Clinic*

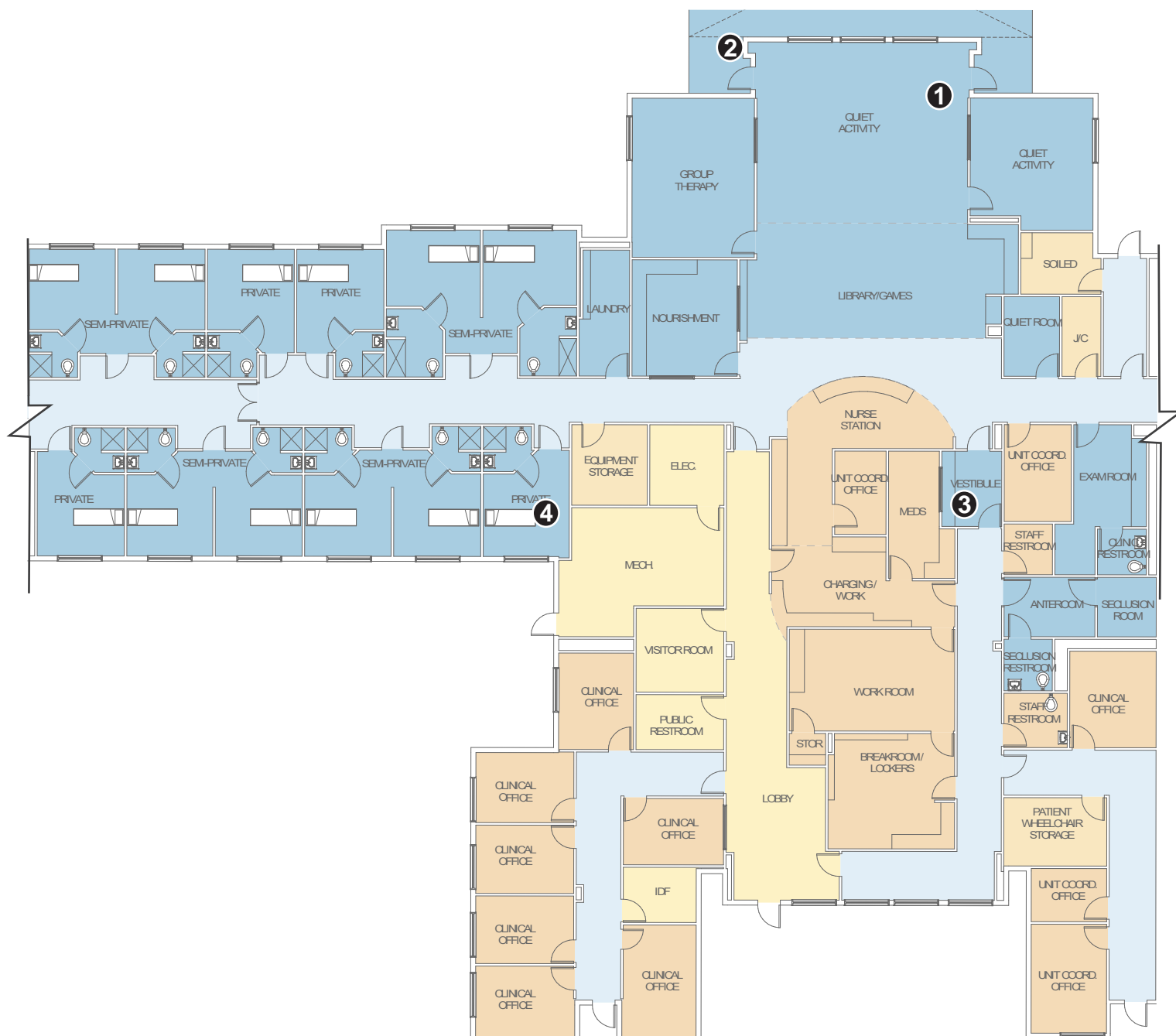
## **Overview**

The Menninger Clinic is a leading specialty psychiatric hospital that treats adults and adolescents with complex mental illness, including severe mood, personality, anxiety and addictive disorders.

The Menninger Campus consists of six buildings on a 46-acre site Southwest of the Texas Medical Center.

The campus is anchored by the 185,000-sf, 120 bed, private psychiatric hospital which surrounds a central courtyard. Patient amenities include interior and exterior dining facilities, a gymnasium, wellness center, meditation garden and a labyrinth within the courtyard. The administration building, which is referred to as The Commons Building, houses a chapel, an education and conference center and a computer lab. The facility also includes laboratory, pharmacy, research and outpatient components for comprehensive mental healthcare treatment and study.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.108 Menninger Clinic, Floor Plan**

**Color Legend:**

- Circulation
- Patient Areas
- Staff Areas
- Public Areas

**Key Notes:**

- 1** Great Room
- 2** Walled Garden
- 3** Medication Dispensing
- 4** Patient Room



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.109 Menniger Great Room, Reference Floor Plan Key Note #1**



**Figure 6.111 Menniger Walled Garden, Reference Floor Plan Key Note #2**



**Figure 6.110 Menniger Medication Dispensing, Reference Floor Plan Key Note #3**



**Figure 6.112 Menniger Patient Room, Reference Floor Plan Key Note #4**



## 6.1.11. VAMC Houston



**Figure 6.113 Aerial of VAMC DeBakey, Houston, TX**

VAMC DEBAKEY		
Location	Houston, TX	
Patient Type	Involuntary	
Average Length of Stay	6D: 4-6 weeks / 6F: 11 days / 6A: 6-7 days	
Unit Size/Type	73 beds, 3 units	
Beds	6D: 20 Bed Trauma Unit 6F: 21 Bed Geropsych Unit 6A: 32 Bed Acute Psych Unit	
Staffing Per Unit	Nursing Per Unit: 6D - 4-6 day/3-4 night ; 6F – 8 day/8 night; 6A – 12 day/10 night ; Plus 30 non-nursing all units	
Nurse Station	Enclosed	
Features	Trauma unit 6D / 4-6-week ALOS; Geropsychiatric unit 6F - pod design	
Staff Interview Feedback	Need in-between unit – currently SUD/Acute mixed; Need visitors room; Corridors create lines of sight issues	



*Figure 6.114 Floor diagram of VAMC Houston*

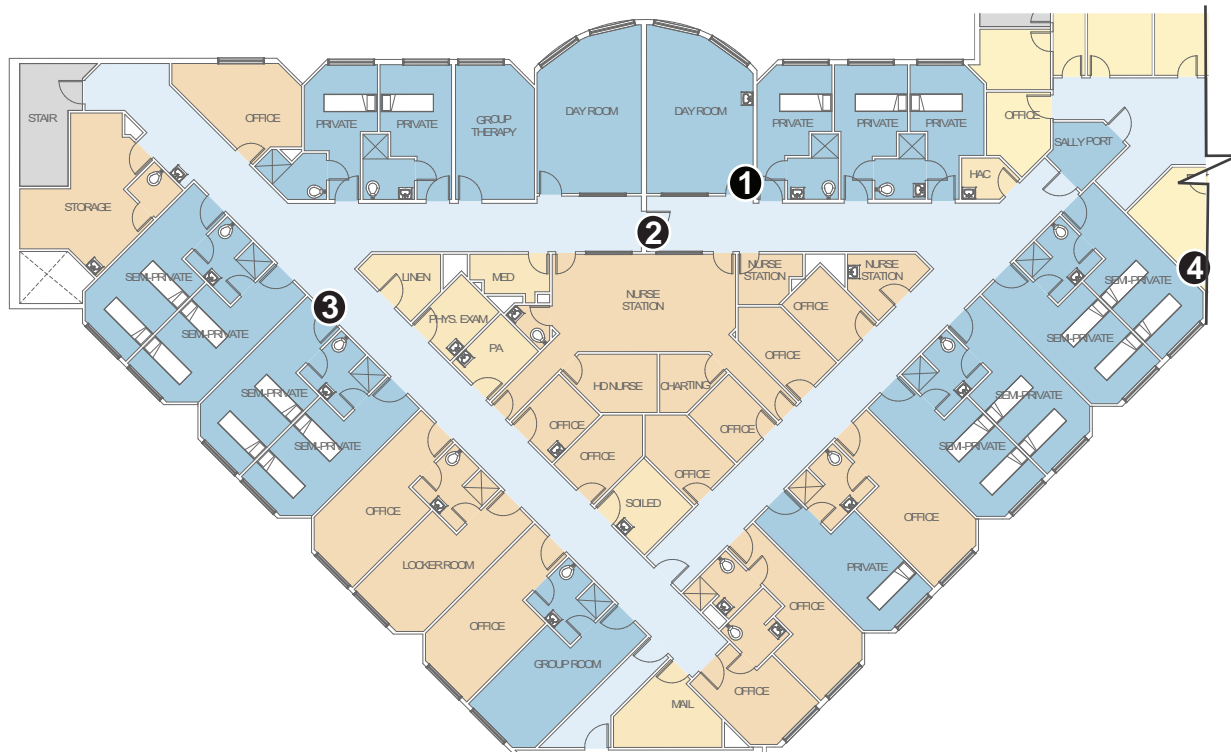
## Overview

The Michael E. DeBakey VA Medical Center building in Houston comprises a vertical expansion and renovation to house the relocated Mental Health Clinic Trauma Recovery Program, the Operation Iraqi Freedom/Operation Enduring Freedom Therapy Programs, and the Telemedicine Psychotherapy Program.

The project includes renovation of the first floor, with the new clinic to be located on the second floor. Ancillary and support services are strategically located throughout the clinic. The design will be compatible with the existing architecture on campus and will include materials such as tilt-up or pre-cast concrete panels along with abundant glass to maximize natural daylight to the interior spaces.

Taking cues from mental health issues unique to veterans, the interior spaces will provide tall, open spaces as well as intimate places for privacy.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.115 VAMC DeBakey, Floor Plan**

**Color Legend:**

- Circulation
- Patient Areas
- Staff Areas
- Public Areas

**Key Notes:**

- 1** Dayroom
- 2** Enclosed Nurse Station
- 3** Patient Bedroom
- 4** Rooftop Courtyard





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.116 VAMC Houston Dayroom,** Reference Floor Plan Key Note #1



**Figure 6.118 VAMC Houston Enclosed Nurse Station,** Reference Floor Plan Key Note #2



**Figure 6.117 VAMC Houston Patient Bedroom,** Reference Floor Plan Key Note #3



**Figure 6.119 VAMC Houston Rooftop Courtyard,** Reference Floor Plan Key Note #4



### 6.1.12. VAMC Louisville



**Figure 6.120 Aerial of VAMC Louisville, Louisville, KY**

VAMC LOUISVILLE		
Location	Louisville, KY	
Patient Type	Voluntary/Involuntary	
Average Length of Stay	3-5 days, outliers 30 days	
Unit Size/Type	1 unit 22 Acute Psychiatric	Semi-private and private
Beds	22	
Staffing Per Unit	Nursing 4-5; MH Aides 1-2; 5 at nurse station @ one time	
Nurse Station		
Features:	Domiciliary: Patients rooms - operable windows; Temp. control	
Staff Interview Feedback	would like outdoor space; Need to improve care for female vets; geropsychiatric patients specific design; Eliminate corridors = Improve lines of sight	



**Figure 6.121** *Main entrance of VAMC Louisville*









## **Overview**

The VAMC Louisville psychiatric unit is a small unit, with a limited number of patients in long, double loaded corridors with few single patient rooms and in several cases, 4 person bed rooms. Shower facilities are shared and not in good condition.

The Nurse Station lacks clear line of sight of the patient spaces and staff rely heavily upon the camera monitors. The limited number and size of open rooms for activities is not ideal.

The floor plan of the 2nd floor is organized as follows:

- Top Section:** NURSE STATION, DINING ROOM, ELEVATOR LOBBY, SALLY PORT.
- Left Wing:** OFFICE, OFFICE, OFFICE, SECLUSION ROOM, SECLUSION ROOM, PT INTERVIEW ROOM, IT, ELEC, BEDROOM.
- Central Core:** SEM-PRIVATE, INTERVIEW ROOM, NURSE STATION (3), MEDS, STAIR, SHOWER ROOM, WASHING ROOM, MEN'S ROOM, PRIVATE, MULTIPURPOSE ROOM (4), DAY ROOM (1, 2).
- Right Wing:** PRIVATE, SEM-PRIVATE, PRIVATE, PRIVATE, SEM-PRIVATE, PRIVATE, PRIVATE, PRIVATE, PRIVATE, LOCKERS-WC, CLEAN LINEN, PRIVATE.
- Bottom Section:** SOLED, HAC, NUTRITION, HVAC, ELEC.

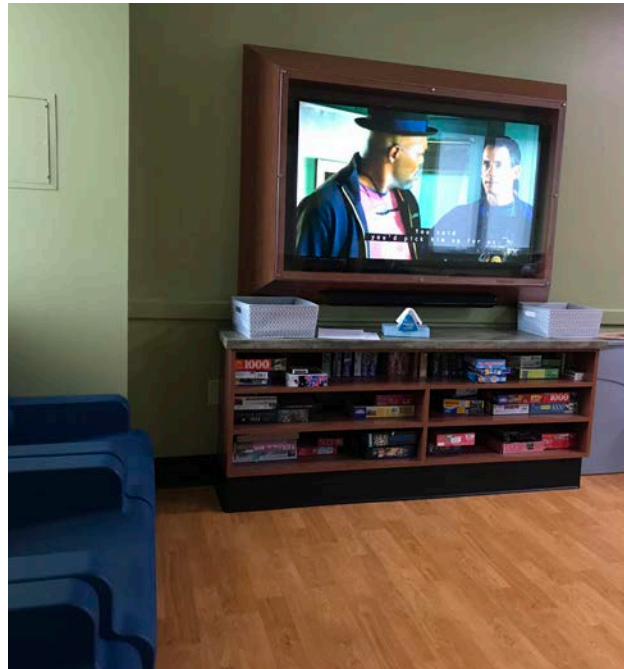
Color Legend:		Key Notes:	
	Circulation		Exercise station in Dayroom
	Patient Areas		Dayroom
	Staff Areas		Enclosed Nurse Station
	Public Areas		Patient Bedroom



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.123 VAMC Louisville Exercise Station in Dayroom, Reference Floor Plan Key Note #1**



**Figure 6.125 VAMC Louisville Dayroom, Reference Floor Plan Key Note #2**



**Figure 6.124 VAMC Louisville Enclosed Nurse Station, Reference Floor Plan Key Note #3**



**Figure 6.126 VAMC Louisville Patient Bedroom, Reference Floor Plan Key Note #4**

### 6.1.13. Sun Behavioral Kentucky



**Figure 6.127 Aerial of Sun Behavioral, St. Elizabeth, KY**

VAMC LOUISVILLE	
Location	St. Elizabeth, KY
Patient Type	Voluntary/Involuntary
Average Length of Stay	Unit Dependent
Unit Size/Type	Youth Adolescent: 18 beds - 10 days; Child: 12 beds - 10 days; Adult Mood/Anxiety 24 beds – ALOS 6 days; Thought Disorder 30 beds – ALOS 8 days; Geropsychiatric 18 beds – ALOS 10 days; Dual Diagnosis 30 beds – ALOS 5 days
Beds	197 beds, 6 units; Semi-private and a few private
Staffing Per Unit	Nursing 1:4 day/ 1:5 night
Nurse Station	Open
Features:	Limited corridors – improved sight lines; Cafeteria dining ; No security guards; Gym / Access to outdoor spaces





**Figure 6.128** *Main Entrance of Sun Behavioral Kentucky*

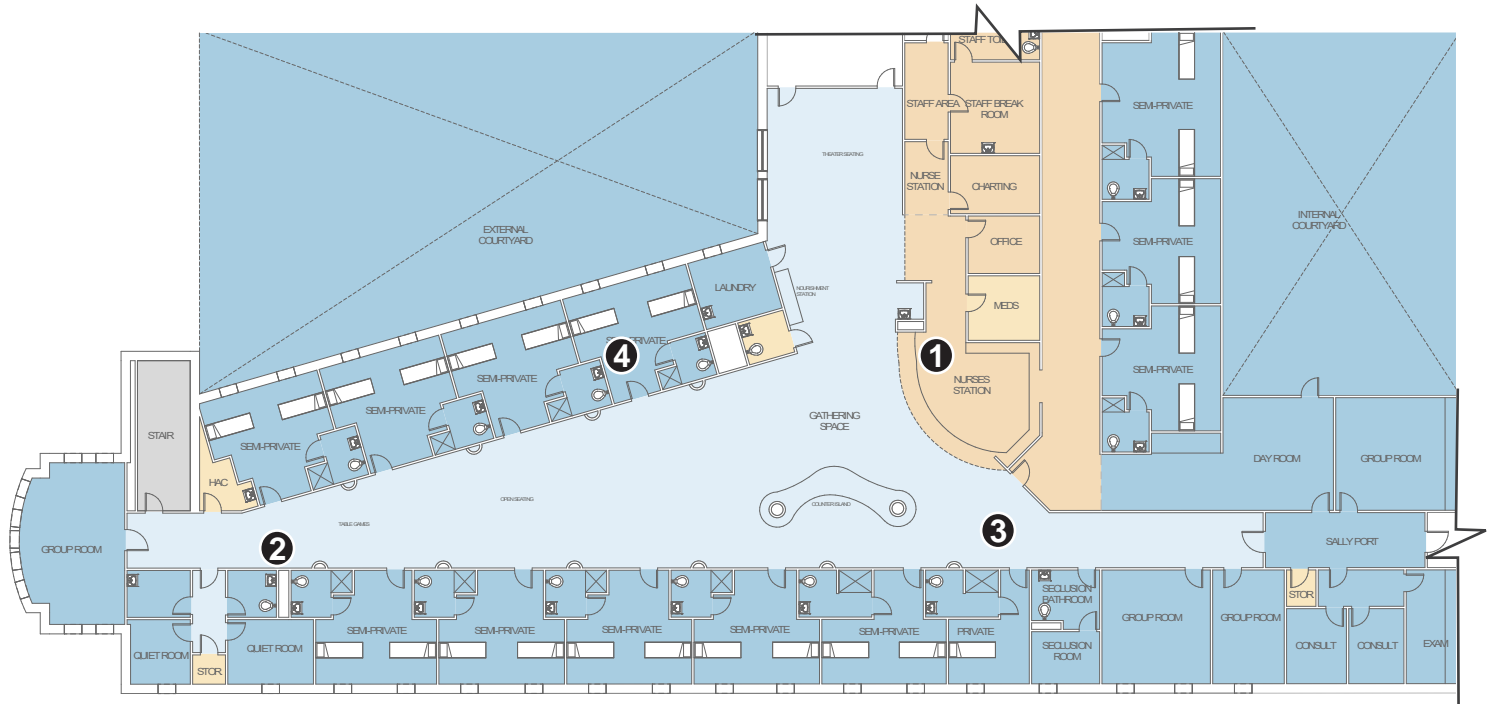
## Overview

Sun Kentucky is new inpatient facility with 8 units across two floors and includes a outpatient clinic. Each unit on the 1st floor have direct access to an enclosed courtyard. Two internal courtyards host a playground and exercise yard, respectively. The large gymnasium is also shared.

The canted walls of the unit diffuse sound and the large open milieu hosts varied and distributed seating and a satellite nurse work area/counter. While the unit receives natural light into it's living room area, its bookend by a group room that cuts off light down the rest of the unit. The wall column covers have seen significant abuse by patients. The patient rooms have blind spots and the bathrooms have been a source of concern for staff.

The offsite dining is seen as a plus by staff to relieve the pressure of being on the unit along with the ample staff spaces in the off-stage areas.

# PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE



**Figure 6.129 Sun Behavioral Kentucky, Floor Plan**

## Color Legend:

- Circulation
- Patient Areas
- Staff Areas
- Public Areas

## Key Notes:

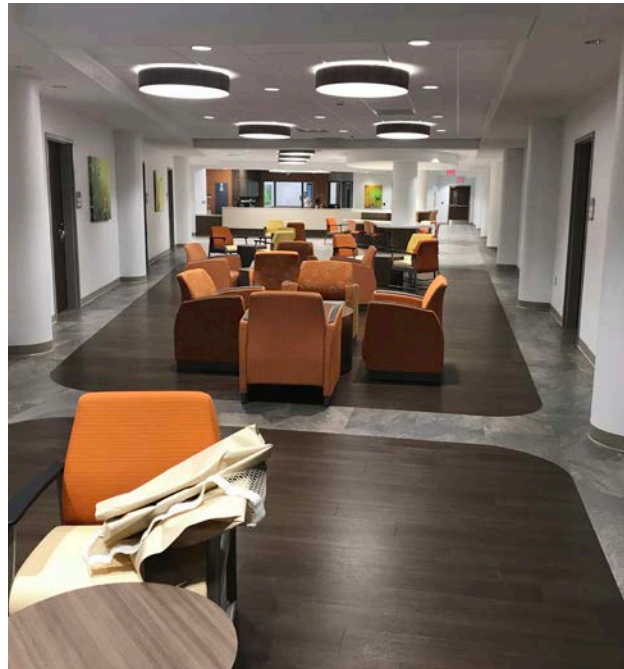
- 1** Open Nurse Station
- 2** Millieu
- 3** Patient Island/Counter
- 4** Patient Bedroom



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.130 Sun Kentucky Open Nurse Station,**  
Reference Floor Plan Key Note #1



**Figure 6.132 Sun Kentucky Millieu, Reference Floor**  
Plan Key Note #2



**Figure 6.131 Sun Kentucky Patient Island/Counter,**  
Reference Floor Plan Key Note #3



**Figure 6.133 Sun Kentucky Patient Bedroom,**  
Reference Floor Plan Key Note #4

## 6.1.14. VAMC Lexington



**Figure 6.134 Aerial of VAMC Lexington, Lexington, KY**

VAMC LEXINGTON	
Location	Lexington, KY
Patient Type	Voluntary/ Some Involuntary
Average Length of Stay	2.5-3 days
Unit Size/Type	1 Unit: Crisis Stabilization
Beds	14 beds Semi-private / a few private
Staffing Per Unit	Nursing 1:4 day / 1:5 night; Psychologist 1:7; Total 4-5 staff including techs
Nurse Station	Semi-Enclosed
Features	Part of medical center
Staff Interview Feedback	geropsychiatric patients need dedicated space, specifically designed for them (sensory walls etc)





**Figure 6.135 Main Entrance of VAMC Lexington**

## **Overview**

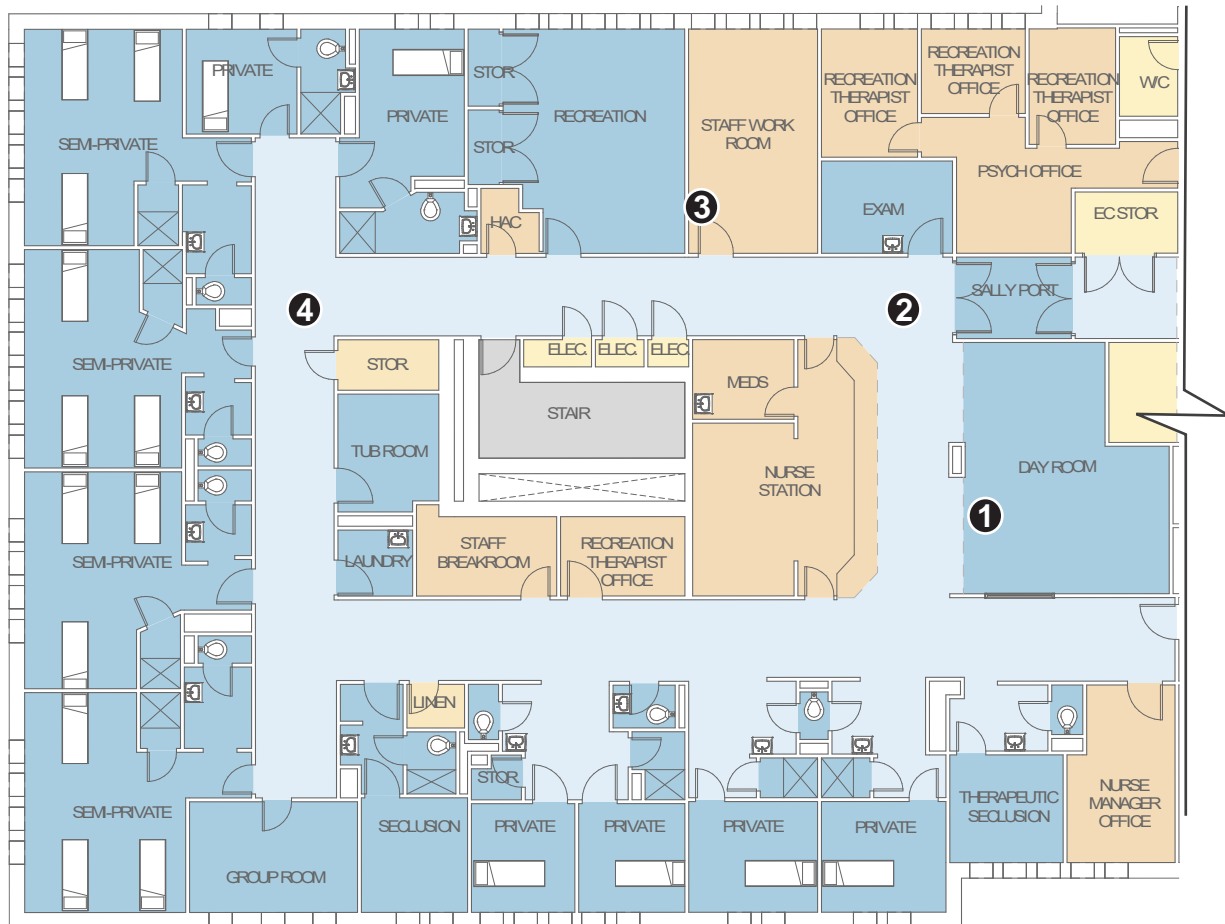
The VAMC Lexington psych unit is small, recently renovated unit with a short ALOS. The unit is based in a renovated med surg space with a racetrack layout.

The deeply sloped counter at the nurse station is topped with a short glass screen to deter patients jumping into the workspace. The ceiling hosts a positive distraction screen in the TV room but otherwise lacks natural light.

Patient rooms share bathrooms in a jack and jill style arrangement which is not ideal for cleaning or patient safety.

The unit has numerous blind spots and lacks adequate patient activity spaces.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.136 VAMC Lexington, Floor Plan**

Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f0ff; border: 1px solid black; margin-right: 5px;"></span> Circulation	<b>1</b> Dayroom
<span style="display: inline-block; width: 15px; height: 15px; background-color: #a0c0ff; border: 1px solid black; margin-right: 5px;"></span> Patient Areas	<b>2</b> Nurse station design
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffffcc; border: 1px solid black; margin-right: 5px;"></span> Staff Areas	<b>3</b> Recreation Room
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffcc99; border: 1px solid black; margin-right: 5px;"></span> Public Areas	<b>4</b> Patient Bedroom



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.137 VAMC Lexington Day Room, Reference Floor Plan Key Note #1**



**Figure 6.139 VAMC Lexington Nurse Station Design, Reference Floor Plan Key Note #2**



**Figure 6.138 VAMC Lexington Recreation Room, Reference Floor Plan Key Note #3**



**Figure 6.140 VAMC Lexington Patient Bedroom, Reference Floor Plan Key Note #4**



## 6.1.15. Eastern State Hospital



**Figure 6.141 Aerial of Eastern State Hospital, Lexington, KY**

EASTERN STATE HOSPITAL		
Location	Lexington, KY	
Patient Type	13% Voluntary/ 87% Involuntary	
Average Length of Stay	15 days	
Unit Size/Type	28 beds per unit	10 single and 9 double
Beds	239 beds	9 units
Staffing Per Unit	3 RNs/ 3 MHA Pt. techs – 1:4 1 APRN/ PA, 1 MD = 1:12	2 Soc. Workers 1 Psychologist 1 Tx coordinator
Nurse Station	Open	
Features	Recovery mall; Transitional housing (RRTP like)	
Staff Interview Feedback	Doors to bathrooms/rooms barricading issues; Charting stations too small (behind open nurse station); T shaped corridors – line of sight issues	





**Figure 6.142** *Main Entrance of Eastern State Hospital*

## **Overview**

Eastern State Hospital in Lexington, Kentucky replaces the state's oldest state-managed psychiatric hospital. The main building is a 273,000-SF, three-story construction located on a 28.85-acre site at the University of Kentucky Coldstream Farm. The project includes four 12,616-SF Personal Care Homes which provide transitional care from the hospital that assists the patients' acclimation into the community.

The new campus includes 168 adult psych beds, 25 forensic beds, 25 geriatric (GERO) beds, 12 acquired brain injury beds, and 48 personal care home beds. This LEED Silver certified project was designed in conjunction with SmithGroup.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.143 Eastern State Hospital, Floor Plan**

Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f0ff; border: 1px solid black; margin-right: 5px;"></span> Circulation	<b>❶</b> Outdoor courtyards
<span style="display: inline-block; width: 15px; height: 15px; background-color: #a0c0ff; border: 1px solid black; margin-right: 5px;"></span> Patient Areas	<b>❷</b> Patient Bedroom
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffffcc; border: 1px solid black; margin-right: 5px;"></span> Staff Areas	<b>❸</b> Patient Bathroom
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffcc99; border: 1px solid black; margin-right: 5px;"></span> Public Areas	<b>❹</b> Open nurse station

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.144 Eastern State Outdoor Courtyards,**  
Reference Floor Plan Key Note #1



**Figure 6.146 Eastern State Patient Bedroom,**  
Reference Floor Plan Key Note #2



**Figure 6.145 Eastern State Patient Bathroom,**  
Reference Floor Plan Key Note #3



**Figure 6.147 Eastern State Open Nurse Station,**  
Reference Floor Plan Key Note #4





## 6.1.16. Essex County Hospital Center



**Figure 6.148 Aerial of Essex County Hospital Center**

ESSEX COUNTY HOSPITAL CENTER	
Location	Essex County, NJ
Patient Type	Involuntary
Average Length of Stay	70 days
Unit Size/Type	26/14 - North wing : 14 single; South wing: 8 single, 9 double
Beds	180 total
Staffing Per Unit	3 RNs; 4 Attendants; 1 Psychiatrist; 1 Case Worker; 1 Therapist; 1 Internist
Nursing Station	Open
Features	
Staff Interview Feedback	



**Figure 6.149** *Courtyard of Essex County Hospital Center*

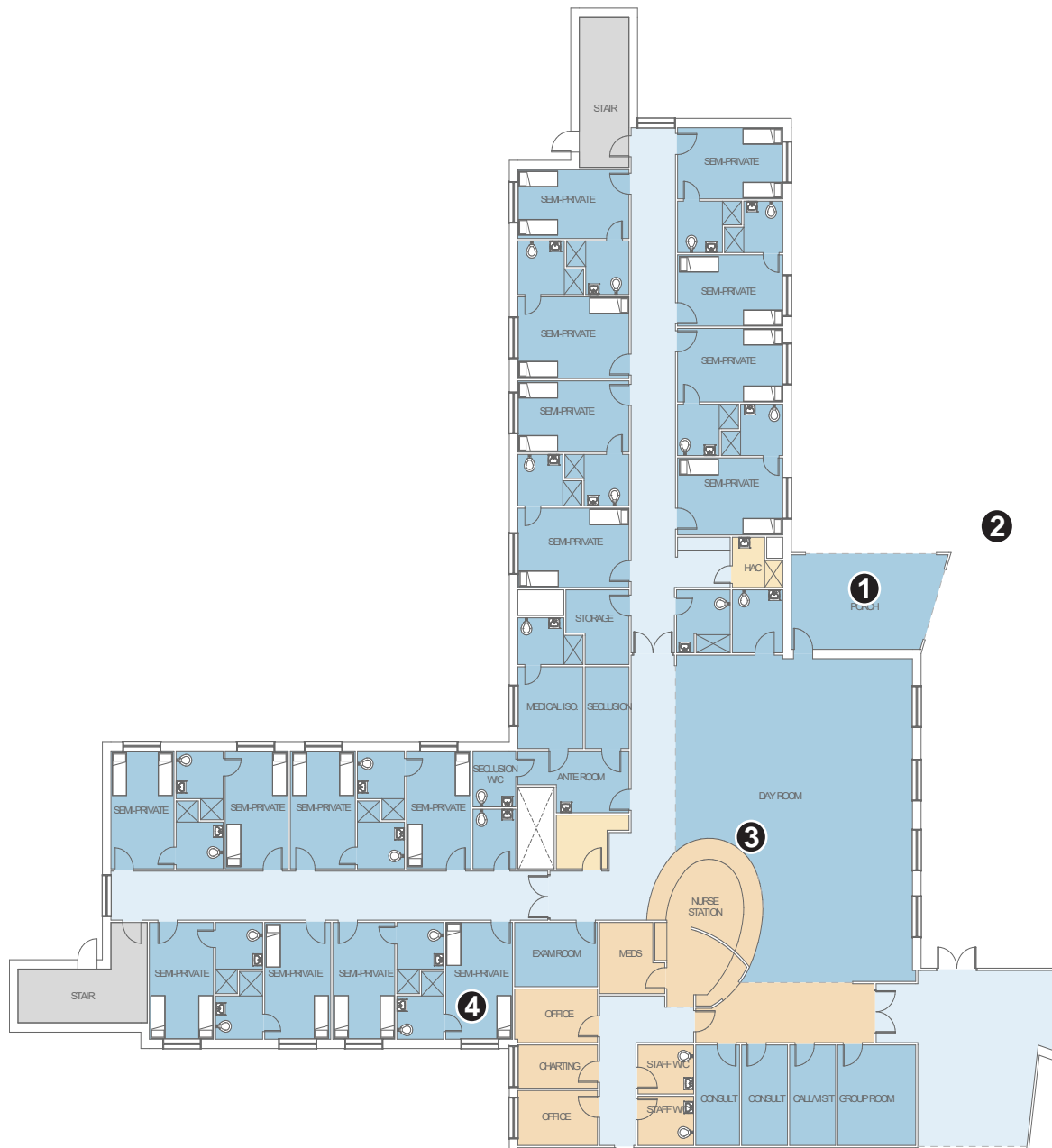
## **Overview**

The Essex County Hospital Center provides inpatient and outpatient mental health, especially long term care, and specialty medical needs for Behavioral Health patients in Essex County.

This purpose built facility is designed around a recovery mall approach, with units opened to the recovery mall in allotted times throughout the day. Extensive outdoor areas and screened porches provide access to nature.

The double occupancy rooms are on long, double load corridors, creating a staffing and line of sight issue to patient rooms. The offices that are accessible on the unit are often crowded with patients and staff.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.150 Essex County Hospital Center, Floor Plan**

Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ADD8E6; border: 1px solid black;"></span> Circulation	<b>1</b> Porch
<span style="display: inline-block; width: 15px; height: 15px; background-color: #4682B4; border: 1px solid black;"></span> Patient Areas	<b>2</b> Outdoor Rec Areas
<span style="display: inline-block; width: 15px; height: 15px; background-color: #D2B48C; border: 1px solid black;"></span> Staff Areas	<b>3</b> Open Nurse Station
<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFDAB9; border: 1px solid black;"></span> Public Areas	<b>4</b> Patient Bedroom



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.151 Essex County Hospital Center Porch,** Reference Key Note #1



**Figure 6.153 Essex County Hospital Center Outdoor Rec Areas,** Reference Floor Plan Key Note #2



**Figure 6.152 Essex County Hospital Center Open Nurse Station,** Reference Floor Plan Key Note #3



**Figure 6.154 Essex County Hospital Center Patient Bedroom,** Reference Floor Plan Key Note #4

## 6.1.17. Carrier Clinic



**Figure 6.155 Aerial of Carrier Clinic**

CARRIER CLINIC	
Location	Belle Mead, NJ
Patient Type	Voluntary / Involuntary
Average Length of Stay	14-20 days (adult program)
Unit Size/Type	20 bed - Geropsych (8 bed); Adult (20 per unit) and SUD (40 Bed) ; Adolescent (38 beds + lodge)
Beds	296 licensed beds / 197 + 100 in Lodge (residential treatment)
Staffing Per Unit	1:8 RN, 1:16 MD
Nursing Station	Open
Features	
Staff Interview Feedback	





**Figure 6.156** *Front entrance of Carrier Clinic*

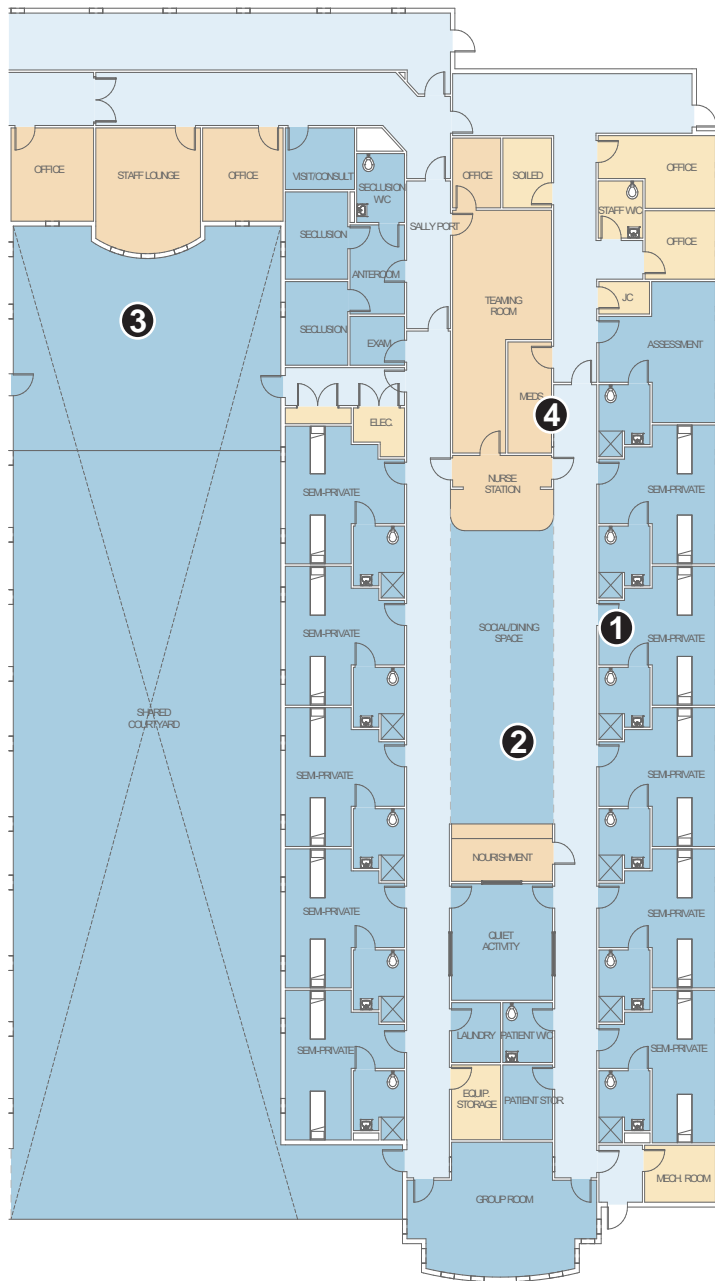
## **Overview**

Carrier Clinic is a behavioral health campus for adolescents and adults for along with residential addiction treatment, serious mental illness and mood disorders.

Their inpatient unit is open to the day room with on-unit dining and an open nurse station with every resident room accessed from the main milieu spaces. A high ceiling, clerestory window design provides a brightly lit environment.

While the accessible courtyard is shared with adjacent unit, it is sparse and lacks vegetation. The on-unit dining was convenient but the smell could permeate the space for an extended period of time. Their are several blind spots with the double-occupancy patient rooms and their arrangement with on-unit therapy spaces.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.157 Carrier Clinic, Floor Plan**

**Color Legend:**

- Circulation
- Patient Areas
- Staff Areas
- Public Areas

**Key Notes:**

- 1** Patient Bedroom
- 2** Great Room
- 3** Courtyard
- 4** Medication Room Counter



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.158 Carrier Clinic Patient Bedroom,**  
Reference Key Note #1



**Figure 6.160 Carrier Clinic Great Room,** Reference  
Floor Plan Key Note #2



**Figure 6.159 Carrier Clinic Courtyard,** Reference  
Floor Plan Key Note #3



**Figure 6.161 Carrier Clinic Medication Room  
Counter,** Reference Floor Plan Key Note #4





## 6.1.18. VA Lyons



**Figure 6.162 Aerial of VA Lyons + Domiciliary**

VA LYONS		
Location	Lyons, NJ	
Patient Type	Voluntary/Involuntary	
Average Length of Stay	17.34 days/ RRTP: 193 days	
Unit Size/Type	26 acute care, 16 long term	
Beds	Private, Semiprivate, Quads	42 beds IP (mixed); 85 beds RRTP (11 singles/37 double)
Staffing Per Unit		
Nursing Station	Enclosed	
Features	VA	
Staff Interview Feedback		





**Figure 6.163** *Front entrance of VA Lyons*

## **Overview**

The VA Lyons campus includes both inpatient and RRTP facilities. Its IP unit is a lock down, acute psych unit with a range of patient room sizes, from single, double and quad rooms. It's fully enclosed nurse station doubles as it's sally port and

The lack of shared spaces on the unit means staff escort patients to a day room off the unit, to allow visits with patients or the internal courtyard of the building.

The RRTP program includes both men and women's programs. A women's lounge separate from the other shared spaces in the facility. The patient's stressed the need for an updated gym for exercise and stress management.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



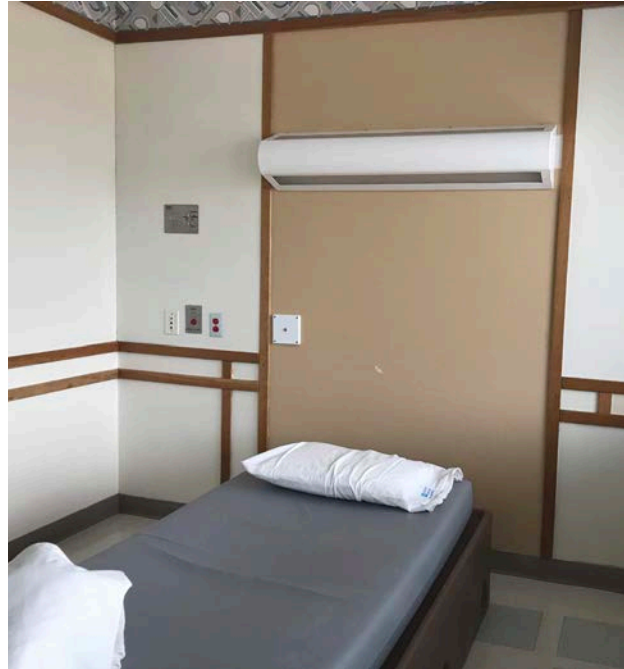
**Figure 6.164 VA Lyons, Floor Plan**

Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f0ff; border: 1px solid black; margin-right: 5px;"></span> Circulation	<b>1</b> Sally Port
<span style="display: inline-block; width: 15px; height: 15px; background-color: #a0c0ff; border: 1px solid black; margin-right: 5px;"></span> Patient Areas	<b>2</b> Patient Bedroom
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffffcc; border: 1px solid black; margin-right: 5px;"></span> Staff Areas	<b>3</b> Activity Room
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffcc99; border: 1px solid black; margin-right: 5px;"></span> Public Areas	<b>4</b> Medication Room Counter

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.165 VA Lyons Sally Port, Reference Floor Plan Key Note #1**



**Figure 6.167 VA Lyons Patient Bedroom, Reference Floor Plan Key Note #2**



**Figure 6.166 VA Lyons Activity Room, Reference Floor Plan Key Note #3**



**Figure 6.168 VA Lyons Activity Room, Reference Floor Plan Key Note #4**

### 6.1.19. UCLA Resnick Neuropsychiatric Hospital



**Figure 6.169 Aerial of UCLA Resnick**

UCLA NEUROPSYCHIATRIC HOSPITAL		
Location	Los Angeles, CA	
Patient Type	Voluntary/Involuntary (60-70%)	
Average Length of Stay	14 days	
Unit Size/Type	3 Units	Geropsych/Med Surg, Child/Adolescent, Acute
Beds	74 beds	25 beds (3x8 bed pods)
Staffing Per Unit	1:3 RN/ 1:10-12 Psychiatrist	2 Techs per Unit 1 Case Coordinator per Unit 2-3 Internist per Unit
Nursing Station	Open	
Features	Smaller “neighborhoods” = pods	





**Figure 6.170** *Main Entry of UCLA Resnick*

## **Overview**

The UCLA Resnick Neuropsychiatric Hospital houses several, distinct inpatient, acute psych units. These include the an adolescent, adult and geropsych unit, each with shared roof top terraces.

Each unit is broken into a “neighborhoods” with shared point of access from a single sally port. The generous offstage areas connect the “neighborhoods” together. The patient rooms, both single and double occupancy, have lockable storage to reassure patients their belongings are safe.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.171 UCLA Resnick, Floor Plan**

Color Legend:	
<span style="color: lightblue;">■</span>	Circulation
<span style="color: blue;">■</span>	Patient Areas
<span style="color: yellow;">■</span>	Staff Areas
<span style="color: orange;">■</span>	Public Areas





## 6.1.20. VAMC West Los Angeles



**Figure 6.172 Aerial of VAMC West LA**

VAMC WEST LA	
Location	Los Angeles, CA
Patient Type	Voluntary/Involuntary (60-70%)
Average Length of Stay	21 days
Unit Size/Type	2 Units: 20 + 26 beds each - Geropsych and Acute
Beds	46 beds
Staffing Per Unit	Per regs
Nursing Station	Open in one, semi-enclosed in other
Features	
Staff Interview Feedback	



*Figure 6.173 Nurse Station of VAMC West LA*

## **Overview**

VAMC West LA includes several lock down, acute psych units on the upper floor of the hospital complex with shared off-stage areas and nurse stations.

One unit was recently renovated with an open nurse station, updated finishes and access to a refurbished rooftop terrace. Diffuse, indirect lighting and increased shared spaces for patients were improvements from the existing unit according to staff.

The other unit had an enclosed nurse station with additional acoustic treatments along the corridors and shared patient spaces. There are numerous blind spots and the patient rooms have an additional sink in each room that is a concern for staff.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



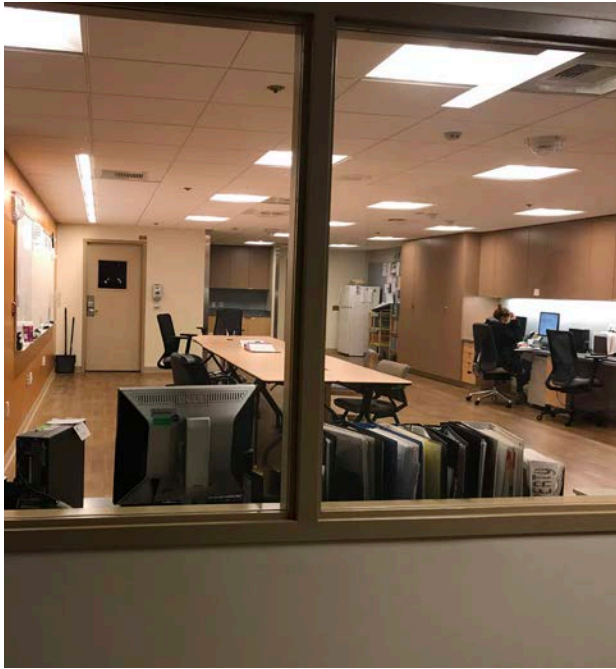
**Figure 6.174 VAMC West LA, Floor Plan**

Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f0ff; border: 1px solid black; margin-right: 5px;"></span> Circulation	<b>1</b> Staff teaming area
<span style="display: inline-block; width: 15px; height: 15px; background-color: #a0c0ff; border: 1px solid black; margin-right: 5px;"></span> Patient Areas	<b>2</b> Patient bedroom
<span style="display: inline-block; width: 15px; height: 15px; background-color: #fff9c4; border: 1px solid black; margin-right: 5px;"></span> Staff Areas	<b>3</b> Open Nurse Station
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffe0b2; border: 1px solid black; margin-right: 5px;"></span> Public Areas	<b>4</b> Rooftop terrace





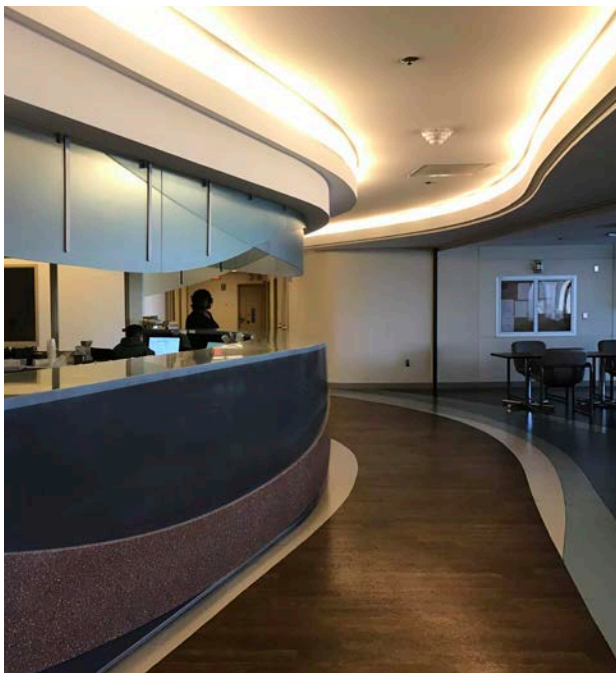
**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.175 VAMC West LA Staff Teaming Area,**  
Reference Floor Plan Key Note #1



**Figure 6.177 VAMC West LA Patient Bedroom,**  
Reference Floor Plan Key Note #2



**Figure 6.176 VAMC West LA Open Nurse Station,**  
Reference Floor Plan Key Note #3



**Figure 6.178 VAMC West LA Rooftop Terrace,**  
Reference Floor Plan Key Note #4

## 6.1.21. VAMC West Los Angeles RRTP



**Figure 6.179 Aerial of VAMC West LA Domiciliary**

VAMC WEST LA DOMICILIARY		
Location	Los Angeles, CA	
Patient Type	Voluntary	
Average Length of Stay	90-120 days	
Unit Size/Type	6 units	PTSD, Homeless, Addiction (multiple), SMI, Combat Trauma, Women Unit (18 bed)
Beds	289 beds	30 beds per unit
Staffing Per Unit	3 psychiatrists/7 psychologist	
Nursing Station	N/A	
Features		
Staff Interview Feedback		





**Figure 6.180** Main Entry of VAMC West LA Domiciliary

## Overview

The VA West LA campus includes a large RRTP program with nearly 300 beds spread across two buildings.

Both buildings share green space with outdoor pavilions as part of the larger campus. The dining hall in one building serves all 6 units along with dedicated shared resident spaces spread throughout both buildings.

The units serve specific populations including a dedicated women's unit. The spaces suffered from deferred maintenance and finishes were aged. Outdoor space was lacking for the women's unit, the contraband searching of rooms was a concern for staff and the urine analysis room was in need of renovation.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.181 VAMC West LA Domiciliary, Floor Plan**

Color Legend:	Key Notes:
<div style="display: flex; flex-direction: column; gap: 5px;"> <div><span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f0ff; border: 1px solid black; margin-right: 5px;"></span> Circulation</div> <div><span style="display: inline-block; width: 15px; height: 15px; background-color: #cce0ff; border: 1px solid black; margin-right: 5px;"></span> Patient Areas</div> <div><span style="display: inline-block; width: 15px; height: 15px; background-color: #fff9c4; border: 1px solid black; margin-right: 5px;"></span> Staff Areas</div> <div><span style="display: inline-block; width: 15px; height: 15px; background-color: #ffe0b2; border: 1px solid black; margin-right: 5px;"></span> Public Areas</div> </div>	<div style="display: flex; flex-direction: column; gap: 10px;"> <div><b>①</b> Reception/Entry</div> <div><b>②</b> Staff office area</div> <div><b>③</b> Community Room</div> <div><b>④</b> Art Room</div> </div>



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.182 VAMC West LA Domiciliary Reception/Entry, Reference Floor Plan Key Note #1**



**Figure 6.184 VAMC West LA Domiciliary Staff Office Area, Reference Floor Plan Key Note #2**



**Figure 6.183 VAMC West LA Domiciliary Community Room, Reference Floor Plan Key Note #3**



**Figure 6.185 VAMC West LA Domiciliary Art Room, Reference Floor Plan Key Note #4**

## 6.1.22. Willow Rock Center



**Figure 6.186** Aerial of Willow Rock

WILLOW ROCK CENTER		
Location	San Leandro, CA	
Patient Type	Voluntary/Involuntary Adolescent	
Average Length of Stay	7-8 days	
Unit Size/Type	1 unit	2 “pods”
Beds	16 beds	private/semiprivate
Staffing Per Unit	5-6 staff (for 12-13 patients)	1 RN, 1 LVN, 2 counselors, 1 soc. Worker group leader
Nursing Station	N/A	
Features	Crisis Stabilization Unit (CSU); single rooms; Less stressful than EDs; By removing nurse station = increased interaction with staff	
Staff Interview Feedback	Too large = different dynamics	





**Figure 6.187** *Main Courtyard of Willow Rock*

## **Overview**

The Willow Rock Center is an involuntary/voluntary adolescent unit with two components. A small, crisis stabilization unit that feeds into the adolescent psych unit. Both units have access to a shared internal courtyard as well as exercise yards.

The layout of the “pods” allows separate patient populations to be housed or to be locked down separately, if needed. The open work station reflects the staff culture and ample natural light from the skylights was praised by the staff.

The facility is aged and in need of a finish upgrade and the back of house spaces for staff on the unit are small and lacking.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.188 Willow Rock, Floor Plan**

Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f0ff; border: 1px solid black; margin-right: 5px;"></span> Circulation	<b>1</b> Crisis Unit Cottage
<span style="display: inline-block; width: 15px; height: 15px; background-color: #a0c0ff; border: 1px solid black; margin-right: 5px;"></span> Patient Areas	<b>2</b> Intake/Interview Area
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffffcc; border: 1px solid black; margin-right: 5px;"></span> Staff Areas	<b>3</b> Outdoor play area
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffcc99; border: 1px solid black; margin-right: 5px;"></span> Public Areas	<b>4</b> Living Room area for each pod of bedrooms





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



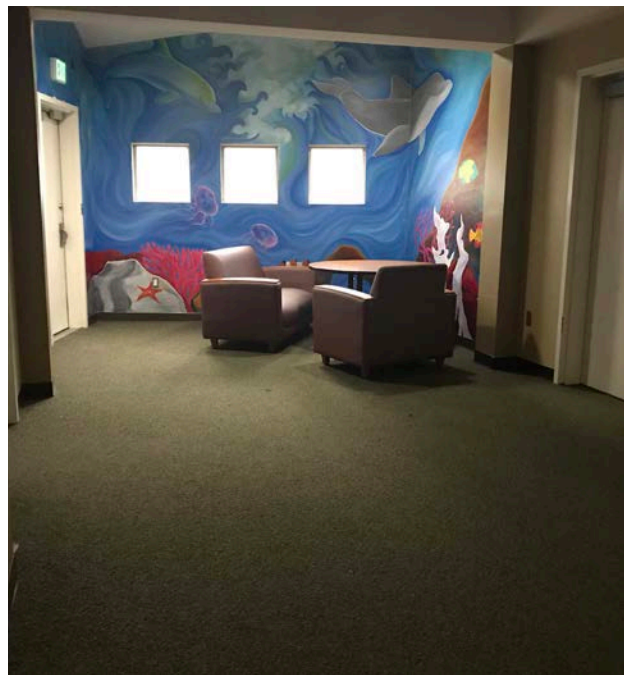
**Figure 6.189 Willow Rock Crisis Unit Cottage,**  
Reference Floor Plan Key Note #1



**Figure 6.191 Willow Rock Intake/Interview Area,**  
Reference Floor Plan Key Note #2



**Figure 6.190 Willow Rock Outdoor Play Area,**  
Reference Floor Plan Key Note #3



**Figure 6.192 Willow Rock Living Room Area,**  
Reference Floor Plan Key Note #4



### 6.1.23. John George Psychiatric Pavilion



**Figure 6.193 Aerial of John George**

JOHN GEORGE PSYCHIATRIC PAVILION		
Location	San Leandro, CA	
Patient Type	Voluntary/Involuntary (95%)	
Average Length of Stay	5-7 days	
Unit Size/Type	6 units	1 Adult, 1 Acute Pysch, 1 Crisis Stabilization, 3 IP Units
Beds	138 beds	1 private, 11 semiprivate
Staffing Per Unit	1:6 RN + 1 Charge Nurse	
Nursing Station	Open	
Features	Outdoor spaces, WOWs in milieu	
Staff Interview Feedback	Nurse station could be more central, Acoustics an issue in open space	



**Figure 6.194** *Main Courtyard of John George*

## **Overview**

The John George Psychiatric Pavilion, as it was originally called, is a stand alone acute psychiatric hospital with 6 units.

The units are organized around a large, shared central courtyard with ample exercise space, open lawns, gardens and connected via covered walkway.

Each unit has its own small walled garden or exercise yard but they are not used often. The units are organized around a shared day space with bedrooms directly off the clerestory-lit milieu space.

The nurse station is small and lacks lines of sight to every patient space. The shared off-stage areas connect all the units but are in need of expansion. Acoustics is an issue, given the large open space and the columns spacing create hard surfaces that do not dissipate sound.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.195 John George, Floor Plan**

**Color Legend:**

- Circulation
- Patient Areas
- Staff Areas
- Public Areas

**Key Notes:**

- 1** Courtyard
- 2** Millieu
- 3** Walled Patio
- 4** Enclosed Nurse Station, interior





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



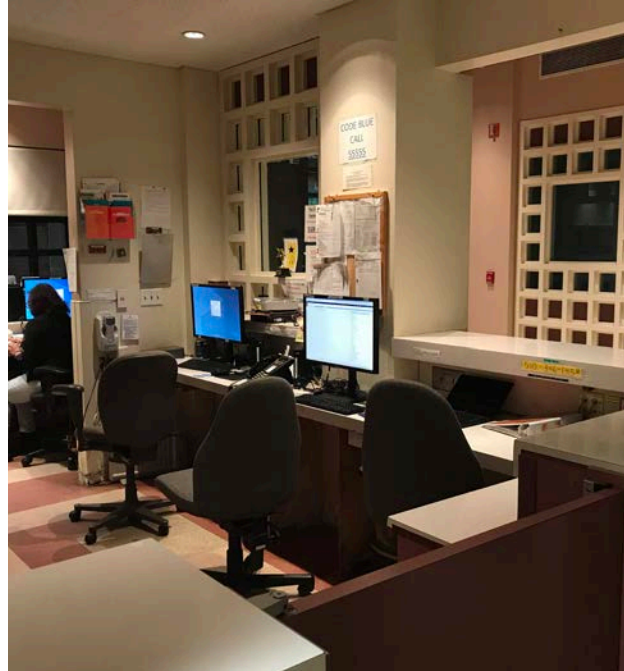
**Figure 6.196 John George Courtyard, Reference Floor Plan Key Note #1**



**Figure 6.198 John George Millieu, Reference Floor Plan Key Note #2**



**Figure 6.197 John George Walled Patio, Reference Floor Plan Key Note #3**



**Figure 6.199 John George Enclosed Nurse Station, Reference Floor Plan Key Note #4**

## 6.1.24. VAMC Palo Alto



**Figure 6.200 Aerial of VAMC Palo Alto**

VAMC PALO ALTO		
Location	Palo Alto, CA	
Patient Type	Voluntary/Involuntary (25-30%)	
Average Length of Stay	Varies	Acute Psych: 14, Non-Acute Residential: 28
Unit Size/Type	3 units	Acute Psych, Non- Acute
Beds	60 beds	20 beds, 3 units
Staffing Per Unit	6-7 staff per unit	RN, NA, LVN 1:8 Provider Ratio 3 Internist per unit 5 Psych Trainees
Nursing Station	Open	
Features	Courtyards, natural light	
Staff Interview Feedback	Need more medical services, too many hard surfaces, overhangs in courtyards, need interview	





**Figure 6.201** Main Entry of VAMC Palo Alto

## Overview

This freestanding inpatient acute psychiatric facility at VAMC Palo Alto serves veterans mental health needs. It's overall building is organized around internal courtyards, allowing every unit multiple outdoor spaces.

The semi-enclosed nurse station is composed of head height glass to increase transparency to the unit while protecting staff. The numerous skylights bring in abundant natural light and ample off-stage areas allow staff to share resources between units.

The skylights create acoustic issues due to the lack of absorptive finishes and the blind spots by some corridors and corners is a concern for staff. The numerous courtyards and beneficial, especially with access to on-unit dining but the limited size of the smaller courtyards have limited their use. Elopement from the courtyards has lead to several modifications of the outdoor spaces.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.202 Floor Plan of VAMC Palo Alto**

Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f0ff; border: 1px solid black; margin-right: 5px;"></span> Circulation	<b>1</b> Nurse Station
<span style="display: inline-block; width: 15px; height: 15px; background-color: #a0c0ff; border: 1px solid black; margin-right: 5px;"></span> Patient Areas	<b>2</b> Courtyard
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffffcc; border: 1px solid black; margin-right: 5px;"></span> Staff Areas	<b>3</b> Patient Bed
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffcc99; border: 1px solid black; margin-right: 5px;"></span> Public Areas	<b>4</b> Millieu



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.203 VAMC Palo Alto Nurse Station,**  
Reference Floor Plan Key Note #1



**Figure 6.205 VAMC Palo Alto Courtyard,** Reference  
Floor Plan Key Note #2



**Figure 6.204 VAMC Palo Alto Patient Bedroom,**  
Reference Floor Plan Key Note #3



**Figure 6.206 VAMC Palo Alto Millieu,** Reference  
Floor Plan Key Note #4

## 6.1.25. VAMC Menlo Park RRTP



**Figure 6.207 Aerial of VAMC Menlo Park Domiciliary**

VAMC MENLO PARK DOMICILIARY		
Location	Menlo Park, CA	
Patient Type	Voluntary	
Average Length of Stay	90-180 days	30 bed SUD(90 day) 70 bed homeless (6 months)
Unit Size/Type	2 programs	SUD, Homeless
Beds	100 beds	Some Private with mostly Semiprivate, Jack/Jill Bathrooms
Staffing Per Unit	25 staff +/- nursing	Higher due to building
Nursing Station	N/A	
Features	Community of 30 good size reinforce peer to peer interactions/ interventions	
Staff Interview Feedback	Need storage, need meeting space, clear lines of sight an issue.	





*Figure 6.208 Great Room of VAMC Menlo Park Domiciliary*

## Overview

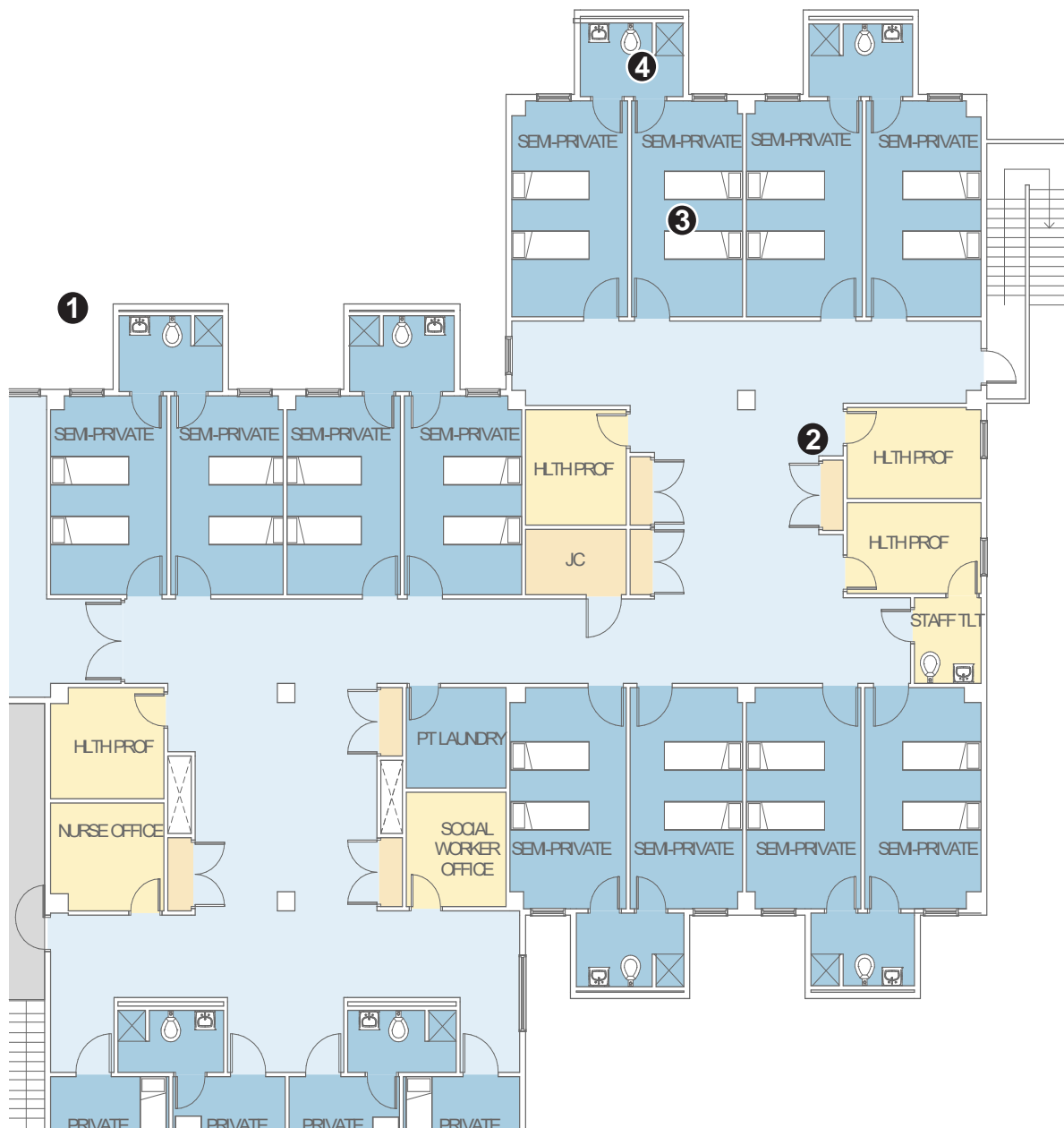
The VAMC Menlo Park Domiciliary is a large RRTP unit with 100 beds serving two distinct resident groups: SUDs and Homeless Veterans.

The program has a well-established culture and traditions that utilize the space to reinforce the program. As residents move up in responsibility, their “rank” affords them additional amenities, such as a private bedroom or bathroom.

The space is older but well lit and maintained, with ample access to nature and natural light. The distribution of staff space is spread throughout the facility but storage is lacking. The numerous open spaces for are used often for a variety of activities.

Clear lines of sight are an issue and few enclosed spaces are over-utilized. The staffing is higher due to the large and spread-out foot print of the facility.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



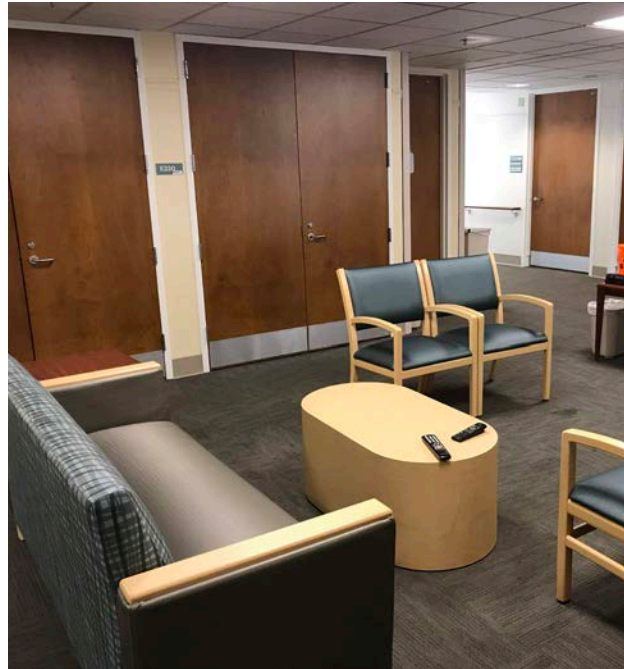
**Figure 6.209 VAMC Menlo Park Domiciliary, Floor Plan**

Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f0ff; border: 1px solid black;"></span> Circulation	<b>1</b> Courtyard
<span style="display: inline-block; width: 15px; height: 15px; background-color: #a0c0ff; border: 1px solid black;"></span> Patient Areas	<b>2</b> Millieu
<span style="display: inline-block; width: 15px; height: 15px; background-color: #fff9c4; border: 1px solid black;"></span> Staff Areas	<b>3</b> Patient bed
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffe0b2; border: 1px solid black;"></span> Public Areas	<b>4</b> Patient Bathroom

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.210 VAMC Menlo Park Domiciliary Courtyard, Reference Floor Plan Key Note #1**



**Figure 6.212 VAMC Menlo Park Domiciliary Millieu, Reference Floor Plan Key Note #2**



**Figure 6.211 VAMC Menlo Park Domiciliary Patient Bed, Reference Floor Plan Key Note #3**



**Figure 6.213 VAMC Menlo Park Domiciliary Patient Bathroom, Reference Floor Plan Key Note #4**



## 6.1.26. St. Joseph Behavioral Hospital - Stockton



**Figure 6.214 Aerial of St. Joseph-Stockton**

ST. JOSEPH BEHAVIORAL HOSPITAL-STOCKTON		
Location	Stockton, CA	
Patient Type	Voluntary/Involuntary (75-80%)	
Average Length of Stay	7 days	
Unit Size/Type	3 units	16 bed GPU, 11 bed Acute, 11 bed unit
Beds	35 beds	Semiprivate, 1 Triple
Staffing Per Unit	1:3 staff ratio	
Nursing Station	Enclosed	
Features	dining off unit, freestanding facility	
Staff Interview Feedback	Ideal separate detox, high acuity, step down units; Smaller unit to segregate high risk pts; Need more quiet rooms; Outdoor courtyard	



**Figure 6.215** *Main Entry of St. Joseph-Stockton*

## **Overview**

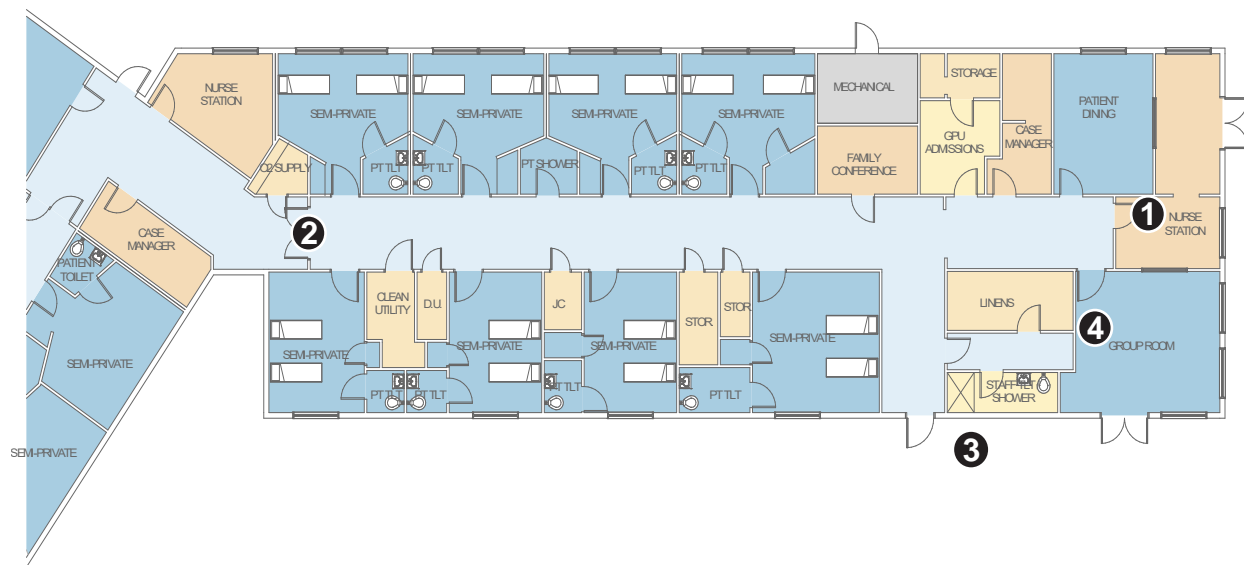
This acute, inpatient psychiatric hospital is re-purposed facility, oriented around a central courtyard. It's 3 units have equal access to outdoor space.

The patient bedrooms are all double-occupancy with shared shower facilities accessible off the main corridor. Staff have to pass through each unit to access the next or cut across the courtyard. The share patient spaces on each unit is small and over-utilized.

There is little in the way of off-stage space per unit and all nurse stations are enclosed.

The staff expressed the need for quiet rooms, smaller units and the ability to separate distinct patient populations.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.216 St. Joseph-Stockton, Floor Plan**

Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f0ff; border: 1px solid black; margin-right: 5px;"></span> Circulation	<b>1</b> Enclosed Nurse Station
<span style="display: inline-block; width: 15px; height: 15px; background-color: #a0c0ff; border: 1px solid black; margin-right: 5px;"></span> Patient Areas	<b>2</b> Patient Hallway
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffffcc; border: 1px solid black; margin-right: 5px;"></span> Staff Areas	<b>3</b> Outdoor Courtyard
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffcc99; border: 1px solid black; margin-right: 5px;"></span> Public Areas	<b>4</b> Dayroom



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.217 St. Joseph-Stockton Enclosed Nurse Station, Reference Floor Plan Key Note #1**



**Figure 6.219 St. Joseph-Stockton Patient Hallway, Reference Floor Plan Key Note #2**



**Figure 6.218 St. Joseph-Stockton Outdoor Courtyard, Reference Floor Plan Key Note #3**



**Figure 6.220 St. Joseph-Stockton Dayroom, Reference Floor Plan Key Note #4**



## 6.1.27. San Jose Behavioral Hospital



**Figure 6.221 Aerial of San Jose Behavioral Hospital**

SAN JOSE BEHAVIORAL HOSPITAL		
Location	San Jose, CA	
Patient Type	Voluntary/Involuntary	
Average Length of Stay	7-12 days	
Unit Size/Type	4 units: 17-23 beds	
Beds	80 beds	23 bed GPU 17 bed adolescent 23 bed medically-acute/older 17 bed acute male
Staffing Per Unit	8 FTE per 24 patients	22 staff
Nursing Station	Open	
Features	Outdoor courtyards – walking track (larger better)	
Staff Interview Feedback	Blind corners, flexibility critical, hallway width/length an issue, acoustics	



*Figure 6.222 Main Entry of San Jose Behavioral Hospital*

## **Overview**

This re-purposed high school is a stand alone, acute psychiatric hospital with 4 units caring for geropsych, adolescent, medically acute patients along with an all male, acute psych unit.

The facility has updated finishes with a residential feel. The outdoor courtyards are large and include exercise spaces, along with the gym which is used as an exercise/multipurpose space. there is off-unit dining and patients are escorted

The bedrooms feature magnetic foam doors, which are well liked by the administration. Most rooms are double occupancy and the open nurse station is well-lit from the skylights that organize each unit.

There are several blind spots throughout the facility, both from the internal corridors and the larger courtyard wrapping around the gymnasium



### 6.1.28. Jay Mahler Recovery Center



**Figure 6.223 Aerial of Jay Mahler**

JAY MAHLER RECOVERY CENTER		
Location	San Leandro, CA	
Patient Type	Voluntary	
Average Length of Stay	14-30 days	
Unit Size/Type	1 crisis residential unit	shared bathrooms
Beds	16 beds	
Staffing Per Unit	1:2 Staff Ratio	2-3 Clinicians, 1 RN 2 Counselors 1 Psychiatrist 3x/wk 1 Rehab Therapist
Nursing Station	None/WOW	Enclosed Meds Room
Features	Rooms directly off community room; Outdoor areas/central courtyard and porch; Cooking on site	
Staff Interview Feedback	Private rooms preferred by clientele	





**Figure 6.224** *Great Room of Jay Mahler*

## **Overview**

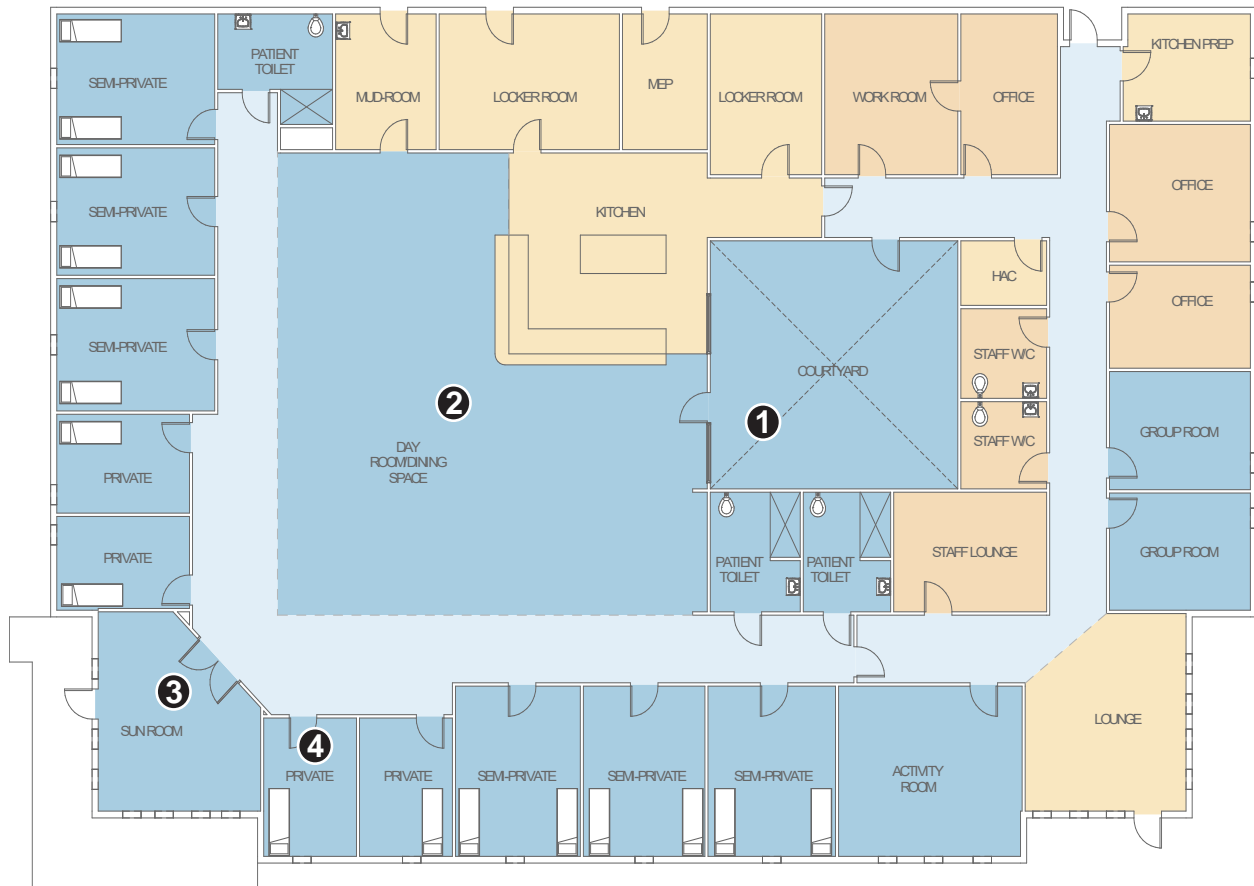
The Jay Mahler Recovery Center is a stand alone, residential rehab program that houses 16 beds.

It's single and double bedrooms are all accessible from the great room, eliminating corridors. The lack of a nurse station is replaced by a open kitchen island that staff and residents congregate around. All meals are prepared in the shared main kitchen by staff and residents.

The great room has ample natural light from a clerestory and the borrowed light from the compact internal courtyard and adjacent sun room. The sun room doubles as a music room/lounge.

The bedrooms lack bathrooms, and 3 shared, single occupancy bathrooms are distributed around the great room. The number of doors is a concern to staff, as residents are free to come and go till curfew. The limited off-stage space is a concern by staff.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.225 Jay Mahler, Floor Plan**

**Color Legend:**

- Circulation
- Patient Areas
- Staff Areas
- Public Areas

**Key Notes:**

- ①** Central courtyard
- ②** Great Room
- ③** Sun Room
- ④** Resident Bedroom





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



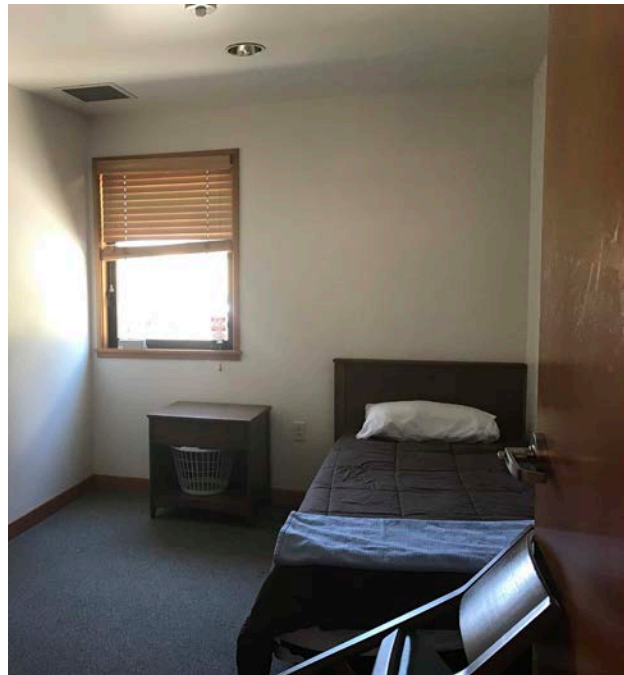
**Figure 6.226 Jay Mahler Central Courtyard,**  
Reference Floor Plan Key Note #1



**Figure 6.228 Jay Mahler Great Room,** Reference  
Floor Plan Key Note #2



**Figure 6.227 Jay Mahler Sun Room,** Reference Floor  
Plan Key Note #3



**Figure 6.229 Jay Mahler Resident Bedroom,**  
Reference Floor Plan Key Note #4

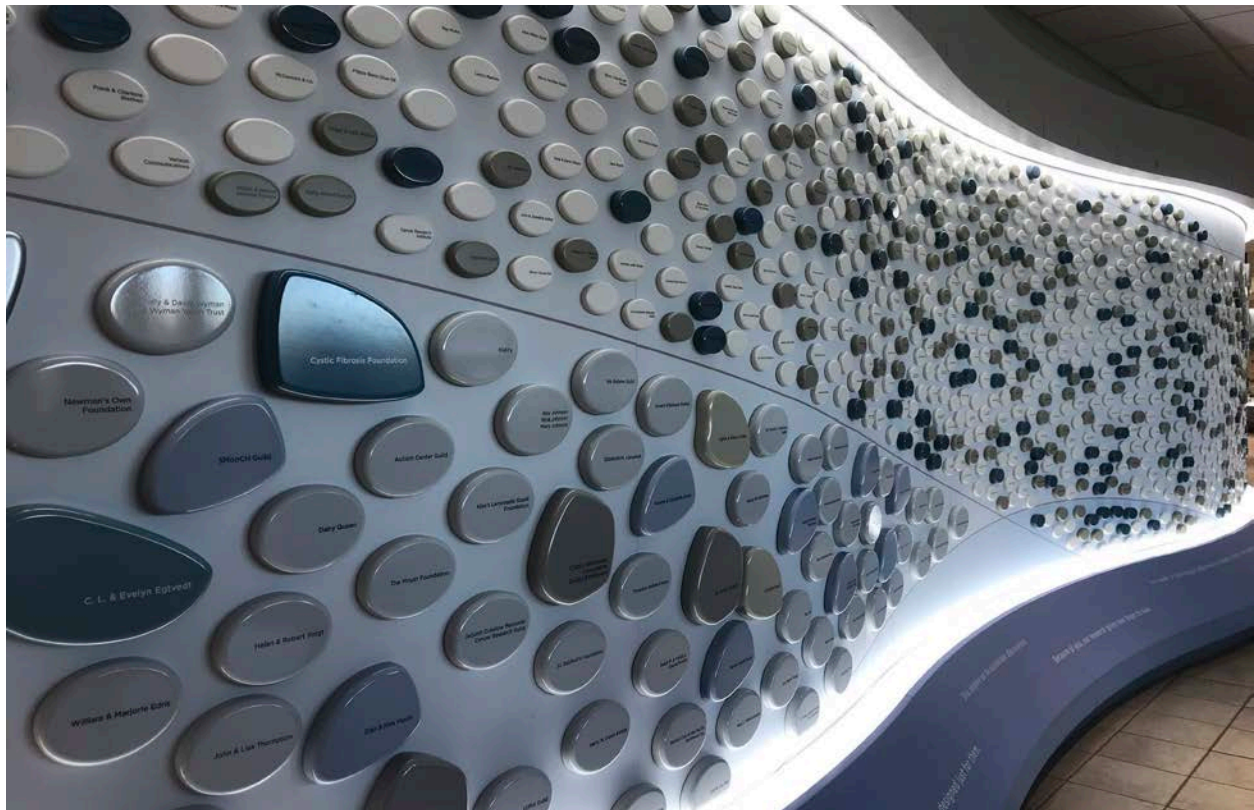
## 6.1.29. Seattle Childrens Hospital



**Figure 6.230 Aerial of Seattle Childrens**

SEATTLE CHILDRENS HOSPITAL		
Location	Seattle, WA	
Patient Type	Parental Consent	
Average Length of Stay	5-7 days	
Unit Size/Type	41 beds	25 bed/16 bed quiet unit
Beds	Single	Includes bed for parent
Staffing Per Unit	7 per unit per day/ 3 night	
Nursing Station	Enclosed x 3	
Features	No seclusion rooms (restraints to kids) CMS waiver; On stage/ off stage for material/food delivery; Bathrooms accessed from corridor; Staff are coaches (not ok to be in nurse station) Outdoor spaces x 2; Interconnected stair between units	
Staff Interview Feedback		





**Figure 6.231** *Main Corridor of Seattle Childrens*

## **Overview**

The Seattle Children's Hospital is specialty hospital that includes 2 behavioral health units specifically design for children and adolescents. This includes a low-stimulus autism unit.

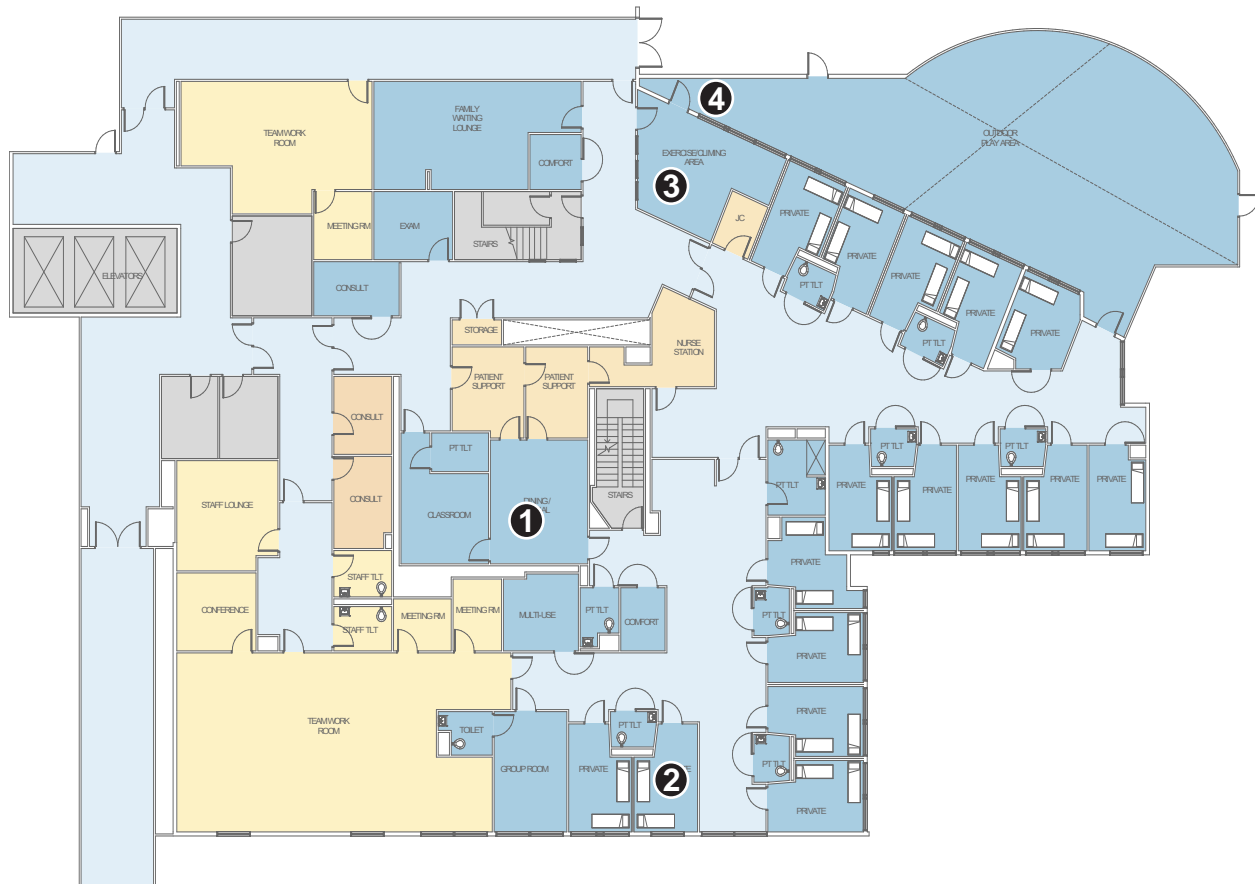
The unit is situated on two upper floors of the hospital, with access to both an enclosed porch and a roof top terrace courtyard. The units are splayed to mitigate sound and furnished in a colorful palette with natural hues. There are ample off-stage spaces, no nurse stations, numerous shared patient spaces and classrooms distributed throughout the unit and connected with an internal, communicating stair.

Patient bedrooms lack bathrooms, as they are accessible outside each room. While patient bedrooms are single occupancy, they have an additional bed for a parent to the stay the night. Several patient bedrooms feature a lockable med gas cabinet.

A shared back of house staff areas provide close collaboration and a control room monitors all spaces via camera. There are blind spots and a heavy staff presence in the milieu is common.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.232 Seattle Childrens, Floor Plan**

Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ADD8E6; border: 1px solid black; margin-right: 5px;"></span> Circulation	<b>1</b> On-unit Dining Room
<span style="display: inline-block; width: 15px; height: 15px; background-color: #6495ED; border: 1px solid black; margin-right: 5px;"></span> Patient Areas	<b>2</b> Patient Bedroom
<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFFF00; border: 1px solid black; margin-right: 5px;"></span> Staff Areas	<b>3</b> Dayroom
<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFA500; border: 1px solid black; margin-right: 5px;"></span> Public Areas	<b>4</b> Enclosed Porch

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.233 Seattle Childrens On-unit Dinign Room,**  
Reference Floor Plan Key Note #1



**Figure 6.235 Seattle Childrens Patient Bedroom,**  
Reference Floor Plan Key Note #2



**Figure 6.234 Seattle Childrens Dayroom,** Reference  
Floor Plan Key Note #3



**Figure 6.236 Seattle Childrens Enclosed Porch,**  
Reference Floor Plan Key Note #4

### 6.1.30. VAMC American Lake RRTP



**Figure 6.237 Aerial of VAMC American Lake Domiciliary**

VAMC AMERICAN LAKE DOMICILIARY		
Location	American Lake, WA	
Patient Type	Voluntary	
Average Length of Stay	1-6 months	
Unit Size/Type	4 units	8 Chronic Pain (5 weeks) 18 PTSD (30 day) 24 SUD (30 day) 18 Homeless (3-6 months)
Beds	64 beds	Single, Double, Triple and Quad
Staffing Per Unit	N/A	
Nursing Station	Open	
Features	Even though shared rooms, cabinets well designed to separate personal spaces	
Staff Interview Feedback	Vets prefer private but some want roommates – no quads; Would like women’s only facility; Single bathrooms best – Jack and Jill more difficult to check, Smaller units better, could take higher risk clients	







*Figure 6.238 View from VAMC American Lake Domiciliary*

## Overview

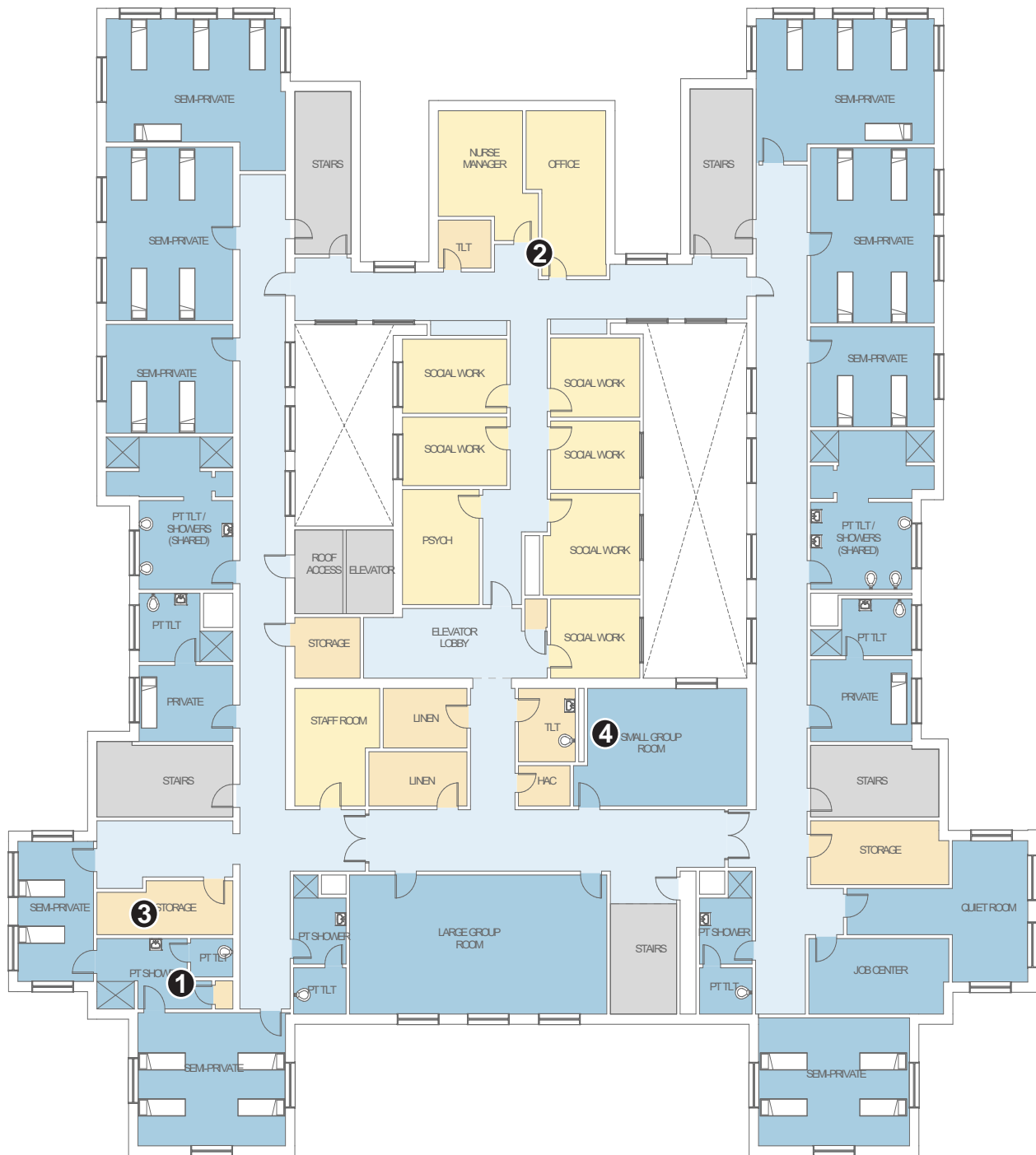
The VAMC American Lake Domiciliary is a 64 bed residential rehab program that includes several units for distinct resident types: SUDs, PTSD, Chronic Pain Management and Homeless Veterans.

The facility is recently renovated with updated finishes and residential-feel. The on-unit kitchen is often used for shared meals though the campus canteen is primarily used by residents and staff. The campus is landscaped and accessible to residents.

There are few single occupancy resident bedrooms and the some bedrooms are more than double-occupancy. The furniture is often used to create privacy among residents in the same bedroom and is well-designed to be personalized by residents.

There are several blind spots and staff wish for a secure reception space. The staff station is only accessible from the first floor but shared resident spaces are distributed throughout the two floors of the building. The off-stage spaces on the second floor is central to the unit but staff would prefer more space.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.239 VAMC American Lake Domiciliary, Floor Plan**

Color Legend:	Key Notes:
<span style="display: inline-block; width: 15px; height: 15px; background-color: #e0f0ff; border: 1px solid black; margin-right: 5px;"></span> Circulation	<b>1</b> Patient bed
<span style="display: inline-block; width: 15px; height: 15px; background-color: #a0c0ff; border: 1px solid black; margin-right: 5px;"></span> Patient Areas	<b>2</b> Staff Area
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffffcc; border: 1px solid black; margin-right: 5px;"></span> Staff Areas	<b>3</b> Patient Bathroom
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ffcc99; border: 1px solid black; margin-right: 5px;"></span> Public Areas	<b>4</b> Group Room





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.240 VAMC American Lake Domiciliary Patient Bed**, Reference Floor Plan Key Note #1



**Figure 6.242 VAMC American Lake Domiciliary Staff Area**, Reference Floor Plan Key Note #2



**Figure 6.241 VAMC American Lake Domiciliary Patient Bathroom**, Reference Floor Plan Key Note #3



**Figure 6.243 VAMC American Lake Domiciliary Group Room**, Reference Floor Plan Key Note #4

### 6.1.31. VAMC Puget Sound



**Figure 6.244 Aerial of VAMC Puget Sound**

VAMC PUGET SOUND		
Location	Seattle, WA	
Patient Type	Voluntary/Involuntary (10%)	Scheduled Detox
Average Length of Stay	5-7 day	
Unit Size/Type	25 beds	
Beds	1 – 4 bed, 1 – 3 bed 9 – 2 bed incl. low stimulus pod pod (2 rooms 4 beds) 7 – shared washrooms	
Staffing Per Unit	N/A	
Nursing Station	Semi-Enclosed	
Features	No medical beds; Open areas, good daylight	
Staff Interview Feedback	Need a true med/surg psych unit (geropsych); Does not mix well with others; Homelike important	





*Figure 6.245 Main Entry of VAMC Puget Sound*

## **Overview**

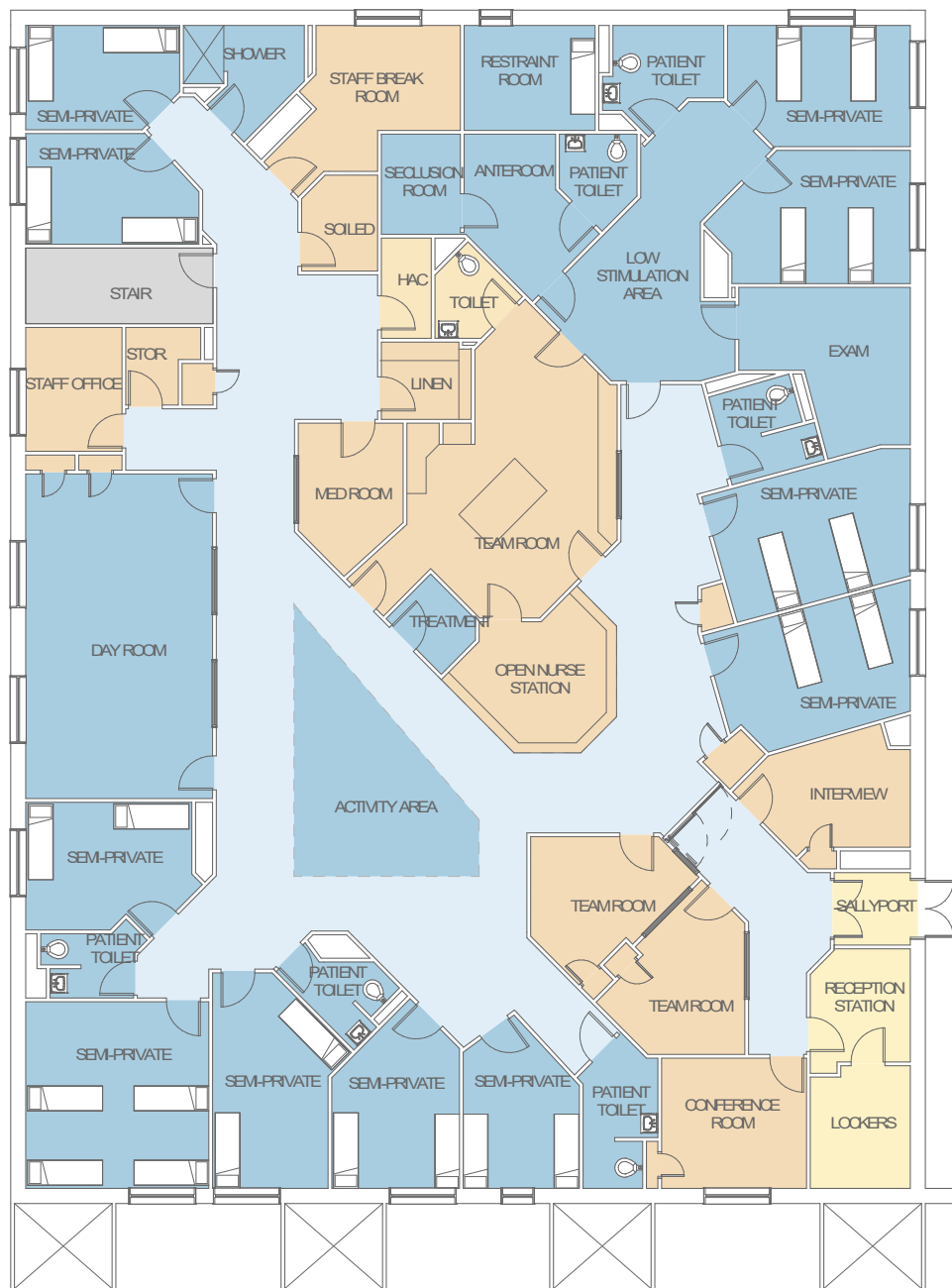
The VAMC Puget Sound campus contains a recently renovated inpatient accurate psych unit on the top floor of the main hospital building. The finishes are well-appointed and residential in feel.

The transparent, double sally port provides access to consult, intake and individual therapy spaces without risk of elopement. The patient bedrooms have pivot doors to avoid barricading and electro-chromatic glass for patient privacy and staff visibility.

The semi-enclosed nurses station includes head height glass and the enclosed staff areas are also visible through storefront glass. The staff spaces are distributed throughout the unit and patient lockers are visible from the day room to give patients reassurance that their belongings are safe. There is a separate low-stimulus suite and the spaces are well lit.

There are no private patient rooms and several rooms with more than two beds. The off-stage spaces are too transparent for staff. There are no private bathrooms in the patient bedrooms, all are accessible from the main milieu.

**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**



**Figure 6.246 VAMC Puget Sound, Floor Plan**

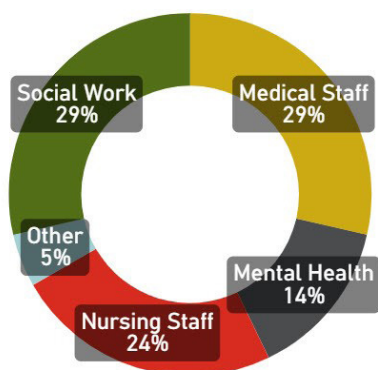
Color Legend:	
<span style="display: inline-block; width: 15px; height: 15px; background-color: #ADD8E6; border: 1px solid black;"></span>	Circulation
<span style="display: inline-block; width: 15px; height: 15px; background-color: #4682B4; border: 1px solid black;"></span>	Patient Areas
<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFFF00; border: 1px solid black;"></span>	Staff Areas
<span style="display: inline-block; width: 15px; height: 15px; background-color: #FFA500; border: 1px solid black;"></span>	Public Areas



### 6.3 Staff Opinion Survey Summary

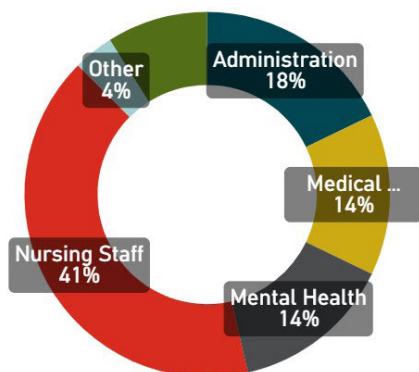
A Staff Opinion Survey was created and distributed to staff at all facilities visited. This survey was designed to collect feedback from staff to complete the Design Team's field research. The four-page digital survey is provided on pages 6-137 to 6-140. The following pages provide aggregated survey data as reported.

Responses have been aggregated for both VA and non-VA facilities. Responses from IPMH and MH RRTP facility staff have been reported separately. 184 total staff members responded to the survey. Of those, 105 responded to a paper version of the survey and 79 responded digitally. Of the 79 staff members that took the digital version of the survey, 21 Domiciliary staff members responded, and 56 Inpatient Unit Staff responded. Compiling both surveys types together, nursing had the highest representation with Forty percent (40%) of the respondents identifying as Nursing staff. This was followed by Mental health staff (20%), Medical staff (13%), Social work staff (11%), Administrative staff (10%) and other (6%).



Of the respondents identifying as Domiciliary (MH RRTP) staff, medical staff and social work had the highest representation with twenty-nine percent (29%) each. This was followed by nursing staff (24%), medical staff (14%), and other (5%).

**Figure 6.247 Domiciliary (MH RRTP) Staff Representation**



Of the respondents identifying as Inpatient Unit (IPMH) staff, nursing had the highest representation with forty-one percent (41%). This was followed by Administrative staff (18%), Medical and Mental Health staff both at fourteen percent (14%), Social work staff at nine percent (9%) and four percent Other (4%).

**Figure 6.248 Inpatient Unit Staff Representation**



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**VA Inpatient Mental Health and Domiciliary Opinion Survey**  
(page 1)

1. What is your role?

☐ Psychiatrist  
☐ Psychologist  
☐ Social worker  
☐ Nurse practitioner  
☐ Registered Nurse  
☐ License Practical Nurse  
☐ License Vocational Nurse  
☐ Other- Write in (Required)

Is your facility a VA facility?

☐ Yes  
☐ No

Is your facility a Domiciliary?

☐ Yes  
☐ No

2. What do you feel is the optimum occupancy of patient rooms?

☐ Private  
☐ Semi-private  
☐ Ward (3, 4 or more beds)  
☐ Mix of private or semi-private

Comments

3. What is the optimum design of a nurses' station?

☐ Fully-enclosed  
☐ Open  
☐ Partially-enclosed (partial glass panels)

Comments



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**VA Inpatient Mental Health and Domiciliary Opinion Survey**

(page 2)

4. What type of furniture do you feel works best in common areas?

- ☐ Fixed
- ☐ Move-able but heavy
- ☐ Move-able but lightweight
- ☐ Normal furnishing

Comments

5. How many patients per unit would you recommend?

- ☐ Less than 8
- ☐ 8
- ☐ 10
- ☐ 12
- ☐ 14
- ☐ 16
- ☐ 18
- ☐ 20
- ☐ 22
- ☐ 24
- ☐ More than 24

Comments

6. What environmental controls should patients be able to control in the patient rooms? (check applicable)

- |  |  |
|--|--|
| <input type="checkbox"/> Locking doors                 | <input type="checkbox"/> Bathroom water temperature      |
| <input type="checkbox"/> Window blinds/shared/curtains | <input type="checkbox"/> Clothing                        |
| <input type="checkbox"/> Lighting                      | <input type="checkbox"/> Room temperature                |
| <input type="checkbox"/> Bed location                  | <input type="checkbox"/> Operable windows                |
| <input type="checkbox"/> Chair location                | <input type="checkbox"/> Art wall-writable paint surface |
| <input type="checkbox"/> Desk location                 |  |

Comments



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**VA Inpatient Mental Health and Domiciliary Opinion Survey**  
(page 3)

7. What components should be included in the environment to reduce stress? (check applicable)

- ☐ Nature-focused artwork
- ☐ View of nature from patient rooms
- ☐ View of nature from common areas
- ☐ Access to exterior gardens
- ☐ Daylight in common areas

Comments

8. What features should be integrated into the patient room bathrooms? (check applicable)

- ☐ Stainless steel fixtures
- ☐ Solid surface fixtures
- ☐ Bathroom doors in private rooms
- ☐ Locks on bathroom doors
- ☐ Angled Partitions

Comments

9. Do you think each unit should have a seclusion room?

- ☐ Yes
- ☐ No

Should that room be designed for other uses?

- ☐ Yes
- ☐ No

Comments

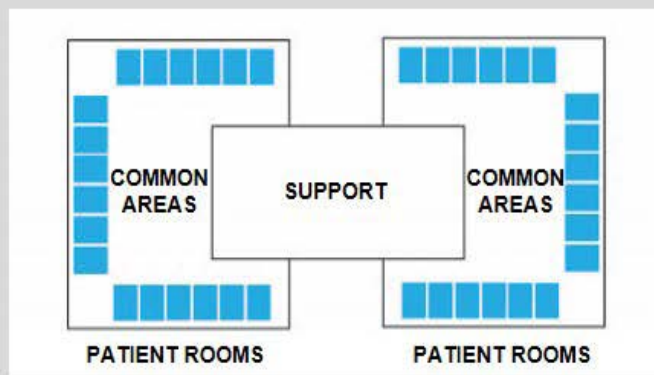
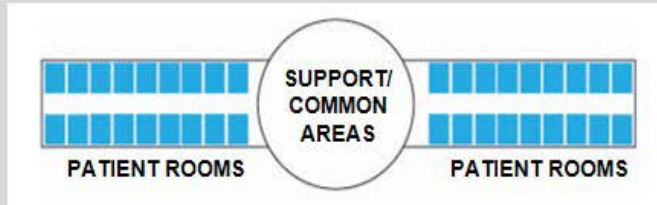


**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**VA Inpatient Mental Health and Domiciliary Opinion Survey**

(page 4)

10. What kind of unit design do you think is most functional? (click on one of the images to make your choice)



Comments

11. If you could design the ideal inpatient mental health unit, what physical feature would be your top priority (e.g., open nurses' station, private patient rooms, accessible courtyard, etc.) and why?

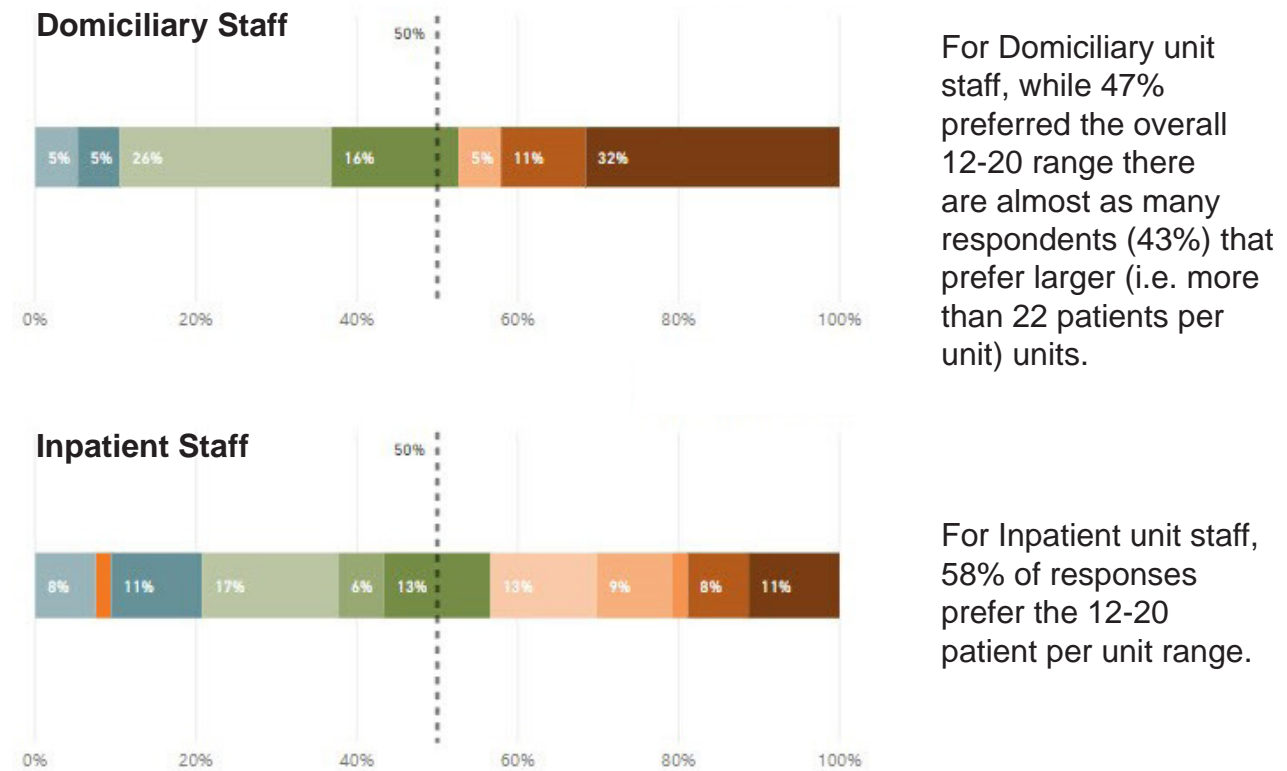
Thank you!

Thank you. We are extremely grateful for your contributing your valuable time, your honest information, and your thoughtful suggestions.

## Staff Opinion Survey Results

### How many patients per unit do you recommend?

Respondents were asked their opinion about their recommended unit size. 184 total staff members answered this question. 61% of these picked a unit size between 12 and 20 patients.



**Figure 6.249 Patients per Unit: Domiciliary and Inpatient Unit Staff Responses**

Responses from the 79 respondents that took the digital version of the survey show differentiation between Domiciliary and Inpatient Unit staff.

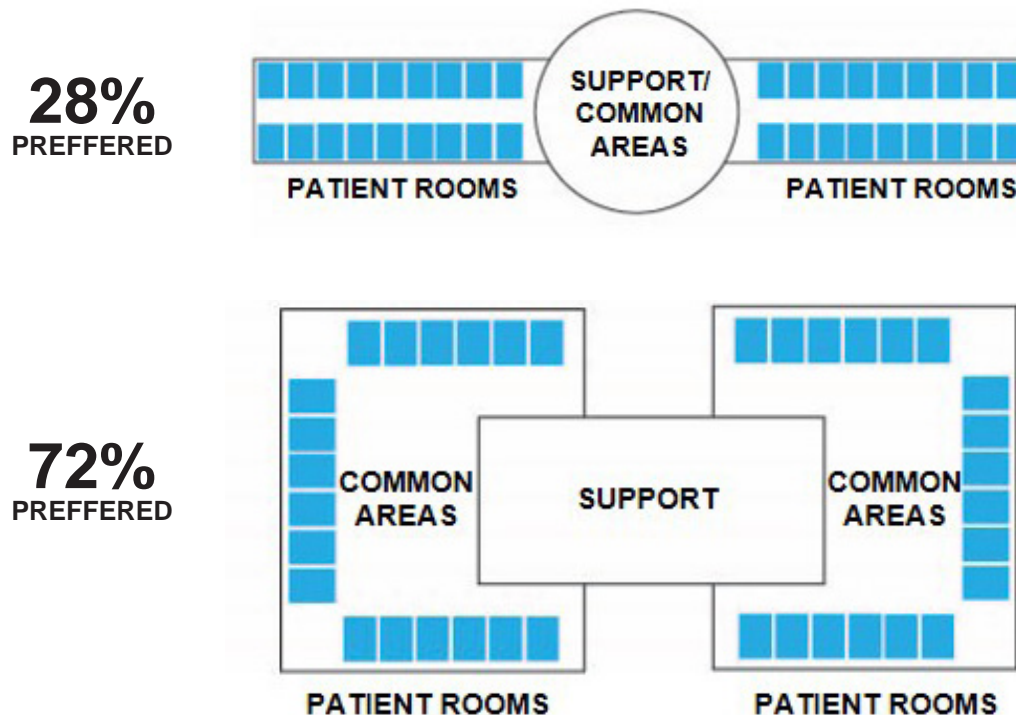
### RESPONDENT COMMENTS

*One domiciliary staff member commented, "I am defining 'unit' as a program with individual providers, one assigned nurse and one assigned case manager. The Domiciliary at my facility houses multiple 'units' by this definition, and that works well for us. A Domiciliary overall, could have many more than 24."*



### **What type of unit design is most functional?**

Survey respondents (n=184) indicated a more than a 2:1 preference (72%) for an open planning strategy with patient rooms distributed around common areas when compared to a double loaded patient corridor with centralized nurse station (28%).



*Figure 6.250 Unit Design Diagram: Total Staff Responses*

Many of the survey respondents remarked that while the common area planning approach afforded better visibility from the nursing station there were concerns that controlling noise in this kind of a unit might be quite challenging.

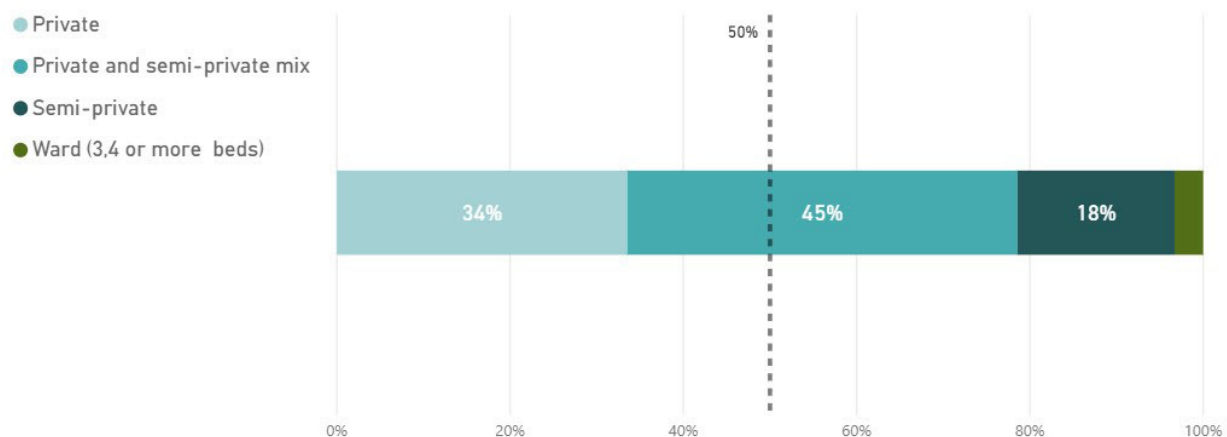
#### **RESPONDENT COMMENTS**

*One respondent said, “Long hallways are very dangerous, because it is harder for staff to evade from an aggressive patient. Wide open spaces are much safer, because you are less likely to get cornered.”*

## What is the optimum occupancy of inpatient rooms?

Survey respondents (n=184) indicated that most respondents (45%) prefer a mix of private and semi-private rooms. Of the remainder, there was a majority (34%) that prefer only private to (18%) only semi-private rooms. Only 3% of respondents preferred wards of 3 or more patients.

Respondent comments illustrate this ambivalence with a bias towards single occupancy rooms.



**Figure 6.251 Optimal Room Occupancy: Total Staff Responses**

### RESPONDENT COMMENTS

One respondent said, *“In general, private is better, however, some will not be able to tolerate being alone.”* Another said, *“Some veterans clearly benefit from having a roommate, and the informal interactions are an important part of their care. Other veterans are definitely unable to tolerate a roommate -- too psychotic, agitated, or with strong history of sexual trauma, for example.”* A third respondent said, *“I feel strongly that rooms should be private.”*

## What is the optimum design of the nurses' station?

Survey respondents (n=184) for inpatient mental health had varied reactions regarding the design of the nurse's station - most (65%) respondents preferred a station only partially enclosed. A fully enclosed nursing station was preferred by (35%) and a fully open nursing station was preferred by (21%).

Domiciliary respondents had a higher proportion (70%) that preferred partially enclosed nursing stations with the remainder (30%) evenly split between fully enclosed and fully open.

Many respondents spoke about the need for designated private office space for nurses to do their work for reasons of confidentiality and to minimize distractions.

### RESPONDENT COMMENTS

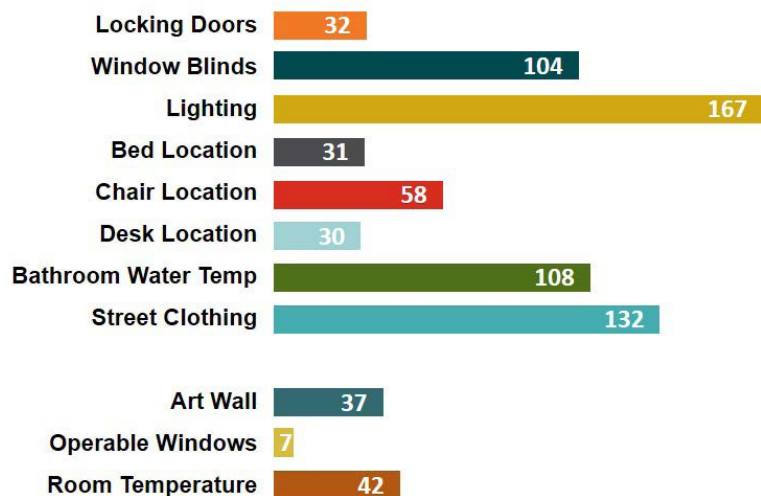
One respondent said *"Dom team nurses should have a designated office to allow for less distractions and more productivity."* Another said, *"could be open but it would be important to have a space with computer access for charting and pertinent discussions that may contain confidential patient information or for nurses to be on the phone with providers where confidential information may be being discussed."*

Safety was a repeated concern. *"Being a mental facility, safety should always be #1. Our staff needs to have a space where they do not feel in harm's way."*

## What Environmental Features should be under patient control?

This question was a multi-select question. Of all the survey respondents (n=184) a majority (90%) agreed that patients should be able to control the lighting in their room - this was closely followed by personal clothing (72%), window blinds (57%) and bathroom water temperature (58%).

In the second round of the survey three additional options were added: An Art Wall, Operable Windows and Room Temperature. Of the second-round respondents (79) around half of them agreed that patients should be able to have control over a personal art wall (47%) as well as the room temperature (53%).



**Figure 6.252 Environmental Feature Control: Total Staff Responses**

### **What type of furniture works best in common areas?**

A majority of survey respondents (n=184) said that furniture in the inpatient facility should be moveable but heavy (73%).

The Domiciliary respondent (21) preferred moveable but heavy (48%) with a preference for moveable/lightweight (19%) and Normal furnishings (24%).

#### **RESPONDENT COMMENTS**

Comments from respondents included:

*"It is important to be able to move furniture for groups, including clearing the space for movement groups like yoga."*

*"Combination of the first three options, fixed furniture is preferable where appropriate (beds, shelving, desks, etc.) heavy furniture that does not require movement (dining tables, tv room couches, etc.) and very lightweight chairs that are moved frequently (dining chairs, desk chairs, etc.)"*

*"Before we moved to barely moveable heavy furniture there were occasional incidents of an agitated veteran pushing, throwing furniture but not often enough to make the current uncomfortable heavy furniture seem necessary."*

*"Lightweight furniture has been more comfortable on my unit and has allowed patients to create spaces for themselves and their groups or families to sit together."*

### **Should each unit have a seclusion room? Should it be used for other uses?**

A majority of 184 survey respondents (78%) said there should be a seclusion room included in each unit.

When asked if the seclusion room should be used for other uses, 55% answered 'no' and 45% responded that flexible use of that space is preferred.

### **What Stress Reducing Features should be included?**

This question was a multi-select question. Of all the survey respondents (n=184) the most commonly selected stress reducing design feature was Access to Daylight from the Common Areas (88%), Closely followed by Nature Views from the Patient Rooms (84%), Nature Views from the Common Area (81%), Garden Access 73%) and Artwork depicting Nature (64%).



*Figure 6.253 Stress Reducing Design Features: Total Staff Responses*

#### **RESPONDENT COMMENTS**

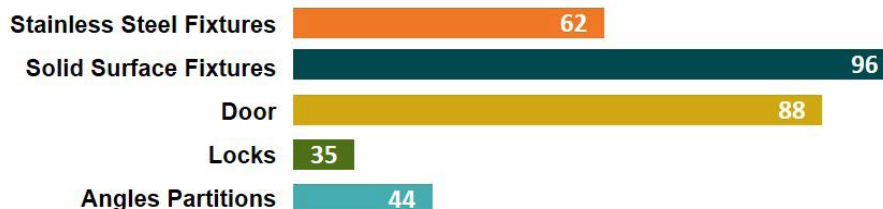
Comments from respondents emphasized the importance of both a physical and visual access to nature.

*“In my experience, patients and families express higher satisfaction when roomed in areas with more natural light and a pleasant view from the bedroom window. Ample natural lighting also helps the unit feel less like the stigmatized ideas of a mental health facility”*

*“Need lots of windows overlooking nature. Need outdoor time. Very healing for the brain. Patients will deteriorate without it.”*

### **What Bathroom Features should be included?**

This question was a multi-select question. Of all the survey respondents (184) the most commonly selected bathroom feature selected by respondents solid surface fixtures (52%) followed closely by a door (47%).

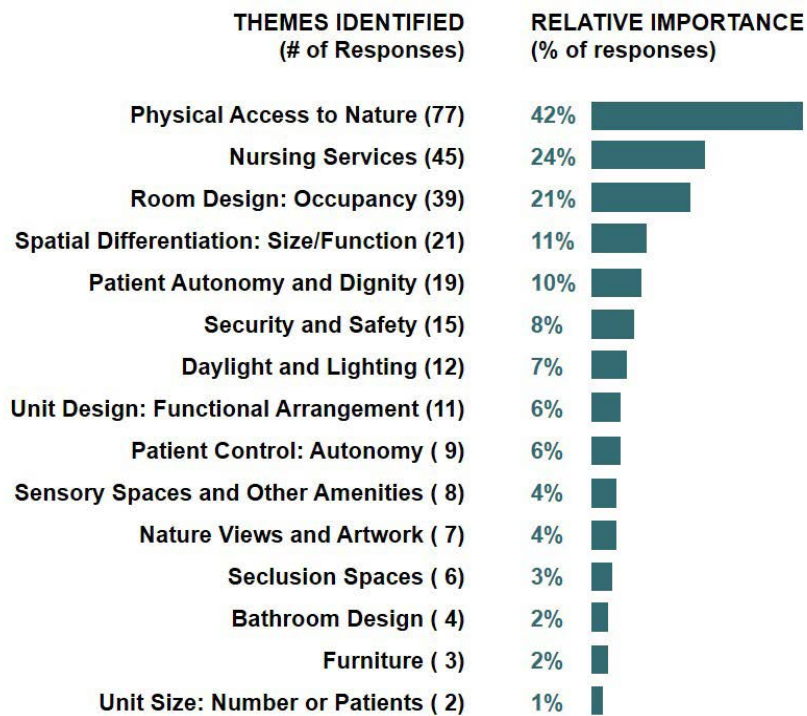


*Figure 6.254 Bathroom Design Features: Total Staff Responses*



**Think of the Ideal Unit. What physical features would be your top priority and why?**

This question was an open-ended question asking respondents to list their top physical feature(s) for an Ideal Unit. 140 Responded to this question (n=184). To analyze these responses, the content of their answers was categorized into the themes identified by our research literature review. Survey results are reported below in order of the percentages of respondents' answers in each of the topic areas.



**Figure 6.255 Physical Features for an Ideal Unit: Total Staff Responses**

Particular attention was paid to the responses in the top five categories with further categorization and comments excerpted on the following pages.

## **Physical Access to Nature**

Of the 77 respondents (42%) that spoke to this theme, 71 described some sort of accessible courtyard, 13 spoke about the importance of visual access to nature throughout the facility, 5 focused in on the importance of gardens and 3 spoke about the value of porches.

### **RESPONDENT COMMENTS: ACCESSIBLE COURTYARDS**

*“Courtyard: Can be unsafe for staff with dysregulated patients. Allows for quiet and ability to process emotions. Allows for downtime/ relieves the closed in feeling.”*

*“Veteran(s) should be able to access fresh air and practice mindfulness in addition to keep Veterans from isolating and promoting socializing.”*

*“Accessible courtyard to allow fresh air. Breaks and activities for stable/ appropriate patient.”*

*“Patient(s) sometime(s) are bored and depressed for being lock(ed) down without leaving for a long time.”*

*“Accessible courtyards due to the fact that so many patients report the inpatient unit feeling like a jail/punishment and not being able to go outside. Fresh air and sunlight are both therapeutic.”*

*“Fresh air makes a huge difference in mental health. We want Veterans on our units to cope and yet we often remove the tools that we encourage them to use to cope (based on safety concerns which is necessary). Giving them access to a courtyard would provide an opportunity to practice some of the skills they are being taught.*

*“To reduce stress and the feeling of confinement.”*

*“Need lots of windows overlooking nature. Need outdoor time. Very healing for the brain. Patients will deteriorate without it.”*

## **Nursing Services**

Of the 45 respondents (24%) that spoke to this theme, 7 called for a fully open station, 11 for a fully enclosed one and 6 for one that was partially enclosed and partially open. 16 respondents spoke about the importance of good visibility and adequate workspaces – including four that singled out the importance of off unit workspaces.

### **RESPONDENT COMMENTS: NURSING SERVICES**

*“Limit blind spots - both of this decrease safety for staff and patients alike.”*

*“Open nurse station, for patient and nursing staff involvement and interaction. Group Interaction, because more interaction between nurses & patient makes for a more therapeutic environment.”*

*“Open nurse’s station and med room closer to nursing station. Computers on wheels for staff, particularly nurses. Wheelchair/disability accessible rooms closer to nursing station. More conference rooms on units for meetings/visitations. Nutrition/Dining rooms in each unit closer to nursing station.”*

*“I think that nursing staff should have both immediate line of sight to patients but also a place to take care of administrative and personal needs in privacy. I also think that clinical staff should have alert lights outside of group rooms and offices for safety/emergent needs.”*

*“For staff safety, a secure locked nursing unit is a must because there will be times a nurse will have to say ‘no’ to certain things and mental health patients can get very upset. However, it will all be in the training of staff. Staff should always acknowledge the knock at the door or window and letting the patients know they will be right with them. I am confident there can be a secure but open design.”*

*“Fully enclosed but see through nurses’ station. helps keep staff safe and helps us communicate and be available to patients when they are escalated (sic) and we can’t be in their space.”*



## **Room Occupancy**

Of the 39 respondents (21%) that spoke to this theme, 31 called for private rooms, 1 for semi-private rooms and 5 for mixed.

### **RESPONDENT COMMENTS: ROOM OCCUPANCY**

*“Private patient rooms could reduce conflict between roommates. It also alleviates how to move patients around so much.”*

*“Private/semi-private rooms, rooms around central staffing area - no long hallways- helps staff to visualize all areas of the unit and not be isolated.”*

*“Private patient rooms: In my interactions with patients and families, letting them know that they will have their own private room seems to alleviate a lot of anxiety about admission to the unit (for both the patient and family).”*

*“Private/semi-private rooms, rooms around central staffing area- no long hallways- helps staff to visualize all areas of the unit and not be isolated.”*

## **Spatial Differentiation (Size/Function)**

The 21 Respondents (11%) wrote about this theme listed design features that encouraged patients to spend time in common areas rather than sequestered in their room, created areas of the unit that could be restricted as needed, called for increased recreational facilities, sufficient staff work areas as well as a diversity of common spaces for staff, families and patients to interact

### **RESPONDENT COMMENTS: SPATIAL DIFFERENTIATION**

*“I think a design should encourage residents to be in common social areas during the day. And in their rooms to sleep at night.”*

*“Multiple common/multi-purpose areas - a single is difficult in my peer to peer conflicts doesn’t allow for several recovery activities at once.”*

*“Welcoming day/community area with different areas that patients can relax as well as congregate and socialize. This helps normalize and facilitate peer to peer support and encourages patients not to isolate in their rooms.”*

*“Focus on the common area and “less” on bedrooms. Do whatever you can do to maximize staff engaging with residents such as the dayroom/living area. Make the common area/living area more inviting. If bedrooms are more comfortable and inviting, the person may be encouraged to isolate themselves by staying in their rooms.”*

## **Patient Autonomy and Dignity**

The 19 Respondents (11%) wrote about this theme listed about design features that cultivated a therapeutic environment on the unit, ones that were non-institutional and more homelike, ones that promote patient autonomy and dignity, support selfregulation and prevent feelings of being trapped.

### **RESPONDENT COMMENTS: NURSING SERVICES**

*“Aesthetics are everything when it comes to mental health hospitalization. It’s difficult to start thinking about recovery when you feel enclosed in a tiny space with limited access to sunlight and other things humans need to feel positive. Staring at the same four white walls can be less than therapeutic. Having a private ‘seclusion’ room that is utilized for Veteran’s to have a ‘time away’ from the milieu would also be beneficial. If the Veteran is willing and able to separate themselves in times of stress, and utilize their own coping skills, I believe we should give them the ability to do so.”*

*“Normalize as much about the unit as possible.”*

*“Accessible courtyards due to the fact that so many patients report the inpatient unit feeling like a jail/punishment and not being able to go outside. Fresh air and sunlight are both therapeutic.”*





## **6.4 IPMH and MH RRTP Facility Workshop Summary**

Findings resulted in overarching theme which is **Success = Safe & Therapeutic Environments.**

### **Attendees**

For the **Inpatient Mental Health & Residential Rehabilitation Treatment Program (RRTP) Design Guide Workshop**, attendees included both VA Construction and Facilities management (CFM) architects, planners and engineers and **Veterans Health Administration (VHA)** clinical staff from across the country. The design team facilitators and workshop attendees are listed below.

#### **VHA**

- Jay Cohen
- Elizabeth Fletcher
- Matthew Miller
- Peter Mills
- Andrew Pomerantz
- Cliff Smith
- Tim Smith
- Kendra Weaver

#### **VA**

- Lisa Banks-Williams
- John Bradley
- Elizabeth Czekanski
- Sharon De Peralta
- Camilla Doctor
- Rand Hakim
- Matt Moore
- Kyle Terry

#### **VA CFM**

- Jacob Brown
- Orest Burdiak
- Gary Fischer
- Peggy Henderson
- Don Myers
- Kayvan Madani Nejad
- Dave Tashakori

#### **VETERAN DESIGN & CONSTRUCTION (VDCI)**

- Smitty Bradstock
- Michael Bokulic
- Marta Cavero
- Bridgette Moore
- Mitch Norris

#### **SMITHGROUP**

- Shary Adams
- Diana Aradz-Fraser
- Stephen Parker
- Liz Vandermark

#### **HDR**

- Ronald Villasante

#### **NKA**

- Ben Lee

### **Agenda**

After introductions of VA stakeholders from VHA and CFM as well as invited guests from the private sector, the combined design team facilitators kicked off the **Workshop**. The next **two days** of the workshop included **information sharing** on research literature review, site visit analysis of 33 facilities and survey feedback along with staff interviews. Several group exercises took place to build consensus and develop **ideal concepts** for both unit types as a collaborative effort.

### **Subject Matter Expert Design Goals**

The following design goals were identified and presented by the subject matter experts.

- Reduced Adverse Events: Patient Safety is first. However, patient dignity is also important.
- Enable Positive Clinical Outcomes: Reduce stress and with flexible/adaptable spaces.
- Increase Patient and Family Satisfaction
- Increase Staff Satisfaction



## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### Facility Site Visits: Findings and Themes

The workshop group reviewed the facilities visited by the design team and each individual voted on their preferred option. As the voting concluded, the workshop group discussed the strengths and opportunities of each design concept, which features should be incorporated and what lessons should be considered in new mental health facility design. The highest scoring facilities included three inpatient mental health units and two residential rehabilitation treatment program facilities.

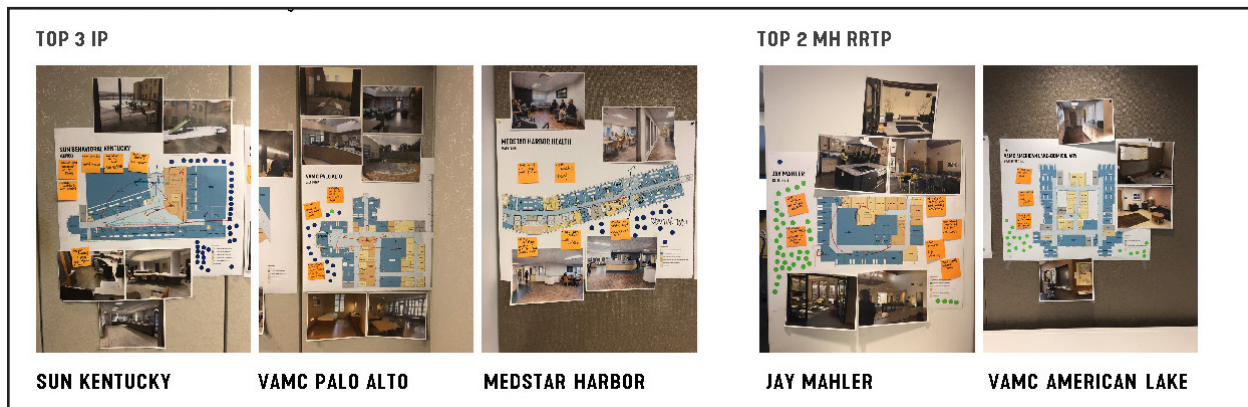


Figure 6.256 Top 3 IPMH and top 2 MH RRTP facility plan concepts, based on site visit feedback.

### Strengths Identified in Site Visits

- Clear lines of sight from staff areas to patient spaces
- Efficient material management flow
- Limited or eliminated blind spots throughout unit
- Ample varieties of patient seating options
- Dining areas on the unit to support less staffing
- Variety of private, semi-private and open spaces for patient activities within the unit
- Safe and accessible outdoor space within lines of sight from staff areas
- Access to natural light in both patient and staff spaces
- Safe and residential feel (durable, warm, home-like materials)
- Maximized single patient rooms

### Opportunities for Improvement Based on Site Visits

- Provide a balance of private spaces with semi-private patient spaces
- Allow greater daylight into all spaces
- Locate dining on the unit when possible
- Clearly delineate on-stage and off-stage areas
- Provide opportunities for personalization of patient rooms
- Limit blind spots in bathroom layouts
- Ensure safety of staff, visitors and patients at the program entry
- Provide visibility to outdoors
- Exam rooms should be safely accessible to staff and patients
- Nurse stations should be sized to accommodate staff activities
- Provide furniture that meets MHEOCC requirements with a less institutional aesthetic

## **Workshop Outcomes**

The layout-exercise (also known as block exercise) was a critical piece of the workshop process. Lead by the design team, the workshop group broke into four teams, each assisted by a facilitator. Each was given a box of foam blocks representing different rooms in each unit and asked to configure the ideal unit.

Each team had an equal distribution of designers, clinicians and facilitators at each table. They explored both IPMH and MH RRTP facility design concepts. The iterative process resulted in each group defining a final concept for each facility type.

The larger workshop group reviewed each concept and discussed the positive and challenging features of each.

## **IPMH Summary**

### **Layout Exercise Outcomes - Inpatient Units**

Lead by the design team, the workshop group discussed the layout exercise outcomes and agreed upon an ideal unit size of 16-20 beds for inpatient services. The ideal scenario would include a mix of private and semi-private (double occupancy only) for flexibility of the unit.

Multipurpose rooms are not ideal. Any one activity and blend of actively-specific rooms and multi-use spaces would be best.

Sight lines were identified as critical and required to cover all patient-occupied areas, especially those where staff are not required to escort patients, including patient room doorways. Spaces for visitors and families of patients should be semi-secure and separate from dayrooms or other patient gathering spaces. Due consideration of the seclusion room and its adjacency to the nurse station was identified as a priority.

The most important priority identified for inpatient units was “safety first” but home-like to avoid an institutional environment. The environment shall balance safety for patients and staff with the therapeutic environment for patients.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**Inpatient Design Concepts**

**Group 1**

**Beds:** 14

**Rooms:** 50/50 single/double

**Outdoor Ammenities:** 2 courtyards

**Strengths:** Open area provides good visibility, on-off stage areas

**Weaknesses:** Day room recieves too little daylight and TV causes commotion at night, Lacking patient privacy

**Additional Comments:** Based on Sun Behavioral Health, KY



**Group 2**

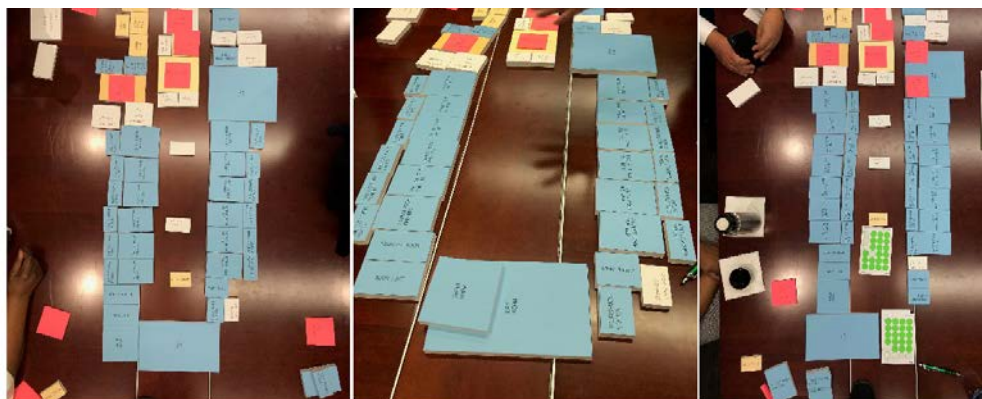
**Beds:** 16

**Rooms:** 2 doubles, 12 single

**Outdoor Ammenities:** internal atrium

**Strengths:** Separate entrees for staff, patients and amterials

**Weaknesses:** Satellite staff station required for more rooms, sight lines are weak, Lack of patient safety





**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**Group 3**

**Beds:** 20

**Rooms:** 100% single

**Outdoor Amenities:** Outdoor areas

**Additional Comments:** Single entry, onstage and offstage, dining is separate from the rest of the unit, separates back of house between two units, clerestory throughout



**Group 4**

**Beds:** 10 beds per pod

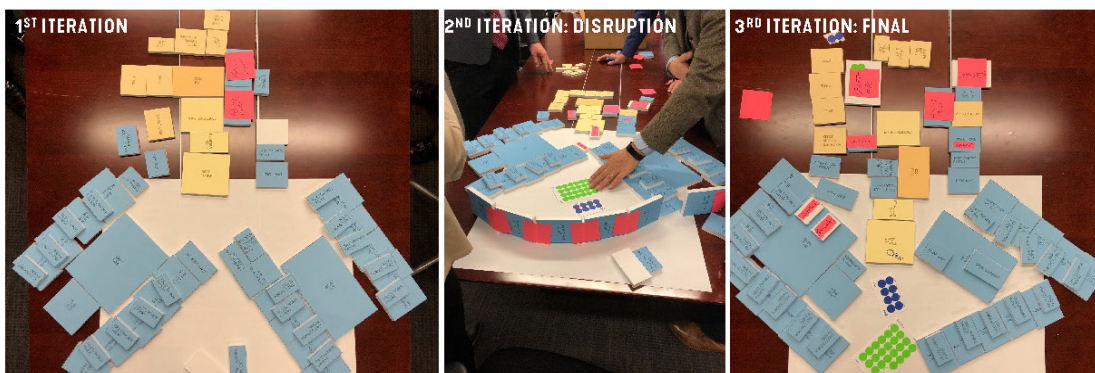
**Rooms:** 2 double rooms

**Outdoor Amenities:** Courtyard

**Strengths:** Central nurse sight lines

**Weaknesses:** Multipurpose dining/living may be too much, missing structured quiet space

**Additional Comments:** Open plan (no corridors)





## PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE

### MH RRTP Summary

#### Layout Exercise Outcomes - RRTP Units

As the workshop group created a model for an ideal unit size for Residential Rehabilitation Treatment Program facilities as a maximum of 28 beds. The preference was for fewer with the intent to make the unit more manageable.

Emphasis was placed on a “home-like but safe” environment, in contrast to the “safe but home-like environment” of an inpatient unit. The residential feel of RRTP is intended to help with reintegration and promote working together as a group.

The design concepts represented facilitation of free flow of residents through secure entry points, such as an enclosed vestibule or waiting space.

### MH RRTP Design Concepts

#### Group 1

**Beds:** 28

**Rooms:** 50/50 private/semiprivate, gender segregated

**Outdoor Amenities:** Courtyard

**Strengths:** Home-like, on-stage/off stage areas



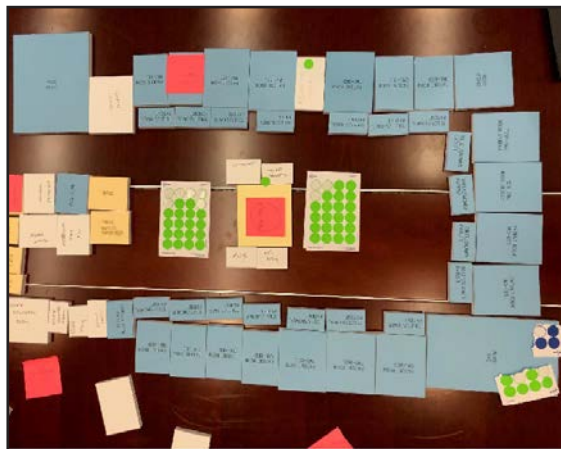
#### Group 2

**Beds:** 28

**Rooms:** 10 double, 8 single, flex  
womens (trans) pod

**Outdoor Amenities:**  
Courtyards

**Additional Comments:** Central  
hub-work center, kitchenette, flex  
to IP acute unit, pod subdivide



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

**Group 3**

**Beds:** 24

**Rooms:** 4 pods, 2 doubles/2 singles

**Outdoor Ammenities:** courtyard per pod

**Additional Comments:** Dining off unit with option of in-unit dining and kitchenette, group rooms at end of pods



**Group 4**

**Beds:** 32 beds

**Rooms:** 2 double, 8 single

**Outdoor Ammenities:** courtyard per pod

**Strengths:** on stage/off stage, open Kitchen/Day room (one on pod and one quieter), gym, multiple areas with community feel

**Weaknesses:** no outdoor space inside, entry has too many doors

**Additional Comments:** Central hub, single central entry, dining room may be included outside of bed area



## **6.5 Emerging Evidence**

The following studies have been collected to inform this Design Guide. Applicable Design Guide topics and sections have been identified for each study.

### **STUDY: Bedroom Size and Social Interaction of the Psychiatric Ward**

**Author: Ittelson, Prochansky and Rivlin (1970)**

#### **Purpose**

Investigate the appropriate bedroom size in a psychiatric ward.

#### **Sampling**

Psychiatric wards of three large metropolitan hospitals: private, city and state. Includes 1, 2 and multi bed occupancy.

#### **Research Design/Methods**

Time-sample Observational study

#### **Measurements**

15 minute observations for a nine hour period (during the active part of the day - not the early morning or evening) conducted in each area per ward per day for six days a week for three weeks.

#### **Analysis and Findings**

Patients assigned to small rooms showed less withdrawn behavior than those in larger rooms. The authors conclude that being alone in a small room does not necessarily lead to withdrawal.

#### **Applicable Section: Room Occupancy**

**Date: 1970**



**STUDY: Psychiatric Ward Renovation: Staff Perception and Patient Behavior**

**Author: Devlin (1992)**

**Purpose**

Evaluate Environmental improvements, including new day hall furniture, plants, wallpaper and paint, and brighter lighting, on four wards of a 40-year old state psychiatric facility.

**Sampling**

Staff on four wards of a state psychiatric hospital in New England

**Research Design/Methods**

Analysis of variance (survey data), Analysis (summary comparisons) of staff and patient counts by location and behavior

**Measurements**

Staff ratings and behavior mapping of staff and patients.

**Analysis and Findings**

Results indicate significant pre-post improvements in the ratings of day hall furnishings and live plants. Every attempt should be made to use live plants in psychiatric settings. Significant main effects for ward were found in a number of environmental variables, reflecting the less demanding nature of the patient population and greater administrative support on these wards. Behavioral data showed a significant decrease in patient stereotypy and a preference for more private seating areas in the day hall following renovation.

**Applicable Section: Interior Common Areas and Corridors**

**Date: 1992**

**STUDY: Sunny Hospital Rooms Expedite Recovery from Severe and Refractory  
Depressions**

**Author: Beauchemin, K. M., & Hays, P. (1996)**

**Purpose**

Bright light therapy is an effective treatment for seasonal affective disorder, an uncommon condition marked by mild winter depression. Bright lights have been used as adjuncts in the pharmacological treatment of other types of depressive illness. Investigate positive effect of light therapy on length of stays for depressed patients.

**Sampling**

Qualified admissions data over the course of a two-year period - 174 admissions. The rooms in our psychiatric inpatient unit (in Edmonton, Alberta) are so placed that half are bright and sunny and the rest are not.

**Research Design/Methods**

Reasoning that some patients were getting light therapy inadvertently, we compared the lengths of stay of depressed patients in sunny rooms with those of patients in dull rooms.

**Measurements**

Length of Stay

**Analysis and Findings**

Those in sunny rooms had an average stay of 16.9 days compared to 19.5 days for those in dull rooms, a difference of 2.6 days (15%):  $P < 0.05$ .

**Applicable Section: Patient Room**

**Date: 1996**



**STUDY: Ward Crowding and Incidents of Violence on an Acute Psychiatric  
Inpatient Unit**

**Author: Ng, Kumar, Ranclaud and Robinson (2001)**

**Purpose**

Examine the relationship between ward occupancy level and staff-to-patient ratio and incidents of aggressive behavior on an acute inpatient unit in New Zealand.

**Sampling**

381 admissions during the study period

**Research Design/Methods**

Logistic regression

**Measurements**

Patient records

**Analysis and Findings**

Occupancy level was positively associated with occurrence of any type of violent incident but especially verbal incidences. No relationship was found between violence and staff-to-patient ratio.

**Applicable Section: Unit Size**

**Date: 2001**

**STUDY: Viewing Nature Scenes Positively Affects Recovery of Autonomic  
Function Following Acute-Mental Stress**

**Author: Brown, Barton and Gladwell (2013)**

**Purpose**

Investigate whether viewing nature scenes positively affects recovery of autonomic function following acute mental stress.

**Sampling**

25 participants (7 males, 18 females) recruited from University support staff

**Research Design/Methods**

Randomized cross-over study

**Measurements**

Autonomic function was assessed using heart rate variability, during stress secondary cardiovascular markers were monitored

**Analysis and Findings**

The study suggests that a green view through a workplace window, small pockets of greenspace in the home or workplace, accessible local parks could be effective tools for enhancing recovery of autonomic function.

**Applicable Section: Visual and Physical Access to Nature**

**Date: 2013**

**STUDY: A Study of Agitation, Conflict and Containment in Association With  
Change in Ward Physical Environment**

**Author: Jenkins, Dye and Foy (2014)**

**Purpose**

Assess the impact of a changed ward environment upon levels of inpatient arousal and aggression.

**Sampling**

Patient records on a National Health Service psychiatric intensive care unit

**Research Design/Methods**

Retrospective service evaluation

**Measurements**

Seclusion episodes, duration of close observation, recorded aggressive incidents and data from the Nursing Observed Illness Intensity Scale (NOIIS) for two-three month periods before and after relocation to a new ward. The ward environments were assessed using the Environment Assessment Inventory (EAI)

**Analysis and Findings**

A statistically significant reduction in episodes of seclusion, total seclusion hours and aggressive incidents as well as a reduction in levels of agitation in a new ward with increased patient privacy (single bedrooms), greater access to therapeutic activity space and increased levels of visibility throughout the ward.

**Applicable Section: Room Occupancy, Interior Common Areas and Corridors**

**Date: 2014**

**STUDY: “Green Altruism”: Short Immersion in Natural Green Environments and  
Helping Behavior**

**Author: Gueguen and Stefan (2016)**

**Purpose**

Investigate whether nature supports pro-social behavior

**Sampling**

318 (Study 1) and 400 (Study 2) participants chosen at random from study site

**Research Design/Methods**

Field research: quasi-experimental design

**Measurements**

The effect of park immersion on helping behavior - two studies

**Analysis and Findings**

A short immersion in a natural green environment is associated with a high-level of helping behavior from people immersed in the environment.

**Applicable Section: Visual and Physical Access to Nature**

**Date: 2016**

**STUDY: Mental and Behavioral Health Environments: Critical Considerations for  
Facility Design**

**Author: Shepley, Watson, Pitts, Garrity, Spelman, Kelkar and Fronsman (2016)**

**Purpose**

Identify features in the physical environment that are believed to positively impact staff and patients in psychiatric environments

**Sampling**

19 interviews with psychiatric staff, facility administrators and architects

**Research Design/Methods**

Qualitative text analysis

**Measurements**

Structured coding of interview transcripts

**Analysis and Findings**

The interviewees reinforced the controversy that exists around the implications of a deinstitutionalized environment, when the resulting setting diminishes patient and staff safety. Respondents tended to support open nurse stations vs enclosed stations. Support for access to nature and the provision of an aesthetic environment was strong. Most interviewees asserted that private rooms were highly desirable because lower room density reduces the institutional character of the unit. However, a few interviewees adamantly opposed private rooms, because they considered increased supervision of one patient by another to be a deterrent to self-harm.

**Applicable Section: Unit Size, Room Occupancy, Patient Room, Patient Toilet/  
Shower, Interior Common Areas and Corridors, Access to Nature**

**Date: 2016**



**STUDY: Mental and Behavioral Health Environments: Measurement of Building Performance**

**Author: Shepley, Watson, Pitts, Garrity, Spelman, Kelkar and Fronsman (2016)**

**Purpose**

Develop a tool (PSED survey) to evaluate mental and behavioral health facilities; to identify design features believed to positively impact staff, patients, and families in psychiatric environments; to evaluate the quality and presence of these features in existing facilities; and make recommendations for future research.

**Sampling**

Snowball search, 17 interviews, one focus groups with participants from two design firms, PSED survey subjects were recruited from five psychiatric nursing organizations and a large behavioral health facility in NYC.

**Research Design/Methods**

Multi-method

**Measurements**

Structured coding of interview and focus group transcripts and quantitative survey (50 question survey) analysis

**Analysis and Findings**

The results of this multi-phase study were extensive. Interesting findings included: support for private patient bedrooms, the crucial role of positive distraction, and differing definitions of homelike/de-institutionalize environments. Another significant result was the extreme disparity between the perceived importance of specific environmental qualities (e.g. access to nature) and the presence/quality of these attributes in existing facilities.

**Applicable Section: Unit Size, Room Occupancy, Patient Room, Patient Toilet/ Shower, Interior Common Areas and Corridors, Access to Nature**

**Date: 2016**

**STUDY: Designed Natural Spaces: Informal Gardens Are Perceived to Be More Restorative than Formal Gardens**

**Author: Twedt, Rainey and Proffitt (2016)**

**Purpose**

Conceptually, gardens are often considered to be restorative spaces and to contain an abundance of natural elements. This study investigates how garden design impacts their restorative potential - along a spectrum ranging from “formal or geometric” to “informal or naturalistic,” which often corresponds to the degree to which built or natural elements are present, respectively.

**Sampling**

350 Participants from Mechanical Turk - an online marketplace supported by Amazon.com to conduct online research.

**Research Design/Methods**

In the current study, we tested whether participants use design informality as a cue to predict perceived restorative potential of different gardens. Participants viewed a set of gardens and rated each on design informality, perceived restorative potential, naturalness, and visual appeal.

**Measurements**

Correlational analysis of survey results

**Analysis and Findings**

Participants perceived informal gardens to have greater restorative potential than formal gardens. In addition, gardens that were more visually appealing and more natural-looking were perceived to have greater restorative potential than less visually appealing and less natural gardens. These perceptions and precedents are highly relevant for the design of gardens and other similar green spaces intended to provide relief from stress and to foster cognitive restoration.

**Applicable Section: Visual and Physical Access to Nature**

**Date: 2016**

## **STUDY: Evidence-Based Design Features Improve Sleep Quality Among Psychiatric Inpatients**

**Author: Pryke, McKinnon, McNeely, Ahern, Langstaff and Bieling (2017)**

### **Purpose**

The primary aim of the present study was to compare sleep characteristics, pre- and post-move, into a state-of-the-art mental health facility, which offered private sleeping quarters.

Significant evidence points toward sleep disruption among psychiatric inpatients. It is unclear, however, how environmental factors (e.g., dorm-style rooms) impact sleep quality in this population.

### **Sampling**

Two patient samples (47 and 47) with minimal overlap of patients between the two time points

### **Research Design/Methods**

Correlational analysis of Pre-Post cross sectional survey data

### **Measurements**

To assess sleep quality, a novel objective technology, actigraphy, was used before and after a facility move. Subjective daily interviews were also administered, along with the Horne–Ostberg Morningness–Eveningness Questionnaire and the Pittsburgh Sleep Quality Index.

### **Analysis and Findings**

Actigraphy revealed significant improvements in objective sleep quality following the facility move. Interestingly, subjective report of sleep quality did not correlate with the objective measures. Circadian sleep type appeared to play a role in influencing subjective attitudes toward sleep quality. Built environment has a significant effect on the sleep quality of psychiatric inpatients. Given well-documented disruptions in sleep quality present among psychiatric patients undergoing hospitalization, design elements like single patient bedrooms are highly desirable.

### **Applicable Section: Patient Room**

**Date: 2017**

**STUDY: Linking Green Micro-Breaks With Mood and Performance: Mediating  
Roles of Coherence and Effort**

**Author: Lee, Sargent, Williams and Williams (2018)**

**Purpose**

Investigate the effects of green micro-breaks

**Sampling**

225 participants - 6 participants at a time were tested over a six weeks of a University semester

**Research Design/Methods**

Quasi-experimental design

**Measurements**

The effects on work simulation task performance and self reported work effort and tension

**Analysis and Findings**

This study suggests that a green-micro break, with workplace nature views, could play a part in work recovery, and in so doing, improve mood and work performance.

**Applicable Section: Visual and Physical Access to Nature**

**Date: 2018**

**STUDY: Psychiatric Ward Design Can Reduce Aggressive Behavior**

**Author: Ulrich, Bogren, Gardiner and Lundin (2018)**

**Purpose**

Test the ten evidence-grounded stress-reducing environmental features that together comprise a conceptual model for reducing aggression in psychiatric facilities

**Sampling**

Patient records in three Swedish psychiatric facilities

**Research Design/Methods**

Quasi experimental - a pre-post comparison of an older hospital with 1/10 and its remodel with 9/10 stress reducing design features and one control hospital (unchanged) with 1/10 stress reducing design features

**Measurements**

Clinical markers of aggressive behavior, compulsory injections and physical restraints

**Analysis and Findings**

A reduction in injections in the remodeled hospital (no change in the control hospital). The average number of physical restraints decreased as well. These findings suggest that designing with the 10 stress reducing design factors identified may reduce the threat to patient and staff safety posed by aggressive behavior.

**Applicable Section: Unit Size, Room Occupancy, Patient Room, Patient Toilet/ Shower, Interior Common Areas and Corridors, Access to Nature**

**Date: 2018**



**STUDY: Evaluation of a Mental and Behavioral Health Patient Room Mockup at a  
VA Facility**

**Author: Sachs, Shepley, Peditto, Hankinson, Smith, Giebink and Thompson (2019)**

**Purpose**

Evaluate a physical full-scale, high fidelity mock-up of a mental and behavioral health inpatient room and bathroom

**Sampling**

VA staff, patients, former patients.

**Research Design/Methods**

Structured mixed-method process with feedback forms and facilitated listening sessions.

**Measurements**

Quantitative analysis of survey and Qualitative analysis of listening sessions

**Analysis and Findings**

Mixed reception of the mock-up. Qualitative responses yielded three primary themes of importance: safety, homeyness/de-institutionalization and postive distraction/nature.

**Applicable Section: Patient Room**

**Date: 2019**

## **6.6 Literature Reviews**

### **REVIEW: Health Benefits of Gardens in Hospitals**

**Author (Date): Ulrich, R. S. (2002)**

#### **Abstract**

This paper selectively reviews scientific research on the influences of gardens and plants in hospitals and other healthcare settings. The discussion concentrates mainly on health-related benefits that patients realize by simply looking at gardens and plants, or in other ways passively experiencing healthcare surroundings where plants are prominent. The review also briefly addresses other advantages of gardens and plants in hospitals, such as lowering the costs of delivering healthcare and improving staff satisfaction. It might be asked at the outset: why is worthwhile to focus exclusively on gardens located in hospitals and other healthcare facilities? One important reason is linked to the fact that extraordinary amounts of money are spent internationally for construction of healthcare environments. This funding for hospitals potentially represents a major source of resources for gardens, plants, and related features such as atriums. Consider the example of only one large medical complex in the United States, the Texas Medical Center in Houston, which plans to spend about \$1.8 billion on new construction during the next two years. In the State of California alone, new spending for hospital buildings will be upwards of \$14 billion by 2010. Even individual buildings can be extremely costly -- Northwestern University's recently opened main hospital in Chicago cost \$687 million. Spending in the United States for new hospitals has averaged about \$15 billion annually during the last decade. The United Kingdom plans to spend at least \$4 billion on new hospital construction within the next three years or so. When substantial additional spending is considered for the many other types of healthcare environments -- for example, nursing homes, primary care clinics, rehabilitation facilities -- it becomes even clearer that healthcare design and construction directly accounts for vast amounts of money. This reality implies great opportunities for funding and creating new gardens to enrich and improve the lives of patients and the environments of hundreds, if not thousands, of existing medical facilities.

**REVIEW: Best Practices: Environmental and Therapeutic Issues in Psychiatric  
Hospital Design: Toward Best Practices**

**Author (Date): Karlin, B. E., & Zeiss, R. A. (2006)**

**Abstract**

The psychiatric hospital environment plays a significant, though often underappreciated, role in patient and staff functioning. This column reviews the literature on important environmental and therapeutic issues in psychiatric hospital design. Research findings and clinical conjecture reported over the past 50 years indicate that intervening environmentally through clinically informed, patient-centered design can improve functioning both among and between patients and staff. This column identifies specific best practice considerations and recommendations for designing inpatient psychiatric facilities and may serve as a useful planning resource to those interested in adopting a patient-centered, inclusive approach to design and treatment.

**REVIEW: A Review of the Research Literature on Evidence -Based Healthcare  
Design**

**Author (Date): Ulrich, R. S., Zimring, C., Zhu, X., DuBose, J., Seo, H.-B., Choi, Y.-S.,  
Quan, X., & Joseph, A. (2008)**

**Abstract**

This report surveys and evaluates the scientific research on evidence-based healthcare design and extracts its implications for designing better and safer hospitals. It builds on a literature review conducted by researchers in 2004. Research teams conducted a new and more exhaustive search for rigorous empirical studies that link the design of hospital physical environments with healthcare outcomes. The review followed a two-step process, including an extensive search for existing literature and a screening of each identified study for the relevance and quality of evidence. This review found a growing body of rigorous studies to guide healthcare design, especially with respect to reducing the frequency of hospital-acquired infections. Results are organized according to three general types of outcomes: patient safety, other patient outcomes, and staff outcomes. The findings further support the importance of improving outcomes for a range of design characteristics or interventions, including single-bed rooms rather than multibed rooms, effective ventilation systems, a good acoustic environment, nature distractions and daylight, appropriate lighting, better ergonomic design, acuity-adaptable rooms, and improved floor layouts and work settings. Directions for future research are also identified. The state of knowledge of evidence-based healthcare design has grown rapidly in recent years. The evidence indicates that well-designed physical settings play an important role in making hospitals safer and more healing for patients, and better places for staff to work



**REVIEW: The Impact of Art, Design and Environment in Mental Healthcare: A  
Systematic Review of the Literature**

**Author (Date): Daykin, N., Byrne, E., Soteriou, T., & O'Connor, S. (2008)**

**Abstract**

There has been a burgeoning interest in arts and the environment in healthcare. While research has been undertaken on the clinical impact of disciplines, relatively little research has studied the impact of broader arts for health interventions. This paper reports findings from a systematic review of the arts for health literature, encompassing research on the impact of visual art, design and the environment on the well-being of patients and staff in mental healthcare settings. A systematic review of over 600 papers published between 1985 and 2005 on the impact of arts, design and environments in mental healthcare was undertaken. The review includes a discussion of contextual and policy literature, as well as 19 reports of quantitative and qualitative studies that met our inclusion criteria. The largest number of studies focused on the aspects of art, design and environment that were relevant to mental healthcare. These studies suggest that this can affect health, including physiological, psychological, clinical and behavioural effects. Exposure to stressful visual and aural environments may reduce levels of stress and enhance recovery. Architectural design consideration is important in mental health settings, especially for patients with conditions such as dementia that can make wayfinding difficult. Exposure to art in healthcare environments has been found to reduce anxiety and depression. Environment features have also been found to affect staff, and improvements in visual and acoustic conditions may reduce risks of errors in some care settings. Qualitative studies provide insights into factors affecting the impact of arts, including issues of power and control, perceptions and influence of key stakeholders, and user participation. A key issue to emerge from this study is that arts interventions do not necessarily address the lack of control exercised by patients in healthcare environments. Conclusions: While there is extensive literature on the impact of design, environment and the arts on health, there is still a need for further research that addresses methodological challenges of evaluating complex interventions. Our review found evidence that environmental enhancements can have a positive impact on health and well-being of staff and patients in mental healthcare. Arts, when considered within this framework of evidence-based design, can also contribute to well-being, offering reassurance and creating identity in healthcare settings. Further research is needed in this area, as well as research that explores the contribution of other models of art that do not fit within the framework of 'evidence-based design'. Finally, responses to the arts are contingent on a number of complex social and political factors; further understanding of these is needed in order to inform future research and evaluation of the arts in healthcare.

**REVIEW: Psychogeriatric Inpatient Unit Design: A Literature Review**

**Author (Date): Dobrohotoff, J. T., & Llewellyn-Jones, R. H. (2011)**

**Abstract**

In many parts of the world the provision of psychogeriatric inpatient units (PGUs) remains limited. More units will be required over coming decades given rapid population aging. Methods: Medline (1950–2010), psycINFO (1806–2009), EMBASE (1980–2009) and CINAHL (1982–2009) were searched for papers about PGU design. Selected non-peer reviewed literature such as government reports and unpublished academic dissertations were also reviewed. Data were also obtained from the literature related to general adult psychiatry inpatient units where there was limited information from studies of units designed for older people. Over 200 papers were reviewed and 130 were included. There are few good quality studies to guide the design of acute PGUs and much of the existing literature is based on opinion and anecdote or, at best, based on observational studies. Randomized controlled studies comparing different designs and assessing outcomes are virtually non-existent. Several studies have identified violence and trauma resulting from hospitalization as significant problems with current acute PGU care. Despite its limitations the available literature provides useful guidance on how PGU design can optimize patient and staff safety and improve clinical outcomes. There are significant problems with current acute PGUs, and patient mix on existing units is an important issue. Future research should examine patient and staff perceptions of different PGU ward environments, the relationship between ward design and clinical outcomes, the effects of segregating patients with challenging behaviors in dementia and the benefits or otherwise of gender segregation.



**REVIEW: Stressed Spaces: Mental Health and Architecture**

**Author (Date): Connellan, K., Gaardboe, M., Riggs, D., Due, C., Reinschmidt, A., & Mustillo, L. (2013)**

**Abstract**

To present a comprehensive review of the research literature on the effects of the architectural designs of mental health facilities on the users. **BACKGROUND:** Using a team of cross-disciplinary researchers, this review builds upon previous reviews on general and geriatric healthcare design in order to focus on research undertaken for mental health care facility design. **METHODS:** Sources were gathered in 2010 and 2011. In 2010 a broad search was undertaken across health and architecture; in 2011, using keywords and 13 databases, researchers conducted a systematic search of peer reviewed literature addressing mental health care and architectural design published between 2005 to 2012, as well as a systematic search for academic theses for the period 2000 to 2012. Recurrent themes and subthemes were identified and numerical data that emerged from quantitative studies was tabulated. **RESULTS:** Key themes that emerged were nursing stations, light, therapeutic milieu, security, privacy, designing for the adolescent, forensic facilities, interior detail, patients' rooms, art, dementia, model of care, gardens, post-occupancy evaluation, and user engagement in design process. Of the 165 articles (including conference proceedings, books, and theses), 25 contained numerical data from empirical studies and 7 were review articles. **CONCLUSIONS:** Based on the review results, especially the growing evidence of the benefits of therapeutic design on patient and staff well-being and client length of stay, additional research questions are suggested concerning optimal design considerations, designs to be avoided, and the involvement of major stakeholders in the design process. **KEYWORDS:** Evidence-based design, hospital, interdisciplinary, literature review, post-occupancy.



**REVIEW: Design Research And Behavioral Health Facilities**

**Author (Date):** Shepley, M. M., Pasha, S., Ferguson, P., Oproescu, G., Huffcut, J. C., Young, J., Kiyokawa, G., Zadeh, R. S., Martere, J., Zborowsky, T., Meyerhoeffer, T., Zimring, C., & McDermott, B. (2013)

**Abstract**

In the interest of determining the state of knowledge on the relationship between behavioral health and the physical environment, the authors explored the literature on research, guidelines, and funding related to this topic. Approximately 300 articles were reviewed for possible incorporation in the literature review, of which 115 were deemed sufficiently appropriate. The criteria for inclusion included (a) relevance to the topic of behavioral health facilities, (b) a demonstration of clear research methodology or practice/research supported guidelines, (c) post-1960 publication, and (d) publication in peer-reviewed journals. This resulted in the development of a literature analysis at three levels: emerging evidence, studies requiring additional corroboration, and design considerations.

**REVIEW: The Role of Color in Healthcare Environments, Emergent Bodies of Evidence-based Design Approach**

**Author (Date):** Ghamari, H., & Amor, C. (2016)

**Abstract**

The objective of this study is to overview the literature relative to color, as an environmental constituent, and its impacts in healthcare environments. Borrowing from the environmental behavioral paradigm, this study attempts to decipher myths and misconceptions as well as highlight well-evidenced research findings. Broad Literature review journal articles and reports of empirical studies in multiple disciplines were studied to identify theories, which could have design implications for color in healthcare design. Despite the incongruity and fragmentation of previous studies, it emerges from this overview that color impacts healthcare outcomes by reducing medical errors, promoting the sense of well-being, reducing stress, improving patients sleep, reducing length of stay, reducing spatial disorientation, increasing patient satisfaction, and increasing staff morale and productivity. While the review of literature indicates major findings relative to the impact of color on healthcare environments, yet ambiguities remained to be addressed. Previous studies on the use of color in healthcare environment have illustrated that there are some obvious, replicable, behavioral and perceptual effects from color that addressed their use in certain ways for design. However, color must be observed and analyzed in the contextual application to avoid generalizations about color perception and mood affects.



**REVIEW: Nature! Small Steps That Can Make a Big Difference**

**Author (Date): Sullivan, W. C., & Kaplan, R. (2016)**

**Abstract**

Healthcare design is incredibly complicated. The contexts range widely, the technical details are endless, and regulations and professional standards are imposing. Creating healthcare settings that meet these many constraints is complex and demanding. But healthcare design needs to address even more challenges. Healthcare settings must also promote the wellbeing of the great diversity of individuals who use these settings. As such they would also: Enhance the users' capacity to think clearly, and listen with care; Reduce the stress they are feeling; Support their inclination to reflect on their situation and plan for the future.

**REVIEW: Therapeutic Landscapes**

**Author (Date): Cooper Marcus, C. (2018)**

**Abstract**

This chapter summarizes the provision of healing or therapeutic landscapes in healthcare facilities, and in the wider urban environment. It does not attempt to provide a detailed review of the research literature but rather draws on some studies of nature and stress recovery, and on post-occupancy evaluations of built examples, particularly in healthcare. Examples are described of patient-specific gardens, outdoor spaces for hospital staff, urban green spaces in places of potential stress, as well as programs that bring stressed people to existing green spaces. In conclusion, a case is presented for a growing demand for restorative green spaces—particularly in healthcare—and the need for more robust research.

## **6.7 Endnotes**

### **Section 1.0**

### **Section 2.0**

<sup>1</sup> Substance Abuse and Mental Health Services Administration. (2012, February). SAMHSA's Working Definition of Recovery | SAMHSA Publications. Available at SAMHSHA website: <https://store.samhsa.gov/product/SAMHSA-s-Working-Definition-of-Recovery/PEP12-RECDEF> and <https://store.samhsa.gov/system/files/pep12-recdef.pdf>

<sup>2</sup> U.S. Department of Veterans Affairs, Veterans Health Administration, Office of Patient Care Services, Mental Health Services, 810 Vermont Avenue, NW, Washington DC 20420, Guide to VA Mental Health Services for Veterans & Families., July, 2012. As determined and agreed upon by VA/VHA Subject Matter Expert Workshop, VA Office of Construction and Facilities Management, 475 I Street, NW, Washington DC 20001, March 6-7, 2019.

### **Section 3.0**

<sup>1</sup> Observations made during the course of multiple site visits by members of VA Office of Construction and Facilities Management, 475 I Street, NW, Washington DC 20001 and Consultants to this Design Guide November 2018 to April 2019 documented in 6.0 Appendix: Research and Fieldwork.

<sup>2</sup> Jenkins et al., 2015

<sup>3</sup> Lee et al., 2013

<sup>4</sup> Observations made during the course of multiple site visits by members of VA Office of Construction and Facilities Management, 475 I Street, NW, Washington DC 20001 and Consultants to this Design Guide November 2018 to April 2019 documented in 6.0 Appendix: Research and Fieldwork.

<sup>5</sup> Staff Opinion Surveys, 6.0 Appendix: Research and Fieldwork to this Inpatient Mental Health Design Guide, TBP

<sup>6</sup> Daykin et al., 2008

<sup>7</sup> Lee et al., 2013

<sup>8</sup> Gueguen et al., 2016

<sup>9</sup> As determined and agreed upon by VA/VHA Subject Matter Experts to this Design Guide during multiple conference calls, March to July, 2019.



**PG 18-12: INPATIENT MENTAL HEALTH (IPMH) & MENTAL HEALTH RESIDENTIAL  
REHABILITATION TREATMENT PROGRAM (MH RRTP) DESIGN GUIDE**

<sup>10</sup> Observations made during the site visit by members of VA Office of Construction and Facilities Management, 475 I Street, NW, Washington DC 20001 and Consultants to this Design Guide February, 2019 documented in 6.0 Appendix: Research and Fieldwork.

<sup>11</sup> As determined and agreed upon by VA/VHA Subject Matter Experts to this Design Guide during multiple conference calls, March to July, 2019.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid.

<sup>14</sup> Gueguen et al., 2016

<sup>15</sup> Ibid.

## **Section 4.0**

<sup>1</sup> Beauchemin et al., 1996

<sup>2</sup> Daykin et al., 2008





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