

Site Plan Options Analysis

The overall development follows an approach that prioritizes efficiency and simplicity in laying out a design for the New Civic Development. The first phase of the New Hospital includes approximately 2.5 million square feet of space to accommodate the tertiary trauma, neurosciences, vascular and cardiac facility as a replacement for the existing Civic Campus. It will include outpatient, inpatient, diagnostic, surgical and treatment facilities as well as the integration of research and education.

A number of Site Plan Options were analyzed during the Ministry of Health (MOH) Stage 1 Submission relative to the configuration of the facility and the unique Site characteristics. Three general approaches to generic massing on the site were developed at the time: a large single building, an extension of the urban grid south of Carling Avenue, and a campus of buildings. Highlights of these options evaluated are presented below.



Single Building Concept

Advantages

- Consolidated Hospital Functions
- Well-connected Facility

Challenges

- Building mass adjacent to Farm
- Minimal site permeability
- Distance from transit
- Few mature trees preserved



Urban Extension Concept

Advantages

- Continuation of view corridors
- Connected hospital functions
- Multiple access points

Challenges

- No connection to Carling Avenue
- Most buildings near the Farm
- Potential traffic through the Farm
- Minimal flat open space



Campus Plan Concept

Advantages

- Open space options
- Access to natural light
- Improved onsite wellness

Challenges

- Lack of interconnectivity
- High density adjacent to the Farm
- Vehicular shortcuts
- Potential traffic through the Farm

A Hybrid Approach, as illustrated below (Figure 1), formed part of the Stage 1 Submission and was conceptual in nature – a 10,000-foot level representation. The Stage 2 Submission evolved into the Master Site Plan (Figure 2) as further described in this Design Brief and Planning Rationale.

Figure 1: Stage 1 Submission Concept Plan



Figure 2: Proposed Master Site Plan



The evolution of the Master Site Plan has been guided by the substantial efforts undertaken to understand the physical and regulatory factors that have influenced the form of the buildings and the Master Site Plan design. Specific influential factors include property size, shape and topography, the functional needs of the hospital and project phasing and the location of the Trillium LRT Line, transportation planning and municipal servicing. Also integral to the Master Site Plan design process is developing a plan that is efficient and cost-effective. These influences leading to the proposed Master Site Plan are outlined below.

Property Size, Shape and Site Topography

Informing the Master Site Plan design process, lidar mapping was completed to determine the precise topography of the site which was found to be quite variable and challenging. The 20-hectare site can be topographically divided into two distinct parts by a treed escarpment: the upper plateau that represents 2/3 of the site and the lower plateau, located approximately 10 metres (30 ft) below, that represents 1/3 of the site. After determining the functional requirements of the Hospital, it was concluded that the main hospital building, and associated research functions and the location for the Future University of Ottawa Heart Institute (UOHI), could not be sited on the lower plateau of the site without severe operational and construction challenges. The treed escarpment is a valued part of the site and minimizing the impact on this area was considered essential in the Master Site Plan design process.

Functional Needs of the Hospital and Project Phasing

By placing the hospital on the largest portion of open land on the site allows for the most optimal clinical configuration and the best opportunity for future expansion. Its siting will allow critical research facilities, additional patient care and the UOHI to be added in the future, coordinating these future uses programmatically and spatially from the start. The main hospital floor plate creates an efficient floor plan that develops a primary podium including major diagnostic and treatment areas while forming the base for two patient care towers. Specific program elements such as a 200,000 square foot surgical care area drives the design of the hospital floor plate with patient care above. This type of grid layout and level of detailed program planning for the hospital could not have been achieved in the Stage 1 submission Concept Design.

Following policy direction in the Preston-Carling District Secondary Plan and through consultation with the City and the NCC, the desire for an urban edge along Carling Avenue and Preston Street framed with retail and service frontages, wide sidewalks, seating areas within a linear landscape zone and a bi-directional cycle-track were best achieved through the proposed Carling Village Mixed Use area centered around a future Dows Lake Station entrance. The location of a Research Facility will also bring continuity to the street frontage along Carling Avenue and clearly defines the Crown edge of the site when reflected against the very high-density private development along the north side of Carling Avenue (50-60+ storeys).

The idea of a protected public realm was developed in consultation with the community and supported by the Preston-Carling District Secondary Plan with the idea of an urban plaza connected to the main entrance plaza of the hospital building and preserving as much of the existing treed escarpment as possible. Adding to this, is a

proposed reimagined Queen Juliana Park located on the roof of the parking garage that contributes to the area greenspace and parks network, provides activation of the site as well as offering panoramic views to Dows Lake and the Rideau Canal, Commissioners Park, the Arboretum and Central Experimental Farm, and the Preston-Carling District.

The site is bisected by the Trillium LRT Line which further constrains the site from a hospital planning perspective and introduces programming, operational, and constructability complexities limiting the future phasing and integration of the research functions and relocation of the UOHI to the site. The vibration and noise impacts from the Trillium Line is also an influencing factor. The siting of a Dows Lake Station entrance on the south side of Carling Avenue will provide direct access to the uses in Carling Village but also integrated into a fully weather protected access to the site's greenspace network, the hospital and other uses on the site.

Transportation Planning and Parking

Multi-modal access to the site was carefully considered during the Master Site Plan design process. Vehicular access to the site is limited, with few existing points of access from the surrounding arterial road network, the need for Prince of Wales Drive to remain a Scenic Entry Route, and the importance of line-of-sight views considering the site's variable topography.

Best practices for public safety and patient experience requires largely separated public and service access. The site was carefully laid out so that all modes including pedestrians, cyclists, and vehicles including emergency and service vehicles, trauma helicopter, shuttle services, hailing and carpools, and customer transfer vehicles, could be accommodated. The multi-modal plan includes:

- special consideration to pedestrian circulation based on vulnerabilities and exposure to the elements including incorporation of a fully weather protected walkway from Dows Lake Station.
- an intersection at Champagne Avenue provides a direct route for the public, bringing patients and visitors safely and efficiently to the hospital. The Stage 1 submission envisioned site access at Sherwood Avenue, while the Master Site Plan shifts this access in an effort to also prevent cut-through traffic from the adjacent residential neighbourhood.
- A separate access for ambulance access and authorized staff directly from Maple Drive and Prince of Wales. The Master Site Plan makes use of Maple Drive for a short distance, quickly transferring first responders onto the site that will be distinctly separate from public access.
- The Master Site Plan allows for the loading docks to be located at the hospital's lowest elevation, set into the landscape, and away from public view, with direct access to Prince of Wales Drive which is a designated Urban Truck Route.
- The Master Site Plan design process determined the need for a 2,500-space parking structure to meet the needs of the New Civic Development. The structure itself changed from underground in the Stage 1 submission to above-ground in the Master Site Plan at a substantial cost reduction. The Parking Garage will be the first phase of development to provide space for contractor parking and staging during the construction of the first phase of the hospital. The parking garage will also provide reserved spaces for visitors to Dows Lake and the surrounding area.

Municipal Servicing

A Master Servicing Plan was also completed as part of the Master Site Plan design process with the goal of demonstrating the proposed development could be supported by municipal services, including water, sanitary, and storm water management. The site leased from Public Services and Procurement Canada has existing private infrastructure throughout that is still in use by adjacent federal buildings. Further, the site is encumbered by an existing sanitary service easement. The Mooney's Bay Collector sewer is a 1050 mm diameter concrete sewer that cuts diagonally through the lower plateau of the site. The Master Site Plan design will avoid the necessary relocation of this critical service.