

In September 2014 a schematic design for the new 500 bed Student Residence 2017 was presented to the Building Program Committee by the Facilities team and received approval . The scheme reflected the Program Committee's previous recommendations for a terraced massing and a six storey form adjacent to the pedestrian pathway system. A number of recommendations were made by the Program Committee including consideration to introduce suites at the lower level with a sunken courtyard and vehicular access to the building for accessibility, deliveries and garbage removal. The Architects were instructed to incorporate these recommendations and modified the building design and site planning accordingly. Furthermore, a tunnel connection was studied to link the existing tunnel system to the new student residence building.

#### Summary of Features and Assumptions

The schematic design incorporates a terraced massing from 14 storeys transitioning to 12 storeys and 6 storeys along the eastern flank and 7 storeys along the western flank. The lower level accommodates a series of suites which address the sunken courtyard and the pond. The main entrance is located in the south east corner of the 6 storey wing (Level 2) with a second entrance further north and adjacent to the pedestrian walkway offering direct access to the residence lobby and resident elevator core.

The concept for the suites incorporates an apartment style arrangement with a kitchen, dining area and living room, common storage closet and 3 piece bathroom. The bedrooms are equipped a closet and a workstations and a twin bed.

The ground floor common area accommodates amenities including café, fitness, theatre, games room, multi-purpose space and a study room with public washrooms. A resident lobby accommodates a reception space and garbage and recycling room with access to the loading area. An elevator core, exit stairwell and study room are located within the north east inside corner. The remainder of the ground floor accommodates two and four bedroom suites as well as accessible suites. A public elevator provides access to the lower level for students entering from the tunnel to the second level café and public spaces.

The lower level L1 accommodates an amenity room, mechanical and electrical rooms, resident laundry, service rooms for IT/telephone, housekeeping and storage. The tunnel is connected to the basement with a secure entrance and direct access to the public and residence elevators. There are two banks of two elevators with 3 cabs and 1 spare shaft for a future fourth elevator with two exit stairs in the inside corner core areas. The remainder of the lower level accommodates two and four bedroom suites as well as accessible suites overlooking the courtyard and the pond and an amenity room with access to the courtyard at grade. IT rooms are provided from the lower level in the north east inside corner extending to the 14 storey tower. The lower level provides for access to replace mini sub transformers through large door openings.

The third level accommodates two and four bedroom suites with an opening over the entrance lobby with a glazed corridor link to the exit stairwell. A single bachelor suite and accessible suites are provided in the east and west wings. The elevator and exit stair core extends from the lower level to the 14<sup>th</sup> level.

Levels 3 to 7 are typical with two and four bedroom suites as well as a common study room located adjacent to two banks of elevators located in the inside corners, there are two electrical rooms and IT rooms and exit stairs located within the floor plate and accessible from the corridor.

Levels 8 to 12 are typical with two and four bedroom suites as well as a common study room located adjacent to the elevator cores located in the inside corners, there are two electrical rooms and IT rooms and exit stairs located within the floor plate and accessible from the corridor.

Levels 13 and 14 are typical with two and four bedroom suites. There is a study room located adjacent to the elevator cores located in the inside corners, there are two electrical rooms and IT rooms and exit stairs located within the floor plate and accessible from the corridor. On the 13<sup>th</sup> level a commons room is located with an exterior roof top amenity space.

The site plan is in keeping with the Campus Master Plan and the lower wings are located north of Leeds House by approximately 11 m to the west wing (from the northerly wall at the lower level of Leeds House) and 19 m to the east wing (from the north face of Leeds House). A sunken courtyard is accessible at grade to an amenity room on L1. The courtyard will be provided with a patio, seating and a gas barbeque. The campus pedestrian system is extended from south of Leeds House at the upper main level and from the lower level (via a tunnel extension) adjacent to Stormont and Dundas Residences. A fire lane is provided along the face of Leeds House providing access to the Siamese connection at the entrance to Leeds House. A new fire lane is provided through the parking lot and adjacent to the east and north face of the new residence. An apron space is provided adjacent to the east face of the new residence which can accommodate an outdoor sitting area. There is substantial space at the apron to the new residence for bicycle stands and move in and move out space.

A landscape plan incorporates street trees along the pathway system and adjacent to the terrace facing the east side of the new residence and separating the pedestrian surface from the fire lane.

For common and suite area summary and suite types and mix refer to attached area summary tables. The gross constructed area based on the most recent schematic design is approximately 236,000 sf.

The suites were designed as apartment style suites with a common bathroom per two bedroom suite, living and dining area and kitchen area and the four bedroom suites have two bathrooms with a living and dining and kitchen area.

The building is to be constructed of a reinforced concrete structure resting on conventional footings. Due to the depth of the glacial till in the area of the west wing there will be a series of vertical cut trenches filled with lean concrete to support conventional footings and resting on the glacial till in accordance with the geo technical report prepared by Paterson Associates.

The exterior envelope will be constructed of a combination of glazing systems including glass curtain wall with glazed spandrel panels, window wall with insulated aluminum panels between floors and as vertical insulated aluminum panels between windows, masonry walls with precast concrete sills and headers with running courses of precast act to reduce the massing. The roofing system will be constructed of R30 insulation, protection board and a double ply membrane.

The interior floor finishes will comprise porcelain tile in the common amenity areas on the ground floor, lower level amenity room, upper level amenity room (13<sup>th</sup> floor) and corridors in the basement level residence elevator lobby (extending from the tunnel connection to the elevators), main level residence lobby/reception area and elevator lobby, garbage room and mail room. The corridors adjacent to all suites will have carpet tile and the suites will have sheet vinyl flooring and porcelain tile in the bathrooms. The electrical rooms and IT rooms will have vinyl composite tile. The laundry rooms will have porcelain tile. The stairwell floors will be treated with a non-slip finish.

The ceilings throughout the building will be gypsum board with bulkheads in the suites for ductwork. The corridor wall construction will be fire rated gypsum board and common rooms will be provided with glass panels to corridors for safety. Suite entrances will be provided with a side panel with a wall sconce and suite number to identify the suite.

The suites will be provided with MDF trim or painted pine. Window sills will be provided with corian sills. All kitchens will receive a ceramic back splash.

The elevator fronts and the floor corridor area in front of the elevators on all floors will receive a porcelain wall and floor tile finish. Elevator cabs will have a stainless steel finish with arborite panels and porcelain tile flooring.

All common area kitchens will have granite counter tops and stainless steel sinks. All common area built in millwork will have corian counter tops including computer work stations in the lobby café area and residence lobby. The exercise room will have a rubber flooring system to accommodate weight and exercise equipment. A gas fire place with mantle and hearth will be provided in the common amenity area on the ground floor. The theatre and games room will have architectural finishes on the walls and ceilings. The common amenity area will be fitted with a suspended wood ceiling system or facsimile.

The roof top areas will receive a patio stone tile system with sleepers and levelers.

The building hardware will suit the standard specification for Carleton including security hardware and security cameras with back feeds.

The duct shafts will be core board with CH studs for all riser shafts for ventilation supply and exhaust, plumbing risers and roof drains.

The loading dock will be equipped with insulated coiling door and automatic lift hardware.

All storage rooms will be equipped with bicycle mounting equipment and/or resident storage lockers.