

The image features two silhouettes: a teal one of a standing child on the left and an orange one of a seated child on the right. Both are surrounded by dashed lines and arrows indicating dimensions. The standing child has a vertical dimension line on the left and a horizontal one above. The seated child has vertical dimension lines on the right and a horizontal one below. The text 'Child Care Design & Technical Guideline' is centered between the two figures.

Child Care Design & Technical Guideline



prepared by: [LGA Architectural Partners](#) | for: Children's Services, City of Toronto | R1 2016

Child Care Design & Technical Guideline

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Introduction

Children's Services is proud to initiate this first revision of these design guidelines, originally released in 2012.

Over the last few decades, a deeper understanding of the role that early education plays in improving a child's future academic performance, health and quality of life has emerged. Within the spectrum of elements that create excellent child care, the quality of this environment has a profound influence – especially given that many children spend close to half their waking hours in a child care setting. Learning from direct experience, children are attuned to and affected by their surroundings. The child care is a place where children experience the world and through which caregivers and the community gain support.

These design guidelines were developed in response to the above considerations and for people who are involved in planning, building and renovating space for child care. It is the product of a collaborative effort by people who are passionate about child care and recognize the contribution that the environment makes to good quality child care.

ABOUT CHILDREN'S SERVICES

Mission:

Toronto Children's Services promotes access to high quality early learning, child care and supports for families through a well-planned and managed system.

Vision:

All families in Toronto benefit from a range of services that promote healthy child development and family well-being.

Philosophy:

Children's Services is committed to the promotion and delivery of quality child care. The maintenance and continued improvement of quality care demands the recognition of an underlying philosophy upon which high standards in curriculum programming can be developed. The philosophy espoused by Children's Services is reflective of the adopted principles and values. Children are seen as active participants in their environments, and are by nature problem-solvers. Learning then is an active process whereby the opportunity to explore and interact with the environment are key components in a child's

growth and development. Underlying this is the **assumption** that a child's growth follows a developmental sequence that is universal, but that within that sequence, each child proceeds at different rates and in unique ways.

The programming is reflective of the need to provide stimulating and developmentally appropriate challenges for the individual child in a warm, secure environment. Staff commitment to planned programming is a fundamental necessity in ensuring quality care. The role of the teacher is that of facilitator, to provide kinds of experiences that promote active learning on the part of the child. Through the combination of planned programming, staff commitment and continued training, Children's Services can provide consistent, high quality care to best meet the needs of the active, continually developing child.

Background:

Toronto Children's Services has a lead role in the infrastructure planning of services for children in Toronto. The Toronto Child Care Service Plan **2015-2019**, includes a capital strategy that sets out principles and priorities for allocating capital funds to

develop new child care and renovate existing space. **The plan also looks to expand child care capacity and improve access to high quality child care environments.**

These design guidelines continue to support the City of Toronto's recognition of the importance of physical environments in the development of children. As standards evolve and are updated, Children's Services remains committed to building a system which improves the development of high quality environments through constantly advancing organizational and pedagogical best practices. Quality initiatives are reviewed to ensure they align with current legislation and to reflect best practices; emphasizing educator/child interactions and responsive learning environments.

Children's Services has played a significant role in the development of new child care spaces over several decades that have enhanced the quality of child care throughout the city. In addition to the development of new **community** child care programs, **Toronto Early Learning Child Care Services, operated by Children's Services**, has a portfolio of owned and leased sites.

These sites are maintained and renovated to meet the Province of Ontario's licensing requirements, under the Child Care and Early Years Act (CCEYA) 2014.

GUIDE OVERVIEW

Intent, Description and Organization:

- The guideline will ensure that child care spaces are safe, functional, developmentally appropriate, child-friendly and accessible for children.
- This guideline contains design and technical recommendations. The recommendations are not mandatory unless otherwise stated. It is intended for use by those designing or constructing new child care projects or renewing existing ones. The guideline is intended for stand-alone facilities as well as centres that are part of larger facilities. It outlines best practice design choices with regards to sustainability and the creation of inspired functional spaces for children and staff.
- *Guide Organization:* The main content of the guide is organized into two parts - design considerations and technical information. Supplemental drawings illustrate

some of the concepts outlined in each part.

A Document Based on Consultation:

- The content of this guideline is based in part on a consultative process that included child care facility tours and on-site interviews, an intensive consultation with a wide range of stakeholders that included parents, Registered Early Childhood Educators, Child Care Supervisors, the Children's Services Asset Management Unit, and Children's Services District Operations.

A Flexible Document:

- By using a performance rather than prescriptive approach, the document is designed to be a flexible tool.

A Document for a Wide Audience:

- By giving examples of solutions that meet the performance criteria, the document is intended to be accessible to lay people as well as professionals.

A Living Document:

- This is an evolving document, designed to be changed based on user feedback and developing concepts in child care.

INTENDED USERS

This guideline is intended to be used by a wide range of people including:

- Architects
- Consultants
- City of Toronto Divisions
- Child Care Owners/Operators
- Contractors
- Developers
- School Boards

HOW TO USE THIS GUIDE

Document Structure:

To fully understand the design and technical intent, both sections are to be read in concert.

- **The Child Care Environment** (Part 1) is organized by room and outlines issues specific to each room or area. Each section contains an Intent and Performance guidelines section.
- **Performance Criteria of Building Components** (Part 2) is similar to an outline specification and is organized by building component. Each of these sections contains a General and Materials section.
- In some cases, a diagram is included to illustrate the concepts outlined in the sections.

Flexibility of Use:

- This guideline contains design and technical recommendations. It sets out performance criteria along with example solutions. The intent is that the guideline allow for flexibility in its application to enable users to effectively address issues specific to their project,

including budget, context, and so on. Users may adopt the solution in the guideline or explore alternate solutions that meet or exceed the recommended criteria.

Guideline as Living Document:

- This guide is an evolving document. The City of Toronto’s Children’s Services Division intends to update it based on user feedback and evolving concepts in child care. Please take a few moments and submit your comments on the included feedback form to : childcare@toronto.ca, and mention “Design Guidelines” in the subject line.

Updated Document:

- R1 2016 (Revision 1) is the first updated document released by Children’s Services. All updates are noted in this new colour for easy access. As future updated documents are released, a different colour will be selected with previous revisions incorporated to match the original document.

GLOSSARY OF TERMS:

Various key terms outlined below will be used consistently throughout the document.

Best Practice

Indicates the best of various possible options **when found at the end of a recommendation.**

CCEYA 2014

Child Care and Early Years Act, 2014

Infant

A child under 18 months of age.

Toddler

A child 18 months to 30 months of age.

Preschool

A child **30** months to 4 years of age.

*Kindergarten and School Age**

A child 4+ years to 12 years of age.

* Children’s Services has deleted reference to this age group from the guidelines. City facilities are typically designed to accommodate Infant, Toddler and Preschool age groups.

Regulations and Standards

This guideline is intended to be used in concert with other applicable regulations and standards. It is the responsibility of those developing a child care project to ensure that all **current** regulations and standards are met.

This guideline recommends the use of Canadian-made and sourced materials and equipment whenever possible.

REGULATIONS AND STANDARDS

The following is a list of typical regulations and standards that may be applicable. **In all cases, users should refer to the most current version:**

- **Child Care and Early Years Act (CCEYA) 2014 (Bill 10), Ministry of Education.**
- **City of Toronto Children's Services Early Learning & Care Assessment for Quality Improvement (AQI).**
- Ontario Building Code (OBC).
- Children's Playspaces and Equipment, CAN/ CSA-Z614-07 (**Annex H**), Canadian Standards Association, 2008.
- Accessibility for Ontarians with Disabilities Act (AODA), S.O. 2005, Chapter 11.
- AODA Initial Proposed Accessible Built Environment Standard (ABE), June 2009. (This document is currently under review and is subject to change).
- City of Toronto Accessibility Design Guidelines, 2004.
- Toronto Green Standard, Low-Rise or Non-Residential, Mid- to High-Rise Development (as applicable), 2010.
- City of Toronto: Corporate Identity Program Manual. http://insideto.toronto.ca/cip/assets/pdf/cip_manual.pdf
- City of Toronto Bylaws.
- City of Toronto Shade Guidelines, July 2010. https://www1.toronto.ca/city_of_toronto/toronto_public_health/healthy_public_policy/tcpc/files/pdf/shade_guidelines.pdf
- Cabling Standard: City of Toronto Corporate Services Information & Technology, Standards and Procedures, issued by: I.T. Network Services, V.4.2-January 28, 2010.
- LEED Canada Reference Guide for Green Building Design and Construction, 2009.
- *Pathways to Recreation Guidebook, Learning about Ontario's Accessibility Standard for the Design of Public Spaces.* Parks and Recreation Ontario (PRO).

- How Does Learning Happen? Ontario's Pedagogy for the Early Years. *A resource about learning through relationships for those who work with young children and their families.* Government of Ontario, 2014.
- City of Toronto Public Health, Guidance Document. *Infection Prevention and Control in Child Care Centres,* 2016.

OTHER RESOURCES

- Canadian Partnership for Children's Health and Environment, 2010. *Advancing Environmental Health in Child Care Settings: a Checklist for Child Care Practitioners and Public Health Inspectors.* Toronto, ON: CPCHE.
- *Planning and Design Guidelines for Childcare Centres,* Ministry of Children and Youth Services, Province of Ontario, 2006.
- Moore, Gary T. "The Developmentally Appropriate Design of Child Care Facilities." Summary text of a paper presented at the United Nations Conference on the Rights of the Child--Stronger Families--Stronger Children. Victoria, Canada. June 21, 1994.
- Olds, Anita Rui. *Child Care Design Guide.* New York: McGraw-Hill, 2001.
- Pascal, Charles E. "With Our Best Future in Mind. Implementing Early Learning in Ontario." Report to the Premier by the Special Advisor on Early Learning. Queen's Printer for Ontario, 2009.
- Ruth, Linda Cain. *Design Standards for Children's Environments.* New York: McGraw-Hill, 1999.
- *Landscape and Child Development, 2013. A Design Guideline for Early Years - Kindergarten Play - Learning Environments.* TDSB, Evergreen.

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 - [City of Toronto, Occupational Health & Safety, Ergonomics Unit](#)
 - [ENSO Systems Inc.](#)
 - [Scott Torrance Landscape Architect Inc.](#)
 - [DGS Consulting Services Inc.](#)

LIMIT OF LIABILITY

- This document is intended as a guide only. It is the responsibility of child care designers and operators to ensure that their project requirements as well as all applicable

regulations and standards are met. Adherence to the guideline does not necessarily guarantee compliance with [the Child Care and Early Years Act \(CCEYA\) 2014](#) or ensure that licensing will be granted. The authors and contributors shall not be held liable.

ONLINE INFORMATION

This guide can be found online at:

- www.toronto.ca/children/childcaredesign

Design Checklist

The design checklist works as an agenda for the design process. It is a reminder of the design issues that should be addressed, but is by no means a comprehensive list.

- Review and address the specific needs, values and functional requirements of the centre and community. A design that is responsive to these issues will give the centre its unique character.

- Create connections with the centre's immediate context. Establish internal relationships between various parts of the child care centre where appropriate. This will foster a sense of interconnectedness.

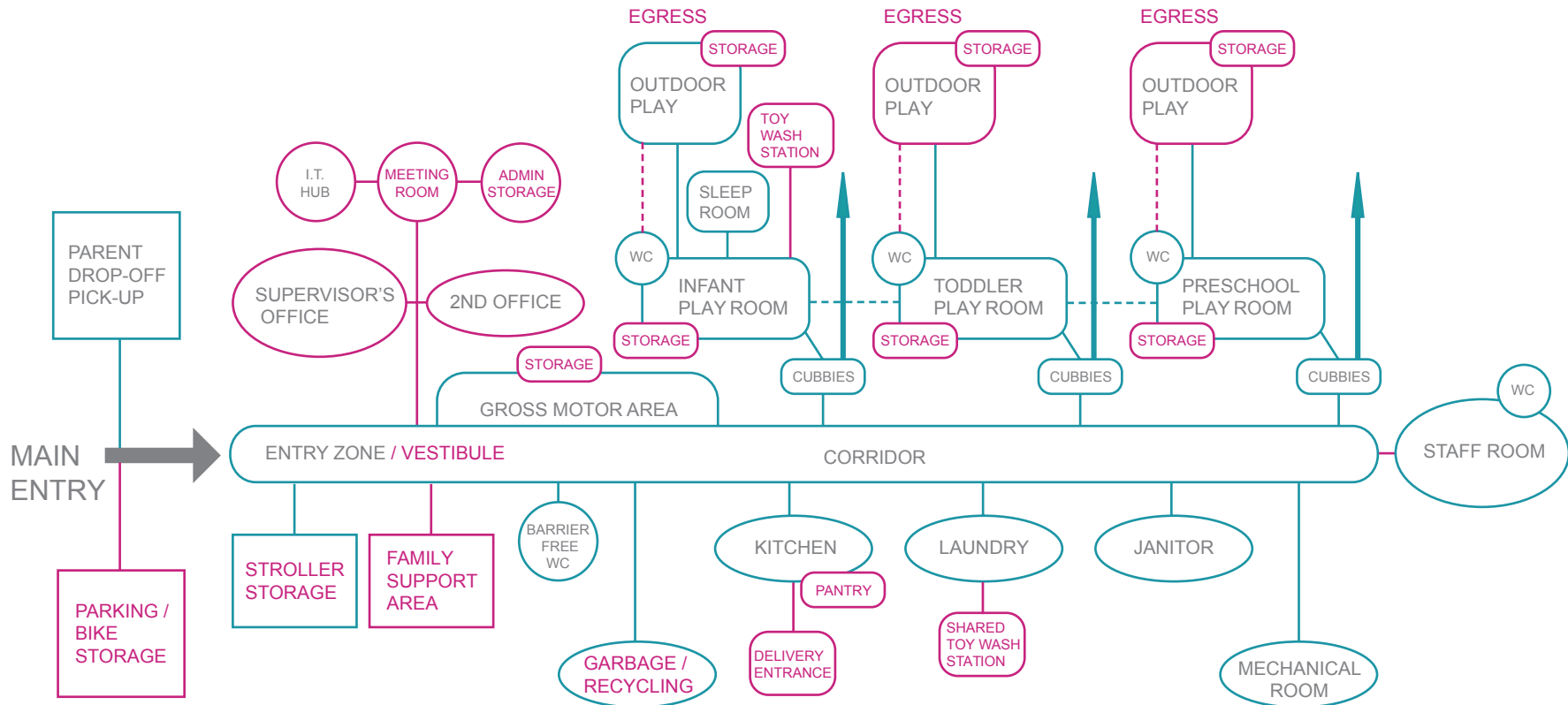
- Review goals for sustainable design. Solutions should encourage child participation and opportunities for learning.

- Review requirements for accessibility. The space should be physically accessible, equitable, safe and welcoming for all.

The Child Care Environment

*The purpose of the **Child Care Environment** section is to illustrate both the function and the intent of each area of a child care facility. By referencing design ideas regarding circulation, spatial organization and room layout, this section provides guidelines for designing safe, functional and inspiring spaces that support child development and encourage learning. This section is organized by room and outlines issues specific to each area. Each section contains an Intent and Performance guidelines section.*

EXAMPLE SPACE PLANNING DIAGRAM



WC = washroom

A. Entry Zone

INTENT

The entry should express the unique characteristics of the centre while providing a welcoming, safe, secure and accessible main entry sequence. The entry should establish the centre as a community resource for child and family information.

PERFORMANCE GUIDELINES

Experience:

1. The entry is comprised of the exterior entry, the entry vestibule and community lobby space.
2. Access to natural light and ventilation is required in this zone.
3. The entry zone is an opportunity to create an identity for the centre. Avoid an institutional appearance by installing public art/interactive art or children's art in entry. Maintain a sense of professionalism in the main entry area by managing clutter and storage.
4. Visual Access: Visitors should be able to see all areas of the entry. For example, the vestibule should be fully glazed with low glass for children.
5. Secure Entry: The entry controls access to the centre. It is recommended that the vestibule have two sets of double

doors, each with one active and one locked leaf. This allows one visitor through the security system at a time.

6. Physical Access:

- a) In place of a separate dedicated barrier-free access, i.e. ramp, consider providing a shared, continuous barrier-free surface without curbs, between parking and entry and between entry and sidewalk. Consider using different materials to demarcate zones rather than employing grade changes.
- b) Consider parents, children and stroller dimensions when designing the vestibule. It should be large enough to accommodate a triple stroller, one person and a swinging door. Make sure to consider peak traffic times.

7. Community Space: The purpose of the interior and exterior entry is to engender a sense of community and encourage socializing. Providing loose and/or fixed furniture encourages people to mingle and provides a comfortable space for parents and kids waiting to be picked up.

8. Community Access: Consider expanding the interior space just **outside** the controlled access zone to encourage

community access. For example, a large and comfortable vestibule might allow those not directly associated with the centre to access a **Family Support Area**.

9. Gross Motor Area: If, to maximize space usage, the child gross motor area is located in the entry zone, separate the space from circulation for safety and fire exiting. All equipment must be stored neatly to avoid the appearance of clutter. Consider a large closet. Locate gross motor areas in a separate room. *Best Practice*

10. **Family Support Area**: Locate a **family support area** or niche with an information board in a visible location in the child care centre proper or in the vestibule. Provide an opportunity for the centre to disseminate required and discretionary information to **families** and to build relationships between the **family** and centre staff. Locate so it is visible in path of traffic but isn't blocked by other activities. Provide comfortable seating, internet access and **a counter with a small sink and bar fridge**. *Best Practice*

11. Display of Children's Work: Consider a prominent display location for children's artwork.

12. Children's Furniture: Provide appropriately scaled built-in

and loose furniture, info boards and displays.

Adjacencies:

1. Vestibules should open into interior community lobby space. Other adjacencies to entry and community lobby space include: Supervisor's office, barrier-free washroom, main circulation corridor, dedicated elevator, stroller storage, a parent resource room or niche, and the outdoor play space (if possible).

Wayfinding and Signage:

1. Ensure wayfinding system is universal. For example, consider using graphic rather textual signage. Also consider digital touch screen information available in multiple languages and large text. *Best Practice*
2. All basic signage should appear in braille, text and graphic form.
3. Ensure a space is provided for posting centre hours, spaces available and contact information. This signage should be adjustable.
4. Provide a changeable exterior information sign. **Ensure**

signage is unobstructed and clearly visible from a distance.

Security and Access:

1. Only one public entry should be provided. *Best Practice*
2. Access Control: To control access and reduce the chance that children can open an exterior door unsupervised, limit entry and exit access via card reader, video phone or keypad system.
3. Access System: If a buzzer/phone system/video security is used, connect to the following release button and screen locations: Supervisor's office, kitchen, playrooms.
4. Lighting: Entry routes (indoor and outdoor) should be well lit and visible to the street to provide safety for staff arriving early and leaving late. Ensure lighting is sensor-controlled and casts light down to minimize light pollution.
5. Interior Lighting: Ensure two to three light fixtures in the entry zone/corridors are on a separate circuit that can be turned on overnight.
6. Barrier-free auto door operator buttons or other door release buttons should not allow children to leave the

centre unsupervised. Ensure auto operator motor operates only after keypad or card access is granted.

7. The lockable Canada Post box should be easily accessible. Locate in vestibule if exterior vestibule doors are never locked.

Openings and Visual Connections:

1. Visually open as possible, uncluttered.
2. Provide a clear view to lobby through vestibule from exterior.
3. Provide passive surveillance through direct visual connection from Supervisor's office to entry zone.
4. Views to outdoors from vestibule/entry encouraged.
5. Provide low level glazing in the vestibule/entry for children.
6. Install roller shades in vestibules and lobby/entry zones for use in a lock-down situation.

Storage:

1. Locate closet or cubby for evacuation materials near exit door.

Dust / Dirt / Water Control:

1. Staff should provide loose seasonal mats to catch dirt and water. In the vestibule, provide an appropriately sized aluminum pan recessed in floor with removable carpet tread or recycled rubber insert for dirt and water. *Best Practice*
2. Provide a canopy or covered space in front of the entry doors to provide protection from weather. There should be no place for birds to roost in soffits.

B. Corridors

INTENT

To promote a sense of interconnection and community throughout the centre by allowing for accessible circulation, easy navigation and orientation, visual/audible connections where appropriate, learning opportunities, social gathering and a clear escape route in case of emergency.

PERFORMANCE GUIDELINES

Experience:

1. Circulation space should remain uncluttered and simple to navigate. Provide the most direct circulation route possible.
2. To encourage a lively corridor, consider other multi-purpose, flexible uses for circulation space, including gross motor, cubbies and display space. Different corridor widths, small gathering spaces and wider entry areas to rooms promote social interaction between children, parents and staff.
3. Provide natural lighting as much as possible, **include low-level glazing in select areas with views outdoors for children.**
4. Consider wider corridors to comfortably accommodate

- parents, children, staff, strollers during peak times.
5. Acoustic and Visual Control: Connections encourage passive learning while separations allow for a variety of simultaneous uses. Separate or connect corridors to adjacent space where appropriate.
 6. Information Exchange:
 - a) Provide areas in corridor outside of play rooms for program plans, staff bios and diplomas.
 - b) Consider installing plexiglass coverings to protect low bulletin boards.
 - c) Consider opportunities for information exchange. For example, post children's art, ECE backgrounds and photos in this area.
 - d) Locate the centre schedule near Supervisor's office.
 - e) Provide bulletin boards, white boards or display space that won't be damaged by adhesives.
 - f) Discuss requirements for signage/postings with centre staff. Determine locations and account for signage opportunities where required.
 - g) A menu should be located outside of the kitchen in corridor.

Adjacencies:

1. Locate the universal barrier-free washroom off the main corridor in a visible and easily accessible location.

Visual Connections:

1. Provide visual access to adjacent spaces to enable passive surveillance.

Security and Access:

1. Lock Down Procedures: The strategy should limit physical and visual access into play rooms and other areas. Review with Child Care Operator.
2. Where blinds are not provided on corridor glazing, provide a gathering space for children that is not visible from corridor and/or street.

Wayfinding and Signage:

1. Ensure wayfinding system is universal. For example, consider using graphic rather than textual signage.
2. Consider using flooring or other elements as orienting references to facilitate movement.

3. Provide a contrasting border in the floor, as per AODA standards, to assist the visually impaired.

Storage:

1. Provide storage for gross motor area if adjacent to corridor.
2. Provide lockable storage for centre use. For example, locate storage in corridors where possible by utilizing space above cubbies or stroller storage. For non-cupboard type storage, check if lighting and sprinklers are required. Storage should be easily accessible for staff and lockable.

Stairs, Ramps and Elevators:

1. Stairs:
 - a) Install a child-height handrail at all stairs.
 - i. Heights: 510-710mm (20-28") from line drawn through stair nosing.
 - ii. Diameter: 25mm (1").
 - b) All stair nosings to be rounded profile.
2. Ramps:
 - a) Consider using interior ramps in corridors if there is a change in elevation.

- b) Ramps to have no projections and rounded edges.
- c) Install a child-height handrail at all ramps.
 - i. Heights: 510-710mm (20-28") from surface of ramp.
 - ii. Diameter: 25mm (1").

3. Elevators:
 - a) All child care centres more than one storey must have a dedicated elevator not shared with the public.
 - b) Select an elevator model that accommodates a stretcher.
 - c) Size elevators to accommodate a triple stroller and the appropriate CCEYA 2014 staff-to-child ratio based on age group.

C. Supervisor's Office and Secondary Staff Office

INTENT

To provide an office that is the administrative centre of the child care. This office should be accessible and connected with the entry, and it should be a secure and private place to meet with staff and parents.

PERFORMANCE GUIDELINES

Supervisor's Office

Experience:

1. In-office Meetings: Size room to accommodate meetings with two parents or staff. Provide a separate table with chairs. *Best Practice*
2. Information: Locate an area (whiteboard/bulletin board) outside Supervisor's office for required and discretionary information.
3. Mailbox: Provide in/out box outside office for pick up and drop off of City documents (8.5" x 11").
4. Resting Alcove: Provide an alcove for a cot in the office for sick children. *Best Practice*
5. Acoustic Separation: Install appropriate acoustic separation for privacy.
6. For comfort and acoustics, consider colours and sound-

absorbing flooring options.

Adjacencies:

1. Locate directly adjacent to the main entry zone.

Visual Connections:

1. Direct visual connection from Supervisor's office to entry and main circulation corridor.
2. Designer should coordinate furniture location so as not to obstruct passive surveillance.
3. Provide for privacy on exterior. For example, provide roller shades. Consider privacy shades on interior glazing.
4. If adjacent to second office, provide visual connection between rooms while allowing for visual and acoustic privacy.

Security:

1. Passive Surveillance: Ensure all visitors walk by office upon arrival.
2. Lockable: Supervisor office must be on separate key and must be equipped with classroom lock set.

3. Locate a front door release mechanism in **an easily accessible location from the desk in Supervisor's office.**

Storage:

1. Allow sufficient space for day-to-day filing cabinets. Filing cabinets must be lockable for confidential documents.
2. **Provide additional lockable storage for office supplies and archiving files. Consider a lockable administrative storage room for office supplies, photocopier and fire-safe archiving files. *Best Practice***
3. If a safe is required, locate in Supervisor's office.
4. Allow for an open book shelf.
5. Hub Room: Size based on I.T. requirements.

Equipment

1. Allow for computer, printer, copier, fax and scanner with appropriate voice and data connections.

Secondary Staff Office: *Best Practice*

1. If space and budget allow, provide a flexible space for staff to use computer or for visiting staff.

2. Locate next to the Supervisor's office.
3. Photocopier could be located in second office, **if required**.
4. Provide telephone, computer access and internet connection.

Loose Furniture:

1. Select furniture which meets applicable ergonomic standards.
2. Consider security and visibility when laying out office spaces.

Meeting Room: *Best Practice*

1. If space and budget allow, provide a dedicated meeting room.
2. Locate adjacent to Staff Offices.
3. Provide telephone, computer access, cable and internet connection.

D. Staff Room

INTENT

To provide staff with an area for privacy, relaxation and professional development.

PERFORMANCE GUIDELINES

Experience:

1. Provide facilities for staff to store their belongings, have breaks and eat lunch.
2. The room should have a comfortable yet professional atmosphere. Provide space that promotes professional development. For example, a Resource Centre with desk, computer or library.
3. Design a flexible space for staff to use a computer or consider providing a hotelling station for visiting staff.
4. The room should be equipped for sharing information. This includes required postings, professional information (e-learning, staff presentations, etc.) and day-to-day communications. For example, provide white boards, monitors, and so on.
5. Natural Light: The room must have access to natural light. Light from an exterior window is preferable.
6. Provide a washroom with a shower for use by staff and

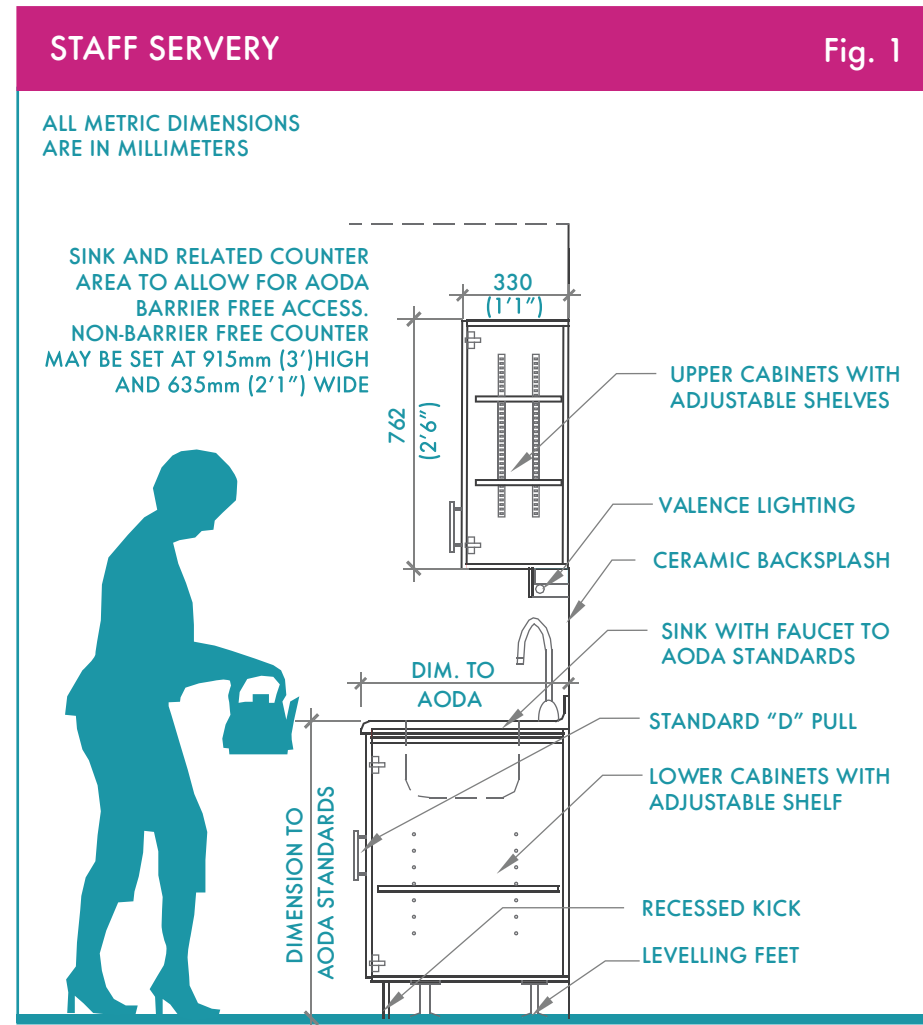
locate near staff lockers. *Best Practice*

Adjacencies and Connections:

1. Locate so that the room is a private retreat from the active areas of the centre and where staff can come and go discretely.
2. Separate area visually and acoustically from the remainder of the centre.

Equipment:

1. Provide Staff Servery with sink, microwave, countertop, cabinets, full fridge, kettle and toaster (See Fig. 1)
2. Staff Servery to meet AODA standards. Include knee space where required.
3. Provide energy-efficient residential dishwasher. *Best Practice*
4. Allow for lounge and table seating.
5. Provide a computer station with voice and data connections.
6. TV with VCR/DVD.
7. Photocopier could be located in Staff professional



development area.

8. Staff mailboxes.

Storage:

1. Provide 1/3 size triple tier lockers for bag/personal item storage.
2. Install open shelving for books and magazines and closed storage cabinets where required.
3. Provide a small closet for visitor coats.
4. Provide a broom closet with shelf above for cleaning supplies.

E. Stroller Storage

INTENT

To provide orderly and convenient interior areas to store family and centre-owned strollers.

PERFORMANCE GUIDELINES

Experience:

1. Provide stroller storage areas that are accessible and orderly. (See Fig. 2)
2. Family Strollers: Stroller storage should be located in a niche off the corridor, with no walls restricting access. If providing doors, ensure when open they do not block any of the storage space. Sufficient space should be provided to store varying sizes and styles of strollers and car seats. **Consider current stroller design trends.** Umbrella strollers can be hung above; other styles folded on the floor. *Best Practice*
3. Centre Strollers: **Ensure storage space suits the stroller type and size owned by the Centre.** Confirm anticipated stroller numbers with staff.
4. For ease of maintenance, strollers should be stored over flooring rather than millwork bottoms, and the walls should be protected with durable material.

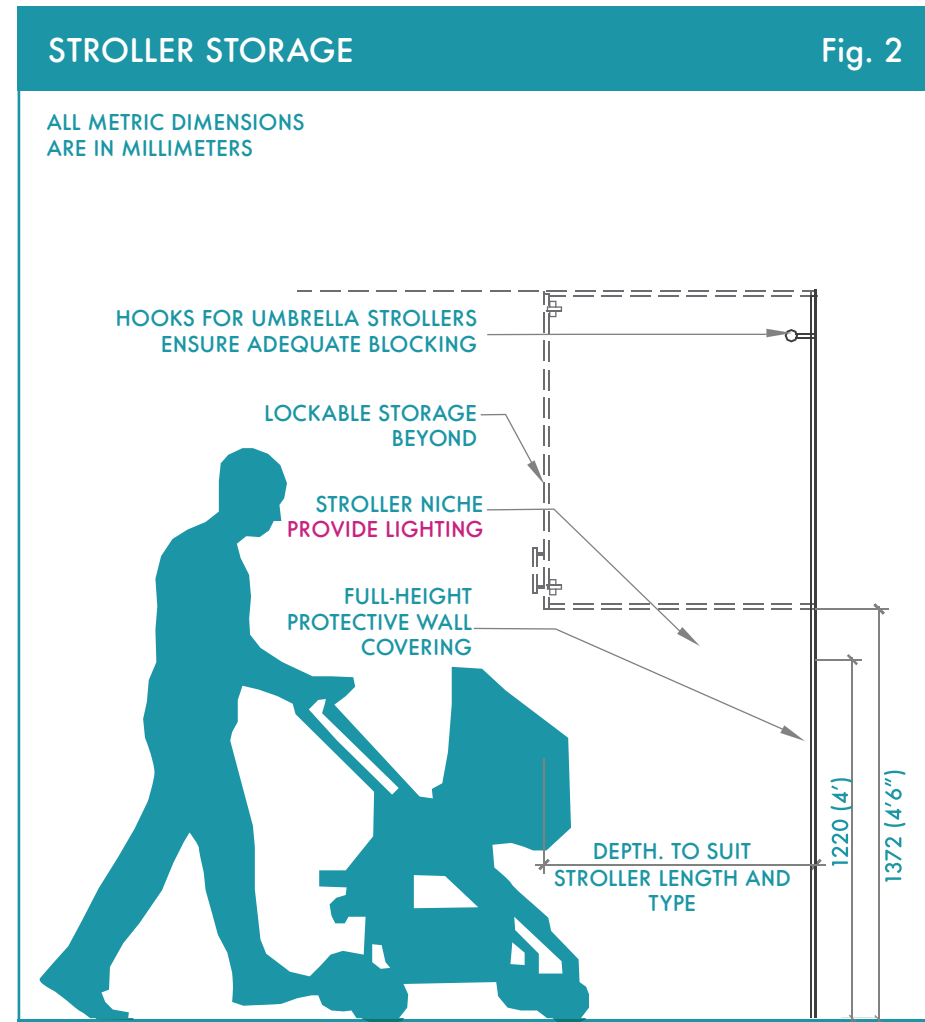
5. Provide lighting under upper storage cabinets and in enclosed stroller storage areas.

Adjacencies:

1. Locate family stroller storage in discrete niche off corridor near front entry to minimize dirt infiltration and allow passive surveillance.
2. Locate centre strollers separately, near infant room.

Security and Access:

1. Passive surveillance of area preferred.



F. Gross Motor Area

INTENT

To provide a clear, flexible and safe area for indoor play that supports gross motor skill development on days when outdoor play is not possible.

PERFORMANCE GUIDELINES

Experience:

1. The gross motor area is where children can engage in active physical activities such as climbing, cycle riding, dramatic play, group games, music and intensive small group activities such as singing.
2. Provide a space that is flexible for other uses. This area will be used for gross motor activity only periodically.
3. Space permitting, locate area in a dedicated multipurpose space. *Best Practice*
Another option is to locate the area in a flexible entry lobby.
4. As an alternative, consider using a nearby gym or multi-purpose room, outside of the centre, if available.
5. Consider ways of making the space larger and smaller depending on the number of children.
6. In this area, provide a change of atmosphere from the

activity rooms. For example, increase the amount of natural light by using low-level glazing with views outdoors for children. Consider unique programming opportunities for individual or group play and allow for a variety of activities.

7. Provide acoustic control for this area. Consider both sound quality and sound separation.

Adjacencies:

1. The area could open to the outdoors via large doors, especially if the adjacent outdoor activity space is covered. This would extend the usable area of the centre during rainy days or create a flexible space for large child care community gatherings.
2. If area is located within a circulation route, be sure circulation is not blocked.
3. Area should be near a washroom.

Storage:

1. Provide storage for large toys and materials, etc.

Security and Access:

1. Ensure operators lock down procedures are incorporated into design and layout of area.

G. Play Room

INTENT

*To provide the primary space within the centre where children learn about the world around them and their place in it. This space supports learning in a caring and comfortable atmosphere, and it encourages exploration and many different types of play. It is well organized, easily supervised, flexible, healthy and safe while emphasizing relationships *as well as* independence.*

PERFORMANCE GUIDELINES

Experience:

1. Provide an easily supervised room layout that includes a mixture of open shared space, smaller group space and individual space, and that doesn't compromise visual connections. For example, lowered ceilings, material changes and special windows can all create smaller spaces within the larger space.
2. The organization of the space will be structured by how staff set up loose furniture in the space. Design with flexibility in mind to accommodate a variety of activity settings.
3. Consider how people move through the space. Children's play should not be interrupted by others passing through.

- Consider making the experience of moving between areas interesting.
4. Relationship with Exterior: Provide more natural light and views than required by the [CCEYA 2014](#). *Best Practice*
 5. Connect the interior and exterior activity spaces with direct access. *Best Practice*
 6. Consider creating zones including:
 - a) Entry:
 - i. A posting area for information and daily records, allow 8.5" x 11" per child.
 - ii. Provide a half-wall vestibule just inside the door. This allows for both a shoe removal area in the infant room and it allows for the main door to be propped open while keeping children in the play room.
 - b) Quiet:
 - i. Bench seating at windows, which can double as cot storage.
 - ii. Individual spaces such as quiet nooks with lower ceiling heights.
 - c) Sensory:
 - i. Water and sand play zones, arts, crafts and sensory activities.
 - ii. Provide easy-to-clean surfaces.
 - d) Active:
 - i. Open, flexible space where furniture can be configured to suit different activities.
 7. Provide as much wall space as possible for graphic material (art work, notices, etc.). Finish wall with a durable surface that will not peel with tape, or install bulletin board material. Consider protecting child-height boards with clear plastic panels.
 8. Provide low wall surfaces for toy storage accessible to children, for views to other rooms or outside, and for wall decoration.
 9. Depending on available space, consider an eating alcove to minimize mess on main activity area floor. *Best Practice*
 10. Colours should be carefully selected based on consideration of current research into children and colour, and the client's philosophy.
 11. Acoustics: Provide appropriate acoustic control to allow for simultaneous uses. Consider both sound quality and sound

separation.

12. Size: In consultation with staff, provide more space than required by **CCEYA 2014** in order to achieved stated goals.

Best Practice

13. Infant Design Considerations:

- a) Infant activity room should be located directly adjacent to change area for staff supervision.
- b) Infant room should be close to laundry room if possible, as this room generates the most laundry.
- c) Infants need broad, open horizontal spaces with minimal boundaries.
- d) Consider various textures, surfaces and finishes for infant exploration.
- e) Infants need spaces to engage in art and sensory play, dramatic play, manipulative toy play, climbing, crawling and quiet reading.
- f) **Install a shatter-proof** mirror and bar attached to wall for walking.

14. Toddler Design Considerations:

- a) Toddlers benefit from open space with defined boundaries to encourage and support independence.

- b) Toddlers need space to engage in art, water, sand and sensory play, reading, dramatic play, blocks/building, manipulative toy play, gross motor movement and quiet retreat.

15. Preschool Design Considerations:

- a) An area for group socialization is important to promote independence and self-reliance.
- b) Preschool children need room to engage in art, water play, sand, dramatic play, science, games, manipulative toy play, blocks/building, gross motor play, reading, wheeled toys, and quiet retreat.

Adjacencies:

1. Locate rooms adjacent to outdoor play areas with direct access to encourage a strong indoor/outdoor relationship.
- Best Practice*
2. Provide direct access to age-appropriate washroom.
 3. Locate adjacent to children's cubbies.
 4. Locate adjacent to similar-aged activity rooms. For pre-school, consider operable elements in dividing wall for controlled interaction.

Visual & Acoustic Connections:

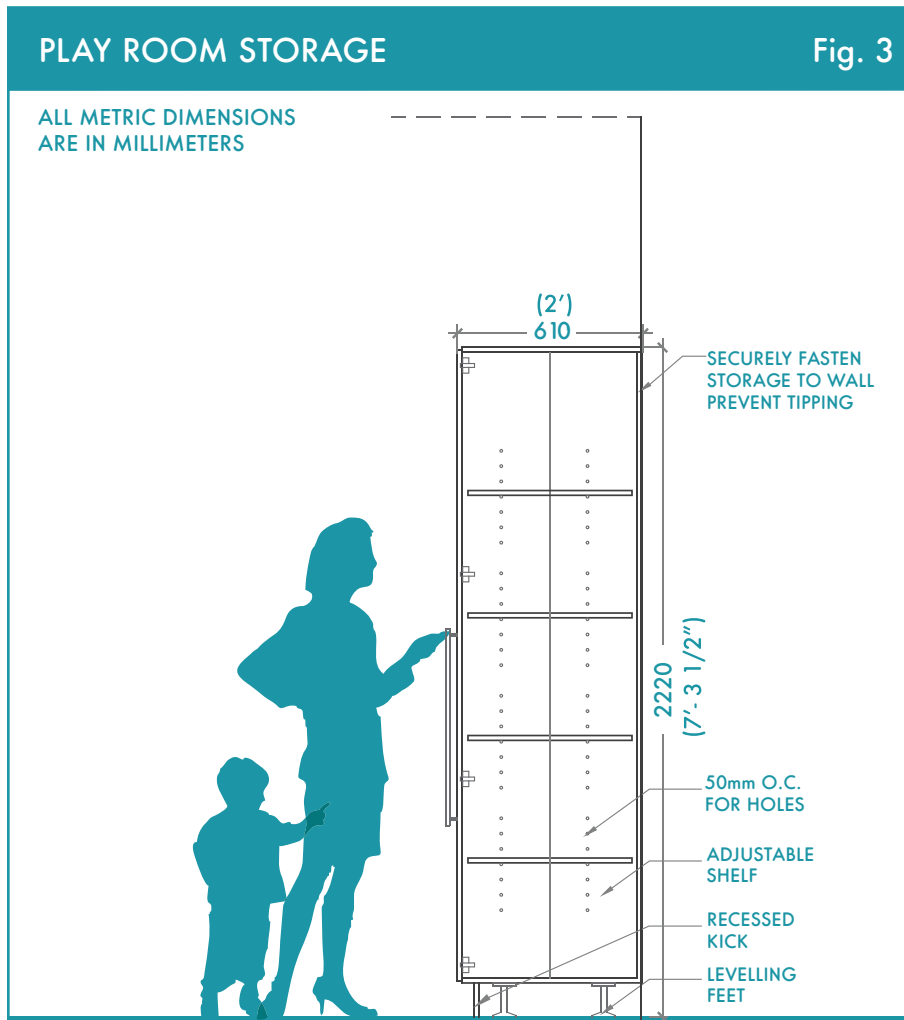
1. To encourage a connection to the corridor for staff, parents and other children, provide low glazing in door and wall.
2. Provide option for acoustic connection or separation as appropriate throughout the day. Dutch doors (split top and bottom) are discouraged due to safety concerns. As an alternative to the Dutch door, consider providing a half-walled vestibule and gate inside the room just clear of the main door, which can be left open.
3. The room itself should be unobstructed by fixed tall elements or L-shaped layouts.
4. Provide visual connection to the washroom so that staff can supervise the washroom and activity room simultaneously. This allows children to use the washroom on an as-needed basis rather than at set times. A low half-wall with glazing above, for example, controls access to the washroom and affords some privacy while allowing for supervision. Some acoustic connection is beneficial.
5. As staff are in constant communication to ensure staff/child ratios are maintained **and to allow for child interaction**, provide visual or direct connections to

adjacent activity rooms (especially with same-age children). Be careful to acoustically separate the rooms.

6. Provide visual connection to the outdoors and allow for controlled acoustic connections. **Include low-level glazing in select areas with views outdoors for children.**

Millwork & Storage:

1. The play rooms need adequate storage. Review storage needs with client. (See Fig. 3)
2. A good deal of the storage will be provided in loose furniture. Where storage for children's use is built in, it should be low, adjustable and open to encourage easy accessibility and recognition of what is available.
3. Provide storage accessible only to staff. Locate out of reach of children or install locks if low.
4. Provide a storage room or large closet for large toys and equipment.
5. Provide dedicated storage for sleeping cots and bedding in toddler and preschool rooms. Locate adjacent to cot layout area. Confirm types of cots to be stored with staff **and consider ergonomic standards.**
6. Provide storage for items such as creative supplies, large



paper sheets, art racks for holding completed art work, drawers for pencils, and so on.

7. If parents and visitors are required to remove their shoes, provide the required space.
8. Provide a broom closet with shelf above for cleaning supplies.

Security and Access:

1. All play room doors to be glazed and lockable from inside room.
2. All entry doors equipped with classroom locksets.
3. Locate front door intercom access near room entry.
4. Ensure operators lock down procedures are incorporated into design and layout of area.

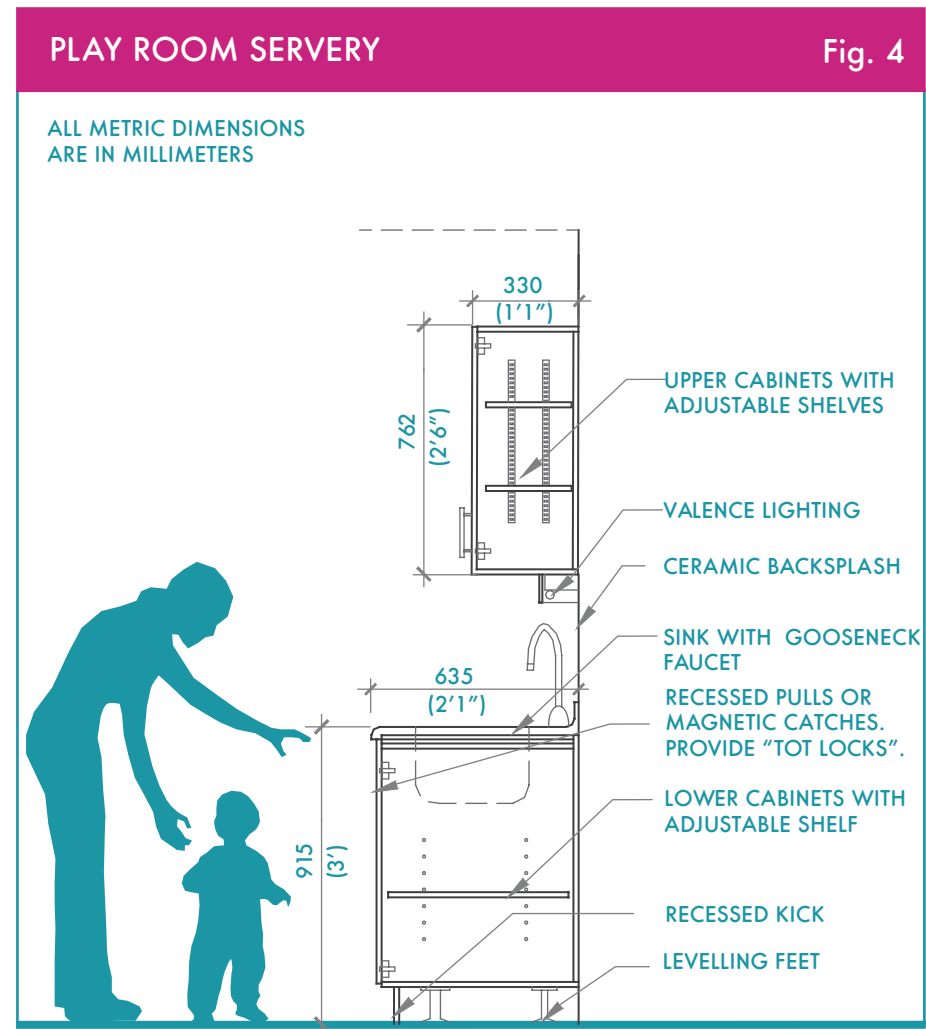
Openings:

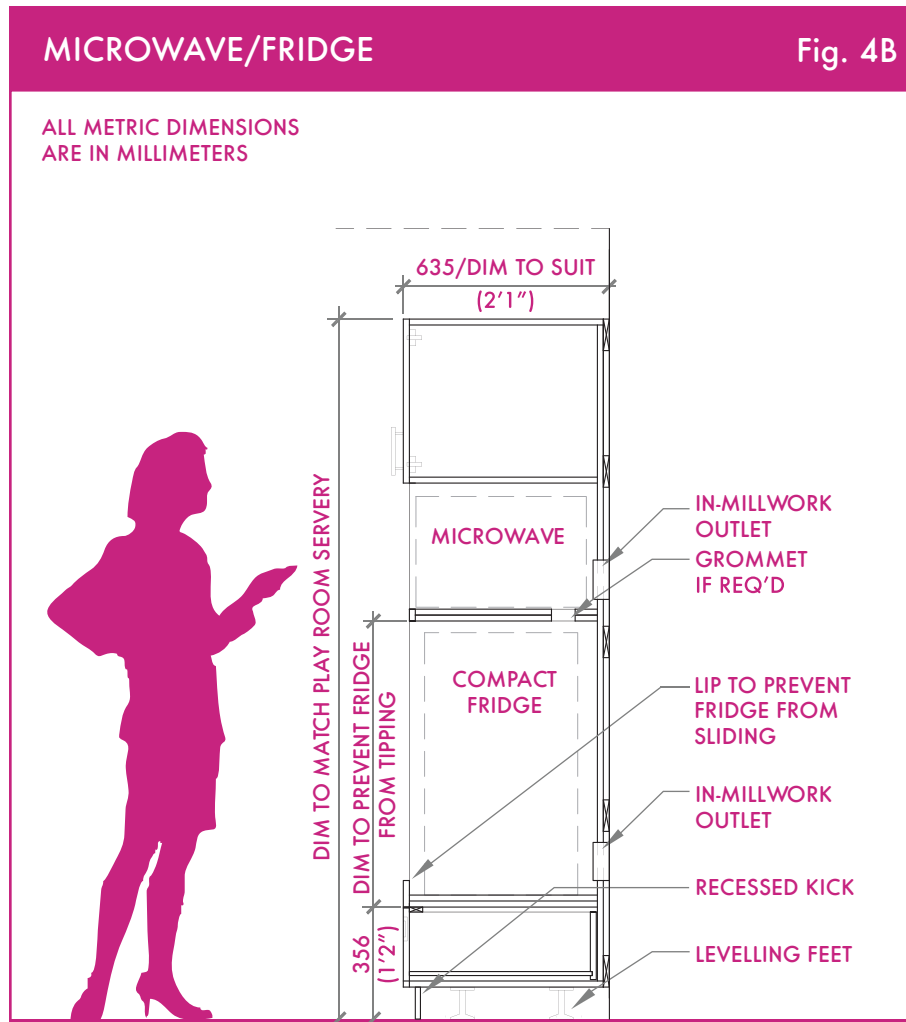
1. Exterior Windows: Provide low-level glazing in select areas with views outdoors for children. Operable windows must be fitted with screens and be out of reach of children. Windows and hardware should not create a hazard when in the open position inside or outside the room.

2. Window Shading: To reduce heat gain, provide exterior window shading such as retractable awnings or interior light shelves to reduce heat gain and reflect diffuse light deep into rooms. *Best Practice*
3. Provide interior roll-down fabric shades with chains out of the reach of children.
4. Doors: Provide fully glazed with hinge guards. In infant and toddler rooms, locate door handles as high as possible so children cannot operate.
5. Fire-rated Doors: Consider installing hold-open devices so staff have the option to open room to adjacent spaces.
6. Sliding Doors: Install bumpers to avoid finger pinching.

Servery:

1. Provide a **servery** located within the play room. (See Fig. 4)
2. Provide a dedicated component for a microwave and compact bar fridge to the servery. (See Fig. 4B)
3. Aspects of the **servery** are potential learning areas and should be accessible to children. For example, provide a child height sink and storage. Consider a peninsula or island design. (See Fig. 5)



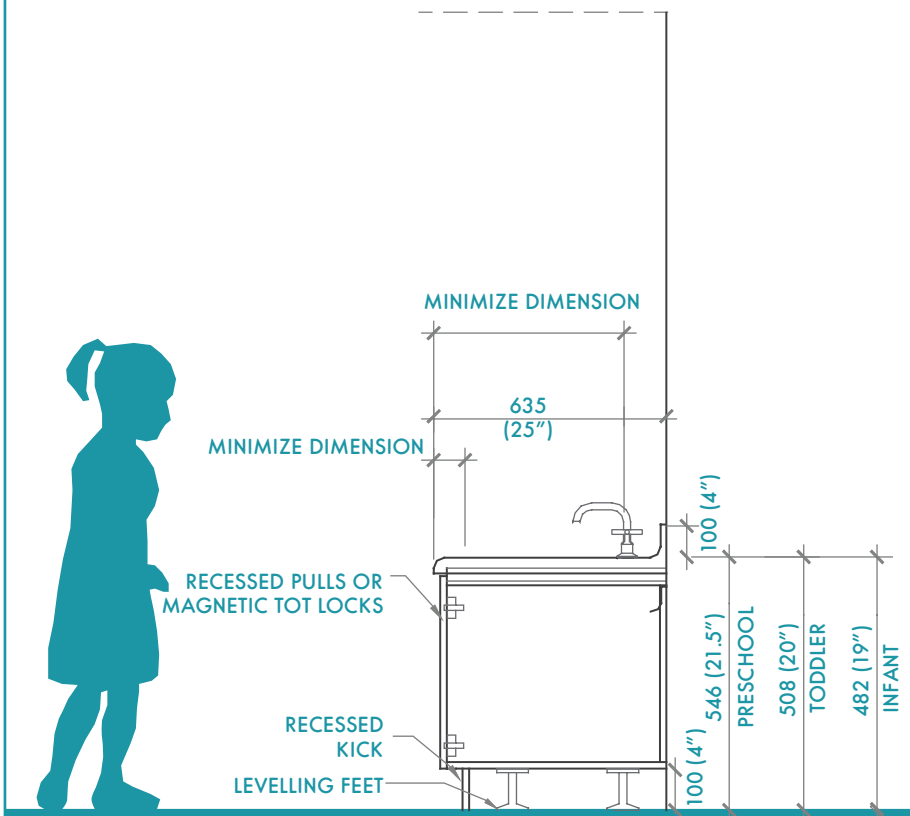


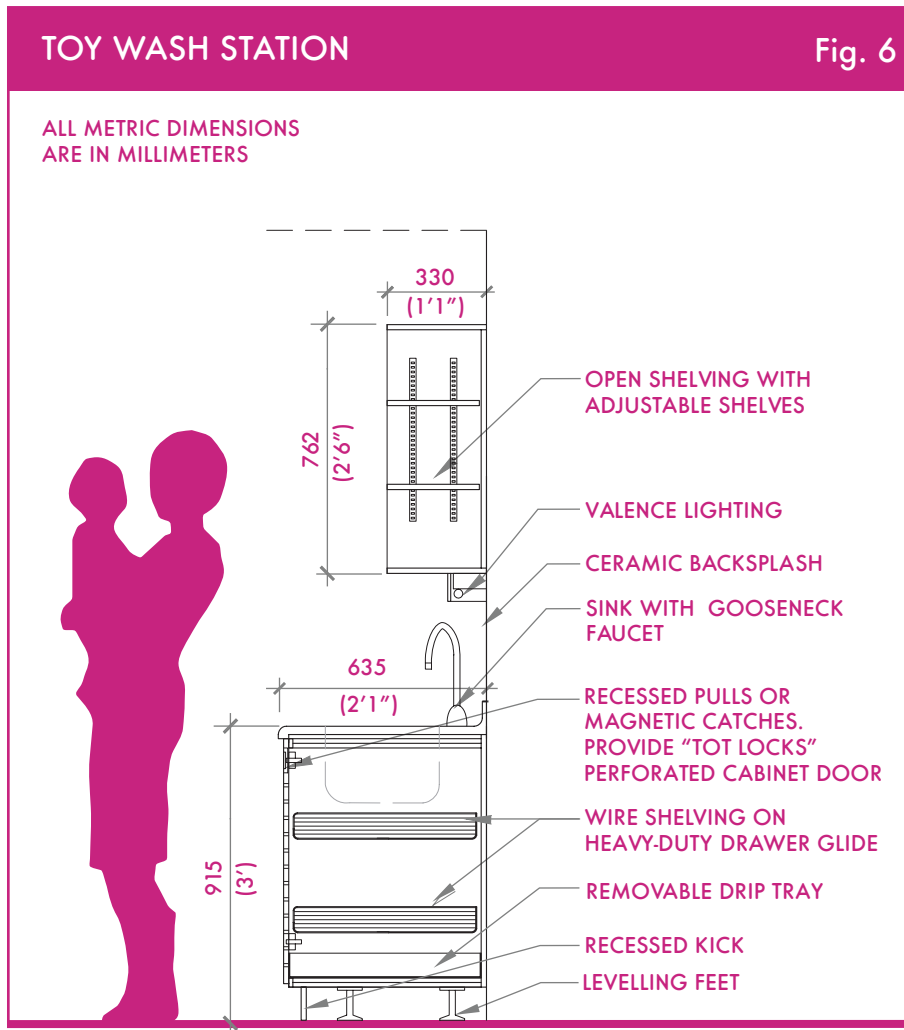
4. If access to the **servery** is restricted to staff, in order to allow children to be fed individually, consider separating it from the play room using a child-height counter. This enables children to become involved in kitchen activities.
5. Staff need visual connection to entire activity area from **servery**.
6. If the **servery** creates a hidden area in activity room, then restrict access to children with gate.
7. Infant **servery** requires additional storage and counter space.
8. Equipment:
 - a) Bar refrigerator. Provide full refrigerator with freezer in infant room only.
 - b) Microwave.
 - c) Bottle warmer.
 - d) Provide a single hand wash sink. A wall mounted sink may be preferred in lieu of a child height servery.

CHILD HEIGHT SERVERY

Fig. 5

ALL METRIC DIMENSIONS
ARE IN MILLIMETERS





Toy Wash Station: *Best Practice*

1. Where space and budget allow, provide a toy wash station located within the play room. (See Figure. 6)
2. Priority should be given to Infant Play Rooms. Alternatively, the toy wash station may be located within Laundry Facilities.
3. Adhere to Public Health requirements and procedures for toy washing.
4. Provide lockable cabinets for disinfectant and other cleaning supplies.
5. Equipment:
 - a) Provide a triple toy wash sink. A double sink is an acceptable alternative if space for drying racks is provided.

H. Cubbies

INTENT

To provide each child with an individual transitional area for dressing and undressing, for storing belongings and for communication between parents and staff. The area should allow staff or parents to assist while encouraging children to do things themselves.

PERFORMANCE GUIDELINES

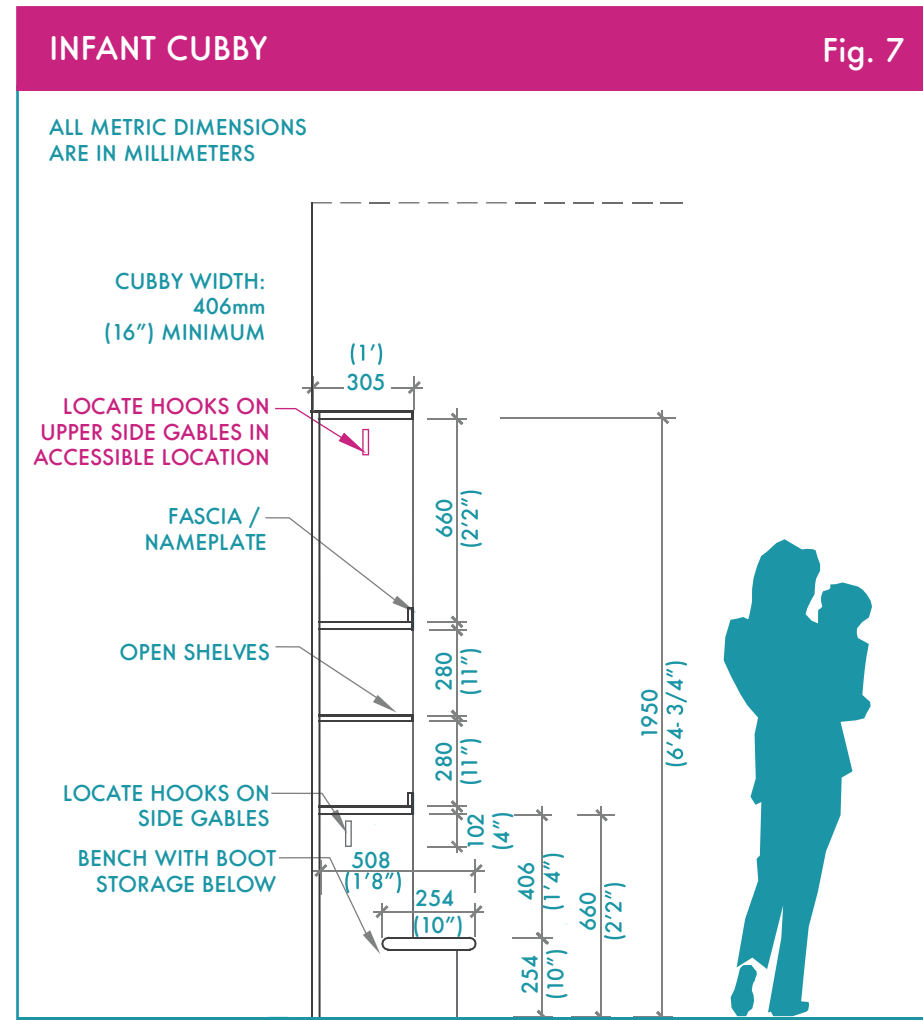
Experience:

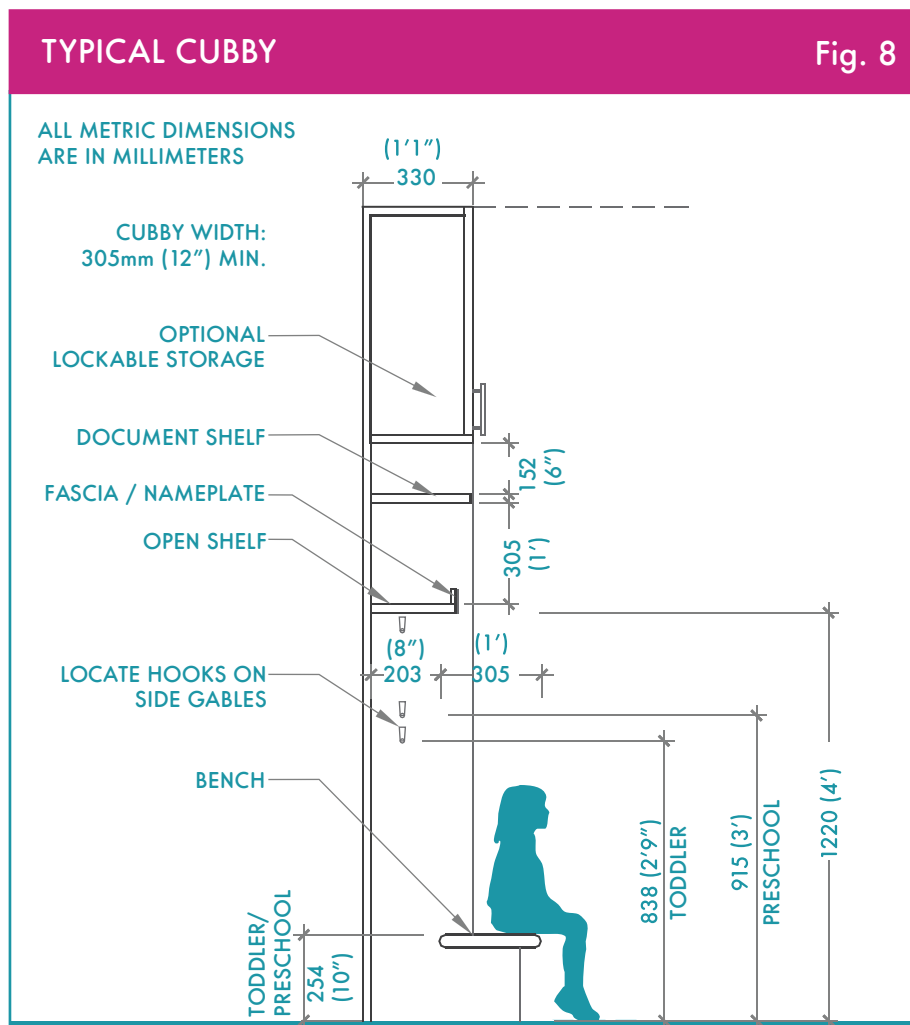
1. Each cubby should accommodate a child's seasonal clothing, footwear and other belongings.
2. Provide sufficient floor space adjacent to cubbies to accommodate a group transitioning at the same time.
3. Provide a continuous bench to allow both children and adults to sit while dressing.
4. Provide a place for staff to label each cubby with the child's name and/or photo.
5. Provide cubbies that allow for the exchange of information. For example, a place for a clipboard where staff can report on the child's daily activities.
6. Infants:
 - a) A separate cubby area is recommended. A door or half wall can be used to separate from main area.

- b) This area is used primarily for parents to store belongings. Consider larger cubbies for diaper bags.
 - c) A dressing table is useful for parents that wish to dress **or undress** the child themselves.
 - d) Infant cubbies can be stacked.
7. Toddlers:
- a) To encourage self-dressing, cubbies should be easily accessible with a bench. Provide generous floor space in front of cubbies for lying/sitting on floor to dress **or undress**.
8. Preschool:
- a) Consider slightly wider cubbies to house larger bags.

Adjacencies:

1. Locate cubbies in an area adjacent to the corridor, play room and a door to the outdoor play area. *Best Practice*
2. The divider between the cubby space and the play room can be more or less open and should be discussed with staff. Such a cubby area could be shared with the adjacent play room, although sound control should be considered.
3. As an alternative, locate the cubbies in corridor adjacent to





the play room leading to an exit to the outdoor play area.

4. Locate the cubby area directly accessible to either the corridor entrance or the outdoor play area so muddy and wet clothing and boots do not enter the play room.

Millwork and Storage:

1. Base number of cubbies on number of children plus some extra for part-time attendees.
2. Provide bench for adults in infant cubby area. (See Fig. 7)
3. Provide a bench in front of cubby, boot storage beneath on durable material, clothes hanging space in cubby, two open shelves above for baskets, etc. (See Fig. 8)
4. Provide a place of identity for child's name/picture. For example, provide a fascia element that will not be damaged by tape.
5. For cleaning, raise cubbies off the ground. *Best Practice*
6. Flooring under cubbies is preferable to millwork bottoms.
7. Size cubbies to each age group (infant, toddler, preschool).
8. Provide lockable staff closet adjacent to cubbies.
9. Consider providing storage above cubbies for the centre's use.

I. Infant Sleep Room

INTENT

To provide a separate, safe and quiet sleep area for infants apart from activity area.

PERFORMANCE GUIDELINES

Experience:

1. Carefully consider location of sleep rooms to isolate from external noises such as street traffic, parking lots, playgrounds, mechanical equipment, exhaust vents, etc.
2. Provide sound control for both sound quality in room and sound separation to surrounding noise.
3. The sleeping area should be kept at a comfortable temperature. Cribs should be arranged away from direct sunlight and drafts from windows.
4. Allow for easy access by staff. Provide a crib layout more generous than the [CCEYA 2014](#). *Best Practice*
5. If cribs are laid out back to back, provide a clear acrylic divider.
6. Provide sufficient floor space for an adult rocking chair and one cot.
7. **Include a work surface for staff.**

Adjacencies:

1. The sleep room must have a direct physical and visual connection with the play room. For example, provide clear glazing in the dividing wall.
2. The preferred location would be near the change area.

Storage:

1. Provide lockable cabinets for all in-room storage. Any upper cabinets must be enclosed. A linen closet is recommended. *Best Practice*
2. Provide a high shelf with an electrical outlet at same height for radio, baby monitor and lamp. Do not locate shelves above cribs in case of falling objects.

Security and Access:

1. Ensure operators lock down procedures are incorporated into design and layout of area.

Openings:

1. Provide door to sleep room that is glazed to allow views into activity area, but that provides acoustic separation. Provide a passage set on door.

2. Locate windows at clerestory level if possible. Operable windows must be fitted with screens and be out of reach of children. Windows and hardware should not create a hazard when in the open position inside or outside the room.
3. Provide blinds on windows. Ensure cords are secured out of reach of children. If windows are lower, they should be treated to avoid any direct views into the room from exterior.
4. Ensure sleep rooms are provided with natural light as required by the Ontario Building Code.

J. Infant and Toddler Washroom

INTENT

To provide a clean area that is accessible and safe for both children and staff. It is separate but visually connected for diapering and toileting of infants.

PERFORMANCE GUIDELINES

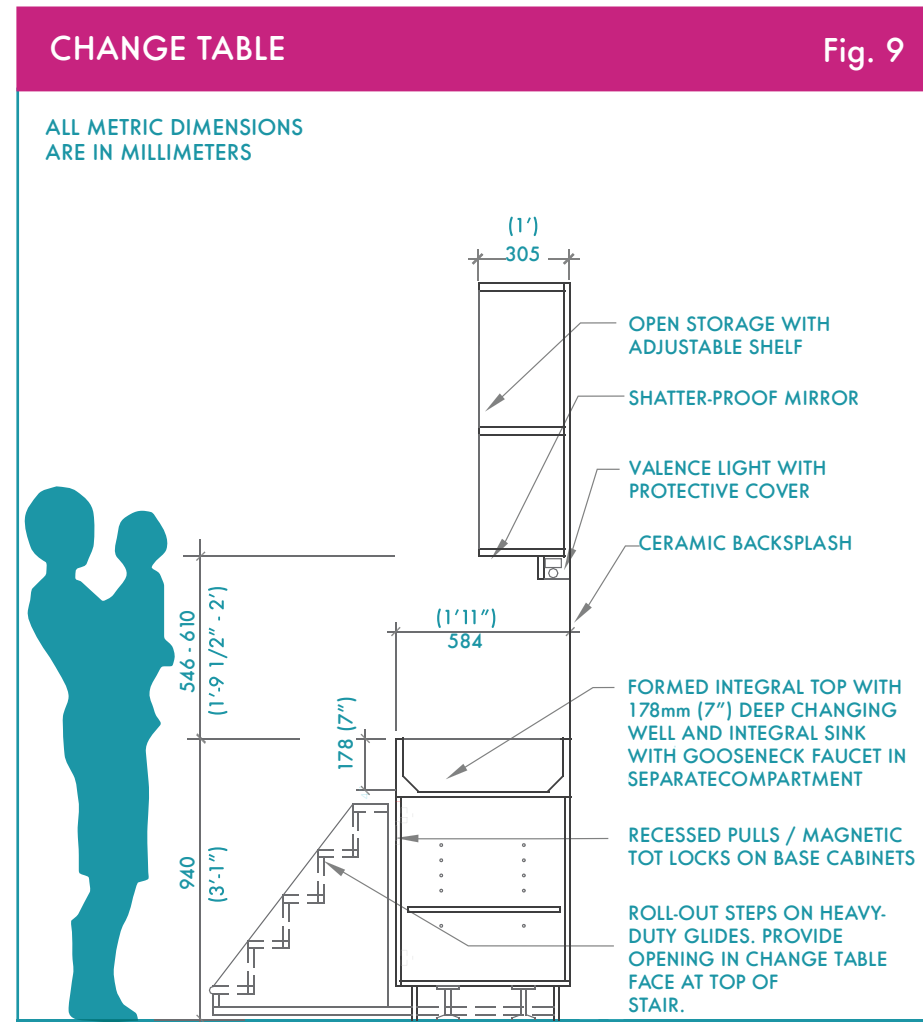
Experience:

1. Visual and Acoustic Connections: Provide visual and acoustic connection to play room so staff can supervise and communicate.
2. Separate the washroom area from play area with half-height gate and wall so infants can't access the area unsupervised. Ensure distance between floor and underside of gate is minimal.
3. Provide a child-size toilet and sink with mirror to encourage toilet training and hand washing. (See Fig. 10). A wall mounted sink may be used.
4. Fixtures should be laid out and sized to be accessible for the specific age group.
5. Provide a change table with roll-out steps, integral staff sink and storage. (See Fig. 9)
6. Safety and Convenience: Staff can not leave children

unattended on the change table. Locate everything the caregiver needs to change the child within easy reach.

Millwork and Storage:

1. Change table can be prefabricated unit or custom millwork.
 - a) Roller Step: **Infants and toddlers** need rolling steps up to change table. Steps should have lockable wheels and be stored under millwork counter or table. Steps should be held in alignment when inside or outside cabinet. **When steps are in an open position, ensure location does not impede changing activities.** Consider providing heavy-duty drawer slides. (See Fig. 9)
 - b) Change Counter: Easy to clean with edges on all four sides slightly higher than foam insert to prevent children rolling out, but still allowing access. Allow for the mat liner to be changed. Change tables should be roomy to allow for larger children. (See Fig. 9)
 - c) **Staff Sink:** Locate as part of integral change table. Locate adjacent to but separated from change well.



Equipment:

1. Washroom Accessories:
 - a) Locate washroom accessories at children's height.
 - b) Ensure an easily accessible paper towel dispenser and cup dispenser for children are located near the sinks.
 - c) Provide a paper towel dispenser adjacent to change table accessible to Staff.
 - d) Provide one shatter-proof mirror per sink.
 - e) Do not provide built-in liquid soap dispenser. Soap will be provided in a non-mounted store-bought container.
Best Practice
 - f) Provide recessed washroom accessories when possible to minimize loss of floor space and injuries by bumping into projecting corners. *Best Practice*
2. Fixtures, provide:
 - a) An integral staff sink at change table.
 - b) Child hand wash sinks and toilets as required.

K. Preschool Washroom

INTENT

To provide a clean area for toileting and diaper changing, accessible and safe for both children and staff who assist them. The washroom should encourage children's independence with regard to toilet training and other washroom activities.

PERFORMANCE GUIDELINES

Experience:

1. The washroom should be connected to the play room in a way that allows staff to supervise both rooms.
2. In a typical room of 16 children, based on a ratio of 1 staff to 8 children, provide one child-sized toilet / sink and one adult-sized toilet / sink as per the Ontario Building Code.
3. Adult-sized toilet and sink is to meet AODA accessible standards. The adult-sized sink must be mounted at a height that is both accessible and appropriate for the preschool age group.
4. Providing a child-sized toilet and sink with mirror encourages toilet training and hand washing. (See Fig. 10). A wall mounted sink may used. Girls and boys may share washrooms, up to school age.
5. The atmosphere should be warm and inviting to minimize

anxiety.

6. For staff supervision, privacy and the need for visual connections must be balanced. **Public view of washrooms must be avoided.**
7. The washroom routine can be physically demanding for staff. **As such, consider ergonomics standards.**
8. Try to minimize touch points. For example, use sensor faucets, dispensers. Provide toilets that will not flush until wanted. Surprise flushing during toilet use can discourage toilet use.

Adjacencies, Visual and Acoustic Connections:

1. Children's **washrooms** should be visually and acoustically connected to play room. This allows children to be toileted by staff individually rather than all together. It also encourages independent toilet use.
2. **Privacy: Openings in play room dividing walls vary according to age group and preschool children require more privacy. For example, provide half-size walls or partial dividers between toilets.**
3. **Washrooms** can be shared by adjacent rooms, however,

consider acoustic control between the play rooms.

4. Provide direct access from the toilet area to the outdoor play area. Provide a vestibule to prevent cold air entering directly into the toileting area. *Best Practice*
5. If possible, provide a dedicated **washroom** with toilet and sink for the outdoor play area. *Best Practice*

Millwork and Storage:

1. There should be storage in washrooms for cleaning supplies. Storage should be lockable if in reach of children.
2. Provide storage under or above vanities when possible. (See Fig. 10).
3. Provide under-counter garbage and diaper bins. *Best Practice*

Equipment:

1. **Washroom Accessories:**
 - a) Locate washroom accessories at children's height.
 - b) Ensure an easily accessible paper towel dispenser and cup dispenser for children are located near the sinks.

- c) Provide one shatter-proof mirror per sink.
- d) Do not provide built-in liquid soap dispenser. Soap will be provided in a non-mounted store-bought container.

Best Practice

- e) Provide recessed washroom accessories when possible to minimize loss of floor space and injuries by bumping into projecting corners. *Best Practice*

2. Fixtures, provide:

- a) Child hand wash sinks and toilets as required.
- b) Adult hand wash sinks and toilets as required.

L. Kitchen

INTENT

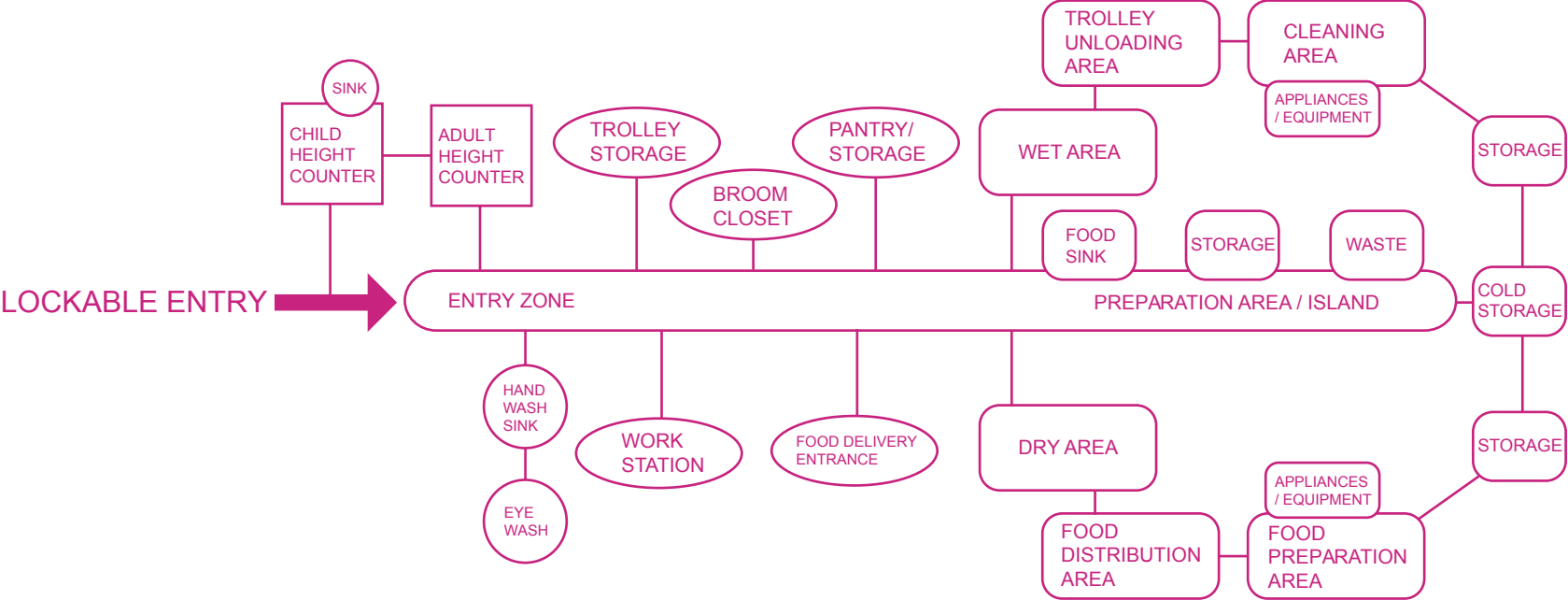
To provide a space for preparing healthy food and/or the handling of healthy catered food. The kitchen should provide an opportunity for children to learn about food and its preparation.

PERFORMANCE GUIDELINES

Experience:

1. Design: The kitchen should be designed in consultation with staff according to the centre's type of food program.
2. The kitchen is a safe and effective work environment that is easily kept clean and where the quality of the food is maintained. **All Surfaces should be easy to disinfect.**
3. When the kitchen is visible to children from the corridor, they learn about food and its preparation. For example, consider providing an open counter between the corridor and kitchen where children can sit. **Provide a hand wash sink and above counter childproof electrical outlets appropriate for wet areas.**
4. Provide display space in the corridor outside the kitchen to post required information, educational information and information about food production.
5. **In laying out space, allow for functional flow of activities.**

FUNCTIONAL KITCHEN LAYOUT DIAGRAM



Adjacencies:

1. Location: Directly accessible to a main circulation route and preferably near the entry zone. The intent is that:
 - a) Deliveries and catering drop-off are more convenient.
 - b) Kitchen staff can provide passive surveillance.
 - c) Constant learning opportunities are provided for children.
 - d) It encourages casual pickup of food for breakfast programs and so on.

Millwork and Storage:

1. Provide upper and lower cabinets with ample shelf space and drawers.
2. Provide a sitting height work station for staff.
3. Provide drawer(s) for utensils.
4. Provide a lockable pantry space in the form of a room or cupboard for dry goods, cans, boxes. Lockable food storage allows the general kitchen space to be more open.
5. Consideration for storage of catering trays on counter or on carts.
6. Rodent-proof storage for dry goods.

7. Baking: Storage for baking trays.
8. Provide storage area for rolling carts (one per activity room). For example, under a standing height counter.

Equipment:

1. High-end electric residential oven/range. Consider range hood where applicable.
2. Commercial dishwasher on plinth base with fan and exhaust.
3. Two full-size commercial fridges.
4. Full-height industrial freezer.
5. Microwave: Confirm type and size with client.
6. Locks should be provided for the fridges and freezer.
7. Provide anti-fatigue mats for kitchen staff.
8. Eye wash station to be provided at hand wash sink.
9. Sinks, provide:
 - a) Single hand wash sink.
 - b) Triple integral sink for dish washing.
 - c) Dedicated food washing sink. *Best Practice.*

Openings:

1. Provide views for children into kitchen from corridor. For example, providing **low-level** windows. Locate windows away from door so children are not near a pinching hazard.
2. Provide half-height glazing in door so adult can see if children are near door.
3. Doors: Provide classroom lockset.
4. Where possible, provide operable windows to exterior.

M. Laundry Facilities

INTENT

To provide a room with adequate space to allow for the day-to-day washing, drying and folding of children's clothes/linens and other miscellaneous items.

PRACTICE GUIDELINES

Adjacencies:

1. Locate close to children's playrooms, especially the infant room(s) as infant rooms generate the most laundry.
2. Locate close to kitchen if kitchen staff do the laundry. **Do not locate laundry facilities within a kitchen.**
3. Locate close enough to an exterior wall to accommodate the limits of the exhaust duct.

Equipment:

1. Provide space for one stacked washer and dryer. Provide one additional dryer for outdoor clothing. Provide high-efficiency residential equipment.
2. Provide floor area for laundry hampers.
3. **Provide a laundry sink/tub or deep double sink. Upgrade to a triple sink if toy wash station is to be located in Laundry Facilities.**

Millwork and Storage:

1. Provide counter large enough for sorting and folding of clothes/linens.
2. Provide **lockable** storage for laundry supplies. Keep out of reach of children.
3. Provide open or closed storage for linens and extra clothing.
4. Shelves and cupboards should be constructed of durable material. In wet areas consider using stainless steel or solid surfacing. Ensure plastic laminate is at least 600mm from wet areas.
5. **Where space and budget do not allow for a toy wash station within the play rooms, consider locating within the laundry facilities. (See Fig. 6)**

Openings:

1. Doors: Provide storage lockset.
2. Consider clear panel in door.

N. Waste Management

INTENT

Based on the type of pickup intended, provide accessible yet tamper- and pest-proof storage areas for garbage, recycling and composting. Encourage children to participate, where appropriate, in the management of waste, especially recycling and composting.

PERFORMANCE GUIDELINES

Interior:

1. Recycling: In addition to garbage containers, if a recycling program is planned, provide recycling bins suitable for the materials that can be recycled.
2. Composting: If opportunities exist, incorporate organic waste composting into the centre's waste management.
3. Learning Opportunities: Consider opportunities for teaching children about recycling and composting. For example, use “expressive” bins or millwork for use by children.
4. Ensure diaper bins are separate from garbage.
5. If centre is located in an apartment building, centre should have access to a waste chute or dedicated garbage room.
6. When laying out spaces within the child care, ensure waste management is included.

Exterior:

1. Review requirements with representatives depending on the “pickup” method proposed.
2. Screened-off waste area should be provided if exterior storage is required. Locate near an exterior door and with good street access. Do not locate near main entry or play areas to avoid noise, smell and attraction of rodents. Ensure door into garbage/recycling area is large enough. Consider using double doors.
3. If curbside pickup is required, provide paved pad at street.
4. Provide on-site composting area/container if opportunities exist. Allow for supervised access by children where appropriate.
5. Provide waste management for outdoor play areas and locate near adjacent exit door.

Exterior Waste Area:

1. Foundation: Provide concrete curb. Wood should not touch ground.
2. Ensure enclosure has sufficient space for bins and is secure.

3. All bins must be rodent-proof and lockable.
4. Provide a floor drain or slope it out to door for drainage.
5. The cladding and finish of the enclosure should complement the building and surrounding site elements. For example, wood with detailing and a finish that complements adjacent elements.
6. Install hose bib.
7. Locking: A padlock with latch is preferable.

Equipment:

1. Size area for three large metal tamper-proof containers for organic waste, recycling and garbage.

O. Janitor Room

INTENT

To provide a secure room for cleaning/maintenance functions and supplies.

PERFORMANCE GUIDELINES

Adjacencies:

1. Locate in an accessible but non-prominent location.
2. Provide one janitor room per floor, locked at all times.

Equipment:

1. Chemical Mixing: A chemical mixing unit for janitorial chemicals is preferred over the sink. *Best Practice*
2. Provide an eye wash station.
3. Provide a single hand wash sink.

Storage:

1. Provide lockable storage for chemicals. Provide utility-grade open shelves for other cleaning materials. Secure to wall. Shelves to be rust-resistant, cleanable, durable and adjustable. Review quantity of storage with client representative.
2. Mop and Broom Storage: Install wall-mounted mop and

broom storage with stainless steel finish.

3. Provide area on floor for storage of vacuum and other cleaning equipment.

Openings:

1. Doors: Hollow metal door and frame.
2. Install high stainless steel kick plates both sides of door.
3. Provide storage room lockset.

P. Outdoor Play Area

INTENT

To provide a challenging and safe outdoor environment for children to socialize and learn through a variety of active play opportunities set in the natural environment.

PERFORMANCE GUIDELINES

Experience:

1. Provide separate play areas for different age groups (infant, toddler, preschool) that are separated using low fencing or dividers.
2. If the play space is shared by all age groups, it should be appropriately designed for all ages.
3. Provide play areas that invite interactions between children of diverse abilities.
4. Each outdoor play area should be designed with age-specific physical challenges for the user group.
 - a) Infant:
 - i. Infants should be separated from other children during active play.
 - ii. Provide cast-in-place rubber surface for crawling.
Best Practice
 - iii. Include a variety of soft surface textures and

materials for exploration.

- iv. Provide **covered** sensory boxes that contain various tactile and visual items for children to explore.
 - v. Avoid materials that can pose an ingestion or choking hazard.
- b) Toddler:
- i. Provide a flat track for wheeled toys and tricycles with only minor variation in grade.
 - ii. Install play elements or other structure such as a stage, playhouse, slides or sand boxes to encourage social play.
- c) Preschool
- i. Provide increased physical challenges by sloping portions of the riding track. Introduce rumble strips.
 - ii. Provide opportunities for group play. Install a stage or structure to encourage social play.
5. Play areas should offer a variety of activities in different zones to encourage the four elements of play (physical, social, manipulative cognitive and quiet retreat).
6. Provide appropriate separation between different play zones (i.e. avoid placing quiet retreat play adjacent to physical play).
7. Provide a variety of hard and soft surfaces in the play area.
8. Provide 40% of playground space as open space.
9. Trees should be strategically located to provide children with ample amount of shade during summer months while promoting sunshine during winter months. In outdoor play area, provide a minimum 25% shaded area at all times of day. Avoid locating trees in circulation areas to prevent accidental run-ins.
10. Provide area for children to practice upper and lower body gross motor activity including:
- a) Play mounds for climbing.
 - b) Elements at varying heights for climbing.
 - c) Open surface for ball games, running, rolling.
11. Create a looped hard-surface route for riding toys that does not interfere with the open play zone. Consider embedding items into surface of loop to encourage interactive play and discovery.
12. **Provide at grade and elevated/platform equipment for use by diverse abilities. Where appropriate, provide a variety of ramps, as per AODA standards.**

13. Provide soft surfaces (such as coarse mulch, granitic sand or engineered wood fibre) for other types of play.
14. Provide protection from wind and sun with removable coverings (shade sails, parasols, awnings), permanent structures and planting. If necessary, provide wind or shade studies.
15. Provide balance beam and stepping stones to practice balance (not for infants).
16. Ensure children have contact with the natural environment (i.e. plants, sand, earth, water and sun). Provide educational opportunities that engage with the natural world wherever possible. **Combine natural and manufactured features.**
17. Provide kit of parts for natural, imaginative play:
 - a) Consider objects with multiple uses, such as tarps and columns.
18. Encourage children to take ownership of the play space through creative and educational activities (such as painting murals, planting a vegetable plot).
19. **Provide gathering spaces and quiet areas.**
20. Provide table with seating (**toddler, preschool areas**).
 - a) Minimum Seating: Size area for six children, but provide seating in small groups of two or three.
 - b) Seating could be tree stumps (squared off).
 - c) **Provide accessible tables and seating with required clearances.**
21. Provide enclosures for quiet retreat (landscaped or fenced) that have openings to facilitate visual supervision by staff.
22. Provide barrier-free access and space for children with disabilities to maneuver. **Provide multiple ways to use and access equipment or features.** Consider sensory boxes.
23. **Provide exterior childproof electrical outlets on building face within outdoor play area.**

Adjacencies:

1. Outdoor play area should open directly into indoor play rooms. *Best Practice*
 - a) Provide direct access from indoors to outdoors with sliding doors or walls that open up. *Best Practice*
2. Provide a transitional covered area from indoor to outdoor play areas.
3. Provide a covered area for play during inclement weather.

4. Locate washrooms close to outdoor play area.
 - a) Provide direct access to washrooms from playground and, if possible, a dedicated washroom for outdoor play area. *Best Practice*
5. Locate outdoor storage so it is easily accessible.
6. Buffer the play area from traffic and parking with fences or vegetation.
7. When locating outdoor play areas, consider adjacencies to neighbouring properties to ensure safety and protection from vulnerability.

Zones:

1. Water play.
2. Sand play.
 - a) Consider a trough (stainless steel) in sand play area for enhanced water play. Drain towards low point.
 - b) Locate in shade as sand gets extremely hot.
3. Bike and wheeled toy path.
4. Open play space.
5. Climbing and exploring.
6. Block play.

7. Natural area.
8. The quiet zone.

Equipment:

1. Consider installing a water element equipped with industrial outdoor “sinks” at different levels for water play.
2. A winterized drinking fountain should be provided in preschool area only. *Best Practice*
3. Sand Area: Enclose or depress into landscape to control spread of sand.
4. Consider providing a variety of outdoor art equipment. Some examples: art easels, chalkboards, plexiglass sheets.
5. Provide musical equipment for outdoor use.
6. Provide play structures such as slides built into landscape mounds for climbing. **Grade earth to suit and ensure structure is not exposed. Install guards where required.**
7. Permanent outdoor furniture should be weatherproof. *Best Practice*

Openings:

1. Consider providing large openings to play rooms, such as

sliding doors, in order to increase the connection between indoor and outdoor. Install bumpers on sliders to reduce risk of fingers getting pinched.

2. Large low-level windows should be installed with views of the play rooms for children. Windows and hardware should not create a hazard when in the open position.

Storage

1. A storage room or shed must be provided for outdoor toys and bicycles.
2. Storage sheds should be weather-tight, lockable and vandal proof.
3. Ensure that the storage is easily accessible .
4. Consider building storage into face of building to minimize space usage on playground.
5. Equip storage room or shed with combination lock or keypad lock (no key required).
6. Locate first aid supplies for playground in storage area.

Security and Access:

1. Playgrounds to be fenced.

2. Design the play area with unobstructed views so that staff can monitor the area at all times.
3. Install latchable gates with “S” hook closures. Provide one main gate that exits from the playground and individual gates between separate play areas.
4. Size gates for maintenance access. 2100mm (7’0”) for Bobcats and 1220mm (4’0”) for wheelbarrows.
5. Provide lighting for visibility and safety.

Materials:

1. Provide hard surfaces, such as asphalt, for wheeled-toy track geared to age-specific user group.
2. Each playground to have minimum of three different surfaces. *Best Practice*
3. Provide removable, breathable covers for sandbox areas to protect against animals and prevent moisture buildup.
4. Avoid use of chemically treated wood in play area.
5. Provide a safety surface such as rubber in areas where children might fall from a raised element.
6. Consider using lighter coloured materials that will absorb less heat in peak summer sunshine hours.

Performance Criteria of Building Components

The purpose of the Performance Criteria for Building Components is to provide performance-based technical guidelines, similar to an outline specification, for components specific to child care facilities. Within each section the information is outlined in two parts: General: includes quality assurance and environmental considerations, and Materials: includes information regarding materials and performance.

Q. Outdoor Landscaping

GENERAL

Quality Assurance:

1. Use materials with proven durability in **an outdoor play area or setting**.
 - a) Warranty: Minimum two years. Warranty planting for three years. *Best Practice*
2. Provide two third-party peer design reviews by a **play structure** consultant who will ultimately be approving built **play structures or equipment**.
 - a) One review at conceptual design stage.
 - b) One review at working drawing stage, before issue of contract documents.

Environmental Considerations:

1. All dimensional lumber and plywood to be Forest Stewardship Council certified wood or recycled plastic wood material. *Best Practice*
2. Adhesives:
 - a) Use adhesives, sealants and mastics that have low VOC levels per LEED requirements.
 - b) Laminating Adhesive: Water-resistant, low VOC content,

CSA 0112 Series.

3. Paints, Stains and Sealants:
 - a) All paints and primers to be no VOC content.
 - b) Perform work to MPI requirements for premium grade. Provide paint products meeting MPI “Green Performance Standard GPS-1-05”.

MATERIALS

Wellness:

1. No Sharp Edges: Edges rounded to minimum 6mm radius.
2. No protrusions at eye level, including planting.
3. Ensure materials used do not pose ingestion or choking hazard.
4. Avoid potential head and neck entrapments in any designed element **in the outdoor play area**.
5. Where dissimilar surfaces meet, ensure edge details are properly coordinated during installation.
6. Avoid using chemically treated lumber in any equipment, fencing and play structures accessible to children.

Planting:

1. Microclimate:
 - a) Cluster plantings to provide dividers, screens, shade or wind shelters.
 - b) Groups of trees, shrubs or perennials are less likely to sustain damage from children.
 - c) Consider fast-growing deciduous trees for shading.
 - d) Plant deciduous trees on south side of play area to provide shade in summer and sun in winter.
 - e) Plant coniferous trees to provide wind protection.
2. Planting shall be hardy, low-maintenance and pest-resistant.
3. Ensure all plantings are non-toxic, without prickles or thorns:
 - a) **Consider plants that bare no berries or nuts.**
 - b) Use plants native to the local region. If using naturalized species, avoid those considered to be invasive. *Best Practice*
 - c) Provide adequate soil volume for planting.
 - d) Do not use guy wires or T-bars as stakes.
 - e) Avoid planting dense hedges and screens so

supervising staff can have unobscured view of children in all play areas.

4. Conform to *International Code of Nomenclature for Cultivated Plants* for nomenclature of plants and with recognized scientific name given in latest edition of *Standardized Plant Names*.
5. Collected plants and plant materials that require chemical treatments as ordered by Canadian Department of Agriculture are not acceptable.

Perimeter Fencing:

1. Design so as not to facilitate climbing.
2. Round all components. No sharp edges.
3. Open-fencing construction to provide unobstructed view for supervising adults and so children can see out.
4. Openings in Fences:
 - a) All openings to dimensions found in CSA standards. No fully bounded openings that may allow head entrapment or strangulation.
5. Fence height to be 1200mm above highest grade within 1000mm of either side of fence.

a) Plan for snow piled against fence when considering heights.

6. Fence Materials:
 - a) Aluminum fencing with vertical pickets and top rail. Aluminum materials to confirm to ASTM B209, ASTM B211 and ANSI H35.1.
 - b) Woven mesh welded on edges. Maximum 25mm x 25mm openings.
 - c) Galvanized decorative metal or steel fencing conforming to ASTM A653/A653-M.
 - i. Pickets: 16ga. (1.5mm) thick sheet steel.
 - ii. Rails and Posts: 14ga. (1.9mm) thick sheet steel.
 - d) Galvanized double-sided metal fence conforming to ASTM A653/A653-M.
 - e) Powder coat finish conforming to AAMA 2603.
 - f) Tempered glass conforming to CAN/CGSB-12.1-M.
 - g) Composite lumber products.
 - h) If wood is used:
 - i. No chemically treated lumber.
 - ii. No privacy fencing.
 - iii. Fence must be sanded to prevent splinters.

- iv. Cut back any protruding bolts to no more than 6mm (1/4").
 - v. Cedar (Eastern White Cedar preferred) fencing with no seal or non-toxic sealant. *Best Practice*
 - vii. Dimensionally stable, smooth.
 - viii. Conform to requirements of standard grading rule for Canadian Lumber of National Lumber Grades Authority (NLGA).
7. Provide guardrails or protective barriers on elevated surfaces.
8. Rooftop or Above-grade Playgrounds:
- a) Minimum 1800mm fence height.
 - b) 2100-2700mm fence height. *Best Practice*
9. Gates:
- a) Provide perimeter exit gate from the outdoor play area and interior gates between children's outdoor play areas.
 - b) Provide heavy duty type hardware as listed below.
 - c) Provide unobstructed view through gate. *Best Practice*
If gate does not provide unobstructed view, it must open outwards from play area.
 - d) Install latchable, self-closing gates.
 - e) Latch Height:
 - i. Perimeter gates: Minimum 1200mm.
 - ii. Dividing fence: As appropriate to height of dividing fences.
 - f) Latch Type: Top pull.
 - g) Magnetic safety latch. *Best Practice*
 - h) Ensure latches do not create protrusion hazards .
 - i) Provide a minimum of two means of egress out of outdoor play areas.
- Surfaces:**
1. Recommended Hard Surfaces:
 - a) Asphalt.
 - b) Concrete.
 2. Soft Surfaces:
 - a) Engineered wood fibre mulch. Replenish as needed.
 - b) Small conifer woodchips or coarse conifer mulch. Replenish as needed.
 - c) Turf Grass:
 - i. In low-traffic areas only.

ii. Use of artificial turf is not recommended.

3. Rubberized Surfaces:
 - a) Neutral colours preferred.
 - b) Rubber Play Mounds: Mound should be one colour and surrounding area a different colour.
 - c) Design rubber play surface in accordance with CAN/CSA Z614, ASTM F1292, and ASTM F1951 to suit application.
4. Play Logs:
 - a) Hardwood is recommended. **For example, use Oak in lieu of Cedar.**
 - b) If softwood is used, provide only Western Red Cedar or Eastern White Cedar.
 - i. Logs to be sawn top and bottom (to reduce slippage), free of large cracks, sharp edges and splinters. Remove bark.
 - ii. Treat logs with a non-toxic oil to protect against rot.
 - ii. **For seating, logs are to be sawn flat along the seat side. Chamfer logs to sit close together.**

Specific Concerns by Area:

1. Main Entry to Centre:
 - a) Provide hard paved surface at building entrance.
 - b) Provide sand storage box (approximately 1m x 1m x 1m) for snowy areas.
 - c) Provide area for snow storage away from front entrance.
 - d) Install canopy or covered area at entry doors to facilitate indoor-outdoor transition.
 - e) Provide visible, legible signage.
 - f) Provide weatherproof box to display activities, images and information about the centre.
 - g) Provide exterior seating.
 - h) Provide exterior animal-proof garbage and recycling containers.
2. Bicycle Parking:
 - a) Provide weather-protected, secure bicycle parking for staff.
 - b) Provide dedicated entrance to bicycle parking. *Best Practice*
 - c) Provide visible and accessible bicycle parking for visitors.

3. Vehicle Drop-off/ Pick-up Zone:
 - a) Locate as close as possible to main entry.
 - b) Provide marked crossing areas where needed.
 - c) Provide two to three spots minimum.
 - i. A lay-by off the street. *Best Practice*
 - ii. A dedicated, clearly signed area at street (minimum).
 - d) Provide signage for area with time limits for parking.
4. Parking:
 - a) **Number of parking spaces to meet current City of Toronto Zoning By-Law requirements** or at minimum two to three parking spots. Locate as close as possible to main entry.
5. Children's Outdoor Play Area:
 - a) Plantings:
 - i. Provide pathways through planting.
 - ii. For toddlers and preschool children: Provide interest through dried grasses, pine cones, etc.
 - iii. Include garden plots or vegetable plots to facilitate learning.
 - iv. Include raised beds to facilitate access for children with disabilities.
 - b) Surface Materials:
 - i. Provide a minimum of **three** types of surfaces within each **outdoor** play area. If possible, include more than **three** different tactile surfaces. *Best Practice*
 - ii. Ensure at least one surface is accessible for **children with disabilities**.
 - c) Walking/Wheeled Toy Surfaces:
 - i. Provide non-slip surfaces.
 - ii. Materials: Concrete, asphalt (preschool), synthetic surface such as rubber (toddler). Asphalt surfaces to conform to the requirements of applicable OPSS standards.
 - iii. Grade changes for toddler track: Maximum +/- 150 mm.
 - iv. Grade changes for preschool track: Provide small hills for increased physical challenge.
 - v. To reduce urban heat island effect at grade, use high-albedo surfaces. *Best Practice*
 - d) Active Play Zone:
 - i. Consider using grass in low-traffic areas or wood

- chips.
- ii. Where climbing is encouraged, provide a fall protection zone to reduce the risk of fall injury.
 - iii. Provide a fall protection zone of loose fill or unitary synthetic materials such as sand, engineered wood fibre or poured rubber.
 - iv. If no elevated climbing elements exist in protective surfacing zone, provide surface with minimum 1000mm fall height.
 - v. If elevated climbing elements exist in protective surfacing zone, ensure requirements are met for critical fall heights.
 - vi. Once installed, protective synthetic surfaces are difficult and costly to modify and will likely be in place a minimum of ten years. Ensure adequate equipment planning for critical fall heights prior to installation.
 - vii. Size fall zone appropriate to **structures and equipment**.
 - viii. Maintain protective surfaces regularly through scheduled inspections and repair/replace as needed.
- ix. Ensure that surfaces have positive drainage. Avoid areas of ponding.
 - x. Ensure that surface is universally accessible.
 - xi. Boulders to be placed either maximum 300mm apart to facilitate stepping or minimum 1800mm apart to discourage leaping. *Best Practice. Ensure all boulders have no sharp edges and avoid in high circulation areas, specifically at bottom of steep grades.*
- e) Sand Play Zone: Provide sand **outdoor** play areas for **all age groups**.
- i. For infant play area, **provide sensory boxes containing removable items**.
 - ii. Use washed brick sand conforming to CSA A179 or equivalent (to allow for molding), free from organic materials or contaminants.
 - iii. Provide appropriate sand depths per age group.
 - iv. Install filter cloth at sand boxes.
 - v. Sand boxes to be permeable to facilitate drainage.
 - vi. **Provide removable, breathable cover to protect from**

animals and prevent moisture buildup when not in use. *Best Practice*

vii. Size: 2m x 2m for ten children. *Best Practice*

viii. Provide paved strip near sand box or sand grate at building entry to prevent sand being tracked into the facility.

ix. Provide ledge at edge of sand enclosure for seating and play.

x. Provide access to water where possible.

xi. Provide a variety of shade: Natural, tarps, sails, parasols or structures.

f) Water Play Zone:

i. Provide one water source per outdoor play area.

ii. Water must be constantly moving to reduce risk of mosquitoes breeding.

iii. In areas containing water, use pea stone or some other ballast to reduce effective water depth to maximum 300mm.

iv. Water source must be near water play area.

v. Provide a variety of water elements to facilitate creative, social and intellectual development.

g) Art Installations:

i. Ensure no head or neck entrapment and non-climbable.

ii. Use child-safe materials and coatings.

Drainage and Irrigation:

1. Drainage:

a) Drain surface water away from building and sidewalks.

b) Grates: Provide opening sized to reduce risk of finger entrapment.

c) All drains in outdoor play areas should be equipped with sediment traps.

d) Provide drainage in sand play area.

e) Slope lawns and sidewalks toward drainage to avoid ponding.

f) Divert drainage to naturalized portion of site for overflow purposes.

2. Irrigation:

a) Provide irrigation at grade and on rooftop play areas.

b) Install high efficiency irrigation.

c) Install rain gauge, which may also provide educational

aspect.

- d) Install soil moisture sensor.
- e) Install irrigation controller as part of digital dial controller (DDC) system (no stand alone controller).
- f) If no irrigation is installed, provide additional, lockable hose-bibs at 15m intervals. These can be used to provide water for water play area.

Storage:

1. Provide lockable storage, located conveniently for staff.
 - a) Locate storage room inside building and provide outside access to room from **outdoor play area**. *Best Practice*
 - b) Combination or code lock (no key required). *Best Practice*
 - c) Minimum Size: 9.3 square metres for each **outdoor play area (infant, preschool, toddler)**. Toddler and infant storage rooms may share space but should have separate doors that open onto separated **outdoor play area**.
 - d) Storage must be rodent-proof.

- e) Freestanding Storage: Construct of prefab concrete, composite wood or plastic, or metal. *Best Practice*
- f) Ensure all available surfaces inside and outside storage room are used: Hang small items and instruments on interior walls. Hang drawing boards on exterior walls or provide space for mural painting by children, provide green roof on top of storage area.
- g) Provide hooks on walls and/or storage shelves for smaller toys above large riding toys.
- h) Provide door hold-open to reduce risk of children becoming trapped inside storage area.
- i) Locate storage at grade or with ramp for children riding bicycles/ tricycles into shed.

Fasteners:

1. All fasteners to be corrosion-resistant, tamper-proof Type 316 stainless steel type screws and bolts. Use heavy-duty fasteners for outdoor use.

R. Millwork and Fabricated Metals

GENERAL

Quality Assurance:

1. Standard of finished carpentry and cabinet work in accordance with the “Millwork Standards” of the Architectural Woodwork Institute (AWI) to grades as follows:
 - a) All exposed hardwood: Premium grade.
 - b) All exposed plastic laminate surfaces: Custom grade.
2. Warranty: Products and material: Extend for a total of two years.

Design Requirements:

1. All upper and lower cabinets to have adjustable shelving.
2. All edges must be eased and rounded throughout.
3. Corner joints to be mitred throughout.
4. Provide protection of millwork if it is close to or on the floor and susceptible to moisture. For example, clad lower portions with Type 304 stainless steel or baseboard products.
5. As child care spaces are flexible, consider designing millwork that can be easily relocated or repurposed.

Environmental Considerations:

1. All dimensional lumber and plywood to be Forest Stewardship Council certified wood. *Best Practice*
2. Adhesives:
 - a) Use adhesives, sealants and mastics that have low VOC levels per LEED requirements.
 - b) Laminating Adhesive: Water-resistant, low VOC content, CSA 0112 Series.
3. Paints, Stains and Sealants:
 - a) All paints and primers to be no VOC content.
 - b) Perform work to MPI requirements for premium grade.
 - c) Provide paint products meeting MPI “Green Performance Standard GPS-1-05”.

MATERIALS

Casework:

1. Substrate:
 - a) Cabinets, doors, drawer fronts, shelves, cubbies: 19mm plywood at all wet areas including kitchen, **serveries**, laundry room, change area, washrooms. Plywood throughout. *Best Practice*
 2. Hardwood Lumber and Veneer:
 - a) Conform to NHLA and AWS Premium Grade, S4S, average moisture content 7% +/- 2% at installation.
 3. Stainless Steel:
 - a) **Counters and lower cabinets in main kitchen to be**
- b) Cabinets, doors, drawer fronts, shelves, cubbies: Areas not exposed to moisture: Particle board conforming to ANSI A208.1, Grade M2. Particleboard to be bound with waterproof adhesive and have a minimum density of 705kg/m³.
 - c) Countertops: 19mm plywood supported @ 760mm on-centre unless otherwise required by the finish.
 - d) Do not expose edges to moisture. For example, do not recess accessories into countertop. Back Panels: 12mm plywood. Install on all millwork.
 - e) Support shelving @ 760mm on-centre unless otherwise required by loading.
 - f) Melamine Panels ANSI A208.1, Grade M2 particleboard with melamine thermofused onto the surface.
 - g) Do not use MDF as a substrate in kitchen area.

stainless steel where possible. Upper cabinets adjacent to dishwasher hood to be stainless steel. All other upper cabinets may be alternate material.

- b) 14 gauge, 18/8, Type 304, conforming to ASTM A167.
- c) Perform stainless steel work in accordance with NAAMM, Code of Standard Practice for the Metal Industry, Workmanship, Class 1.

4. Finish:

- a) Wood Veneer:
 - i. Hardwood with clear finish in accordance with MPI requirements.
- b) Plastic Laminate:
 - i. Provide plastic laminates in accordance with ANSI/NEMA LD 3.
 - ii. Integral backsplash, curved front lip edge on horizontal counter surfaces. *Best Practice* Non Post-formed Horizontal Surface: 1.2mm thick, heavy wear-resistant, face sheet.
 - iii. Vertical Surface: 0.8mm thick face sheet.
 - iv. Backing sheet to match face sheet thickness.
- c) Melamine:

- i. Provide melamine conforming to requirements of ANSI/NEMA LD 3.
- ii. High quality melamine may be used for storage cabinet interiors except under sinks in wet areas.
- iii. Paint: Painting of millwork surfaces such as plywood is not recommended in new construction. All staining, painting and finishing work to be in accordance with MPI requirements.

d) Solid Surfacing:

- i. 12mm thick with integral sinks and backsplash, finish exposed edges.

5. Edging:

- a) Adjacent Wood, Veneer:
 - i. All exposed edges: 6mm solid wood edges to match species of adjacent veneer.
- b) Plastic Laminate/Melamine:
 - i. Post-formed integral edge. *Best Practice*
 - ii. Non-petroleum bio-co-polymer edging.
 - iii. PVC or ABS edging is minimum standard. Where PVC edging is used, it is to be done in thin PVC to match or compliment adjacent colour.

- iv. No wood tape or plastic laminate edging.
 - c) Solid Surfacing:
 - i. Integral edge.
 - d) Stainless Steel:
 - i. Type 304 integral stainless steel edge with drainage lip, conforming to ASTM A167.
 - e) All edges and exposed corners must be eased and rounded to minimum 3mm radius throughout.
 - f) A 100mm minimum guard edge must be provided at the change tables.
6. Base:
- a) 100mm Toe Kick: Cover finished millwork kick with resilient rubber base or stainless steel.
 - b) Construct wall base and toe kicks on millwork using marine-grade plywood.
7. Fascia:
- a) Provide and size accordingly to conceal under-counter lighting on upper cabinets.

Countertops and Backsplashes:

1. Backsplash:

- a) Countertops that meet wall provide integral backsplash 100mm in height min. unless otherwise indicated. Where counter end meets wall on integral plastic laminate backsplashes, continue post-formed backsplash along side wall.
 - b) Where no backsplash is indicated, caulk joint at wall with clear silicone.
2. Kitchen Counter:
- a) All counters located near water sources are to be Type 304 stainless steel or solid surfacing with integral triple sinks and backsplash. Provide plastic laminate on exterior grade plywood only where not exposed to moisture. Low use or counters not located near water sources could be plastic laminate on plywood substrate with non-PVC edging.
 - b) Ensure sufficient support is provided for triple sinks in kitchen.
 - c) Counters should be deeper for prep and catering food trays. Consider a minimum depth of 750mm.
3. Staff **Servery** Counter:
- a) The sink and surrounding counter to be set to barrier-

free counter dimensions. Provide counter space beside sink large enough for dishes and preparing food/snacks.

- b) Counter should be constructed of durable material. In wet areas, consider using solid surfacing. Ensure plastic laminate is at least 600mm from wet areas.

4. Laundry Room Counter:

- a) Provide counter large enough for sorting and folding of clothes/linens. Counter should be constructed of durable material. In wet areas, consider using solid surfacing. Ensure plastic laminate is at least 600mm from wet areas.
- b) This counter need not have a backsplash. Provide backsplash when toy wash station is located within laundry facilities.

5. Children's Washroom (Infant, Toddler and Preschool):

- a) Counter and backsplash should be easy to clean and constructed of a durable, water-resistant material such as solid surfacing. *Best Practice*
- b) Counter material should be one continuous millwork surface with no seams and integral backsplash, post-formed with bull nose edge.

c) Infant and Toddler Washroom:

- i. Extend backsplash to underside of upper cabinets at change table in ceramic.

6. Play Room and Child Height Servery:

- a) Counter should be constructed of durable material. In wet areas, consider using solid surfacing. Ensure plastic laminate is at least 600mm from wet areas.
- b) Where child-height servery or wall mounted sink is directly adjacent to play room servery, consider returning high counter as end gable to protect millwork from moisture.

Handrails:

1. Provide additional child-height hardwood handrails (clear finish) and adequate blocking at all stairs and ramps.

Hardware:

1. Provide commercial grade hardware throughout.
2. Hinges: Heavy-duty 110 degree, concealed, self-closing.
3. Drawer Extensions/Slides: Full-extension model, self-closing.

- a) Select appropriate hardware based on anticipated loads.
 - b) Ensure retractable roller stairs are secure when in open position.
4. Pulls:
- a) D-shape, or similar, for easy grasp on upper cabinets.
 - b) Recessed pulls on lower cabinets in children’s reach.
 - c) Concealed magnetic catches on lowers. *Best Practice*
5. Adjustable Shelves: Heavy-duty hole type, flush with cabinet sides.
6. Locks:
- a) Confirm with staff which millwork items require locks.
 - b) All millwork locks to be common keyed except kitchen cabinets/pantry storage.
 - c) Supervisor’s office and staff cabinets/lockers to be individually keyed.
 - d) Confirm any additional locking requirements for each facility.
 - e) Install childproof “tot-locks” on all specified cabinets within reach of children.
7. Hooks:

- a) At cubbies or other child-height areas provide rounded style hooks. Provide two hooks per cubby. Do not mount on back panel of cubby.
- b) Alternate Option for Cubby: Triple prong hook (2 side, 1 front) mounted on back wall of cubby.
- c) Provide break-away style hooks in all children’s areas.

Best Practice

Fasteners:

1. All millwork should be securely anchored to wall or floor to avoid tipping.
2. Ensure sufficient blocking and anchorage for millwork items.
3. Use heavy-duty attachments for wall-mount cabinets.
4. Conceal all Fasteners: When screws are used, countersink in round clean-cut hole and plug with wood plug with finish to match adjacent finish. Set finishing nails to receive filler.
5. Do not use staples.

S. Doors, Windows and Hardware

GENERAL

Quality Assurance:

1. Standard of Architectural Woodwork in accordance with the “Millwork Standards” of the Architectural Woodwork Manufacturers Association of Canada (AWMAC) - Premium Grade.
2. Provide windows as per AAMA/WDMA/CSA 101/I.S.2/A440, Class CW.
3. Provide hardware on fire-rated assemblies as per NFPA-80 and to approval of Ontario Fire Marshall.
4. Metal doors in accordance with ASTM A653/A653M. Perform work in accordance with requirements by a member of the Canadian Steel Door and Frame Manufacturers Association.
5. Wood Doors: Perform Work in accordance with requirements of AWI, Quality Standards for Architectural Woodwork, Premium Grade, except as indicated otherwise.
6. Provide fire-rated doors and hardware with ULC labels in accordance with NFPA 80.
7. Warranty: Products and material: Extend for a total of two years.

8. Inspection and Testing: Confirm based on project and client requirements.

Design Requirements:

1. Doors to be standard 45mm thickness throughout.
2. All offices should have acoustic sealant at all interior doors sidelights and interior windows.
3. Finish all sides of doors and windows.
4. Install operable windows in all areas where possible.
5. Install operable windows and operators out of child's reach. Windows and hardware should not create a hazard when in the open position inside or outside a room.

Environmental Considerations:

1. All dimensional lumber and plywood to be Forest Stewardship Council certified wood. *Best Practice*
2. Adhesives:
 - a) Use adhesives, sealants and mastics that have low VOC levels per LEED requirements.
 - b) Laminating Adhesive: Water-resistant, low VOC content, CSA 0112 Series.

3. Paints, Stains and Sealants:
 - a) All paints and primers to be no VOC content.
 - b) Perform work to MPI requirements for premium grade.
 - c) Provide paint products meeting MPI "Green Performance Standard GPS-1-05".

MATERIALS

Doors and Sidelights:

1. Material:
 - a) Exterior:
 - i. Hollow Metal: Standard gauge commercial grade steel in accordance with ASTM A568/A568M, Class 1, hot dip galvanized to ASTM A653/A653M with rigid closed cell insulation.
 - ii. Aluminum:
 - i. Aluminum Extrusions and Channels: Conforming to ASTM B211 and ANSI H35.1.
 - ii. Aluminum Finish: Anodized or pre-painted finish in accordance with AAMA requirements.
 - b) Interior:
 - i. Hollow Metal: Standard gauge commercial grade

steel, in accordance with ASTM A568/A568M, Class 1, hot dip galvanized to ASTM A653/A653M.

i. Locations: Janitor's room, laundry room, kitchen.

ii. Wood:

i. Solid core, 5-ply wood doors, with core conforming to ANSI A208.1, having a minimum density 513 kg/m³. Extruded particle board cores with voids are not permitted. Door Facing: Paint grade birch.

ii. Locations: Play Rooms, offices, staff room, washrooms.

iii. Closet: Standard or Sliding: Hollow core wood, paint grade birch.

iv. Room Dividers: Hollow core wood sliders.

c) Glass:

i. Consider glass sliders between play rooms and outdoor play areas.

2. Finish:

a) Veneer: Hardwood with clear finish.

b) Paint: MPI premium grade.

c) Solid Wood Stain or Sealant: In accordance with MPI

requirements, premium grade. Standard sealants to conform to ASTM C920 and acoustic sealants to ASTM C919.

d) Aluminum Finish: Anodized or pre-painted finish in accordance with AAMA requirements.

3. Openings in Doors:

a) Glazing:

i. Tempered throughout, conforming to CAN/CGSB-12.1-M.

ii. Vestibule: Full height in aluminum framing system.

4. Hardware:

a) Hinges:

i. Heavy-duty commercial grade Type 304 stainless steel, ball-bearing style.

ii. Type 304 stainless steel screws.

iii. Do not install piano-style hinges in high use applications.

b) Hinge Guards: Install retractable, fabric type to prevent pinching at all play rooms.

c) Bumpers: Sliding doors to outdoor play should be equipped with bumpers to prevent finger pinching.

- d) Levers: Install **childproof** lever-style door hardware.
- e) Door closers should be slow-release type.
- f) Stops: Wall-mounted to prevent tripping.
 - i. Ensure adequate blocking.
- g) Kickplates: Install on both door faces where required.
 - i. Type 304 stainless steel finish.
 - ii. Install to height of 200mm (8").
 - iii. Install higher kickplates in stroller storage room, janitor's room.
 - iv. Install kickplates on all wood and painted doors.
- h) Provide weather stripping on all exterior doors
- i) Locks/keying: Confirm requirements with client.
- j) Thresholds and Accessories:
 - i. Exterior thresholds and sliding tracks to be aluminum or Type 304 stainless steel.

Windows:

1. Install operable sections at appropriate heights to encourage cross-ventilation. *Best Practice*
2. Install operable windows and operators out of child's reach. **Windows and hardware should not create a hazard**

when in the open position inside or outside a room.

- a) Install 100mm restrictors on all operable windows.
 - b) Utilize concealed hardware where possible.
 - c) High-level operable windows must be equipped with automated opener or manual crank at adult height.
3. Install removable screens in all operable windows conforming to CAN/CGSB 79.1-M.
 4. Minimum Standard: Double-glazed sealed units. All IGU units to conform to requirements of CAN/CGSB-12.8. Consider triple-glazed seal units to offer increased thermal values. *Best Practice*
 5. Consider using Low-E coatings on exterior windows.
 6. Install visible dots on glazing for bird protection.
 7. Hardware:
 - a) Heavy duty Type 304 stainless steel with brushed satin finish.
 - b) Ensure levers and/or cranks do not project out into room.

Frames:

1. All exterior frames and mullions to be thermally-broken.

2. Materials:
 - a) Hollow Metal: Standard gauge commercial grade steel, hot dip galvanized.
 - i. Exterior hollow metal frames to have insulation.
 - ii. Paint finish in accordance with MPI requirements, premium grade.
 - b) Wood: Solid wood, paint or stain finish in accordance with MPI requirements, premium grade.
 - c) Aluminum: Anodized or pre-paint finish in accordance with AAMA requirements.

Fasteners:

1. Type 304 stainless steel.
2. When screws are used, countersink in round, clean-cut hole and plug with wood plug to match material.
3. Set finishing nails to receive filler.

T. Floor Finishes

GENERAL

Quality Assurance:

1. Warranty: Products and material: Extend for a total of two years.

Design Requirements:

1. Flooring throughout should not be slippery when wet. Impermeable flooring with increased slip-resistance to be provided in janitor's room, kitchen, laundry room and washrooms.
 2. All selected flooring material shall be durable and easy to clean and maintain.
 3. All selected flooring materials should be compatible with in-floor heating systems.
 4. Provide chemical-resistant flooring in janitor's room.
 5. Consider indoor resilient athletic flooring in play rooms.
- Best Practice*
6. Baseboard material to match flooring whenever possible.
 7. Ensure transition strips are installed between different materials.
 8. For every proposed floor material, review manufacturer's

- maintenance program with client rep.
9. At completion of work submit, from same product run, an extra 5% of gross floor area covered or to nearest full carton of each colour pattern or type of flooring material and base for client's use. Include sufficient amount of adhesive and finishing material.
 10. Floor Drains: When floor drain provided, slope finish to drain. *Best Practice*
If floor not sloped, provide threshold at door.

Environmental Considerations:

1. All dimensional lumber and plywood to be Forest Stewardship Council certified wood. *Best Practice*
2. Adhesives:
 - a) Use adhesives, sealants and mastics that have low VOC levels per LEED requirements.
 - b) Laminating Adhesive: Water-resistant, low VOC content, CSA 0112 Series.
3. Paints, Stains and Sealants:
 - a) All paints and primers to be no VOC content.
 - b) Perform work to MPI requirements for premium grade.

- c) Provide paint products meeting MPI "Green Performance Standard GPS-1-05".

MATERIALS

Finish:

1. Resilient Flooring:
 - a) All resilient flooring to be non-absorbent, anti-microbial, washable. Linoleum and rubberized cork materials are preferable to rubber or vinyl.
 - b) Use matching welding rods for sheet good seams.
 - c) Place seams in manner to minimize seams in material. Obtain client approval of seam placement before installation.
 - d) Resilient Rubber Base: Provide Resilient Wall Base as per ASTM F1861.
 - i. 100mm high x 3mm thick tapered wedge, including pre-moulded end stops and inner and outer corners.
2. Linoleum Composite Tile: Provide linoleum tile flooring as per ASTM F2195.
 - a) 2.5mm minimum thickness with polyester backing.
3. Linoleum Sheet Goods: Provide linoleum sheet flooring as

per ASTM F2034.

a) 2.5mm minimum thickness with jute backing.

4. Indoor Resilient Athletic Sheet Flooring:

a) 6mm minimum thickness.

5. Rubberized Cork Flooring:

a) 4mm minimum thickness.

6. Vinyl Composite Tile: Provide vinyl tile flooring as per ASTM F106.

a) 3.0 minimum thickness.

b) Patterned VCT is preferable to solid colours.

7. Hardwood Engineered Flooring:

a) All engineered hardwood flooring to be compatible with in-floor heating system if applicable.

8. Tile: Provide porcelain or ceramic tile as per CAN/CGSB-75.1-M.

a) Perform Work of this Section by a company that is a member in good standing of the Terrazzo Tile and Marble Association of Canada with proven, acceptable experience with installations of similar complexity and scope.

b) All floor tile to be through-body porcelain tile.

c) Keep grout lines to a minimum.

d) Use anti-microbial grout in a mid-tone colour. White is not acceptable.

e) Seal grout used in flooring applications or use epoxy grout.

f) Provide tile base with tile flooring. Tile base: Supply bull-nose, coves, caps and inside/outside corners to match floor tile. To 100mm min.

9. Natural Stone:

a) Limestone: In accordance with ASTM C568, Classification III, High Density.

b) Granite: In accordance with ASTM C615.

10. Epoxy:

a) All epoxy flooring to be seamless, “orange-peel” textured for slip resistance.

b) Provide integral epoxy cove base with epoxy flooring to height of 100mm minimum.

11. Concrete: Sealed

a) Prepare surface to be dry and free of dust, oil, wax and other contaminants.

b) Seal concrete surfaces.

12. Concrete: Polished.
 - a) Provide consistent, non-slip finish.
13. Flooring Trims: Transition strips, reducers, edge strips, thresholds:
 - a) Provide appropriate accessories to transition between different flooring materials.
 - b) Aluminum accessories. *Best Practice*
 - c) Resilient rubber or plasticized vinyl finishing accessories.
14. Stair Treads:
 - a) Nosing: Provide rounded profile with non-slip edges on all treads.

U. Wall Finishes

GENERAL

Quality Assurance:

1. Masonry Work: Provide masonry work in accordance with CSA A370, CSA A371, and CSA S304.1.
2. Warranty: Products and Material: Extend for a total of two years.

Design Requirements:

1. All wall corners must be eased and rounded to prevent injury.
2. Provide walls in corridors and play rooms that are resistant to impact, scuffing and peeling from the use of tape to display graphic material.
3. Select durable materials to a certain height in heavy-traffic, stroller storage and play zones. No unprotected drywall to a height of 1220mm unless impact resistant.
4. Provide wall protection in kitchen between top of counter and underside of upper cabinet or to 1800mm minimum above floor.
5. Provide wall protection in laundry room to 1200mm above finished floor, minimum, and 600mm above sink

- minimum. Exposed drywall to be moisture resistant.
6. Provide wall protection in janitor's room to 1800mm above finished floor, minimum. Exposed drywall to be moisture resistant.
 7. For every proposed wall material review manufacturer's maintenance program with client rep.
 8. Prepare all substrate surfaces to be dry and free of dust, oil, wax and other contaminants.
 9. At completion of work submit, from same product run, an extra 10% of gross wall area covered or to nearest full carton of each colour paint or type of material for client's use. Include sufficient amount of adhesive and finishing material.

Environmental Considerations:

1. All dimensional lumber and plywood to be Forest Stewardship Council certified wood. *Best Practice*
2. Adhesives:
 - a) Use adhesives, sealants and mastics that have low VOC levels per LEED requirements.
 - b) Laminating Adhesive: Water-resistant, low VOC content,

CSA 0112 Series.

3. Paints, Stains and Sealants:
 - a) All paints and primers to be no VOC content.
 - b) Perform work to MPI requirements for premium grade.
 - c) Provide paint products meeting MPI "Green Performance Standard GPS-1-05".
 - d) Acoustic sealants: To be in accordance with ASTM C919.

MATERIALS

Substrate:

1. Wet Areas: Install at wet areas including washrooms, kitchen, play room *serveries*, janitor and laundry rooms.
 - a) Concrete block conforming to CSA A165 Series-M.
 - b) Cement board conforming to ASTM C1629 or fiber-reinforced gypsum board conforming to ASTM C1278.
2. High-Activity Areas: Such as gross-motor area, corridors.
 - a) Concrete block conforming to CSA A165 Series-M.
 - a) Impact-resistant GWB Conforming to ASTM C1629.

Acoustic Insulation:

1. Provide acoustic/fire insulation batts for partitions in Supervisor's office and staff room. *Best Practice*

Acoustic Sealant:

1. Provide acoustic sealant conforming to ASTM C919 for all acoustically insulated partitions.
2. Provide sealant for use under floor runner tracks, at partition perimeter both sides and at openings, cut-outs and penetrations, concealed from view in the final installation.

Finish:

1. Paint:
 - a) Use MPI standard premium grade.
 - b) Remove, store and reinstall any hardware and accessories.
 - c) Use satin finish or semi-gloss. No matte finish.
 - d) If drywall is used in kitchen use high-gloss paint finish.
 - e) Consider epoxy paint in high activity areas.
 - f) Conform to gloss reflectance definitions listed in MPI

Specification Manual.

2. Tile: Provide ceramic tile as per CAN/CGSB-75.1-M.
 - a) Perform Work of this Section by a company that is a member in good standing of the Terrazzo Tile and Marble Association of Canada with proven, acceptable experience with installations of similar complexity and scope.
 - b) Wall and Backsplash Tile: Ceramic.
 - i. Provide to a height of 1220mm minimum in janitor's room and washrooms.
 - c) Grout: Anti-microbial and sealed for easy cleaning. Use epoxy grout in kitchen.
3. Polyester Resin Panels:
 - a) Consider providing polyester resin panels to a height of 915mm in corridors and 1220mm in washrooms. Use countersunk fasteners.
4. Linoleum Bulletin Board Sheet Material:
 - a) Linoleum sheet to conform to the requirements of ASTM F2034.
 - b) Install in areas that need wall protection and areas for display, such as corridors, entry zones.

5. Cork:
 - a) Consider cork panels in high activity areas for acoustic properties.
6. Stainless Steel Sheet:
 - a) Install in kitchen to underside of upper cabinets.
 - b) Use 14 ga. Type 304 stainless steel, conforming to ASTM A167.
 - c) Seal joints and edges with clear silicone.
 - d) Perform stainless steel work in accordance with NAAMM, Code of Standard Practice for the Metal Industry, Workmanship, Class 1.

Fasteners:

1. Use fasteners suitable to size and nature of components being installed.
2. Use heavy-duty attachments for wall-mount panels.
3. When screws are used, countersink in round clean-cut hole and plug to match material.

Corner Guards & Wall Protection:

1. Corner Guards: Fabricate corner guards from high-impact rigid vinyl sheet with radiused edges.
 - a) Install corner guards to a height of 1220mm or to height of wall protection.
 - b) Install rounded profile corner guards.
2. Consider clear, removable plexiglass panels to protect wall-mounted art work in corridors and play rooms.

V. Ceiling Finishes

GENERAL

Quality Assurance:

1. Warranty: Products and material: Extend for a total of two years.

Design Requirements:

1. Ceilings should provide acoustic absorption and reflect light.
2. Ceilings in kitchens and washrooms to be finished moisture-resistant drywall.
3. Consider not finishing the ceiling in laundry room, janitor's room and service spaces. If ceiling finished, consider moisture-resistant drywall.
4. For every proposed ceiling material review manufacturer's maintenance program with client representative.
5. Prepare all substrate surfaces to be dry and free of dust, oil, wax and other contaminants.

Environmental Considerations:

1. All dimensional lumber and plywood to be Forest Stewardship Council certified wood. *Best Practice*

2. Adhesives:
 - a) Use adhesives, sealants and mastics that have low VOC levels per LEED requirements.
 - b) Laminating Adhesive: Water-resistant, low VOC content, CSA 0112 Series.
3. Paints, Stains and Sealants:
 - a) All paints and primers to be no VOC content.
 - b) Perform work to MPI requirements for premium grade.
 - c) Provide paint products meeting MPI “Green Performance Standard GPS-1-05”.
 - d) Acoustic Sealants: To be in accordance with ASTM C919.

MATERIALS

Finish:

1. GWB: Provide gypsum board as per ASTM C1396 and finished in accordance with ASTM C840.
 - a) Access hatches should be GWB with reveal. Recess flush with ceiling. *Best Practice*
Paint to match.
 - b) If steel hatches are used, paint to match ceiling.

2. Paint:
 - a) Use MPI standard premium grade.
 - b) Use paint finishes with satin finish for washability.
 - c) When painting existing space, remove, store and reinstall any light fixtures, fire protection equipment and accessories.
3. Acoustic Ceiling Tile: Provide acoustic ceiling products as per ASTM E1264.
 - a) Provide suspension system, acoustic tiles and accessories in accordance with ASTM C635 with white finish.
 - b) Provide an acoustic ceiling tile with a Noise Reduction Coefficient of >0.50. Provide standard size 610mm x 1220mm (24" x 48").
 - c) Provide anti-microbial and stain guard ceiling tiles.
Best Practice
 - d) Do not install ACT tiles in kitchen, washrooms, laundry room, janitor’s room.
 - e) Carefully cut openings in acoustic tiles to accommodate fixtures, etc.

Mouldings and Accessories:

1. Provide corner caps, edge moulding, hold-over clips, metal closures and trim in same finish and colour as ceiling tees.

Acoustic Treatments:

1. If walls do not extend to underside of deck, install acoustic batting over ceilings of Supervisor's office and meeting rooms. Consider installing additional acoustic batting at locations including staff rooms.
2. Consider installing acoustic treatments if walls do not extend to ceiling in shared spaces such as play rooms.

Fasteners:

1. Use fasteners suitable to size and nature of components being installed.
2. When screws are used, countersink in round clean-cut hole and plug to match material.

W. Wall-Mounted and Miscellaneous Accessories

GENERAL

Quality Assurance:

1. Ensure adequate blocking to support accessories.
2. Warranty: Products and material: Extend for a total of ten years.

Design Requirements:

1. Finish to be corrosion-resistant Type 304 stainless steel in accordance with ASTM A167 where required.
2. All accessories to be commercial grade.
3. Provide locks with keys on accessories where indicated.
4. Ensure washroom accessories are recessed where possible to avoid injury.
5. Ensure all accessories are easy to clean and sanitize.
6. Minimize touch points, especially in children's washrooms.

Environmental Considerations:

1. Adhesives:
 - a) Use adhesives, sealants and mastics that have low VOC levels per LEED requirements.
 - b) Laminating Adhesive: Water-resistant, low VOC content,

CSA 0112 Series.

2. Paints, Stains and Sealants:
 - a) All paints and primers to be no VOC content.
 - b) Perform work to MPI requirements for premium grade.
 - c) Provide paint products meeting MPI “Green Performance Standard GPS-1-05”.

MATERIALS

1. Stainless Steel:
 - a) Sheet Metal: ASTM A167, Type 304.
 - b) Tubing: ASTM A312, Type 304.
2. Sheet Steel: ASTM A653M, Z275; Cold-rolled, commercial quality, surface preparation and pretreatment as required for applied finish.
3. Fasteners, Screws and Bolts: Type 304 stainless steel, tamper-proof.

Washroom Accessories:

1. Adult and Barrier-free Washroom:
 - a) Toilet Tissue Dispenser:
 - i. Finish: Type 304 stainless steel or white porcelain.
 - ii. Lockable.
 - iii. Surface-mounted, 1-roll dispenser.
 - b) Soap Dispenser:
 - i. Finish: To be discussed with client.
 - ii. Wall-mounted push button dispenser.
 - iii. Touch-free dispenser. *Best Practice*
 - iv. Lockable.
 - c) Paper Towel Dispenser and Receptacle:
 - i. Recessed or semi-recessed Type 304 stainless steel universal paper towel dispenser.
 - ii. C-fold or multi-fold paper towel.
 - iii. Integrated leak-proof receptacle.
 - d) Grab Bars:
 - i. Type 304 stainless steel with textured surface.
 - e) Automatic Hand Dryer:
 - i. Install energy efficient model.
 - ii. Finish: Type 304 stainless steel or white.
 - f) Shatter-proof Mirrors: Provide mirrors as per CAN/CGSB 12.5M.
 - i. Washroom mirrors: Minimum 6mm thick laminated tempered glass with Type 304 stainless steel frame.

- ii. Barrier-free tilt mirror: Minimum 6mm thick **laminated** tempered glass with Type 304 stainless steel frame.
- g) Hooks:
 - i. Locate one hook near toilet.
 - ii. Locate one hook on back of **washroom** door.
- h) Sanitary Napkin Disposal:
 - i. Self-closing, wall-mounted.
- i) Shelves:
 - i. Folding with automatic spring return when not in use.
 - ii. Metal Shelving: Rust-prohibitive undercoat, durable baked enamel finish.
- 2. Children's **Washroom**:
 - a) Toilet Tissue Dispenser:
 - i. Finish: Type 304 stainless steel or white porcelain.
 - ii. Lockable.
 - iii. Surface-mounted, 1-roll dispenser.
 - iv. Mounting Heights:
 - i. Infant: 280mm (11")
 - ii. Toddler: 330mm (13")
 - iii. Preschool: 380mm (15")
 - b) Soap Dispenser:
 - i. Store-bought bottles on countertop preferred.
 - c) **Shatter-proof** Mirrors:
 - i. Minimum 6mm thick **laminated** tempered glass with Type 304 stainless steel frame.
 - ii. Provide one mirror per sink.
 - iii. If child-height sink is provided in infant change area, locate to accommodate mirror.
 - iv. Use shatterproof reflective material under upper cabinets above change table.
 - d) Paper Towel Dispenser and Receptacle:
 - i. Recessed to avoid injury. *Best Practice*
Or semi-recessed Type 304 stainless steel universal paper towel dispenser.
 - ii. C-fold or multi-fold paper towel.
 - iii. Integrated leak-proof receptacle.
 - iv. Mounting heights:
 - i. Infant: 710mm (28")
 - ii. Toddler: 762mm (30")
 - iii. Preschool: 787mm (31")

- e) Cup Dispenser:
 - i. Surface-mounted.
 - ii. Mounting heights:
 - i.* Infant: 710mm (28")
 - ii.* Toddler: 762mm (30")
 - iii.* Preschool: 787mm (31")
- f) Grab Bars (barrier-free stalls only):
 - i. Type 304 stainless steel with textured surface.
 - ii. Install fold down arm style. Install one bar on either side of the toilet.
 - iii. Mounting heights:**
 - i.* Toddler: 305-355mm (12-14")
 - ii.* Preschool: 455-510mm (18-20")
- g) Adjustable-height Change Bench:
 - i. Bench should adjust from transfer height to changing height.
- h) Fixed-height Change Bench:
 - i. Surface-mounted seat of 13mm phenolic.
 - ii. Mounting Heights:
 - i.* Preschool: 305mm (12")
 - iii. Provide rough-in for ceiling lift.

- i) Washroom Partitions:
 - i. Ceiling or wall-mounted is preferred.
 - i.* Install pilaster boot assembly and wall connections in Type 304 stainless steel.
 - ii.* Mounting Height: Toddler: 762mm (30")
 - iii.* Mounting Height: Preschool: 965mm (38")
 - ii. Hardware:
 - i.* All hardware to be heavy-duty Type 304 stainless steel with satin finish.
 - ii.* Type 304 stainless steel frame.

**Play Room and Staff Room Serveries,
Laundry Room and Kitchen Accessories:**

1. Paper Towel Dispenser:
 - a) Type 304 stainless steel finish.
 - b) C-fold or multi-fold paper towel.
 - c) Lockable.
 - d) Wall-mounted style.
2. Soap Dispenser:
 - a) Finish:
 - i. Type 304 stainless steel.

- b) Wall-mounted push button dispenser.
- c) Mount so that spilled soap stays on counter.
- 3. Shelf:
 - a) Wall-mounted, corrosion-resistant shelf. Locate near sink (Laundry Room only).

Janitor Room Accessories:

- 1. Janitor shelf with mop/broom holder and hooks:
 - a) Heavy duty, corrosion-resistant 18 ga. Type 304 stainless steel finish.
- 2. Chemical dispensing unit:
 - a) 4-reservoir dispensing system, wall-mounted and lockable. *Best Practice*
 - b) Mount securely above janitor sink.

Bulletin Boards:

- 1. Material:
 - a) Uni-coloured linoleum, natural homogeneous, resilient, tackable and washable surface conforming to ASTM F2034.
 - b) 6mm thick self-healing sheet material with jute

- backing.
- c) Seamlessly join sheets to avoid division within large bulletin board surfaces.
- d) Consider plexiglass protective covers conforming to CGSB-12.12 for lower bulletin boards.
- e) Cork with aluminum or wood reveal trim.
- 2. Frame:
 - a) Anodized aluminum 3mm (1/8”) reveal framing system (no overlap frame) preferred. Elite reveal framing system by Architectural School Products or approved alternative.

Whiteboards:

- 1. Material:
 - a) Consider porcelain-on-steel writing surface, dry erasable and washable, magnetic. *Best Practice*
 - b) Provide High Pressure Laminate writing surface, dry erasable and washable.
 - c) Select colour with client representative.
- 2. Anodized aluminum 3mm (1/8”) reveal framing system (no overlap frame) and chalk/pen rail preferred. (Elite

reveal framing system by Architectural School Products or approved alternative).

Lockers:

1. Staff Room: Lockable, 1/3 size (triple tier) lockers.
2. Confirm number required with staff.

Fasteners:

1. All fasteners to be chrome-plated or stainless steel Type 304, non-ferrous tamperproof type screws and bolts.
2. Ensure sufficient blocking and anchorage for wall-mounted items.
3. Use heavy-duty attachments for wall-mount accessories.
4. Conceal all Fasteners: When screws are used, countersink in round clean-cut hole and plug with wood plug with finish to match adjacent finish. Set finishing nails to receive filler.

X. Window Treatments and Solar Control

GENERAL

Quality Assurance:

1. Do not install PVC blinds, vertical or venetian blinds.
2. Ensure no cords are within reach of children when children are on the floor or furniture, or provide some other child safety approach with regard to the cord.
3. Ensure adequate blocking to support window treatments and shading devices.
4. Warranty: Products and material: Extend for a total of ten years.

Design Requirements:

1. Bring as much natural light into building as possible.
2. Window treatments should be cleanable and durable.
3. Roller shades must be installed at all openings to exterior and corridor for operators lock down procedures. Ensure shades suit all opening types - regular and irregular.
4. To support passive heating and cooling, prevent direct summer daylight from reaching interior surfaces, but allow direct daylight to warm the interior in the winter. The above point assumes that the HVAC system zoning is

compatible with this approach.

MATERIALS

Manual Roller Shades:

1. Wall- or ceiling-mount depending on site condition.
2. On exterior openings, mount shades above glazed doors for operators lock down procedures.
3. Best practice is electric switch operation, or manual crank style, wall-mounted at adult height for safety.
4. Manual chain operation roller shades must be secured at adult height.
5. Fabric:
 - a) Sheer woven with 3% openness factor.
 - b) Fabric shall be certified by an independent laboratory to pass CAN/ULC-S109 Large Flame Test.

Exterior Awnings:

1. Retractable Awnings: Manual crank operated or electric controls. Awnings prevent solar radiant energy from penetrating into the building envelope. *Best Practice*
2. Locate controls inside rooms at adult height.

Fixed Sun Shading:

1. Exterior shading devices and/or extending building overhangs offer the benefits of stopping solar radiation from entering the building. This will aid in the energy efficiency of the building and provide a higher level of environmental comfort. It also allows for clear views out the window as interior shades do not have to be drawn. Careful consideration must be taken by the designer to respond to building aesthetics.

Solar Shelf:

1. Consider installing an interior window shelf to reflect incoming sunlight toward ceiling.
 - a) This protects occupants from direct sunlight and distributes natural sunlight deeper into the room, allowing blinds to remain open for direct views outside.

Y. Mechanical Items

GENERAL

Quality Assurance:

1. Locate all mechanical equipment in a dedicated room.
2. Locate meters, controls, equipment and fixtures requiring maintenance in readily accessible areas.
3. Avoid placing exterior mechanical equipment in or adjacent to the outdoor play space.

Design Requirements:

1. Back flow preventers should be installed as per the Ontario Building Code.

MATERIALS

HVAC:

1. Main System:
 - a) General: System to be stand alone where possible. Packaged forced air units are preferred. Where facility is part of a larger building and will be connected to a central system, ensure that control is provided locally to suit child care facility hours.
 - b) Heating Systems: If baseboard or wall heaters are

- installed, protect with shields to prevent children coming into contact with hot surfaces.
- c) Provide a heated vestibule. Installation of low profile or in-wall heaters is preferred over baseboard style.
- d) Air Conditioning:
 - i. Should be zone controlled for children's comfort.
 - ii. If central air is not provided, provide through-wall units as opposed to window units.
- 2. Radiant Floor Heating: **Priority** in infant rooms **and recommended** in toddler areas. *Best Practice*
 - a) Ensure flooring material is compatible with selected radiant floor system.
 - b) Control: Install individual temperature/timer control in each room.
 - c) In rooms with radiant flooring, shading devices are especially important to control.
 - d) **Where radiant floor heating is not possible at ground floor, consider under slab insulation.**
- 3. Duct Silencers:
 - a) Consider where required to maintain acceptable noise levels with forced air systems.
- 4. Filters:
 - a) 50mm disposable type.
- 5. Zoning and Controls:
 - a) DDC (direct digital control) with module for internet access and future control.
 - b) Provide separate zones for all sleep rooms, play rooms and gross motor areas.
 - c) Perimeter areas to be a separate zone. *Best Practice*
 - d) Install carbon dioxide sensors for fresh air control in high occupancy rooms on packaged forced air systems.
- 6. Diffuser and Grille Placement:
 - a) Low level supply and high level return. Ensure that low level outlets have no sharp edges or holes where children's fingers can be lacerated or wedged. *Best Practice*
- 7. Humidification: Required.
- 8. Ceiling Fans:
 - a) Equip with local speed control switches. *Best Practice*
- 9. Exhaust Systems:
 - a) Provide exhaust vents (including but not limited to the kitchen exhaust, laundry dryer vent, washroom and

- change area vents and mechanical combustion vents). Vents should not outlet in the outdoor play area.
- b) Provide higher than Code minimum exhaust rates for change areas and janitor's room.
 - c) Provide means to start exhaust systems serving main kitchen, children's change areas and washrooms prior to staff arrival in the morning.
 - d) Ensure adequate ventilation and exhaust fan in **washroom** and change room areas. The fan should be on a separate switch from lights.
 - e) Adult washroom exhaust to be connected to room light switch.
 - f) Main Kitchen: Provide minimum two-speed residential type range hood for kitchen where electric stove is installed.
 - g) Provide vapour hood over dishwasher in main kitchen and interlock to dedicated exhaust fan.
 - h) Hub Room: Provide transfer fan with reverse-acting thermostat; air conditioning to be reviewed for large hub rooms (site specific).
 - i) Locate equipment to minimize duct run. **For example,**

locate a dryer in such a way that the run for its vent is minimal.

- j) Provide heat recovery. *Best Practice*
10. Energy Efficiency:
- a) Provide high efficiency equipment.
 - b) If required, coordinate with Building Automation System (BAS) to control temperatures and equipment to facility schedule.
 - c) Programmable sensors to have minor local temperature adjustment and lockout feature.
 - d) Control kitchen and children's washroom and change area exhaust fans by BAS.
 - e) Employ night setback features.
 - f) Employ occupancy controls to allow larger temperature range in children's rooms when room is vacant.

Plumbing and Drainage:

1. Water Supply:
 - a) Separate meter or check meter required.
2. Water Heater:
 - a) High efficiency (natural gas where possible); consider

- gas-fired tankless unit(s).
3. Sanitary Drainage:
 - a) Provide heat recovery. *Best Practice*
 4. Stainless Steel Floor Drains:
 - a) Required in all washrooms, kitchen, laundry room, janitor's room, basement, stroller storage rooms and outdoor storage. Ensure floor is sloped appropriately.
 5. Hot Water Supply:
 - a) Provide reduced hot water temperature water supply to all children's sinks via a central mixing valve. A local mixing valve is acceptable for the adult washroom.
 - b) Provide high temperature water in kitchen, laundry room and janitor's sink.
 6. Toilets:
 - a) Install low-flow fixtures; dual flush toilets. *Best Practice*
 - b) Infant and toddler toilets: 10" high bowl, child-size round bowl (American Standard Baby Devoro or equal) tank style preferred. Provide toilet seat with hand grips.
 - c) Preschool toilets: Adult size tank style preferred.
 - d) Adult toilets: Manual dual flush valve desired. Wall-hung style. *Best Practice*

7. Sinks :
 - a) General:
 - i. There should be no splash at sinks. For example, do not use shallow sinks with gooseneck faucets.
 - b) Play Room:
 - i. Art sink: Minimum 250mm deep stainless steel single bowl sink.
 - ii. Install clay/sediment traps on all play room sinks.
 - iii. **Servery sink: Minimum 200mm deep stainless steel undermount single bowl sink. Wall mounted sink with carrier may be used in lieu of child height servery. Mount at height suitable for age group.**
 - iv. Faucet to include spray nozzle on flexible hose for toy cleaning.
 - v. **Toy Wash Station: Minimum 200mm deep steel undermount triple bowl sink. *Best Practice* Where space does not allow, double bowl sink is acceptable.**
 - c) Janitor's Room:
 - i. Install a floor-mounted mop sink with recirculating pump type backflow preventer on water supplies.

- Equip with swivel faucet and hose.
- ii. Provide a separate hand wash sink with eye wash station.
- d) Kitchen:
 - i. Triple stainless steel sink, integral to counter. Provide gooseneck kitchen faucet and hand-held attachment that can reach to all sinks. Ensure adequate overflow prevention is provided in sink design.
 - ii. Provide a separate single basin hand wash sink minimum 600mm away, **with eye wash station**. Locate near door. Should be pedal-operated or automatic controls.
 - iii. Provide recessed grease interceptor.
 - iv. **Designated food washing sink. *Best Practice***
- e) Laundry Room:
 - i. Install a suitably sized single laundry sink or tub with gooseneck faucet and hand-held attachment on hose, **unless a toy wash station is included**.
- f) Children's Washrooms:
 - i. **Mount sinks at height suitable for age group.**
 - ii. **Accessible sink to be semi-counter mounted type or wall mounted type with carrier, as per AODA standards.**
- g) Infant/Toddler Change Area/Washroom:
 - i. Provide an in-unit stainless steel sink for hand washing at change table, or - if feasible - one that is deep enough to wash a child. Provide paddle handles and a hand-held shower attachment.
 - ii. **A height-appropriate separate child-sink should be provided.**
- h) Barrier-free Adult Washroom:
 - i. Wall-mounted sink complete with no-touch faucet.
- i) Staff Room:
 - i. Barrier-free, single basin stainless steel sink with paddle faucet.
- j) Outdoor Play Area:
 - i. **Sink: Provide an outdoor deep sink (industrial) and water sources at different levels for varied play opportunities and hand washing. *Best Practice***
 - iii. Provide heat tracing on outdoor water supplies. Drains should not terminate onto grade.

8. Faucets: Make faucets accessible to children when intended. For example, mount faucet at side of sink so it is closer to the child.
 - a) Use faucets that minimize splash and install temperature control to avoid scalding.
 - b) Energy Efficiency: Low-flow aerators on faucets.
 - c) In areas accessible to children, use sensor faucets to minimize touch points.
9. Additional Water Connections/Rough-ins to Appliances:
 - a) Washing machine.
 - b) Dishwasher
 - i. Commercial dishwasher in Kitchen.
 - ii. Residential energy-efficient dishwasher in Staff Room. *Best Practice*
10. Outdoor Play Areas:
 - a) Hose Bibs: Provide vandal-proof, non-freeze type hose bibs complete with backflow preventer to City standards in outdoor play area and outdoor garbage areas.
 - b) Provide a minimum of one hose bib per outdoor play area (infant, toddler, preschool). If located in centre of play area, provide childproof cover.
- c) Install water supply to:
 - i. Water table/play area
 - ii. Irrigation system
 - iii. Water fountain.
 - iv. Hose bib.
- d) Site Drainage: Provide catch basins with sediment pit (to collect sand) in outdoor play area. Basin grate to be heel-proof or equivalent (smaller perforations to prevent children from dropping toys into the basin).
- e) Supply water fountain in outdoor play area.
- f) Potable water must be supplied at all outdoor water play areas.
11. Natural Gas:
 - a) Separate meter or check meter required.
12. Fire Protection System:
 - a) Fire Extinguishers: Strategically locate to avoid high activity children areas.
 - b) Consider evacuation equipment for upper floor child care centres. Locate in an unobstructed and easily accessible area.

Z. Electrical Items

GENERAL

Quality Assurance:

1. Provide a dedicated electrical room.
2. Locate meters, controls, equipment and fixtures requiring maintenance in readily accessible areas. **Coordinate layout to ensure clarity and to meet clearance requirements as required.**
3. Avoid placing equipment in or adjacent to the outdoor play space.

Design Requirements:

1. Lighting should be designed to be bright but calming. Lighting should not be harsh.
2. Consider installing a variety of fixture types and lighting levels.

MATERIALS

Lighting:

1. General:
 - a) Lighting should be easy to maintain and easy to change bulbs.

- b) No light fixtures to have exposed bulbs.
 - c) Within adult work areas, provide indirect lighting in lieu of overhead fluorescents.
 - d) Provide valence lights under all upper cabinets over counters complete with separate local switch.
2. Specific Concerns by Area/Rooms:
- a) Corridors and Public Areas:
 - i. Provide appropriate night lighting in main vestibule, corridors and rooms with street exposure (strategically located depending on site).
 - b) Offices:
 - i. Provide a variety of lighting types including task, adjustable, indirect overhead.
 - c) Staff Room:
 - i. Lighting should be calm—non-fluorescent. Consider a variety of lighting sources including dimmable pot lights, floor/table lamps, under-counter lighting at **servery**.
 - d) Play Rooms:
 - i. Lighting: Provide dimmable fixtures. *Best Practice*
 - ii. If dimmable fixtures are not possible, ensure that a minimum of half of the light fixtures are separately switched.
 - iii. Provide variations in lighting types with separate switching for each type.
 - iv. Diffuse lighting preferred. For example, fluorescent fixtures with a large percentage of up-lighting.
 - v. **Lighting in play rooms must have a level of at least 55 dekalux.**
 - e) Sleep Rooms:
 - i. Cove lighting preferred in sleep rooms.
 - ii. Provide calm adjustable lighting. Consider installing dimmable lights or sconces. Locate fixtures so light does not shine directly in children’s eyes.
 - iii. Lighting should be on a separate switch from the rest of the play room.
 - f) Change Area:
 - i. Fixtures in change area to be shielded for glare.
 - g) Activity Room **Washrooms**:
 - i. Consider under-counter lighting in dark **washrooms** for children. Put on a separate switch.
 - h) Storage:

- i. Provide lighting in large storage cabinets to be energized by door switch.
 - ii. Provide lighting and electrical outlet in outdoor equipment storage.
- 3. Fixture Types: Lenses required on fixtures in all areas:
 - a) Fluorescent: 1200mm long T5 desired, 1200mm long T8 acceptable.
 - b) LED fixtures: *Best Practice*
 - c) Minimize use of incandescent fixtures **within play rooms** to improve energy efficiency.
 - d) Review colour and temperature quality of light fixture lamps with client (CRI and K-value).
- 4. Controls:
 - a) Provide master switch to de-energize all fixtures, except night lights, at staff entrances.
 - b) Sensors:
 - i. Dual technology motion sensor switches to be used in adult and barrier-free washrooms, laundry room and janitor's room. Review other locations with client.
 - ii. Daylight Sensors: Confirm locations with staff.
- c) Lighting in perimeter of rooms with glazing to be switched separately with photocell wired-in series. *Best Practice*
 - d) Allow for multiple light levels in activity rooms and gross motor area. *Best Practice*
 - e) In washrooms provide a separate switch for lights and exhaust fan.
- 5. Emergency Lighting:
 - a) required in washrooms, office, janitor's room and kitchen, corridors.
- 6. Exterior and Site Lighting:
 - a) Required at all entrances, exits, pathways to parking, **parking area**, outdoor play areas and outdoor storage container.
 - b) Control of outdoor play area lighting to be by photocell and motion sensor.
 - c) All other exterior lighting to be controlled by photocell (on) and 7-day timer (off).

Power:

- 1. Metering: Separate or check meter when in shared facility.

2. Provide more electrical outlets than the minimum required by Ontario Building Code (residential), at various heights and childproof.
3. Ensure convenience outlets are located in corridors and gross motor areas.
4. Provide above-counter GFI outlets at all wet areas including janitor's room, laundry room, kitchen, **serveries**.
5. Distribution: Ensure service size includes future air-conditioning load for entire facility.
6. Provide weatherproof electrical outlets in outdoor play areas and outdoor storage sheds.
7. Appliances requiring separate circuits: Microwaves, fridges, photocopier, stove/oven, dishwasher.
8. Provide three over-counter duplex outlets for each **servery**.
9. Heat-trace sloped roofs where snow/ice might fall on pedestrians.
10. Heat trace barrier-free ramps where not covered.
11. Heat-trace exterior entry zone. *Best Practice*
12. Provide power and conduit rough-in for all barrier-free doors.

Fire Alarm System:

1. Strobes: May bring on an epileptic seizure. To the extent allowed, avoid locating strobes where they will impact children.
2. Fire alarm pulls must be equipped with protective, child-proof covers.

Information Technology:

1. Cabling: MCCS facilities to follow latest City of Toronto Standards.
2. Provide Hub Room/Closet. Location should not require access through other restricted access room – to be reviewed (site specific).
3. All cabling to be in conduit or raceway system.
4. UPS: Locate in hub room.
5. Voice and Data:
 - a) Provide voice and data outlets **as required** in all offices (including fax line in main office), play rooms, staff room and kitchen.

Security System:

1. Main Entry Access Equipment:
 - a) Provide a video intercom system connected to Supervisor's office, all play rooms and main kitchen in the centre. Equip in-room intercoms with remote door release buttons.
 - b) Keypad/card reader access required at main and second staff entrance if applicable.
2. Entry System Sequence:
 - a) Automatic door operators required at main entrance and should be connected to the key pad access system.

Audio-visual:

1. Rough-in conduit and power for projectors in meeting and staff rooms.

Feedback

Please take a few moments to give feedback. Submit your comments to: childcare@toronto.ca, and mention “Design Guidelines” in the subject line.

Part A:

General Comments on the Design and Technical Guideline:

Part B:

Suggestions for Revising or Expanding the Current Design and Technical Guideline. Please include:

- Section including page #:
- Description of Suggested Revision (attach additional material if necessary):
- Reason for Request:

Contact:

Name:

Company:

Contact Email (for receipt of guide revisions and updates):

www.toronto.ca/children/childcaredesign