Early Learning Facility Design Criteria Classroom Best Practices

Guide

A Resource to Make Informed Facility Improvement Decisions

September 2017

Companion document to the ELF Design Criteria - Classroom Best Practices "Checklist"

Dates of Use	
Site Name	
Classroom	
User(s)	
Tools Needed	**Camera** to document possible improvements **Measuring Tape, Calculator & Copy of Floor Plan** to Calculate Square Footage

FIRST 5 SAN MATEO COUNTY

SAN MATEO COUNTY OFFICE OF EDUCATION

LiNCC CONNECTING CHILD CARE + ECONOMIC DEVELOPMENT

Introduction

The *Best Practices* **Guide** can be used as a comprehensive classroom facility review or as the companion document for the Best Practices **Checklist**. It is a comprehensive booklet providing information on potential areas of health and safety improvements, possible resolutions, initial technical assistance and funding justifications. Whether it's small improvements, a major remodel or adding a classroom, the **Guide** can provide you support in accomplishing those goals. This document is a compilation of classroom facility best practices. *It is not intended to replicate or replace licensing requirements or program rating scales. It's a resource for you to make informed facility improvement decisions.*

Instructions

It is recommended to take photos of the areas/items being reviewed or considered for improvement, as the images will be helpful when developing action plans. This **Guide** can be used as a comprehensive review or in conjunction with the *Best Practices Checklist*.

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1 Diapering and Toileting Areas

LINCC's ECE Facility Design Criteria:

Diapering and Toileting Areas in the classroom are essential for a healthy classroom. Recommended practices require diapering and toileting areas to be in places that optimally meet the developmental needs of children, which is in the classroom. Toileting areas within the classroom provide privacy and independence for children and allow excellent adult supervision from the classroom; teachers remain in the classroom. Teachers do not leave the classroom to accompany children, therefore maintaining teacher-child ratios.[53]

Child-height toilets in the classroom allow children to use them independently, to develop personal hygiene skills and to socialize with one another. Using steps for children to reach adult-height toilets is not recommended; it's a safety hazard. It's optimal to have the toileting and diapering areas as residential in feel as possible.[53]

	Yes	Partial	No	N/A	Notes	Date_____
▶ Diapering & toileting areas are in the classroom. Children enter while in the classroom.	☐	☐	☐	☐		
▶ Excellent visual access into/from diapering/toileting area.	☐	☐	☐	☐		
▶ If the area has a door, it is a 1/2 door with lite panel, and doors swing into classroom. See *Definitions*.	☐	☐	☐	☐		
▶ Preschool programs: one toilet has a child-height privacy panel.	☐	☐	☐	☐		
▶ If stalls are the only option for providing the toileting area in the classroom, stalls are child-height.	☐	☐	☐	☐		
▶ Toilets are child-height (seat 10" - 12" high from floor).	☐	☐	☐	☐		
▶ Infant, toddler & two's rooms have Tank-style toilets.	☐	☐	☐	☐		
▶ Diapering table has stairs.	☐	☐	☐	☐		
▶ 3' high water-resistant wainscot behind toilets.	☐	☐	☐	☐		
▶ Child-height full-length mirror in toileting area. Use safety glass or safety film on a regular mirror.	☐	☐	☐	☐		
▶ If possible, toileting area has a floor drain.	☐	☐	☐	☐		
▶ Toileting area's floor has sealed base coving.	☐	☐	☐	☐		
▶ Optimal: Toileting area is located near outdoor yard door or is accessible from outdoors.	☐	☐	☐	☐		

1   Diapering and Toileting Areas (continued)

Notes

1. **Tank toilets** have quiet flush and are easy to operate, especially for the youngest children.

Definitions

1. **1/2 door with lite panel** is a half door that has one pane of glass filling most of the interior, creating a visibility panel.

2. **Tank-Style Toilet - Floor Mounted** for infants, toddlers and two's classrooms.

Action Item Ideas

Remodel to have toileting and diapering areas located inside the classroom. Configure diapering area to enable adults to look up and see into classroom (i.e. the adult faces into classroom); use 1/2 walls and 1/2 doors, windows, pass through, wall mirrors, etc. Remove/replace adult/elementary school restroom stalls. Install child-height privacy panels and add upper-wall cabinet storage. Replace adult-height toilets with child-height toilets. Replace diapering table with one that has stairs. Consider adding wall cabinets. (See 12. Storage).

Diapering and Toileting Areas - List Action Items:

2 Child-Height Sinks

LINCC's ECE Facility Design Criteria:

Children's Sinks. Children need access to sinks in the classroom; it is vital for disease prevention, and personal and center hygiene. Health experts agree the spread of infectious diseases can be significantly decreased by sound hand-washing practices. To facilitate hand-washing, sinks must be in the classroom near activity areas that require hand-washing: the diapering, toileting, art and meal areas. Child-height sinks allow children to use them independently, to socialize with one another and develop personal hygiene skills. Using steps for children to reach adult-height sinks is not recommended; it's a safety hazard. [53]

In each classroom:	Yes	Partial	No	N/A	Notes	Date_____
▶ Child sinks in diapering & toileting areas.	☐	☐	☐	☐		
▶ All children's sinks are at child-height and step stools are not used. See *Note 1* for sink installation heights.	☐	☐	☐	☐		
▶ Two additional child-height sinks in classroom. One sink is located in the eating area for handwashing and one is located in the art area. If one sink is used for both activities, the sink set-up is designed to be easily disinfected between types of use. See *Note 2*.	☐	☐	☐	☐		
▶ Children can access child-height classroom sinks without using doors.	☐	☐	☐	☐		
▶ Optimal: Sink bowl depth is 7" - 8" to avoid water splashing in order to contain germs and keep water off of floor.	☐	☐	☐	☐		
▶ Optimal: Faucets have lever handles & gooseneck spouts. See *Definitions* for images.	☐	☐	☐	☐		
▶ Soap and towel dispensers are child-appropriate and child-sized, installed at child-height, and within child's reach of sink.	☐	☐	☐	☐		
▶ Faucets are close enough to leading edge so **children can reach faucet and handles** without standing on tip toes or using a step.	☐	☐	☐	☐		
▶ Mirrors are above all children's sinks and are made of safety glass or have safety film.	☐	☐	☐	☐		
▶ Adults have an unobstructed visual access of children using sinks.	☐	☐	☐	☐		
▶ Paper towels are used for drying hands, not hand blow dryers. See *Note 3*.	☐	☐	☐	☐		
▶ Child-height sinks in all outdoor yards.	☐	☐	☐	☐		

2   Child-Height Sinks (continued)

Notes

1. **Child-Height Sinks Mounting Heights:**

Infant (0-18 months)	18" H
Toddler (18-36 months)	21" H
Preschool (36+ months)	24" H

2. **ECERS** requires dedicated sinks for hand-washing for meals and clean-up from art activities, or if one sink is used for both activities, the sink is disinfected between uses.
3. **Hand blow dryers** are not recommended. The forced air spreads germs and often results in water dripping on the floor.

Definitions

1. **Lever Handles and Goose Neck Spouts:**

2. **Trough Sink:**

Action Item Ideas

Lower or replace sinks if not at child-height. Replace faucet and handles with goose neck spouts and lever handles to provide easier use for all ages of children. Install mirrors above all sinks so children are able to look at and groom themselves. If needed, add safety film to mirrors. Remove hand blow dryers since they contribute to the spread of germs. Relocate soap and towel dispensers to be within child's reach. Consider the use of trough sinks that have two faucets; locate and install so 3-4 children may use at one time. If adding additional plumbing for sinks is impossible, portable sinks can be used. If teachers are not able to see children using sinks, add window, remodel wall into a half wall, add mirrors, relocate sink, etc. (See 5. Ease of Visual Supervision).

Child-Height Sinks - List Action Items:

3 Classroom Adult-Height Sinks

LINCC's ECE Facility Design Criteria:

Adult Sinks. Adults need access to sinks in the classroom; it is vital for center hygiene and disease prevention. Health experts agree the spread of infectious diseases can be significantly decreased by sound hand-washing practices. Adult sinks are to be dedicated to specific uses to prevent contamination and disease transmission. It is recommended to have separate adult sinks for diapering, food preparation and art activities, and located where the activities take place. [53]

	Yes	Partial	No	N/A	Notes	Date_____
▶ One adult-height sink in diapering area dedicated for diapering.	☐	☐	☐	☐		
▶ One adult-height sink in teacher support area dedicated for snack/food prep, washing dishes, etc.	☐	☐	☐	☐		
▶ One adult-height sink in the classroom dedicated for non-food activities: art, etc.	☐	☐	☐	☐		
▶ Optimal: Sinks minimum of 7" deep. See *Note 1*.	☐	☐	☐	☐		
▶ Optimal: Classroom sinks have swivel, goose neck faucets with single lever handles that can be wrist operated.	☐	☐	☐	☐		
▶ Children do not use adult sinks.	☐	☐	☐	☐		

Notes

1. When choosing an adult sink, the minimum depth of 7" and a goose neck swivel faucet are preferred. These two specifications allow the sink to be the most functional and promote health and safety in the classroom. Too shallow a sink or a low, non-movable faucet make it difficult to effectively clean large items. Health and safety concerns increase because the shallow bottom causes water to splash onto the counter and floor increasing the risk of spreading germs. Shallow sinks and other faucets maybe less expensive, but they are not effective.

Action Item Ideas

Best practices stipulate adult-height sinks are used for three specific activities: diapering, food prep/dishes, art activities. Add and/or replace sinks, handles and faucets. If installing plumbing is impossible, portable sinks can be used.

Classroom Adult-Height Sinks - List Action Items:

4 Classroom Teacher Support Area

LINCC's ECE Facility Design Criteria:

Classroom Teacher Support Areas provide a less stressful, more efficient and professional environment. With appropriate cabinetry, appliances, storage and technology, teachers can be in the classroom to perform administrative tasks, food preparation, clean-up and other activities. [53]

	Yes	Partial	No	N/A	Notes	Date_____
▶ The Administrative space is within the classroom, and has the following:	☐	☐	☐	☐		
• Desk/counter space	☐	☐	☐	☐		
• Adult chair	☐	☐	☐	☐		
• Equipment: Phone, Wi-Fi, laptop, classroom camera, and quiet all-in-one printer, etc.	☐	☐	☐	☐		
• Storage for administrative supplies, manuals, etc.	☐	☐	☐	☐		
• Locking storage for files	☐	☐	☐	☐		
• Personal storage for teacher (i.e. for coat, knapsack, etc.)	☐	☐	☐	☐		
▶ The Food Prep space is within the classroom, and includes: deep sink with swivel gooseneck faucet, garbage, disposal, dishwasher, refrigerator, upper and lower cabinets, oven/range, microwave, counter space, etc.	☐	☐	☐	☐		
▶ Teacher support is configured for easy visual and auditory supervision.	☐	☐	☐	☐		
▶ Optimal: Admin and Food Prep areas are combined to make a self-contained teacher support area using a half door to enter. See definitions.	☐	☐	☐	☐		
▶ All classrooms have access to on-site washer and dryer.	☐	☐	☐	☐		
▶ Optimal: Infant/Toddler rooms have a washer and dryer located within the classroom.	☐	☐	☐	☐		

4 Classroom Teacher Support Area (continued)

Notes

1. Teachers can use most the support area functions without turning their back to the children.

Definitions

2. A self-contained teacher support area using a half door to enter.

Action Item Ideas

Reconfigure or renovate space to create a teacher support area located within the classroom. Area to include: teacher admin, food prep and personal storage. Purchase needed equipment. Ensure excellent line-of-sight so that visual contact can be made with the children at all times; use half walls and half doors with lite panels, pass-through, etc. (See 5. Ease of Visual Supervision).

Classroom Teacher Support Area - List Action Items:

5 Ease of Visual Supervision

LINCC's ECE Facility Design Criteria:

Ease of Visual and Auditory Supervision of a classroom is a key element in providing a safe environment. The ability of the teaching staff to quickly look up and monitor the children's activities enhances classroom safety management by extending their line of sight and their ability to continually scan the room. The shape of the classroom can impact the ability to have excellent visual & auditory supervision. Configure the classroom so staff can see and hear all the children at all times, including when children are napping and while using sinks and toilets. Also, clutter can impede visual and auditory supervision. [53]

	Yes	Partial	No	N/A	Notes	Date_____
▶ Classroom configured for excellent visual supervision of activity areas. No 90-degree outward corners. See definitions.	☐	☐	☐	☐		
▶ Optimal: Teacher support, diapering and toileting areas use half-walls and half-doors with full lite panels.	☐	☐	☐	☐		
▶ Activity areas are defined by: low shelves, panels, dividers,	☐	☐	☐	☐		
▶ Tops of cubbies, cabinets, shelving, etc. are clutter free.	☐	☐	☐	☐		
▶ Ceiling hangings are not a visual barrier and do not pose a fire hazard.	☐	☐	☐	☐		
▶ There is excellent line-of-sight into toileting/diapering area.	☐	☐	☐	☐		
▶ There is excellent line-of-sight into nap room/area.	☐	☐	☐	☐		
▶ There is excellent line-of-sight for children using sinks.	☐	☐	☐	☐		
▶ Optimal: Interior hall and exterior doors have full-lite/visibility panels.	☐	☐	☐	☐		

5 Ease of Visual Supervision (continued)

Notes

1. 90-degree outward corner(s) in classrooms can create significant blind spots.

Definitions

1. **Visibility panels in interior & exterior doors –** glass low enough for young children to see out

2. **Pass-through:**
   - Leave open
   - Add safety glass
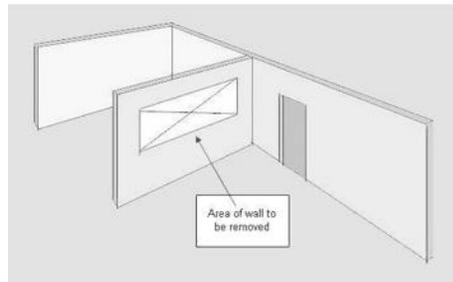
3. **90-degree outward corner:**
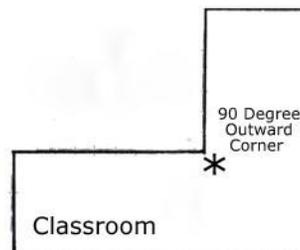
5   Ease of Visual Supervision (continued)

4. Convex mirror:

Action Item Ideas

Reconfigure classroom with low shelving and half-walls. Ensure tops of cubbies, cabinets, shelves, etc. are not used as storage space. Replace tall storage and/or add wall storage. Remove clutter from tops of cubbies, shelving, storage units and ceiling. Remodel toileting/diapering areas with half walls and windows. If necessary, add adult-height mirrors to the back walls of restroom. Relocate children's sinks. Replace solid doors with doors that have full-lite panels. If classroom has 90-degree outward corner that creates blind spots, consider remodeling, adding a pass-through with safety glass, or at a minimum add a convex mirror.

Ease of Visual Supervision - List Action Items:

6 Natural Light in Classroom

LINCC's ECE Facility Design Criteria:

Natural Daylight Lighting is the most desirable type of lighting for classrooms. Studies show natural daylight has positive effects on learning and wellbeing and also creates an esthetically pleasing environment both staff and children want to be in. The ideal is to have most of the classroom lighting come from daylight and to have child-height exterior and interior windows. Windows installed at child-height provide children with perceptual experiences of sight, sound and smell, provide opportunities for conversation and create connections to the larger community. [53]

	Yes	Partial	No	N/A	Notes Date_____
▶ Optimal: Natural light is the primary source of light.	☐	☐	☐	☐	
▶ Optimal: Total exterior window area of classroom which captures light is a minimum of 20% of floor area. See *Notes* on how to calculate.	☐	☐	☐	☐	
▶ Classroom has a minimum of two windows that let in daylight.	☐	☐	☐	☐	
▶ Optimal: Classroom has child-height exterior view windows, (26"H from floor).	☐	☐	☐	☐	
▶ If no child-height exterior windows exist, there is a platform/loft, etc. to bring children up to the window.	☐	☐	☐	☐	
▶ Optimal: There are child-height (26"H from floor) and adult-height windows to interior of facility.	☐	☐	☐	☐	
▶ Optimal: Interior hall and exterior doors have full-length lite panels. See *Definitions*.	☐	☐	☐	☐	
▶ Window coverings are easy to operate, control light, are in good repair and easy to clean.	☐	☐	☐	☐	
▶ If needed, glare and excessive brightness is mitigated with window coverings.	☐	☐	☐	☐	
▶ If needed, glare and excessive brightness is mitigated by external awnings or overhangs.	☐	☐	☐	☐	

Maximize Daylighting

	Yes	Partial	No	N/A	Notes
▶ Windows are clear of display items.	☐	☐	☐	☐	
▶ If needed to reflect existing daylight, **walls** are painted in colors that reflect light. See Definitions.	☐	☐	☐	☐	
▶ If needed to reflect existing daylight, **ceilings** are painted in colors that reflect light. See Definitions.	☐	☐	☐	☐	

6 Natural Light in Classroom (continued)

Notes

1. Window coverings are open during hours when children are in the classroom to maximize daylight, except when less light is needed.
2. Calculating the % of Window Area to Classroom Floor Area:

   a. To calculate the **total classroom area** (square footage), multiply in feet the room's length x width.   _____ x _____ = _____
   Remember, if inches are used in the calculations, they must be converted into feet.   Length   x   Width   Total Sq. Ft.

   b. To calculate the **square footage of windows needed** to meet recommended best practices, multiply the total classroom footage (2.a) x 20% (.20).

   _____ x .20   =   _____
   Total classroom footage (see 2.a)   Total Sq. Ft.

   c. To calculate the **total number of square feet of existing windows**:
      1. First calculate the square footage in each window by multiplying the height of the window x width of the window. _____
      2. Add all the window square footage together. _____

   d. Compare the total square feet of existing windows (2.c.2) to the total square feet of window area needed (2.b).

Definitions

1. **Exterior windows** are windows that are on the exterior walls of the classroom and have a view of the outside.
2. **Interior windows** are windows that are on the interior walls of the classroom and have a view of the inside of the facility.
3. **Doors with full-lite panels** have one pane of glass that runs the length of the door. Doors come in various lite panel configurations: 2-lite, 4-lite, etc.
4. **Reflective Paint**. Every paint color has a Light Reflective Value (LRV). LRV measures the percentage of light a color reflects. The scale runs from 0% (black) to 100% (perfect white). Manufacturers typically list LRV for each paint color in the index of the color deck.

   Color deck

6 Natural Light in Classroom (continued)

Action Item Ideas

To gain additional sources of natural light, enlarge and add windows and replace solid doors with full-lite panels. Add child-height exterior windows. If this is not possible, add platforms/lofts, etc. to bring children up to window level. When adding windows or new classrooms, site/locate them to maximize natural light by facing to the south. Mitigate glare with effective window coverings and/or by adding exterior overhangs and awnings. Remove display items from windows. Fix, replace or add window coverings and ensure they are easy to operate, clean and it controls light. Paint walls and ceilings with colors that reflect light.

Natural Light in Classroom - List Action Items:

7 Optimal Electrical Lighting

LINCC's ECE Facility Design Criteria:

Electrical Lighting in the classroom provides illumination, comfort, safety and encourages learning. Poor lighting has a negative impact on children's visual acuity: the eye's ability to distinguish visual detail. Too much or too little light makes it difficult for children to focus and is linked to eye strain. It is desirable to create a home-like residential quality of light. This is accomplished by using a "mix" of different types of lighting to illuminate the different areas: e.g. children's activities spaces, diapering/toileting areas, teacher support areas, entrances, nap rooms, etc. You have a lighting problem if there is Too Little Light, Too Much Glare or Confusing Shadows. [53]

	Yes	Partial	No	N/A	Notes	Date_____
▶ All activity areas are well lit: reading, writing, art, etc.	☐	☐	☐	☐		
▶ Diapering area is well lit.	☐	☐	☐	☐		
▶ Toileting area is well lit and light stays on while children are in the classroom. See *Note 1*.	☐	☐	☐	☐		
▶ Teacher task spaces are well lit: food prep, admin. etc.	☐	☐	☐	☐		
▶ Classroom lights are dimmable and convenient for staff to reach	☐	☐	☐	☐		
▶ Ceiling fixture bulbs are covered by a lens. See *Definitions*.	☐	☐	☐	☐		
▶ Optimal: Light controls are in at least two locations, e.g. at each classroom entrance.	☐	☐	☐	☐		
▶ Lights have multi-level switching - ability to turn 50% of lights off while 50% stays on. See *Definitions*.	☐	☐	☐	☐		
▶ Outdoor yards, entrances, exits, pathways, etc. are well lit to enhance safety and security.	☐	☐	☐	☐		
▶ Different types of lighting are used in the classroom. See *Definitions*.	☐	☐	☐	☐		
▶ Optimal: Classroom has residential quality of light.	☐	☐	☐	☐		
▶ Ceiling fixtures have both direct and indirect light.	☐	☐	☐	☐		

7 Optimal Electrical Lighting (continued)

Notes

1. If the system cannot be reconfigured to have a light on at all times, add an additional low wattage light fixture. Adding a window can provide the needed light and additional ventilation.

Definitions

1. **Lens covered ceiling fixtures** have the bulb covered by a "lens" so the bulb is not exposed. Lenses mitigate glare and are a safety feature. Choose lighting fixtures with lenses that are designed to maximize the amount of light emitted. Some lenses are made to reduce the amount of light projected.
2. **Multi-level switching** is the ability to turn off at least 50% of the lights while the others are able to stay on. This gives more control over the lights to the staff and is also energy efficient. This is a CA Building Code requirement for elementary schools.
3. **Examples of Lighting Types:**

Examples of grid mount ceiling fixtures which have both direct and indirect ambient light
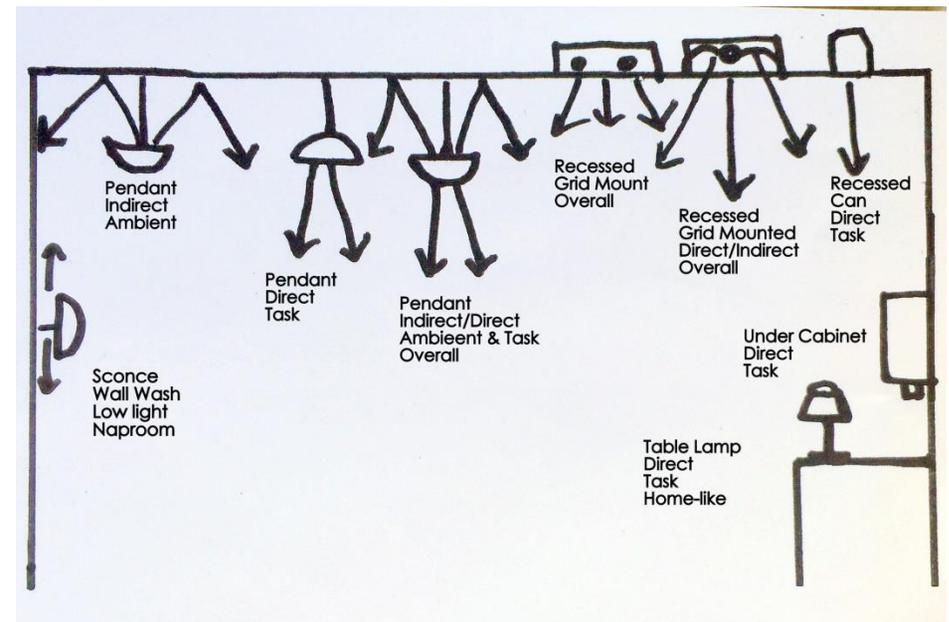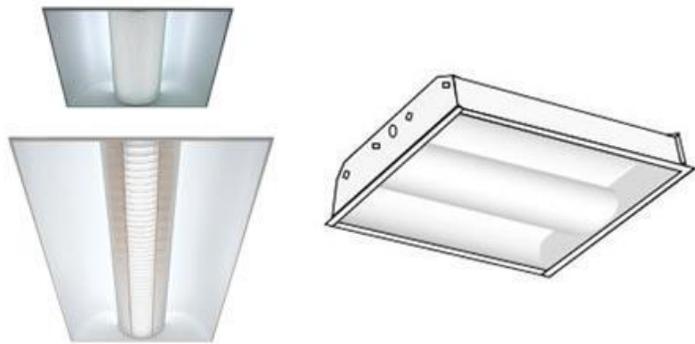
7 Optimal Electrical Lighting (continued)

Action Item Ideas

Increase classroom illumination, light specific activity areas and/or eliminate shadows by replace or add additional light fixtures. In teacher's support area, add lights under the cabinets. Add residential-type lighting, lamps, wall sconces, etc. Add multi-level switching, dimmable fixtures and additional light controls. Hire a lighting professional or electrician specializing in lighting to help determine a classroom lighting needs.

Optimal Electrical Lighting - List Action Items:

8 Acoustic Levels

LINCC's ECE Facility Design Criteria:

Good Acoustic Levels are critical for all classrooms. Poor acoustic conditions are a barrier to health and learning; elevated noise can damage hearing, affect physiological, motivational and cognitive development, interfere with effective communications and reduce wellbeing. The auditory system in young children is still maturing. It isn't until late adolescence that children achieve the levels of speech and understanding close to that of an adult. Because children cannot process sound as well as adults, adults may not be fully aware of the impact noise has on children; the younger the child, the greater the impact of noise.[53]

There are no national standards for acoustic levels for young children's environments. As of 2017, the American National Standards Institute (ANSI) is in the process of developing acoustical standards for ECE settings knowing their standard for elementary classrooms is inadequate for young children. You have an acoustic issue if: One cannot clearly be heard and understood in normal conversation without raising one's voice; one can hear background noise from interior or exterior sources when the room is empty.[53]

> Ceilings that are too high or too low can cause acoustic issues. Keep this in mind when selecting a space for a classroom.

	Yes	Partial	No	N/A	Notes Date_____
▶ There is minimal internal classroom noise: lights, fans, appliances, aquariums, etc. are quiet.	☐	☐	☐	☐	
▶ There is minimal facility noise: copying machines, HVAC, adjoining or across-the-hall classrooms, etc.	☐	☐	☐	☐	
▶ There is minimal external noise: traffic, garbage pick-up, airplane traffic, light industry, etc.	☐	☐	☐	☐	
▶ Classroom walls are insulated and/or constructed to mitigate sound transfer. See *Definitions*.	☐	☐	☐	☐	
▶ Ceilings have sound absorbing material or are designed to redirect sound. See *Definitions*.	☐	☐	☐	☐	
▶ If needed, classroom has sound absorbing items: area rugs, upholstered chairs, couch, floor pillows, etc.	☐	☐	☐	☐	
▶ If needed, classroom walls have sound absorbing panels.	☐	☐	☐	☐	
▶ Infant and toddler classrooms are located in the quietest part of the facility.	☐	☐	☐	☐	
▶ Optimal: Classroom has recommended group size.	☐	☐	☐	☐	
▶ Optimal: Classroom has recommended square footage. (See Section 9. 50 Usable Square Feet per Child).	☐	☐	☐	☐	

8 Acoustic Levels (continued)

Notes

1. Use acoustic ceiling tiles with a noise reduction coefficient of > 0.50 and are formaldehyde-free.
2. Insulate HVAC equipment and line ductwork with sound absorbing material to help reduce sound.
3. If the classrooms are located on both sides of a hall, it is preferable to have classrooms' entrance doors staggered so they are not directly across from each other.

Definitions

1. There are a variety of ways to mitigate sound transfer through the walls and ceilings, i.e. insulation between walls, certain configurations of the studs, wall board layering, etc. If there is a suspended ceiling, the tops of the walls must meet the structural ceiling.
2. Ceilings can be designed to absorb and/or redirect sound by using sound absorbing dropped ceilings, sound absorbing ceiling materials, varied ceiling heights, sound attenuation panels, avoiding extremely high ceilings, etc.

Action Item Ideas

Mitigate all sources of internal noise by replacing or fixing noisy HVAC systems, lights, appliances, fans, etc. Hire certified contractor for assessment. Replace old acoustic ceiling; existing older ceiling tiles may not be effective in absorbing sound. Lower or step down high ceilings. Use sound absorbing panels for display boards. Insulate classroom walls. If needed and possible, relocate infant and toddler classrooms to quietest part of the facility. If adding portable classrooms, locate them away from external and internal sources of noise. Decrease group size and increase activity space. Add a carpeted area using non-adhesive padded carpet tiles. Add upholstered furniture, floor pillows, etc. that have removable covers for frequent cleaning.

!Caution!

If acoustical ceiling tiles where installed before 1985, they may contain asbestos. Contact a certified asbestos abatement contractor to determine course of action.

Acoustic Levels - List Action Items:

9 50 Usable Square Feet per Child

LINCC's ECE Facility Design Criteria:

Adequate Classroom Activity Space is essential for healthy, safe, learning environments. Adequate space prevents negative outcomes of overcrowding. Best practices cite 42 to 54 square feet of usable classroom space per child to provide an environment that is "highly functional for program delivery to encourage strong, positive staff and child relationships…" In classrooms that are too small, children get sick more often and behave more aggressively. _When possible, increasing classroom square footage is a top priority_.[53]

Calculating Usable Square Feet per Child

a. To calculate the overall classroom area (square footage), multiply the room's length x width (in feet)   _____

b. To calculate the total number of **excluded** square feet, calculate the square footage of the **excluded** items

    i. Multiply the length and width of these **excluded** items:

        1. Teacher Classroom Support Area (food prep and administrative spaces)   _____

        2. Toileting Area   _____

        3. Diapering Area if separate from toileting area   _____

        4. Adult Restrooms (if in classroom)   _____

        5. Cribs and Nap Rooms/Area   _____

        6. Storage, shelving, etc. not actively used for curriculum activities   _____

        7. Circulation pathways   _____

c. Add **1-7** to calculate the **total excluded** square footage   _____

d. Subtract **c** from **a** to calculate the **total usable activity** square footage   _____

e. Divide **d** by the number of children to calculate the **usable activity** square feet per child   _____

Action Item Ideas

If possible, add additional usable square footage. The CA licensing square footage requirement is the bare minimum and is not a quality measure; the 35 sq. ft. falls short of the 50 sq. ft. of usable activity space recommended for healthy and safe learning environments. An outdoor yard that is directly adjacent to the classroom can help offset the shortage of indoor space, especially if configured for program activities.

50 Useable Square Feet per Child - List Action Items:

10 Sculpted Learning Environments – Define Areas, Relationship Building & Maximize Sq. Ft.

LINCC's ECE Facility Design Criteria:

It is extremely important when planning classroom activity areas to create spaces that facilitate relationship building, e.g., intimate spaces for one-to-one interactions between children, teachers and parents, a convenient place to transition into the classroom, a cozy place to stretch out and relax, a place to read a book and have a conversation, etc.[53]

Louis Torelli's *Enhancing Development through Classroom Design in Early Head Start* **(2002):**

Sculpted Learning Environments are created by locating activity areas along the periphery of the classroom that results in an effective and efficient space for both children and teachers. Use low walls and low shelving to define spaces for specific activities for individual and small group play. It provides teachers with excellent line-of-sight; permitting teachers to simultaneously supervise two or three of the activity areas.

Having well-defined areas, with adequate space & visual supervision, helps reduce potential for accidents and assists in safe classroom management practices.	Yes	Partial	No	N/A	Notes	Date_____
▶ Activity areas are sculpted along classroom's perimeter.	☐	☐	☐	☐		
▶ Low walls, shelving, partitions, etc. are used to create activity spaces, allowing teachers clear visual supervision.	☐	☐	☐	☐		
▶ Activity spaces include intimate spaces to encourage relationship building, e.g. child-adult and child-child.	☐	☐	☐	☐		
▶ There is a space for parent/child transitions near the classroom entrance.	☐	☐	☐	☐		
▶ Some activity areas are configured for parents to stay, e.g. the reading area.	☐	☐	☐	☐		
▶ Activity areas include private spaces for children to decompress, rest and rejuvenate.	☐	☐	☐	☐		
▶ There are no wide-open spaces present that encourage unfocused play (e.g. running, etc.).	☐	☐	☐	☐		
▶ Some activity space is flexible/dual purpose that can expand for large activities (e.g. music, movement).	☐	☐	☐	☐		
▶ Circulation paths are well-defined and minimized, to free up extra square footage for activity space.	☐	☐	☐	☐		
▶ Non-slip area rugs or carpet tile rugs are used to help define activity space. See *Definitions*.	☐	☐	☐	☐		

10 Sculpted Learning Environments - Define Areas, Relationship Building & Maximize Sq. Ft. (continued)

Definitions

1. **Carpet tiles** can be configured to create any size rug. Use carpet tiles that are padded, low-pile, non-toxic, anti-microbial, and are not glued onto the floor. Using carpet tiles which are not installed with adhesive are extremely efficient and effective. They are easy to clean, replace and can be reconfigured to meet the changing needs of the classroom.

Action Item Ideas

Add spaces to facilitate relationship building and private spaces for children to rejuvenate. Minimize circulation pathways and wide-open spaces. Define classroom entrance and reconfigure activity spaces along classroom's perimeter. Use low shelving, partitions and walls, non-slip area rugs or non-adhesive padded carpet tiles, and potted plants to help define areas.

Sculpted Learning Environments - List Action Items:

11 Convenient, Plentiful & Organized Storage

LINCC's ECE Facility Design Criteria:

Ample & Organized Storage is critical in creating a well-structured classroom environment that is safe, healthy and helps teachers to be effective and efficient. Having organized materials located in the areas in which they are used allows more time for meaningful interactions and less time tracking down materials. Well organized storage model organization skills to children. Inadequate and disorganized storage leads to clutter, under use of resources (not knowing what materials exist), and safety and health hazards (rodents, dust, and materials/equipment stacked in corners, toileting areas and in the halls).[53]

	Yes	Partial	No	N/A	Notes	Date_____
▶ There is storage in the classroom for frequently used materials.	☐	☐	☐	☐		
▶ There is storage outside of the classroom for infrequently used materials.	☐	☐	☐	☐		
▶ Conveniently located upper-wall cabinet storage is located in areas where materials are used.	☐	☐	☐	☐		
▶ Storage is appropriate for materials being stored.	☐	☐	☐	☐		
▶ Storage is proportional to the size of the classroom.	☐	☐	☐	☐		
▶ Items are not stored in corners, hallways, diapering, or toileting areas unless in a specific storage unit which does not pose a safety hazard.	☐	☐	☐	☐		
▶ Storage spaces (including storage closets) are well organized, labeled and do not pose a safety hazard (e.g. blocking floor pathways).	☐	☐	☐	☐		
▶ Storage containers easily fit into storage and allow for clear visual access.	☐	☐	☐	☐		
▶ Convenient and effective nap mat storage is available.	☐	☐	☐	☐		
▶ Optimal: In-classroom floor-to-ceiling storage is limited.	☐	☐	☐	☐		
▶ Limited or no wall-to-wall storage in the classroom exists that takes up activity space.	☐	☐	☐	☐		
▶ Teacher support area has ample storage for administrative materials and food preparation supplies.	☐	☐	☐	☐		
▶ Diapering and toileting areas have appropriate storage.	☐	☐	☐	☐		
▶ Adequate spaces are designated for diapers, garbage, and recycling containers.	☐	☐	☐	☐		
▶ Children's trash cans are located next to sinks in diapering/toileting, art and eating areas.	☐	☐	☐	☐		
▶ There is plentiful outdoor storage with easy access for ride-on vehicles, wagons, sand toys, gardening tools, etc.	☐	☐	☐	☐		
▶ Outdoor storage is in good condition and is waterproof.	☐	☐	☐	☐		

11 Convenient, Plentiful & Organized Storage (continued)

Action Item Ideas

Add appropriate in-classroom wall cabinets, storage shelving, etc. Replace storage containers to fit storage shelves and choose containers where materials can be seen when stored. Label storage containers and/or shelving. Add upper-wall cabinet storage in activity areas. Organize existing storage and discard unwanted and unnecessary items. In storage closets ensure the floor is clear so that items on shelving can be easily and safely accessed. Remove items/safety hazards from corners, halls, diapering and toileting areas. Replace and/or add additional outdoor storage.

Convenient, Plentiful & Organized Storage - List Action Items:

12 Thoughtful Visual Environment

LINCC's ECE Facility Design Criteria:

Visual Environment is a design element that supports children's ability to focus and learn. Heavily decorated classrooms may create overly-stimulating environments that disrupt young children's ability to focus. A recent study of a small group of kindergarteners found that children in a classroom with heavily decorated walls were more distracted, had difficultly discriminating what was important, wandered off task. Additional research is needed to replicate the study with a larger group sample and with preschool children to be predictive. Some ECE professionals recommend a "home-like" classrooms with thoughtful visual displays rather than brightly colored classrooms with numerous decorations covering the ceilings and walls.[53]

Louis Torelli's *"Criteria for Setting Up Early Head Start Classrooms"* (2001-2007)

Color. Bright primary colors can be over-stimulating in an (infant) group care environment. Walls painted an ivory-eggshell color and furniture constructed of natural wood creates a cozy, neutral colored background which allows children to visually discriminate toys and pictures on the wall. Splashes of color and texture can be incorporated flexibly into the classroom through the use of wall quilts and fabric canopies.

Extensive clutter can pose safety and health hazards.	Yes	Partial	No	N/A	Notes	Date_____
▶ Specific areas are designated for child and adult displays. See Notes.	☐	☐	☐	☐		
▶ Tops of cubbies, cabinets, shelving, etc. are clutter-free.	☐	☐	☐	☐		
▶ Windows are not used as display boards.	☐	☐	☐	☐		
▶ Ceiling hangings do not block classroom visual supervision & are not fire hazards. Check fire code to see what materials can be suspended from ceiling.	☐	☐	☐	☐		
Classrooms Have Residential Design Elements						
▶ Use home-like color pallet. Have accent wall. See Notes.	☐	☐	☐	☐		
▶ Optimal: Flooring is residential-like in pattern and design.	☐	☐	☐	☐		
▶ Classroom has some residential items: lamps, plants, etc.	☐	☐	☐	☐		
▶ Optimal: Some furniture is residential: futon/sofa, upholstered chair, table, display shelf, etc.	☐	☐	☐	☐		

12 Thoughtful Visual Environment (continued)

Notes

1. **ECERS requirement on Child-related display** does not require a certain percentage of wall space to display children's work. Too often this requirement is misinterpreted and results in many flat vertical spaces being covered with display items. (*See ECERS Revised Edition*, page 17 and *All About ECERS-R*, pages 45-55 for requirements).
2. **Accent walls painted a different color** from the rest of walls can create additional color interest and depth to the classroom. Consider paint colors that are muted colors or colors and/or textures that reflect community's cultural esthetic.

Action Item Ideas

Thoughtfully define appropriate display spaces for children's work. Purchase appropriate display boards, etc. If needed, purchase storage to declutter. Add lamps and plants to create a residential feel. When replacing flooring, rugs, table and chairs, shelving, etc., consider residential-like items. If needed, paint walls, shelving, etc. When at the end of their useful life, consider replacing "learning" or "theme" rugs with home-like area rugs.

Thoughtful Visual Environment - List Action Items:

13 Direct Access to Outdoors

LINCC's ECE Facility Design Criteria:

Direct Access from Classroom to the Outdoor Yard allows the outdoors to become an extension of the classroom and makes it easier to implement indoor/outdoor programs. It can help offset indoor classroom space that is less than the recommended square footage. Direct access to the outdoor yard allows children to engage in physical activity, be in nature, and enrich their learning experiences and provide immediate respite for teachers comforting crying infants and distressed children.[53]

Direct access gives the opportunity for the outdoors to be used as an extension of the classroom and it can provide the second classroom emergency exit.	Yes	Partial	No	N/A	Notes Date_____
▶ Classroom has direct access to the outdoor yard.	☐	☐	☐	☐	
▶ Each outdoor yard has child and adult height outdoor sinks	☐	☐	☐	☐	
▶ Each outdoor yard has a covered patio for eating, table-top and art activities.	☐	☐	☐	☐	
▶ Each outdoor yard has defined space for activity areas.	☐	☐	☐	☐	
▶ Each outdoor yard has semi-private spaces.	☐	☐	☐	☐	
▶ Optimal: Each outdoor yard has gathering area.	☐	☐	☐	☐	

Action Item Ideas

Add a door with full-lite panels to create direct access to the outdoor yard. Reconfigure outdoors to incorporate indoor activities.

Direct Access - List Action Items:

14   Heating and Air Conditioning - Air Quality

LINCC's ECE Facility Design Criteria:

Good Indoor Air Quality is essential for a healthy classroom. Poor air quality can increase the potential for short and long term health issues for both children and teachers due to the lack of air filtration, ventilation and fresh air. Indoor air pollution is often greater than the pollution found outdoors.

Heating, Ventilation and Air Conditioning Systems are commonly referred to as HVAC. Often the HVAC systems are a combined in one piece of mechanical equipment. Other systems will have separate mechanical equipment for each system. Make sure each system's performance is evaluated.

	Yes	Partial	No	N/A	Notes	Date_____
▶ All systems operate at the correct capacity: heating and cooling the entire classroom with no drafts or cold spots.	☐	☐	☐	☐		
▶ Classroom temperature is between 72-76 degrees.	☐	☐	☐	☐		
▶ All systems are quiet.	☐	☐	☐	☐		
▶ Air filters are changed monthly when system is in use.	☐	☐	☐	☐		
▶ Coils are cleaned quarterly.	☐	☐	☐	☐		
▶ Yearly maintenance inspections are performed. See *Note 1*.	☐	☐	☐	☐		
▶ Optimal: Room temperature sensors are located at child-height.	☐	☐	☐	☐		
▶ Optimal: Controls, located in each classroom, are at adult-height.	☐	☐	☐	☐		
▶ Controls can be adjusted by teachers.	☐	☐	☐	☐		
▶ Air supply and return vents are free of obstructions.	☐	☐	☐	☐		

14   Heating, Ventilation, and Air Conditioning - Air Quality (continued)

Notes

1. During annual maintenance, have certified inspector ensure high efficiency filters are installed and humidity is between 30%-60%.
2. HVAC equipment is strategically located to reduce sound impact and is not located inside classrooms.

Action Item Ideas

Ask the teaching staff and children about the temperature in the room. Are there drafts or cold or warm spots? This helps diagnose if the system's capacity is correct for the size of the room. Is it noisy? Background noise impacts the acoustical comfort in the room. Ducting may need to be insulated or system may need to be replaced. Hire an ANSI-certified contractor to perform a comprehensive inspection to determine course of action. He or she should also ensure that the system is operating correctly and at the correct capacity (as systems can be undersized or oversized). Equipment may need to be cleaned, repaired, insulated or replaced.

Heating and Air Conditioning - List Action Items:

15 Ventilation and Fresh Air Circulation - Air Quality

LINCC's ECE Facility Design Criteria:

Effective Ventilation and Fresh Air Circulation are required for healthy indoor air. Children are particularly vulnerable to air pollution because their lungs are still developing and they breathe more air per pound of body weight than adults do. [53]

Indoor Air Quality, IAQ, experts recommend considerably higher fresh air exchange rates for young children than the exchange rates required by the State of CA Building Code.

	Yes	Partial	No	N/A	Notes	Date_____
▶ All Section 14 Heating and Air conditioning items apply to mechanical ventilation systems.	☐	☐	☐	☐		
▶ Minimum of two operable windows with secure screens.	☐	☐	☐	☐		
▶ Optimal: Cross-ventilation from two different directions.	☐	☐	☐	☐		
▶ If needed, ceiling fans are used to circulate air.	☐	☐	☐	☐		
▶ Mechanical ventilation system is air exchange rate to approach IAQ experts' recommendation 20 L/s or 42cfm	☐	☐	☐	☐		

Notes

1. During annual maintenance, have a certified inspector ensure ventilation system's air exchange rate approaches IAQ experts' recommendation of 20 L/s (liters per second) or 42 cfm, (cubic feet per minute). The State of CA Building Standard Code - 2016 requirement is 15cfm.

Action Item Ideas

For mechanical systems, hire a certified contractor to perform comprehensive inspection to determine course of action. If the outdoor air is polluted, use a stand-alone mechanical system set at a high exchange rate, use high efficiency filters and relocate away from pollution sources. Windows and doors can provide classrooms with fresh air. Fix, replace or add windows/doors with secure screens; ensure open windows are not a safety hazard. Adding ceiling fans can help to circulate the fresh air throughout the classroom. If ceilings are low, flush mount ceiling fans are available.

Ventilation and Fresh Air Circulation - List Action Items:

16 Effective Venting of Odors - Air Quality

LINCC's ECE Facility Design Criteria:

Effective Venting of Odors. Many children's centers do not have adequate ventilation to remove odors, especially over toileting and diapering areas. The classroom is to be free from odors. Often staff becomes acclimated to odors and does not recognize the odors as an issue. It is imperative that fans vent to the outdoors, not back into the building. [53]

	Yes	Partial	No	N/A	Notes	Date_____
▶ All classroom areas are odor free, especially toileting, diapering and food prep areas.	☐	☐	☐	☐		
▶ There is a ventilation fan in the toileting area.	☐	☐	☐	☐		
▶ Ventilation fan in the toileting area stays on when the children are present. Motion-sensitive auto-on fans are not recommended.	☐	☐	☐	☐		
▶ If the toileting area has an exterior wall, it has an operable exterior window (unless it opens to a source of pollution).	☐	☐	☐	☐		
▶ There is a ventilation fan directly over the diapering table.	☐	☐	☐	☐		
▶ There is a ventilation fan in the food prep area.	☐	☐	☐	☐		
▶ All fans vent to the outdoors, not back into the facility.	☐	☐	☐	☐		

Notes

1. Often in toileting areas, the ventilation fan is connected to the lights. This is fine if the lights and the ventilation fan can be continually "on." Toileting areas need to be continually ventilated and lit to make them inviting for children to use.
2. Most motion-sensitive auto-on systems have the lights and fan interconnected; the light and fan turn on when a child enters and off when the child leaves. Motion-sensitive auto-on systems do not provide the required ventilation or lighting for the toileting area.

Action Item Ideas

Add ventilation fans. Fix or replace fans that do not remove odors and/or are noisy. The ventilation fan and lights need to be operating continually and quietly. Re-configure switching so fan and a light can be continually on.

16   Effective Venting of Odors - Air Quality (continued)

Effective Venting of Odors - List Action Items:

17 Mildew, Mold and Moisture Leaks - Air Quality

LINCC's ECE Facility Design Criteria:

Mildew, Mold and Moisture Leaks. Ensure the sources of leaks, windows, doors, sinks, toilets, etc., are correctly sealed. The center's facility maintenance manual/plan includes a checklist of items to be routinely checked for potential active and inactive leaks by looking for moisture, stains and warping. [53]

	Yes	Partial	No	N/A	Notes	Date_____
▶ Stale or musty smells are absent.	☐	☐	☐	☐		

The following are free of leaks:

	Yes	Partial	No	N/A	Notes
▶ Toilets.	☐	☐	☐	☐	
▶ Sinks and faucets.	☐	☐	☐	☐	
▶ Walls.	☐	☐	☐	☐	
▶ Windows.	☐	☐	☐	☐	
▶ Doors.	☐	☐	☐	☐	
▶ Ceiling and roof.	☐	☐	☐	☐	
▶ Appliances.	☐	☐	☐	☐	

Notes

1. If mold is suspected, hire a certified inspector to determine extent of problem. If mold mitigation is needed, hire a certified contactor.

Action Item Ideas

Repair all leaks and replace items if they are worn and are at end of usable life (e.g. appliances, windows, and doors). If there are signs of leaks on the ceiling and walls, hire a roofing inspector to inspect roof for active and inactive leaks and determine a course of action. Even if the leak is repaired, often water damaged items contain mold, mildew and musty smells. Replace items that have water damage (e.g. flooring, ceiling tiles, cabinets, and walls). Establishing a preventative maintenance practice of regularly inspecting for leaks can minimize the damage they can cause (See Section 21. Facility Maintenance). If ceiling tiles need to be replaced, use sound absorbing formaldehyde-free ceiling tiles. (See Section 8. Acoustic Levels)

17   Mildew, Mold and Moisture Leaks - Air Quality (continued)

Mildew, Mold and Moisture Leaks - List Action Items:

18 Reduce Toxins in Environment - Air Quality

LINCC's *ECE Facility Design Criteria*:

Good Indoor Air Quality

Toxins – Reduce Dust, Use Non-Toxic Cleaning and Integrated Pest Management Practices and Products. Toxins often enter the classroom from outdoors on the soles of shoes and come from cleaning products and accumulated dust on floors, clutter, etc.[53]

	Yes	Partial	No	N/A	Notes Date_____
▶ Exterior and interior entries have large and easy-to-clean mats (walk-off mats). Optimal: Minimum of 4 feet in length.	☐	☐	☐	☐	_____
▶ Only safe products and practices are used and followed for cleaning, sanitizing and disinfecting. (No bleach solutions.)	☐	☐	☐	☐	_____
▶ Clean with a high efficiency vacuum that uses a HEPA filter. *See Definitions*.	☐	☐	☐	☐	_____
▶ Microfiber items, such as mops and cloths, are used to clean. Use damp microfiber to dust. See *Definitions*.	☐	☐	☐	☐	_____
▶ Classroom is free of clutter.	☐	☐	☐	☐	_____
▶ Classroom has radon detectors.	☐	☐	☐	☐	_____
▶ Non-toxic fertilizer is exclusively used.	☐	☐	☐	☐	_____
▶ Integrated Pest Management (IPM) practices are used.	☐	☐	☐	☐	_____

Definitions

1. **Walk-off mats** are typically made for use in commercial buildings. To be most effective, Indoor Air Quality experts recommend that each mat be a minimum of 4 feet in length, as wide as the door opening and cleaned daily.

18 Reduce Toxins in Environment - Air Quality (continued)

Definitions (continued)

2. **Microfiber** fabric is positively charged so it attracts negatively charged dirt and dust. This allows for dusting of surfaces to be performed with a damp cloth and does not expose the children to chemical dusting products.
3. **HEPA** filter is a type of filter designed to remove 99.97% of airborne particles microns or greater in diameter.

Action Item Ideas

Add interior and exterior entrance mats. Use microfiber cleaning cloths and mops. Purchase vacuum with HEPA filter exhaust and/or require maintenance service to use one. Declutter classroom. Institute green cleaning practices and replace bleach cleaning with approved alternative. Install radon detectors. Implement IMP in landscaping and pest control practices with service providers.

Reduce Toxins in Environment - List Action Items:

19 Flooring - Air Quality & Safety

LINCC's ECE Facility Design Criteria:

Flooring is a potential source of mildew and mold. Wall-to-wall carpeting is not recommended. Replace carpeting with easily cleanable, non-toxic flooring such as linoleum, rubber or carpet tiles. Include flooring's specific cleaning and maintenance procedures in the center's facility maintenance manual/plan. Define activity areas with non-toxic and easy to clean area rugs with non-slip padding and edges that are not trip hazards. Worn flooring can be a safety hazard.

	Yes	Partial	No	N/A	Notes	Date_____
▶ All flooring is easy to clean and non-toxic, especially in infant and toddler classrooms.	☐	☐	☐	☐		
▶ All flooring cleaners used are non-toxic.	☐	☐	☐	☐		
▶ Flooring is in good condition, meaning it is not worn, cracked, musty, torn, stained, rippling or buckling.	☐	☐	☐	☐		
▶ Flooring transition strips are in good condition and are not a trip or safety hazard.	☐	☐	☐	☐		
▶ Rugs are vacuumed and floors are cleaned on a daily basis.	☐	☐	☐	☐		
▶ Rugs are professionally steam-cleaned 2-4 times per year, and more frequently if needed.	☐	☐	☐	☐		
▶ Flooring is appropriate for area (e.g. water-resistant flooring under sinks, art areas, etc.).	☐	☐	☐	☐		

Notes

1. Roll carpeting is not recommended for classrooms due to health issues. Where carpeting is needed, use carpet tiles that are padded, low-pile, non-toxic, anti-microbial, easy to clean and replace. Use carpet tiles that are not glued onto the floor.
2. When selecting flooring, choose muted colors and patterns (See Section 12. Thoughtful Visual Environment).

Definitions

1. **Non-toxic flooring** will not cause adverse health effects either immediately or over the long term. Examples include linoleum (vs. vinyl), rubber, wood, terrazzo and ceramic tile. When using non-toxic surfaces, be sure to use non-toxic sealers, finishes and cleaning products.

19 Flooring - Air Quality & Safety (continued)

Action Item Ideas

Replace worn flooring. For carpeted areas, replace carpeting with easily cleanable, non-toxic flooring such as carpet tiles that are not glued to the floor, or replace with linoleum and use non-slip area rugs. If possible, refinish floor to extend its life. Replace restroom flooring; consider using ceramic tile, terrazzo or concrete as these materials are better for health and are highly durable. Although the up-front costs are higher, they require lower maintenance, have longer useful life and have less of an environmental impact.

Flooring - List Action Items:

20 General Safety

LINCC's ECE Facility Design Criteria:

General Safety. Following general safety practices ensures the classroom will be safe and healthy for both children and adults. Be proactive in design and maintenance to remove potential hazards and prevent accidents from occurring.[53]

	Yes	Partial	No	N/A	Notes	Date_____
▶ Door hinge guards are on both sides of all doors. See *Definitions*.	☐	☐	☐	☐		
▶ Child-height lite panels in all doors.	☐	☐	☐	☐		
▶ All hardware (pulls, handles, etc.) is non-protruding.	☐	☐	☐	☐		
▶ Only tamper-resistant electrical outlets are used.	☐	☐	☐	☐		
▶ Room has sufficient outlets to avoid use of extension cords.	☐	☐	☐	☐		
▶ Windows are made of safety glass or have safety film. See *Definitions* on how to identify safety glass.	☐	☐	☐	☐		
▶ No sharp edges are present on furniture, shelving, cabinets, etc. Outside corners in the classroom have ½" bullnose edge along counters, walls, etc., especially in the infant, toddler & two's rooms.	☐	☐	☐	☐		
▶ Outdoor yards/equipment are free of sharp edges.	☐	☐	☐	☐		

Definitions

1. **Door hinge guards** prevent fingers from being caught in door hinges.
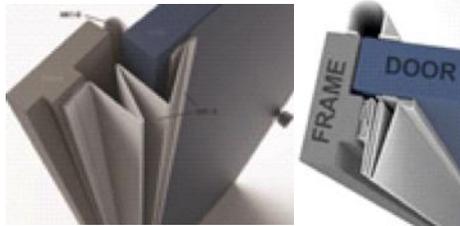
2. **Safety glass** windows are marked with an etched label.

20   General Safety (continued)

Action Item Ideas

Add finger protection to all door hinges to prevent finger injuries. Add visibility panels to all doors. Replace protruding hardware. Replace electrical outlets with tamper-resistant type. Add safety film to windows not made of safety glass. Fix all sharp edges. Replace sharp outside corners with ½" round bullnose edge, especially in infant, toddler and two's rooms.

General Safety - List Action Items:

21 Facility Maintenance

LINCC's ECE Facility Design Criteria:

Facility Maintenance. Classrooms must be maintained in good condition to provide children a healthy environment. It is recommended that a preventive maintenance program be developed that inspects, repairs and replaces systems before they fail. Leaky roofs, windows, sinks, doors, etc. can have major health and financial consequences. It is essential for an organization to maintain its major capital asset in excellent condition and plan for its renovation/replacement when it has reached the end of its useful life.[53]

	Yes	Partial	No	N/A	Notes	Date_____
▶ Facility has a preventative maintenance program.	☐	☐	☐	☐		
▶ Classroom walls are in good condition.	☐	☐	☐	☐		
▶ Interior has been painted every 3 years.	☐	☐	☐	☐		
▶ Exterior has been painted every 5-10 years, depending on conditions.	☐	☐	☐	☐		
▶ Roof is in good condition.	☐	☐	☐	☐		
▶ Ceiling is in good repair (no paint peeling, water stains, etc.).	☐	☐	☐	☐		
▶ Windows are operable, in good repair, have secure screens, and weather stripping is in good condition.	☐	☐	☐	☐		
▶ Doors and weather stripping are in good condition.	☐	☐	☐	☐		
▶ Flooring is in good condition.	☐	☐	☐	☐		
▶ Cabinetry & shelving are in good condition.	☐	☐	☐	☐		
▶ All children's classroom furniture is in good condition.	☐	☐	☐	☐		
▶ All appliances are in good condition and have a maintenance & replacement plan.	☐	☐	☐	☐		
▶ There are routine inspections of facility, classroom and outdoor areas to identify potential problems.	☐	☐	☐	☐		

21   Facility Maintenance (continued)

Action Item Ideas

Develop comprehensive maintenance plan and corresponding budget. Paint, if needed. Repair items that need fixing and/or replace items that have reached the end of their useful life, e.g. appliances, HAVAC, flooring, window coverings, roof, windows, cabinets, children & adult furniture, doors, etc. Hire contractor to preform facility inspections, e.g. roof, walkways, windows, doors, lighting, HVAC, appliances, weather stripping, plumbing & lighting fixtures, exterior finishes: siding, paint, decking, etc. Perform necessary maintenance.

Facility Maintenance - List Action Items:

22 Classroom Improvements Under Consideration

To develop an Action Plan, priorities, cost and funding need to be determined. To estimate costs, contact local professionals.

Priority   =   Short-Term   Medium-Term   Long-Term

Classroom	Improvements	Page #	Priority	Cost Estimate	Funding Source	Notes & Date

Classroom	Improvements	Page #	Priority	Cost Estimate	Funding Source	Notes & Date

23 Develop an Action Plan & Schedule

Once the priorities and cost estimates are identified, detailed action plans can be developed. Any action plan format can be used. Here are steps for a simple *Facilities Action Plan*:

Action Plan Steps:

1. Pick top priority item(s).

2. List action steps needed to achieve.
    a. Research improvement options.
    b. List tasks to be performed.
    c. Refine cost estimates (include staff time).
    d. Research and secure funding.
    e. Obtain approvals, if necessary.

3. Assign personnel.

4. Establish timeline.

5. Communicate, to staff, parents and children, the plan for improvements.

24 Resources and References

Resources

Green Cleaning Practices
☐ *Green Cleaning Toolkit*
Provides practical information on how to keep ECE environments clean and safe. Includes fact sheets, checklist, curriculum, posters, etc.
http://cerch.org/research-programs/child-care/greencleaningtoolkit/

Integrated Pest Management Practices
☐ *Integrated Pest Management: A Curriculum for Early Care and Education Programs California Childcare Health Program*
Toolkit presents practical information about using integrated pest management (IPM) to prevent and manage pest problems.
http://cchp.ucsf.edu/

Recycle and Reduce Waste
☐ *Go Green Rating Scale for Early Childhood Settings*, Phil Boise (2009)
A comprehensive tool to evaluate overall center practices. Tool offers practical guidelines to increase green score.

Environment Stewardship Products & Practices

When **purchasing**, select the following:

Paint, Finishes and Adhesives
☐ Use zero to low Volatile Organic Compounds (VOCs). Non-VOC paint can be found in most paint and hardware stores including the large hardware box stores.

Energy Efficient Products
☐ Energy efficient appliances
☐ Energy efficient HVAC systems
☐ Energy efficient doors
☐ Energy efficient windows
☐ Energy efficient lighting and light bulbs

Water Conservation
☐ Appliances – use low water use dishwashers, clothes washers, etc.
☐ Faucets – use high-efficiency aerators.
☐ Implement water conservation policies.

Furniture Selection
☐ Buy wood products that comply with California's formaldehyde regulations (e.g. furniture, cabinets, insulation, laminates and particle board).
☐ Use materials that do not off-gas and are non-toxic (e.g. flooring, cots, materials, and foam products).
☐ Select furniture that is built well and has a long life-cycle, as compared to less expensive items that do not hold up and need replacing.

References

1. Acoustical Society of America. (2002). *Acoustical Barriers to Learning, Classroom Acoustics II*.
2. Acoustical Society of America. (2002). *Acoustical Performance Criteria, Design Requirements and Guidelines for Schools, ANSI-ASA 12.60*.
3. American Academy of Pediatrics, American Public Health Association, 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 program*. (3rd Edition). Elk Grove Village, IL: American Academy of Pediatrics; Washington, DC: American Public Health Association.
4. American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education. (2013). *Stepping Stones,* (3rd Edition) *and Stepping Stones Compliance/Comparison Checklist, (*3rd Edition). Elk Grove Village, IL: American Academy of Pediatrics; Washington, DC: American Public Health Association.
5. American Lung Association, U.S. Consumer Product Safety Commission, U.S. Environmental Protection Agency. (1994). *Indoor Air Pollution: An introduction for health professionals*. Retrieved from http://www.cpsc.gov/en/Safety-Education/Safety-Guides/Home/Indoor-Air-Pollution-Introduction-for-Health-Professionals/.
6. American Society of Heating Refrigeration and Air-conditioning Engineers, *ANSI/ASHRAE Standard 62.1-2007*. Retrieved from https://www.ashrae.org/File%20Library/docLib/Public/20100608_62_1_2007_g_r_t_final.pdf.
7. Arthur, D., Larson, C., Gillman, A. and Sussman, C. (2005). *Resource Guide-Volume 2: Designing early childhood facilities*. New York, NY: Local Initiatives Support Corporation (LISC). Retrieved from http://www.lisc.org/content/publication/detail/3520.
8. Baker, L., and Bernstein, H. (2012). *Impact of School Buildings on Student Health Performance: A call to research*. New York, NY: The McGraw-Hill Research Foundation and the Center for Green Schools at the U.S. Green Building Council. Retrieved from http://www.mhfigi.com/wp-content/uploads/2013/08/GreenSchoolsWP-2012.pdf.
9. Bergen, D., Reid, R., and Torelli, L. (2001). *Educating and Caring for Very Young Children: The infant/toddler curriculum*. New York: Teachers College Press.
10. Boise, P., Smith, E., and Carey, J. (2004). *GreenCare for Children: Measuring Environmental hazards in the Childcare Industry*. Goleta, CA: Community Environmental Council. Retrieved from http://www.greencareforchildren.org/vdb/document/40.
11. Bradley, R.H. and Vandell, D.L. (2007). *Child Care and the Wellbeing of Children*. Archives of Pediatric & Adolescence Medicine. 161(7):669-676 Retrieved from http://archpedi.jamanetwork.com/article.aspx?articleid=570794&resultClick=3.
12. Bradman, A., Gaspar, F., Castorina, R., Tong-Lin, E. and McKone, T. (2012). *Environmental Exposures in Early Childhood Education Environments Study*. Sacramento, CA: State of California Environmental Protection Agency, Air Resources Board. Retrieved from http://www.arb.ca.gov/research/apr/past/08-305.pdf.
13. California Childcare Health Program, UCSF School of Nursing. (2005, 2013). *CCHP Health and Safety Checklist*. Retrieved from http://www.ucsfchildcarehealth.org/pdfs/Checklists/UCSF_Checklist_rev2.0802.pdf.
14. California Childcare Health Program, UCSF School of Nursing. (2011). *Integrated Pest Management: A curriculum for early care and education programs*. Retrieved from http://www.ucsfchildcarehealth.org/pdfs/Curricula/ipm/Curriculum_FINAL%2010.2010.pdf.
15. California Childcare Health Program, UCSF School of Nursing. (2013). *Green Cleaning, Sanitizing, and Disinfecting: A checklist for early care and education*. Retrieved from http://cerch.org/wp-content/uploads/Checklist-8.1.2013.pdf.
16. California Department of Public Health, Programs, IAQ Section, *Ventilation*. Retrieved from http://www.cdph.ca.gov/programs/iaq/pages/ventilation.aspx.
17. Collaborative for High Performance Schools (CHPS). *CA-CHPS Criteria for New Construction and Major Modernizations*. Sacramento, CA: Collaborative for High Performance Schools. Retrieved from www.chps.net.
18. Community Playthings and WestEd Program for Infant/Toddler Care. (2010). *Infant and Toddler Spaces: Design for a quality classroom*. Ulster Park, NY: Community Products. Retrieved from http://www.scribd.com/doc/15899674/Infant-and-Toddlers-Spaces-Design-for-a-Quality-Classroom.
19. De Schipper, E.J., Riksen-Walraven, J. M. and Geurts, S. A. E. (2006). *Effects of Child-caregivers ratio on the Interactions between Caregivers and Children in Child-care Centers: An experimental study*. Child Development 77:861-74.

20. Dogan A., Larson, C., Gillman, A, and Sussman, C. (2005). *CICK Resource Guide-Volume 2: Designing Early Childhood Facilities*. New York, NY: Local Initiatives Support Corporation/Community Investment Collaborative for Kids. Retrieved from http://www.lisc.org/docs/publications/2005_cick_guide_vol2_designing.pdf.

21. Erdreich, J. (1999). Classroom Acoustics, *IssueTrak: A CEFPI Brief on Educational Facility Issues*. Scottsdale, AZ: The Council of Educational Facility Planners International. Retrieved from http://healthyschools.cefpi.org/issue9.pdf.

22. Fisher, A., Godwin, K. and Seltman, H. (2014). *Visual Environment, Attention Allocation, and Learning in Young Children: When too much of a good thing may be bad*. Psychological Science: May 21, 2014. Retrieved from http://pss.sagepub.com/content/early/2014/05/20/0956797614533801.abstract.

23. Fisk, William. (2015). *Indoor Air Quality in Schools: Influence on Health and Performance*. Indoor Environment Group: Lawrence Berkeley National Laboratory and U.S. EPA, Indoor Environments Division. Presentation at Environment Health at School: Ignored Too Long, Washington, D.C. November 2015. Retrieved from http://healthyschools.org/.

24. Gatland II, G. (2008). *Understanding Acoustics and Sound Control*. American Institute of Architects. Retrieved from http://aia.org/.

25. Harms, T., Clifford, R., and Cryer, D. (2005). *Early Childhood Environment Rating Scale, Revised Edition*. Chapel Hill, NC: The University of North Carolina.

26. Harms, T., Clifford, R., and Cryer, D. (2006). *Infant Toddler Environment Rating Scale, Revised Edition*. Chapel Hill, NC: The University of North Carolina.

27. Health Schools Network, Inc. (2012). *Better Lighting for Healthier Students*. Albany, NY: Health Schools Network, Inc. Retrieved from www.healthyschools.org.

28. Illinois Facility Fund. (2004). *The Building Blocks of Design: a handbook for early childhood development facilities*. Joliet, IL: Illinois Facility Fund. Retrieved from www.iff.org.

29. International Code Council. (2012). *2012 International Property Maintenance Code; Chapter 4, Light, Ventilation and Occupancy Limitations*. Retrieved from http://publicecodes.cyberregs.com/icod/ipmc/2012/icod_ipmc_2012_4_sec004.htm.

30. Johnson, K. (2006). *Learning to Learn, Pre-kindergarten-Kindergarten Design Implication*. *IssueTrak: A CEFPI Brief on Educational Facility Issues*. Scottsdale, AZ: The Council of Educational Facility Planners International. Retrieved from http://0-files.eric.ed.gov.opac.msmc.edu/fulltext/ED500558.pdf.

31. Lindstrom, M., and Gillman, A. (2010). *CICK Resource Guide: Greening early childhood centers*. New York, NY: Local Initiatives Support Corporation/Community Investment Collaborative for Kids. Retrieved from http://www.lisc.org/content/publication/detail/18907.

32. Lowry, Pat. (1993). *Privacy in the Preschool Environment: Gender differences in reaction to crowding*. C*hildren's Environments* 10(2): 46-61. Boulder, CO: University of Colorado. Retrieved from http://www.colorado.edu/journals/cye.

33. Maxwell, L., and Evans, G. (1999). *Design of Child Care Centers and Effects of Noise on Young Children*. New York, NY: Cornell University. Retrieved from http://www.designshare.com/research/lmaxwell/noisechildren.htm.

34. Mendell, M. J., Eliseeva, E., Davies, M. G., Spears, M., Lobschied, A. B., Fisk, W. J., and Apte, M. G. (2013). "Association of Classroom Ventilation with Reduced Illness Absence: A Prospective Study in California Elementary Schools." *Indoor Air* 23, no. 6: 515.

35. Moore, G. (2002). *Designed Environments for Young Children: Empirical Findings and Implications for Planning and Design*. University of Sydney. Retrieved from http://sydney.edu.au/architecture/documents/ebs/child_family_policy_conf_pape.pdf.

36. Moore, G., and Sugiyama, T. (2012). *The Children's Physical Environment Rating Scale (CPERS4): Reliability and Validity for Assessing the Physical Environment of Early Childhood Educational Facilities*. Sydney, AU: University of Sydney ARC Physical Environments of Early Childhood Centers Project. Retrieved from http://www.acefacilities.org/RetrieveDocument.ashx?DocId=107eafb6-2422-4460-8236-4ef10aec3ec9.

37. National Association for the Education of Young Children. (2014). *NAEYC Early Childhood Program Standards and Accreditation Criteria, All Criteria Document*. Washington, DC: National Association for the Education of Young Children. Retrieved from http://www.naeyc.org/academy/primary/viewstandards.

38. National Institute of Building Sciences, Whole Building Design Guide Program. (2013). *Enhance Indoor Environment Quality*. Retrieved from http://www.wbdg.org/.

39. Olds, A. R. (2001). *Child Care Design Guide. New York, NY:* McGraw Hill.

40. Ontario Ministry of Children and Youth Services. (2006). *Planning and Design Guidelines for Child Care Centers.* Ontario, Canada: Ministry of Children and Youth Services. Retrieved from http://www.edu.gov.on.ca/eng/parents/planning_and_design.pdf.

41. Proscio, T., Sussman, C., and Gillman A. (2004). *Child Care Facilities: Quality by Design.* Local Initiatives Support Corporation (LISC). New York, NY: Local Initiatives Support Corporation (LISC). Retrieved from http://www.lisc.org.

42. Ritchie, S., Clifford, R. M., and Crawford, G. M. (2009). *"FirstSchool Learning Environments: Supporting relationships. Issues in PreK-3rd Education (#3)."* Chapel Hill, NC: The University of North Carolina, FPG Child Development Institute, FirstSchool.

43. Siegel, T.J. (2010). *Quality Environments for Children: A design and development guide for child care and early education facilities.* San Francisco, CA: Low Income Investment Fund (LIIF). Retrieved from http://www.liifund.org/wp-content/uploads/2011/03/LIIF-Quality_Environments_for_Children-2010.pdf.

44. Soli, S.D. and Sullivan, J.A. (1997). *Factors Affecting Children's Speech Communications in Classrooms.* Journal of the Acoustical Society of America, p. 101, 3070.

45. State of California Air Resource Board. (2012). *Air Pollution and Contaminants at Child-Care Preschool Facilities in California.* Sacramento, CA: Air Resources Board, California Environmental Protection Agency. Retrieved from http://goo.gl/cWvdi.

46. State of California Building Standard Commission. (2016). *California Code of Regulations (CCR), Title 24/2016 California Standard Building Code.* Sacramento, CA

47. State of California Department of Health, Environmental Investigative Branch. *Asthma Information Handbook for Early Care and Education Providers.* California Breathing Program. Retrieved from http://www.ucsfchildcarehealth.org/pdfs/asthma/Handbook.pdf.

48. State of California Department of Health and California Environmental Protection Agency. (2004). *Environmental Health Conditions in California's Portable Classroom.* Sacramento, CA: California Environmental Protection Agency, Air Resources Board. Retrieved from http://www.arb.ca.gov/research/apr/reports/l3006.pdf.

49. State of California Department of Health and Human Services Agency, Department of Social Services. (2014). *Child Care Center General Licensing Requirements,* (Title 22, Division 12).

50. State of California Department of Education. (2014). *California Code of Regulations, School Facilities Construction,* (Title 5). Sacramento, CA: State of California Department of Education. Retrieved from https://govt.westlaw.com/calregs/Index?transitionType=Default&contextData=(sc.Default).

51. State of California Department of Education and West Ed Center for Child and Family Studies. (2004). *Creating a child care environment for infant and toddler.* Sacramento, CA: State of California Department of Education.

52. State of California Department of Education and West Ed Center for Child and Family Studies. (2009). *Infant Toddler Caregiving: A guide to setting up environments, (*2nd Edition). Sacramento, CA: State of California Department of Education.

53. State of California Department of Pesticide Regulation. (2007). *Healthy Schools Act, (Assembly Bill 2260).* Sacramento, CA: California Department of Pesticide Regulation. Retrieved from http://apps.cdpr.ca.gov/schoolipm/childcare/.

54. Tama, Kathryn. (2013). *LINCC Early Childhood Education Facility Design Criteria, "Classroom Best Practices Checklist*."

55. Torelli, Louis. *Enhancing Development through Classroom Design in Early Head Start.* Retrieved from http://spacesforchildren.com/enhanc.html.

56. Torelli, Louis. (2001-2009). *Designing an Early Head Start Facility Tips for Start-up.* Retrieved from http://spacesforchildren.com/ehssetup.html.

57. Torelli, L. and Durrett, C. (1996*). Landscapes for Learning: Designing group care environments for infants, toddlers and two-year-olds.* Berkeley, CA: Torelli/Durrett Infant Toddler Childcare Furniture.

58. Torelli, L. and Durrett, C. (1996*) Landscape for Learning: The impact of classroom design on infants and toddlers.* Retrieved from http://spacesforchildren.com/impact.html.

59. Trancik, A. M. and Evans, G. W. (1995). *Spaces Fit for Children: Competency in the design of daycare center environments*, Children's Environments (12(3)). Boulder, CO: Retrieved from http://www.colorado.edu/journals/cye/.

60. University of Sydney ARC Physical Environments of Early Childhood Centers Project. (2012). *The Children's Physical Environments Rating Scale*, (CPERS4).

61.

62. U.S. Department of Defense. (2014). *Facilities Criteria: Navy and Marine Corps Child Development Centers* (FC 4-740-14N). Retrieved from http://www.wbdg.org/ccb/DOD/UFC/fc_4_740_14n.pdf.

63. U.S. Department of Health and Human Services, Head Start Bureau. (2005). *Head Start Design Guide: a guide for building a Head Start facility*. Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Head Start Bureau.

64. U.S. Environmental Protection Agency. (2008). *Care for your air: a guide to indoor air quality*. Washington, DC: U.S. Environmental Protection Agency.

65. U.S. Environmental Protection Agency. (2009). *Indoor Air Quality Tools for Schools* (EPA 402/K-07/008). Retrieved from https://www.epa.gov/iaq-schools.

66. U.S. General Services Administration. (2003). *Child Care Center Design Guide*. New York: U.S. General Services Administration, Public Buildings Service, Office of Child Care. Retrieved from http://www.gsa.gov/graphics/pbs/designguidesmall.pdf.

67. U.S. General Services Administration. (2010). *Childcare Property Managers Child Care Desk Guide 2010*. Office of Facilities Management and Services Child Care Division 1800 F Street, NW Room 4240 Washington, DC 20405. Retrieved from www.gsa.gov/childcare.

68. U.S. General Services Administration, Public Buildings Service. *Unit Cost Study, Space Type: Child Care, Construction Criteria*. U.S. General Services Administration, Public Buildings Service. Retrieved from http://www.wbdg.org/pdfs/gsa_constr_criteria_child.pdf.