

General Design Considerations

1. Buildings shall be designed to be spatially efficient and shall be at or below the acceptable space allocations for circulation and service rooms and amenity/program areas.
2. Project design should generally reflect a modest accommodation including the size of units, amenities/common areas available, and finishes.
3. Building and landscaping design should strive to harmonize with the building styles, indigenous culture and character of the surrounding neighbourhood.
4. Building and landscape design shall incorporate Crime Prevention through Environmental Design principles where appropriate. Further information on CPTED principles can be found at www.rcmp.grc.gc.ca/pubs/ccaps-spcca/safecomm-seccollect-eng.htm.
5. Durability and ease of maintenance should determine the selection of materials. At minimum the following items should be durable and the durability/life span should be indicated as part of the design development submission
 - Flooring
 - Cupboards and counters - plywood casework construction
 - Exterior walls
 - Shingles/Roofing
 - Doors and windows - 25 year to lifetime warranty
 - Interior finishes in high traffic areasTo be considered *durable*, millwork and flooring should have a commercial warranty period of not less than 10 years and exterior finishes should have a warranty period of not less than 40 years.
6. Where applicable, fixtures and finishes must be reviewed and confirmed from Ontario Aboriginal Housing Service's approved product list. The approved product list will be provided at the initial IDP meeting with Ontario Aboriginal Housing.
7. Low volatile organic compound (VOC) finishes, furnishings, products and materials should be selected whenever possible.
8. Selection of the primary heating/cooling energy source should consider availability, life-cycle cost implications, and initial capital cost. For space and domestic hot water heating, Ontario Aboriginal Housing Services prefers the incorporation geothermal for the fuel source wherever available.

Component Specifications

All component specifications will be subject to request/ review. (i.e – flooring, tub surrounds, fixtures, exterior finishes, paint, windows, doors, etc.)

Energy Model

- Mor-vents/ baffles into each rafter space to suit insulation depth.
- To build and secure retainer around attic hatch to hold back insulation.
- To blow in fiberglass wool insulation to approximately 18.5" in total to achieve R50.
- To insulate back of attic hatch using rigid board insulation.

- Weather-stripping around face of attic hatch to ensure it seals properly.
- **The development must have an energy model and installation standards that meet a 26 - 40% reduction in operating energy consumption and greenhouse gas emissions. An Energy Report must be provided upon completion that is satisfactory to CMHC requirement for energy reduction.**

01 35 00 Special Procedures

Fire Safety Plan

A fire safety plan must be submitted to Ontario Aboriginal Housing Services as part of the Design Development Phase and drawings set.

An emergency evacuation floor plan must be posted on each floor.

Verification of all fire safety systems must be conducted and all reports must be submitted to Ontario Aboriginal Housing Services as part of the Close-Out submission.

Labels must be affixed to each fire safety system indicating the date of installation and certification.

Safety and Health

Storage areas for cleaning chemicals/controlled products require a CSA certified eye-wash station in the same room.

Janitorial rooms should have low sinks/drains to empty mop pails. These rooms should also include proper weight-rated shelves affixed to the walls to prevent tipping.

03 00 00 Concrete

- Provide heated sidewalks

04 00 00 Masonry

05 00 00 Metals

06 00 00 Wood, Plastics, and Composites

06 10 00 Rough Carpentry

BATHROOM WALLS

- Should be reinforced with additional blocking or plywood panel to allow for the installation of grab bars.

FRAMING / GENERAL CONSTRUCTION

- Modular framing, trusses, sheathing, insulating, vapor barrier and air sealing in compliance with current Energy Efficiency/OBC requirements. Detailed specs as per your stamped drawings.

06 20 00 Finish Carpentry

06 22 00 Millwork - Residential Kitchens

- Kitchen Design to meet CSA standards
- Cabinets: solid wood framing and wood veneer, laminate or melamine doors. Colour & style of cabinets to be verified prior to order
- kitchen cabinet hardware: including handles/pulls to be nickel in colour. Any changes must be verified/ approved by OAHS.
- laminate countertops: as per drawing. Colour to be verified by OAHS prior to order. Ensure all countertops are caulked where necessary.
- stainless steel double kitchen sink, Sink Fixture to be single handle, nickel finish with Water Sense label. Manufacturer to be Moen.
- Ontario Aboriginal Housing will supply all appliances – **NO dishwasher**

Commercial Kitchens

- Stainless Steel countertops

07 00 00 Thermal and Moisture Protection

07 40 00 Roofing and Siding

General roofing notes

- Drip edge around perimeter of roof.
- 2 rows of ice and water shield on all eaves, valleys and vulnerable area, where roof is sloped. Cover remainder of roof with synthetic underlayment. Venting must be adequate for square footage of attic space. Venting to be either Max Static Vents or Ridge Venting. No whirly birds permitted.
- ABS flashing around all vent stacks.
- Lifetime Architectural Shingles on entire roof surface. Seal where necessary
- Forward receipt and warranty documentation to OAHS with invoice upon completion.

General siding notes

- Rigid insulation and house wrap around entire exterior of unit to meet current OBC.
- Necessary light/ utility extensions to suit wall depth.
- Dryer, exhaust, receptacle and all necessary J Blocks. Vents must be vinyl. Colour to be verified by OAHS with siding colour.
- 4.5" HardiBoard siding **OAHS to choose colour. Budget premium colour for siding** prior to order.

Forward receipt and warranty documentation to OAHS with invoice upon completion

08 00 00 Openings

08 10 00 Doors and Frames

Doors 915 mm preferred or greater if required by Code.

All doors shall have levered door handles and pre-drilled deadbolt with peephole at 50 – 64" for standard units, and 43" – 51" for accessibility

All entrance doors to come pre-painted and with maintenance free cladding if exposed to exterior elements.

- Entrance Door - 36" x 80" insulated 6 panel Steel Entry Doors.
- Slab predrilled for deadbolt
- All interior and exterior finishing to be included. Interior casing/trim to be composite PVC unless approved otherwise by OAHS rep.
- Brick mould to be maintenance free – Vinyl.
- No hollow capping permitted.
- Interior hinge pin door stops on all entrance doors.
- Forward receipt and warranty documentation to OAHS with invoice upon completion

Unit Interior Doors

- 6 panel pre-hung textured & primed interior doors.
- All main floor interior doors (including bathrooms) to have a clear opening width of 32 in.
- Paint doors and frames white in colour using semi-gloss latex paint.
- All main floor int doors (including bathrooms) to have a clear opening width of 810 mm (32 in.)
- Passage handles. Nickel finish unless approved by OAHS.
- Hinge pin doors stops on all interior doors.

08 40 00 Entrances, Storefronts, and Curtain Walls

08 50 00 Windows

Each bedroom shall have at least one operable window

- Vinyl triple-pane casement windows with standard handle and lock.
- All windows to come Low E, Argon & Energy Star Rated.
- All windows to come with vinyl jamb extensions to suit wall depth.
- All windows to be shimmed, insulated, and sealed properly as per manufacturer install specs.
- To come with vinyl, maintenance free brick mould.
- All exterior and interior finishing to be included.
- Interior casing/trim to be MDF minimum 2 3/4" width & 5/8 thickness.
- All casing to have nail holes and joints filled/puttied and painted.
- Forward receipt and warranty documentation to OAHS with invoice upon completion.

08 70 00 Hardware

09 00 00 Finishes

Interior Walls

Corner guards should be provided in high traffic areas and common hallways.

09 60 00 Flooring

Light commercial grade resilient Luxury Vinyl Plank / Tile with glue down installation. OAHS to approve colour.

- PVC baseboard throughout. Other materials such as rubber may permitted if approved by OAHS rep. Colour also to be approved by OAHS rep.
- Transitions/ reducers/ nosings necessary.
- Remove all debris and leave work area clean.
- Forward receipt and warranty documentation to OAHS with invoice upon completion.

09 90 00 Painting and Coating

- All paint must be mildew/moisture resistant in bathroom and kitchen
- Prime and Paint all walls with **Semi-gloss**(eggshell?) latex paint. Paint colour must be neutral, confirm with OAHS prior to start date.
- Do not paint light fixtures, vinyl windows, vinyl or rubber casings, handles, plug covers, etc. unless requested otherwise by OAHS rep.
- Leave unused cans on site for future touch ups.
- Forward colour swatch to OAHS with invoice for future reference.

10 00 00 Specialties

Provide a mailroom area that meets the requirements of Canada Post.

10 28 00 Toilet, Bath, and Laundry Accessories

Include – Mirror, Toilet roll holder, Towel rack, Shower rod

11 00 00 Equipment

11 30 00 Residential Equipment

The laundry equipment to unit ratio for apartment buildings is as follows:

Seniors & Singles – one washer and one dryer for every 15 units. Families – one washer and one dryer for every 10 units.

Revenue generating commercial grade washers and dryers shall be selected.

Ventless clothes dryers are not permitted.

Each laundry room shall be equipped with a single bowl laundry sink and a table or counter for folding laundry.

Floor drain(s) shall be provided.

Laundry rooms shall not be located below grade.

Laundry rooms may provide an inoperable window to allow for natural light.

In-suite laundry within units is permitted in townhouses only. Ventless clothes dryers are not permitted. Laundry rooms shall include a floor drain and floors shall be resilient sheet flooring.

11 40 00 Foodservice Equipment

12 00 00 Furnishings

12 06 00 Schedules for Furnishings

12 36 00 Countertops

12 50 00 Furniture

14 00 00 Conveying Equipment

14 20 00 Elevators

22 00 00 Plumbing

22 40 00 Plumbing Fixtures - See CMHC Specs for accessibility

30" vanity in both bathrooms. Vanity to come with 1 piece sink & countertop. Caulk where necessary. Colours/style to be verified with OAHS prior to install.

Door handles/hardware if not supplied with vanity. Nickel finish. To supply and install new sink fixture. Fixture to be single handle, nickel finish with Water Sense label. Manufacturer to be Moen.

Hot Water

- 40-gallon hot water tank.
- Tank must come with Energy guide Label and be Energy Star Rated.
- Insulate all hot water lines within minimum 2-3 metres of tank with insulated pipe wrap.
- Tank must be installed as per manufacturers instructions and temperature set to meet current OBC.

1 piece shower /tub unit in bathrooms. To supply and install permanent shower curtain rod on both units. To supply and install shower/tub fixtures. Fixture to be single handle, nickel finish with Water Sense label. Manufacturer to be Moen. To caulk where necessary. Verify style of Shower/Tub surround with OAHS rep prior to install.

1 new *American Standard* Water Sense toilet. Toilet to come with elongated bowl, chair height and no greater than 4.8 LPF. Include any plumbing modifications as required. Any other manufacturer or changes in spec must be approved by OAHS.

Kitchen - A stainless steel, double bowl sink with a low-flow, pressure balanced lever faucet must be provided.

Dishwashers are not permitted.

Hose bib – fire pit and front entrance

Door handles/hardware if not supplied with vanity. Nickel finish. New sink fixture. Fixture to be single handle, nickel finish with Water Sense label. Manufacturer to be Moen.

23 00 00 Heating, Ventilating, and Air Conditioning (HVAC)

Consultation is required with OAHS and PM team. source for apartment buildings.

Apartment buildings must be commissioned by an independent third-party commissioning agent. The commissioning agent shall not be the project design engineer/architect, contractor, or owner's representative. At minimum, the commissioning agent will confirm the building's mechanical/electrical systems, envelope, and windows are designed and constructed to the owner's project requirements and to the design intent, calibrated to the specifications, and that building staff receive training and systems operation and maintenance (O&M) manuals.

Provide a heated vestibule.

Each unit must have its own independent climate control.

Exhaust system to address smudging in common room

New ventilation exhaust fans in bathroom. Fan must be minimum 100 cfm & Energy Star rated/qualified. Fan must be humidity sensing. All exhaust fans ductwork must be properly insulated & vented to the outside.

Electric Baseboards

- New electric Dimplex Linear Proportional Convection Heaters.
- Units to come with built in controls.
- All units **MUST** be installed with 1" wall spacers to reduce direct heat to wall.
- Multi-Zone Programmable Smart Thermostat (Must **not** be only Wifi connectivity) in accessible location. Smart Stat is Preferred.
- New TRIM (casing) on wall to suit new smaller baseboard size. Match existing trim/casing if possible.
- To ensure units are functioning properly.
- To leave instructions on site. OAHS rep to instruct where.
- Forward any relevant warranty information to OAHS with invoice upon completion

Cold Climate Heat Pumps

- Ductless mini-split Air Source Heat Pump per unit. Installed as per manufactures installation specs. If layout will allow, it can be a multi-head unit (specified in quote) to allow for cost savings.
- Exterior unit to have 3 sided protection.
- Thermostat to be a wireless wall mounted control, not remote.
- Unit must be Energy Star rated to meet energy efficiency requirements.
- Unit must be a Cold Weather Heat Pump and have a minimum temperature rating of -25 C.
- Units must be sized appropriately for square footage of house.
- To prevent snow from blocking airflow over the coil and to permit defrost water drainage, the unit should be raised or placed on a stand that raises it 30 to 60 cm (12 to 24 in.) above the ground. The stand should be anchored to a concrete pad, which in turn should sit on a bed of gravel to enhance drainage.
- Refrigrant lines must be insulated to minimize unwanted heat loss and to prevent condensation.

Heat Recovery Ventilator

- Ensure proper air exchange/ air quality is met as per OBC
- To install control on main floor near existing thermostat unless directed otherwise by OAHS
- Heat Recovery Ventilator must Energy Star Rated and be adequately sized for unit.
- The HRV must meet current OBC requirements, have defrost mode and have sensible recovery efficiency of at least 75% at 0°C

26 00 00 - Electrical

- Rangehood must be hardwired and vented to the exterior.
- All light switches shall be rocker style.
- Interior lighting fixtures with 7" LED flush mount low profile lights. Different profile can be used if approved by OAHS rep.
- Bulbs to be LED and equivalent to 60 watt incandescent minimum.
- Eco Option / Energy Star qualified.
- Forward receipt and warranty documentation to OAHS with invoice upon completion.

Lighting & Signage

- Ensure the building entrance / exits are well lit.
- Provide adequate exterior lighting to walkways, parking areas, amenity spaces, and

building entrances.

- Exterior lighting shall not create light pollution for neighbours or residential units located in the building.
- Provide easy to read building signage.
- Ensure building signage is adequately lit at night.

Exterior Light Fixtures

- Outdoor wall lights at all entrances. Lights to be black in colour & LED compatible.
- LED exterior bulb in fixture. Minimum 60-watt equivalent.
- For supplemental exterior lighting (not beside entrances or Parking lot lighting) we would prefer Solar powered, LED Motion sensing lighting.

Smoke Alarms

- New hardwired Smoke CO combo detectors in all required locations as per OBC.
- Units to have strobe and voice commands for alarm functions.
- All operating instructions to be left on site. Consult OAHS rep on location to leave them.

27 00 00 Communications

27 01 30 Operation and Maintenance of Voice Communications

Provide a building intercom entry system. The intercom system must be hard wired to each unit and functionality must not depend on telephone service to the housing units.

28 10 00 Access Control

28 20 00 Video Surveillance

Video Monitoring

- Every building must include a video monitoring system.
- System Equipment Requirements for Kantech Card Access (see separate attached spec)
- Video cameras must be installed and positioned to monitor, at minimum, the following areas: front vestibule, building exits, common areas on main floor, and elevator area.
- Consideration for additional video monitoring should be informed by assessment and a review by Ontario Aboriginal Housing Services.

28 30 00 Security Detection, Alarm, and Monitoring

All public and residential unit doors must be controlled by a fob access system.

Keying

- All locks within the building must have Weiser Smart Key Deadbolts and come with nickel finish.
- Where units have more than 1 exterior entrance, all locks within unit must be keyed alike
- Locks must be ANSI Grade 2 or better.
- All non tenant spaces (storage, electrical, boiler, roof, entrances, etc) are to be keyed alike for maintenance purposes.
- Forward receipt and warranty documentation to OAHS with invoice upon completion
- Keys to be given to OAHS representative unless directed otherwise

32 00 00 Exterior Improvements

Site Circulation and Walkways

- Drop-off points/loading zones shall be of adequate size to accommodate service vehicles.
- Vehicular drop-off points and pedestrian entrances shall be clearly identifiable.
- Consideration must be given to the number and size of garbage and recycling bins to ensure that collection trucks are able to access the area for pick-up.
- Garbage areas must be isolated and screened from amenity spaces and units located at grade.
- Walkways shall be non-slip on a compacted and level base. Width and slope shall allow for wheelchair accessibility with no steps to entrance and exit points from the parking area. Ramps shall conform to the local code or by-law.

32 30 00 Site Improvements

32 31 00 Fences and Gates

32 33 00 Site Furnishings

32 90 00 Planting

Landscaping

- Landscape design shall be simple and low maintenance.
- Low water landscaping principles and practices shall be applied.

- Trees should be located at an appropriate distance from the building and water/sanitation lines to avoid maintenance and foundation problems.