

COMPLIANCE CHECKLIST

IP15: Imaging Services

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 2014 Edition of the FGI Guidelines for Design and Construction of Hospitals and Outpatient Facilities. 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:

- NFPA 101 Life Safety Code (2000) and applicable related standards contained in the appendices of the Code
- State Building Code (780 CMR)
- Joint Commission on the Accreditation of Health Care Organizations
- CDC Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health Care Facilities
- USP 797
- Accessibility Guidelines of the Americans with Disabilities Act (ADA)
- Architectural Access Board Regulations (521 CMR)
- 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 Part II of the 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 symbols, unless otherwise directed in the checklist. If a functional space is not affected by a renovation project, the symbol "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.

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).

4. All room functions marked with "X" must be shown on the plans with the same name labels as in this checklist.
5. 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.
6. Oxygen, vacuum, medical air, and waste anesthesia gas disposal outlets (if required) are identified respectively by the abbreviations "OX", "VAC", "MA", & "WAGD".
7. Requirements referenced with "FI" result from formal interpretations from the FGI Interpretations Task Group.
8. The location requirements including asterisks (*) refer to the definitions of the Glossary in the beginning section of the FGI Guidelines.

Facility Name:

DoN Project Number: (if applicable)

Facility Address:

Satellite Name: (if applicable)

Building/Floor Location:

Satellite Address: (if applicable)

Submission Dates:

Project Description:

Initial Date:

Revision Date:

Architectural Requirements

Building Systems Requirements

2.2-3.4

IMAGING SERVICES

2.2-3.4.1.2

Location:
 ready access by beds & stretchers to & from other departments

2.2-3.4.1.3

Radiation Protection:
 specifications of radiation shielding have been submitted to DPH Radiation Control Program

(1)
(a)

shielded control alcove or room
 each examination/procedure room containing non-portable radiation-emitting imaging equipment includes fixed shielded control alcove or room

(b)

shielded view window designed to provide full view of examination/procedure table & patient at all times, including full view of patient when table is tilted or chest X-ray is used

or

no shielded control alcove or room
 letter from hospital physicist supporting the omission of shielded control alcove or room is attached

2.2-3.4.1.4

(1)

Special Design Elements:
 floor structure meets equipment manufacturer load requirements
 floor finishes conform to imaging equipment technical requirements

2.2-3.4.2

COMPUTED TOMOGRAPHY (CT) FACILITIES

check if not included in project

2.2-3.4.2.1

(1)

(a)

CT scanner room
 Space Requirements:
 CT scanner room sized & configured in compliance with manufacturer specifications
 installation plans have been submitted to DPH Plan Review

Ventilation:

Min. 6 air changes per hour Table 7.1

Nurse Call System:

Emergency staff assistance station Table 2.1-2

Code call station

(b)

min. clearance 4'-0" on all sides of gantry assembly or table

(2)

handwashing station in CT scanner room

(3)

door swing does not encroach on equipment, patient circulation, or transfer space

2.2-3.4.2.2

(1)

(2)

Control room
 shielded view window
 angle between control & CT equipment centroid permits control operator to see patient's head & part of body being imaged in bore of scanner

Architectural Requirements

Building Systems Requirements

2.2-3.4.3 **DIAGNOSTIC RADIOGRAPHY FACILITIES**

check if not included in project

2.2-3.4.3.1(1) Room design & equipment siting accommodate manufacturer's operational, service & safety clearances
 installation plans have been submitted to DPH Plan Review

2.2-3.4.3.2 Radiography room
 check if not included in project
 (2) handwashing station

Ventilation:
 Min. 6 air changes per hour Table 7.1
 Nurse Call System:
 Emergency staff assistance station Table 2.1-2

2.2-3.4.3.3 Radiography/fluoroscopy room
 check if not included in project
 (2) handwashing station

Ventilation:
 Min. 6 air changes per hour Table 7.1
 Nurse Call System:
 Emergency staff assistance station Table 2.1-2

(3) separate toilet room
 handwashing station
 direct access from each dedicated fluoroscopy room
 patients able to leave toilet room without reentering fluoroscopy room

Ventilation:
 Min. 10 air changes per hour Table 7.1
 Exhaust

2.2-3.4.3.4 Mammography room
 check if not included in project
 (1) views into mammography room by public or other patients prevented when room is in use
 (2) handwashing station
 (3) changing room for mammography patients immediately accessible* to waiting area & procedure room
 (a) complies with Section 2.2-3.4.8.3
 (b) (may serve other imaging services)

Ventilation:
 Min. 6 air changes per hour Table 7.1
 Nurse Call System:
 Emergency staff assistance station Table 2.1-2

2.2-3.4.4 **MAGNETIC RESONANCE IMAGING (MRI) FACILITIES**

check if not included in project

2.2-3.4.4.1 MRI suite & scanner rooms sized & configured in compliance with manufacturer specifications
 installation plans have been submitted to DPH Plan Review

2.2-3.4.4.2 MRI Scanner Room Space Requirements:
 (1) sized to accommodate clearances in manufacturer's technical specifications
 (2) min. clearance 4'-0" on all sides of gantry assembly or table
 door swing does not encroach on min. clearances

Ventilation:
 Min. 6 air changes per hour Table 7.1
 Nurse Call System:
 Emergency staff assistance station Table 2.1-2
 Code call station

Architectural Requirements**Building Systems Requirements**

- 2.2-3.4.4.3
(1) Planning Configuration of MRI Suite:
 ___ conforms to 4-zone screening & access control protocols identified by American College of Radiology
 ___ **Zone I:** all areas that are freely accessible to the general public
 ___ **Zone II:** interface between the publicly accessible uncontrolled Zone I & strictly controlled Zone III (space for screening questions, patient histories, medical insurance questions)
 ___ **Zone III:** no free access by unscreened persons or non-MRI personnel due to interactions between persons or equipment & MRI scanner
 ___ **Zone IV:** MRI scanner room where access must be supervised by MRI personnel
- (2) ___ MRI suite as well as spaces around, above & below designed to prevent unscreened individuals from entering 5-gauss volume around MRI equipment
- (3) Layout has provisions for following functions:
 (a) ___ patient interviews & clinical screening
 (b) ___ physical screening
 (c) ___ ferromagnetic detection & warning systems
 (d) ___ access control
 (g) ___ storage for patient belongings & non-MRI-safe items
- (4) ___ Control vestibule
 ___ visible from control room
 ___ sole means of access to MRI scanner room & control room
- (5) ___ Locking system to any area where magnetic field strength equal to or greater than 5 gauss
- 2.2-3.4.4.4 ___ Cryogen venting, emergency exhaust & passive pressure relief systems in accordance with equipment manufacturer specifications
- 2.2-3.4.4.5 ___ Handwashing station
 ___ directly accessible* to MRI scanner room
- 2.2-3.4.4.6
(1) ___ MRI control room
 ___ full view of patient & all activity in MRI room
 (a) ___ operator's console positioned so operator has full view of approach & entrance to MRI scanner room
 (b) ___ door in open position does not obstruct view of entry opening from operator's console
 (3) ___ space for emergency patient stabilization or resuscitation near control room but outside 5-gauss line

Architectural Requirements

Building Systems Requirements

- 2.2-3.4.4.7 Pre-procedure patient care area or room
- 2.2-3.5.3.1 (2) immediately accessible* to procedure rooms
- separate from corridors
- (3) arranged to permit visual observation by staff before & after procedure
- 2.2-3.5.3.2 Space Requirements:
 - patient bays*
 - check if not included in project
 - min. clear floor area 60 sf
 - 5'-0" between sides of patient beds/stretchers
 - 4'-0" between sides of patient beds/ stretchers & adjacent walls or partitions
 - patient cubicles*
 - check if not included in project
 - min. clear floor area 80 sf
 - min. clearance 3'-0" between sides & foot of lounge chairs/stretchers & adjacent walls or partitions
 - provisions such as cubicle curtains used for patient privacy
- 2.1-2.6.5.3 Handwashing Stations:
 - (1) at least one handwashing station for every 4 patient care stations or fewer & for each major fraction thereof
 - (2) evenly distributed
 - provide uniform distance from two patient care stations farthest from handwashing station
- 2.2-3.4.4.8 Computer room
- 2.2-3.4.4.10 Special Design Elements-MRI Scanner Room:
 - (1) no ferromagnetic materials
 - (a) location or shielding to avoid
 - (b) radiofrequency interference from elevators or other mechanical-electrical equipment
 - (2) (a) floor structure designed to support weight of MRI scanner equipment,
 - floor structure designed to minimize disturbance to MRI magnetic field
 - floor structure designed to mitigate disruptive environmental vibrations
 - (b) entry door swings outward from inside room
 - (c) lighted sign with red light to indicate that magnet is always on
 - (d) acoustic control to mitigate ambient noise emitted by MRI scanner per Table 1.2-6

- Nurse Call System:
 - Patient station
 - Emergency staff assistance station
- Table 2.1-2

Architectural Requirements**Building Systems Requirements**

2.2-3.4.5

ULTRASOUND FACILITIES check if not included in project

2.2-3.4.5.2

 Ultrasound examination or procedure rooms(1) min. clear floor area 120 sf(2) min. clearance 3'-0" on three sides of table/stretchers

Ventilation:

 Min. 6 air changes per hour Table 7.1

Nurse Call System:

 Emergency staff assistance station Table 2.1-2

2.2-3.4.5.3

 handwashing station

2.2-3.4.5.4

 patient toilet room(1) directly accessible* from examination or procedure room

Ventilation:

 Min. 10 air changes per hour Table 7.1 Exhaust(2) serves more than one procedure room measures to limit patient access to other procedure rooms**or** serves only one procedure room

2.2-3.4.6

SUPPORT AREAS FOR IMAGING SERVICES

2.2-3.4.6.1

 Reception area with control desk

2.2-3.4.6.2

 Documentation area

2.2-3.4.6.3

 Area for consultation with patients or referring clinician (including remote consultation with referring clinicians)

2.2-3.4.6.4

 Pre-procedure patient care & observation space(1) area where imaging service patients can receive point-of-care lab work or injection preparation for contrast(2) under direct observation of nursing staff
 accommodates stretcher patients
 accommodates seating space for patients & visitors

2.2-3.4.6.6

 Medication safety zone & storage

2.1-2.6.6.1

 medication preparation room(2) **or**
 self-contained medication dispensing unit

2.2-3.4.6.6

 immediately accessible* from patient holding areas(2) provision made for locked storage of medications & drugs

2.1-2.6.6.1(2)

(a) located out of circulation paths to minimize distraction & interruption(c) work counters(d) task lighting(e) meet acoustic design criteria per 1.2-5.1

Architectural Requirements

Building Systems Requirements

2.1-2.6.6.2

- (1) medication preparation room
 - check if not included in project
- (a) under visual control of nursing staff
- (b) work counter
 - handwashing station
 - lockable refrigerator
 - locked storage for controlled drugs
- (c) Sharps Containers:
 - check if not included in project
 - sharps containers placed at height that allows users to see top of container
- (d) space to prepare medicines in addition to any self-contained medicine-dispensing unit
- (2) self-contained medication dispensing units
 - check if not included in project
- (a) located at nurse station or in an alcove
 - lockable unit to secure controlled drugs
- (b) handwashing station located next to stationary medication-dispensing units

- Ventilation:
 - Min. 4 air changes per hour Table 7.1
- Nurse Call System:
 - Duty station Table 2.1-2

2.2-3.4.6.9 Clean storage (may be shared with another department)

- readily accessible*

2.2-3.4.6.10 Provisions made for soiled holding

- (2) handwashing stations immediately accessible*

2.2-3.4.6.12 Environmental services room

- (1) immediate access to imaging suite

- 2.1-2.6.12.2 (1) service sink or floor-mounted mop sink
- (2) provisions for storage of supplies & housekeeping equipment
- (3) handwashing station or hand sanitation station

- Ventilation:
 - Min. 10 air changes per hour Table 7.1
 - Exhaust

2.2-3.4.6.13 Contrast media preparation area

- check if not included in project

- (1) sink
- (a) counter
- (b) storage to accommodate preparation of contrast media
- (c) storage to accommodate preparation of contrast media

2.2-3.4.6.14 Space to accommodate equipment to be used for image acquisition & transmission

2.2-3.4.6.15 Image interpretation/reading rooms

Architectural Requirements

- 2.2-3.4.6.16 Facilities for processing ultrasound probes
 - check if not included in project
- (1) (only if cleaning & decontamination of ultrasound probes is not performed in the imaging department)
- (b) size of processing room dictated by amount of equipment to be processed
- (c) cleaning area allows for flow of ultrasound probes from contaminated area to clean assembly area & then to storage
- (d) decontamination area
 - work counter space
 - sink appropriate to method of decontamination used
 - handwashing station
 - space & utility connections for automatic cleaning equipment & for sterilizing equipment
- (2) clean equipment room

Building Systems Requirements

- Ventilation:
- Min. 10 air changes per hour Table 7.1
 - Exhaust
 - Negative pressure
 - No recirculating room units

- Ventilation:
- Min. 4 air changes per hour Table 7.1
 - Positive pressure

2.2-3.4.7 **SUPPORT AREAS FOR IMAGING SERVICES STAFF**

- 2.2-3.4.7.1 Staff lounge
 - lockers
 - readily accessible* to imaging suite
- 2.2-3.4.7.2 More than 3 exam/procedure rooms in suite
 - staff toilets directly accessible*

or

 - 3 or fewer exam/procedure rooms in suite
 - staff toilets immediately accessible* (may be outside suite)

2.2-3.4.8 **SUPPORT AREAS FOR PATIENTS**

- 2.2-3.4.8.1 Patient waiting area
 - (1) screened & separated from unrelated traffic
 - under staff control
 - (3) outpatient waiting & inpatient holding areas separated & screened to provide visual & acoustic privacy between them

- Chest X-Ray Ventilation: 4/7.1
- check if not included in project (only if no chest X-rays are performed)
 - Min. 12 air changes per hour Table 7.1
 - exhaust ventilation
 - or**
 - recirculating ventilation system with HEPA filter

Architectural Requirements

- 2.2-3.4.8.2 Patient toilet rooms
 - handwashing stations
 - immediately accessible* to waiting areas
- 2.2-3.4.8.3 Patient changing rooms
 - (1) immediately accessible* to imaging examination/procedure rooms
 - (2) include seat or bench & mirror
 - (3) provisions for hanging patients' clothing & securing valuables either in patient changing room or in shared secured storage

Building Systems Requirements

- Ventilation:
- Min. 10 air changes per hour Table 7.1
 - Exhaust

Architectural Details & MEP Requirements

2.1-7.2.2 ARCHITECTURAL DETAILS

- 2.1-7.2.2.1 NFPA 101
- Aisles, corridors & ramps required for exit access in a hospital not less than 8'-0" in clear & unobstructed width
 - or**
 - Code Review Sheet establishing compliance with NFPA 101 has been submitted

- Aisles, corridors & ramps in adjunct areas not intended for the housing, treatment, or use of inpatients not less than 44" in clear width

2.1-7.2.2.2 CEILING HEIGHT:

- (1) Min. ceiling height 7'-6" in corridors & normally unoccupied spaces
- (2) Min. height 7'-0" in radiography & procedure rooms from floor to lowest protruding element of equipment or fixture in stowed position
- (4) Min. height 7'-6" above floor of suspended tracks, rails & pipes located in traffic path for patients in beds and/or on stretchers
- Min. ceiling height 7'-10" in other areas

2.1-7.2.2.3 DOORS & DOOR HARDWARE:

- (1) (a) Doors between corridors, rooms, or spaces subject to occupancy swing type or sliding doors
- (b) Sliding doors
 - check if not included in project
 - manual or automatic sliding doors comply with NFPA 101
 - code review sheet attached
 - no floor tracks
- (2)

- (a) Min. 45.5" clear door width for diagnostic/treatment areas
- Min. 83.5" clear door height for diagnostic/treatment areas
- (b) Swinging doors for personnel use in addition to sliding doors
 - check if not included in project
 - min. clear width 34.5"
- (3) Doors do not swing into corridors (except doors to non-occupiable spaces & doors with emergency breakaway hardware)
- (4) Lever hardware
- (b) Doors for patient toilet facilities
- (5) 2 doors separated by horizontal distance equal to one-half length of max. diagonal room dimension
- or**
- door that swings outward
- or**
- door equipped with emergency rescue hardware
- or**
- (b) sliding door
- toilet room door opening in public area or corridor maintains visual privacy

2.1-7.2.2.7 GLAZING MATERIALS:

- (4) Glazing within 18" of floor
 - check if not included in project
 - safety glass, wire glass or plastic break-resistant material

2.1-7.2.2.8 HANDWASHING STATIONS:

- (1) Handwashing stations in patient care areas located to be visible & unobstructed

- (3) ___ Anchoring suitable for vertical or horizontal force of 250 lbs.
 - (4) Handwashing Station Countertops:
 check if not included in project
 - (a) ___ porcelain, stainless steel or solid surface materials
 - (b) ___ plastic laminate countertops
 check if not included in project
 - ___ substrate marine-grade plywood (or equivalent) with impervious seal
 - (5) ___ Designed to prevent storage beneath sink
 - (6) ___ provisions for drying hands
 - (a) ___ hand-drying device does not require hands to contact dispenser
 - (d) ___ directly accessible* to sinks
 - (7) ___ Liquid or foam soap dispensers
 - 2.1-7.2.2.9 GRAB BARS:
 (2) ___ Grab bars anchored to sustain concentrated load of 250 lbs.
 - 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) ___ Smooth non-textured surface free of rough edges
 - (5) ___ Eased edges & corners
 - (6) ___ Finishes cleanable
 - 2.1-7.2.2.11 RADIATION PROTECTION:
 check if no radiation emitting equipment is included in project
 - ___ Protection for X-ray & Gamma-ray installations are shown in the plans
 - ___ Documentation for radiation protection has been submitted separately to the DPH Radiation Control Program
 - 2.1-7.2.2.12 NOISE CONTROL:
 (2) ___ Partitions, floors & ceiling construction in patient areas conform to Table 1.2-6
- 2.1-7.2.3 SURFACES**
- 2.1-7.2.3.1 FLOORING & WALL BASES:
 (1) ___ Selected flooring surfaces cleanable & wear-resistant for location
 - (2) ___ Smooth transitions between different flooring materials
 - (3) ___ Flooring surfaces, including those on stairways, stable, firm & slip-resistant
 - (b) ___ Carpet

- check if not included in project
 ___ provides stable & firm surface
- (4) ___ Floors & wall bases of soiled workrooms, toilet rooms & other wet cleaned areas are not physically affected by cleaning solutions
- 2.1-7.2.3.2 WALLS & WALL PROTECTION:
 (1) ___ Washable wall finishes
 - (a) ___ Wall finishes near plumbing fixtures smooth, scrubbable & water-resistant
 - (2) ___ Monolithic wall surfaces in areas routinely subjected to wet spray or splatter
 - (5) ___ No sharp, protruding corners
 - (6) ___ Wall protection devices & corner guards durable & scrubbable
- 2.1-7.2.3.3 CEILINGS:
 (1) Ceilings in areas occupied by patients, in clean rooms & soiled rooms:
 - (a) ___ cleanable with routine housekeeping equipment
 - (b) ___ acoustic & lay-in ceilings
 check if not included in project
 ___ do not create ledges or crevices
- 2.1-8.2 HEATING, VENTILATION, & AIR-CONDITIONING (HVAC) SYSTEMS
- 4/6.3.1 Outdoor Air Intakes:
 4/6.3.1.1 ___ Located min. 25 feet from cooling towers & all exhaust & vent discharges
 ___ Bottom of air intake is at least 6'-0" above grade
- 4/6.3.1.2 Roof Mounted Air Intakes:
 check if not included in project
 ___ bottom min. 3'-0" above roof level
- 4/6.3.2 Exhaust Discharges for Contaminated Exhaust Air:
 check if not included in project
 - ___ Ductwork under negative pressure (except in mechanical room)
 - ___ Discharge in vertical direction at least 10'-0" above roof level
 - ___ Located not less than 10'-0" horizontally from air intakes & operable windows/doors

- 4/6.4 Filtration:
 - Filter banks conform to Table 6.4
- 4/6.4.1 Filter Bank #1 placed upstream of heating & cooling coils
- 4/6.4.2 Filter Bank No. 2 installed downstream of cooling coils & supply fan
- 4/6.7 Air Distribution Systems
- 4/6.7.1 Ducted return or exhaust systems in spaces listed in Table 7.1 with required pressure relationships
- Ducted return or exhaust systems in inpatient care areas
- 4/6.7.3 Smoke & Fire barriers:
 - HVAC zones coordinated with compartmentation to minimize ductwork penetrations of fire & smoke barriers
- 4/6.8 Energy Recovery Systems:
- 4/6.8.2 Exhaust systems serving potentially contaminated rooms are not used for energy recovery
- 4/6.9 Duct Lining:
 - No duct lining in ductwork located downstream of Filter Bank #2
- 4/7 Space Ventilation:
- 4/7.1 Spaces ventilated per Table 7.1
- Air movement from clean areas to less clean areas
- Min. number of total air changes indicated either supplied for positive pressure rooms or exhausted for negative pressure rooms
- Recirculating room HVAC units
 - check if not included in project
 - each unit serves only single space
 - min. MERV 6 filter for airflow downstream of cooling coils
- 4/7.4.3 Imaging Procedure Rooms:
 - check if not included in project
 - anesthetic gases are not used
 - ventilation complies with requirements for ambulatory surgery "Procedure Rooms"
 - or**
 - anesthetic gases are used
 - ventilation complies with requirements for "Operating Rooms"

- 2.1-8.2.1.1 (5) Acoustic Considerations:
 - Equipment location or acoustic provisions limit noise associated with outdoor mechanical equipment to 65 dBA at building façade
- 2.1-8.2.1.2 (1) Ventilation & Space-Conditioning:
 - All rooms & areas used for patient care have provisions for ventilation
 - Mechanical ventilation provided for all rooms & areas in facility in accordance with Table 7.1 of Part 4
- 2.1-8.2.1.2 (2) Mechanical ventilation provided for all rooms & areas in facility in accordance with Table 7.1 of Part 4
- 2.1-8.2.3.1 (1) Exhaust Systems:
 - Room routinely used for administering inhalation anesthesia & inhalation analgesia
 - check if not included in project
 - (b) anesthesia scavenging system with air supply at or near ceiling & exhaust air inlets near floor level
 - or**
 - (c) gas-collecting system arranged so as not to disturb patients respiratory systems
 - gases from scavenging system exhausted directly to outside

2.1-8.3 **ELECTRICAL SYSTEMS**

2.1-8.3.2 **ELECTRICAL DISTRIBUTION & TRANSMISSION**

- 2.1-8.3.2.1 Switchboards Locations:
 - (1) Located in areas separate from piping & plumbing equipment
 - (b) Not located in rooms they support
 - Accessible to authorized persons only
 - (c) Located in dry, ventilated space free of corrosive gases or flammable material

- 2.1-8.3.2.2 Panelboards:
 - (1) Panelboards serving life safety branch emergency circuits only serve same floor, floor above & floor below
 - (2) Panelboards serving critical branch emergency circuits only serve same floor
 - (3) New panelboards not located in exit enclosures

- 2.1-8.3.3.1 **EMERGENCY ELECTRICAL SERVICE**
 - (1) Emergency power per NFPA 99, NFPA 101 & NFPA 110

- 2.1-8.3.5 **ELECTRICAL EQUIPMENT**
- 2.1-8.3.5.2 Required handw. station or scrub sink tied to building electrical service
 - check if not included in project
 - connected to essential electrical system
- 2.1-8.3.6 **ELECTRICAL RECEPTACLES**
- 2.1-8.3.6.2 Receptacles in Patient Care Areas:
 - receptacles provided according to Table 2.1-1
- 2.1-8.3.7 **CALL SYSTEMS**
- Nurse call equipment legend includes patient stations, bath stations, staff emergency stations & code call stations
- 2.1-8.3.7.1 (1) Nurse call system locations provided as required in Table 2.1-2
- (2) Nurse call systems report to attended location with electronically supervised visual & audible signals
- (4) Call systems meet requirements of UL 1069 *Standard for Hospital Signaling & Nurse Call Equipment*
- (5) Wireless system
 - check if not included in project
 - meet requirements of UL 1069
- 2.1-8.3.7.3 Bath Stations:
 - (1) provided at each patient toilet
 - alarm turned off only at bath station where it was initiated
 - (3) located to side of toilets within 12" of front of toilet bowl & 3'-0" to 4'-0" above floor
- 2.1-8.3.7.4 Staff emergency stations for summoning local staff assistance for non-life-threatening situations at each patient care location
- 2.1-8.3.7.5 Code call station equipped with continuous audible or visual signal at point of origin
- 2.1-8.4.2 **PLUMBING & OTHER PIPING SYSTEMS**
- 2.1-8.4.2.5 Heated Potable Water Distribution Systems:
 - (2) systems serving patient care areas are under constant recirculation
 - non-recirculated fixture branch piping does not exceed 25'-0" in length
 - (3) no dead-end piping
 - (4) water-heating system has supply capacity at minimum temperatures & amounts indicated in Table 2.1-3

- (5) handwashing stations supplied as required above
- or**
- handwashing stations supplied at constant temperature between 70°F & 80°F using single-pipe supply
- 2.1-8.4.2.6 Drainage Systems:
 - (1) drainage piping above ceiling of, or exposed in electric closets
 - check if not included in project
 - special provisions to protect space below from leakage & condensation
- 2.1-8.4.3 **PLUMBING FIXTURES**
- 2.1-8.4.3.1 (1) Materials material used for plumbing fixtures non-absorptive & acid resistant
- 2.1-8.4.3.2 Handwashing Station Sinks:
 - (1) basins reduce risk of splashing to areas where direct patient care is provided, sterile procedures are performed & medications are prepared
 - basin min. 144 square inches
 - min. dimension 9 inches
 - made of porcelain, stainless steel, or solid-surface materials
 - water discharge point of faucets at least 10 inches above bottom of basin
 - (7) anchoring for sinks withstands min. vertical or horizontal force of 250 lbs.
 - (8) fittings operated without using hands for sinks used by medical & nursing staff, patients & public
- (a) blade handles or single lever
 - min. 4 inches long
 - provide clearance required for operation
- or**
- (b) sensor-regulated water fixtures
 - meet user need for temperature & length of time water flows
 - designed to function at all times & during loss of normal power

- 2.1-8.4.3.5 Clinical Sinks:
 check if not included in project
 (1) trimmed with valves that can be operated without hands
 (2) handles min. 6 inches long
 integral trap wherein upper portion of water trap provides visible seal

2.1-8.4.4 **MEDICAL GAS & VACUUM SYSTEMS**

Station outlets provided as indicated in Table 2.1-4

- 2.1-8.4.4.2
 (2) Vacuum discharge at least 25'-0" from all outside air intakes, doors & operable windows

2.1-8.6.2 **ELECTRONIC SURVEILLANCE SYSTEMS**

- check if not included in project
 2.1-8.6.2.1 Devices in patient areas mounted in unobtrusive & tamper-resistant enclosures
 2.1-8.6.2.2 Monitoring devices not readily observable by general public or patients
 2.1-8.6.2.3 Receive power from emergency electrical system