

BUILDING STANDARDS MANUAL

Patry Group – We Are Development Experts

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Patry Group Building Standards Manual

Milhaus Building Standards v5.2 is considered the primary reference source for this document, and the pages 1 to 136 are considered "baseline". This document is intended as a conversion for Patry Group, Canadian edition. Unpatched text is verbatim from the baseline. Any changes for this draft copy are highlighted in yellow for review and approval. The entire document is subject to the approval of Patry Group prior to publishing Version 1.

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INTRODUCTION

Patry Group Development, Patry Group Construction, and **Patry Group Management** (“Patry Group”) have developed this **Building Standards Manual** (“Standards,” “Building Standards”) and the requirement for an administered architectural design review process for all new mixed-use and multi-family projects. The architectural design process will integrate good urban design principles and will help to promote a clean, healthy, attractive, safe, and livable environment with a positive identity. The purpose of the Building Standards Manual is to encourage the design and construction of developments that harmonize with their surroundings and demonstrate a high standard of quality. They are intended to establish a community design vision for new mixed-use and multi-family development projects and to provide guidance necessary to achieve that vision.

The Building Standards Manual is a living document to be utilized by Patry Group and consultants during the conceptual, schematic design, design development, construction documentation, and construction phase of every Patry Group-developed mixed-use and multi-family project. Any deviation from these standards must be approved by Patry Group.

DISCLAIMER

The Building Standards Manual is for information only and is not part of the construction documents on any Patry Group project. This Building Standards Manual does not supersede, modify, or replace any written agreement between Architects, Engineers, or other design professionals and Patry Group. This Building Standards Manual does not supersede, modify, or replace any municipal, provincial, or federal laws, statutes, codes, or regulations, including but not limited to the applicable provincial building code[1], the Accessibility for Ontarians with Disabilities Act, 2005[2] and its Integrated Accessibility Standards Regulation[3], the Ontario Human Rights Code, or other accessibility requirements applicable to the Patry Group project**.**

Architects, Engineers, and other design professionals are responsible for code compliance and shall be subject to the terms and conditions and standard of care set forth in their respective contracts with Patry Group or affiliated entity and as imposed by applicable law.

The Building Standards Manual and the information contained therein are valuable assets of Patry Group and its affiliated entities. The Building Standards Manual is confidential, privileged, and proprietary to Patry Group and its affiliated entities. It is only for the information of the intended recipient, and may not be used, published or redistributed without the prior written consent of Patry Group. Any form of reproduction, dissemination, copying, disclosure, modification, distribution, and/or publication of the Building Standards Manual is strictly prohibited.

[1] The latest version of the Ontario Building Code 2024 Building Code Compendium (updated to January 16, 2025) - Two-Volume PDF set (kit) can be reference online for free and downloaded as PDF. Access Link

[2] Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11 | ontario.ca. Access Link

[3] Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11. Access Link

PERIODIC REVIEW OF GUIDELINES

Over time, further modification to the Building Standards Manual may be necessary to address unforeseen issues, changes in Patry Group vision, construction practices, web links, etc. Periodic review of these Standards will be conducted by Patry Group to ensure they are kept current and effective.

CURRENT VERSION

Version 1.0 Release Date 2026-10-09 First issue. Adapted for Canadian practice: entity, codes, standards, referenced agencies, defined terms and units of measurement.

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1. GENERAL BUILDING ARCHITECTURE & SHEET SETUP

1.1. Building Massing

Discuss and confirm with Patry Group whether the project will be a single construction phase or multi-phase project. The first phase of any project must include the following amenities and services:

- Utility connections: Water, sanitary, sewer, electric, gas, telecom
  - Meter centers, electrical rooms, MDF, water rooms, booster pumps, emergency generators
- Firefighting access route conforming to **OBC 3.2.5.5.** and **OBC 3.2.5.6.**
- Permanent leasing lobby with prospective resident parking
  - Temporary leasing facilities are rarely used but acceptable in extenuating circumstances
- Base amenity package as approved by Patry Group Development / Property Management
- Parking with safe access during construction of remaining phases
- Mail room and package delivery room
- Permanent move-in route, or temporary if needed
- Maintenance office, or temporary if needed
- Garbage room / facilities
- Bike storage and dog park are preferred in the first phase, but not required

The first phase will also need fully functional systems in place, independent of subsequent phases, to satisfy the authority having jurisdiction to obtain permission to occupy, including occupancy of an unfinished building, under Division C of the applicable building code, and meet all life safety requirements.

Coordinate with the authority having jurisdiction whether multiple building permits will be required due to phasing. Local zoning by-laws will define the limits of the structure, i.e. setting maximum building height, setbacks, floor area, and open space. **The typical building depth will range between 23 m to 24.5 m (75’ to 80’).** with a building efficiency of +/- 80%[4].

Typical unit depths range between 10,700 mm to 11,450mm depending on fully recessed, semi-recessed, or cantilevered balconies. The standard corridor width should be 1600 mm min clear, which exceeds the 1,100 mm minimum public corridor width at **OBC 3.3.1.9**, with insets at unit entries to break up long corridors. This minimum should be met to avoid turnarounds, otherwise required every 30m. Base unit plans and program statement to be provided by Patry Group per project.

Grading & Drainage Baseline Standards Proper grading and drainage must be incorporated during early design phases to protect foundations and prevent water intrusion.

- **Foundation Surface Slope:** Site grading should provide a target minimum slope of **5% within the first 3.0 m (10’)** away from building foundations to direct surface runoff away from walls.
- **Swales & Channels:** Swales and drainage channels should maintain a minimum gradient of **2%** to ensure adequate overland flow velocity without standing water.
- **Stormwater Features:** Detention or retention facilities should maintain a minimum setback of **9.0 m (30’)** from building foundations to mitigate hydrostatic pressure on subterranean structures.

[4] When builders are required to state and calculate the square footage of a rental or condominium units for purchase agreements and marketing, the OBC

Note: These parameters serve as early-stage design baselines. Final grading, swale invert slopes, and stormwater basin setbacks must be verified against local Municipal Lot Grading Criteria, applicable Conservation Authority regulations, and the project-specific Civil Engineering Site Plan.

Detention or retention basins should be placed at least 9.0 m (30') from the nearest building to avoid hydrostatic pressure on foundations. These slopes and the basin setback are conventions; in Ontario the municipal lot grading standard and the conservation authority stormwater criteria govern and vary by watershed. Always verify against the local standards amd requirements per project.

Units shall be stacked vertically through the building. This allows for the demising, exterior and corridor walls to carry the structural, uplift, and shear loads through the building down to the foundation. Stacking of the units also allows for aligning MEP and sprinkler lines vertically through the structure without jogs from floor to floor.

Stacking of elements on the exterior façade (i.e. windows & doors) will reduce the need for oversizing headers to pick up point loads transferring through the building. Windows and doors may be offset from floor to floor, provided that the point loads are appropriately distributed and do not rely on the headers of the windows or doors below. Exceptions to unit stacking will only occur at leasing, amenity, and back-of-house areas of the building. Avoid balconies over finished space and large unsupported spans whenever possible. Notify Patry Group if structural steel is proposed in any leasing or amenity locations. If structural steel is determined to be required, it should be used sparingly and strategically in these areas. It is critical that the architect and structural engineer coordinate all structural steel locations to ensure wall furr-outs, ceiling soffits, intumescent paint, offset hangers, and/or other considerations are fully captured and detailed in the drawings. The use of cantilevered conditions is strongly discouraged due to the high costs of picking up the loads transferring down through the structure.

1.2. Clear Ceiling Heights

Approximate clear ceiling heights are to be as follows unless approved otherwise by Patry Group:

- Ceiling heights are determined by the length of the precut studs. For example, typical 10-foot lumber measures approximately 3,050mm (10' 1-1/8") nominally. This results in the length from the top floor sheathing to the underside of the joist typically 3,050mm (10' 1-1/8"). The resulting *ceiling height* is approximately 3,000mm (10') from top of the finished floor to the underside of the finished ceiling.
- Building design may require higher ceilings at ground level units, depending on site grading, building type, adjacent lobby / amenity ceiling heights, and garbage pickup requirements.
- Corridors & Elevator Lobbies: 3,000 mm (10'-0") minimum. Verify garbage rooms require head clearance to install, maintain and replace equipment.
- Parking Deck: 2,285 mm (7'-6") minimum under pre-cast beams, except for a 2,540 mm (8'-4") minimum along vehicular path to and from all required accessible parking spaces.
- Ontario uses Type A and Type B accessible parking spaces under OBC 3.8 and the AODA Design of Public Spaces Standard. Always confirm required vertical clearance along the accessible route with Authorities Having Jurisdiction. Accessible routes shall also include backup and turn-round areas.

1.3. Calculating Area & Building Efficiency

Optimizing for Ontario Framework

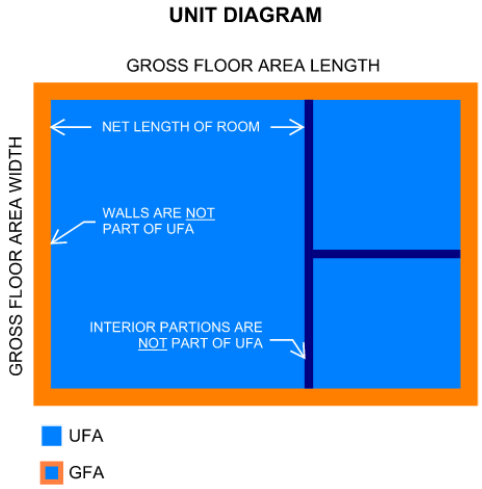
To make a standard definition work for a rental development framework, this manual avoids ambiguous terms like "net rentable", which belongs in commercial leasing, and instead anchor everything on a clear ratio defined below.

1. **Zoning Compliance Alignment:** By anchoring Gross component to exterior wall measurements, designers are designing within standard municipal zoning definitions of GFA.
2. **OBC Compatibility:** It respects the Ontario Building Code's spatial separation and fire-compartment boundaries without confusing structural footprint calculations with commercial leasing metrics (like BOMA standards, or Tarion standards which do not apply cleanly to residential multi-family rental developments) [5].
3. **Target Benchmarking:** Setting a clear formula allows the designer to establish baseline efficiency expectations for the purposes described in this manual (e.g. *Target multi-family residential building efficiency must achieve a minimum of 80% to 85% UFA-to-GFA ratio*). This provides the design team an objective metric to optimize hallway lengths, core layouts, and structural grid placements.

Optimizing Units

Net-to-Gross Area Efficiency (E_u) is defined as the ratio of **Usable Floor Area (UFA)** to the **Gross Floor Area (GFA)**, expressed as a percentage. It measures the “spatial efficiency” of a layout by determining how much of the building's total constructed footprint translates directly into functional, rentable, or livable tenant space versus structural loss.

$$E_u = \left(\frac{\text{Usable Floor Area (UFA)}}{\text{Gross Floor Area (GFA)}}\right) \times 100$$



[5] BOMA standards are for leasing and operational accounting (commercial spaces), whereas zoning compliance and Tarion disclosures require strict exterior-wall GFA calculations. Tarion manages the warranty program, HCRA is Ontario’s licensing and regulatory authority for all new home builders and vendors. HCRA Directives dictate how builders must operate, market homes, and interact with consumers to maintain their licenses. Tarion Warranty Corporation (Tarion) is the administrator of the warranty plan and is the financial backstop for warranty obligations of vendors under the Ontario New Home Warranties Plan Act (ONHWPA).

Usable Floor Area (UFA)

Definition: The actual space contained within the interior finished surfaces of individual suites or leasable commercial bays, measured wall-to-wall.

Measurement: from faces of finished walls and finished faces of interior partitions.

Inclusions: Habitable rooms, internal partitions, closets, and in-suite mechanical/laundry footprints.

Exclusions (Loss Factors): Vertical service shafts, elevators, fire stairwells, shared public corridors, garbage chutes, main electrical/mechanical rooms, and management offices. These represent the "core loss" of the building.

Gross Floor Area (GFA)

Definition: Aligned with standard Ontario municipal zoning bylaws, GFA must be measured to the exterior face of the exterior perimeter walls of the building across all floors.

Measurement: from centre line of demising wall to centre line of demising wall by outside of framing studs on the exterior wall to corridor side of stud on the interior wall. Excludes patios, balconies, and tuck-under garages.

Inclusions: All enclosed levels above grade, including corridors, mechanical penthouses (depending on local zoning exclusions), and shared amenity core spaces.

Exclusions: Unenclosed exterior balconies, roof terraces, and standard parking/below-grade storage structures (unless local zoning specifically counts underground footprints).

Optimizing Buildings

Total Net Rentable Area (NRA): The sum of **UFA** x **Number of Units**. Excludes patios and balconies.

Residential Gross Area (RGA): Total building envelope minus all retail spaces. Includes Tuck Under Parking. Excludes patios and balconies.

Building Efficiency: Between **NRA/RGA**, an acceptable efficiency rating of 80% or higher is acceptable as a baseline, unless other targets are defined by Patry Group during pre-application or feasibility analysis.

1.4. Accessibility in New Construction

Accessibility, or 'barrier-free' design requirements of the applicable provincial building code apply to all new multi-unit residential buildings within the scope of these Standards. Such buildings and associated site amenities must meet specific design requirements so all public and common use spaces and facilities are accessible to people with disabilities. In addition, the interior of dwelling units covered by those requirements must be designed so they too meet certain accessibility requirements [6].

For Ontario the governing instruments are OBC and AODA. This section should only refer to what is outlined in the OBC and the AODA. The building code requires a minimum 15% accessible units across the entire demographic of unit types for a building, and there may be other implications depending on requirements defined by municipal bylaws.

Blocking is required for grab bars at specific locations.

All unit plans with an accessible route and common areas must show required accessible floor clearances. Refer to the latest publications and amendments of the **AODA.** Following these guidelines will keep the project in compliance.

Typical Patry Group projects will have 1-, 2-, and 3-bedroom configurations. When providing units, it may be required to distribute among different unit types.

[6] In Ontario the governing instruments are OBC Part 3 Section 3.8, and the AODA.

1.5. Energy Efficiency

Energy efficiency for buildings within the scope of these Standards is governed in Ontario by OBC Part 12 with Supplementary Standards SB-10 and SB-12, and elsewhere in Canada by the provincially adopted edition of the **National Energy Code of Canada**[7] for Buildings (NECB). [8]

These offer both Prescriptive and Performance paths and carry mandatory provisions that all buildings must meet (e.g., proper mechanical equipment sizing). Provided the mandatory requirements are met, the rest of the code can be met in one out of two ways. The project team can follow prescriptive requirements, building each component to a certain level of performance, or they can prove that the building will perform at least as well as if it followed the prescriptive requirements, satisfying the performance path. For example, the performance path of OBC SB-10 requires that the proposed design be shown to perform at least as well as the reference (prescriptive) design against the applicable energy performance metric.

Performance Path
Using performance pathways to establish energy code compliance requires modeling the building to predict energy usage against an acceptable baseline. This modeling is performed by using commonly available software that creates a virtual building, then uses historical weather information to predict how it would perform under those conditions. There are two different types of performance pathways.

The first is referred to as the envelope trade-off method. This method allows the building designer to make trade-offs between various components of the building envelope. If certain building elements perform especially well, it allows more leniency with other elements. For example, if the walls are thicker than required insulation, it might allow the building to have less insulation on the roof, or perhaps less efficient windows or doors than what might be allowed under the prescriptive approach.

The second performance method allows the designer to make trade-offs between the building envelope components and the systems used to heat, cool, and light the building. This method also requires the use of computer modeling to establish energy code compliance.

Energy compliance documentation shall be submitted using the Performance Path Method. Construction drawing details and specifications must be coordinated to match and reflect the design assumptions presented within any documentation submitted to the AHJ to meet or exceed the requirements of OBC Part 12 and **SB-10.**

1.6. Unit Plan Labelling & Numbering

Units are to be labelled as follows:
If a unit plan is slightly different due to a minor wall shift or modification, then each version of that unit should be identified by adding a decimal and a number. For example, *A1.1*, *A1.2*, etc. However, if the unit plan has a different layout, then it should have a new number. For example, *A1*, *A2*, *A3*, etc.

Ensure units are numbered on overall plans so that odd numbers are placed on one side of the corridor and even numbers are placed on the opposite side. Number and label each unit plan sheet with the associated unit type. For example, A501 – Unit S1; A502 – Unit S2; A503 – Unit A1; A504 – Unit A1-

1.7. Sheet Set

[7] OBC Part 12, SB-10 / SB-12 Access Link
[8] National Energy Code Information Archived on the Web. Access Link

Coordinate sheet series with Drawing Deliverables exhibit.

Each sheet in a set of plans needs to have its own unique number. Sheet naming and numbering should be coordinated across disciplines and to also have the same nomenclature. For example, **A101 – Overall Building**, should align with Floor Plan should align with **E101 – Overall Electrical Plan**.

Each floor level needs its own floor plan, for example, do not combine floor levels 03 through 05, even if they are identical. This is to ensure sheets are set up for ease of use in Procore or similar software during construction. Similarly, for garden-style projects, each building type needs its own floor plan.

Patry Group preferred sheet series order:

G000 Series – General
A100 Series – Overall and partial building plans, and enlarged amenity / BOH plans
A200 Series – Overall, partial (as required), and enlarged building elevations
A300 Series – Overall building sections, wall sections, and section details
A400 Series – Vertical circulation
A500 Series – Unit plans and associated details
A600 Series – Interior elevations, casework
A700 Series – Schedules for doors, windows, storefront, and all associated elevations / details

2. INTERIOR AMENITIES & LOBBY

Overall, amenity areas have a broad range of standards and requirements, depending on the location and building layout requirements. Specific numerical baselines are not defined in this manual; however, the designer should group amenities in a central location within the building footprint; supporting the concept of an amenity-focused building and may opt to exceed municipal minimums.

Ceiling bulkheads, ceiling finishes and trims, and wall finishes and trims need architectural coordination with structural to provide clear and concise direction on details of framing and blocking.

All common areas are to be secured with access control. The building design should consider the location of security cameras in indoor amenities and at all exterior building entrances. Specific camera locations will be provided to the design team by Patry Group during the design development phase.

Analyze occupant load and provide egress capacity as required by the applicable building code and municipal by-laws. Provide code compliance diagrams for the leasing area as part of the construction documents, including egress, occupant load and plumbing fixture calculations as well as accurate and fire separation designations for walls and ceilings.

2.1. Leasing Lobby

The lobby should provide direct and visual access to the leasing area, common corridors, and an elevator lobby. Provide clear storefront windows between the main lobby and the building exterior. Do not specify a curtain wall system. Discuss and confirm programmatic needs during the schematic phase of the project.

Designer shall consider fire separation requirements between leasing area and adjacent spaces in the building, including egress access corridors, stairs, residential units, etc.

2.1.1. Location

The leasing area shall be placed at the most visible location and highest traffic area of the project site on the ground level (likely a building corner of the main streets) with proximity to parking either in the deck, surface lot or parallel parking on the street. The architectural site plan should identify and note reserved future resident parking spaces nearest to the Main Building Entrance.

The leasing area is typically located adjacent to the lobby with a clear pedestrian and accessible route. The elevator located near the leasing area should provide the option to facilitate prospective resident tours to all building levels and other building amenity areas. The leasing area should be on one level. Coordinate and detail signage location, including power and structural requirements.

2.1.2. Layout & Design

Consider an open-concept layout for the main building lobby and leasing area. Property management offices and other leasing support spaces should be able to be locked outside business hours. Confirm with Patry Group if the leasing reception desk and main building lobby may remain accessible to residents after business hours.

2.1.3. Leasing / Concierge

The open leasing area contains leasing desk and closing table(s) per requirements listed above.
Provide power and data at leasing desk. Ensure all leasing casework is lockable for Property Management storage. Coordinate signage location and power requirements. Provide one TV for an Engrain TouchTour and ensure horizontal orientation of TV at 1,370 mm (54”) o.c. Coordinate inset depth with fixed mount. Ensure TV is recessed with a

proportioned alcove so that the total projection with the recessed bracket and TV does not exceed 100 mm (4") from the wall surface. See 11 00 00 for TV and mount basis of design.

2.1.4. Offices

Provide two (2) private offices, one (1) leasing desk that can house two people, and one (1) area forclosings. Ensure both private offices (property manager and assistant property manager) have visual access to visitor / resident traffic and leasing area. Minimum size for private offices should be 9.3 m² (100 sf).

2.1.5. Work Room

Provide a kitchenette area with plastic laminate countertops, storage cabinets, microwave, drop-in sink with disposal, a unit refrigerator, and a minimum of 1,830 mm (6’-0”) linear counter space. Provide shelving or wall cabinets to store marketing material. Do not specify glazing on the work room door. Provide enough space for a combination printer / scanner / copy machine, with data jack for the printer. Space should allow for all doors, drawers, and access panels to be opened and closed for normal operation and service without having to move the machine.

2.2. Coffee Bar

The coffee bar is to be used by current and prospective residents and should be accessible to residents 24/7. Place the coffee bar within the open leasing area or resident lounge. Ensure a hard surface floor in the coffee bar area to avoid stains.

Coffee machine is to be located on a countertop, against a wall, adjacent to a sink. Provide a water line (with shut off through the cabinet below), lockable cabinets for storage, an open countertop space next to the coffee machine to house supplies, and garbage / recycling receptacles.

2.3. Resident Lounge & Coworking Space

The resident lounge and coworking space should be located adjacent to pool, courtyard, or other outdoor amenity spaces if applicable. The size of the resident lounge is dependent on market, project size, and development program.

2.3.1. Resident Lounge

For larger resident lounges, provide a caterer’s kitchen with a full-size fridge, large kitchen sink with disposal, dishwasher, microwave, ice maker, and an island with seating. For smaller lounges, provide a kitchenette with small under-counter refrigerator, sink with disposal, dishwasher, microwave, and ice maker. Provide a dining area (if not in the island), a lounge seating area, and at least one television within the resident lounge. Separate movie lounges may be considered for projects with 250 or more units.

2.3.2. Coworking Space

Typically, coworking spaces will be located within or adjacent to the resident lounge. For larger projects, separate coworking lounges or rentable resident lounges may be considered. Verify program requirements with Patry Group. Provide at least one (1) conference room in the coworking space and ensure it can accommodate 4-6 seats. Consider additional smaller conference rooms or focus booths is space allows. Conference rooms and focus booths shall have a minimum of 1,070 mm (42”) clear space between the table and the walls.

Provide floor outlets under the table or incorporated into the table and provide a television in larger conference rooms, with HDMI connections between the television and table. Consider additional sound attenuation measures between coworking rooms.

2.4. Fitness Centre

The fitness centre is to be located on slab on grade at ground level, basement space or on an elevated podium slab. Cardio equipment should face the exterior. Typically, fitness is located on one level. Mezzanines within the main fitness centre with dedicated activities, such as group fitness and/or yoga rooms, may be considered. At least one wall shall be mirrored. Provide cubbies for projects with multiple buildings for residents' bags, coats, or belongings. Utility grade floor-, wall-, or ceiling-mounted fans must be provided.

Provide televisions in the fitness centre and confirm quantity / locations with Patry Group. Ideally, the fitness room is not located above residential units. Provide cast in place concrete slab floor construction for conditions where the fitness room is located above residential, retail, or other building amenities.

If the design or program of an amenity or fitness area anticipates producing high noise levels, beyond those typically expected for such amenity spaces, additional design measures to upgrade the performance of these assemblies presented above will be required to achieve acceptable noise transmission levels, verified on an apparent sound transmission class (ASTC) basis rather than by laboratory STC alone.

A water fountain with water bottle filling station as required per code should be located near fitness but does not have to be located within.

2.4.1. Private Fitness Room

Provide a private fitness room between 28 and 46 m² (300 and 500 ft²) adjacent to main fitness room. This space is market dependent. Consider only when a fitness centre is provided or for projects containing over 250 residential units.

2.4.2. Fitness Room Equipment

Patry Group will provide a layout from a fitness consultant during the Design Development phase of the project to facilitate coordination and requirements with Architect, MEP Engineers, and Interior Designer. The fitness consultant will provide an equipment list, equipment layout, and electrical requirements for the fitness room.

Equipment priority is cardio equipment (treadmills, ellipticals, stair climbers, stationary cycles, etc.), along with free weights up to 34 kg (75 lbs). If free weights are placed in front of mirrors, mirrors should sit min. 1,070 mm (3'-6") above finish floor. Additional equipment may include squat racks, cable machines, rowers, stair climber, or other specialty fitness equipment. Consider ceiling height when locating stair climbers, treadmills, and ellipticals.

2.5. Pet-Washing Room

Exterior access to the pet-washing room is preferred. Hot and cold water hook up is required. If hot water is not available from other common area water heaters, then provide a small electric on-demand water heater.

Provide 2,080 mm (6'-10") long x 760 mm (2'-6") deep floor area for installation of pet wash station. Provide pet wash station with accessory kit, grooming table, and grooming dryer (dependent on base or upgraded pet wash). Refer to division 11 00 00 Equipment for Patry Group standard pet wash equipment, and confirm selections with Patry Group Development during design development.

The pet wash room is to be conditioned space with proper ventilation, moisture, and odour control. Provide utility closet for water heater and mechanical equipment if required. Locate the pet-wash room near the dog park whenever possible. Specify a mini-split to ensure separation from common area ductwork and avoid odours from reaching common areas.

Base pet wash finishes: Walls to be painted CMU, or moisture resistant gypsum board w/FRP with purchased stainless steel equipment (tub and countertop).

Upgraded pet wash finishes: Walls to be ceramic or porcelain tile. In lieu of stainless-steel equipment (both the tub and the grooming table), the pet wash tub can be built-in and integrated into the room design. The grooming table can become casework with a countertop for an elevated design.

Provide hard surface non-slip flooring in pet washroom. Ensure floor is sloped to a drain with a hair interceptor (use Shor-line Hair Interceptor as basis of design). Pet wash, faucet, and grooming dryer to be provided by Patry Group and installed by plumbing & electrical contractors.

2.6. Furniture, Fixtures & Equipment (FF&E)

Locate FF&E on amenity finish / furniture plans to ensure coordination with electrical needs (floor outlets, data, etc). FF&E should include exterior furnishings. Note furniture and/or artwork to areas where the design and layout anticipate future resident tours, on walls visible from the street, and in the leasing office.

If design is dependent on furniture selections, the documents shall describe requirements such as desk type for offices, guest chair requirements, (L-shaped, transaction style, 2 guest seats, etc), table heights in lounges, furniture sizes, etc. Specify built-in banquettes to be built by subcontractor rather than FF&E.

2.7. Common Area Washrooms

Provide washrooms as required by code. Consider combining washroom facilities between amenity areas (fitness centre, resident lounge, courtyard) if located in proximity. Ensure exterior access from the courtyard to the washrooms through a common corridor. The design team should include washroom facilities calculations as part of the construction documents to demonstrate compliance with building codes and regulations. Multiple-fixture or single-fixture washrooms are acceptable. If multiple-fixture **M / W washrooms** are provided, ensure at least one universal washroom conforming to **OBC 3.8.3.12** is also provided.

Provide standard single-lever or wide-spread faucets, soap dispensers, flush valves, and a wall-mounted automated touchless paper towel dispenser. Provide foot pulls on the washroom doors.

Provide vacancy indicator deadbolts on doors of single-fixture washrooms. Specify large-format porcelain tile flooring with porcelain tile wall base. Porcelain wall tile to 1,830 mm (6’-0”) above finished floor with paint or vinyl wall covering above to ceiling height at walls. Painted gypsum board ceilings.

Quartz or hard surface equivalent counters with apron, backsplash, and undermount sinks. Sink shape and mirrors to be per designer specification. Hang mirrors at the barrier-free mounting height required by **OBC 3.8**.

Toilet Partitions to be per designer specification. Floor mounted water closets shall meet all barrier-free requirements of OBC 3.8 and CSA/ASC B651. Provide floor drains in each washroom. Provide janitor’s closet with mop sink and hose connection near common area washrooms. If the local public health unit or other regulatory authorities require showers for swimming pools under O. Reg. 565 (Public Pools), specify ceramic tile showers with a ceramic tile mud base, and enclose for privacy.

2.8. Mail Room / Area & Package Delivery Room

Mail room / area should be located near the main lobby and leasing area if possible, and per **Canada Post** approval. The mail area can be a separate room or combined with lobby and/or leasing area. Provide one package delivery room per property and locate near lobby / leasing office and resident mail room.

Direct access to the exterior is preferred. Package room should also be visible to leasing office to ensure package carrier compliance. Consider delivery access, security of common areas, sequence from service area, parking space, etc. Refer to 11 00 00 Equipment for mailbox, package room delivery system, and package room refrigerator basis of design.

2.8.1. Mail Room / Area

Mailboxes to be front-loading horizontal mailboxes to Canada Post specification[9]. Preference is recess-mounted installation. All mailboxes must be mounted to meet OBC 3.8 and **Canada Post** requirements.[10]

Confirm the current Canada Post mail receptacle specification and approval process for the project. Ensure from early in the project the configuration and quantity of mailboxes to meet project requirements.

Mailboxes

Should be numbered 1 through XXX (not unit numbers).

Provide built-in garbage & recycling receptacles and 1-2 security cameras.

2.8.2. Package Delivery Room

All projects should have a package delivery room near the mail room, and direct access from the exterior is preferred to allow for 24/7 deliveries. Provide keypad and fob reader combination at all package room access points to allow for carrier access via keypad and resident access via fob reader.

Provide 1-2 security cameras, depending on room size and configuration. Shelving will typically be provided by owner at turnover to Property Management. If built-in shelving is desired by Patry Group, specify 460 mm (18”) depth KV standard brackets and shelving within the package room. Coordinate with Patry Group on direction per project.

Provide space for dry cleaning lockers and floor space for oversized packages (boxed mattresses, rugs, etc). Also provide space and dedicated outlet for package room refrigerator for perishable deliveries.

2.9. Bicycle Storage Room & Parking

Typically located in urban-style projects. For garden-style projects, confirm with Patry Group if bicycle storage room is anticipated. Bicycle storage room is to be centrally located on ground level with access control and video surveillance. Locate the bike storage room with direct access to a sidewalk or paved surface, utilizing no elevator or stairs and not crossing through leasing or amenity areas. Accessible bike storage area to be provided in each bike storage room. Bike storage amount to meet the applicable municipal zoning by-law and any municipal green development standard. Confirm with Patry Group if additional bike storage space beyond the requirements specified by the local pplicable codes and regulations is required for the project.

The bicycle storage room should be minimum of 3,050 mm (10’-0”) wide (3,350 mm (11’-0”) wide is preferred) for double loaded bike storage aisle layout. Bicycle repair and air kits should be provided and located in bike rooms. Specify an abuse-resistant wall finish, like acrylic, plywood, or CMU.

Outdoor bicycle racks shall be located throughout the site to provide short-term storage for residents and visitors. They shall be constructed of a hard surface material and located adjacent to sidewalks or paved surfaces and not obstruct with pedestrian traffic.

[9] Support: Mail delivery standards for new construction | Canada Post Access Link
[10] Multiple occupancy mail delivery systems and Delivery Planning Standards manual (PDF) Access Link

2.10. Maker Space

Patry Group to confirm if **maker space** is anticipated. Provide a work bench and an area for a locked cabinet with tools. Cabinet will be provided by Patry Group. Provide a shop sink, source for hose, floor drain, and exhaust fan within the maker space. Ensure the exhaust fan is sized appropriately for all types of projects, including painting, staining, etc. Exterior access is preferred with a garage door to the outdoor amenity area. Ensure flooring is durable and easy to clean.

2.11. Golf Simulator Room

Patry Group to confirm if golf simulator is anticipated. Provide a minimum 3,660 mm (12’-0”) width and 7,620 mm (25’-0”) length for the golf simulator, with additional space for lounge areas and kitchenettes as required. Coordinate details with the Patry Group-selected manufacturer such as depressed slabs, ceiling heights, CAT6 / data requirements, etc.

3. OUTDOOR AMENITIES, LANDSCAPING, & HARDSCAPING

Provide connection between interior and exterior amenity spaces and ensure the Interior Designer and Landscape Architect have coordinated design concepts. Determine the occupancy load for courtyards and design egress accordingly.

3.1. Community Safety & Circulation

To promote a safe, pedestrian-friendly community, design should incorporate principles of Crime Prevention Through Environmental Design (CPTED). CPTED is based on the principle that proper design and effective use of buildings and public spaces in neighbourhoods can lead to a reduction in the fear and incidence of crime, and an improvement in the quality of life for citizens.

An on-site system of pedestrian walkways can provide direct access and connections to primary building entrances, adjacent sidewalks, and the sidewalk system along perimeter streets.

Ensure sidewalks and landscaped planting strips add comfortable separation between the street and the pedestrian environment. Sidewalks to be 1,200 mm (4’-0”) wide, unless adjacent to parking, in which it should increase to at least 1,500 mm (5’-0”) wide to avoid need for parking bumpers.

Exterior path of travel required by the AODA Design of Public Spaces Standard is 1,500 mm minimum where the walkway serves a public space. Confirm which walkways are captured and adjust the width if required.

Increased setbacks and building heights at the sidewalk allow for planting areas which can separate ground floor units from the public realm and soften the building edge. Verify if walk-up units should be provided. Ensure all stairs, handrails, and gates are fully detailed and in alignment with municipal urban design guidelines and the applicable building code.

3.2. Courtyard, Outdoor Lounge, Grill Areas, & Firepits

Courtyards and outdoor lounge areas are not defined by persribed dimensions. Locate the outdoor lounge adjacent to the indoor resident lounge and/or fitness centre to allow for a smooth indoor-outdoor connection. Evaluate wall elevations consistent with building façade standards and ensure courtyard spaces are safe and inviting for users. For garden style properties, outdoor lounges and grill areas will typically be located adjacent to the clubhouse. All outdoor grills and firepits shall maintain a minimum 3.0 m (10’-0”) clearance from combustible materials, are protected by approved fire-rated barriers, or located as per required fire code regulations[11].

All fully enclosed courtyards should include a 3,660 mm (12’-0”) width exterior passage for construction and maintenance circulation. If courtyard is semi-enclosed (and open on one or more sides), and if egress is required through the building, consider additional access control to ensure residential corridors remain secure.

If space allows, provide storage for Property Management, accessed directly from the courtyard.

3.2.1. Outdoor Lounge

Provide multiple seating areas where smaller groups can gather in the outdoor lounge. Specify an outdoor weatherproof television. A non-weatherproof television is acceptable if sufficiently tucked beneath a roof, and if approved provisions are made to shield the device from the elements.

Coordinate exterior electrical for the ability to charge devices outside. Coordinate underground storm drainage system with Civil Engineer’s site utilities plan to ensure storm water does not flood the pool (when provided) or building.

[11] Clearances to combustibles for outdoor gas appliances are governed in Canada by CSA B149.1 and the Ontario Fire Code, and by the appliance certification listing.

3.2.2. Grill Area

Grill area(s) should be located away from building frontages. Proximity to pool deck should be considered if pool amenity is provided. Provide a minimum of one (1) grill for every 100 units. Grills should be connected to natural gas line installed in accordance with CSA B149.1. All exterior gas appliances to be connected to a timer like Fire Magic by RH. If gas is not available or cost-prohibitive, electric grills may be specified.

Coordinate gas routing with civil site utilities and plumbing engineer. Decking and countertops to be easily cleanable/replaceable for grease stains. Grill countertop length shall be approximately 3,050 mm (10'-0") per grill. Grill shall include stainless steel access doors like Coyote CDA2436. Provide a minimum of one (1) stainless steel roll-out garbage drawer in each grill area.

Do not specify black countertops, unless otherwise noted.

3.2.3. Firepits

Provide one (1) natural gas firepit for every 150 residential units. Take anticipated wind patterns into consideration when determining location and include glass surround per the municipality's guidelines or requirements. All exterior gas appliances are to be connected to a timer like Fire Magic by RH Peterson. Coordinate gas routing with civil site utilities and plumbing engineer.

3.3. Pool & Pool Enclosure

Pool location should consider adjacencies to amenities, views, sun exposure, and noise constraints.
Determine if a shadow study is needed for pool placement. The pool should have approximate access to indoor resident lounge and outdoor lounge. For garden style properties, the pool will be located adjacent to the clubhouse. Pools are typically design-build with a pool sub-contractor hired by Patry Group.

3.3.1. Code

Pool consideration should be given to projects of 200 residential units or larger. Verify program requirements with Patry Group. Refer to OBC Regulations regarding pools, and the requirements of the local public health unit for specific sizing requirements for pool and pool deck areas. If the size for these areas is not regulated, proceed with a minimum pool size of 18.6 m² (200 ft²) for every 50 residential units. Provide any municipal, provincial, or public health unit pool requirements (for example first aid kit, emergency phones, etc.)[12]

Verify AODA Design of Public Spaces Standard whether accessible means of entry into the water is required. If required, they are to be located with least impact on views from clubroom and lounge area. A removable lift is preferred. If a removable is permitted, provide a closet for storage during off-season. Confirm requirements for accessible pool lift and pool overflow drainage, and coordinate design intent for drain to site utilities and landscape architect.

3.3.2. Pool Features

Discuss requirements with pool consultant and/or subcontractor to confirm specific size needs, access, ventilation, etc., as design of the project develops. Pools are to be salt water with a standard depth of 1,220 mm (4'-0"). Provide in-pool edge seating and other features such as bubblers, waterfall edges, etc.

if development program allows.

Provide pool lighting on deck and in the pool and confirm minimum light level requirements. Provide a manual pool cover with anchors, unless local code requires an automatic pool cover. If allowed by the applicable code, provide a tanning or sun shelf with lounge chairs in 200 mm - 230 mm (8" - 9") water depth.

[12] O. Reg. 565 (Public Pools)

3.3.3. Pool Finishes

Provide 50 x 50 mm (2”x2”) non-skid contrasting tile or coping at tanning shelf (if provided) and stepped edges to act as a warning. Pool should utilize 150 mm (6”) shotcrete with 13 mm (½”) finish. Finishes should be equal to Kristalkrete or Diamond Brite finish standard selections.

Provide 48 mm (1.9”) diameter stainless steel handrail when required. Precast 610 x 3,660 x 50 mm (24”x12’x2”) single bullnose coping around four side of pool. Ensure placement of all depth and safety markers. Provide 125 mm (5”) non-skid standard numbers contrasting tile and 150 mm (6”) non-skid message markers.

3.3.4. Pool Fencing / Screening

Pool area shall be fenced off to the public according to the applicable code. [13] Pool area shall also be fenced from other amenity areas with a secondary 1,525 mm (60”) high fence to restrict access to pool deck area when closed and allow the use of other outdoor amenity spaces.[14] Gate access to be 1,830 mm (72”) tall with 300 mm (12”) wide panels on either side to prevent reach over access.

Pool enclosure height, self-closing and self-latching gate hardware are set by O. Reg. 565 and by the municipal pool enclosure by-law, which is often more stringent. Verify both before fixing the height. Do not specify surface-mounted fence posts.

3.3.5. Washroom Facilities

Refer to the local public health unit, O. Reg. 565 (Public Pools), and the applicable edition of the provincial building code and amendments for facility requirements, including showers, plumbing fixture count, etc. Refer to 2.7 Common Area Washrooms section of this manual for additional information.

Exterior Showers, if required, are to be in discreet place, not highly visible from resident lounge or clubhouse. Confirm drainage requirements for exterior shower and provide drainage routing to sanitary or storm sewer per code. Coordinate accordingly with plumbing engineer and civil engineer.

3.3.6. Pool Deck

Pool furniture and seating capacity is to be planned by the Landscape Architect but refined and specified by the Interior Designer. Provide chaise lounges, tables, chairs, umbrellas, and side tables. Provide between 30 and 60 pool deck loungers based on unit count and market at a maximum of two (2) rows. One (1) side table should be provided per four (4) loungers and one (1) umbrella per eight (8) loungers.

As a minimum, provide pool deck area of not less than three times the pool surface area. Decking material should include (light colour) stamped concrete and/or broom finish scored concrete with minimal accent paver areas. Slope 2%. Provide a deck drain detail. Drainage is to be coordinated by the Civil & MEP Engineers. Show deck penetration details (for electrical and plumbing connections). Detail the typical pool coping. Detail the accessible pool lift and locate in the plan. Do not specify pavers with loose sand joints – ensure specified paver system can be power washed without sand washout.

3.3.7. Pool Equipment Room

Provide a minimum 3,350 mm x 4,570 mm (11’-0” x 15’-0”) pool equipment and chemical room. Sleeves through foundation walls must be shown on the plumbing plans. Locate as close to pool as cost effectively possible and in the least valuable and most efficient location. Preferred access to the pool equipment room is from the exterior of the building.

Provide floor drain with top of the floor slab sloping to drain and adequate ventilation within the pool equipment room. Provide hose bibb and floor drain inside pool equipment room. Provide rough-in gas, plumbing, and ventilation for a future heater. Pool equipment room should utilize a dual 1,830 mm (6’-0”) wide door or single 1,220 mm (4’-0”) door to accommodate equipment installation. For podium pools, provide a winterizing line.

[13] Mississauga Property Standards By-Law Access Link
[14] Mississauga Swimming Pool Enclosure By-law Access Link

3.4. Dog Park / Pet Area

An outdoor dog park and pet area should be considered for all projects.

3.4.1. Location

The dog park / pet area should be located to integrate well into the site and avoid detracting from the aesthetic quality of the project. Avoid locating a dog park amenity in enclosed courtyards (all four sides). Shade is highly desirable. The site should provide a good mix of mature trees and open space/turf grass. Ideally the side should be relatively flat and have permeable soils. Ensure a curb is called out at the edge of the turf to mount fencing. Astro Turf to be installed over well-draining aggregate system like K9Grass System.

If the budget and site permit, and if it is necessary to buffer the park, vegetation should be planted on the outside of the fence to aid in the aesthetic quality of the site and to assist in mitigating noise associated with the dog park / pet area.

3.4.2. Dog Park Fencing / Gates

A minimum of a 1,500 mm (5’-0”) high fence, to be installed around the perimeter of the site. Fence to be galvanized or vinyl coated chain link fences, with a minimum height of 1,500 mm (5’-0”). Do not specify surface-mounted fence posts. An entry corral, operated by an access control system, consisting of at least a 1,800 mm x 2,400 mm (6’-0” x 8’-0”) fenced area within the footprint of the dog park with two gates, should be provided to allow for pet owners to safely enter and exit the park without accidentally letting other pets escape. Gates located in the corral shall be offset to each other and have a spring-loaded hinge. Barrier-free access to the site shall be provided, as well as an area through the corral and at the entry. Barrier free paths through the park should be provided if space and funding permit.

3.4.3. Dog Park / Pet Area Features

Multiple benches with shade should be provided in convenient locations to allow for gathering and resting throughout the park. Consult with Patry Group if agility equipment or other amenities are to be included. Provide a source of drinking water with a hose bibb (connect to site irrigation when applicable) and waste station with bag dispenser and waste container. Ensure they are located with easy access for maintenance and per accessibility requirements.

Signage is to be fence mounted. MEP and Landscape Architect to coordinate lighting for the park. Photometrics (provided by the electrical engineer) should be provided to account for appropriate lighting levels in this area and accounted for in MEP proposals.

3.5.Outdoor Sports Court

For properties with volleyball, basketball, pickleball, or other sports courts, provide seating and screening around the court via fencing or landscaping. Consider adjacent lounge spaces for residents. For pickleball courts, provide integral colour concrete with sand matrix finish, and ensure grading high point is centred at the net at a 1.5% slope.

3.6. Landscaping & Streetscaping

Ensure coordination with Civil for overall site grading, drainage, and utilities that are pertinent to the landscape and hardscape design. Discuss drainage and piping from courtyard areas into storm system, location of any underground vaults. The Civil Engineer should locate a box to connect any courtyard and pool deck drainage. The Civil Engineer will also assist in pipe sizing to ensure proper overall storm drainage.

3.6.1. Tree Mitigation/Recompense

Many jurisdictions require the preservation of some existing tree species on site. An accurate and recent Tree Survey is required to complete this task. Ensure a tree survey is authorized to proceed early in this phase so that building planning is not impacted. The requirement for a tree survey can be verified with the municipal arborist and the applicable municipal tree protection by-law.

3.6.2. Landscaping

Plan for enhanced landscaping at the Leasing Centre and Signage areas.

For properties in Patry Group's primary markets, sod should be used at the main entrance and around visual appeal. All areas with sod should be irrigated. Unless entire site is fenced, do not show sod or seeded areas within fencing for aintenance purposes. For all other areas outside of sodded areas, seed is sufficient. Construction is to maintain all landscape until turnover to Property Management. Temporary drip lines can be purchased and left with the property after turnover. Landscape beds are preferred around the entire perimeter of all residential and amenity buildings.
Landscape beds should be a minimum of 1,500 mm (5'-0") width. Provide screening around all ground-level condenser units with fencing or shrubs. Evaluate necessary plantings to screen, and double-up if required. Provide screening around garbage enclosures, as required by the municipal zoning by-law and screening requirements.

For markets outside regions typical for Patry Projects, confirm requirements with Patry Group.

Demonstrate that outdoor amenity areas have adequate opportunities for shade, either using trees or structures. Discuss architectural elevations to make sure planting design does not cover key features. Ensure no signage will be blocked by landscaping. Submit a plant palette to Patry Group for approval, and provide low-maintenance landscaping materials in the Courtyards.

Courtyard and Landscape Lighting, along with other outdoor power needs, are part of the Landscape Architect's scope with the Electrical Engineer ensuring adequate power for these spaces and connecting back to a house panel.

Avoid using mulch next to hardscape areas due to concerns of wash-off (especially near pools). If mulch is specified; a curb should be provided. Indicate metal landscaping edges at sidewalks, especially if the landscape area sets up above the sidewalk. Raised courtyards should utilize stone in lieu of mulch, and a light-weight soil shall be specified. Provide a maintenance path to all landscaped areas. Ensure hose bibs are located adjacent to all potted plant areas. Consider above-ground planters for separation of spaces.

3.6.3. Streetscaping

Provide street trees with 50 mm (2") minimum caliper. Coordinate street tree placement with architectural elevations and ensure that design does not conflict with the retail store frontage where applicable.

Dimension street trees and street lighting and identify street tree species and lighting fixtures.

Provide a material schedule per the design deliverables. Ensure the landscape site plan is reviewed and that it complies with the local streetscape requirements. Locate street trees in grates as required and coordinate these locations with Patry Group.

3.7. Hardscaping

Prior to design, consultants are to determine what ground surface materials are allowed in the ROW and what will be covered by the utility or the municipality if work needs to occur after development completion.

Focus any upgraded hardscape materials within the property line, outside of the right of way. Utilize standard materials within the right of way.

3.7.1. Retaining Walls

If the courtyard design is part of the amenities, retaining walls will need to be coordinated by the Landscape Architect, Civil Engineers, and/or Structural Engineers.

Ensure early coordination with the full design team regarding which consultant will provide structural design for retaining walls. If on an elevated terrace, these walls will require waterproofing. Ensure your detailing is coordinated with the

architect's waterproofing system. Ensure any lighting located in walls is shown on the drawings and light fixture schedule. Coordinate all this information with the Electrical Engineer. Ensure retaining walls adjacent to sidewalks and parking areas clearly indicate guardrails to be provided with linear dimensions. Provide sections of each different wall design. Coordinate with Structural Engineer if any of the outdoor amenity spaces are elevated or if there are large structures designed. Provide structural and dimensioned drawings for grill stations, firepits, trellises, etc. Reference details for each item. Raised planters can be used as a strategy to keep occupant loads lower in large amenity deck areas.

3.7.2. Sidewalks

Show scope of sidewalks, steps to access elevated areas, railings, and planting areas if applicable. Indicate materials of all sidewalks. If applicable, provide sections through site stairs. Ensure the accessible route is coordinated with civil and architectural plans. Ensure sidewalks are dimensioned and both control / expansion joints are clearly marked. A minimum of 1,500 mm (5'-0") sidewalks should be used throughout the site. Identify all typical hardscape details.

Provide a material schedule. Do not specify crushed granite in dog parks or outdoor common areas. Approved finish to be determined per project / market conditions.

Identify all site signage including monument signage, wayfinding, rules, traffic, etc. Garbage Receptacles must be noted on site plans if provided.

The site lighting plan will be the responsibility of the Landscape Architect. Provide a light fixture schedule that references back to tagged lighting on the plans. Locate all light fixtures with dimensions. Photometric plans to be provided by the electrical engineer.

3.7.3. Paving Details

Include any paving details that are part of the hardscape design, tagged on the plan and referenced to a detail sheet. If applicable, provide tree grate details. Paving details should represent the load requirements after the construction activities are complete. Additional design/s shall be provided for the construction roads, entrances, etc.

If applicable, provide a detail of the split slab showing waterproofing. Ensure all waterproofing details are coordinated with the Architect. Show termination and transition details for waterproofing in planter boxes. Detail all typical expansion and/or control joints.

3.8. Irrigation

Irrigation is typically design-build. Provide an irrigation diagram on the plans. Show irrigation control location and connection point to the building. Provide a dedicated water meter for irrigation system, and ensure power is coordinated for all irrigation equipment. Hose bibb should be located within 7.5 m (25 ft) of planter boxes and potted plants. Sod areas are to be sprinklered and all landscape areas are to receive drip irrigation. Seeded grass areas will not be irrigated. Provide integrated rain sensor.

Consider irrigation as a water source for dog park / pet area fountain, as it can be winterized with irrigation in cold climates. Show sleeving and open conduit under all sidewalks and parking areas as needed for irrigation service installation.

3.9. Fencing/Screening

At the intersection of common and private open space areas, provide low walls, plant materials, or fences (1,070 mm (42”) height or less) to provide separation. Materials such as wood or metal pickets may be used to offer degrees of transparency without creating total enclosure at front yards. Do not specify surface-mounted fence posts.

For garden style properties, site fence and gate must be 1,830 mm (6’-0”) minimum or as required by the municipality. Residential units in urban style property courtyards should not have direct access to the pool deck area.

Pool area shall also be fenced from other amenity areas within the courtyard to restrict access to pool area when closed and allow use of other outdoor amenity spaces. Provide 1,525 mm (5’-0”) minimum pool fence enclosure; gate access to be 1,830 mm (6’-0”) tall with 300 mm (1’-0”) wide panels on either side to prevent reach over access.

Dimension fencing shown on the plans. Provide elevations and details of fencing and gates. If there is to be any access control on gates, be sure to coordinate this with Electrical Engineer, Low Voltage Consultant, and Architect.

Ensure compliance with OBC, municipal Bylaws, OADA, and all required local regulations.

3.10. Rooftop Terrace

Verify with Patry Group if a Rooftop Terrace is provided in the development program. Rooftop Terraces are typically attached to an indoor resident lounge. Location of this amenity space should consider site-predominant views and easy access to an elevator connected to the leasing walk of the building. Do not provide access to the roof from the terrace.

The numbere of exits required for an amenity is determined by the Ontario Building Code.

The exterior terrace area should provide seating areas with tables and chairs. Other exterior design features to consider include garage doors to connect interior space to exterior space, pergola, and lighting design. Interior designer to provide finishes, fixture locations, material specifications, plan and furniture layout and details as part of the construction documents.

Terrace is to be constructed of pressure treated lumber on sleepers with slip sheets, unless otherwise noted. Deck railing will be a minimum of 1,070 mm (42”) high. Discuss with Structural and Mechanical Engineer for design strategy and detailing.

Coordinate drainage with Plumbing Engineer, as two stage drains may be required as part of the split drainage system of the exterior terrace. Architect to provide waterproofing details and material specifications as part of the construction documents. Coordinate details for a barrier-free ramp conforming to OBC 3.8.3.4 as required between interior and exterior floor levels.

4. BACK-OF-HOUSE & OTHER COMMON AREAS

4.1.Delivery, Loading, & Building Services

During the Schematic Design phase, the design team should determine the interior and exterior circulation of how move-ins, deliveries, and other building services should be accommodated. Confirm municipal zoning by-law requirements for loading zones. Confirm the number and size (width, length, height) of loading spaces required. Determine if there is a requirement to conceal or screen loading areas. Determine if maneuvering of a loading van or other delivery or garbage vehicles is allowed on street in a public right-of-way. Ensure if maneuvering is allowed within the right-of-way, it is confirmed in writing with the municipality. Show the location of all loading / unloading zones on the site plan which will accommodate moving trucks. Loading zones should have close access to an elevator for resident move-ins. Show garbage truck and semi-truck turn radii on paving plans for intended routes. Label garbage staging areas and sizes. Staging area shall comfortably accommodate all the garbage receptacles without infringing upon any public or private walk or street. Locate existing and proposed curb cut and ramp locations.

4.2.Corridors & Secondary Lobbies

4.2.1. Elevator Entries / Lobbies

Where elevator lobbies are required by code, use smoke doors on hold open devices tied to the building's alarm system. Provide door pockets recessed in the walls. Specify correct hinges and detail to achieve the desired design. Where elevator lobbies are not required, and if allowable by code,avoid specifying smoke curtains at elevator doors.

Protect outside gypsum board corners at elevator entries and lobbies with paintable vinyl wall guards, colour to match wall where it is installed. Specify walk-off carpet adjacent to all elevator doors in corridors.

For elevator lobbies in parking decks, provide painted precast walls, floors, and signage. Provide bollards and striping around the elevator lobby enclosure. Direct access from accessible parking spaces to the elevator lobby shall be provided. In all structured parking garages, the elevator should always have a lobby.

4.2.2. Corridors

Corridor walls are to be articulated by insetting entries to break up long corridors. Refer to 5.4.1 Unit Entry section of this manual for more information. Graphically show gypsum board control joints within reflected ceiling plans to align with corridor wall articulation.

Single loaded corridors should be broken up with additional enhancements if possible. In addition to the unit entry insets identified above, utilize murals, framed art, sculptural art, ceiling materials, accent lighting, and windows, when allowed by code due the building separation and assumed property line between buildings.

Coordinate location of utility rooms including location of HVAC equipment if required. Coordinate and correctly label between all design consultants' location of storage and utility rooms functions including location of HVAC equipment if required.

Coordinate floor, walls, and ceiling transitions between interior corridor and areas where corridors are exposed to weather. Consider pressure treated wood framing, slope to drainage of the structure or internal drains, waterproofing membrane, light weight concrete (light broom finish) floor areas, etc., for those areas exposed to weather.

Indicate location of fire extinguishers as required by location applicable codes. Designer shall consider fire separation requirements between lobbies and corridor areas and adjacent spaces in the building, including leasing, and other amenity areas, stairs, residential units, etc.

4.2.3. Common Corridor Finishes & Fixtures

Specify durable floor and wall finishes. Aesthetics and budget considerations will determine final finishes package. The design team shall coordinate with Patry Group during the design and pricing stages of the project.

All corridor floor finishes shall be slip resistant. Provide commercial-grade carpet tile. In addition to corridor areas, slip resistant floor finishes should be specified for all areas where slipping is a significant concern, these include washroom areas, corridors between pool and washroom areas, open breezeways, exterior and open stairs and landings, main building garbage rooms, and garbage chute rooms.

Coordinate ceiling design and consider location of the following devices:

a) Semi-recessed sprinkler heads.
b) Exit signs and emergency battery-backed wall pack ILO light fixtures battery backup.
c) HVAC diffusers. Linear diffusers are not standard. Refer to 23 00 00 HVAC section of this manual for more information.
d) Surface mounted light fixtures and simulated “recessed” downlights to allow for flush LED.
Provide dimensioned and coordinated reflected ceiling plans, indicating all lighting, mechanical grilles, and life safety elements within the ceiling as part of the construction documents.

Finger Jointed Pine to be used as base material. Unit entries (with a 150 mm (6”) inset) are to be included on the architectural and/or interior design plans.

Provide detailing for the entries, signage, lighting, accent paint and trim. All unit signs to be on pull side of door per code. Provide accent paint at all unit entries and other key areas.

4.2.4. Service Corridor Finishes & Fixtures

~~Walls are to be concrete masonry units (CMU) wherever possible.~~ CMU used if required. When gypsum board systems are used, specify installation of impact resistant gypsum board to the first 1,220 mm (4’-0”) of the wall from finished floor.

Specify trowel finish concrete with sealer for concrete slabs. If slippage is a concern, add aggregate to the concrete mixture. Provide a minimum width of 1,830 mm (6’-0”) in service corridors and avoid wall articulations wherever possible to minimize wall damage.

4.3. Utility Rooms

At the beginning of the schematic design phase, the Civil Engineer, MEP engineers, and Architect should meet to review locations of outside utilities to ensure efficient utility points of entry into the building. The MEP engineer should coordinate all required utility rooms (domestic and fire water, electrical, low voltage, and HVAC) and how these utilities will be distributed through the building. The MEP engineer should also provide the approximate sizes of rooms, and the Architect shall coordinate room naming for all trades. The Civil Engineer should provide a mark-up of all known utility pathways, including internet, cable, and fibre optics connections on or near the project.

Confirm utility approach with Patry Group during Pre-Construction.

4.3.1. Mechanical Rooms

For planning purposes, provide 1.4 m² (15 ft²) of closet for every 140 m² (1,500 ft²) of amenity space. Where the corridors are conditioned, provide for mechanical closets in the corridors, spaced no more than 60 m (200 ft) apart. This limits the ductwork run to around 37 m (120 ft). Sizes of these closets should be coordinated with the mechanical engineer; however, for planning purposes use a 900 x 900 mm (3 ft x 3 ft) room if the closet is located at an outside corner in a corridor and a 900 x 1,500 mm (3 ft x 5 ft) room if the closet is in line with the corridor. Specify mechanical ventilation and deodorizers.

Exhaust is typically provided to the roof.

4.3.2. Electrical Rooms

At the beginning of the schematic design phase, the Electrical Engineer should meet with the local electric utility to determine power needs and types of transformers available. The Electrical Engineer should then locate transformers on the site to best serve the main electrical rooms with the shortest secondary power runs possible.

Main electrical rooms, located on the ground level, are fed by 100 mm (4 in) conduit from the transformer under the slab (typical) and will house the disconnect, house panels, switchboard, and meter centre for distribution to units nearby. Coordinate wall cavity sizes on the lower levels to allow for proper distribution. Sizes of electrical rooms vary and should be coordinated with the electrical engineer. For early planning purposes, use 2,400 x 3,650 mm (8 ft x 12 ft). In garden-style / three-storey walk-up buildings with CT cabinets, provide a double-stud exterior wall, only adjacent to the CT cabinet.

Specify 19 mm (¾") plywood panels (fire rated if required by code) to be installed over finished wall assemblies. The 19 mm (¾") plywood panel should be painted on all exposed sides prior to gear installation.

Electrical rooms are to be conditioned per manufacturer's specifications and per code. Electrical room lighting to be controlled with automatic occupancy sensors.

4.3.3. Plumbing Rooms

Provide a water entry / riser room in or near the water main, if possible, to reduce the length of piping required. As required by code, water entry rooms are located at the perimeter of the building with direct access from the exterior. The room is typically 1,500 x 1,800 mm (5 ft x 6 ft) minimum and has a floor drain.

Confirm size requirements with the Plumbing Engineer. Room must be heated to prevent freezing. Water entry / riser room must be located within the first phase of construction.

Early in the schematic phase, a flow test needs to be performed so the Plumbing Engineer can determine if domestic water or fire pump are required. Ensure this information is provided in a timely manner so the room can be sized to accommodate a pump if needed.

4.4. Garbage & Recycling

The design team will determine if the garbage service will be provided by a public or private entity. A single point of contact for the entity providing service to the project should be identified to assist on the development of the overall service needs for the project, type and size of compactor, verify whether garbage removal is by waste bin, self-contained compactor (large) or mini compactors with detachable small waste bins on casters. If utilizing waste bins, specify a side load waste bin with no overhead access other than for trucks. Provide hold-opens on exterior garbage room doors. Patry Group Development and Property Management will determine if the compactor and equipment will be leased or purchased and the type of garbage management system to be provided for the development. Confirm whether it will be Valet or Self-Serve. If Valet, this type of service may not require the use of garbage chutes or garbage rooms on each floor of the building.

Regardless of the garbage collection method, the garbage rooms will need to be designed for accessibility. Residents will need access to garbage rooms on days without valet garbage service (weekends and holidays). When designing a mixed-use building with retail and restaurant space, separate garbage rooms for commercial and residential use to ensure that commercial garbage is not routed through residential corridors.

All Patry Group Projects require recycling. Provisions for recycling bins must be provided in the garbage **rooms.**

Ontario multi-unit residential waste diversion is set by O. Reg. 103/94 and the municipal waste by-law, which commonly require three or four separated streams including organics; the garbage room areas and bin counts in this clause are sized on a US two-stream assumption and must be resized | confirm the streams with the servicing municipality before fixing room areas

All garden style projects are to utilize a garbage and recycling enclosure. Patry Group to provide a typical enclosure.

Ensure barrier-free access per OBC 3.8 is provided to garbage enclosure. Urban projects with less than 200 residential units are to have mini mac, (2-3) 2.3 m³ (3 yd³) waste bins. Urban projects with more than 200 residential units are to have 15+ m³ (20+ yd³) compactor, (4-5) 2.3 m³ (3 yd³) waste bins.

4.4.1. Urban-Style Project Interior Garbage Rooms

Garbage rooms for commercial use are typically conditioned via ductless split system. Confirm requirements with Patry Group and coordinate design (if required) with Mechanical Engineer. Specify mechanical ventilation and deodorizers. Ventilation/exhaust fan will be going directly to the exterior of building (typically to the roof) if garbage room is located inside the building. Garbage rooms should include additional fans if located next to a residential unit. Always consider location of the main garbage room in relation to residential units and amenity spaces.

Specify floor drain and hose connection at all garbage rooms, as required by code. Lighting is to be controlled with automatic occupancy sensors. Specify fire sprinklers to be installed in garbage rooms. If required by code or by the municipality, specify grease traps for garbage compactor rooms. Coordinate service connection for specific compactor equipment to be utilized with Electrical Engineer.

Specify grey epoxy painted floors. Specify an impact resistant gypsum board on lower 1,220 mm (48”) of the perimeter of the room. Careful consideration of the wall finishes for routine cleaning of the room with a hose.

If not installed under a podium, consider additional acoustical measures to avoid noise transmission between the main garbage room and residential or common building areas. Specify additional space for storage of large items, furniture, mattresses, etc. if possible.

An area will also be designated for a series of 360 L (95 gallon) recycling containers with wheels like Brute 95 Gallon Rollout Container. If small compactors with detachable waste bins on casters are to be used, like the Mini-Mac apartment compactor, storage for additional waste bins based on the above calculations, shall be provided. Refer to 1.2 Clear Ceiling Height section of this manual for minimum ceiling height. CAD / Revit files of Mini-Mac garbage compactors can be provided by Patry Group upon request.

4.4.2. Garden-Style Project Garbage Enclosures

Exterior garbage areas will be provided in the parking area for garden style developments. Patry Group preference is to provide one centrally located garbage compactor/waste bin for a project, like Marathon’s Self-Contained Compactor. Provide parking adjacent to the enclosure for garbage drop-off. The route to the garbage compactor, the access door, and controls must meet all accessibility requirements.

The garbage enclosure must be a minimum of 2,400 mm (8’-0”) tall and large enough to fully enclose the compactor and the waste bin assembly. Three sides of the enclosure will be constructed out of masonry walls with a brick veneer. The entrance gate will be a lockable gate with screening and rollers. A separate 1,070 mm (42”) pedestrian gate will be provided with access control for resident access into enclosure. Provide an adjacent/additional space for large items of garbage if the garbage compactor area is outside.

An area will also be designated for a series of 95 Gallon Recycling Containers w/Wheels like Brute 95 Gallon Rollout Container. Confirm if Patry Group or the municipal zoning by-law require that these exterior garbage areas be covered with roofs.

Garbage enclosure floor will be sloped to ensure storm water runoff, to be collected in a drain connected to the storm water system (if allowed by code). Confirm if local AHJ will require interceptors or if they allow drainage into storm or sanitary.

Garbage enclosure shall be provided with electrical service for compactor and ample occupancy lighting to access and use area safely and securely. Provide a hose bibb connected to the irrigation system for maintenance of the area.

CAD / Revit files of Mini-Mac garbage compactors and/or garbage enclosure example drawings can be provided by Patry Group upon request.

4.4.3. Site Design

Garbage room should be street accessible with concrete drive for garbage truck pickup. Provide truck maneuvering diagram. Note that truck maneuvering should not occur on public road. Confirm size of the truck providing service, and design around the specific criteria and maneuvering requirements.

An adequate heavy duty concrete apron as recommended within the geotechnical report shall be provided for allotted waste bins to be rolled out on garbage collection days.

Coordinate access and curb cut locations with Civil Engineer. Coordinate pavement design with geotechnical report recommendations, Structural, and Civil Engineer.

Meet the local planning and building officials to review the proposed concept for the garbage and loading/unloading areas for feedback and approval prior to beginning the design development phase of the project.

4.4.4. Resident Garbage Chute Access Rooms

Garbage chute rooms should be located above the main garbage rooms. Provide a resident-accessible room on the ground floor for garbage on non-valet days or overflow recycling. It should be separate from main garbage room and centrally located on a barrier-free route. Ensure walls have a 1-hour fire-resistance rating in accordance with OBC 3.6.3.

Doors shall be self or automatic closing, with a fire protection rating of 45 minutes. Ensure that the mechanical drawings include fire dampers or fire/smoke dampers on all duct penetrations at fire rated walls and shafts.

4.4.5. Garbage Chute

All buildings, unless noted otherwise or are a walk-up / garden-style, will require garbage shafts.
Confirm with Patry Group if garbage chutes should be installed on day one or will be implemented in the future. Where tuck-under garages are provided, the shafts should located above a tuck-under garage for easy conversion to a garbage room. Specify 760 – 900 mm (30 – 36”) diameter shaft minimum. Ensure the garbage chute is designed to be straight. Avoid garbage chute offsets or angles at all costs. If the design prohibits a straight chute, the offset should be no greater than 15 degrees.
Shafts for any future garbage chutes should be rated / impact resistant gypsum board. Provide a full section of the garbage chute by the end of the design development phase of the project.
Provide a vent hood at the top of the chute. The top of the vent hood should be installed 1,200 mm (4’-0”) min. above adjacent roof area. The vent hood must be a minimum of 3,050 mm (10’-0”) away from any mechanical intake on the roof. Provide exhaust for the garbage room where the garbage chute discharges through the roof. This will reduce the updraft (chimney effect) through the chute to reduce potential odours.

Garbage Chute Intake Door should be a standard size. Ensure the intake door is ULC listed with a 1.5 h **fire-protection rating, Type 304 stainless steel.**

ULC - confirm the required fire-protection rating for the chute intake against OBC 3.6.3 and that the assembly carries a listing from an SCC-accredited certification body

Ensure the door is self-closing / self-latching hopper-type door and meets the floor and height clearance requirements of OBC 3.8 and CSA/ASC B651 for forward or side approach wheelchair access.

Garbage chute shaft rating to be indicated in the drawings. Most buildings require a 2 h fire-resistance rating at vertical shafts. Verify code requirements for the specific project. Confirm if a separate garbage chute will be required for recycling with Patry Group. Do not specify tri-sorter chute systems.

Provide plumbing stubs for sprinkler and sanitizing spray connection.

Other garbage chute components to consider:

a) Disinfecting and sanitizing spray unit (provide only if required).
b) Confirm with Patry Group if auto- or manual-switch control system should be provided.
c) Sound deadening coating installed to the exterior of the chute.
d) Sound vibration isolators pads at floor supporting frames.
For projects where garbage chutes are provided, residents at all levels should have accessible and secured access to a garbage intake door, including residents on the first floor. Consider garbage chute

location within the garage if noise is a concern. One acceptable manufacturer for garbage chutes is Valiant Products, Inc.

4.5. Stairs

Maximum riser height, 178 mm (7”). Closed riser design is required for exit stairs.
Minimum tread run, 280 mm (11”).
Minimum headroom, 2,235 mm (7’-4”).
Maximum vertical rise between landings, 3,660 mm (12’-0”).
Minimum width between railings, 1,220 mm (4’-0”) clear.

this block is IBC-derived. OBC 3.4.6.8 sets exit stair rise at 125–180 mm and minimum run at 280 mm; 11” is 279.4 mm and has been rounded UP so the stated minimum is not reduced. Verify the full set against OBC 3.4.3 and 3.4.6 before issue

4.5.1. Interior Stairs

Specify concrete filled metal pan stairs when located in noncombustible construction or when stairs are open to the exterior in combustible construction. All enclosed stairs in combustible construction designed as part of an enclosed corridor system shall be wood framed with carpet treads and landings.

Type I, III and V are IBC construction types; Canada classifies as combustible, noncombustible and encapsulated mass timber construction under OBC 3.1.4 and 3.2.2, and the mapping is not one to one | restate against the construction type selected at pre-design

Switchback or straight run stair arrangements are acceptable.

Provide one roof access per building from top level of one of the stairs. Provide a steel, straight metal ladder with locking gate to prevent un-authorized access on 3-storey flat-roof buildings. Coordinate finished floor elevations of stair landings with precast shop drawings. Review tolerances to ensure topping slab achieves accessible path without relocating stair landings.

Provide 38 mm (1 ½”) dia. steel pipe handrails at each side of the stairs, installed at 865 mm (2’-10”) high above the tread nosing. Handrails must not extend into the path of travel and shall meet code minimum per OBC 3.4.6.5 and CSA/ASC B651. Stairs within dwelling units can have wood handrails on one side.

Railing shall extend 300 mm (12”) horizontally beyond the top riser, parallel to the floor or landing. Railing shall extend at least one tread run beyond the bottom riser (typically 280 – 300 mm / 11” – 12”) in the direction of stair travel. 2x wood framed wall shall support the interior side of stair run and extend from the slab of the lowest level of stairwell to the underside of the trusses of the top level of stairwell. If the interior framed wall does not extend to the top level, then it will extend 1,070 mm (42”) high above the finished floor to form guard-wall. Refer to applicable building codes for specific fall protection requirements. 1,100 mm / 1,220 mm (44”/48”) minimum wide stairs are typically required by code; OBC 3.4.3.2 sets the minimum exit width at 1,100 mm. Confirm applicable codes for specific requirements. Confirm occupant load and exiting arrangement for additional width requirements.

Provide 1,220 mm (4’-0”) clear on all stair runs for move in / out purposes.
CMU stair shaft walls shall be installed below the podium slab level, if provided. Stair shaft walls above podium level to be constructed of wood framing. Where allowed by code, stairs and framing inside the CMU stair shaft shall be wood framed. Coordinate location of standpipes and connection valves and confirm minimum clearance requirements at landings. Provide cane detection at standpipes, under stairs, and any object protruding greater than 100 mm (4”) between 685 mm (27”) and 2,030 mm (80”) height from finish floor elevation.

these are ADA protruding-object figures; the Ontario limits sit at OBC 3.8.1.5 and CSA/ASC B651 and differ

Coordinate area drains in stair shafts for building with open stairs.

4.5.2. Exterior Stairs

Provide cast in place concrete steps on grade. Grading to be coordinated with Civil and Landscape Architect, and construction details with Structural Engineer. Outdoor stairs shall be designed so that water will not accumulate on walking surfaces. Specify non-slippery tread metal edge for exterior stair conditions.

Provide 38 mm (1 ½") dia. galvanized steel pipe handrails, installed at 865 mm (2'-10") high above the tread on both sides of stairs. Provide painted galvanized steel guards (1,070 mm / 3'-6" high) where the **walking surface at stair exceeds 600 mm above adjacent grade, floor surface, etc.**

the source triggers a guard at 30" (762 mm); OBC 3.4.6.5 triggers at 600 mm, so the US rule would omit guards Ontario requires. The trigger has been lowered to 600 mm | confirm guard height for each condition

Refer to applicable building codes for specific guardrail design requirements.

4.5.3. Parking Garage Stairs

Specify precast stair towers with precast stairs in precast parking decks. Provide 38 mm (1 ½") dia. steel pipe & picket handrails, installed at 865 mm (2'-10") high above the tread nosing on the interior side of stairs. Provide 38 mm (1 ½") dia. steel pipe wall rail on the outside walls, installed 865 mm (2'-10") high above the tread nosing. 38 mm (1 ½") steel pipe & picket guards (1,070 mm / 3'-6" high) are required where the walking surface at stair exceeds 600 mm above adjacent grade, floor surface, etc. Refer to applicable building codes for specific guardrail design requirements.

Coordinate location of standpipes and connection valves and confirm minimum egress clearance requirements at landings. Cane railing protection may be required depending on the municipality. If applicable, coordinate finished floor elevations of the parking garage stair towers with the finished floor elevations of the buildings.

4.6. Maintenance

The Architect shall identify the location of the maintenance room during the schematic design phase of the project. The following design criteria should be followed unless confirmed otherwise with Patry Group.

4.6.1. Location

These rooms are typically remaining spaces located away from amenity areas. The location should have convenient access to the exterior of the building, delivery, loading and parking area. It is preferable to have this space near the loading or parking area.

4.6.2. Programming
Provide 46 m² (500 ft²) for developments under 200 residential units, and 70-93 m² (750-1,000 ft²) for development over 200 residential units.

Provide a 2,400 x 3,050 mm (8’ x 10’) conditioned office space, desk, computer and filing cabinet, and data connections. Provide two-piece washroom within maintenance space.

Provide a flush hollow metal door to the building corridor if applicable. Provide insulated 3070 (915 x 2,135 mm) hollow metal exterior double doors with metal frame at the exterior. If location of room is fit for a garage door, provide a minimum 7080 (2,135 x 2,440 mm) insulated garage door with automatic opener. Provide a minimum double stud wall if this space is adjacent to any unit or other occupied space.

Ensure the wall is acoustically separated with a minimum 50 STC rating.

OBC 5.9 requires apparent sound transmission class (ASTC) where flanking is accounted for; a laboratory STC alone is not evidence of compliance | restate as an ASTC target]] If gypsum board partitions, provide a

1,220 mm (4 ft) high x 19 mm (¾”) plywood wainscot (painted) around the entire perimeter of the room. If a CMU partition, provide block filler and latex semi-gloss paint finish. Floor shall be sealed concrete. Ceilings shall be gypsum board and painted.

Provide the same data connections as for the Leasing Office spaces. Provide security alarm system.

Provide a smoke detector. Provide 120 V and 240 V power for this space per CSA C22.1. Provide a charging station for an electric cart if applicable. Lighting shall be surface-mounted 1,200 mm (4 ft) LED strips. Do not locate large electrical circuit breaker boxes inside the space.

Provide fresh air intake and a separate fan coil unit for this space. Provide exhaust fan at 35 L/s (75 CFM). Room must be temperature controlled. Provide washer/dryer hook-up, floor drain, and mop sink. Confirm with Patry Group if a washer and dryer should also be included in the maintenance room in addition to W/D hookup.

5. RESIDENTIAL UNITS

5.1. General

Mix unit type locations in the building plan layout to diversify options for leasing. Confirm the applicable provincial building code and accessibility requirements, including OBC 3.8, CSA/ASC B651 and the AODA Integrated Accessibility Standards. Confirm which barrier-free suite types are required. All minimum clearance dimensions should maintain at least 50 mm (2") tolerance for construction **error.**

OAA: Type A and Type B are IBC categories; the Ontario barrier-free suite requirement at OBC 3.8 uses different categories and percentages | restate with Section 1.4

Base unit plans are to be provided by Patry Group per project. Confirm with Patry Group if penthouse, mezzanine units, dens in one, two- or three-bedrooms units, live / work units or other special type of unit design will be required as part of the project.

Confirm with Patry Group if balconies will be required at each unit, as well as the appropriate mix, size, and features such as Juliette, outboard, inboard, combination inboard/outboard, waterproofed vs. drip through, covered vs. uncovered, soffits or exposed structure, and cantilevered or post supported.

5.2. Unit Design Requirements

Prior to beginning the unit design process, confirm the unit matrix, including average unit size, target size per unit type, and percentage of units by type (studios, 1 bed, etc.) with Patry Group. Unit matrix and template is to be provided by Patry Group per project.

All unit floor plans should be designed within the span limitations of standard 460 mm (18") open web trusses, spaced at 610 mm (24") on centre. Decreasing truss spacing below 610 mm (24") on centre will only be allowed when approved in writing by Patry Group. The following description is for wood framed construction. It should be noted that this does not apply to "block and plank" framed construction which should conform to standard masonry dimensions to eliminate altering of standard sized masonry and excess construction waste.

a) Floor to floor height should always be 3,248 mm (10' 7 7/8", generally referred to as 10'8").
b) The resulting clear space between bottom of truss cord and top of subfloor is 2,772 mm (9' 1 1/8").
c) The 15.9 mm (5/8") gypsum board on 13 mm (½") RC channel uses 29 mm (1 1/8"), leaving 2,743 mm (9'-0") from top of subfloor to bottom of gypsum board. Top floor ceiling does not require an RC channel.
d) Gypcrete is then installed at a depth anywhere from 19 to 32 mm (¾" to 1 ¼") depending upon the system used.
e) This results in a clear ceiling height of 2,718 mm (8'11") +/- 6 mm (¼") depending upon the gypcrete system used.

this chain resolves to 2,718 mm, which does not agree with the 2,750 mm (9'-0") nominal stated at Section 1.2; the inconsistency exists in the source

Refer to 1.2 Clear Ceiling Height section of this manual for minimum ceiling height.

5.3. Unit Types

5.3.1. Micro Unit

Maximum micro unit size is 44 m² (475 ft²). The living and sleeping area can be combined within the open space of the unit and occasionally this common space will incorporate the use of a Murphy-style bed.
On the larger micro units, provide a defined interior bedroom area with a 2,135 mm (7'-0") partial wall and/or opening towards the open space of the unit to capture some light in bedroom. Micro units are typically located inline.

5.3.2. Studio Unit

Typical size between 44 m² to 56 m² (476 ft² to 600 ft²). The layout may offer a combined living and sleeping area, small linear kitchen, stackable washer and dryer, small closet and three fixture bathrooms. On larger studio units, provide a defined interior bedroom area with a 2,135 mm (7’-0”) partial wall and/or opening towards the open space of the unit to capture some light in bedroom. Studios are typically located inline.

5.3.3. One-Bedroom Unit

The size of this unit type is typically between 56-77 m² (600-825 ft²). Confirm with Patry Group if one-bedroom den units are to be provided as the unit size for this type will be around 67-79 m² (725-850 ft²). The program for one-bedroom units includes an open living area with kitchen, pantry closet or cabinet, storage/coat closet, bedroom, walk-in closets, and three fixture bathrooms and a laundry closet with stackable washer and dryer. Bathroom should have a common entrance not through a bedroom. On larger one-bedroom units, the goal will be to provide front load, side by side washer and dryer with storage shelf and separate linen storage. Bedrooms have windows to the exterior. Layouts are typically found as in-line or interior corner units. If premium finishes are anticipated for some units, they should be placed in the largest units of that type. Patry Group to provide direction.

5.3.4. Two-Bedroom Unit

Provide an open living and kitchen area with an island. If possible, provide a separate dining area apart from the kitchen island seating. For inline two-bedroom units, consider a modular design where a two-bedroom unit design is based on a one-bedroom unit with a second bedroom bay added. This concept is beneficial for massing, structural simplicity, and façade design. It also allows flexibility should the unit mix needs to be revised during the design process. Two bedrooms offer a wide range of sizes; typically 88-116 m² (950-1,250 ft²). These can be found as in-line or as interior and exterior corner configurations. Provide two bathrooms. One bathroom should be directly accessed from the living area or a hall. The second bathroom should be private and accessed directly from the primary bedroom. Confirm with Patry Group for specific vanity design preference (one sink vs two). Side-by-side W/D is preference when possible; stackable W/D acceptable if needed. Both bedrooms should have windows to the exterior and preferably a private walk-in closet. Whenever possible, parity between bedrooms size, closet size & configuration, and bathroom size & features is preferred for potential roommate conditions. If premium finishes are anticipated for some units, they should be placed in the largest units of that type. Patry Group to provide direction.

5.3.5. Three-Bedroom Unit

Unit size varies between 116 m² and 137 m² (1,251 ft² and 1,475 ft²). Provide an open living and kitchen area with an island.
If possible, provide a separate dining area apart from the kitchen island seating. The primary bedroom should also contain its own bathroom and walk-in closet similar to the two-bedroom units.
The second and third bedroom share a bathroom that is also accessed directly from the living area of the unit or a hall. All bedrooms must have windows to the exterior of the building. Three bedrooms

are typically premium units and are found as outside corner layouts. Only in select scenarios would a half or full third bathroom be included in the three-bedroom unit. If premium finishes are anticipated for some units, they should be placed in the largest units of that type. Patry Group to provide direction.

5.4. Typical Unit Interior Features

5.4.1. Unit Entry

From the corridor side, define the unit entry, with accent paint or material, light fixture, signage, etc. Consider Numera or similar system with integrated sconce and unit number. A 150 mm (6”) inset in the corridor should be accommodated. Provide at least 450 mm (18”) adjacent to pull side of door to **ensure required code floor clearances.**

18” is 457 mm, short of the latch-side clearance required on the pull side of a door on a barrier-free path at OBC 3.8.3.3 and CSA/ASC B651 | verify and increase for suites on a barrier-free route

Create a sense of entry inside unit. Unit Entry system to be Dormakaba Saffire LX-D model with upgraded BLE software. In addition, passage lever needs to be compliant with fire rating. Refer to 28 10 00 Keyless Entry & Access Control for additional information.

5.4.2. Coat Closet

Coat closets are required in all units over 56 m² (600 ft²) and encouraged in all units below 56 m² (600 ft²). Provide one open shelf and rod, with a minimum 865 mm (2’-10”) wide door. Closets not intended for walk-in use should be no deeper than 600 mm (24”) to meet accessibility requirements.

5.4.3. Living Rooms

Minimum size of living rooms should be 3,350 mm (11’-0”) wide. One wall must be at a minimum of 2,750 mm (9’-0”) for furniture placement. Built-in bookshelves, coffee bars, etc to be determined per project. Locate one data jack in the living room.

5.4.4. Computer Niche

Computer niches are encouraged in micros and studios if space allows. Include as an extension of the kitchen wall. Space should include built-in knee space with tabletop height of 760 mm (2’-6”) AFF. Draw base cabinet on either side if space allows. Locate one data jack in this location.

5.4.5. Dens

Minimum size of dens should be 2,750 x 2,750 mm (9’ x 9’). Provide one puck light and locate one data jack in the den.

5.4.6. Kitchen Cabinets & Pantry

Provide pantry closet or pantry cabinet, 450 mm (18”) wide minimum. Standard height base cabinets, 1,070 mm (42”) high wall cabinets. Provide a minimum 840 mm (33”) wide opening for refrigerator; larger units may require 915 mm (36”) wide refrigerator openings. Confirm refrigerator specification to determine opening width. Provide a 760 mm (30”) wide opening for free standing range. Barrier-free suites will require box to match cabinets to support drop in range. Provide 600 mm (24”) dishwasher space. 760 mm (30”) single bowl sinks with 915 mm (36”) base cabinet. 600 mm (24”) deep cabinet above refrigerator. Avoid L-shaped kitchen layouts wherever possible. Typical countertop overhang is 38 mm (1 ½”).

5.4.7. Islands

Provide bar seating. Countertop overhang of 250 mm (10”) for seating sides of islands, with 38 mm (1 ½”) overhang elsewhere. Provide single-height countertop, with no bar tops. Kitchen base cabinets are to be wrapped by 2x4 finished walls on 3-sides with the back wall being a 2x6 finished wall if the island is to account for electrical and plumbing behind the sink. Ensure trim at top of island walls is coordinated with countertop overhang, typically 6 x 38 mm (¼” x 1.5”).

5.4.8. Laundry Closet / Room

Washer and dryer equipment is to be provided in all units. Laundry closets with stacked or side-by-side units are typical; walk-in laundry rooms are not required but acceptable in larger 2- and 3- bedroom units if space allows. Do not combine laundry closets with utility closets.

Washer and dryer units to be stacked, side-by-side with top-load washer and front-load dryer, full-size front load as required for accessibility, standard side-by-side, or stacked. Unitized space-saver washer and dryer combos or all-in-one washer/dryers should not be specified. Do not specify ventless dryers. See 11 30 00 Appliances for Patry Group standard washers and dryers.

Dryer exhaust to be routed to exterior wall with rigid metal ducts. Ensure water hookups for washer are located to the side of the W/D in a 2x6 wall for maintenance purposes. Ensure that the laundry room depth can sufficiently allow for the dryer hose 90-degree connection in addition to the depth of the dryer itself. Provide venting for dryer in non-demising 2x6 wall. If laundry closet is located on a demising wall, vent the dryer in a 2x6 side wall. If laundry is in a walk-in closet, ensure waterproof LVT flooring is specified for the entire walk-in closet.

5.4.9. Bedroom

Minimum bedroom dimensions 3,350 x 3,350 mm (11’-0” x 11’-0”). Show queen bed size on unit furniture / finish plans. Define a primary bedroom with attached bathroom in two- and three-bedroom units. Confirm with Patry Group if a data jack is to be provided in all bedrooms.

5.4.10. Bedroom Closet

Patry Group to provide standard shelving heights /details for all closet sections. For non-walk-in closets, consider double doors (hinged, bifold, or bypass doors) to conserve space. Provide one section of single shelf & hangers and one section of double shelf & hangers in all bedroom closets. Walk-in closets are preferred in one-, two-, and three-bedroom units. Show rods, shelves, and hanger depth in closets. Enclosed closets typically utilize wire shelving; confirm with Patry Group if painted wood or MDF shelving is to be provided in enclosed closets, as this is market driven. Open shelving not located in a closet is to be painted wood or MDF. Linen closets and pantry closets should receive five (5) shelves. Closets not intended for walk-in use should be no deeper than 600 mm (24”) to meet accessibility requirements.

5.4.11. Bathrooms

When only one bathroom is provided in the unit, provide direct access from living area to bathroom.

Door into bathroom should swing into the bathroom. Minimize door swing conflicts. 865 mm (34”) high by minimum 1,220 mm (48”) wide vanity is preferred with a drawer stack. Provide 760 mm (30”) sink base. Wet walls to be 2x6 if freestanding in the unit. Ensure bathroom exhaust fan is located on a non-demising 2x6 wall, and as close to the ceiling as possible.

Include proper blocking at tub surrounds for grab bar installation per OBC 3.8 and CSA/ASC B651. Do not specify tile flooring at walk-in showers; instead, specify a single-threshold shower pan (American Standard 810 x 1,525 mm (32” x 60”) or Patry Group-approved alternate). Provide fire-treated plywood beneath all tubs and showers to match thickness of unit gypcrete. Confirm walk-in shower locations with Patry Group.

5.4.12. Bath Accessories Provide one (1) 450 mm (18”) towel bar for studio and 1-bedroom units, and one (1) 600 mm (24”) towel bar for 2- and 3-bedroom units. Avoid placing towel bars over toilets whenever possible. If required, ensure at least 815 mm (32”) is provided between top of toilet and towel bar. Provide one (1) paper holder mounted to wall rather than cabinet where possible. If installed to cabinet specify a wood block inside cabinet.

Provide one (1) curved shower rod over tubs at 2,030 mm (80”) A.F.F. Provide a hand towel ring in all unit bathrooms at 600 mm (24”) minimum. Mirrors to be 6 mm (¼”) plate glass with flat polished edge, 1,070 mm (42”) tall set at 2,135 mm (84”) A.F.F., 150 mm (6”) narrower and centred on vanity. Do not place robe hooks on unit doors.

If unit has a walk-in shower and is not required to be barrier-free, provide a 6 mm (¼”) semi frameless glass enclosure at the shower (Southeastern Aluminum Products Inc., Signature series frameless clear glass shower door with C-pulls and Hinge connection). If specifying a tile surround in walk-in showers, ensure corner shelves are also specified (Schluter Shelf-E or Patry Group-approved alternate).

5.4.13. Utility Closet

Typically, utility closets are 1,070 mm (3’-6”) wide x 915 mm (3’-0”) deep minimum. Consult with MEP Engineer for specific requirements prior to begin unit design process for the water heater and mechanical unit. Return louver should be installed over door. Ensure a minimum of a 865 mm (2’-10”) wide door. Utility room floor to remain unfinished; install a transition strip underneath door. Do not combine utility closets with laundry closets.

5.5. Balconies & Juliettes

Balconies are an extension of the living area of the residential unit. They are not only a functional space, but they also contribute to the architectural character and articulation of the building façade. The balcony is a highly exposed exterior building element. Provide access to balcony from living room areas, not bedrooms; however, the balcony may be in front of bedrooms. Balcony and patio doors are to swing inwards towards units. Verify deviations from this standard with Patry Group. Do not specify wood-framed doors. Access to the balcony must meet the barrier-free requirements of OBC 3.8 and CSA/ASC B651. Ensure all balconies are covered with a roof or canopy structure for inswing balcony doors.

Special attention to the balcony details by the building designer and specifying durable materials will minimize the need of frequent maintenance. The following summary provides a series of industry standard practices that shall be incorporated in the design of our mixed-use projects to ensure long term performance and balcony durability. Except for concrete podiums, balconies should not be designed over finished space.

5.5.1. Dimensions

All balconies should be a minimum of 1,525 mm (5’-0”) clear depth. Width of balconies will be a minimum of 2,440 mm (8’-0”) in length relating to patio door size and the design of the building.

Provide a swing door at all balconies.

Juliette balconies should not project more than 200 mm (8”) from the face of the façade and are not meant to be occupied. Sliding glass doors are to be used only at Juliette balconies.

5.5.2. Drip-through Wood Frame Balconies

Drip-through wood frame balconies are preferred and the most economical to construct. Specify solid stain for underside. Confirm with Patry Group if an alternative balcony detail is anticipated.

All balcony undersides left exposed and to be finished with Wood Scapes Exterior Stain. Final colour selection to be approved by ownership. Specify a solid stain to protect exposed wood material.

5.5.3. Fully-Recessed balconies

Fully recessed balconies are to be constructed using 2x pressure treated lumber with a composite or pressure treated decking.

5.5.4. Cantilevered Balconies

Fully cantilevered balconies are to have (2) pressure treated beams cantilevered past the building façade to support the 2x pressure treated lumber with composite or pressure treated decking.

5.5.5. Semi-Recessed Balconies

For projects where the exterior walls are required to be non-combustible, semi-recessed balconies should be designed so that only 1/3 of the balcony is outbound to avoid cantilevered conditions. For combustible construction projects, semi-recessed balconies may be cantilevered if needed.

Type III and Type V are IBC construction types; restate against the construction type selected at pre-design under OBC 3.1.4 and 3.2.2, and note that OBC 3.1.5.5 governs combustible balcony construction on a non-combustible building]]

5.5.6. Concrete Topped Balconies

Concrete Topped Wood Frame Balconies are not a preferred balcony system and should only be considered if code will not allow drip-through balconies. This applies to fully-recessed, cantilevered, and semi-recessed balconies.

57 mm (2 ¼") minimum continuous thickness lightweight concrete topping slab with light broom finish. 1.5 mm (60 mil) elastomeric membrane installed horizontally on the deck and wrap a minimum of 200 mm (8") vertically up adjacent walls.

Plywood deck sloping to drain to the exterior face of the balcony with aluminum T-Bar edge.
Top chord sloped truss down 2% (¼" per foot). Specify flat bottom chord for balcony trusses.
Provide fibre cement ceiling with vents installed to the bottom of balcony floor trusses.

5.5.7. Balcony on Grade (Patio)

The system consists of the following components:
Standard suites – Step down 90 mm (3 ½") minimum and 100 mm (4") maximum from the interior of the space to the patio top of slab. 100 mm (4") is preferred for waterproofing. Cast in place slab, sloping to drain away from the exterior walls at 2% (¼" per foot).

Barrier-free suites – Step down 13 mm (½") maximum from the interior of the space to the patio top of slab. Cast in place slab, sloping to drain away from the exterior walls at 2% **(¼" per foot).**

the ½" step is an ANSI A117.1 / FHA figure; Ontario sets the threshold height at a barrier-free door at OBC 3.8.3.3 and CSA/ASC B651 | verify the limit 100 mm (4") cast in place slab to be installed over minimum 100 mm (4") structural fill.

Perimeter of patio to be thickened to a 140 mm (5 ½") face. Provide a thermal break where the patio abuts foundation of occupied space as required by OBC Part 12 and SB-10. Refer to Structural and Geotechnical report for additional slab on grade requirements.

Specify sealed concrete with a light broom finish.

5.5.8. Balcony on Concrete Podium

The system consists of the following components:
At the location of the balcony, recess the podium slab 13 mm (½") at the back side of the balcony and slope 2% (¼" per foot) towards building façade. Underside of the podium to be flat. Provide a thermal break within the cantilevered balcony to separate the exterior concrete from the occupied living spaces as required by OBC Part 12 and SB-10.

Specify installation of urethane traffic coating to the top surface of the balcony slab, the vertical balcony slab edge, and 200 mm (8") minimum up the adjacent walls and door opening. Do not coat the underside of the slab.

5.5.9. Railings

A combination of railing configurations is typically utilized as part of the building elevation design. The designer shall consider the budget requirements, and the balcony location, street, courtyard, etc., when specifying the railing design. The following list summarizes the most typical balcony railing systems used on projects. Standard and premium railing types include:

a) 1,070 mm (42") high aluminum guard with vertical pickets (standard)
b) 1,070 mm (42") high aluminum guard with mesh inserts (confirm with Patry Group)
c) 1,070 mm (42") high aluminum guard with perforated panel inserts (confirm with Patry Group)

42" is 1,067 mm, below the OBC 3.3.1.18 minimum guard height of 1,070 mm; the metric value governs and has been rounded up. Confirm guard height, opening limits and design loads for balcony guards, and note that glass guards must satisfy OBC 3.3.1.18 and CAN/CGSB-12.1]]

d) 1,070 mm (42") high aluminum guard with tempered glass inserts (confirm with Patry Group)
Provide construction details and specifications of the materials to be utilized for the base of the wall, door opening, exterior balcony edge, scupper, and internal drains, etc., to reflect the type of waterproofing, as well as interface with the specific adjacent balcony construction. These will vary depending on the required waterproofing system for the specific balcony type, balcony finishes, wall finishes, exterior building wall construction, etc.

Ensure adequate blocking is provided in balcony joist framing alongside the rim board for floor-mounted railings. Also ensure adequate blocking is provided at walls for railing connection points.

6. RETAIL

6.1.General

Retail spaces shall be designed as cold dark shell, unless otherwise noted by Patry Group. When units are located directly above retail, space should be designed as a warm dark shell or warm bright shell. At a minimum, above grade plumbing serving spaces above and fire protection within the cold dark shell should be designed and specified with insulation for the unconditioned space to prevent pipe sweating and condensation as it is unknown how long retail space will remain vacant. The retail area shall be designed to meet all applicable building code and municipal by-law requirements. Provide dashed lines at presume future demising wall locations and BOMA areas to represent maximum number of planned tenants. Minimum preferred ceiling height for retail spaces is 4,270 mm (14’-0”).

6.1.1. Floor

1,500 mm (5’-0”) wide, 100 mm (4”) thick perimeter slab on grade at perimeter of retail space with steel trowel finish. Remaining floor area to be left open for future underground mechanical, electrical and other utilit tie-ins.

6.1.2. Demising Walls

Retail space will be left as open as possible for future resident(s). However, ancillary mechanical, electrical, and washroom space should be reserved and planned for maximum number of future residents. The only walls to be installed will be perimeter walls to common corridors, garbage rooms, MEP rooms and stairwells. Walls to be finished to a level to comply with Codes. Show with dashed lines and label in plan maximum distribution of residents. Additionally, indicate and label reserved space within core building allocated for each resident’s future electrical utility meters and equipment. For multiple retail tenant spaces, provide adequate chase space within demising walls for all required utilities, including plumbing, electrical, and mechanical services.

6.1.3. Mechanical

Provide one (1) 100 mm (4”) diameter conduit from the retail space to the roof, per each 23 m² (250 ft²) of retail area, for future installation of mechanical equipment. Confirm with Patry Group if retail shafts / chases are required. If anticipated, ensure retail shaft wall liner is provided. Provide service access panel at every other floor to access into mechanical shaft, concealed by a pedestrian door from residential corridor.
Preference is for make-up air to be provided at level 1 exterior wall with louvers as required.
When units are located above retail space, one electric space heater will be provided for every 140 m² (1,500 ft²) of floor area to maintain the space temperature at 4°C (40°F) minimum in the retail space. Electric space heaters will consist of fan coil with 15 kW resistance heat mounted to a skid to allow for movement during construction and repurposing on future jobs after commercial tenant build-out is complete.

6.1.4. Sprinkler System

Install a fire sprinkler system with upturned heads throughout the shell of the building per the Construction Drawings.

6.1.5. Fire Alarms

In new construction projects, provide, one 19 mm (¾”) conduit from the building’s fire alarm panel to the retail space for future fire alarm connection.

6.2. Utilities

6.2.1. Sanitary Sewer

Install a minimum 150 mm (6”) PVC main, with minimum 100 mm (4”) PVC laterals to each retail sections of up to 232 m² (2,500 ft²) GA and 150 mm (6”) PVC laterals to retail sections of up to 465 m² (5,000 ft²) GA. During the schematic design phase, discuss with Patry Group the placement of grease traps and whether they will be installed by Patry Group or the future tenant based on the assumed retail mix and retail configuration (stand-alone commercial vs. vertically integrated mixed-use). 75 mm (3”) common vent stub in ceiling. The civil design needs to accommodate the grease trap and clean-outs away from the entries. They should always be located outside and/or either in the parking garage lower level, alley, etc, but never in the retail portion. No need to have cast iron.

6.2.2. Grease traps

Future restaurant space will be provided with grease waste connections routed to grease traps piped in series and sized per OBC Part 7 and certified to CSA B481. All grease traps will be located outside the building footprint or at loading/drive aisled for easy access. All grease waste piping shall be PVC.

6.2.3. Domestic Water

Install a PVC domestic water main line with shut off valve(s) inside the building, location, and size per the Construction Drawings. This should have the typical manifold system of having a main line, minimum 50 mm (2”) running parallel to each retail space, and then branching off with a minimum 25 mm (1”) size for 232 m² (2,500 ft²) GA and larger for known restaurant space or coffee shop. The retail tenant will need to provide additional requirements. All work shall be overhead to allow any upgrades in sizing, shut off valves, and the water meter. Confirm with Patry Group if a separate water room is desired.

6.2.4. Electrical Service

Provide two (2) 50 mm (2”) conduit (without conductors) for electrical service from the meter bank to the premises, per retail area. Retail meter centres should be sized for one (1) 208/120 V 400 A service per 232 m² (2,500 ft²) of retail space.

Within the electrical one-line diagrams, include separate metered "future retail" panels for each assumed retail tenant for maximum number of tenants within the electrical line diagram. Provide enlarged plans and elevations of electrical room or meter centre wall including all electrical equipment sizes approved under the Ontario Electrical Safety Code and the ESA to confirm adequate space is provided for end of construction, and maximum "future tenant" build out clearance requirements. Install night and emergency lighting as required by code. Provide electrical junction box at tenant signage location, with conduit to future tenant space. Confirm with Patry Group if a distribution panel / room separate from the multifamily main distribution panel should be provided with a standalone transformer. A separate room and service allows for a better use of the site’s transformers, primary services, etc. Many times, a back-of-house corridor to service all retail spaces, along with the use of a separ ate electrical room, is the preferred approach by Patry Group.

6.2.5.

Low Voltage ConduitInstall two (2) empty 50 mm (2”) conduit with pull strings (without wires) for telephone, cable, security service inside the space per each 232 m² (2,500 ft²) GA of floor area.

6.2.6. Gas

Confirm with Patry Group if gas is to be provided within retail spaces. If gas service is anticipated, provide a gas line to the retail space with shut off valves and cap. Provide one (1) gas meter for each space planned for future restaurant use.

6.3. Doors and Storefront

Design and install common area doors per occupant load and include a set of hollow metal double doors for back of house / retail. Where required by OBC 3.4.6.16, panic hardware for exit doors will be used. Do not specify panic paddles; specify panic bars only at egress door locations.

6.4. Architectural

Architect to provide as-built plans in both PDF and CAD formats for plan/permit usage with Matterport links (or other software as required) to real-time scans.

6.5. Abstract

Require architect to provide descriptions of all delivery conditions and systems throughout the space while also noting any foreseeable obstacles including unusual changes in finished floor elevation, differences in finished floor elevation from exterior to interior and ingress/egress points, eccentricities in shaft space construction, elevation encumbrances for line sets and RTUs, unique applications in zoning for permit set navigation, garbage room access, MDF rooms, etc.

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7. EXTERIOR ENVELOPE

7.1. General

Exterior building finish schedule must be complete and identify all façade materials and finishes. Finish schedule must include manufacturer, model numbers, style and factory finished colour of each product specified and must also identify paint/stain colours of all exterior materials to be field finished. Each building should have its own unique schedule. If a colour scheme is to be used it must be clearly identified on plans showing the pattern.

7.2. Exterior Façade Materials to be Identified

a) Masonry – Brick, Block, Cast Stone and Mortar Colour
b) Cement Siding – Panels, Lap, Trim, Pre-Finished or Field Finish Colours
c) Metal Siding – ACM, Metal Panels, Trim, Pre-Finished Colour
d) Wood Siding – Type, Grade, Pre-Finished or Field Finish Colour
e) Break Metal – Copings, Masonry Caps, Sills and Trim, Pre-Finished Colour
f) Gutters & Downspouts – Pre-Finished Colour
g) Storefront – Frame Finish, Glazing, Tinting
h) Composite Decking – Material & Colour
i) Handrails – Material, Finish, Pre-Finished Colour
j) Exterior Steel Doors – Paint Colour
k) Garage Door – Style, Finish, Glazing, Paint Colour
l) Balconies w/Traffic Coat – Colour, Finish
m) Windows – Exterior Finish, Colour, Style
n) Patio Doors – Paint Colour
o) Dryer & Exhaust Vents – Spec, Field Paint Colour

Main building elevations (facing the street) typically will be a combination of masonry, metal, wood, stucco, and fibre cement board. Due to higher maintenance costs, the use of wood should be restricted to accent areas in recessed areas. Provide higher level of finish around leasing and amenity façade areas. Use masonry on street side elevations for curbside appeal but minimize the use of masonry otherwise.

Coordinate exterior signage placement and material selection with overall façade design.

Storefront is typically installed on leasing and amenity areas and main building entrances.

Specify vinyl windows for residential units. Windows and doors should stack vertically to ensure point loads carry down the structure to the foundation, without placing point loads on window and door headers.

Fibre cement, lap siding, and stucco (market dependent) are typically used for interior courtyard elevations.

7.3. Exterior Materials

Confirm exterior material percentages with Patry Group in conceptual design phase and ensure alignment with the roject's program statement and local design requirements.

7.3.1. Masonry

Manufacturer's selection based on general location where the development is located. Specify a modular or queen size.

Masonry facades over three storeys in height should be avoided due to potential cost impact of supporting brick. Review design criteria and detailing with Structural Engineer for conditions where brick is higher than 3 storeys if required by local design guidelines.

Coordinate and detail brick ledge and steel shelf angles with Structural Engineer and edge of slab drawings. Consider and detail brick skin to address wood shrinkage. Special attention should be given around windows and doors. Window and door opening heads in brick wall areas should be brick and not stone or cast stone materials.

Ensure all brick or CMU veneer includes an airspace with through-wall flashings and weep inserts at openings and at the base of wall. Specify the inside bend to be 110 degrees to account for the anticipated movement. Specify adjustable two-piece brick ties.

Patry Group preference is standard grey mortar; coloured mortar may have a higher cost impact. Consider and detail special shapes as required by the proposed building elevation design.

7.3.2. Fibre Cement

Typical fibre cement lap siding is 8 mm x 3,660 mm (5/16" x 12'); wood grain or smooth. System can be field painted or prefinished with 125, 150, 180 or 200 mm (5", 6", 7" or 8") exposure. Fibre cement trim boards to match. Typical fibre cement panel size is 8 mm (5/16") smooth panels with extruded aluminum reveal system. System can be field painted or prefinished. Façade layout to maximize panel usage. Panels sizes available 1,220 x 2,440 mm, 1,220 x 2,745 mm, 1,220 x 3,050 mm, 1,220 x 3,660 mm (4' x 8', 4' x 9', 4' x 10', 4' x 12').

If acceptable to Patry Group, board and batten is a viable VE option for panel and reveal system.

All panel systems shall be designed as a drainable system with ventilation openings at the base and top of wall. Ensure flashings are above each opening at floor lines, and at the base of walls.
Specify Allura or equivalent fibre cement panels.

7.3.3. Metal Siding

Concealed Fastening Wall System – The installation system can be either vertical or horizontal, as determined best for the architectural design, and the cost impacts. All systems shall be reviewed for subsurface requirements, including waterproofing, as well as fastening requirements, such as added blocking, added furring elements, added individual clips, and added difficulties of material installation (size of panels). Gauge and striations should be considered to prevent "oil canning" at the surface. All associated metal trims shall be detailed for transition of materials and to prevent water intrusion. Trims shall be hemmed to provide stout/tight finished conditions. Minor exposed fasteners shall be provided with colour-matching rivets of adequate size and depths.

Exposed Fastener Wall Systems – The installation system can be either vertical or horizontal, as determined best for the architectural design, and the cost impacts. All systems shall be reviewed for subsurface requirements, including waterproofing, as well as fastening requirements, such as added blocking, added furring elements, added individual clips, and added difficulties of material installation (size of panels). Gauge and striations should be considered to prevent "oil canning" at the surface. All associated metal trims shall be detailed for transition of materials and to prevent water intrusion. Trims shall be hemmed to provide stout/tight finished conditions. Exposed self-tapping fasteners shall be pre-selected for their ability to secure and seal the metal siding per manufacturer's warranties. Fasteners shall be indicated with a hexagonal head, pan head, or pancake head with Neoprene washers.

All adjacent break metal flashing to be from coil stock from the manufacturer.

All downspouts and scuppers to be from coil stock from the manufacturer.

All exposed fasteners to be colour matched to the colour of the panels.

7.3.4. Stucco / EIFS

Design as a drainage wall but build as a barrier wall. Typically, 3-coat +/- 19 mm (¾") thick (scratch, brown, and acrylic finish coat), like StoPowerwall[15] system.

Joints for areas no greater than 13.4 m² (144 ft²). Apply joints at all openings (vertically and horizontally).

Note that lath is cut behind expansion joints but remains continuous behind control joints. Ensure continuous caulking as recommended by manufacturer is applied at all control joint, terminations to other finishes, and around all penetrations and surface-mounted fixtures.
Use corrosion resistant lath, accessories, and anchors. PVC is preferred.

Note that galvanized accessories are less expensive but will ultimately rust, which will increase future maintenance costs.

7.3.5. Accent Siding

There is an abundance of other siding products available on the market today, some at a higher cost and lower availability than typical. They should be considered as accents around entries and balconies only.

[15] Access Link

7.4. Weather Barriers

Consult specific exterior wall materials instructions to be installed, tested assembly data and specific local code requirements. Provide DuPont, Tyvek products or equal. Commercial Wrap behind masonry veneer and siding. Commercial Wrap D behind Portland cement plaster. Provide damp proofing on masonry walls.

7.5. Continuous Insulation System

Consider a continuous insulation system as required by code, along with other green building design strategies for the building. Continuous exterior insulation is typically required by the energy code from roof to footing for all construction within cold weather climates.

Coordinate details between different materials and methods above and below podium slab transition. There should be no exposed slab edge outside of any occupied conditioned space. Additionally, cantilevered concrete balconies and patios should include a thermal break outside of conditioned space within the architectural and structural detailing. Consult OBC Part 12 and SB-10, or the provincially adopted NECB.

All measures to meet code with batt insulation should be fully validated by the design team prior to using continuous insulation.

7.6. Dryer & Exhaust Vents

Preferred unit dryer vent basis of design is a 100 mm (4”) DWV4 DryerWallVent by In-O-Vate. When applicable, utilize a prefinished colour. When necessary, a primed and ready-for-paint model should be specified and shall be painted to match the adjacent wall.

Preferred unit bathroom vent basis of design is a 150 mm (6”) 6WV PremiumWallVent by In-O-Vate (with integrated screen). When applicable, utilize a prefinished colour. When necessary, a primed and ready-for-paint model should be specified and shall be painted to match the adjacent wall.

7.7.Roof Drainage System

Primary and emergency roof drainage system shall be designed per the rainfall intensity for the location.

100-year / 60-minute and 100-year / 15-minute criteria are a US convention; Ontario sizes roof drainage under OBC Part 7 using the 15-minute rainfall intensity and one-day rainfall from the OBC Appendix C climatic data for the location, and the municipal stormwater criteria may govern the outlet | restate the sizing basis before issue

Downspouts shall be included in roof drainage system using the options below, with option A being most desired. For building canopies, downspouts should be routed against building and tied into storm system, or draining through downspout onto splash block. Sheet draining from roofs, patios, or canopies is not preferred.

Option A: Roof drains tie directly into overall storm system or detention pond to remain underground and avoid adding any stormwater to landscaped areas.

Option B: Trench drain under landscaping and sidewalk, and sheet flow across parking area
Option C: Directly draining to splash block within landscaped area

7.7.1. External Gutters & Downspouts

Gutters & Downspouts are the preferred system for draining roofs. The system will drain to the rear façade to an underground hard pipe system to the underground storm detention system or pond. This form of drainage is preferred to prevent water from pooling on the roof and keeps rainwater from being routed through the building. The underground hard pipe system will be coordinated with the Civil Engineer.

Gutters and downspouts size and spacing to be sized at the rainfall intensity for the location per OBC Part 7 and Appendix C. Check with the municipality to verify design criteria. Show calculations on the drawings.

Location of downspouts as required above, will be shown, and dimensioned on the roof plan and the elevations.

Gutters and downspouts to be prefinished. Colour to match surrounding materials.
Confirm gutter and downspout style with developer to align with design direction. Locate all the above drainage elements items on the roof plan. Ensure the downspout locations are coordinated with the elevations as well as with the Civil drawing underground storm piping and adjacent landscaping. Use the building elevations for placement of the downspouts to avoid openings in walls such as doors, windows, thru-wall vents, and building/site lighting.

7.7.2. Internal Roof Drains

This system should only be designed if required by code or limitations on building height. These will drain to a roof drain near the centre of the roof, through the attic space of the top floor, and continuing to an underground storm main or a detention pond.
Secondary (or emergency) roof drainage is required wherever the buildup of water is detrimental to the roof structure. Secondary drainage shall be provided using sidewall scuppers. The discharge shall be located so that it is readily visible by building occupants.
Downspouts shall connect to the underground storm piping system. Coordinate roof/elevation design, and location of downspouts with Civil underground storm system. Ensure plumbing pipe sizing and civil pipe sizing match and are coordinated.

7.7.3. Building Entrance Canopies

Building entrance canopies shall be stick framed and coordinated with the roof drainage system whenever possible. If premium aluminum canopies are needed, avoid the use of any internal building drainage (i.e. cow tongues). Provide gutters and downspouts.

7.8.Roofing Systems

7.8.1. Single-Ply

Flat roofs shall have a minimum slope of 2% (¼" per foot, per code). The slope shall be achieved using sloped top-chord roof trusses. Crickets, etc., to provide positive water flow to drain locations are achieved using tapered rigid insulation. It is important to graphically note on the roof plan the difference between tapered insulation and sloped structure to achieve positive drainage as both have different cost implications. By graphically denoting the difference, these separate scopes will be better coordinated and priced appropriately at bid.

TPO membrane, white 1.5 mm (60 mil) mechanically fastened (unless regional conditions dictate otherwise).

For roofs with terrace pavers or other construction on top, use membrane thickness as required by the manufacturer.

~~All roofing shall be installed over a 13 mm (½") cover board and RSI 3.52 (R-20) poly-iso insulation (confirm applicable codes for specific RSI requirements). Use tapered insulation to achieve positive drainage. If a Class A roof covering classification to CAN/ULC-S107 is required, use Resista Polyiso~~

Insulation Board by Firestone.

OBC SB-10 / SB-12 for the climate zone | set the roof RSI from the energy compliance path

Show and identify expansion joint locations per coordination with the structural engineer. Ensure the gap is per the engineer's direction and that the joint cover is appropriate for the condition (e.g., roof to wall or roof to roof).

Indicate access to the roof per meeting with the Chief Fire Official. Ensure there is access to all roof levels (e.g., ladders) if required.

All roofing membrane shall be installed up and over the top of standard parapet walls. For taller roof parapets, the roofing shall terminate not less than 200 mm (8") above the roof surface and be mechanically attached.

Include walk mat paths leading to all mechanical equipment on the roof from all roof access points. Ensure roof hatches are 1,070 x 1,070 mm (3'-6" x 3'-6") width minimum.

Provide permanent roof tie-off points on flat roof projects for building courtyards that are inaccessible by lift. Space these tie-off points 6.0 m (20 ft) apart to facilitate façade maintenance and **window cleaning.**

permanent anchors in Ontario fall under the Occupational Health and Safety Act and O. Reg. 213/91, with suspended access anchors designed to CSA Z91 and CAN/CSA-Z271; spacing is an engineered result and requires a specialist design

Slip sheets to be provided under all mechanical equipment.

Show frost-proof hose-bibs on roof, coordinated with plumbing in such a way that all condensers can be reached and served via a 30 m (100 ft) hose.

Show electrical service outlets (either as required by code or for convenience) on roof – coordinated with the electrical engineer.

Show standpipe up to roof if roof access is required (either in stair or next to hatch – confirm with Chief Fire Official and the Ontario Fire Code).

Minimize the number of roof penetrations. Where penetrations occur, set on curbs or pedestals, and bring up through a sheet-metal hood assembly. Do not gang penetrations. Rather, space penetrations apart by at least 450 mm (18”). Do not use pitch pans.

7.8.2. Shingle Roofing

Pitched roofs shall have a minimum slope of–3:12 – depending on the material of the roof. Typical roof pitches are going to be between 4:12 and 6:12 but the architectural style will dictate. Note that any roof slope below 4:12 or above 6:12 requires approval from Patry Group. Ensure you consult with the roof manufacturer for the minimum slope of the material specified.

30-year, 3-tab fibreglass architectural shingles certified to CSA A123.5. Similar in quality to Owens Corning, CertainTeed, or GAF. Colours shall be based on manufacturer’s standard selections. In sloped roof conditions (shingle or metal roof), any opening above the roof (e.g., windows, louvers) shall be a minimum of 200 mm (8”) above the deck to allow for proper flashing.

Ice dam protection membrane shall be applied at all high-risk locations on a roof. Typically, run-in valleys, along building rakes and eaves. Ice dam protection membrane will run up the eave of a roof to 600 mm (24”) past the inside face of the interior wall of a heated space. Metal rake flashing and gutter apron to be specified.

Roof must be properly ventilated. Calculations showing the ventilation requirements must be shown on the prints with the proper amount of eave and roof vents shown.

7.8.3. Metal Roofing

Metal roofing shall be per the design and have a factory applied Kynar or equal finish (unless of a special material such as copper). Specify manufacturer’s standard colours. All underlayment for a metal roof shall be a self-adhered membrane, terminating a minimum of 150 mm (6”) up any adjacent wall assembly.

7.8.4. Decking

For flat and sloped roof systems, specify 11 mm (7/16”) OSB roof decking unless otherwise specified by the Structural Engineer.

In sloped roof conditions (shingle or metal roof), any opening above the roof (e.g., windows, louvers) shall be a minimum of 200 mm (8”) above the deck to allow for proper flashing.

7.8.5. Flashings & Copings

Provide prefinished metal copings with continuous cleat attachment on the outside face of parapet and exposed hex fasteners with neoprene gaskets on the inside face. All inside and outside corners of copings shall be prefabricated at least 300 mm (12”) in either direction of turn. All joints shall have a 150 mm (6”) minimum splice cover set in sealant with 10 mm (3/8”) between coping sections.

7.8.6. Curbs

All equipment or hatch curbs shall be a minimum of 200 mm (8”) tall above the roof surface and at least 600 mm (24”) off any adjacent wall or equipment. All roof access points (e.g., from stairs) shall be a minimum of 200 mm (8”) above the finished roof surface.

7.8.7. Miscellaneous

Condenser units shall be placed on vibration isolation pads, like Mason Industries SLFH. See the applicable code to determine whether the units must be placed on metal stands or on pressure-treated wood sleepers. Metal stands shall be attached to the structure.

Where not required to be attached to the roof structure, roof top equipment shall be installed on pressure-treated wood sleepers over a layer of sacrificial roof membrane attached to protect the primary roof membrane. The condenser units shall be attached to the sleepers using vibration isolators.

All HVAC line sets shall penetrate the roof on a vertical wall if possible. Protect the opening from wind-driven rain using a refrigerant piping roof hood. Use manufacturer's standard details. Provide 1,070 mm (42") parapet walls or guards (2-line rail is okay unless design dictates otherwise) where access to roof or access to service points on equipment is within 3.0 m (10 ft) of the roof edge.

42" is 1,067 mm, below the OBC 3.3.1.18 minimum of 1,070 mm, and rooftop fall protection for maintenance access also falls under the Occupational Health and Safety Act and O. Reg. 851 | confirm guard height and the setback trigger

If an elevator landing is located on a rooftop area, provide a vestibule to protect the elevator shaft from the elements.

7.9.Mock-Up Wall

Moisture Consultant should review the mock-up wall onsite. All projects will be designed with an on-site mock-up wall to be integrated in the drawing set. The mock-up wall shall show as many of the façade materials being used on the project and the transitions between the materials as well as cutaways showing proper installation methods of the materials.

7.9.1. Roofing

Ensure the typical roofing system is included. If there is more than one type (e.g., shingle and single ply), include areas for both types.

7.9.2. Walls

Show sheathing and exterior finishes such as brick, stucco, and siding. Include typical penetrations such as dryer vent, exterior outlet, and conduit penetrating the sheathing. Include the system specified for the building wrap.

7.9.3. Openings

Show both typical window and door openings in a wall.

7.9.4. Balconies

Show the waterproofing membrane system and flashings for the balcony installation. Include the specified method for attachment of railings.

7.10. Storefront Glazing

Storefront is defined as a non-residential, non-load-bearing assembly commercial aluminum entrance systems and windows, usually spanning between the floor slab or knee wall and the building structure above, designed for high use and strength. Storefront spans should be 3,050 mm (10’-0”) or less depending on the spacing of the vertical mullions. Provision for anchorage is made at perimeter conditions. Typically, storefront is only used on the ground floor of a building but can be used up to the second or third floor at common or amenity spaces only. Do not specify storefront for residential unit windows and doors. Storefront is typically centre glazed and is not self-draining.

Storefronts control water infiltration by directing all internal moisture to the sill flashing. Most manufacturers offer sill flashing that fastens to the bottom of the opening prior to installing the storefront framing. A watertight seal is applied over the fastener heads to direct water to the exterior through weep holes at each lite of glass.

If the sill flashing is installed correctly, the most important element in controlling water penetration with storefronts is the proper fastening and sealing of end dams. Without end dams, water will intrude into the jamb locations of the building. To ensure water bypasses the lite of glass, deflectors must be installed wherever a horizontal mullion occurs in storefronts. Without water deflectors, moisture settles on the top of the glass, potentially causing failure of the insulating glass unit seal.
Coordinate and detail mullion spacing accurately in the construction documents addressing performance requirements to make sure standard storefront product can be utilized without adding any additional horizontal or vertical structural members or changing to a curtain wall system.

7.11. Windows

Noise concerns near the project site will require a discussion with Patry Group to confirm if further study by a specialty consultant will be needed to determine additional acoustical measures for window and storefront **design. Specify minimum STC 28.**

environmental noise in Ontario is assessed against MECP Publication NPC-300, commonly required as a condition of site plan approval, and the resulting glazing STC is site-derived; a blanket STC 28 will not satisfy it | set from the noise study.

Specify windows with thermal performance (U-value in W/(m²·K), SHGC and Energy Rating) declared under CSA A440.2/A440.3 as required to meet OBC Part 12 and SB-10. Coordinate specific performance requirements with mechanical engineer.

Confirm that window selection meets the specific exterior building envelope requirements indicated in the structural drawings. Confirm location of vinyl windows vs. storefront, but typically, vinyl windows are to be used at residential units only.

Exterior window colour to be based on the proposed elevation design, materials, and colour selections. Consider white or tan colour. Other colours are often offered as a standard colour but have a premium upcharge. Confirm window colour approach with Patry Group. Always pre-finished. Avoid field colour applications.

Interior window colour in units to be white. Hardware colour to match interior window colour. Specifying the same colour for the inside and outside in common areas is possible as an upcharge. Specify removable window screens at all operable window panels. Screen Frame to match exterior window colour.

All windows to have 100 mm (4”) sash opening regulator stops.

Minimum window size/glazing area for a bedroom is 1,525 x 1,830 mm (5’-0” x 6’-0”) or 2.8 m² (30 ft²). Header height set at 2,440 mm (8’-0”). Sill height is 610 mm (2’-0”).

4” is 101.6 mm and exceeds the 100 mm sphere limit at OBC 3.3.1.19; the stop has been set to 100 mm. A 610 mm sill on an openable window also triggers the OBC 3.3.1.19 guard or limiter provisions where the drop exceeds 600 mm, and bedroom glazing area must satisfy the natural light and egress provisions of the OBC. When architecturally acceptable, single hung or sliding windows

are preferred over casement units. Casement windows are commonly used in buildings where the designer is after a more contemporary design but are a premium over single hung units.

Typically, windows will not be specified on exterior walls at stairs unless necessary as part of building design or code and/or local design regulations. Windows located in stairwells and corridors are to be fixed. Provide adequate number of operable windows and doors to meet outside air requirements. Architect should limit the number of different window types, and specify standard window sizes, based on manufacturer’s standards.

7.12. Patio/Balcony Doors

Provide 2,440 mm (8’-0”) tall units (without transom) to align with window headers

8. PARKING

Parking areas must follow the municipal zoning by-law.

8.1.Parking Space Dimensions

The minimum dimensions for a full-size parking space will be 2,750 x 5,500 mm (9’-0” x 18’-0”), unless dictated differently by the municipal zoning by-law or otherwise requested by Patry Group. A compact parking space will be any size parking space less than the full-size but not less than 2,440 x 4,880 mm (8’-0” x 16’-0”). No more than thirty three percent (33%) of the parking spaces may be designated as a **compact space.**

Confirm with the municipality if compact spaces are allowed. [[CONFIRM . OAA: stall dimensions in Ontario are set by the municipal zoning by-law and are commonly 2.6–2.7 m by 5.2–5.5 m; the converted US figures are larger and will not match the by-law | set from the by-law per project]]

8.2.Parking Ratio

Patry Group requires a minimum of 1 space per unit and prefers 1 space per bedroom, regardless of local zoning by-law for parking requirements, exemptions, reductions, and adjustments. The number of spaces to be provided will be the stricter of local requirements or Patry Group requirements. Parking ratio will vary per project; confirm with Patry Group.

Compact size parking spaces shall be in one (1) or more continuous areas and shall not be intermixed with spaces designed for full size cars.

Utilize shared parking model to maximize parking efficiencies (if applicable). Drive aisles should be minimum 7,300 mm (24’-0”) wide for 90-degree parking, unless dictated differently by code.

Provide visible prospective resident parking with signage. A minimum of two spaces (not including accessible spaces) shall be provided near the leasing office. Consider pedestrian path from parking space to leasing entry. Confirm actual amount of prospective resident parking with Patry Group during the conceptual phase of the project.

Visitor parking needs to be coordinated with Patry Group. Confirm amount to be provided during the conceptual phase of the project. Study phasing and construction activities with Patry Group and the Contractor to determine if paving course is to be specified to handle heavy equipment traffic during the duration of the construction of the project.

8.3. Accessible Parking Requirements

Accessible parking shall be provided following OBC 3.8.3.19, the AODA Design of Public Spaces Standard

**Ontario uses Type A accessible spaces at 3,400 mm
and Type B at 2,400 mm, each with a 1,500 mm access aisle, and sets the required count by total spaces provided | confirm counts and dimensions per project**

Accessible parking spaces and associated loading area shall be specified as concrete and not asphalt. Slope on accessible parking spaces shall not exceed 1.5% in all directions.

Accessible parking spaces shall be located on the shortest accessible route from those spaces to an accessible building entrance. Accessible route to be clearly shown on plans.

Clearly identify accessible parking spaces and specify and detail signage and location as part of the

construction documents.

Identify a minimum headroom clearance of 2,540 mm (8’-4”) for the access route from the deck entrance to the Type A accessible spaces, and from the Type A accessible spaces to the deck exit.

8.4. EV (Electric Vehicle) Parking Requirements

Patry Group to provide specification for standard Electron Charger. Provide EV chargers for 3-5% of total parking spaces. Extend conduit and stub-in 15-20% of total parking. **Patry Group to confirm on a per-project basis.**

EV provision in Ontario is commonly set by the municipal green development standard, which in several municipalities requires a far higher share of EV-ready spaces than these figures, and the installation is governed by CSA C22.1 Section 86 with energy management under Section 8.

8.4.1. Infrastructure Requirements

Basis of Design Charger: Electron Charger Level 2 Electric Car Charger EC-EVC-L2-11kW.

Patry Group to provide EV charging standard details. Coordinate with selected EV Charging vendor for electrical requirements. Specify 100 mm (4”) conduit for future EV chargers. Consolidate EV charging stations to one (1) designated area if possible. EV charging stations placed within structured garages will utilize CAT6 data or Wireless Access Points (WAPs) for connection. EV charging stations placed on roofs of garages or on surface parking areas will utilize cellular network for connection.

EV charging stations should not exceed 45 m (150’) distance from house panel.

8.4.2. Accessible EV Charging Requirements

Refer to 8.3 Accessible Parking Requirements for additional information.

Accessible EV charging spaces require a wider-than-normal parking space at 3,400 mm (11’-2”) wide. The minimum 3,400 mm Ontario Type A accessible space should be confirmed against OBC 3.8.3.19 and the AODA standard, and also checked against local requirements.

An accessible route must be provided from the charger to the access aisle adjacent to the accessible EV charging space. Consider placement of EV charging stations when planning for accessible spaces, as the cord from the charging equipment to the car cannot block the accessible route. Slope should not exceed 1.5% in both directions.

Accessible EV charging spaces should not be labelled or designated as an accessible parking space. This is especially important if it’s the only EV charging station for the project. Provide an accessible aisle(s) for accessible EV charging space(s). The controls for the charging equipment must be located within the reach range and clear floor space required by OBC 3.8 and the Ontario reach range and clear floor space should be confirmed.

It is recommended not to have tactile walking surface indicators at the curb ramp location. This decision is made to prevent raised truncated domes from conflicting with the clear floor space for the EV charger In Ontario tactile walking surface indicators are required under the AODA Design of Public Spaces Standard and CSA/ASC B651 at defined locations including some on private property While these are general recommendations, it is crucial to consult the applicable building code, the AODA Design of Public Spaces Standard and municipal by-laws, as they may have specific requirements that apply to electric vehicle charging stations.

8.5. Parking Access

Patry Group preference is rolling (overhead) gates for structured parking garages, similar to Rytec, Spiral FV high speed roll-up door if headroom allows at access points. For other applications, such as surface parking areas, specify a sliding gate with an operator like DoorKing 9100-080 Residential/Commercial slide gate operator. Do not specify an aluminum grille gate / door at garage access points.

Gates should be located to allow for 2-3 cars in a row behind the gate in a straight line (e.g., not around a bend). Do not show a parking space(s) against a gate. First space shall allow for a parked car to back out of a space and maneuver without hitting the gate.

Provide pedestrian gates adjacent to vehicular gates to allow clear pedestrian egress circulation where the secured vehicular gate is provided, particularly in parking decks. For combined public and private structured garages, consider paths of egress and access control points to ensure resident-occupied areas are secured from public areas.

8.6. Structured Parking

Specify security screen at ground level exterior openings of structured parking to minimize break ins.
Ramp slopes should not exceed 5%, in some cases this can be increased but not exceed 6%. Do not provide parking on ramp surfaces exceeding a slope of 6%. For a grade difference of 8% or more, provide a transition or “blend”. The transition must be half the slope of the ramp to prevent vehicles from bottoming out when accessing the ramp. For example, If the slope of an 11.0 m (36’) long jump ramp is 10%, use a 5% blend for approximately 3.0 m (10’) on each end. Quick ramp areas should not exceed 15%.

For cast in place and precast parking decks, traffic coating should be installed over any interior space within garages such as electrical rooms, maintenance shops, bike rooms, etc. Extend traffic coating 600-900 mm (2-3 ft) beyond footprint of applicable room(s) below.

Coordinate and specify on the drawings top of slab elevation at all access points, including stair doors, and all doors between the parking areas and residential buildings.

Coordinate delivery of the Geotechnical report to the Structural Engineer prior to completion of schematic Phase of the project.

At garage entry, specify adequate cabling/power protected by concrete filled steel bollards or median for garage access points with ground-based entry loops.

Specify guardrail at interior wall/opening at ramps. Coordinate details with Precast Contractor, Structural Engineer and provide typical connection details in the construction documents.

Specify expansion joint materials, provide details and locations as part of the construction documents for all typical conditions between the residential buildings and parking structure.

Provide 4.5 kg (10 lb) extinguishers in parking decks as required by the Ontario Fire Code. Provide elevator/stair lobby enclosure at top level of the deck. Specify an awning or metal canopy over doors at elevator/stair lobbies located at the top level of the deck.

Coordinate with Plumbing Engineer the location of rainwater piping and drains. Storm drain lines for each level are typically routed down through the centre of the parking deck.

Where possible, parking deck stairs shall serve as vertical means of egress for adjacent apartment building/units. Typically, an elevator is provided within the parking structure since the structure in most cases is part of the first delivery phase of the project. Coordinate stair tower and elevator penthouse roof drainage.

Specify waterproofing system on all parking structure surfaces above occupied space. Confirm standpipe locations are not in the egress path of travel in the stair landings.

Urban projects may dictate that a roof top amenity, pool, and deck area be provided as part of the development. When provided, the design team should consider the following:

a) Confirm the applicable building code and requirements if the parking deck under the amenity area should be sprinklered or other fire protection measures shall be specified.
b) Evaluate the occupant load and egress management concept for the deck structure as stairs may be required to become wider to accommodate the additional assembly occupancy load at the top level of the deck.
c) Coordinate grading and drainage plan with Landscape, Precast Contractor, Structural Engineer and Plumbing Engineer.
d) The Architect shall advise Patry Group that the pool contractor and designer be involved in the coordination process during the early stages of the project.

Other spaces found in the parking deck include the following areas. Open parking deck corners areas are ideal to accommodate these spaces. Confirm with Patry Group. Traffic coating to be applied on decking above all rooms located in the parking garage.

Other potential spaces in the garage include garbage chute access rooms and main garbage room areas. When provided, the deck may also include truck maneuvering area and additional overhead area for garbage container pickup. Main utility rooms, such as water entry, main electrical, bike storage rooms, building maintenance room, resident storage areas, etc. may also be included.

Confirm occupancy requirements and ensure adequate exiting. Provide clear 1,525 mm (5’-0”) minimum access path to all exit stairs. If parking is located near to an exit door, provide a bollard next to the exit path so a car cannot block or reduce the exit path width. Locate exit signs in such manner that no point in the deck is greater than 30 m (100’) from an exit sign.

Provide openings in the interior shear walls to allow people and cars to see around walls. Run calculations to determine if the structured deck is considered open. Indicate finish floor elevations on all floor plans.

Where openings abut rooflines, utilize security or safety screens to prevent resident access to roof areas.

Coordinate specific details and requirements for the wall between the parking deck and the residential buildings with the authority having jurisdiction.

Typically storm detention facilities are considered under the parking deck structure due to site space limitations, when allowed by code. When provided, coordinate with Civil and Structural Engineer prior to completing the design development phase of the project.

Specify precast spandrel panels at exterior elevations. Coordinate that a minimum of 1,070 mm (42”) high **guard is provided above the top of the wash, at all locations.**

42” is 1,067 mm, below the OBC 3.3.1.18 minimum of 1,070 mm; rounded up. Vehicle impact barriers on parking structures are a separate design to CSA S413 | confirm both

Minimize the use of cable rail at exterior elevations.

Identify and coordinate with the Precast Contractor floor openings such as garbage chutes, mechanical ventilation ducts, storm, etc.
Deck design preference to be naturally ventilated, but not at the expense of rentable efficiencies and exterior aesthetics. Confirm approach with Patry Group and verify local design guidelines.

8.6.1. Precast Parking Deck

Structured parking for wrap products is typically designed as a precast deck. All precast surfaces will be field topped. Confirm requirements with Patry Group at the conceptual phase of the project.
On the edge-of-slab drawings, coordinate with the Structural Engineer and Precast contractor and identify wash locations and areas where cast-in-place will be used. Elevator and stair shaft walls located in a precast parking structure to be pre-cast concrete panels. Stairs will be precast. If possible, the top level of parking deck should not be higher than the highest occupied floor. Confirm that the parking deck layout meets fire access requirements. Confirm proposed concept with the Chief Fire Official.

The precast parking deck super structure is designed by a specialty engineer. Identify the roles and responsibilities of the Specialty Engineer and the Engineer of Record. Structural column spans may vary between precast manufacturers.

Confirm requirements and coordinate with the Structural

Engineer during the design development phase of the project.

Parking deck shop drawings may be required for permitting. Coordinate and confirm requirements with the authority having jurisdiction during the design phase of the project.

The foundations for the deck are designed by the Structural Engineer of Record. Coordinate grading, foundation and retaining walls with Structural and Civil Engineer.

The Architect will provide a coordinated edge-of slab-drawing for the slab on grade. This edge of slab shall consider precast tees camber and lower elevation points towards one end of the tees.

Coordinate delivery to the Structural Engineer of the parking deck structure loads for foundation design at least 4 weeks prior to releasing foundation/building permit set or GMP set of documents.

Architect should coordinate embeds, bollards, railing, and all other deck penetration locations with Structural Engineer and Precast contractor.

8.6.2. Cast-in-Place Parking Deck

For cast-in-place parking decks, the Structural Engineer of record designs the complete cast in place concrete deck structure, including foundations. Structural column grid should generally be based on an 8.2 x 9.1 m (27’ x 30’) max span. Confirm specific requirements with the Structural Engineer.

Typically, 200 mm (8”) post tensioned slabs. Column size and configuration varies.

8.7. Surface Parking

Unless otherwise specified by Patry Group or other areas in this section, specify asphalt paving and coordinate details with Civil Engineer. Provide heavy duty asphalt in drive aisles and at garbage enclosure, and light duty asphalt in parking areas. Confirm with the municipal zoning by-law and design guidelines minimum landscaping requirements. Coordinate with Civil Engineer and Landscape Architect. Confirm local requirements or market standards for carports, and discuss if fully-cantilevered or semi-cantilevered carports should be considered with Patry Group Development and PreConstruction.

8.8. Enclosed Tuck-Under Parking

The minimum width of the standard garages shall be 3,500 mm (11’-6”) clear. The building demising walls from above will determine the width. Best practice is to carry the demising walls all the way down to the foundation. This will avoid the cost for additional structural members to carry the loads. The minimum depth of the garages shall be 6,100 mm (20’-0”) clear. However, the depth of the garages will be determined by the depth of units above. Explore opportunities to add resident storage rooms between the back of the garages and the common corridors.

Refer to 1.1 Building Massing section of this manual for additional information.
Overhead garage door should be 2,750 mm (9’-0”) wide by 2,135 mm (7’-0”) high.

Exterior walls and ceilings to be insulated. Interior walls of the garages to be finished to a level 3 finish and ready for Paint. Painting of the garage interiors will be optional.
Provide carbon monoxide alarms in units above or adjacent to garages as required by OBC 9.33.4 and O. Reg. 194/14. Garages are to be protected with a fire suppression system installed to NFPA 13 as referenced and modified by OBC 3.2.5.
Provide electrical outlet for garage door opener and one GFCI receptacle on back wall of garage. Provide keyless fixture on switch. Provide exterior coach lights.

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directly to the bottom of the floor trusses, a layer of 13 mm (½”) resilient channels running perpendicular to the trusses spaced at 300 mm (12”) O.C., and two additional layers 15.9 mm (5/8”) type ‘C’ gypsum board panel.

Specify for all conditions where a 2 h fire separation is required, including floor/ceiling assembly between main garbage room area and residential units.

9.16. Assembly Design 16 – Residential Unit to Building Services Area Floor-Ceiling Assembly

Floor System 16 LVT, Ceramic Tile Floor Covering, 2 h Fire-Resistance Rating

UL Design Number L577

STC Rating, assumed 61 (without floor covering) minimum

IIC Rating, Assumed 55 (LVT) and 50 FIIC (ceramic tile) minimum

The system consists of vinyl/wood plank or tile floor covering, over 19 mm (3/4”) gypcrete installed over Acousti-Mat I (nominal 3 mm / 1/8” thick), directly installed over 19 mm (¾”) floor sheathing. Floor sheathing to be installed on 460 mm (18”) parallel chord trusses. 90 mm (3 ½”) RSI 1.94 (R-11) RSI 5.28 (R-30) glass fibre insulation attached the underside of floor sheathing in the floor truss cavity or draped over the bottom chord of the floor truss and gypsum board membrane in the floor cavity. The ceiling system is installed to the bottom of the floor trusses and consists of one layer 15.9 mm (5/8”) gypsum board panel installed directly to the bottom of the floor trusses, a layer of 13 mm (½”) resilient channels running perpendicular to the trusses spaced at 300 mm (12”) O.C., and two additional layers 15.9 mm (5/8”) type ‘C’ gypsum board panel.

*Specify for all conditions where a 2 h fire separation is required, including floor/ceiling assembly between main garbage room area and residential units.