

Waterloo Region Housing Affordable Housing Design Guidelines

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Introduction

Waterloo Region Housing (hereafter WRH) provides a vision and strategy to revitalize housing communities through future redevelopment and growth. The WRH Master Plan (MP) was developed in 2019 to ensure the continued support and improvement of services for all tenants. The MP recognized that WRH could create a minimum of an additional 600 units within its existing communities which would then meet the overall service goal of generating more affordable housing within Waterloo region.

These Affordable Housing Design Guidelines (AHDG) include both requirements and recommendations to guide staff, consultants, and contractors throughout the design and construction process of affordable housing for WRH. The AHDG define the nature, functions, and elements that combine to form the built environment of WRH affordable housing communities. The AHDG are intended to promote the production of attractive, efficient, and functional housing.

The AHDG have been established as minimum acceptable standards relating to materials, products, workmanship and services. Staff, consultants, and contractors are encouraged to go beyond these requirements and recommendations in order to foster innovation, efficiency, and functional affordable housing developments that are to be compatible to the surrounding neighborhood and that provide support services to allow families and individuals to live independently.

This document is to be read in conjunction with the Region of Waterloo Accessibility Design Standards (2017); the most current Crime Prevention through Environmental Design documents; the Region of Waterloo Water Efficiency Master Plan (2015-2025); the Province of Ontario Storm Water Management Practices and Planning and Design Manual (2003); concepts and guides provided by VisitAble Housing Canada¹; all municipal, provincial and national codes; all requirements of authorities having jurisdiction; and any other document or report referenced herein.

Regulatory Requirements

All services, processes, products, and workmanship as required shall conform to the current applicable standards, codes, and regulations of authorities having jurisdiction. Consider all of the references and documents such as standards, codes, specifications, and applicable instructions referred to in the document to be the latest published and/or issued editions at the date of submission of the proposal, unless otherwise stated in the document or as required by the authorities having jurisdiction.

¹ [VisitAble Housing Canada website](#)

The AHDG constitute minimum acceptable standard of services, materials, products, and workmanship. Ensure that materials, products, and workmanship meet or exceed requirements of the reference standards specified.

In the event of conflict between documents specified herein, the most stringent requirements shall apply. Where no standards are referred to, provide services, products, materials, and workmanship that meet or exceed the minimum requirements of the applicable standards in North America.

For reference purposes, applicable standards shall include, but not be limited to: Canadian Standards Association, Ontario Building Code, and Accessibility for Ontarians with Disabilities Act.

1.0 SITE DEVELOPMENT

The purpose of this Section is to identify the desirable characteristics of the exterior built environment for WRH communities. Consider building locations on the site carefully in the context of any negative impact on the site's environmental and geographic characteristics. Select suitable building locations that minimize site disruption.

The nature of adjacent lands and developments should be taken into account in relation to the proposed new build. This requires a careful review of the buildings' fit into the proposed site while restricting the potential negative impact on the existing neighbouring properties, roadways and sidewalks, parks and open spaces and properties. The desired outcome is affordable housing that is truly integrated into the community.

1.1 Site Servicing

All designs should provide the required supplementary equipment and services, such as gas, water and hydrometers, cable, telephone and other service appurtenances (accessories necessary for the efficient operation of the services) that are to be coordinated and integrated into the project.

1.2 Transportation

Where possible to consider, affordable housing buildings should be located on or near a Grand River Transit route and in close proximity to schools, recreational facilities, shopping and services and should support the planning and land-use policies of the Region of Waterloo and Area Municipalities.

1.3 Environmental Protection

Affordable housing building designs should demonstrate an intention to minimize environmental impact with the use of products with projected high-performance standards, long life-cycles, and high efficiencies; and where possible, recycle and/or salvage construction, demolition and land clearing waste. Buildings should be designed to conserve existing natural areas by restoring any damaged areas and incorporate new areas to provide habitat and promote biodiversity. Sites will be developed in accordance with the Grand River Source Protection Plan and a Risk Management Plan, if required.

1.4 Built Environment

Design of the building should take into consideration the potential negative impacts of adjacent properties including, but not limited to, overshadowing, overlooking, and wind-tunnel effects. Ensure that the building's height and mass is appropriate to the type and nature of adjoining development. The building should be oriented to take into consideration climatic factors where there are maximum benefits to be derived from natural lighting, energy efficiency (e.g. solar heat gain), and protection from weather

elements. Consider preparation for the installation of a future solar thermal system or solar photovoltaic system.

The ground floor design of the building should express the individuality of the residential and commercial units, if applicable, through architectural expression and the inclusion of entrance doors, canopies and windows addressing the street. Ensure appropriate sidewalk width is provided to accommodate the anticipated pedestrian traffic flow.

Mechanical equipment, elevator, and telecommunications rooms should be located on the ground floor or in a basement and should be screened from street view if applicable. Transformers should be integrated into the site plan creating minimal impact on the building's operational and functional needs.

Emergency generators shall be included per the Ontario Building Code to provide power for essential building services.

1.5 Exterior Space

Utilize the site's existing features in creating compatible and well-defined amenity areas for adults and/or child-oriented activities. Minimize overshadowing of amenity spaces by neighbouring buildings and create shading through natural means (e.g. deciduous tree planting)².

The exterior space of the building should comply with Crime Prevention Through Environmental Design principles for crime prevention. Well-defined public places (e.g., street, garden, park, walkway, mews, or squares) should be created through the massing of built-form and creating residual, unusable spaces should be avoided.

Play areas should be universally accessible. Consider locating play areas adjacent to communal laundry room, lobby, or amenity space, with good sightlines to play area.

Consider allocating areas such as pathways and outdoor exercise space to promote active living. Consult with WRH on requirements for a play area, community gardens and outdoor exercise space.

1.6 Landscaping

Landscaping should be designed to complement the development and amenity spaces, enhance the image of the neighbourhood, and address practical considerations such as wind protection, buffering, and shade. Consider planting hardy, water saving, indigenous species, especially in passive areas, to reduce the demand for irrigation and maintenance.

Develop a site plan that utilizes and complements existing landscaping features and topography. Maintain part of the site in its natural state where practical and appropriate.

² [Region of Waterloo's webpage on shade](#)

Use landscaping for practical benefits and solutions, such as:

- A colonnade of trees for protection from sun, rain and wind.
- A grid of trees that will produce a “roof canopy” of foliage to create a secluded sitting area for passive recreation.
- A berm adjacent to an open sodded area, which will act as a separation between outdoor spaces and can also be used for an informal sitting area.
- Landscape elements such as trees and shrubs to define circulation edges, which will also be a benefit for microclimatic conditions.
- Incorporate landscaping elements to provide maximum shade for hard surface areas.
- Design site-landscaping layout to accommodate and support all desired and required outdoor activities, such as garden plots and/or outdoor exercise areas.

Consider the ease of maintenance of grounds (hard and soft surfaces) and snow removal. For areas that are to be designated for snow storage, consider snow drifting patterns, and consider the use of planting and screening to mitigate drifting. Design landscape layout with sufficiently wide mowing strips between lawns, planting beds, buildings, retaining walls, planters or steps in order to avoid the need for trimming the edge of grass areas to reduce maintenance requirements.

1.7 Storm Water Management

Provide innovative low-impact design options such as detention ponds, emergency spillways and/or wetlands for storm water management. Co-ordinate the design with the Region and Grand River Conservation Authority. Ensure that surface drainage of abutting properties will not be adversely affected by the development.

The amount of storm water runoff should be limited by encouraging on-site infiltration and by designing swales and permeable surfaces in accordance with the Grand River Source Protection Plan. Employ natural treatment systems to improve storm water quality before it exits the site, where possible.

1.8 Signage

Provide a comprehensive signage system that considers the orientation, location, direction, and distance of signage based on the physical layout of the project. Property identification signs should be located at the main entrance and should include the site address. Ensure that all exterior signage is durable, low maintenance, and vandal-resistant. Provide internal way-finding signage in all lobby areas and at each elevator location. All signage is to be provided in accordance with the Region of Waterloo Accessibility Design Standards.

Construction signage should include the project name and appropriate contact information.

1.9 Access and Circulation

Design vehicular and pedestrian entrances to evoke a sense of arrival (e.g., drop-off, canopy, or change of hard surface material from concrete to interlock and/or stone). Internal road networks should be designed to enable vehicular traffic to enter and exit the site while travelling in a continuous forward direction to minimize vehicle turnarounds. This feature shall extend to the entry/exit points at the main roadway and also to the drop-off and parking area(s), where possible. Ensure that the road network and flow of traffic are designed to complement the development. Attempts should be made to avoid the glare of car headlights into the windows of ground and/or first floor units.

Circulation areas should be designed with wide multi-purpose pathways for different users (e.g., children on bicycles, pedestrians and barrier-free needs). The layout of walkways should follow natural pedestrian traffic patterns with a hard surface such as concrete, unit pavers, natural stone pavers, or other suitable material to discourage routing across lawns and play areas.

Consider the design of garbage and move-in/out areas to ensure ability of large trucks to manoeuvre.

1.10 Surface Parking

Surface parking must comply with municipal parking standards, including meeting barrier-free parking requirements.

Parking spaces for residents and visitors should be located away from children's play area, if applicable. Illuminate all outdoor parking areas with direct illumination towards the paved areas only and not into any adjacent buildings. Make provisions for pedestrian routes through parking area(s) with sightlines at intersections of walkways and vehicular traffic. Demarcate and provide appropriate lighting on pedestrian routes.

Snow storage and removal should be considered when designing parking area(s) and access routes.

1.11 Underground Parking

Consider providing tenant parking underground and visitor parking above ground where possible. Locate underground garage entrance/exit in close proximity to building driveway entrance. Outdoor/exposed ramps should have a snow melting system complete with heating cables. Provide a linear drain with grill at the base of all ramps.

Adequate, energy-efficient lighting should be provided throughout the parking areas. Provide convex mirrors to aid vehicles. Colour coding and graphics should be used to identify floors, stairwells and elevators.

2.0 BUILT FORM

The purpose of this Section is to establish the minimum standards and characteristics required for the building and its interior spaces. Buildings should be designed to be low maintenance and durable, achieve optimal energy efficiency (i.e., limits energy use), and maintain a comfortable interior environment. New buildings should provide a sense of security to residents and visitors while meeting quality design expectations to promote good energy conservation practices, environmental protection, universal accessibility, pedestrian movement, vehicular functionality and sustainable design considerations. Buildings should also be designed with consideration for the health and safety of staff and maintenance workers.

2.1 Safety and Security

The principles of Crime Prevention Through Environmental Design should be incorporated into the design of the building layout. Exterior circulation routes should be designed in a manner that prevents the creation of areas that lead to potential confusion, entrapment, dead ends or hidden spaces. Adequate lighting needs to be provided at public and secluded areas.

All “Exit” lights should be LED-type and securely mounted on walls or ceilings above exit doors.

Design for the installation of surveillance cameras and alarm signal devices to be located at the exterior building entrance(s), at the front & back lobbies, and in other locations as specified by Regional security staff.

2.2 Accessibility

The Region of Waterloo supports designs that are inclusive of all residents and allow basic access to everyone regardless of age and level of mobility. VisitAble Housing is the concept of designing homes so that individuals who use wheelchairs, walkers, or have some other form of mobility impairment, as well as a parent with a stroller, can move freely throughout the main level of a home or unit in an apartment building.

VisitAble Housing has three main features:

- Provide a no-step entrance (e.g., at the front, back, or side of the house/building).
- Wider doorways and clear passage on the main floor and common areas in apartments.
- A main floor bathroom that can be accessed by visitors who use mobility devices.

The design of new buildings that target housing for persons with disabilities should provide accessible units with features and design details above the minimum Ontario Building Code requirements and Accessibility for Ontarians with Disabilities Act. The Region of Waterloo Accessibility Design Standards should also be incorporated.

2.3 Structure

The Region of Waterloo encourages innovative designs that are durable, low maintenance, energy efficient, and affordable. Affordable housing built under these guidelines must:

- Be similar in size and amenities to other types of housing in the community.
- Improve environmental performance of buildings based on current established principles, practices, materials, and standards.
- Promote good energy conservation practices.
- Have durable materials and equipment at the time of construction which will reduce maintenance and replacement costs.

2.4 Building Envelope

The Region requires new buildings to meet or exceed the LEED Silver standard. Consider exceeding the LEED Silver standard where possible.

The building envelope should be designed to achieve low air leakage, eliminate thermal bridging, and reduce summer time solar heat gain and winter heat loss. Consider the building orientation and incorporating shading devices to achieve these goals. Also explore passive and active solar possibilities.

Use a wall type construction which is durable, low maintenance, and provides a proper pressure equalized rain screen through use of sufficient venting. Faced sealed joints for precast concrete panels and EIFS (exterior insulation and finish system) are not allowed; instead use two-stage seals in joints that provide for water drainage at the source.

Include architectural features, such as outward projection of the roof, cornice, sills, and drip ledges to prevent large scale wetting of the building envelope. The building envelope should visually integrate with the surrounding neighbourhood to reduce impact on community members.

To prevent thermal bridging conditions as well as align thermal mass of wall insulation, use thermal breaks in door and window frames and insulate floors over all unheated spaces. Ensure the air/vapour barrier retardant system within the walls is continuous, properly connected to window frames, and installed on the warm side of the wall. Ensure that the location of the air/vapour barrier is not creating a vapour trap for

concealed condensation, and that it is rigid and made of or supported by structural components capable of withstanding wind loads and thermal expansion.

2.5 Heating, Ventilation and Air Conditioning (HVAC)

HVAC systems should be designed to achieve optimal energy performance on equipment and materials selected. Ensure uniform conditioning (both heating and cooling) is provided year-round throughout the building and in all units. Materials and equipment should be selected from a reputable manufacturer with the ability to provide competent and thorough technical services through local a representative with the ability to deliver spare parts expeditiously.

Building designs should provide for adequate access and service space for all major mechanical equipment (such as boilers, chillers, cooling tower, air handling units and fans) and also for motorized dampers and actuators, control sensors and devices, humidifiers, coils (e.g., heating, cooling and reheating), drain pans, isolating valves, drain valves, filters, strainers, and expansion joints.

2.6 Exhaust Fans

Provide direct drive exhaust fans, complete with louvers and automatic shutters. Ensure louvers are anodized or powder-coated aluminum construction and flush mounted to the outside wall. Provide inline blowers for extraction of dryer vents for the common laundry facility and ensure that all exhaust fans are vented outside.

Exhaust fans should be ceiling-mounted, energy-efficient, and high-volume. Bathroom exhaust fans should also be motion/humidity activated with timing.

2.7 Ductwork

Design all ductwork with straight, short runs with few turns and a maximum efficiency of airflow. Use rigid ducting of at least 100 mm (4 in.) diameter for bathroom fans; for longer runs provide 150 mm (6 in.) diameter. Seal all ductwork joints with aluminum duct tape to prevent air, moisture and noise leakage. Ensure any duct running through unheated areas or vented outside is insulated and all joints are sealed.

2.8 Plumbing and Drainage

Water supply should be separately metered for each residential building, amenity space, parking garage, and exterior use. Design domestic hot water system with redundant heater capacity to ensure continuous supply of hot water. Provide high efficiency water heaters and insulated storage tank(s). Provide packaged, dual pressure booster pumps with variable speed drive for cold water supply in high-rise buildings. Provide shut-off valves for all individual hot and cold water risers. Ensure all shut-off valves are clearly marked and easily accessible from common corridors.

Allow for thermal expansion of piping and equipment by providing expansion loops or joints on all main runs and all risers. Isolate pipes to control vibrations and finish piping insulation with a protective cover, with appropriate paint and labels for identification.

Provide each unit with a main water shut-off valve and ensure each hot and cold-water supply fixture within the unit has an easily accessible isolation valve.

Units should include bathtubs with integrated drain stops and floor drains should be provided in all barrier-free bathrooms and public bathrooms.

Kitchens located in all common/multipurpose rooms should be provided with a rough-in for a dishwasher. Laundry facilities should have adjustable water mixing valves. Clean-outs should be located on every third floor for accessing and cleaning drainage stacks.

Provide garbage chute wash down facilities with sanitizing and odour control.

2.9 Electrical

Solar power systems or other energy conservation systems should be considered to minimize operational costs associated with electricity use.

Ensure individual revenue-grade suite metering is provided for each unit, common laundry facility, common amenity space, and exterior use. Provide a minimum 100-amp electrical breaker panel for each unit. Ensure a dedicated circuit is provided for each receptacle to avoid tripping when multiple appliances are used at the same time.

Electrical rooms are independent from all other spaces and should be located in one area as far as possible from residential units, adjacent to other service rooms, and preferably accessible by a service corridor. Ensure that adequate ventilation is provided in transformer vaults and switchgear rooms to prevent overheating and equipment failure, and consider heat recovery options for energy efficiency.

The building design should ensure all electrical conduits are concealed (i.e., surface mounted conduits will not be permitted). Rough-ins for telecommunications equipment (e.g., computer, telephone, cable, etc.) and audiovisual equipment should be provided in all common areas. A rough-in box for fiber optic cable should be provided in each master bedroom closet (consult provider for sizes of the rough-in).

Consideration for future electric vehicle charging stations should be made (e.g., rough-in conduits, electrical panel sizing, etc.).

2.10 Lighting

Lighting should be designed as an architectural element using coves and bulkheads for indirect lighting alone or in combination, for a warm and well-balanced lighting effect. All unit entrances should have overhead lighting fixtures, and all parking areas, parking drop-offs, every entry to the building, ramps, stairs, and walkways should be well lit with uniform lighting levels along all pedestrian routes. Light fixtures should be vandal-

resistant, of sturdy construction and low maintenance, and non-institutional in appearance.

Install ENERGY STAR-qualified low power options for interior and exterior lighting fixtures, appliances and equipment. All fixtures are to be LED and in accordance with Region of Waterloo standards for colour and temperature. Provide motion sensors for lighting control in garbage rooms and other service rooms. The number of types of light fixtures should be minimized to facilitate future maintenance.

2.11 Roofing

Roof lines should be designed and sloped to accommodate proper drainage, reduce snow build-up around mechanical equipment and air intakes/exhaust outlets, and eliminate snow slides and icicle build-up that could threaten pedestrians during winter months. Install snow guards and/or heat tracing on eaves of high-sloped roofs. Where suitable, consider incorporating a “green” (vegetated) roof with a durable root-resistant membrane. Otherwise, use ENERGY STAR-rated (highly reflective) and high emissivity-type of roofing for the roof surface.

Select materials used in roof assemblies for compatibility with physical and thermal behavior. Preference shall be given to the assemblies that use materials having proven long life-cycle expectancies and low maintenance requirements.

Sloped metal roofs should be designed as decorative building features to disguise mechanical penthouse and should consider the need for water protection to the walls below. Eave protection should be provided for six feet from the edge to reduce ice-damming effect. Provide effective passive ventilation of the attics (e.g., ridge vents, roof vents) and soffits. Provide baffle walls at the soffits to prevent blockage by insulation.

Design flat (i.e., low-sloped membrane) roofing system assemblies capable of lasting at least 20 years. Adequate protection to exposed roofing systems (i.e., materials and surfaces) should be provided to compensate for negative effects such as uplift forces due to wind and floatation; differential thermal movements; roof traffic due to servicing roof-mounted equipment, access to service room(s), window washing and maintenance; and all work performed post-roof installation.

Roof-mounted equipment should be placed such that fall protection measures are not required during regular maintenance. A protective railing is required at all maintenance walkways as per the Occupational Health and Safety Act. Ensure that all service walkways are suspended on neoprene spacers and obstructions are bridged at walkway locations. Sufficient roof anchors should be installed for suspended equipment and rolling stages normally used for window cleaning operations, general cleaning, repair, painting, maintenance and inspections.

2.12 Windows

Windows should be recessed into the building's façade to create a solid expression and to increase shadow lines for visual interest. The design and proportion of window openings should be relative and adequate for the room's intended use and located according to building orientation to maximize natural light and minimize need for artificial lighting. The design must be bird-friendly.

When designing windows with mullions (i.e., horizontal and vertical dividers), consider the impact of their placement on views to the exterior from both sitting and standing positions. Provide restrictors to limit the opening for child safety requirements.

Windows should be energy efficient and should be tested and certified by the Canadian Standards Association. They should have above-average ratings for air filtration, water penetration, and strength from wind load. Exterior windows will be double-glazed, sealed units with 6 mm (1/4 in.) thick inner and outer pane.

Provide thermally broken frames with provisions for internal drainage to exterior. Provide sills with drips clear of wall cladding and with sill deflectors and ensure window sills/stools are constructed out of a moisture resistant material. Provide proper weather seal between framing of opening and wall.

2.13 Door Design

Doors should be designed in compliance with the Region's Accessibility Design Standards. Heavy-duty, commercial grade, aluminum doors should be provided for the building vestibules. Ensure that the doors are power-operated sliders with a motion detection sensor operation system and auto-lock feature.

All exterior doors should have heavy-duty weather stripping, kick plate, and a metal-covered doorsill. Exterior emergency exit doors should not have any exterior hardware or glazing.

Main entrance doors to units should be fire rated, insulated metal doors. Interior unit doors should be semi-solid core doors without decorative laminate finishes. All unit doors should have lever handles as opposed to knobs.

Ensure overhead doors for the underground parking garage are insulated metal panel doors with formed steel guides, electrically operated (door opener), and weather tight.

2.14 Building Entrance

Building entrances should create a sense of entry with distinctive project identity. The exterior drop-off area should be visible from the front lobby. Entry vestibules should provide protection from weather elements by recess or a detailed and finished canopy for the front and rear building entrances. Ensure that vestibule doors and components are manufactured and installed so that when in closed position, they:

- Control air leakage and resist wind loads.
- Provide required thermal performance and reduce thermal conductivity.
- Resist forced entry.
- Provide easy and smooth operation.

A private telephone intercom system should be installed for primary entrances. A rental telephone system is not acceptable.

All secure doors are to be equipped with card-reader access, compatible with Region of Waterloo security systems.

Provide built-in seating that is durable and vandal-resistant for the front lobby.

2.15 Unit entrances

Unit entrances should be located on both sides of the corridor. Entrances should be well illuminated by overhead valence lighting or pot lighting. All unit doors should be equipped with card-reader access, compatible with Region of Waterloo security systems.

2.16 Materials/Finishes

The variety of interior materials and finishes used should be limited in order to reduce the complexity of future maintenance. All products used shall be environmentally friendly, durable, aesthetically pleasing, and resilient.

Units are required to be finished with painted drywall and ceilings using low-VOC paint. Carpet flooring should be avoided. Mock-up units should be provided to allow the Region of Waterloo to review the quality of workmanship and finishing criteria before proceeding with the remainder of the units.

2.17 Acoustical

Building layouts should be designed to minimize noise conflicts between public, service, and private areas both on the interior and exterior sides. Sound transmission classes should exceed the Ontario Building Code requirements:

- Between residential units: Minimum Sound Transmission Class (STC) of 55.
- Between residential units and other (non-residential) spaces: Minimum STC 55.
- Between residential units and mechanical or electrical rooms, emergency generator room, elevator room and/or elevator shaft (hoist way), any service room and refuse chute, exterior wall assembly: Minimum STC 60.
- Rating for floor assembly to be minimum Impact Insulation Class (IIC) of 50.

2.18 Equipment

All mechanical equipment installed in buildings should be provided with lockout instructions. Equipment should be installed to allow for convenient access on all sides for maintenance and operations staff.

2.19 Furnishings

Furnishings for common areas will be finalized by the Region on a project-by-project basis. At a minimum, design common areas to accommodate furniture such as sofas, tables, chairs, benches, shelving, waste receptacles, plants, bulletin boards, and artwork.

2.20 Common Corridors

Building corridors should be designed to minimize blind spots and possible hiding places. However, long and monotonous corridors are discouraged. Light switches for hallways should be installed only in service rooms. Motion sensors should be located on every other light fixture. Lock out thermostats located in public areas by programming or installing non-tamper covers. Stainless steel corner guards should be provided. Incorporate a handrail on at least one side of the corridor and provide corner guards.

2.21 Stairwells

Stairwells should have natural daylight where possible. The open area at the bottom of the stairwell should be secured to prevent loitering.

2.22 Elevators

Apartment buildings should have a minimum of two elevators and elevator equipment should be non-proprietary. Design elevators to meet the Ontario Building Code, Canadian Standards Association, Technical Standards and Safety Authority, and accessibility requirements and standards. Provide copies of elevating device license(s) and certificate(s).

Provide machine room-less type elevators for low-rise buildings up to seven stories. Vertical shafts should be designed to minimize potential airflow with the rest of the building at each floor level.

Cabs should be well-illuminated with LED light fixtures. Ensure cabs have removable decorative stainless steel ceiling panels to match cab walls and to allow for easy servicing. Install handrails at barrier-free height inside the cab.

Ensure elevator control buttons address a variety of functional issues such as reach, dexterity and visual impairments. The service elevator should have a key-operated rear-access door to the moving room.

2.23 WRH Staff Office

An office for WRH staff should be located on the main floor, easily accessible from the front lobby. The office should be able to accommodate two staff members with furniture as well as provide seating for visitors.

2.24 Moving Room

Moving rooms should be located away from the building entrance(s) if possible and in close proximity to the service elevator. Exterior doors should be heavy-duty with heavy-duty hinges, door closers and hold-open devices, or an overhead door. Interior and exterior doorjambes should be protected with bollards. Wall protection and corner guards should be provided throughout the route to service elevator.

2.25 Amenity Space/Multipurpose Room

Any amenity spaces or multipurpose rooms are required to be universally accessible. These spaces should consider including the following:

- Moveable partition walls.
- Storage and coat closet.
- Intercom with remote release of main entrance door.
- Direct exit to exterior.
- Conduit, cable outlets, and receptacles for floor and wall-mounted televisions as well as telephone and data cabling.
- Kitchen or kitchenette with stove, refrigerator, and double sink.
- Unisex barrier-free washroom with a feminine napkin dispenser and disposal unit, a baby change table, a recessed garbage receptacle and a paper towel dispenser.

2.26 Commercial Space

Consideration should be given to incorporating leasable commercial space on the main floor of buildings.

2.27 Bicycle Room

Bicycle rooms are to be universally accessible and should be located on the main floor with direct access to outside with ramp if necessary. The room should be lockable with a time delay door closer.

The ratio of bicycled spots-to-units will vary by building. In general, provide one spot for every three suites for family buildings and one spot for every five suites for seniors' buildings.

2.28 Mailroom

Mailrooms should be designed in accordance with Canada Post requirements. They should be universally accessible and should provide exterior access by Canada Post.

2.29 Public Washrooms

One unisex barrier-free washroom should be accessible from the main floor corridor and include the following accessories:

- Feminine napkin dispenser and disposal unit.
- Baby change table.
- Recessed garbage receptacle and a paper towel dispenser.
- Exhaust fan ducted to outside.
- Motion activated high efficiency lighting.

2.30 Common Laundry Facility

Laundry rooms are to be universally accessible. The ratio of equipment to units will be based on the type of building. If possible, laundry rooms should be located at ground floor level with view to an outdoor child play area or amenity area.

Ensure each dryer has a separate gas disconnect valve and is vented directly outside. Provide individual shutoff valves for individual washing machines as well as a separate cleanout drain for each washing machine with appropriate slope.

Provide a clothing folding counter/table with dual height to accommodate accessibility requirements. Include a laundry sink that is accessible.

2.31 Main Garbage/Recycling Room

Garbage rooms should be located away from the building's main entrance(s), air intake ducts and should not be visible from main circulation areas.

The garbage approach and pick-up area should be level with a heavy-duty concrete slab and be large enough for the placement of garbage bins. Provide metal bollards or concrete safety curb to prevent garbage bins from rolling away.

2.32 Garbage Chute Room

Garbage chute room(s) should be centrally located on each floor; however, should not be located opposite to a residential suite entrance door.

Ensure garbage chute rooms are barrier-free and have automatic door openers on all floors. Provide exhaust fan within the room on a programmable timer and high efficiency lighting, activated on a motion sensor.

A dual-sorter chute should be provided in each garbage room for recycling and garbage.

2.33 Housekeeping Closet

Housekeeping closets should be located on both the main floor and top floor, and on at least one other floor in the middle. Closets should be at least 2.3 m² (25 ft²) in area and should include the following:

- Eye wash station.
- Exhaust fan and high efficiency lighting.
- Slop sink with hot and cold water.
- Ceramic floor tiles.
- Floor drain.
- Cement board or equivalent water resistance board material instead of drywall.
- Built-in shelves for storage.

2.34 Storage Room

If required, storage rooms should be secure, heated and ventilated and should be located in the basement or on the ground floor and be at least 23 m² (250 ft²) in area.

2.37 Standard Unit Sizes

The average and minimum unit sizes listed below should be considered as minimum requirements. The average applies to all units of the same size in a project.

Unit Type	1-Bed	2-Bed	3-Bed	4-Bed	5-Bed
AVERAGE	592 ft ²	725 ft ²	1,000 ft ²	1,175 ft ²	1,300 ft ²
	55.0 m ²	67.4 m ²	92.9 m ²	109.2 m ²	120.8 m ²
MINIMUM	525 ft ²	650 ft ²	900 ft ²	1,100 ft ²	1,200 ft ²
	48.7 m ²	60.4 m ²	83.6 m ²	102.2 m ²	111.5 m ²

2.38 Unit Requirements

Residential units should not be located next to service areas such as mechanical, electrical and laundry rooms. All units should be designed for maximum use efficiency

with well-defined areas (e.g., individual rooms) and with allowance for sufficient wheelchair turning radius in each room.

Units should be designed to provide a generous amount of exterior/natural light to make units bright and inviting. However, windows should avoid direct sightlines from immediate units and adjacent buildings. Common durable window coverings should be provided.

Wiring for cable/internet and telephone lines should be provided to each unit from demarcation point. Provide all rough-ins for cable TV including outlets, cover plates, conduits, and pull boxes for the living/dining room and master bedroom.

Living room and dining areas should be designed to accommodate the placement of various furniture types and arrangements.

Bedrooms should be a minimum 9.3m² (100 sq.ft.) and designed to accommodate bedroom furniture adequately. Make provisions for a closet with a shelf and rod.

Kitchens should be located with direct access from the foyer. Upper cabinets should be installed to underside of bulkhead(s). Stoves should not be located adjacent to doorways or in corners. Provide minimum 350 mm (1.2 ft.) wide counter space between stove and adjacent wall or appliance. Kitchen faucets should have lever handles as opposed to knobs.

Bathrooms should be accessible from the hallway but avoid direct access (and view) from the main living areas. Bathrooms should allow for two-person occupancy simultaneously. Ensuite bathrooms are not permitted. Second bathrooms in larger units should be three-piece (shower, toilet, and sink). The main bathroom should have backboards for future grab-bar installation. Provide cement board on walls at bathtub and vanity area and ensure that ceiling above bathtub has cement board. Use mold resistant silicone caulking throughout. Each bathroom shall have an exhaust fan connected to the exterior with exhaust rate of 100 cfm. Ensure the light switch is interconnected with the exhaust fan to prevent mold. Exhaust fans must be activated by motion and humidity.

Units should have a universally accessible storage closet large enough to store a stroller or scooter located within the front entry of the unit. The room should have impact-resistant drywall and electrical outlets to allow for scooter charging.

3.0 SOCIAL PROCUREMENT

Per the Waterloo Region Housing Master Plan (2020 – 2040), the Region of Waterloo is implementing a Social Procurement Plan, where it intends to leverage spending to have a positive impact on the local economy and the overall well-being of the community.

As part of the design development of a new facility, the Region of Waterloo will require the cooperation of the Architect/Consultant to assist in incorporating a social benefit into the facility itself, and/or into the process of designing and constructing the facility.