Housekeeping/Laundry/Maintenance

(C) maintain an effective pest control program so that the facility is free of pests and rodents

(f) Clean utility room. A clean utility room must be provided and must contain a sink with hot and cold water. It must be part of a system for storage and distribution of clean and sterile supply materials and equipment.

(g) Soiled utility room. A soiled utility room must be provided and contain a flushing fixture and a sink with hot and cold water. It must be part of a system for collection and cleaning or disposal of soiled utensils or materials.

(h) Soiled linen room. Soiled linen rooms must be provided as needed commensurate with the type of laundry system used. In relation to adjacent areas, a negative air pressure must be provided with air exhausted through ducts to the exterior. Air must be exhausted continually whenever there are soiled linens in the room. A soiled linen room may be combined with a soiled utility room.

(i) Clean linen storage. Clean linen storage must be provided, conveniently located to resident bedroom areas.

(n) Laundry.

(1) Laundry facilities must be located in areas separate from resident rooms. The laundry must be designed, constructed, and equipped and appropriate procedures must be utilized to assure that laundry is handled, cleaned, and stored in a sanitary manner.

(2) Laundry for general linen and clothing must be arranged so as to separate soiled and clean operations as they relate to traffic, handling, and air currents. Suitable exhaust and ventilation must be provided to prevent air flow from soiled to clean areas.

(3) Floors, walls, and ceilings must be nonabsorbing and easily cleanable.

(4) Soiled linen must be stored and/or transported in closed or covered containers. Soiled linen storage or holding rooms must have a negative air pressure in relation to adjacent areas with air exhausted through ducts to the exterior.

(5) Laundry areas must have air supply and ventilation to minimize mildew and odors. Doors must not remain open, for sanitation and safety reasons.

(6) Room size, and number and type of appliances must provide efficient, sanitary, and timely laundry processing to meet the needs of the facility.

(7) The laundry, if located in the facility, must meet Life Safety Code requirements for separation and construction for hazardous areas.
(o) Resident-use laundry. This service, if provided, must be limited to not more than one residential type washer and dryer per laundry room. This room must be classified as a hazardous area according to the Life Safety Code.

(r) Janitor closets. In addition to the janitors’ closet called for in certain departments, other janitors' closets must be provided throughout the facility to maintain a clean and sanitary environment. All janitor closets must have a negative air pressure in relation to adjacent areas with air exhausted through ducts to the exterior.

RULE §19.323 Housekeeping Services

(a) The facility must provide sufficient housekeeping and maintenance personnel, equipment, and supplies to maintain the interior, exterior, and grounds of the facility in a safe, clean, orderly, and attractive manner. In a nursing facility, an employee must be designated as responsible for housekeeping services.

(b) Occupied resident rooms must be cleaned and put in order at least daily.

(c) Storage areas must be kept safe and free from accumulations of extraneous materials such as refuse, discarded furniture, and newspapers. Combustibles, such as cleaning rags and compounds, must be kept in closed metal containers and labeled.

(d) Attics, mechanical rooms, boiler rooms, and other similar areas must not be used for storage purposes.

(e) All bleaches, detergents, disinfectants, insecticides, and other poisonous substances must be kept in a safe place accessible only to employees. They must not be kept in containers previously containing food or medicine. Containers must be labeled.

RULE §19.324 Pest Control

(a) An effective, safe, and continuing pest control system against insects, rodents, and vermin must be in operation in the facility. Pest control services must be provided by nursing facility personnel or by contract with a licensed pest control company. Care must be taken to use the least toxic and least flammable effective insecticides and rodenticides. These compounds must be stored in nonfood preparation and storage areas. Poisons must be under lock.

(b) The facility must protect against harborages and entrances for insects, rodents, and vermin. Outside doors must be self-closing to control entry of pests.

(c) Garbage and trash must be stored in enclosed containers, protected against leakage, contact with disease carriers, and access to animals. It must be stored in areas separate from those used for the preparation and storage of food and must be removed from the premises in conformity with state and local practices. Garbage and trash containers must be maintained free of accumulations and coatings of garbage. Garbage storage areas must be kept clean and in a state of good repair.

RULE §19.325 Linen

(a) The nursing facility must have available at all times a quantity of linen essential for the proper care and comfort of residents. Linens must be handled, stored, and processed so as to control the spread of infection.
(b) Linen will be maintained in good repair.

(c) Linen must be washed, dried, stored, and transported in a manner which will produce hygienically clean linen. The washing process must have a mechanism for soil removal and bacteria kill.

(d) Clean linen must be stored in a clean linen area easily accessible to the personnel.

(e) Clean towels and washcloths must be provided to each resident as needed or desired. Towels and washcloths must be stored in a sanitary manner between uses by the resident and must not be used by more than one resident between launderings.

(f) Soiled linen and clothing must be stored separately from clean linen and clothing. Soiled linen and clothing must be stored in well ventilated areas, and must not be permitted to accumulate in the facility. Soiled linen and clothing must be transported in accordance with procedures consistent with universal precautions. Bags or containers must not be reused to transport or store clean items.

(g) Soiled linen must not be sorted, laundered, rinsed, or stored in bathrooms, resident rooms, corridors, kitchens, or food storage areas, except soiled linen and clothing which is not contaminated with blood may be rinsed in a resident’s bathroom water closet.

(h) Resident’s personal clothing that is not soiled with body wastes may be stored in a closed container in the resident’s closet. The clothing must be collected and cleaned at least weekly.

(i) Facility staff must wash their hands both after handling soiled linen and before handling clean linen.

(8) Other environmental conditions. The facility must provide a safe, functional, sanitary, and comfortable environment for residents, staff, and the public. The facility must:

(D) maintain an effective pest control program so that the facility is free of pests and rodents.

New Construction: Housekeeping (l) Laundry and linen services.

(1) On-site processing must be as follows:

(A) Because of the high incidence of fires in laundries, it is highly recommended that the laundry be in a separate building 20 feet or more from the main building. If the laundry is located within the main building it must be separated by minimum one-hour fire construction to structure above, and sprinklered, and must be located in a remote area away from resident sleeping areas. Access doors must be from the exterior or interior nonresident use area such as a service corridor (not required exit) which is separated from the resident area.

(B) If linen is to be processed on the site, the following must be provided:

(i) A soiled linen receiving, holding, and sorting room with a rinse sink. This area must have a floor drain and forced exhaust to the exterior which must operate at all times there is soiled linen being held in the area.
(ii) A laundry processing room with equipment which can process seven days needs within a regularly scheduled work week. Hand-washing facilities must be provided. The washer area must have

(I) a floor drain;

(II) storage for laundry supplies;

(III) a clean linen inspection and mending room or area and a folding area;

(IV) a clean linen storage, issuing, or holding room or area;

(V) a janitors’ closet containing a floor receptor or service sink and storage space for housekeeping equipment and supplies; and

(VI) sanitizing (washing) facilities and a storage area for carts.

(C) Soiled and clean operations must be planned to maintain sanitary flow of functions as well as air flow. If carts containing soiled linens from resident rooms are not taken directly to the laundry area, intermediate holding rooms must be provided and located convenient to resident bedroom areas.

(D) Laundry areas must have adequate air supply and ventilation for staff comfort without having to rely on opening a door that is part of the fire wall separation.

(E) Provisions must be made to exhaust heat from dryers and to separate dryer make-up air from the habitable work areas of the laundry.

(2) For off-site linen processing, the following must be provided on the premises:

(A) a soiled linen holding room (provided with adequate forced exhaust ducted to the exterior);

(B) clean linen receiving, holding, inspection, sorting or folding, and storage room(s); and

(C) sanitizing facilities and storage area for carts.

(3) Resident-use laundry, if provided, must be limited to not more than one residential type washer and dryer per laundry room. This room must be classified as a hazardous area as in accordance with the Life Safety Code.

(n) Janitors’ closet. In addition to the janitors’ closet called for in certain departments, a sufficient number of janitors’ closets must be provided throughout the facility to maintain a clean and sanitary environment. These must contain a floor receptor or service sink and storage space for housekeeping equipment and supplies.

Corridors, Floors, and Signage

(D) equip corridors with firmly secured handrails on each side on all walls 18 inches or greater. These rails must be substantially anchored to withstand downward force and must be mounted 33 to 36 inches from the floor.

RULE §19.312 Means of Egress
(a) Corridors and other means of egress must be kept clear of obstructions and must not be used for any purpose which would interfere with its use as an exit, such as for storage, vending machines, seating, or similar purposes. The corridor width must be maintained at all times.

(b) Ways of egress and exit signs must be illuminated at all times.

(c) In addition to the required normal and emergency illumination, the facility must keep on hand and readily available to night staff no less than one working flashlight per nurses station.

(d) Doors within the means of egress must not be equipped with a latch or lock which requires the use of a key or tool to open from the inside of the building. A latch or other fastening device on a door must be provided with a knob, handle, panic bar, or other simple type of releasing device with an obvious method of operation, even in darkness.

(e) A hold-open device must be installed on each exit door.

**RULE §19.313 Interior Finishes--Walls, Ceilings, and Floors**

(a) Interior finishes of walls and ceilings must have limited flame-spread rating as required by the Life Safety Code. Where new interior finishes of walls, ceilings, or floors are applied to existing facilities, the new finishes must meet the requirements for flame-spread ratings for new construction. Fire retardant paints or solutions must not be applied to new materials in an effort to meet flame-spread requirements for new construction. This description of interior finishes does not apply to furniture or accessories.

(b) Floors of the facility must be level, smooth, and free of any irregularities which might affect safety.

(c) Walls and ceilings not specifically described elsewhere in this chapter must be cleanable, maintained attractively, and in good repair.

(d) Walls and floors must be kept free of cracks. The joint between the walls and floors is to be maintained so as to be free of spaces which might harbor insects, rodents, or vermin.

(3) All employees must be familiar with the disaster plan and must be instructed in the location and use of the facility’s alarm systems, fire-fighting equipment, and procedures. The facility must post fire and explosion evacuation routes prominently throughout the facility. The facility must have a fire safety plan within the disaster plan. The fire safety plan must be rehearsed quarterly on each shift with at least one rehearsal conducted each month. A comprehensive fire drill report form must be completed for each rehearsal of the fire safety plan.

(4) In smaller, simple, one story buildings where all exits are obvious, the Texas Department of Human Services (DHS) may not require the posting of evacuation routes.

(6) Emergency telephone numbers must be clearly posted on or near each phone. Emergency telephone numbers must include the local fire department, ambulance, and police.

(n) Smoke doors, fire doors, and doors to hazardous rooms must be kept closed and must not be propped or wedged open. Only approved devices such as alarm-activated electromagnetic hold-open devices may be used to hold these doors open, except doors to rooms classified as severe hazard.
(3) Exit doors and ways of egress must be maintained clear and free for use at all times. Furnishings, equipment, carts, and other obstacles must not be left to block egress at any time.

(4) Steps in interior ways of egress are prohibited. If changes of elevation are necessary within ways of egress, approved ramps with maximum slope of 1:12 (one unit of rise to 12 units of run) must be used.

(B) Other environmental conditions. The facility must provide a safe, functional, sanitary, and comfortable environment for residents, staff, and the public. The facility must:

(C) equip corridors with firmly secured handrails on each side; and

**Lighting, Noise, Temperature (HVAC), and Odors**

**RULE §19.303 Emergency Power**

(a) An emergency electrical power system must supply power adequate at least for lighting all entrances and exits, equipment to maintain the fire detection, alarm, and extinguishing systems, and life-support systems if the normal electrical supply is interrupted. Emergency electrical services by generator or battery must be provided to comply with the provisions of the National Fire Protection Association (NFPA) 70. Battery systems must be capable of sustaining power for a duration of at least one and one-half hours.

(1) Life safety systems must include:

(A) illumination for means of egress, nurse stations, medication rooms, dining and living rooms, and areas immediately outside of exit doors;

(B) exit signs and exit directional signs required by the Life Safety Code;

(C) alarm systems, including fire alarms activated by manual stations, water flow alarm devices of sprinkler systems, fire and smoke detecting systems, and alarms required for nonflammable medical gas systems if installed (where hospital-type functions are included in the nursing home facility, applicable standards apply);

(D) task illumination and selected receptacles at any required or provided generator set location;

(E) selected duplex receptacles, including receptacles in resident corridors, each resident-bed location where life-support electrical appliances are utilized, nurse stations, medication rooms, including biological refrigerator, if a generator is required or provided;

(F) nurse calling systems;

(G) resident room night lights where required;

(H) elevator cab lighting, control, and communication systems;

(I) all facility telephone equipment; and

(J) those paging or speaker systems that are necessary for the communication plan for an emergency. Radio transceivers that are necessary for emergency use must be capable of operating for at least one hour upon total failure of both normal and emergency power.
(2) Where critical systems are provided, there must be a delayed automatic connection.

(3) The emergency lighting must be automatically in operation within 10 seconds after the interruption of normal electric power supply. Emergency service to receptacles and equipment may be a delayed automatic connection. Receptacles connected to emergency power must be of a uniform and distinctive color. Stored fuel capacity must be sufficient for not less than four-hour operation of required generator.

(4) Emergency motor generator, if required or provided, must meet the following standards:

(A) any emergency generator must be installed in accordance with NFPA 37 and NFPA 99;

(B) generators located on the exterior of the building must be provided with a noncombustible protective cover or be protected as per manufacturer’s recommendations; and

(C) motor generators fueled by public utility natural gas must have the capacity to be manually or automatically switched to an alternate fuel source, as specified in NFPA 70.

(5) Wiring for the emergency system must be in accordance with NFPA 70.

(b) When life support systems are used, the facility must provide emergency electrical power with an emergency generator (as defined in NFPA 99, Health Care Facilities) located on the premises.

(1) The facility must:

(A) establish procedures to ensure that water is available to essential areas when there is a loss of normal water supply;

(B) have adequate outside ventilation by means of windows, mechanical ventilation, or a combination of the two;

(7) If deodorant is used for air-freshening purposes, the following procedures must apply:

(A) deodorants or air fresheners are permitted provided the dispensing device is located where it is inaccessible to residents and patients;

(B) these products are not used to cover odors resulting from poor housekeeping practices or unsanitary conditions;

(C) these products are not used in excess;

(D) there is no contra-indication on the label of the product indicating that the product should not be used in the presence of aged or ill persons; and

(E) devices, such as ozone generators, ultra-violet generators, and smoke eliminators, must be approved by the Texas Department of Human Services.

**RULE §19.314 Fire Alarms, Detection Systems, and Sprinkler Systems**

Fire alarms, detection systems, and sprinkler systems must be as required by the Life Safety Code, the National Fire Protection Association (NFPA) 72, and NFPA 13.
Components must be compatible and laboratory listed for the use intended.

Wiring and circuitry for alarm systems must meet the applicable requirements for NFPA standards, including NFPA 70, for these systems.

Fire alarm systems must be installed, maintained, and repaired by an agent having a current certificate of registration with the State Fire Marshal’s Office of the Texas Commission on Fire Protection, in accordance with state law. A fire alarm installation certificate must be provided as required by the Office of the State Fire Marshal.

Smoke detector sensitivity must be checked within one year after installation and every alternate year thereafter in accordance with NFPA 72. Documentation, including as-built installation drawings, operation and maintenance manuals, and a written sequence of operation for systems installed after July 1, 2000, must be available for examination by the Texas Department of Human Services (DHS).

The fire alarm system must be designed so that whenever the general alarm is sounded by activation of any device (such as manual pull, smoke sensor, sprinkler, or kitchen range hood extinguisher) the following will occur automatically:

(A) smoke and fire doors which are held open by an approved device must be released to close;

(B) air handlers (air conditioning/heating distribution fans) serving three or more rooms or any means of egress must shut down immediately;

(C) smoke dampers must close; and

(D) the alarm-initiating location must be clearly indicated on the fire alarm control panel(s) and all auxiliary panels.

Consistent fire alarm bells or horns must be located throughout the building for audible coverage. Flashing alarm lights (visual alarms) must be installed to be visible in corridors and public areas including dining rooms and living rooms.

A master control panel which indicates location of alarm and trouble conditions (by zone or device) must be visible at the main nurse station. All control panels must be listed in accordance with the provisions of the Underwriters Laboratories, Inc. (UL) for intended use, such as manual, automatic, and water-flow activation. Alarm and trouble zoning must be by smoke compartments and by floors in multi-story facilities.

Remote annunciator panels, indicating location of alarm initiation by zone or device and common trouble signals, must be located at auxiliary or secondary nurses stations on each floor or major subdivision of single story facilities and indicate the alarm condition of adjacent zones and the alarm conditions at all other nurse stations.

Manual pull stations must be provided at all exits, living rooms, dining rooms, and at or near the nurse stations.

The NFPA 13 sprinkler system must be monitored for flow and tamper conditions by the fire alarm system.
(11) The kitchen range hood extinguisher must be interconnected with the fire alarm system. This interconnection may be a separate zone on the panel or combined with other initiating devices located in the same zone as the range hood is located.

(12) Partial sprinkler systems provided only for hazardous areas must be interconnected to the fire alarm system and comply with the Life Safety Code. Each partial system must have a valve with a supervisory switch to sound a supervisory signal, water-flow switch to activate the fire alarm, and an end-of-line test drain. **RULE §19.315 Portable Fire Extinguishers**

Portable fire extinguishers must be provided and maintained to comply with the provisions of the National Fire Protection Association (NFPA) 10. This includes type of extinguishers (A, B, or C), location and spacing, mounting heights, monthly inspections by staff, yearly inspections by a licensed agent, any necessary servicing, and hydrostatic testing as recommended by the manufacturer.

(1) Extinguishers in resident corridors must be spaced so that travel distance is not more than 75 feet. The minimum size of extinguishers must be either 2 1/2 gallon for water type or five pound for ABC type.

(2) Extinguishers must be installed on supplied hangers or brackets or be mounted in cabinets approved by the Texas Department of Human Services (DHS).

(3) Extinguishers must be surface wall-mounted or recessed in cabinets where they are not subject to physical damage or dislodgement.

(4) Extinguishers having a gross weight not exceeding 40 pounds must be installed so that the top of the extinguisher is not more than five feet above the floor. Extinguishers with a gross weight greater than 40 pounds must be installed so the top of the extinguisher is not more than 3-1/2 feet above the floor. The clearance between the bottom of the extinguisher and the floor must not be less than four inches.

(5) Portable extinguishers provided in hazardous rooms must be located as close as possible to the exit door opening and on the latch (knob) side.

**RULE §19.316 Subdivision of Building Spaces--Smoke Barriers**

(a) Subdivision of building spaces must be as required by the Life Safety Code.

(b) The facility must maintain the integrity of smoke barrier walls, including those parts of walls in attics and other concealed spaces.

(c) The facility must maintain the integrity of smoke dampers in air ducts.

(d) Ducts with smoke dampers must have maintenance panels for inspection. The maintenance panels must be removable without tools. Means of access must also be provided in the ceiling or side wall to facilitate smoke damper inspection readily and without obstruction. Location of dampers must be identified on the wall or ceiling of the occupied area below.

**RULE §19.317 Elevators and Escalators**
Elevators must comply with the provisions of the Life Safety Code and American National Standard Institute Safety Code for Elevators and Escalators (ANSI/ASME A17.1). Elevators are required for buildings having residents’ facilities, such as bedrooms, dining, or recreation areas; or services, such as diagnostic or therapy, located on other than the main entrance floor. Passenger elevators and escalators must be inspected by a qualified agent at least every six months. Freight elevators must be inspected every 12 months.

**RULE §19.320 Lighting and Illumination**

Current recommendations of the Illumination Engineering Society of North America must be followed to achieve proper illumination characteristics and lighting levels throughout the facility. Minimum illumination must be tenfoot candles in resident rooms and 20 foot candles in corridors, nurses stations, dining rooms, lobbies, toilets, bathing facilities, laundries, stairways, and elevators. Illumination requirements for these areas apply to lighting throughout the space and should be measured at approximately 30 inches above the floor anywhere in the room. Minimum illumination for overbed reading lamps, medication preparation or storage areas, kitchens, and nurse’s station desks must be 50 foot candles. Illumination requirements for these areas apply to the task performed and should be measured on the task.


(a) The heating system must be capable of maintaining a temperature of not less than 71 degrees Fahrenheit at the resident level in all resident-use areas.

(1) Auxiliary heating devices permanently installed, such as heat strips in ducts, electric ceiling-mounted heating units, and electric baseboards, may be used to augment a central heating system as approved by the Texas Department of Human Services (DHS). See §19.705 of this title (relating to Environment).

(2) All gas heating systems must be checked annually for proper operation and safety by persons who are licensed or approved by the State of Texas to inspect such equipment. A record of this service must be maintained by the facility. Any unsatisfactory condition must be corrected promptly.

(b) The cooling system must be capable of maintaining a temperature suitable for the comfort of the residents in resident-use areas.

(c) Air flow must be directed or adjusted so that a resident is not in direct drafts that could be harmful to the health and comfort of the resident.

(d) Unvented heating units and portable heaters are prohibited.

(e) The facility must be well ventilated through the use of windows, mechanical ventilation, or a combination of both. Rooms and areas which do not have outside windows and which are used by residents or personnel must be provided with functioning mechanical ventilation to change the air on a basis commensurate with the room usage. Air systems must provide for the induction and mixing of at least 10% outside fresh air into the facility unless otherwise approved by DHS; that is, 100% continuous recirculation of interior air in most areas is not acceptable. When certain rooms or areas are dependent on a central air system for proper ventilation, including exhaust, that central air system fan must run continuously.
(f) Operable outside windows must be provided with insect screens. Outside doors must be self-closing to control entry of insects. All exterior doors must be effectively weather stripped.

(g) Heating and air conditioning systems must be provided with clean and effective air filters.

(h) Ducts and piping subject to surface condensation must be insulated to prevent condensation at least in areas which may affect sanitation or cause building deterioration.

(i) A comfortable temperature for residents when bathing must be provided.

(j) Heating, ventilating, and air conditioning systems must comply with the provisions of applicable National Fire Prevention Association (NFPA) standards. Ducts are to be of a Class A material (noncombustible). Combustion air for gas-fired equipment must be ducted from the exterior.

(k) Air flow must be designed to prevent cross contamination within any area where applicable, such as laundries and kitchens, as well as the system or facility as a whole.

(l) In relation to adjacent areas, a positive air pressure must be provided for clean utility rooms, clean linen rooms, and medication rooms. Conditioned supply air must be introduced into these rooms.

(m) In relation to adjacent areas, a negative air pressure must be provided for soiled utility rooms, soiled laundry rooms, bathrooms, toilets, and other odor-producing rooms. Air from these rooms must not be recirculated, but instead must be exhausted through ducts to the exterior by effective means.

(n) Facility temperature must be maintained for the comfort of residents.

**RULE §19.322 Plumbing**

(c) Sewage must be discharged into a state-approved sewerage system or the sewage must be collected, treated, and disposed of in accordance with applicable Texas Natural Resource Conservation Commission rules and regulations.

(d) The wastewater drainage and sewage system must assure that sanitation is maintained for residents. Wastewater or sewage must not be discharged on the surface of the ground. Traps must not be allowed to lose their seal. Appliances must have air gaps as required for connections to the sewerage system. Venting must assure a rapid flow of wastewater in the sewage system.

(g) Resident-use hot water must be reliably controlled, such as by thermostatic or mixing valves, to not exceed 110 degrees Fahrenheit and not less than 100 degrees Fahrenheit at each fixture.

(h) Hot water for other usages must be provided at the temperatures required for the appliance or fixture or for the operation involved, such as dishwashing and laundry.

(i) The supply quantity of hot water must be adequate for normal peak load usage. Facilities which continue to experience a shortage of hot water must remedy the situation by such means as adding storage tanks, adding or increasing the size of water heaters, or other approved means.

(j) Water heaters must be equipped with pressure temperature relief valves.
(o) Electrical extension cords must not be used on a permanent or semi-permanent basis as a substitute for approved wiring methods. Approved electrical receptacles must be provided in quantity and location for the normal use of appliances.

(p) All abandoned utilities such as electrical wiring, ducts, and pipes, must be removed from the facility when no longer usable.

(2) Emergency power.

(A) An emergency electrical power system must supply power adequate at least for lighting all entrances and exits; equipment to maintain the fire detection, alarm, and extinguishing systems; and life-support systems if the normal electrical supply is interrupted.

(B) When life support systems are used, the facility must provide emergency electrical power with an emergency generator (as defined in NFPA 99, Health Care Facilities) located on the premises.

(8) Other environmental conditions. The facility must provide a safe, functional, sanitary, and comfortable environment for residents, staff, and the public. The facility must:

(A) establish procedures to ensure that water is available to essential areas when there is a loss of normal water supply;

(B) have adequate outside ventilation by means of windows, mechanical ventilation, or a combination of the two;

Amenities

(p) Personal grooming area. Space and equipment must be provided for the hair care and grooming needs of the residents. Hair care and grooming service will be provided in resident bedrooms or in designated areas which are not in a way of egress.

Outdoor Area

RULE §19.310 Site and Grounds

(a) Site grades must provide for positive surface water drainage so that there will be no ponding or standing water at or near the building that would present a hazard to health or provide a breeding site or harborage for carriers of disease.

(b) Outdoor activity, recreational, and sitting spaces must be provided for residents as space permits. (c) Each facility must have parking spaces to satisfy the needs of residents, employees, staff, and visitors. Provisions must be made for handicapped parking and access into the building.

(d) Protection must be provided for resident safety from traffic or other site hazards by the use of appropriate methods, such as fences, hedges, retaining walls, railings, or other landscaping. This protection must not inhibit the free emergency egress to a safe distance away from the building.

(e) Auxiliary buildings located on the site within 20 feet of the main licensed structure and which contain hazardous operations or contents, such as laundries or storage buildings, must meet the same code requirements for safety as the main licensed structure.
(f) Other buildings on the site must meet the appropriate occupancy section or separation requirements of the Life Safety Code.

(g) All outside areas, grounds, and adjacent buildings on the site must be maintained in good condition and kept free of rubbish, garbage, and untended growth that may constitute a fire or health hazard.

(h) Enclosed exterior spaces, such as fenced areas, that are in a means of egress to a public way must meet the requirements of §19.2208(a)(6) of this title (relating to Standards for Certified Alzheimer’s Facilities).

**RULE §19.311 Fire Service and Access**

(a) The facility must be served by a paid or volunteer fire department.

(1) The fire department must provide written assurance to the licensing agency that the fire department can respond to an emergency at the facility within an appropriately prompt time for the travel conditions involved.

(2) The facility must have an annual inspection by the local fire marshal and maintain documentation of such an inspection at the facility.

(b) The facility must be served by an adequate water supply that is satisfactory and accessible for fire department use as determined by the fire department serving the facility and by the Texas Department of Human Services (DHS).

(c) There must be at least one approved, readily accessible fire hydrant located within 300 feet of the building. The hydrant must be on a minimum six-inch service line, or else there must be an approved equivalent, such as a storage tank. The hydrant, its location, and service line, or equivalent must be approved by the local fire department and DHS.

(d) The building must have suitable fire lanes for access as required by local fire authorities and DHS.

**New Construction: Facility-Wide**

(3) Heating, ventilating, and air-conditioning systems must be designed and installed in accordance with NFPA 90A and the Heating, Ventilating, and Air-Conditioning Guide of the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE), except as may be modified in this subchapter.

(4) Electrical and illumination systems must be designed and installed in accordance with NFPA 70 and the Lighting Handbook of the Illuminating Engineering Society (IES) of North America, except as may be modified in this subchapter.

(5) Accessibility for individuals with disabilities must be designed and installed in accordance with the following laws: the Americans with Disabilities Act of 1990 (Public Law 101-336; Title 42, United States Code, Chapter 126); Title 28, Code of Federal Regulations, Part 35; Texas Civil Statutes, Article 9102; and Title 16, Texas Administrative Code, Chapter 68. Plans for new construction, substantial renovations, modifications, and alterations must be submitted to the
Texas Department of Licensing and Regulation (Attn: Elimination of Architectural Barriers Program) for accessibility approval under Texas Civil Statutes, Article 9102.

(6) Every building and portion thereof must be capable of sustaining all dead and live loads in accordance with accepted engineering practices and standards.

(7) Each building must be classified as to building construction type for fire resistance rating purposes in accordance with NFPA 220 and the Life Safety Code.

(8) Building insulation materials, unless sealed on all sides and edges in an approved manner with noncombustible material, must have a flame-spread rating of 25 or less when tested in accordance with NFPA 255 and NFPA 258.

(9) All boilers not exempted by the Texas Health and Safety Code, §755.022, must be inspected and certified for operation by the Texas Department of Licensing and Regulation.

RULE §19.304 Space and Equipment

(a) The facility must:

(1) provide sufficient space and equipment in dining, health services, recreation, and program areas to enable staff to provide residents with needed services as required by these standards and as identified in each resident’s plan of care; and

(2) maintain all essential mechanical, electrical, and patient care equipment in safe operating condition.

(b) A wing or area which is separated from the rest of the facility by locked doors for the purpose of securing residents must meet the requirements of §19.2208(a)(6) and (c)(1)-(10) of this title (relating to Standards for Certified Alzheimer’s Facilities).

(c) If children are residents of the facility, the facility must provide:

(1) indoor and outdoor recreation areas designed to encourage exploration within the children’s capabilities; and

(2) pediatric equipment and supplies in appropriate size for the age and development level of the children. Pediatric emergency supplies and equipment must be readily available for use.

(4) In operations where there is a chance of cross-contamination, clean and soiled operations must be separated to lessen the chance of cross-contamination by facility employees, residents, and others. This separation must be in relation to traffic flow, air currents, air exhaust, water flow, vapors, and other conditions.

(5) An electric water cooler or water fountain must be accessible to residents. When new drinking fountains are provided, at least one must be installed to be accessible to persons in wheelchairs.

RULE §19.319 Provisions for Persons with Disabilities

New facilities and additions must meet the requirements of the Texas Department of Licensing and Regulation, Elimination of Architectural Barriers Section. Existing facilities must meet the
requirements of the Americans with Disabilities Act and must, at a minimum, comply with the following:

(1) The facility must provide and mark at least one parking space for persons with disabilities.

(2) The facility must provide wheelchair access into the building by use of ramps and curb breaks. Ramps must not slope more than 1:12 (one unit of rise to 12 units of run).

(3) Room identification signs or letters must be installed four feet six inches to five feet above finished floor and located on the corridor walls adjacent to the latch side of the door jamb. Letters or numbers on signs must be raised or recessed at least 1/32 inch minimum. Characters must be at least 5/8 inch in height and no higher than two inches.

(4) Grab bars at toilet and bathing units must be 1-1/4 inch to 1-1/2 inch in diameter.

(5) Toilet facilities must be available and of sufficient size to accommodate wheelchairs. There must be at least one public wheelchair-accessible restroom.

(6) Water closet seat height in toilet facilities for persons with disabilities must be 17 to 19 inches from floor.

(7) Mirrors and dispensers for persons with disabilities must be no higher than 40 inches above the floor.

(8) Drinking fountains or coolers must meet American National Standards Institute (ANSI) A117.1 (that is, up front spout and controls no more than 36 inches from floor maximum). Fountains existing at the time of this publication do not have to be altered.

(9) Public telephones, if provided, must meet ANSI A117.1. Mounting height must not exceed 48 inches to coin slot.

RULE §19.322 Plumbing

(a) If the municipality has a plumbing code, that code must be used as a basis for determining the correctness of plumbing installation. In the absence of a municipal code, a nationally recognized plumbing code must be used. assure a rapid flow of wastewater in the sewage system.

(e) The interior cold water supply system and piping must be so placed or so insulated as to prevent condensation drip in habitable areas and in storage areas.

(f) Backflow preventers or vacuum breakers must be installed with any water supply fixture where the outlet or attachments may be submerged.

RULE §19.332 Location and Site

(d) Exit doors from the building must not open directly onto a drive for vehicular traffic, but must be set back at least six feet from the edge of the drive (measured from the end of the building wall in the case of a recessed door) to prevent accidents due to lack of visual warning.

(e) Walks must be provided as required from all exits and must be of non-slip surfaces free of hazards. Walks must be at least 48 inches wide except as otherwise approved. Ramps should be
used in lieu of steps where possible for the handicapped and to facilitate bed or wheelchair removal
in an emergency.

(f) Outdoor activity, recreational, and sitting spaces must be provided and appropriately designed,
landscaped, and equipped. Some shaded and/or covered outside areas are needed. These areas
must be designed to accommodate residents in wheelchairs.

(g) Each facility must have parking space to satisfy the needs of residents, employees, staff, and
visitors. In the absence of a formal parking study, each facility must provide for a ratio of at least
one parking space for every four beds in the facility. This ratio may be reduced slightly in areas
convenient to public parking facilities. Space must be provided for emergency and delivery vehicles.
No parking space may block or inhibit egress from the outside exit doors. Parking spaces and drives
must be at least ten feet away from windows in bedrooms, dining, and living areas.

(h) Barriers must be provided for resident safety from traffic or other site hazards by the use of
appropriate methods such as fences, hedges, retaining walls, railings, or other landscaping. These
barriers must not inhibit the free emergency egress to a safe distance away from the building.

(i) Open or enclosed courts with resident rooms or living areas opening upon them must not be less
than 20 feet in the smallest dimension unless otherwise approved by DHS. Exceptions would be as
follows:

1. Nonparallel wings forming an acute angle may have a maximum of two windows each side less
   than 20 feet but not less than ten feet.

2. Windows may be separated by a distance equal to the depth of the court but not less than ten
   feet.

3. For unusual or unique site conditions, courts with resident rooms opening upon them on one
   side only must be not less than ten feet in the smallest dimension, provided that the opposite wing
does not contain a hazardous area, and the wall has no openings which could permit fire to reach
the resident room side.

(j) Auxiliary buildings located within 20 feet of the main building and which contain hazardous
areas such as laundry and storage buildings must meet the applicable Life Safety Code
requirements for separation and construction.

(k) Other buildings on the site must meet the appropriate occupancy section or separation
requirements of the Life Safety Code.

(l) Fire service and access must be as follows:

1. The facility must be served by a paid or volunteer fire department. The fire department must
   provide written assurance to DHS that the fire department can respond to an emergency at the
   facility within an appropriately prompt time for the travel conditions involved.

2. The facility must be served by an adequate water supply that is satisfactory and accessible for
   fire department use as determined by the fire department serving the facility and by DHS.

3. There must be at least one readily accessible fire hydrant located within 300 feet of the building.
The hydrant must be on a minimum six inch service line, or else there must be an approved
equivalent, such as a storage tank. The hydrant, its location, and service line, or equivalent must be as approved by the local fire department and DHS. (4) The building must have suitable all-weather fire lanes for access as required by local fire authorities and DHS. As a minimum, there must be access to two sides of the building by an all-weather lane at least ten feet wide. Fire lanes must have at least 14 feet in clearance width above grade (two feet each side of the ten-foot roadbed) and be kept free of obstructions at all times. All-weather access lanes must be no less than a properly constructed gravel lane.

**RULE §19.333 General Considerations**

(d) Exterior finishes. Unless otherwise approved by the Texas Department of Human Services (DHS), the exterior finish material of buildings classified (per the National Fire Protection Association (NFPA 220)) as fire resistive or protected noncombustible must be Class A in the Life Safety Code. All others must be Class A or B in the Life Safety Code. Items of trim may be of combustible material subject to approval by DHS. Roofing must be Underwriter Laboratories listed as Class A or B.

(e) Interior finishes.

(1) Interior finish of walls, ceilings, and floors must meet the Life Safety Code requirements for new construction.

(2) Documentation of finishes, including, but not limited to, copies of lab test reports and material labels is required.

(f) Corridor travel distance. Corridor travel from the nurse station to the farthest resident room must assure prompt service to the resident. The normal travel for nursing efficiency is considered to be not over 85 feet and must not exceed 150 feet.

(g) Accessibility for individuals with disabilities. The facility must meet the provisions and requirements concerning accessibility for individuals with disabilities in the following laws: the Americans with Disabilities Act of 1990 (Public Law 101‐336; Title 42, United States Code, Chapter 126); Title 28, Code of Federal Regulations, Part 35; Texas Civil Statutes, Article 9102; and Title 16, Texas Administrative Code, Chapter 68. Plans for new construction, substantial renovations, modifications, and alterations must be submitted to the Texas Department of Licensing and Regulation (Attention: Elimination of Architectural Barriers Program) for accessibility approval under Article 9102.

(h) Handrails. Handrails must be provided on each side of all resident-use corridors. Handrails for other areas should be provided as needed to facilitate resident movement or egress. Design of handrails must be in accordance with the American National Standards Institute (ANSI) A117.1. These handrails may extend into the minimum required corridor width without widening the corridor (that is, in an eight-foot-wide corridor, handrails may project up to 3 1/2 inches on each side). Reference §19.342(a)(8) and (9) of this title (relating to Miscellaneous Details) for handrail details.

(k) Personal grooming area (barber/beauty shop). A separate room with appropriate equipment must be provided for hair care and grooming needs of residents in facilities with over 60 beds.

(o) Maintenance, engineering service, and equipment areas. Space and facilities for adequate preventive maintenance and repair service must be provided. The following spaces are needed and it is suggested that these be part of a separate laundry building or area:
(1) A storage area for building and equipment maintenance supplies, tools, and parts must be provided.

(2) A space for storage of yard maintenance equipment and supplies, including flammable liquids bulk storage, must be provided separate from the resident-occupied facility.

(3) A maintenance and/or repair workshop of at least 120 square feet and equipment to support usual functions is recommended.

(4) A suitable office or desk space for the maintenance person(s) is recommended (possibly located within the repair shop area) with space for catalogs, files, and records.

(p) Oxygen. The storage and use of oxygen and equipment must meet applicable NFPA standards for oxygen, including NFPA 99.

**Exit Doors**

(5) Any remodeling of, construction on, and/or additions to occupied buildings which involve exitways and exit doors must be accomplished without compromising the exits or creating a dead end situation at any time. Acceptable alternate temporary exits may be approved, or resident(s) in the area involved may have to be relocated until construction blocking the exit is completed. Other basic safety features such as fire alarms, sprinkler systems, and emergency power must also remain operational.

(6) Doors in means of egress must be as follows:

(A) Locking hardware or devices which are capable of preventing or inhibiting immediate egress must not be used in any room or area that can be occupied.

(B) A latch or other fastening device on an exit door must be provided with a knob, handle, panic bar, or similar releasing device. The method of operation must be obvious in the dark, without use of a key, and operable by a well known one-action operation that will easily operate with normal pressure applied to the door or to the device toward the exterior. Locking hardware which prevents unauthorized entry from the outside (only) is permissible. Permanently mounted hold-open devices to expedite emergency egress and prevent accidental lock-out must be provided for exterior exit doors as well as self-closing devices.

(C) No screen or storm door may swing against the direction of exit travel where main doors are required to swing out.

(D) To aid in control of wandering residents, buzzers or other sounding devices may be used to announce the unauthorized use of an exit door. Other methods include approved emergency exit door locks or fencing with a gate outside of exit doors which enclose a space large enough to allow the space to be an exterior area of egress and refuge away from the building.

(E) Inactive leaves of double doors may have easily accessible and easily operable bolts if the active leaf is 44 inches wide. Center mullions are prohibited.

(F) Resident baths or toilets having privacy locks will require that keys or devices for opening the doors are kept readily available to the staff.
(G) Folding or sliding doors must not be used in exit corridors or exitways. Sliding glass doors may be used as secondary doors from residents' bedrooms to grade or to a balcony, or as secondary doors in certain other areas where the primary designated exit door requirements are met. Doors to bathroom and other resident-use areas must be the side-hinged swinging type. Corridor doors to rooms must swing into the room or be recessed so as not to extend into the corridor when open; however, doors ordinarily kept closed may be excepted. Corridor door frames must be steel in accordance with the Life Safety Code.

(7) Horizontal exits, if provided, must be according to the Life Safety Code.

(8) Areas outside of exterior exit doors (exit discharge) must be as follows:

(A) Provision must be made to accommodate and facilitate continuation of emergency egress away from a building for a reasonable distance beyond the outside exit door, especially for movement of nonambulatory residents in wheelchairs and beds. Any condition which may retard or halt free movement and progress outside the exit doors will not be allowed. Ramps must be used outside the exit doors in lieu of steps whenever possible.

(B) The landing outside of each exit door must be essentially the same elevation as the interior floor and level for a distance equal to the door width plus at least four feet. Generally, the difference in floor elevation at an exterior door must not be over 1/2 inch with the outside slope not to exceed 1/4 inch per foot sloping away from the door for drainage on the exterior. In locations north of the +20 Fahrenheit Isothermal Line as defined in the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Handbook of Fundamentals, the landing outside of all exit doors must be protected from ice build-up which would prohibit the door from opening and be a slip hazard.

(C) Emergency egress lighting immediately outside of exit doors is required as a part of the building emergency lighting system. Photocell devices may be used to turn lights off during daylight hours.

(9) The requirements of an emergency lighting system must be in accordance with §19.341 of this title (relating to Electrical Requirements).

(10) Requirements for interior finishes of ways of egress (flame spread of floor, walls, and ceiling finishes) must be in accordance with the Life Safety Code. The interior finishes of other areas must be in accordance with §19.333(e) of this title (relating to General Considerations).

**RULE §19.336 Smoke Compartmentation (Subdivision of Building Spaces)**

(a) Smoke compartmentation must be as described in the Life Safety Code and in this section.

(b) An exit sign must be provided on each side of corridor smoke doors unless otherwise directed by the Texas Department of Human Services (DHS).

(c) The metal frames for the wire glass view panels in smoke doors must be steel, unless otherwise approved by DHS. The bottom of the view panel must not be higher than 54 inches above the floor. Pairs of opposite (double egress) swinging smoke doors in corridors must have push/pull hardware. The door leaves must align in the closed position.
(d) Smoke barrier walls in concealed spaces such as attics, must have prominent signs on each side that read: "Warning: Smoke/fire barrier. Properly seal all openings."

(e) Provisions must be made for reasonable access to concealed smoke barrier walls for maintaining smoke dampers and so that walls and dampers can be visually checked periodically for conformance by facility staff, service persons, and inspectors. Access must provide for visual inspection of both sides of the wall, and of all parts (end-to-end and top-to-bottom). Ceiling access panels must be prefabricated metal panel, or its equivalent, and be at least 20 inches by 20 inches with no obstructions above (such as ducts) to hamper entrance, and it must be fire rated if required to maintain ceiling-roof or ceiling-floor fire rating. Access must be provided for both sides of the wall.

(f) Air systems should be designed to avoid having ducts which penetrate smoke barrier walls, thus eliminating the need for smoke dampers which are often a problem to maintain in proper working condition.

**RULE §19.337 Fire Protection Systems**

(a) Fire protection systems include detection, alarm, and communication systems; fixed automatic extinguishment systems; and portable extinguishers. These systems must meet the requirements of the Life Safety Code, and of this section. Components must be compatible and laboratory listed for the use intended.

(b) Fire protection systems must meet the requirements of all applicable National Fire Protection Association (NFPA) standards, such as NFPA 72 for alarm systems, as referenced in the Life Safety Code. Wiring and circuitry for alarm systems must meet the applicable requirements of NFPA standards including the NFPA 70 for these systems.

(c) Requirements of emergency electrical systems must be in accordance with §19.341 of this title (relating to Electrical Requirements). Requirements for sprinkler systems must be in accordance with §19.340(4) of this title (relating to Mechanical Requirements).

(d) Partial sprinkler systems (those provided only for hazardous areas) must be interconnected with the fire alarm and comply with the Life Safety Code. Each partial system must have a valve with a supervisory switch to sound a trouble signal, water flow switch to activate the fire alarm, and an end-of-line test drain.

(e) Fire alarm systems must be installed, maintained, and repaired by an agent having a current certificate of registration with the State Fire Marshal’s office of the Texas Commission on Fire Protection, in accordance with state law. A fire alarm installation certificate must be provided as required by the Office of the State Fire Marshal.

(f) The fire alarm system must be designed so that whenever the general alarm is sounded by activation of any device (such as manual pull, smoke sensor, sprinkler, or kitchen range hood extinguisher), the following must occur automatically:

1. smoke and fire doors which are held open by approved devices must be released to close;
2. air handlers (air conditioning and/or heating distribution fans) serving three or more rooms or any means of egress must shut down immediately;
(3) Smoke dampers must close; and

(4) The alarm-initiating-device location must be clearly indicated on the fire alarm control panel(s) and all auxiliary panels.

(g) Fire alarm bells or horns must be located throughout the building for audible coverage. Flashing alarm lights (visual alarms) must be installed to be visible in corridors and public areas including dining rooms and living rooms in a manner that will identify exit routes.

(h) A master control panel indicating the location of all alarm, trouble, and supervisory signals, by zone or device, must be visible at the main nurse station. Fire alarm system components must be laboratory-listed as compatible. Alarm and trouble zoning must be by smoke compartments and by floors in multi-story facilities.

(i) Remote annunciator panels, indicating location of alarm initiation, by zone or device, and trouble indication, must be located at auxiliary or secondary nurse stations on each floor, and will indicate the alarm condition of adjacent zones and the alarm conditions at all other nurse stations.

(j) Manual pull stations must be provided at all exits, living rooms, dining rooms, and at or near the nurse stations.

(k) The sprinkler system must be monitored for flow and tamper conditions by the fire alarm system.

(l) The kitchen range hood extinguisher must be interconnected with the fire alarm system. This interconnection may be a separate zone on the panel or combined with other initiating devices located in the same zone as the range hood is located.

(m) Portable fire extinguishers must be provided throughout the facility as required by NFPA Standard 10 and as determined by the local fire department and the Texas Department of Human Services. The following requirements are applicable to fire extinguishers:

(1) Extinguishers in resident corridors must be spaced so that travel distance is not more than 75 feet. The minimum size of extinguishers must be either 2 1/2 gallon for water type or 5 pound for ABC type.

(2) Extinguishers must be installed on hangers or brackets supplied or mounted in approved cabinets. Recessed cabinets are required for extinguishers located in corridors.

(3) Extinguishers installed under conditions where they are subject to physical damage must be protected from impact or dislodgement.

(4) Extinguishers having a gross weight not exceeding 40 pounds must be installed so that the top of the extinguisher is not more than five feet above the floor. Extinguishers having a gross weight greater than 40 pounds must be installed so that the top of the extinguisher is not more than 3-1/2 feet above the floor. In no case may the clearance between the bottom of the extinguisher and the floor be less than four inches.

(5) Portable extinguishers provided in hazardous rooms should be located as close as possible to the exit door opening and nearest the latch (knob) side.
RULE §19.338 Hazardous Areas

(a) Protection from hazardous areas must be as required in the Life Safety Code, except as required or modified in this section. Gas fired equipment must not be located in attic spaces, except under the following conditions:

(1) the area around the units must be constructed to be one-hour fire rated;

(2) the enclosure must have sprinkler protection; and

(3) combustion and venting air must be ducted from the exterior in properly sized metal ducts.

(b) Laboratories must be protected in accordance with the National Fire Protection Association (NFPA) 99.

(c) Cooking equipment must have exhaust systems designed and installed in accordance with NFPA 96.

(d) Doors to hazardous areas must have closers and be kept closed unless provided with an approved holdopen device such as an alarm activated magnetic hold-open device. Doors must be single-swing type with positive latching hardware. View panels at laundry entrances must be provided and be of materials adequate to maintain the integrity of the door as allowed by the Life Safety Code.

RULE §19.339 Structural Requirements

(a) Every building and every portion thereof must be designed and constructed to sustain all dead and live loads in accordance with accepted engineering practices and standards.

(b) Special provisions must be made in the design of buildings in regions where local experience shows loss of life or extensive damage to buildings resulting from hurricanes, tornadoes, earthquakes, or floods.

(c) The sponsor is responsible for employing qualified personnel in the preparation of plan designs and engineering and in the construction of the facility to assure that all structural components are adequate, safe, and meet the applicable construction requirements.

(d) The design of the structural system must be done by or under the direction of a professional structural engineer who is currently registered by the Texas State Board of Registration for Professional Engineers in accordance with state law.

(e) The parts of the plans, details, and specifications covering the structural design must bear the legible seal of the engineer on the original drawings from which the prints are made.

(f) If the municipality has a building code, that code must govern the building requirements for the construction involved. The Life Safety Code must be used for fire safety requirements. Should discrepancies between the codes arise, they must be called to the attention of the Texas Department of Human Services for resolution.
(g) In the absence of a local building code, a nationally recognized building code must be used with regard to the construction integrity of the building. The Life Safety Code must be used for fire safety requirements.

(h) Each building must be classified as to building construction type for fire resistance rating purposes in accordance with the National Fire Protection Association (NFPA) 220 and the Life Safety Code.

(i) Enclosures of vertical openings between floors must meet the Life Safety Code.

(j) All interior walls, partitions, and roof structure in buildings of fire resistive and noncombustible construction must be of noncombustible or limited combustible materials.

(k) Building insulation materials, unless sealed on all sides and edges in an approved manner, must have a flame spread rating of 25 or less when tested in accordance with NFPA 255 and NFPA 258.

RULE §19.340 Mechanical Requirements

The design of the mechanical systems must be done by or under the direction of a registered professional (mechanical) engineer approved by the Texas State Board of Registration for Professional Engineers to operate in Texas, and the parts of the plans and specifications covering mechanical design must bear the legible seal of the engineer. Building services pertaining to utilities; heating, ventilating, and air-conditioning systems; vertical conveyors; and chutes must be in accordance with the Life Safety Code. Required plumbing fixtures must be in accordance with the Life Safety Code and §19.334 of this title (relating to Architectural Space Planning and Utilization) in specific use areas.

(1) Plumbing.

(A) All plumbing systems must be designed and installed in accordance with the requirements of the plumbing code of the municipality. In the absence of a municipal code, a nationally recognized plumbing code must be used. Any discrepancy between an applicable code and these requirements must be called to the attention of the Texas Department of Human Services (DHS) for resolution.

(B) Supply systems must assure an adequacy of hot and cold water. An average rule-of-thumb design for hot water for resident usage (at 110 degrees Fahrenheit) is to provide 6-1/2 gallons per hour per resident in addition to kitchen and laundry use.

(C) Water supply must be from a system approved by the Water Utility Division, Texas Natural Resources Conservation Commission, or from a system regulated by an entity responsible for water quality in that jurisdiction as approved by the Water Utility Division, Texas Natural Resources Conservation Commission.

(D) The sewage system must connect to a system permitted by the Watershed Management Division, Texas Natural Resources Conservation Commission, or to a system regulated by an entity responsible for water quality in that jurisdiction as approved by the Water Utility Division, Texas Natural Resources Conservation Commission.

(E) The minimum ratio of fixtures to residents shall be as required in §19.334(c) of this title (relating to Architectural Space Planning and Utilization).
(F) For design calculation purposes, resident-use hot water must not exceed 110 degrees Fahrenheit at the fixture. For purposes of conforming to licensure requirements, an operating system providing water from 100 degrees Fahrenheit to 115 degrees Fahrenheit is acceptable. Hot water for laundry and kitchen use must be normally 140 degrees Fahrenheit except that dish sanitizing, if done by hot water, must be 180 degrees Fahrenheit.

(G) Water closets raised to provide a seat height 17 inches to 19 inches from the floor is required for persons with disabilities.

(H) Showers for wheelchair residents must not have curbs. Tub and shower bottoms must have a slipresistant surface. Shower and tub enclosures, other than curtains, must be of tempered glass, plastic, and other safe materials.

(I) Drinking fountains must not extend into exit corridors.

(J) Fixture controls easily operable by residents must be provided (such as lever type).

(K) Plumbing fixtures for residents must be vitreous china or porcelain finished cast iron or steel unless otherwise approved by DHS. Bathing units constructed of class B fire rated fiberglass are acceptable for use.

(L) Hand-washing sinks for staff use are required in many areas throughout the facility in accordance with §19.334 of this title (relating to Architectural Space Planning and Utilization). Lavatories are required to be provided adjacent to water closets in each area.

(M) The soiled utility room must be provided with a flushing device such as a water closet with bedpan lugs, a spray hose with a siphon breaker or similar device, such as a high neck faucet with lever controls and a deep sink that is large enough to submerge a bedpan. A sterilizer for sanitizing may be used in place of a deep sink.

(N) Siphon breakers or back-flow preventers must be installed with any water supply fixture where the outlet or attachments may be submerged.

(O) Clean-outs for waste piping lines must be provided and located so that there is the least physical and sanitary hazard to residents. Where possible, clean-outs must open to the exterior or areas which would not spread contamination during clean-out procedures.

(P) All boilers not exempted by the Texas Health and Safety Code §755.022 must be inspected and certified for operation by The Texas Department of Licensing and Regulation.

2) Heating, ventilating, and air-conditioning systems.

(A) Heating, ventilating, and air-conditioning systems must be designed and installed in accordance with the Heating, Ventilating, and Air-Conditioning Guide of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), except as may be modified by this section.

(B) Heating, ventilating, and air-conditioning systems must meet the requirements of the Life Safety Code and the National Fire Protection Association (NFPA) 90A. The plans must have a statement verifying that the systems are designed to conform to NFPA 90A. Requirements for conditions
related to smoke compartmentation must be in accordance with §19.336 of this title (relating to Smoke Compartmentation (Subdivision of Building Spaces)).

(C) Systems using liquefied petroleum gas fuel must meet the requirements of the Railroad Commission of Texas and NFPA 58 Liquefied Petroleum Gases.

(D) The heating system must be designed, installed, and functioning to be able to maintain a temperature of at least 75 degrees Fahrenheit for all areas occupied by residents. For all other occupied areas, the indoor design temperature must be at least 72 degrees Fahrenheit. The cooling system must be designed, installed, and functioning to be able to maintain a temperature of not more than 78 degrees Fahrenheit. A facility constructed or licensed after January 1, 2004, must have a central air conditioning system, or a substantially similar air conditioning system, that is capable of maintaining a temperature suitable for resident comfort within areas used by residents. Occupied areas generating high heat, such as kitchens, must be provided with a sufficient cool air supply to maintain a temperature not exceeding 85 degrees Fahrenheit at the five-foot level. Supply air volume must be approximately equal to the air volume exhausted to the exterior for these areas.

(E) Air systems must provide for mixing at least 10% outside air for the supply distribution. Blowers for central heating and cooling systems must be designed so that they may run continuously.

(F) Floor furnaces, unvented space heaters, and portable heating units must not be used. Heating devices or appliances must not be a burn hazard (to touch) to residents.

(G) A combustion fresh air inlet must be provided to all gas or fossil fuel operated equipment in steel ducts or passages from outside the building in accordance with NFPA 54. Rooms must also be vented to the exterior to exhaust heated ambient air in the room. Combustion air will require one vent within 12 inches of the floor and one vent within 12 inches of the ceiling.

(H) The location and design of air diffusers, registers, and return air grilles, must ensure that residents are not in harmful or excessive drafts in their normal usage of the room.

(I) In areas requiring control of sanitation, the air flow must be from the clean area to the dirty area. Air supply to food preparation areas must not be from air which has circulated places such as resident bedrooms and baths.

(J) Air from unsanitary areas such as janitors closets, soiled linen areas, utility areas, and soiled area of laundry rooms, must not be returned and recirculated to other areas.

(K) Intakes for fresh outside air must be located sufficiently distant from exhaust outlets or other areas or conditions which may contaminate or otherwise pollute the incoming fresh air. Fresh air inlets must be appropriately screened to prevent entry of debris, rodents, and animals. Provision must be made for access to such screens for periodic inspection and cleaning to eliminate clogging or air stoppage (see paragraph (3)(C)(i) of this subsection).

(L) Systems must be designed as much as possible to avoid having ducts passing through fire walls or smoke barrier walls. All openings or duct penetrations in these walls must be provided with
approved automatic dampers. Smoke dampers at smoke partitions must close automatically upon activation of the fire alarm system to prevent the flow of air or smoke in either direction.

(M) Ducts with smoke dampers must have maintenance panels for inspections. The maintenance panels must be removable without tools. Means of access must also be provided in the ceiling or side wall to facilitate smoke damper inspection readily and without obstruction. Location of dampers must be identified on the wall or ceiling of the occupied area below.

(N) Fusible links are not approved for smoke dampers.

(O) Central air supply systems and/or systems serving means of egress must automatically and immediately shut down upon activation of the fire alarm system. (An exception must be approved, engineered smokeremoval systems.)

(P) Ducts must be of metal or other approved noncombustible material. Cooling ducts must be insulated against condensation drip.

(3) Ventilating and exhaust.

(A) General ventilating systems must be in accordance with paragraph (2) of this subsection.

(B) Provisions for natural ventilation using windows or louvers must be incorporated into the building design where possible and practical. These windows or louvers must have insect screens.

(C) All air-supply and air-exhaust systems must be mechanically-operated. The ventilation rates shown in the table in clause (xi) of this subparagraph must be considered as minimum acceptable rates and must not be construed as precluding the use of higher ventilation rates.

(i) Outdoor air intakes must be located as far as practical (but normally not less than 10 feet) from exhaust outlets or ventilating systems, combustion equipment stacks, medical vacuum systems, plumbing vent stacks, or from areas which may collect vehicular exhaust and other noxious fumes.

(ii) The ventilation systems must be designed and balanced to provide the pressure relationship as shown in the table in clause (xi) of this subparagraph. A final engineered system air balance report will be required for the completed system to be furnished and certified by the installer.

(iii) The bottoms of ventilation openings must be not less than three inches above the floor of any room.

(iv) Doors protecting corridors or ways of egress must not have air transfer grilles or louvers. Corridors must not be used to supply air to or exhaust air from any room except that air from corridors may be used as make-up air to ventilate small toilet rooms, janitor’s closets, and small electrical or telephone closets opening directly on corridors, provided that the ventilation can be accomplished by door undercuts not exceeding ¾ inches.

(v) All exhausts must be continuously ducted to the exterior. Exhausting air into attics or other spaces is not permitted. Duct material must be metal.

(vi) All central ventilation or air-conditioning systems must be equipped with filters of sufficient efficiency to minimize dust and lint accumulations throughout the system and building including supply and return plenums and ductwork. Filters with efficiency rating of 80% or greater (based on
ASHRAE) are recommended. Filters for individual room units must be as recommended by the equipment manufacturer. Filters must be easily accessible for routine changing or cleaning.

(vii) Static pressures of systems must be within limits recommended by ASHRAE and the equipment manufacturer (upstream and downstream).

(viii) In geographic locations or interior room areas where extreme humidity levels are likely to occur for extended periods of time, apparatus for controlling humidity levels (preferably between 40-60%) are recommended to be installed as a part of central systems and with automatic humidistat controls.

(ix) Exhaust hoods, ducts, and automatic extinguishers for kitchen cooking equipment must be in accordance with NFPA 96.

(x) Forced air exhaust must be provided in laundries, kitchens, and dishwashing areas to remove excess heat and moisture and to maintain air flow in the direction of clean to soiled areas.

(xi) Ventilation requirements for nursing areas must be according to the following table: Attached Graphic

(xii) With relationship to adjacent areas, a positive air pressure must be provided for clean utility rooms, clean linen rooms, and medication rooms. Conditioned supply air must be introduced into these rooms.

(4) Sprinkler systems. The following requirements are applicable to sprinkler systems:

(A) Sprinkler systems must be in accordance with NFPA 13 and this subchapter.

(B) The design and installation of sprinkler systems must meet any applicable state laws pertaining to these systems and one of the following criteria:

(i) The sprinkler system must be designed by a qualified registered professional engineer approved by the Texas State Board of Registration for Professional Engineers to operate in Texas. The engineer must supervise the installation and provide written approval of the completed installation.

(ii) The sprinkler system must be planned and installed in accordance with NFPA 13 by firms with certificates of registration issued by the office of the state fire marshal that have at least one full-time licensed responsible managing employee (RME). The RME’s license number and signature must be included on the prepared sprinkler drawings.

(C) The approved sprinkler plans must be submitted to DHS, Architectural Section, Austin, Texas.

(D) Particular attention should be paid to adequate, safe, and reasonable freeze protection for all piping. The design of freeze protection should minimize the need for dependence on staff action or intervention to provide protection.

**RULE §19.341 Electrical Requirements**

(a) The design of the electrical systems must be done by or under the direction of a registered professional electrical engineer approved by the Texas State Board of Registration for Professional
Engineers to operate in Texas, and the parts of the plans and specifications covering electrical design must bear the legible seal of the engineer. Requirements pertaining to utilities, heating, ventilating, and air-conditioning systems, vertical conveyors, and chutes must be in accordance with the Life Safety Code, Chapter 9, Building Service and Fire Protection Equipment.

(b) Requirements for fire protection systems must be in accordance with §19.337 of this title (relating to Fire Protection Systems).

c) Electrical systems must meet the requirements of the NFPA 70.

d) Specific requirements for lighting and outlets at resident bedrooms must be in accordance with §19.334 of this title (relating to Architectural Space Planning and Utilization).

1) Emergency electrical service.

(A) To provide electricity during an interruption of the normal electric supply, an emergency source of electricity must be provided and connected to certain circuits for lighting and power.

(B) Emergency electrical connection service must be provided to the distribution systems as required by the Life Safety Code and NFPA 99.

(i) Emergency systems must include the following:

(I) illumination for means of egress, nurse stations, medication rooms, dining and living rooms, group bathing rooms (those not directly connected to resident bedrooms), and areas immediately outside of exit door (egress lighting must not be switched);

(II) exit signs and exit directional signs as required by the Life Safety Code;

(III) alarm systems including fire alarms activated by manual stations, water flow alarm devices of sprinkler systems, fire and smoke detecting systems, and alarms required for nonflammable medical gas systems if installed (where hospital-type functions are included in the nursing home facility, applicable standards will apply);

(IV) task illumination and selected receptacles at the generator set location;

(V) selected duplex receptacles including such areas as resident corridors, each bed location where patient care-related electrical appliances are utilized, nurse stations, and medication rooms including biological refrigerator;

(VI) nurse calling systems;

(VII) resident room night lights;

(VIII) a light and receptacle in the electrical and/or boiler room;

(IX) elevator cab lighting, control, and communication systems;

(X) all facility telephone equipment; and
(XI) paging or speaker systems if intended for communication during emergency. Radio transceivers where installed for emergency use must be capable of operating for at least one hour upon total failure of both normal and emergency power.

(ii) Critical systems (delayed automatic or manual connections to critical systems) must include the following:

(I) Heating equipment must provide heating for general resident rooms. This will not be required if:

(-a-) the outside design temperature is higher than 20 degrees Fahrenheit (-6 degrees Celsius);

(-b-) the outside design temperature is lower than 20 degrees Fahrenheit (-6 degrees Celsius) and where selected rooms are provided for the needs of all confined residents, then only those rooms need to be heated; or

(-c-) the facility is served by a dual source of normal power; and

(II) In instances when interruptions of power would result in elevators stopping between floors, throw-over facilities must be provided to allow the temporary operation of any elevator for the release of passengers.

(C) The emergency lighting must be automatically in operation within ten seconds after the interruption of normal electric power supply. Emergency service to receptacles and equipment may be delayed automatic or manually connected. Receptacles connected to emergency power must have red face plates. Stored fuel capacity must be sufficient for not less than four-hour operation of required generator.

(D) The design and installation of emergency motor generators must be in accordance with NFPA 37, NFPA 99, and NFPA 110.

(i) Generators must be a minimum of three feet from the combustible exterior building finish and a minimum of five feet from a building opening if located on the exterior of the building.

(ii) Generators located on the exterior of the building must be provided with a noncombustible protective cover or be protected as per manufacturer’s recommendations.

(iii) Motor generators fueled by public utility natural gas must have the capability to be switched to an alternate fuel source in accordance with NFPA 70.

(E) The normal wiring circuit(s) for the emergency system must be kept entirely independent of all other wiring and must not enter the same race-ways, boxes, or cabinets in accordance with NFPA 70.

(2) General Lighting Requirements. General lighting requirements are as follows:

(A) All spaces occupied by people, machinery, equipment, approaches to buildings, and parking lots must have lighting.

(B) All quality, intensity, and type of lighting must be adequate and appropriate to the space and all functions within the space.
(C) Minimum lighting levels can be found in the Illuminating Engineering Society (IES) Lighting Handbook, latest edition. Minimum illumination must be 20-foot candles in resident rooms, corridors, nurses' stations, dining rooms, lobbies, toilets, bathing facilities, laundries, stairways, and elevators. Illumination requirements for these areas apply to lighting throughout the space and should be measured at approximately 30 inches above the floor anywhere in the room. Minimum illumination for overbed reading lamps, medication-preparation or storage area, kitchens, and nurse's station desks must be 50 foot candles. Illumination requirements for these areas apply to the task performed and should be measured on the task.

(D) Nursing unit corridors must have general illumination with provisions for reduction of light levels at night.

(E) Exposed incandescent light bulbs (or other high heat generating lamps) in closets or other similar spaces must be provided with basket wire guards or other suitable shield to prevent contact of combustible materials with the hot bulb and to help prevent breakage.

(F) Exposed incandescent or fluorescent bulbs will not be permitted in food service or other areas where glass fragments from breakage may get into food, medications, linens, or utensils. All fluorescent bulbs will be protected with a shield or catcher to prevent bulb drop-out.

(3) Receptacles (convenience outlets).

(A) Receptacles at bedrooms must be in accordance with §19.334(a)(7) of this title (relating to Architectural Space Planning and Utilization).

(B) Duplex receptacles for general use must be installed in corridors spaced not more than 50 feet apart and within 25 feet of ends of corridors.

(C) Receptacles must be provided for essential needs such as medication refrigerators and life support systems or equipment. At least one outlet in each resident corridor must be provided with emergency electrical service. All receptacles on emergency circuits must be clearly, distinctly, and permanently identified, such as using a red face plate and/or a small label that says "Emergency."

(D) Receptacles in the remainder of the building must be sufficient to serve the present and future needs of the residents and equipment.

(E) Location of receptacles (horizontally and vertically) should be carefully planned and coordinated with the expected designed use of furnishings and equipment to maximize their accessibility and to minimize conditions such as beds or chests being jammed against plugs used in the outlets.

(F) Exterior receptacles must be approved waterproof type.

(G) Ground fault interruption protection must be provided at appropriate locations such as at whirlpools and other wet areas in accordance with the National Electrical Code.

(4) Nurse call systems.

(A) A nurse call system consists of power units, annunciator control units, corridor dome stations, emergency call stations, bedside call stations, and activating devices. The units must be compatible and laboratory listed for the system and use intended.
Each resident bedroom must be served by at least one calling station and each bed must be provided with a call switch. Two call switches serving adjacent beds may be served by one calling station. Each call entered into the system must activate a corridor dome light above the bedroom, bathroom, or toilet corridor door, a visual signal at the nurses station which indicates the room from which the call was placed, and a continuous or intermittent continuous audible signal of sufficient amplitude to be clearly heard by nursing staff. The amplitude or pitch of the audible signal must not be such that it is irritating to residents or visitors. The system must be designed so that calls entered into the system may be canceled only at the calling station. Intercom-type systems which meet this requirement are acceptable.

Nurse calling systems which provide two-way voice communication must be equipped with an indicating light at each calling station which lights and remains lighted as long as the voice circuit is operating.

A nurse call emergency switch(es) must be provided for resident use at each resident’s toilet, bath, and shower. These switches must be usable by residents using the fixtures and by a collapsed resident lying on the floor.

RULE §19.342 Miscellaneous Details

1. Hazards such as sharp corners and edges and unexpected steps must be avoided.

2. Items such as drinking fountains, telephone booths, vending machines, and portable equipment must be located so as not to restrict corridor traffic or reduce corridor width.

3. Windows must be designed to prevent residents from accidentally falling through the windows.

4. Doors that normally stay open or are frequently used must not swing out into the corridor unless otherwise needed or required. Alcoves may be provided for doors that must swing outward toward a corridor or way of egress.

5. The proper use of safety glass must be adhered to in applicable locations and conditions.

6. Thresholds and expansion joint covers must be made essentially flush with the floor surface to facilitate use of wheelchairs and carts. See §19.340(a)(8) of this title (relating to Mechanical Requirements) for requirements for such items as shower curbs, surfaces, and doors.

8. Handrails must be provided on both sides of corridors used by residents. A clear distance of 1-1/2 inches must be provided between the handrail and the wall. Handrails must be securely mounted to withstand downward forces of 250 pounds. Handrails may be omitted on wall segments less than 18 inches. Handrails must be mounted 33 inches to 36 inches above the floor, and must comply with standards adopted under the Americans with Disabilities Act and the Texas Accessibility Standards.

9. Ends of handrails and grab bars must be constructed to prevent snagging the clothes of residents (that is, return ends to wall).

10. Ceiling fan blades must be at least seven feet above the floor and be located so as not to interfere with the operation of any ceiling-mounted smoke detectors.

(b) General details.
(1) Concrete floors, whether finished by sealant, or similar product, must not be used as the finished floor unless specifically approved in writing by the Texas Department of Human Services. An exception is mechanical equipment rooms and maintenance or similar areas.

(2) Sound separation must be provided in corridor walls and resident room party walls; Minimum Sound Transmission Coefficient 30 per American Society for Testing Material E-90.

(3) Illumination and a safe platform in the attic must be provided at all attic access panels.

(4) Attic access must be provided for building maintenance. Access panels must be prime coated steel flush panels where required to maintain fire rating of ceiling-roof/ceiling-floor assemblies.

RULE §19.343 Elevators

All buildings having residents' facilities (such as bedrooms, dining rooms, or recreation areas) or resident services (such as diagnostic or therapy) located on other than the main entrance floor must have at least one electric or electrohydraulic elevator and must comply with standards adopted under the American National Standards Institute (ANSI) Code, §A17.1.

(1) Number of elevators.

(A) At least one hospital-type elevator must be installed where one to 60 resident beds are located on any floor other than the main entrance floor.

(B) At least two (one of which must be hospital-type) elevators must be installed where 61 to 200 resident beds are located on floors other than the main entrance floor, or where the major inpatient services are located on a floor other than those containing resident beds. Elevator service may be reduced for those floors which provide only partial inpatient services.

(C) At least three (one of which must be hospital-type) elevators must be installed where 201 to 350 resident beds are located on floors other than the main entrance floor or where the major inpatient services are located on a floor other than those containing resident beds. Elevator service may be reduced for those floors which provide only partial inpatient services.

(D) For facilities with more than 350 resident beds, the number of elevators must be determined from a study of the facility plan and the estimated vertical transportation requirements.

(2) Cars and platforms. Cars of hospital-type elevators must have inside dimensions that will accommodate a resident bed and attendants and must be at least five feet wide by seven feet six inches deep. The car door must have a clear opening of not less than three feet eight inches.

(3) Leveling. Elevators must be equipped with an automatic leveling device of the two-way automatic maintaining type with an accuracy of 1/2 inch.

(4) Operation. Elevators, except freight elevators, must be equipped with a two-way special service switch to permit cars to bypass all landing button calls and be dispatched directly to any floor.

(5) Accessibility provisions. Elevator controls, alarm buttons, and telephones, must be accessible to and usable by individuals with disabilities as required under the Americans with Disabilities Act of 1990.
(6) Protection from fire. Elevator call buttons, controls, and door safety stops must be of a type that will not be activated by heat or smoke. Door openings must meet the requirements of the Life Safety Code for protection of vertical openings.

(7) Field inspection and tests. Inspections and tests must be made and the owner must be furnished written certification that the installation meets the requirements set forth in this section and all applicable safety regulations and codes.