



LONG TERM CARE FACILITY REQUIREMENTS

Requirements for Nursing Home Design in Nova Scotia

May 2020

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INTRODUCTION AND PURPOSE

Long term care facilities are an important component of care for Nova Scotians. The Department of Health and Wellness Nursing Home facility requirements describe design concepts that emphasize smaller scale, residential, household design features.

Evidence and leading practice links resident quality of life to the use of small, self-contained households. Smaller households allow for care to be organized in a way that more closely resembles normal daily life. This approach to design and care supports independence for residents, and decreases noise levels, leading to reduced resident agitation, and increased social interaction. Smaller units have also been shown to contribute to a calmer environment for both residents and staff, reducing staff stress and increasing staff job satisfaction.

Further, given the increasing prevalence of dementia, it is imperative that nursing homes are designed thoughtfully with this population in mind, ensuring the built environment will¹:

- Support resident independence and choice;
- Support resident orientation;
- Provide appropriate physical and cognitive stimulation; and
- Provide residents with a feeling of safety and security.

Three key design elements, supported by research, that support this philosophy are small households, private resident bedrooms and bathrooms, and readily accessible outdoor space. Resident households must be designed to minimize travel distances for residents and staff, and to provide staff with appropriate and adequate sightlines throughout the household. Other features include access to small kitchenettes for residents, and household living rooms. Long term care facilities are also uniquely positioned to support community connections - to increase opportunities for residents to continue to interact with the larger community. By providing space that facilitates such connections, facilities can help to strengthen the social capacity of their community, based on their unique needs.

The purpose of this document is to provide direction on the design and general layout of Nursing Homes within Nova Scotia. Parameters around the sizing of spaces, what spaces are required, and adjacencies of those spaces can be found within the following pages. The document outlines:

1. **Space Standards**- Required spaces that must be present in all new long term care facilities. The Space Standards outlined in this document are based on leading practices, centred on small household design, which reduces the number of residents living in one household. This approach to design and care supports independence for residents and decreases noise levels, which leads to reduced resident agitation, and increased social interaction. Smaller units have

¹ Bill Benbow (2014). Dementia Design Guidelines: Benbow Best Practice Design Guideline for Nursing Homes. http://wabenbow.com/?page_id=2

also been shown to contribute to a calmer environment for both residents and staff, reducing staff stress and increasing staff job satisfaction.

2. **Considerations**- Areas where flexibility exists in design to allow innovation and processes to address local community needs. This section of the document includes information that is based on evidence, related to both care and design in long term care, along with information shared by other stakeholders.

This document is not intended to be a complete inventory. Service providers are responsible to ensure that the necessary space, equipment and furnishings support the delivery of care. The facility design must be carried out by designers (e.g. Architect / Engineering team) who are experienced in long term care facility design and are fully conversant in current LTC best practices. If service providers propose to move significantly away from the intended outcome of a space, it is expected that clear rationale will be provided to DHW for consideration and approval.

Efforts have been made to ensure all information in this document aligns with known, adopted and enforceable Codes and Standards within the Province of Nova Scotia. However, should anything within this document contradict or contravene accepted technical Codes or Standards, the latter (provided they are legally binding) shall take precedence.

PRINCIPLES

RESIDENT AND FAMILY FOCUS

- Help residents maintain choice and self-determination as their need for support increases.
- Encourage residents and families to be partners in care.
- Support a holistic approach to resident focused care - addressing physical, social, mental and spiritual well-being.
- Enable flexible scheduling of activities of daily living that maximizes residents' abilities and provide opportunities for meaningful interactions with other residents, family, staff and the community.
- Provide a clean, accessible, comfortable, homelike and safe environment for residents and family.

STAFF FOCUS

- Support the occupational and organizational health, well-being and safety of staff
- Provide a workplace for staff that is pleasant, safe and efficient.

ECONOMIC VIABILITY AND ACCOUNTABILITY

- Service providers must demonstrate fiscal responsibility during construction and operational life of the facility.
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NURSING HOME DESIGN STANDARDS

- All nursing homes in Nova Scotia shall:
 - Meet or exceed municipal, provincial and federal legislation and regulations. See Appendix A.
 - Provide barrier free accessibility in conformance with applicable building codes and regulations.
 - Use design principles, standards and materials that improve safety and reduce risk for residents.
 - Use design standards that minimize spread of infection and are aligned with infection prevention and control leading practice.
 - Include all spaces that are required for the provision of long term care.
 - Use a small household design that includes a maximum of 24 residents.
 - Ensure outdoor spaces are readily accessible to residents.
 - Incorporate current best-practices in dementia-friendly design of interior and exterior resident spaces, including the use of wayfinding principles.
- The design of the building and its systems are an integral part of the planning and commissioning process. There must be a coordinated effort between design, execution, start-up and functional testing; ensuring the design intent has been met. Documentation, manuals and employee training is a required part of this process.

SITE LOCATION AND CHARACTERISTICS

OUTCOME

The site will provide an opportunity for building design, building configuration and site development to support a home-like and safe environment for residents

SPACE STANDARDS

Sites for new Nursing home facilities shall:

- Be large enough to accommodate the building and readily accessible outdoor space for residents.
- This means facilities must:
 - Ensure adequate clearances at the driveway and entrances/exits for ambulances, fire trucks and service vehicles.
 - Accommodate outdoor spaces for use by residents. All exterior courtyard/garden areas are to be wheelchair accessible, fenced and have controlled access/egress that can be appropriately secured. Outdoor space design shall be dementia-friendly (e.g. circular pathways that enable secured/supervised wandering).
 - Have outdoor spaces that include adequate lighting and ensure that glare from fixtures does not impact resident rooms and other indoor spaces.
 - Have paved routes for all exits to outdoor spaces used by residents.
- Consider how food and laundry services will be provided.
- Use consistent pavement color and non-glare surfaces.
- Have service areas including fuel tanks, garbage and receiving screened from adjacent neighbours and from resident rooms to minimize visual and acoustic impact.
- Have sufficient water supply and pressure for sprinklers, other water-based fire protection systems and fire fighting. Where municipal systems are used, confirm pressure and supply of fire water to site with the local water utility.

CONSIDERATIONS

- Consider water drainage and flood plains when determining the appropriate site.
 - The site should be accessible to public transportation for use by families, staff and residents, if provided in the local community. Consider the need for a barrier free route.
 - The site should be centrally located in the community with reasonable access to medical services, shopping and recreation services.
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- Where possible, avoid heavily sloped sites that will require significant earthworks for regrading or result in highly sloped driveways, walkways and/or retaining of soils.

BUILDING CONFIGURATION AND LAYOUT

OUTCOME

The layout of the facility will enhance the residents' ability to easily access and enjoy living spaces, including amenities and the outdoors.

SPACE STANDARDS

BUILDING CONFIGURATION AND LAYOUT

- For facilities more than 48 beds, the building gross area must not exceed **83.62 gross square meters (900 gross square feet)** per resident. For facilities of 48 beds, facilities must not exceed 84.54 gross square meters (910 sq. ft.). This area assumes the central kitchen, central laundry, receiving, admin, etc. are all included as part of the building. If these functions are located at another facility, the area per resident is expected to be proportionately below this threshold.
 - Resident rooms must be grouped into households containing 16 or 24 residents.
 - Households with 24 residents, they must be split into two clusters of 12 resident rooms to reduce travel distances. These two clusters will share living/dining space that holds all residents in the household.
 - Resident household sizes must be carefully aligned with staffing model to ensure safe facility operations.
 - Resident households may share some service/amenity spaces with adjacent households but should fundamentally operate as independent units from the day-to-day perspective of residents.
 - Facilities will be designed with a central administrative and shared support service core.
 - Residents, staff and families must not travel through one resident household to access another resident household. However, interconnections between households should be incorporated if their inclusion increases efficiency and/or safety.
 - Facilities will provide appropriate wayfinding signage for residents, families and guests.
 - Facilities must provide **3-4 NSM** per resident of living/activity space in the facility. A minimum of **2.5 NSM** must be located on the household. The remaining area of living/activity space can be allocated according to the needs of the overall facility's residents.
 - Facilities will include a resident kitchenette in each household. Decisions regarding the use of a servery or central kitchen will be based on the facility's food service delivery model.
 - In order to observe resident flow and activities, sightlines for staff shall be considered when designing spaces such as common areas, corridors, and outdoor spaces.
 - Service spaces such as the commercial kitchen, laundry, staff areas, storage, and maintenance shall not be accessible to residents.
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- Staff should have a separate space to carry out tasks that would require quiet work and privacy. The use of technology should be considered when designing the space.
- Corridor widths must meet code requirements based on occupancy type, occupant load and exit capacity. At a minimum, width of corridors in resident and public areas shall be 6'-0".
 - Wider corridor widths (up to 8'-0") may have benefits related to resident supervision, movement of residents and equipment, and longevity of surface finishes.
 - If corridor widths narrower than 8'-0" are used, facilities must avoid equipment and furniture located in corridors, which present obstructions to required egress width. Provide appropriate storage outside of egress routes to avoid potential obstructions.
- The ceiling height in the facility is not to exceed 3.65 meters.
- Multi-storey facilities are permitted in response to site constraints, facility size and/or operational constraints. Facility operators must carefully assess the design, safety and operational implications of single-storey vs. multi-storey configurations during the programming, planning, design, and operationalization phases of new LTC projects.
- Quantities, locations and design requirements for Hand Hygiene Sinks (HHS) throughout the facility must be determined based on an Infection Control Risk Assessment (ICRA) for the facility.
 - The level of care provided to the residents shall be considered when determining the need for HHS in resident bedrooms. The locations for HHS must be considered during the planning process and be appropriately aligned with the functional program.
- All washrooms and hand wash facilities must include a paper towel dispenser and liquid soap dispenser. Hand sanitizer must also be available.
- The facility must have a building security system that supports controlled access and egress. Each resident house must have egress delayed hardware to support the safety of residents who may be exit seeking.

OUTDOOR SPACE

- Grade-level outdoor access from resident houses is required for one story buildings.
- When designing outdoor spaces, it is important to consider resident and staff safety. The design shall block resident elopement and unlawful entry by others.
- Do not use poisonous plants.
- In multi-storey facilities, access to outdoor space must be provided from each household. Such space may take the form of balconies and/or rooftop patio spaces and should provide opportunities for connections with the outdoor environment (e.g. planters, bird feeders, etc.).
 - The size of such spaces at the household level shall be carefully considered and aligned with their intended use.

- Such space must be able to accommodate seating capacity of 25% of household residents at a time and must support planned programming for the facility. 3NSM should be allocated for each resident.
- Careful consideration must be given to access, supervision, safety and maintenance of such spaces including access for residents using wheelchairs/walkers etc.
- Dissuasion/prevention of bird roosting and nesting must be considered in the design of balcony spaces.
- Ensure railing height does not place resident at risk of falling off upper deck and style does not encourage resident to climb on/over railing. Railing height will meet DHW's or the NBC requirements, whichever is more stringent. DHW's requirement is a minimum of 1370 mm. Consideration should be given to not impede view of residents who use wheelchairs.

BUILDING ENTRANCE AND EXIT

- A covered vehicle drop-off/pick-up area for residents must be located adjacent to the main entrance.
- Have entrance/exit doors that are barrier-free and designed to prevent drafts and that must include a system for delayed egress that supports resident safety.

CONSIDERATIONS

BUILDING CONFIGURATION AND LAYOUT

- Resident households with small groups of residents provide the following benefits:
 - Flexibility to group residents with similar needs (e.g. dementia, young adults).
 - Ability to tailor each resident house activities to the needs and preferences of the residents.
 - Supporting a staffing model that enhancing continuity of care and relationships with the residents and families.
 - Shorter travel distances for residents between bedrooms, living room and dining room.
 - On-household activity/amenities, both indoor and outdoor, increase resident participation.
 - Consider design solutions to prevent/reduce dead-end corridors in resident areas.
 - Consider how best to provide exposure to sunlight, as this leads to increased physical activity and improves sleep duration.
 - When planning living space, consider ways to provide quiet space for residents.
 - Review and consider leading practices in Infection Prevention and Control (IPAC) in facility design plans. Engage Infection Prevention and Control personnel regularly throughout all stages of design and construction.
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BUILDING ENTRANCE AND EXIT

- Open access to secure outdoor spaces must be considered. Exit control shall also be incorporated into the design to prevent resident elopement from the main building and from the neighborhoods. This can be implemented in a variety of ways such as, electronically locked doors, non-intrusive security monitoring, and a resident-worn exiting alarm system. Coordinate means and methods of exit control with applicable codes and authorities having jurisdiction.
- Provide living room style fire retardant healthcare furniture for the entrance foyer.

OUTDOOR SPACE

- Consider intent of outdoor space and plans for resident use when designing outdoor space. Providing outdoor space for residents who wander may be difficult in certain multi-storey designs. When that is the case, the design of the building interior to allow resident wander will be increasingly important. Multi-storey facilities may require additional exterior space (e.g. gardens/courtyard/wandering space) to accommodate residents who wander on grade-level storeys of the facility.
- Consider sight lines when planning to support staff in supervising residents.
- Provide continuity between indoor space and outdoor space, subject to seasonal restrictions.
- Provide a closed loop patterned pathway system that provides shade for residents and is protected from wind and harsh weather elements.
- Preserve and enhance existing planting wherever possible.
- Provide deciduous trees to shade building and outdoor spaces and coniferous trees to create wind breaks.
- Provide planting for sensory experience (e.g. sound, touch, smell). Consider raised garden beds.

INTERIOR FINISHES AND COMPONENTS

OUTCOME

Buildings will support safe, resident-centred care, and efficient operations. Facility design and interior finishes should remind residents of home, be durable and support Infection Prevention and Control

SPACE STANDARDS

- The design, layout and finish of the home shall be residential in scale. The intended use of the space must be considered when determining the quality of materials.
 - Interior design shall incorporate current recommendations and evidence regarding dementia-design and be aligned with wayfinding strategies for the facility.
 - Thresholds and transition strips shall be flush. Objects and features shall not be placed below a resident's field of vision.
 - Resident rooms must have individual temperature control that can also be managed from a central location.
 - Residents may struggle to differentiate within very light and very dark colour ranges and the colour scheme shall minimize that by avoiding a monochromatic colour scheme. The facility design will include the use of color to highlight resident rooms and conceal rooms not intended for resident use.
 - Provide finishes with the following minimum Light Reflective Values: Ceilings 80-90 LRV, Walls 60-80 LRV, Floors 30-50 LRV.
 - Avoid materials and finishes that may lead to unintended misinterpretation of visual planes (e.g. shiny floors reading as wet, sky imagery on walls, etc.).
 - Floor colors shall contrast with wall colors to facilitate spatial perception for sensory impaired persons.
 - All edges on counters, cabinets and corners in resident areas must be smooth and rounded.
 - Wall areas below handrails and wall corners in corridors and common areas that are frequented by residents and portable equipment must have "abuse resistant drywall" and treatment or coverings that protect the wall surface (e.g. corner guards and bumper rails). Aesthetic protection treatments such as wooden wainscoting or paneling should be considered.
 - Exposed masonry, concrete, and gypsum board surfaces in resident/public areas must be painted. Resident safety must be considered in the choice of materials and finishes.
 - Handrails must be securely mounted on both sides of corridor walls in resident areas. The height and width of handrails must comply with building code.
 - Interior products and finishes used shall be appropriate, code-compliant, and warranted for use in long term care facilities.
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- Window draperies, cubicle/privacy curtains and bed linens shall be tested to CAN/CGSB-4.162 "Hospital Textiles - Flammability performance Requirements", per requirements of the National Fire Code.
- Mattresses used in LTC facilities must be tested to CAN/ULC-S137 "Standard Method of Test for Fire Growth of Mattresses (Open Flame Test)" per requirements of the National Fire Code.
- Upholstered furniture, chairs, tables and other related furnishings within the perimeter of a space open to an access to exit (e.g. open plan living/dining areas) shall be tested to recognized flammability standards.

FLOORING

- Decisions regarding flooring and finishes must be made with consideration to preventing falls and promoting resident mobility. Patterned floors should be avoided.
- Floor finish colors must be carefully considered to prevent confusion by residents with perceptual and visual impairments.
- The following table describes acceptable floor finishes. If materials are proven to provide the same or better performance and meet the intents, alternate flooring types may be considered and approved by DHW.

Space	Floor	Base
Resident Bedroom Resident Washroom Resident Living Room Resident Dining Room Community Connection Room Resident Care Support Space Corridors Hair Salon (optional) Smoking Room (optional)	resilient sheet or resilient tile	resilient cove
Resident Assisted Bathing Suite Bathroom Soiled Utility Resident Laundry Central Kitchen Central Laundry Housekeeping	slip resistant resilient sheet	Integral resilient welded or flash cove
Resident Kitchen	slip resistant resilient sheet or slip resistant resilient tile	Integral resilient welded or flash cove
Clean Utility	resilient sheet	resilient welded or flash cove
Entrance Foyer	resilient sheet or resilient tile, ceramic in weather vestibule	resilient cove, ceramic cove in weather vestibule
Services, Equipment & Material Handling Mechanical Rooms	slip resistant floor paint on concrete or concrete hardener or	resilient cove as required by wall construction

Receiving Areas/Loading Docks/Bulk Storage Rooms	welded slip resistant vinyl sheet floor, poured epoxy flooring	
Administration	resilient sheet, resilient tile or carpet tile	resilient cove or carpet base
Staff Facilities	resilient sheet or resilient tile (non-slip sheet or ceramic at showers)	resilient cove (welded or flash cove at showers)

CONSIDERATIONS

- To assist residents with visual impairments and cognitive difficulties, visual and/or textural “cueing” should be included on signage to assist residents in identifying different rooms and finding their way in the facility. Examples are landmarks and curio “identity” boxes at entrances to resident rooms. Use upper and lower-case lettering for signage.

MECHANICAL SYSTEMS

OUTCOME

The building mechanical systems will be accessible and of robust construction using good quality materials and meet the requirements of the building systems to deliver resident accommodation, comfort and care.

SPACE STANDARDS

TESTING

- Field testing of the mechanical systems must be carried out to ensure that the equipment is operational and within industry and manufacturer's tolerances and installed in accordance with design specifications.

INSULATION

- All domestic piping, hot water heating piping and ductwork must be insulated as per the National Energy Code of Canada for Buildings.

PLUMBING

- If the building will be serviced from an on-site well system, provide a reservoir sized for minimum 24-hour backup water supply.
- Domestic hot water must be generated and maintained at 70 degrees Celsius (158 degrees Fahrenheit) as per CAN/CSA-Z317.1 Special Requirements for Plumbing Installations in Health Care Facilities.
- Domestic hot water piping distribution at 60° C (140° F) as per CAN/CSA-317.1 Special Requirements for Plumbing Installations in Health Care Facilities.
- For resident, public and general use outlets, temper domestic hot water at mixing valves to 43° C (109° F) as per CAN/CSA-Z317.1 Special Requirements for Plumbing Installations in Health Care Facilities.
- Generate and maintain the domestic hot water for laundry at 77° C (170° F) as per CAN/CSA-Z317.1 Special Requirements for Plumbing Installations in Health Care Facilities.
- Generate and maintain temperatures referred to in the Nova Scotia Food Code for mechanical dishwashing/manual dishwashing.
- Design the domestic hot water system to prevent generation of Legionella Pneumophila bacteria.
- Provide grease interceptor for drains from the pot wash sink prior to connection to the building sanitary systems.
- Provide Institutional-grade CSA-approved plumbing fixtures and brass.
- Provide electronic trap primers for floor drains.

HEATING, VENTILATION AND AIR CONDITIONING

- Use the following design criteria:
 - Inside temperature and humidity design conditions as per CAN/CSA-Z317.2 Special Requirements for Heating, Ventilation, and Air Conditioning (HVAC) Systems in Health Care Facilities.
 - Winter Room Design: Generally, 22° C DB with greater than 30% RH.
 - Provide ventilation in accordance with CAN/CSA-Z317.2, Special Requirements for Heating, Ventilation and Air-Conditioning (HVAC) Systems in Health Care Facilities.

GENERAL HVAC

- Locate air distribution systems in accessible (without the use of ladders) fan rooms sized for adequate service. The air distribution systems must supply tempered and humidified air.
- Separate systems must be provided if air flow requirements for the kitchen and/or laundry exceeds 800 litres / second.
- Provide access doors for easy cleaning and maintenance for intake plenums, before and after coils, and other serviceable devices.
- Intake plenums to have sloped floors complete with drains.
- Heat recovery of general exhaust is recommended.
- Design air distribution systems to prevent generation of *Legionella* bacteria - drain pans throughout and where acoustic liners are required walls are to be double wall construction with solid liners to facilitate cleaning.

SPACE HEATING

- Provide standby heating capacity as per CAN/CSA-Z317.2 Special Requirements for Heating, Ventilation, and Air Conditioning (HVAC) Systems in Health Care Facilities.
- Fuel storage systems must have capacity for one-week supply at winter design conditions.
- The heating coils in the air distribution systems are to be glycol.
- Humidification must be provided in all air distribution systems to maintain a minimum of 30% RH in winter.

BUILDING AUTOMATION SYSTEM

- Building automation system (BAS) Controls Room control as per CAN/CSA-Z317.2 Special Requirements for Heating, Ventilation and Air Conditioning (HVAC) Systems in Health Care Facilities.
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CONSIDERATIONS

- When planning the building's mechanical systems, consider maintenance costs and logistics. Increased system complexity (i.e. geothermal and solar heating systems) requires additional skill and specialized knowledge to maintain.

ELCTRICAL SYSTEMS

OUTCOME

The building's electrical systems will be accessible and of robust construction using good quality materials and meet the requirements of the building systems to deliver resident accommodation comfort and care programs.

SPACE STANDARDS

TESTING

- Field testing of the electrical systems must be carried out to ensure that the equipment is operational, within industry and manufacturer's tolerances and is installed in accordance with design specifications.
- A fault level analysis, equipment interrupting evaluation, and a protective device coordination study for the electrical distribution system must be provided.

NORMAL ELECTRICAL POWER DISTRIBUTION SYSTEM

- The electrical power distribution system must be designed to meet anticipated needs with sufficient spare capacity to allow reasonable load growth over the life of the building.
- The main electrical service entrance must be grounded to the requirements of the Canadian Electrical Code. All panel feeders will contain a bonding conductor sized to the requirements of the Canadian Electrical Code, Table 16.
- Electrical junction and pull boxes must be color coded to identify electrical equipment and system type. All electrical equipment enclosures, circuits and panels must be identified with lamicaid plates. Conductors must be color coded to indicate phase, neutral, bond and ground.
- Receptacles and switches must be heavy duty specification grade, with every resident room having a 20-amp receptacle. All cover plates must be nylon in resident areas.

EMERGENCY ELECTRICAL POWER DISTRIBUTION SYSTEM

- An emergency electrical power distribution system must be provided and be designed to supply on-site generated emergency power to carry loads considered essential for the life safety and care of the residents, the building lighting system and power distribution system in all resident areas, the entire building heating system, food preparation and other selected loads during a loss of normal utility power. The system must be in conformance with CSA-Z32-09 Electrical Safety and Essential Electrical Systems in Health Care Facilities.
 - Generally, the system will consist of the following:
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- Diesel engine driven, radiator cooled generator, located within a dedicated generator room within or adjacent to the facility.
- A dedicated above ground fuel storage tank with capacity to operate the emergency power generator at full load for at least 72 hours.
- Automatic transfer switch that includes the following:
 - Solenoid operating mechanism.
 - Double throw, interlocked transfer mechanism.
 - Overlapping neutral conductor.
 - Programmable microprocessor controller.
 - Bypass and isolation feature.
 - In-phase monitor.
 - Normal source surge protection.
 - Auxiliary contact sets.
 - CSA Type 1 enclosure, with drip shield.
- An automatic temperature control system must be installed to ensure generator room temperatures are maintained within acceptable parameters. A ventilation system must be installed to provide air for combustion and for cooling.
- Receptacles controlled by the emergency power distribution system must be colored “red”.

ELEVATOR

- In multi-storey buildings where grade-level entry/exit is not available to all resident floor levels, elevators must be provided.
 - A functional analysis is to be completed during the design phase to determine the appropriate quantity/size/speed of elevators suitable for the size, layout and function of the facility.
 - All elevators must meet barrier free standards.
 - At least one elevator must be large enough to facilitate movement of groups of residents as well as fully-reclined beds and equipment.
 - A second elevator must be provided that is sized, at a minimum, to meet EMS/stretchers movement requirements of the building code.
 - Elevators must be connected to the emergency power system of the building. Consideration may be given to only a subset of elevators being connected to emergency power, but such decision must be supported by an operational and safety assessment conducted by the facility prior to construction.
 - Elevators must be roughed-in for access controls (e.g. keypad/swipe card, or integration with security system that delays egress from the building) when elevators are located within routine access of residents.
 - Installation of these controls during initial construction should be determined based on elevator location, supervision and adjacent resident populations.

- Passive means of dissuading use of elevators by residents with dementia should also be considered.

STRUCTURED WIRING SYSTEM (VOICE AND DATA)

- Secure wireless internet must be available throughout the facility, including in resident bedrooms.
- Phone lines must be made available for residents.
- Each resident bedroom and each living room in the resident house and resident care support space must be wired for voice and data.
- The system must include Category 6 UTP cabling, communication outlets and terminals.
- The structured wiring system must be capable of handling resident information systems, etc. in support of a future province wide resident records system. All requirements of UL 1069 must be met.
- A structured wiring system is to be provided for phone, cable television and high-speed internet service in each resident bedroom and living room in the resident house.

FIRE ALARM SYSTEM

- The system must include a two-stage, addressable, fire alarm system to meet the requirements of the National Building Code and local fire protection requirements.
- System wiring must consist of #12 RW90 cubic inch cable and conduit installed to the requirements to the Canadian Electrical Code, Section 32.
- The fire alarm system will include manual pull stations, audible-signaling devices as well as smoke and heat detectors. Strobe signaling units must be provided in mechanical rooms and other areas with high ambient noise levels. Do not provide strobe signaling in resident areas.
- Each resident bedroom must be equipped with a smoke detector, separately annunciated at a central location.
- Additional annunciators must be provided in staff locations likely to be staffed night/day (24/7) in accordance with approved facility fire safety plans. These annunciators should be located at the level of one per household or, where facility layer allows, in a centralized location between households that is convenient and audible from the households.

RESIDENT / STAFF RESPONSE SYSTEM

- The building must be equipped with a complete resident/staff response system.
 - Resident stations must be provided at each bed, emergency station in each resident washroom, resident bathing areas and other resident activity areas.
 - Corridor dome lights must be provided over resident room doors to annunciate normal, bed alarm, or emergency call.
 - An overhead paging system must be available and is to be used for emergencies only.
-

LIGHTING SYSTEM

- The building must be equipped with a lighting system that meets the illumination requirements of the Illuminating Engineering Society of North America (IESNA). The lighting system is to provide high illumination levels which are well distributed and uniform.
- The lighting system must be operated at 120 volts throughout, with local switching at each room.
- Each resident bedroom must be equipped with appropriately located and aesthetically appealing light fixtures which have a non-institutional appearance. A three-way switch for general room lighting must be provided.
- Corridor lighting must be switched to provide lower levels of illumination for after-hour periods.
- Light fixtures must be mainly fluorescent, containing electronic ballasts. Lamps must have a color temperature of 3000K and a CRI of 85.
- Exterior lighting must be LED type and meet the requirements of the IESNA recommended standards and will include the illumination of vehicular drives, sidewalks, and landscaping features to orient users and to enhance the safety and security of the facility perimeter.
- Emergency lighting must be LED type complete with auto test features. The emergency lighting must comply with the National Building Code and be powered by the emergency power distribution system. Emergency lighting must consist of a central inverter system and branch circuit wiring to selected fixtures to provide ride through until the generator set is transferred to power the emergency distribution system. Battery packs complete with heads must be provided for emergency lighting in all electrical rooms.
- Motion sensor switching is not to be used in resident areas.

EXIT LIGHTING SYSTEM AND EXIT SIGNAGE

- The exit lighting system and exit signage must meet the requirements of the National Building Code.

SECURITY SYSTEM

- Exterior and resident household doors must be alarmed and separately annunciated at a central location. Local control must be provided using keypads and magnetic locks and include the ability to be bypassed. All magnetic locks must comply with 3.4.6.16.4 of the Nova Scotia Building Code.
- A connection to the fire alarm system must provide an override where required by code.

CONSIDERATIONS

- When planning the building's electrical systems, consider maintenance costs and logistics. Increased system complexity requires additional skill and specialized knowledge to maintain.
 - Appropriate levels of lighting enhance the overall comfort and functionality of nursing homes. Therefore, it is important to choose fixtures that provide adequate lighting to assist with positive perceptions and interpretations of surroundings.
 - Residential style light fixtures contribute to the homelike environment.
-

HOUSEHOLD SPACES

RESIDENT HOUSEHOLD

CARE OUTCOME

Enhanced resident social interactions and optimized staff working environments are supported by small household design. The well-being of residents, staff, volunteers and visitors is enhanced by design that incorporates home-like principles.

SPACE STANDARDS

- Each resident household will be a self-contained unit that will accommodate either 16 residents in one wing, or 24 residents in two wings.
- For the security and privacy needs of the residents, the ability to prevent residents from accessing different households shall be incorporated into the design.
- To grant more independence to the residents and support staff's ability to provide care and assistance, resident household design shall allow accessibility. The design shall allow for flexible use of space in order to meet program requirements.
- The travel distance between resident bedroom entry doors and the entry to the household dining room must be less than 15.3 meters (50') for 50% of the household's residents and less than 27.43 meters (90') for the remainder of the residents.
- One single occupancy resident bedroom/washroom must be designed to accommodate residents who require specialized care or equipment (e.g. oversized equipment). There must be one of these rooms per 2 households.
- Semi-private rooms or adjoining rooms must be provided at a maximum 1:48 resident ratio. Written justification must be provided for the inclusion of semi-private rooms (e.g. accommodating spouses, decreasing social isolation, etc.) as part of the functional program.
 - Doors connecting adjoining resident rooms must be acoustically rated to min. STC 38 and be provided with keyed locks, acoustic seals and rated smoke seals.
- Resident households must also contain:
 - Resident assisted bathing suite.
 - Resident dining and living/activity spaces. Resident living and dining rooms must have direct views to the outdoors.
 - Resident kitchenette.
 - Resident care and staff support space, including space for administrative tasks.
 - Medication preparation space.
 - Access to laundry services, food delivery system, storage, housekeeping etc.

CONSIDERATIONS

- Small household design results in better resident quality of life, better health care outcomes and better resident, family and staff satisfaction. This design contributes to calmer environments for residents and staff, reduced stress, and increased staff satisfaction. Evidence suggests that smaller households for residents contribute to better social relationships, lower incidence of responsive behaviors, and a higher quality of life.
 - Consider dementia friendly design research when planning resident spaces. For example, to support resident wayfinding when planning households, consider a looped walking path through the household and limited number of exits are important for wayfinding to reduce confusion for residents.
 - Semi-private rooms could include separate/dedicated ensuite washrooms per resident to improve infection control, provided space constraints allow.
 - Adjoining rooms may be considered as an alternative to semi-private rooms at the same maximum 1:48 resident ratio.
-

RESIDENT BEDROOM

CARE OUTCOME

Resident bedrooms support each resident's privacy, dignity, independence and care.

SPACE STANDARDS

All bedrooms must include:

- The resident room must provide sufficient space for; the bed, side chair, power wheelchair, recliner chair, lockable wardrobe, desk/dresser, staff and guests.
- Storage space (wardrobe/closet) with doors for resident's clothes including space for seasonal resident clothing storage must be provided. A portion of this must be able to be secured.
- CSA/UL approved ceiling mounted track for a resident lift to facilitate resident transfers from the bed to a chair or wheelchair. Ceiling-mounted lifting devices/tracks (including their installation, testing and inspection) shall be in accordance with CSA Z10535.2. Design and installation of patient lift tracks shall not interfere with sprinkler locations and coverage.
- A window with a view to the exterior, which is not less than 10% of the floor area (1.58 Net Square Meters) and does not have an opening of more than 8 inches.
- A minimum of one operable window is required and will have a secure limiting device (8" opening) restricting egress. Windowsills are required to be above grade. The resident should be able to see out the window when laying in bed or in a chair.
- Space for residents to display and store personal items.

Single occupancy bedrooms:

- Each single occupancy resident bedroom must be between 175- 190 sqft (16.3- 17.65 NSM) using a paired ensuite design. This includes a space for resident clothes closet, dresser, bed, side table, resident chair and wheelchair. There must be a minimum of 1524 mm clear on each side of the bed and 1200 mm clear at the end of the bed. The bedroom doorway must provide a minimum clear width of 1070mm in everyday usage.

Special Use/Oversized bedrooms:

- One single occupancy bedroom in every two households must be structurally appropriate and be designed to accommodate residents who require specialized equipment. Examples of specialized equipment include portable bariatric equipment, peritoneal dialysis equipment and equipment that supports palliative care.
- Each special use resident bedroom must be between 24 NSM to 26 NSM
- The bedroom doorway must provide a minimum clear width of 1220 mm in everyday usage.

Double occupancy bedrooms:

- Each double occupancy resident bedroom must be between 24 NSM to 26 NSM. This includes a space for each resident's clothes, closets and dressers, beds, side tables and resident chairs. Semi-private rooms must ensure adequate clearances and separation between residents for infection control, operational and privacy reasons.
- A minimum of 1220mm (4'-0") clear separation between beds must be provided and 1200mm at the end of each bed. The bedroom doorway must provide a minimum clear width of 914 mm in everyday usage. Provision for occasional movement of beds and larger furnishings and equipment must be accommodated, either via larger bedroom doors or a side leaf that can be opened when necessary to achieve a clear opening of a minimum of 1200mm.
- The design of semi-private rooms must establish zones within the room for each resident that can aid in personalization, orientation and privacy.

CONSIDERATIONS

- Consider best location of call bells when planning room layout.
 - There should be a balance of privacy and care requirements. For example, the staff should have visibility from the corridor of the resident's room.
 - Provide a space to charge a wheelchair in each resident room.
 - If the resident's wardrobe is modular it must be fixed to the wall.
 - Built in shelving/closets maximizes floor space.
 - Consider how services will be provided to residents when planning room size and layout. For example, some rehabilitation and/or recreation services will likely be provided in resident rooms.
 - Permit flexibility to enable residents and family to personalize their private spaces, which includes items such as shelving and bookcases to allow for family pictures, paintings, etc.
 - Private resident rooms:
 - Are recommended in the literature as a leading practice.
 - Allow for greater infection control; reduced infection rates and related hospitalizations.
 - Are associated with lowered resident stress levels.
 - Are associated with fewer conflicts and staff interventions to address responsive behavior.
 - Improve resident/family/staff satisfaction and quality of life care outcomes.
 - Research supports having some double rooms to decrease isolation and increase flexibility to address resident needs and preferences (e.g. spouses, family members).
 - Residents experience greater socialization in facilities with more diverse common spaces and a range of private, semi-private and public spaces.
-

RESIDENT WASHROOM

CARE OUTCOME

Resident washrooms support privacy, safety, dignity and independence.

SPACE STANDARDS

All washrooms must have:

- Toilets that are appropriate for resident population, readily accessible and identifiable to maintain and encourage independence in toileting.

All resident ensuite washrooms must have:

- Adequate space provided for resident to achieve independent and/or assisted transfer from the front and both sides.
- A door opening that is visible to the resident when the resident is in bed.
- Securely mounted, wall hinged, fold-up bars installed on both sides of the toilet to accommodate lifts and transfers.
- Taps that are easy to use by residents with visual impairments and reduced strength.
- A switched or automatic night-light (low wattage) fixture provided in the washroom above the toilet.
- A mirror which is located over the sink designed to accommodate residents of differing heights.
- Storage space for resident's personal toiletry items and secure storage for staff supplies.
- No direct view of the toilet from the corridor when the bedroom door is open.
- Toilet seat height shall consider the needs of resident population. Toilets must be between 16 and 20 inches in height.
- A lockable storage drawer or small cupboard.
- If pocket style doors are used:
 - An access door 458mm x 305mm high on either wall must be included that allows access to the pocket door cavity allowing visual inspection and clean out.
 - The sole plate of the wall cavity must be treated or be made of material that is easily cleanable (tightly wrapped in plastic or painted with an epoxy or similar paint) and must be replaced if cracked or tight fit is not maintained.
 - Water resistant welded cove flashing must be extended at least 1 - 3/4 inches above the floor all the way around the pocket door to prevent water entering the cavity.
 - Walls surrounding the doors to be water resistant drywall.

Single occupancy washroom:

- Each resident washroom for a single occupancy bedroom must have a clear opening width of at least 914 mm (3'-0").

- Ensuite washrooms for oversized/special needs bedrooms are to be structurally appropriate and be designed to accommodate residents who require specialized or oversized equipment. Doors must have an entrance width of at least 1050 mm (41-3/8") clear opening.

Double occupancy washroom:

- Bathrooms in semi-private rooms must accommodate care for two residents, including storage space and must have an entrance width of at least 914 mm clear opening.

CONSIDERATIONS

- The washroom door could be a sliding door (e.g. surface mounted) that can be easily moved by residents. If sliding doors are used, they must not move when closed, as residents may mistake them for doors.
 - Pocket doors on washrooms are permitted. It is recommended that this style of door only be used for washrooms in resident rooms and not for other washrooms within the facility.
 - If possible, a swing door should not be used. If swinging doors are used, it cannot interfere with access to the resident bed.
 - Consider including floor drains to support infection prevention and control and asset preservation.
 - The location of grab-bars shall promote resident independence. Installation of grab-bars should not be limited by the building code requirements.
 - Consider using wall hung toilets to provide easy access for floor cleaning under and around the fixture. Wall hung toilets may be mounted at the higher than standard height to meet resident need and eliminate the requirement for raised toilet seats.
 - Consider use of swing-clear hinges and/or door edge protection to limit damage to doors due to movement of wheelchairs and equipment.
 - Supports for accessibility in the washroom could include:
 - Single lever taps.
 - An illuminated light-switch for the washroom located in the bedroom on the wall by the washroom entrance.
-

RESIDENT ASSISTED BATHING SUITE

CARE OUTCOME

Residents will be bathed in a safe, dignified, private and comfortable manner.

SPACE STANDARDS

- A resident-assisted bathing suite must be provided in each household that includes a tub area and a shower area
- The bathing suite must be able to be secured from the hallway.
- A floor drain is required.

Each suite will contain the following:

- One therapeutic tub area:
 - A therapeutic bathtub with hydraulic / electric / mechanical lift must be provided. Do not use water generated whirlpool type bathtub.
 - CSA/UL approved ceiling mounted track for a resident lift to facilitate resident transfers.
 - The bathtub must be positioned with 1220 mm (4'-0") access on three sides of the bathtub and a door entrance width of at least 1050 mm (41-3/8") clear opening.
 - A dedicated hand hygiene sink must be provided.
- One shower area:
 - The shower room must be barrier free and:
 - Must be designed to accommodate residents who require specialized equipment, including bariatric equipment.
 - These are to include equipment and fixtures with a capacity of 500 kg (e.g. toilet, grab bars); and must have an entrance width of at least 1050 mm clear opening.
 - A dedicated hand hygiene sink must be provided. This can be omitted if the HHS in the tub area is readily accessible.
- Resident bath and shower rooms must have enough secure storage space for cleaning supplies, soaps and shampoo.
- A hair shampoo sink must be included. The sink must be wheelchair accessible and there must be enough work and storage space, including secure storage space for chemicals.

CONSIDERATIONS

- Consider providing two-piece washroom (toilet and hand wash sink) that is directly accessible by both the tub room and shower room.
 - There must be visual privacy when the resident is in the bathtub or the shower from the corridor when the door is open.

- In bathing suites, few opportunities exist to improve the acoustics or apply noise-reducing materials. Textural variety may reduce some problems with background noise transmission or the commonly experienced “echo” problem. Tub selection criteria could include low noise levels. Other opportunities to reduce noise include window coverings, shower curtains, cubicle curtains and flooring.
 - Consider location of air supply diffusers to avoid uncomfortable drafts for the residents.
 - Ensure that there are adequate lighting levels using non-institutional (in appearance) fixtures.
 - Having toilets in bathing rooms is significantly easier for staff and residents (in case the resident needs to toilet when bathing). The use of pivoting toilets may be considered as a means of space-saving in lieu of a separate washroom associated with the tub/shower areas.
-

RESIDENT LIVING/ACTIVITY SPACE

CARE OUTCOME

Residents are supported to interact with other residents, family members, visitors and staff in a comfortable, homelike and relaxed atmosphere that enhances resident quality of life.

SPACE STANDARDS

- Each household must have 2.5 NSM of living/activity space per resident located in the household. This space may be increased to include the remaining living/activity space per resident, as referenced in the building layout and configuration section of this document.
 - Each living room must have a television and storage / shelving for recreation supplies.
 - Each living room must have a direct view to the exterior.
 - Sufficient space to store wheelchairs and walkers (during resident use of the living room) must be located nearby. Provision shall be made to charge electrical wheelchairs and scooters in this area.
-

CONSIDERATIONS

- Select wall decorations, window treatments (e.g. blinds and curtains) and room finishes (e.g. wallpaper, trim, wainscoting, etc.) that create a “homelike” environment.
- Provide a card table in each resident living room to encourage recreational activity.
- If spiritual practice space is planned for this space, consider designing and decorating space in a flexible and non-denominational manner.
- If living/activity and dining space are adjacent, consider sharing storage space for wheelchairs and walkers.
- Minimize noise in these areas through the provision of finishes that reduce reflected noise and increase sound absorption, such as acoustic rated homogeneous resilient flooring, ceiling tiles and treatments.
- Provide adequate storage for chairs and table reduces the staff effort needed to rearrange heavy furniture or stack unused chairs.

RESIDENT DINING ROOM

CARE OUTCOME

Resident nutritional and social needs are met in a comfortable atmosphere that supports independence.

SPACE STANDARDS

- Each resident household must have 3.0 NSM of dining room space per resident living in that household.
 - Dining area chairs must have armrests to support resident mobility.
 - The dining area must have a dedicated hand hygiene sink in or immediately adjacent to the dining area for use by staff and residents.
 - A housekeeping closet must be provided near the dining area.
 - Each dining room must have a direct view to the exterior.
 - Sufficient space to store wheelchairs and walkers (during resident use of the dining room) must be located nearby. Provision shall be made to charge electrical wheelchairs and scooters in this area. If living/activity and dining spaces are adjacent, consider sharing storage space for wheelchairs and walkers.
-

CONSIDERATIONS

- Make efforts to minimize noise in the dining area by providing finishes that reduce reflected noise and increase sound absorption.
 - Consider co-locating the dining room and the resident kitchenette.
 - Non-institutional dining rooms are associated with increased food intake by residents
 - Select wall decorations, window treatments (e.g. blinds and curtains) and room finishes (e.g. wallpaper, trim, wainscoting, etc.) in the dining room that creates a “home-like” environment.
 - Small, square dining tables provide flexibility in configuration and arrangement and encourage socialization and interaction between residents at meal times.
 - Consider providing a portion of the tables with adjustable height feature.
 - Non-pedestal tables provide greater stability. Non-glare table top finishes assist residents with vision challenges.
-

RESIDENT KITCHENETTE

CARE OUTCOME

Residents are supported to engage in activities that reflect their nutritional requirements and support their independence.

SPACE STANDARDS

- Each resident household kitchenette must have:
 - A sink
 - A microwave
 - A fridge
 - An ice/water dispenser, if not located elsewhere in the household
 - Homelike storage cabinets
 - Counter space
 - Safety and security must be addressed. Extent of such measures must be based on the activities and equipment in the kitchenettes. Locking cupboards/drawers must be provided to secure any potentially hazardous or significant nuisance items.
 - Appliances (other than fridges) if not locked, must have a key switch or other suitable power disconnect to prevent unauthorized resident use.
-

CONSIDERATIONS

- Electric ranges/ovens are optional items in resident kitchenettes but may be included if intended for household activity purposes (e.g. baking cookies). These appliances must not be used for the preparation of meals. Induction ranges should be used for safety purposes and these appliances must be provided with a power disconnect to prevent unauthorized use.
- If ranges or ovens are included, some means of signifying or separating resident space and staff space must be provided. This may take the form of active measures such as gates/barriers or passive measures like flooring changes, depending risk assessment.
- Dishwashers may be provided, in alignment with food service delivery model. Dishwashers, when provided, must comply with commercial kitchen requirements.
- Residents in wheelchairs may have specific requirements (e.g. counter height) to enable them to use the kitchenette.
- Recreational baking/cooking in resident kitchenettes creates aromas and an atmosphere like the resident's home.
- Resident-accessible and less institutional kitchens may decrease resident agitation.
- Research shows that resident kitchens may increase conversation between residents and staff.
- Mounting height of upper cabinetry should consider ergonomics of access to items being stored.

RESIDENT LAUNDRY

CARE OUTCOME

Space is available for the laundering of resident clothing and equipment (i.e. slings). Residents are supported to participate in components of familiar activities, as appropriate.

SPACE STANDARDS

- There must be a minimum of one resident laundry area for the facility. Resident laundry must be shared by a minimum of two households.
 - A dedicated hand wash sink must be conveniently located in the laundry area for staff use.
 - Surfaces must be easily cleaned and impermeable to moisture.
-

CONSIDERATIONS

- Consider providing residential size, commercial quality washer and dryer.
 - Consider providing space to iron and fold resident's clothing.
 - A small mending station may be included.
 - Consider location relative to exterior walls to minimize lengths of dryer ducts.
-

MEDICATION PREPARATION SPACE

CARE OUTCOME

Resident health is supported through the safe storage, management and administration of medication. Staff can prepare medication in a space that is free of distraction. Privacy of resident's personal health information is protected.

SPACE STANDARDS

- A secure separate medication preparation space that serves two resident households must be provided.
 - One dedicated hand hygiene sink shall be provided.
 - A locked medication cabinet, a preparation sink and medication fridge is required.
 - Secure storage for the management of active resident medication records and the medication cart is required.
-

CONSIDERATIONS

- Glazing on the window may provide both privacy and a view of resident areas.
- Documentation of resident records could occur at a small work area in the household.
- Mobile chart racks could be considered.
- Consider locating close to the dining room to support administration of medications.

RESIDENT CARE AND STAFF SUPPORT SPACE

CARE OUTCOME

Staff are provided with a space for meetings with other staff, residents and families, which allows for the sharing of confidential information and maintains respect for the privacy of residents.

SPACE STANDARDS

- Resident care and staff support space must be shared by a minimum of two households.
 - One wheelchair accessible/barrier free washroom must be located in close proximity.
 - Furnishings to support staff and family meetings must be included.
-

HOUSEKEEPING CLOSET

CARE OUTCOME

Housekeeping equipment and supplies are securely stored to ensure a clean and safe environment for residents, staff, family, and visitors utilizing infection prevention and control best practices.

SPACE STANDARDS

Housekeeping Closet

- Every household will have a secure housekeeping closet. The housekeeping closet must be no more than 2-2.5 NSM.
 - All surfaces (e.g. floors, walls, ceilings and shelves) must be smooth, easily cleanable and impermeable to moisture.
-

CONSIDERATIONS

- Housekeeping closets are best located close to areas of highest use (e.g. close to the resident assisted bathing suites and public washrooms).
- Consider locating housekeeping closets near resident bedrooms.

FACILITY SUPPORT SPACES

STAFF FACILITIES

CARE OUTCOME

Space dedicated to staff that meets their needs, ensures their belongings are safe and secure and that is separate from resident care areas.

SPACE STANDARDS

- One staff room per facility must be provided for staff breaks that is separate from resident care and common areas. It must include a fridge, microwave and sink.
 - Secure storage and change areas and a minimum of one three-piece washroom must be provided.
-

CONSIDERATIONS

- Full height lockers can be problematic when used to store wet clothes. An alternative could be a secure room with open coat/boot rack with separate half-height lockers for small personal belongings.
 - Consider providing a separate staff entrance.
 - Consider including a refrigerator with freezer and automated dispensing ice machine
 - Consider natural light sources when planning this space
-

COMMUNITY CONNECTION ROOM

CARE OUTCOME

Residents are supported to maintain connections with and participate in community life.

INTRODUCTION

Long term care facilities are uniquely positioned to support community connections that increase opportunities for residents to continue to interact with the larger community. By providing space that facilitates such connections, facilities can help to strengthen the social capacity of their community, based on their unique needs.

Facility design proposals must include detailed written information describing how the community connection room (previously called a multi-purpose room) will be used by the residents, and by the larger community. This must include linkages between the functional program/operations of the facility and provide evidence of an ongoing need for the space and describe how it will be accessed by and be a benefit for the larger community. For example, there may be a known need for this space in the community or there is a lack of other alternatives in the area (e.g. no other meeting facilities in the community, no local meals programs).

This space will be funded up to the remaining allowable living space not already accounted for on the household (see Building Configuration and Layout section) and must be factored in to the overall building gross area of **83.62 gross square meters (900 gross square feet)** per resident.

Decisions regarding additional space beyond this allotment will be made by the Minister and will be based on the rationale provided above. Exceptions for the inclusion or use of this space will be determined by the Minister in their sole discretion. This may include, but is not limited to, factors such as: a known need for this space, the number of similar spaces in the area, programs/groups that will access/use the space, the location of the facility in the community (adjacencies and remoteness), and a demonstrated continued need for the space. Should the Minister determine that additional space is allowable, the gross square meters per resident in the facility may increase to accommodate the inclusion of this space.

SPACE STANDARDS

- If a community connection room is included, the department will provide funding for up to 1.5 NSM, the remaining allowable living space that is not already accounted for on the households. Funding requests for space beyond those requirements will be determined by the department based on the written rationale provided.
- The ceiling height must not exceed 3.1 m.
- If a community connection room is provided, it must be able to be subdivided into smaller spaces using removable partitions.

CONSIDERATIONS

- Consider whether a kitchenette and washroom should be provided in this space.
 - Provide adequate storage for chairs and tables to reduce the staff effort needed to rearrange heavy furniture or stack unused chairs.
 - Consider including space for spiritual practice. If included, consider ways to separate this space from the larger room using acoustic operable partitions.
 - If the community connection room is accessible for the larger community, consider a separate entrance or a designated drop off / pick up areas at the main entrance to decrease the travel distance to the program space.
 - If a separate entrance is not included, the facility entrance foyer should be adjacent to the community connection room. This is particularly critical if space will be used for community events, to manage access and security.
 - Consider providing a view to the exterior.
 - If the community connection room is provided, consider including a kitchen space for staff/residents or for the larger community to access that can also support community programming. If a kitchen is provided, consider including:
 - a double sink
 - storage cabinets/counter space
 - refrigerator space
 - microwave
 - Make efforts to minimize noise in these areas through the provision of finishes that reduce reflected noise and increase sound absorption.
 - Consider space for coats and personal belongings.
 - Providing adequate storage for chairs and table reduces the staff effort needed to rearrange heavy furniture or stack unused chairs.
 - Consider how spiritual practice space may be included in a flexible and non-denominational manner.
-

HOUSEKEEPING

CARE OUTCOME

Housekeeping equipment and supplies are securely stored to ensure a clean and safe environment that uses infection prevention and control best practices.

SPACE STANDARDS

Housekeeping Room:

- In addition to the housekeeping closet in each resident household, there must be one housekeeping room for every two resident households. This room must be able to be secured.
- The housekeeping room area must be between 6.5-7.5NSM and capable of accommodating the requirements of the area served.
- Each housekeeping room must be equipped with a hot and cold running water supply, a curbed service sink, a hand-wash sink and a floor drain.
- The area around the floor sink is to have full waterproof wall protection.
- All surfaces must be smooth, easily cleanable and impermeable to moisture.
- Housekeeping room must be secure to prevent resident access.
- An eyewash station may be required depending on the hazards present in this space.

Central Housekeeping/Environmental Services Area:

- There must be one central housekeeping room that is appropriately sized to manage the supplies and garbage in your facility. Clean supply streams must be kept separate from soiled supplies and waste streams.
- This area must be able to be secured.
- Storage and disposal of supplies, wet and dry garbage, and recycling must be done in compliance with provincial/municipal Space Standards.
- Provide sufficient space to collect, sort and pick up garbage and to support a recycling program.
- Each central housekeeping room must have sufficient space for the secure storage of chemicals and other cleaning supplies, chemical dispensing units, storing carts and other housekeeping equipment, such as mops and pails.
- Each central housekeeping room must be equipped with a hot and cold running water supply, a curbed service sink, a hand hygiene sink and floor drain.
- The area around the floor sink is to have full waterproof wall protection
- All surfaces (e.g. floors, walls, ceilings and shelves) must be smooth, easily cleanable and impermeable to moisture.
- An eyewash station and/or safety shower may be required depending on the hazards present in this space.

CONSIDERATIONS

- Housekeeping rooms and closets are best located close to areas of highest use (e.g. close to the resident assisted bathing suites and public washrooms).
 - Consider locating housekeeping closets near resident bedrooms.
-

CLEAN UTILITY ROOM

CARE OUTCOME

Resident safety and staff workflow are supported by the provision of secure, accessible storage spaces for clean supplies (e.g. incontinent products, nursing supplies and linens).

SPACE STANDARDS

- Clean utility rooms must be provided to store clean supplies. Design shall be in compliance with CAN/CSA Z314.
 - Clean Utility rooms must be shared by no more than two households and must be able to be secured.
 - Design should minimize potential for soiling or contamination of clean supplies.
-

CONSIDERATIONS

- Proximity to point of use shall be carefully assessed to minimize excessive travel distance to supply rooms.
- Personal clothing racks and linen exchange carts could be housed in this space.

SOILED UTILITY ROOM

CARE OUTCOME

Soiled equipment and materials are processed in keeping with infection prevention and control best practices.

SPACE STANDARDS

- Each secure soiled utility room must be shared by no more than two households with direct access from each.
- Space must be provided for the temporary storage of soiled linen carts. Soiled linen carts must be covered.
- All surfaces must be easily cleaned and impermeable to moisture.
- Adequate space will be provided for general waste, soiled linen, private waste, recycling, and medical/harmful waste, stored in separate mobile containers.
- Equipment must include:
 - A commercial flusher/disinfector or macerator
 - Flushing rim sink (Hopper)
 - Double bowl stainless steel sink
 - A dedicated hand hygiene sink

CONSIDERATIONS

- Protective, non-porous wall protection (e.g. Fibre Reinforced Plastic (FRP)) on wall surfaces are durable, sustainable and provide superior hygiene.
 - An eyewash station may be required depending on the hazards present in this space.
-

MAINTENANCE SPACE

CARE OUTCOME

Space will support ongoing maintenance activities including equipment and building components.

SPACE STANDARDS

- There must be dedicated maintenance space (shop, office and storage) provided to support the ongoing maintenance activities of the facility including:
 - repairs on equipment, furnishings and other building contents
 - storage space for maintenance equipment, facility floor plans and operating manuals
 - portable machinery and tools
 - This space must be able to be secured.
 - The maintenance shop and maintenance office must be co-located.
 - The maintenance office must be no bigger than 11 NSM (118 sq. ft.) and have a view of the shipping and receiving area.
 - Landscaping equipment such as snow blowers and lawn mowers must be securely stored in a separate building.
 - There must be physical separation and good acoustical control between the maintenance and resident/public areas of the facility.
 - An eyewash station and/or safety shower may be required depending on the hazards present in this space.
-

CONSIDERATIONS

- Consider communications with the remainder of the building when planning this space.

MATERIALS MANAGEMENT

CARE OUTCOME

Space provided to effectively and safely handle, store and distribute food supplies, dry goods, chemicals, paper products and resident supplies and equipment.

SPACE STANDARDS

- Materials management space must provide year-round access for delivery, storage and distribution of supplies and equipment and be sized appropriately to manage the expected flow of materials to support the facility.
 - Materials management space must be separated from resident and public areas to prevent exposure to noise, noxious fumes and safety hazards. This space must be able to be secured.
 - There must be a dedicated receiving entrance separate from the main entrance of the facility.
 - Storage space for the temporary accumulation of received goods must be provided that allows for the storage of dry good, supplies, and refrigerated/ frozen food that complies with provincial Space Standards.
 - Storage of wet and dry garbage and recycling must be done in compliance with provincial Space Standards.
 - An area with drainage that supports the cleaning of carts and wheelchairs must be provided.
 - An eyewash station and/or safety shower may be required depending on the hazards present in this space.
-

CONSIDERATIONS

- Consider providing a notification system in materials management to allow delivery persons to alert facility staff when goods have arrived.
 - Consider a refrigerated garbage/compost room and separate space for dry garbage
 - The exterior of the receiving dock could have an overhang or dock seal to protect staff and goods from inclement weather.
 - The driveway to the receiving dock and waste storage area could directly link to the public road to facilitate pickup and delivery and reduce onsite truck traffic.
 - Consider providing a space with floor drain for the cleaning and sanitizing of equipment such as garbage containers and carts.
-

PROGRAM SUPPORT STORAGE AND OFFICE SPACE

CARE OUTCOME

Supports resident programming in the facility

SPACE STANDARDS

- One rehabilitation storage space must be provided per facility and be large enough to accommodate all equipment and supplies related to rehabilitation services.
- An office for rehabilitation staff must be provided and be no more than 11 NSM (118 sq. ft.)
- Secure storage space for files and records must be provided.
- This space must include storage for activity materials.

CONSIDERATIONS

- Consider the locations of confidential and electronic correspondence/files.
- Allow for high density shelving in the planning of furniture, fixture and equipment procurement.
- Consider storage for seasonal decor items.

ADMINISTRATION

CARE OUTCOME

Space that supports resident care through effective and efficient management of the home.

SPACE STANDARDS

- Space for administration and operational staff must be provided as follows:
 - Administrator's office – maximum of 14 NSM (150 sq. ft.)
 - Directors and Managers offices- maximum of 11 NSM (118 sq. ft.)
 - Administrative space – maximum of 6-7.5 NSM (65-80 sq. ft.) per approved administrative staff person
 - Secure storage space for files and records must be provided.
 - There must be a dedicated photocopier and related supplies space.
 - There must be space in the facility for meetings/staff education.
-

CONSIDERATIONS

- Consider the location and storage of confidential and electronic correspondence and files.
 - Allow for high density shelving in the planning of furniture, fixture and equipment procurement.
 - Consider how to provide administrative space for recreation and nutritional services staff during planning processes. (e.g. centralized admin vs. decentralized).
-

OTHER RESIDENT SUPPORT SPACES

All long term care facilities must clearly identify their food delivery model and laundry delivery model. Depending on the model chosen, facilities may require a full central production kitchen and/or a commercial servery.

Department approval of the food delivery model and the laundry delivery model is required. A decision regarding these spaces must occur early in the design phase and be considered in conjunction with the facility's functional program. Facility design proposals must include detailed rationale of the food and laundry delivery models and how the space will support this model. It must link the inclusion of these spaces to care outcomes, the operations of the facility and identify any benefits to the larger community.

Please note that the square footage of these spaces must be included within the overall building gross area of **83.62 gross square meters (900 gross square feet)** per resident. Should these spaces not be included, the overall building gross area must be reduced appropriately.

CENTRAL LAUNDRY

CARE OUTCOME

Space, if provided, that supports effective and efficient laundry services.

SPACE STANDARDS

- All long term care facilities must provide laundry services. Facility design proposals must include detailed rationale linking the inclusion of the central laundry to the functional program, operations of the facility and describe any linkages to the larger community.
- If a central laundry space is provided within the facility, it must:
 - Have an adequate allocation of space to accommodate the provided equipment and supplies.
 - Clearly delineate the clean and soiled areas, allowing for one-way directional flow.
 - Have dedicated hand wash sink conveniently located for staff use.
 - Have surfaces that are easily cleaned and impermeable to moisture.
 - Include floor drainage in the washing central laundry space. If a drainage trough is provided for the washer this must have a solid cover.
 - Space for laundry chemicals to be safely stored in the central laundry room.
 - The central laundry staff must have access to a separate area for the cleaning and sanitizing of laundry equipment such as baskets, carts and bags.
 - If an off-site laundry service is used, there must be separate space in the facility for soiled laundry storage, and for receiving /distributing clean laundry.
 - Be able to be secured.
- An eyewash station and/or safety shower may be required depending on the hazards present in this space.
- The square footage of this space must be included within the overall building gross area of **83.62 gross square meters (900 gross square feet)** per resident. Should this space not be required, the overall building gross area must be reduced appropriately

CONSIDERATIONS

- Consider providing space for labeling and ironing activities.
 - Consider providing space for mending services.
-

COMMERCIAL SERVERY

CARE OUTCOME

Space, if provided, that ensures residents' nutritional requirements are met through a balanced diet. A servery located on the resident household may enhance the experience of a home-like environment.

SPACE STANDARDS

- The facility's food delivery model must be planned and equipped to meet all resident's dietary needs. Facility design proposals must include detailed rationale linking the inclusion of a commercial servery to the facility food delivery model, the functional program and operations of the facility.
- Functions, layout, equipment, and safety measures shall be review with the local authorities having jurisdiction. Depending on the food-service delivery model for the facility, this may include (but not be limited to) the NS Department of Environment and the NS Office of the Fire Marshal.
- Dishwashers may be provided, in alignment with food service delivery model. Dishwashers, when provided, must comply with commercial kitchen requirements.
- If a servery is included, it must be inaccessible to residents and families.
- The square footage of this space must be included within the overall building gross area of **83.62 gross square meters (900 gross square feet)** per resident. Should this space not be required, the overall building gross area must be reduced appropriately

CONSIDERATIONS

- Food could be prepared in a central kitchen or by contracted services with the balance of food prepared in each commercial servery.
- Preparing food in the household creates aromas and an atmosphere similar to the resident's own home.
- Decentralized dining with capacity to prepare and serve food near or within the household is successful in other long term care facilities in Nova Scotia.

CENTRAL KITCHEN

CARE OUTCOME

Space, if provided, that ensures residents' nutritional requirements are met through a balanced diet.

SPACE STANDARDS

- The facility's food delivery model must be planned and equipped to meet all resident's dietary needs. Facility design proposals must include detailed rationale linking the inclusion of a central kitchen to the facility food delivery model, the functional program and operations of the facility.
 - If an onsite central kitchen is provided, the kitchen must meet the Homes for Special Care Act requirement, section 34.2.
 - If the kitchen is off site, the facility must have the ability to reheat, and transfer hot food to households.
 - If a central kitchen is included, functions, layout, equipment, and safety measures shall be reviewed with the local authorities having jurisdiction. Depending on the food-service delivery model for the facility, this may include (but not be limited to) the NS Department of Environment and the NS Office of the Fire Marshal.
 - The square footage of this space must be included within the overall building gross area of **83.62 gross square meters (900 gross square feet)** per resident. Should this space not be required, the overall building gross area must be reduced appropriately.
-

CONSIDERATIONS

- Decentralized dining with capacity to prepare and serve food near or within the household is successful in other long term care facilities in Nova Scotia.
-

OPTIONAL SPACES

The Department of Health and Wellness wants to ensure that service providers design their facilities in a way that best meets the needs of their residents, staff and communities. As such, the following spaces are optional and should be considered based on the needs of residents and the larger community.

Department approval of optional spaces is required. Facility design proposals must include detailed written rationale linking the inclusion of these spaces to the care outcomes, functional program and operations of the facility. Proposal should also be able to demonstrate:

- a known need for these spaces, which may also include a lack of alternatives in the area ((e.g. current clients or those waiting/expecting to receive care in the facility, no other facilities with smoking rooms in the area, no accommodations locally for families).
- information that would clearly demonstrate a continued need for the space

Please note that the square footage added by optional spaces must be factored in to the overall building gross area of **83.62 gross square meters (900 gross square feet)** per resident.

Decisions regarding the funding of these spaces will be at the Minister's sole discretion and determined based on the rationale provided, and discussions/submissions regarding the facility's functional program.

FAMILY ROOM (OPTIONAL)

CARE OUTCOME

Families are supported to participate in care and visit with their loved ones. The availability of a family room facilitates increased visitation by family and friends living far from the resident.

SPACE STANDARDS

- A written rationale for the inclusion of the space must be included and it must demonstrate how the space will support and/or be used by the larger community. This rationale will support decisions related to funding.
 - If a family room is provided:
 - A maximum of one family room will be supported.
 - Such spaces should be designed as independent sleeping accommodation, as the occupants will have control over the space and not be subject to staff supervision expected in the Care Occupancy portions of the building.
 - Family room must include a three-piece ensuite washroom.
 - It must have sleeping accommodations.
 - It must include individually annunciated smoke detector connected to the building fire alarm system.
-

CONSIDERATIONS

- Folding sofa bed could be considered.
-

HAIR CARE STATION/SALON (OPTIONAL)

CARE OUTCOME

A space where hair care and/or other personal services are provided.

SPACE STANDARDS

- A written rationale for the inclusion of the space must be included and it must demonstrate how the space will support and/or be used by the larger community. This rationale will support decisions related to funding.
- If included, the hair care salon must meet all requirements of other authorities having jurisdiction (e.g. Cosmetology Association of NS). It is the facility's responsibility to ensure all appropriate standards are met.
- If included, the hair care station, must:
 - Include a shampoo sink.
 - Be a wheelchair accessible hairdressing station that meets the needs of the residents.
 - Have sufficient work and storage space, including secure storage space for chemicals.
 - If a hair salon is provided, mechanical system enhancements must be provided to exhaust chemicals that will be used.
 - Have a dedicated hand wash sink.

CONSIDERATIONS

- A separate hair drying area may be included. Consider including a chair equipped with a hooded hair dryer.

SMOKING ROOM (OPTIONAL)

CARE OUTCOME

Supports resident choice to smoke and/or difficulties with smoking cessation.

SPACE STANDARDS

- A written rationale for the inclusion of the space must be included and it must demonstrate how the space will support and/or be used by the larger community. This rationale will support decisions related to funding.
- If included, the construction and ventilation of smoking rooms must meet all applicable acts and regulations.
- There must be a window to the corridor, so staff can observe residents.
- There must be a nurse call bell in the smoking room.
- All furnishings must be non-combustible.

The Department will provide design standards for smoking rooms to ensure the safety of residents, however whether government will provide funding will require a business case and demonstrated need within the resident population. This would should include:

- Estimate of staff time and additional resources required to accommodate smoking residents without access to a smoking area.
 - Demonstrating a client population that will need to be served in terms of those on the waitlist, and those who currently live within the facility (if this is a replacement facility)
 - Demographic estimates that would clearly demonstrate a continued need for the resource (continued trend)
 - Demonstrating a lack of alternatives in the area (i.e. there are no other smoking rooms readily available in other facilities)
-

APPENDIX A: REFERENCES

The following non-exhaustive list of references (including any future amendments) must be met or exceeded. Versions of documents below to be applied shall be the latest editions adopted or referenced in building Codes at time of tender.

The Nova Scotia Building Code and National Building Code of Canada

The Nova Scotia Homes for Special Care Act and Regulations

Long Term Care Program Requirements

The Nova Scotia Nursing Home Building Maintenance Standard, August 2013

Nova Scotia Smoke Free Places Act and Regulations

CAN/CSA Z317 Infection Control During Construction, Renovation, and Maintenance of Health Care Facilities

The National Energy Code for Buildings

CAN/CSA Z317 Area Measurement for Health Care Facilities.

CAN/CSA Z317.2 Special Requirements for Heating, Ventilation, and Air Conditioning Systems in Health Care Facilities

CAN/CSA Z317.1 Special Requirements for Plumbing Installations in Health Care Facilities

CSA B51 Boiler, Pressure Vessel and Pressure Piping Code

CAN/CSA B149.1, Natural Gas and Propane Installation Code

CAN/CSA B139, Installation Code for Oil Burning Equipment

Nova Scotia Department of Environment - Petroleum Storage Regulation.

CAN/CSA Z32 Electrical Safety and Essential Electrical Systems in Health Care Facilities

CSA C22.1-18 Canadian Electrical Code, Part 1

Nova Scotia Government Communications Cabling Guidelines

CAN/CSA Z317.5 Illumination Systems in Health Care Facilities

BICSI/TDMM - Telecommunications Distribution Methods Manual

IESNA Standards including IES RP28 Lighting and the Visual Environment for Senior Living

CAN/ULC - S524, Standard for Installation of Fire Alarm Systems

J-STD-607A Commercial Building Grounding and Bonding Requirements for Telecommunications

NFPA 13-Standard for the Installation of Sprinkler Systems

NFPA 20 Standard for the Installation of Stationary Fire Pumps for Fire Protection

NFPA 96 Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations

CAN/CGSB-4.162 Hospital Textiles - Flammability performance Requirements

CAN/ULC-S137 Standard Method of Test for Fire Growth of Mattresses (Open Flame Test

CAN/CSA-Z8001-13 (R2018) Commissioning of Health Care Facilities

CAN CSA B44 – safety code for elevators

CGBC LEED – current version for the specific project seeking certification

Nova Scotia Architects Act

Nova Scotia Interior Designers Act

A Guide to Inspection of Homes for Special Care (Department of Agriculture)

Nova Scotia Fire Safety Act & Regulations and the National Fire Code of Canada

Food Safety Regulations

APPENDIX B: RECOMMENDED RESOURCES

Dementia design:

<http://brainxchange.ca/public/home>

<http://brainxchange.ca/Public/Resource-Centre-Topics-A-to-Z/Design-and-dementia.aspx>

<http://dementia.stir.ac.uk/>

<https://www.cfm.va.gov/til/dGuide/dgSmallHouseModel.pdf>

http://wabenbow.com/?page_id=2

<http://www.dementia.design/>

<http://www.dementiacentre.com.au/education/design-school>