**COMPLIANCE CHECKLIST**

**IP5\_Critical Care Unit**

The following checklist is intended to be used in the plan review applications for health care facilities submitted to the Massachusetts Department of Public Health. This checklist summarizes and references the applicable requirements from the Licensure Regulations and the 2018 Edition of the FGI Guidelines for Design and Construction of Hospitals. Applicants must verify compliance of the plans submitted to the Department with all referenced requirements from the Licensure Regulations and FGI Guidelines when completing this Checklist. A separate Checklist must be completed for each nursing unit, hospital or clinic department, or clinical suite.

Other jurisdictions, regulations and codes may have additional requirements which are not included in this checklist, such as:

1. NFPA 101 Life Safety Code (2012) and applicable related standards contained in the appendices of the Code
2. State Building Code (780 CMR)
3. Accreditation requirements of The Joint Commission
4. CDC Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health Care Facilities
5. USP 797 & Regulations of the Massachusetts Board of Registration in Pharmacy
6. Occupational Safety & Health Standards (OSHA)
7. Accessibility Guidelines of the Americans with Disabilities Act (ADA)
8. Architectural Access Board Regulations (521 CMR)
9. Local Authorities having jurisdiction.

Instructions:

1. All requirement lines must be completed according to the following instructions and included in the plan submissions for Self-Certification Process or Abbreviated Review Process.
2. This checklist must be completed by the project architect or engineer based on the design actually reflected in the plans at the time of completion of the checklist.
3. Each requirement line (\_\_\_) of this Checklist must be completed exclusively with one of the following marks, unless otherwise directed in the checklist. If a functional space is not affected by a renovation project, the mark “E” may be indicated on the requirement line (\_\_\_) before the name of the functional space (associated requirements on indented lines below that name, or associated MEP requirements do not have to be completed in this case). If more than one functional space serves a given required function (e.g. patient room or exam room), that clarification should be provided in the Project Narrative, and the requirement lines are understood to only address the functional spaces that are involved in the project.

|  |  |
| --- | --- |
| **X** = Requirement is met, for new space, for renovated space, or for existing direct support space for an expanded service. | ⌧ = Check box under section titles or individual requirements lines for optional services or functions that are not included in the project area. |
| **E** = Requirement relative to an existing suite or area that has been *licensed* for its designated function, is *not affected* by the construction project and *does not pertain to a required direct support space* for the specific service affected by the project. “E” must not be used for an existing required support space associated with a new patient care room or area. |  **W** = Waiver requested for specific section of the Regulations or FGI Guidelines, where hardship in meeting requirement can be demonstrated (a Physical Plant Waiver Form must be completed for each waiver request). An explicit floor plan or plan detail must be attached to each waiver request. |

1. All room functions marked with "X" must be shown on the plans with the same name labels as in this checklist.
2. Mechanical, electrical & plumbing requirements are only partially mentioned in this checklist. The relevant section of the FGI Guidelines must be used for project compliance with all MEP requirements and for waiver references.
3. Oxygen, vacuum, medical air, waste anesthesia gas disposal and instrument air outlets (if required) are identified respectively by the abbreviations "OX", "VAC", "MA", “WAGD” & “IA”.
4. Requirements referenced with “FI” result from formal interpretations from the FGI Interpretations Task Group.
5. The location requirements including asterisks (\*) refer to the definitions of the Glossary in the beginning section of the FGI Guidelines and reproduced in this checklist.

|  |  |  |
| --- | --- | --- |
| Facility Name: |  | DoN Project Number: (if applicable) |
| Facility Address: |  | Patient Care Unit Bed Complements: Current =  Proposed =  |
| Satellite Name: (if applicable) |  | Building/Floor Location: |
| Satellite Address: (if applicable) |  | Submission Dates:  |
| Project Description: |  | Initial Date: Revision Date:  |

|  | **Architectural Requirements** | **Building Systems Requirements** |  |
| --- | --- | --- | --- |
| 2.2-2.6 | **CRITICAL CARE UNIT** |  |  |
|  |  |  |  |
| 2.1‑1.2.3 | Shared Services: |  |  |
|  |       No combined functions unless specifically allowed in this checklist |  |  |
|  |  |  |  |
| 2.2-2.6.1.2 |  Location: |  |  |
| (1)  |       critical care unit located in same building as services and/or departments required to provide care to critical care patients (e.g. emergency, respiratory therapy, laboratory, radiology, surgery)  |  |  |
| (2)  |       unit be located so that medical emergency resuscitation teams can respond promptly to emergency calls with minimum travel time |  |  |
| (3)  |       location does not permit unrelated traffic of staff, public or other patients through unit (except for emergency egress) |  |  |
|  |  |  |  |
| 2.2-2.6.2 | **CRITICAL CARE PATIENT CARE AREAS** |  |  |
|  |  |  |  |
| 2.2-2.6.2.2 |  Space Requirements: | Ventilation: |  |
| (1)  |       each patient care station is single-patient room |       Min. 6 air changes per hour | Table 7.1 |
| (2)  |       each patient room has min. clear floor area 200 sf       min. headwall width 13’-0” | Lighting:      General lighting      Lighting for bed permits staff observation of patient  | 2.1‑8.3.4.3(1) (c)  |
| (3)(a)  |       min. clearance 1'-0" from head of bed to wall |       minimizes glare |  |
| (3)(b)  |       min. clearance 5’-0” from foot of bed to wall | Power:      Min. 16 receptacles in total | Table 2.1-1 |
| (3)(c) (3)(d) |       min. clearance 5’-0” on transfer side      min. clearance 4’-0” on non-transfer side |       convenient to head of bed with one on each wall |  |
| (5)  |       patient room sized to allow for minimum of two seated visitors without interfering with providers’ access to patient & equipment | Nurse Call System:      Patient station      Staff assistance station      Emergency call station  | Table 2.1-2 |
|  |  | Medical Gases:      1 OX, 3 VAC, 1 MA per bed | Table 2.1-3 |
| 2.2-2.6.2.3 |  Windows In Patient Rooms: |  |  |
| 2.1‑7.2.2.5(1)  |       each patient room provided with natural light by means of window to outside |  |  |
| 2.1‑7.2.2.5(3)  |  |  |  |
| (a)  |       minimum net glazed area be no less than 8% of required min. clear floor area of room served |  |  |
| (b)  |       maximum 36 inches windowsill height above finished floor  |  |  |
|  |  |  |  |
| 2.2-2.6.2.4 |  Patient Privacy: |  |  |
| (1)  |       view panels to corridor with means to allow visual privacy |  |  |
| (2)  |       existing multiple patient care stations in renovation projects [ ]  check if not included in project  |  |  |
|  |       each patient care station has provisions for visual privacy from casual observation by other patients & visitors |  |  |
|  |  |  |  |
| 2.2-2.6.2.5 |  Handwashing Stations: |  |  |
| (1)  |       handwashing station provided in each patient room |  |  |
| (2)  |       existing multiple patient care stations in renovation projects [ ]  check if not included in project  |  |  |
| (a)  |       at least one handwashing station provided for every 3 patient care stations |  |  |
| (b)  |       handwashing station located near patient care station |  |  |
|  |  |  |  |
| 2.2-2.6.2.6 |  Toilet Room or Human Waste Disposal Room: | Ventilation: |  |
| (1)  |       enclosed toilet room |       Min. 10 air changes per hour | Table 7.1 |
| (a)  |       toilet with bedpan-rinsing device      direct access from patient room |       Exhaust      Negative pressure |  |
|  | **or**      enclosed human waste disposal room |       No recirculating room units |  |
|  |  |  |  |
| (b)  |       flushing-rim clinical sink with bedpan-rinsing device      direct access from patient room |  |  |
|  |  |  |  |
| 2.2-2.6.4 | **SPECIAL PATIENT CARE AREAS** |  |  |
|  |  |  |  |
| 2.2-2.6.4.2 |       Airborne infection isolation (AII) room |  |  |
| (1)  |       at least one AII room provided in one critical care unit |  |  |
| 2.1‑2.4.2.2 |       complies with requirements applicable to patient rooms |  |  |
| (1) |       capacity one bed |  |  |
| (2) |       personal protective equipment (PPE) storage at entrance to room |  |  |
| (3) |       handwashing station |  |  |
| (4) |       patient toilet room       serves only one AII room | Ventilation:      Min. 10 air changes per hour | Table 7.1 |
|  |  |       Exhaust      Negative pressure      No recirculating room units |  |
|  |  |  |  |
| 2.1‑2.4.2.3 |       Anteroom[ ]  check if not included in project  |  |  |
| (1) |       provides space for persons to don personal protective equipment (PPE) before entering patient room  | Ventilation:      Min. 10 air changes per hour      Exhaust      No recirculating room units | Table 7.1 |
| (2) |       all doors to anteroom have self‑closing devices **or**       audible alarm activated when AII room is in use as isolation room |  |  |
|  |  |  |  |
| (3)(a) |       handwashing station |  |  |
| (3)(b) |       storage for unused PPE |  |  |
| (3)(c) |       disposal/holding container for used PPE |  |  |
|  |  |  |  |
| 2.1‑2.4.2.4 |  Architectural Details & Furnishings: |  |  |
| (1)(a) |       perimeter walls ceiling & floor including penetrations constructed to prevent air exfiltration |  |  |
| (1)(b) |       self‑closing devices on all room exit doors **or**      activation of audible alarm when AII room is in use as isolation room |  |  |
|  |  |  |  |
|  |       edge seals provided along sides & top of doorframe for any door into AII room |  |  |
| (2) (a)  |       window treatments do not include fabric drapes & curtains |  |  |
| 2.1‑7.2.3.1(7)(a) |       floors are monolithic & integral coved wall bases are at least 6” high & tightly sealed to wall |  |  |
| 2.1‑2.4.2.5 |       room pressure visual or audible alarm |  |  |
|  |  |  |  |
|  |  |  |  |
| 2.2-2.2.4.4 |       Protective environment (PE) room[ ]  check if not included in project  |  |  |
| 2.1‑2.4.2.2 |       complies with requirements applicable to patient rooms | Ventilation:      Min. 12 air changes per hour | Table 7.1 |
| (1) |       capacity one bed |       Positive pressure |  |
| (2) |       personal protective equipment (PPE) storage at entrance to room |       No recirculating room units |  |
| (3) |       handwashing station |       Supply air diffusers are located above patient bed | Part 3/7.2.2 |
|  |  |       Exhaust grilles or registers located near patient room door |  |
|  |  |  |  |
| (4) |       Patient toilet room       serves only one PE room | Ventilation:      Min. 10 air changes per hour | Table 7.1 |
| 2.1‑2.2.6.3 |  |       Exhaust |  |
| (1)(2)(3) |       toilet       handwashing station       bedpan washer  |       Negative pressure      No recirculating room units |  |
|  |  |  |  |
| 2.1‑2.4.2.3 |       Anteroom[ ]  check if not included in project  |  |  |
| (1) |       provides space for persons to don personal protective equipment (PPE) before entering patient room  | Ventilation:      Min. 10 air changes per hour      No recirculating room units | Table 7.1 |
| (2) |       all doors to anteroom have self‑closing devices **or**       audible alarm activated when PE room is in use as isolation room |  |  |
|  |  |  |  |
| (3)(a) |       handwashing station |  |  |
| (3)(b) |       storage for unused PPE |  |  |
| (3)(c) |       disposal/holding container for used PPE |  |  |
|  |  |  |  |
| 2.1‑2.4.2.4 |  Architectural Details & Furnishings: |  |  |
| (1)(a) |       perimeter walls ceiling & floor including penetrations constructed to prevent air exfiltration |  |  |
| (1)(b) |       self‑closing devices on all room exit doors **or**      activation of audible alarm when PE room is in use as isolation room |  |  |
|  |  |  |  |
|  |       edge seals provided along sides & top of doorframe for any door into PE room |  |  |
| (2) (a)  |       window treatments do not include fabric drapes & curtains |  |  |
| 2.1‑7.2.3.1(7)(a) |       floors are monolithic & integral coved wall bases are at least 6” high & tightly sealed to wall |  |  |
| 2.1‑2.4.2.5 |       room pressure visual or audible alarm |  |  |
|  |  |  |  |
| 2.2-2.2.4.4(5)  |  Special Design Elements: |  |  |
| (a) |       monolithic ceiling  |  |  |
|  |       surfaces are cleanable |  |  |
| (b)  |       lighting fixtures have lenses & are sealed |  |  |
| 2.1‑7.2.3.1 (7)(a) |       floors are monolithic & integral coved wall bases are at least 6” high & tightly sealed to wall |  |  |
| 2.2-2.6.8 | **SUPPORT AREAS FOR CRITICAL CARE UNIT** |  |  |
|  |  |  |  |
| 2.2-2.6.8.2(1) |       Administrative center or nurse station |  |  |
| 2.1‑2.8.2.1(1)  |       space for counters |  |  |
| 2.1‑2.8.2.1(2)  |       handwashing station next to or directly accessible\***or**      hand sanitation dispenser next to or directly accessible\* |  |  |
|  |  |  |  |
| (2)  |       direct or remote visual observation between nurse station or staffed charting stations & all patient care stations in critical care unit       observation provides view of patient while patient is in bed |  |  |
|  |  |  |  |
| 2.2-2.6.8.3 |       Documentation areas |  |  |
| (1)  |       provided for each patient in or adjacent\* to patient care station | Nurse Call System:      Duty station (light/sound signal) | 2.1‑8.5.1.2(3)(b) |
| (2)  |       Information review area located to facilitate concentration |  |  |
|  |  |  |  |
| 2.2-2.6.8.4 |       Nurse or supervisor office |  |  |
| (1)  |       office space for critical care medical & nursing management/administrative personnel       immediately accessible\* to critical care unit |  |  |
| (2)  |       offices linked with unit by telephone or intercommunications system |  |  |
|  |  |  |  |
| 2.2-2.6.8.5 |       Multipurpose room |  |  |
|  |       at least one multipurpose room for each facility for patient conferences, reports, education, training sessions & consultation (may serve several patient care units & departments) |  |  |
|  |  |  |  |
| 2.2-2.6.8.8 |       Medication safety zones |  |  |
| 2.1‑2.8.8.1(2) |  Design Promoting Safe Medication Use: |  |  |
| (a)  |       medication safety zones located out of circulation paths |  |  |
| (b)  |       work space designed so that staff can access information & perform required tasks | Lighting:      Task‑specific lighting level min. 100 foot‑candles | 2.1‑2.8.8.1(2)(d) |
| (c)  |       work counters provide space to perform required tasks |  |  |
| (e)  |       sharps containers placed at height that allows users to see top of container |  |  |
| (f)  |       max. 45 dBA noise level caused by building systems  |  |  |
| 2.1‑2.8.8.2(1)  |       medication preparation room |  |  |
| (a)  |       under visual control of nursing staff | Ventilation:  |  |
| (b) |       work counter |       Min. 4 air changes per hour | Table 7.1 |
|  |       handwashing station | Lighting:  |  |
|  |       lockable refrigerator |       Task lighting | 2.1‑2.8.8.1(2)(d) |
|  |       locked storage for controlled drugs |  |  |
|  |       sharps containers[ ]  check if not included in project  | Nurse Call System:      Duty station (light/sound signal) | Table 2.1-2 |
| (c)  |       self‑contained medication‑dispensing unit [ ]  check if not included in project  |  |  |
|  |       room designed with space to prepare medications **or** |  |  |
| 2.1‑2.8.8.2(2)  |       automated medication‑dispensing unit |  |  |
| (a)  |       located at nurse station, in clean workroom or in alcove | Lighting:      Task lighting | 2.1‑2.8.8.1(2)(d) |
| (c)  |       handwashing station located next to stationary medication-dispensing units or stations | Nurse Call System:      Duty station (light/sound signal) | Table 2.1-2 |
|  |  |  |  |
| 2.2-2.6.8.9 |       Nourishment area or room |  |  |
| (2)  |       located within critical care unit**or**      shared with another critical care unit      accessible from critical care unit without travel through public corridor |  |  |
| 2.1‑2.8.9.2 |  | Ventilation:  |  |
| (1)  |       handwashing station |       Min. 2 air changes per hour | Table 7.1 |
| (2)  |       work counter |  |  |
| (3)  |       refrigerator |  |  |
| (4)  |       microwave |  |  |
| (5)  |       storage cabinets |  |  |
| (6)  |       space for temporary storage of food service implements | Nurse Call System:      Duty station (light/sound signal) | 2.1‑8.5.1.2(3)(b) |
| 2.1‑2.8.9.3 |       provisions & space are included for separate temporary storage of unused & soiled meal trays |  |  |
|  |  |  |  |
| 2.2-2.6.8.10 |       Ice-making equipment |  |  |
| (1)  |       provides ice for treatment & nourishment |  |  |
|  |  |  |  |
| 2.2-2.6.8.11 | Clean workroom or clean supply room |  |  |
| (2) |       located within critical care unit**or**      shared with another critical care unit      accessible from critical care unit without travel through public corridor |  |  |
|  |  |  |  |
| 2.1‑2.8.11.2 |       clean workroom       used for preparing patient care items | Ventilation:      Min. 4 air changes per hour | Table 7.1 |
| (1)  |       work counter |       Positive pressure |  |
| (2)  |       handwashing station |  |  |
| (3)  |       storage facilities for clean & sterile supplies **or** | Nurse Call System:      Duty station (light/sound signal) | Table 2.1-2 |
| 2.1‑2.8.11.3 |       clean supply room  | Ventilation:  |  |
|  |       used only for storage & holding as part of system for distribution of clean & sterile supplies |       Min. 4 air changes per hour      Positive pressure | Table 7.1 |
|  |  |  |  |
| 2.2-2.6.8.12 | Soiled workroom or soiled holding room |  |  |
| (2) |       located within critical care unit**or**      shared with another critical care unit      accessible from critical care unit without travel through public corridor |  |  |
|  |  |  |  |
| 2.1‑2.8.12.2 |       soiled workroom | Ventilation:      Min. 10 air changes per hour | Table 7.1 |
| (1)(a)  |       handwashing station |       Exhaust |  |
| (1)(b)  |       flushing‑rim clinical service sink with bedpan‑rinsing device or equivalent flushing‑rim fixture |       Negative pressure      No recirculating room units |  |
| (1)(c)  |       work counter |  |  |
| (1)(d)  |       space for separate covered containers for waste & soiled linen | Nurse Call System:      Duty station (light/sound signal) | Table 2.1-2 |
| (2)  |       fluid management system is used[ ]  check if not included in project  |  |  |
| (a)  |       electrical & plumbing connections that meet manufacturer requirements |  |  |
| (b)  |       space for docking station **or** |  |  |
| 2.1‑2.8.12.3 |       soiled holding room | Ventilation:      Min. 10 air changes per hour | Table 7.1 |
| (1)  |       handwashing station or hand sanitation station |       Exhaust      Negative pressure |  |
| (2)  |       space for separate covered containers for waste & soiled linen |       No recirculating room units |  |
| 2.2-2.6.8.13(1)  |       Clean linen storage |  |  |
| (b) |       located within critical care unit**or**      shared with another critical care unit      accessible from critical care unit without travel through public corridor |  |  |
| 2.1‑2.8.13.1 |  |  |  |
| (1)  |       stored in clean workroom**or**       separate closet **or**       covered cart distribution system on each floor |  |  |
| (2)  |       storage of clean linen carts in designated corridor alcoves, clean workroom or closets |  |  |
|  |  |  |  |
| 2.2-2.6.8.13(2)  |       Equipment storage room or alcoves |  |  |
| (a)  |       sized to provide min. 20 sf per patient care station |  |  |
| (b)  |       equipment storage room contains space & provisions for recharging equipment |  |  |
|  |  |  |  |
| (3)  |       Wheelchair & gurney storage |  |  |
|  |  |  |  |
| (4)  |       Emergency equipment storage |  |  |
| 2.1‑2.8.13.4 |  |  |  |
| (1)  |       each patient care unit has at least one emergency equipment storage location |  |  |
| (2)  |       provided under visual observation of staff |  |  |
| (3)  |       storage locations in corridors do not encroach on minimum required corridor width |  |  |
|  |  |  |  |
| 2.2-2.6.8.14 |       Environmental services room | Ventilation:      Min. 10 air changes per hour | Table 7.1 |
| 2.1‑2.8.14.1 |       readily accessible\* to unit or floor it serves (permitted to serve more than one patient care unit on floor) |       Exhaust      Negative pressure      No recirculating room units |  |
| 2.1‑2.8.14.2 |  |  |  |
| (1)  |       service sink or floor‑mounted mop sink |  |  |
| (2)  |       provisions for storage of supplies & housekeeping equipment |  |  |
| (3)  |       handwashing station **or**       hand sanitation station |  |  |
|  |  |  |  |
| 2.2-2.6.8.15 |       Examination room[ ]  check if not included in project  |  |  |
| 2.1‑2.1.2 | Patient Privacy: |  |  |
|  |       provisions are made to address patient visual & speech privacy |  |  |
|  |  |  |  |
| 2.1‑3.2.2.1 | Space Requirements: | Ventilation:  |  |
| (1)  |       min. clear floor area 120 sf       min. clear dimension 10’‑0” |       Min. 6 air changes per hour | Table 7.1 |
| (2)(a)  |       room size permits room arrangement with min. clearance 3’‑0” at each side & at foot of exam table  | Lighting:      Portable or fixed exam light | 2.1‑8.3.4.3(3)  |
|  |       room arrangement (layout #1) shown in the plans | Power:      Min. 8 receptacles in total | Table 2.1-1 |
| (2)(b)  |       exam table, recliner or chair is placed at angle closer to one wall  |       Min. 4 receptacles convenient to head of gurney or bed |  |
|  | than another or against wall to accommodate type of patient being served | Nurse Call System:      Staff assistance station      Emergency call station  | Table 2.1-2 |
|  | [ ]  check if not included in project      room arrangement (layout #2) shown in the plans |  |  |
| 2.1‑3.2.2.2 |  |  |  |
| (2)  |       storage for supplies |  |  |
| (3)  |       accommodations for written or electronic documentation |  |  |
| (4)  |       space for visitor’s chair |  |  |
| (5)  |       handwashing station |  |  |
|  |  |  |  |
| 2.2-2.6.8.16 |       Patient-monitoring equipment |  |  |
| (1)  |       each unit contains equipment for physiological monitoring with visual displays for each patient at bedside & at nurse station or centralized monitoring area |  |  |
| (2)  |       monitors located to permit easy viewing       monitors do not interfere with access to patient |  |  |
|  |  |  |  |
| 2.2-2.6.8.17 |       Image-viewing capability unit (may serve more than one critical care unit) |  |  |
|  |  |  |  |
| 2.2-2.6.9 | **SUPPORT AREAS FOR STAFF** |  |  |
| 2.2-2.6.9.1 |       Staff lounge  |  |  |
|  |       min.100 sf |  |  |
| (1) (2) |       located in or adjacent\* to critical care unit (may serve adjacent\* critical care units) |  |  |
| (3)  |       telephone or intercom & emergency call station connections to critical care unit it serves |  |  |
| (4)  |       equipment & space for seating |  |  |
| 2.2-2.6.9.2 |       Staff toilet rooms (permitted to be unisex) |  |  |
|  |       readily accessible\* to staff lounge |  |  |
| 2.1‑2.9.2.1 |       readily accessible\* to each patient care unit | Ventilation:      Min. 10 air changes per hour | Table 7.1 |
| 2.1‑2.9.2.2 |       toilet & handwashing station |       Exhaust      Negative pressure      No recirculating room units |  |
| 2.2-2.6.9.3 |       Staff storage facilities |  |  |
| 2.1‑2.9.3.1 |       securable closets or cabinet compartments for personal articles of staff       located in or near nurse station |  |  |
|  |  |  |  |
| 2.2-2.6.9.4 |       On-call staff accommodation |  |  |
| (1)  |       accommodations for sleeping & rest |  |  |
| (a)  |       space for chair |  |  |
| (b)  |       space for bed |  |  |
| (2)  |       individually secured storage for personal items |  |  |
| (3)  |       communication system |  |  |
| (4)  |       at least one toilet, shower & handwashing station | Ventilation:      Min. 10 air changes per hour | Table 7.1 |
|  |  |       Exhaust      Negative pressure      No recirculating room units |  |
| 2.2-2.6.10 | **SUPPORT AREAS FOR FAMILIES & VISITORS** |  |  |
|  |  |  |  |
| 2.1‑2.10.1 |       Family & visitor lounge | Communications: |  |
|  |       each patient care unit provides access to lounge for family & visitors |       Public communication services provided in each family & visitor lounge | 2.1‑2.10.1.6 |
| 2.1‑2.10.1.1 | Size: |  |  |
| (1)  |       accommodates at least 3 chairs & 1 wheelchair space |  |  |
| (2)  |       accommodates at least 1.5 persons for every adult critical care bed |  |  |
| 2.1‑2.10.1.2 |       immediately accessible\* to patient care units served (permitted to serve more than one patient care unit) |  |  |
| 2.1‑2.10.1.4 |       designed to minimize impact of noise & activity on patient rooms & staff functions |  |  |
|  |  |  |  |

\*LOCATION TERMINOLOGY:

Directly accessible: Connected to the identified area or room through a doorway, pass-through, or other opening without going through an intervening room or public space

Adjacent: Located next to but not necessarily connected to the identified area or room

Immediately accessible: Available either in or adjacent to the identified area or room

Readily accessible: Available on the same floor or in the same clinic as the identified area or room

Architectural Details & MEP Requirements

|  |  |
| --- | --- |
| 2.1‑7.2.2 | **ARCHITECTURAL DETAILS** |
|  |  |
|  | CORRIDOR WIDTH: |
| 2.1‑7.2.2.1NFPA 101, 18.2.3.4 |       Aisles, corridors & ramps required for exit access in a hospital not less than 8'‑0" in clear & unobstructed width **or**      Detailed code review incorporated in Project Narrative |
|  |  |
|  |       Aisles, corridors & ramps in adjunct areas not intended for the housing, treatment, or use of inpatients not less than 44” in clear & unobstructed width**or**      Detailed code review incorporated in Project Narrative |
|  |  |
| 2.1‑7.2.2.2 | CEILING HEIGHT: |
| (1) |       Min ceiling height 7'-6"in corridors & in normally unoccupied spaces  |
| (3) |       Min. height 7’‑6” above floor of suspended tracks, rails & pipes located in traffic path for patients in beds & on stretchers |
|  |       Min. ceiling height 7’‑10” in other areas |
| 2.1‑7.2.2.3(1)(a)(b) | DOORS & DOOR HARDWARE:Door Type:      doors between corridors, rooms, or spaces subject to occupancy swing type or sliding doors      sliding doors[ ]  check if not included in project |
|  |       manual or automatic sliding doors comply with NFPA 101      detailed code review incorporated in Project Narrative      no floor tracks |
| (2)(a) | Door Opening:      min. 45.5” clear door width for patient rooms       min. 83.5” clear door height for patient rooms  |
| (b) |       swinging doors for personnel use in addition to sliding doors[ ]  check if not included in project      min. clear width 34.5”  |
| (3)  |  Door Swing: |
| (a)  |       doors do not swing into corridors except doors to non‑occupiable spaces (e.g. environmental services rooms & electrical closets) & doors with emergency breakaway hardware |
|  |  |
| (4)  |       Lever hardware or push/pull latch hardware  |
|  |  |
| (5)  |  Doors for Patient Bathing/Toilet Facilities: |
| (a) |       two separate doors**or** |
|  |       door that swings outward **or** |
|  |       door equipped with emergency rescue hardware (permits quick access from outside the room to prevent blockage of the door)**or** |
|  |       sliding door other than pocket door |
|  |  |
| (b)  |       bathing area or toilet room opens onto public area or corridor [ ]  check if not included in project  |
|  |       visual privacy is maintained |
|  |  |
| 2.1‑7.2.2.5 | WINDOWS IN PATIENT ROOMS: |
| 2.1‑7.2.2.5(1)  |       Each patient room provided with natural light by means of window to outside |
| 2.1‑7.2.2.5(2)  |       Operable windows in patient rooms or suites [ ]  check if not included in project       window operation is limited with either stop limit/restrictor hardware or open guard/screen      prevents passage of 4‑inch diameter sphere through opening |
| 2.1‑7.2.2.6 |       insect screens |
|  |  |
| 2.1‑7.2.2.5(3)  |  Window Size In Patient Rooms: |
| (a)  |       minimum net glazed area be no less than 8% of required min. clear floor area of room served |
| (b)  |       maximum 36 inches windowsill height above finished floor  |
|  |  |
| 2.1‑7.2.2.7 | GLAZING MATERIALS:       Glazing within 1 foot 6 inches of floor[ ]  check if not included in project  |
|  |       must be safety glass, wire glass or plastic break‑resistant material |
|  |  |
| 2.1‑7.2.2.8 | HANDWASHING STATIONS: |
| (1)(c)  |       Handwashing stations in patient care areas located so they are visible & unobstructed |
| (3)  |  |
| (a)  |       Handwashing station countertops made of porcelain, stainless steel, solid‑surface materials or impervious plastic laminate assembly |
| (b)  |       Countertops substrate [ ]  check if not included in project       marine‑grade plywood (or equivalent material) with impervious seal |
| (4)  |       Handwashing station casework [ ]  check if not included in project       designed to prevent storage beneath sink |
| (5)  |       Provisions for drying hands  |
| (a)  |       hand‑drying device does not require hands to contact dispenser |
| (b)  |       hand‑drying device is enclosed to protect against dust or soil & to ensure single‑unit dispensing |
| (6)  |       Liquid or foam soap dispensers |
|  |  |
| 2.1‑7.2.2.9 | GRAB BARS: |
| (1)  |       Grab bars anchored to sustain concentrated load 250 pounds |
| (2)  |       Grab bars in toilet rooms used by patients of size anchored to sustain concentrated load 800 pounds |
| (3)  |       Ends of grab bars constructed to prevent snagging clothes of patients, staff & visitors |
|  |  |
| 2.1‑7.2.2.10 | HANDRAILS: |
| (1)  |       Handrails installed on both sides of patient use corridors |
| (3)  |       Rail ends return to wall or floor |
| (4)  |       Handrail gripping surfaces & fasteners are smooth (free of sharp or abrasive elements) with 1/8‑inch min. radius |
| (5)  |       Handrails have eased edges & corners |
| (6)  |       Handrail finishes are cleanable |
|  |  |
| 2.1‑7.2.2.12 | NOISE CONTROL: |
| (1)  |       Recreation rooms, exercise rooms equipment rooms & similar spaces where impact noises may be generated are not located directly over patient bed areas **or**      Special provisions are made to minimize impact noise |
|  |  |
| (2)  |       Noise reduction criteria in Table 1.2‑6 applicable to partitions, floors & ceiling construction are met in patient areas  |
|  |  |
| 2.1‑7.2.2.14 | DECORATIVE WATER FEATURES: |
| (1)  |       No indoor unsealed water features |
| (2)  |       Covered fish tanks [ ]  check if not included in project       restricted to public areas |
|  |  |
| 2.1‑7.2.3 | **SURFACES** |
| 2.1‑7.2.3.1 | FLOORING & WALL BASES: |
| (1)  |       Flooring surfaces cleanable & wear‑resistant for location |
| (3)  |       Smooth transitions provided between different flooring materials |
| (4)  |       Flooring surfaces including those on stairways are stable, firm & slip‑resistant |
| (5)  |       Floors & wall bases of soiled workrooms, toilet rooms & other areas subject to frequent wet cleaning are constructed of materials that are not physically affected by germicidal or other types of cleaning solutions |
|  |  |
| 2.1‑7.2.3.2 | WALLS & WALL PROTECTION: |
| (1)(a)  |       Wall finishes are washable |
| (1)(b)  |       Wall finishes near plumbing fixtures are smooth, scrubbable & water‑resistant |
| (2)  |       Wall surfaces in areas routinely subjected to wet spray or splatter (e.g. environmental services rooms) are monolithic or have sealed seams that are tight & smooth |
| (5)  |       Wall protection devices & corner guards durable & scrubbable |
| 2.1‑7.2.3.3 | CEILINGS: |
| (1)  |       Ceilings provided in all areas except mechanical, electrical & communications equipment rooms |
| (a)  |       Ceilings cleanable with routine housekeeping equipment |
| (b)  |       Acoustic & lay‑in ceilings where used do not create ledges or crevices |
|  |  |
| 2.1-7.2.4 | FURNISHINGS: |
| 2.1‑7.2.4.1 | Built‑In Furnishings:[ ]  check if not included in project  |
|  |       upholstered with impervious materials in patient treatment areas |
| 2.1‑7.2.4.2 |  Window Treatments in Patient Rooms & Other Patient Care Areas: |
| (1)  |       blinds, sheers or other patient‑controlled window treatments provided to allow for patient privacy & to control light levels & glare |
| (2)  |       window treatments do not compromise patient safety       easy for patients, visitors & staff to operate |
| (3)  |       window treatments selected for ease of cleaning, disinfection or sanitization |
| 2.1‑7.2.4.3 |       Privacy curtains in patient rooms & other patient care areas are washable[ ]  check if not included in project  |
|  |  |
| 2.1‑8.2 | **HEATING VENTILATION & AIR‑CONDITIONING (HVAC) SYSTEMS** |

|  |  |
| --- | --- |
|  |  |
| Part 3/6.1 | UTILITIES: |
| Part 3/6.1.1 |  Ventilation Upon Loss of Electrical Power:       space ventilation & pressure relationship requirements of Tables 7.1 are maintained for AII Rooms, PE Rooms in event of loss of normal electrical power |
|  |  |
| Part 3/6.1.2 |  Heating & Cooling Sources: |
| Part 3/6.1.2.1 |       heat sources & essential accessories are provided in number & arrangement sufficient to accommodate facility needs (reserve capacity) even when any one of heat sources or essential accessories is not operating due to breakdown or routine maintenance       capacity of remaining source or sources is sufficient to provide for domestic hot water & heating for intensive care rooms  |
|  |  |
| Part 3/6.1.2.2 |  Central cooling systems greater than 400 tons (1407 kW) peak cooling load [ ]  check if not included in project       number & arrangement of cooling sources & essential accessories is sufficient to support facility operation plan upon breakdown or routine maintenance of any one of cooling sources |
|  |  |
| Part 3/6.2 | AIR-HANDLING UNIT (AHU) DESIGN: |
| Part 3/6.2.1 |       AHU casing is designed to prevent water intrusion, resist corrosion & permit access for inspection & maintenance |
| . |  |
| Part 3/6.3 | OUTDOOR AIR INTAKES & EXHAUST DISCHARGES: |
| Part 3/6.3.1 |  Outdoor Air Intakes: |
| Part 3/6.3.1.1 |       located min. of 25 ft from cooling towers & all exhaust & vent discharges       outdoor air intakes located such that bottom of air intake is at least 6'-0" above grade       air intakes located away from public access  |
|  |  |
| Part 3/6.3.1.3 |       intakes on top of buildings [ ]  check if not included in project       located with bottom of air intake min. 3'-0" above roof level |
|  |  |
| Part 3/6.3.1.4 |       intake in areaway [ ]  check if not included in project       bottom of areaway air intake opening is at least 6'-0" above grade       bottom of air intake opening from areaway into building is at least 3'-0" above bottom of areaway |
|  |  |
| Part 3/6.3.2 |  Exhaust Discharges for Infectious Exhaust Air:[ ]  check if not included in project  |
| Part 3/6.3.2.1 |       ductwork within building is under negative pressure for exhaust of contaminated air (i.e. air from AII rooms)  |
|  |       exhaust discharge outlets with contaminated air located such that they reduce potential for recirculation of exhausted air back into building |
| Part 3/6.3.2.2 |       exhaust discharge outlets with contaminated air is arranged to discharge to atmosphere in vertical direction at least 10'-0" above adjoining roof level |
|  |       exhaust discharge outlets from AII rooms is located not less than 25 feet horizontally from outdoor air intakes, openable windows/doors & areas that are normally accessible to public |
|  |  |
| Part 3/6.4 | FILTRATION: |
|  |       Two filter banks for inpatient care (see Table 6.4)      Filter Bank No. 1: MERV 7       Filter Bank No. 2: MERV 14       Each filter bank with efficiency of greater than MERV 12 is provided with differential pressure measuring device to indicate when filter needs to be changed  |
|  |  |
| Part 3/6.4.1 |       Filter Bank No. 1 is placed upstream of heating & cooling coils |
| Part 3/6.4.2 |       Filter Bank No. 2 is placed downstream of all wet-air cooling coils & supply fan |
|  |  |
| Part 3/6.5 | HEATING & COOLING SYSTEMS: |
| Part 3/6.5.3 |       Radiant heating systems [ ]  check if not included in project       ceiling or wall panels with exposed cleanable surfaces or radiant floor heating are provided in AII room, PE room & burn unit |
|  |  |
| Part 3/6.7 | AIR DISTRIBUTION SYSTEMS: |
| Part 3/6.7.1 |       pressure relationships required in tables 7.1 maintained in all modes of HVAC system operation       Spaces that have required pressure relationships are served by fully ducted return systems or fully ducted exhaust systems       Inpatient facilities are served by fully ducted return or exhaust systems |
|  |  |
| Part 3/6.7.2 |  Air Distribution Devices:  |
|  |       supply air outlets comply with Table 6.7.2 |
|  |  |
| Part 3/6.7.3 |  Smoke Barriers:       HVAC zones coordinated with compartmentation to minimize ductwork penetrations of fire & smoke barriers. |
|  |  |
| Part 3/6.8 | ENERGY RECOVERY SYSTEMS:[ ]  check if not included in project  |
| Part 3/6.8.1 |       Located upstream of Filter Bank No. 2  |
| Part 3/6.8.2 |       AII room exhaust systems or combination AII/PE rooms are not used for energy recovery |
|  |  |
| Part 3/6.8.3 |       Energy recovery systems with leakage potential [ ]  check if not included in project       arranged to minimize potential to transfer exhaust air directly back into supply airstream       designed to have no more than 5% of total supply airstream consisting of exhaust air  |
|  |  |
| Part 3/7  | SPACE VENTILATION |
| Part 3/7.1.aPart 3/7.1.a.1 |       Spaces ventilated according to Table 7.1      Air movement is from clean to less-clean areas  |
|  |  |
| Part 3/7.1.a.3 |       Min. number of total air changes required for positive pressure rooms is provided by total supply airflow       Min. number of total air changes required for negative pressure rooms is provided by total exhaust airflow |
|  |  |
| Part 3/7.1a.5 |       Air recirculation through room unit [ ]  check if not included in project       complies with Table 7.1 |
|  |       room unit receive filtered & conditioned outdoor air      serve only a single space |
|  |       provides min. MERV 6 filter located upstream of any cold surface so that all of air passing over cold surface is filtered |
|  |  |
| Part 3/7.2 | ADDITIONAL ROOM-SPECIFIC REQUIREMENTS: |
| Part 3/7.2.1 | Airborne Infection Isolation (AII) Rooms[ ]  check if not included in project  |
|  |       AII rooms have permanently installed device and/or mechanism to constantly monitor differential air pressure between room & corridor      Local visual means is provided to indicate whenever negative differential pressure is not maintained |
|  |       Air from AII room is exhausted directly to outdoors |
|  |       Exhaust air from AII rooms, associated anterooms & toilet rooms is discharged directly to outdoors without mixing with exhaust air from any other non-AII room or exhaust system |
| Part 3/7.2.1 |       Exhaust air grille or register in patient room is located directly above patient bed on ceiling or on wall near head of bed |
|  |  |
|  |       Anteroom [ ]  check if not included in project       AII room is at negative pressure with respect to anteroom       Anteroom is at negative pressure with respect to corridor |
|  |  |
| Part 3/7.2.2 | Protective Environment (PE) Rooms[ ]  check if not included in project  |
| Part 3/7.2.2 |       Supply air diffusers are located above patient bed |
|  |       Exhaust grilles or registers are located near patient room door. |
|  |       PE rooms have permanently installed device to constantly monitor differential air pressure between room & corridor local       Visual means is provided to indicate whenever positive differential pressure is not maintained |
|  |  |
| Part 3/7.2.3 | Combination Airborne Infectious Isolation/ Protective Environment Room (AII/PE)[ ]  check if not included in project  |
|  |       Supply air diffusers are located above patient bed |
|  |       Exhaust grilles or registers are located near patient room door. |
|  |       Anteroom[ ]  check if not included in project  |
|  |       anteroom is at positive pressure with respect to both AII/PE room & corridor or common space**or** |
|  |       anteroom is at negative pressure with respect to both AII/PE room & corridor or common space |
|  |  |
|  |       First device monitors pressure differential between AII/PE room & anteroom       Second device monitors pressure differential between anteroom & corridor or common space       Local visual means are provided to indicate whenever differential pressures are not maintained |
|  |  |

|  |  |
| --- | --- |
| 2.1‑8.3 | **ELECTRICAL SYSTEMS** |
|  |  |
| 2.1‑8.3.2.2 |  Panelboards: |
| (1)  |       panelboards serving life safety branch circuits serve floors on which they are located & floors immediately above & below |
| (2)  |       panelboard critical branch circuits serve floors on which they are located |
| (3)  |       panelboards not located in exit enclosures or exit passageways |
|  |  |
| 2.1‑8.3.2.3 | Ground‑Fault Circuit Interrupters in Critical Care Areas:[ ]  check if not included in project  |
| (2)  |       each receptacle individually protected by single GFCI device |
|  |  |
| 2.1-8.3.3 | POWER-GENERATING & -STORING EQUIPMENT |
| 2.1-8.3.3.1 |       Essential electrical system or emergency electrical power |
| (1)  |       essential electrical system complies with NFPA 99 |
| (2)  |       emergency electrical power complies with NFPA 99 |
|  |  |
| 2.1‑8.3.4 | LIGHTING: |
| 2.1‑8.3.4.2 |       Luminaires in wet areas have smooth cleanable shatter‑resistant lenses & no exposed lamps |
|  |  |
| 2.1‑8.3.4.3(1)  |       Reading light for each patient bed |
| (a)  |       incandescent & halogen light [ ]  check if not included in project  |
|  |       placed or shielded to protect patient from injury |
|  |       light source covered by diffuser or lens |
|  |       flexible light arms [ ]  check if not included in project       mechanically controlled to prevent lamp from contacting bed linen |
|  |  |
| 2.1‑8.3.4.3(2)  |       Patient care unit corridors have general illumination with provisions for reducing light levels at night |
|  |  |
| 2.1‑8.3.5 | ELECTRICAL EQUIPMENT: |
| 2.1‑8.3.5.1 |       Handwashing sinks & scrub sinks that depends on building electrical service for operation are connected to essential electrical system[ ]  check if not included in project  |
|  |  |
| 2.1‑8.3.6 | ELECTRICAL RECEPTACLES: |
| 2.1‑8.3.6.1 |  Receptacles In Corridors: |
| (1)  |       duplex‑grounded receptacles for general use installed 50’‑0” apart or less in all corridors       duplex‑grounded receptacles for general use installed within 25’‑0” of corridor ends |
| (2)  |       receptacles in pediatric & psychiatric unit corridors are of tamper‑resistant type |
|  |  |
| 2.1‑8.3.6.3 |  Essential Electrical System Receptacles: |
| (1)  |       cover plates for electrical receptacles supplied from essential electrical system are distinctively colored or marked for identification |
| (2)  |       same color is used throughout facility |
|  |  |
| 2.1‑8.4 | **PLUMBING SYSTEMS** |
|  |  |
| 2.1‑8.4.2 |  Plumbing & Other Piping Systems: |
| 2.1‑8.4.2.1(3)  |       no plumbing piping exposed overhead or on walls where possible accumulation of dust or soil may create cleaning problem  |
|  |  |
| 2.1‑8.4.2.2 |  Hemodialysis/Hemoperfusion Water Distribution:[ ]  check if not included in project  |
| (1)(a)(2)(b) (1)(b) |       separate treated water distribution system      outlet at each individual hemodialysis treatment bay      outlet at hemodialysis equipment repair area      outlet at dialysate preparation area**or**      dialysis equipment includes sufficient water treatment provisions for use of domestic cold water  |
|  |  |
| (1)(a) |       drainage system independent from tap water drainage |
| (4)  |       liquid waste & disposal system for hemodialysis treatment area are designed to minimize odor & prevent backflow |
| (5)  |       hemodialysis distribution piping is readily accessible\* for inspection & maintenance |
|  |  |
| 2.1‑8.4.2.5 |  Heated Potable Water Distribution Systems: |
| (2)  |       heated potable water distribution systems serving patient care areas are under constant recirculation       non‑recirculated fixture branch piping max. length 25’‑0” |
| (3)(a) (3)(c) |       no installation of dead‑end piping (except for empty risers mains & branches for future use) |
| (3)(b)  |       any existing dead‑end piping is removed☐ check if not included in project  |
| (4)(a)  |       water‑heating system supplies water at temperatures & amounts indicated in Table 2.1‑4 |
| 2.1‑8.4.2.6 |  Drainage Systems: |
| (1)(a)  |       drainage piping installed above ceiling of or exposed in electronic data processing areas & electric closets [ ]  check if not included in project  |
|  |       special provisions to protect space below from leakage & condensation |
| (1)(b)  |       drip pan for drainage piping above ceiling of sensitive area [ ]  check if not included in project       accessible       overflow drain with outlet located in normally occupied area |
| 2.1‑8.4.3 | PLUMBING FIXTURES: |
| 2.1‑8.4.3.1(1)  |       Materials used for plumbing fixtures are non‑absorptive & acid‑resistant |
| 2.1‑8.4.3.2 |  Handwashing Station Sinks: |
| (1)  |       designed with basins that will reduce risk of splashing to areas for direct patient care & medication preparation |
| (2)  |       sink basins have nominal size of no less than 144 square inches       sink basins have min. dimension 9 inches in width or length |
| (3)  |       sink basins are made of porcelain, stainless steel or solid‑surface materials |
| (5)  |       faucet water discharge point min. 10” above bottom of basin |
| (7)  |       anchored so that allowable stresses are not exceeded where vertical or horizontal force of 250 lbs. is applied |
| (8)  |       sinks used by staff, patients, & public have fittings that can be operated without using hands (may be single‑lever or wrist blade devices) |
| (a) |       blade handles [ ]  check if not included in project       at least 4 inches in length |
|  |       provide clearance required for operation |
| (b)  |       sensor‑regulated water fixtures[ ]  check if not included in project  |
|  |       meet user need for temperature & length of time water flows |
|  |       designed to function at all times and during loss of normal power |
| 2.1‑8.4.3.4 |  Ice‑Making Equipment:       copper tubing provided for supply connections to ice‑making equipment |
| 2.1‑8.4.3.5 |  Clinical Flushing-Rim Sinks:[ ]  check if not included in project  |
| (1) (a) |       trimmed with valves that can are operated without hands (may be single‑lever or wrist blade devices) |
| (b)  |       handles are at least 6 in. long |
| (2)  |       integral trap wherein upper portion of water trap provides visible seal |
| 2.1‑8.4.3.7 |  Bedpan‑Rinsing Devices: |
| (1)  |       bedpan‑rinsing devices provided in each inpatient toilet room |
| (2)  |       use cold water only |
|  |  |
| 2.1‑8.4.4 | **MEDICAL GAS & VACUUM SYSTEMS**  |
|  |       Station outlets provided as indicated in Table 2.1‑3 |
|  |  |
| 2.1‑8.5.1 | **CALL SYSTEMS** |
| 2.1‑8.5.1.1 |  |
| (1)  |       Nurse call stations provided as required in Table 2.1‑2 |
| (2)  |       Nurse call systems report to attended location with electronically supervised visual & audible annunciation as indicated in Table 2.1‑2 |
| (4)  |       Call system complies with UL 1069 “Standard for Hospital Signaling & Nurse Call Equipment” |
| (5)  |       Wireless nurse call system [ ]  check if not included in project  |
|  |       complies with UL 1069 |
|  |  |
| 2.1‑8.5.1.2 |  Patient Call Stations: |
| (1)  |       each patient sleeping bed except nursery beds provided with patient call station equipped for two‑way voice communication (use of dual call station are permitted when beds are located adjacent to each other) |
| (2)(a) |       indicator light that remains lighted as long as voice circuit is operating |
| (2)(b)  |       reset switch for canceling call |
| (3)(a)  |       visible signal in corridor at patient’s door  Multi‑Corridor Patient Areas: [ ]  check if not included in project  |
|  |       additional visible signals at corridor intersections |
|  |  |
| 2.1‑8.5.1.3 |  Bath Stations:       bath station that can be activated by patient lying on floor provided at each patient toilet, bathtub, sitz bath or shower stall |
| (1)  |       alarm in these areas can only be turned off at bath station where it was initiated |
| (2)  |       shower/tub bath stations located 3'‑0" to 4’‑0” above floor within view of user & within reach of staff without need to step into shower or tub |
| (3)  |       toilet bath stations located on the side of toilets within 12” of front of toilet bowl & 3'-0" to 4’‑0” above floor |
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| 2.1‑8.5.1.5 |       Emergency call stations are equipped with continuous audible or visual confirmation to person who initiated the code call |
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| 2.1‑8.6.2 | **ELECTRONIC SURVEILLANCE SYSTEMS**[ ]  check if not included in project  |
|  |  |
| 2.1‑8.6.2.2 |       monitoring devices are located so they are not readily observable by general public or patients |
| 2.1‑8.6.2.3 |       electronic surveillance systems receive power from essential electrical system |
|  |  |