

COMPLIANCE CHECKLIST

IP12: Emergency 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

2.2-3.1

EMERGENCY SERVICES

2.2-3.1.3.2

ENTRANCE

2.1-6.2.1

- Vehicular drop-off & pedestrian entrance
- Min. one drop-off entrance reachable from grade level
- (1) Signed route from public roads that directs ambulance traffic to ED ambulance entrance
- Signed route from public roads that directs vehicle traffic to public entrance
- (2) Paved emergency access to permit discharge of patients from automobiles & ambulances
- (3) ED entrance clearly marked
- (4) Raised platform/dock used for ambulance discharge
 - check if not included in project
 - ramp or elevator/lift to grade level for pedestrian & wheelchair access
- (5) Emergency vehicle entry cover/canopy provides shelter for both patient & emergency medical crew during transfer between emergency vehicle & building
- (6) Emergency bays sized so they are compatible with horizontal & vertical vehicle clearances of EMS providers
- (7) ED ambulance entrances min. 6'-0" clear width to accommodate bariatric stretchers, mobile patient lift devices & attendants

2.2-3.1.3.3

RECEPTION & TRIAGE AREAS

- (1) Reception or triage areas located to provide means for observation of main entrance to ED & public waiting area
- (2) Public access points to treatment area under direct observation of reception & triage areas
- (3) Triage area
 - (a) connection for telephones
 - (b) provisions for patient privacy
 - (c) handwashing station in each triage room & 1 handwashing station for every 4 triage bays or cubicles
 - (d) hand sanitation dispenser for each triage bay or cubicle
 - (e) access to panic button for security emergencies

Ventilation:

- Min. 12 air changes/hour Table 7.1
- Negative pressure
- Exhaust
- or**
- Recirculation through HEPA filters

Power:

- Min. 6 receptacles convenient to head of stretcher Table 2.1-1
- At least 50% on emergency power

Nurse Call System:

- Patient station Table 2.1-2
- Emergency staff assistance station
- Code call station

Medical Gases:

- 1 OX, 1 VAC per station 2.1-4

Architectural Requirements

- 2.2-3.1.3.4(1) Public waiting area
- (b) access to drinking water
- (c) telephones

- (a) toilet facilities

- 2.2-3.1.3.5 Communications center
- (1) directly accessible* to nurse station or part of nurse station & documentation area
- (2) radio, telephone & intercommunication systems
- (3) EMS base station
 - check if not included in project
 - designed to reduce noise, distractions & interruptions during radio transmissions

Building Systems Requirements

- Ventilation:
- Min. 12 air changes/hour Table 7-1
 - Negative pressure
 - Exhaust
- or**
- Recirculation through HEPA filters
-
- Ventilation:
- Min. 10 air changes per hour Table 7.1
 - Exhaust

TREATMENT ROOM OR AREA

- (1)
- (b) Examination/treatment rooms used for pelvic exams allow for foot of exam table to face away from door
- (2) Single-bed treatment room
- (b) space for medical equipment
- view panel designed for patient visual privacy adjacent* to and/or in door
- Space Requirements:
- 2.1-3.2.2.1(1) New Construction:
 - min. clear floor area 120 sf with min. clear dimension of 10'-0"
 - or**
 - Renovations:
 - min. clear floor area 100 sf
- (2)
- (a) room size permits min. clearance of 3'-0" at each side & at foot of exam table
- (b) room arrangement permits placement of exam table, recliner, or chair at an angle, closer to one wall than another, or against wall to accommodate type of patient being served

- Ventilation:
- Min. 6 air changes per hour Table 7.1
-
- Power:
- Min. 8 receptacles in room Table 2.1-1
 - Min. 4 receptacles convenient to head of stretcher
 - Include receptacles on emergency power NFPA 99

- 2.1-3.2.2.2 Room Features:
- (1) examination light
- (2) storage for supplies
- (3) accommodations for written or electronic documentation
- (4) space for visitor's chair
- (5) handwashing station

- Nurse Call System:
- Patient station Table 2.1-4
 - Emergency staff assistance station
 - Code call station

- Medical Gases:
- 1 OX, 1 VAC, 1 MA

Architectural Requirements

- 2.2-3.1.3.6(3) Multiple-bed treatment rooms
 check if not included in project
- 2.1-3.2.3.1 Space Requirements:
 - (1) patient bays or cubicles with min. clear floor area 80 sf per patient care station
 - (2) min. clearance 5'-0" between sides of adjacent patient beds
 - (a) min. clearance 4'-0" between sides of patient beds & adjacent walls
- 2.1-3.2.2.2 Room Features:
 - (1) examination light
 - (2) storage for supplies
 - (3) accommodations for written or electronic documentation
 - (4) space for visitor's chair
 - (5) handwashing station
 for each 4 patient care stations
- 2.2-3.1.3.6(3)
 - (a) adjoining bays separated by curtains
 - (4) Pediatric Facilities:
 check if not included in project
 - (b) pediatric treatment rooms
 - located adjacent* to family waiting area & toilet room
 - min. clear floor area 120 sf
 - (c) pediatric trauma rooms
 - (d) handwashing station
 vacuum, oxygen & air outlets
 physiological monitoring equipment
 space for code cart adjacent* to treatment rooms
 PACS image-viewing station

Building Systems Requirements

- Ventilation:
 - Min. 6 air changes/hour Table 7.1
- Power:
 - Min. 4 receptacles convenient to head of each stretcher Table 2.1-1
 - Include receptacles on emergency power for each stretcher NFPA 99
- Nurse Call System:
 - Patient station Table 2.1-2
 - Emergency staff assistance station
 - Code call station
- Medical Gases:
 - 1 OX, 1 VAC, 1 MA for each patient Table 2.1-4
- Ventilation:
 - Min. 6 air changes/hour Table 7.1
- Power:
 - Min. 4 receptacles convenient to head of each stretcher Table 2.1-1
 - Include receptacles on emergency power for each stretcher NFPA 99
- Nurse Call System:
 - Patient station Table 2.1-2
 - Emergency staff assistance station
 - Code call station
- Medical Gases:
 - 1 OX, 1 VAC, 1 MA for each patient Table 2.1-4
- Ventilation:
 - Positive pressure to all adjoining spaces 4/7.4.1
 - Airflow unidirectional, downwards & average velocity of diffusers 25-35 CFM/ft²
 - Diffusers concentrated to provide airflow pattern over patient & surgical team
 - Area of primary supply diffuser array extends min. 12" beyond footprint of surgical table on each side
 - No more than 30% of primary supply diffuser array area used for ceiling mounted equipment

Architectural Requirements

Building Systems Requirements

- (e) Discrete Pediatric Emergency Service:
(complete the relevant section above for each listed space)
 check if not included in project
 - triage, registration & discharge areas
 - waiting area
 - playroom or play area
 - pediatric treatment rooms
 - at least 1 airborne infection isolation room
 - at least 1 treatment room for pelvic examinations
 - documentation area
 - storage for supplies & medication

2.2-3.1.3.6

- (5) Treatment room for bariatric patients
- (b) min. clear floor area 200 sf
- min. clear dimension 12'-0"
- (d) min. clearance 5'-0" on both sides & at foot of treatment table or bed
- (e) accommodations for patient lift & transport either by an overhead lifting system or by portable lifting assist
- (f) all plumbing fixtures, grab bars & casework floor-mounted and/or designed to accommodate maximum patient weight

- At least 2 low sidewall return or exhaust grilles on opposite corners or as far apart as possible, with bottom of these grilles installed approximately 8" above floor 4/6.1.1
- Space ventilation & pressure relationship requirements of Table 7.1 be maintained in event of loss of normal electrical power
- Min. 15 air changes/hour
- No recirculating room units Table 7.1
- Power:
- 16 receptacles convenient to head of each stretcher Table 2.1-2
- Include receptacles on emergency power NFPA 99
- Nurse Call System:
- Emergency staff assistance station Table 2.1-2
- Code call station
- Medical Gases:
- 2 OX, 3 VAC, 1 MA per patient position Table 2.1-4

- Ventilation:
- Min. 6 air changes per hour Table 7.1
- Power:
- Min. 8 receptacles in room Table 2.1-1
- Min. 4 receptacles convenient to head of stretcher
- Include receptacles on emergency power NFPA 99
- Nurse Call System:
- Patient station Table 2.1-4
- Emergency staff assistance station
- Code call station

Architectural Requirements

Building Systems Requirements

- 2.2-2.16.9.1 Door Opening to Bariatric Treatment Room:
 - ___ min. clear width 54 inches
 - ___ clear height 83.5 inches

- 2.2-3.1.3.6
 - (6) ___ Trauma/resuscitation room
 - (a) ___ single-bed trauma/resuscitation room
 - check if not included in project
 - (b) ___ min. clear floor area 250 sf
 - ___ min. clearance 5'-0" around all sides of stretcher
 - ___ multiple-patient trauma/resuscitation room
 - check if not included in project
 - ___ min. clear floor area for each patient care station defined by privacy curtains (bay) 200 sf
 - ___ min. clearance 5'-0" around all sides of stretcher
 - (c) Equipment:
 - ___ cabinets
 - ___ emergency supply shelves
 - ___ PACS & at least one X-ray film illuminator
 - ___ examination lights
 - ___ documentation area
 - ___ patient physiologic monitoring equipment
 - ___ storage for immediate access to personal protective equipment

- 2.1-7.2.3.1(6) ___ monolithic floors with integral covered 6" high wall base

- 2.1-7.2.3.3(4) Ceiling in Trauma Rooms:
 - (a) ___ monolithic construction
 - ___ no cracks or perforations
 - ___ ceiling finishes scrubbable
 - ___ gasketed access openings
 - (b) ___
 - (c) ___
 - (d) ___ hand scrub facilities for trauma rooms

- 2.1-3.3.2 ___ hand scrub station consisting of 2 scrub positions permitted to serve 2 trauma rooms if located next to the entrance of each trauma room

- 2.1-3.3.3 ___ placement of scrub station does not restrict minimum required corridor width

- Ventilation:
 - ___ Positive pressure to all adjoining spaces 4/7.4.1
 - ___ Airflow unidirectional, downwards & average velocity of diffusers 25-35 CFM/ft²
 - ___ Diffusers concentrated to provide airflow pattern over patient & surgical team
 - ___ Area of primary supply diffuser array extends min. 12" beyond footprint of surgical table on each side
 - ___ No more than 30% of primary supply diffuser array area used for ceiling mounted equipment
 - ___ At least 2 low sidewall return or exhaust grilles on opposite corners or as far apart as possible, with bottom of these grilles installed approximately 8" above floor
 - ___ Space ventilation & pressure relationship requirements of Table 7.1 be maintained in event of loss of normal electrical power 4/6.1.1
 - ___ Min. 15 air changes/hour Table 7.1
 - ___ No recirculating room units

- Power: Table 2.1-2
 - ___ 16 receptacles convenient to head of each stretcher
 - ___ Include receptacles on emergency power NFPA 99

- Nurse Call System: Table 2.1-2
 - ___ Emergency staff assistance station
 - ___ Code call station

- Medical Gases: Table 2.1-4
 - ___ 2 OX, 3 VAC, 1 MA per patient position

Architectural Requirements

Building Systems Requirements

2.2-3.1.3.6(6) (e) doorways leading from ambulance entrance to trauma/ resuscitation room min. clear width 72 inches & min. height 83.5 inches

(7) Access to radiology & laboratory services

2.2-3.1.3.6

(8) (a) Decontamination room
 outside entry door located no less than 10'-0" from closest other entrance
 internal door opens into ED corridor
 internal door swings into room & lockable against ingress from corridor

(b) min. clear floor area 80 sf
 (c) Special Architectural Details:
 all smooth, nonporous, scrubbable, non absorptive, non perforated surfaces
 floor self-coving to height of 6 inches

(d) Special Plumbing Requirements:
 room equipped with 2 hand-held shower heads with temperature controls
 floor drain
 dedicated holding tank
 fixtures acid resistant
 portable or hard-piped oxygen
 portable suction

2.2-3.1.3.6

(10) Fast-track area
 check if not included in project

(a) examination/treatment areas
 min. clear floor area 100 sf
 handwashing stations
 examination lights

(c) at least one examination/treatment room designated for pelvic examinations

Ventilation:
 Min. 12 air changes per hour Table 7.1
 negative pressure
 exhaust
 no recirculating room units

Ventilation:
 Min. 6 air changes/hour Table 7.1
 Power:
 Min. 8 receptacles in room Table 2.1-3
 Min. 4 receptacles convenient to head of stretcher Table 2.1-4
 Nurse Call System:
 Patient station
 Emergency staff assistance station
 Code call station
 Medical Gases:
 1 OX, 1 VAC, 1 MA for each patient Table 2.1-4

Architectural Requirements

- (b) separate procedure room
 - check if not included in project
 - min. clear floor area 120 sf
 - handwashing stations
 - vacuum, oxygen & medical air outlets
 - examination lights

- (d) space for physician/nurse work station
- (e) storage areas for supplies & medication
- 2.2-3.1.3.7 patient toilet room
 - min. 1 patient toilet room per 6 exam/treatment rooms or fewer & for each fraction thereof
 - handwashing station

SPECIAL PATIENT CARE AREAS

- 2.2-3.1.4 Airborne infection isolation (AII) room
- 2.2-3.1.4.2 AII room visible from nurse station
- (3) AII room visible from nurse station

- 2.1-7.2.3.1(6) monolithic floors with integral covered 6" high wall base

- 2.1-2.4.2.4(1) self-closing devices on all room exit doors
- (b) self-closing devices on all room exit doors
- (c) doors has edge seals

Building Systems Requirements

- Ventilation:
 - Min. 6 air changes/hour Table 7.1
- Power:
 - Min. 8 receptacles in room Table 2.1-3
 - Min. 4 receptacles convenient to head of stretcher Table 2.1-4
- Nurse Call System:
 - Patient station
 - Emergency staff assistance station
 - Code call station
- Medical Gases:
 - 1 OX, 1 VAC, 1 MA for each patient Table 2.1-4

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

- Ventilation:
 - 12 air changes per hour Table 7.1
 - Exhaust
 - Negative pressure
 - No recirculating room units
 - Space ventilation & pressure relationship maintained in event of loss of normal electrical power 4/6.1.1
 - Exhaust air from AII rooms discharged directly to outdoors 4/7.2.1
 - Exhaust grilles or registers located directly above patient bed on ceiling or on wall near head of bed
 - Permanent device monitoring differential air pressure between AII room & corridor

Architectural Requirements

- 2.2-3.1.4.3 Secure holding room
 check if not included in project
- (1) location of secure holding room facilitates staff observation & monitoring of patients
- (2) min. clear floor area 60 sf
 min. wall length 7'-0"
 max. wall length 11'-0"
- (3) room designed to prevent injury to patients
- (a) all finishes, light fixtures, vents & diffusers & sprinklers tamper resistant
- (b) no electrical outlets, medical gas outlets, or similar devices
- (c) no sharp corners, edges, or protrusions
 walls free of objects or accessories
- (d) room door swings out
 door hardware on exterior side only
 min. door width 44 inches
- (e) small impact-resistant view panel or window in door for discreet staff observation of patient

Building Systems Requirements

Ventilation:
 Min. 6 air changes per hour Table 7.1

2.2-3.1.6 **SUPPORT AREAS FOR EMERGENCY DEPARTMENT**

- 2.2-3.1.6.1 Administrative center or nurse station
- (2) space for medication storage
- (3) decentralized nurse stations near clusters of treatment rooms
 check if not included in project
- 2.1-2.6.1.1
- (1) space for counters
- (2) at least one handwashing station located in, next to, or directly accessible*
- 2.2-3.1.6.2 Security station
 located near emergency entrances
 located near triage/reception area
 means of observing public waiting areas & ED entrances, including pedestrian & ambulance entrances
- 2.2-3.1.6.8 Provisions for disposal of solid & liquid waste
 clinical sink with bedpan washer in soiled workroom
- 2.2-3.1.6.9 Clean supply room
- 2.1-2.6.9.2 room used only for storage & holding as part of system for distribution of clean & sterile supplies
- Ventilation:
 4 air changes per hour Table 7.1
 Positive pressure
- 2.1-2.6.10 Soiled workroom or soiled holding room

Architectural Requirements

- 2.1-2.6.10.1 (1) soiled workroom room
- (2) handwashing station
- (3) flushing-rim clinical service sink with bedpan washer
- (4) work counter
- (4) space for separate covered containers

or

- 2.1-2.6.10.2 (1) soiled holding room
- (a) handwashing station or hand sanitation station
- (b) space for separate covered containers

- 2.2-3.1.6.11 (1) Wheelchair & stretcher storage for arriving patients
 - located out of traffic with access to emergency entrances

- 2.1-2.6.11.4 (1) Emergency equipment storage
 - at least one emergency equipment storage location
 - (2) under visual observation of staff
 - (3) storage locations in corridors do not infringe on min. required corridor width

- 2.2-3.1.6.12 Environmental services room
 - directly accessible* from ED

- 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

Building Systems Requirements

- Ventilation:
- 10 air changes per hour Table 7.1
 - Exhaust
 - Negative pressure
- Nurse Call System:
- Duty station

- Ventilation:
- 10 air changes per hour Table 7.1
 - Exhaust
 - Negative pressure

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

SUPPORT AREAS FOR EMERGENCY DEPARTMENT STAFF

- 2.2-3.1.7.1 Staff lounge, lockers & toilets
 - immediately accessible* to ED
- 2.2-3.1.7.2 Staff storage facilities
- 2.1-2.7.3.1 securable closets or cabinet compartments for personal articles of staff
 - located in or near nurse station
- 2.1-2.7.3.2 coat storage
 - check if not included in project:
 - storage of coats in closets or cabinets on each floor or in central staff locker area

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 trauma 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
 (3) ___ min. clear width 34.5"
 ___ Doors do not swing into corridors (except doors to non-occupiable spaces & doors with emergency breakaway hardware)
 (4)
 (b) ___ Lever hardware
 (5) ___ Doors for patient toilet facilities

(a) ___ 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
 ___ sliding door

(b) ___ 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:
 (c) ___ 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) ___ Standard grab bars anchored to sustain concentrated load of 250 lbs.

2.2-2.16.2.7 ___ Bariatric grab bars
 (2) ___ anchored to sustain concentrated load of 1000 lbs.

2.1-7.2.2.9(3) ___ length of rear wall grab bars 44"

- 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
- 2.1-7.2.2.12 **NOISE CONTROL:**
 (1) ___ Recreation rooms, exercise rooms, equipment rooms & similar spaces with potential impact noises are not located directly over trauma rooms
 (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
 (b) ___ 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:
 (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 AII Room, Decontamination Room & Waiting Area:**
 ___ 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
- 2.1-8.2.1.1 Acoustic Considerations:
 - (5) ___ Equipment location or acoustic provisions limit noise associated with outdoor mechanical equipment to 65 dBA at building façade
- 2.1-8.2.1.2 Ventilation & Space-Conditioning:
 - (1) ___ All rooms & areas used for patient care have provisions for ventilation
 - (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 Exhaust Systems:
 - (1) ___ 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
 - (a) ___ 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 emerg. 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
- 2.1-8.3.4 **LIGHTING**
 - (3) ___ Exam/Treatment/Trauma Rooms:
 - ___ portable or fixed exam light
- 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 trauma rooms or electric closets
 - check if not included in project
 - special provisions to protect space below from leakage & condensation
 - (2) Floor Drains:
 - (a) no floor drains in trauma rooms
 - (5) Plaster Traps:
 - (a) sink is used for disposal of plaster of Paris
 - check if not included in project
 - plaster trap provided

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
 - (2) basin min. 144 square inches
 - min. dimension 9 inches
 - (3) made of porcelain, stainless steel, or solid-surface materials
 - (5) 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

- 2.1-8.4.3.4 Ice-Making Equipment:
- copper tubing provided for supply connections

- 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

- 2.1-8.4.3.6 Scrub Sinks:
- (1) freestanding scrub sinks trimmed with foot, knee, or electronic sensor controls

- 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