

**Program Facility Standards  
For Early Care and Education  
& Out-of-School-Time Programs  
Revised, September, 2012**

**Children's Investment Fund**

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## Introduction

Children's development is supported by contexts that promote their learning and growth, including early care and education and out-of-school-time programs. Considerable research has examined the importance of *psychosocial* environments, including relationships with caring adults. *Physical* environments are also important contexts for children's development. The physical environment is "the stage or setting upon which social transactions take place."<sup>1</sup> Physical environments can affect children's outcomes in two ways, by suggesting "a range of activities that can or cannot occur," and by eliciting emotions, such as feelings of comfort, self-worth or anxiety.<sup>2</sup>

Facility quality is significantly related to program quality for children in infant, toddler and preschool classrooms and in out-of-school time programs. Preschool-age children exhibit more social withdrawal and more off-task behavior under crowded conditions. In a 2004 study, Kantrowitz and Evans found that the more children there were per activity area, the greater the amount of time spent off-task.<sup>3</sup> Crowding in child care centers has also been associated with attention deficits, behavior problems, and reduced interactions between children.<sup>4</sup> In a study of cortisol levels among 18-40 month old children, Legendre found higher cortisol levels among children in more crowded classrooms, and in group sizes of more than 15 children.<sup>5</sup> Higher cortisol levels indicate greater stress.

In a study of programs serving 4-year-olds in 10 countries, Montie and colleagues found that children who attended programs that offered a wide range of equipment and materials showed greater improvement in cognitive performance than children in less resource rich programs.<sup>6</sup> In a study of 202 Colorado child care centers, Perlman and colleagues found that classrooms with varied materials and activities, adequate space and appropriate furnishings had higher quality interactions between staff and children, including developmentally appropriate interactions during personal care routines and encouragement of language development.<sup>7</sup>

The *Cornerstones*<sup>8</sup> report on early childhood settings in Massachusetts highlighted concerns about hygiene and sanitation. It found that 39% of preschool sites had too little indoor space, poor ventilation, poor lighting, or inadequate activity spaces. 51% of infant-toddler programs lacked appropriate furnishings or made use of furnishings that were in poor repair. Fewer than half the programs had space and materials for active physical play.

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<sup>1</sup> Theodore Wachs, 1989. The development of effective child care environments: Contributions from the study of early experience. *Children's Environments Quarterly*, 8 (4) 4-16.

<sup>2</sup> Olds, A.R., 1989. Psychological and physiological harmony in child care center design. *Children's Environments Quarterly*, 6 (4) 8-16.

<sup>3</sup> Kantrowitz, E.J. & Evans, G.W. 2004. The relation between the ratio of children per activity area and off-task behavior and type of play in day care centers. *Environment and Behavior*, 36 (4), 541-557.

<sup>4</sup> Maxwell, L. 1996. Multiple effects of home and day care crowding. *Environment and Behavior*, 28(4), 494-511, cited in Evans *op. cit.*; Maxwell, L.E. 2003. *Home and school density effects on elementary school children. Environment and Behavior*, 35 (4), 566-578.

<sup>5</sup> LeGendre, A. 2003. Environmental features influencing toddlers' bioemotional reactions in day care centers. *Environment and Behavior*, 35 (4), 523-549.

<sup>6</sup> Montie, J.E., Xiang, Z. & Schweinhart, L.J. 2006. Preschool experience in 10 countries: Cognitive and language performance at age 7. *Early Childhood Research Quarterly*, 21, 313-331.

<sup>7</sup> Perlman, M., Zellman, G.L. & Le, V. 2004. Examining the psychometric properties of the Early Childhood Environment Rating Scale-Revised (ECERS-R). *Early Childhood Research Quarterly*, 19, 398-412.

<sup>8</sup> Washington, V., Reed, M., and Cowden, M. 2007. *Cornerstones: Strengthening the Foundation of Health and Safety in Early Education and Care*. Cambridge, MA: Schott Fellowship in Early Education and Care at Cambridge College.

While there is less research on out-of-school time program facilities, there is some information. Research on schools has found that students in poorer quality facilities have poorer test scores, poorer attendance and higher dropout rates.<sup>9</sup> Technical design features, such as acoustics, climate control, lighting and warm colors, have been found to be correlated with positive child outcomes.<sup>10</sup> And the Massachusetts After-School Research Study<sup>11</sup> found that appropriate space led to positive staff engagement, which in turn led to positive youth engagement, challenging activities and high-quality homework time.

## The Facilities Standards and Criteria

While there are multiple sets of standards offered through varying professional and accrediting organizations that address some components of the physical environment, there is no single set of standards which pays comprehensive attention to facility quality and functionality and none that address standards for both ECE and OST programs. The Children's Investment Fund recognized the need for standards that identify those elements that support good educational environments for children, work environments for staff, and the health and safety of all occupants – standards that go beyond the interior to assess the general condition of a building, the building envelope, mechanical systems, and the grounds. CIF, with consultants from Wellesley Centers for Women and On-Site Insight, a Recap Real Estate Advisors Company, has developed standards for physical environments that support children's safety and healthy development.

The Facilities Standards and Criteria consist of three sections:

**I. The Facilities Standards.** There are 10 facilities standards.

**II. Standards and Criteria Tables.** The Standards and Criteria Tables describe the criteria for each of the 10 standards. Each criterion can be met at three levels: a program that meets *Regulatory Standards* complies with Massachusetts state regulations (licensure, building codes, fire and health regulations); a program that meets *Professional Standards* meets Professional Association Standards and guidelines; a program that meets *Best Practices* follows best practice guidelines. Within the specific criteria, some criteria are designated for specific age groups; unless specified, all other criteria are for every age group. Because these standards will be used across the country, we have incorporated many national criteria in *Professional Standards* that replicate *Regulatory Standards* criteria from Massachusetts state regulations. We have marked these replications with an asterisk (\*). In addition, Appendix A addresses accessibility issues.

**III. Detailed Criteria.** The Detailed Criteria provide the specific regulations, professional guidelines and recommendations for best practices, with verbatim quotes from the sources and citations, to allow programs to review the appropriate sections of the source documents. The references for the source documents are given at the beginning of Section III. As in the Standards and Criteria Tables, if *Professional Standards* are replicated in Massachusetts state regulations (*Regulatory Standards*), we have marked the detailed *Professional Standards* with an asterisk. In addition, some standards apply only to new construction, and we have noted them accordingly.

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<sup>9</sup> Evans, op. cit.

<sup>10</sup> Moore 2001. op. cit.

<sup>11</sup> Intercultural Center for Research in Education and National Institute on Out-of-School Time, 2005. *Pathways to Success for Youth: What Counts in After-School*, p. 26

## **I. The Facilities Standards**

1. **INSPECTIONS:** The facility meets all local and state inspection, licensing and code requirements to ensure the health and safety of all persons who occupy the space and to support basic program operations. All inspections are current.
  2. **SITE LOCATION, ORIENTATION AND LAYOUT:** The facility is located on a site that supports the program activities. The location is convenient to transportation and basic community services, and makes best use of the features of the site.
  3. **VEHICULAR ACCESS AND PARKING AREAS:** The facility drop-off/pick-up and general parking areas are accessible, easy to navigate, safe for vehicular and pedestrian traffic, and adequate to address parking needs.
  4. **BUILDING ENTRY/LOBBY:** The entrance to the facility is visible, secure and accessible. It welcomes children and adults into the center while providing an appropriate level of security.
  5. **ENVELOPE & SYSTEMS:** The facility is safe, secure and accessible. The external and internal envelope and structures (roof, ceilings, doors, walls, floors, windows, exits, stairways) are in good repair and well-maintained. There is sufficient capacity in the electrical, heating, ventilation and cooling, plumbing, fire, lighting and water systems to meet all regulations and ensure the comfort and safety of building occupants.
  6. **CHILD ACTIVITY SPACE:** The facility provides sufficient child activity space designed to support program activities, including educational activities, hygiene and routine care. The space is divided into zones for messy, quiet, and active activities. It welcomes and engages children and youth and makes them feel secure and comfortable.
  7. **ADULT ACTIVITY SPACE:** The facility includes space for reception and administrative offices, staff needs for meeting, planning and relaxation, and space for parents. It is equipped with furnishings, appropriate technology and other resources to support a professional staff.
  8. **SUPPORT SPACE:** The facility includes sufficient space for all functions that support program operations, including food preparation, cleaning and maintenance, laundry and long-term storage.
  9. **ENVIRONMENTAL HEALTH:** The facility meets environmental health standards in the management of hazardous materials, provisions for safe drinking water, recycling and refuse, temperature and humidity, and storage of potentially toxic substances.
  10. **OUTDOOR SPACE & ACTIVITIES:** The facility provides sufficient outdoor space and equipment suitable for the ages of the children in the program. The space and equipment offer access to nature and natural materials, opportunities for healthy physical activities and learning.
- APPENDIX A: ACCESSIBILITY:** The facility provides accessible indoor and outdoor space and equipment to provide persons with disabilities the full and safe use of the buildings and grounds.

## II. Standards and Criteria Tables

<b>1. INSPECTIONS:</b> The facility meets all local and state inspection, licensing and code requirements to ensure the health and safety of all persons who occupy the space and to support basic program operations. All inspections are current.	
<b>Criteria</b>	<b>Regulatory Standards</b>
1.1 Building Code Inspection	Certificate of inspection from the Department of Public Safety or the local building inspector certifying that the facility complies with the State Building Code.
1.2 Certificate of Occupancy	A copy of the Certificate of Occupancy and Use shall be posted at the main entry or be made readily available for inspection.
1.3 Egress	The egress must comply with the state building code and with the state fire code.
1.4 Elevators	The program must meet state elevator regulations.
1.5 Fire Safety Inspection	The licensee shall submit evidence of compliance with applicable fire codes.
1.6 Heating	The program must meet 606 CMR 7.00: Standards For The Licensure Or Approval Of Family Child Care; Small Group And School Age And Large Group And School Age Child Care Programs governing fuel burning stoves.
1.7 Health Inspection	The program must meet 606 CMR 7.00: Standards For The Licensure Or Approval Of Family Child Care; Small Group And School Age And Large Group And School Age Child Care Programs governing health inspections.
1.8 EEC License	The program must be licensed by the Massachusetts Department of Early Education and Care to provide child care.
1.9 Lead Paint Inspection	Programs serving any child younger than 5 years old: The program must meet 606 CMR 7.00: Standards For The Licensure Or Approval Of Family Child Care; Small Group And School Age And Large Group And School Age Child Care Programs governing lead paint inspection.
1.10 Pool Inspection	The program must meet 606 CMR 7.00: Standards For The Licensure Or Approval Of Family Child Care; Small Group And School Age And Large Group And School Age Child Care Programs governing pool and pool roof inspections.
1.11 Porches & Decks Inspection	Porches and decks must be inspected and approved by the EEC before use by child care children.
1.12 Water Source Inspection	The program must meet 606 CMR 7.00: Standards For The Licensure Or Approval Of Family Child Care; Small Group And School Age And Large Group And School Age Child Care Programs governing water source inspections.

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**2. SITE LOCATION, ORIENTATION AND LAYOUT:** The facility is located on a site that supports the program activities. The location is convenient to transportation and basic community services, and makes best use of the features of the site.

Criteria	Regulatory Standards	Professional Standards	Best Practices
2.1 Site Location			(For new construction) - The facility is located on a site that supports the program activities and the health and safety of children and staff. The location is convenient to transportation and basic community services, and makes best use of the natural features of the site.

**3. VEHICULAR ACCESS AND PARKING AREAS:** The facility drop-off/pick-up and general parking areas are accessible, easy to navigate, safe for vehicular and pedestrian traffic, and adequate to address parking needs.

Criteria	Regulatory Standards	Professional Standards	Best Practices
3.1 Drop-Off/Pick-Up and General Parking			Design bus drop-off/pick-up, parking and traffic pattern to maximize access and safety.
3.2 Emergency Vehicle Access			At least one emergency parking place must be provided as near to the center as possible. Provide emergency vehicle access into the playgrounds via a gate.

**4. BUILDING ENTRY/LOBBY:** The entrance to the facility is visible, secure and accessible. It welcomes children and adults into the center while providing an appropriate level of security.

Criteria	Regulatory Standards	Professional Standards	Best Practices
4.1 Entry			The main entry is designed to provide security, support energy conservation, and provide a welcoming transition space for families, staff and visitors.

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<b>5. ENVELOPE &amp; SYSTEMS:</b> The facility is safe, secure and accessible. The external and internal envelope and structures (roof, ceilings, doors, walls, floors, windows, exits, stairways) are in good repair and well-maintained. There is sufficient capacity in the electrical, heating, ventilation and cooling, plumbing, fire, lighting and water systems to meet all regulations and ensure the comfort and safety of building occupants.			
<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
5.1 Alternative Energy			Use on-site alternative energy for electricity production or heating/cooling
5.2 Ceilings	Ceilings shall be maintained in a safe, operable and sanitary condition.	Ceilings shall be structurally sound, in good repair, easy to clean and finished to meet local health standards for exposure to toxic fumes, dust, mold, ventilation, heating, lighting and noise.	Ceilings should vary in height to provide optimal environments for children. Ceiling tiles and paint should have been tested and certified for low emissions of volatile organic compounds.
5.3 Doors	Doors meet state building code requirements.	Required means of egress doors shall be 36 inches. All other doors shall provide a minimum clear width of 32 inches. *	Doors for children and adults should provide acoustic privacy, be made of wood and appropriately glazed, with glass panes for visibility and light.
5.4 Electrical System and Electrical Outlets	Electrical system meets EEC Licensure Standards	Electrical outlets, cords, and extension cords meet NHSPS guidelines.*	Electrical outlets should be placed in locations that support program activities, and there should be sufficient outlets to meet program needs.
5.5 Exits	Exits and evacuation routes meet state building code and fire prevention regulations.	Exits and evacuation routes meet NHSPS guidelines.	Exits to the outside should facilitate evacuation of all children and provide direct access to the outside from every child activity room.
5.6 Exterior Walls	Exterior walls shall be maintained in a safe, operable and sanitary condition.	Every exterior wall shall be structurally sound, weather-tight, and water-tight and finished to control mold, dust, and entry of pests into the child care space.*	Walls above grade must meet specific insulation requirements.

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<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
5.7 Fire System	Meet applicable state fire code and building code regarding carbon monoxide detectors, smoke detectors and fire protection systems.	Fully working fire extinguishers, fire alarms and carbon monoxide detectors are installed in each classroom and are tagged and serviced annually.*	
5.8 Floors	Meet applicable building code requirements for floors.	Floors are structurally sound, in good repair and safe. Floors are finished to control exposure to levels of toxic fumes, dust, mold, ventilation, heating, lighting and noise deemed hazardous by local health authorities.*	Floors should have a combination of carpeting, large area rugs and hard surfaces for specific activity areas, by selection of materials that support health and safety.
<b>5.9 HVAC (Heat, Ventilation, Air Conditioning Systems)</b>			
5.9A Heating Systems	Meet EEC Licensure Standards and state building code for heating and cooling systems and equipment.	Meet NHSPS guidelines for heating and cooling systems and equipment.*	
5.9B Air Conditioning (Temperature & Humidity)	Meet EEC Licensure Standards for temperature.	All rooms that children use are heated, cooled, and ventilated to maintain room temperature and humidity level.	Heating and cooling systems include temperature controls for each classroom. Meet ASHRAE and GSA standards for temperature and humidity.
5.9C Ventilation Systems	Meet state building code requirements and related maintenance standards.	All rooms that children use are ventilated to maintain room temperature and humidity level. Ventilation can be controlled.	Ventilation systems meet standards for temperature and humidity, air exchange effectiveness, carbon dioxide levels. Include air returns over diaper & toilet areas, and meet guidelines in areas where chemicals or cleaning products are used.

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<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
5.10 Lighting-artificial	Meet EEC Licensure Standards for lighting.	All areas of the facility shall have glare-free natural and/or artificial lighting that provides adequate illumination and comfort for facility activities. Lighting levels must be capable of being reduced during nap times while providing sufficient illumination to ensure staff can observe children.*	Lighting should be specific to the activity in that area, including a mix of natural and artificial light that can be adjusted by staff in each classroom.
5.11 Roof	Roofs shall be maintained in a safe, operable and sanitary condition.	Roof shall be structurally sound, weather-tight, and water-tight and shall be finished to control mold, dust, and entry of pests into the child care space.*	Roofs meet SRI (Solar Reflectance Index) standards for roof type, and appropriate insulation standards.
5.12 Safety	Physical facilities are safe, clean, in good repair and free from hazards and clutter.	All areas, both indoors and outdoors, are free from glass, trash, sharp or hazardous items, and visible soil, and are in clean condition.*	
5.13 Security		If emergency exits lead to potentially unsafe areas for children, emergency exits alert staff if child attempts to leave.	The location should be a defensible space with a secure perimeter, appropriate lighting and controlled access and egress.
5.14 Stairways	Stairways and stairwells meet EEC Licensure Standards.	Stairways and stairwells meet NHSPS guidelines.	
5.15 Storage in Center		The facility shall provide and use space to store play and teaching equipment, supplies, records and files.	10% of the building's square footage needs to be allocated to storage, and includes a centrally located resource room for bulk storage.

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<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
5.16 Interior Walls	Meet state building code requirements for maintenance.	Every interior wall shall be structurally sound, in good repair, easy to clean, and meet local health and safety standards.*	Wall materials and finishes meet environmental standards. Wall configurations and color schemes create interest, support the display of artwork and are varied to support program activities.
5.17 Water Use			Water systems meet EPA fixture performance requirements and, in the aggregate, reduce potable water use by 20%.
5.18 Windows	Meet EEC Licensure Standards and building code requirements for windows.	All windows and other openings used for ventilation shall meet NHSPS guidelines.*	Exterior windows provide light control and energy conservation, optimizing daylight while avoiding glare. All windows are appropriate to the ages of the children in the program, and provide adequate direct line of sight.

<b>6. CHILD ACTIVITY SPACE:</b> The facility provides sufficient child activity space designed to support program activities, including educational activities, hygiene and routine care. The space is divided into zones for messy, quiet, and active activities. It welcomes and engages children and youth and makes them feel secure and comfortable.			
<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
6.1 Activity Space Layout	Provide child activity space that meets EEC Licensure Standards.	Design child activity space to support program activities and prevent intermingling of children from different groups.	Design child activity space to make good use of fixed features, different zones, and variations in surfaces. Include soft elements, and, for school age programs, a computer lab.

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<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
6.2 Activity Space Size	Meet EEC Licensure Standards for square feet of activity space per child.	School-age programs meet COA standards for specific activities. Early Childhood programs meet NAEYC standards for primary indoor activity areas.*	(ECE only) Design classrooms to accommodate the number of children for each age group. Classrooms should be flexible enough to adjust to changing program needs.
6.3 Classroom Acoustics		The program has taken measures in all rooms occupied by children to control noise levels so normal conversation can be heard without raising one's voice. Each classroom provides acoustical separation of children from separate groups.	Classroom is designed to reduce noise and has materials with appropriate acoustical materials.
6.4 Children's Bathrooms	Meet EEC Licensure Standards for toilets for children.	Toilets, drinking water, and hand-washing facilities are within 40 feet of the indoor areas that children use. Bathrooms meet NHSPS guidelines.	Water-conserving toilets, child-height hand washing sinks and drinking fountains are located in each classroom area. Toilet areas provide privacy and allow supervision.
6.5 Classroom Entrance			Each child activity room must have a distinct and welcoming entrance, as well as a second entrance to the playgrounds.
6.6 Classroom Pathways	Space is arranged to provide clear pathways for movement from one area to another and to allow visual supervision by educators.	Pathways allow movement from one area to another without disturbing other children's work and play.	

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<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
6.7 Classroom Sink(s)	Facility provides running water in sinks used by children; water temperature meets EEC Licensure Standards.	Running water is conveniently located and accessible to children and youth of varying heights; hand-washing facilities are within 40 feet of indoor areas that children use. (ECE only) Each classroom has sinks with running water for hand washing.	Child-height hand washing sinks and drinking fountains are located in each classroom. Classrooms also include an adult height art sink with art supply storage, display and drying areas. Classroom sinks are equipped with a single-lever faucet; sink area has impervious floor coverings and paper towel dispenser.
6.8 Classroom Storage and Teacher Work Area		There is adequate and convenient storage space for equipment and materials.	Have adequate storage for the items required for a quality program – including cots, strolling equipment, curriculum materials, and supplies – with some lockable storage. Provide an adult-scale counter of solid-surface material, and impervious to water.
6.9 Cubby Area in Classroom	Sufficient space, accessible to children, for each child to store clothing and other personal items in a safe, sanitary manner.	Individual space for each child's belongings.	Cubbies should be secured to the floor and wall; cubbies should be compartmentalized open-front and child-size, with clear area in front for access.
6.10 Diapering (programs serving children who are under two years and nine months of age and/or not toilet trained)	Diapering areas are separate from areas used for food prep and service, and used only for diapering. Diapering area has running water or appropriate alternative and meets EEC Licensure Standards for cleanliness and health.	Diapering areas are not used for other purposes, and meet NHSPS and NAEYC guidelines.	Diapering area is located so that a teacher can see children and children can see the teacher. Diapering area includes paper towel, soap, and rubber glove dispensers, as well as appropriate steps to assist child's access.

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<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
6.11 Display Area	Display area meets Fire Prevention regulations.	Child activity space contains places for displaying children's work, some of which is at children's eye level.	Displays of child's art work and projects include wall and floor displays and deep wall recesses or niches with accent lighting to highlight children's work.
6.12 Eating Area	The facility provides space sufficient for children to eat in an un-crowded manner and to meet the needs of all children.	The child care staff shall ensure that children who do not require highchairs are comfortably seated at tables while eating.	Eating area is in a pleasant area with natural light and lots of displayed items of interest. Children older than infant age need movable chairs and tables of appropriate scale for their eating area.
6.13 Furnishings	Furnishings and installed fixtures are appropriate to the ages, needs and developmental levels of the children enrolled and meet EEC Licensure Standards for safety of furniture and play equipment.	Furnishings are kept in good repair and are safe, durable and meet U.S. Consumer Product Safety Commission recommendations.* ( Preschool and school age) Indoor space is arranged to support children's independent use of materials and space.	Aesthetic qualities and green design are considered in furniture and permanent building components.
6.14 Lofts/Platforms		Lofts, indoor climbers and other play units are constructed to prevent falls, and/or safety surfacing is installed in the fall zone.	Classrooms include level changes, raised areas, lofts and platforms appropriate to the age of the children in the classroom.
6.15 Large Motor/Multi-Purpose Room		When outdoor opportunities for large-motor activities are not possible because of conditions, the program provides similar activities inside, with appropriate equipment.	Multipurpose rooms should include high ceilings, acoustical treatment or separation, a hard, durable, washable surface as wall finish, protective resilient surfaces in fall zones, storage for equipment and supplies.

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<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
6.16 Nursing and Lactation/Feeding (ECE only)		Nursing mothers have a place to breast-feed their children that meets their needs for comfort and privacy.	Provide a quiet, semi-private area in the infant/toddler room for a parent to visit and nurse/feed his or her child.
6.17 Sleep and Rest Area (ECE only)	Meet EEC Licensure Standards for rest and sleep areas.	Sleep and rest area meets NAEYC and NHSPS guidelines.*	Infant sleeping areas should be in a somewhat separate space within the classroom where infants can sleep according to their individual schedules. Sleeping areas meet GSA standards for space between infant cribs, supervision, lighting and presence of evacuation cribs.

<b>7. ADULT ACTIVITY SPACE:</b> The facility includes space for reception and administrative offices, staff needs for meeting, planning and relaxation, and space for parents. It is equipped with furnishings, appropriate technology and other resources to support a professional staff.			
<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
7.1 Director's Office	There must be designated space, separate from children's play or rest areas, for administrative duties and educator and parent conferences.	The work environment includes an administrative area for planning or preparing materials that is separated from the children's areas. *	Provide appropriate work, storage and conference space for the director, adjacent to the reception area and accessible to visitors, with clear views of the main entry, reception and as many activity rooms as possible. Furniture should meet green standards.
7.2 Receptionist/Administrator's Office		The work environment includes an administrative area for planning or preparing materials that is separated from the children's areas.	Provide work, lockable storage, and conference space for the administrator.

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<b>7. ADULT ACTIVITY SPACE:</b> The facility includes space for reception and administrative offices, staff needs for meeting, planning and relaxation, and space for parents. It is equipped with furnishings, appropriate technology and other resources to support a professional staff.			
<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
7.3 Staff Room	There must be designated space, separate from children's play or rest areas, for administrative duties and educator and parent conferences.	The work environment includes an administrative area for planning or preparing materials that is separated from the children's areas. It includes an adult sized bathroom and secure place to store personal belongings.	Staff room is separate from public and children's areas, includes storage for curriculum & training materials, comfortable seating, food preparation area, computer(s) with internet access, furnishings that meet green standards. Provide adult toilet outside toddler and preschool classrooms and in or near infant classrooms.
7.4 Family Resource Room		The environment contains clearly defined places where families can gather information about their child's day.	Provide family resource room with sitting area, materials on parent education and child development, and a children's book- and toy-lending library.
7.5 Storage of Medication	Meet EEC Licensure Standards for the storage of medication.	Meet NAEYC and NHSPS guidelines for the storage of medication. *	
7.6 Mildly Ill Children	The individual needs of the mildly ill child must be met, as indicated by the health condition of the child.	The child is made comfortable in an appropriate location where he or she is supervised by a familiar caregiver.	If the sick bay is a separate space, it should be adjacent to the center director's office and near a toilet, and appropriately furnished.

<b>8. SUPPORT SPACE:</b> The facility includes sufficient space for all functions that support program operations, including food preparation, cleaning and maintenance, laundry and long-term storage.			
<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
8.1 Center Kitchen	Meet EEC Licensure Standards for center kitchen.	If program provides food for meals and snacks, the food preparation, serving, and storage meet USDA and CACFP guidelines. There are no walk-in freezers or refrigerators that do not open from the inside.	Provide fully-stocked kitchen, designed to promote health and safety, with appropriate electrical outlets and Energy Star® equipment and appliances.

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<b>8. SUPPORT SPACE:</b> The facility includes sufficient space for all functions that support program operations, including food preparation, cleaning and maintenance, laundry and long-term storage.			
<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
8.2 Food Preparation in Classroom			Provide appropriate storage, Energy Star® equipment and appliances, and materials that meet green and safety standards. Infant and toddler classrooms' food prep area must be able to store and heat individual bottles and other prepared food brought from home.
8.3 Warming/ Snack Kitchen	If food is prepared off-site, the food must be prepared at a facility that has a Food Service permit or evidence of inspection from the local health department. Meals and snacks provided by parents must be stored safely.	If program provides food for meals and snacks, the food preparation, serving, and storage meet USDA and CACFP guidelines.	Warming/snack kitchen is at least 150 square feet, is protected from children, and has adequate storage and good ventilation. It uses Energy Star® equipment and appliances.
8.4 Washer and Dryer		Each center shall have a mechanical washing machine and dryer on site or shall contract with a laundry service.	Program has a small lockable laundry room with full-sized washer and dryer, and appropriate ventilation, electricity, drainage and equipment.

<b>9. ENVIRONMENTAL HEALTH:</b> The facility meets environmental health standards in the management of hazardous materials, provisions for safe drinking water, recycling and refuse, temperature and humidity, and storage of potentially toxic or dangerous materials.			
<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
9.1 Asbestos	Facility complies with MA Dept of Environmental Protection regulations regarding asbestos.	Any asbestos, fiberglass, or other friable material or any material that is in a dangerous condition must be removed. Non friable asbestos must be identified to prevent disturbance and/or exposure during remodeling or future activities.	

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<b>9. ENVIRONMENTAL HEALTH:</b> The facility meets environmental health standards in the management of hazardous materials, provisions for safe drinking water, recycling and refuse, temperature and humidity, and storage of potentially toxic or dangerous materials.			
<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
9.2 Drinking Water	The licensee must provide a source of sanitary drinking water located in or convenient to rooms occupied by children.	Drinking water must be accessible to children indoors and outdoors, and checked for lead and other toxic materials.	
9.3 Recycling and Refuse	Garbage must be kept in lined and covered containers.	Garbage shall be kept in containers approved by the regulatory health authority.*	The facility must meet any local ordinances for recycling space, and provide an easily accessible area for recycling.
9.4 Toxins	Toxic substances must be used and stored in compliance with EEC Licensure Standards.	Meets NAEYC and NHSPS guidelines for pest management and the storage of toxic substances.*	Materials used in facility have been tested and certified for low emissions of volatile organic compounds (VOC's).

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<b>10. OUTDOOR SPACE &amp; ACTIVITIES:</b> The facility provides sufficient outdoor space and equipment suitable for the ages of the children in the program. The space and equipment offer access to nature and natural materials, opportunities for healthy physical activities and learning.			
<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
10.1 General Playground Safety	The outdoor play area meets EEC Licensure Standards for safety.	The outdoor play area and equipment are kept in good repair, and are clean, safe and protected by appropriate fencing or barriers.*	
10.2 Age-appropriate Design and Activities	The outdoor play space must be appropriate for each age group served.	Playground is inspected by certified playground safety inspector. There should be a clear separation for the play areas for children ages 0-2, 2-5, and 5-12; each area should have a variety of age- and developmentally appropriate materials and equipment available that offer various levels of challenge.	The play areas for infants, toddlers and preschoolers meet DOD guidelines for design.
10.3 Dramatic Play		The outdoor environment includes dramatic play equipment.	Include an appropriately-designed dramatic play area for preschoolers.
10.4 Active Outdoor Play		The outdoor play area should accommodate active play. For school age children, this should include a hard surface for activities such as basketball and bike riding, as well as a large field area for sports activities.	
10.5 Quiet area		There is a protected area for quiet play and socializing.	
10.6 Sand and Water Play		Sand play areas or sandboxes should be distinct from fall zones. Sandboxes have appropriate drainage and are covered when not in use.	Provide water for water play and filling wading pools. For preschoolers, include facilities for play with sand and water and place adjacent to one another allowing these activities to intermingle. For toddlers, sandboxes should have a retaining border that does not pose a tripping hazard.

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<b>10. OUTDOOR SPACE &amp; ACTIVITIES:</b> The facility provides sufficient outdoor space and equipment suitable for the ages of the children in the program. The space and equipment offer access to nature and natural materials, opportunities for healthy physical activities and learning.			
<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
10.7 Equipment Safety	The outdoor equipment meets EEC Licensure Standards for safety.	Large equipment is anchored appropriately. Equipment, elevated surfaces and equipment arrangement meets safety standards for given age of children.	Outdoor play area does not use metal slides, enclosed tunnel slides, spring mounted rocking toys, merry-go-rounds, or trampolines.
10.8 Fencing and Barriers	The outdoor play area meets EEC Licensure Standards for fencing.	Fencing meets NHSPS guidelines.	Fences are specific to the activity area and include appropriate gates for occupant egress.
10.9 Access from Classrooms			The outdoor activity area is directly accessible from the building and adjacent to activity rooms. Transitional areas between interior and exterior spaces are located outside each group room to be used for activities.
10.10 Natural Elements and Landscaping	The outdoor play area must provide for both direct sunlight and shade.	Outdoor play areas accommodate exploration of natural environment, including a variety of natural and manufactured surfaces, and areas with natural materials such as nonpoisonous plants, shrubs, and trees. Outdoor play area includes shaded play areas.*	Outdoor play areas incorporate a variety of textures, shade areas and sunlight, plants appropriate to program location, and appropriate drainage systems.
10.11 Size, Layout, Circulation	Outdoor space meets EEC Licensure Standards for size.	The program provides at least 75 square feet of outside play space for each child playing outside at any one time. Porches shall be constructed for safe use, kept in sound condition, well lighted, and in good repair.*	Outdoor play area should include wide pathways with minimal slopes, dedicated pathways for wheeled toys, access for wheelchairs and strollers, as well as maintenance equipment. The outdoor play area should be accessible from the classroom and outside the site, and be designed to be open to many interpretations.

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<b>10. OUTDOOR SPACE &amp; ACTIVITIES:</b> The facility provides sufficient outdoor space and equipment suitable for the ages of the children in the program. The space and equipment offer access to nature and natural materials, opportunities for healthy physical activities and learning.			
<b>Criteria</b>	<b>Regulatory Standards</b>	<b>Professional Standards</b>	<b>Best Practices</b>
10.12 Outdoor Storage		Outdoor games and sports equipment are stored close to the activity space, or moved near the activity space during the time children will be using it.	Provide enclosed, weather-tight, vandal-proof storage in each play area, clearly labeled to indicate contents.
10.13 Outdoor Surfacing	Meet EEC Licensure Standards for surfacing.	Surfaces are free from standing water, animal feces, and foreign objects and use appropriate surface materials. Surface around playground equipment have at least 6 inches of appropriate materials or mats of safety-tested rubber or other cushioned materials. Resilient surfacing should extend six feet beyond the limits of stationary equipment.	Surfaces use a variety of surface materials, with varying finishes, patterns, textures, and colors to stimulate interest and increase play opportunities.

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### III. Detailed Criteria

Each of the criteria, above, is grounded in existing regulations, professional standards, or best practices. In this section, we provide the exact citations for the sources for each criterion. The authors selected the criteria shown in this report for the purposes of this report only. Meeting the selected criteria in this report is not the same as meeting all the standards of the organizations listed below. We started to compile the standards in late 2008; some sources have updated their materials since then or are in the process of doing so, and we have indicated that below. The sources, and the abbreviations we use in this document, are:

#### Regulatory Standards

Americans with Disabilities Act Title 42, Chapter 126.

Department of Justice. (1994). *ADA Standards for Accessible Design*. Appendix A of the Americans for Disability Act Title III Regulations (28 CFR Part 36, revised July 1, 1994). Available at: <http://www.ada.gov/adastd94.pdf> . Abbreviation: ADA

Massachusetts Architectural Access Board (AAB) standards (2006). Abbreviation: 521 CMR

Massachusetts Department of Early Care and Education (2009). *Standards for the licensure or approval of family child care; small group and school age and large group and school age child care programs. Effective 1/10*. Abbreviation: 606 CMR 7.07

Massachusetts Department of Environmental Protection. *Regulations for Air Pollution Control*. Abbreviation: 310 CMR 7.15

Massachusetts State Board of Building Regulations and Standards (2008). *The Massachusetts State Building Code*. Massachusetts: The Commonwealth of Massachusetts. Abbreviation: 780 CMR

The Uniform Federal Accessibility Standards (UFAS) (1982). Available at <http://www.access-board.gov/ufas/ufas-html/ufas.htm> Abbreviation: UFAS

#### Professional Standards

American Academy of Pediatrics, the American Public Health Association and the National Resource Center for Health and Safety in Child Care and Early Education (2011). *Caring for our Children, National Health and Safety Performance Standards: Guidelines for Early Care and Education Programs. 3rd Edition*. Elk Grove Village, IL: American Academy of Pediatrics; Washington, DC: American Public Health Association. Also available at <http://nrckids.org>. Abbreviation: NHSPS

Council on Accreditation. (2009). *Afterschool Standards*. Available at <http://coaafterschool.org/standards.php?navView=private&core?id=7>. Abbreviation: COA

Harms, T., Clifford, R.M., Cryer, D. (2005) *Early Childhood Environment Rating Scale Revised Edition (ECERS)*. New York: Teachers College Press. Abbreviation: ECERS

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New York: Teachers College Press. Copyright © 2005 by Thelma Harms, Richard M. Clifford, and Debby Cryer. All rights reserved.

Harms, T., Cryer, D., and Clifford, R.M. (2006). *Infant/Toddler Environment Rating Scale Revised Edition (ITERS)*. New York: Teachers College Press. Abbreviation: ITERS.

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Harms, T., Jacobs, E., & White, D. (1996). *School-Age Care Environment Rating Scale (SACERS)*. New York: Teachers College Press. Abbreviation: SACERS

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Massachusetts Department of Early Education and Care. (2010). *Center and School-based QRIS Standards Provisional Version and After School and Out Of School Time QRIS Standards Provisional Version* Revised December 14, 2010. Abbreviations: Center and School Based QRIS Standards and After School and Out of School Time QRIS Standards

National Association for the Education of Young Children (NAEYC). 2007. *NAEYC Early Childhood Program Standards and Accreditation Criteria: The Mark of Quality in Early Childhood Education*. Washington, DC: Author. [www.naeyc.org/academy](http://www.naeyc.org/academy) Abbreviation: NAEYC 2007

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National Association for the Education of Young Children (NAEYC). 2012. *New Guidance on NAEYC Accreditation Criteria. Effective April 15, 2012*. Washington, DC: Author. [www.naeyc.org/academy](http://www.naeyc.org/academy) Abbreviation: NAEYC

Copyright © 2007 NAEYC®. Reprinted with permission. Meeting the selected NAEYC accreditation criteria shown in this report is not the same as meeting the NAEYC Early Learning Childhood Program Standard on Physical Environment.

National Program for Playground Safety (NPPS). (2005). *Child Care Assessment Manual and Workbook for Outdoor Play Environment*. Cedar Falls, Iowa: University of Northern Iowa. Abbreviation: NPPS

US Consumer Product Safety Commission, 2010. *Safety Standards for Full-Size Baby Cribs and Non-Full –Size Baby Cribs; Final Rule*. Federal Register/Vol.75, No. 248/Tuesday, December 28, 2010/Rules and Regulations. Available at <http://www.cpsc.gov/businfo/frnotices/fr11/cribfinal.pdf>. Abbreviation CPSC Cribs

US Consumer Product Safety Commission, (2010). *Public Playground Safety Handbook*.  
Abbreviation: CPSC

### Best Practices

American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE),  
*Complete Set of Standards (Print Edition)*. Available at [www.ashrae.org](http://www.ashrae.org) Abbreviation:  
ASHRAE

Collaborative for High Performance Schools. *2009 Edition Massachusetts CHPS Criteria for  
New Construction and Major Modernizations*. 2010. San Francisco: Collaborative for  
High Performance Schools. Available at [www.chps.net/massachusetts/](http://www.chps.net/massachusetts/) Abbreviation:  
CHPS

Gilmore, F. (2005). *Health Considerations when Choosing School Flooring*. Dorchester, MA:  
Asthma Regional Council of New England.

Olds, A.R. (2001). *Child Care Design Guide*. New York: McGraw-Hill. Abbreviation: Olds, A.R.  
*Child Care Design Guide*, ©2001 McGraw-Hill Companies, Inc.

This material is reproduced with permission of The McGraw-Hill Companies. McGraw-Hill makes no representations or warranties as to the accuracy of any information contained in the McGraw-Hill material, including any warranties or merchantability or fitness for a particular purpose. In no event shall McGraw-Hill have any liability to any party for special, incidental, tort, or consequential damages arising out of or in connection with the McGraw-Hill Material, even if McGraw-Hill has been advised of the possibility of such damages.

Sushinsky, G.F. (2005). *Surfacing Materials for Indoor Play Areas: Impact Attenuation Test Report*. U.S. Consumer Product Safety Commission.

United States Army. (2004). *The Army Standard for Child Development Center Construction (for school-age children)*,  
<[https://www.idsarmy/hqda.pentagon.mil/army\\_ids/IDG/Army\\_Standard\\_for\\_CDC\\_Construction\\_v3\\_Approved\\_Oct04.doc](https://www.idsarmy/hqda.pentagon.mil/army_ids/IDG/Army_Standard_for_CDC_Construction_v3_Approved_Oct04.doc)>. Abbreviation: Army CDC

United States of America Department of Defense (2002). *Unified Facilities Criteria (UFC) Design: Child Development Centers*. Available at:  
[http://www.wbdg.org/ccb/DOD/UFC/ufc\\_4\\_740\\_14.pdf](http://www.wbdg.org/ccb/DOD/UFC/ufc_4_740_14.pdf). Abbreviation: DOD

United States of America Department of Defense. (2006). *Unified Facilities Criteria (UFC): Youth Centers*. Available at: [http://www.wbdg.org/ccb/DOD/UFC/ufc\\_4\\_740\\_06.pdf](http://www.wbdg.org/ccb/DOD/UFC/ufc_4_740_06.pdf).  
Abbreviation: DOD Youth

US Department of Health and Human Services (2005). *Head Start Design Guide: A Guide for Building a Head Start Facility*. Arlington, VA: National Head Start Training and Technical Assistance Resource Center. Abbreviation: Head Start

US General Services Administration. 2003 (GSA) (2003). *Child Care Center Design Guide*. New York: GSA Public Building Service Office of Child Care. Abbreviation: GSA

## Detailed Criteria for Facilities Standards

### 1. INSPECTIONS

#### 1.1 Building Code Inspection

- a. Certificate of inspection from the Department of Public Safety or the local building inspector certifying that the facility complies with the State Building Code. (606 CMR 7.07 (2))
- b. Inspections and certifications for specified use groups must be annual and prior to issuance of each new certificate for Group E Day Care (child day care centers) [which covers school age children and children more than two years nine months] Group A-3 [recreation centers] and Group I-4 [for children two years nine months or less]. (780 CMR Table 106) (See also 780 CMR 422)

#### 1.2 Certificate of Occupancy

- a. Buildings, in whole or in part, altered to change from one use group to another, to a different use with the same use group, the maximum live load capacity, or the occupancy load capacity shall not be occupied or used until the certificate shall have been issued certifying that the work has been completed in accordance with the provisions of the approved permits and of the applicable codes for which a permit is required. (780 CMR 120.2) A copy of the Certificate of Occupancy and Use shall be posted at the main entry or be made readily available for inspection. (780 CMR 120.5.1)

#### 1.3 Egress (done as part of the building inspection)

- a. Day Care Centers in new and existing buildings or portions, thereof shall conform to the means of egress requirements as set forth in 780 CMR 10.00 and 780 CMR 34.00. (780 CMR 422.4.1)
- b. Day cares and afterschool care programs are considered “schools” in the following context:
  1. The responsible school official shall formulate a plan for the protection and evacuation of all persons in the event of a fire, and shall include alternate means of egress for all persons involved; such plan shall be presented to and approved by the head of the fire department. (527 CMR 10.09 (1))
  2. The person in charge of each school shall see that each class instructor or supervisor shall receive proper instructions on the fire drill procedure specified for the room or area in which that person carries out his duties before he assumes such duties. (527 CMR 10.09 (2))
  3. Every student in all schools shall be advised on the fire drill procedure or shall take part in a fire drill within three days after entering such school. (527 CMR 10.09 (3))
  4. The head of the fire department, or person designated by him, shall visit each school at least four times each year for the purpose of conducting fire drills and questioning the teachers and supervisors. These drills shall be conducted without advance warning to the school personnel other than the person in charge of the school at the time. (527 CMR 10.09 (4))
  5. A record of all fire exit drills shall be kept on the premises and persons in charge of such occupancies shall file written reports at least twice a year with the head of the fire department giving the following information: time of drill, date of drill, and weather conditions when occupants were evacuated. (527 CMR 10.09 (4) (a))
- c. All exterior bridges, steel or wooden stairways, fire escapes and egress balconies shall be examined and/or tested, and certified for structural adequacy and safety every five years, by a Massachusetts registered professional engineer, or others qualified and acceptable to the



building official; said engineer or others shall then submit an affidavit to the building official. (780 CMR 1001.3.3)

#### **1.4 Elevators**

a. An annual elevator test and periodic inspection shall be required on all new and existing equipment covered by 524 CMR, except as otherwise modified by other provisions of 524 CMR or M.G.L. C. 143&64. (524 CMR 1.04(2))

#### **1.5 Fire Safety Inspection**

a. The licensee must submit evidence of compliance with applicable fire codes. (606 CMR 7.07 (3))

#### **1.6 Heating**

a. All fuel burning stoves, including but not limited to wood, coal, pellet, or gas, when used during child care, must meet applicable local and state codes and approval documentation must be provided to the Department (606 CMR 7.07 (14c1))

#### **1.7 Health Inspection**

- a. Provide evidence of inspection from local health dept when required by the DPH. 606 CMR 7.12(15)
- b. If the licensee provides food prepared on-site, the licensee must have a Food Service permit or evidence of inspection from the local health department when required by the DPH. (606 CMR 7.12 (15b))
- c. If the licensee provides food that is prepared off-site, the food must be prepared at a facility that has a Food Service permit or evidence of inspection from the local health department and must be transported to the program in appropriate sanitary containers and at appropriate temperatures. (606 CMR 7.12 (15c))

#### **1.8 EEC License**

a. [Program is licensed by the MA Department of Early Education and Care to provide child care]. (606 CMR 7.03)

#### **1.9 Lead Paint Inspection**

a. If a program serves any child younger than 5 years old, the licensee must provide evidence of a lead paint inspection from the local board of health, or the Massachusetts Department of Public Health, or a private lead paint inspection service and compliance with 105 CMR 460.000 (Department Of Public Health Prevention and Control of Lead Poisoning regulations). (606 CMR 7.07 (16a))

#### **1.10 Pool Inspection**

a. The licensee must submit copies of current pool and pool roof inspections as required by applicable law or statute. (606 CMR 7.07 (5))

#### **1.11 Porches & Decks Inspection**

a. Porches and decks must be inspected and approved by the Department [EEC] before use by child care children. (606 CMR 7.07 (8a))

#### **1.12 Water Source Inspection**

a. Provide evidence that any private well or water source has been inspected and approved by the local board of health, health department, or DEP approved private laboratory within one year of licensure and meets Department of Environmental Protection Standards, for drinking water, if

applicable. Programs using well-water to serve twenty-five or more people for at least 60 days each year require DEP approval as small public water suppliers. (606 CMR 7.07 (4))

## **2. SITE LOCATION, ORIENTATION AND LAYOUT**

### **2.1.3. Best Practices (For new construction)**

- a. Locate building within ½ mile of a commuter rail, light rail or subway station or within 1/4 mile of one more bus lines. (CHPS, SS.C5.1, page 128)
- b. Site the [school] building within ½ mile of at least eight of the basic services: 1) Supermarket; 2) Commercial Office Building; 3) Convenience Grocery; 4) Day Care; 5) Cleaners; 6) Fitness Center; 7) Hair Care; 8) Hardware; 9) Laundry; 10) Library; 11) Medical/Dental Services; 12) Senior Care Facility; 13) Public Park; 14) Pharmacy; 15) Post Office; 16) Bank; 17) Community Center (e.g., recreation center, after-school program building, or art center); 18) Community Park; 19) Theater or Museum. (CHPS, SS.C2.1, page123)
- c. Orient the building(s) to take advantage of maximum natural daylight OR plot shadow patterns from surrounding buildings and place buildings to optimize access to daylight (for urban-infill sites). (CHPS, SS.C4.1, page 126)
- d. Consider prevailing winds when determining the site and building layout. For example, consider how the shape of the building itself can create wind-sheltered spaces and consider prevailing winds when designing parking lots and driveways to help blow exhaust fumes away from the school. (CHPS, SS.C4.1, page 126)
- e. Take advantage of existing land formations and vegetation to provide shelter from extreme weather or to deflect unwanted noise. (CHPS, SS.C4.1, page 126)
- f. Plant or protect existing deciduous trees to block summer sun and allow winter solar gain. Plant or protect existing coniferous trees to block winter wind. Planting should be done an adequate distance from the building to prevent the accumulation of water along the building envelope. (CHPS, SS.C4.1, page 126)
- g. Minimize importation of non-native soils and exportation of native soils. Optimize Cut & Fill (ideally in 1:1 proportions) during clearing and excavation. (CHPS, SS.C4.1, page 126)
- h. Create physical connections to bike paths, natural features, or adjacent buildings. (CHPS, SS.C4.1, page 126)
- i. Site the building to maximize opportunities for on-site renewable energy generation. (CHPS, SS.C4.1, page 126)

## **3. VEHICULAR ACCESS AND PARKING AREAS**

### **3.1 Drop-Off/Pick-Up and General Parking (parents, staff, visitors)**

#### **3.1.3. Best Practices**

- a. Locate the bus drop-off/pick-up directly adjacent to the main building entrance. (DOD 3-5.4.1)
- b. Provide short-term parking spaces (15 minutes duration), based on one space per 20 children. (DOD 3-5.4.2)
- c. Locate this parking as close to the building as possible, and configure so that the majority of the parking for parents with children is on the building-side of the drive. (DOD 3-5.2)
- d. Provide parking spaces for the maximum number of staff on duty at one time. Staff parking can be configured for 90° parking. (DOD 3-5.4.4)
- e. Provide a minimum number of parking spaces for visitors at the rate of one parking space for each 12 children cared for by the facility. (DOD 3-5.4.3)

### **3.2 Emergency Vehicle Access**

#### **3.2.3. Best Practices**

- a. Provide emergency vehicle access into the playgrounds via a gate. (DOD 3-5.4.6)

b. For emergency purposes, at least one parking space must be provided as near to the center entrance as possible. (GSA 6.2.2)

#### **4. BUILDING ENTRY/LOBBY**

##### **4.1.3. Best Practices**

- a. The entry includes the transition space and vestibule where parents, caregivers, children, and visitors enter the facility. (DOD 4-2)
- b. The character of the main entry communicates security and professionalism to the parents. At the same time, it must be fun and engaging to children. Pay attention to the design, materials, finishes, interesting volumes and colorful details. (DOD 4-2)
- c. The entrance door must afford full visibility for children and adults. (DOD 4-2.1)
- d. The entry approach should be visible by center staff located inside. Position the reception area adjacent to the entry and director's office. (Head Start 10.2) The reception staff member seated at the desk can see the front door as well as children entering. (DOD 4-2.4)
- e. Provide a 2-part walk-off mat system for all high volume entryways to capture dirt, particulates, and moisture before they enter the building. Part one is a mat in the vestibule that scrapes dirt and moisture off of shoes allowing particles to drop below the surface of the mat. Part two is a walk-off mat in the entranceway that finishes drying and cleaning of shoes. The recommended length of part two is 15 feet. (CHPS, EQ.P3.2, page 36)
- f. A vestibule for energy conservation, conforming to barrier free accessible requirements, is required. (DOD 4-2.2)
- g. In the waiting area, include shelf/display space for parent education and program materials. (DOD 4-2.4.3) See Appendix A for more information regarding accessibility.
- h. Provide stroller storage. (GSA 3.1.1)
- i. The main entrance should be in close proximity to a barrier free accessible adult toilet room, for use by parents. (DOD 4-2.1)
- j. Provide views of the short-term-parking area from the entry vestibule and design the windows to have low sills so that children can look out of and into the center. (GSA 7.1.8)

#### **5. ENVELOPE and SYSTEMS**

##### **5.1 Alternative Energy**

##### **5.1.3. Best Practices**

- a. Use renewable energy sources for electricity production that are on-site or allocated to the facility through net metering. (CHPS, EE.C3.1, page 91)
- b. Use on-site renewable energy sources for heating/cooling. (CHPS, EE.C3.2. page 9).

##### **5.2 Ceilings**

##### **5.2.1. Regulatory Standards**

- a. All buildings and structures and all parts thereof, both existing and new, and all systems and equipment therein which are regulated by 780 CMR shall be maintained in a safe, operable and sanitary condition. (780 CMR 103.1)
- b. If the ceiling provides a fire resistant rating, no penetrations, unless fire stopped, shall be located through the ceiling. (780 CMR 103.1)

##### **5.2.2. Professional Standards**

- a. Every interior...ceiling should be structurally sound and shall be finished in accordance with local business codes to control exposure of the occupants to levels of toxic fumes, dust, and mold. (NHSPS 5.1.1.6) \*
- b....Ceilings should be in good repair, and easy to clean when soiled. (NHSPS 5.3.1.6) \*

##### **5.2.3. Best Practices**

- a. Limit ceilings in children's areas to no more than 9 feet above the floor. Other areas may warrant higher ceilings and larger volumes. Well-designed and intermittent ceiling features are encouraged as long as acoustical requirements are met. (DOD 7-1.7)
- b. Vary ceiling heights to define areas, disperse light, and create interest. Higher activity levels are often encouraged by higher ceiling heights, while quiet areas are supported by lower ceiling heights. (GSA 7.4)
- c. All ceiling and wall systems totaling 90% or more of the total areas of such systems shall meet these requirements. Ceilings and wall systems include but are not limited to ceiling insulation installed within the structural envelope, wall insulation, acoustical ceiling panels, gypsum board wall panels, tackable wall panels, and wall coverings. Ceramic tile and other organic-free metal-or mineral-based wall coverings have no testing requirements. Ceiling and wall systems shall be tested and evaluated for emissions of VOCs of concern with respect to chronic inhalation exposures. (CHPS EQ.C3.3, page 59)

### **5.3 Doors**

#### **5.3.1. Regulatory Standards**

- a. All required means of egress doors should be at least 36 inches in width. All other doors shall be at least 32 inches in width. (780 CMR 422.4.1.3)

#### **5.3.2. Professional Standards**

- a. The minimum width of any path of egress should be 36 inches. An exception is that doors should provide a minimum clear width of 32 inches. (NHSPS 5.1.4.3) \*

#### **5.3.3. Best Practices**

- a. Front door should have glazing at adult height and side-glazing for children. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 207)
- b. Interior doors should be glazed at both adult and child height and should be made of wood. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 209)
- c. Director's office door should have a window. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 208)
- d. Door [provides] acoustic privacy, yet contain glass panes for visibility and light. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 209)

### **5.4 Electrical System and Electrical Outlets**

#### **5.4.1. Regulatory Standards**

- a. All electrical outlets within the reach of children younger than school age must be made inaccessible by use of a safety device or covering that prevents access to the receptacle openings. If the covering is a shock stop, it must be of adequate size to prevent a choking hazard. (606 CMR 7.07 (10o))

#### **5.4.2. Professional Standards**

- a. All electrical outlets accessible to children who are not yet developmentally at kindergarten grade level of learning should be of a type called "tamper-resistant electrical outlets." In existing child care facilities that do not have "tamper-resistant electrical outlets," outlets should have "safety covers" that are attached to the electrical outlet by a screw or other means to prevent easy removal by a child. (NHSPS 5.2.4.2) \*
- b. The use of extension cords should be discouraged; however, when used, they shall bear the listing mark of a nationally recognized testing laboratory, and shall not be placed through doorways, under rugs or carpeting, behind wall-hangings, or across water-source areas. Electrical cords (extension and appliance) should not be frayed or overloaded. (NHSPS 5.2.4.5)

- c. Electrical cords should be placed beyond children's reach. (NHSPS 5.2.4.6) \*

#### **5.4.3. Best Practices**

- a. Provide wall duplex outlets at intervals of approximately 13 feet and provide one duplex outlet per wall on walls less than 10 feet wide. (Head Start 10.10.2)
- b. Elevated electrical outlets for equipment such as audio devices. (GSA 3.2.1)

## **5.5 Exits**

### **5.5.1. Regulatory Standards**

- a. Exits and evacuation routes must be kept clear of obstructions. (606 CMR 7.07 (1))
- b. Except as specifically permitted by 780 CMR 1008.1 egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort. (780 CMR 1008.1.8)
- c. All exterior stairways and fire escapes shall be kept free of snow and ice. (527 CMR 10.03 (13) (d))
- d. Two exits are required for all buildings with levels above the ground floor. Only one exit shall be required [if] a building has not more than one level below the first story above grade plane and 1.the travel distance is less than 75 feet, 2. the occupant load is less than 50 in Group E occupancy and less than 10 in a Group I-4 (780 CMR 1018.2, 1018.2 and Table 1018)
  - e. In any building or structure not provided with exit facilities as herein prescribed for new buildings, and, in which the exits are deemed hazardous or dangerous to life, and limb, the building official shall declare such building dangerous and unsafe in accordance with provisions of 780 CMR 121.0. (780 CMR 102.5.5)
- f. A diagram of escape routes must be posted conspicuously at each means of egress in rooms that do not have access to the outdoors. (606 CMR 7.11 (18b))
- g. Other egress/security requirements are:
  1. Delayed egress locks are not permitted in Group E occupancies (children over two years and nine months of age). (780 CMR 1008.1.8.6)
  2. Interior stairway means of egress doors shall be openable from both sides without the use of a key or special knowledge or effort. (780 CMR 108.1.8.7)
  3. Stairway discharge doors shall be openable from the egress side and shall only be locked by the opposite side. (780 CMR 1008.1.8.7 Exception 1)
  4. In stairways serving not more than four stories, doors are permitted to be locked from the side opposite the egress side, provided they are openable from the egress side. (780 CMR 1009.1.8.7 Exception 3)
  5. Entrance doors in a means of egress from a Group E occupancy (children over two years and nine months of age) are permitted to be equipped with an approved entrance and egress access control system. (780 CMR 1008.1.3.4)

### **5.5.2. Professional Standards**

- a. Doorways, exit access paths, passageways, corridors, and exits should be kept free of materials, furniture, equipment, and debris to allow unobstructed egress travel from inside the child care facility to the outside. (NHSPS 5.1.4.3) \*
- b. Each building...should be provided with a minimum of two exits at different sides of the building...leading to an open space at ground level... Each floor above or below ground level used for child care should have at least two unobstructed exits that lead to an open area at ground level and thereafter to an area that meets safety requirements... (NHSPS 5.1.4.1) \*
- c. No door should have a lock or fastening device that prevents free escape from the interior. (NHSPS 5.1.4.4) \*
- d. Emergency exits should be clearly identified and visible at all times during operation of the child care facility. The exits for egress should be arranged or marked so the path to safety outside is unmistakable. (NHSPS 5.1.4.6) \*

### **5.5.3. Best Practices**

- a. Provide a direct exit to the outside from every child activity room. (DOD 2-15.1.4)

- b. Design door thresholds and hardware to facilitate the exiting of an evacuation crib with up to four children pushed and/or pulled by a single adult. (DOD 2-15.1.7)
- c. The travel distance between any point in a sleeping room and an exit access door in that room shall not exceed 50 feet. (GSA 10.1.5)
- d. Exit signs should use LED technology and should also be EPA Energy Star® labeled. (GSA Table 10.2) –e. Emergency egress routes/exit discharge paths will not cross any vehicle access roads. (DOD 3-5.4.6)

## **5.6 Exterior Walls**

### **5.6.1. Regulatory Standards**

- a. All buildings and structures and all parts thereof, both existing and new, and all systems and equipment therein, which are regulated by 780 CMR shall be maintained in a safe, operable and sanitary condition. (780 CMR 103.1)

### **5.6.2. Professional Standards**

- a. Every exterior wall...should be structurally sound, weather-tight, and water-tight to ensure protection from weather and natural disasters. (NHSPS 5.1.1.6) \*

### **5.6.3. Best Practices**

- a. Meet the insulation standards of 780 CMR Appendix 120 AA Stretch Energy Code for walls above grade. (CHPS Appendix A., pp. 4-6.)

## **5.7 Fire System**

### **5.7.1. Regulatory Standards**

- a. The provisions of 780 CMR 9.00 shall specify where fire protections systems are required and shall apply to the design, installation, maintenance and operation of all fire systems in all buildings and structures. (780 CMR 901.1)
- b. [For all preschoolers and school age children in new construction or significant renovations], An automated sprinkler system shall be provided for Group E occupancies. (780 CMR 903.2.3)
- c. [For infants and toddler in new construction or significant renovations] An automated sprinkler system shall be provided throughout buildings with a Group I occupancy. (780 CMR 903.2.6)
- d. Smoke detectors shall be installed to ensure total coverage of the day care center and also located in front of the doors to the stairways and in the corridor providing required means of egress on all floors of the day care center...[,] (780 CMR 422.4.5.1)
- e. Approved carbon monoxide detectors must be located and maintained in the program in accordance with the provisions of the state fire safety code and guidelines. (606 CMR 7.97 (10p)) and per 527 CMR 31.04 (3) (b))

### **5.7.2. Professional Standards**

- a. Fully working fire extinguishers and fire alarms are installed in each classroom and are tagged and serviced annually. (NAEYC 2007, 9.C.11a) \*
- b. Fully working carbon monoxide detectors are installed in each classroom and are tagged and serviced annually. (NAEYC 2007, 9.C.11b) \*

## **5.8 Floors**

### **5.8.1. Regulatory Standards**

- a. If the floor provides a fire resistance rating, no penetration, unless fire stopped, shall be located through the floor. All buildings and structures and all parts thereof, both existing and new, and all systems and equipment therein, which are regulated by 780 CMR shall be maintained in a safe, operable and sanitary condition. (780 CMR 103.1)

### **5.8.2. Professional Standards**

- a. Floors...are kept in good repair and are safe, with no sharp edges, splinters, protruding or rusty nails, or missing parts. (NAEYC 9.C.07a)

b. Every interior floor... should be structurally sound and shall be finished in accordance with local building codes to control exposure of the occupants to levels of toxic fumes, dust, and mold. (NHSPS 5.1.1.6) \*

c. (Infants/Toddlers only) Floors, walls and other built-in surfaces made of easy-to-clean materials (Ex. Washable floors/floor covering and paint/wallpaper, counters and cabinets have easy-to-clean surfaces). (ITERS 1-1.7.3)

### 5.8.3. Best Practices

a. A number of pollutants that are associated with respiratory illnesses, including dusts, mold and mildew, are captured and can grow in carpets and then get released into the air. Vinyl is also subject to mold and mildew when water pools below it. Vinyl is also the most toxic flooring material to manufacture and to dispose of. Below are some better options. (Asthma Regional Council of New England, pg 2):

Area***	Common Flooring Choices	Better*
Halls and entry	Vinyl tile or sheet	<i>Better:</i> linoleum; <i>Much better:</i> terrazzo, ceramic tile or concrete with non-skid texture and walk-off mats
Classrooms	Carpet	<i>A little better:</i> VCTT carpet **; <i>Better:</i> linoleum; <i>Much better:</i> Terrazzo, ceramic tile or concrete, with washable rugs, mats or cushions as needed
Libraries	Carpet	<i>A little better:</i> VCTT carpet; <i>Better:</i> linoleum; <i>Much better:</i> Terrazzo, ceramic tile or concrete, with washable rugs and non-flooring noise abatement measures
Cafeteria and restrooms	Vinyl tile or sheet	<i>Better:</i> linoleum; <i>Much better:</i> Terrazzo, ceramic tile or concrete
Kitchen	Quarry tile and resinous epoxy	Rubber, or hard flooring (terrazzo, quarry or ceramic tile, or concrete) with anti-fatigue mats *Better for health, lower maintenance, higher durability, and less environmental impact, though upfront costs are much higher for hard flooring (terrazzo, tile and concrete).
**VCTT is vinyl compound tufted textile, a form of carpet with a thin top fuzzy layer and an impermeable backing, designed to reduce water problems, and limit trapped pollutants. ***Note: there is not enough information to include gym floors in the table.		

b. For floors in child activity areas, use a combination of carpeting, large area rugs, and hard surfacing as appropriate for the specific activity areas. (DOD 7-1.6.1)

c. Select soft floor coverings impervious to bacteria, fungus growth, and odor retentions. Use carpets and area rugs complying with fire and sanitation requirements. (DOD 7-1.6.1.2)

d. All flooring systems totaling 90% or more of the total floor area of the project shall meet the requirements described herein. Flooring systems include but are not limited to carpet with its adhesive and cushion; resilient flooring; wood flooring; ceramic tile flooring; other mineral-based flooring without any organic component, and concrete flooring. Systems shall be tested and evaluated for emissions of VOCs of concern with respect to chronic inhalation exposures. (CHPS EQ.C3.2, page 59)

e. All adhesives and sealants in quantities of 2.5 gal (10 liters) or more and totaling 90% or more of total volumes of such products applied in the project interior shall meet VOC content requirements of South Coast Air Quality Management District Rule 1168 and shall be tested and evaluated for emissions of VOCs. (CHPS EQ.C3.1, page 58).

## **5.9 HVAC: Heat, Ventilation & Air Conditioning**

### **5.9A. Heating Systems**

#### **5.9A.1. Regulatory Standards**

- a. All steam and hot water pipes and radiators must be protected by permanent screens, guards, insulation or another suitable device that prevents children from coming in contact with them. (606 CMR 7.07 (14 a))
- b. The use of portable heaters and portable radiators is prohibited during child care hours. (606 CMR 7.07 (14b))
- c. Heaters and stoves in approved space or common space used by children must be surrounded by a fireproof wall or enclosed by partitions, screens, or guards or other similar barricades that are at least three feet in height and installed at least three feet from the heaters and stoves. If non-combustible and non-heat retaining materials are used, barricades may be placed two feet away from the stove. (606 CMR 7.07 (14c2))
- d. Heaters and stoves that are not used for heating purposes during child care, or are used before child care and are sufficiently cooled to prevent a child from being burned, may be barricaded less than two feet away.(606 CMR 7.07 (14c3))
- e. Heaters and stoves that are never used for heating purposes may be barricaded two feet from the stove or be sufficiently padded to prevent a child from injury if the child falls against them. (606 CMR 7.07 (14c4))
- f. All working fireplaces in space used by children must have a secure child proof barrier in place at all times. (606 CMR 7.07 (14d1))
- g. Boilers, furnaces or other fire units shall be enclosed as required in the International Mechanical Code listed in 780 CMR 35.00. Boiler room doors shall not open into occupied areas. (780 CMR 422.4.9)
- h. Maintenance requirements may be implemented by the manufacturer to ensure the equipment is kept in working order. All buildings and structures and all parts thereof, both existing and new, and all systems and equipment therein, which are regulated by 780 CMR shall be maintained in a safe, operable and sanitary condition. (780 CMR 103.1)

#### **5.9A.2. Professional Standards**

- a. All rooms that children use are heated, cooled, and ventilated to maintain room temperature and humidity level. (NAEYC 2007, 9.D.05)
- b. Unvented gas or oil heaters and portable open-flame kerosene space heaters should be prohibited. (NHSPS 5.2.1.10) \*
- c. ...Portable gas stoves...should not be used for space heating or any other indoor purposes. Charcoal grills should not be used for space heating or any other indoor purposes. (NHSPS 5.2.1.10) \*
- d. Electric space heaters should be attended while in use and be off when unattended; be inaccessible to children and be stable; have protective coverings to keep hands and objects away from the electric heating element...(NHSPS 5.2.1.11) \*
- e. Heating equipment and units, including hot water heating pipes and baseboard heaters with a surface temperature hotter than 120 degrees F should be made inaccessible to children by barriers such as guards, protective screens, or other devices. (NHSPS 5.2.1.13) \*
- f. Fireplaces, fireplace inserts, and wood/corn pellet stoves should be inaccessible to children... and should be installed in accordance with the local or regional building code and the manufacturer's installation instructions. The front opening should be equipped with a secure and stable protective safety screen. (NHSPS 5.2.1.12) \*

#### **5.9A.3. Best Practices**

- a. Provide separate temperature and ventilation controls for each classroom or provide each classroom with an independent temperature sensor to automatically adjust to the conditions in the individual classroom, but that is not necessarily controlled by the teacher. (CHPS, EQ.C8.2, page 69)



## 5.9B. Air Conditioning (Temperature & Humidity)

### 5.9B.1. Regulatory Standards

a. Room temperature in rooms occupied by children must be maintained at a minimum of 65°F. (606 CMR 7.07 (10i))

### 5.9B.2. Professional Standards

a. All rooms that children use are heated, cooled, and ventilated to maintain room temperature and humidity level. (NAEYC 2007, 9.D.05)

### 5.9B.3. Best Practices

a. Comply with the current ASHRAE *Standard 55* for thermal comfort standards within established ranges for Massachusetts' Climate Zone 5. (CHPS, EQ.P6.1, page 42)

Temperature/Humidity Ranges for Comfort		
Conditions	Relative Humidity	Acceptable Operating Temperatures
Summer	If 30% then	76-82 degrees F
	If 60%, then	74-78 degrees F
Winter	If 30%, then	69-78 degrees F
	If 60%, then	68-75 degrees F

b. Infant areas may be more comfortable at a 1-3 degrees warmer temperature than other areas. (GSA 10.9.1)

c. Temperature levels are measured at lower than normal heights above the floor in order to accommodate children. Children spend a great deal of time on the floor, therefore both temperature control and avoidance of drafts are very important. (GSA 10.9.1)

d. Thermostats should be accessible to the center director or other designated staff members. (GSA 10.9.1)

## 5.9C. Ventilation Systems

### 5.9C.1. Regulatory Standards

a. All buildings or structures all parts thereof, both existing and new, and all systems and equipment therein which are regulated by 780 CMR shall be maintained in safe, operable and sanitary condition. (780 CMR 103.1)

b. In any existing building, or portion thereof, (a) in which the light or ventilation do not meet applicable provisions of 780 CMR 12.0 and (b) which is deemed by the building official to be dangerous or hazardous to the health and safety of the occupants the building official shall order the abatement of such conditions to render the building or structure occupiable or habitable as applicable for the posted use and occupant load. In enforcing 780 CMR 102.5.6, the building official may require or accept engineering or other evaluations of the lighting and/or ventilation systems in order to evaluate possible dangerous or hazardous conditions and accept solutions. Where full compliance with 780 CMR for light and ventilation as required for new construction is not practical for structural and/or other technical reasons, the building official may accept compliance alternatives, or engineering or other evaluations, which adequately address the building or structure livability for the posted use and occupant load. (780 CMR 102.5.6)

### 5.9C.2. Professional Standards

a. All rooms that children use are heated, cooled, and ventilated to maintain room temperature and humidity level. (NAEYC 2007, 9.D.05)

b. Ventilation can be controlled. (SACERS 1-1.7)

### 5.9C.3. Best Practices

a. Ventilation systems must achieve an air-change effectiveness of minimum 0.9 per ASHRAE 129-1997 and as described in LEED Version 2.0. (GSA 10.9.2)

- b. Locate air return over diaper and toilet areas. (GSA 10.9.2)
- c. Provide the capacity for permanent carbon dioxide monitoring...to prevent indoor CO<sub>2</sub> levels from exceeding outdoor levels by more than 700 parts per million (ppm), as described in LEED Version 2.0. (GSA 10.1.16)
- d. Where chemical use occurs, including housekeeping areas, chemical mixing areas, copying/print rooms,... use deck-to-deck partitions with dedicated outside exhaust at a rate of at least 0.50 cubic feet per minute per square foot, no air recirculation, and adequate make up air. (CHPS, EQ.P3.1, page 36)

## **5.10 Lighting- Artificial**

### **5.10.1. Regulatory Standards**

- a. The interior space must be clean, safely maintained, well-ventilated and well-lit... (606 CMR 7.07 (10))
- b. Educators must ensure that there is adequate lighting for quiet activities for children who do not sleep and there is adequate lighting to allow proper supervision of sleeping, resting children. (606 CMR 7.11 (13d 4b, c))
- c. In any existing building, or portion thereof, (a) in which the light or ventilation do not meet applicable provisions of 780 CMR 12.0 and (b) which is deemed by the building official to be dangerous or hazardous to the health and safety of the occupants the building official shall order the abatement of such conditions to render the building or structure occupiable or habitable as applicable for the posted use and occupant load. In enforcing 780 CMR 102.5.6, the building official may require or accept engineering or other evaluations of the lighting and/or ventilation systems in order to evaluate possible dangerous or hazardous conditions and accept solutions. Where full compliance with 780 CMR for light and ventilation as required for new construction is not practical for structural and/or other technical reasons, the building official may accept compliance alternatives, or engineering or other evaluations, which adequately address the building or structure livability for the posted use and occupant load. (780 CMR 102.5.6)

### **5.10.2. Professional Standards**

- a. All areas of the facility should have glare-free natural and/or artificial lighting that provides adequate illumination and comfort for facility activities. (NHSPS 5.2.2.1)
- b. Floor or table lamps are used when needed. (COA ASP-PS 8.05)
- c. Lighting levels should be reduced during nap times to promote resting or napping behavior in children. Some degree of illumination must be allowed to ensure that staff can continue to observe children. (NHSPS 5.2.2.1) \*

### **5.10.3. Best Practices**

- a. Light fixtures in classrooms and nap rooms are to be dimmable....Incorporate variety in lighting, through such devices as dimming controls, separate switching, adjustable directional fixtures, and pendant fixtures that are positioned over work areas....Well-considered lighting for each activity area is a key element in creating the "home-like" environment which is a goal of the program. The quality of light should remind children of a residential environment. Broad ambient lighting is most appropriate for large motor activity spaces; task lighting is required for manipulative activities; lower light levels are needed for quiet and sleeping areas. The amount and orientation of natural light need to be considered in the design and variation in light levels. (GSA 10.10)
- b. Where dimmer controls are used, provide lighting fixtures that do not oscillate visibly at low intensities. Consider a mix of indirect and overhead lighting in child activity spaces. (DOD 7-2.4.2.3)
- c. Provide lighting controls for each classroom. (CHPS, EQ.C8.2, page 69)

- d. Use compact fluorescent lamps (CFLs) instead of incandescent lamps as a general rule. CFLs should meet, at a minimum, the efficiency standards of the EPA Energy Star<sup>®</sup> program. (GSA Table 10.2)
- e. All lamps must have shatterproof lenses or covers. (GSA 10.10)
- f. Interior lighting in buildings larger than 5000 sq. ft. shall be controlled with an automatic control device to shut off building lighting in all spaces. This automatic control device shall function on a scheduled basis, an occupant sensor, or a signal from another control or alarm system. (ASHRAE 90.1-2004 9.2.1.1)
- g. Ensure that there is adequate exterior lighting to allow safe exterior circulation and site security. (GSA 10.2.3)
- h. Provide security lighting on a timer for after-hours activation and on a switch for staff control. (DOD UFC Youth Table 4-4.2)

## **5.11 Roof**

### **5.11.1. Regulatory Standards**

- a. All buildings and structures and all parts thereof, both existing and new, and all systems and equipment therein which are regulated by 780 CMR shall be maintained in a safe, operable and sanitary condition. (780 CMR 103.1)

### **5.11.2. Professional Standards**

- a. [The] roof should be structurally sound, weather-tight, and water-tight to ensure protection from weather and natural disasters. (NHSPS 5.1.1.6) \*

### **5.11.3. Best Practices**

- a. Meet the roof insulation requirements of 780 CMR Appendix 120 AA Stretch Energy Code (CHPS, Appendix A., pp. 4-6)

## **5.12 Safety**

### **5.12.1. Regulatory Standards**

- a. The licensee must ensure that the physical facilities are safe, clean, in good repair and free from hazards and clutter. (606 CMR 7.07 (1))

### **5.12.2. Professional Standards**

- a. All areas, both indoors and outdoors, are free from glass, trash, sharp or hazardous items, and visible soil, and are in a clean condition. (NAEYC 9.C.07b) \*

## **5.13 Security**

### **5.13.2. Professional Standards**

- a. If emergency exits lead to potentially unsafe areas for children (such as a busy street) alarms or other signaling devices should be installed on these exit doors to alert the staff in case a child attempts to leave. (NHSPS 5.1.4.4)

### **5.13.3. Best Practices**

- a. The location should be a defensible space with a secure perimeter and controlled access. (Head Start 5.5 and GSA 5.7)
- b. The design should ensure that a child is unable to leave the center without the knowledge of the staff. (Head Start 10.2)
- c. Maximum visibility of entry points from inside the center should be provided. (GSA 5.7)
- d. The seated reception staff member can see the front door as well as children entering. (DOD 4-2.4)
- e. Security system equipment may include, but is not limited to, perimeter security alarm systems, video surveillance for entrance doors and vestibules, and annunciation systems for main entrance doors. (GSA 10.2)

## 5.14 Stairways

### 5.14.1. Regulatory Standards

- a. Open stairways used by children younger than school age must have railings or banisters installed along the open or unprotected side(s). (606 CMR 7.07 (11b))
- b. In programs serving children younger than three years old, barriers must be placed at the top and bottom of stairwells opening into areas used by children, unless prohibited by building or fire department regulations. Barriers must be permanently installed at the top of stairways. Pressure gates may not be used at the top of stairs. (606 CMR 7.07 (11a))
- c.(ECE only) Handrails shall conform to the requirements of 780 1009.0 and when the day care center's clients include children, in addition to an upper handrail, a lower handrail shall be installed between 20 inches and 24 inches above the nosing of the stair tread. (780 CMR 422.4.1.4)
- d. Stairways shall have handrails on each side. Handrails shall be adequate in strength and attachment in accordance with 780 CMR1607.7. (780 CMR 1009.11)

### 5.14.2. Professional Standards

- a. Securely installed, effective guards (such as gates) should be provided at the top and bottom of each open stairway in facilities where infants and toddlers are in care. (NHSPS 5.1.5.4) \*
- b. When railings are installed on the side of stairs open to a stairwell, access to the stairwell should be prevented by a barrier so a child cannot use the railings as a ladder to jump or fall into the stairwell. (NHSPS 5.1.5.2)\*
- c. Handrails...should be provided on both sides of stairways, be securely attached to the walls or stairs, and at a maximum height of 38 inches. (NHSPS 5.1.5.2) \*

### 5.14.3. Best Practices

- a. (ECE only) Provide handrails for all stairs and ramps at 21.6 inches above the leading edge of the treads. (GSA 7.6.2)

## 5.15 Storage in Center

### 5.15.2. Professional Standards

- a. The facility should provide and use space to store play and teaching equipment, supplies, records and files. (NHSPS 5.5.0.3)

### 5.15.3. Best Practices

- a.10% of the building's square footage needs to be allocated to storage. (Olds, A.R. *Child Care Design Guide*, ©2001 McGraw-Hill Companies, Inc., page 74)
- b. Provide centrally located resource room for bulk storage of curriculum materials and supplies and for storage of resource tapes, books, as well as audio/video equipment. (GSA 7.1.16)

## 5.16 Interior Walls

### 5.16.1. Regulatory Standards

- a. All buildings or structures all parts thereof, both existing and new, and all systems and equipment therein which are regulated by 780 CMR shall be maintained in safe, operable and sanitary condition. (780 CMR 103.1)
- b. Objects mounted with their leading edges at or below 27 inches above the finished floor may protrude any amount. Free-standing objects mounted on posts or pylons may overhang 12 inches maximum from 27 to 80 inches above the ground or finished floor. (ADA 4.4.1)

### 5.16.2. Professional Standards

- a. Walls... are kept in good repair and are safe, with no sharp edges, splinters, protruding or rusty nails, or missing parts. ( NAEYC 9.C.07a)
- b. Every interior...wall...should be structurally sound and shall be finished in accordance with local building codes to control exposure of the occupants to levels of toxic fumes, dust, and mold. (NHSPS 5.1.1.6) \*
- c. ...Walls...should be in good repair, and easy to clean when soiled. (NHSPS 5.3.1.6) \*

### 5.16.3. Best Practices

- a. Vary wall configurations to create interest, soften a space or create a more nurturing impression in special spaces. Consider curved or obtuse angled partitions. (Head Start 7.4)
- b. Interior colors will be low maintenance neutrals to mitigate visual clutter and provide backdrop for colorful artwork. (Army CDC)
- c. Wall paint should be non-toxic with a 200 grams/liter of VOCs or less. High build coatings are durable, can be scrubbed and should be used in high-wear areas. Glazed coatings are appropriate for wet areas. (Head Start 9.3.1)
- d. Interior walls must meet minimum insulation requirements of 780 CMR Appendix 120 AA Stretch Energy Code. (CHPS, Appendix A., pp. 4-6).

## 5.17 Water Use

### 5.17.3. Best Practices

- a. Employ strategies that, in aggregate, reduce potable water use by 20% beyond the baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992's fixture performance requirements. [Examples include low-flow toilets, low-flow bathroom sinks]. (CHPS, WE.P2.1, page 104)

## 5.18 Windows

### 5.18.1. Regulatory Standards

- a. All windows used for ventilation must include screens in good repair. (606 CMR 7.07 (10h))
- b. Windows and glass doors must be constructed, adapted, or adjusted through the use of window guards or other means to prevent injury to children (606 CMR 7.07 (10h))
- c. All buildings and structures and all parts thereof, both existing and new, and all systems and equipment therein which are regulated by 780 CMR shall be maintained in a safe, operable and sanitary condition. (780 CMR 103.1)
- d. Strings and cords longer than six inches that are not part of recreational or educational materials, including, but not limited to cords on window blinds, curtains or shades, must be kept out of children's reach. (606 CMR 7.07 (13h))

### 5.18.2. Professional Standards

- a. (ECE only) All windows in areas used by children under five years of ages should be constructed, adapted, or adjusted to limit the exit opening accessible to children to less than four inches, or be otherwise protected with guards that prevent exit by a child but that do not block outdoor light. Where such windows are required by building or fire codes to provide emergency rescue and escape, the windows and guards, if provided should be equipped to enable staff to release the guard and open the window fully when evacuation or rescue is required. (NHSPS 5.1.3.2)
- b. All openings used for ventilation should be screened against insect entry. (NHSPS 5.1.3.3) \*
- c. Glass windows and glass door panels within 36 inches of the floor should have safety guards (such as rails or mesh) or be of safety-grade glass or polymer and equipped with a vision strip. (NHSPS 5.1.3.4) \*
- d. Strings and cords (such as those...found on window coverings) long enough to encircle a child's neck should not be accessible to children in child care. (NHSPS 3.4.6.1) \*

### 5.18.3. Best Practices

- a. Provide direct line of sight to view glazing from 70% of the combined floor areas of classrooms, library and administration areas. To qualify, a space shall have view glazing area equal to or greater than 7% of the floor area. View glazing shall be clear and only include window area above 2.5 feet and below 7.5 feet from the floor. The total width of view glazing shall be greater than 1% of the floor area. (CHPS, EQ.P7.1, page 43).
- b. Provide windows from activity rooms to the outside and from activity rooms to corridors. (DOD 7-1.3)

- c. Use overhangs or tinted glass to prevent glare in children's activity rooms. (DOD 7-1.3.2.8)
- d. Use insulated glass for exterior window glazing. (DOD 7-1.3.2.13)
- e. Provide light control and energy conservation features on all exterior windows in children's areas, either by exterior or interior methods. (DOD 7-1.3.2.14)
- f. Maximum windowsill heights for children are 1.5 feet above the finished floor for infants, 2 feet above the finished floor for toddlers, and 2.5 feet above the finished floor for pre-school children (Head Start 10.6.1)
- g. Ninety percent of all classrooms shall have a minimum of one operable window per classroom that is reasonably accessible to the occupants. (CHPS, EQ,C8.1, page 69)

## **6. CHILD ACTIVITY SPACE**

### **6.1 Activity Space Layout**

#### **6.1.1. Regulatory Standards**

- a. Provide space to accommodate a variety of activities, and to accommodate all children who are present playing individually, together, and in small or large groups. (606 CMR 7.07 (10) (d))
- b. Provide a private yet visible area where a child can play or work alone or with another. (606 CMR 7.07 (10)(e))
- c. Indoor play areas must be clearly defined by spatial arrangement reflecting the variety of creative activities required by 606 CMR 7.06(1) (b) 3. (606 CMR 7.07(16)(c)5)

#### **6.1.2. Professional Standards**

- a. A group or classroom consists of the children who are assigned to a teacher or a team of teaching staff for most of the day and who occupy an individual classroom or well-defined space that prevents intermingling of children from different groups within a large room or area. (NAEYC 10.B.12)
- b. Up to age 8: A variety of age- and developmentally appropriate materials and equipment are available indoors and outdoors for children throughout the day. This environment includes:
  - a. dramatic play equipment;
  - b. sensory materials such as sand, water, play dough, paint, and blocks;
  - c. materials that support curriculum goals and objectives in literacy, math, science, social studies, and other content areas; and
  - d. gross-motor equipment for activities such as pulling up; walking; climbing in, on, and over; moving through, around, and under; pushing; pulling; and riding. (NAEYC 9.A.04a-d)
- c. Up to age 8: The indoor environment includes washable, soft elements that allow groups of children or adults and children to sit in close proximity for conversations or comforting. (NAEYC 9.A.10a)
- d. (OST only) Children and youth have opportunities to participate in a wide variety of engaging and challenging activities. (COA ASP-PS 5.02)
- e. (OST only) Children and youth can use and relax on soft, comfortable furniture, such as couches, cushions, beanbag chairs, or rugs. (COA ASP-PS 6.01).
- f. (OST only) Separate area that is quiet, not crowded and has suitable furniture for homework or other quiet study. (SACERS 1-4-4a.5)
- g. School age care program has daily use of a number of shared facilities (e.g., access to community pool). (SACERS 1-9.7).
- h. The program setting is welcoming and engaging and helps children and youth feel physically and emotionally comfortable and supported. (COA ASP-PS 6.01)
- i. The indoor space is arranged well for the range of activities the program offers. (COA APS-PS 6.03)
- j. (OST only) The indoor space is arranged so that various activities can go on at the same time without much disruption. (COA APS-PS 6.04)
- k. (OST only) Three or more interest centers defined and conveniently equipped (ex: water provided if needed). Quiet and noisy areas separated. (SACERS 4)

- l. (Preschool only) At least two interest centers defined. (ECERS 1-4.3.1)
- m. (Preschool only) At least three interest centers defined and conveniently equipped (Ex. water provided near art area; shelving adequate for blocks and manipulatives). (ECERS 1-4.5.1)
- n. (Preschool only) At least five different interest centers provide a variety of learning experiences. (ECERS 1-4.7.1)
- o. (Preschool Only) More than one space available for privacy. (ECERS 1-5.7.1)
- p. Some clear floor space used for block play. (ECERS 4-22.3.2)
- q. (Preschool only) Enough space, blocks and accessories are accessible for three or more children to build at the same time. (ECERS 4-22.5.1)
- r. (Preschool only) Special block area set aside out of traffic, with storage and suitable building surface. (Ex. Flat rug or other steady surface). (ECERS 4-22.5.3)
- s. (OST only) Softness regularly accessible to children (Ex: cushions in reading area, couches in music/listening area, several carpeted areas). (SACERS 1-7.5)
- t. (OST only) Planned cozy area plus "softness" available in other areas (Ex: living room area to relax in). (SACERS 1-7.7)

### **6.1.3. Best Practices**

- a. The layout of the room [considers]: 1: functional requirements; 2: fixed features; 3: protected regions (protected corners); 4: exposed regions and main transit path; 5: wet and dry regions; 6: entry zone; 7: messy zone; 8: sinks/bathrooms in the messy zone; 9: quiet zone; 10: active zone; 11: location for a tall structure; 12: boundary between wet and dry. (Olds, A.R. *Child Care Design Guide*, ©2001 McGraw-Hill Companies, Inc., pages 154-156)
- b. An activity area has five defining attributes: 1: specific physical location suited to the activity; 2: visible boundaries; 3: play and sitting surfaces; 4: provision for storage and display of materials specific to the area's function; 5: a mood that distinguishes it from contiguous spaces. (Olds, A.R. *Child Care Design Guide*, ©2001 McGraw-Hill Companies, Inc., page 268)
- c. (Infants only) The infant open activity area offers all the opportunities for learning. This area must be a safe, soft, "print rich," stimulating environment in which babies can crawl, explore and interact with their teachers. (GSA 7.5.7)
- d. Infant classrooms include the following soft elements: 1 floor pillow per child, 2 padded floor mats, 2 solid color area rugs, 2 sets of geometric pillows, 2 bean bag chairs and a small futon or junior size mattress. (GSA Table 8.1)
- e. The [toddler] activity area must allow for running and cruising (movement through the space to view and select from a variety of activities) without disrupting other children's activities. (GSA 7.5.8)
- f. Toddler classrooms include the following soft elements: 1 floor pillow per child, 2 padded floor mats, 2 solid color area rugs, 2 sets of geometric pillows, 2 bean bag chairs and a small futon or junior size mattress and a small adult sofa. (GSA Table 8.2 and 8.3)
- g. Preschool children are involved in a wide-range of activities, and their level of skills allows them to take part in more advanced activities, requiring a greater number of interest areas configured for small groups of children in each area. (GSA 7.5.9)
- h. Preschool classrooms include the following soft elements: 1 floor pillow per child, one solid color area rug, 2 bean bag chairs, and a small adult sofa. (GSA Tables 8.4 and 8.5)
- i. The school age open activity area needs to allow free movement within this space. More cooperative play can occur in this classroom, such as group activities and games. (GSA 7.5.10)
- j. School age children must have a computer lab. (The Army CDC)
- k. (OST only) The computer lab must accommodate 15 computer workstations with a minimum of 525 square feet or 35 square feet per child, and be strategically located adjacent to the entry area (this for programs with 150-225 children). For programs with up to 135 children, this area can dual function as a computer lab and homework center and requires 7 workstations. (The Army CDC)

## **6.2 Activity Space Size**

### **6.2.1. Regulatory Standards**

- a. The licensee must provide a minimum of 35 square feet of activity space per child. (606 CMR 7.07 (15c))
- b. When measuring activity space, only usable floor space (exclusive of hallways, bathrooms, and portions of rooms or areas that contain furniture or equipment suitable only for adult use) may be included. (606 CMR 7.07 (10c))
- c. The total required activity space must be available to children for at least half of the program day. (606 CMR 7.07 (10b))

### **6.2.2. Professional Standards**

- a. (OST only) Approximately 75 square feet per child or youth when indoor space is used for active play (e.g., dance, aerobics, or basketball). (COA ASP-PS 6.02)
- b. (OST only) Approximately 45 square feet per child or youth for small group and enrichment activities such as woodworking, arts and crafts, and science experiments. (COA ASP-PS 6.02)
- c. (OST only) Approximately 35 square feet per child or youth for quiet activities such as homework, reading, or holding club meetings. (COA ASP-PS 6.02)
- d. (ECE only) There is a minimum of 35 square feet of usable space per child in each of the primary indoor activity areas (The primary activity area does not include diaper stations, cribs, large structures that cannot be removed or moved aside easily, toilets, any sick-child areas, staff rooms, corridors, hallways, stairways, closets, lockers or cubbies, laundry rooms, janitor rooms, furnace rooms, storage areas, and built-in shelving. (NAEYC 9.C.01a)\*)

### **6.2.3. Best Practices (ECE only)**

- a. Design classrooms to accommodate the number of children for each age group. The Head Start Program Performance Standards and local licensing requirements must be referenced. (Head Start 7.2.3)
- b. The Head Start Performance Standards, 45 CFR 1304.53(a)(5), provide that centers must have at least 35 square feet of available usable indoor space per child. This footage is exclusive of bathrooms, halls, kitchen, staff rooms, and storage places. (It should be noted that this is a minimum standard.) (Head Start 5.3)
- c. Classrooms should be flexible enough to adjust to variable demographics and to allow program adjustments to serve a fluctuating demand for ...services. (Head Start 5.8)

## **6.3 Classroom Acoustics**

### **6.3.2. Professional Standards**

- a. The program has taken measures in all [classrooms] to control noise levels so normal conversation can be heard without raising one's voice. (NAEYC 9.D. 04a)

### **6.3.3. Best Practices**

- a. Majority of children's areas will have acoustical ceiling tile, .79 to .98 inches thick, with effective acoustical ceiling treatment. (GSA 9.4)
- b. Unoccupied classrooms must meet the following design requirements: For each classroom and core learning space, document that the reverberation time meets the requirements of ANSI S 12.60. Calculations are to assume a fitted out and furnished but unoccupied classroom. (CHPS, EQ.P9.1, page 48)
- c. Design all walls, roof-ceiling and floor-ceiling assemblies separating classrooms and other core learning spaces to meet the Sound Transmission Class (STC) requirements as defined in ANSI Standard S12.60-2002, except windows which must meet an STC rating of at least 35. (CHPS, EQ.P9.1, page 48)



## 6.4 Children's Bathrooms

### 6.4.1. Regulatory Standards

- a. Toilets must be available no more than one floor level away from the approved program space if licensed for the first time after the effective date of these regulations. (606 CMR 7.07 (10 k1)).
- b. When adult toilets and sinks are used, the licensee must provide a safe means to permit access by those children who are able to use them. (606 CMR 7.07 (10 k2))
- c. In addition to toilets, portable "potty chairs" may be used in a bathroom for children unable to use toilets. (ECE only) (606 CMR 7.07 (10 k3))
- d. In programs serving children younger than school age, locks on doors to bathrooms must be easily opened from both the inside and outside. (606 CMR 7.07 (10 k4))
- e. The licensee must maintain a ratio of at least one toilet and sink in one or more well-ventilated bathrooms for every 20 children. (606 CMR 7.07 (16 d1))
- f. Toilet facilities must afford adequate privacy appropriate to the ages of children enrolled in the program. (606 CMR 7.07 (16 d3))
- g. Bathrooms must be in close proximity to children's activity space. (606 CMR 7.07 (16 d4a))
- h. Bathrooms must be readily accessible to all children, including children with disabilities. (606 CMR 7.07 (16 d4b)) See Appendix A for more information regarding accessibility.
- i. Hot water and drain pipes under lavatories shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories. (ADA 4.19.4)

### 6.4.2. Professional Standards

- a. (a) Toilets, (b) drinking water, and (c) hand-washing facilities are within 40 feet of the indoor areas that children use. (NAEYC 9.C.05a-c)
- b. Bathrooms have barriers to prevent entry by unattended infants and toddlers/twos. (NAEYC 9.C.17a)
- c. Location of toilets and handwashing facilities:
  - 1) For infant areas, toilets and handwashing facilities are for adult rather than child use. They should be located within the infant area to reduce staff absence. (NHSPS 5.4.1.1)
  - 2) For toddler areas, toilet and handwashing facilities should be located in or adjacent to the toddler rooms. (NHSPS 5.4.1.1)
  - 3) For preschool and school-age children, toilet and handwashing facilities should be located near the entrance to the group room and near the entrance to the playground. (NHSPS 5.4.1.1)
  - 4) ...males and females who are six years of age and older should have separate and private toilet facilities. (NHSPS 5.4.1.2)
- d. Children should be able to easily open every toilet room door from the inside, and caregivers/teachers should be able to easily open toilet room doors from outside if adult assistance is required. (NHSPS 5.4.1.3)
- e. Toilets and hand sinks should be easily accessible to children and facilitate adult supervision. The number of toilets and hand sinks should be subject to the following minimums:
  - 1) School-age children: If each group size is less than ten children, provide one sink and one toilet per group. If each group size is between ten to twenty children, provide two sinks and two toilets per group. Provide separation of male and female toilets. (NHSPS 5.4.1.6) \*
- f. ...Equipment used for toilet learning/training should be provided for children who are learning to use the toilet. Child-sized toilets or safe and cleanable step aids and modified toilet seats (where adult-sized toilets are present) should be used in facilities. Non-flushing toilets (i.e. potty chairs) should be strongly discouraged. (NHSPS 5.4.1.7) \*

g. Accessibility includes access to ...toilets [for children with disabilities]. (NHSPS 5.1.1.4) \* See Appendix A for more information regarding accessibility.

#### **6.4.3. Best Practices**

- a. [for toddlers and preschoolers] A minimum of two toilets and two child-height hand washing sinks within each classroom area that uses the toileting facility, with never less than one toilet, one lavatory and one drinking fountain for every 12 children who will use them (where allowed by licensing). Note: two classrooms may share one toilet area. (GSA 7.6.4)
- b. Children using the water closet are visible from within the activity room but not the hallway or any other room. (ECE only) (DOD 7-2.1.2.2)
- c. Provide child toilet facilities in toddler room. (DOD Table 5.1)
- d. Toilet areas are to have gates or half doors at entrances and may have child height partitioning between toilets. These elements must have hinge protection so that children's hands and fingers are not accidentally pinched or crushed. (GSA 7.6.4)
- e. The toilet area must be physically separated from food preparation and eating areas and partially screened from the view of remaining spaces. (GSA 7.6.4)
- f. Use water conserving type of water closet. Install durable, water-resistant finishes and bright, cheerful lighting. (DOD 7-2.1.2.3)
- g. Use pre-mixing, automatic shut-off faucets with single-action controls in child toilet areas and provide a shut-off valve for each fixture. (DOD 7-2.1.2.4)
- h. The toilet area requires a floor drain. (GSA 7.6.4)
- i. Mount mirrors over the sink. Use only shatter-proof mirrors. (DOD 7-2.1.2.4)

### **6.5 Classroom Entrance**

#### **6.5.3. Best Practices**

- a. Each child activity room to have a distinct and welcoming entrance. The entrance must meet all emergency egress requirements. Provide a second room entrance to the playgrounds. (DOD 5-4)
- b. All required means of egress doors shall be at least 36 inches in width. All other doors shall be at least 32 inches in width. (780 CMR 422.4.1.3)

### **6.6 Classroom Pathways**

#### **6.6.1. Regulatory Standards**

- a. Space is arranged to provide clear pathways for movement from one area to another and to allow visual supervision by educators. (606 CMR 7.07 (10f))

#### **6.6.2. Professional Standards**

- a. Clear pathways are available for children to move from one area to another without disturbing other children's work and play. (NAEYC 9.A.11a)

### **6.7 Classroom Sink(s)**

#### **6.7.1. Regulatory Standards**

- a. The licensee must provide running water in sinks used by children. Water temperature must not exceed 120°F. (606 CMR 7.07 (10 1))
- b. Any portable sink used to meet any of the requirements of these regulations must be approved by the Board of Health. (606 CMR 7.07 (16 d2))

#### **6.7.2. Professional Standards**

- a. (ECE only) Demonstrates stimulating indoor and outdoor environments that provides access to sinks in the classroom. (Center and School Based QRIS Standards, Safe, Healthy Indoor and Outdoor Environments)
- b. (OST only) Running water is conveniently located and accessible to children and youth of varying heights; and activities take place near the sink when they require water for clean-up. (COA ASP-PS 6.03).

- c. The hand-washing sinks are accessible to (d) staff and (e) children (step stools if needed). (NAEYC 9.C.05d-e)
- d. These facilities should be capable of heating water to at least 120°F. Hot water temperature at sinks used for handwashing, or where the hot water will be in direct contact with children, should be at a temperature of at least 60 degrees F and not exceeding 120 degrees F. (NHSPS 5.2.1.14)\*
- e. When plumbing is not available to provide a hand washing sink, the facility should provide a hand washing sink using a portable water supply and a sanitary catch system approved by a local public health department. A mechanism shall be in place to prevent children from gaining access to soiled water or more than one child from washing in the same water. (NHSPS 5.2.6.9)\*
- f. A handwashing sink should be accessible without barriers (such as doors) to each child care area. In areas for infants, toddlers, and preschoolers, the sink should be located so the caregiver/teacher may visually supervise the group of children while carrying out routine handwashing or having children wash their hands. (NHSPS 5.4.1.10)

### **6.7.3. Best Practices**

- a. In toddler classrooms, provide a ...sink...mounted in a 555mm [21.9 inches] high counter for children to use in art and other activities requiring cleanup....For pre-school and school-age children the [children's art] sink height should be 650 mm [25.6 inches]. ...The art sink area should include art supply storage, display, and drying areas for finished work or work-in-progress. ...Provide an adult height art sink in all toddler and preschool classrooms at 865 mm [34 inches]. Provide sheet impervious floor coverings with sealed seams and using a floor drain in this [art] area, if feasible. (GSA 7.6.3b. Provide one paper towel dispenser per sink area. (DOD 7-2.1.2.4)

## **6.8 Classroom Storage and Teacher Work Area**

### **6.8.2. Professional Standards**

- a. There is adequate and convenient storage space for equipment and materials. Personnel rarely have to carry heavy equipment long distances or large amounts of materials for set-up and clean-up. Programs in shared space have portable equipment on wheels. (COA ASP-PS 6.06)

### **6.8.3. Best Practices**

- a. Provide an adult-scale counter of solid-surface material, (DOD 5-6.2) and impervious. (GSA 7.6.8)
- b. Provide storage for cots, strolling equipment, curriculum materials, and supplies. (DOD 5-10)
- c. Provide some lockable storage including some cabinets elevated above children's reach or with a door to limit their access. Provide one lockable cabinet in each run of cabinets. This storage area is required for storing activity room equipment, materials, and supplies. (DOD 5-10)
- d. Some lockable storage must be provided in the classroom for teachers to store outdoor clothing and other personal belongings. (GSA 7.6.12)

## **6.9 Cubby Area in the Classroom**

### **6.9.1. Regulatory Standards**

- a. Sufficient space, accessible to children, for each child to store clothing and other personal items in a safe, sanitary manner. (606 CMR 7.07 (10g))

### **6.9.2. Professional Standards**

- a. Individual space is provided for each child's belongings. (NAEYC 9.A.02a)

### **6.9.3. Best Practices**

- a. Compartmentalized open-front, scaled to child size, per child. (GSA 7.5.2)
- b. Cubby storage units secured to the floor and wall. (GSA 7.5.2)
- c. A 36 inches clear area in front of the cubbies for access. (GSA 7.5.2)

d. Seating, such as a bench, which may be integral with the cubby for either adult or child use. (GSA 7.5.2)

## **6.10 Diapering (programs serving children who are under two years and nine months of age and/or not toilet trained)**

### **6.10.1. Regulatory Standards**

a. In programs serving children who are under two years and nine months of age and/or not toilet trained, the educator must ensure that diapering areas are separate from facilities and areas used for food preparation and food service. (606 CMR 7.11 (12b))

b. The changing surface is smooth, intact, impervious to water and easily cleaned. (606 CMR 7.11 (12e))

c. A common change table or diapering surface is not used for any other purpose. (606 CMR 7.11 (12d))

d. Soiled disposable diapers are placed in a closed container that is lined with a leak-proof disposable lining. (606 CMR 7.11 (12l))

e. There must be running water or an approved alternative adjacent to each diapering area. (606 CMR 7.07 (16 d4c))

### **6.10.2. Professional Standards**

a. ...Hand-washing sinks within arm's length of diaper changing tables. (NAEYC 9.A.01b)

b. Each changing area is separated by a partial wall or is located at least three feet from other areas that children use and is used exclusively for one designated group of children.... (This indicator only is an Emerging Practice.) (NAEYC 5.A.08h)

c. Soiled diapers should be stored inside the facility in containers separate from other waste. Washable, plastic-lined, tightly covered receptacles, with a firmly fitting cover that does not require touching with contaminated hands or objects, shall be provided, within arm's reach of diaper changing tables, to store soiled diapers. (NHSPS 5.2.7.4)

d. Surfaces used for changing and on which changing materials are placed are not used for other purposes, including temporary placement of other objects, and especially not for any object involved with food or feeding. (NAEYC 5.A.08m) \*

e. The facility shall have at least one diaper changing table per infant group or toddler group to allow sufficient time for changing diapers and for cleaning and sanitizing between children. (NHSPS 5.4.2.1)\*

f. Changing tables should meet the following requirements: a) have imperious, nonabsorbent, smooth surfaces that do not trap soil and are easily disinfected... (NHSPS 5.4.2.5)\*

### **6.10.3. Best Practices**

a. Orient the diapering station so that a teacher, while diapering a baby or toddler, can maintain visual supervision of the children, and the children can see the teacher. (GSA 7.6.5)

b. Provide the diaper-changing unit with integral retractable steps that lock in place for the caregiver to assist the children to climb up to the changing surface. (DOD 5-12.5.1)

c. Provide paper towel, soap, and rubber glove dispensers. (GSA 7.6.5)

## **6.11 Display Area**

### **6.11.1. Regulatory Standards**

a. Paper materials displayed in classrooms should not exceed 20% of the total wall area. Paper materials displayed shall be attached directly to the walls and shall not be permitted to cover an egress door or be placed within five feet of an egress door. There are the following exceptions:

1. paper materials displayed in fully enclosed viewing cabinets with glass or polycarbonate viewing panels or covered with glass or polycarbonate sheet material (thermoplastic materials such as plexiglass are not acceptable); 2. flame retardant paper material used for display; 3. paper material displays may cover up to 50% of total wall area in fully sprinklered classrooms. (527 CMR 10.09 (5) (a))

- b. Paper materials displayed shall not exceed 10% of the surface area of any wall of an exit access passageway, assembly area or corridor. Such paper material shall be positioned in such a manner to avoid concentration of materials to reduce flame spread in the event of a fire. In no event shall any one grouping exceed a maximum horizontal measurement of 12 feet and a maximum vertical measurement of six feet. Groups of paper material shall be allowed as long as there is space between each group equal to the horizontal width of the largest adjacent group. Paper material used for display shall be attached directly to the walls and shall not be permitted to cover an egress door or be placed within five feet of an egress door. Exceptions listed are the same as in listed in a directly above. (527 CMR 10.09 (5) (b))
- c. Displayed paper materials shall not be permitted in exits or enclosed exit stairs. (527 CMR 10.09 (5) (c))

#### **6.11.2. Professional Standards**

- a. ...Environment contains elements such as: (d) places for displaying children's work... (NAEYC 9.A.09d)
- b. ...Some displays are at children's eye level. (NAEYC 3.A.06c)

#### **6.11.3. Best Practices**

- a. Provide wall and floor display space for notices and children's artwork. (DOD 4-2.4.3)
- b. Use deep wall recesses or niches with accent lighting to highlight children's work. (DOD 4-2.4.3)

### **6.12 Eating Area**

#### **6.12.1. Regulatory Standards**

- a. The licensee must provide space sufficient for children to eat in an un-crowded manner and to meet the needs of all children. (606 CMR 7.07 (10n))

#### **6.12.2. Professional Standards**

- a. The child care staff should ensure that children who do not require highchairs are comfortably seated at tables...while eating. (NHSPS 4.5.0.1) \*

#### **6.12.3. Best Practices**

- a. Eating area is in a pleasant area with natural light and lots of displayed items of interest. (GSA 7.6.9)
- b. Children older than infant age need movable chairs and tables of appropriate scale for their eating area. (GSA 7.6.9)
- c. Locate eating/table areas for older children in a central location, away from children's toilets and hand washing sinks. (GSA 7.6.9)

### **6.13 Furnishings**

#### **6.13.1. Regulatory Standards**

- a. Equipment and furnishings are appropriate to the ages, needs and developmental level of the children enrolled. They must be sturdy, safely constructed and installed, non-tippable, flame retardant, easily cleaned, and free from lead paint, protruding nails, rust, and other hazards that may be dangerous to children. (606 CMR 7.07 (13))
- b. All play equipment, and structures must be free of entrapment hazards. (606 CMR 7.07 (13d))

#### **6.13.2. Professional Standards**

- a. Children and youth can move furniture easily to make more room or to define an area. (COA ASP-PS 6.05)
- b. Preschool and school age only: Indoor space is arranged so that children and youth can get materials out and put them away by themselves with ease and move materials and equipment to suit their activities. (COA ASP-PS 6.05)

- c. Furniture should be durable and child-sized or adapted for children's use. Tables should be between waist and mid-chest level of the intended child-user and allow the child's feet to rest on a firm surface while seated for eating. (NHSPS 5.3.1.3) \*
- d. Equipment, materials, furnishings, and play areas should be sturdy, safe and in good repair and meet the recommendations of the U.S. Consumer Product Safety Commission (CPSC) for control of the following safety hazards:...openings that could entrap a child's head or limbs;...protruding nails, bolts or other components that could entangle clothing or snag skin; loose rusty parts;...paint that contains lead or other hazardous materials. (NHSPS 5.3.1.1) \*
- e. (Infants/Toddlers only) Seats for children are comfortable and supportive (Ex. Footrest, side and back supports; non-slippery surface; safety belt if needed). (ITERS 1-2.3.4)
- f. (Infants/Toddlers only) Some adult seating for use in routine care. (ITERS 1-2.5.5)
- g. (Infants/Toddlers only) Comfortable adult seating for working with children. (ITERS 1-2.7.4)
- h. (Preschool only) Some adult furniture available outside of children's play space. (ECERS 7-39.3.2)

### **6.13.3. Best Practices**

- a. No sharp edges within children's areas. All corners on trim, counters, partitions, and shelving must have rounded edges. In areas accessible to children, there shall be no openings between 3.5 and 9 inches in width to prevent head entrapment as per CPSC requirement. (GSA 10.1.17)
- b. Furniture must meet fire codes, but aesthetic qualities- such as color, line, mass, construction, and design- are also important considerations. (Olds, A.R. *Child Care Design Guide*, ©2001 McGraw-Hill Companies, Inc., page 258)
- c. Wood furniture is generally more neutral, more durable, as easy to maintain, warmer, more pleasing and more cost-effective in the long run than plastic furniture. (Olds, A.R. *Child Care Design Guide*, ©2001 McGraw-Hill Companies, Inc., page 258)
- d. Give preference to products made with zero formaldehyde. (Head Start 8.1.4)
- e. Use Furniture Stewardship Council (FSC)-certified sustainable harvested wood for minimum 50% of all wood materials including temporary formwork as well as permanent building components. (Head Start 9.1)
- f. Use products made with recycled content and avoid finishes with PVC content to the extent possible. (Head Start 8.1)
- g. All new furniture, both classroom and administrative, shall be tested for VOC emissions following the procedures in ANSI/BIFMA M7.1-2007. (CHPS EQC3.4, page 60)

## **6.14 Lofts/Platforms**

### **6.14.2. Professional Standards**

- a. Furnishings such as lofts are constructed to prevent falls (e.g., with appropriate barriers), or safety surfacing is installed in the fall zone. (NAEYC 2007, 9.A.06)
- b. When climbers, climbing gyms, slides, and other play units are part of the indoor environment, the program provides safety surfacing that is rated and installed in the fall zone as recommended by the manufacturer for the fall height of the play equipment. (NAEYC 2007, 9.A.06)

### **6.14.3. Best Practices**

- a. Infant classrooms require soft, colorful crawling areas with low level changes such as low, carpeted, constructed platforms; movable foam shapes; or forms that provide level changes. Ramps, or small 3 inch to 4 inch steps, should be used between level changes. The maximum total height of platforms for infants is 18 inches. (GSA 7.6.1)
- b. Toddler and pre-school lofts and platforms must be no higher than 36 inches above the finished floor for toddlers and 54 inches above the finished floor for pre-school children. (GSA 7.6.2)
- c. Protective barriers must be provided on all raised surfaces 24 inches above floor level or higher for preschool and younger children. (GSA 7.6.2)

## **6.15 Large Motor/ Multi-Purpose Room**

### **6.15.2. Professional Standards**

- a. When outdoor opportunities for large-motor activities are not possible because of conditions, the program provides similar activities inside. (NAEYC 5.A.06b)
- b. The environment includes: (d) gross-motor equipment for activities such as pulling-up; walking; climbing in, on, and over; moving through, around, and under; pushing; pulling; and riding. (NAEYC 9.A.04d)
- c. ...[A] large indoor activity room ...may be used [for active play] if...a) it provides for types of activities equivalent to those performed in outdoor play space; b) the area is ventilated...; c) the surfaces and finishes are shock-absorbing, as required for outdoor installations...; d) the play equipment meets the requirements for outdoor installations...[.] (NHSPS 6.1.0.2)

### **6.15.3. Best Practices**

- a. Provide the following features: high ceilings; acoustical treatment on walls and ceilings, together with possible acoustical separation between the multi-purpose and the adjoining rooms; a hard, durable, washable surface as wall finish; protective resilient surfaces in fall zones; and, storage for equipment and supplies. (GSA 7.6.13)

## **6.16 Nursing and Lactation/Feeding (ECE only)**

### **6.16.2. Professional Standards**

- a. Nursing mothers have a place to breast-feed their children that meets their needs for comfort and privacy. (NAEYC 9.A.15a)

### **6.16.3. Best Practices**

- a. Provide a quiet, semi-private area in the infant/toddler room for a parent to visit and nurse/feed his or her child. (DOD 5-12.3)

## **6.17 Sleep and Rest Areas (ECE only)**

### **6.17.1. Regulatory Standards**

- a. The licensee must provide a separate mat, cot, sofa, portacrib, playpen, bassinet or bed, and blanket for each child present at any time during the day. (606 CMR 7.11 (13 (d3b)))
- b. Educators must ensure safe and sanitary storage of blankets and bed linens. (606 CMR 7.11 (13 (d3d)))
- c. Educators must ensure that there is a distance of at least two feet between each crib or cot, or there is a distance of at least three feet between children's faces while resting or napping. (606 CMR 7.11, (13 d4a))
- d. There is appropriate space and adequate lighting for quiet activities for children who do not sleep. (606 CMR 7.11, (13d4b))
- e. There is adequate lighting to allow proper supervision. (606 CMR 7.11 (13d4c))
- f. Ensure that cribs have firm, properly fitted mattresses with clean coverings, and do not contain any potential head entrapment areas. (606 CMR 7.11 (13e3))
- g. Ensure that slats on cribs are no more than 2-3/8 inches apart. (66 CMR 7.11 (13e4))
- h. Programs that use cribs for evacuation must assure that such cribs are safe for the intended purpose, easily movable and small enough to fit through exit doors to the outside. (606 CMR 7.11 ((7i)))
- i. By December 31, 2012 all child care facilities must use only cribs that comply with US Consumer Product Safety Commission Section 104 of the Consumer Product Safety Commission Improvement Act. (CPSC cribs)

### **6.17.2. Professional Standards**

- a. The following furnishings are available: (e) at least one cot, crib, mat, sleeping bag, or pad for each child who spends more than four hours a day in the program (no child is allowed to sleep on the floor without using rest equipment). (NAEYC 9.A. 01e) \*

- b. Cribs, cots, sleeping bags, beds, mats, or pads in/on which children are sleeping should be placed at least 3 feet apart....(NHSPS 5.4.5.1)
- c. The crib should have no cutout openings in the head board or footboard structure in which a child's head could become entrapped. (NHSPS 5.4.5.2) \*
- d. The [crib's] mattress support system should not be easily dislodged from any point in the crib by an upward force from underneath the crib. (NHSPS 5.4.5.2) \*
- e. The facility should provide and use space to store...cots, mats and bedding. (NHSPS 5.5.0.3)
- f. Child care facilities should provide separate storage areas for soiled linen and clean linen. (NHSPS 5.5.0.4) \*

### **6.17.3. Best Practices**

- a. Infant sleeping areas should be quiet and pleasant in a somewhat separate space within the classroom where infants can sleep according to their individual schedules. (GSA 7.6.6, Head Start 7.7.4)
- b. Provide one crib for each infant and young toddler. (Head Start 7.7.4)
- c. Teachers must have visual and acoustical accessibility to this area at all times. Locate sleeping areas away from active areas. (GSA 7.6.6, Head Start 7.7.4)
- d. Lighting must be capable of being dimmed. (Head Start 7.7.4)
- e. Exterior windows require window treatment to control direct sunlight. (GSA 7.6.6)
- f. One of every four cribs must be an evacuation crib, especially constructed for this purpose, and capable of holding and transporting up to four infants. (GSA 7.6.6)

## **7. ADULT ACTIVITY SPACE**

### **7.1 Director's Office**

#### **7.1.1. Regulatory Standards**

- a. There must be designated space, separate from children's play or rest areas, for administrative duties and educator and parent conferences.(606 CMR 7.07 (16c2))

#### **7.1.2. Professional Standards**

- a. The work environment includes: (e) an administrative area for planning or preparing materials that is separated from the children's areas. (NAEYC 9.C.02e) \*

#### **7.1.3. Best Practices**

- a. Provide work, storage and conference space for the director. (DOD 4-4.2)
- b. Locate this room adjacent to the reception area and accessible to visitors. It should have clear views of the main entry, reception and as many activity rooms as possible. (DOD 4-4.2)
- c. An adequately sized office with room for a desk, an office chair, at least two visitor chairs, filing cabinets, space for equipment (unless it is located elsewhere) including a personal computer, printer, copier and fax machine. (GSA 3.2.2)
- d. The director's office should be comfortable, with a carpeted floor and washable wall surfaces. (GSA 7.1.12)
- e. Provide adequate lighting, and acoustical separation. (GSA 7.1.12)
- f. Use Furniture Stewardship Council (FSC)-certified sustainable harvested wood for minimum 50% of all wood materials including temporary formwork as well as permanent building components. (Head Start 9.1)
- g. Give preference to products made with zero formaldehyde. (Head Start 8.1.4)
- h. Use products made with recycled content and avoid finishes with PVC content to the extent possible. (Head Start 8.1)
- i. Provide a lockable storage closet, 6 square feet minimum. (DOD 4-4.2)
- j. Provide work and personal/professional storage space for assistant director. (DOD 4-4.3.1)

### **7.2 Receptionist/ Administrator's Office**

#### **7.2.2. Professional Standards**



a. The work environment includes: (e) an administrative area for planning or preparing materials that is separated from the children's areas. (NAEYC 9.C.02e) \*

### **7.2.3. Best Practices**

a. Provide work, storage, and conference space for the administrator (DOD 4-4.3.2)

b. Provide a lockable storage closet. (DOD 4-4.3.2)

## **7.3 Staff Room**

### **7.3.1. Regulatory Standards**

a. There must be designated space, separate from children's play or rest areas, for administrative duties and educator and parent conferences. (606 CMR 7.07 (16c2))

### **7.3.2. Professional Standards**

a. The work environment for staff, including classrooms and staff rooms, is comfortable and clean and is in good repair. (NAEYC 9.C.02a)

b. The work environment includes: (b) a place for adults to take a break from children; (c) an adult-sized bathroom; (d) a secure place for staff to store their personal belongings; and (e) an administrative area for planning or preparing materials that is separate from children's areas. (NAEYC 9C.02b-e)

### **7.3.3. Best Practices**

a. Buffer visually and acoustically from children's activity rooms and public area and provide a vision panel in the door. (DOD 7-5.2)

b. Provide closet space for coats and jackets, smocks, boots, etc. (DOD 7-5.3)

c. Provide space for comfortable seating (e.g., sofa and lounge chairs) for about 25 percent of staff. (DOD 4-5.4)

d. Provide bulletin boards. (DOD 4-5.5)

e. Provide window(s) for natural light, when possible. (DOD 4-5.6)

f. Provide a sink and space for a coffee machine, refrigerator and microwave. Use solid surface counter tops. (DOD 4-5.7)

g. Provide space for staff work, development of program materials, and utilization for staff training library and resources. (DOD 4-6)

h. Provide work counter with storage above and below counter. Coordinate location of electrical receptacles with counter heights. (DOD 4-6.3)

i. Provide shelving and closet space for staff training resources. (DOD 4-6.4)

j. Provide additional equipment including: Personal Computer(s) with Internet Access, Printers and scanners, Telephone, Wall clock. (DOD 4-6.9)

k. Wood furniture is generally more neutral, more durable, easier to maintain, warmer and more cost-effective in the long run than plastic furniture. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 258)

l. Use Furniture Stewardship Council (FSC)-certified sustainable harvested wood for minimum 50% of all wood materials including temporary formwork as well as permanent building components. (Head Start 9.1)

m. Give preference to products made with zero formaldehyde. (Head Start 8.1.4)

n. Use products made with recycled content and avoid finishes with PVC content to the extent possible. (Head Start 8.1)

o. Provide storage for training materials and AV cart. (DOD Youth Table 4-3.2)

p. Adult toilet outside toddler and preschool classrooms. (Head Start 7.7.2)

q. Adult toilet in or near infant classrooms. (Head Start 7.7.2)

r. All new furniture, both classroom and administrative, shall be tested for VOC emissions following the procedures in ANSI/BIFMA M7.1-2007. (CHPS EQC3.4, page 60)

## **7.4 Family Resource Room**

### **7.4.2. Professional Standards**

a. A welcoming and accessible environment contains elements such as: (b) clearly defined places where families can gather information regarding the daily schedule and upcoming events; [and] (c) clearly defined places where families sign in, sign out, and gather information about their child's day (NAEYC 9.A.09b-c)

#### **7.4.3. Best Practices**

a. Room, area or alcove where books, videos, and audio tapes on parent education and child development are displayed for parent to borrow. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 409)

b. Include tables, chairs, audiovisual and computer supports, a comfortable sitting area, and a bulletin board... (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 409)

c. Locate the parent resource room convenient to lavatories, snacks, telephones, water fountains, coat closets and circulation... (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 409)

d. Include a children's book- and toy-lending library. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 409)

### **7.5 Storage of Medication**

#### **7.5.1. Regulatory Standards**

a. Must store all medications out of the reach of children and under proper conditions for sanitation, preservation, security and safety during the time the children are in care. (606 CMR 7.11 (2e))

b. Those medications found in United States Drug Enforcement Administration (DEA) Schedules II-V must be kept in a secured and locked place at all times when not being accessed by an authorized individual. (606 CMR 7.11 (2e1))

c. Prescription medications requiring refrigeration shall be stored in a way that is inaccessible to children in a refrigerator maintained at temperatures between 38° F and 42 ° F. (606 CMR 7.11 (2e2))

#### **7.5.2. Professional Standards**

a. All medications are kept in a locked container. \* (NAEYC 5.A.11e)

b. All medications, refrigerated or unrefrigerated, should have child-resistant caps, be kept in an organized fashion, be stored away from food, be stored at the proper temperature, and be completely inaccessible to children. (NHSPS 3.6.3.2) \*

### **7.6 Mildly Ill Children**

#### **7.6.1. Regulatory Standards**

a. The individual needs of the mildly ill child for food, drink, rest, play materials, comfort, supervision and appropriate indoor and outdoor activity must be met, as indicated by the health condition of the child. (606 CMR 7.11 (8))

#### **7.6.2. Professional Standards**

a. ...The child is made comfortable in a location where he or she is supervised by a familiar caregiver. If the child is suspected of having a contagious disease, then until she or he can be picked up by the family, the child is located where new individuals will not be exposed. (NAEYC 2007, 5.A.04a)

#### **7.6.3. Best Practices**

a. If the sick bay is a separate space, locate it adjacent to the director's office and near a toilet. Provide a cot or bed with a night light. This area should have simple, pleasant, cleanable finishes, and lockable storage for first aid supplies. A bookshelf for the storage of books and toys would be appropriate. A view to the exterior is preferred. (GSA, 7.6.14)

## 8. SUPPORT SPACE

### 8.1 Center Kitchen

#### 8.1.1. Regulatory Standards

- a. If the licensee provides food prepared on-site, the licensee must have a Food Service permit or evidence of inspection from the local health department when required by DPH. (606 CMR 7.12 (15b))
- b. The licensee must provide refrigeration and storage for food at not less than 32°F, nor more than 40°F for all food requiring refrigeration. Thermometers verifying temperatures must be maintained in all refrigerators. (606 CMR 7.12 (8))
- c. There must be a barrier between children's activity space and the kitchen. (606 CMR 7.07 (16c6))

#### 8.1.2. Professional Standards

- a. If the program provides food for meals and snacks (whether catered or prepared on-site), the food is prepared, served and stored in accordance with the U.S. Department of Agriculture (USDA) Child and Adult Care Food Program (CACFP) guidelines. (NAEYC 2007, 5.B.01)
- b. There are no walk-in freezers or refrigerators that do not open from the inside. (COA ASP-PS 9.01)

#### 8.1.3. Best Practices

- a. Provide the kitchen with heavy duty equipment that will function primarily to prepare simple meals. It should be accessible to service personnel, staff, and other adults. (GSA 7.6.16)
- b. The following equipment should be provided: stainless steel, three-compartment, deep sink with required plumbing, faucets with hot and cold water connections near the dishwasher with gooseneck; separate hand washing sink; garbage disposal with required plumbing connections; floor drain; heavy duty, commercial-type dishwasher/sanitizer; commercial-type refrigerator storage at or below 39°F and freezer storage at or below 0°F.; microwave oven(s); convection oven; commercial range; adequate 29 inch minimum deep counter space; storage for dry food, equipment, and supplies on open wire metal shelves; a can rack for large canned food items; recycling bin; commercial-type kitchen equipment with highly washable finishes such as stainless steel; dietitian corner with telephone to use when ordering food; ample, easily washed, metal cabinets with interior shelving within reach of cooks; stainless steel countertops and highly washable, seamless wall surfaces made for kitchens; impervious, durable, easily cleaned floor finish; washable ceiling finish. (GSA 7.6.16, Head Start 7.7.14 and DOD 4-10.7)
- c. Provide space for two or more stainless steel food carts. (GSA 7.6.16)
- d. Adequate lighting, ventilation, and clearances are required. (GSA 7.6.16)
- e. Locked storage for any hazardous materials must be provided. (GSA 7.6.16)
- f. Provide storage for all utensils and equipment off the floor in a clean, dry, closed space. (GSA 7.6.16)
- g. No sewage or drain pipes are allowed above food storage, preparation, or service areas. (GSA 7.6.16)
- h. Ample electrical outlets (with ground-fault interruption in wet areas) out of children's reach, must be provided (GSA 7.6.16) for refrigerator, oven, range, freezer, convection oven, microwave oven, garbage disposal. (GSA 10.11.1)
- i. Provide power supplies where under counter appliances will be located. (GSA 10.11.1)
- j. Require Energy Star<sup>®</sup> equipment and appliances where available for all new purchases and prohibit the purchase of low efficiency products... (CHPS, EE.C4.1, page 96)
- k. Depending on center size, provide ... a kitchen of at least 150 square feet that can be protected from access by children, has adequate/appropriate storage for bulk and daily food supplies, space for recycling bins, convenient access to a service entrance, an operable window for ventilation, natural light, and a view to the outdoors. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 406)

## **8.2 Food preparation in the Classroom**

### **8.2.3. Best Practices**

- a. Upper and lower washable cabinet storage. Provide child-proof latches or locks to prevent child access to any storage within reach. (GSA 7.6.8)
- b. Provide a minimum of 8 cubic feet of refrigerator storage. Provide a lockable box in each refrigerator for storage of medication. (GSA 7.6.8)
- c. Finishes include impervious flooring and gloss painted wall above an impervious wainscot, for example, ceramic tile. Fiberboard substrates for plastic laminate cabinets and countertops should have little or no formaldehyde emissions. Use post formed counters with integral coves and bullnose. (GSA 7.6.8)
- d. Require Energy Star® equipment and appliances where available for all new purchases and prohibit the purchase of low efficiency products. (CHPS, EE.C4.1, page 96)
- e. Infant and toddler classrooms' food preparation areas must be able to store and heat individual bottles and other prepared food brought from home. (GSA 7.6. 8)
- f. Provide food preparation areas with fixtures having shielded or shatterproof bulbs. (GSA 10.10)
- g. Equip the sink with a single-lever faucet [and] spray hose....Limit the hot water temperature to 109.4 degrees. (GSA 7.6.8)

## **8.3 Warming/Snack Kitchen**

### **8.3.1. Regulatory Standards**

- a. If the licensee provides food that is prepared off-site, the food must be prepared at a facility that has a Food Service permit or evidence of inspection from the local health department. (606 CMR 7.12 (15c))
- b. Meals and snacks provided by parents must be stored safely. The licensee must provide refrigeration and storage for food at not less than 32°F, nor more than 40°F for all food requiring refrigeration. Thermometers verifying temperatures must be maintained in all refrigerators. (606 CMR 7.12 (8))

### **8.3.2. Professional Standards**

- a. If the program provides food for meals and snacks (whether catered or prepared on-site), the food is prepared, served and stored in accordance with the U.S. Department of Agriculture (USDA) Child and Adult Care Food Program (CACFP) guidelines. (NAEYC 2007, 5.B.01)

### **8.3.3. Best Practices**

- a. Depending on center size, provide ... a kitchen of at least 150 square feet that can be protected from access by children, has adequate/appropriate storage for bulk and daily food supplies, space for recycling bins, convenient access to a service entrance, an operable window for ventilation, natural light, and a view to the outdoors. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 406)
- b. Require Energy Star® equipment and appliances where available for all new purchases and prohibit the purchase of low efficiency products. (CHPS, EE.C4.1, page 96)

## **8.4 Washer and Dryer**

### **8.4.2. Professional Standards**

- a. Centers should have a mechanical washing machine and dryer on site or shall contract with a laundry service. (NHSPS 5.4.4.1)

### **8.4.3. Best Practices**

- a. Create a small lockable laundry room...with appropriate ventilation, electricity, floor drain, and laundry tub for soaking, include some shelves for supplies, space for folding, and an area for storing clean and dirty linens. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 318)

- b. Purchase a full-sized washer and dryer. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 318)
- c. A washer and dryer convenient to the infant and toddler rooms are highly recommended for cleaning sheets, blankets, bibs, wash cloths, towels and smocks. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 318)

## **9. ENVIRONMENTAL HEALTH**

### **9.1 Asbestos**

#### **9.1.1. Regulatory Standards**

a. No person shall cause, suffer, allow or permit the spray application of asbestos fibers or materials containing asbestos fibers; or the application of said materials by means which, in the opinion of the Department, may cause or contribute to a condition of air pollution. (310 CMR 7.15).

#### **9.1.2. Professional Standards**

a. Any asbestos, fiberglass, or other friable material or any material that is in a dangerous condition found within a facility or on the grounds of the facility should be repaired or removed. ... Non friable asbestos should be identified to prevent disturbance and/or exposure during remodeling or future activities. (NHSPS 5.2.9.6)

### **9.2 Drinking Water**

#### **9.2.1. Regulatory Standards**

a. The licensee must provide a source of sanitary drinking water located in or convenient to rooms occupied by children. (606 CMR 7.12 (13))

#### **9.2.2. Professional Standards**

- a. Clean, sanitary drinking water should be readily available, in indoor and outdoor areas, throughout the day. (NHSPS 4.2.0.6)
- b. ...Drinking water is within 40 feet of the indoor areas children use... (NAEYC 9.C.05b)
- c. Drinking water, including water in drinking fountains, should be tested and evaluated in accordance with the assistance of the local health authority or state drinking water program to determine whether lead and copper levels are safe. (NHSPS 5.2.6.3)

### **9.3 Recycling and Refuse**

#### **9.3.1. Regulatory Standards**

a. Garbage must be kept in lined and covered containers. (606 CMR 7.07(10m))

#### **9.3.2. Professional Standards**

a. Garbage should be kept in containers approved by the regulatory health authority....Waste containers should be kept covered with tight-fitting lids or covers when stored. (NHSPS 5.2.7.3)

\*

#### **9.3.3. Best Practices**

a. The [school] building shall meet any local ordinances for recycling space, if such exist, and provide an easily accessible area that is dedicated to the separation, collection, and storage of materials for recycling, including at a minimum paper (white ledger and mixed), cardboard, glass, plastics, aluminum cans, and metals, and also a plan for the removal of these recyclables. (CHPS, MW.P1.1, page 143)

### **9.4 Toxins**

#### **9.4.1. Regulatory Standards**

a. The interior of the child care program must be clean and maintained free from vermin. Safe and effective means of eliminating vermin must be provided. Pesticides may not be used on the child care premises during child care hours. (606 CMR 7.07 (10j))

- b. All disinfectant solutions must be stored in accordance with manufacturer's instructions and in a secure place out of the reach of children. (606 CMR 7.11 (10o))
- c. Toxic substances must be stored separately from food and medications. (606 CMR 7.07 (13g1))
- d. All toxic substances must be labeled as to the contents and antidote. (606 CMR 7.07 (13g2))

#### **9.4.2. Professional Standards**

- a. The program maintains facilities so they are free from harmful animals, insect pests, and poisonous plants. (NAEYC 9.D.08a) \*
- b. The program uses the techniques known as Integrated Pest Management (IPM) so the least hazardous means are used to control pests and unwanted vegetation. (NAEYC 9.D.08c) \*
- c. The following items should be... stored in the original labeled containers: cleaning materials; detergents; automatic dishwasher detergents; aerosol cans; pesticides; health and beauty aids; medications; lawn care chemicals; other toxic materials. (NHSPS 5.2.9.1) \*
- d. When not in active use, all chemicals used inside or outside should be stored in a safe and secure manner in a locked room or cabinet, fitted with a child-resistive opening device, inaccessible to children, and separate from stored medications and food. (NHSPS 5.2.9.1) \*

#### **9.4.3. Best Practices**

- a. All paints and architectural coatings totaling 90% or more of the total volumes of such products applied in the project's interior shall meet the requirements described herein. Products in this category include but are not limited to sealers, stains, clear wood finishes, floor sealers and coatings, waterproofing sealers, primers, flat paints and coatings, non-flat paints and coatings, and rust preventative coatings. All such products shall meet the VOC content requirements in the applicable category of South Coast Air Quality Management District (SCAQMD) Rule 1113. Further all such products shall comply with the requirements of the Safe Drinking Water and Toxic Enforcement Act of 1986 and the most current list of chemicals (Proposition 65, CA Office of Environmental Health and Hazardous Assessment). All paints and coatings ...shall be tested and evaluated for emissions of VOCS of concern with respect to chronic inhalation exposures. (CHPS EQ.P10.1, page 50)
- b. At least 90%, by area, of the composite wood and agrifiber products installed onsite in the project's interior shall meet either one or both of the requirements described herein. The fibers may be wood, straw, bamboo, or similar cellulosic material (e.g. agrifiber). The affected products include hardwood plywood, plywood with decorative softwood veneer, laminated products with a composite wood core or platform, particleboard, medium density fiberboard (MDF), and finished goods fabricated from these products (e.g. doors, trim or molding, cabinetry, counter tops). All such products shall be manufactured with no added formaldehyde based resins and shall meet the emission requirements established by the ATCM for such products. Alternately, the products shall employ ultra-low emitting formaldehyde (ULEF) resins. (CHPS EQ.P10.2, page 51)
- c. All adhesives and sealants in quantities of 2.5 gal (10 liters) or more and totaling 90% or more of total volumes of such products applied in the project interior shall meet VOC content requirements of South Coast Air Quality Management District Rule 1168 and shall be tested and evaluated for emissions of VOCS. (CHPS EQ.C3.1, page 58)

## **10. OUTDOOR SPACE AND ACTIVITIES**

### **10.1 General Playground Safety**

#### **10.1.1. Regulatory Standards**

- a. The outdoor play area must be free from hazards including but not limited to: a busy street, a parking lot, poisonous plants, water hazards, debris, broken glass, chipping, peeling or flaking paint, dangerous machinery or tools, and weather-related and environmental hazards or small objects that could present a choking hazard to young children. Any such hazard must be

removed or fenced by a sturdy, permanently installed barrier which is at least four feet high or otherwise protected or removed, as appropriate. (606 CMR 7.07 (7d))

### **10.1.2. Professional Standards**

- a. The facility... should be equipped with an outdoor play area that directly adjoins the indoor facilities or that can be reached by a route that is free of hazards. (NHSPS 6.1.0.1).
- b....[T]he outdoor play area, and equipment are kept in good repair and are safe, with no sharp edges, splinters, protruding or rusty nails, or missing parts. (NAEYC 9.C.07a) \*
- c. All areas, both indoors and outdoors, are free from glass, trash, sharp or hazardous items,...and are in clean condition (NAEYC 9.C.07b)\*
- d. Program staff provide an outdoor play area that is protected by fences or by natural barriers to prevent access to streets and to avoid other dangers, such as pits, water hazards, or wells. (NAEYC 9.B.02a) \*

## **10.2 Age-Appropriate Design and Activities**

### **10.2.1. Regulatory Standards**

- a. The outdoor play space must be appropriate for each age group served. (606 CMR 7.07 (7b))
- b. The licensee must only use outdoor equipment, and materials, that are appropriate to the ages, needs and developmental level of the children enrolled. (606 CMR 7.07 (13))

### **10.2.2. Professional Standards**

- a. Outdoor play areas designed with equipment that is age and developmentally appropriate and that is located in clearly defined spaces within semiprivate areas where children can play alone or with a friend... (NAEYC 9.B.01)
- b. (OST only) Equipment offers various levels of challenge. (COA ASP-PS 7.04)
- c. For playgrounds intended to serve children of all ages, the layout of pathways and the landscaping of the playground should show the distinct areas for the different age groups. The area should be separated at least by a buffer zone, which could be an area with shrubs or benches. (CPSC 2.2.2)
- d. The findings of a Certified Playground Safety Inspector are documented and available on-site. (NAEYC 9.B.07)
- e. A variety of age- and developmentally appropriate materials and equipment are available indoors and outdoors for children throughout the day. This environment includes: (a) dramatic play equipment; (b) sensory materials such as sand, water, play dough, paint, and blocks; (c) materials that support curriculum goals and objectives in literacy, math, science, social studies, and other content areas; and (d) gross-motor equipment for activities such as pulling up; walking; climbing in, on, and over; moving through, around, and under; pushing; pulling; and riding. (NAEYC 9.A.04a-d)
- f. [T]he outdoor play area accommodates the abilities, needs, and interests of each age group the program serves. (NAEYC 9.B.07d) \*

### **10.2.3. Best Practices**

- a. For infants the play areas should consist of soft, resilient materials that protect crawling children and provide a comfortable surface on which to sit. (DOD 6-6.1)
- b. For infants include small steps, slopes, ground beams, climbing ramps, slight barriers and slides. (DOD 6-6.1)
- c. Include a fenced in activity area for infants and toddlers. (DOD 6-6.1)
- d. The toddler activity area is a fenced outdoor play area with many types of play spaces and activities for playing alone, playing in pairs, and playing in small groups. (DOD 6-6.3)
- e. In the activity zones of preschoolers, include a wheeled toy path, a dramatic play area, a construction area, a multi-purpose area, swings, a ball play area, a quiet place, a garden, and a composite structure for climbing. A covered porch area provides an ideal area for painting, drawing, etc. (DOD 6-6.4)

f. Incorporate manufactured textures of wood, metal and plastic as well as elements that respond when acted upon within the play environment. (DOD 6-1)

### **10.3 Dramatic Play**

#### **10.3.2. Professional Standards**

a. [The outdoor environment] includes...dramatic play equipment... (NAEYC 9.A.04a)

#### **10.3.3. Best Practices**

- a. Include a dramatic play area for preschoolers. (DOD 6-6.3)
- b. Playhouse structures should have seating. (GSA 6.5.2)
- c. The dramatic play area should be adjacent to and incorporate paths and parking areas for wheeled toys. (GSA 6.5.2)
- d. A change of level greatly enhances the quality of dramatic play. (GSA 6.5.2)

### **10.4 Active Outdoor Play**

#### **10.4.2. Professional Standards**

- a. Outdoor play areas...accommodate: (a) motor experiences such as running, climbing, balancing, riding, jumping, crawling, scooting or swinging. (NAEYC 9.B.01a)
- b. There is an open area where children and youth can run, jump, and play. (COA ASP-PS 7.01)
- c. OST: There is a large field area, for structured sports activities such as kickball. (COA ASP-PS 7.01)
- d. OST: There is a hard surface for basketball, rollerblading, bike riding and other activities. (COA ASP-PS 7.01)

### **10.5 Outdoor Quiet Area**

#### **10.5.2. Professional Standards**

- a. There is a protected area for quiet play and socializing. (COA ASP-PS 7.01)

### **10.6 Sand and Water Play**

#### **10.6.2. Professional Standards**

- a. Sand play areas should be distinct from landing areas for slides or other equipment. (NHSPS 6.2.4.1)
- b. Sandboxes should be constructed to permit drainage. (NHSPS 6.2.4.1)
- c. Sandboxes should be covered with a lid or other covering when they are not in use. (NHSPS 6.2.4.1)

#### **10.6.3. Best Practices**

- a. Provide a hose bib connection for water play and for filling wading pools, accessible from the circulation path. (GSA 6.5.1)
- b. For toddlers, provide a sandbox with a retaining border that does not pose a tripping hazard. (DOD 6-6.3.1)
- c. For preschoolers include facilities for play with sand and water and place adjacent to one another allowing these activities to intermingle. (DOD 6-6.4)

### **10.7 Equipment Safety**

#### **10.7.1. Regulatory Standards**

- a. Equipment must be sturdy, safely constructed and installed, non-tippable, easily cleaned, and free from lead paint, protruding nails, rust, and other hazards that may be dangerous to children. (606 CMR 7.07 (13))
- b. Must keep all equipment, materials, clean and in a safe, secure, and workable condition. (606 CMR 7.07 (13b))



- c. Must arrange equipment and fixtures safely, with sharp edges protected, and in such a way as to not present hazards to children. (606 CMR 7.07 (13c))
- d. All play equipment, and structures must be free of entrapment hazards. (606 CMR 7.07 (13d))
- e. Except for therapeutic equipment, the use of trampolines by child care children, whether indoors or outdoors, is prohibited. (606 CMR 7.07 (12))

#### **10.7.2. Professional Standards**

- a. All equipment should be arranged so that children playing on one piece of equipment will not interfere with children playing on or running to another piece of equipment. (NHSPS 6.2.2.2)
- b. Moving equipment such as swings should be located toward a corner, side, or edge of a play area while ensuring that the appropriate use zones around the equipment are maintained. (CPSC 2.2.4)
- c. Large equipment is bolted down. (COA ASP-PS 9.02)
- d. When connected to the ground, the anchoring devices should be installed below ground level and beneath the base of the protective surfacing material. (CPSC 5.3.2.3)
- e. Outdoor climbing equipment and swings should be assembled, anchored and maintained in accordance with the manufacturer's instructions. (NHSPS 6.2.1.3)
- f. Playgrounds should ...be in scale with [children's] sizes, abilities, and developmental levels. Table 1 shows the appropriate age range for various pieces of playground equipment. (CPSC 2.3)

<b>TABLE 1. EXAMPLES OF AGE APPROPRIATE EQUIPMENT</b>		
<b>Toddler – Ages 6-23 months</b>	<b>Preschool – Ages 2-5 years</b>	<b>Grade School – Ages 5-12 years</b>
Climbing equipment under 32" high	Certain climbers**	Arch climbers
Ramps	Horizontal ladders less than or equal to 60" high for ages 4 and 5	Chain or cable walks
Single file step ladders	Merry-go-rounds	Free standing climbing events with flexible parts
slides	Ramps	Fulcrum seesaws
Spiral slides less than 360 degrees	Rung ladders	Ladders – Horizontal, Rung, & step
Spring rockers	Single file step ladders	Overhead rings***
Stairways	Slides	Merry-go-rounds
Swings with full bucket seats	Spiral slides up to 360 degrees	Ramps
	Stairways	Ring treks
	Swings – belt, full bucket seats (2-4 years) & rotating tire	Slides
		Spiral slides more than one 360 degree turn
		Stairways
		Swings – belt and rotating tire
		Track rides
		Vertical sliding poles
*See CPSC 5.3.6	**See CPSC 5.3.2	*** See CPSC 5.3.2.5

g. (ECE only) No fulcrum seesaws (CPSC 5.3.5.1), sliding poles (CPSC 5.3.2.6), chain or cable walks (NPPS), track rides (CPSC 5.3.2.7), parallel bars (CPSC 5.3.2), horizontal ladders (CPSC 5.3.2.4), cement crawl tubes (NPPS), long spiral slides (CPSC 5.3.6.3.3), log rolls (CPSC 5.3.3), free standing flexible climbers (CPSC 5.3.2.3), free standing arch climbers (CPSC 5.3.2.2) or overhead rings. (CPSC 5.3.2.5)

h. Some playground equipment is not recommended...including: trampolines, swinging gates, giant strides, climbing ropes not secured at both ends, heavy metal swings, multiple occupancy swings, rope swings, swinging dual exercise rings and trapeze bars. (CPSC 2.3.1)

i. Anything that could crush or shear limbs is not acceptable. (CPSC 3.1)

j. Swings:

1. No more than 2 single-axis swings are to be hung in each bay of the supporting structure.

(CPSC 5.3.8.3.1)

2. The use zone is twice the height of the swing beam in front and back. (CPSC Figure 25)

3. For multi-axis swings,(tire swings) the use zone should extend in any direction from a point directly beneath the pivot point for a minimum distance of 6 feet plus the length of the suspending members (CPSC 5.3.8.4.1)

4. The use zone for a full bucket swing should extend to the front and rear a minimum of twice the vertical distance from the top of the occupant's sitting surface to the pivot point. (CPSC 5.3.8.3.3)

5. Lightweight rubber or plastic swing seats are preferred. (CPSC 5.3.8.3.1)

6. The vertical distance from the underside of the occupied swing seat to the protective surfacing should be at least:

For toddlers and preschool children: 12 inches for to-fro (belt) swings and 24 inches for full bucket swings. (CPSC Table 7)

For school age children: 12 inches for belt seat swings. (CPSC Table 7)

7. Drainage holes should be provided in the underside of the tire for tire swings. (CPSC 5.3.8.4)

k. Slides:

1. Slide platforms should be at least 19 inches deep for toddler and 14 inches deep for preschoolers and school age children and be surrounded by guardrails. (CPSC 5.3.6.2)

2. Slides should not have any spaces or gaps that could trap strings, clothing, body parts, etc. between the platform and the start of the slide chute. (CPSC 5.3.6.2)

3. No bare metals on platforms, chutes and steps. (CPSC 5.3.6)

4. Handholds to facilitate the transition from standing to sitting and decrease the risk of falls (except tube slides where the tube perimeter provides hand support) should extend high enough to provide hand support for the largest child in a standing position, and low enough to provide hand support for the smallest child in a sitting position. (CPSC 5.3.6.2)

5. Straight slides with flat open chutes should have sides with a 4 inch minimum height extending along both sides of the chute for the entire length of the inclined sliding surface. (CPSC 5.3.6.3.4)

6. All slides should have an exit region to help children maintain their balance and facilitate a smooth transition from sitting to standing when exiting. The chute exit region should: be between 0 and -4° as measured from a plane parallel to the ground and have edges that are rounded or curved to prevent lacerations or other injuries that could result from impact with a sharp or straight edge. (CPSC 5.3.6.4)

7. For toddlers the chute exit region should be between 7 and 10 inches long if any portion of the chute exceeds a 24° slope, be no more than 6 inches above the protective surfacing and have a transition from the sliding portion to the exit region with a radius of

curvature of at least 18 inches. (CPSC 5.3.6.4) For preschool- and school-age the chute exit region should be at least 11 inches long, be no more than 11 inches above the protective surfacing if the slide is no greater than 4 feet high and be at least 7 inches but not more than 15 inches above the protective surfacing if the slide is over 4 feet high. (CPSC 5.3.6.4)

8. (ECE only) Only short spiral slides (one 360 degree turn or less) are allowed. (CPSC 5.3.6.3.3)

I. Elevated surfaces:

1. Guardrails and barriers should completely surround any elevated platforms (Except for entrance and exit openings, the maximum clearance opening without a top horizontal guardrail should be 15 inches.), prevent unintentional falls from the platform, prevent the possibility of entrapment, and facilitate supervision. Equipment intended for toddlers should use barriers on all elevated walking surfaces above 18 inches. (CPSC 5.1.3)

2. There is space to turn around on elevated platforms if children decide they do not want to slide or climb down equipment. (NPPS)

m. Stepped Platforms: The maximum difference in height between stepped platforms should be: Toddlers: 7 inches. (CPSC 5.1.2) Preschool-age: 12 inches. (CPSC 5.1.2) School age: 18 inches. (CPSC 5.1.2)

n. Balance beams:

1. For toddlers: No balance beams (CPSC 5.3.1)

2. For preschoolers: No higher than 12 inches. (CPSC 5.3.1)

3. For school age children: No higher than 16 inches. (CPSC 5.3.1)

o. Merry-go- rounds: not to be used by infants or toddlers (CPSC 5.3.4)

p. (OST only) The first handhold on either end of upper body equipment should not be placed directly above the platform or climbing rung used for mount or dismount. The horizontal distance to the first handhold should be no greater than 10 inches but not directly above the platform where access is from a platform. The maximum height of overhead rings measured from the center of the grasping device to the protective surfacing should be 84 inches. (CPSC 5.3.2.5)

q. (OST only) If overhead swinging rings are suspended by chains, the maximum length of the chains should be 7 inches. (CPSC 5.3.2.5)

r. (OST only) The horizontal distance between a sliding pole and any structure used for access to the sliding pole should be between 18 inches and 20 inches. (CPSC 5.3.2.6)

s. The outdoor play area protects children from.... (a) catch points, sharp points, and protruding hardware, (b) entrapment (openings should measure less than 3.5 inches or more than 9 inches), and (c) tripping hazards. (NAEYC 9.B.06b-d)\*

t. Wooden fences and playground structures created out of wood should be tested for chromate copper arsenate (CCA). Wooden fences and playground structures created out of wood that is found to contain CCA should be sealed with an oil-based outdoor sealant annually. (NHSPS 6.1.0.8)

u. Unless otherwise specified...the fall height for climbers is the distance between the highest part of the climber intended for foot support and the protective surfacing beneath it. (CPSC 5.3.2.1.2)

### 10.7.3. Best Practices

a. The following elements are not to be used: metal slides, enclosed tunnel slides, spring toys (GSA 6.5.3) [and ECE only] animal swings metal or otherwise, hard-seat swings and zip lines. (DOD 6-7.2)

b. The following elements are not allowed for preschoolers: merry-go-rounds. (DOD 6-7.2)

## 10.8 Fencing and Barriers

### 10.8.1. Regulatory Standards

a. All fences must be free of entrapment hazards. (606 CMR 7.07 (13d))

b. Suitable barriers, including but not limited to bulkhead doors, must be installed to prevent falls into outdoor stair or window wells. (606 CMR 7.07 (7h))

c. If the outdoor play space is located on a roof, it must be protected by a barrier at least seven feet high, which cannot be climbed by children. (606 CMR 7.07 (7e))

#### **10.8.2. Professional Standards**

a. The outdoor play area should be enclosed with a fence or natural barriers. Fences and barriers should not prevent the observation of children by caregivers/teachers. If a fence is used, it should conform to applicable local building codes in height and construction. (NHSPS 6.1.0.8)

b. The fence and gates should be constructed to discourage climbing. (NHSPS 6.1.0.8)

c. The openings in the fence and gates should be no larger than 3 ½ inches. (NHSPS 6.1.0.8)

d. Wooden fences and playground structures created out of wood should be tested for chromate copper arsenate (CCA). Wooden fences and playground structures created out of wood that is found to contain CCA should be sealed with an oil-based outdoor sealant annually. (NHSPS 6.1.0.8)

#### **10.8.3. Best Practices**

a. When the play area is adjacent to hazards, busy roadways, enclose the perimeter of the play area by an 8 ft high fence. (DOD 6-5.1.4)

b. To prevent finger entrapment, there must be no openings in the fence between .35 inches and .98 inches wide. (GSA 6.7.1)

c. Provide gates that permit occupant egress to include infant crib egress from the play area and from the building. Provide at least one access gate that is 10 ft. to 12 ft. wide for emergency or service vehicles. Provide gates with an adult-controlled securing device. (DOD 6-5.1.9)

d. Gates must be self-closing and latching. Children's fingers must be protected from pinching or crushing on gate hinge spaces. (GSA 6.7.1)

### **10.9 Access from Classrooms**

#### **10.9.3. Best Practices**

a. Design outdoor play areas to directly adjoin the building. Locate the play areas immediately adjacent to the activity rooms of the children who will use the area and to be viewed from the activity rooms that they serve. (DOD 6-2.2)

b. The link between interior and exterior spaces may be a transitional area such as a deck or open vestibule. (GSA 6.4.3)

c. Locate covered, hard-surfaced transitional areas (wood, brick, concrete, asphalt) outside each group room to be used for art, woodworking, science, water and sand play. (Olds, A.R. *Child Care Design Guide*, © 2001 McGraw-Hill Companies, Inc., page 103)

### **10.10 Natural Elements and Landscaping**

#### **10.10.1. Regulatory Standards**

a. The outdoor play area must provide for both direct sunlight and shade. (606 CMR 7.07 (7c))

#### **10.10.2. Professional Standards**

a. Outdoor play areas... accommodate: (c) exploration of the natural environment, including a variety of natural and manufactured surfaces, and areas with natural materials such as nonpoisonous plants, shrubs, and trees. (NAEYC 9.B.01c)

b. To protect against cold, heat, sun injury and insect-borne disease, the program ensures that: (b) children have the opportunity to play in the shade. (NAEYC 5.A.07b) \*

#### **10.10.3. Best Practices**

a. Incorporate textures such as sand, water, grass, flowers, trees, and smooth rocks (and other artifacts of nature) within the natural environment. (DOD 6-1)

b. At least 50 percent of the play area should be exposed to sunlight at any time during the morning and afternoon when the play yard will be used. (GSA 6.7.4)

- c. Provide a minimum of 10 % shaded area per each playground or a minimum of 15 square feet per child for the maximum number of children occupying the Outdoor Activity Area at any one time. (DOD 6-5.3)
- d. Ensure that all areas have positive drainage. (DOD 3-3)
- e. Locate above-grade downspouts outside the outdoor activity area and away from areas where children congregate. (DOD 3-3.1)
- f. Do not install permanent irrigation systems for watering non-playing field landscaped areas and specify drought resistant plants or grasses in these areas so that irrigation is not needed beyond plant establishment. (CHPS, WE.C3.1, page 111)

## **10.11 Size, Layout, Circulation**

### **10.11.1. Regulatory Standards**

- a. The licensee must maintain, or have access to, an outdoor play area of at least 75 square feet per child who is outside at any one time. (606 CMR 7.07 (7))
- b. Porches and decks may be used to meet the requirements for outdoor play space. (606 CMR 7.07 (8 b))
- c. Porches and decks that are more than three feet from grade level must be surrounded by a protective barricade in accordance with applicable building codes. (606 CMR 7.07 (8c))
- d. Barricades must be sturdy and constructed in a way that will prevent a young child from going underneath, over, or through them. (606 CMR 7.07 (8d))
- e. Stairs must be safely barricaded whenever the porch or deck is in use by children younger than three years old. (606 CMR 7.07 (8e))

### **10.11.2. Professional Standards**

- a. The program provides at least 75 square feet of outside play space for each child playing outside at any one time. The total amount of required play space is based on a maximum of one-third of the total center enrollment being outside at one time. (NAEYC 9.B.04a) \*
- b. ...porches...should be constructed for safe use as required by the local building code....and should be kept in sound condition, well lighted, and in good repair. (NHSPS 5.1.6.2) \*

### **10.11.3. Best Practices**

- a. Design the play environment to be open to many interpretations and uses in order for the child to exercise his or her power to manipulate it. (DOD 6-1)
- b. The play yard ideally has a minimum of two access points, one from the classroom into the play yard, and one from the play yard outside to the site. (GSA 6.4.6)
- c. Main entrance pathways should be 72 inches to 96 inches wide. (GSA 6.7.3)
- d. Dedicated pathways and routes should be provided for play with wheeled toys. These paths need to be a minimum of 60 inches wide so that two tricycles can pass each other. (GSA 6.4.6)
- e. For children with disabilities, pathway slopes should be no greater than 1:20 unless they are provided with a handrail. Cross slopes will be limited to 1:50. (GSA 6.7.3)
- f. The design must accommodate the movement of maintenance equipment into the play yard, and allow an emergency exit. (GSA 6.4.6)
- g. Provide an entry to each play zone for transporting materials, wheelchairs, walkers, and infant strollers. (DOD 6-5.7.1)
- h. Pathways under trees and constructed elements must have a minimum of 80 inches headroom. (GSA 6.7.3)

## **10.12 Outdoor Storage**

### **10.12.2. Professional Standards**

- a. Outdoor games and sports equipment are stored close to the activity space, or moved near the activity space during the time children will be using it. (COA ASP-PS 7.03)

### **10.12.3. Best Practices**

- a. Provide enclosed, weather-tight, vandal-proof storage in each play area. (DOD 6-5.2)

b. Storage facilities should be easily discernible and have a unique, easily understood symbol indicating the contents. (GSA 6.4.8)

### 10.13 Outdoor Surfacing

#### 10.13.1. Regulatory Standards

a. The outdoor play space must not be covered with a dangerously harsh, abrasive, or toxic material. (606 CMR 7.07 (7f))

b. Pea gravel and wood chip nuggets must not be used in areas used by infants and toddlers. (606 CMR 7.07 (16e))

c. The use zones under and around swings, slides and climbing structures must be covered with an adequate depth (9 inches) of an impact absorbing material, in accordance with EEC policy. (606 CMR 7.07 (16e))

#### 10.13.2. Professional Standards

a. Surfaces should be free from standing water, animal feces, and foreign objects. (NPPS)

b. Inappropriate surfacing materials include asphalt, carpets not tested to ASTM F1292, concrete, dirt, grass, or CCA treated wood mulch. (CPSC 2.4.2)

c. Other appropriate surface materials include those tested to ASTM F1292 and include engineered wood fiber (EWF), unitary materials of rubber mats or tiles poured in place. (CPSC 2.4.2.1 and 2.4.2.2)

d. The minimum compressed loose-fill surfacing depths of shredded/recycled rubber, sand, pea gravel, wood mulch (non-CCA) or wood chips is 9 inches with a start of 12 inches because of compression over time due to use and weathering. (CPSC 2.4.2.2) [Note: exclusion of pea gravel and wood chip nuggets in areas used by infants and toddlers found in 1. Regulatory Standards] (CPSC 2.4.2.2)

e.

Table 2. Minimum compressed loose-fill surfacing depths				
Inches	Of	(Loose-Fill Material)	Protects to	Fall Height (feet)
6*		Shredded/recycled rubber		10
9		Sand		4
9		Pea Gravel		5
9		Wood mulch (non-CCA)		7
9		Wood chips		10
Shredded/recycled rubber loose-fill surfacing does not compress in the same manner as other loose-fill materials. However, care should be taken to maintain a constant depth as displacement may still occur. (CPSC Table 2., p. 11)				

f. Moving equipment such as swings should be located toward a corner, side, or edge of a play area while ensuring that the appropriate use zones around the equipment are maintained. (CPSC 2.2.4)\*.

g. The use zone should extend a minimum of 6 feet in all directions from the perimeter of the equipment. (CPSC 5.3.10)

h. The use zone of a climber may overlap with neighboring equipment if the other piece of equipment allows overlapping use zones and

- There is at least 6 feet between equipment when adjacent designated play surfaces are no more than 30 inches high; or

- There is at least 9 feet between equipment when adjacent designated play surfaces are more than 30 inches high. (CPSC 5.3.2.1.4)

i. The use zone should extend a minimum of 6 feet in all directions from the perimeter of the stand alone climber. (CPSC 5.3.2.1.4)

j. For preschool and school age children: the use zone in front of the access and to the sides of a slide should extend a minimum of 6 feet from the perimeter of the equipment. For slides less than or equal to 6 feet high, the use zone in front of the exit should be at least 6 feet. For slides greater than 6 feet high, the use zone in front of the exit should be at least as long as the slide is high up to a maximum of 8 feet. (CPSC 5.3.6.5)

**10.13.3. Best Practices**

a. Use a variety of surface materials, with varying finishes, patterns, textures, and colors to stimulate interest and increase play opportunities. (DOD 6-5.4)

## APPENDIX A: ACCESSIBILITY

The Children's Investment Fund seeks to ensure that children with differing abilities have access to high quality early care and education facilities as well as after school and out of school time facilities. We support the intent of the Massachusetts Architectural Access Board "... to provide persons with disabilities full, free and safe use of all buildings and facilities so that all such persons may have the educational, living and recreational opportunities necessary to be as self-sufficient as possible and to assume full responsibilities as citizens." (521 CMR 2.2) Included below are the accessibility standards that were used in this inventory of early care and education and out-of-school-time facilities. There are two sets of federal standards – the Americans with Disabilities Act Standards for Accessible Design (ADA) and The Uniform Federal Accessibility Standards (UFAS). We have chosen the UFAS standards, which were developed under the Architectural Barriers Act, and used by the Department of Defense and other federal agencies, and are required for all facilities designed, built, or renovated with federal funds. The UFAS standards are also generally consistent with the standards published by the non-governmental American National Standards Institute (ANSI). The Massachusetts standards from the Architectural Access Board (AAB) are closely aligned with the federal standards: we have included those Massachusetts standards that differ from or supplement the UFAS standards. We would like to acknowledge On-Site Insight, a Recap Real Estate Advisors Company, for their work in this area and are grateful for their willingness to share their Section 504/Mass AAB Facility Review Book.

While neither federal nor Massachusetts regulations require that all early care and education and out-of-school time facilities be fully accessible, these regulations do require compliance with certain standards depending on the extent of the facility work and whether it is new construction/additions, or alterations to existing buildings. The relevant requirements are found in UFAS 4 and 521CMR. The Americans with Disabilities Act requires that businesses make reasonable accommodations to individuals with a disability, unless the entity can demonstrate that the accommodation would impose an undue hardship on the operation of the business, (Title 42, Chapter 126, Section 12112). The Massachusetts Department of Early Education and Care also requires that "The licensee must accept applications and make reasonable accommodations to welcome or continue to serve any child with a disability" (606 CMR 7.04 (13)). Early education and out-school-time providers should consult with an architect to determine which, if any, accessibility requirements apply to their particular project.

The following categories are included:

1. Accessible Routes- Outside Paths and Walks
2. Parking
3. Existing Curb Ramps
4. Existing Ramps
5. Entrance Doors
6. Accessible Routes- Interior Circulation
7. Interior Doors
8. Elevators
9. Public Toilet Rooms- Adults
10. Drinking Fountains
11. Public Telephones
12. Common Use Kitchens
13. Platform Lifts
14. Public Toilet Rooms- Children
15. Storage Facilities



## 1. Accessible Routes- Outside Paths and Walks

- a. At least one accessible route complying with 4.3 shall connect accessible building and facility entrances with all accessible spaces and elements within the building or facility. (UFAS 4.1.2(1))
- b. The minimum clear width of an accessible route shall be 36 inches (915mm) except at doors (see 4.13.5). If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in Figure 7. (UFAS 4.3.3)
- c. [The] width of walkways shall not be less than 48 inches (48" = 1219mm) excluding curb stones. An unobstructed path of travel shall be provided which is at least 36 inches (36" = 914mm) clear, excluding curb stones. (521 CMR 22.2)
- d. If an accessible route has less than 60 inches (1525mm) clear width, then passing spaces at least 60 inches by 60 inches (1525mm by 1525mm) shall be located at reasonable intervals not to exceed 200 feet (61m). A T-intersection of two corridors or walks is an acceptable passing place. (UFAS 4.3.4)
- e. Objects projecting from walls (for example, telephones) with their leading edges between 27 inches and 80 inches (685mm and 2030mm) above the finished floor shall protrude no more than 4 inches (100mm) into walks, halls, corridors, passageways, or aisles. Objects mounted with their leading edges at or below 27 inches (685mm) above the finished floor may protrude any amount. Free-standing objects mounted on posts or pylons may overhang 12 inches (305mm) maximum from 27 inches to 80 inches (685mm to 2030mm) above the ground or finished floor. Protruding objects shall not reduce the clear width of an accessible route or maneuvering space. (UFAS 4.4.1)
- f. Walks ... or other circulation spaces shall have 80 inches (2030mm) minimum clear head room. If vertical clearance of an area adjoining an accessible route is reduced to less than 80 inches (normal dimensions), a barrier to warn blind or visually-impaired persons shall be provided. (UFAS 4.4.2)
- g. Ground ... along accessible routes ..., shall be stable, firm, slip-resistant. (UFAS 4.5)
- h. An accessible route with a running slope greater than 1:20 is a ramp and shall comply with 4.8. Nowhere shall the cross slope of an accessible route exceed 1:50. (UFAS 4.3.7)
- i. Changes in level up to ¼ inch (6mm) may be vertical and without edge treatment. Changes in level between ¼ inch and ½ inch (6mm and 13mm) shall be beveled with a slope no greater than 1:2. Changes in level greater than ½ inch (13mm) shall be accomplished by means of a ramp that complies with 4.7 or 4.8. (UFAS 4.5.2)
- j. If gratings are located in walking surfaces, then they shall have spaces no greater than ½ inch (13mm) wide in one direction. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel. (UFAS 4.5.4)

## 2. Parking

- a.. If parking spaces are provided for employees or visitors, or both, then accessible spaces, complying with 4.6 shall be provided in each such parking area in conformance with the following table:[one accessible space for every 25 spaces up to 500]. (UFAS 4.1.1(5) and 521 CMR 23.2.10)
- b. Parking spaces for disabled people and accessible passenger loading zones that serve a particular building shall be the spaces or zones located closest to the nearest accessible entrance on an accessible route. (UFAS 4.6.2)
- c. Parking spaces for disabled people shall be at least 96 inches (2440m) wide and shall have an adjacent access aisle 60 inches (1525mm) wide minimum. Parking access aisles shall be part of an accessible route to the building or facility entrance and shall comply with 4.3. (UFAS 4.6.3)
- d. One in every eight accessible spaces, but not less than one, shall be van accessible. (521 CMR 23.2.2)

- e. Each [van space] should have an adjacent access of aisle of at least 96 inches (2440mm) wide. (UFAS 4.6.3)
- f. Access aisles shall be clearly marked by means of diagonal stripes. (521 CMR 23.4.6.e)
- g. Parking spaces and access aisles shall be level with surface slopes not exceeding 1:50 in all directions. (UFAS 4.6.3)
- h. Accessible parking spaces shall be designated as reserved for the disabled by a sign showing the symbol of accessibility. Such signs shall not be obscured by a vehicle parked in the space. (UFAS 4.6.4)
- i. A sign shall be located at the head of each space and not more than 10 feet (10' – 3048mm) away, and at accessible passenger loading zones and may also include wording identifying its use. (521 CMR 23.6.1)
- j. Passenger loading zones shall provide an access aisle of at least 60 inches (1525mm) wide and 20 feet (6 m) long adjacent and parallel to vehicle pull-up space, then a curb ramp complying with 4.7 shall be provided. Vehicle standing spaces and access aisles shall be level with surface slopes not exceeding 1:50 in all directions. (UFAS 4.6.5)
- k. Provide minimum vertical clearance of 114 inches at accessible passenger loading zones and along vehicle access routes to such areas from site entrances. If accessible van parking spaces are provided, then the minimum vertical clearance should be 114 inches. (UFAS 4.6.6)

### 3. Existing Curb Ramps

- a. Curb ramps complying with 4.7 shall be provided wherever an accessible route crosses a curb. (UFAS 4.7.1)
- b. Slopes of curb ramps shall comply with 4.8.2. The slopes shall be measured as shown in Figure 11. Transitions from ramps to walks, gutters, or streets shall be flush and free of abrupt changes. Maximum slopes of adjoining gutters, road surface immediately adjacent to the curb ramp, or accessible route shall not exceed 1:20. (UFAS 4.7.2)
- c. Curb cuts are required at each corner of each intersection, located within a crosswalk and/or the pedestrian path of travel. Curb cuts shall be perpendicular to the curb at street crossings and each shall have a level landing at the top. At marked crossings, the bottom of the ramp run, exclusive of flared sides, shall be wholly contained within the marked crossing. The crosswalk/pedestrian path of travel must also be perpendicular to the curb. (521 CMR 21.2.1)
- d. The least possible slope should be used for any ramp. The maximum slope shall be one-in-12 (1:12) (8.3%). Where sidewalks are too narrow to install a straight-line curb cut at a slope of one-in-12 (1:12) (8.3%), the sides of the curb cut shall not exceed one-in-12 (1:12) (8.3%). The maximum cross-slope for any curb shall be 1:50 (2%). (521 CMR 21.3)
- e. Curb ramps must be a minimum of 36 in clear width, exclusive of flared sides. (UFAS 4.8.3) Sides of curb cuts shall extend at least 24 inches (24" = 610mm) at the curb. The maximum slope of the flare is one-on-ten (1:10) (10%). Curbing at the flared sides must blend with the slope of the flared sides. (521 CMR 21.7)
- f. Ground and floor surfaces...including...curb ramps, shall be stable firm, slip-resistant, and shall comply with 4.5. (UFAS 4.5.1)
- g. If a curb ramp is located where pedestrians must walk across the ramp or where it is not protected by handrails or guardrails, then it shall have flared sides; the maximum slope of the flare shall be 1:10. (UFAS 4.7.5)
- h. If the landing depth at the top of a curb ramp is less than 48 inches, then the slope of the flared side shall not exceed 1:12. (UFAS Figure 12(a))
- i. Curb cuts with returned sides are only permitted where they are protected by handrails pursuant to 521 CMR 24.5, Handrails, or where pedestrian travel across the ramp is obstructed by permanently installed street hardware or landscaping. (521 CMR 21.8)
- j. Built-up curb ramps shall be located so that they do not project into vehicular traffic lanes. (UFAS 4.7.6)

k. If diagonal (or corner type) curb ramps have returned curbs or other well-defined edges, such edges shall be parallel to the direction of the pedestrian flow. The bottom of diagonal curb ramps shall have 48 inches (1220mm) minimum clear space ...If diagonal curb ramps are provided at marked crossings, the 48 inches (1220mm) clear space shall be within the markings. If diagonal curb ramps have flared sides, they shall also have at least a 24 inch (610mm) long segment of straight curb located on each side of the curb ramp and within the marked crossing. (UFAS 4.7.10)

#### 4. Existing Ramps

a. Any part of an accessible route with a slope greater than 1:20 shall be considered a ramp and comply with 4.8. (UFAS 4.3.7 and 4.81)

b. The least possible slope shall be used for any ramp. The maximum slope of a ramp in new construction shall be 1:12. The maximum rise for any run shall be 30 inches (760mm). Curb ramps and ramps to be constructed on existing sites or in existing buildings or facilities may have slopes and rises as shown in Table 2 if space limitations prohibit the use of a 1:12 slope or less (see 4.1.6). (UFAS 4.8.2)

c. The cross slope of ramp surfaces shall be no greater than 1:50. (UFAS 4.8.6)

d. Ground or floor surfaces... [of] ramps shall be stable, firm, slip-resistant, and shall comply with 4.5. (UFAS 4.5.1)

e. If a ramp run has a rise greater than 6 inches (250mm) or a horizontal projection greater than 72 inches (1830mm), then it shall have handrails on both sides. Handrails are not required on curb ramps. Handrails shall comply with 4.2.6 and shall have the following features:...If handrails are not continuous, they shall extend at least 12 inches (305mm) beyond the top and bottom of the ramp segment and shall be parallel with the floor or ground surface. The clear space between the handrail and the wall shall be 1-1/2 inches (38mm)...Top of handrail gripping surfaces shall be mounted between 30 inches and 34 inches (760mm and 865mm) above the ramp surfaces. (UFAS 4.8.5)

f. Handrails shall be provided in pairs, one at a height between 34 inches and 38 inches (34" -38" = 864mm – 965mm), and a lower one at a height between 18 and 20 inches (18" – 20" = 457mm - 508 mm), measure vertically from the surface of the ramp to top of the handrail. (521 CMR 24.5.2)

g. Handrails shall have a circular cross section with an outside diameter of 1 ¼ inches (32mm) minimum and two inches (51mm) maximum. (521 CMR 25.5.5)

h. Ramps and landings with drop-offs shall have curbs, walls, railings, or projecting surfaces [edge protection] that prevent people from slipping off the ramp. Curbs shall be a minimum of 2 inches (50mm) high. (UFAS 4.8.7)

i. Ramps shall have level landings at the bottom and top of each run. Landings shall have the following features: (1) The landing shall be at least as wide as the ramp run leading to it, (2) The landing length shall be a minimum of 60 inches (1525mm) clear, (3) If ramps changes directions at landings, the minimum landing shall be 60 inches by 60 inches (1525mm by 1525mm). 4) If a doorway is located at a landing, then the area in front of the doorway shall comply with 4.13.6. (UFAS 4.8.4)

j. A minimum of 24 inches (24" =610mm) of clear floor space shall be provided on the latch, pull side of the door when the clear floors space in front of the door is a minimum of 54 inches (54" = 1372mm) and the door has a closer. (521 CMR 26.6.3)

k. The minimum clear width of a ramp shall be 36 inches. (UFAS 4.8.3)

l. The minimum clear width of a ramp shall be 48 inches (48" = 1219mm), measured between the railings. (521 CMR.24.3)

## 5. Entrance Doors

- a. At least one principal entrance at each grade floor level to a building or facility shall comply with 4.14. Because entrances also serve as emergency exits, whose proximity to all parts of buildings and facilities is essential, it is preferable that all or most exits be accessible. UFAS 4.1.2(8)
- b. All public entrance(s) of a building or tenancy in a building shall be accessible. Public entrances are any entrances that are not solely service entrances, loading entrances, or entrances restricted to employee use only. (521 CMR 25.1)
- c. At least one accessible route complying with 4.3 shall connect accessible building or facility entrances with all accessible spaces and elements within the building or facility. (UFAS 4.1.2(1))
- d. Each door that is an element of an accessible route shall comply with 4.13. (UFAS 4.1.2.7 (a))
- e. If doorways have two independently operated door leaves, then at least one leaf shall meet the specifications in 4.13.5 and 4.13.6. That leaf shall be an active leaf. (UFAS 4.13.4)
- f. An accessible gate or door shall be provided adjacent to the turnstile or revolving door and shall be so designated as to facilitate the same use pattern. (UFAS 4.13.3)
- g. Doorways shall have a minimum clear opening of 32 inches (815mm) with the door open 90 degrees, measured between the face of the door and the stop. Openings more than 24 inches (610mm) in depth shall comply with 4.2.1 and 4.3.3. (UFAS 4.13.5)
- h. Handles, pulls, latches, locks and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist to operate. Level-operated mechanisms, push-type mechanisms, and U-shaped handles are acceptable designs. ...Mount no hardware required for accessible door passage higher than 48 inches (1220mm) above finished floor. (UFAS 4.13.9)
- i. Hand operated door opening hardware shall be located 36 inches to 48 inches (36" to 48" = 914mm to 1219mm) above the floor. (521 CMR 26.11.2)
- j. The maximum force for pushing or pulling open a door shall be as follows: ... exterior hinged doors: (reserved [8.5lbf]), interior hinged doors: 5lbf (22.2N), sliding or folding doors: 5lbf (22.2N). (UFAS 4.13.11)
- k. The maximum force for pushing or pulling opening a door shall be as follows: ...a. exterior hinged doors: 15 lbs, b. interior hinged doors: five lbs., c. sliding or folding doors: five lbs. (521 CMR 26.8.1)
- l. Thresholds at doorways shall not exceed  $\frac{3}{4}$  inch (19mm) in height for exterior sliding doors or  $\frac{1}{2}$  inch (13mm) for other types of doors. Raised thresholds and floor level changes at accessible doorways shall be beveled with a slope no greater than 1:2 (see 4.5.2). (UFAS 4.13.8)
- m. The minimum space between two hinged or pivoted doors in a series shall be 48 inches (1220mm) plus the width of any door swinging into the space. Doors in series shall swing either in the same direction or away from the space between the doors. (UFAS 4.13.7 and 521 CMR 25.3)
- n. Pull side clearance shall comply with the following: a. A minimum of 18 inches (18" = 457mm) of clear floor space shall be provided on the latch, pull side of the door when the clear floor space in front of the door is a minimum of 60 inches (60" = 1524mm). b. A minimum of 42 inches (42" = 1067mm) of clear floor space shall be provided on the latch, pull side of the door when the clear floor space is in front of the door is more than 54 inches (54" = 1372mm) but less than 60 inches (60" = 1524mm). c. A minimum of 24 inches (24" = 610mm) of clear floor space shall be provided on the latch, pull side of the door when the clear floor space in front of the door is a minimum of 54 inches (54" = 1372mm) and the door has a closer. (521 CMR 26.6.3)
- o. Door mats  $\frac{1}{2}$  inches ( $\frac{1}{2}$ " = 13mm) thick or less shall be securely anchored at all edges to avoid tripping. Door mats between  $\frac{1}{4}$  inch ( $\frac{1}{4}$ " = 6mm) and  $\frac{1}{2}$  inch ( $\frac{1}{2}$ " = 13mm) thick must be secured with beveled edging that slopes no more than 1:2 (50%). Door mats thicker than  $\frac{1}{2}$

inch ( $\frac{1}{2}$ " = 13mm) shall be recessed. Grates shall have openings not exceeding  $\frac{1}{2}$  inch ( $\frac{1}{2}$ " = 13 mm) in the path of travel. (521 CMR 25.4)

p. Any entrance/exit of a facility not accessible by persons in wheelchairs shall have a sign clearly indicating the location of the accessible entrance/exit. (521 CMR 25.6)

q. If an automatic door is used, then it shall comply with American National Standard for Power-Operated Doors, ANSI A156.10-1979...Such doors shall not open to back check faster than 3 seconds and shall require no more than 15 lbf (66.6M) to stop door movement. (UFAS 4.13.12)

r. [The intercom panel must be within reach ranges]. If the clear floor space only allows forward approach to an object, then maximum high forward reach allowed shall be 48 inches (1220mm). The minimum low forward reach is 15 inches (380mm). If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches (1370mm) and the low side reach shall be no less than 9 inches (230mm) above the floor. (UFAS 4.2.5 and 4.2.6)

## **6. Accessible Routes- Interior Circulation**

a. At least one accessible route complying with 4.3 shall connect accessible building and facility entrances with all accessible spaces and elements within the building or facility. (UFAS 4.1.2(1))

b. Accessible routes may include but are not limited to walks, halls, corridors, aisles, skywalks and tunnels. (521 CMR 20.1)

c. The minimum clear width of an accessible route shall be 36 inches (915mm) except at doors (see 4.13.5). If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in Figure 7. (UFAS 4.3.3)

d. An accessible route shall have a minimum clear width of 36 inches (36" = 914mm) except at doors and openings less than 24 inches (24" = 610mm) where it shall comply with 521 CMR 26.00. (521 CMR 20.3)

e. If an accessible route has less than 60 inches (1525mm) clear width, then passing spaces at least 60 inches by 60 inches (1525mm by 1525mm) shall be located at reasonable intervals not to exceed 200 feet (61m). A T-intersection of two corridors or walks is an acceptable passing place. (UFAS 4.3.4)

f. Objects projecting from walls (for example, telephones) with their leading edges between 27 inches and 80 inches (685mm and 2030mm) above the finished floor shall protrude no more than 4 inches (100mm) into walks, halls, corridors, passageways, or aisles. Objects mounted with their leading edges at or below 27 inches (685mm) above the finished floor may protrude any amount. Free-standing objects mounted on posts or pylons may overhang 12 inches (305mm) maximum from 27 inches to 80 inches (685mm to 2030mm) above the ground or finished floor. Protruding objects shall not reduce the clear width of an accessible route or maneuvering space. (UFAS 4.4.1)

g. Halls, corridors, passageways, aisles, or other circulation spaces shall have 80 inches (2030mm) minimum clear head room. If vertical clearance of an area adjoining an accessible route is reduced to less than 80 inches (normal dimensions), a barrier to warn blind or visually-impaired persons shall be provided. (UFAS 4.4.2)

h. Ground and floor surfaces along accessible routes and in accessible rooms and spaces including floors...ramps, stairs...shall be non-slip, firm and stable. (UFAS 4.5)

i. An accessible route with a running slope greater than 1:20 is a ramp and shall comply with 4.8. Nowhere shall the cross slope of an accessible route exceed 1:50. (UFAS 4.3.7)

j. Changes in level up to  $\frac{1}{4}$  inch (6mm) may be vertical and without edge treatment. Changes in level between  $\frac{1}{4}$  inch and  $\frac{1}{2}$  inch (6mm and 13mm) shall be beveled with a slope no greater than 1:2. Changes in level greater than  $\frac{1}{2}$  inch (13mm) shall be accomplished by means of a ramp that complies with 4.7 or 4.8. (UFAS 4.5.2)

k. If gratings are located in walking surfaces, then they shall have spaces no greater than  $\frac{1}{2}$  inch (13mm) wide in one direction. If gratings have elongated openings, then they shall be

placed so that the long dimension is perpendicular to the dominate direction of travel. (UFAS 4.5.4)

## 7. Interior Doors

- a. At least one principal entrance at each grade floor level must be accessible. (UFAS 4.1.2(8) [Note: UFAS prefers all])
- b. All public entrance(s) of a building or tenancy in a building shall be accessible. Public entrances are any entrances that are not solely service entrances, loading entrances, or entrances restricted to employee use only. (521 CMR 25.1)
- c. The location of an interior door must be on an accessible route. (UFAS 4.1.2(1) and 4.14.1)
- d. Revolving doors or turnstiles shall not be the only means of passage at an accessible entrance or along an accessible route. An accessible gate or door shall be provided adjacent to the turnstile or revolving door and shall be so designed as to facilitate the same use pattern. (UFAS 4.1.3.2)
- e. If the doorways have two independently operated door leaves, then at least one leaf shall meet the specifications in 4.13.5 and 4.13.6 that leaf shall be an active leaf. (UFAS 4.13.4)
- f. Doorways shall have a minimum clear opening of 32 inches (815mm) with the door open 90 degrees, measures between the face of the door and the stop. Openings more than 24 inches (610mm) in depth shall comply with 4.2.1 and 4.3.3. (UFAS 4.13.5)
- g. Hand operated door opening hardware shall be located 36 inches to 48 inches (36" to 48" = 914mm to 1219mm) above the floor. (521 CMR 26.11.2)
- h. Handles, pulls, latches, locks and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist to operate. Level-operated mechanisms, push-type mechanisms, and U-shaped handles are acceptable designs. ...Mount no hardware required for accessible door passage higher than 48 inches (1220mm) above finished floor. (UFAS 4.13.9)
- i. The maximum force for pushing or pulling opening a door shall be as follows: ...a. exterior hinged doors: 15 lbs, b. interior hinged doors: five lbs [22.2N], c. sliding or folding doors: five lbs. [22.2N]. (UFAS 4.13.11 and 521 CMR 26.8.1)
- j. Thresholds at doorways shall not exceed  $\frac{3}{4}$  inch (19mm) in height for exterior sliding doors or  $\frac{1}{2}$  inch (13mm) for other types of doors. Raised thresholds and floor level changes at accessible doorways shall be beveled with a slope no greater than 1:2 (see 4.5.2.). (UFAS 4.13.8)
- k. Minimum space between doors is 48 in plus the width of any door swinging into the space. (UFAS 4.13.7, Figures 25 and 26) Between any two hinged or pivoted doors, there shall be a minimum of 48 inches (48" = 1219 mm) plus the width of any door swinging into the space. (521 CMR 25.3)
- l. Pull side clearance [of doors] shall comply with the following: a. A minimum of 18 inches (18" = 457mm) of clear floor space shall be provided on the latch, pull side of the door when the clear floor space in front of the door is a minimum of 60 inches (60" = 1524mm). b. A minimum of 42 inches (42" = 1067mm) of clear floor space shall be provided on the latch, pull side of the door when the clear floor space in front of the door is more than 54 inches (54" = 1371mm), c. A minimum of 24 inches (24" = 610mm) of clear floor space shall be provided on the latch, pull side of the door when the clear floor space in front of the door is a minimum of 54 inches (54" = 1372mm) and the door has a closer. (521 CMR 26.6.3)
- m. Door mats  $\frac{1}{2}$  inches ( $\frac{1}{2}$ " = 13mm) thick or less shall be securely anchored at all edges to avoid tripping. Door mats between  $\frac{1}{4}$  inch ( $\frac{1}{4}$ " = 6mm) and  $\frac{1}{2}$  inch ( $\frac{1}{2}$ " = 13mm) thick must be secured with beveled edging that slopes no more than 1:2 (50%). Door mats thicker than  $\frac{1}{2}$  inch ( $\frac{1}{2}$ " = 13mm) shall be recessed. Grates shall have openings not exceeding  $\frac{1}{2}$  inch ( $\frac{1}{2}$ " = 13 mm) in the path of travel. (521 CMR 25.4)
- n. Any entrance/exit of a facility not accessible by persons in wheelchairs shall have a sign clearly indicating the location of the accessible entrance/exit. (521 CMR 25.6)

o. If an automatic door is used, then it shall comply with American National Standard for Power-Operated Doors,, ANSI A156.10-1979...Such doors shall not open to back check faster than 3 seconds and shall require no more that 15 lbf (66.6M) to stop door movement. (UFAS 4.13.12)

p. [The intercom panel must be with reach ranges.]If the clear floor space only allows forward approach to an object, then maximum high forward reach allowed shall be 48 inches (1220mm). The minimum low forward reach is 15 inches (380mm). If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches (1370mm) and the low side reach shall be no less than 9 inches (230mm) above the floor. (UFAS 4.2.5 and UFAS 4.2.6)

## 8. Elevators

a. One passenger elevator complying with 4.10 shall serve each level in all multi-story buildings and facilities and comply with 4.10. If more than one elevator is provided, each elevator shall comply with 4.10. Accessible ramps complying with 4.8, or, if no other alternative is feasible, accessible platform lifts complying with 4.11 may be used in lieu of an elevator. (UFAS 4.1.2(5))

b. In all multi-story buildings and facilities, each level including mezzanines, shall be served by a passenger elevator.... Buildings having only two levels may provide an interior accessible ramp complying with 521 CMR 24.00: RAMPS in lieu of an elevator. (521 CMR 28.1)

c. Accessible elevators shall be on an accessible route and shall comply with 4.10. (UFAS 4.10.1)

d. Elevator door shall open and close automatically. They shall be provided with a reopening device that will stop and reopen a car door and hoistway door automatically if the door becomes obstructed by an object or person. The device shall be capable of completing these operations without requiring contact for an obstruction passing through the opening at heights of 5 inches and 29 inches (125mm and 735mm) from the floor. Door reopening devices shall remain effective for at least 20 seconds. After such an interval, doors may close in accordance with the requirement of ANSI A17.1-1978 and A17.1a-1979. (UFAS 4.10.6)

e. The floor area of an elevator car shall provide space for wheelchair users to enter the car, maneuver within reach of controls, and exit from the car. The clearance between the car platform sill and the edge of any hoistway landing shall be no greater than 1¼ inches (32mm). (UFAS 4.10.9)

f. The width of the elevator car [with a center opening] is a minimum of 80 inches (2030mm). The depth of the elevator measured from the back wall to the elevator door is a minimum of 54 inches (1370m). The depth of the elevator car measured from the back wall to the control panel is a minimum of 51 inches (1291 mm). The width of the elevator car (side opening) is a minimum of 68 inches (1730mm). The depth of the elevator car measured from the back wall to the elevator door is a minimum of 54 inches 91370m). The depth of the elevator car measures from the back wall to the control panel is a minimum of 51 inches (1291mm). (UFAS Figure 22)

g. The elevator cab shall be a minimum of 54 inches by 68 inches (54" by 68" = 1372mm. x 1727mm) measured wall-to-wall and wall-to-door, or may be 60 inches by 60 inches, (60" by 60" =1524mm x 1524mm) wall-to-wall and wall-to-door. The door can be located on any wall or walls. In existing buildings...in no case shall the inside car area be smaller than 48 inches by 48 inches, wall-to-wall and wall-to-door. (521 CMR 28.7)

h. Call buttons in elevator lobbies and halls shall be centered 42 inches (1065mm) above the floor. Such call buttons shall have visual signals to indicate when each call is registered and when each call is answered. Call buttons shall be a minimum of ¾ inches (19mm) in the smallest dimension. The button designating the up direction shall be on top. Buttons shall be raised or flush. Objects mounted beneath hall call buttons shall not project into the elevator lobby more than 4 inches (100mm). (UFAS 4.10.3)

- i. Hall lantern fixtures shall be mounted so that their centerline is at least 72 inches (1830mm) above the lobby floor. Visual elements shall be at least 2 ½ inches (64mm) in the smallest dimension. (UFAS 4.10.4 (1 and 2))
- j. A visible and audible signal shall be provided at each hoistway entrance to indicate which car is answering a call. Audible signals shall sound once for the up direction and twice for the down direction or shall have verbal annunciators that say “up” or “down.” (UFAS 4.10.4)
- k. All elevator hoistway entrances shall have raised floor designations provided on both door jambs. The centerline of the characters shall be 60 inches (1525mm) from the floor. Such characters shall be 2 inches (50mm) high and shall comply with 4.30. Permanently applied plates are acceptable if they are permanently fixed to the jambs. (UFAS 4.10.5)
- l. All control buttons shall be at least ¾ inches (19mm) in their smallest dimension. They may be raised or flushed. (UFAS 4.10.12 (1))
- m. All floor buttons shall be no higher than 48 inches (1220mm), unless there is a substantial increase in cost, in which case the maximum mounting height may be increased to 54 inches (1370mm), above the floor. Emergency controls, including the emergency alarm and emergency stop, shall be grouped at the bottom of the panel and shall have their centerlines no less than 35 inches (890mm) above the floor. (UFAS 10.12 (3))
- n. All raised designations for control buttons shall be placed immediately to the left of the button to which they apply. (UFAS 4.10.12 (2))
- o. Controls shall be located on a front wall if cars have center opening doors, and at the side wall or at the front wall next to the door if cars have side opening doors. (UFAS 4.10.12 (4))
- p. In elevator cars, a visual car position indicator shall be provided above the car control panel or over the door to show the position of the elevator in the hoistway. As the car passes or stops at a floor served by the elevators, the corresponding numerals will illuminate and an audible signal shall sound. Numerals shall be a minimum of ½ inches (13mm) high. The audible signal shall be no less than 20 decibels with a frequency no higher than 1500 Hz. An automatic verbal announcement of the floor number at which a car stops or which a car passes may be substituted for the audible signal. (UFAS 4.10.13)
- q. If provided, emergency two-way communication systems between the elevator and a point outside the hoistway shall comply with ANSI A17.1-1978 and A17.1a-1979. The highest operable part of a two-way communication system shall be a maximum of 48 inches (1220mm) from the floor of the car. It shall be identified by a raised or recessed symbol and letters complying with 4.30 and located adjacent to the device. If the system uses a handset, then the length of the cord from the panel to the handset shall be at least 29 inches (735mm). If the system is located in a closed compartment, the compartment door hardware shall conform to 4.27. The emergency intercommunication system shall not require voice communication. (UFAS 4.10.14)
- r. All floor buttons shall be no higher than 54 inches (54” = 1372 mm) above the finish floor for side approach and 48 inches (48” = 1219mm) for front approach. (521 CMR 28.8.2)
- s. The minimum time for elevator doors to remain fully open in response to a car call shall be 3 seconds. (UFAS 4.10.8)
- t. Handrails must be located on at least one wall in every elevator between 32 and 36 inches (32” and 36” = 813mm and 914mm) above the car floor, with a 1½ inch (1 1/2 “ = 38 mm) clearance from the wall. (521 CMR 28.7.2)

## **9. Public Toilet Rooms- Adults**

- a. If toilet facilities are provided, then each public and common use toilet room shall comply with 4.22. (UFAS 4.1.2(10))
- b. Accessible toilet rooms shall be on an accessible route. (UFAS 4.17.1 and 4.22.1)



- c. In each adult public toilet room, at least one water closet and one sink in each location shall be accessible to persons in wheelchairs, or a separate accessible unisex toilet room shall be provided at each location. (521 CMR 30.1.a)
- d. Accessible toilet stalls shall have a door that swings out or slides and has a 32 inches (32" = 813mm) clear opening. (521 CMR 30.6.1a)
- e. Doorways shall have a minimum clear opening of 32 inches (815mm) with the door open 90 degrees, measured between the face of the door and the stop. (UFAS 4.13.5)
- f. Handles, pulls, latches and other operating devices on accessible doors shall have a shape that is easy to operate with one hand and that does not require tight grasping, tight pinching, or twisting of the wrist to operate. Lever-operated mechanisms, push-type mechanisms, and U-shaped handles are acceptable designs. (521 CMR 26.11.1 and UFAS 4.13.9)
- g. Doors to single user toilet rooms may swing into the room if the door has a self-closing device and maneuvering space is provided in accordance with 521 CMR 26.6. The door may swing into the room if there is a clear floor space of 30 inches by 48 inches (30" = 762mm by 48" = 1219mm) beyond the swing of the door. (521 CMR 30.4)
- h. Doors shall not swing into floor space for any fixture. (UFAS 4.23.2)
- i. There shall be 18 inches (18" = 457mm) of clear space on the latch pull side of the door. (521 CMR 30.6.1c)
- j. The maximum force for pushing or pulling open a door shall be as follows: ...interior hinged door s: 5lbf (22.2N). (UFAS 4.13.11(b))
- k. The space required for a wheelchair to make a 180 degree turn is a clear space of 60 inches (15235mm) diameter. (UFAS 4.2.3)
- l. The size and arrangement of toilet stalls shall comply with Figure 30 (a). Toilet stalls with a minimum of 56 inches (1420mm) shall have wall-mounted water closets. If the depth of toilet stalls is increased by at least 3 inches (75mm), then a floor-mounted water closet may be used. Arrangements for stalls may be reversed to allow either a left- or right-handed approach. (UFAS 4.17.3)
- m. Standard accessible stalls shall be 60 inches (60" = 1524mm) wide and 72 inches (72" = 1829mm) deep. (521 CMR 30.6.1)
- n. In standard stall, the front partition and a least one side partition shall provide a toe clearance of at least 9 inches (230mm) above the floor. If the depth of the stall is greater than 60 inches (1525mm), then the toe clearance is not required. (UFAS 4.17.4)
- o. For the standard accessible toilet stall the water closet shall have two grab bars 42 inches (42" = 1067mm) long, one on the wall in back of the water closet and one on the side wall closet to the water closet. (521 CMR 30.8)
- p. Grab bars may be mounted with any desired method as long as they have a gripping surface at the located shown [Figures 30 (a) and (b)] and do not obstruct the required clear floor area. Grab bars shall comply with 4.26. (UFAS 4.17.6)
- q. The 36 inches wide stall shall have parallel grab bars on the side walls. The 48 inch minimum stall shall have a grab bar behind the water closet and one on the side wall next to the water closet. (UFAS Figure 30 (b))
- r. [Grab bars located at the back of the water closet must have a height of 36 inches and the side grab bar must have a height of 33 in to 36 inches]. (UFAS Figure 30(c))
- s. [The back grab bar must be 6 inches from the corner and the side bar must be 12 inches from the corner]. (UFAS 4.17.6 (Figure 30(a)))
- t. The diameter or width of the gripping surface of a handrail or grab bar shall be 1 1/4 to 1 1/2 inches (32mm to 38mm), or the shape shall provide an equivalent gripping surface. If handrails or grab bars are mounted adjacent to a wall, the space between the wall and grab bar shall be 1 1/2 inches (38mm). (UFAS 4.26. 2)
- u. The height of water closets shall be 17 inches to 19 inches (430mm to 485mm), measured to the top of the toilet seat. (UFAS 4.16.3)

- v. The centerline of the water closet shall be 18 inches (455mm) from the side wall. (UFAS (Figure 30(a))
- w. Flush controls shall be hand operated or automatic and shall comply with 4.27.4. Controls for the flush valves shall be mounted on the wide side of the toilet areas no more than 44 inches (1120mm) above the floor. (UFAS 4.16.5 and 521 CMR 30.7.5)
- x. Toilet stall doors shall comply with 4.13. If toilet stall approach is from the latch side of the stall door, clearance between the door side of the stall and any obstruction may be reduced to a minimum of 42 inches (1065mm). UFAS 4.17.5)
- y. The toilet paper dispenser must be installed within reach and be a minimum of 19 inches (485mm) from the floor. (UFAS 4.6.6 (Figure 29(b))
- z. The centerline of the roll shall be set at a minimum height of 24 inches (24" = 610mm) above the floor. Dispensers that control delivery or that do not permit continuous paper flow are not allowed. (521 CMR 30.7.6)
- aa. Lavatories shall be mounted with the rim or counter surface no higher than 34 inches (865mm) above the finished floor. Provide a clearance of at least 29 inches (735mm) from the floor to the bottom of the apron. Knee and toe clearance shall comply with Figure 31 [and 17 inches from the back of the sink to the front rim.] (UFAS 4.19.2 and Figure 31)
- bb. A clear floor space 30 inches by 48 inches (760mm by 1200mm) complying with 4.2.4 shall be provided in front of a lavatory to allow forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall extend a maximum of 19 inches (485mm) underneath the lavatory. (UFAS 4.19.3)
- cc. Hot water and drain pipes under lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under lavatories. (UFAS 4.19.4)
- dd. Faucets shall comply with 4.27.4. Lever-operated, push-type and electronically controlled mechanisms are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds. (UFAS 4.19.5)
- ee. Sinks shall be mounted with the rim no higher than 34 inches (34" – 864mm) above the finished floor. Sinks shall also extend a minimum of 17 inches (17" = 422mm) from the wall to the front of the sink or counter. (521 CMR 30.9.2)
- ff. Mirrors shall be mounted with the bottom edge of the reflecting surface no higher than 40 inches (1015m) from the floor. (UFAS 4.19.6)
- gg. Urinals shall be stall-type or wall-hung with an elongated rim at a maximum of 17 inches (430mm) above the floor. (UFAS 4.18.2)
- hh. A clear floor space 30 inches by 48 inches (760mm by 1220 mm) shall be provided in front of urinals to allow forward approach. The clear space shall adjoin or overlap an accessible route and shall comply with 4.2.4. Urinal shields that do not extend beyond the front edge of the urinal rim may be provided with 29 inches (735mm) clearance between them. (UFAS 4.18.3)
- ii. Flush controls [for urinals] shall be hand operated or automatic, and shall comply with 3.27.4, and shall be mounted no more than 44 inches (1120mm) above the floor. (UFAS 14.18.4)
- jj. A coat hook shall be at a maximum 54 inches (54" = 1372mm) above the floor. (521 CMR 30.6.1d)

## 10. Drinking Fountains

- a. If drinking fountains or water coolers are provided, approximately 50% of those provided on each floor shall comply with 4.15 and shall be on an accessible route. (UFAS 4.1.2(9))
- b. If only one drinking fountain or water cooler is provided on any floor, it shall comply with 4.15. (UFAS 4.1.2(9))
- c. Spouts [of drinking fountains] shall be no higher than 36 inches (915mm), measured from the floor or ground surfaces to the spout outlet. (UFAS 4.15.2)
- d. The spouts of drinking fountains and water coolers shall be at the front of the unit and shall direct water flow in a trajectory that is parallel or nearly parallel to the front of the unit. The

spout shall provide a flow of water at least 4 inches (100mm) high so as to allow the insertion of a cup or glass under the flow of water. (UFAS 4.15.3)

e. Controls [of the drinking fountain] shall comply with 4.27.4. Unit controls shall be front mounted or side mounted near the front edge. (UFAS 4.15.4)

f. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5lbf (22.2N). (UFAS 4.27.4)

g. Wall- and post-mounted cantilevered units shall have a clear knee space between bottom of the apron and the floor or ground at least 27 inches (685mm) high, 30 inches (760mm) wide and 17 inches to 19 inches (430mm to 485mm) deep. Such units shall also have a minimum clear floor space 30 inches by 48 inches (760mm by 1220 mm) to allow a person in a wheelchair to approach the unit facing forward. Free-standing or built-in units not having a clear space under them shall have a clear floor space at least 30 inches by 48 inches (760mm by 1220m) that allows a person in a wheelchair to make a parallel approach to the unit This clear floor space shall comply with 4.2.4. (UFAS 4.15.5)

## 11. Public Telephones

a. If public telephones are provided, then accessible public telephones shall comply with 4.31. [T]here must be one or more single unit installations per floor or one bank per floor. (UFAS 4.1.2(16))

b. A clear floor or ground space at least 30 inches by 48 inches (760mm by 1220mm) that allows either a forward or parallel approach by a person using a wheelchair shall be provided at telephones. The clear floor or ground space shall comply with 4.2.4. Bases, enclosures, and fixed seats shall not impede approaches to telephones by people who use wheelchairs. (UFAS 4.31.2)

c. If a front approach is provided and the clear floor area includes knee space under the telephone, the knee space shall be at least 30 inches (30" = 762mm) wide and 30 inches (30"= 762mm) high. (521 CMR 37.2.1)

d. If the clear floor space only allows forward approach to an object, the maximum high forward reach allowed shall be 48 inches (1220mm). The minimum low forward reach is 15 inches (380mm). If the high forward reach is over an obstruction, reach and clearances shall be as in Figure 5 (b). (UFAS 4.2.5)

e. If the clear floor space allows parallel approach by a person in a wheelchair, then maximum high side reach allowed shall be 54 inches ((1370mm) and the low side reach shall be no less than 9 inches (230mm) above the floor. If the side reach is over an obstruction, the reach and clearances shall be as show in Figure 6 (c). (UFAS 4.2.6)

f. Telephones shall have pushbutton controls where service for such equipment is available. (UFAS 4.31.6)

g. The cord from the telephone to the handset should have a minimum length of 29 inches (735mm). (UFAS 4.31.8)

h. [For the hearing impaired], telephones shall be equipped with a receiver that generates a magnetic field in the area of the receiver cap. Volume controls shall be provided in accordance with 4.1.2. (UFAS 4.31.5)

i. If a facility has a public telephone text telephone (TTY) directional signage indicating the location of the nearest text telephone (TTY) shall be placed adjacent to tall banks of telephones which do not contain a text telephone (TTY). Such directional signage shall include the international TTY symbol. Signage for hearing amplified telephone shall be identified with signage depicting a telephone handset earpiece with radiating sound waves and shall be placed on the wall above the amplified telephone or in a location on or near the phone so that it can be easily seen and located. (521 CMR 37.10.2)

j. Where two or more telephones are provided in the same location, one shall be equipped with a Text Telephone (TTY). The text telephone (TTY) shall be permanently affixed within the telephone enclosure. (521 CMR 37.8)

## 12. Common Use Kitchens

a. The minimum clear width of an accessible route shall be 36 inches (915mm) except at doors (see 4.13.5). If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in Figure 7. (UFAS 4.3.3)

b. Doorways shall have a minimum clear opening of 32 inches (815mm) with the door open 90 degrees, measured between the face of the door and the stop. (UFAS 4.13.5)

c. The maximum force for pushing or pulling open a door shall be as follows: ... interior hinged doors: 5lbf (22.2N). (UFAS 4.13.11)

d. Handles, pulls, latches, locks and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist to operate. Level-operated mechanisms, push-type mechanisms, and U-shaped handles are acceptable designs. ...Mount no hardware required for accessible door passage higher than 48 inches (1220mm) above finished floor. (UFAS 4.13.9)

e. Clearances between all opposing base cabinets, counter tops, appliances, or walls shall be 40 inches (1015mm) minimum, except in U-shaped kitchens, where such clearance shall be 60 inches (1525mm) minimum. (UFAS 4.34.6.1)

f. Non-commercial kitchens in public facilities such as classrooms and community rooms shall provide a clear space of 60 inches (60" = 1524mm) in diameter, measured 12 inches (12" = 305mm) above the floor. (521 CMR 32.1)

g. A clear floor space at least 30 inches by 48 inches (760mm by 1220 mm) complying with 4.2.4. that allows either a forward or parallel approach by a person in a wheelchair shall be provided at all appliances in the kitchen, including the range or cooktop, oven, refrigerator/freezer, dishwasher, and trash compactor. Laundry equipment installed in the kitchen shall comply with 4.34.7. (UFAS 4.34.6.2)

h. If the clear floor space only allows forward approach to an object, then maximum high forward reach allowed shall be 48 inches (1220mm). The minimum low forward reach is 15 inches (380mm). If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches (1370mm) and the low side reach shall be no less than 9 inches (230mm) above the floor.(UFAS 4.2.5 and 4.2.6)

i. Controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf (22.2 N). (UFAS 4.27.4)

j. Where hoods are provided above cooking units, controls shall be located no higher than 54 inches (54" = 1372mm) above the floor, but shall not be located behind cooking units. (521 CMR 32.8.2)

k. Garbage disposals, when provided, shall be controlled by switches under the counter at the front. (521 CMR 32.7.6)

l. At least one 30 inches (760mm) section of counter shall provide a work surface that complies with the following requirements; (1) The counter shall be mounted at a maximum height of 34 inches (865mm) above the floor, measured from the floor to the top of the counter surface, or shall be adjustable or replaceable as a unit to provide alternative heights of 28 inches, 32 inches, and 36 inches (710mm, 815mm, and 915mm), measured from the top of the counter surface. (UFAS 4.34.6.4(1))

m. Counter tops that contain sinks and cooking units shall provide a minimum of 15 inches (15" = 381mm) of clear countertop on at least one side of the cooking unit and on at least one side of the sink and shall have a clear space underneath that complies with 521 CMR 32.6.

Countertops shall be mounted no higher than 34 inches (34" = 864mm) above the finish floor. (521 CMR 32.2)

n. Access space for the knees and feet of wheelchair users shall be provided under cooktops and sinks, and elsewhere as space and storage considerations permit. (521 CMR 32.6)

o. All such spaces [access spaces for the knees] shall be at least 30 inches (30" = 762mm) wide, 27 inches (27" = 686mm) high, and 19 inches (19" = 484mm) deep. (521 CMR 32.6.1)

p. Base cabinets, if provided, shall be removable under the full 30 inches (760mm) minimum frontage of the counter. The finished floor shall extend under the counter to the wall. (UFAS 4.34.6.4.(2))

q. A clear floor space 30 inches by 48 inches (760mm by 1220mm) shall allow a forward approach to the counter. Nineteen inches (485mm) maximum of clear floor space may extend underneath the counter. The knee space shall have a minimum clear width of 30 inches (760mm) and a minimum clear depth of 19 inches (485mm). (UFAS 4.34.6.4)

r. Hardware for accessible storage spaces shall comply with 4.27.4. Touch latches and U-shaped pulls are acceptable. (UFAS 4.25.4)

s. The sink and surrounding counter shall be mounted at maximum height of 34 inches (865mm) above the floor, measured from the floor to the top of the counter surface, or shall be adjustable or replaceable as a unit to provide alternative heights of 28 inches, 32 inches, and 36 inches (710mm, 815mm, and 915mm), measured from the floor to the top of the counter surface or sink rim. The total width of sink and counter area shall be 30 inches (760mm). (UFAS 4.34.6.5(1))

t. The depth of a sink bowl shall be no greater than 6 ½ inches (165mm). Only one bowl or double- or triple-bowl sinks needs to meet this requirement. (UFAS (4.34.6.5(3))

u. There shall be no sharp or abrasive surfaces under sinks. Hot water and drain pipes under sinks shall be insulated or otherwise covered. (UFAS 4.34.6.5(8))

v. Sink depth shall not exceed eight inches (8" = 203mm). (521 CMR 32.7.3)

w. Controls and operating mechanisms [for cooktops] shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf. (UFAS 4.27.4)

x. Ranges and cooktops shall comply with 4.34.6.2 and 4.34.6.3. If ovens or cooktops have knee space underneath, then they shall be insulated or otherwise protected on the exposed contact surfaces to prevent burns, abrasions, or electrical shock. The clear floor space may overlap the knee space, if provided, by 19 inches (485mm) maximum. The location of controls for ranges and cooktops shall not require reaching across burners. (UFAS 4.34.6.6)

y. Ovens shall comply with 4.34.6.2 and 4.34.6.3. Ovens shall be of the self-cleaning type or be located adjacent to an adjustable height counter with knee space below. For side-opening ovens, the door latch side shall be next to the open counter space, and there shall be a pull-out shelf under the oven extending the full width of the oven and pulling out not less than 10 inches (255mm) when fully extended. Ovens shall have controls on front panels; they may be located on either side of the door. (UFAS 4.34.6.7)

z. Refrigerator/freezers shall comply with 4.34.6.3. Provision shall be made for refrigerators which are: (1) of the vertical side-by-side refrigerator/freezer type; or (2) of the over-and-under type and meet the following requirements (a) have at least 50 percent of the freezer space below 54 inches (1370mm) above the floor. (b) have 100 percent of the refrigerator space and controls below 54 inches (1370mm). Freezers with less than 100 percent of the storage volume within the limits specified in 4.2.5 or 4.2.6 shall be the self-defrosting type. (UFAS 4.34.6.8)

aa. [The refrigerator] may be combination refrigerator-freezers with two doors side by side, or may be two door freezer-above-the-refrigerator units or refrigerator-above-the-freezer units, provided the bottom of such freezer or refrigerator is not higher than 44 inches (44" – 1118mm) above the floor. (521 CMR 32.9)

- bb. Cabinets, drawers, and shelf areas shall comply with 4.25 and shall have the following feature: Maximum height shall be 48 inches (1220mm) for at least one shelf of all cabinets and storage shelves mounted above work counters. (UFAS 4.34.6.10 (1))
- cc. A tall cabinet at least 30 inches (30" = 762mm) wide and 72 inches (72" = 1829mm) in height may be installed in lieu of making overhead cabinets accessible. If walk-in-pantry is provided, the door to the pantry shall fully comply with 521 CMR 26.00. (521 CMR 32.4)
- dd. Controls and operating mechanisms [for dishwashers] shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf. (UFAS 4.27.4)
- ee. Dishwashers shall comply with 4.34.6.2 and 4.34.6.3. Dishwashers shall have all rack space accessible from the front of the machine for loading and unloading dishes. (UFAS 4.34.6.9)

### 13. Platform Lifts

- a. Accessible platform lifts complying with 4.11 may be used in lieu of an elevator. (UFAS 4.1.2 (5))
- b. The minimum clear floor or ground space required to accommodate a single, stationary wheelchair occupant is 30 inches by 48 inches (760mm by 1220mm). (UFAS 4.2.4.1)
- c. Platform size shall be a minimum of 36 inches wide by 54 inches deep (36" by 54" = 914mm by 1372mm). (521 CMR 28.12.2.b)
- d. If the clear floor space only allows forward approach to an object, then maximum high forward reach allowed shall be 48 inches (1220mm). The minimum low forward reach is 15 inches (380mm). (UFAS 4.2.5)
- e. If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches (1370mm) and the low side reach shall be no less than 9 inches (230mm) above the floor. (UFAS 4.2.6)
- f. Controls and operating mechanisms [for platform lifts] shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5 lbf. (UFAS 4.27.4)
- g. If the wheelchair lift is key operated, a buzzer and intercom system must be installed at the lift and connected to a location within the building where the key is maintained. (521 CMR 28.12.2.d)

### 14. Public Toilet Rooms- Children

- a. Where children's toilet rooms are provided, at least one water closet and one sink in each location shall be accessible to children in wheelchairs, or a separate *accessible* unisex toilet room shall be provided at each location. (521 CMR 30.1.b)
- b. Accessible toilet rooms shall be on an accessible route. When unisex toilet rooms(s) are provided, they shall be located in the same area as other toilet rooms. (521 CMR 30.2)
- c. All doorways and openings that are required to be accessible shall have a clear opening of not less than 32 inches (32" = 813mm). (521 CMR 26.5)
- d. Handles, pulls, latches and other operating devices on accessible doors shall have a shape that is easy to operate with one hand and that does not require tight grasping, tight pinching, or twisting of the wrist to operate. Lever-operated mechanisms, push-type mechanisms, and U-shaped handles are acceptable designs. (521 CMR 26.11.1 and UFAS 4.13.9)
- e. Doors to single user toilet rooms may swing into the room if the door has a self-closing device and maneuvering space is provided. The door may swing into the room if there is a clear floor space of 30 inches by 48 inches (30" = 762mm by 48" = 1219mm) beyond the swing of the door. (521 CMR 30.4)

- f. The maximum force for pushing or pulling opening a door shall be as follows:...a. exterior hinged doors: 15 lbs, b. interior hinged doors: five lbs., c. sliding or folding doors: five lbs.. (521 CMR 26.8.1)
- g. An unobstructed turning space complying with 521 CMR 6.3 shall be provided within an accessible toilet room. The clear floor space at fixtures and controls, the accessible route, and the turning space may overlap. (521 CMR 30.5)
- h. Standard accessible stalls shall be 60 inches (60" = 1524mm) wide and 72 inches (72" = 1829mm) deep. (521CMR 30.6.1)
- i. Accessible toilet stalls shall have a door that swings out or slides and has a 32 inches (32" = 813mm) clear opening. (521 CMR 30.6.1a)
- j. There shall be 18 inches (18" = 457mm) of clear space on the latch pull side of the door. (521 CMR 30.6.1c)
- k. The water closet shall have two grab bars, 42 inches (42" = 1067mm) long, one mounted on the wall in back of the water closet and one on the side wall closest to the water closet and located no more than six inches (6" = 152mm) from the interior corner. When a tank prevents location of the rear grab bar, a bar may be installed three inches (3" = 76mm) above the tank. Where a flushometer prevents the location of a 42 inch (42" – 1067mm) rear grab bar, one grab bar, 36 inches (36" = 914mm) shall be installed to the side of the flushometer, located three inches (3" = 76mm) from the closest edge of the flushometer. (521 CMR 201.15)
- l. [The] height [of the] grab bars shall be mounted from the floor to the top of the grab bar as follows" Pre-kindergarten: 18" to 20" (457mm to 508mm), Kindergarten to third grade: 20" to 25" (508mm to 635mm), Fourth grade to sixth grade: 25" to 27" (635mm to 686mm). (521 CMR 30.15.1)
- m. The outside diameter of grab bars shall be as follows: Pre-kindergarten: 1" (25mm), Kindergarten to sixth grade: 1 ¼" to 1 ½" (32mm to 38mm). (521 CMR 30.15.2)
- n. Water closets shall be set at a height measured from the floor to the top of the seat as follows: Pre- kindergarten: 11 ½" to 12 ½" (292mm to 318 mm), kindergarten to third grade: 12" to 15" (305mm to 381 mm), fourth grade to sixth grade: 15" to 17" (381mm to 432mm). (521 CMR 30.14.3)
- o. The centerline of the water closet shall be located 11 inches (11" = 279mm) from the nearest side wall for pre-kindergarten, 11 to 15 inches (11" to 15" = 279mm to 381mm) for kindergarten to third grade and 15 to 18 inches (15" to 18" = 381 to 457mm) for fourth grade to sixth grade. The water closet shall also be located 42 inches (42" = 1067mm) from the centerline of the water closet to the opposite wall or closest edge of next fixture. (521 CMR 30.14.2)
- p. Flush controls: controls for flush valves on water closets used by children shall be mounted within 20 to 30 inches (20" to 30" = 508mm to 762mm) above the floor. (521 CMR 30.14.4)
- q. Toilet paper dispensers: Toilet paper dispensers used by children shall be centered above finished floor as follows: Pre-kindergarten: 14" (356mm), kindergarten to third grade: 14" to 17" (356mm to 422mm), fourth grade to sixth grade: 17" to 19" (32mm to 483mm). (521 CMR 30.14.5)
- r. Sinks shall be mounted with the rim no higher than 30 inches (30" = 762mm) above the finish floor. A clearance of at least 25 inches (25" = 635mm) above the finish floor to the bottom of the apron shall be provided. Knee and toe clearance shall be at least 30 inches (30" = 762mm) wide and 19 inches (19" = 483mm) deep. (521 CMR 30.16.2)
- s. Sink traps and drains shall be located as close to rear walls as possible. Hot water and drain pipes exposed under sinks shall be recessed, insulated, or guarded. There shall be no sharp or abrasive surfaces under sinks. Piping must be insulated. (521 CMR 30.16.3)
- t. Faucets shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. Lever-operated, push-type, touch-type, or electronically controlled mechanisms are acceptable designs. If self-closing valves are used, the faucet shall remain open for at least ten seconds. (521 CMR 30.16.4)

- u. The top of any shelf and or bottom of any mirror which is provided above a sink shall be set with the bottom edge of the reflecting surface no higher than 31 inches (31" = 787mm) above the finish floor. (521 CMR 30.18)
- v. Where one or more urinal is provided, at least one urinal shall be accessible. (521 CMR 30.17)
- w. The accessible urinal shall be stall-type or wall-hung with an elongated rim at a maximum of 15 inches (15" = 381mm) above the floor. (521 CMR 20.17.1)
- x. Flush controls shall be hand operated or automatic, and shall be mounted no more than 44 inches (44" = 1120mm) above the finish floor. (521 CMR 20.17.2)
- y. If controls, receptacles or other equipment are provided, then at least one of each shall be mounted no higher than 36 inches (36" = 914mm) above the floor to the centerline of the operable portion of the control. (521 CMR 30.20)
- z. The space required for a wheelchair to make a 180 degree turn is a clear space of 60 inches (60" = 1524mm) diameter (see Figure 6c) or a T-shaped space. See Figure 6d. (521CMR 6.3)

## 15. Storage Facilities

- a. If storage facilities such as cabinets, shelves, closets, and drawers are provided in accessible spaces, at least one of each type provided shall contain storage space complying with 4.25. Additional storage may be provided outside of the dimensions shown in Figure 38. (UFAS 4.1.2(11))
- b. At least one accessible route complying with 4.3 shall connect accessible building or facility entrances with all accessible spaces and elements [storage facilities] within the building or facility. (UFAS 4.1.2(1))
- c. Doorways [of storage facilities] shall have a minimum clear opening of 32 inches (815mm) with the door open 90 degrees, measured between the face of the door and the stop. (UFAS 4.13.5)
- d. Handles, pulls, latches, locks and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist to operate. Level-operated mechanisms, push-type mechanisms, and U-shaped handles are acceptable designs. ...Mount no hardware required for accessible door passage higher than 48 inches (1220mm) above finished floor. (UFAS 4.13.9)
- e. The maximum force for pushing or pulling open a door shall be as follows:...exterior hinged doors: (reserved [8.5lbf]), interior hinged doors: 5lbf (22.2N), sliding or folding doors: 5lbf (22.2N). (UFAS 4.13.11)
- f. Hardware for accessible storage facilities shall comply with 4.27.4. Touch latches and U-shaped pulls are acceptable. (UFAS 4.25.4)
- g. Accessible storage spaces shall be within at least one of the reach ranges specified in 4.2.5 and 4.2.6. (UFAS 4.25.3)
- h. If the clear floor space only allows forward approach to an object, then maximum high forward reach allowed shall be 48 inches (1220mm). The minimum low forward reach is 15 inches (380mm). (UFAS 4.2.5)
- i. If the clear floor space allows parallel approach by a person in a wheelchair, the maximum high side reach allowed shall be 54 inches (1370mm) and the low side reach shall be no less than 9 inches (230mm) above the floor. (UFAS 4.2.6)
- j. A clear floor space of at least 30 inches by 48 inches (760mm by 1220mm) complying with 4.2.4 that allows either a forward or parallel approach by a person using a wheelchair shall be provided at accessible storage facilities. (UFAS 4.25.2)