Vancouver CoastalHealth

Long Term Care Design Guidelines

2020

Table of Contents

1. INTRODUCTION

Current Context

The Vancouver Coastal Health (VCH) Long Term Care Design Guidelines (2020) form part of the overall direction and commitment to continuously improve VCH Long Term Care (LTC) services, and are intended to inform all major capital LTC projects in the region including owned and operated and affiliate replacement and rejuvenation. The guidelines have been updated from the 2018 version using the following inputs:

- VCH Vision, Values and Purpose
- MoH 2020/21 – 2022/23 Service Plan
- 2019 Accreditation Canada Standards
- Regulations and legislation (e.g., Community Care and Assisted Living Facilities Act)
- National and international research and best practices
- VCH population demographics and projected needs
- Indigenous Design Guidelines – 2020 (See Appendices)
- Infection Prevention and Control best practices, and COVID-19 outbreak data
- Lessons learned from VCH LTC projects
- Best practices in Energy and Environmental Sustainability
- Input from subject matter experts
- Input from community members through Community Engagement Advisory Network

The VCH vision is to create LTC homes that offer residents, families, staff and volunteers who live, play and work in them the following:

- Quality of life, quality care and dignity
- Safe, efficient and health-promoting work environment for staff
- Affordable and sustainable buildings
- Flexibility for the care of future population needs

Intent of Design Guidelines

The Design Guidelines identify and describe essential environmental and structural design elements within a social care and operational model that is defined by best practices. The Design Guidelines are not meant to be exhaustive, but to summarize minimum functional requirements, and the integration of care philosophy and design, in order to guide the professionals who will plan and execute LTC design and construction on behalf of VCH residents and communities. Engagement of stakeholder such as Aboriginal Health, local indigenous people, residents, families and staff are required in planning of each project.

The purpose of the Design Guidelines is to:

- State the minimum building requirements for an LTC home
- Support flexibility in design and construction as necessitated by the building, land or other considerations
- Promote optimal quality of life and health outcomes for LTC residents
- Promote safety and quality of work experience for staff

2. Incorporate evidence based and best practices from across Canada and around the world

2. LIVING IN LONG TERM CARE

The People We Serve

By Ministry of Health definition, LTC services provide 24-hour professional supervision and care in a protective, supportive environment for people who have complex care needs and can no longer be cared for in their own homes or in an assisted living residence.

An analysis of VCH LTC 2019/20 population data indicates that:

- the majority of people in LTC are frail elderly (75% are over 80; 39% are over 90 years)
- the 'baby boomer' demographic shift is starting to manifest in admissions, with recent years showing an increase in the 65-74 age group
- though many people move in for short periods at the end of their life, the majority of people live in LTC for two years or more
- the majority of people have moderate to severe cognitive impairment which requires cuing, physical assistance and support for engagement in social and other enjoyable pastimes
- about 17% of people have medical complexity and need for physical support
- about one third of people have improved physical functioning, suggesting their health has improved
- one third of people have a decline in physical functioning, suggesting decline in health and/or lack of engagement in everyday activities
- about 13% have worsening depression

Resident Abilities and Design Implications

Signs/ Symptoms and Abilities	Design Implications
Short-term memory loss **Difficulty learning new things** **May respond appropriately to familiar situations/cues**	Consider sightlines for residents to see familiar places, e.g. people can easily be drawn to the household kitchen from a short bedroom hallway Ease of access to outdoor and community spaces Elevators to ground floor community spaces must be well marked and easy to use for residents Explicit environmental cues; e.g. familiar pictures and words e.g. a picture of a toilet rather than an abstract washroom symbol Front doors to each household have a distinct look to differentiate one from another
Repetitiveness in verbalization and actions **Responsive behaviour when frustrated or scared** **Behaviour will indicate unmet needs**	Options for differing levels of stimulation, e.g. quiet and private places to sit, eat and observe as well as meaningful places to go Authentic environments that allow meaningful engagement (e.g. access to household kitchen for participation for meals and snacks, LTC home coffee

Signs/ Symptoms and Abilities	Design Implications
	shop, art studio) Provide purposeful destinations at the ends of hallways by providing an area to sit and watch or socialize, e.g. chairs and window at the end of a hallway Wandering loops can cause frustration and do not necessarily provide meaningful engagement Wandering loops are not required when there is freedom of movement throughout the LTC home and easy access to outdoors. Meaningful destinations are recommended
Visual impairment and changes in visual perceptual (e.g. poor depth perception, and figure ground, blurring, slow adaptation in changes of light intensity) **Range from independence to total dependence**	No clutter in hallways, plan for storage of equipment and supplies High contrast demarcations of spaces, e.g. emphasize entrances to doors, pathways, contrast between chairs/toilet seats and floors, balcony railing and enclosure against the sky Vibrant colours to attract people to communal areas and destinations (avoid purples which appear muddy for people who have cataracts) Avoid busy patterns on floors/walls, glare Use of technology to adjust lighting to consistent levels during dawn and dusk and to turn on at night. Motion lights for bathrooms
Hearing impairment **Range from totally impaired to unimpaired**	Include visual emergency alarms Technology to boost audio level for individuals in large spaces Sound attenuation between spaces and mitigate generation of echoes
Impaired mobility **May be able to walk long distances if in safe and secure environment** **May be completely dependent on lifts for transfer and wheelchair**	Short distances to dining areas from bedrooms (e.g. 10 to 20 meters) Provide opportunities for walking indoors and outside Ceiling and portable lifts required. Consider space to store and charge portable lifts Wheelchair and walker friendly environment (wide doorways, ramps, adjustable furniture)
Impaired upper body function	Levered door handles

Signs/ Symptoms and Abilities	Design Implications
May be able to manage self-care, eating and other activities if given time and adapted equipment	Large buttons for light switches, elevators, accessible doors, emergency call systems
Impaired sensation **May be difficult to distinguish hot and cold**	Water temperature from all faucets less than 49 degrees Celsius
Impaired swallowing **May be independent to highly impaired**	Portable suction machines available. Consider space to store portable equipment Family and friends are welcome to participate in meals to support their loved one to eat
Obesity (Bariatric is defined as 182 kg/400 lbs. or more)	Ceiling lifts must be rated to carry 1,000 lbs. Doorways, circulation spaces (including elevators), and common social spaces within the home, floor and Community Spaces will be designed and sized to allow bariatric resident mobility to all services (1220mm/48" width) minimum
End of life	Space for family to stay long periods (including overnight) with the resident, and spaces for grieving and contemplation

Current Realities of LTC

Historically LTC evolved from a hospital efficiency model as people were placed in wards of acute care settings if they could not return home. This led to construction of LTC facilities based on spaces and finishes similar to, or taken directly from, acute care design. These traditional facilities have also served to perpetuate models of care which primarily reflect staff routines and regimented meal times. In general, residents are required to conform to an institutional schedule rather than the LTC home supporting their individualized needs.

Residents report loss of dignity as they are rigidly scheduled for showers/baths and may even have to use commodes at bedsides rather than access a private toilet. Staff report feeling rushed, with too little time to build relationship with residents and provide/receive social stimulation. Because of the lack of authentic household and community spaces, meaningful activities are scheduled and usually based on large groups, often with the same residents who participate each time. Residents are restricted in where they can go and access to outside is limited and often dependent on staff or visitors.

Institutional care environments are associated with functional decline, as they typically eliminate opportunities for residents to use and retain their remaining physical and cognitive abilities. Dementia-related behaviours and treatments may further impede a resident's ability to live a full, meaningful life. Instead, the focus of the environmental design and staff routines are on protection and control which can result in outcomes such as:

- over-prescribing wheelchairs and associated loss of mobility
- incontinence because residents cannot get to a toilet quickly enough

- increased use of medications for behavioural control as residents become frustrated in locked units with poor access to outside and limited walking

> "Our most cruel failure in how we treat the sick and the aged is the failure to recognize that they have priorities beyond merely being safe and living longer; that the chance to shape one's story is essential to sustaining meaning in life; we have the opportunity to refashion our institutions, culture, and conversations to transform the possibilities for the last chapters of all of our lives."[1]

According to the BC MoH Resident Bill of Rights[2], the balance between health, safety and dignity must be achieved. Newer models uphold resident dignity as important, and sometimes even more important than safety concerns or associated health risks when understanding and supporting what the resident truly needs from the care team and how they wish to live their remaining years in the LTC setting.

A NEW VISION FOR LTC

VCH has reached a tipping point where a shift away from traditional and institutionalized settings and care models can better reflect the way that seniors wish to live and be supported in LTC homes. New LTC home construction is an opportunity to re-focus planning from a primary emphasis on care and control to a dignified life based on peoples' needs, wishes and hopes, or 'a life worth living.' Staff involved in designing and commissioning new facilities are challenged to ask the question: "Would I want to live here?"

VCH strives to create a LTC home environment where residents thrive, live a life with meaning and purpose, and are actively engaged in the world and people around them – as well as an environment that invites family involvement and participation and interaction with the broader community. As each individual living in LTC moves through their life journey, e.g. stages of dementia, the home will be able to accommodate the person's needs and celebrate their abilities.

The following table highlights the differences between the traditional/institutional model of care and a social model which emphasises relational rather than transactional care, meaningful activity, dignity and choice.

---

[1] Gwande, Atul. Being Mortal: Medicine and What Matters in the End, 2014

[2] https://www2.gov.bc.ca/gov/content/health/accessing-health-care/home-community-care/accountability/policy-and-standards#:~:text=The%20Residents'%20Bill%20of%20Rights,rights%20to%20transparency%20and%20accountability.

Comparison of Institutional and Social Models of Care

Institutional Model: Transactional Care	Social Model: Resident Centred, Relational Care
Focus on care treatments and interventions	Focus on 'living' and providing excellent medical and clinical care
Residents follow facility and staff routine	Team members follow residents' routines
One size fits all approach to care provision	Honour unique and individual life history, needs, desires, concerns
Staff rotate work assignments	Team members consistently assist same residents
Staff make decisions for residents	Residents are supported to make decisions
Environment is the staff's workplace	Environment is the residents' home
Activities are structured	Activities are flexible and spontaneous
Hierarchical department focus	Collaborative team focus
Unidirectional relationship; "us and them"	Mutual relationships; community feel
Locked units or floors for resident protection	Freedom of movement within the larger LTC home
Protection from the outside except in good weather	Able to easily and independently access outdoors even in inclement weather
Hierarchal care model	Increased scope and responsibility of Health Care Assistant (HCA) who know the residents' needs and desires best
Risk aversion and over protection of some people	Greater balancing of risks with engagement in everyday life with residents, families and staff
Everything is done for the resident	Residents are able to participate in everyday chores, e.g. personal care, sweep a floor, rinse dishes after a meal, get a snack from the fridge, and water the plants.
Care guidelines are built from checklist of resident problems	Greater knowledge about the resident before they move into LTC
Language used is medically focused and institutional, e.g. nurses station	Language is normalized and home like, e.g. staff may be called carers, nursing station is called a work station

Inspirational and Exemplary Models of Care and Design

Leading Organizations/Models	Summary of Principles
Pioneer Network https://www.pioneernetwork.net/	Defines culture change in LTC as: • Person-directed, not system-directed • Flexibility and self-determination are embraced and practiced
Re-Imagining Long Term Care https://reltc.apps01.yorku.ca/	Identifies promising practices for thinking about, planning and organizing long-term residential care, including: • Viable, desirable and equitable options for individuals, families and caregivers

	• Promoting and supporting a more inclusive notion of citizenship • A place where people want to work and live, while encouraging the best use of resources
de Hogeweyk Dementia Village Model Sodo, J and Winters, M. *Missing Main Street: Reconnecting Older Adults with Dementia to the Fabric of Authentic Living.* Perkins Eastman. 2019	Includes: • Small household living • Authentic spaces • Freedom of movement
Wrublowsky, Robert. ***Design guide for Long Term Care Homes 2018*****. MMP Architects.** URL: https://www.fgiguidelines.org/wp-content/uploads/2018/03/MMP_DesignGuideLongTermCareHomes_2018.01.pdf	Evidence based design for LTC

Summary of Model of Care Principles

1. RESIDENT DIRECTED CARE
    - Each resident has the right as a citizen to participate in decisions that affect them, including level of risks they are willing to take
    - Staff and volunteers know the resident's life story, hopes and dreams
    - Privacy and dignity is balanced with health and safety
    - Residents have opportunities to engage in spontaneous and meaningful activities

2. RESIDENTS HAVE TRUSTING AND MEANINGFUL RELATIONSHIPS
    - Relationships include residents, staff, family, volunteers and the broader community
    - All people are treated with warmth and authenticity and listened to without judgment
    - Resident behaviours are understood to be a form of communication which expresses unmet needs or emotions

3. ENGAGING AND ENABLING ENVIRONMENT
    - The creation of households and shared community spaces at a human scale and with authentic spaces is normalizing which contributes to quality of life, good health outcomes and staff contentment
    - Freedom of movement in authentic spaces

4. EMPOWERMENT OF STAFF AND FAMILY
    - model in households is consistent so Health Care Assistants (HCAs) know residents and family well
    - HCA participate in all meetings about residents
    - Communication between HCAs and other interdisciplinary team members is daily
    - Staff caretakers who feel safe, respected and inspired

Based on exemplary models around the world and extensive literature review, VCH and PHC LTC communities are changing cultures from our traditional and institutional model of care to a resident-directed and social model of creating homes in a shared community.

The following tables detail the implications of each of the four main principles:

1. Resident Directed Care

Principles	Implications
Resident directed care is the core principle of this model of care. People who have dementia and cannot speak for themselves can inform staff through past and current behaviour.	Residents wake up, go to bed, eat, and bathe when they choose to. Staff alter work routines to honour residents' preferences. Each resident's room is their personal space. The individual maintains control over access, sound, light, and personalization. Visual and acoustic privacy is important. Management engages residents, families, and staff before making decisions that affect their daily lives. Management also supports staff to enable residents to make decisions. "Rules" are based on safety on ethical guidelines for autonomy and decisions making.
Deliver culturally safe and appropriate care, advancing and improving health and wellness outcomes for indigenous peoples in BC.	Engage with VCH/PHC Aboriginal Health and the local First Nations at the earliest planning and stages.
Consider diversity with regard to cultural, ethnic and gender appropriateness.	Recognize and provide space for religious and cultural practices, ceremonies and events. Public washrooms are gender neutral.
All staff, including leadership, will support the resident and their family and friends in many ways.	Anybody may help out to serve food at mealtime, help take someone to the community centre if they cannot find their own way, and engage in spontaneous conversation with residents.
Engagement in life is spontaneous and flexible and based on resident's interests and strengths.	Spaces must also allow residents to participate in everyday chores, e.g. comb their own hair, sweep a floor, rinse dishes after a meal, get a snack from the fridge, and water the plants. The community will offer planned and spontaneous opportunities to be involved such as a walk in a garden, go out for coffee, and be creative. Easy access to outdoors and freedom of movement to leave the household and engage in something meaningful and interesting to each resident requires clear and engaging destination spaces on every level.
Interdisciplinary team professionals support	Residents are referred to allied health professionals

Principles	Implications
residents in a consultative manner (e.g. social worker, occupational therapist, and physiotherapist).	as needed. All health professionals provide clinical care and support engagement of residents. Workstations for interdisciplinary team members are imbedded in the LTC home community spaces to be close to residents.
Privacy and dignity	Preserve privacy, dignity, safety and security by considering the relationship between private spaces and common spaces. There is a buffer between the communal household and the resident's private space, e.g. a small hall from the household into the bedroom. Resident bedrooms and ensuites can be individualized. Staff and volunteers will knock and announce themselves every time they enter. The number of people who enter a person's bedroom will be limited to those who provide personal care, or are otherwise invited in by the resident.

2. Trusting and Meaningful Relationships

Principles	Implications
Trusted relationships between residents, family, staff, volunteers and leaders are paramount.	Except for break spaces, staff, volunteers and leaders are visible and available to engage with the people who live in and visit the LTC home.
Each household is supported by a consistent and dedicated care team. **See Appendices: Staffing Model Template.**	HCA work primarily in one household and support personal care, meals and engagement of residents. The voice of HCAs are required at all meetings related to resident care. RN/LPN will work primarily in a small grouping of households (e.g. four households) and support clinical care and engagement of residents.
Allied health professionals support residents in a consultative manner.	Residents are referred to allied health professionals as needed. All health professionals provide clinical care and support engagement of residents.

Principles	Implications
	Clinical workstations are imbedded in the LTC home to be close to residents.
All staff, including leadership, will support the resident and his family and friends in many ways.	Anybody may help out to serve food at mealtime, help take someone to the community centre if they cannot find their own way, and engage in spontaneous conversation with residents.
Volunteers and broader community members of all ages bring vibrancy to the LTC home.	Requires creativity and flexibility in engagement of volunteers. The broader community comes in to the LTC home on a regular basis, e.g. community garden plots, children's playground, coffee shop.

3. Engaging and Enabling Environments

Principles	Implications
Home like scale and comfort	Scale of rooms is a balance of function for a number of people who require wheelchairs or walkers to live together, and size that means people with dementia recognize cues to identify the room they are in, e.g. a fireplace and or TV on the wall, the fridge, their own bedroom door. Food punctuates day-to-day life and is a natural focus of activity in the home. The layout should enable staff to observe the activity within the home in a natural, non-controlling way.
Design and decorate for people who have dementia, cognitive impairment and/or perceptional problems.	The specialized needs of people who have dementia, or other cognitive impairments, living in LTC need to be considered first. Other resident needs can also be accommodated within a dementia friendly framework.
Engagement in life is spontaneous and flexible and based on resident's interests and strengths.	Residents will be able to participate in chores, e.g. sweeping, rinsing dishes, doing laundry, as they are able.
The kitchen/dining and living are the heart of the household.	Residents, family and care staff have easy and full access to a kitchen area to support meal times as well as spontaneous snacks and drinks.

Principles	Implications
	Any "staff only "spaces such as a second fridge for bulk beverages are unobtrusive Use technology to allows safe access for residents (e.g. induction stove tops, hidden on/off switches)
The community centre is the heart of the LTC home.	Community spaces as destinations for residents outside of the household contribute to normal life for many. Authentic spaces such as a coffee shop and store, art studio, town hall are essential. These spaces can also be used for staff needs such as meetings or education events.
Freedom of movement **Providing unrestricted access to secure outdoor spaces can reduce agitation and frustration.**	All residents will be able to access all outdoor and community centre spaces. Households and amenity spaces can be secured if necessary, e.g. after hours, in an outbreak. Maximize views to active areas, views of nature, etc. outside the home and minimize the challenges of moving to these spaces.
Easy access to the outside. **Providing unrestricted access to secure outdoor spaces can reduce agitation and frustration.** **Elevators are essential to freedom of movement.**	Access to the outside must be available from the household or nearby. Link outdoor and indoor spaces to promote natural connections and use. There are enough elevators to minimize waiting during peak periods, e.g. returning to households at lunch or suppertime.
Spaces are authentic.	Realistic spaces help to define their use for residents and can be used by staff for other purposes. Avoid including meeting rooms when other spaces such as a resident creative space or exercise studio can accommodate staff groups. Integrate staff workspaces to maximize the effectiveness of staff to contribute to activity and engagement in these areas. Highlight the sense of entry to the home and each resident's space (consider doorbells, mailboxes, etc.).
Staff space is invisible	Minimize components that are part of an institutional setting (e.g. utility rooms) and see staff as supporters

Principles	Implications
	to individuals rather than controllers. Staff spaces are kept “back of house”. Signs for staff are kept in staff areas. Shared medical equipment and supplies stored out of sight.
Wayfinding systems support people who have cognitive and/or visual impairments.	To eliminate people who have dementia or other cognitive behaviour focusing on exits from the home, disguise exits to the outside. Within the LTC home use very simple way-finding systems to focus on needs of residents and visitors who will have memory and sensory/perceptual limitations: • Include simple, explanatory high contrast photos/graphics on signs using universal symbols wherever possible • Use high contrast colour coding to facilitate way-finding • Clearly identify emergency exits and routes • Minimal number of decision making points • At each decision-making point, such as hallway junctions, there should be orienting landmarks to assist with way-finding
Employ technology for specific purposes	Technology can be enabling for some residents and support some staff functions for safety, but cannot replace the need for staff engagement with residents 24 hours a day. Consideration of resident privacy and dignity balanced with function and purpose is required. See Purposes and Use of Technology

4. Empowerment of Staff and Family

Principles	Implications
“Nothing about me without me”	The governance of the home considers the voice of all stakeholders through involvement of people who will live, visit and work in the home
HCA participate in all meetings about residents	Communication between HCAs and other interdisciplinary team members is daily. The structure of care huddles, shift change reports

Principles	Implications
	and care conferences must be structured around HCA needs and knowledge.
Families are partners in care	Leadership support for positive and constructive family and staff interactions is required. Families are meaningfully engaged as part of the LTC community and care team.
Leaders support staff to do their best	Prioritize engagement of residents by each staff person. Provide adequate space for supplies and equipment to promote worker safety and ease of care delivery. Create a regenerative environment for optimal health and quality of work/life by creating attractive and functional staff only spaces. Ensure residents, family and staff are included in design and layout of all spaces.

Staffing Model Assumptions

The following assumptions have been made when outline the model of care. These assumptions will inform size of some spaces. A Staffing Model Template has been included in the Appendices to assist calculating the number of people working in the home.

- Aligns with the provincial target for long term care HPRD (3.36) and VCH requirements for non-professional and professional staff ratios
- Utilizes LPN/RN model
- Effective technologies will be in place to support clinical documentation, communication and resident safety
- Maximizes staff that provide direct care to residents, particularly in the households
- Eight hour shifts are optimal for most positions due to the intensity of the work
- Recreational and social activities are available on evenings and weekends
- Clinical leadership is available 7 days a week
- Consideration of transitional needs of residents and families (e.g. staff available for weekend moves)
- Teamwork is based on interdisciplinary functions and working to full scope of practice
- A strong corporate and practice infrastructure is in place to support specialized care needs and a high degree of complexity
- Staff will receive education required to meet expectations above the training required for their role

Physician Model Assumptions

- Physician services will be coordinated by a medical leader
- Physicians may be dedicated by household or neighbourhood
- Scheduled in-call coverage is required

- The following standards of practice will be achieved
    - 24/7 availability and on-site attendance when required
    - Proactive visits to residents
    - Collaborative medication reviews
    - Clear documentation and plan of care
    - Attendance at case conferences
- Physician services will achieve the system-level outcomes that result in a reduction of unnecessary or inappropriate hospital transfers; improved resident/provider experience, and reduced cost per resident as a result of higher quality of care

3. OVERALL DESIGN GUIDANCE

Designers of LTC will benefit from an understanding of human factors and the specific needs of people who require support 24 hours a day (see Chapter 2: Living in Long Term Care: Resident Abilities and Design Implications). Design should focus on creating spaces that residents can use independently, including freedom of movement between spaces. The LTC Home is made up of a number of large family style households, authentic community spaces for use by residents, family and visitors from the broader community, e.g. a coffee shop and store, plus spaces for staff to support their work.

Definitions & Regulatory Requirements

It is the responsibility of the architects, engineers and builders hired to design and build that plans conform to relevant legislation and codes including British Columbia Community Care and Assisted Living Act and Residential Care Regulation (Includes BC Bill of Rights).

Broader community	People from outside the LTC home
Care Model	Outlines how care is delivered
Community spaces	Destination spaces shared by all residents, families and staff, e.g. exercise room, creative space, café and store, sacred space, hair salon
Health Care Assistant (HCA)	Health Care Assistant (HCA), also called Resident Care Aide/Assistant (HCA) or Care Aide (CA) are direct care providers and must be registered with the BC Care Aide and Community Health Worker Registry.
Household	A household is a home and the people living within. Households are up to 14 residents[3] and includes all the spaces required to support day to day living (e.g. meals, personal care)
Household social spaces	Living room, dining room and kitchen
Implications / Considerations	Provides further details and considerations related to a requirement
LTC Home	Refers to the entire community of households, community spaces, support spaces and people who live and work there. Replaces phrases such as: “facility”, “site”, “campus”
Principles	A basic statement that underlies the rationale for decision making
Requirement / Design Requirements	Must be provided as stipulated

Engagement of Indigenous Peoples

Further design and discussion of creating LTC homes must include culturally responsive engagement and inclusive decision-making processes amongst partners and design practitioners for the co-creation of design

[3] Household size has been determined through review of the literature, exemplary models and operational staffing models

solutions. Based on a commitment to true, lasting reconciliation with Indigenous people, a new vision for LTC homes would benefit from authentically enrich design that supports a sense of place, based on stories of place making. To acknowledge the land (sense of place), you must understand it and what is born from it, including its languages, art, culture, and unique peoples.

Incorporating cost estimates of design elements and engagement activity into the project budget during the front end-planning phase shows facilitating mutual benefit and reciprocity with the Host Nations. Engagement should go beyond the creation of opportunities to give the Indigenous voice a platform to be discussed, explored and acknowledged (through art, furniture, way-finding, façade art). Mutual benefit and reciprocity includes designing around ongoing relationships that supports future programming activities. Putting in design elements that help the Host Nations host and hold space in these spaces will create an environment that invites family involvement, participation and interaction with the broader community.

It is essential that project timelines provide for ample time to develop trusting relationships between the project team and Knowledge Keepers. All bodies working the closest with the Host Nation(s) involved will require training to be implemented for the entirety of the project to avoid tokenism.

Indigenous Design Guidelines for Vancouver Coastal Health (2020) (See Appendices) contains the Indigenous Place-Keeping Framework (Wanda Dalla Costa, 2018), for direction on best steps of engagement in co-creating design solutions around inclusion and representation. These are living guidelines that will be updated regularly.

Analysis of Gender Bias

In order to challenge assumptions about whether design of a LTC home has gender or other diversity implications, a Gender-Based Analysis Plus (GBA+) lens (see Appendix: Gender Bias Analysis) will be required for any business case to the MoH. Consider the effect on women, Indigenous people, rural British Columbians, LGTBQ2S+ individuals, new Canadians, etc.

Infection Prevention and Control

These guidelines are being updated six months into the COVID-19 pandemic and it is apparent that the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) which causes COVID-19 will be in the human population for the foreseeable future. The VCH region will likely have this virus circulating at some level even if/when a vaccine is developed. As the population living in LTC maybe frail elderly or have other comorbidities, they are vulnerable to severe COVID-19 disease, and other infectious illnesses, suffering a higher rate of death than younger and healthier population groups. VCH has been successful in preventing widespread of transmission into LTC through behavioural and engineering controls which require consideration when designing new LTC communities. As the COVID-19 pandemic has demonstrated, design needs to accommodate actions required to ensure health and safety for staff and residents during the outbreak of infectious illness such as:

- Limiting the number of people who come into each LTC home
- Screening all people before entry for exposure to and/or symptoms of COVID-19
- Correct and consistent use of Personal Protective Equipment (PPE) when in direct contact with residents
- Social distancing between staff, residents and visitors

The temptation to continue to build hospital like environments in order to protect residents and staff is strong in such circumstances, however a balance must be struck between creating a safe environment and one that promotes quality of life. The Royal Society of Canada advocates for:

- Appropriate policies on visitors, recognizing the risk of infection, but also recognizing how essential friends and family are to both residents' quality of life and in providing care
- Quality of care in nursing homes is fundamental and intimately linked to quality of life
- Quality of life for the frail elderly is a non-negotiable objective
- Quality of end of life and a good death are non-negotiable objectives

We must be able to consistently deliver high-quality and holistic care and support a good quality of life, a good end of life and a good death. [4]

While there continue to be lessons learned from the COVID-19 pandemic, they are generalizable and support the adoption of infection prevention and control (IPAC) principles and practices as outlined below.

Principles	Implications
Households that can operate relatively independently allow for isolation during infectious disease outbreaks.	
Hand hygiene and sanitizing	Placement of alcohol based hand rub (ABHR) dispensers and hand hygiene sinks at critical points are required throughout the LTC home in consultation with IPAC. Consider how to make dispensers and sinks unobtrusive to ensure non-institutional atmosphere.
Proper and consistent use of Personal Protective Equipment (PPE) is essential.	Create adequate space for staff/visitor donning and doffing of PPE before entering the LTC home. Ensure storage space is available to have a "just in time" supply of PPE on hand. Ensure laundry and waste management storage spaces are adequate for processing soiled PPE.
Social distancing may be required: • **Between residents** • **Between staff** • **Between residents and others**	Adequate space for staff to socially distance if required, during break times. Flexibility of resident spaces to increase social distancing if required, e.g. open dining/living room.

[4] Royal Society of Canada: Restoring Trust and the Future of LTC. June 2020.

Principles	Implications
	Space for safe social distancing with outside visitors is required.
Screening of staff and visitors creates opportunity to limit transmission with the LTC homes.	Space for all staff and visitors to be screened as they enter LTC home. Consider need for a staff marshalling area during an outbreak (e.g. parking lot) and space for extra supplies if necessary.
Cleanable surfaces	Materials must be non-porous and withstand products required for cleaning and sanitizing.
Good air quality	Circulation of air from the outside must meet minimal standards (e.g. ASHRAE standards for indoor air quality.) Further investigation of recommendations related to transmission of COVID-19 is required.
Low touch technology	Touchless faucets particularly for hand hygiene sinks, and door access control system
Storage for personal items	Adequate spaces are required for storage of resident's personal items during an outbreak when enhanced horizontal cleaning may be required.
Managing traffic during an outbreak	Multiple elevators and the ability to limit use of elevators to outbreak floors
Protection from heat	Air conditioning and the use of fans may pose a risk for droplet transmission during an outbreak. Consider the risk of heat related medical problems and discomfort.

Energy, Climate Action and Environmental Sustainability

The Vancouver Coastal Health Environmental Sustainability Policy outlines the importance of developing a triple-bottom-line approach to sustainability, one that balances ecological, societal and economic imperatives and recognizes the link between a healthy environment and a healthy population. VCH recognizes a duty to minimize their environmental impact as a means to support a healthy population. This policy provides the framework to support the development protocols and procedures.

The Lower Mainland Facilities Management (LMFM) **Energy and Environmental Sustainability (ESS) Design Guidelines for New Construction & Major Renovation** projects were created to ensure that new construction and major renovation projects in Vancouver Coastal Health are built to the highest standard of human and environmental health within the financial constraints of the project. This approach aligns with

the VCH Sustainability Policy, the provincial Clean BC Climate Strategy, and the Climate Change Accountability Act (CCAA).

There is a significant and growing body of evidence available that links the impacts of the built environment, from the energy they consume to the materials used in their construction, on occupants as well as local and global populations. Buildings impacts include both short and long term and span from inside the building to the broader global population.

The EES Design Guidelines provide an important source of information to guide the LTC projects and include the following core sections:

- Climate Resilience & Adaptation Requirements
- LEED Gold Requirements
- Smart Energy & Water Requirements
- Zero Waste & Toxicity Requirements
- Active & Clean Transportation Requirements

Integration of passive house design strategies should be pursued to maximize patient thermal comfort and acoustic quality to improve the patient experience in addition to the range of environmental and health co-benefits.

For each LTC project an EES team member will be engaged early in the planning process, at the beginning of the business plan or earlier, to ensure appropriate project support and optimal health and environment outcomes.

Accessibility

The environment will facilitate resident independence, mobility and control of their own environment (e.g. doors, lights, blinds, temperature etc.) resulting in increased independence and overall wellbeing.

Principles	Requirements
Since many residents have physical, visual, perceptual or cognitive impairments, design features will allow easy, barrier free access to common and personal areas.	Wheelchair and mobility aid access and contiguous floor levels Adequate turning spaces in all interior living areas and exterior spaces. As a guideline for the residents, provide a 1,675 mm /5'6" turning radius for wheelchairs, which is recommended for the more frail residents who cannot manoeuvre a wheelchair as easily and who are often being assisted. For residents in motorized wheelchairs or bariatric persons, an 1828 mm/6'0" turning radius is required. Adequate door widths appropriate for each function or space

Principles	Requirements
	Barrier-free accessible millwork and furniture including counters and sinks Fittings and fixtures, such as window operators and door handles, that are easy for residents to operate Handrails on both sides of corridors used by residents
Will meet minimum requirements to be able to live in or visit the LTC home	Zero-step entrance, adequate interior door width and same floor access to a bathroom

Bariatric Specific Requirements

Planning for each LTC home will include the review of data and trends to establish the number of bedrooms intended to accommodate bariatric individuals (i.e. a person who has a body mass index greater than 30 or a weight over 182 kg/400 lbs.). A minimum of one bariatric bedroom is required in each LTC home.

Features that accommodate bariatric individuals will be required in access routes from the main entrance to all spaces used by bariatric residents, elevators, community spaces used by residents, and throughout any household with a bariatric bedroom. These features, such as wider and as a result heavier doors, may present barriers to residents and are best used thoughtfully where they enhance the accessibility for bariatric persons only.

Design Requirements	Considerations
Doorway and door clearances intended for bariatric access will be at least 1220 mm/ 4' 0" wide. Bariatric resident bedroom doors will be 1524 mm/5' 0" clear width to accommodate larger beds.	
Clearances for bariatric wheelchairs and turning radius will be 1828 mm/6' 0"	
Bariatric access 2 piece public washrooms will be 7.7m2 (CSA Z8000)	
Fixtures will accommodate bariatric individuals	Toilets, sinks, grab bars, handrails and ceiling lifts will be designed specifically for bariatric residents. CSA Z8000.18 provides guidance.

Wayfinding

Clear wayfinding is important to help visitors navigate the LTC home and to support residents to be independent in their daily movement.

Features of the building that negatively impact residents include confusing layouts where there are multiple junctions where decisions are required. Simple directional cues in straightforward designs help to eliminate fear and frustration and aid in independence.

Design Requirements	Considerations
Circulation patterns will be simple and direct and avoid complex circulation patterns.	Clearly define entry points at all entry levels. Major circulation elements (e.g. corridors, elevators and stairs) are positioned to be easily located and identified. The numbers of decision points/junctions are minimized and orienting landmarks, outdoor views and signage are used to assist with wayfinding at these locations. Clearly identify emergency exits and routes. Colour coding may be considered.
Signage design will be used where necessary to support wayfinding with simple and clear design.	Simple, explanatory graphics or pictures on signs using universal symbols will be used wherever possible. Signage may reflect the overall character and theme of the LTC home or individual households within. Rooms within in a household should not require labels.
The design will reinforce awareness of location and direction by providing frequent sight lines to the outside and distant views for orientation with surroundings.	

Purposes and Use of Technology

Technology will also be an important and potentially life changing enabler for residents, families and staff. Any technology must address a specific purpose and provide evidence-based functions. Preparing for future technology, whether implemented by the organization or individual families/residents requires forward thinking and investment in the infrastructure required. As technology is always evolving, each project will review advancements to meet resident needs.

Purpose	Functions Required
Wi-Fi, Bluetooth and cabled technologies	Required universally through the entire LTC home including resident and support spaces
Fall prevention and alarms	**Required:** Motion sensor lighting in bed rooms and ensuites for residents who may rise to go to the bathroom on their own Ability to turn off motion sensors for those who do not need it due to limited mobility Bed/chair alarms that alert when a person who needs assistance for transfer/walking attempts to rise from bed or a chair. Ideally must be silent to minimize intrusive noises in the environment. **Consider:** Devices to monitor posture to sense a fall
Hearing boosters	**Consider:** Hearing loops (induction loop) for the large community space to boost function of telecoil hearing aids and cochlear implants
Monitoring resident and staff safety	**Required:** Emergency call systems will be installed at resident's bed and in the ensuite bathroom by the toilet. Monitored duress alarms will be incorporated for the safety of staff where they might be alone. Zone identification must be as precise as possible. **Consider:** Quiet alarms, e.g. pager vibration to alert staff but not disturb other people GPS tracking for people who may exit the area
Social connectedness	**Required:** Ability for video calls (e.g. Facetime, Skype, Zoom) Phone capability **Consider:** Transmission of group activities, e.g. concerts, group singing, games into resident rooms via smart TV

Purpose	Functions Required
	Digital voice assistants (e.g. Apple Siri, Google Alexa) for use by family and residents in resident bedrooms only (requires awareness by staff that their voice may be heard by others)
Entertainment	**Required:** Cabling for television will be provided for each resident room, in living rooms, and activity spaces. Internet capability in all resident spaces
Electronic documentation	**Required:** Cabling for desktop workstations, printers and wireless capability in each household, office, community amenity space
Enabling technologies	**Consider:** Voice or app activated lighting and temperature controls for people with impaired upper body function
Organizing technologies	**Consider:** Equipment inventory and purchasing software Vertical storage
Language translation	Language translation apps depend on good internet connections, the hearing of the resident and the dialect used In situations where translation is required for critical conversations, an interpreter is required, in person ideally or by phone
Security systems	**Required:** Each household will have lockable doors to provide a safe environment after hours Closed circuit TV systems will be used to monitor the exterior perimeter of the LTC home Intrusion alarm systems will be used to secure the perimeter of the building to deter break-ins
Telehealth	**Consider:** Telehealth systems that support the medical provider to talk to and assess the resident remotely, e.g. a laptop/mobile computer in the resident bedroom and/or examination room

Purpose	Functions Required
Infection Prevention and Control	**Consider:** Touchless faucets Automatic door operators

Finishes and Décor

Home like décor is very subjective as there is a great variation in individual taste and cultural norms. It may be easier to determine what is not home like, comfortable or inviting. For example, when making decisions about finishes and décor an important question to ask is "does this look like institutional?" Neutral or pastel colours and stark décor seem hospital like in large spaces. Another question to ask is "is this comfortable and inviting"? Interiors that look like traditional high end luxury hotels can be intimidating.

Planning for refreshing and maintenance of décor is important so that paint colours that "don't work" can be replaced.

The table below highlights some basic, evidence-based principles for interior decor.

Principles	Considerations
Provide consistent lighting that is soft and well diffused across a full colour spectrum.	Avoid glare Avoid changes in light at doorways and other transitions
Provide task lighting at bedside, in the bathroom and in specific activity areas, e.g. kitchen, creative spaces.	
Surface finishes must be non-porous for infection control purposes.	
Decorate with vibrant colours to attract residents to a specific area.	Older adults have trouble seeing pastels. Purple and some blues look brown through yellowing lens as people age. (Test colours using yellow lens goggles.)
Provide high contrast for residents to see doorways, handrails, distinction between floor and walls.	Do not use high contrast in flooring patterning as this may confuse or signal a level change to residents.
Use low contrast to disguise areas that are not open for resident use, e.g. door to dirty utility room	
Do not use patterns on floors, e.g. wood grain with knots, checkerboard tile.	Residents often perceive patterns on the floor as something to pick up or step over.
Consider picture rails so art can be changed frequently.	Simply framed resident art provides discussion points and adds to vibrancy.

Principles	Considerations
Use of murals can add to confusion for people who have dementia if not used to add authenticity to a space.	Murals that depict an outdoor scene can be hazardous, e.g. if resident tries to sit on the painting of a log Murals of a bookcase can be frustrating if person is trying to pick up a book.
Furniture must be functional for residents, and be non-institutional.	Armrests on chairs are helpful for standing but need to fit under tables when not in use. Colours must be high contrast with the floor to be easily distinguishable when sitting down.
Sound attenuation between spaces to mitigate generation of echoes	

4. SPACE DESIGN GUIDELINES

The design of the LTC home will create a small community for the people that live, work and visit there. The LTC home is made up of a number of households that replicate large family living as well as authentic community spaces (e.g. coffee shop and store) that residents can visit freely and independently and the broader community can come in and enjoy. Figure 1 shows the relationships for the different components of the LTC home.

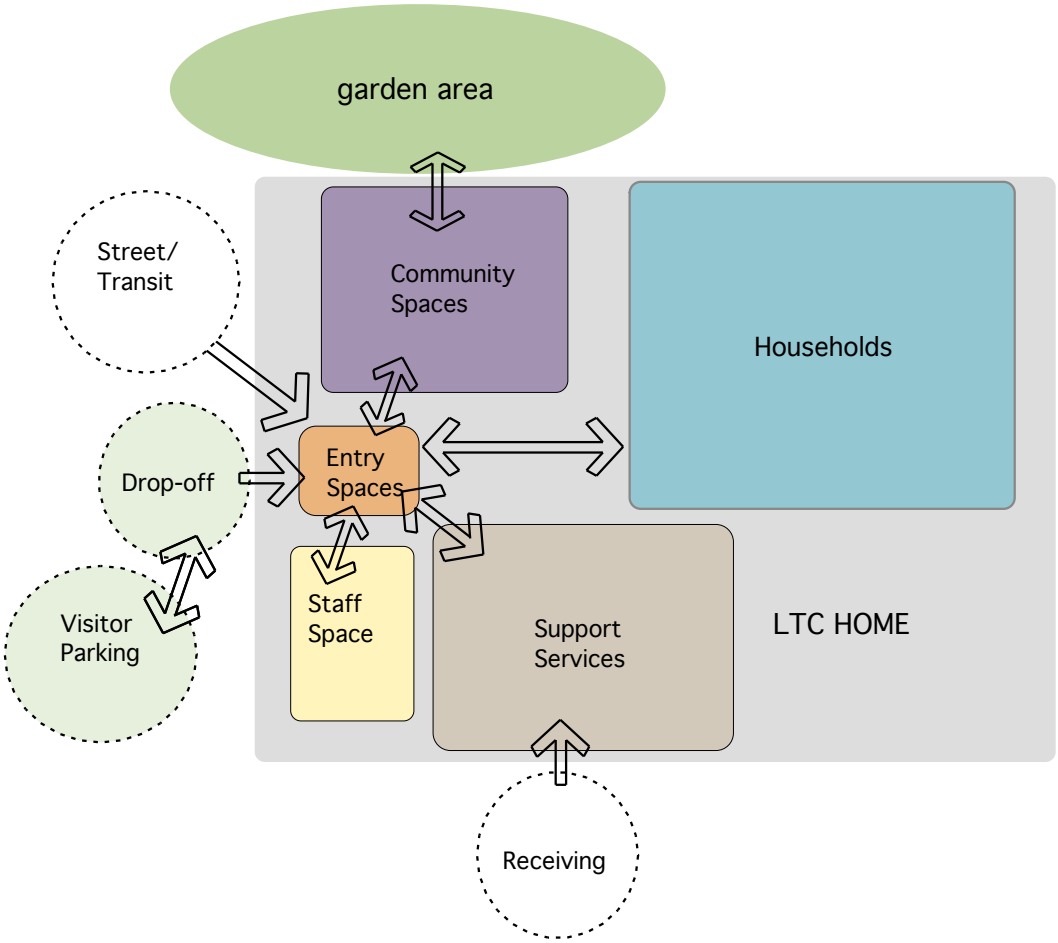

Figure 1 Relationships between main components of the LTC home

THE HOUSEHOLD

The household provides residents with a supportive care environment in a small scale setting which encourages independence and involvement in everyday life, e.g. chores and enjoyable pursuits alone or with other people in the household and visitors.

The primary staff of each household are the HCAs who help to organize the resident day based on each person's care needs, regular routines and choices for spontaneity. HCAs will identify and communicate

changes in resident status to nurses and other members of the care team to alert the need for clinical reassessment and possible interventions.

When not supporting residents in individual bedrooms and ensuite, staff will engage with residents who are in the shared social space, i.e. the central living, dining and kitchen areas. Therefore, staff documentation and work areas will be integrated into the central living area.

The shared social space will be vibrant and welcoming, and suitable for small groups, e.g. conversations, watching TV sports together, group singing, baking and caring for plants and other hobbies that are supported by the HCAs or volunteers in the household. Meals will be served `family style` with the options for snacks and different meal times based on individual routines.

Residents will be able to easily and independently access the outdoors in all kinds of weather to the attached or nearby covered patio. Coats and umbrellas are stored at the doors to outside.

Staff have easy access to a soiled and clean utility room as well as other items that will be used every day, e.g. sit to stand lift. The spa room may be shared between households.

Figure 2 shows the relationships of the components of a household.

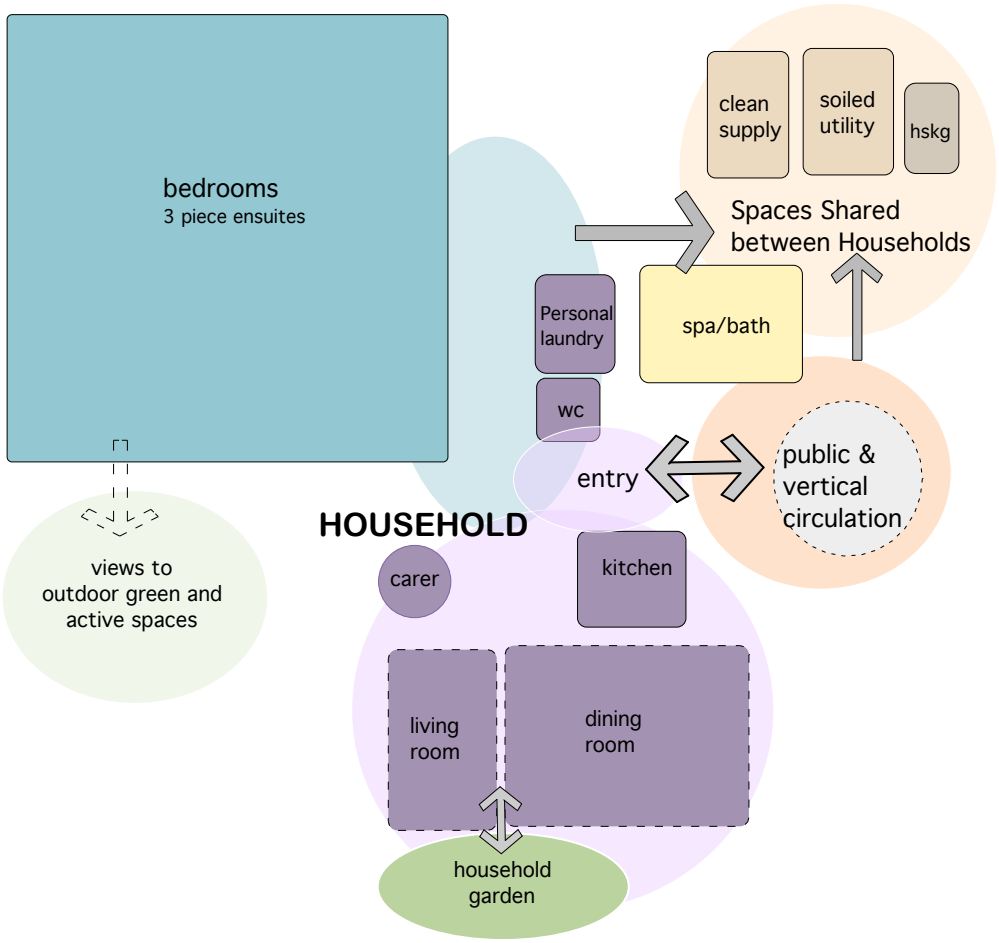

Figure 2 Relationships between components within an individual HOUSEHOLD

Design Requirements	Considerations
Each resident household is a separate entity with its own front door from a common area such as a courtyard or hallway. Visitors will knock or ring a doorbell to be permitted entry.	Entry design should consider normal residential front door elements such as an individualized door color/design/signage, mailbox, "front porch, etc. Distinctions between households may include colour & design of door and interior decor which may support wayfinding as well as the identity of people who reside there.
Each household accommodates 10-13 residents with a maximum of 12 recommended. **Household resident spaces include:** • Bedroom and ensuite • Living room, including TV and storage for books, crafts, games • Kitchen and dining room • Personal laundry room • Staff alcove that can be hidden and locked when not in use (e.g. inside cupboard/desk and secure medication storage • Shared household washroom (accessible toilet and sink) • Entrance with spaces for resident outdoor coats and umbrellas (and lockers for two HCAs who work in the household) • Household outdoor space • Spa room (may be shared between households) **Support functions include:** • Soiled utility room • Clean utility room • Housekeeping closet • Central storage • Medication dispensing space	The number of people living in each household requires consideration of staffing model efficiencies in particular for Health Care Assistant (HCA), LN and RN. Homes can be paired to share service spaces and allow flexibility in staffing for night coverage. ***Each functional area required is described in more depth elsewhere in this document.***
Corridors that residents use to travel around the household are short and provide visual access into social spaces such as living room, dining room and /or kitchen.	Residents should not have to travel more than the length of 6 resident bedrooms to reach social spaces in the household. Residents are more willing to enter a space if they can see what's happening and who's there before committing.
Corridors within the resident area of the household do not have carts stored in them.	Provide extra storage for clean linens in each bedroom to eliminate linen carts in hallways.

Design Requirements	Considerations
Access/entrance into living room and kitchen, dining room should be wide and have an open concept.	Doorways act as barriers to residents' free movement and engagement .
The household will have a balance of natural light, privacy for resident bedrooms, visibility of destinations for residents (e.g. kitchen/dining area, front door) and ability for staff hear or see residents.	Resident criteria should be prioritized in the design layout.
Storage for equipment and supplies used daily will be provided in convenient locations.	Households may be linked together to facilitate shared support services. Service routes will not pass from one household to another. Distance to transport soiled equipment must be minimized.
Locate hand hygiene sinks in high use staff and resident areas such as kitchen/dining area and near the medication storage area.	Hand hygiene sinks should be small and unobtrusive so as not to appear institutional.
Keep the scale of the household residential by reducing the amount of corridor and circulation space.	Eliminate dead end hallways wherever possible. Where dead end hallways exist provide a point of interest at the end of a resident hallway such as a small seating area. Loops within the household make it difficult for residents to find destination spaces. Loops for walking outside are preferred.
Each household will have direct access to an outdoor space that they can access at will for fresh air and exercise.	Household outdoor area may be a porch, patio or direct access to the Community Garden.
There is capacity to lock the household entrance and exterior space for safety in the evening/night.	

HOUSEHOLD RESIDENT SPACES

Bedrooms

The resident bedroom is an important private space for the resident where staff will knock and announce themselves every time they enter. People who enter the bedroom will be limited to those who provide personal care, or are otherwise invited in by the resident.

While in their bedroom, a resident may choose to be on their bed or sit in a comfortable chair. They need space to have one or two visitors, watch TV and engage in individual pursuits suitable for a small space. They must be able to decorate their space with personal items, bring in their own furniture and store personal items. Independent access to their bathroom is required. At the end of life there needs to be sufficient space for a sleeper chair so that loved ones can stay overnight as desired.

Layout of the bedroom must consider safety and ease for staff providing personal care and transfers. Storage space for wheelchairs, personal care items, e.g. extra linens, incontinence supplies and dirty laundry is required to eliminate clutter in the hallways.

Residents who are totally dependent on staff will have opportunities to be outside of their bedrooms every day in order to be engaged in the more social and stimulating environment of the household living, dining and kitchen areas.

Design Requirements	Considerations
Resident Bedrooms will be designed for a single individual occupancy. **All bedrooms will have an adjoining three-piece ensuite with toilet, sink, and wheelchair accessible shower.**	Single occupancy rooms are the accepted minimum standard to support resident satisfaction, personal care and flexibility in room allocation. Shared rooms may address unique situations and accommodate couples or friends who would benefit from a shared setting.
If considered advantageous, a maximum of 5% of bedrooms may be designed to be shared between two individuals and have a shared ensuite.	To create the shared opportunity in a flexible way an adjoining door may be provided to link a pair of single rooms creating the opportunity for couples to share a bedroom and have an adjoining living area, and allowing for each resident to have a personal ensuite for dignity, infection control and staff workflow purposes.
Every LTC home will include at least one bariatric resident bedroom. **The Bariatric bedroom will be designed to accommodate a larger turning circle (1829 mm / 6') and have a minimum suite size of 32.0 m2 inclusive of washroom and room entry.** **The design of the room will be generally similar to other resident bedrooms with the exception of a larger washroom, wider entry door (1524mm/5'0"), larger manoeuvring clearance and higher capacity ceiling lift (gantry to support 453kg/1000 lb.).**	In a household with a bariatric resident suite all other areas will be designed to accommodate bariatric clearances and manoeuvring requirements. Consider the number of bariatric bedrooms required and plan households to optimize larger square footage required. Bariatric bed dimensions are typically 2250mm long x 1220mm wide.
Resident suites will be designed to allow access to the bed from three sides and accommodate a wardrobe or closet (described below). The position of the bed will allow: • **A minimum turning circle of 5'6" (1676 mm) on one or the other side of the bed so that the resident may access from the side they are most able to access**	The resident may have a few additional pieces of personal furniture in the room. E.g. bureau, desk, chair. A sleeping chair will be made available for loved ones to stay overnight if the resident is near the end of life. A secondary position for the bed with one long side against the wall will be considered if appropriate for the resident's ability to transfer independently.

Design Requirements	Considerations
independently. • **4' (1200 mm) clearance at the end of the bed** • **Staff to access both sides of the bed if required for transfers** • **Resident can access the ensuite** **The minimum room size of 24 m2 inclusive of ensuite.**	The bed locations will provide privacy and avoid an unintended direct view of the resident from the hallway.
Flexibility will be considered in the room layout to allow individuals to arrange furniture and decoration to personal satisfaction.	Space will be personalized and decorated by the resident. Consider a picture rail. Electrical outlets positioned for maximum flexibility in arranging furniture.
Entry doorways to resident suites will have the capacity to be individualized and a means for staff and visitors to announce they are entering.	Consider an individualized nameplate or mailbox to identify room and a doorknocker or bell.
The entrance to each bedroom shall be wheel chair accessible with a doorway width of 1220 mm /48" of clear space unless planned as a bariatric room in which case 1524 mm/5' 0" is required.	A split door with leaves 900 mm (36") and 300 mm (12") may be considered.
Bedroom and bathroom doors will be lockable by the resident. Staff will be able to unlock these doors from the outside for safety or emergency reasons. **Door hardware will be lever-style handles that can be easily opened with one hand.**	Residents may carry the key to control access to their own space. Residents may have loss of strength, joint pain and cannot use doorknobs.
Each bedroom shall have closet or alternative clothes storage furniture (i.e. wardrobe) for each resident. **Minimum requirement is 0.74 m2 (8' 2") designed to accommodate standard clothes hanging depth.**	Consider designing the wardrobe with two sections, one of which is lockable. Consider providing separate storage space or clean linens in each bedroom to eliminate linen carts in hallways.
All Resident suites will have with an XY gantry patient ceiling lift. **The gantry system will include coverage into the ensuite (XY gantry and J-track into the ensuite) and have a minimum capacity of 450-500 lbs. patient lift.** **In the case of the bariatric room, the XY gantry coverage must be 100% of the room including the ensuite and have a minimum capacity of**	Wherever possible, ceiling tracks shall be recessed into the ceiling to make them less obtrusive and maintain the highest possible headroom in the room. At occupancy, all rooms shall be equipped with ceiling track systems and the facility will provide at least 75% motor coverage.

Design Requirements	Considerations
1000 lbs.	
Each bedroom shall have individual controls for temperature and lighting.	Controls for reading/task lighting will be located near the bed location.
Lighting will be designed to provide both adequate task lighting for reading and for provision of care.	Lighting without shades or diffusers that produces glare will be avoided.
Staff call system will be installed in each bedroom and located to be easily accessed by the resident from the bed and from the ensuite.	Consider quiet alarm systems.
At least one operable window will be provided that has a direct view to the outdoors, both from a sitting and lying position. The window opening should be restricted to no more than 150 mm (5.9 inches).	View to include greenspace or vegetation (recommendation 30% green to grey ratio).
Bedrooms will provide respite to residents from heat waves, high daytime temperatures, and warmer nights.	The design will allow for a diversity of passive and active cooling ensuring that residents are not adversely affected.
Window treatments should consider light control and privacy. If pull cords are used, they must be break away.	Bedrooms where windows open directly onto a patio or balcony require extra consideration of privacy screening and window coverings so people cannot see into the room. Window coverings will allow a view out while providing control of glare/light. Window coverings will darken the room for sleeping at night.
Provide for a phone, cable television service and internet for each resident **Provide power outlets to accommodate resident's electrical equipment (e.g. computer, stereo, and lamp).**	As technology changes wireless device and Wi-Fi may replace the requirement for cabling. Power outlets should be located on each usable wall to allow for personalization. Consider mounting heights of outlets other than the tradition 12" above floor.
Wall area should be made available to allow for a flat screen TV to be mounted	Confirm current TV technology and plan for a PVR or other cable box if required. Cords should be concealed where possible.
Allocate space in the bedroom for storage of wheelchairs and provide electrical outlets for motorized wheelchair battery charging.	There will be no storage of wheelchairs in the corridors.

Ensuite

Besides the privacy and dignity of an individual bathroom and shower, a private ensuite will contribute significantly to infection prevention and control. As well, an ensuite supports flexibility of providing showers based on individual care needs and preferences. Those who prefer a soak in a bathtub can also use the spa room. The ensuite can also serve as storage for individual equipment needs, e.g. a bed commode or shower chair.

Like all home bathrooms, a balance of safety, function and style is required for the resident, as well as staff supporting the resident. The resident should be provided the opportunity to remain as independent as possible in going to the toilet, brushing teeth, combing hair, washing face and shaving.

Design Requirements	Considerations
Each resident suite/bedroom will have an attached barrier-free 3-piece ensuite washroom.	
A minimum turning circle of 1676 mm /5'6" to accommodate wheelchairs and walkers is required.	Bariatric ensuite turning circle requirement is 1828mm/6'0".
The washroom door will provide 900 mm/ 36" clear opening width. The door will be lockable with emergency opening capability.	Sliding door handles must be easy to grip (C or D type handles) and located on the door so that hands and knuckles will not be hit when opening and shutting the door.
The ensuite bathroom will include an open (European) shower with the appropriate handrails and grab bars. The shower must allow for use of a shower chair and to have staff provide assistance.	A telephone type hand shower spray with 2 m length hose will be provided. Appropriate non-slip flooring must be installed.
Toilets should be mid-high; 400 mm/ 16" is recommended to meet accessibility requirements for shorter residents. Toilets for resident use shall conform to accessibility requirements for handicapped persons. Minimum space to each side of the toilet is 600 mm/ 24". **Grab bars shall be placed on both sides of the toilet and may be fixed or folding type.**	Toilets in bariatric ensuites will be floor mounted and capable of supporting 453kg.
A wheelchair accessible vanity and washbasin shall be provided for the personal use of each resident.	The recommended washbasin mounted height is 840 mm with 770 mm clearance for wheelchair access under the front rail. Residential style single lever faucets are easy for residents to manipulate to control temperature/volume. Touchless faucets should not be used in ensuites as they are typically timed to turn off and are frustrating to use for personal hygiene.
For ensuites attached to Bariatric resident bedrooms the following additional requirements	

Design Requirements	Considerations
will be met: • **Door access will be minimum 1220mm/4'0" clear.** • **Floor space will accommodate a 1828mm/6'0" turning radius** • **The washroom vanity shall be able to withstand 453 kg of downward force** • **Toilets in bariatric ensuites will be floor mounted and capable of supporting 453kg.**	A clear area approximately 2440mm/8'0" x 1828mm/6'0" is recommended.
A station to activate the staff call system will be provided in an easily reached location.	
The ensuite should be arranged to provide privacy with no view from the household corridor.	
Storage space for the resident's personal toiletry items will be provided.	Each washroom shall have counter space of minimum 9" on left and right sides of the sink, a soap dispenser, towel bar, coat hooks and a mirror. Separate storage for incontinence and care products will be considered.
Holding space will be provided for the collection of dirty household linens before transport to central laundry or receiving area	
Controls for the shower and basin will automatically maintain a safe water temperature. (Maximum 49 Celsius)	Conceal water shut off valves so they are not visible to residents in order to prevent tampering.
Ventilation will be adequate to eliminate unpleasant odours and excess humidity.	
Provide motion sensor night light for the path from bed to ensuite, and inside the ensuite	To assist with cueing consider painting the washroom door and the door frame a paint hue that contrasts with the colour of the bedroom wall.
The ceiling mounted patient lift will provide access from the bedroom into the ensuite.	Consideration is to be given in design of ensuite walls to ensure access by the ceiling lift apparatus. For standard rooms where the ensuite walls are full height an XY gantry system with a J-track to the ensuite is the preferred design. For bariatric rooms the ensuite walls may be designed as pony walls so that the XY gantry system is continuous through the entire room including the ensuite.
Ensuite finishes will be designed to be impervious to water and the flooring will be non-slip type.	Non-slip flooring will be carefully selected and tested to balance cleanability with the non-slip feature.

Kitchen

The resident kitchen is best situated adjacent to an open dining room so residents can take part in the bustle of a kitchen and participate in chores, as they are able. This area of the home provides multisensory experience of familiar sights, sounds, and aromas.

The kitchen will have a dual functional role as:

1. Space for residents and family to easily access beverages and snacks and engage in everyday chores or cooking/baking activities
2. Area for temperature controlled holding and serving of food brought from central kitchen for specific meals

Design Requirements	Considerations
The resident kitchen includes resident accessible kitchen functions and food service functions in the one space.	Residents can see and smell food, snacks can be prepared, and residents can make food choices at the point of meal service. There is storage for food service delivery and temperature control equipment, e.g. Cambro containers.
The resident kitchen should be open concept with full view of the dining area. **Provide:** • **Fridge for resident use** • **Residential stove with oven** • **Dishwasher (commercial grade)** • **Double bowl sink** • **Space and adequate outlets for small appliances including microwave, residential style coffee pot, kettle, toaster** • **Ice maker in fridge** • **Unlocked cupboards with snacks, dishes and cutlery for resident/family use**	An arrangement with an inland or peninsula allows those in the kitchen to see and interact with residents in nearby spaces. A commercial grade dishwasher is required – it must include a rapid speed cycle, a water heater booster. A lockout switch to control the operation of the stove/oven should be provided in a location accessible to staff only. Storage space for recyclables and garbage is needed.
Area for temperature controlled storage of food delivered from the central kitchen: • **A second fridge for storage of food services supplies only** • **Locked storage for food service supplies** • **Space for hot food holding (e.g. Cambro containers)**	This does not need to be a separate room. Primary purpose is safe storage of warm and cold food transported from central industrial kitchen. Comply with all requirements regarding safe food handling practices in consultation with IPAC and Environmental Health. Access control may be required when supervision of the area is limited.
Food will be produced on site in a central kitchen. **Transport of prepared food will require:** • **Safe and efficient pathways**	Requires: • Central kitchen for contracted or in house food services providers scaled to size of the population • Consideration of movement of hot food to each

Design Requirements	Considerations
• **Containers for safe food handling temperatures** • **Storage space for carts to facilitate delivery of food/ pick-up of soiled dishes**	household kitchen for three meals a day • Consideration for movement of food snacks/drinks and household pantry and household kitchen fridge on a regular basis • Storage of snacks/juices/pantry items • Methods for safe handling of temperature controlled food/drinks • Method for return of pots and pans and large serving dishes to central kitchen • Ability to wash dishes and cutlery in each household
Residents in wheelchairs should be able to access snacks/beverages for themselves.	Locate the microwave at counter height Millwork should have rounded corners to prevent injuries.
All surfaces including lower cupboards and drawers should have durable, scratch resistant finishes. **Counter surfaces will be seamless, durable materials that meet licensing requirements.**	Solid surface counter tops are preferred over stainless steel for their more residential appearance.

Dining Area

The resident dining area is best located adjacent to the kitchen to encourage the engagement of residents in observing or participating in snack and meal preparation, and clean up. The aroma of food is comforting and stimulates appetite. Dining tables will be flexible to be configured family style (one large table) or allow for people to eat by themselves or in smaller groups if lower stimulation is required. There will be space for staff and visitors (family, volunteers, and paid companions) to participate in mealtime activities. Staff and visitors should be allowed to eat and drink at the table with residents as a normal part of life.

The dining tables can be used for other activities between meals.

Design Requirements	Considerations
The dining and kitchen area room is the centre of the home.	Resident dining areas must incorporate design features that promote a home like ambience and reinforce familiar eating patterns associated with smaller social gatherings. The dining area should have finishes and features that reduce reflected noise and increase sound absorption, and enhance the “home” environment.
The minimum space requirement is 3m2/resident.	This space will seat all household residents and a couple of visitors or staff. The ability to space out tables for people that want to eat alone, or pull together to eat family style is required.

Design Requirements	Considerations
The dining room will have a view to the kitchen so that residents can observe or participate in meal preparation. **The living room will be adjacent enabling the spaces to expand into each other under special circumstances.** **The dining area is also adjacent to the staff alcove enhancing engagement between staff and residents.**	In the case of an outbreak the dining area might be expanded into the living area to create greater distance between tables.
Provide storage space for group activities that might take place at the table between meals.	The dining space may be used as an activity or social space outside of mealtimes, but is not to function as the sole activity space for residents.
The shared household washroom for the use of resident, visitors and staff will be nearby.	
A separate wheelchair accessible hand hygiene sink is to be located either in the dining area or in a corridor immediately adjacent	Residents, visitors and staff will use this sink.
Requires station to activate the staff call system.	
Provide space for a portable suction machine and charging station.	
Designate space for a large font poster describing the weekly menu in a location that is easily viewed by residents.	

Living Room

The living room is a lounge and activity space, designed so that residents can engage with other people and things to do. Having the living area as part of an open concept living room, dining room and kitchen allows for flexibility in seating and activities, and maximizes the engagement between staff and residents.

Design Requirements	Considerations
The living room is a lounge and activity space designed so that residents can engage with other people, engage in recreation and spend time away from their room.	Consider: Fireplaces, gas or electric, offer warmth and enjoyment. A wall mounted TV or entertainment system for shared watching, e.g. sports events, movie night Task lighting or lamps to provide a homelike ambience.
The Living Room will be located adjacent to the dining space to create an open concept area that provides versatility for a range of activities.	The activity of one space will help to activate both.

Design Requirements	Considerations
The minimum total required space for resident lounge and program/activity space is 2.5 m^2 per resident.	The space will be furnished with comfortable seating appropriate for seniors, with provision made for wheelchairs to manoeuvre.
Each living room should have a direct view of outdoor areas.	The household outdoor space may be accessed via the living room.
The Shared Washroom will be located nearby for resident convenience.	The shared washroom should be easily identifiable to residents using the Lounge/Living Room or Dining areas.
Open and closed shelving and storage is required	Storage will accommodate items used for recreation activities, e.g. games, craft supplies.
Resident lounge areas should be designed for clustered seating rather than linear seating to allow resident conversations and activities to take place.	
The entrance way into the living room will be wide and inviting.	

Staff Alcove and Medication Storage

The staff alcove is a workspace for one staff person at a time to do documentation and other computer based activities. It will be used primarily by the household HCAs, nurses and visiting physician. There will be other shared workstations in the Office Spaces and Workstations located near the Community Spaces.

Locked medication will be located in or near the care alcove for ease of documentation.

Confidentiality and privacy is important, balanced with staff ability to observe and engage with the residents in the social spaces.

Design Requirements	Considerations
Staff alcove will be designed to include a computer workspace, printer and storage capacity for daily charting and medication dispensing. When not in active use the area will be secured.	May require a second monitor/CPU for resident tracking/monitoring safety system. A hand hygiene sink is required in the general area which may be shared with adjoining communal space Will not have barriers and the height of the station should not exceed the height of a typical work desk.
The staff alcove will be located in the social area of the household to allow observation and engagement of residents while doing documentation.	
Lockable with separate locked compartment for narcotics and controlled drugs	A centralized space for initial storage of medications when delivered from pharmacy will be located near the RN/LPN workspace outside of the households.

Personal Laundry Room

Personal laundry will be done in the household by HCAs and family members (if they wish). Residents will help as they are able. The personal laundry brings normality to the household, convenience for family, who want to help, as well as the familiar sounds, tactile sensation and aroma of clean laundry.

Design Requirements	Considerations
Each household will have a personal laundry space that includes: • **Washer and dryer** • **Hand hygiene sink** • **Locked cupboard for detergents and other cleaning supplies** • **Non-slip flooring** • **Method of locking of washer/dryer by staff**	Front loading washers and dryers are easiest for residents to access. (Consider use of pedastals for ease of access). HCA will be involved in doing personal care laundry, particularly on evening shifts. Residents will be engaged to help do their own laundry as they are able. Families may choose to do personal laundry themselves.

Household Washroom

Design Requirements	Considerations
For convenience an accessible washroom will be provided near the dining and living area.	This washroom can be shared by residents, staff and visitors. Staff will have access to staff only washrooms in the staff break/locker room area.
In households with bariatric rooms this washroom will meet the requirements for bariatric access and use. (e.g. 1220mm/ 4' door)	

Household Entryway

The entrance vestibule is an important space for transition in and out of each household. The functions of the entryway also include independent entrance and egress of residents, storage of coats, umbrellas, and movement of an ambulance stretcher.

Design Requirements	Considerations
At the household entrance provide storage space for resident coats and umbrellas	Two staff lockers may be located here for HCA working in the household. Provide storage and space for donning and doffing Personal Protective Equipment (PPE).

Household Outdoor Space

Immediate access to a household outdoor space provides residents with the opportunity to enjoy fresh air activity with minimal barriers.

Design Requirements	Considerations
Each households will have easy access to outside, i.e. deck, that provides some coverage if it is raining.	
The transition from interior to the outdoor space will be seamless with wide openings and level floor surfaces.	
The outdoor space will accommodate enjoyment of informal and organized activities.	Ideally the outdoor space will be configured to allow individual residents a relaxing environment while others are walking about.
See Community Garden for additional requirements & considerations.	

Spa Room (May be shared between households)

The spa room is a destination for individuals that require or desire an assisted bathing experience. Ideally, each household may have a spa room for assisted bathing. However, the tub may be rarely used, and because of its cost, the spa room may be shared between households. As the spa room will likely be located outside of the household, residents will travel to the spa room fully clothed. The spa room must therefore include a connected washroom, sink, mirror, the therapeutic/assisted tub and overhead lifts. The spa will be configured to support a relaxing environment.

Each project will determine the number of spa rooms based on the resident needs, cost, expected use and ease of transporting residents outside of the household.

Design Requirements	Considerations
The spa room will contain therapeutic/assisted tub, with overhead lifts, hand hygiene sink, and mirror.	
An adjoining accessible washroom will have a toilet and hand sink. The toilet will have swing grab bars and be located to be accessible from both sides.	
The location and arrangement will consider the privacy and dignity of persons in care. Residents will travel to this destination outside the Home as if going to a spa appointment.	
Spa rooms will be designed so that caregivers can easily and safely assist residents to bathe or shower in a manner that protects dignity and promotes resident independence as much as	Spa rooms will provide a sense that the resident has come to a special location providing a spa-like ambience and familiar detailing.

Design Requirements	Considerations
possible.	Features will include: • Non-institutional and low lighting • Shelving with grounded outlet for music player • Towel warmer • Heat lamp/overheat radiant heating for resident comfort when drying • Storage space for towels/PPE • Shelf and/or robe hooks for resident's clothing
The room will be designed to be accessible to individuals with limited mobility. There will have adequate space to allow staff to assist from 3 sides of tub, and space for recliner lift to be manoeuvred. An XY gantry ceiling lift with coverage over the entire room and connect to the washroom will be provided.	
A raised standing jetted or ultrasonic therapeutic tubs with lift, or side entrance tub is required by licensing requirements.	
Door to be lockable. Privacy curtains to screen the entry door are required.	
The room will accommodate a shelf for supplies; clean linen cart, and soiled linen hamper.	
Requires secure cupboard for cleaning supplies for the cleaning and sanitizing of tubs, toilet, sinks and equipment.	
Ventilation will be adequate to eliminate unpleasant odours and excess humidity.	
Finishes will be selected to be appropriate for a wet space including slip resistant flooring and easily cleanable, moisture proof wall finishes.	
Emergency call will be provided to alert other staff, as well as an emergency call station for residents to alert staff from the toilet.	

HOUSEHOLD SUPPORT SPACES

Support spaces for two households may be shared for convenience of staff balanced with best infection prevention and control practices. Figure 3 shows the relationship of shared support spaces between two households. A spa room may also be shared between two or more households.

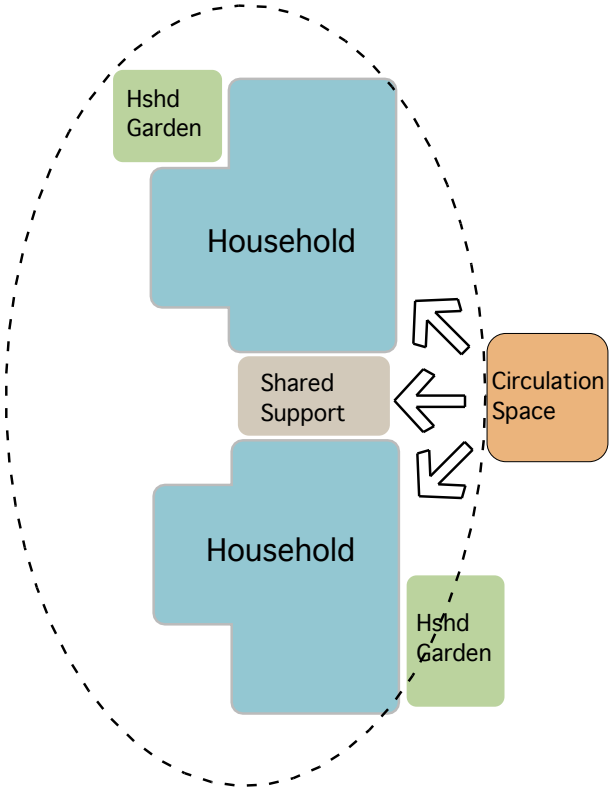

Figure 3 Relationships of shared components between two households.

Household Soiled Utility Rooms

The Soiled Utility Room is used to hold soiled material for disposal and to clean equipment generated in the Household.

Design Requirements	Considerations
A soiled utility room is required and can be shared by a maximum of two households.	The path from resident bedrooms to the soiled utility space should be minimized for staff efficiency and will not pass near the household social spaces. A soiled utility room for each household is optimal from infection prevention & control and staff efficiency perspectives.
The soiled linen/utility room will include the following fixtures: • **Counter top with large single bowl sink and elbow controlled mixing faucet**	The soiled utility room will include an area to rinse off soiled sheets and storage for soiled linens in covered containers.

Design Requirements	Considerations
• **Washer-sanitizer** • **Splash protection on walls near sinks and washer -sanitizer** • **Separate hand hygiene sink** • **Space for soiled linen hampers, garbage/waste, recycling, and bio-medical waste bins.** • **Storage shelves for utensils and cleaning chemicals.** • **Self-closing and locking door with hold-open device** • **Adequate ventilation to minimize odours and humidity** • **Specimen fridge**	Also functions as a holding area for soiled equipment waiting to be cleaned. The layout will accommodate a workflow from soiled to clean.

Household Clean Supplies Rooms

The Clean Supplies Room accommodates clean supplies and care equipment that a routinely used but not able to be accommodated in the resident's bedroom or other household spaces. The supply delivery model intends that daily used supplies and the resident specific equipment (e.g. mobility aids) are stocked and stored in the individual's bedroom/ensuite. Clean supply storage may be shared across households, e.g. as a floor.

Design Requirements	Considerations
Storage of bulk quantities of clean supplies including: • **personal care & nursing supplies** • **incontinence products** • **clean linen cart** • **care equipment** • **resident equipment that is used regularly** • **slings**	Adequate electrical outlets for charging of equipment Must be separate from dirty utility rooms.

Housekeeping Closets

Housekeeping closets are distributed through the LTC home to ensure that cleaning supplies and equipment is convenient and accessible.

Design Requirements	Considerations
Locked room which includes storage of cleaning cart, janitor sink and storage of equipment and supplies	Place within households and high volume areas such as Community Hall/ Coffee Shop.

COMMUNITY SPACES

The community spaces function as a recreation and social centre for the entire LTC home. It is the destination for residents and family who leave their household and a space into which the LTC home can invite the broader community. In the spirit of freedom of movement, community spaces and the outdoor garden must be visible and accessible from elevators for people who have dementia. Staff and administration offices will be integrated into this area both for ease of access by residents and family, and to help add to the regular occupants who will be available to observe and monitor resident activity. Recreation, social and spiritual activities will be available every day and after dinner.

Exits to the Main Entrance will be hidden to deter people who have dementia from leaving the premises.

Spaces will be vibrant and welcoming and allow for spontaneous and planned activities. Watching others including staff moving about, in the exercise or creative spaces, central kitchen and maintenance areas, is an activity unto itself.

The resident community amenity spaces provide vibrancy and opportunities for engagement of residents in social interactions and meaningful roles, e.g. gardener, painter, friend, observer. Well-designed spaces draw residents into activities of interest to them. Rather than providing multi-purpose rooms consider creating more specialized spaces that can be used for more than one purpose, e.g. creative space, exercise room and community hall, cafe and store.

To help build resilience to heat events[5] and air quality advisories, the design of common areas should consider the potential to be used as refuge areas and have cooling and ventilation systems connected to emergency power.

The community spaces can double as staff spaces for education and meetings. In general residents will not be excluded from staff gatherings in the spirit of "nothing about me, without me".

Indoor Pathways/Corridors

Indoor corridors contribute to the institutional feel of a building and to decreased mobility and isolation of residents who cannot manoeuvre long corridors independently.

Design Requirements	Considerations
Indoor pathways, e.g. corridors/hallways are integral to the look and feel of the community for residents and visitors.	Maximize natural light and views to outdoors, provide destination and spots of interest along corridors. E.g. dedicated spaces for sitting to add interest and resting spaces.

[5] *Vancouver Coastal Health uses a specific trigger algorithm to set municipal emergency plans in motion when the average of the current day's 14:00h temperature and tomorrow's forecasted high is ≥ 34˚C at Abbotsford Airport or ≥ 29˚C at Vancouver Airport, an extreme heat warning is issued and municipalities are advised to call a heat emergency.*

Design Requirements	Considerations
In long corridors, provide designated resting spaces.	
Internal corridors will be designed to allow two people in wheelchairs to pass comfortably.	1880 mm (6'2") corridor width minimum in household maybe appropriate to create a less institutional scale in relatively short corridors In community and high traffic areas, wider corridors are required (2438 m/96") to allow two people in large wheelchairs to pass each other.
Corridors between households and community amenity spaces may be outdoors.	Cover any outdoor pathways that are required to access households or the Community Amenity spaces.
Create a destination and turnaround spaces at the end of corridors.	E.g. window to outdoors plus a chair
Provide handrails on both sides of corridors at a height of 840 mm/ 33". Handrails to be designed with solid blocking between the handrail and the wall. **The colour of the handrails will contrast with the floor and the wall to assist those with visual and cognitive impairment**	
Emergency and night lighting will be provided in all corridors	
Flooring and walls will be in contrasting color values. Floor patterns will not be high contrast values.	Consideration of visual and cognitive perception is important in selection of interior colors and finishes.
To eliminate corridor clutter, provide spaces for storage of required household equipment (e.g. staff carts, mobile lifts) when not in immediate use.	Carts and equipment stored in corridors are a hazard for residents and create an institutional appearance. Storage spaces with doors located on corridors may be a solution to locate carts/care supports efficiently.

Community Hall

The Community Hall will serve as the central gathering space for informal groups or individuals to congregate away from the homes. It will also be used for special events, celebrations that include many of the residents, staff training, family, and/or community events.

Design Requirements	Considerations
The Community Hall may be designed to open to shared circulation space to increase its capacity and allow activities to be observed by those not	This room does not contribute to the 2.5m^2/resident lounge/activity space in the household.

Design Requirements	Considerations
directly engaged.	Direct access to outdoor garden is advantageous.
Functions to be accommodated including: • **Presentation capacity including internet, television and sound system** • **Separate storage space for folding tables, stacking chairs when not in use as well as program and activity equipment.** • **An alcove with the minimum of a counter and sink, where catering can be organized is required.**	Touchdown stations for recreation/activity focused staff may be accommodated in this space.
Accessible washrooms for residents, staff, and visitors will be provided near this space.	

Community Garden

Outdoor spaces offer places for independent, safe walking, with opportunities to observe daily weather and seasonal changes. Residents should have choice in outdoor areas that are under cover or open to the sky. Covered areas comprising mature urban tree canopy allows for cooling, shade and protection from the sun and other outdoor elements. A diversity of trees and other greenery also offers mental and emotional health co-benefits.

Walking paths are designed for residents as a journey with meaningful destinations, seating and defined landmarks strategically placed to assist in orientation and way-finding. Providing unrestricted access to secure outdoor spaces may reduce agitation, frustration, and may help reduce elopement attempts. Pathways that provide uninterrupted visual, and ideally physical, access to nature optimise health co-benefits.

Design Requirements	Considerations
A grade level garden that can be accessed by all residents, families and staff is required.	Provide shade for protection from the sun and other outdoor elements, e.g. retractable sunshades
Provide unrestricted access with option to locking in unique situations.	Create highly visible entrances to the home from outside, e.g. high contrast and bright colours. Create safeguards to ensure no one is locked in the outdoor space. Grade level spaces where intrusion is a concern will have special access arrangements. Conceal exits from inside the home, e.g. with vestibules, neutral décor.

Design Requirements	Considerations
The outdoor walking path should be a continuation of the indoor walking route with clear views of outdoor areas from the indoor common areas.	Individuals may be encouraged to experience outdoor spaces if they can see who and what is happening in them. Adjacent outdoor spaces enhance the experience of those in adjoining interior common spaces by providing views to nature and different activities. Casual observation of outdoor spaces by staff enhances safety.
Eliminate threshold or slope at the exterior doors that create a tripping hazard or will limit people using wheelchair or walker.	
Each outdoor area should provide a mix of environments, including shady and sunny areas as well as areas protected from the wind and other weather elements.	Provide interesting destination points such as benches, birdbaths. Consider use of trees to shade areas and pathways.
Surfaces will be firm and smooth to be suitable for those with gait impairment and use of wheelchairs, walkers and mobility aids.	Defining the path edgeways with contrasting materials or colours can assist resident travel along the pathway. Use raised flowerbeds and planters to support engagement of residents.
The width of the path should allow for the passage of two wheelchairs, a minimum of 1890 mm.	
Avoid views into resident bedrooms from outdoor pathways.	
Requires device(s) to activate staff call.	Alarm must identify the zone(s).
Secure outdoor spaces with perimeter fencing and gates will have landscape features such as trees or shrubs to soften the space and camouflage barriers.	
Enclosed outdoor spaces, including grade level spaces, balconies, roof top terraces, etc. wall have a minimum railing/fencing/gate height of 2200 mm/ 7'0").	
An automatic door operator will be provided to allow for independent access to outdoor space	Consider whether door will operate by button and/or motion.

Cafe and Store

A café and store is a very normal destination for people; creating a space outside of the households where people (residents, staff, volunteers, and visitors) can have a snack, shop, socialize or people watch. The store can also be a venue for selling of items created by residents.

Design Requirements	Considerations
Space maybe operated by food services, volunteers, or a vendor from the broader community.	Provide small kitchenette with display counter and include: • Commercial coffee maker • Microwave • Food sink and hand hygiene sink • Fridge • Cash drawer Shelves for sundry items, e.g. greeting cards, personal care items, snacks
Provide accessible seating and tables for residents, visitors and staff.	Location with community hall would provide flexibility to increase seating capacity.
Area must be lockable when no staff/resident/volunteer can operate	

Public Washroom

Conveniently located washrooms will be required that can be used by residents, staff and visitors.

Design Requirements	Considerations
Accessible washrooms will be available to residents, staff and visitors near community space destinations.	The public washrooms do not require overhead lifts. Nurse call stations may be considered.

Hair Salon

The hair salon provides an opportunity for self-care and socialization familiar to many residents.

Design Requirements	Considerations
The room will be located in the shared public area of the facility.	
Hair salon space specific requirements include: • **Hair washing sink** • **Hand hygiene sink** • **Styling station (mirror with space for chair or wheelchair)** • **Waiting space** • **Work counter** • **Outlet for hair dryer** • **Secured storage for supplies** • **Exhaust system to remove moist air and odours** • **Storage for clean towels & dirty linen**	The waiting area will be designed for residents arriving early for their appointment as well as those in varying stages of service.

Sacred Space

Design Requirements	Considerations
A non-denominational place of worship and reflection will be used as part of the regular life of the home as well as to celebrate the life of residents when they die	Residents, visitors and staff may use this space. The important elements of worship of local faiths should be considered in the design including provision of storage space for items used in worship when not in use. Plan flexible seating arrangements and storage for furniture if not in use. REMOVED TEXT ON VENTILATION DESIGNED FOR SMUDGED CEREMONIES

Exercise/Fitness Space

The exercise or fitness space is a destination space that provides opportunities for group or individual exercise not readily available in the household. It provides a space and equipment to support residents to maintain their strength, mobility and balance. It may be shared by residents and staff, e.g. staff yoga/aerobic classes may be provided in this space.

Design Requirements	Considerations
The space will be designed to accommodate: • **Small exercise groups in wheelchairs, sitting on chairs and/or standing** • **Individuals exercising independently or with direction**	Consider: • Equipment that can be accessible to residents and families as much as possible, e.g. parallel bars • Storage of specialized equipment, e.g. equipment that requires staff supervision when used

Creative Space

The creative space is the destination for people to engage in “messier” activities, e.g. painting, wood working, potting.

Design Requirements	Considerations
A creative space will accommodate a minimum of 6 to people using wheelchairs at a large table.	Typically, this room will be used for programmed activities but residents and families may use it independently.
Specific requirements include: • **Double sink** • **Hand hygiene sink** • **Open and locked storage for supplies** • **Appropriate ventilation**	

Examination/Treatment Room

The exam/treatment room is a destination for residents who are able to get out of the household for medical/dental/podiatrist and other appointments. Residents may also receive medical house calls if that serves them better.

Design Requirements	Considerations
Include: • **Include a workstation (including network drop) for charting** • **Locked storage for exam/treatment supplies and equipment for in-house medical provider** • **Space for resident in wheelchair or using a walker** • **Space for family to attend (Seating for two)** • **Unlocked storage for first aid supplies**	Space may be used for: • Medical provider • Podiatrist • Foot care nurse • Dentist/dental hygienist • Other visiting health care professionals

Smoking Area (Optional)

Smoking areas support individuals who are not interested in support for smoking cessation. Staff interaction with the smoking area will be minimal.

Design Requirements	Considerations
Only residents are allowed to smoke on the premises if local by-laws and policies allow.	Provide outdoor gazebo with adequate sand ashtrays away from resident/ staff rooms or pathways. Staff must be able to supervise any resident who requires support for safety. The design must be such that supervising staff are not exposed to second hand smoke. Does not infringe on neighbours.

ENTRY SPACES

In traditional institutional buildings the main entrances may be a focal point for welcoming visitors, and for residents who have dementia who are seeking to leave. In the new vision of LTC, the goal is to engage residents inside the LTC home including freedom of movement. It is therefore essential that entry spaces for visitors and staff be low key and disguised from residents who have dementia. Residents who are capable of coming and going from the LTC home freely will be able to access exits easily.

Main Entrance

Design Requirements	Considerations
Provide a vestibule to prevent drafts at the front entry and an accessible door opening push plate device for easy access.	Allow enough space for both screening of staff and screening and sign in visitors for COVID-19 as well as hand sanitizing and donning and doffing of PPE. Landscape near entry to help manage weather impacts and enhance the green experience for those coming and going.
Provide a covering at the main entrance of the building which is large enough to shelter persons in wheelchairs moving to/from vehicle transport.	For example, a *port chochere*
Provide way-finding details.	For residents and visitors, the overall facility layout should be recognizable and easy to understand.
Secure access and exit	Conceal exits to deter people who would get easily lost to prevent them from attempting to leave the exit.

Lobby and Reception

Design Requirements	Considerations
Greeting/reception counter and workstation	This area should be able to be secured when not staffed for the security of computers and equipment.
Provide a safe for securing resident funds and petty cash "banking" usually done by the receptionist.	

Infection Prevention and Control Social Visiting Space

This room will allow for visitors to enter, sanitize and sign-in, and then socialize with residents in a socially distant and safe manner.

Design Requirements	Considerations
This space will accommodate for pandemic related social visits and includes: • **Space for physical distancing** • **Amplified verbal communication** • **Adequate ventilation**	Identify a space that can be quickly implemented as a social visiting space. This room should be equipped to the current recommended standard with highest-efficiency particle air (HEPA) filters, or use dedicated outdoor air systems (DOAS) with activated carbon filters to provide 100% of the space with fresh outdoor air,

Design Requirements	Considerations
	flushing the building of contaminants and improving air quality.
Identify space for window/outdoor visits	Identify a space where residents and families/visitors can communicate with ease (hear each other) and where families/visitors are comfortable and protected from poor weather conditions.

Parking

Design Requirements	Considerations
Provide sufficient barrier-free parking spaces near the visitor entrance to accommodate elderly visitors.	Critical is having adequate drop-off and pick-up capacity that ensures convenient arrivals and departures.
Provide locked bicycle storage adequate for the location and the number of people who may use it.	
A short-term vehicle stopping and drop-off area will be immediately accessible to the building entrance used by residents, residents and visitors.	The driving route to and from the drop-off entrance to the visitor parking should be convenient for someone moving a car after dropping off or before picking up. Pedestrian access from the visitor parking area will ideally pass through the drop-off entrance to simplify way finding.
Barrier-free persons parking stalls are required as defined by Municipal requirements and should be located adjacent to primary building entrance(s). **Parking for a small bus for resident transport is required.**	

Exterior Design

Requirements	Implications
Consider designs that integrate the long-term care home into its local neighbourhood.	Inviting, non-institutional façade Consider the impact of vehicle access, waste and recycle containers, and noise of delivery vehicles on neighbours Retention of mature trees where possible and design for new diverse, climate resilient vegetation on the property.

SUPPORT SPACES

Central Kitchen

The Central Kitchen will be design for a bulk home meal service model. In this model fresh cooked bulk meals are produced in the central kitchen and transported to kitchens in each home.

Dishware and utensils will be washed and stored in the home kitchen. Service ware will be returned to the kitchen for cleaning.

The Central Kitchen space includes food production, storage, receiving, washing and office areas sized to suit the LTC home.

Design Requirements	Considerations
Designed to suit the food services model and for number of residents to be served.	Consider whether food services will operate/supply the coffee shop and/or sell staff meals. Consider possibility of future programs on site, e.g. Adult Day Program.
Central Kitchen will be located near central circulation routes for efficient access to the households.	Close access to the receiving door is also desirable.
The space for the Central Kitchen will be designed for the kitchen workflow.	The Central Kitchen houses equipment, counter space and carts that fit most efficiently into a rectangular space (i.e. without angles).
Office space for manager will include work station and space for confidential storage and conversations.	
Provide a designated space for storage of emergency food and water supplies for residents.	

Central Medication Room

Design Requirements	Considerations
To receive delivery of drugs to the LTC a central medication room is recommended near the workspace for nurses. This allows a continuous chain of control from the pharmacy to nursing.	The room must be lockable with a separate locked compartment for narcotics and controlled drugs. Consider the means of delivery of medications from the central medication room to the household medication space by nursing.
Access to medication storage areas is limited to authorized team members.	Determine how best to restrict access to medication storage areas based on their needs and the risk of unauthorized people accessing the storage area.
Lighting in medication storage areas is sufficient for teams to read medication labels and information sheets.	Magnifying tools (e.g., magnifier lights and hand-held magnifiers) can also be provided for team members who have trouble reading medication labels.

Central Linen/Laundry

Laundry space should be designed to suit the laundry operational system employed. This may include on-site laundry, holding linens prior to being processed off-site, or a combination of both. Resident personal laundry will be done in the Household.

Design Requirements	Considerations
Laundry space should be designed to meet the daily laundry requirements of all residents.	
Provide workflow of soiled to clean linens through two separate access/egress doors.	
Ensure adequate space for collecting, storing and sorting of soiled laundry until it can be processed.	Consider ventilation.
The soiled linen holding area must have access to space for cleaning and sanitizing laundry equipment such as carts used for soiled linens.	
Hand hygiene sink will be provided for staff hand hygiene.	
If laundry is done centrally onsite the laundry design will include adequate space: • **For all laundering process functions, including storing, folding and hanging clean linen/personal clothing, and labelling personal clothing.** • **For industrial washers and dryers placed so that there is access to the back of the equipment to ensure easy cleaning and repair work.**	Office space for manager may be required including workstation and space for confidential storage and conversations.

Central Storage

A central storage is required for items that are not required regularly, e.g. PPE, seasonal decorations, recreation equipment outdoor furniture, bedroom furniture and occasionally resident belongings.

Central Housekeeping

A central housekeeping space is used to store specialized cleaning equipment, cleaning supplies, and to wash cleaning equipment.

Design Requirements	Considerations
The central housekeeping area will accommodate: • **Storage and charging of specialized equipment** • **Secure storage of cleaning chemicals** • **equipment to wash mops, etc.** • **Hand hygiene sink** • **Space for wheelchair cleaning**	Depending on the housekeeping service provision, a check-in space/office may be required.

Receiving/Distribution Area

The facility must have a well-organized space to effectively handle the delivery of goods, food supplies and equipment away from public areas of the site. This "back of house" activity should be located to minimize resident and public exposure to noise, vehicle exhaust and safety hazards.

The receiving area includes a loading dock for deliveries, short term receiving holding area where supplies are decanted and distributed, access for waste removal including exterior bins if required and clean-up/maintenance space.

Design Requirements	Considerations
The receiving area will be convenient to general storage areas, the laundry space and the food services space.	Doors from the receiving area should open directly onto the loading dock and into the main service corridor.
The receiving dock will provide year-round access for delivery and waste removal. **Smaller deliveries by vehicle (e.g. car/van), which will not be using the dock, must also be accommodated.**	Security requirements of this area should be evaluated. Consider having an overhang for the exterior that will provide staff and goods with protection from weather. The receiving dock will be used for deliveries requiring a raised dock (rolling equipment).
Provide a receiving area located immediately adjacent to the loading dock for short-term bulk storage and receiving of all goods such as general stores, material and linens (if laundry is not on site).	Deliveries include: linen, general supplies from HSSBC system, bulk care supplies, food (multiple sources), pharmacy, oxygen tanks, equipment, etc.
Delivery and waste removal routes and storage areas will be separate.	
There will be an area equipped with floor drains for cleaning and disinfecting equipment such as garbage containers, carts and racks.	Provide access to water supply.

Design Requirements	Considerations
Equip the receiving dock with an exterior intercom system that will allow delivery personnel to alert staff of goods arrival.	
Protect the receiving area from water ingress with flood protection barriers.	

Waste Disposal/Recycling Area

Design Requirements	Considerations
A holding room for waste disposal/recycling should be located adjacent to the loading area to accommodate refuse as well as provide sufficient temporary holding space for recycled items and cardboard boxes.	The holding space is most efficient if waste can be moved from the interior of the home directly to the exterior pick-up area.
Adequate space will be planned to accommodate various waste streams available in the community including: Bio-medical waste, recycling (various streams), organics, garbage and cardboard.	A locked room or cage is required for bio-medical waste storage.

Maintenance Area

Design Requirements	Considerations
A general maintenance shop should be provided within the service area of the facility. Requires space to carry out ongoing maintenance activities for equipment, furnishings and building components.	Direct access from the exterior and a location near the receiving area may be advantageous. Outside service people may be used to maintain items/components that require more specific tools and skills. Provide a window into the space so residents can see work being done.
Doors leading into maintenance spaces in areas to which residents have access must be self-closing and self-locking.	

STAFF SPACES

Office Spaces and Work Stations

While office spaces and workstations must function based on the needs of the specific users, their location will be embedded into the Community Spaces. Having administrative, nursing and other care staff offices as part of the central community spaces used by residents adds to the vibrancy of the LTC homes and reinforces the model of care.

Design Requirements	Considerations
Workspaces for allied health staff and care coordinators/nurse leaders, who work across all homes, will be located outside the households.	Clinical workstations for most staff are embedded within the community spaces so that clinical staff is not separated from residents.
Provide adequate computer workstations for the number of clinical staff who may be using at the busiest periods.	
Managers and administrative staff require computer workstations, lockable drawers for confidential papers and space to have private meetings with staff, residents and families.	Individual offices should be limited to leaders who require confidential space the majority of their workday. Consider adding a small meeting room for small, physically distant confidential meetings.
Provide space for business functions including: mail, office machines (printer, copier, scanner, and fax) and locked storage for office supplies, recycling and confidential shredding.	
Volunteers are essential to the vibrancy of any LTC homes. Support for volunteers includes consideration of their comfort and convenience as they give their gift of time. **Provide a space for volunteers to include:** • **Tables and chairs** • **Notice boards** • **Adequate ventilation** **Computer for sign-in**	Comfortable and welcoming. Align with workspace for Volunteer Coordinator.

Staff Break and Locker Rooms

Sufficient “staff only” washrooms, staff break and locker spaces are required. Special consideration of the flow of staff into the LTC home must be considered in locating staff locker space as best practice infection and control, and especially during an outbreak of infectious disease, suggests that they will be near staff entrances and showers. However, staff break rooms may be distributed throughout the LTC home, as staff prefer break close to their work area where they are easy to access.

Design Requirements	Considerations
Provide staff break room outside of the resident households with: • **Tables and chairs** • **Natural light** • **Refrigerator (appropriate capacity)** • **Hand hygiene sink** • **Dishwashing sink** • **Dishwasher (commercial grade)** • **Space and outlets for microwave, kettle, coffee pot, toaster** • **Notice boards** • **Adequate ventilation**	Décor that will support staff wellbeing for half hour breaks. Where break rooms are planned to accommodate larger numbers the capacity and number of large and small appliances will be reviewed. Storage space for recyclables and garbage is needed.
Break rooms will be sized to allow social distancing when eating.	Operational considerations must be given to the number of staff who can break at one time in order to support the model of care and maximize the number of staff available to meet resident needs.
Provide lockers and change rooms with: • **Individual showers rooms** • **Washrooms** • **Hand hygiene sinks** • **Lockers for all care and service staff** • **Storage of reusable PPE** • **PPE laundry baskets** • **Adequate ventilation**	Consider the space needs of staff on the busiest shifts who may need to shower, change clothes and don/doff PPE. Gender neutral spaces are required. Access to laundry equipment for washing staff clothes in an outbreak may be considered.

Staff First Aid

Design Requirements	Considerations
Staff must have access to first aid supplies at all times.	Consider a room with a cot and storage. The Exam/Treatment room may accommodate this function if accessible to staff.

Emergency Operation Centre (EOC)

Design Requirements	Considerations
Storage for EOC Supplies, e.g. flashlights, walkie-talkies, satellite phone, etc. (must be easily accessed)	Ideally located in the central area of main floor with natural light. This function is only required in an emergency situation and may be accommodated with another function. A location with computer and a phone is optimal.
Provides communication capability to meet health authority systems and requirements.	

BUILDING SYSTEMS

VCH is committed to leadership with respect to environmental stewardship while engaging the healthcare community in a collaborative approach towards sustainability. Building systems design for the LTC home will align with VCH Energy, Climate Action and Environmental Sustainability guidelines. (See section 3. Overall Design Guidance)

Safety and Security Systems

Security and access control systems are used to aid in protecting the safety and wellbeing of residents.

Design Requirements	Considerations
The security system will include perimeter access control, a system for access and exit control with door monitoring/alarm and card access capability, and video surveillance of exits.	The system will comply with the BC Building Code and Fire Regulations while balancing the special safety challenges of some residents.
Perimeter security is required to prevent vulnerable residents from leaving the facility, while at the same time allowing access by family and other visitors.	Electronic security systems may be utilized but should emphasize egress control rather than monitoring. The design of the physical space should maximize resident autonomy and staff observation of residents, reducing the requirement for electronic type controls (e.g. wrist bands).
The access control system must be designed so that it is always active.	The system will be on emergency power system including alarms.
A door alarm system will monitor perimeter exit doors to indicate unauthorized opening of the doors. Door alarms will sound at designated staffed location(s). The system will be programmable allowing it to be deactivated during daytime hours on a door-by-door basis.	This system may be interfaced with the nurse call system.
All doors in the LTC home leading to the outdoors, service areas, stairwells, and on to open stairways, will be equipped with monitored electronic locking systems.	All doors must be provided with a back-up alarm system to alert staff if an electronic lock does not properly engage, leaving the door(s) unlocked and unsupervised.
The door access control system will be designed so that when an alarm is activated, the deactivation of the alarm can only occur at the source of the alarm.	
The main entry door will require an entry control system with video intercom and card access. The system will be designed to allow visitors to call directly to the household they wish to visit and to enable staff to remotely release the door for visitors after hours.	Card access will be provided to staff and potentially regular visitors. The exit protocol may require the use of a keypad to discourage elopement.

Design Requirements	Considerations
Each household will have its own "front door" that can be locked when desired.	The household may be secured if: it is providing a secure environment (special care unit), to control the access of unauthorized persons, and where there is an elopement risk.
All doors leading to non-resident areas must be equipped with locks to restrict unsupervised access.	Locks may be mechanical or electronic depending on the location and the need for monitoring.
Spaces that contain medications will require added security features.	Obtain guidance from the current pharmacy regulations.
Video surveillance cameras will be installed at all building exits to record traffic leaving the home. The cameras will be recorded with time and date stamped reporting and backup provisions.	Recorded video surveillance is used to assist authorities in locating residents who have eloped from the home. Video surveillance equipment requires onsite space allocation for electronic storage and occasional review.

Staff Call System

While nurse call systems detract from a homelike environment, the reality of family expectations and staffing levels make a reliable staff call system a necessity. Integrated systems with wireless/mobile communication devices for staff contribute to staff effectiveness and responsiveness.

Design Requirements	Considerations
The staff call system will have the capacity for residents to call staff from their bedrooms, ensuites, shared washrooms and other resident occupied spaces; for staff to call other staff for assistance; and for staff to initiate a duress call in emergency situations. Each type of call will initiate a distinct signal.	
The resident call will activate an annunciator panel or screen in a central household area and a staff-issued mobile device, indicating the calling resident's name, room and/or other location within the facility. **The resident call will only be able to be disarmed at the resident's location.**	The preferred system is one that can operate effectively in a silent manner, to minimize agitation and disruption for the residents. The likely location of direct care staff, e.g. HCA and nurse, in the care model should be considered in the design of the system and the location of its annunciation devices.
The system will have flexibility to integrate with wireless two-way voice communication between staff that may be extended to two-way communication with residents where appropriate.	

Design Requirements	Considerations
Minimum staff call requirements include: • **Each bed shall have its own call-cord station** • **Emergency stations with the pull cord in ensuite bathrooms shall be close enough to be pulled by a resident using the toilet and shower and reach to the floor** • **Where toilets are centrally located on the wall, the call cord must be attached to the grab bar** • **Pull cords should be placed in all common area rooms of the facility for use by residents and staff** • **Wireless technology is to be used throughout the system** • **The staff duress alert system should be integrated with the staff call using a single alert button to call for help** • **The system should have the ability to escalate call bells when unanswered after a specific time frame** • **Computerized reports will be available for quality monitoring** • **The staff call system will be connected to emergency power**	

Fire Alarm System

Design Requirements	Considerations
The fire alarm system shall be installed to comply with British Columbia Fire Code and British Columbia Building Code.	
Fire alarm pull stations should have flip-up guards to deter accidental operation and vandalism.	
Fire doors in the household that require door closers will have hold open devices to ensure that residents have unobstructed movement.	
Door closers should be avoided on resident bedroom doors. If required by building codes they will be designed to be easy for elders to operate.	Heavy door closers restrict resident independence.

Emergency Power

Design Requirements	Considerations
An on-site generator will be provided, preferably contained in a separate room within the facility.	Sound-attenuated and weather-protected outdoor units will be considered if a viable interior option is not available.
Fuel supply and storage capacity on site should allow the facility to operate for at least 72 hours in the event of a power outage.	
Emergency power will be provided to the following (minimum requirement): • **One elevator in a multi-storey building** • **Emergency lighting in the resident corridors, common spaces and staff used support spaces.** • **At least one receptacle in each resident room, nursing stations, main kitchen and kitchen serveries, dining areas and main reception area.** • **Electronic hands free faucets** • **Exterior lighting** • **Patient lifts** • **Where kitchen equipment requires electricity, the emergency power needs to be sufficient to operate the large refrigerators and freezers as well as limited kitchen cooking equipment such as kettles and convection ovens.** • **Heating in the household resident common spaces, if electric** • **Safety and security systems** • **Staff Call/communication** • **Communication rooms** • **Systems required by code**	During a power outage the home should be able to be occupied with some disruption. This will give homes time to plan contingencies if lengthy outages occur.

Elevators

Design Requirements	Considerations
The elevator system will be designed to accommodate the diverse activities of the facility (sufficient capacity, safety, reliability, responsiveness, accessibility, and operational efficiency). **Elevator design requirements (number, size and use) will be confirmed in design stage.**	Redundancy and speed are important considerations.

Design Requirements	Considerations
Locate elevators close to accessible entrances and place them in visible areas that are directly accessible from main entrances and circulation paths on each floor. **All elevators will be sized to accommodate a stretcher, bariatric individual, and food or service cart.**	

Lighting Systems/Electrical

Requirements	Implications
Lighting design will be designed to address age-related vision loss, sensitivity to glare, and diminished visual acuity. Lighting levels will be appropriate to the purpose and use of the space and adequate to ensure the safety of residents while reflecting a residential environment.	Directly improving the visual environment, comfort and quality of lighting for occupants and staff.
Lighting levels in corridors and resident communal areas will be even and consistent.	
Lighting may be used to accentuate artwork and other wayfinding landmarks.	Uneven lighting levels between areas can create visual adjustment problems and shadows that may result in falls.
Resident rooms will have individual switches to control lighting. Task lighting will be controlled from both the bed location and the entry.	
General illumination shall be provided at all entrance doors to rooms used by residents (e.g. bedroom entrance doors, ensuites, and washrooms).	
Energy efficient technologies that provide high quality light will be used.	Minimize the number and type of different lighting systems, light sources and replaceable components to standardize systems and improve maintenance efficiency. Use of fluorescent lights is discouraged.
All lighting fixtures that produce a direct glare will be shaded (e.g. visible lighting source).	
Task lighting, which is adjustable in intensity, location and direction, will be provided in bedrooms and common areas.	
Lighting will be designed so that contents of resident memory boxes are easily visible, particularly if behind glass.	

Heating, Ventilation and Air Conditioning (HVAC) System

Requirements	Implications
The home will be designed to optimize resident comfort throughout the year including room temperatures between 25-28^0 C, relative humidity between 40-60% and clean/filtered air.	Relative humidity control improves health outcomes and reduced risks and health impacts associated with hospital acquired infections by reducing viral pathogen survival and transmission.
The HVAC system will comply with all relevant regulations and standards set by authorities having jurisdiction. These include VCH energy and environmental sustainability and CSA health care specific requirements and guidelines.	
Project specific energy consumption and carbon emissions targets will be established in consultation with EES.	Target setting as early as possible, in the business plan phase or earlier, will improve success of the design team addressing the facility energy and emissions impact.
Each resident bedroom will be provided with individual temperature control of the heating and cooling system.	
All areas within the building will be ventilated to ensure an air exchange adequate to control contaminant levels, odours, temperature and humidity. The ventilation system will be generally designed to provide air movement from clean to less clean areas. **The system will have enhanced exhaust capabilities to maintain a comfortable environment for residents with respect to humidity levels in the bath and shower areas.**	
As a minimum requirement, mechanical cooling will be supplied to the following areas: • **Resident Dining/Living/Kitchen areas in the household** • **Community areas used by residents in the home** • **Corridors** • **Resident bedrooms and ensuites** • **Laundry (if on site)** • **Central Kitchen** • **Staff Rooms**	
Filtration of fresh air entering the HVAC system is required to follow the most current guidance from BC CDC and Worksafe BC.	

Building Envelope

Requirements	Implications
The building envelope is to provide a high-quality enclosure that will resist deterioration and anticipated environmental and structural loads while contributing to the interior comfort or the occupants.	Provide options for either passive or active ventilation. Use high albedo or 'cool' roofing materials or vegetated roof systems to reduce internal heat gains. Utilize low-e glass and exterior shading options to minimize solar gains. Building envelope assemblies and components are to be suitable quality for a long-lasting hard-wearing building Selection of materials (claddings, finishes, sealants, etc.) must consider maintenance and access requirements. Preferred materials will require little to no regular maintenance including cleaning and refinishing. The thermal performance of the building enclosure must demonstrate compliance with the prescriptive requirements of the Projects Energy Standard (NECB 2015 or ASHRAE 90.1-16). Architectural details should be developed in order to determine a solution with minimal thermal bridging. Develop solar gain reduction strategy considering internal or external shading, electro-chromatic glazing.
	Passive House Standard design principals (high performance glazing, minimizing thermal bridges, airtight barrier, high performance insulation, heat recovery ventilation) have a range of comfort, health, and environmental benefits. These design features must be evaluated with both the mechanical and envelope design).

5. APPENDICES

Indigenous Design Guidelines (2020)

(by Tiffany Creyke, Indigenous Design Consultant, Aboriginal Health)

Background

What is Indigenous Design? Indigenous-led design is a new subject in architecture and is defined by a transparent process that allows affiliated communities to be involved in the work as co-creators. What distinguishes Indigenous planning from mainstream practice is the prioritization of 'traditional' knowledge and cultural identity of the Indigenous communities affected. Indigenous design aims to mitigate the colonial impact in the built environment and the negative consequences of non-indigenous professionals translating Indigenous voice and defining priorities. The aim of Indigenous design is to operate within an Indigenous world-view, whereby values of the community - including their land, their culture and their future - are paramount. This not only serves to "unite us philosophically, but also helps to distinguish this process from those of neighboring, non-land based communities."[6] Indigenous design has an opportunity to promote interventions against displacement trauma. Equitably revitalizing communities through value driven design leads to sustainable wellness. By demonstrating values with diverse perspectives, you are reflecting the values of the communities the built-environment is shaping.

Design is currently being used to support Nation-building in Indigenous communities and to improve the "feel" of spaces for Indigenous clientele. However, there remains a dearth of research on these design methods and approaches used. A literature review highlights only five book publications dedicated to the exploration of Indigenous Architecture in the last 30 years: *On the Cultural Responsiveness of Architecture (*1987), *Native American Architecture* (1989)[7], *Contemporary Native American Architecture* (1996)[8], *New Architecture on Indigenous Lands* (2013)[9] and, *Our Voices: Indigeneity And Architecture* (2018)[10]. None of these published resources adequately explore the *process* of Indigenous design as their focus is on the physical *form.* For this reason, direct interviews and conversations with practicing Indigenous architects is the best resource for insights into this methodology. This report summarizes today's voices of the leading experts in the Indigenous design movement around the world.

Methods

Success for any Indigenous design principles | guidelines and how to caution invalid interpretation of such were the theme of data collection. This information was gathered from the review of eleven experts through books, published papers, conference notes, and newspaper articles. Seven interviews were additionally conducted over the phone, and through video conferencing.

---

[6] Jojola, T., and E. Baron. 2000. *Special issue on indigenous planning.* Planner's Workshop, Spring Newsletter.

[7] Nabokov, Peter; Easton, Robert. Native American Architecture. 19*89. Oxford University Press, 200 Madison Ave., New York, NY.*

[8] Krinsky, C. H. 1996. Contemporary native American architecture. New York: Oxford University Press.

[9] Joy Monice Malnar, J. M., and F. Vodvarka. 2013. New Architecture on Indigenous Lands.

[10] Rebecca Kiddle, Luugigyoo Patrick Stewart and Kevin O'Brien. 2018. Our Voices: Indigeneity And Architecture.

Indigenous Design Principles in Application

How do we incorporate Indigenous design-inspired elements into VCH spaces? It involves an intentionally slow methodology, whereby a devotion to place, community, identity and nature are integral to creating good and appropriate work. Honouring these elements takes proper time and care, and much of the process in delivering design is a process of listening to and learning from the land and its people. Slow design gives the capability and opportunity to not only create appropriate spaces, but to build strong relationships, and learn and tell the stories of what we have learned along the way through the creation of well thought out spaces.

The *Indigenous Place-keeping Framework (IPKF)* was a contribution made by Cree architect Wanda Dalla Costa in 2018 to address the lack of literature for Indigenous architects and planners. Dalla Costa asks us to consider Indigenous design pedagogy when participating in an institutional setting of community planning. Practitioners are positioned not only with Indigenous methodologies within designing processes, but are also committed to "Indigenous knowledge structures (epistemology), and ways of being (ontology)."[11] Meaning Indigenous design is not about incorporating specific elements, but rather about building into the design the beliefs and understandings of the people on whose land you are building.

The IPKF is offered as a living framework, to be "altered and edited by scholars, practitioners, knowledge brokers and citizen experts"[12] when grappling with how to verbalize Indigenous methodologies. I will unpack the IPKF method and how to engage the community at the level of co-creating solutions into four stages of design: (1) community-led, (2) reciprocal, (3) processed-based, and (4) context-specific.[13]

1. Community-led

The first design stage is community-led. This is the most vital part of Indigenous design so it takes precedence. Until relatively recently, Indigenous voices have been "subsumed by non-native practitioners that have used approaches of community development designed around urban mainstream environments intended to assimilate tribal nations into mainstream life through architecture."[14] Decolonizing our approach and *meaningfully* including and empowering Indigenous communities to be involved and lead from start to finish is a necessary precursor for successful Indigenous design. Our role at VCH is to support the design process through facilitation and listening. We design *with* Indigenous communities, not on their behalf.

Development of design concepts begins only after listening to what the relevant Indigenous community/population wants and needs. Mistakes are often made and problems arise when the community is not leading the design process. The local Indigenous community whose land the building is being built on,

[11] "Contextualized Metrics and Narrating Binaries: Defining Place and Process in Indigenous North America," Conference Paper for Association of Collegiate Schools of Architecture (ACSA), 2016 International Conference, Santiago, Chile.

[12] "Contextualized Metrics and Narrating Binaries: Defining Place and Process in Indigenous North America," Conference Paper for Association of Collegiate Schools of Architecture (ACSA), 2016 International Conference, Santiago, Chile.

[13] Dalla Costa, W. (2018 in press). "Teaching Indigeneity in Architecture: Indigenous Placekeeping Framework." In Kiddle, R., Stewart. L.P & O'Brien, K. (eds). Our Voices: Indigeneity and Architecture, ORO Editions, New York, NY, USA: 146 -153.

[14] Jojola, T., and E. Baron. 2000. *Special issue on indigenous planning.* Planner's Workshop, Spring Newsletter.

should lead. For example, the history of the three host nations in Vancouver takes precedent. They hold the spiritual authority over Vancouver so it is their stories that connect us within the City of Vancouver.

Eladia Smoke and Larissa Roque, both Anishinaabe architects, explained how problematic it is when too many design decisions are made between engagement meetings. This kind of “external” decision making leads to a lack of transparency and gives the impression that the community members have been left out of the conversation. This can have a profound and detrimental impact on both design and the ongoing relationship. For this reason, design teams must be very flexible. The capacity to modify project timelines to give adequate time for community engagement meetings to happen should be built into projects from the outset. Smoke and Roque admit that this process almost always takes much longer than they would like but highlight how they need to be considerate of the fact that not everyone works on a designer time frame, especially Elders.

The VCH design process must consider not just form, but also the *meaning* underlying the form. Successful design should tell the story of a place and its people. This requires the merging of Indigenous knowledge with western knowledge. The conventional western design/architecture was, and in many cases continues to be a fundamentally colonial tool, and will take time and effort to deconstruct and decolonize. According to Maori architect Jade Kake, one should not be talking to somebody’s head, but rather one should be talking to their heart when designing. This is culturally and contextually appropriate whereby the meeting of two worldviews is capable of influencing dominant systems of control through a process of defining the intention, function and needs of each component.

Incorporating an Indigenous perspective, framework, or knowledge structure into ones practice requires the support of the communities involved. Community-led design creates space for the collection of thoughts and values of the users of the spaces we are designing for. While we must privilege our local host nations when designing, we also need to involve other Indigenous "users" of the space. There are different methods for collecting community feedback, but the main guidelines are:

- Remain open in your design phases for the collection processes
- Process should be Indigenous-led/guided/supported
- Remain aware of your own biases and perspectives that you are bringing to the design team

Through interviews with key industry experts, it has been found that the development of “Indigenous Design Guidelines” tool-kits is not a useful approach. They can be accessed by anyone and can lead to a “cookie cutter approach” as they are applied to different communities under different contexts. Rather, all design decisions should be made on a case-by-case basis with adequate time and resources set aside for proper engagement. This should look like:

- Interviewing as many people as possible
- Speaking to Elders
- Being democratic with the design process
- One person should never be making all of the design decisions for a space

Indigenous design processes are transformative because their primary goal is the positive enhancement of Indigenous communities, in that they encourage and support community, identity, and wellness. Community as the client-centered design process is necessary to truly functional and performative Indigenous design. This is transformative designing where the center of knowledge production shifts from the “professional firm as the center of knowledge production, to a multimodal knowledge system that emerges from the local

people, their understanding of place and its associations."[15] Equity leading the city will generate the resilience of neighborhoods. Community inclusion through inclusive development should include:

- The local community directs the design process of the built-form
- The design team should reflect the communities they serve
- Investing into Indigenous design leads and liaisons
- Partnering or working with Indigenous developers who are working to equitably revitalize communities
- Hiring design firms that demonstrate value with diverse perspectives
- Creating policy interventions to prevent displacement and add equity

2. Reciprocal

The second design stage is reciprocal. Reciprocity is fixing a broken system. Reparations create a mutual exchange of privileges. This stage designs respect and responsibility. Reciprocal design is an act of reconciliation and a way of giving back. Design "research" should be viewed as a mutual exchange and requires considerable commitment to understand cultural values and transforming them into form and design. Learning in Indigenous design is both visual and place based. Being physically in the space allows us to learn from the environment. Indigenous design has *meaning*. This is an important point that is not often talked about within architecture. The symbols and colours and imagery are not just decorations, they are teaching tools that convey deeper meaning and lessons.

Indigenous design is educational. VCH spaces should communicate accountability, accessibility, and respect. They become places of learning that strengthen the understanding of land, culture and community. The stories told through design are the collective values of the communities' culture and traditions. In this way architecture and the design of spaces merge with traditional oral storytelling. It is important to note that the collective values embedded in the design are authored and owned by the communities whose stories they tell.

Indigenous cultures are traditionally oral based. It is through stories that important lessons are taught, shared, and learned. There are many parallels between Indigenous design and traditional storytelling. Good Indigenous design allows spaces and places to tell a story thus having a meaningful impact on those with whom this knowledge is shared. Trauma can be reversed through the application of equity of design. Indigenous design positively impacts individuals accessing the space. When you diagnose the issues that go along with displacement and make it right through visual representation, the community accessing the space can gain mental strength through the provision of a safe place that reflects them. Indigenous design provides inclusion in an urban environment that was originally built around displacing the Indigenous community through its design.

3. Process-based

The third design stage is process-based. It accommodates addition and expansion through designing for seven generations. This means that all decisions made should result in a sustainable design seven generations from now, including the materials used. Building trust through allyship is the key success to achieving shared values for master planning allotment. This means having key stakeholders that are willing to adapt

[15] Dalla Costa, W. (2018 in press). "Teaching Indigeneity in Architecture: Indigenous Placekeeping Framework." In Kiddle, R., Stewart. L.P & O'Brien, K. (eds). Our Voices: Indigeneity and Architecture, ORO Editions, New York, NY, USA: 146 -153.

Indigenous design principles in a meaningful way. It is important to remember that we are trying something different, and it will take time. Design should be an act of reconciliation. A process based approach allows us to be intentional in how we go about our work. When you invest in places they can turn around to generate resilience.

This is reconciliation-based design that requires people to spearhead with commitment to the process according to Anishinaabe architect Ryan Gorrie and Métis architect Rachelle Lemieux. The language reflected by the design should be the language of the people of the place. This form of reclamation of place and space reflects Indigenous aspirations. In order to follow this protocol, honorariums need to be provided for cultural Knowledge Keepers, Elders, and community members acting as subject matter experts. Below is a guide to inform honoraria payments. Please note, exceptions may need to be made in allowance of local protocols.

Honorarium by activity type	**Rate**
Half Day (less than four hours)	$200
Full day (four or more hours)	$400
Hourly	$60
Other considerations	
Travel expenses (if they are traveling great distances)	@ .52/per km Bus or taxi fare
Gifts; tobacco	$25-30
Catering/food	TBD

Resources:

Carleton University. 2018. Guidelines for Working with Elders.

University of Manitoba. 2018. Indigenous Planning and Design Principles.

Vancouver Coastal Health. 2016. Peer Framework for health-focused peer positions in the downtown eastside.http://dtes.vch.ca/wp-content/uploads/sites/6/2016/06/VCH_DTES_Peer_Framework_FINAL_DIGITAL.pdf

4. Context-specific

The fourth and last design stage is context-specific. This stage is place-based, and therefore involves *local* Knowledge Keepers. This methodology should result in sustainable buildings designed to honour the past, allowing for the future of seven generations to live on the same natural resources available in the initial design.

Indigenous design communicates a relational worldview where kinship to the materials of the structure is embedded in the places and spaces of the design. It is the primary distinction of all Indigenous designed buildings, including contemporary buildings, that their design support and help communicate this concept.

Indigenous design tells stories. In other words, there is always a *why* behind the design. These stories are the cultural traditions and history that then get expressed through structures, shapes and spaces. Indigenous

design should fit into the landscape. Honouring the natural world through design pays homage to historical precedents through the blending of indoor and outdoor space designed with environmentally sensitive solutions. Indigenous design is an ethically responsible architecture driven by cultural worldviews: Use materials from the earth that are not highly fabricated: stone, concrete, wood, and copper.

Materials must also have significance to the people and efforts should be made to locally source. Traditional architecture was Indigenous to its environment and used the natural materials and processes available.

Resources:

Awatere, Shaun, Pauling Craig, Rolleston Shad, Hoskins Rau, and Karl Wixon. Tu Whare Ora - *Building Capacity for Maori Driven Design in Sustainable Development*, 2008. Prepared for Nga Pae Maramatanga, University of Auckland.

Te Aranga: Maori Cultural Landscape Strategy, 2008, Second Edition. Retrieved from the World Wide Web at http://tearanga.maori.nz/cms/resources/TeArangaStrategy28Apr08_lr.pdf.

Conclusion

Indigenous design provides VCH a new reference for practice that builds and improves upon Western thought and practice. Indigenous design is more than images and iconography — it is about relationship to the place in which the space sits. Indigenous design, when following these four stages, it is an act of reconciliation. Through story-telling, place-making, and meaningful dialogue, VCH can use Indigenous design to build relationships and improve the experiences and health outcomes of Indigenous patients and their families. Indigenous design will allow VCH to create truly transformational places for wellness to occur. First we shape our buildings and then they shape us.

Summary of the key Indigenous design recommendations:

- **Design deploys a vision**
- Should reflect design of the given area in a deep way, not wallpaper
- **Representation matters**
- Be upheld and vetted constantly with communities, allows participation within the principles, room for specificity
- **Reciprocity**
- Host nations need to host and lead the design discussion. Build relationships
- Involve Indigenous people from the area that are affected at all levels and aspects of projects as they progress
- **Equity**
- A tangible seat at the table: Partner with Indigenous designers and developers
- Invest into the Indigenous community through proper representation
- A progressive design process is not just designing the form, but defining the parameters of need for which the form may grow out of
- When identifying need from intention one should not be talking to somebody's head, but rather they should be talking to their heart to understand how the build-form should be designed

Space Summary Table

	Minimum Clearances	Minimum Area m^2	Notes
THE HOUSEHOLD			
Resident Bedroom mix	All bedrooms will be single occupancy with 3 piece ensuite with the exception of up to 5% that may be shared bedrooms (two residents) if considered advantageous to meet known demand. A minimum of one bedroom per LTC home will be design to accommodate a bariatric individual. The overall number of bariatric bedroom(s) in a LTC home will be decided based on local site or community circumstances.		
RESIDENT SPACES:			
Hallways/Corridors	1890mm low traffic 2440 mm high traffic		
Door width for resident access spaces in Households with a Bariatric Resident Bedroom	1220 mm		
Resident Bedroom (includes closet & ensuite)		24	To meet BC CCALA minimum
Turning Circle - either side of bed	1676 mm		
Clear space - end of bed	1200 mm		
Bedroom Entry Doors	1220 mm		May be two leaves with one minimum 900mm
Closet	0.74 m2		
Resident Ensuite		Included above	
Ensuite Entry Door	900 mm		
Ensuite Turning Circle	1676 mm		
Bariatric Bedroom (includes closet & ensuite)		32	
Turning Circle - either side of bed	1829 mm		
Clear space - end of bed	1200 mm		
Bedroom Entry Doors	1524 mm		May be two leaves with one minimum 1220 mm
Closet	0.5 m2		
Bariatric Resident Ensuite		Included above	
Ensuite Entry Door	1220 mm		
Ensuite Turning Circle	1828 mm		
Resident Kitchen			Note 1
Resident Dining Area		3m2/resident	To accommodate all residents of a household sized for larger mobility aids

	Minimum Clearances	Minimum Area m^2	Notes
Resident Living Area		2.5 m2/resident	To accommodate all residents of a household
Staff Alcove and Medication Storage			Note 1
Personal Laundry Room			Note 1
Household Washroom		5.6 m2	Larger if bariatric residents
Household Entryway			Note 1
Household Outdoor Space			Note 1
Spa Room (May be shared between households)			Note 1
Spa ensuite			
Household Soiled Utility Rooms			Note 1
Household Clean Supply Rooms			Note 1
Housekeeping Closets			Note 1
COMMUNITY SPACES			
Indoor Pathways/Corridors	1890mm low traffic 2440 mm high traffic		
Community Hall			Note 1
Community Garden			Note 1
Outdoor Space - per resident			BC CCALA min. req. $1.5m^2$
Path Width	1890 mm		
Railing/Fencing/Gate Height	2200 mm		
Café and Store			Note 1
Public Washroom			Note 1
Hair Salon			Note 1
Sacred Space			Note 1
Exercise/Fitness Space			Note 1
Creative Space			Note 1
Examination/ Treatment Room			Note 1
Smoking Area (optional)			Note 1
ENTRY SPACES			
Main Entrance			Note 1
Lobby and Reception			Note 1
Infection Prevention and Control Social Visiting Space			Note 1
Parking			Note 1

SUPPORT SPACES			
Central Kitchen			Note 1
Central Medication Room			Note 1
Central Linen/Laundry			Note 1
Central Storage			Note 1
Central Housekeeping			Note 1
Emergency Preparedness Supply and Equipment Storage		25	Note 1
Receiving Area			Note 1
Waste Disposal/Recycling Area			Note 1
Maintenance Area			Note 1
STAFF SPACES			
Office Spaces and Work Stations			Note 1
Staff Break and Locker Rooms			Note 1
Staff First Aid			Note 1
Emergency Operation Centre (EOC)			Note 1
BUILDING SYSTEMS			
Elevator	Door 1220 mm		To accommodate stretcher, bariatric individual & food/service carts
Note 1: area to be confirmed during functional programming.			

Staffing Model Template

This template is provided to support planning for the appropriate number of staff for each LTC project. This information will be required to size the staff spaces appropriately.

Staffing Model Template			
Description	Staff mix RN/LPN/HCA		
Household size	Up to 14residents		
HPRD	Direct Care - 3.00	Allied - 0.36	Total - 3.36
Health Care Assistant: Resident Ratio			
LPN: Resident Ratio			
RN: Resident Ratio			
Allied: Resident Ratios (Included in 0.36 HPRD)	Dietician Occupational Therapy Physio Recreation Coordinator Rehabilitation Assistant Social Work		
Other: (Not included in 3.36 HPRD)	Business Support Associate Clinical Leader (e.g. CNL/RCC) Clinical Nurse Specialist Music Therapist Nurse educator Pharmacist Physician Program Assistant Receptionist Resident Care Manager Spiritual Health Practitioner Support Services Managers/ Supervisors Unit Coordinator Volunteer Coordinator		
Opportunities	Allows for future expanded role for the HCA within the housing model Fully utilizes the LPN/RN scope of practice Supports the critical contribution allied staff make to resident quality of life Focused, specialized nursing care Consistent scopes of practice, clear roles and leadership responsibilities Professional staff work to their full scope of practice Supports the social model and biopsychosocial-spiritual needs Provides flexibility in development of new job descriptions as required		

Gender Bias Analysis

A gender bias analysis is required in order to submit a business case to the Ministry of Health.

GBA+ step	Description	Key questions to ask
Identify key issue	The first step is to identify the context and the gender and diversity issues Nothing happens in a vacuum. Your initiative may have a narrow objective, but it will always be linked to broader government priorities. Start by making social, cultural, and economic connections. Look beyond the topic of the Budget Template request. Consider the depth and breadth of the issue.	Are you taking a long-term and holistic perspective? Are you looking beyond the topic of the Submission (e.g. considering community impacts of resource development?) Are there historical disparities related to the broader issue (e.g. is the industry male dominated? How has the history of colonialism contributed to disparities?)
Challenge Assumptions	We all have assumptions. In addition to our individual assumptions, the institution you work for may have formal or informal policies in place that can affect the development or outcome of an initiative. You need to be aware of these. Although the proposal you are working on may appear to impact everyone equally, always challenge your assumptions about whether it has gender or other diversity implications. Consider the effect on women, Indigenous people, rural British Columbians, LGTBQ2S+ individuals, new Canadians, etc.	What assumptions are being made? Whose point of view is reflected in defining the problem? What assumptions informed the identification of the topic as an issue? Who is affected by the proposal? Could certain groups be affected differently? Who benefits, and why? Are you making assumptions about the uniformity of population groups? If you consider an issue “neutral”, can you support this with evidence? Is it possible that your assumptions prevent you from asking questions and hearing answers?
Gather the facts – Research	You need data (quantitative or qualitative) to assess whether your initiative will have a more significant impact on a particular group of people, or whether barriers exist. The Integrated Data Division has developed a Gender-Based Data Inventory as a resource to guide research and is available upon request.	What type of gender and diversity disaggregated data are already available regarding this issue or policy? Did you contact the Gender Equity Office for the Gender-Based Data Inventory? What groups of people might experience this issue differently? Do current policies and measures for this issue offer strong gender and diversity

GBA+ step	Description	Key questions to ask
	Conduct research The data you use should be gender-disaggregated and should include other intersecting identity factors, such as Indigeneity, age, or ability. If information is not available, do not abandon your analysis. Identify gaps in existing data and consider making data collection part of your initiative's objectives and evaluation measures.	analysis? What other types of disaggregated data are needed to understand the gender (and other) dimensions of this issue? Where are the gaps? How will your research methods ensure that the collection of gender and diversity disaggregated data is facilitated?
Gather the facts – Consult	**Consult Stakeholders** Make sure you use GBA+ when you design your consultation process. It is not enough to consult the general public and then apply your findings to all groups. Seek out multiple viewpoints. Engage British Columbians of various identities and consult broad and inclusive sources to depend your analysis. Accessibility issues, social conditions, and economic considerations can all affect someone's ability to participate in your consultation process.	Whom did you consult? How did you consult? Were your consultations broad and inclusive? Did they include multiple viewpoints? Do you have information on your clients, partners or target groups? Have you consulted diverse sources? Was there a mechanism to ensure organizations or stakeholders with less capacity to be heard are included meaningfully? Does the information collected suggest that the issue or initiative potentially affects diverse groups of people in different ways? If so, how?
Develop and make recommendations	Your choice of words can have an impact – consider them carefully. The results of your consultation and research should inform your options and recommendations at all stages of initiative development and implementation. Using the data you have gathered, indicate how the options you propose respond to the specific issues you identified. Present your GBA+ findings to decision-makers clearly. If you have found that your initiative could have differential impacts or unintended barriers, suggest	What would decision-makers expect to know in order to make an informed decision? What are the desired end-results being sought for this initiative? How does implementation ensure equality in gender and diversity factors? Are there barriers to access? Are there differences in outcomes or limitations for any segment of the population? Have diversity factors been considered? How? What outcomes will improve current inequitable situations between different groups of people?

GBA+ step	Description	Key questions to ask
	strategies to strengthen the proposal. And be sure to highlight your plan to fill any data gaps that your GBA+ identified.	What indicators are you using to gauge the results of the initiative? Are the issues identified in the GBA+ incorporated into options as risks, or addressed through mitigation strategies? Would this serve to reinforce or address historical inequities (e.g. colonialism)? How have you considered the government's commitment to implementing the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and the Calls to Action of the Truth and Reconciliation Commission in your analysis and recommendations?
Evaluate	GBA+ also applies to the evaluation and monitoring of your initiative. The design of your evaluation framework and approach to monitoring can help to address inequality and build capacity. Highlight data gaps and address unintended outcomes for diverse groups. Incorporate them into strategy renewals or management responses.	How are you ensuring equality of outcomes? What equity measures may be necessary to implement in order to achieve equality of outcomes? Are the policies or programs being adapted to account for unanticipated gender and diversity-specific differences? Have baseline indicators been established to measure the effectiveness of this initiative? Are they conducive to assessing the impact on diverse groups of people? Are there gaps in quantitative or qualitative data needed to measure outcomes effectively? How could these gaps be filled? What additional data is needed?
Communicate	Use GBA+ when considering how to communicate your initiative. Identify your target audiences, and tailor your messaging appropriately. Show how your initiative supports	Does the communications strategy use messaging that will reach diverse groups of people? Are the examples and language used in products gender and diversity appropriate

GBA+ step	Description	Key questions to ask
	diversity, and use inclusive examples and language. Review your messaging to ensure you are not perpetuating stereotypes.	(see "Words Matter: Guidelines for Using Inclusive Language in the Workplace." https://gww.gov.bc.ca/news/2018/0518/words-matter
	Share your GBA+ results with your organization. This will demonstrate due diligence, foster buy-in with stakeholders, and identify areas for further action.	How would a communications strategy need to be designed to respond to the needs of different groups of people?
Document	It is essential to document your analysis and findings throughout the cycle for the following reasons: The data and analysis that guided your recommendations provide meaningful background information You may be asked to provide evidence that a GBA+ was conducted and explain the process that guided your recommendations This information could inform a future proposal.	

6. REFERENCES

Accreditation Canada LTC Standards. 2019. URL: https://accreditation.ca/

Sara Barron, Kanchi Dave, Xinke Yu, Stephen Sheppard, Angie Woo, Kathy Wolf, Erin Desautels, Sophie Nitoslawski, Doris Sun. *Climate resilience & well-being through neighbourhood-scale green design A Better Practice Guide.* Report prepared for: Report prepared for the Real Estate Foundation of British Columbia and the Cascadia Urban Analytics Cooperative, 2020. https://bcgreencare.ca/system/files/resource-files/Climate%20Resilience%20And%20Well-being%20Through%20Neighbourhood-scale%20Green%20Design.pdf

BC Centre for Disease Control; Developing a Municipal Heat Response Plan (2017)
URL: http://www.bccdc.ca/resource-gallery/Documents/Guidelines%20and%20Forms/Guidelines%20and%20Manuals/Health-Environment/Developing%20a%20municipal%20heat%20response%20plan.pdf

BC Ministry of Health *2020/21–2022/23 Service Plan*. February 2020.
https://www2.gov.bc.ca/gov/content/governments/organizational-structure/ministries-organizations/ministries/health/service-plan

BC Ministry of Health. 2012. *Best Practice Guideline for Accommodating and Managing Behavioural and Psychological Symptoms of Dementia in Residential Care A Person-Centered Interdisciplinary Approach*
https://www.health.gov.bc.ca/library/publications/year/2012/bpsd-guideline.pdf

British Columbia Community Care and Assisted Living Act and
https://www.bclaws.ca/civix/document/id/complete/statreg/00_02075_01

Residential Care Regulation
https://www.bclaws.ca/civix/document/id/complete/statreg/96_2009

Bill of Rights
https://www2.gov.bc.ca/gov/content/health/accessing-health-care/home-community-care/accountability/policy-and-standards#:~:text=The%20Residents'%20Bill%20of%20Rights,rights%20to%20transparency%20and%20accountability.

Canadian Standards Association, *CSA Z8000.18 Canadian Health Care Facilities, 2018*

Fraser Health *Residential Complex Care Building Requirements* December 2018

Gwande, Atul. Being Mortal: Medicine and What Matters in the End. Picador USA 2014.

Models for Long-term Residential Care: *A Summary of the Consultants' Report to Long-Term Care Homes and Services, City of Toronto*
https://www.semanticscholar.org/paper/Models-for-Long-term-Residential-Care%3A-A-Summary-of-Banerjee-Armstrong/0249b5b52a179b3a229ade4973a744da1df9c38b

Parke, B and Friesen, K. *Code Plus: Physical Design Components for an Elder Friendly Hospital, 2nd Edition*. Fraser Health Authority. 2015

Pioneer Network
https://www.pioneernetwork.net/

Re-imagining Long-term Residential Care: An International Study of Promising Practices.
https://reltc.apps01.yorku.ca/

Royal Society of Canada: *Restoring Trust and the Future of LTC.* June 2020.
https://rsc-src.ca/en/restoring-trust-covid-19-and-future-long-term-care (Accessed July 19, 2020)

Sodo, J and Winters, M. *Missing Main Street: Reconnecting Older Adults With Dementia to the Fabric of Authentic Living*. Perkins Eastman. 2019

VCH Design Guidelines: Complex Residential Care Developments (2007)

VCH Design Guidelines LTC Rejuvenation (2018)

VCH Moving Toward Climate Resilience Health Facilities for Vancouver Coastal Health (2018)
LMFM Energy and Environmental Sustainability Design Guidelines for New Construction & Major Renovation (2020)

VCH Wildfire Smoke and COVID-19 in Long-Term Care and Assisted Living Facilities (2020)
Healthy Built Environment Tool Kit
Passive House Feasibility Study Report (Dogwood Study, Final draft in Progress)

7. ACKNOWLEDGEMENTS

The VCH LTC Design Guidelines developed in 2018 were developed in collaboration with Fraser Health Authority and subject matter experts including seniors care, professional practice, and mental health.

The following people provided valuable input and feedback into the updated 2020 VCH LTC Guidelines:

Steering Group:
Yasmin Jetha, Vice President, Community Services, VCH (Executive Sponsor)
Fernando Pica, Chief Financial Officer, VCH (Executive Sponsor)
Karin Olson, VP, Coastal Community of Care, VCH
Laura Case, VP, Richmond and Vancouver Community Services, VCH
Deborah Mitchell, VP, Chief Strategy Officer, PHC
Michael Sheeres, Executive Facilities Officer
Natalie McCarthy, Executive Director, Community Strategic Initiatives and Home Support, VCH
Jo-Ann Tait Executive Director, Regional LTC, Assisted Living and Supported Housing Program, VCH
Ken Takano, Regional Program Medical Director, LTC, Assisted Living and Supported Housing, VCH
Sarah Jordan, Director, Long Term Care and Assisted Living
Susan Luckey, Capital Planning, VCH
Ron Van Halen, Finance Director, VCH

Working Group:
Robena Sirett, Regional Leader, LTC, Assisted Living and Supported Housing Program, VCH
Laurie Steen, Consultant, Linden Architecture Studio
Natalie McCarthy, Executive Director, Community Strategic Initiatives and Home Support, VCH
Jo-Ann Tait Executive Director, Regional LTC, Assisted Living and Supported Housing Program, VCH
Greg Wooster, Director of Space Planning & Optimization, Facilities & Real Estate, VCH
Sutinder Kaba, Director of Resident Experience, PHC
Sara Camano, Director Special Projects, Community Strategic Initiatives, VCH

Consulted:
Deborah Lorimer, Clinical Director LTC Facilities Rejuvenation, VCH
Gregg Cernes, Special Projects Director (Richmond Community), VCH
Vishal Dasoar, Project Director Dogwood Redevelopment, VCH
Dr. Michael Schwandt, Medical Health Officer, VCH
Sarah Jordan, Director, Long Term Care and Assisted Living
Keith McBain, Executive Director, Long Term Care & Seniors, Coastal Community, VCH
Heather Mak, Professional Practice Director Regional LTC, VCH
Kori Jones, Energy and Emission Manger, Energy & Environmental Sustainability Team, VCH
Sonja Janousek, Environmental Sustainability Manager, Energy & Environmental Sustainability Team, VCH
Angie Woo, Climate Resilience Lead, Energy & Environmental Sustainability Team, VCH

Ministry of Health LTC Design Guidelines Sub Committee:
Heather Cook, Seniors Services Advisor, Senior's Services Branch
Anderson Logan, Policy Analyst, LTC and Assisted Living
Jim Aldrich, Northern Health
Vezza Carmela, Vancouver Island Health
Joanne Andrew, Vancouver Island Health
Snider Curtis, Fraser Health
Noorsallay Esmail, Fraser Health
Mike Mutter, Fraser Health
Nataly McCarthy, VCH
Robena Sirett, VCH