



ST. PATRICK'S HOME SENIOR APARTMENTS

URBAN DESIGN BRIEF

PREPARED BY

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FOR

ST. PATRICK'S HOME OF OTTAWA



1.0 Introduction

Edward J. Cuhaci and Associates Architects Inc. (EJC) has been asked by St. Patrick’s Home of Ottawa to design a new rental apartment building for seniors at their current location.

Municipal Address: 2865 Riverside Drive, Ottawa, Ontario

Legal Description: Parts of Lots 45, 46 and Registered Plan 66 and part of Lot 23 Junction Gore Geographic Township of Gloucester City of Ottawa

St. Patricks Home of Ottawa wishes to construct a new seven-storey rental apartment building for seniors, approximately 10,390 square metres (111,837 square feet) in gross floor area on the same property as the St. Patrick’s Home, located north of the existing building. The property is located within the Outer Urban Transect of the Official Plan, zoning designation R5A[2753] H(24).

Vision

St. Patrick’s Home vision is to provide housing for seniors where everyone feels supported and cared for. The Vision is for the development of the site next to the existing St. Patrick’s Home building to serve the seniors in the community with appropriate and affordable housing in a welcoming supportive community.

St. Patrick’s Home of Ottawa’s Mission and Values are built on heritage, values and respect and the spiritual legacy of the Sisters of the Immaculate Conception. The goal of St. Patrick’s Home is to create a community of continuum care and improved quality of life for seniors.



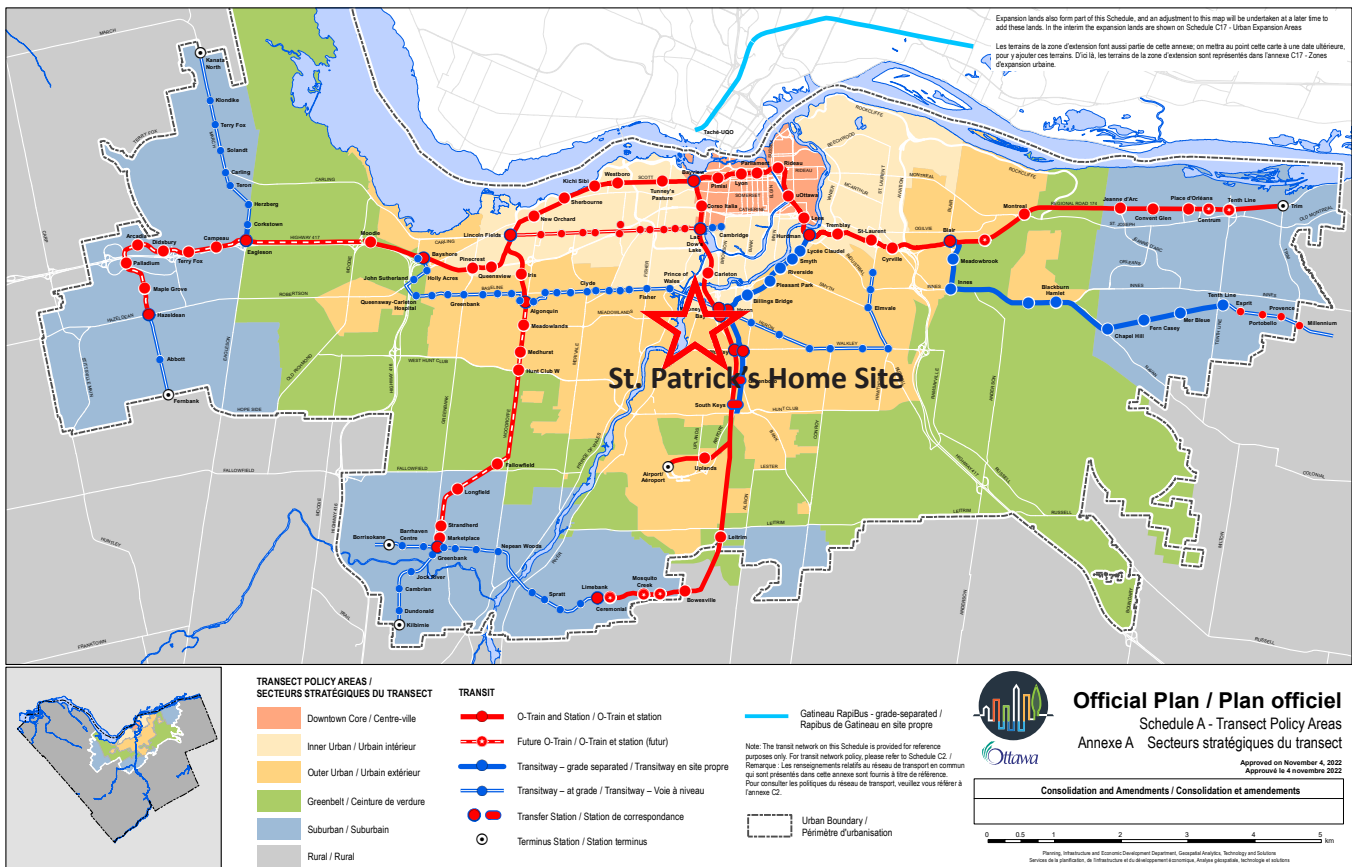


Figure 1.1: City of Ottawa New Official Plan Schedule

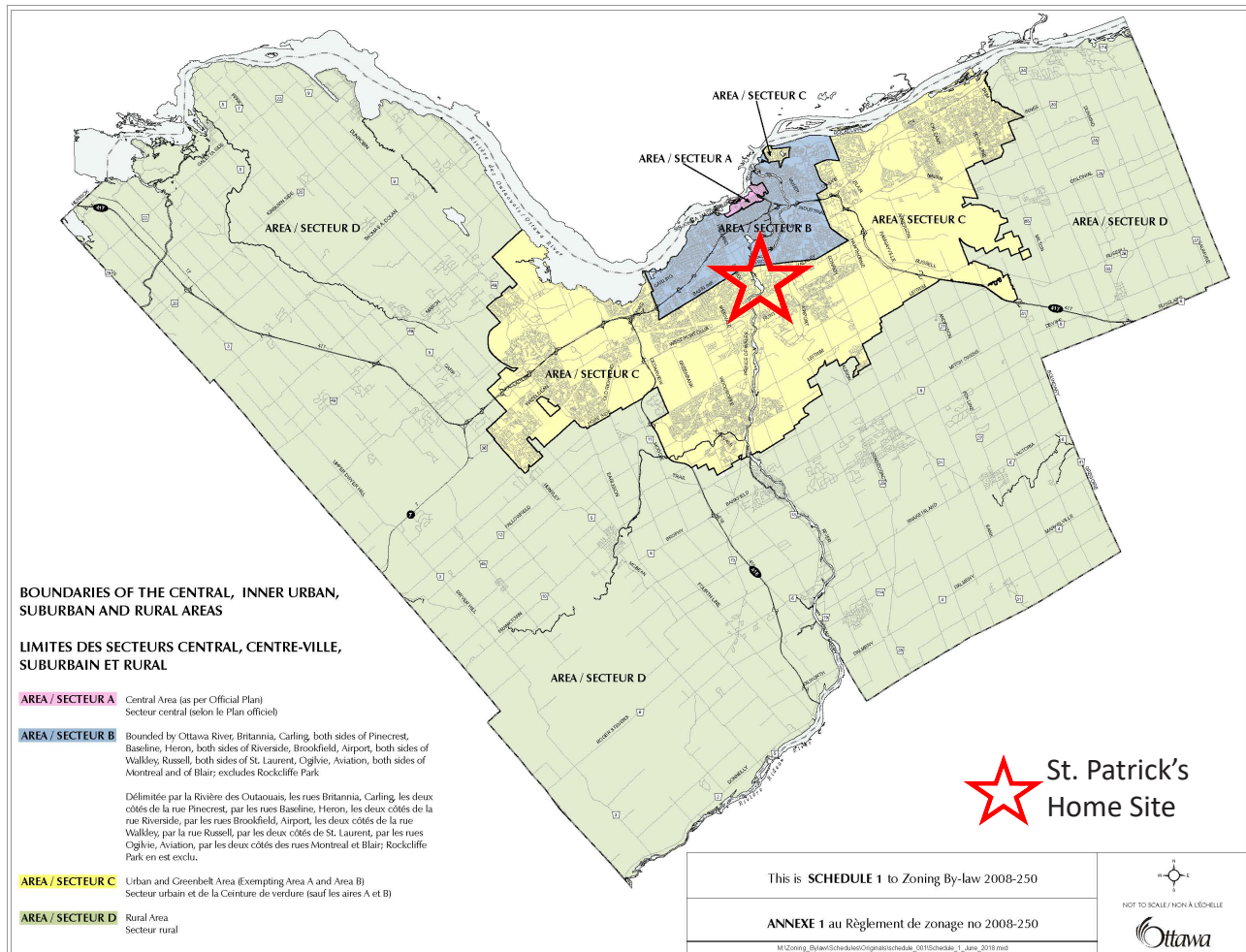


Figure 1.2: City of Ottawa Schedule 1 Zoning By-Law

2.0 Site & Existing Context

2.1 Existing Context

The location of the proposed apartment building is located on the east side of Riverside Drive, south of Hog's Back Road. The lot area is 24,387 square metres with approximately 126 metres of frontage along Riverside Drive.

The zoning designation of this site is Residential Fifth Density Zone R5A[2753]H(24). St. Patrick's Home currently occupies the south side of the lot with vehicle access points along Riverside Drive and parking on the north-east side. The surroundings of the site include:

NORTH	Some businesses, including Canadian Labour Congress and The War Amps.
EAST	Low to medium density residential homes in the Riverside Park neighbourhood.
SOUTH	Residential and general mixed use buildings, including Riverside Mall, The Denbury (an apartment/condo building), and YSB Riverside (supportive housing for youth)
WEST	Mooney's Bay Park and Terry Fox Athletic Facility across Riverside Drive.

Photographs of the existing site:

- 1 At the northern vehicle entrance, facing east, looking at the existing parking lot.
- 2 Along the northern vehicle entrance, facing south, looking at the existing site and St. Patrick's Home.
- 3 In the existing parking lot, facing south-west, looking at the existing site and vegetation.
- 4 A view of the existing walking paths and outdoor seating area.
- 5 Looking at the existing site from the outdoor seating area, facing north-west.
- 6 Viewing the west side of the site from the southern vehicle entrance, along Riverside Drive.
- 7 From Riverside Drive, viewing the St. Patrick's Home of Ottawa sign, facing north-east.



Figure 2.1: Aerial 3D view of the site and surrounding area.

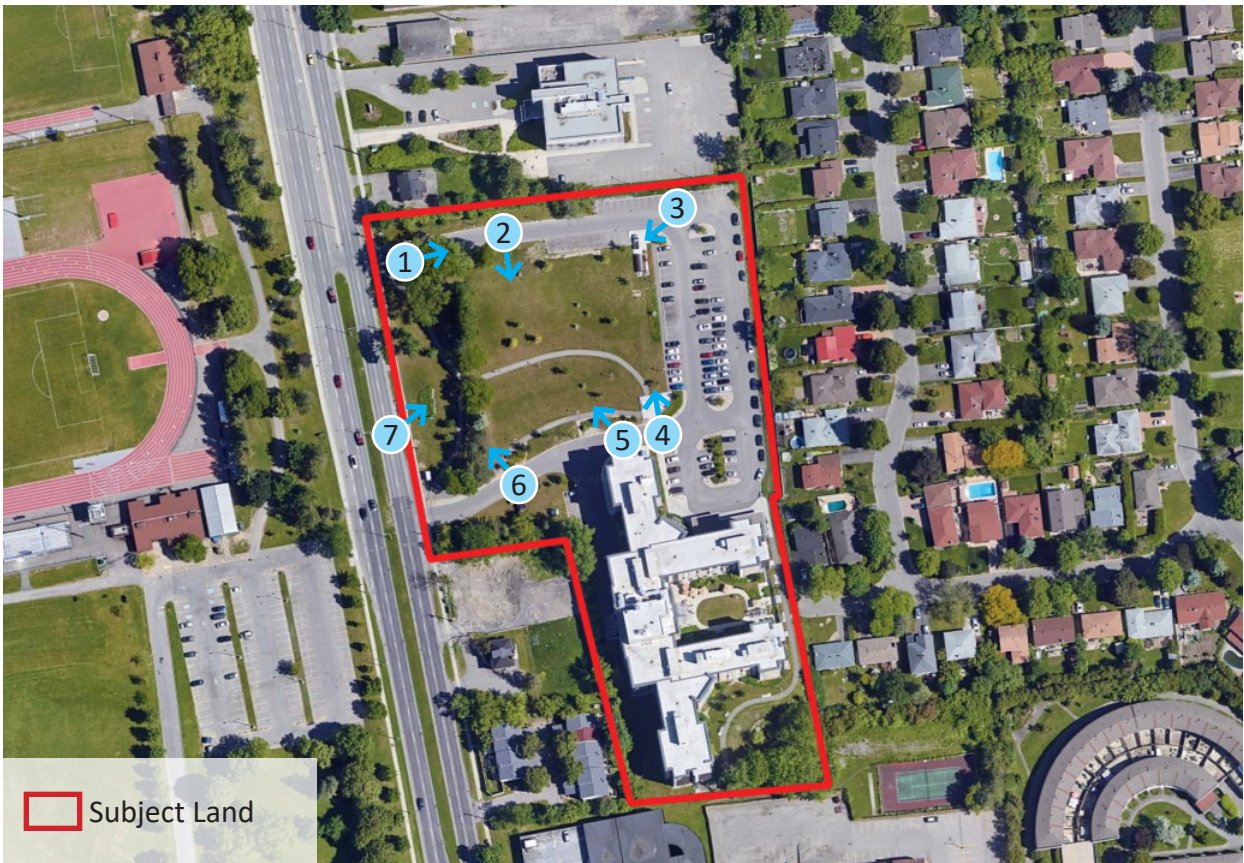


Figure 2.2: Aerial view of the site and locations of the following pictures.



Figure 2.3: Photographs of existing site for context

3.0 Design Proposal

3.1 Design Brief

The design proposal consists of a seven-storey rental apartment building for seniors with a gross floor area of 10,390 square metres (111,837 square feet) on the 24,387 square metre site. Development of the site will include a total of 205 parking spaces, 8 of which are barrier-free, 36 new bicycle parking spaces, walking paths through the site, and an outdoor courtyard and gazebo.

The proposed building contains 14 two-bedroom apartments, 57 one-bedroom apartments, 2 studio apartments, and 60 bedrooms contained in 6 urban cottage units (co-housing).



Figure 3.1: 3D Massing View



Legend





-  Vehicular Entrances
-  Bike Racks
-  Pedestrian Circulation
-  Landscape

Figure 3.2: Site plan showing landscape design and principal elements

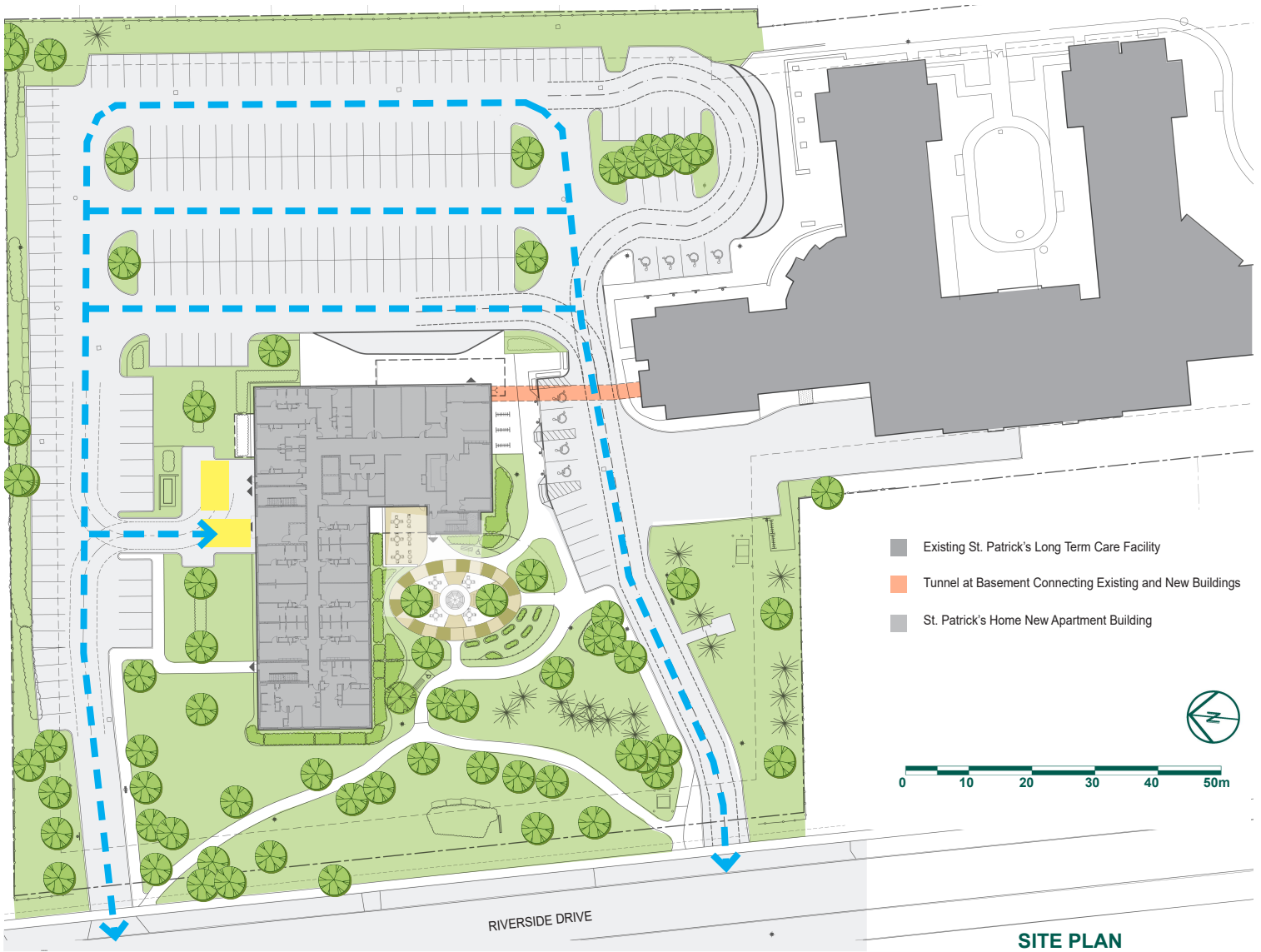


Figure 3.3: Site plan showing vehicular movement and loading area

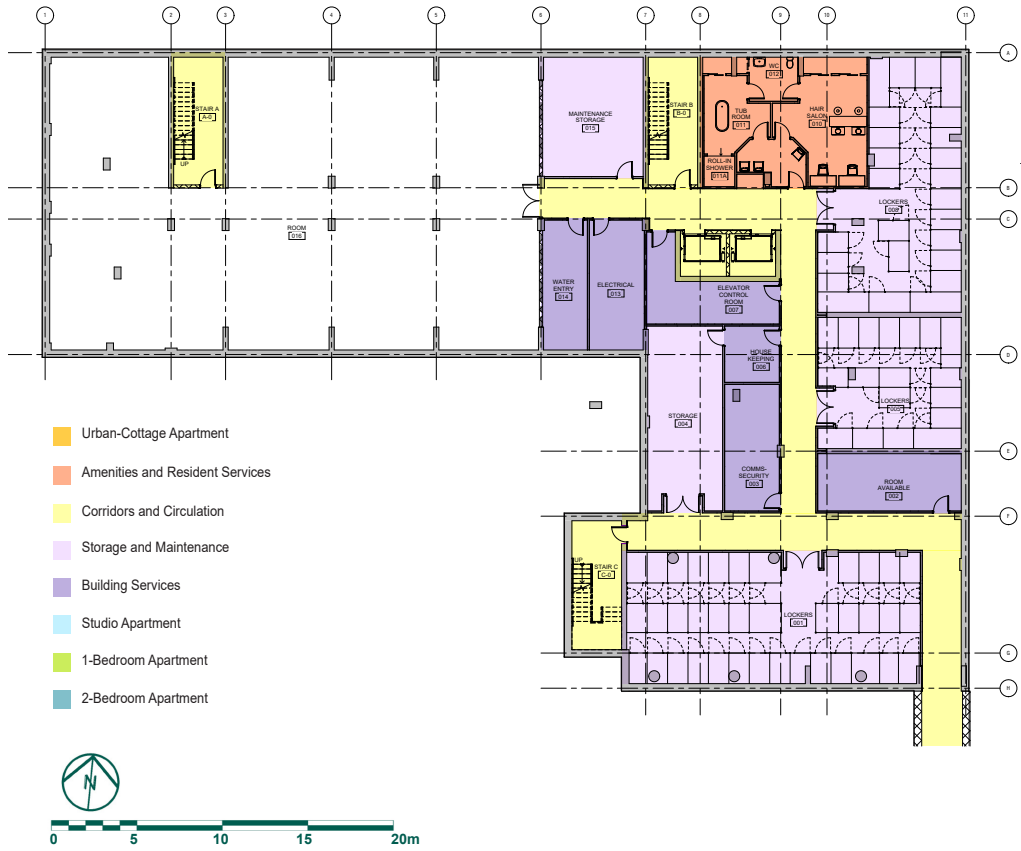


View 1



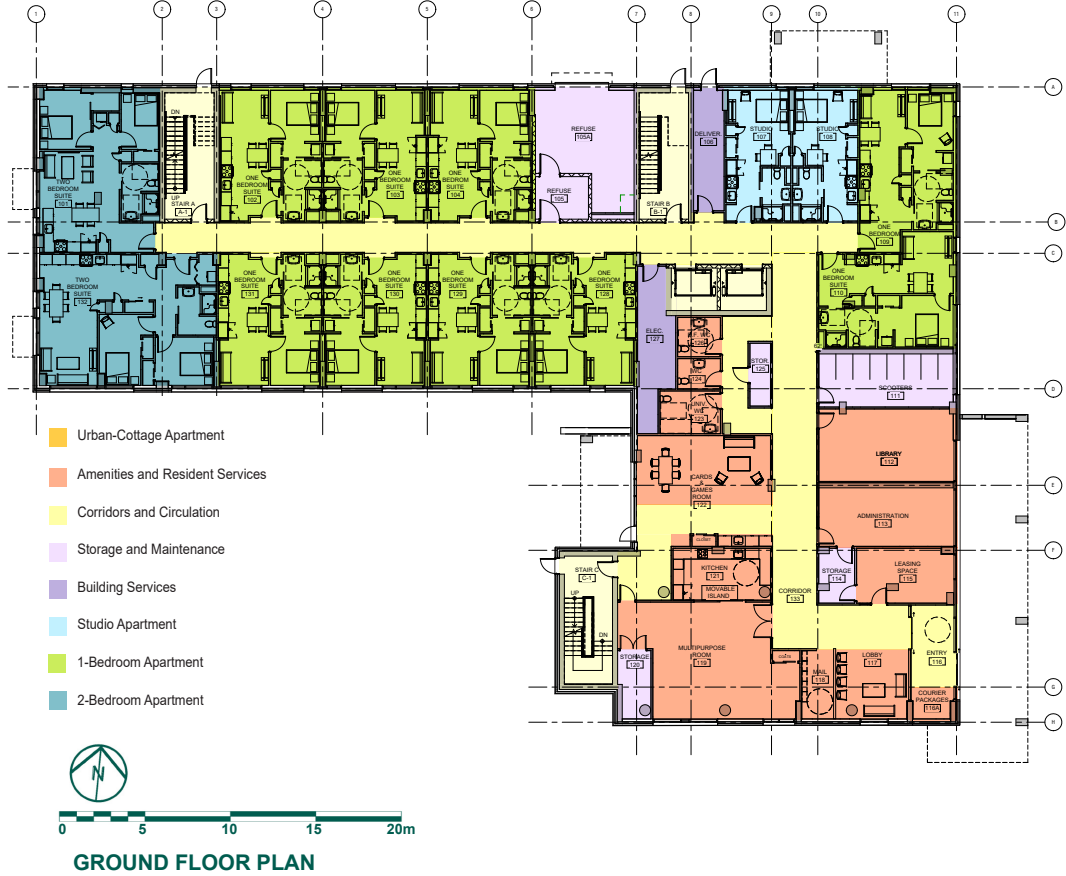
View 2

Figure 3.4: Perspectives of the proposed apartment building



BASEMENT PLAN

Figure 3.5: Basement Plan



GROUND FLOOR PLAN

Figure 3.6: Ground Floor Plan



TYPICAL FLOOR PLAN

Figure 3.7: Typical Floor Plan

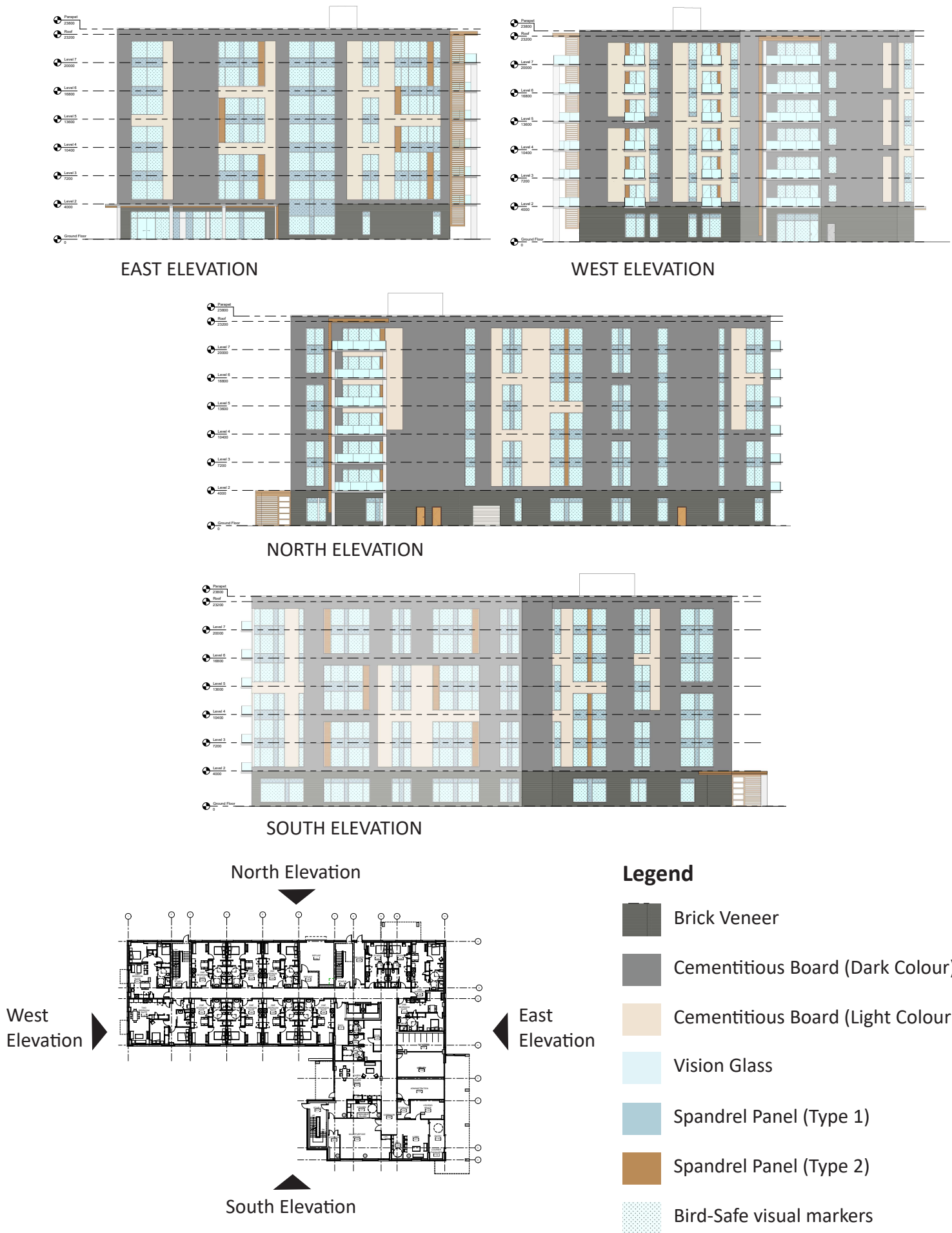


Figure 3.8: Proposed elevations

4.0 Sustainability

4.1 HVAC

The Mechanical system for the new senior's residence must simultaneously provide a high level of occupant comfort, due to the age of the senior residents, while also taking advantage of modern HVAC technologies to meet the project's sustainability goals, reduce operating costs, and to be cost-effectively maintained by available personnel. To meet these requirements and criteria, a variable refrigerant flow (VRF) was selected for its sustainability benefits, for the heating and cooling of the individual suites.

A VRF system allows for simultaneous heating and cooling of individual suites, while transferring heat to spaces that need it, or rejecting the heat through a rooftop condenser. The ability to move the heating or cooling load around the building provides operating cost benefits. The ability to heat and cool regardless of the time of year also provides the occupants with ultimate individual space temperature control. However, VRF systems are limited and cannot provide adequate heating on very cold winter days in Ottawa, therefore auxiliary heat will be provided to make-up the additional heating load.

Each suite will be equipped with a vertical VRF unit that draws in air from the room space, conditions it, and discharges it throughout the suite through HVAC ductwork located within the unit's bulkheads.

The VRF system will have multiple centralized piping risers running vertically through the entire building, basement to roof level. Each floor will incorporate branch piping distribution through the heat recovery refrigeration boxes to the units located within the suites. Ventilation for the suites will be provided by ceiling mounted Energy Recovery Ventilators (ERVs) located in the ceiling spaces of the suite's washrooms. These units will exhaust air from the washrooms, extract the energy from the exhaust air stream and transfer it to the incoming outdoor air supply, which will be delivered directly into the occupied space.

Another benefit of VRF systems is the ability to eliminate the need for a mechanical penthouse, and also provide the net zero-carbon approach to conditioning the building. VRF systems also greatly decrease the need for rooftop Air Handling Units which in-turn reduces the mechanical noise being emitted from the building to the neighbourhood. Please refer to the Noise and Vibration study which forms a component of this Design Brief..

4.2 Site

The site planning for the new seniors building was undertaken with the goal of retaining as many healthy existing trees as possible and to plant numerous new trees to increase the tree canopy. The front of the property facing Riverside Dr. maximizes retained trees and new to provide ample shade for the residents and to also provide a noise buffer from the traffic along Riverside Dr. In several locations, such as the central exterior courtyard, drought-tolerant species plants will be planted along with permeable hard landscaping to improve water conservation.

Wherever feasible and practical, the existing internal vehicular roadway network and parking surfaces have been retained and reorganized to suit the new circulation arrangement. Areas to the perimeter of the new construction were identified which could be reused to minimize the extent of new asphalt.



Figure 4.1: Example of drought-tolerant plants

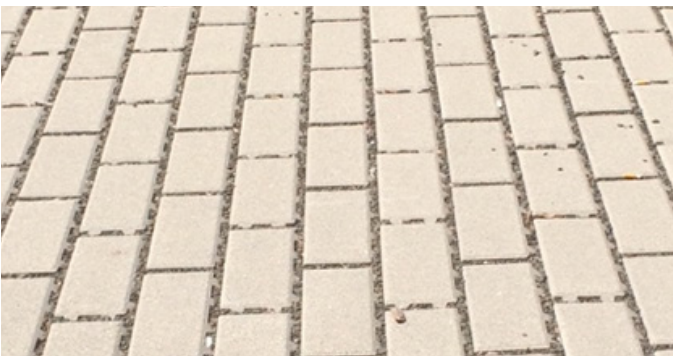


Figure 4.3: Example of permeable hard landscaping

4.3 Lighting

All exterior building fixtures will be energy efficient LED outdoor rated fixtures. All parking lot and exterior pathway fixtures will also be LED with full cut-off type located to comply with Municipal by-laws restricting light trespassing to adjacent properties and to comply with the Dark Sky requirements. All exterior lighting will be automatically controlled by photocell provided through a timeclock providing control in compliance with SB-10. All interior light fixtures will be LED types, with most to be controlled through occupancy sensors and centralized controls.



Figure 4.2: Example of energy efficient LED outdoor light

4.4 Plumbing

The domestic hot water will be provided through a dedicated high efficiency natural gas fired condensing type domestic hot water generation system to meet the demands of the residents and to meet increased energy efficiency requirements. This system will be located in the basement.

A domestic hot water recirculation system is proposed to maintain hot water distribution temperatures at all points within the system. This approach will reduce water consumption through low run times.

Additionally, water saving plumbing fixtures will be utilized throughout the facility to conserve water usage.

4.5 Building Controls

To control the various heating and ventilation, air conditioning, and lighting systems, a central building automation system (BAS) will be installed. This system will enable an operations manager to change heating and cooling setpoints. Some individual unit controls will be linked to provide the occupants with some control over the heating and cooling setpoints. This arrangement will provide user comfort will maintaining tight control on the energy usage.

4.6 Future Roof Consideration

The roof area is open and does not incorporate a Mechanical Penthouse, only a single make-up air handling unit. This arrangement and the orientation of the building will readily support the installation of future photovoltaic grids to generate local renewable energy while reducing greenhouse gas emissions. A photovoltaic system is possible, but the current planning does not include for a system, though it is being considered. If the system is viable from an economic perspective, it may be advanced.

4.7 Bird-Safe Glass Implementation

The City of Ottawa Bird-Safe Design Guideline state ways to make buildings more bird-friendly by different measures. Guideline 2 is about minimizing the transparency and reflectivity of glazing. To help reduce the risk of bird collisions with windows by making the glass more visible to birds, we will be implementing bird-safe glass on all windows by using visual markers on the exterior of the glass. Refer to elevations for location.



Figure 4.4: Example of Bird-Safe glass using visual markers