CITY OF VANCOUVER

POLICY REPORT
DEVELOPMENT AND BUILDING

Report Date: November 2, 2012
Contact: Kent Munro
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VanRIMS No.: 08-2000-20
Meeting Date: November 13, 2012

TO: Vancouver City Council

FROM: General Manager of Planning and Development Services

SUBJECT: CD-1 Rezoning: 4500 Oak Street
(Children's and Women's Health Centre of British Columbia)

RECOMMENDATION

A. THAT the application, by DYS Architecture Inc. on behalf of Children's and Women's Health Centre of British Columbia Branch, to amend the use, height and density provisions of CD-1 (Comprehensive Development) District (126) (By-law No. 5091) for 4500 Oak Street *(PID 009-471-278; Block 1009, except those portions in Plan 12393, 12719 and Reference Plan 14318, District Lot 526, Group 1, New Westminister District Plan 10359*), to increase the floor space ratio from 0.85 to 1.05, among other things, to permit the development of a new Acute Care building and an expanded heat plant, be referred to a public hearing, together with:

(i) plans prepared by DYS Architecture Inc. received March 7, 2012 and amended May 9, 2012;
(ii) a new Master Plan, prepared by DYS Architecture Inc., dated March 6, 2012 and revised May 9, 2012, generally as presented in Appendix J;
(iii) Design Standards dated June 19, 2012 generally as presented in Appendix E;
(iv) draft CD-1 By-law amendments generally as presented in Appendix A; and
(v) the recommendation of the General Manager of Planning and Development Services to approve the application, subject to conditions contained in Appendix B;

FURTHER THAT the Director of Legal Services be instructed to prepare the necessary amending by-law generally in accordance with Appendix A for consideration at the public hearing.

B. THAT, subject to enactment of the rezoning by-law, the new Master Plan be approved subject to it being updated as set out in Appendix B and that this Master Plan replace the Master Plan Council adopted in 1999;

FURTHER THAT the General Manager of Planning and Development Services be instructed to bring forward the updated Master Plan at the time of enactment of the rezoning by-law.

C. THAT, subject to enactment of the rezoning by-law, the Design Standards, generally as presented in Appendix E, be approved subject to being updated as set out in Appendix B;

FURTHER THAT the General Manager of Planning and Development Services be instructed to bring forward the updated Design Standards at the time of enactment of the rezoning by-law.

D. THAT, subject to enactment of the rezoning by-law, the Parking By-law be amended to include this CD-1 and to provide parking regulations generally as set out in Appendix C;

FURTHER THAT the Director of Legal Services be instructed to bring forward the amendment to the Parking By-law at the time of enactment of the rezoning by-law.

E. THAT Recommendations A to D are adopted on the following conditions:

(i) THAT the passage of the above resolutions creates no legal rights for the applicant or any other person, or obligation on the part of the City; any expenditure of funds or incurring of costs is at the risk of the person making the expenditure or incurring the cost;
(ii) THAT any approval that may be granted following the public hearings shall not obligate the City to enact a by-law rezoning the property, and any costs incurred in fulfilling requirements imposed as a condition of rezoning are at the risk of the property owner; and
(iii) THAT the City and all its officials, including the Approving Officer, shall not in any way be limited or directed in the exercise of their authority or discretion, regardless of when they are called upon to exercise such authority or discretion.

REPORT SUMMARY

This report presents the staff assessment of an application by DYS Architecture Inc. on behalf of Children's and Women's Health Centre of British Columbia Branch (the "Health Centre") to amend the use, height and density provisions of the existing CD-1 By-law for 4500 Oak Street. Should Council approve the proposed CD-1 Bylaw in principle, consequential updates will be undertaken to the 1999 Master Plan and that updated Master Plan, once approved by Council, will provide guidance for development on the site for the next 30 years. The zoning amendment would allow construction of a new Acute Care building and it would allow a broader range of retail uses. Additional changes include renovation of the existing Children's

and Women's Hospital to accommodate the Sunny Hill Health Centre for Children. These changes will address the growing need for health services in the province. Construction of the new Acute Care building will necessitate partial demolition of the historic Shaughnessy Military Hospital and the Medical Education Research Unit (MERU). All other buildings remain as is until future phases of the proposed Master Plan are implemented. Development of subsequent buildings, beyond Phase 3 in the Master Plan, is expected to require future rezoning consideration by Council. To address Council's policy to minimize vehicle traffic on bikeways, access to the site from Heather Street will be closed and a new access road developed from Willow Street. Conditions related to road improvements are contained in Appendix B.

As part of rezoning requirements related to financing growth, a community amenity contribution in the form of a 49-space child day care had been offered and secured as a rezoning condition for by-law amendments enacted for this site on July 24, 2012. The size and value of this child care amenity satisfies 1999 and 2012 zoning amendments, and it is estimated to cover any additional community amenity contribution required as a consequence of this current rezoning application.

If the rezoning is approved, development of the Acute Care building is proposed to proceed through a public-private partnership (P3) process, where the building's design will be submitted to the City at the development permit stage. A set of Design Standards has been provided, as a companion to the CD-1 By-law, to guide development of the Acute Care building and to establish the building's relationship to the surrounding area.

Staff have assessed the application, including the Design Standards and proposed Master Plan, and are supportive of the proposal. Staff recommend that the application be referred to a public hearing, with the recommendation of the General Manager of Planning and Development Services to approve it, subject to conditions in Appendix B.

COUNCIL AUTHORITY/PREVIOUS DECISIONS

Relevant Council Policies for this site include:

- CD-1(126) By-law No. 5091, enacted June 14, 1977, amended up to and including By-law No. 10546, dated July 24, 2012
- 4500 Oak Street - Children's and Women's Health Centre "Master Plan" (dated November 1998), adopted June 24, 1999
- Green Building Policy for Rezonings (last amended 2010)
- Greenest City Action Plan (2011)
- Council's Rezoning Policy for Greener Larger Sites (EcoCity Action A2)
- Strategic Approach to Neighbourhood Energy and Energy Centre Guidelines (2012)
- Financing Growth Policy (Community Amenity Contributions) (last amended 2004)
- Riley Park/South Cambie Community Vision (2005)
- Transportation Plan (1997) and Transportation 2040 Directions (2012).

REPORT

Background/Context

1. CD-1 By-law (126) No.5091 (including amendments enacted July 24, 2012)

The site's existing CD-1 By-law, enacted June 14, 1977 and including amendments up to July 24, 2012, provides for hospital uses, including a child day care facility and retail store (limited to small-scale pharmacy), to a combined maximum floor space ratio (FSR) of 0.85. The most recent amendment, enacted on July 24, 2012, was to facilitate development of a Family Stay and Respite Centre to be operated as a Ronald McDonald House (see Figure 2). As part of the same amendment, a 49-space Child Care Centre was approved.

2. Policy Context

The Riley Park/South Cambie (RPSC) Community Vision was approved by Council on November 1, 2005 and includes a rezoning policy which allows for expanded institutional uses to be considered through the standard City rezoning process. In addition, the RPSC Community Vision includes general directions for rezonings on large sites (2 acres or more).

While the Children's and Women's Health Centre was not specifically referenced, the RPSC Community Vision calls for a higher level of environmental sustainability through the application of "green" development strategies. If approved, the rezoning application that is the subject of this report would meet the Green Building Rezoning Policy and, through Council's Rezoning Policy for Greener Larger Sites, the Health Centre would be required to connect to a low-carbon heating system.

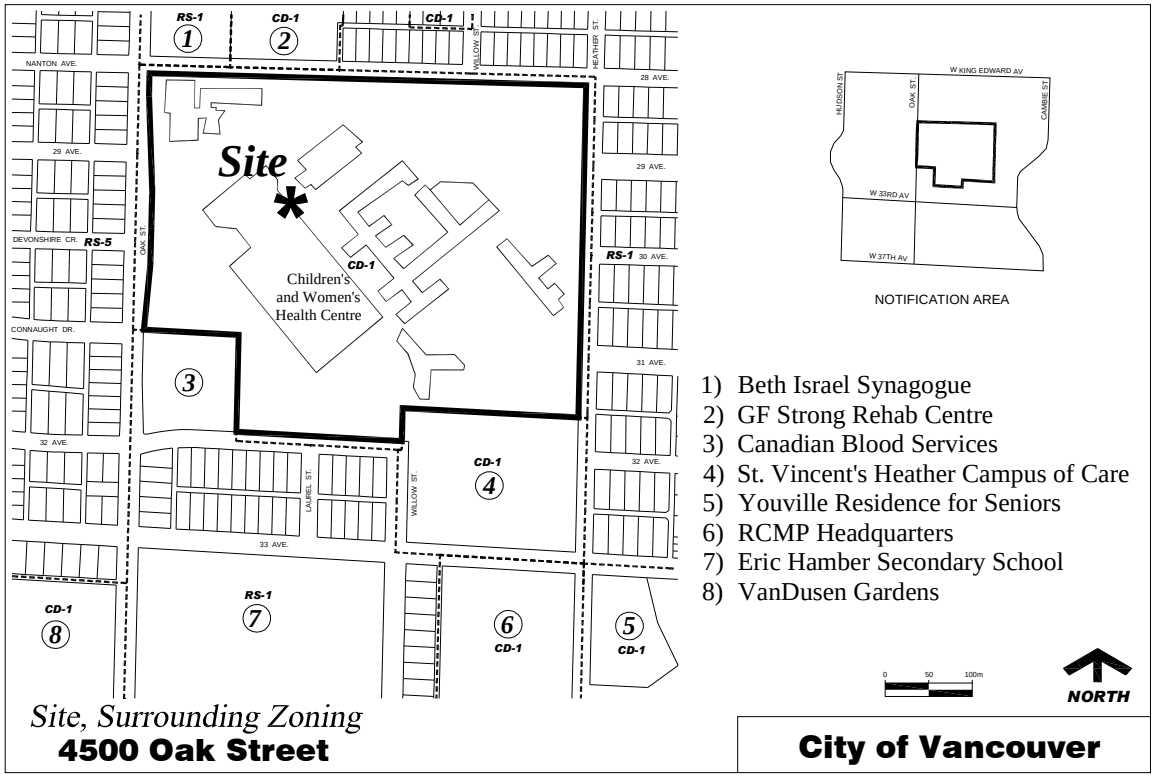
3. Site and Context

The Children's and Women's Health Centre is located on a 46-acre (18.6-hectare) site that is bounded by Oak Street, Heather Street, 28th Avenue and 32nd Avenue (see Figure 1). The site is surrounded by a mix of single-family residential and institutional uses. Significant sites in the area include the Congregation Beth Israel Synagogue, GF Strong Rehabilitation Centre, Canadian Blood Services Building, St. Vincent's Heather Campus of Care, Van Dusen Gardens, and Eric Hamber Secondary School.

Hospital facilities have existed at the subject site since 1940, including the Shaughnessy Military Hospital and Grace Hospital. Today, the site also accommodates the BC Women's Hospital and BC Children's Hospital both of which have existed in Vancouver and have served local residents as well as all British Columbians since 1928. The Children's Hospital relocated to the Oak Street site in 1982 and the BC Women's Hospital amalgamated with the Women's Health Centre on the site in 1994.

BC Women's Hospital is the only facility in the province devoted primarily to the health of women, newborns and families. It provides a range of specialized primary, secondary and tertiary health services that address the needs of women of all ages and backgrounds. It is Canada's busiest maternity hospital, delivering approximately 7,000 babies each year and it provides 60,000 clinic services annually. The facility is a resource for high-risk pregnancies for mothers from across the province and it is the main maternity service-provider for women and families in the Vancouver Coastal Health Region.

Figure 1 – Children's and Women's Health Centre Site and Context



BC Children's Hospital delivers child and youth health and rehabilitation services and is the province's major treatment, teaching and research facility for child health, with over 200,000 children cared for on an annual basis. In addition to providing specialized pediatric services — many of which are not available elsewhere in British Columbia — BC Children's Hospital is the province's leading teaching and research facility for child health. BC Children's and BC Women's Hospitals are both agencies of the Provincial Health Services Authority (PHSA), and are academic health centres affiliated with the University of British Columbia, Simon Fraser University, the Child and Family Research Institute, and the Women's Health Research Institute.

The campus of care that exists at the subject site is exceptionally important to the health services infrastructure of both the city and the province. From an economic perspective, the Health Centre represents one of the city's largest sources of employment, with about 3,000 full-time equivalent staff. Expansion and improvement to the Children's and Women's Health Centre at the Oak Street site would serve the City's strategic objective to cultivate and sustain safe and caring communities for a wide diversity of individuals and families who live in, work in and visit Vancouver.

Strategic Analysis

1. Proposed Master Plan

The first Master Plan for the Health Centre was adopted by Council in 1999. It included demolitions, renovations and additions to the historic Shaughnessy Military Hospital, new parking structures, a new psychiatry building, construction of additional research facilities

and renovations to existing buildings on site. Development was focused near 28th Avenue at the north of the property, leaving the extensive landscaped buffers along the remaining three perimeter streets, to serve as a transition from hospital uses to the neighbouring residential community. Most of the intended development in the original Master Plan has been abandoned in favour of an alternate approach to future development of the site.

Figure 2 – Site Plan - showing the existing site condition and including the Child Care Centre and Ronald McDonald House approved through rezoning enacted July 24, 2012

The proposed new Master Plan (Figure 3) retains the idea of a hospital in a park, but proposes to demolish the majority of the buildings in the centre of the site and replace them with two structures. The larger of the two would consolidate and house all hospital services, while the smaller building would provide for future hospital development. While the completed Master Plan contains seven phases, this current rezoning is seeking Council's approval of by-law amendments which enable implementation only up to Phase 3 (see Figure 5). It is noted that development identified as Phase 1 includes the buildings approved as part of the July 24, 2012 zoning enactment. The first three phases of redevelopment are described as follows:

Phase 1: Child Care Centre and Ronald McDonald House (Family Stay and Respite) (see Figure 2)

Phase 2: Demolition of a portion of the historic Shaughnessy Hospital to accommodate a new Acute Care building (see Figure 5)

Phase 3: Renovations to the Children's and Women's Hospital buildings to accommodate the Sunny Hill Health Centre for Children.

Figure 3 — Proposed New 2012 Master Plan
(at full build out upon completion of all 7 phases)

The proposed Master Plan is provided as a guide for future development, noting health care standards and requirements are continually in flux. It is understood that development beyond Phase 3 of the proposed Master Plan will require subsequent rezoning approval and could include revisions to the Master Plan to address changing future needs. In addition to the work described for Phases 1 to 3 above, smaller construction projects will occur up to completion of Phase 3, such as the expansion of the plant services building in the northeast section of the site. If adopted, the Master Plan would form part of the policy documents and would be used to guide future rezonings and development permit applications for the site. Staff are supportive of the proposed Master Plan and have added minor rezoning conditions in Appendix B, to clarify and expand on landscaping, wayfinding and lighting treatments.

2. Proposed CD-1 By-law Amendments

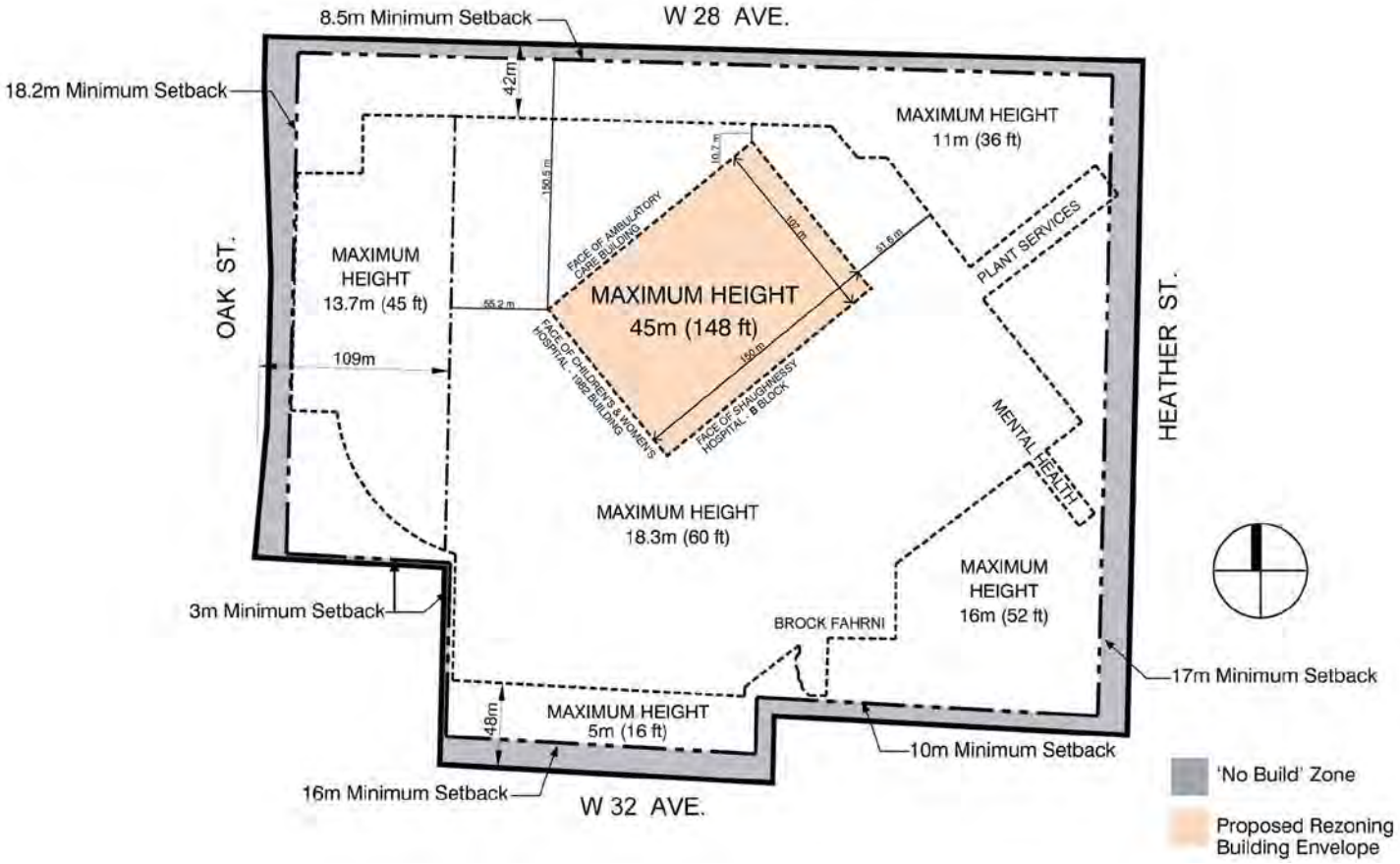
The application proposes amendments to the CD-1 By-law to permit construction of a new Acute Care building, to allow for expansion of the existing plant services building and to permit new retail uses. As part of this rezoning application, changes to the surrounding road network are also proposed. A set of Design Standards and a new Master Plan have been submitted, which will direct the design of the Acute Care building and inform future

alterations to the site. Draft provisions for amending the CD-1 By-law have been included in Appendix A and are described and analyzed in the following sections.

Use — The application proposes to remove the provision which limits retail use to a small-scale pharmacy. This would allow development of a variety of retail services to support the needs of employees, patients and visitors to the site. As a large site with intensive activities, the provision of such services is deemed to be appropriate.

In addition, a housekeeping amendment is proposed which would remove the provision that prohibits a provincial laboratory. The site has contained a provincial laboratory for many years, as this function is needed in conjunction with the services provided by Children's and Women's Health Centre. It is surmised this provision was part of the original CD-1 By-law from 1977 and it was not amended when the hospital converted and expanded to a provincial hospital in 1982. The amendment would allow the existing laboratory to comply with the by-law.

Figure 4 — Proposed Revised Maximum Building Heights



Height — The application proposes to amend the height permitted in the northern middle portion of the site from 18.3 m (60 feet) to 45.0 m (148 feet) in order to accommodate the construction of an Acute Care building (see Figure 4). The proposed building would be approximately eight floors in height, noting the floor-to-floor dimension for hospital functions can be as much as 6 m (20 feet). The height increase will be limited to a prescribed area, as

shaded and noted in Figure 4. For the remainder of the site, no change to the existing 18.3 m (60 ft.) height limit is proposed.

In addition, an amendment is proposed to permit a reconfigured and expanded heat plant building to exceed the maximum height of 11 m (36 feet) in the northeast area of the site. Heat plant buildings would be permitted to reach a maximum of 16 m (52 feet) and an associated exhaust stack to reach 21.3 m (70 feet), provided all structures that exceed 11 m in height are set back from 28th Avenue by at least 42 m (138 feet).

Staff have analyzed the proposed heights, and their relationships to the site and its context, and have concluded that the proposal is supportable (see section 3, Form of Development).

Floor Space Ratio (FSR) — The application proposes to amend the permitted FSR from 0.85 to 1.05. This represents an increase of 37 390 m² (402,471 sq. ft.) of floor space on the site. This amendment, if approved, would permit the construction of the new Acute Care building, the expansion of the heat plant and would permit other proposed development up to Phase 3 in the Master Plan. Staff have analyzed the proposed density and have concluded that the proposed 1.05 FSR is supportable (see section 3, Form of Development).

Site Coverage — A new section is proposed for the CD-1 By-law which aligns with the intent of the new Master Plan, and would limit site coverage for all buildings to a maximum of 33% of the total site area. The proposed site coverage is supportable (see section 3, Form of Development).

Parking Standard — The parking standard is proposed to be amended to cover parking demands up to completion of the renovations to the existing Children's and Women's Hospital buildings in Phase 3, as described in Appendix C.

Design Standards — A set of Design Standards is proposed as a companion document to the CD-1 By-law. The Design Standards will be primarily used to assess, under a public-private partnership or P3 process, the design of the Acute Care building and the expansion to the heat plant. The Standards focus on massing, exterior detailing and the surrounding landscaping. The intention is to apply a standard to the site to help mediate the scale of new buildings with the smaller scaled building context on site and in the surrounding community. Staff are supportive of the Design Standards and have included related conditions in Appendix B. Should Council approve the rezoning, the future development permit application for the Acute Care building would be required to comply with the directions contained within the Design Standards. The draft Design Standards are contained within Appendix E.

3. Form of Development

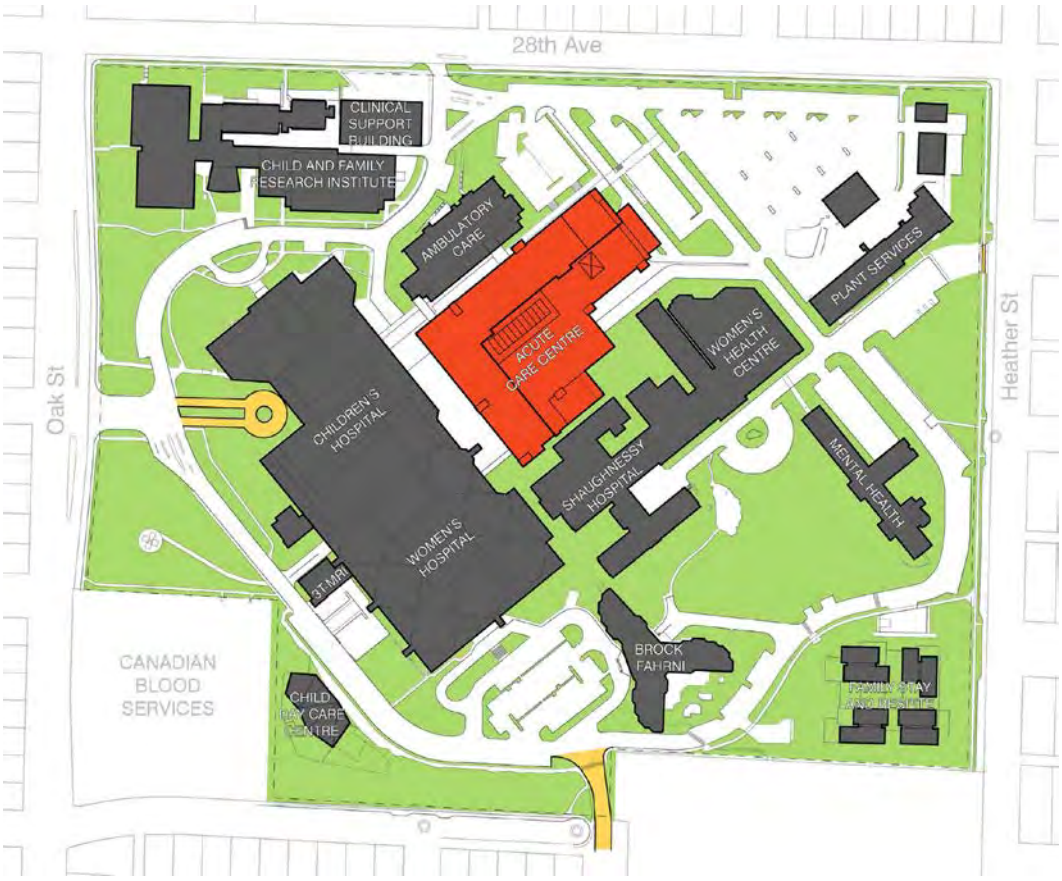
The proposed amendment to the existing zoning to accommodate a new Acute Care building and an expanded heat plant follows on the model established in the 1999 rezoning for a "hospital in the park" concept. Any forms more than 11 m (36 feet) in height will continue to be set back from the nearest residential street by a minimum of 42 m (138 feet).

The application seeks an increase in the site's overall allowable density as well as increased height in an area between the middle of the site and 28th Avenue, to accommodate the new Acute Care building at up to 45 m (148 feet) in height. The overall building footprint would be contained within a central rectangle indicated in Figure 4 and Figure 5. While some

existing buildings such as the "A" and "L" wings of the Shaughnessy Hospital would be removed, most of the net increase in allowable density will be consumed by the new Acute Care building. The application proposes an increase in height up to 15.24 m (50 feet) for the expansion to the heat plant building and up to 21.3 m (70 feet) for an associated exhaust stack, in the northeast portion of the site.

To meet the "hospital in the park" concept established in the original rezoning, the total amount of site area covered by the proposed development will not increase significantly. The existing site coverage is significantly lower than what is permitted in the surrounding single-family area. The rezoning application proposes to apply a site coverage maximum of 33% which would accommodate the proposed buildings and allow for future flexibility. Staff support this approach and recommend that the site coverage be added to the CD-1 By-law.

Figure 5 — Site Plan showing completion of Phase 3 of the proposed Master Plan*



* Note: Massing of the proposed Acute Care building may be altered at the development permit stage. Similarly, configuration of the proposed expansion to the heat plant would be determined at a future development permit application stage.

Figure 5 illustrates completion up to Phase 3 of the Master Plan, which includes the renovation of the Children's and Women's Hospital buildings to accommodate the Sunny Hill Health Centre for Children, demolition of a portion of the Shaughnessy Hospital, expansion of the heat plant and the construction of a new Acute Care building. The plan of the Acute Care building shown in Figure 5 is a hypothetical massing at this stage, as design of the actual building would develop through the public-private partnership or P3 process. The P3 process is required by the Province for all large-scale developments. Under a P3 process, the building

design, construction, finance and maintenance are undertaken by a single entity, separate from the Province. One of the consequences of this approach is that the detailed design of the building would not commence until after Council's approval in principle of the rezoning and would occur through the development permit application stage. As with all CD-1 rezonings, Council's approval of the form of development is required prior to final approval of a development permit application. It is important to note that, as part of the development permit review process, City staff will seek advice from the Urban Design Panel on the form of development and they will consult with the surrounding community.

In lieu of conventional layout drawings, the applicants have provided a detailed description of the anticipated form of development for the Acute Care building and a set of Design Standards. These Standards will direct the design of the building through the development permit stage, and are attached as a reference document to the CD-1 By-law (see Appendix E). For this project, staff are supportive of the approach of using Design Standards in conjunction with the regulations in the CD-1 By-law to determine an acceptable building design at the rezoning stage, subject to the conditions in Appendix B.

The completed Master Plan up to Phase 7 (see Figure 3, above), shows consolidation and expansion of all hospital services into one building, with the Acute Care building as the first phase of this development. The existing Children's and Women's Hospital building facing Oak Street would be replaced with a smaller building, which would house future hospital development. Given the phasing requirements and the long-term redevelopment plans for the campus, locating the Acute Care building close to the middle of the site and away from the surrounding residential community appears to be the best option to address the neighbours' concerns about building height, while allowing for future development of buildings and open space. As well, any building over 11 m (36 feet) in height would be set back a minimum of 42 m (138 feet) from the north property line adjacent to 28th Avenue.

Acute Care Building
To ensure that the design of the building will mitigate impacts with the adjacent neighborhood and address other design goals, the Design Standards set out guidelines for the site and building design. Public consultation undertaken by the applicant and staff indicated the proposed height of the Acute Care building is the most significant issue for the building form. In response, the applicants have provided a design rationale addressing the form of the Acute Care building, and in particular the proposed height (see Appendix D). In simplified form, the current proposal is the result of programming goals to:

a) limit the horizontal travel time required to reach different hospital functions;
b) locate out-patient services and procedural space on the lower floors, separated from in-patient rooms for long-term care or recovery on the upper floors;
c) provide private patient rooms with individual washrooms, as per current practices for infection control and family-centred care;
d) cluster patient rooms around central nursing stations in groups of 8 to 12, while providing patients with better access to outdoor views and natural light; and
e) provide a rooftop outdoor space dedicated to patients for active play and quiet respite.

As a result of these and other health-care goals, the form of the Acute Care building will likely be divided into two distinct shapes — a podium comprised of various procedural spaces and out-patient services with a main-floor footprint of about 9 030 m² (97,200 sq. ft.), and a

higher portion for in-patient rooms and support comprised of relatively narrow wings of about 25 m (82 feet) in width or less. The podium-level floors are taller, about 5 m (16 feet) in height, to accommodate diagnostic equipment, operating rooms, and environmental requirements. In-patient floors can be lower, in the range of 4.2 to 4.5 m (14 to 15 feet).

The effect, as noted in the attached Design Standards, is that the expected building should occupy less than 80% of the proposed rezoning footprint at its base, and that upper floors for in-patient rooms would be reduced in size to occupy 60% of the roof area of the podium. The upper levels most easily seen from surrounding streets would, therefore, have a reduced profile relative to the lower form, somewhat reducing their effect. The podium will be partially masked by adjacent development and landscaping. The visual impact of the proposed Acute Care building will be greatest for the residential streets adjacent to the northeast corner of the site, which is currently occupied by surface parking. It is noted that it is the applicant's proposal to develop the northeast corner of the site as a large green space in future phases of the master plan. In order to provide additional screening for the upper levels and to help start the long-term structure of this green space, staff are recommending that tree planting be undertaken in the northeast portion of the site.

The Urban Design Panel supported the application at its meeting of May 23, 2012 (see the minutes in Appendix D) and provided comments to improve the Design Standards and Master Plan. Staff support the Panel's comments and have incorporated them into design conditions contained in Appendix B.

Heat Plant Expansion

As a consequence of Council's Rezoning Policy for Greener Larger Sites (EcoCity Action A2), a requirement has been added to the rezoning to supply a low-carbon heat for the hospital which may require expansion of the existing heat plant facilities on site. Currently the site's heating equipment is located in the Steam Plant building adjacent to Heather Street. The Health Centre estimates that an expansion of the heating facilities may require a footprint of approximately 2 500 m² (26,910 sq. ft.), roughly one and a half times the size of the existing Steam Plant building. As with the Acute Care building (but not part of its P3 process), the design of the heat plant building is unknown at this stage. Nonetheless, the applicants have confirmed that the height of such a building would not exceed 16 m (52 feet) and that any portion exceeding 11 m (36 feet) in height would be set back from the north property line by at least 42 m (138 feet). The proposed site coverage maximum of 33% would accommodate expansion of the heat plant. Noting that the proposed heat plant height is the same as the height limit set for the another corner of the site facing Heather Street, staff are supportive of this change, contingent on the Design Standards being updated before enactment to describe the urban design necessary to fit new development into this particular context.

For more detailed commentary on the form of development and recommended conditions of enactment and approval, see Appendix B and Appendix D.

Site Works

Rezoning conditions have been added to Appendix B which will assist with redeveloping the site to meet the objectives of the proposed Master Plan. The conditions include increasing the landscaping, providing better landscape screening to the surrounding community and better lighting and wayfinding through the site. These conditions, which include implementation of the Wellness Walk described below, are independent of the work related to the Acute Care

building and will be required to be part of a development permit application and subject to condition (c)2 in Appendix B.

4. Heritage

The Shaughnessy Military Hospital is listed in the "A" category of the Recent Landmarks Inventory. Council's policy is to add buildings, which are on this inventory, to the Vancouver Heritage Register wherever feasible and when supported by the property owner. As such, the Vancouver Heritage Commission was asked to review the rezoning application and provide feedback on the proposed demolition. The Commission reviewed the application on May 7, 2012 and supported it. They noted that the loss of a portion of the Shaughnessy Military Hospital is regrettable, but that the historic J. Matheson Pavilion and Steam Plant are both intended to remain as part of the Master Plan — each is listed in the "B" evaluation category of the Recent Landmarks Inventory. The Commission's motion and a description of the historic value of the Shaughnessy Military Hospital have been included in Appendix D and conditions related to adding the J. Matheson Pavilion and Steam Plant Building to the Vancouver Heritage Register have been added in Appendix B.

5. Wellness Walkway

The idea for a Wellness Walkway developed in 1998 through a City initiative to demonstrate how the public realm can contribute towards community health. The Children's and Women's Health Centre was identified early on as an optimum location for such an amenity, so a walkway is proposed around the perimeter of the site. Portions of the walkway were secured through the July 24, 2012 enactment for the Child Care Centre and the Ronald McDonald House (Family Stay and Respite Centre). The applicant has proposed to provide the walkway in stages as development is approved around the site. As such, the current rezoning application would secure completion of the sections along 28th Avenue, Heather Street and the southern sections along the internal ring road. To complete the walkway and provide for a continuous loop around the site, the missing section along Oak Street is also proposed as part of the conditions of the current rezoning. Enactment conditions, including securing portions of the walkway on Health Centre property through a Statutory Right-of-Way, have been included in Appendix B. A set of design objectives and a site plan showing the possible locations of the walkway have been included in Appendix F.

6. Transportation

Parking

The existing parking supply for the Health Centre is 1,958 parking spaces, which exceeds the current parking requirement dating from the 1999 CD-1 By-law amendment. A transportation study submitted as part of the current application shows the demand for parking reaches 92% of the supply at peak periods. As parking locations are spread around the site, some locations have a higher demand than others. Staff believe that a lower parking requirement would be supportable, provided that a 5% vacancy rate was maintained at peak periods. In order to confirm that a reduction in parking would not create a spillover into the surrounding neighbourhood, staff recommend the submission of a Transportation Demand Management (TDM) Plan. This plan would ensure that measures are taken to encourage the various user groups at the Health Centre to switch to alternate modes of transportation. The TDM Plan would be required to contain specific targets, a monitoring plan and measures to ensure its success.

Appendix C includes by-law provisions to reduce the parking requirement to 1,830 spaces for the whole campus at the time of completion of the new Acute Care building. This would be achieved in conjunction with the implementation of a TDM Plan, as required by conditions contained in Appendix B. At the time of the renovation of the existing Children's and Women's hospital buildings, a higher parking requirement of 1,950 spaces is proposed in the by-law to maintain the desired 5% vacancy rate at peak periods. At this time, should the TDM measures prove to be successful at reducing overall parking demand at the campus, staff will bring forward for Council's consideration a commensurate reduction to the Parking By-law.

Circulation

The Children's and Women's Health Centre is bounded by an arterial road — Oak Street — and three local streets — Heather Street, 28th Avenue and 32nd Avenue. The primary access is from Oak Street with secondary entries on Heather Street and 28nd Avenue. Access from the local streets to the Health Centre campus has been an issue for the surrounding community for many years.

Both Heather Street and 28th Avenue are designated bikeways. Council policy is that, wherever possible, vehicular access should not be taken from bike routes and that traffic on bike routes should be minimized. A condition of the amendment enacted July 24, 2012 was securing removal of the vehicular access from Heather Street and increased traffic-calming measures on nearby local streets to help address impacts of Health Centre traffic on the neighbourhood. In addition, staff have asked the Health Centre to investigate closure of the 28th Avenue entry as well. The Health Centre has hired a consultant to study both closures and the consultant has concluded that the Heather Street access could be closed if an access were opened at another location, but that closing the 28th Avenue access would greatly impact the ability of emergency vehicles to access the emergency entrance to the Health Centre.

28th Avenue — The Beth Israel Synagogue, on Oak Street at 28th Avenue, recently received approval in principle of a rezoning which would allow it to take access from 28th Avenue, on the condition that that development fund 50% of the cost of separating the cycling facility along 28th Avenue. As closure of the Health Centre's 28th Avenue access would negatively impact hospital operations, staff support maintaining that access on the condition that the Health Centre contribute the other 50% of funding for the separated cycling facility on 28th Avenue.

Willow Street — The Health Centre's consultant has reviewed the traffic movements for the site and has concluded that an additional access would be needed if the existing Heather Street access were closed. Staff and the applicant worked together to find an access point which would reduce the impacts on local streets and bikeways and which would work well for the Health Centre. The best location found was the extension of Willow Street, north of 32nd Avenue. This new access point would be one block from 33rd Avenue, which is an arterial street, and directly impact only two residential properties flanking Willow Street.

Opus International was hired by the Health Centre to assess the transportation impacts of the new development with inclusion of a new Willow Street access point. That study found that the new entrance location would function well from a transportation perspective, although some modifications would need to be made, including:

a) creating a cul-de-sac on 32nd Avenue at Willow Street to prevent vehicles from using 32nd Avenue as a shortcut to the Health Centre,
b) installing left-turn bays and a traffic signal at the intersection of 33rd Avenue and Willow Street, and
c) modifying the intersection of 33rd Avenue and Oak Street to allow through vehicles to pass left-turning vehicles.

Staff support these changes, noting that some of the improvements would be cost-shared between Children's and Women's Health Centre and the adjacent St. Vincent's Campus of Care site, which is currently contemplating development along Willow Street. St. Vincent's would similarly have corresponding obligations under their approval process. Staff have included rezoning conditions relating to the road, traffic and parking improvements in Appendix B, noting that approval from the Ministry of Health pursuant to the Hospital Act may be required if dedication of a portion of the site is required.

Figure 6 — Vehicular entry points to the Health Centre campus (existing and proposed)

Green Mobility

Beyond the TDM Plan, the applicant intends to create a Wellness Walkway around the site and to remove the vehicular access onto the Heather Street bikeway. The combination of these

items satisfies the requirement of the Green Mobility Plan. The Wellness Walkway is described above in section 5.

7. Sustainability

The rezoning application is subject to the Green Building Rezoning Policy. As part of the strategy, new development on the site is required to meet LEED® Gold certification with a target of 63 points and to comply with mandatory requirements for Energy Performance, Water Conservation, Parking and Loading, and Stormwater Management. In addition, the policy identifies benchmarks for achieving LEED® Gold certification. The applicant will be required to submit a written description of the sustainability approach and a LEED® scorecard indicating that they intend on achieving 63 points which meets LEED® Gold certification along with six energy optimization LEED® credits (see rezoning conditions in Appendix B). It is noted that the Health Centre intends on certifying to LEED® 2009 GOLD for Health Care (HC) through the US Green Building Council (USGBC). Staff will work with the applicant team to achieve the intent of the Green Building Rezoning Policy, noting the additional prerequisites and credits available in LEED® 2009 for Health Care.

Sustainable Large Sites

Council's Rezoning Policy for Greener Larger Sites (EcoCity Action A2) aims to achieve higher sustainability outcomes on large-site developments through strategies that implement opportunities for low-carbon heat, sustainable site design, green mobility and clean vehicles, sustainable rainwater management, enhanced solid-waste diversion, and housing affordability and mix.

With respect to low-carbon heating, Children's and Women's Health Centre is actively investigating opportunities for implementing a low-carbon heat system to service the space heating and domestic hot water needs of the Health Centre campus. In support of this initiative, and in accordance with Council policy to support low-carbon heat systems on large development projects, conditions of rezoning have been incorporated that provide for delivery of a low-carbon heat source for the Health Centre campus, as well as system design compatibility at the building scale. Development of a low-carbon heat system for the campus shall be executed in accordance with the City's newly adopted "Strategic Approach to Neighbourhood Energy" and "Energy Centre Guidelines" which provide a policy framework to inform the development and assessment of proposals to implement low-carbon heat sources for energy systems in Vancouver and include guidelines pertaining to carbon protection, air quality, neighbourhood fit, sustainable energy sources, and community engagement.

Should Council approve the rezoning, the design of the expanded heat plant would occur as part of a future development permit application or rezoning application, which would include a public consultation process in accordance with the City's Neighborhood Energy Centre Guidelines.

The remaining matters required by the Rezoning Policy for Greener Larger Sites have been addressed, either through the design of the development, or will be provided for through required plans or strategies to be implemented through other items contained within the recommended conditions of approval in Appendix B.

PUBLIC INPUT

Rezoning information signs were installed at the site on April 27, 2012 and a notification letter dated April 13, 2012 was mailed to 849 property owners within the notification area. In addition to informing neighbours of the application to amend the CD-1 By-law, the letter included an invitation to an open house held at Eric Hamber Secondary School on Tuesday, May 1, 2012 at which 25 people attended. Ten comment sheets were received. Key concerns related to the height of the Acute Care building and traffic impacts that may be generated by closing the Heather Street access and opening up access to the site from Willow Street (see Appendix H for a summary of comments received).

In addition, two petitions have been received. The first, on April 19, 2012 with 38 names from 27 surrounding properties, expresses concern about the proposed height of the Acute Care building and requests the City limit the height to the current maximum of 18.3 m (60 feet). The second petition was received on August 30, 2012 with 28 names from 23 surrounding properties. It expresses concern about the proposed closure of the Heather Street vehicle access, about the new access road on Willow Street and about the proposed new traffic signal at the intersection of 33rd Avenue and Willow Street.

At the date of this report, staff have received multiple responses from approximately 40 surrounding properties in the form of petitions, open house comments, emails and phone calls. The key concerns expressed relate to two areas:

1. Height of the Acute Care building, and
2. Traffic impacts on the neighbourhood created by closing the Heather Street access and by opening up access to the campus from Willow Street.

With respect to the height issue, the application contains a rationale for the requested height and it contains a set of Design Standards that will direct the building's design so as to mitigate the scale with the lower surrounding context. Staff feel that with the highest portion of the Acute Care building located in the upper middle of the campus at 42 m (138 feet) from adjacent residential, combined with the additional design development recommendations contained within Appendix B, the Acute Care building can be designed to reduce its impact on the neighbourhood, not only by limiting the amount of the building that reaches the requested height of 45 m (148 feet), but by addressing façade and landscape treatments in such a way as to mediate with the smaller scale community context. Given the rationale submitted by the applicants (included in Appendix D) and given the need to develop a facility that can deliver health services, not just to Vancouver but to the whole province, staff feel that the proposed location of the building, combined with the attached Design Standards, represent the best balance of the various options.

With respect to traffic impacts and concerns over road improvements, after reviewing Council's policy, the neighbours' concerns and the transportation studies submitted by the applicant, staff support the approach to traffic and road improvements, subject to additional conditions contained within Appendix B. For the staff response to specific issues, see the "Transportation" section above and Appendix G "Public Consultation."

While many of the community's concerns can be addressed through the proposed road improvements along Willow Street, 32nd Avenue and 33rd Avenue, staff feel that more work is needed to mitigate the traffic issues on the site and in the area. A Transportation Demand

Management (TDM) Plan has been recommended as a condition of the rezoning. Following the implementation of the TDM Plan, should additional traffic calming measures be required, they can be sought in subsequent phases in the Master Plan.

PUBLIC BENEFITS

In response to City policies which address changes in land use and density, this application for rezoning offers the following public benefits:

Required Public Benefits:

Development Cost Levies (DCLS) - Development Cost Levies (DCLs) collected from development help pay for facilities made necessary by growth, including parks, childcare facilities, affordable replacement housing and various engineering infrastructure. The subject site is in the Citywide DCL District where the rate for institutional uses is currently at $12.50 per sq. ft. DCLs do not apply to floor area in existing buildings which will remain on site. It is anticipated that the new floor area associated with the proposed Acute Care building, will generate DCLs of approximately $5 million, based on an increase of 402,470 sq. ft. in floor space. DCLs are payable at building permit issuance and their rates are subject to Council approval of an annual inflationary adjustment which takes place on September 30th of each year.

Public Art Program - The Public Art Program requires that rezonings involving a floor area of 9 290 m^2 (100,000 sq. ft.) or greater allocate a portion of their construction budgets ($1.81/sq. ft.) to public art as a condition of rezoning. With 37 390 m^2 (402,470 sq. ft.) proposed in this rezoning, a public art budget of approximately $728,000 would be anticipated.

Offered Public Benefits:

Community Amenity Contribution (CAC) - In the context of Financing Growth Policy, the City anticipates the offer of a community amenity contribution from the owner of a rezoning site to address the impacts of rezoning, through the provision of either on-site amenities or a cash contribution towards other public benefits in the neighbourhood. Contributions are negotiated and evaluated by staff in light of the increase in land value expected to result from rezoning approval.

On October 19, 1999, Council enacted an amendment to the Health Centre's CD-1 By-law to allow an increase in FSR from 0.616 to 0.85 for Hospital uses. A condition of that approval was either payment of a cash CAC of $1,444,911 or provision of a Child Day Care Facility or of another amenity to the satisfaction of the City. The CAC was to be delivered prior to construction of Phase 3 or 4 of the 1999 Master Plan. While part of the 1999 Master Plan has been realized, as seen in the expansion of the Child and Family Research Institute and the new Children's Ambulatory Care Building (see Figure 2), none of the development outlined in Phase 3 or 4 has proceeded. The proposed rezoning and new Master Plan replaces the 1999 Master Plan and would similarly require consideration of a CAC to offset the costs of growth connected to the increase in floor area now requested (from 0.85 to 1.05 FSR). An appropriate CAC for the current rezoning is estimated at $1,207,000.

As part of the July 2012 enactment of the zoning amendment for the Ronald Macdonald House, the Health Centre offered a 49-space Child Care Centre as compliance with the CAC obligation stemming from the 1999 rezoning. Real Estate Services staff have determined that the value of the 49-space Child Care Centre would be approximately $4,300,000. This, as an in-kind offering, exceeds both the CAC obligation from the 1999 rezoning and the July 24, 2012 by-law amendment, and it addresses the additional CAC expectation generated by the current rezoning application.

Wellness Walkway
Portions of the Wellness Walkway, anticipated for around the perimeter of the site, have been secured through the amendment enacted July 24, 2012. The current rezoning would further secure the sections along 28th Avenue, missing sections along Heather Street and the southern sections from Oak Street to Heather Street along the internal ring road, which were not secured through a previous rezoning. The combined estimated cost of this is $750,000. Staff are recommending the remaining portion along Oak Street, with an estimated cost of $250,000, also be secured as part of this rezoning, for a total combined estimated cost of $1,000,000. Portions of the Wellness Walkway that are located on Health Centre property would be secured through a Statutory Right-of-Way (see Appendix B for conditions related to the walkway and Appendix F for the location of the Wellness Walkway).

Appendix H provides a summary of all of the public benefits associated with this application.

Financial

As noted in the section on Public Benefits, there is no Community Amenity Contribution (CAC) to be secured with this rezoning application. The CAC linked to the 1999 rezoning and to the amendment enacted July 24, 2012 (delivery of a 49-space childcare centre on site with a value of $4.3 million) provides public benefit for the current rezoning application.

A Wellness Walkway will be delivered by the applicant at an estimated cost of $1 million. The City will maintain the portions located on City street and the Health Centre will maintain the portions on hospital grounds.

If the rezoning application is approved, the applicant will be required to provide new public art on site at an estimated value of $728,000, noting that the applicant has the option to make an equivalent cash contribution to the City for off-site public art.

The site is within the Citywide Development Cost Levies (DCL) District and it is anticipated that the applicant will pay $5 million in DCLs.

CONCLUSION

Staff have reviewed the application by DYS Architecture Inc. on behalf of the Children's and Women's Health Centre of British Columbia Branch to revise CD-1 (126) By-law No. 5091 for 4500 Oak Street to permit development of a new Acute Care building as reflected in a revised Master Plan for the Health Centre. Should Council approve the rezoning, staff are supportive of using the submitted Design Standards to assess an acceptable form of development and building design to be prepared through a P3 process, at a future development permit stage, for both the Acute Care building and the expansion to the plant services buildings.

Upon analysis, staff have concluded that the proposal is supportable, given that the location of all buildings over 11 m (36 feet) in height would be set back a significant distance from the nearest residential properties. Also, the rationale provided by the applicants supports the need to develop a health centre that meets current health care standards. Staff recommend that the application be referred to a public hearing, along with the draft by-law amendments as shown in Appendix A, the proposed Design Standards and the new Master Plan, together with the recommendation of the General Manager of Planning and Development Services that, subject to the public hearing, the application be approved in principle along with rezoning conditions contained in Appendix B, and further that the Design Standards and the Master Plan also be approved in principle subject to updating according to conditions contained in Appendix B.

* * * * *

4500 Oak Street
Children's and Women's Health Centre of British Columbia Branch

DRAFT AMENDMENTS TO CD-1 (126) (BY-LAW No. 5091)

Note: An amending by-law will be prepared generally in accordance with the provisions listed below, subject to change and refinement prior to posting.

1. This By-law amends the indicated provisions of By-law No. 5091.

2. In section 2.1(a), strike out the words "but not including a Provincial Laboratory,".

3. In section 2.1(c), strike out the words "limited to Small-scale Pharmacy,".

[*The above amendments would allow a provincial laboratory to locate in the Health Centre (Note: a Provincial Laboratory has existed on site for several decades); and it would allow for other types of retail stores, in addition to small-scale pharmacy.*]

4. In section 3.2, strike out "0.85" and substitute "1.05".

[*This amendment would increase the permitted floor space ratio.*]

5. After section 3, add:

"4 Site Coverage

4.1 The maximum site coverage for buildings is 33 % of the site area."

[*The above amendment would introduce a maximum site coverage.*]

6. Repeal section 5, Parking and Loading.

[*Parking provisions for this site are proposed for the Parking By-law. See Appendix C.*]

[*The amendment below would replace the current maximum heights diagram with a new diagram that includes provisions for the Acute Care building. Setback dimensions are also included in the new diagram. Further added provisions enable a heat plant expansion and allow for mechanical and architectural appurtenances associated with the Acute Care building.*]

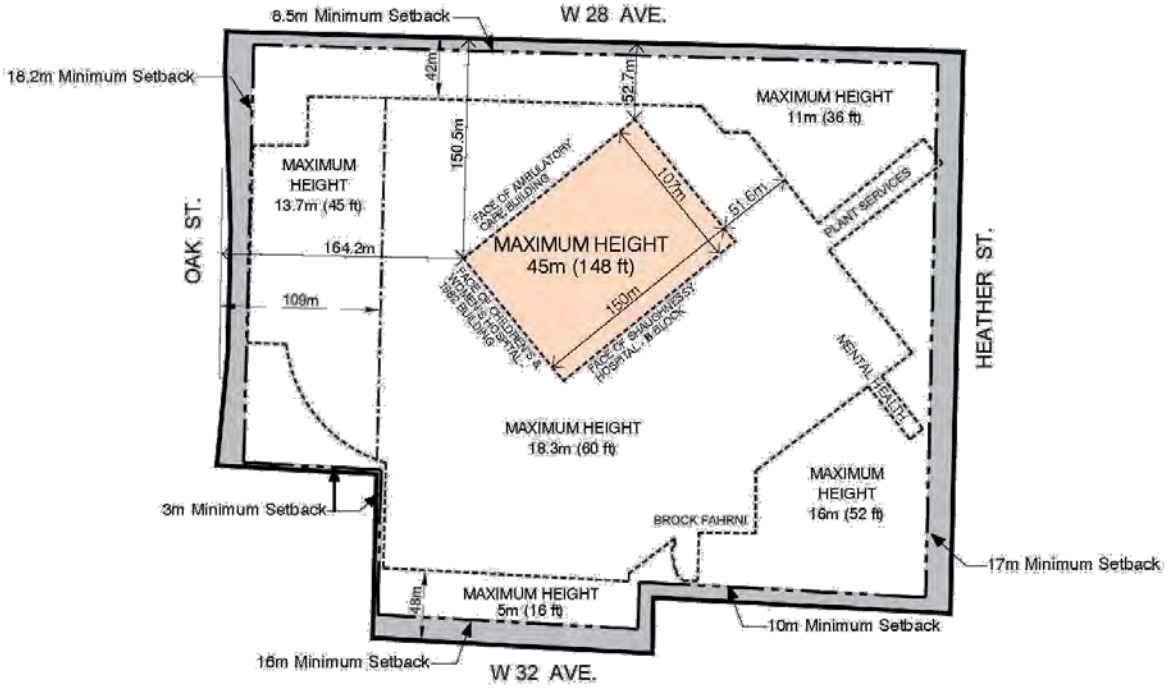
7. In section 4:

(a) re-number sections 4 and 4.2, as sections 5 and 5.3 respectively;

(b) repeal section 4.1 and substitute:

"5.1 Maximum building heights must conform with Diagram 1

Diagram 1



"; and

(c) add, after section 5.1:

"5.2 Mechanical and architectural appurtenances located within the area entitled "Maximum Height 45m" in Diagram 1 must not exceed 45 m in height, except that elevator overruns and stairwells may be excluded to a maximum combined exclusion of 160 m^2 and 3 m in height.

5.3 Buildings, mechanical and architectural appurtenances located in the area entitled "Maximum Height 11m" in Diagram 1 must not exceed 11m in height, except that:

(a) a building providing heat plant services must not exceed 16 m in height and must have a minimum setback of 42 m from the north property line; and

(b) a heat plant exhaust pipe must not exceed 22 m in height and must have a minimum setback of 42 m from the north property line."

* * * * *

4500 Oak Street
Children's and Women's Health Centre of British Columbia Branch

PROPOSED CONDITIONS OF APPROVAL

Note: These are draft conditions which are subject to change and refinement by staff prior to the finalization of the agenda for the public hearing to the satisfaction of the Director of Legal Services.

CONDITIONS OF APPROVAL OF FORM OF DEVELOPMENT

(a) That the proposed form of development be approved by Council in principle, generally as prepared by dys Architecture Inc. and stamped "Received Planning Department - March 7, 2012 and amended on May 9, 2012", provided that the General Manager of Planning and Development Services or the Development Permit Board, as the case may be, may allow minor alterations to this form of development when approving the detailed scheme of development as outlined in (b) below.

(b) That, prior to final approval by Council of the form of development, the applicant shall obtain approval of a development application by the General Manager of Planning and Development Services or Development Permit Board, who shall consider the following conditions:

Urban Design

1. Provision of substantial tree planting to the northeast of the Acute Care building to replace removed trees at a ratio of 1.6:1.0.

   Note to Applicant: Intent is to replace the trees lost during construction; to create a green buffer with prominent vertical height between the new, taller Acute Care building and the nearby residential neighbourhood; to add to the urban forest in an open location which offers the best chance for substantial growth of the trees; and to lay down the structural planting of future park space in this location. If space does not permit location on the site, trees may also be located nearby in coordination with Engineering and Parks staff. See also the related Master Plan condition.

2. Design development to the Acute Care building to limit shadowing to extend no further than a 42 m setback line from 28th Avenue, especially to the northeast.

   Note to Applicant: Intent is to limit shadowing onto the open space beside 28th Avenue to be no greater than as indicated in the rezoning application between 10 am and 2 pm during the equinoxes, especially in relation to future park space, while still allowing a range of forms to be explored in other areas of the site.

3. Design development to the Acute Care building to limit view impacts to residential properties to be comparable to the effect indicated in the rezoning application.

Note to Applicant: Intent is to allow a wide range of forms while limiting the impact of this specific effect for residential neighbours. The General Manager of Planning and Development Services may consider built forms that increase portions of the view effect so long as these are balanced by reductions in other areas.

4. Identify and locate specific noise abatement measures to be constructed as a part of the development, including where appropriate the use of sound absorbing surfaces.

   Note to Applicant: Intent is to reduce the general noise from required mechanical equipment and other sources, for the benefit of patients, staff and neighbours. Abatement should address noise sources such as high-pitched motors that are significant for perceived impact, as well as meeting the minimum requirements of the Noise Control By-law.

5. Provision of a permeable surface for any new or rebuilt surface parking stalls.

   Note to Applicant: Intent is to reduce the environmental effect of these required hard surfaces. Drainage to a storm water retention system may be considered as an alternative. Where possible, a light-coloured surface should be evaluated to reduce the urban heat-island effect.

6. Provision of a design rationale showing how the proposed design responds to the updated Master Plan and the approved Design Standards, with reference to each relevant section and specific built features.

   Note to Applicant: Where the application does not meet the goals or principles of the Plan or Standards, further design development may be required.

7. Provision of an open space for respite and repose, dedicated to patient and family use, directly accessed from the Acute Care building.

   Note to Applicant: Noting future plans for expansion, the location may be an interim condition.

8. Notation on the elevation drawings of finish, colour, and materials.

   Note to Applicant: Include, where relevant, coursing, texture and spacing of materials. Attach colour samples to the drawings and note colours on a legend.

9. Provision of enlarged drawings at ½" = 1'-0" scale or better for exterior building and landscape features.

   Note to Applicant: Include building trim, soffits, windows and steps.

Landscape

10. Provision of a Rainwater Management Plan for the Acute Care building and heat plant expansion that utilizes sustainable strategies such as retention, treatment and utilization of rainwater.

    Note to applicant: Landscape strategies could include green roofs to reduce storm-water runoff, rooftop rainwater harvesting, high efficiency irrigation for planting on slab and the use of drought tolerant or native plants.

11. Provision of a detailed Landscape Plan for the Acute Care building and heat plant expansion.

    Note to Applicant: Provision of landscape design and materials that are equal to or better than the existing landscape, using quality materials for site furnishings, shade structures, lighting and paving that complement the architecture. The Landscape Plan should include a Plant List of all proposed plant material including names, sizes, and quantities. The Plant List should be keyed to the Landscape Plan. The Landscape Plan should also include all surface treatments, site furniture, lighting, hose bibs, retaining walls, and public realm details (including street trees, lamp posts, fire hydrants, sidewalks and curbs). Provide plans, sections, elevations and detailed drawings at ¼" = 1'-0" or better showing maps, signs, and other built elements necessary to provide wayfinding around the building.

12. Provision of large-scale sections from the Acute Care building and heat plant expansion to 28th Avenue, illustrating the landscape edge of the site.

13. Provision of a Tree Retention and Removal Plan for the northeast corner of the site, relating to the construction of Acute Care building and the heat plant expansion.

14. Provision of a separate lighting plan for the Acute Care building and the heat plant expansion.

Crime Prevention through Environmental Design (CPTED)

15. Provision of a design that responds to CPTED principles for the Acute Care building and heat plant expansion, having particular regard for theft, mischief and vandalism, such as graffiti.

    Note to Applicant: Provide a strategy that identifies the particular risks that may arise for the proposed development, and proposes specific features to mitigate them. Show on the plans and elevations where these features are located.

Sustainability

16. Identification on the plans and elevations of the built elements for the Acute Care building and heat plant expansion contributing to the building's sustainability performance in achieving at least 63 points (Gold) in the LEED® Healthcare rating system for new construction, including at least six optimize energy performance points, one water efficiency point, and one storm water point.

    Note to Applicant: Provide a LEED® Gold Healthcare checklist confirming the above points, and a detailed written description of how the above-noted points will be achieved with reference to the requirements of each credit and the specific building features of the development. Both the checklist and description should be incorporated into the drawing set. Visible evidence of sustainable design, especially those related to rain and storm water, solar energy, and passive design features such as sun shades, should be shown in particular. Registration of the project with the CaGBC (or USGBC if applying for LEED® 2009 for Healthcare) and application for certification are required.

    Design must include full cut-off light fixtures.

Engineering

17. Provision of a development specific Rainwater Management Plan consistent with the sites overall Plan that utilizes sustainable strategies to allow for infiltration, retention, treatment and utilization of rainwater where applicable and appropriate on site.

18. Provision of a development specific Solid Waste Diversion Strategy consistent with site's overall Strategy that addresses waste diversion in all solid waste generating activities within the Acute Care building.

CONDITIONS OF BY-LAW ENACTMENT

(c) THAT**,** prior to enactment of the CD-1 By-law, the registered owner shall, at no cost to the City and on terms and conditions satisfactory to the Director of Legal Services, the General Manager of Planning and Development Services, the General Manager of Engineering Services, the Managing Director of Cultural Services and the Approving Officer, as necessary, make arrangements for the following:`

Master Plan and Design Standards

1. Update the Master Plan and the Design Standards, to the satisfaction of the General Manager of Planning and Development Services, in accordance with the following:

1.1. Provision of a strategy to guide the design of areas of respite and repose throughout the campus master plan.

Note to Applicant: Intent is to create spaces that are distinct from active use areas, the Wellness Walkway, open spaces such as playground, or pedestrian circulation.

1.2. Provision in the Master Plan of sufficient underground passenger vehicle parking spaces, in combination with traffic demand measures, to allow removal of the northeast surface parking lot and to replace it with green open space in Phase 5 (development of the new Women's Health Centre), projected for 2027.

Note to Applicant: The northeast triangle is both an open space opportunity and a transitional area to the adjacent single-family neighbourhood that can provide a quiet open space with large dimensions located away from the noise of arterial traffic for patients, staff and visitors.

1.3. Update the Master Plan including maps and phases to reflect the proposed scope of each application and the site conditions current at the time.

Note to Applicant: For example, a rationale for Ronald McDonald House and the day care facilities is not required as they were approved under previous rezoning, although the proposed expansion of the heat plant should be incorporated into the update. Material currently appearing in both the CD-1 By-law and Master Plan may be streamlined.

1.4. Design development to the massing of the future Women's Health Centre building in Phase 5 of the Master Plan, to substantially reduce view impacts to nearby residential properties.

Note to Applicant: Intent is to allow a range of forms while reducing this specific effect for residential neighbours, especially those located on 32nd Avenue. This may be accomplished with a stepped form similar to the Acute Care building shown at application.

1.5. Provision of an open space plan including site and building entry points, along with safe pathways for pedestrians and cyclists, integrated with the range of open spaces.

Note to Applicant: While the current open space plan addresses vehicle access, especially vehicles carrying patients, the Master Plan should also reflect the flow of staff and visitors, and reflect other uses and modes of travel into and through the site. Pedestrian and cyclist routes should show features needed to provide a safe crossing point over vehicle routes such as the ring road. Given the site size and complexity, a plan at 1:750 scale or better should be provided. Map should integrate information from various aspects of the master plan such as open space character areas, respite areas, commercial uses, routes from bikeways to major bicycle parking areas, and pedestrian routes between the Acute Care building and the Wellness Walkway. Consider the inclusion of interpretive information for natural and historical features, such as the J. Matheson Building.

1.6. Design of new surface parking stalls to include a permeable surface.

Note to Applicant: Intent is to reduce the environmental effect of these required hard surfaces throughout the Master Plan. Drainage to a storm-water retention system may be considered as an alternative.

1.7. Updating of the Design Standards to clarify the landscaping and building design to the satisfaction of the General Manager of Planning and Development Services.

Note to Applicant: The Design Standards should be updated to maintain the goals and standards established at application, while reflecting the evolving design of the Acute Care building and the heat plant expansion as new information becomes available. The Design Standards should be complementary to and coordinated with the expected Neighbourhood Energy Centre Guidelines, especially in terms of establishing the urban design and landscape features needed to integrate new energy facilities into the site.

1.8. Consideration to improve sightlines from the main Oak Street entry point to the main entry area by adjusting the massing of the new building shown in Phase 7 projected for 2030.

Note to Applicant: Consider the comments of the Urban Design Panel in this regard.

1.9. Consideration to increase the underground parking associated with the Women's Health Centre to accommodate better open spaces on grade.

1.10. Consideration to provide large sculptural elements as play equipment on the site and to add art elements along the Wellness Walkway to the master plan.

1.11. Provision of a design for maps, signs, and other built elements necessary to provide wayfinding to the Acute Care building and other significant destinations on the campus for all site visitors including pedestrians and cyclists.

Note to Applicant: Intent is to direct the range of users identified in the Master Plan. Provide plans, sections, elevations and detailed drawings at ¼" = 1'-0" or better. Design should include lighting.

1.12. Provision for the completion of the Wellness Walkway around the site.

Note to Applicant: Intent is to complete the walkway around the site in Phase 2, incorporating the sections to be provided next to the day care and Ronald McDonald House.

1.13. Provision of a diversity of landscape types and experiences to benefit Health Centre users, employees and the adjacent community. The landscape should contain both active and passive uses such as children's play areas, urban agriculture plots, recreational walkways and quiet areas of respite.

1.14. Provision of friendly street edges and appropriate transitions between the Health Centre grounds and the adjacent residential neighbourhoods.

Note to applicant: This can be achieved by retaining and enhancing the park-like transition zone that currently acts as a green buffer at the site edges. Mature trees and shrubs should be retained wherever possible.

1.15. Provision of landscape design and materials that are equal to or better than the existing landscape, using materials for site furnishings, shade structures, lighting and paving that complement the architectural quality.

1.16. Provision of clear wayfinding through the use of memorable landmarks, highly visible entrances and distinct connections to the greenway, public transportation and pedestrian walkways.

Note to applicant: A highly visible, single access point to Children's and Women's Health Centre should be provided for people needing fast access to the hospital. Design should be consistent with the Master Plan and consider lighting design as well.

1.17. Reduction of the area of surface parking on the site.

Note to Applicant: Opportunities to reduce the extent of paving and convert surface parking area to green space must be explored and implemented during all phases of the Master Plan, rather than being left to Phase 7 in 2032.

Site Works

2. Obtain approval in principle of a development application by the General Manager of Planning and Development Services to undertake site works on locations outside of the area designated in the Master Plan for the Acute Care building, in accordance with the following:

2.1. Provision of an enhanced green buffer zone between the site of the proposed Acute Care building and the adjacent residential neighbourhood

Note to applicant: This can be achieved in the northeast corner of the site by providing additional opportunities to plant trees and shrubs along 28th Avenue and throughout the adjacent surface parking area. Some parking spots may need to be converted to planting spaces in order to find locations to plant trees. The specific type of trees should be chosen for their mature size and potential height.

2.2. Provision of clear, safe and welcoming pedestrian access walkways from Oak, Willow and Heather streets and from 28th Avenue to the entrances of new Acute Care building.

Note to applicant: This should be illustrated in the development permit drawings on the overall site plan, and should include details of location, lighting, signage and appropriate landscape landmarks. Pedestrian entrances to the site should be highly visible and clearly connected to the adjacent greenway and to public transportation.

2.3. Provision of opportunities for urban agriculture at grade.

Note to applicant: This could take the form of edible landscaping or areas for planters or plots suitable for urban agriculture activity. The necessary supporting infrastructure, such as tool storage, hose bibs and a potting bench should be provided. The design should maximize sunlight, integrate into the overall design and provide universal access.

2.4. Redesign of the surface parking in the northeast corner of the site which should be pulled back from the 28th Avenue street edge. Some of the hard surface should be converted to tree planting spaces.

2.5. Compliance with the Sustainable Large-Site Rezoning Policy including the objectives of Sustainable Site Design, Access to Nature, Sustainable Food Systems, Green Mobility, Rainwater Management, Zero Waste Planning and Low-Carbon Energy Supply.

2.6. Provision of the Wellness Walkway on the public sidewalk adjacent to the full length of 28th Avenue from Oak Street to Heather Street, along Heather Street, adjacent to the Oak Street frontage of the site and along the southern edge of the internal ring road. Dimensions, location and details of the Wellness Walkway to the satisfaction of the General Manager of Engineering and the General Manager of Planning and Development Services.

Note: See Appendix F for a description of the Wellness Walkway.

Engineering

Arrangements to the satisfaction of the General Manager of Engineering Services and the Director of Legal Services for the following:

3. Provision of a Services Agreement to detail the on- and off-site works and services necessary or incidental to the servicing of the site (collectively called the "services") such that they are designed, constructed and installed at no cost to the City and all necessary street dedications and rights of way for the services are provided. No development permit for the site will be issued until the security for the services are provided.

3.1. Closure of the vehicle access onto Heather Street including removal of the vehicle entry, reconstruction of the sidewalk, curbs and boulevards to Wellness Walkway standards.

3.2. Provision of a cul-de-sac on 32nd Avenue at Willow Street, including any property dedications required to secure the cul-de-sac and associated sidewalk space on the north side of 32nd Avenue.

Note to Applicant: Arrangements to secure portions of the rezoning site may be required to provide the cul-de-sac. Approval from the Ministry of Health pursuant to the Hospital Act may be required if dedication of a portion of the site is required. A subdivision application is also required.

3.3. Provision of a full traffic signal and all associated street improvements at the intersection of 33rd Avenue and Willow Street.

Note to Applicant: Street improvements include, but not limited to, the removal of corner bulges and provision of left-turn bays on 33rd Avenue.

3.4. Arrangements to provide traffic calming measures, for the neighbourhood south of 32nd Avenue between Oak Street and Willow Street as well as the neighbourhood directly south of 33rd Avenue east of Willow Street, should they, in the opinion of the General Manager of Engineering Services, prove to be necessary.

3.5. Provision of a sidewalk on the west side of Willow Street from 33rd Avenue into the site including standard boulevard and landscaping treatment.

3.6. Provision of a left-turn arrow at the intersection of Cambie Street and 33rd Avenue for northbound-to-westbound vehicle movements.

3.7. Provision of street improvements to the westbound travel lane at the intersection of 33rd Avenue and Oak Street to allow vehicles to pass left-turning vehicles.

Note to Applicant: Street improvements include, but are not limited to, construction of curb and gutter on the north side of 33rd Avenue, for up to 100 m east of Oak Street, and potential tapering of the curb and gutter immediately west of Oak Street.

3.8. Provision of a "Wellness Walkway" with associated lighting, wayfinding signage, etc. to the satisfaction of the General Manager of Planning and Development Services and the General Manager of Engineering Services, along the full frontage adjacent to 28th Avenue, along Heather Street from 28th Avenue south to the Wellness Walkway constructed as part of the Family Stay and Respite Centre(Ronald McDonald House), the full frontage adjacent to Oak Street, and completion of the southern east-west connection through the site connecting Oak Street, around the Canadian Blood Services, to the Wellness Walkway constructed as part of the Community Care Facility (Ronald McDonald House). For portions of the Wellness Walkway located within the site, provision of a Statutory Right of Way agreement to secure public access.

3.9. Provision of separated bicycle facilities on 28th Avenue between Oak Street and the Health Centre entry including any adjustments required to the intersection and existing traffic signal at 28th Avenue and Oak Street.

Note to Applicant: Should a benefiting adjacent development proceed concurrently with this project the applicant's share may be reduced to reflect contributions from those benefiting developments.

3.10. Provision of adequate water service to meet the fire flow demands of the project. The current application lacks the details to determine if water main upgrading is required. Please supply project details including projected fire flow demands as determined by the applicant's

mechanical consultant to determine if water infrastructure upgrading is required. Should upgrading be necessary then arrangements to the satisfaction of the General Manager of Engineering Services and the Director of Legal Services will be required to secure payment for the upgrading. The developer is responsible for 100% of any water infrastructure upgrading that may be required.

3.11. Provision of adequate sewer service to meet the flow demands of the project. The current application lacks the details to determine if sewer main upgrading is required. Please supply project details including projected flow demands, on-site sewer drainage and proposed discharge locations as determined by the applicant's mechanical consultant to determine if sewer system upgrading is required. Should upgrading be necessary then arrangements to the satisfaction of the General Manager of Engineering Services and the Director of Legal Services will be required to secure payment for the upgrading. The developer is responsible for 100% of any sewer system upgrading that may be required.

4. Provision of all utility services to be underground from the closest existing suitable service point. All electrical services to the site must be primary with all electrical plant, which include but are not limited to, junction boxes, switchgear, pad mounted transformers and kiosks (including non BC Hydro Kiosks) are to be located on private property with no reliance on public property for placement of these features. There will be no reliance on secondary voltage from the existing overhead electrical network on the street right-of-way. Any alterations to the existing overhead/underground utility network to accommodate this development will require approval by the Utilities Management Branch. The applicant may be required to show details of how the site will be provided with all services being underground.

5. Provision of a Rainwater Management Plan that utilizes sustainable strategies to allow for infiltration, retention, treatment and utilization of rainwater where applicable and appropriate on site.

   Note to Applicant: The Plan should demonstrate the volume of the post development runoff not exceeding the former use of the site and that it is treated for 80% TSS removal before discharging into the City's storm-water infrastructure. The Plan should speak in general terms for the entire site and how each development phase will contribute to the overall objective.

6. Provision of a Solid Waste Diversion Strategy that addresses waste diversion in all solid-waste generating activities within the complex.

   Note to Applicant: The Strategy must identify/provide space, infrastructure and an operational approach to divert organics and recyclables from the waste stream, and minimize the vehicle trips required for collection, to the satisfaction of the General Manager of Engineering Services. The Strategy should speak in general terms for the entire site and how each development phase will contribute to the overall objective, and prior to Development Permit issuance the completion of any agreements that may be required by this

Strategy on terms and conditions acceptable to the General Manager of Engineering Services and the Director of Legal Services.

7. Provision of an updated Traffic Demand Management plan outlining specific actions, goals, monitoring and a proposed reporting schedule all to the satisfaction of the General Manager of Engineering Services.

   Note: The plan should include a comprehensive review of potential mechanisms for reducing vehicular travel to the site, including measures to increase cycling, walking, transit use, and carpooling.

Heritage

8. Provision of a letter, to the satisfaction of the General Manager of Planning and Development Services, stating the owner's support to add the Jean Matheson Pavilion and the Steam Plant to the Vancouver Heritage Register.

   Note to Applicant: addition to the Vancouver Heritage register does not preclude future demolition, but gives heritage recognition to the these buildings, which is consistent with Council policy which states that resources listed in the 'A' or 'B' category on the Recent Landmarks Inventory should be added to the Register where possible. The City does not expect the owner to agree to the heritage designation (protection) of these buildings at this point in time. (Staff support the addition of the Shaughnessy Hospital and the Acute Care wing to the Register as well but this is not required as it is anticipated that these buildings could be demolished as part of a future phase.)

Low-Carbon Heat Plant

9. Enter into an agreement on terms acceptable to the General Manager of Engineering Services and the Director of Legal Services to convert to a low-carbon heat source to serve the Children's and Women's Health Centre campus on a timeline acceptable to the General Manager of Engineering Services and secured by a written commitment from PHSA, backed by the Province of British Columbia. The heat source must have installed capacity to reduce greenhouse gas emissions by a minimum of 65% below a business-as-usual approach to heating at the Children's and Women's Health Centre and Vancouver General Hospital campuses. Development of an on-site, low-carbon heat plant must adhere to the policy framework outlined in the Neighbourhood Energy Centre Guidelines and, as part of the necessary municipal approvals, it must include a public consultation process acceptable to the General Manager of Engineering Services and to the General Manager of Planning and Development Services, for the low-carbon heat source.

Soils

10. That the property owner shall, as required by the Manager of Environmental protection and the Director of Legal Services in their discretion, do all things and/or enter into such agreements deemed necessary to fulfill the requirements of Section 571(B) of the Vancouver Charter.

11. Enter into a remediation agreement for the remediation of the Site (or such lesser portion of the Site, as defined by metes and bounds, on which the Acute Care Centre will be located if so approved by the Ministry of Environment in defining the site and authorizing the City to proceed with the rezoning, subdivision and development permit applications) and any contaminants which have migrated from the Site on terms and conditions satisfactory to the Manager of Environmental Protection, City Engineer and Director of Legal Services, including a Section 219 Covenant that there will be no occupancy of the Acute Care Centre constructed pursuant to this rezoning, until a Certificate of Compliance(s) or such other instrument, determination or approval satisfactory to the City has been issued by the Ministry of Environment which confirms that the Site or the portion of the Site on which the Acute Care Centre will be located, as applicable, and any contamination that has migrated from the Site has been remediated, managed or otherwise dealt with to levels or standards acceptable to the Ministry of Environment and for any contamination that has migrated from the Site onto the City roads, to the standards acceptable to the City.

Public Art

12. Execute an agreement satisfactory to the Director of Legal Services and to the Managing Director of Cultural Services for the provision of public art in accordance with the City's Public Art Policy, such agreement to provide for security in a form and amount satisfactory to the aforesaid officials; and provide a preliminary public art plan to the satisfaction of the Public Art Program Manager.

    Note to Applicant: To discuss your application please call Bryan Newson, Program Manager, at 604.871.6002.

Note**:** Where the Director of Legal Services deems appropriate, the preceding agreements are to be drawn, not only as personal covenants of the property owners, but also as Covenants pursuant to Section 219 of the Land Title Act.

The preceding agreements are to be registered in the appropriate Land Title Office, with priority over such other liens, charges and encumbrances affecting the rezoning site as is considered advisable by the Director of Legal Services, and otherwise to the satisfaction of the Director of Legal Services prior to enactment of the by-law.

The preceding agreements shall provide security to the City including indemnities, warranties, equitable charges, letters of credit and withholding of permits, as deemed necessary by and in a form satisfactory to the Director of Legal Services. The timing of all required payments, if any, shall be determined by the appropriate City official having responsibility for each particular agreement, who may consult other City officials and City Council.

* * * * *

4500 Oak Street
Children's and Women's Health Centre of British Columbia Branch

Consequential Amendment to Parking By-law No. 6059

Note: An amending by-law will be prepared generally in accordance with the provisions listed below, subject to change and refinement prior to posting.

1. This By-law amends the indicated provisions of the Parking By-law.

2. In Schedule C, add:

4500 Oak Street (Women's and Children's Health Centre)		126	Parking, loading and bicycle spaces in accordance with by-law requirements on [date of public hearing], except that: a) a minimum of 1,830 parking spaces must be provided for the Acute Care Facility and for all development existing as of [date of public hearing]; b) an additional 120 parking spaces must be provided with the renovation of the Children's Hospital and Women's Hospital buildings; and c) in addition to the requirements in paragraphs a) and b), two staff parking spaces, as well as one passenger drop - off space for each 8 childcare spaces, must be provided for the child day care.

"

4500 Oak Street
Children's and Women's Health Centre of British Columbia Branch

ADDITIONAL INFORMATION

1. Comments – General Manager of Engineering Services

Engineering Services reviewed the application and, in a memo dated June 8, 2012; the Projects Engineer stated that Engineering Services has no objection to the proposed rezoning provided that specific conditions are met. In the memo, a number of rezoning conditions were listed for inclusion in the staff report. These have been inserted in Appendix B as Form of Development conditions and conditions to be met prior to by-law enactment.

2. Comments - Addressing

No addressing issues are foreseen for the proposed project. Addressing of buildings is to be assigned off the existing ring road for the Acute Care Centre and the renovated Children's and Women's Hospitals, at the Building Permit stage.

3. Vancouver Heritage Commission and the Historic Value of the Shaughnessy Military Hospital

The original Shaughnessy Military Hospital was designed by Mercer and Mercer Architects and constructed in 1940. The building is listed on the Recent Landmarks Inventory in the "A" category as a good example of a late Moderne architectural style. Its historic value lies within its architectural expression, the noteworthy architectural team and its ability to relay the history of how development occurred on the site. Buildings on the Recent Landmarks Inventory are eligible for inclusion onto the Vancouver Heritage Register at the discretion of the property owner. Given the long term development direction of the Health Centre along with health care requirements, retaining the building will not be feasible. As part of this rezoning, the A and L wings are intended to be demolished, leaving the B, C and D wings. Staff note that the main entry in the B wing, contains a bronze screen along with other elements, which could be salvaged for reuse through a future rezoning when that area is redeveloped.

As part of the rezoning enactment conditions, staff are seeking the owner's consent to add the J. Matheson Pavilion and the Steam Plant Building to the Vancouver Heritage Register (VHR). Both buildings are also listed in the 'B' category on the Recent Landmarks Inventory, and shown as retained in the proposed Master Plan.

The Vancouver Heritage Commission reviewed the rezoning application on May 7, 2012 and passed the following motion:

THAT the Vancouver Heritage Commissions supports the rezoning application for 4500 Oak Street (Women's and Children's Hospital), as presented at the May 7, 2012, meeting, while regretting the loss of the veterans' hospital, and acknowledging the long range intent to retain and preserve the J. Matheson Pavilion and the Steam Plant.

FURTHER THAT the Vancouver Heritage Commission supports the retention of the Shaughnessy Hospital entrance façade, bronze grilled screens and the Beatrice Lennie bas-relief panels as presented at the May 7, 2012, meeting.

FURTHER THAT the Vancouver Heritage Commission requests that the Statement of Significance for the Shaughnessy Hospital, the Steam Plant, the Acute Care Wing, and the J. Matheson Pavilion is updated paying particular attention to the significant military history of the site.

CARRIED UNANIMOUSLY

4. Comments – Urban Design and Development Planning

Planning staff have reviewed the application and offer the following comments on the application, including the Master Plan and the proposed form of development, and on the recommended conditions of approval, which may be found in Appendix B.

The proposed Master Plan is intended to serve a wide range of goals, primarily those related to rebuilding and improving the physical facility for health care purposes, but also in response to the wider expectations of staff, patients, visitors and the nearby community. Staff acknowledge the significant improvements made to the Master Plan with this proposal, such as the long-term reduction in building footprint that will permit more and better on-grade open space in the future, and the improvement of the Heather Street bikeway by removing vehicle access.

As noted in this report, the requirements of health care change over the life span of health care campuses, and the plan must therefore been seen as work in progress to be revisited at each major interval of work. Similarly, the building design itself is not known at this time, and will be developed in greater detail with reference to the attached Design Standards and conditions of approval. Staff have therefore focussed their attention on the addressing the effects of this new development, whatever individual form it takes, in terms of its interface to the public realm, its landscape and open space, access and circulation while leaving the design of the building itself somewhat more open. The Master Plan should be updated to reflect the evolving design of the new Acute Care Centre, and the heat plant expansion.

Design Standards

Planning staff have worked with the applicant to develop a set of Design Standards that will describe instead the expected range of design solutions that may be considered for the new Acute Care building, along with individual goals that must be met such as universal access to daylight and open space for patients. Staff feel that the standards as attached represent a sufficiently advanced document to stand in for a specific building form as would normally be approved as a form of development, and recommend that they be updated to reflect the heat plant expansion as a condition of enactment in order so that the Standards can guide the exterior design of the two new buildings.

Master Plan

These standards will create the main point of comparison for the applicants and staff alike to evaluate the design of the new building. In order to advance the Master Plan to a similar stage so may also be used to help evaluate development permit applications, staff have recommended a number of refinements and improvements to the Master Plan so that it is complete at the point of application (see conditions (b) 1. through 9. in Appendix B). Generally these conditions seek general changes to the plan or the provision of strategies rather than specific built design, to allow future flexibility.

Form of Development

In order to address the specific design that will be proposed, more specific conditions are recommended for consideration by the General Manager of Planning and Development Services or Development Permit Board in their decision on a development permit application. These conditions need not be resolved at the time of application.

Of this second set of conditions, intended to be addressed through the review of the development permit for the Acute Care building, the most significant relate to the relationship between the new, higher form of the building and nearby open spaces including single-family housing on 28th Avenue.

Staff feel that the northeast triangle of open space, identified for conversion to green space in the final stage of the Master Plan, represents the greatest opportunity to improve the built environment for the benefit of patients, staff, families, visitors, and the community. As the first step in advancing this opportunity, a recommended condition of approval seeks the provision of substantial new tree planting in the area. Surface parking may continue in the short term, although some individual parking stalls may need to be converted to planting area to give trees the best long-term chance of development into a significant addition to the urban forest (see condition 10. in Appendix B). The medium term development of this triangle is also a recommended change to the Master Plan (see condition 2.).

The key concern expressed by the surrounding community is the proposed height of the Acute Care building. Staff feel that the proposed maximum height, intended to permit a range of potential design solutions, can be accommodated on the site so long as the specific impacts to local views and shadowing are controlled as noted (see conditions 11. and 12.).

A number of commentators, including the applicants and the Urban Design Panel, have remarked on the importance of wayfinding for all users of this complex and changing precinct. Staff therefore recommend improvements to overall wayfinding, and the provision of signage and other features for the Acute Care building specifically (see conditions 3, 5, 7 and 13.).

Finally, staff recommend a range of conditions intended to improve the environmental and urban design performance of new development such as reduced noise, permeable surfaces, and the provision of open spaces specifically designed for the respite and repose of family members who are visiting their children and relatives undergoing care.

5. Urban Design Panel

The Urban Design Panel reviewed this proposal on May 23, 2012 and supported (8-0) the use, density and height amendments to the CD-1 By-law. The Panel's consensus on key aspects needing improvements were as follows:

- Add design life to the definitions;
- Consider breaking up the upper floor mass, in balance with the overall goal of centralizing the new massing;
- Improve visibility of the entry sequence;
- Leave design standards flexible to allow evolution over time;
- New Oak Street building in phase seven appears to be too low in intensity;
- Walkway should engage more and invite the neighbourhood in;
- More height in the centre of the site would offer more flexibility in site planning;
- Phases four to seven should be developed in more detail;
- More underground parking than proposed would allow for future flexibility in use of open spaces;
- Legibility of the front entries in phases four to seven needed more clarity;
- Routing connecting to Willow Street is overly circuitous;
- Range of open spaces including permeable and intimate spaces needs more clarity and hierarchy.

Related Commentary:

The Panel thought the massing had been improved from the previous proposal. They felt that a focus on height at the centre of the site was the right way to deal with the increased density. The Panel concurred that adding height at the centre of the site was the right strategy to develop the site, and some thought additional height should be allowed to free up other programmatic aspects of the project. One Panel member had some concerns regarding the concentration of solid mass at the upper levels of the Acute Care building. A couple of Panel members thought that more height might benefit the site planning including the phase seven building on Oak Street. Some members stated that the functionality of the health care should not be compromised to deal with uncertainty with the neighbours.

Several members felt that landscape buffers would form the key interface to the single family neighbours, rather than the building itself. The Panel was supportive of how the applicant was dealing with those interfaces and thought they would be addressed in greater detail.

The Panel thought the key aspects of the Master Plan needing improvements from the Panel's previous comments had been addressed well in particular with the modification of the height and mass and freeing up some of the components on the site.

The Panel felt that the basics of the proposed Design Standard were acceptable and that the document was the right length, with one member noting that "slimmer was better" as it was less prescriptive and would allow for flexibility.

Some members felt the energy metrics should be developed more and thought they were still undefined although the targets were supportable. There was a concern that since the project will be built out over a long period of time that the goals might need to be more formally established.

The Panel supported the new Willow Street connection. A couple of Panel members had a concern regarding the relationship with 28th Avenue in part with the vehicular circulation and the interface with the bike routes. One Panel member noted that having more underground parking would allow greater freedom on the site surface in the future.

The Panel thought the design for on-site circulation and open spaces was better than the previous design. The notion of the nodes was strong and the Willow Street through route was supported however there were a number of Panel members who thought the route was circuitous. The Panel encouraged the applicant to let the green space evolve over time.

Some Panel members thought the range of open spaces was still a little unclear recognizing that the building massing will be shifting but felt the hierarchy should be more clearly established along with the permeability of the intimate spaces.

Applicant's Response: Mr. Yuen thanked the Panel for some great comments. He reminded the Panel that the document is in draft form and there is still work to be done. He added that a lot of the commentary from the Panel will be included. He mentioned that they have been working on the plan for some time and it has been difficult trying to find a balance between being prescriptive and non-prescriptive. Mr. Yuen added that they will look at the energy metrics and agreed that they needed to work on the entry sequence.

6. Comments of the Applicant

The applicant was provided with a draft copy of this report in September 2012 and provided the following comments:

The Provincial Health Services Authority (PHSA), on behalf of Children's and Women's Health Centre of BC, thanks the General Manager of Planning and Development Services and staff for their efforts developing this Policy Report to enable rezoning of the Oak Street site and therefore development of the new BC Children's and BC Women's Acute Care Centre. This much-needed facility will provide significantly enhanced facilities for the most complex and critical health care services provided at BC Children's and BC Women's Hospitals, serving both local Vancouver patients and those from around the province.

The conditions of rezoning and development described in this report are generally acceptable to PHSA as presented, and PHSA supports the project proceeding onto Public Hearing.

Design Rationale for the Acute Care Building

As noted in the staff report, the new Acute Care building will require large floor plates to accommodate the requirements of the anticipated department sizes and the desire to co-locate certain departments together to support preferred clinical adjacencies.

The most critical time for a risk event is in the transfer of patients between these service areas. As such, the critical adjacencies are driven by reducing the movement of patients between areas by placing certain departments next to each other.

- Typically, departments between which patients are most frequently moved, should be placed together.
- Children undergoing surgery are at the highest risk of transfer, so the Surgical Suite and Critical Care Units are located together.
- It is also desirable to keep out-patients on the lower levels to reduce the mixing of ambulatory day patients and longer term in-patients above. As such, out-patient services and clinics tend to be located on the lower floors.
- Where possible, it is desirable to put the lower risk patients at the top of the building. As such, in-patient floors where children are generally in a more stable condition and in the recovery stage of their stay are located on the upper floors.

Issues impacting the shape and layout of in-patient floors:

- All in-patient rooms should have access to daylight and view. It has been well documented that access to daylight and views can significantly reduce recovery times and length of stay for patients. As such, all in-patient rooms are typically located around the perimeter of the floor plates.
- To reduce the length of staff travel time to each patient, localised staff work areas are placed between opposing rows of patient rooms in the centre part of the floor, rather than a long elongated arrangement of rooms.
- Building Code requires that all patient rooms need to be served by corridors of at least 2.4 m in width to allow for the movement of patients in beds if required.
- The allocation of nurses to patients varies depending on acuity level, but generally this means that patient rooms are grouped into manageable operational pods of 8-12 rooms, each with their own support areas for equipment, material management and staff collaboration.
- To reduce the incident of hospital borne infection, it is also desirable to be able to isolate the pods from each other in the event of an outbreak. This results in a floor shape where pods of rooms are accessible independently without patients having to pass through one pod to reach another.

- As a result of the criteria above, it is typical to provide a assembly of "patient room pods" that create "wings" of rooms branching away from a central arrival and service point on each floor.
- Unlike the previous model of multi-occupancy rooms or wards, best practice now calls for all patients to be in single occupancy rooms with an en-suite washroom and adequate space to support the needs of parents and families. Families are encouraged to participate in care and stay overnight, particularly in pediatric facilities. As such, rooms are typically larger single occupancy rooms in the region of 28 m^2 in area and when placed alongside each other, determine the overall length of each pod or wing.
- In the case of BC Children's Hospital, there will be 48 in-patient beds per floor arranged in four groupings of 12 beds. This will create a floor plate shape that has four distinct wings of a width across each wing of approximately 23-25 m.

Issues impacting the shape and layout of the lower diagnostic and treatment floors (the podium levels):

- The shape and footprint of these floors is determined by site constraints such as the existing retained buildings, access and circulation on the campus road system and need to maintain minimum spatial separation between buildings for code conformance.
- It is desirable to maintain a minimum separation of 9 m between buildings but this is increased to 13 m next to the 1982 building, to maintain emergency vehicle access to the existing emergency department during construction.
- Given the site constraints, separation from adjacent buildings and footprint size this pushes the building to the northeast to within 67.00 m (anticipated setback) of the property line on 28th Avenue.
- The primary entry level is typically reserved for the main emergency department as this has to be readily accessible and provided with an ambulatory arrival point distinct from other entries to the Health Centre. To reduce patient and family anxiety, this entry must be clearly recognisable and easy to find. This department relies heavily on the support of diagnostic services such as CT, MRI and Radiology and as such the main diagnostic and imaging department is placed alongside emergency.
- The size of these departments is driven by the size of rooms to support and house the diagnostic equipment but also, the total number of anticipated patients presenting at the emergency department and requiring care.
- In addition, the diagnostic and imaging department serve the regularly scheduled elective tests that go on for ambulatory day patients to the Health Centre.
- The transfer of patients from one area to another is the time of highest risk and as such, clinical planning attempts to reduce the travel time between critical areas as much as possible.

- The two departments are large in size to meet this service demand and need to be co-located on the same floor to reduce travel time for patients and eliminate vertical transport in elevators when patients are at greatest risk. As a result, the main floor of the new ACC will be approximately 9 030 m².
- The next three floors contain the main birthing suite, NICU (Neo-natal Intensive Care Unit), main Surgical Suites and the PICU (Pediatric Intensive Care unit). To improve the consistency of the building stacking, these floors are similar in size and range between 7,200 bgsm- 7,400 bgsm.

Building Height

The height of the building is driven by the demands of the functions on each level and the relationship to other buildings on campus.

- Surgical and Diagnostic floors require a significant height to support the functional demands of the rooms but also satisfy the significant service infrastructure required to provide the very specific environmental requirements of the space.(i.e., operating rooms, diagnostic rooms, procedure suites)
- For these reasons, the typical diagnostic and treatment floors in the podium are 5.0 m in height, whilst the upper patient floors can be less because the infrastructure demands of the patient rooms are less significant. In this case, we anticipate a floor to floor height in the range of 4.2 m-4.5 m.
- The rooftop mechanical spaces accommodate the main air-handling equipment, which for the size of this project are significant and require a floor to floor height of 7 m. This also allows the equipment to be enclosed within a mechanical penthouse rather than be exposed on the roof.
- Finally, the lower two floors have to relate directly to the floor heights of the 1982 building, as there are direct connections between these two buildings at Level 1 and 2. As such, the floor to floor height of Level 1 is 5.14 m.

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4500 Oak Street
PROPOSED CD-1 DESIGN STANDARDS

ACUTE CARE CENTRE DESIGN STANDARDS

June 19, 2012

Children's and Women's Health Centre of BC

CONTENTS

1.0 Intent

These design standards have been developed for the Children's and Women's Health Centre (CWHC) and in consultation with the City of Vancouver. The intention is to document areas of significant interest to the broad community of patients and families, staff, visitors and neighbours in the design and construction of the proposed new Acute Care Centre. Incorporation of these objectives and guidelines in the site planning and design of the new building will contribute to creating an exemplary model for acute care in a public health facility.

The design standards will apply to the current Rezoning submission for development of the Acute Care Centre (ACC). The intent of this document is to direct the Public Private Partnership (P3) proponent teams and inform them of design expectations from the neighbourhood, the City and CWHC for the Acute Care Centre. This document will also be used by City staff to evaluate development permit applications. The design standards will be included with the output specifications contained within the Request for Proposals documentation.

This document forms the fundamental design framework, identified by the stakeholders, for the project, as well as specific requirements for identified components of the design. All directives must be considered in the context of the existing residential neighbourhoods surrounding the CWHC site. All planning and design decisions must respect the adjacent neighbourhoods and strive to enhance their unique characteristics. The Master Site planning and building massing in the Rezoning document is illustrative only and intended to provide a general guidance.

The design objectives and guidelines are derived from five themes to:

- support the philosophy of patient and family-centred care;
- reflect the culture and core values of BC Children's, BC Women's, and UBC;
- maximize operational efficiency;
- pursue environmental sustainability; and
- be a good neighbour, respectful of other uses and activities in and around the site.

The ultimate goal of site redevelopment is - "To create affordable and sustainable strategies to address challenges associated with the existing BC Children's and BC Women's Hospital facilities."

Broad goals of the ACC project are to:

- incorporate LEAN and evidence-based design principles in facility design to improve the delivery of patient-centred care;
- provide a facility that improves operational efficiency/capacity utilization by developing flexible spaces to support changes in health care service delivery and respond to public health and environmental disasters;
- provide space for clinical education and clinical research that supports the core mandate of BC Children's and BC Women's;
- build a facility that is environmentally responsible (to a standard similar or equal to LEED® Gold) and supports a safe and healthy work environment; and
- design a building that is functional, easily intelligible, warm and welcoming to all users and visitors, and exists in a pleasant surrounding that benefits the hospital and the surrounding neighbourhoods.

2.0 Background

2.1 Who We Are

BC Children's Hospital and Sunny Hill Health Centre for Children (BC Children's) and BC Women's Hospital and Health Centre (BC Women's) - collectively referred to as Children's & Women's Health Centre (CWHC) - are leaders in clinical excellence, delivery of patient and family-centered care, clinical teaching and research. For more than 50 years the children and women of British Columbia (BC) have received specialized care through the programs and services of CWHC.

Agencies of the Provincial Health Services Authority (PHSA), BC Children's and BC Women's have a mandate to deliver a comprehensive range of specialized tertiary and quaternary patient care services for the sickest children and most complex obstetrical cases in the province as well as primary and secondary pediatric and maternal care, and women's health services for Vancouver Coastal Health (VCH). These organizations have also historically responded to the primary and secondary care delivery demands that arrive at both the BC Children's Emergency Department and the BC Women's Assessment Room for residents outside of VCH, to the best of their ability and capacity.

The **Vision** for the BC Children's and BC Women's Redevelopment Project is for:

> ***A campus of patient-centred care that operates in an environment of quality, excellence and innovation***

2.2 Rezoning Site & Context

The site for the new CWHC Acute Care Centre contemplated under the current Rezoning submission is located near the centre of the Oak Street Campus, adjacent to existing health care buildings. Other health care and related facilities are located on the southern edge of the block; and existing well-established residential neighbourhoods are found on street frontages surrounding the site. See Figure 1.

2.3 Definitions

Various terms have been used throughout this document to describe the appropriate application of these guidelines.

The use of "must", "will", or "shall" indicates a mandatory requirement for inclusion in the design of the ACC and for which there is no recourse for negotiation for as long as that item remains in this document.

The word "may" is used in situations where suggested design options satisfy the guideline however other approaches or techniques can be considered. However it is accomplished, the guideline must be satisfied.

The word "should" indicates a strong preference for achieving the stated goal. The means of accomplishing the objective are open to the design team.

FIGURE 1: PROPOSED REZONING

3.0 General Design Requirements

3.1 Evidence-Based Design

The design of any new facility for the BC Children's & Women's Health Centre will incorporate Evidence-Based Design (EBD) principles. The goal is to transform healthcare settings into healing environments that contribute to health and improve outcomes through the creative use of EBD. This includes but is not limited to patient care and staff experiences. Improved patient health and staff work environments have resulted from such design qualities as access to daylight and views, minimization of travel distances, efficient patient room configurations, and convenient, well-equipped care stations.

3.2 Use of Wood

As required by BC Provincial Bill 9 – Wood First Act, the site and building design will incorporate wood and wood products into the Acute Care Centre to the extent that is consistent with the requirements of the Vancouver Building Bylaw and other regulations and schedules. This requirement is consistent with the availability of extensive evidence-based literature confirming the positive effect on patient outcomes and staff morale of the use of wood in the built environment.

3.3 Measurable Sustainability Criteria – LEED

All phases of the design and development of the Acute Care Centre will reference sustainable design criteria and principles. Wherever possible materials, methods and technologies that mitigate the negative impacts associated with energy and resource use will be considered. The LEED (Leadership in Energy and Environmental Design) rating system from the Canadian Green Building Council will guide the design of the Acute Care Centre, with the goal of achieving a LEED Gold Certification upon completion of construction. A 'Gold' Certification level will confirm that the new building meets the requirements for: site sustainability, water and energy efficiency, materials and resource suitability, atmospheric standards and innovation.
Pursuit of LEED certification also requires that the core issues of sustainability are adhered to throughout the design and construction process. The LEED rating system provides a solid framework for reference supporting Vancouver's leadership in becoming a more sustainable City.

3.4 Safety and Security

Crime prevention through environmental design (CPTED) must be incorporated into the design of the project. The following design principles are a guide to enhance security for the hospital campus:

- differentiate public and private spaces through changes in paving, vegetation or grading; or through design features of low walls, bollards, or planters rather than solid fences or walls;
- develop people gathering spaces with appropriate seating, and gardens with potential water features;
- develop designs that allow individuals to observe their surroundings during the course of their daily activities;
- develop circulation routes to have unobstructed views of surrounding areas;
- avoid excessive vegetation that obstructs visibility from windows and doors;
- design below grade parking structures with good lines of vision throughout the parking areas, and avoid hidden dark corners and spaces;
- paint all walls and ceilings white, and provide motion-sensitive lighting, in all parking structures;
- provide appropriate lighting levels throughout the campus to prevent crime and accidents; and
- give careful consideration to the design of refuse, recycling, and utility areas which are typically out of sight lines from the surrounding buildings and neighbourhood.

4.0 Site Planning Guidelines

The guidelines set out below are derived from and focused on achievement of the following primary site planning principle:

> ***Develop an Acute Care Centre within an existing health campus that is compatible with its existing campus and neighbourhood context.***

4.1 Site Access and Circulation

For the convenience of patients, visitors and staff, and safe and secure operations within the site, the access routes and parking areas must:

- provide clear access points, with minimum width and frequency of driveway crossings from surrounding streets, leading to a direct, intelligible on-site road system;
- offer easy and direct access to easily identifiable main facility entrances;
- lead to clearly marked and conveniently located surface and underground parking;
- provide accessible vehicle and bicycle parking spaces near to main facility entrances;
- develop well-defined and well-lighted pedestrian routes from parking areas to main entrances and vertical circulation points;
- use landscaping, fencing, and other appropriate treatments to screen surface parking areas from adjacent public streets and open spaces without compromising the safety and security of users;
- incorporate sustainable measures such as integrated landscaping, drainage swales, and permeable paving to decrease storm water run-off; and
- incorporate design details for the accommodation of those with physical limitations both in vehicles and as pedestrians

4.2 Vehicular Circulation

The three main access points to the site are from the existing Oak Street, the existing West 28th Avenue & the new entry at Willow Street. Only the Oak Street access point will be used for service pickups and deliveries. All service and loading for the new ACC facility will be accommodated as it currently functions.

The 28th Avenue access will be the secondary access point to the new Emergency Department entry and the surface parking lots in the NE corner of the site.

Parking access & entry of the new ACC should work with the on-site road system of the campus and be clearly identified for all staff, patients and visitors.

The ACC will accommodate pickup/drop off and valet parking. The design of this function must be compatible with the existing circulation on site. A separate Parking Study and Transportation Demand Management Program have been undertaken to make recommendations regarding this subject.

Please see Figure 2.

4.3 Pedestrian Circulation

Primary pedestrian access to the Acute Care Centre will occur from Oak Street via the existing BCCH. Secondary access will occur from Willow and Heather Streets.
All on-site pedestrian circulation routes must provide for links to existing buildings and desired links to future facilities.

4.4 Disabled Access

The accessibility needs of the physically challenged should be carefully considered in both the public and private realms to facilitate functional, integrated and comfortable linkages from the neighbouring streets and facilities and throughout the hospital campus.

FIGURE 2: ACCESS & CIRCULATION

Legend:

- Major North-South Arterial Roadway
- East-West Arterial Roadway
- Skytrain Canada Line
- Bus Stop/Bus Route
- Bikeway
- Ring Road
- Wellness Walkway
- Main Routes to ACC
- Access to Site * (Truck Access)
- Entry Areas of Children's & New Acute Care Centre
- Bicycle / Pedestrian Access
- Potential Emergency Department Access
- Entry to Buildings
- Underground Parkade
- Potential Underground Parkade

5.0 Landscape Design Guidelines

Hard and soft landscaping developed in association with the health care facilities will provide usable spaces, integrate the buildings with the site, and enhance the neighbourhood; all informed by the following principle.

> ***As part of the neighbourhood environment, the building must enhance the pedestrian experience and offer pleasant views into the site from surrounding streets; and provide a series of high quality open spaces appropriate for both hospital and community year round enjoyment.***

5.1 Elements of the Landscape

CWHC occupies a large, well-known and visible site within the City of Vancouver. The landscape will be a major factor in the creation of a livable, healthy and environmentally responsive community. A consistently creative design approach for the open spaces, circulation routes, and location of planting must be employed to provide compatibility and continuity with the adjacent neighbourhoods. Hard and soft landscape elements should be combined to help define the public, semi-public and private spaces on site. Landscape elements may include, but not be limited to, grassed areas, trees and shrubs, changes in elevation, berms, paved areas and walkways, fencing, seating, pergolas and trellises, and lighting. The design should incorporate living plants where appropriate using planters to define and enhance outdoor spaces.

5.2 Landscape Materials

All landscape materials will be of the highest quality, suitable for the intended use and climatic zone. Living plant material should be obtained from local sources.

5.3 Soft Landscaping

Soft landscaping, comprising grassed and planted areas, lines and groups of trees and shrubs, and changes in elevation should be used to the greatest extent possible to maximize the quantity and quality of open, green space. Small trees and shrubs should be used to define, and secure, outdoor spaces for patients and visitors. Outdoor spaces, especially those intended for children, should be located to maximize sunlight exposure.

All reasonable efforts should be made during design and construction to preserve existing mature trees and vegetation.

Boulevards fronting surrounding streets should be lined with trees at a minimum 75mm caliper and of appropriate species and height to create reasonable impact and screening when planted. Such trees should be located in accordance with City of Vancouver requirements. Wherever space permits a second row of similar trees should be provided inside the property line to enhance the quality of the boulevard and increase screening to surrounding homes.

The thoughtful incorporation of seasonal and coniferous planting, and the use of a variety of species of tree and plant materials, is required in the development of the landscape plan.

5.4 Hard Landscaping

The creation of usable outdoor space for patients, visitors and staff will require the judicious use of hard surface materials. These spaces should be carefully located with respect to sunlight penetration, protection from wind, and for the safety and security of users. Each space should

be distinguished by the nature of paving patterns and colours, seating and lighting, and clusters of trees and other vegetation. Outdoor places should be connected to access points with clearly defined, well-lit, and accessible pathways. Hard surfaces should use permeable materials and consider natural drainage suitable to the anticipated users.

Outdoor plazas and focal points should be used to define and enhance main facility entrances. These spaces need not be large, however, should be carefully located and designed to overcome the need for extensive on-site directional signage.

Suitable hard landscaping materials include:

- concrete with saw-cut joints, or concrete unit pavers;
- stone and masonry if suitably textured for walking and wheeled use;
- wood for furnishings and structures only; and
- metal for furnishings and plant containers only.

Asphalt or crushed rock surfaces are not suitable for outdoor spaces and will not be permitted. Similarly, 'Allenblock" or equivalent materials will not be acceptable for use in retaining walls.

6.0 Building Design Guidelines

The design of the Acute Care Centre must be sensitive to the neighbouring community and provide an environment that is welcoming, comfortable and attractive for all building users and the public.

Principle: New buildings and changes to public realm elements shall be designed to promote a healing environment focused on family-centred care; and remain respectful of the surrounding community.

Architectural design must be a part of this goal, and can participate by:

- creating buildings that are highly articulated and transparent to reduce their scale;
- utilizing glazing, canopies, shading systems and exposed structural elements to add character and interest to facades;
- arranging massing, materials, and detailing to create a pedestrian-scaled perimeter;
- providing transparency at street level;
- protecting pedestrians from the elements;
- providing clear definition of, and access to, major entrances;
- utilizing natural site grades to reduce visual building mass;
- developing landscaped areas, including roof decks, for the benefit of patients and staff; and
- providing a design rationale addressing the recommended design options in this and other sections.

6.1 Siting and Orientation

To respect views into the site for neighbours and passersby, and to assist those arriving at the hospital, the new ACC must be:

- located so that it is "contained" by existing buildings to the greatest extent possible;
- oriented consistently with the existing BC Children's and BC Women's Hospitals and the Ambulatory Care Centre;
- organized so that major vehicular entrances are aligned with Hospital main entrances;
- provided with projecting, protective, differentiating elements to clearly identify each major entrance;
- thoughtfully fit into natural site grades to reduce height and scale impact;
- reduced in height toward the surrounding streets edges to minimize view and shadow impacts;
- maintain or increase existing setback lines from the street to care buildings;
- screened and softened by the retention of mature existing trees and the addition of new trees and other planting in effective locations.

6.2 Site Coverage

Recognizing the finite nature of this site and the importance that the open space on site has for both the hospital users and neighbours, all new construction on site shall be arranged to:

- in the longer term, maintain or reduce existing site coverage;
- eliminate inefficiently used and wasted space within the complex;
- maintain or increase the extent of open, landscaped areas; and
- reduce the extent of impervious road and parking surfaces on grade wherever possible.

6.3 Building Configuration

Floor plate sizes and dimensions, and their arrangement, in contemporary medical centre facilities are largely determined by their programmatic, functional and operational needs. Within this context, the design of the ACC must provide a dynamic, interesting building with a well-articulated massing that is a welcoming and supportive place for patients, visitors and staff. This may be achieved by:

- arranging the single-patient rooms in articulated, repetitive groupings with substantial exterior glazing;
- utilizing family lounges and respite areas to create variety among the groups of patient rooms;
- providing staff access to daylight both during working and break times;
- utilizing vertical circulation elements to define and articulate main building massing;
- marking major building entrances with glazing and differentiated massing as cues; and
- creating direct, easily understood major circulation patterns with views out to the site to assist orientation.

6.4 Building Massing

The footprint (horizontal extent) of the new ACC will be limited to the envelope illustrated in Figure 3; and by the requirement to have access to the existing loading and marshalling areas on the north side of the Women's Health Centre. This envelope is encompassed on 3 sides by the existing buildings on site. To the NW is the Ambulatory Care Building, to the SE is the Shaughnessy Hospital (B Block) and to the SW is the Children's & Women's Hospital (1982 Building).

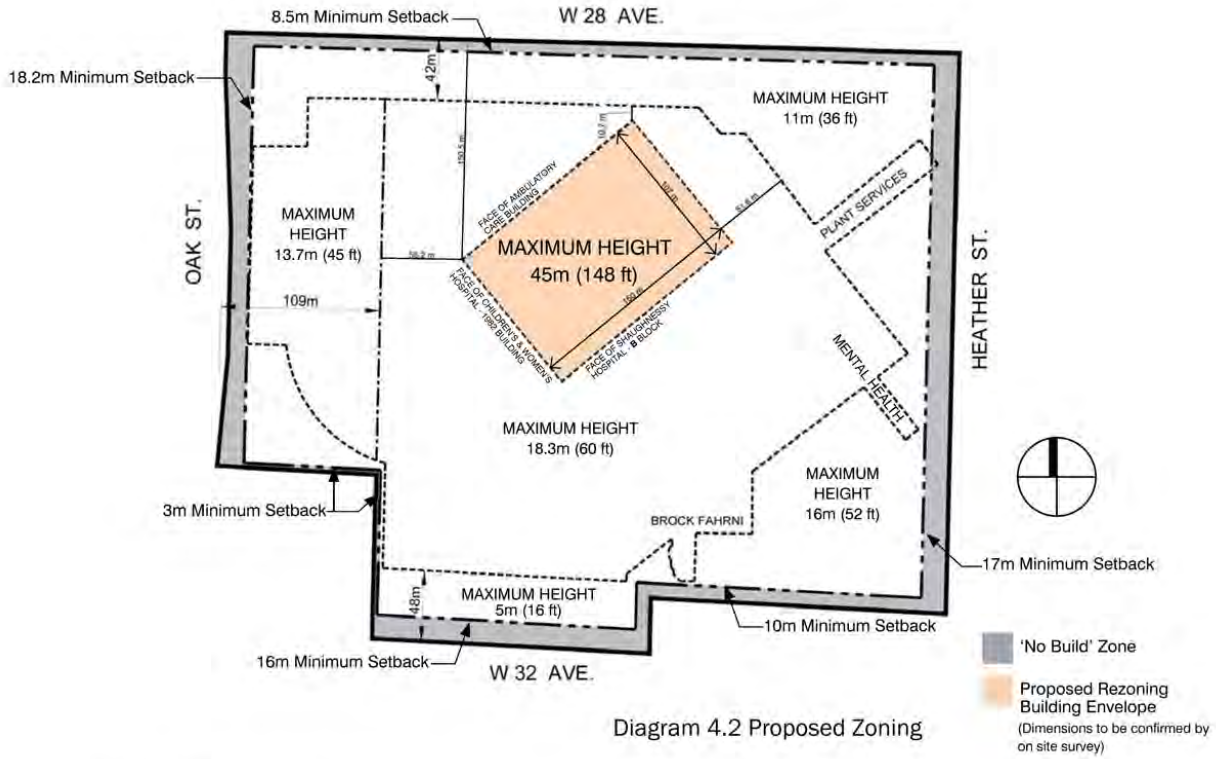

FIGURE 3: PROPOSED ZONING

Within these broad parameters the ACC must fulfill its health services mandate and respond sensitively to the neighbouring community and land uses. To do so, the building design must reflect a human scale, particularly at the street level, and provide an environment that is comfortable and attractive for both the building users and the public.

The overall building massing is expected to be composed of two major elements: the lower levels comprising entrance, major circulation, and diagnostic and treatment functions; and the upper levels consisting of the inpatient units and their support facilities. The lower levels will typically create a podium upon which the inpatient units are located in the upper levels. For the ACC, the footprint of the podium levels should not exceed 80% of the rezoning envelope; and the upper levels of inpatient units should not cover more than 60% of the roof area of the podium. See Figures 4a & 4b.

FIGURE 4a & 4b: MASSING DIAGRAMS

Extensive unbroken exterior wall surfaces are unfriendly, unwelcoming, unnecessary and inconsistent with contemporary health facility design. Accordingly, the configuration and materiality of the exterior walls of the ACC must be designed with care and thoughtfulness for the user and the surrounding community. With the exception of vertical circulation or service elements, signage, or entrance massing markers, exterior wall surfaces should be broken at each floor by using string courses, recessed glazing or contrasting material, carefully detailed through-wall flashing of significant size, or other design device. No floor-height exterior wall surface should extend more than 7.5 metres horizontally without articulation provided by building massing, window openings, change in materials, change in colour, or other appropriate action. Articulation in massing is significantly more effective and preferred over changes in material or colour within a flat wall plane to achieve this goal.

Special design attention must be placed on building corners which front surrounding public streets. These areas will be developed using smaller increments of solid and glazing materials than in other parts of the building to create a finer grain and more detail. Vertical elements, signage, colour and material variation, and other techniques may be used to reduce building scale, create identity, and relate to adjacent landscaped areas at these important locations.

The overall massing of the ACC must create a clear break between the podium levels and the inpatient units above. This can be achieved by:

- developing a cornice line (extended slab or other added element) at the top of the podium;
- differentiating the extent and type of glazing, and sunshading or other devices;
- recessing the exterior wall of a floor at the interface of podium and inpatient units;
- changing the design and materiality of the exterior cladding materials; and/or
- some combination of these or similarly effective design techniques.

The scale and massing of the new ACC at the street level will be mitigated by employing at least three distinct design techniques that include, but are not limited to, the following:

- stepping back the building massing from the street as the height of the building increases;
- providing a façade of high quality materials that is well articulated both vertically and horizontally, especially within the lower two storeys of the building;
- increasing the transparency of the building through extensive glazing with clear glass;
- recessing the lower two floors of the building from the storeys above;
- layering the facades using structural and sunscreening elements, recessed windows, and significant articulation or change in material to create smaller incremental elements; and/or
- increasing building setbacks from zoning minimums.

Consistent with functional and programmatic requirements, building massing will be used to achieve other important objectives by:

- breaking massing into legible parts to reduce building scale and identify key functional components, primary entrances and essential internal organization;
- arrange massing to provide clear visual clues to way-finding, entry and organization;
- arrange massing to maintain sunlight penetration into the public realm and into semi-private and private open spaces;
- develop direct and easily identifiable primary circulation routes between and within building masses to reduce arrival stress and assist visitors with orientation and identification of destinations;
- provide clearly separate, distinctly designed major entrances for the institution and the emergency department

6.5 Height

The maximum allowable height of development within the prescribed footprint area is forty-five (45) metres measured from the entry level. This height limitation is applicable to all occupied floors, any enclosed roof areas or overhead structures, mechanical penthouses, and roof-mounted equipment. Elevator penthouses, exhaust ducts and their supporting structure, and stairs may be excluded from this limit, depending on their design in relation to the goals of this standard.

In response to the prescribed uses of the building which have been determined to meet the necessary delivery of health care services, the proposed building will range in height from two to eight storeys, all within the maximum overall limit of 45 metres. Building components of various heights must be arranged to:

- reflect the requirements of functional floor plate sizes; notably smaller upper levels for inpatient units set above a larger continuous podium accommodating diagnostic and treatment services;
- utilize the broader base elements to create suitable scale at the ground plane by recessing and maximizing transparency on the lower one or two levels;
- create accessible outdoor spaces for inpatient and staff use on the roof areas of the podium exposed by the smaller inpatient floors;
- offer a welcoming, dynamic and attractive composition to patients, visitors, and neighbours; and

- set back any enclosed mechanical penthouse in order to reduce the apparent height at the street; or use a recessed mechanical floor to separate the podium from the floors above; in either case designing the mechanical enclosure as an integral element of the overall composition.

6.6 Materials and Finishes

The design will incorporate materials to create a distinct character appropriate to a hospital for children and women. Accordingly the material palette will:

- avoid a clinical and repetitive aesthetic and instead be friendly and open, welcoming and warm, using materials that exude warmth and harmony;
- promote variation and articulation of the exterior through varied use of materials;
- avoid extensive unbroken exterior wall areas and the excessive use of concrete;
- incorporate textured and warm, natural, and familiar materials;
- be used integrally with changes of massing
- animate the exterior with playful elements using materials and colours to add visual interest to the patients, visitors and staff;
- reinforce the recognition of primary entries, encourage material changes at major height transitions in the massing and clearly express the functional distinction between the inpatient units on the upper floors and the hospital support services on the lower "podium" floors;
- create changes and transitions to express the building hierarchy, prime circulation connections and to articulate stairs and elevators; and
- recognize that the lower "podium" levels will be more solid in character with a higher proportion of wall to window area, while the upper floors will be expressed in lighter materials and a greater extent of glazing; and
- emphasize the glazed and visually transparent major entrances with surrounding solid elements.

A variety of exterior materials will be appropriate, however the context of the surrounding residential community must be considered. Materials shall be natural, indigenous, durable and appropriate to the character of the area. Traditional cladding materials including wood (as allowed under VBBL), stone, brick masonry, and textured concrete or textured or polished concrete masonry units in warm colours are anticipated and acceptable. In addition, incorporating limited amounts of smooth or corrugated metal panels, or proven high quality cementitious cladding panels, is an acceptable design approach. All exterior wall cladding materials must be carefully detailed consistent with current best practice, suitable to local conditions, sourced locally to the extent possible, and be of high quality, durable and with permanent finish.

Unacceptable materials include stucco, vinyl siding, large expanses of concrete, mirrored glass, and neon lighting unless used in artwork, playful intervention, or other situation approved by the Owner and the City of Vancouver.

Tactile materials, such as wood, brick and stone, which avoid an oppressive 'clinical' atmosphere must be used to create a familiar 'residential' feel wherever the facility interacts with pedestrians.

All materials used throughout the ACC shall be selected to suit their intended purpose and with appropriate consideration of relevant LEED implications.

6.7 Entrances

Identifiable entrances are vital to the success of a hospital campus. The major entrances at this campus are the BC Children's Hospital, the BC Women's Hospital, and the proposed new Emergency Entrance. Patients and visitors must be able to easily identify and access these entrances without distress or delay. The building massing and architectural design should:

- reinforce identification of the major entrances from fronting streets;
- develop vertical façade elements at major entrances to act as "markers" for these important points;
- incorporate strong colours, and clear legible signage, to support and differentiate major entrances;
- locate major entrances on axis with, or highly visible from, main site entry points from surrounding streets;
- utilize large glazed expanses at major entrances to reinforce public access and permeability;
- provide visible, effective canopies to strengthen entrance identity and provide weather protection; and
- reduce visibility of secondary entrances and fire exits to limit and control access for enhanced patient and staff security.

Projecting exterior elements such as weather protection canopies should be incorporated at building entrances and extend over pedestrian and vehicle areas to:

- further break down the overall building massing and recognize the pedestrian scale along the building perimeter;
- provide significant weather protection at major entrances and along building frontages that provide circulation paths between buildings on the site; and
- reinforce the identity of major entrances to the building.

Denver Children's Hospital, Denver, CO.
Zimmer Gunsul Frasca Architects

University Medical Center, Princeton, NJ.
HOK / RMJM

6.8 Windows and Skylights

Patient and staff must be provided with access to daylight and views to the outside, to support the demonstrated improvement in well-being and care outcomes. Building design should address this goal by:

- the arrangement of circulation routes and occupied spaces to maximize opportunities for windows;
- the careful selection of window size and placement consistent with the space use;
- the inclusion of windows, of the largest possible size consistent with project sustainability and space use objectives;
- providing sun shades and other solar control measures;
- the provision of skylights, with appropriate glare protection, where windows are not possible or suitable;
- the utilization of internal courtyards to increase exterior wall exposure; and
- variation of glazing type, pattern and frequency to reduce building scale and massing, and to clearly distinguish the inpatient units from the diagnostic and treatment areas.

HEC Library, Montreal, QC
Dan Hanganu / Jodoin Lamarre Pratte

Institute for Medical Research
Madison, WI. HOK

6.9 Roof Treatment

Contemporary, and widely used, medical centre massing that combines broad diagnostic and treatment areas at the lower (podium) levels with smaller inpatient units above results in substantial exposed roof areas. These roof areas present significant opportunity for:

- green roof treatments to enhance sustainability and achievement of required LEED Gold certification;
- landscaping to improve the overview from inpatient floors above;
- creating accessible deck spaces to enhance the visual interest of the building and offer broad views to the surrounding natural environment;
- providing valuable outdoor respite areas for patients, visitors and staff; and
- reducing storm water run-off to limit dependence on the City storm system.

As such, no less than 75% of the podium roof areas must be developed for active and passive deck use; or green roofs. Remaining podium roof areas may be covered with sloping roofs. Alternatively if such areas remain flat, they must be finished with roofing membrane in acceptable coloured pattern or river rock ballast of acceptable colour and size.

Inaccessible roof areas above the inpatient units may be either sloped or flat; and finished appropriately. Sloped roofs may be used to screen and integrate mechanical equipment at this location into the overall building design. Flat roofs, if not visible from any adjacent building, may be finished to meet other performance criteria

Mechanical, electrical and elevator equipment, and exit facilities, located on the podium roof must be screened and integrated into the building design. Such equipment located above habitable levels must be set back from the building perimeter to reduce visual impact from ground level; and must be screened and integrated into the building design.

6.10 Noise Impact

The building must respond to design criteria and incorporate necessary materials, systems and equipment to ensure that noise from the building meets or improves upon the Noise Control By-law. The design should also demonstrate and incorporate proven methods of reducing noise transfer. The design of the building and landscape design must incorporate features that reduce the reflection of noise to the neighbourhood.

6.11 Light Spillage

The design of the ACC should comply with the Royal Astronomical Society of Canada Light Pollution Guidelines. Lighting of interior and exterior areas must be appropriate to the space function and provide adequate user safety, prevent light trespass beyond the site, avoid light pollution, and maximize energy conservation.

Adequate exterior lighting must be provided for all walkways, paths, plazas and building entrances. Bollard, building and pole-mounted down lighting may be utilized. Lamps must be full cut-off fixtures.

Interior light levels and fixture types will be determined by the regulations and standards applicable to the space; and should also respond to the criteria first noted above.

6.12 Patient and Family Oriented Outdoor Spaces

Patient-oriented outdoor spaces must be secure, easily accessible from adjacent indoor spaces, and provided with separation and privacy from other outdoor spaces.

6.13 Way-finding

A logical way-finding system is critical to major healthcare facilities and is often key to a user's hospital experience. Every aspect of design on the site and of the ACC must be utilized to assist way-finding for patients, staff and visitors by:

- clarifying site organization and simplifying access routes;
- providing direct sight lines to major building entrances from primary site access points;
- offering adequate distance between decision-making points along travel routes;
- creating highly visible and distinct entry points for the BC Children's and BC Women's Hospital components, and for the Emergency entrance;

- utilizing landmarks such as landscape, lighting and colour to identify location and key points along the major travel routes;
- creating memorable and differentiated site landscape areas and landmarks to assist with orientation;
- regularly reinforcing orientation within the building with views to outside, floor numbers colours and themes, and maps at vertical circulation points;
- incorporating canopies and other projecting elements, material changes, and massing to direct users to major entrances and within the building;
- creating significant recognizable major circulation routes such as the proposed atrium within the building; and
- integrating new facilities into the existing CWHC Way-finding Concept Plan.

4500 Oak Street
Children's and Women's Health Centre of British Columbia Branch
WELLNESS WALKWAY

Design Objectives of the Wellness Walkway:

- Accessible bench designs and increased seating opportunities
- Wheelchair pads beside benches
- Unified furniture theme with variations relating to zones
- Aromatic planting where appropriate
- Shade structures and shelters
- Unified wayfinding strategy with eye level signage
- Aligned sidewalks/crosswalks
- Minimum 1.8 m wide sidewalks
- Street trees and planted/lawn boulevards
- Gentle slopes
- Glare reducing pavement solutions
- Saw-cut concrete sidewalks
- Variety of sensory experiences

The following diagram illustrates the location of the Wellness Walkway around the Health Centre site as well as an internal walkway along the southern ring road, to Wellness Walkway standards. Variations on the location of the internal sections, are anticipated.

4500 Oak Street
Children's and Women's Health Centre of British Columbia Branch

PUBLIC CONSULTATION SUMMARY

The following comments were submitted over the course of the rezoning review process and include comments received from the Community Open House held on May 1, 2012 at Eric Hamber Secondary School as well as two petitions received on April 19 and August 30, 2012.

Mixed support for the proposed height of the Acute Care Facility:

Suggestions were to limit the building height to the existing 18.3 m maximum or 30 m and locate the facility in the center of the site, as far from 28th Avenue as possible, in order to mitigate the negative impacts on the neighbourhood to the north. A petition was submitted in April, containing 38 names opposed to the height, and requesting no changes be made to the maximum height provisions contained in the By-law.

Also, some neighbours did not understand that a building design was not being presented, only the location of a "volume" where the future building would be required to stay within. As such, they expressed concern over the lack of detail.

Mixed support for closing the Heather Street access to the site and opening up the Willow Street access. Concerns expressed included the following points:

1. There is already a problem at Willow Street and 33rd Avenue, due to the amount of existing traffic caused by the three schools in the area and the amount of pedestrian traffic from these schools. The City should solve this problem first before adding to the problem with encouraging more traffic on 33rd Avenue and Willow Street.

2. No pedestrian studies were submitted to assess the existing volume of pedestrian traffic.

3. The rezoning will increase traffic in the area around 32nd and 33rd avenues, the lane and Laurel Street.

4. Increased safety issues with parents dropping off/picking up students at Eric Hamber, and the other two schools further south on Willow up to 41st Avenue.

5. Concerned about new traffic light on 33rd and Willow causing accidents

6. Why does the Heather Street bikeway take precedence over neighbours living in the area and their traffic concerns? The 37th avenue bike route is more heavily used than Heather. Heather Street is a wide street and can accommodate both bikes and cars.

On the positive site, there was a feeling that the closure of Heather would reduce cut through traffic in the area. Also a desire was expressed to construct the full Wellness Walkway so the community can see some benefit coming from the rezoning.

Other Concerns: Concerns expressed related to the City not enforcing their noise and parking by-laws with respect to noise from on-going construction and parking in residential only areas, and allowing contractors to park and stage construction on the neighbouring streets.

Staff response to neighbourhood transportation concerns:

'During the drop-off and pick-up times for Eric Hamber Secondary (just south of 33rd Avenue at Oak Street), 33rd is congested and there is concern that the additional traffic generated by the entrance will make matters worse.'

Staff and the Hospital's consultant, as well as the transportation consultant for the St Vincent's site, have reviewed the traffic situation at school times. There are specific issues at school drop-off and pick up times, particularly on Willow Street, south of 33rd Avenue, some of which spill onto 33rd. Additionally, a large number of students cross 33rd avenue, often stopping traffic for long periods of time, leading to increased congestion.

The new signal at Willow at 33rd is expected to create a safer crossing for students and reduce the traffic congestion resulting from long streams of students crossing the road. Adjustments to the intersection of Oak and 33rd Avenue will also reduce congestion on the stretch at busy times.

Overall, the current traffic issues are mitigated by being limited to school drop-off/pick-up times and the proposed improvements to the intersections will also reduce the issues during school peak hours. Staff are working with Eric Hamber to improve the school traffic situation, including developing measures to reduce the use of cars to drop off students.

'Concern that Willow access may cause additional traffic on 32nd Avenue and the lane behind 32nd Avenue.'

Staff have reviewed the cul-de-sac proposal and believe that it will eliminate the possibility of vehicles using 32nd Avenue to access the Health Centre site. The back lane and Laurel Street have the potential to become short-cutting routes to the Health Centre if congestion on 33rd Avenue creates significant delays. Staff suggest securing a commitment through this rezoning to install traffic calming in the lane if issues do arise.

'Concern that traffic may use Willow Street, south of 33rd, as a short-cut route to/from the Health Centre.'

While City staff believe it is unlikely that a significant number of vehicles will use Willow south of 33rd to access the site, a proposed condition of the rezoning requires provision of traffic calming to address the issues, should they arise.

* * * * *

4500 Oak Street
Children's and Women's Health Centre of British Columbia Branch
PUBLIC BENEFITS SUMMARY

Project Summary: A new Acute Care building within the Children's and Women's Health Centre and associated buildings as per a revised Master Plan.

Public Benefit Summary:
The offering of a 49 space Child Care Facility, secured through the July 24, 2012 zoning amendment, satisfies the CAC obligation generated by this rezoning application. The proposal will generate DCL and public art contributions, in addition to securing the completion of a Wellness Walkway around the perimeter of the site.

	Current Zoning	Proposed Zoning
Zoning District	CD-1	Amended CD-1
FSR (site area = 186 955 m²/2,012,356 sq. ft.)	0.85	1.05
Buildable Floor Space (sq. ft.)	1,710, 503	2,112,974
Land Use		

	Public Benefit Statistics	Value if built under Current Zoning ($)	Value if built under Proposed Zoning ($)
*Required**	DCL (City-wide) (See Note 1) $12.50/sq.ft.***	0	$5,000,000
	DCL (Area Specific)		
	Public Art	0	$728,000
	20% Social Housing		
Offered (Community Amenity Contribution)	Heritage (transfer of density receiver site)		
	Childcare Facilities *	N/A	
	Cultural Facilities		
	Green Transportation/Public Realm		
	Housing (e.g. supportive, seniors)		
	Parks and Public Spaces		
	Social/Community Facilities		
	Unallocated		
	Other: Wellness Walkway- estimated value of completion		$1,000,000
	TOTAL VALUE OF PUBLIC BENEFITS	**$**	**$6,728,000**

Other Benefits:

*** DCLs, Public Art and Social Housing may have exemptions and/or minimum thresholds for qualification.
For the City-wide DCL, revenues are allocated into the following public benefit categories: Parks (41%); Replacement Housing (32%); Transportation (22%); and Childcare (5%). Revenue allocations differ for each of the Area Specific DCL Districts.

* The Rezoning on this site from October 2011 secured a 49 space Child Care Centre, which would address the CAC expectations arising from this application.

4500 Oak Street
Children's and Women's Health Centre of British Columbia Branch
APPLICANT, PROPERTY, AND DEVELOPMENT PROPOSAL INFORMATION

APPLICANT AND PROPERTY INFORMATION

Street Address	4500 Oak Street
Legal Description	PID 009-471-278; Block 1009, except those portions in Plan 12393, 12719 and Reference Plan 14318, District Lot 526, Group 1, New Westminister District Plan 10359
Applicant	DYS Architecture
Architect	DYS Architecture
Property Owner	Children's and Women's Health Centre of British Columbia Branch
Developer	Children's and Women's Health Centre of BC

SITE STATISTICS

	GROSS	**DEDICATIONS**	**NET**
SITE AREA	186 954.56 m²		186 954.56 m²

DEVELOPMENT STATISTICS

	DEVELOPMENT PERMITTED UNDER EXISTING ZONING	**PROPOSED DEVELOPMENT**	**RECOMMENDED DEVELOPMENT (if different than proposed)**
ZONING	CD-1 (126)	CD-1 (126)	As proposed
USES	Hospital (excluding Provincial Laboratory), Child Day Care Facility, Retail Store limited to small scale pharmacy; Accessory use customarily ancillary to a hospital; and Community Care Facility- Class B	Hospital, Child Day Care Facility, Retail Store; Accessory use customarily ancillary to a hospital; and Community Care Facility- Class B	As proposed
MAX. FLOOR AREA	158 911 m² (1,710,503 sq.ft.)	19 630 m² (2,112,974 sq.ft.)	As proposed
MAX. FLOOR SPACE RATIO	0.85	1.05	As proposed
MAXIMUM HEIGHT	18.3 m (60 feet)	45 m (147.6 feet)	As proposed
PARKING SPACES	1,958 existing spaces	1,884 to completion of Phase 3	1,958 to completion of Phase3

4500 Oak Street
Children's and Women's Health Centre of British Columbia Branch

MASTER PLAN
(dated March 6, 2012 and revised May 9, 2012)

BC Children's and BC Women's

An initiative of the Provincial Health Services Authority

Redevelopment Project

MASTER PLAN GUIDELINES

CD-1(126)

Client
Provincial Health Services Authority

Consultant Team

dys architecture

Vaughan Landscape Planning and Design

URBANISTix Community & Project Planning

Robert Lemon - Heritage Consultant

Opus International - Traffic Consultant

Hughes Condon Marler Architects

March 6th, 2012

Revised May 9, 2012

Children's and Women's Health Centre of BC

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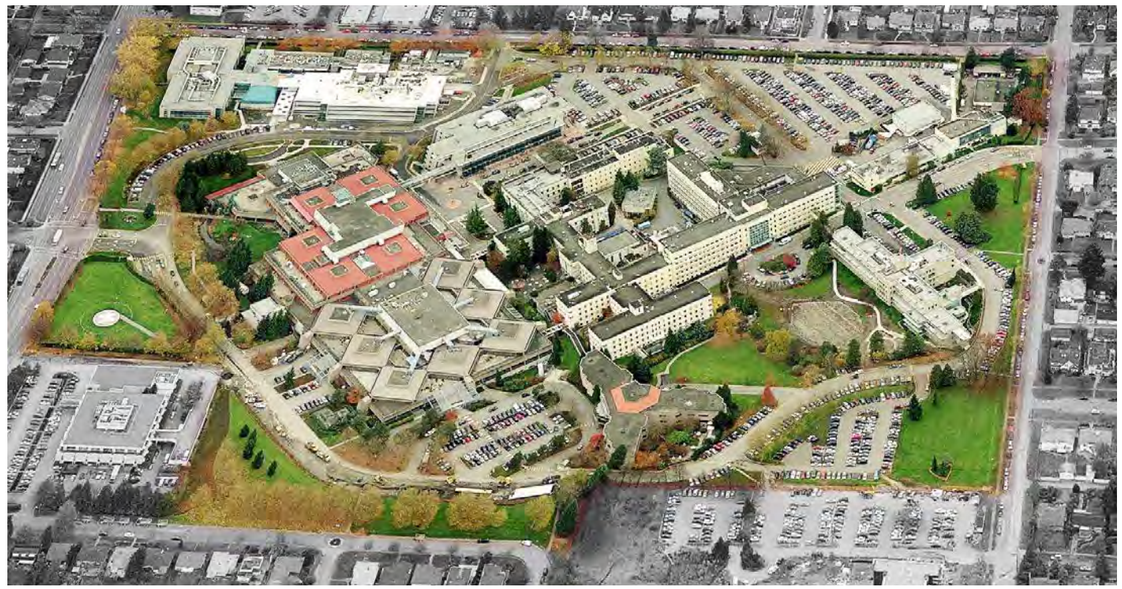


image: Architectural concept of the NICU for the proposed Acute Care Centre

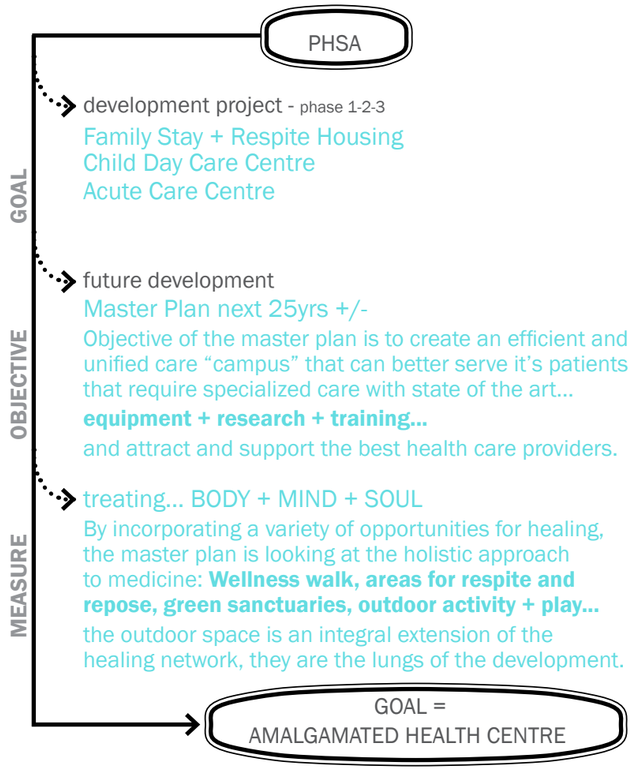
1.0 Introduction

The Provincial Health Services Authority (PHSA), on behalf of Children's and Women's Health Centre of BC (CWHC) and Sunny Hill Health Centre, is submitting an application to the City of Vancouver to amend the Comprehensive Development District CD-1 (126).

PHSA is embarking on a Redevelopment Project that will see the construction of a state-of-the-art Acute Care Centre for British Columbia's children & women. PHSA has taken this opportunity to project what may occur to the campus over the next 25-30 years. The vision for the long-term master plan is a shared campus for Children's and Women's Health Centre of BC that will be a provincial centre of excellence that truly meets the specialised care needs of British Columbians.

The impending Redevelopment Project will comprise of the first three phases of the long-term Master Plan. It will see the construction of a Family Stay and Respite Housing by Ronald McDonald House (RMH), a Child Day Care Centre and a new Acute Care Centre (ACC).

As a major teaching, training and research facility, Children's and Women's academic mandate will be strengthened by the new ACC. In association with the University of British Columbia, Children's and Women's will become a true leader, enhancing its training for B.C.'s future physicians, nurses and other health care providers and ensuring care providers working in regional hospitals across the province are kept up-to-date on the latest advancements in children's and women's health. The redevelopment will help expand research opportunities beyond those already in place at the Child and Family Research Institute and Women's Health Research Institute as care providers seek answers to questions that will lead to real improvements in the healthcare of B.C.'s children, women and families.



1.0.1 The Redevelopment Project - Phases One to Three (See separate Rezoning Submission)

Phase One:

- Demolition of "A" and "L" wing of the former Shaughnessy hospital.
- Demolition of the MERU building.
- Development of the Family Stay and Respite Housing by Ronald McDonald House.
- Development of a new Child Day Care Centre.

Phase Two:

- Building of a new Acute Care Centre.

Phase Three:

- Renovation to the existing Children's and Women's acute care building in order to relocate the Sunny Hill Health Centre to the Oak Street campus, expand the birthing programs within the existing Women's hospital, and better integrate related hospital functions.

1.0.2 The Remaining Phases - Four to Seven

Although they will not be included in the site rezoning at this time, the remaining phases of the 25 - 30 year master plan will be outlined as part of the master plan guidelines. It is important to lay the general framework and guiding principles that should inform subsequent development as the hospital continues to respond to the needs of children's and women's health services.

It should be noted that the proposal which is outlined may change over time due to health standards and requirements, provincial and/or hospital policies and City of Vancouver bylaws or policies. The planning and design is meant only to give a general direction to the development of the campus and ensure that longer term objectives are achievable to the degree that current knowledge allows.

In addition the architectural expression and landscape planning is left to the discretion of the forthcoming selected architect's to refer to the master plan document as a guide for development, but overall they will still maintain freedom to execute and propose the project's form and character at their discretion.

The later phases will be comprised of an expansion of the Acute Care Centre, a new Women's Health Centre, and Future Hospital Developments which will provide educational facilities through the UBC Faculty of Medicine as well as offices and administration space.

image: Architectural concept of the Atrium for the proposed Acute Care Centre

1.0.3 Background

The prior master plan for the Oak Street Health Care Campus developed by IBI Group/ Karlsberger in 1995 featured an incremental approach to replacement of existing facilities over time and retention of several elements of the former Shaughnessy Hospital Complex. Since then, changing program requirements, health care delivery models, technology and best practice design have challenged the efficacy of the '95 master plan and suggested a new approach that relies less on existing infrastructure and more on opportunities for new buildings that better support effective and efficient delivery of health care services in a healing environment.

An efficiently organized building typology will reduce the footprint and vehicular hard space on the site and will increase opportunities for landscape relief.

The new Master Plan differs from the prior master plan primarily in the manner in which buildings and open space are dispersed across the site. The current Master Plan meets the test of 'equal to or better than' its predecessor by reducing the building footprint in comparison to the previous plan, while increasing green space and reducing surface parking and roadways and providing increased community-accessible amenity space.

1.1 Project Vision

1.1.1 The Case for Change

Building a new Acute Care Centre and upgrading and expanding Women's is timely, given the needs of the community and limitations of the current facilities. Some of the key issues facing Children's and Women's include:

- Patient rooms are not large enough to support family centered care or to accommodate required equipment.
- Insufficient beds to meet the current demand. For instance, neonatal intensive care, emergency department, medical surgical beds, critical care, and birthing units have reached capacity.
- Infection control does not meet current requirements in patient care and treatment areas (e.g. multi-bed rooms are common).
- Limited capacity to manage seasonal patient surges or natural/ inflicted disasters; for example, in 2007/2008 the occupancy rate for Children's inpatient beds exceeded 100 percent for specialized medicine, pediatric beds and oncology.
- Lack of integration and increased travel for key related off-site facilities, such as Sunny Hill Health Centre for Children.
- Inadequate physical design and sub-optimal working conditions result in staff recruitment and retention challenges.
- Poor integration of teaching and research into clinical space and patient flows.
- Lack of appropriate Telehealth and conferencing facilities.
- Lack of single physical access point to Children's for patients and staff.

Poor 'wayfinding' throughout facilities with dispersal of programs across a large and confusing site.

The intent and vision of the new Master Plan is to address and correct all items of inadequacy as noted above into a consolidated clustering of adjoining buildings in the centre of the site.

1.1.2 Rezoning Rationale

The proposed rezoning accommodates the first steps of a cohesive sequence of replacement facilities needed to update medical services provided by CWHC over the next 25+ years in a location which:

- Remains central to the region.
- Takes advantage of the unusual site scale.
- Permits orderly phasing and transition.
- Minimizes travel among related institutions.
- Generates employment in the Cambie Corridor.
- Takes advantage of Cambie Corridor transit services.
- Draws upon future options for service providers to live nearby as the neighbourhood continues to densify and include more multi-family developments.

In updating the strategy for facility replacement and site utilization, this plan looks further into the future than the prior master plan. It strives to balance the same community and healthcare objectives within the physical constraints of previous development.

To replace facilities without interruption of service requires a multi-phased sequence of developments and subsequent demolitions, resulting in floor area and site coverage variations. The steps shown in this document demonstrate that all anticipated facility upgrades are achievable over the next 25 - 30 years. The proposed CD-1 amendments at this time reflect the floor area necessary up to phase 3, and will increase with subsequent rezonings in order to reflect the maximum overlapping density, which will necessarily be higher than the ultimate density. Recognizing the low density residential context, it should be noted that while this is clearly an institutional use of regional and provincial importance, the floor space ratio will reflect a density comparable to nearby townhouse sites, while site coverage will remain lower than single family.

image: Architectural concept of the Atrium for the proposed Acute Care Centre

Further to the phased sequence for development, the opportunity to locate accessory buildings becomes limited due to site constraints and residual green space. Therefore locating the Child Day Care Centre and the Family Stay and Respite by Ronald McDonald House (RMH) were appropriately located due to the following:

1) Oak Street Frontage (west edge) -- a review of the sites along Oak street concluded that the heavy arterial traffic, noise, the helicopter landing pad, and the major entry to the hospital would not be appropriate for both the RMH and the Child Day Care Centre. As well, the scale of the sites would not allow for the appropriate planning or design.

2) 28th Ave Frontage (north edge) - The only location would be the on grade parking lot on the north- east of the site. The need for parking on site for both visitors and staff require that this lot be in existence until appropriate underground parking is provided which we anticipate to be 25+ years away. There is presently existing mechanical equipment and other servicing machinery on that site. We anticipate that a portion of this area will act as a staging area for the construction of the new Acute Care Centre.

3) Heather Street Frontage (east edge) - There are potentially two sites that could accommodate the RMH and the Child Day Care Centre. The first site adjacent to the Heather Street entry and east of the Mental Health building was reviewed and was rejected due to its proximity to the Hospital and the site was found to be too small to accommodate RMH. It was therefore felt that this site with the potential closure of Heather Street would be appropriate as a green space for both the Hospital and the surrounding neighbourhood. The second site on the south-east corner of Heather was found to be appropriate for RMH.

4) 32nd Ave Frontage. (south edge) - This was the original location for both the Child Day Care Centre and RMH. The site chosen is directly behind Canadian Blood services. RMH however required more space for their development and thus moved to the Heather Street site, and the Child Care Day Centre remains on the 32nd Avenue frontage.

5) Open Green Space behind Mental Health Building.- This area is set aside for outdoor Rehab area and secured away from the public. It is used for mental health patients in the Mental Health Building.

6) There is a need for both the RMH and the Child Day Care Centre to be on the site and yet separate from the day to day workings of the CWHC. Both the Child Day Care Centre and RMH are not core hospital functions and as such need a reasonable separation from the hospital. The sites along Heather Street and 32nd Ave offer that opportunity.

7) The sites for RMH and the Child Day Care Centre are located away from major arterial traffic and noise. The sites also are well suited for security and safety for the children as the two developments are separated from the hospital public areas.

8) The nature of the development for the Child Day Care Centre and RMH on 32nd Avenue and Heather Street respectively, are more residential in planning and design and fit into the residential character of the surrounding neighbourhood. The buildings will be lower in scale with the Child Day Care Centre being one storey in height and RMH being a maximum of four stories.

9) Drop off functions for both the Child Day Care Centre and RMH will occur on the hospital site and not on Heather Street nor 32nd Ave.

10) The Hospital is in the process of a major redevelopment over the next 25- 30 years. The old Shaughnessy buildings are intended to be demolished for future development of the CWHC. RMH and the Child Day Care Centre planned on the edges of the CWHC site will stand alone and not be hindered by these planned developments.

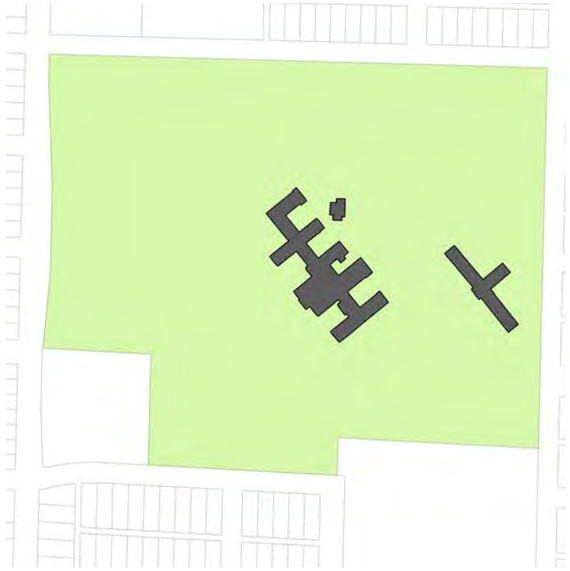
1.1.3 Precinct Goals and Principles

The general precinct goal is to develop a new state of the art Children's and Women's Health Centre on the Oak Street site over the next 25 years.

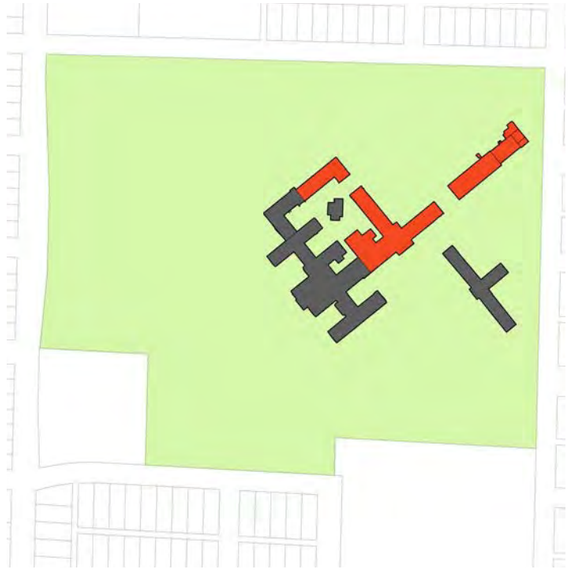
The primary working design principle will be to consolidate the major hospital development in the center of the site, while enlarging the surrounding green space over time.

Specifically, the goal is to create a link between the hospital site and the surrounding community by developing open space that can be accessed and used by the neighbourhood, hospital workers, patients and families. The open space on the site will be categorized as passive, semi-active, and active which will create areas of landscape for respite and repose, for healing, and for active sport, children's play and therapy (see Landscape drawings and design principles for further detail). A "wellness walk" along the street edges of the hospital campus will be developed over time, welcoming use by workers and neighbours.

The future buildings are then massed at the centre where clinical services are consolidated into a series of linked structures that together will house the new Children's and Women's Hospital. Most of the original buildings will be stripped away to reveal a new Hospital that responds to the primary links and connections back to the local community and surrounding street structure.



1940's



1950's and 1960's

1970's and 1980's

1990 to Present

1.2 Development History

For more than seventy years, the 46 acre site has been home to public institutions providing health care services to the residents of Vancouver and British Columbia. Originally a 'greenfield' site in an undeveloped area of Vancouver, the hospital has continued to grow and change, and a residential neighbourhood established around it. The site has been developed over time to accommodate a broad range of hospital and associated medical education and research facilities in several buildings. The site evolution is described below.

1940's
As the designated site for a military hospital for veterans returning from World War II, the first buildings constructed on the Oak Street campus included: the Shaughnessy Hospital A & B Blocks (1940); C Block (1944); and the Jean Matheson Memorial Pavilion (1944) originally built as a sanatorium. In 1947, a small building was added adjacent to A Block (currently referred to as the Medical Research Unit or MERU). All the original buildings remain in active service today, re-purposed and partially renovated to accommodate support services, albeit inefficiently.

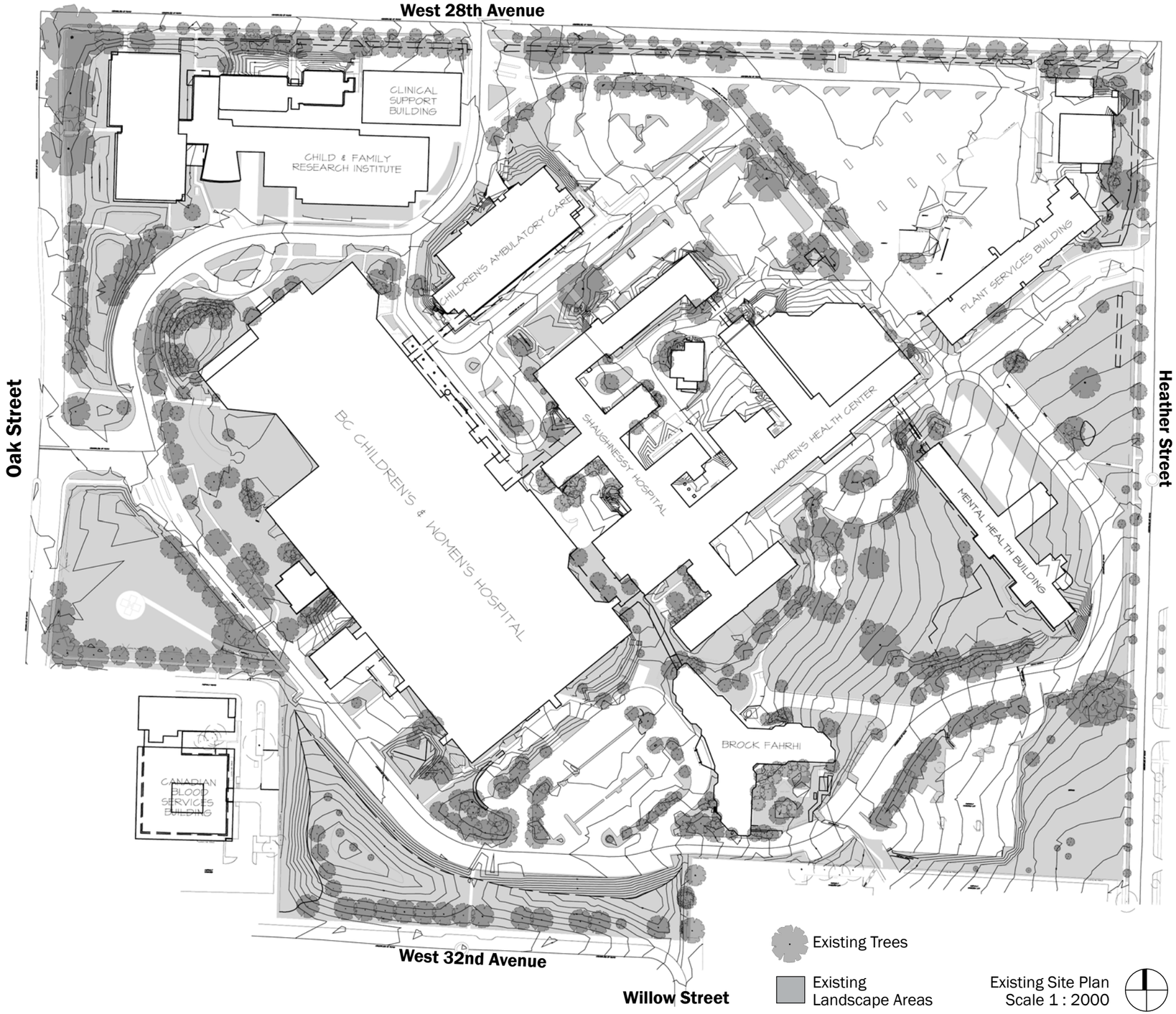
1950's and 1960's
The post-war decades witnessed an expansion of the original Shaugnessy complex to include; an extension to A Block (i.e. L Block lab building); addition of D, E and F Blocks; and the Plant Services Building. As with the original Shaughnessy hospital, the buildings built during this era remain in active use today, with D, E & F Blocks currently serving as the home for the Women's Health Centre

1970's and 1980's
A new Children's and Women's Hospital was added to the Oak Street site, opening in 1982 and signaling the shift towards a new health care focus on obstetrics and pediatric care. At the same time, the first research facilities were constructed on West 28th Ave., Shaughnessy H Block was built as a central logistics / material management facility and an extended care facility – the Brock Fahrni Pavilion – was added in 1982.

1990 to present
An emphasis on research and pediatric ambulatory care resulted in new development concentrated in the northwest quadrant of the campus. The Centre for Molecular Medicine and Therapeutics, Education Centre, and Centre for Translational Research were added to the Clinical Support Research precinct in 1996, 1999 and 2008 respectively. A new Ambulatory Care Centre, completed in 2000, was constructed adjacent to the Children's Hospital. The former Jean Matheson Pavilion was extensively renovated to accommodate Child, Adolescent and Women's Mental Health programs in 2004/5.

Legend:

- Existing Buildings
- New Building Additions
- Approved Building Projects (2012)
  Pending Construction (2013)



2.0 Existing Site Context

2.0.1 Existing Campus

The existing Children's and Women's Campus is in the south Cambie neighbourhood adjoining the 'Cambie Transit Corridor'. The Shaughnessy neighbourhood is directly to the west and the Riley Park / Little Mountain neighbourhood is to the east.

The major arterials serving this neighbourhood are King Edward Ave. to the north, Cambie Street to the east, 41st Ave. to the south, and Oak Street to the west. Major transit services are located on all these arterials. In particular, light rapid transit - the Canada Line - has been in operation since August 2009.

2.0.2 Existing Site Plan

The campus, as illustrated in the previous section on 'Development History', has been established since the outset at a 45 degree angle to the existing grid. Subsequent additions and expansions of Shaughnessy Hospital and the existing Children's and Women's hospital align with this original planning offset. The only section that is parallel to the street grid are the research buildings fronting 28th Ave. and Oak Street.

2.0.3 Topography

The site has a significant grade change of approximately 18.75m across the site, from 68.10m at the north-west corner to 86.85m at the high point in the south-east corner of the site.

The topography follows generally the same orientation as the existing buildings, at 45 degrees to the street grid, and may have been a reason that the original buildings on the site were oriented as such. One key exception to this trend is the berm that exists adjacent to 32nd Ave. The berm runs roughly parallel to 32nd Ave. and has a maximum height of approximately 5m. It has historically served as a buffer between residents and hospital functions and should be maintained where possible.

2.0.4 Existing Landscape

Although there is a significant amount of open space on the site, it is dominated by dispersed spaces, roadways and parking. As a result there is very little usable green space. There are many mature trees throughout the site which should be retained where possible. However, the Prince Andrew Tree is the only tree whose specific retention is being proposed. Another valued green space is the berm along 32nd Ave. which buffers the neighbours from the hospital. One of the more significant amenities of the CHWC is the green border around the site, which helps to give the precinct a park-like character.


View to Campus on 28th Ave.


Neighbourhood on 28th Ave.


Heather St. Looking North


St. Vincent's on 33rd St.


GF Strong on 28th Ave.


Beth Israel Synagogue


Neighbourhood across Oak St.


RCMP Headquarters


Looking North from 32nd Ave.


Neighbourhood on 32nd Ave.


Neighbourhood on 32nd Ave.


View South to site on Willow St.

2.1.1 Neighbourhood Character

The Oak Street Campus is surrounded by residential as well as other institutional uses.

The precinct is bounded by 28th Avenue, 32nd Avenue, Heather Street and Oak Street. The four boundaries have unique characters and communities.

The character of the surrounding area is residential in nature with housing typical of suburban Vancouver residential development circa 1960 with some examples of newer renovations and additions. The streets are generous in dimension and populated with mature trees in most cases.

Queen Elizabeth Park can be found two blocks east and is a beautiful public garden as well as recreational mecca for the community and general public, including tennis courts, golfing and lawn bowling.

Van Dusen Gardens to the south and west is a 22 hectare horticulturists dream with an inspiring environment that accommodates all ages and abilities.

Institutional uses exist on the north side of 28th Avenue in GF Strong Rehabilitation Centre, and on the south side in the Child and Family Research Institute (CFRI) on campus facing that street, with adjacent single family residential making up the remainder of the street.

Along the east side of Heather Street are single family residential dwellings which face into 29th, 30th, 31st and 32nd Avenues presenting a side elevation onto Heather Street.

Honoria Conway at St. Vincent's, a residential care facility completed in August 2008, is at the corner of Heather Street and 33rd Avenue. This building houses the elderly and disabled. This building is the first phase of a project to develop an extensive 'Campus of Care' for the elderly in Vancouver.

Youville Residence is on the south side of 33rd Avenue and contains a multi-level care facility for the elderly.

The RCMP 'E' Headquarters is currently housed south on 33rd Avenue and runs through to 37th Avenue further south. The Headquarters will soon be vacating and moving to Surrey, BC.

Eric Hamber Secondary School is on the corner of 33rd Avenue and Oak Street. This high school has several outdoor fields and is well used by the community.

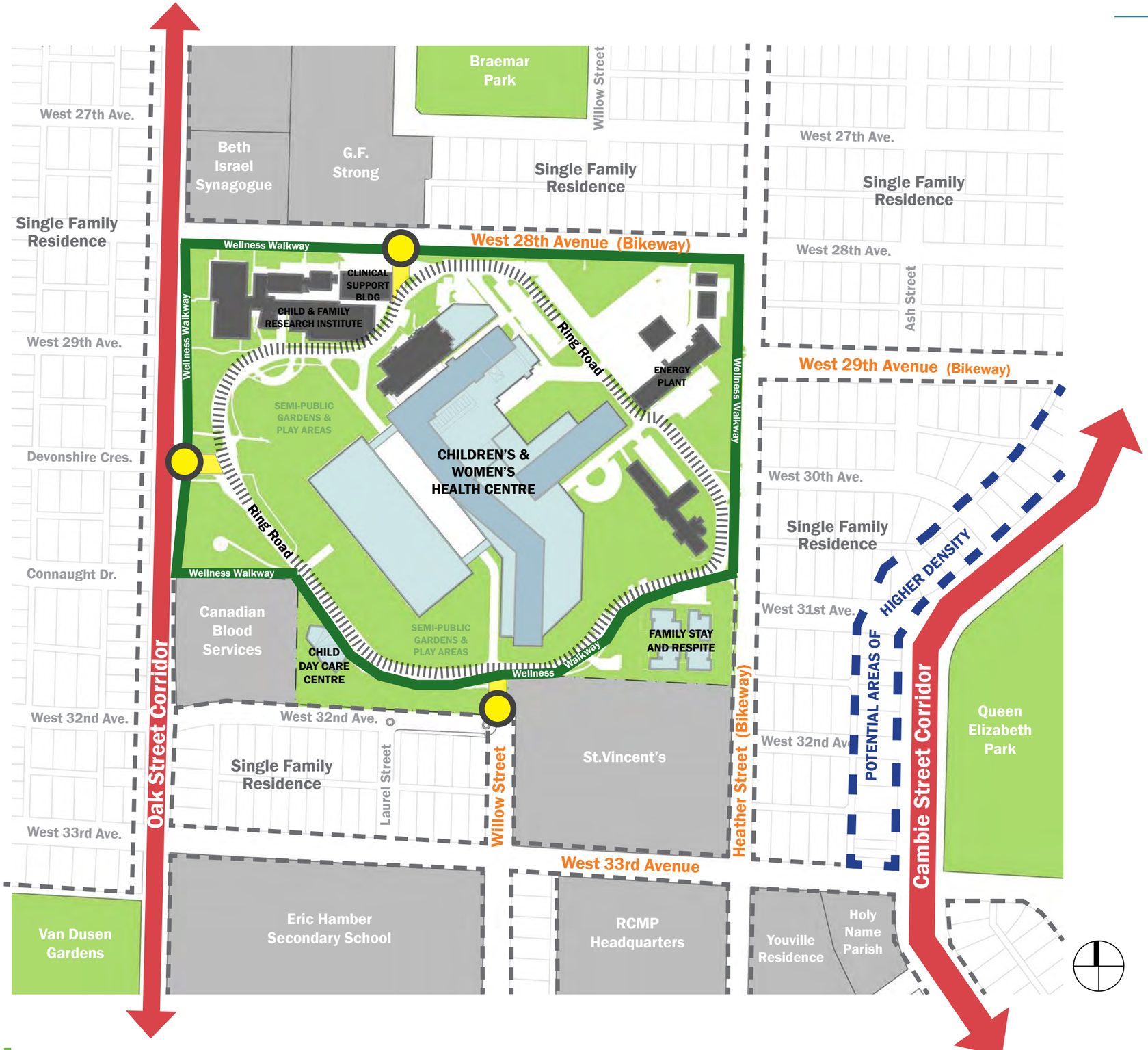
2.1.2 Precinct Character

Current regional growth strategies over the next 25-30 years predict increased densification in certain areas around the Children's and Women's Health Centre site. Such anticipated growth, is to be expected along the major city corridors of Cambie Street & Oak Street. Other sites around the CWHC campus, such as G.F. Strong, St. Vincent's, & the RCMP Headquarters will go through some redevelopment during this time period.

The Master Plan at the end of the 25-30 years projection, places the main Children's and Women's Hospital in the center of the site within the enclosing Ring Road. The areas between the Ring Road and the boundaries of the site are to evolve into landscaped areas or parking with improvements in local community access. The buildings within this outer zone are the Energy Plant, Clinical Support Building, Child & Family Research Institute, the new Child Day Care Centre & the new Family Stay and Respite Housing.

Inside the Ring Road, the buildings will be grouped and consolidated into a single entity that will be surrounded by adjacent green space and gardens. There is a distinct character change between the perimeter edges of the site and those outdoor spaces placed next to the buildings. The outer edges are more publicly accessible and provide a green buffer zone to the neighbourhood. At the centre, the landscape character shifts to one of semi-public garden and play areas, allied with the medical centre, predominantly used as respite areas for staff, families and patients.

The strategy creates a Hospital within a park-like setting that gives the site a distinct Campus quality.



Legend:

- Potential Areas of Higher Density
- Institutional Area
- Green Space / Park Area
- Major Street Corridor
- Ring Road
- Wellness Walkway
- Entry Points

2.2 Street Character

The 25 year Master Plan places the main Children's and Women's Hospital in the center of the site which supports purposeful green open spaces surrounding the building. Inevitably, a large institution such as this creates a significant building, but the massing is deliberately articulated to reduce the overall scale and then pulled to the center of the site to minimise the impact of the buildings on the lower scale residential neighbourhood that surrounds it. The resultant "green buffer zone" that surrounds the new Hospital will allow a semi-public amenity that creates a soft transition between the Hospital and the neighbourhood.

This results in a more "campus-like" organization, rather than a massing where buildings are more directly oriented to the existing street patterns that is common in a more traditional urban setting.

Where development along the edges occurs, the building forms and massing should respond to the scale of the residential neighbourhood. The existing berm along 32nd Avenue should be maintained where possible and landscaping should be of high quality.

See section *4.3 - Street Edges and Existing Site Conditions* on p.28 for a more detailed discussion on how the proposed massing responds as it approaches the streets that border the site.

Heather Street Partial East Elevation

33rd Avenue Partial South Elevation

Oak Street Partial West Elevation

28th Street Partial North Elevation

32nd Avenue South Elevation

2.3 Building Orientation

The dominant urban ordering principle in Vancouver is the grid system, and a majority of our city's urban development is defined by, and respectful of, this grid. However the development history of the hospital was established at the outset at a 45° angle to this grid and subsequent building development has continued with this alignment. Only the Research Precinct in the NW corner of the Hospital site conforms to the city grid system and runs parallel to 28th Avenue.

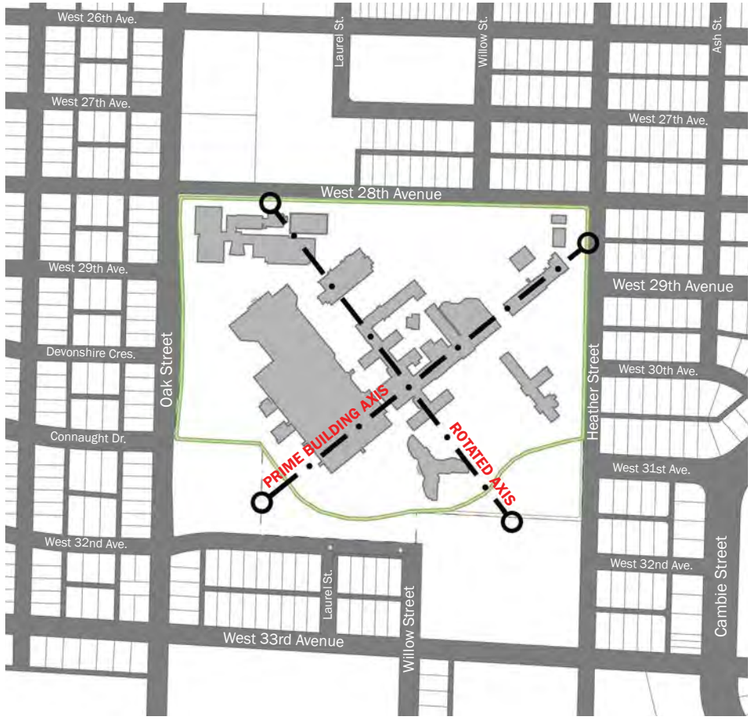
It is inevitable that phased development of the site is required to allow Hospital operations to continue while future phases are under construction. As a result, new buildings inserted into the centre of the site must respect the existing framework of buildings that run with the 45° angle. As the development of the site occurs, the progressive "peeling away" of existing buildings allows certain buildings in the later stages to fall back onto the original street grid and reinforce the alignment with adjoining streets.

For this reason, the existing buildings dictate the sequence for the development of the Master Plan. Using the existing Children's and Women's Acute Care Hospital to transition services out of the former Shaughnessy Hospital, the staged demolition can proceed smoothly (see development phasing pp. 20-26). The final phase of the Master Plan will be to remove the original Acute Care building, whose programs will have all been relocated to the new facilities.

In the Master Plan development there is one section of the building that rotates at its hinge 45° and aligns back to the city's main grid system. This is done for two main reasons: one, to align and address the future Willow Street access, which provides a direct route to the Women's Hospital entrance and two, to leave undisturbed the green space adjacent to the Child and Youth Mental Health building. Orientating the last mid-rise section to a north-south axis keeps the open space between the Women's Hospital and the Child and Youth Mental Health building semi-private, creating a quiet and comfortable space that connects visually to the elevated green space of the Hospital and the Child Care Centre. The north-south gestures also pay homage to the established urban grid.

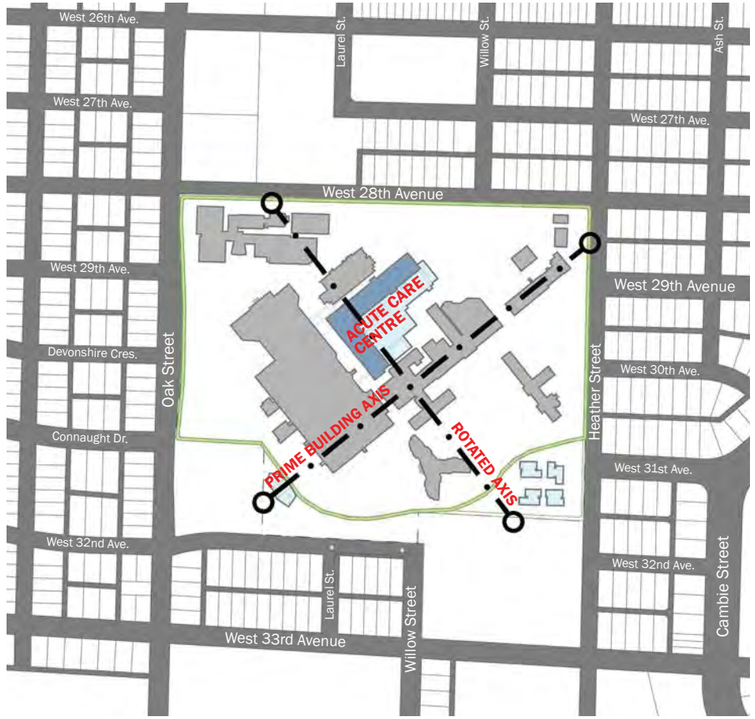
At this point the building extends towards the wellness walk so that there is a point at which the user of the wellness walk can chose to exit the circuit and enter the building through the Women's Hospital. The green space at the end of the hinged segment is minimal as the adjacent St. Vincent's site designated an area along the property line as green space, thus creating a comfortable landscaped area that flanks the wellness walk which runs along side the property edge.

PRIMARY CITY STREET GRID



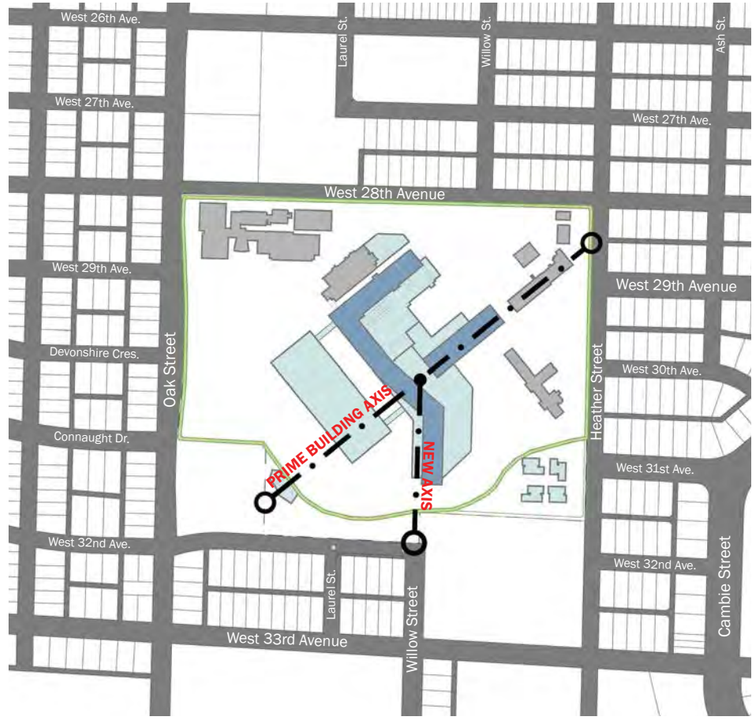
EXISTING

PRIMARY CITY STREET GRID



REZONING

PRIMARY CITY STREET GRID



MASTER PLAN

1 Heather Street at W 29th Ave - Existing

1 Heather Street at W 29th Ave - Master Plan

2 Heather Street at W 31st Ave - Existing

2 Heather Street at W 31st Ave - Master Plan

3 W 28th Ave - Existing

3 W 28th Ave - Master Plan

4 W 32nd Ave at Willow Street - Existing

4 W 32nd Ave at Willow Street - Master Plan

2.4 View Analysis

Sight lines across the site have been examined and are shown adjacent to this text with proposed future building envelopes modeled. While there would clearly be an increased visual presence of hospital buildings, public views and some private views will not be substantively diminished. New structures often fall behind present structures remaining on site or line up within a view angle instead of extending more broadly across the site.

Diagonal views from the height of land east and west of Heather Street benefit from diagonal orientation of buildings in the centre of the site. Somewhat taller buildings use less site area and consume less of the view angles. This is also advantageous to future residents of RCMP and St Vincent's development sites. Some private winter views along 28th Avenue & 32nd Avenue will be affected.

Special consideration should be made to the articulation of the architectural massing from the northeast corner of the site at West 28th Avenue as well as the south end at West 32nd Avenue and Willow Street. This will help to minimize any visual impact made as well as enhance the urban fabric of the neighbouring community.

KEY PLAN

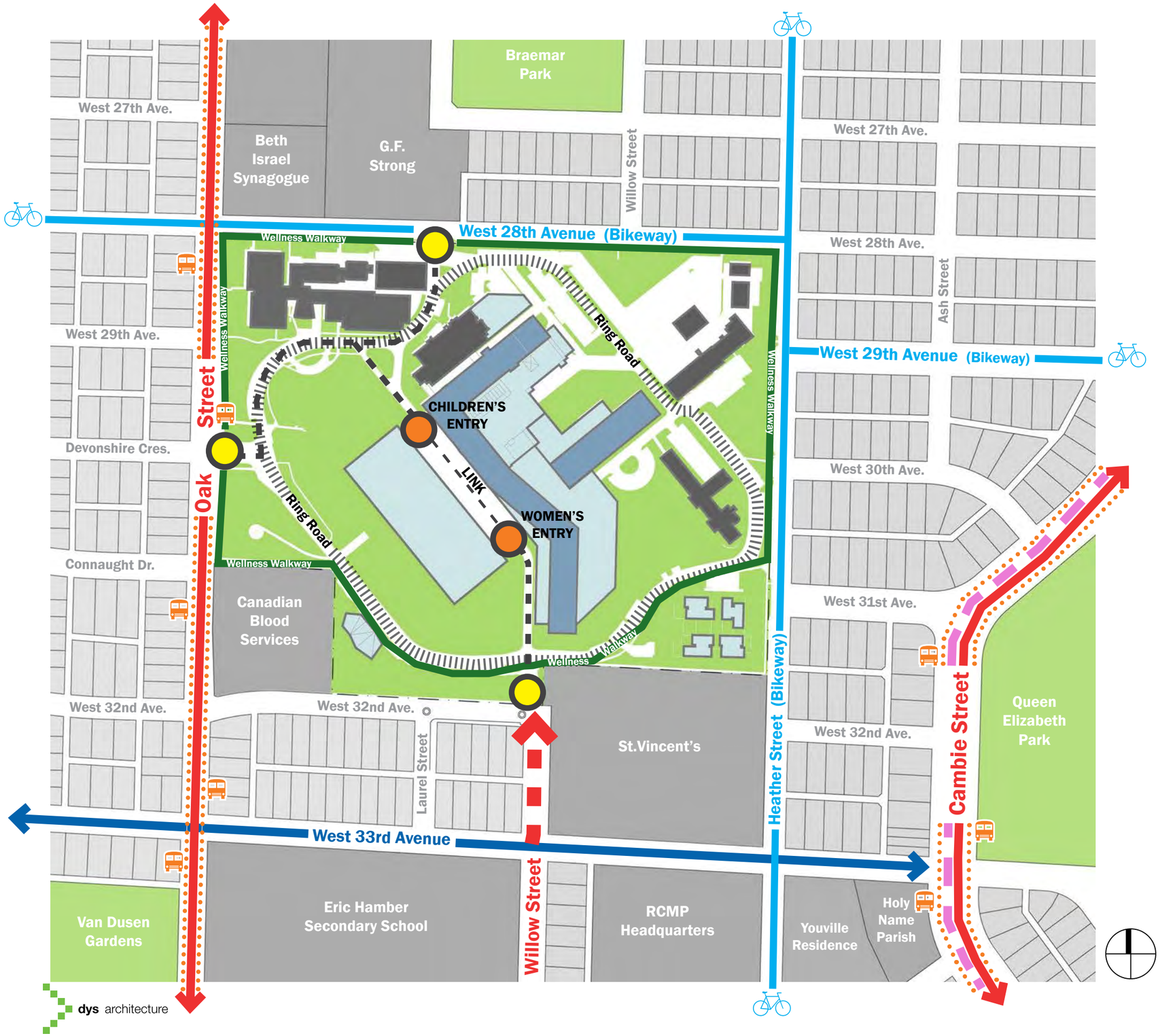
2.6 Access and Circulation

The overall master plan recognizes several key links to the surrounding neighbourhood. The prime site entry will remain off Oak Street on the west side of the site. Oak Street is the primary vehicular artery in this part of the city and is therefore the most recognizable and obvious entry point to the site.

On arrival to the hospital at the main access point off Oak Street there should be a clear and distinct landmark that indicates that this is the Children's and Women's Health Centre. As visitors approach the hospital there should be a clear marker that distinguishes the direction of each use on site. On arrival to the hospital there should be a clear and obvious entrance for both Children's Hospital and Women's Hospital, that reinforces once again the theme that was revealed along the approach.

Since the Master Plan focuses on locating buildings in the centre of the site, there is an opportunity for a longer driveway entry between the street and the drop-off point at the Hospital entries. This is vital, as it allows more time for visitors to orient themselves and make decisions about where they need to go. The configuration of the driveway will be designed to slow incoming traffic speed and direct arriving families, limiting decision points and offering an easy return if an incorrect route was taken. This longer arrival lane is on axis with the point of arrival on Oak Street and links directly to the perimeter Ring Road that links all parts of the Hospital grounds. It will also remain as the service vehicle entry to the site to avoid larger vehicles infiltrating through residential areas.

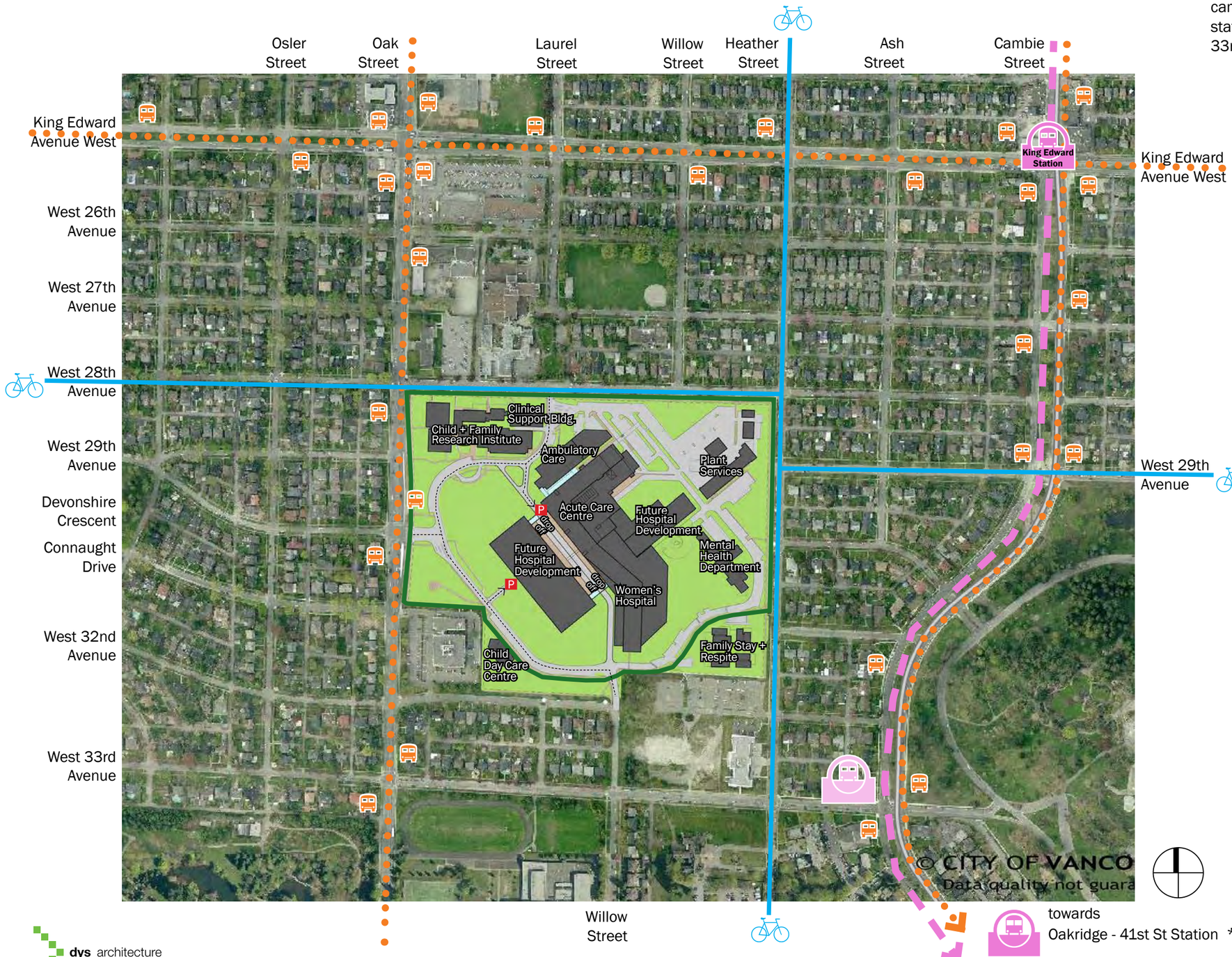
The existing entry from Heather Street will be closed off to vehicular traffic in Phase 2. To offset the closing of the Heather Street access, it is proposed by the City of Vancouver to open an access point from Willow Street, linking the campus to the main intersection at 33rd Avenue. This new entry will provide the primary access from both the south and east and will lead directly to the arrival point for the Women's Hospital. This new entry will link directly to the perimeter Ring Road system as well as the Wellness Walkway on the site and afford site-wide access for staff and visitors.



Legend:

- Major North-South Arterial Roadway
- East-West Arterial Roadway
- Skytrain Canada Line
- Bus Stop/Bus Route
- Bikeway
- Ring Road
- Wellness Walkway
- Access Points
- Entry Zones

Diagram 2.6.1 Public Transportation



With the closure of the Heather Street Entry, there will be a reduction of traffic congestion in this area, therefore enhancing and improving the bike route along Heather Street on the east side of the site. Pedestrian access will remain to allow staff, visitors and residents to enter the campus on the east side and encourage links to the Canada Line station at King Edward and the future station at Cambie Street and 33rd Avenue.

Legend

- Skytrain Stations
  King Edward Station
  Oakridge - 41st St.
- ** Provide a shuttle bus from Oakridge station directly to the hospital
- Future Station
  Cambie St - West 33rd Ave
- Bus Stops
  Bus Routes
- Designated Bicycle Routes
- P Parkade Entrance
- Public Vehicle Routes

2.7 Parking and Loading Areas

Parking on the site consists of a mixture of underground and surface parking lots, as well as parking along the internal ring road. Current parking exceeds City of Vancouver requirements by nearly 25%. The Transportation Study recently undertaken (see Appendix B) noted that even at peak times there were many vacant stalls remaining throughout the site. Over the course of development, some of these existing parking areas will be lost as interstitial areas around the former Shaughnessy Hospital are filled in by the new consolidated Hospital buildings, and green spaces are reconfigured to allow for more usable area. Also, it is anticipated that over the course of the next 25 years there will be an approximately 20 percent increase in Hospital staff, physicians, researchers and students.

It is anticipated that future Traffic Demand Management (TDM) strategies will create a 10% decrease in parking demand, resulting in a lower number of required stalls per staff person. However, the amount of additional staff, combined with the loss of existing stalls, indicate that there will be a requirement for the creation of a certain amount of new parking on the site. The Transportation Study analyses current and anticipated traffic demand and has determined that current over-supply combined with future Traffic Demand Management strategies will result in very few additional parking stalls being required. Most new parking will replace existing stalls as they are displaced.

New parking will be developed below-grade rather than as surface lots, reducing the amount of hard-surface landscape on the site. The new Acute Care Centre will have an underground parking component. The parkade below the existing Acute Care building will be retained when the building itself is demolished in the final development phase. The area above will then be redeveloped to accommodate another phase of the Learning Commons plus Ambulatory Care surrounded by a generous landscaped area to the completed hospital.

Please see *Appendix B – Children's and Women's Health Centre Transportation Study* for a detailed discussion of parking and access issues on the site throughout the development timeline.

2.8 Traffic Demand Management Strategy

CWHC have demonstrated their commitment to reducing traffic, parking and related environmental impacts through ongoing efforts to manage traffic and parking generation. A Transportation Management Plan (TMP) for the CWHC was initially completed in May 1993, and partially updated in July 2002, and again in 2006. A new Transportation Study has been completed in conjunction with this application. (Please see Appendix B.)

The CWHC has several programs and physical measures in place which address TDM objectives, including a carpooling program, cycling facilities, Employee Transit Pass Program (EPP) through TransLink, and employment of a full-time Transportation Demand Management Coordinator. This centrally located site offers immediate connections to transit, pedestrian, and cycling corridors. These current TDM initiatives already aid in reducing the need for employees to drive to and from work. With a decreased need to drive to and from work, the corresponding employee parking demands have been decreased.

Further TDM initiatives are proposed, and existing programs will be or are proposed to be improved to further encourage CWHC employees to commute using alternative modes. The Provincial Health Services Authority (PHSA) has indicated that they are committed to implementing programs which are discussed in Appendix B, Section 7.1 & 7.2. These include:

- Carpooling — Free Parking for car pool cars; Carpool Rewards Program
- Cycling Program — Facility Improvements; Rewards Program
- Transit — Rewards Program
- Parking — Disincentives
- Car-sharing

There are other potential TDM programs and initiatives which are discussed in Section 7.3 including:

- Walking Program
- Transit — Employer Transit Pass Program Subsidy; FareSaver Tickets Program
- Guaranteed Ride Home Program
- Telework
- Administration

These proposed TDM programs and initiatives are expected to be implemented over the next two years, but are still subject to funding and available staff resources. It is anticipated that at the minimum, a slight increase in programs from the existing level is expected at the onset of the first phase of redevelopment at the site.

Higher use of modes other than single occupant vehicles should be expected with renewal of the CWHC and the implementation of further TDM initiatives. In particular, employee parking demand is expected to decrease from current levels with greater incentives for employees to leave their vehicles at home.

2.9 Sustainable Approach to Design

Today, health care facilities are becoming more than just places where patients go for treatment. As key hubs of neighbourhood activity, modern hospitals are transforming into places where patients--as well as staff and community members--all gather together to nourish mental and physical health.

In that vein, how we design our core health care services—and how they fit into our neighbourhoods--is vitally important to health and well-being. Site land-use decisions such as the protection of biodiversity, resource conservation, and pollution prevention, all influence health significantly. So does planning for the enhancement of the social aspects of sustainability, such as community vibrancy and happiness.

With that in mind, the Master Plan Guidelines for the new hospital aim to not only support the City of Vancouver's EcoDensity ambitions. The Guidelines also aim to showcase leading edge sustainability practices in a range of health promotion areas, including:

- Urban agriculture

The site offers great opportunities for therapeutic community gardens and neighbourhood farmers markets. The hospital's recently passed food policy promotes exactly these kinds of initiatives. The project will also prioritize alignment with the city's food charter.

- Fostering neighbourhood gathering places

Besides farmers markets and community gardens, the vision is to create a hospital within a park-like setting. The idea is to preserve current green spaces. The perimeter will be pedestrian-scaled. Inside the ring road, buildings will be grouped into a single entity. A special healing garden and green buffer zone surrounding the new hospital will provide a tranquil sense of place. The site also connects with bike-route greenways and public transit corridors.

- Creating community amenities

A childcare facility on site would serve the children of staff of the hospital. A potential district energy initiative would offer a new resource to the city, as well as promote conservation.

- Heritage and public art

The preservation of buildings of significance--such as the Jean Matheson Pavilion and the steam plant--is key. Valued elements of the Shaughnessy building, including the decorative bronze screens and the Art Moderne light fixtures will be preserved. Areas designated for the display of public art will be integrated.

- A cutting-edge Transportation Demand Management (TDM) Strategy

The hospital currently has dedicated TDM resources that are working to find innovative ways to support the provincial long-range region-wide Transportation Plan. To date, the hospital is working diligently to prioritize the reduction of travel to and from related institutions. The hospital is also encouraging active forms of transportation such as walking, cycling, and transit.

- A sustainable rainwater management and water reduction plan

This plan includes pilot projects such as sustainable surfaces for parking lots, grey-water use for landscaping, green roofs, and retaining natural water run-off in ponds for irrigation. It will highlight methods for reducing water-use on site ranging from the installation of low-flow toilets and urinals (where possible) and ongoing maintenance programs for water infrastructure.

- A solid waste diversion strategy

This provides space, infrastructure, and a plan to divert organics and recyclables from the waste stream while reducing materials use. It will also include the adoption of sustainability purchasing programs. A demonstration project, such as an in-vessel composter, would not only divert all garden waste, food scraps and paper towels from landfill, but also provide soil for use on site.

- Energy Plan

To date, the hospital has demonstrated leadership in energy management for many years. The goal is to continue to refine and enhance energy saving opportunities. The hospital already offers Canada's first staff engagement program designed to foster sustainable behaviours in terms of energy consumption, alternative transportation, and materials reduction, and will soon potentially be at the forefront as a hub for a sustainable district energy system.

- Sustainable Buildings

By law, the project is required to achieve a rating of LEED Gold. However, LEED relates only to green building practices, and does not incorporate social sustainability criteria. Consideration will be given to other ways to integrate leading-edge healing principles into the buildings such as the holistic mind, body, spirit approach of the Planetree method and the inclusion of elder-care criteria. Building performance will also be monitored on an ongoing basis over a number of years. Tools such as the Green Guide for Health care will serve as a guide for ongoing performance monitoring.

- Carbon neutrality and ecofootprint

As of 2010, the hospital is measuring its carbon footprint in terms of energy use for buildings, fuels used for fleets, and paper consumption. To maintain carbon neutrality, the hospital is not only implementing programs designed to reduce consumption but buying offsets from the BC Pacific Carbon Trust annually. The hospital is also considering other, more comprehensive methods to measure ecofootprint and sustainability, such as the Green Guide to Health care and the Global Reporting Initiative.

All Provincial government agencies, including BC Children's and BC Women's hospitals, are working to fulfil and enhance current mandated and community-identified environmentally-responsible measures. In addition to the carbon-neutral policy that applies to all Provincial agencies, the hospitals continue to implement a number of environmental measures, some of which are shown below.

Current and future practices include;

- All new buildings will be designed and built to the LEED Gold (Leadership in Energy and Environmental Design) standard as per the Government's Energy and Efficient Buildings Strategy and the BC Energy Plan.

- PHSA participates in the Power Smart Program with BC Hydro.

- PHSA employs an Energy Manager supported with funding by BC Hydro and audited by BC Hydro. The Energy Manager is a recognized leader in the field and has been awarded 'Energy Idol' status by Natural Resources Canada.

Following the LEED system, many strategies will be employed and tested for new buildings and further sustainable development of this site. New buildings will target LEED Gold accreditation.

Examples of energy reducing and environmentally supportive tactics could be:

- water conservation practised with dual flush toilets and waterless urinals
- utilization of solar controls to reduce energy needs, control and monitoring of the building's energy management are other areas of potential energy savings
- incorporating native vegetation to reduce irrigation needs
- 'living roofs' to reduce storm water run-off and heat island effect, and or white roofs (cool roofs) to reflect daylight into the building and reduce heat island effect
- 'living roofs' could include urban agriculture activities, and storage of required tools
- roof tops could be used for rainwater harvesting
- utilize solar shade in summer with sunshades and landscaping and utilize solar gain in winter
- potential use of recycled building materials as more and more builders request these products
- implement a recycling program on site to decrease landfill waste

Further to the above strategies for attaining environmental excellency, the site and landscape have strategies to promote conservation. Please see Section 6.0 - Open Space and Landscape Treatment.

2.10 District Energy System Planning

Children's and Women's Health Centre of BC is currently investigating opportunities for a District Energy System in collaboration with the City of Vancouver's Sustainability and Engineering personnel. This investigation is expected to be complete in late 2012.

2.11 Noise Control

The future master plan developments of the hospital will be required to meet or exceed the city's requirements with respect to the City of Vancouver Noise Control Manual, as a regarded "Quiet Zone".

Design consideration must be given to the north-west facade of the new Hospital. The surface should be articulated so as to not reflect sound to the adjacent residence.

2.12 Security Management Plan

Physical security safeguards are an important component to a comprehensive security management plan. Security safeguards refer to "physical measures, policies, and procedures [designed] to protect a covered entity's electronic information systems and related buildings and equipment, from natural and environmental hazards, and unauthorized intrusion" (U.S. Department of Health and Human Services, 2007). The following elements may be considered in order to provide a safer environment within Children's and Women's Health Center.

- Safety of People
- Building Perimeter and Grounds
- Vehicular Traffic Control
- Building Interior
- Protection of Information Systems, Patient Records/ Documents

Risk Assessments

Security "Risk Assessments" refer to the formal process of evaluating and documenting vulnerabilities within Children's and Women's Health Center sites, departments or programs, to determine their potential exposure to security related or other events.

High Risk and Security Sensitive Areas

The following areas have been determined to be high risk, indicating they have an increased risk for harm to people, property and/or organizational reputation.

- Maternity/Labour Delivery/Pediatrics
- Emergency Departments
- Pharmacy
- Inpatient Mental Health Units
- Data Centres

A specific security plan has been developed for each area. This specific security plan is to be evaluated once per year, at a minimum.

Threat Assessments

"Threat assessment" refers to the formal process of evaluating, documenting and mitigating vulnerabilities as a result of hostile or potential hostile acts towards workers, staff, physicians, volunteers or others within Children's and Women's Health Centre.

Please see *Appendix C – Fraser Health Security Management Plan* for a detailed discussion on a range of security safeguards. Please note that CWHC authorities has adopted the Fraser Health Security Management Plan.

2.13 Heritage

The existing buildings on the site have varying levels of historic significance. While none of the buildings are included on the Vancouver Heritage Register, a Statement of Significance has been prepared on several of the older buildings on the campus (see Appendix A), and there are some elements which have been noted as being of heritage value. The Mental Health Building, formerly the Jean Matheson Pavilion, was rehabilitated by Henriquez Architects in 2005 and is now a functional as well as architectural asset to the Hospital. This building will be retained as part of the redevelopment proposal. The Steam Plant, with it's large expanses of coloured glazing and prominent "chimney", is also being retained.

The buildings of the former Shaughnessy Hospital have been unable to adequately sustain hospital functions for some time. They are currently used only for administration and support services. The low floor-to-floor heights make it impossible to add the mechanical infrastructure necessary for modern hospitals, and the buildings are considered structurally or seismically inadequate. The location of these under-used buildings at the heart of the Hospital site makes it impossible to retain them while undertaking a comprehensive redevelopment of the Hospital.

While the preservation of the former Shaughnessy buildings is not possible, there are several elements of the buildings which are of value and should be preserved. The plaster bas-relief panels by Beatrice Lennie at the main entrance, as well as the decorative bronze screens above, should be removed prior to demolition, safely stored, and incorporated into the new designs. The Art Moderne light fixtures in the lobby should also be considered for preservation and re-use. In this way, these unique heritage elements can be given new life as part of a new era for the Hospital.

Please see Appendix A - *Heritage Statement of Significance* for a full discussion of the Heritage significance of existing buildings on the site.

Former Shaughnessy Hospital

Former Shaughnessy Hospital
Beatrice Lennie Panel (1 of 2)

Jean Matheson Memorial Pavilion

3.0 Uses

The CHWC site will include mainly hospital and related health care uses, such as medical research and teaching (in partnership with the UBC medical school). There are also ancillary support and maintenance functions associated with the operation of the Hospital, as well as minor commercial uses, such as coffee outlets (i.e. Starbucks) and a pharmacy, which serve patients and staff.

New uses are being added to the site as part of the redevelopment.

A **Family Stay and Respite Housing** facility will be located in the southeast corner of the site, adjacent to Heather Street. This short-term housing, built and run by Ronald McDonald House (RMH), is intended to accommodate out-of-town families with children requiring medical treatment. This new use is highly appropriate to the Hospital site as it relates directly to patients of the Children's Hospital and improves the quality of the hospital experience for children and their families. The facility will have a secure controlled environment where they can play and rest as their health is compromised and interaction with other children may expose them to further health issue or a slower recovery. The scale of the housing has been broken down into smaller components thus maintaining and matching the scale and character of the adjacent neighbourhood.

The second new use will be a **Child Day Care Centre** for 49 children of infant, toddler and preschool age. It will be located in the southwest corner of the site. This facility is part of the City of Vancouver mandate to encourage the provision of childcare services within the city. By locating a childcare facility on the site, the Hospital will be able to support its staff in their childcare needs, while limiting excess driving to more distant sites and making transit and other TDM strategies more viable. The facility will be a community amenity as well, providing much-needed childcare options to residents of the surrounding neighbourhood. The centre will provide a secure and controlled outdoor space for the children to play in. The Child Day Care Centre will be one storey in height and is well suited in the southwest corner adjacent to the two storey residential neighbourhood and away from busy hospital functions. The Child Day Care Centre will be designed for an extra 25 children and will be built in the future when funding becomes available.

Along with these new developments will be four additional designated uses located on site for the benefit of the public, patients and their families and staff:

One is a **Child Play Garden** located adjacent to the Children's Hospital. The location of the children's garden requires that it be in close proximity to the Children's Hospital. The garden is a private space not accessible to the public as it is a space for healing and recovery and should be limited to public exposures as much as possible. The children may have health equipment with them and their safety is essential as well as the anonymity. Children feel more at ease when they are amongst other children that are there because of other health related issues.

Second is a **Healing Garden** located adjacent to the Women's Hospital. It is important that women should have close proximity to the healing garden so that they are able to leave the hospital and retreat into a healing outdoor space for emotional comfort.
The healing garden is not only for the benefit of patients but staff and the public.

Third is a **Family Commons** located between the Child Play Garden and the Healing Garden. It is an open public space for the patients, staff and the surrounding community and beyond.
The space will provides families an opportunity to be outdoors and participate in a variety of organized activities and have access to exhibits and performances such as cultural exhibitions, art space, fundraisers, festivals, Easter Egg Hunts, theater groups, shows, live music, clowns etc...

Additionally there will be opportunities for **revenue uses** such as coffee shops and other food areas located within the new Health Centre.

The Master Plan seeks to clarify the organization of the key uses on the site, making orientation and wayfinding easier for patients, and health-care delivery more efficient through strategic adjacencies. Peripheral use precincts will remain as they are currently, with a Research zone in the northwest corner of the site consisting of the Child & Family Reserach Institute and the Clinical Support Building; a Plant Services zone in the northeast corner, and the Mental Health zone towards the southeast. A new Family / Childcare zone will be added in the southwest and southeast end of the site. In the centre of the site, the main Hospital buildings will be zoned into overlapping areas allowing for shared diagnostic facilities, as well as good interconnection for programs related to the hospital, including the neonatal intensive care unit. To the north of the main Hospital will be the Ambulatory Care zone, consisting of the existing building and a new extension. To the west & east will be the Future Hospital Development zones, which will house facilities for the UBC medical school, as well as offices and administration areas.

Legend of Building Use Zones & New Designated Areas:

- Acute Care Centre - with New Child Play Garden
- Women's Hospital - with New Healing Gardens
- New Family Commons
- Ambulatory Care Zone
- Research Zone
- Plant Services Zone
- Mental Health Zone
- Family/Childcare Zone
- Future Hospital Development Zones

3.1 Development Phasing

The existing buildings, along with the 45° alignment, dictate the sequence for the development of the Master Plan. Using the existing Children's and Women's Acute Care Hospital as the decant vessel, the staged demolition of the Shaughnessy Hospital can proceed smoothly until it is eventually demolished in the final phase, by which time it will be more than 50 years old.

The 25 year Master Plan has been broken down into 7 phases. Phases 2 and 3 constitute the current site rezoning proposal. Beginning with the new Acute Care Centre in Phase 2, updated facilities for the Children's and Women's Hospital will continue to be developed in the centre of the site, on the area currently occupied by the Shaughnessy Hospital and Brock Fahrni Pavillion. By concentrating building mass towards the center and reducing service roads and surface parking, the green space on the site is significantly increased.

The sequence of new facility developments illustrated by this document reflect a balance among several objectives, including:

- Available space among existing structures.
- Proximity to services being replaced.
- Need for linkages between hospitals.
- Desire for a compact, integrated footprint.
- Respect for the value of open space.
- Desire to provide usable open space.
- Minimizing traffic impact.
- Limiting view impacts.
- Ease of orientation.

Proposed siting optimizes inter-hospital linkages and ease of access with as compact a footprint as siting options will allow. It also limits the breadth of massing across most important view angles.

Existing

Phase 1

Phase 2

Phase 3

Phase 4

Phase 5

Phase 6

Phase 7

Completed Master Plan

3.1.1 Existing Conditions (2011)

Existing Site Area	186,954.6 sm
Existing Allowable FSR	.85
Existing Allowable Density	158,911.4 sm

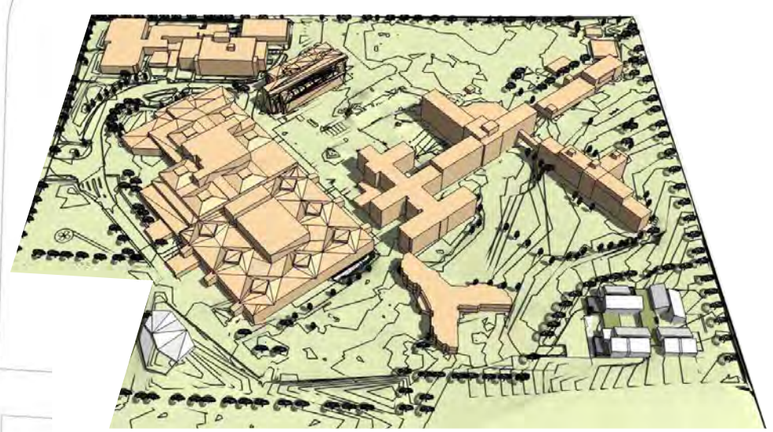
Existing Density (2011 - 2012)

Existing Density (2011)	132,432.5 sm
Clinical Support Building (under construction)	2,373.0 sm
3T Research MRI (under construction)	403.5 sm
Total Area	135,209.0 sm
Total FSR	.72

3.1.2 Phase 1 2011-2013

Existing Density	135,209.0 sm
• Family Stay and Respite Housing	6,970.0 sm
• Child Day Care Centre	850.0 sm*
• Demolition of the Shaughnessy A wing	(7,388.0) sm
• Demolition of MERU building	(247.5) sm
• Demolition of L Wing	(3,972) sm
Total Area (2013)	130,571.5 sm
Total FSR (2013)	.70

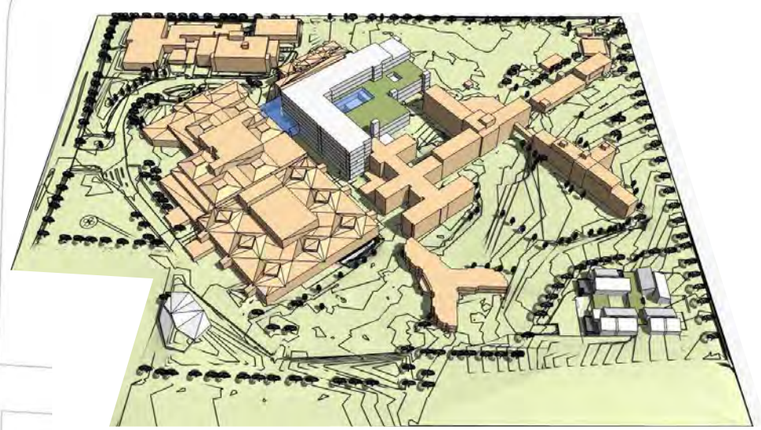
* excluded from Floor Space Ratio



3.1.3 Phase 2 - 2013-2017

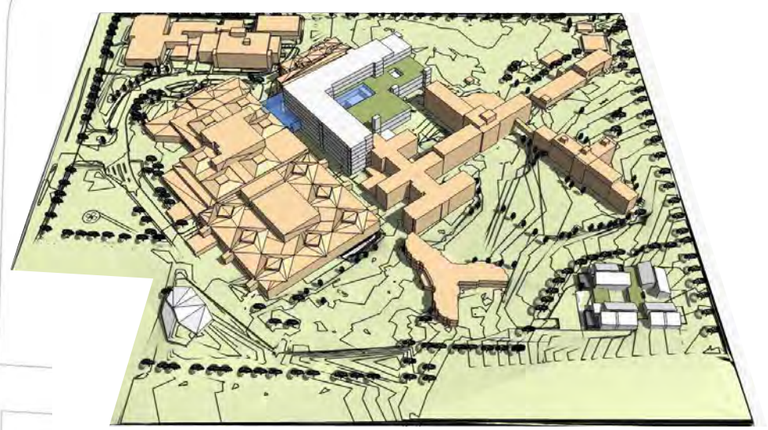
Existing Density (2013)	130,571.5 sm
• Acute Care Centre	
- New Build (2013-2017)	55,000.0 sm
Total Area (2017)	196,302.3 sm*
Total FSR	1.05

* includes additional hospital development space that may be required



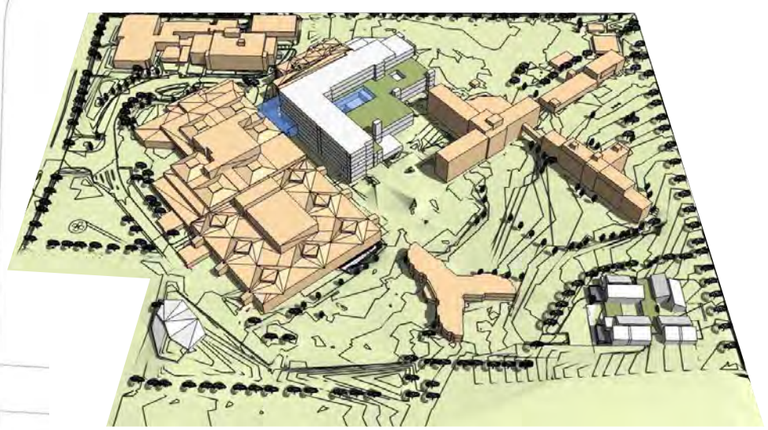
3.1.4 Phase 3 - 2017-2020

Existing Density (2017)	196,302.3 sm
• Interior renovation of existing 1982 Children and Women's Hospital	0 sm
Total Area (2020)	196,302.3 sm
Total FSR	1.05



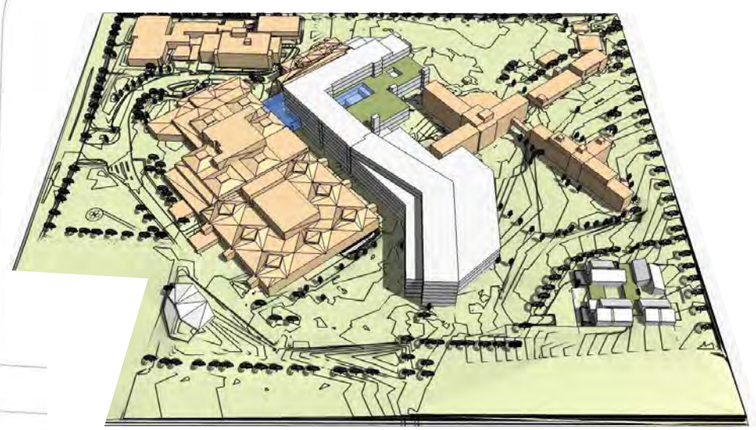
3.1.5 Phase 4 - 2020-2022

Existing Density (2020)	196,302.3 sm
• Ambulatory Care - New Build (2020-2022)	6,800 sm
• Demolition of Shaughnessy Hospital	(13,194.0) sm
Total Area (2022)	189,908.3 sm
Total FSR	1.02



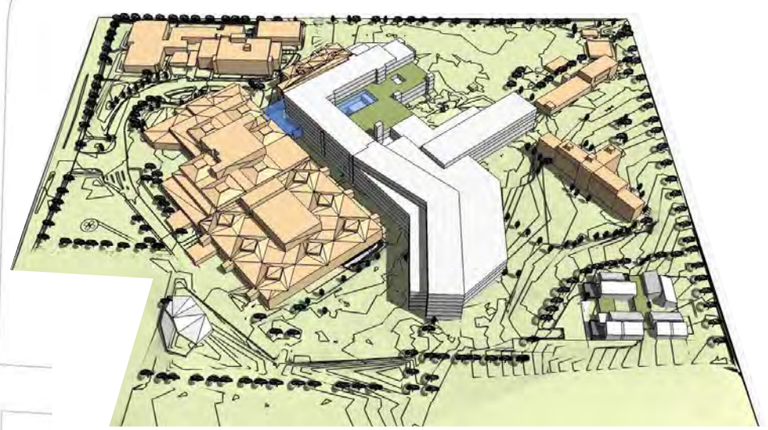
3.1.6 Phase 5 - 2022-2027

Existing Density (2022)	189,908.3 sm
• Acute Care Centre Expansion	37,500 sm
• Women's Health Centre	24,500.0 sm
• Demolition of Brock Farhni	(6,122.0) sm
Total Area (2027)	245,786.3 sm
Total FSR	1.31



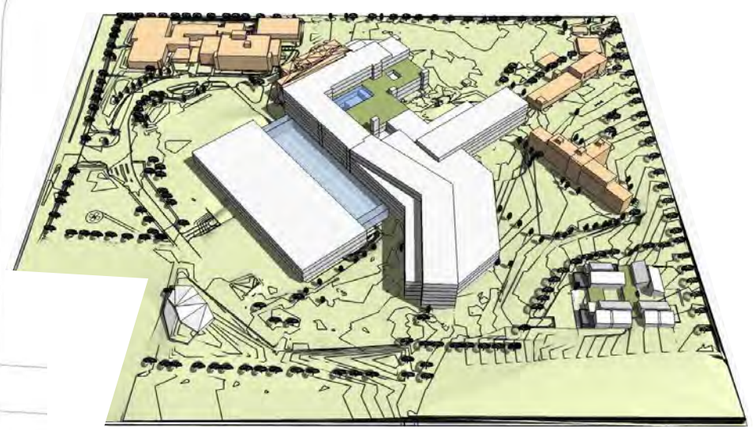
3.1.7 Phase 6 - 2027-2030

Existing Density (2027)	245,786.3 sm
• Future Hospital Development	20,300 sm
• Demolition - Women's Health Centre	(17,423.0) sm
Total Area (2030)	248,663.3 sm
Total FSR	1.33



3.1.8 Phase 7- 2030-2035

Existing Density (2030)	248,663.3 sm
• Demolition of 1982 existing Acute Care Hospital	(42,803.0) sm
• Children's and Women's Health Centre Entries	2,500.0 sm
• Future Hospital Development	30,000 sm
Total Area (2035)	238,360.3 sm
Total FSR	1.27



4.0 Site Planning Guidelines

These guidelines and recommendations have been developed in concert with the Provincial Health Services Authority, Children's and Women's Health Centre and Hughes Condon Marler Architects (the Indicative Design Team). The intent is to direct the future development of the CWHC campus. While the principles herein can continue to guide the development on this site for the next 25 years, the site planning and building massing is illustrative only to provide a general direction to the development of the campus. These principles will be expanded in the current Rezoning submission for the Acute Care Centre development and the building configuration will be refined by the related Indicative Design. In addition, the Master Plan may change over time due to health standards and requirements, Provincial and/or Hospital policies and City of Vancouver bylaws or policies.

Please see *Appendix E - Children's & Women's Health Centre Design Objectives & Principles* for a further detailed discussion on site planning guidelines.

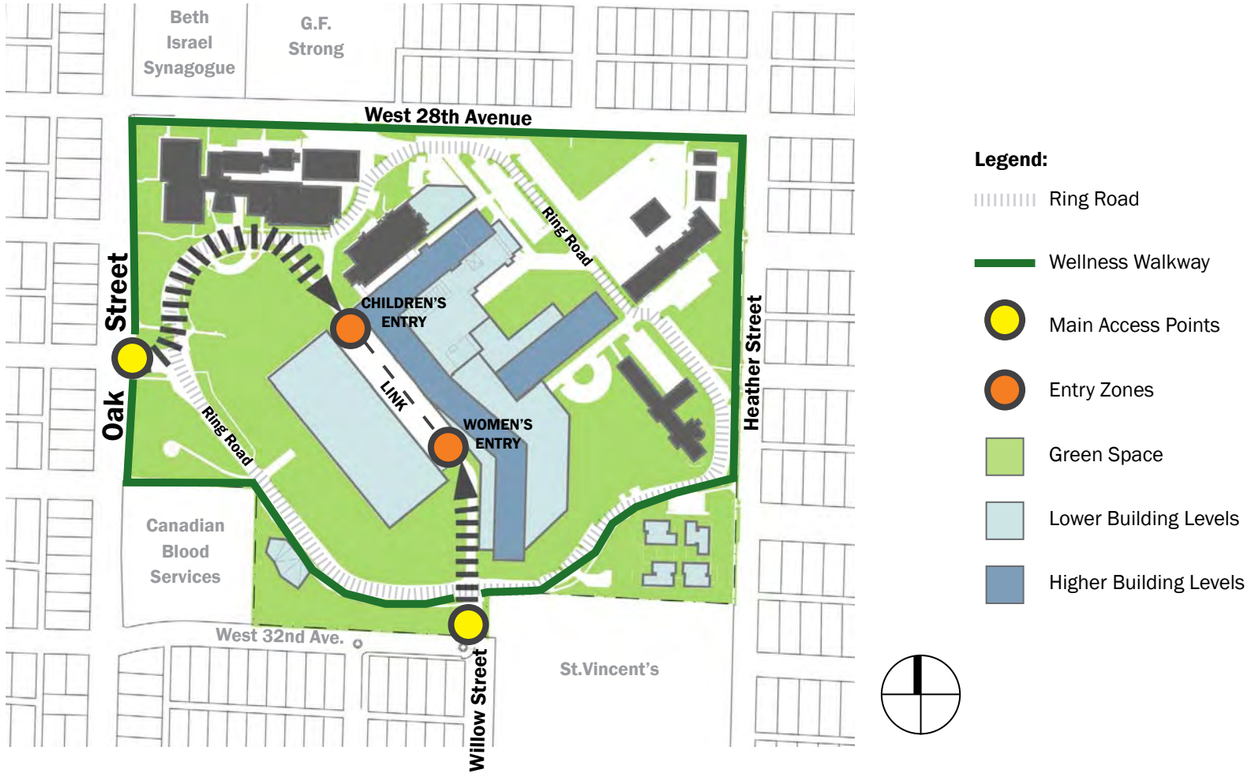
4.1 Building Layout

The building layout is intended to break down the overall massing into legible parts that help to reduce the scale of the building and identify the key components, entries and internal organization of the Hospital. As with any large hospital, it is vital that the building provides some visual clues to way-finding, entry and organization. By doing so, visitors can quickly orient themselves, identify where they need to go and reduce the stress often associated with arrival.

The building form should also recognize that the overall massing contains two institutions and that each requires a separate identity, although they share clinical support functions on the lower "podium" floors.

- **BC Children's has its entry on the main arrival route with the access point from Oak Street**
- **BC Women's has its entry on axis with the access point from Willow Street**

As such, there are two primary entries, one for BC Children's and one for BC Women's Hospital which will allow a reinforcement of the "brand' of each facility.



4.2 Site Coverage

The proposed Master Plan consolidates the primary Hospital buildings into a single entity, thereby eliminating much of the wasted space caused by the configuration of the older buildings currently on the site. As a result, when the existing Acute Care Hospital is demolished in the final phase of development, the site coverage will have increased only slightly compared to the current site, however the landscape area will be greatly enlarged. The total site coverage of the completed Master Plan is approximately 34 percent, an increase of only 4.4 percent over the current site coverage. A larger amount of the site will be devoted to green landscaped space (and more, depending on the extent of rooftop landscaping), while hard surfaces such as parking and roads will be decreased by 15 percent to occupy only 27 percent of the site area. This site coverage is lower than the adjacent single family neighbourhood, and provides many areas of public and semi-public green space as a community amenity.

4.3 Street Edges and Existing Site Conditions

The arrival to the main atrium space shown running between the Acute Care Centre and the Ambulatory Care Building, will act as the main "circulation spine" for the ACC. This circulation provides a pedestrian connection from the main entry of the hospital located on the NW corner to the NE corner of the site.

The overall massing demonstrates that the buildings should reduce in height as they approach the surrounding street edges. At the frontage to 28th Avenue on the northern edge, the buildings step down from the 8 storey Acute Care Centre to a lower 4 storey extension of the Ambulatory Care Building. Here the building face runs parallel to and respects the existing street setback line.

On the southern edge of the site the future buildings for BC Women's Hospital are orientated parallel with the new Willow Street entry. This rotation back onto the alignment of the city grid means that the large scale building presents an "end-on" profile to the neighbours and reduces the impact of the buildings on views from the south. Also, the higher grades in the southeast portion of the site mean that the buildings in this part of the campus sit into the slope to further reduce the impact of the height and scale.

In Phases 6 and 7, the Future Hospital Developments will be formed into two separate buildings. The first development will be located in the northeast centre on the site. This structure is anticipated to be 5 stories in height. This portion of the hospital will be further from neighbouring areas of 28th Avenue and will be screened by the mature trees which line 28th Ave. and the northern edge of the Ring Road. The face of the building is deliberately aligned with the existing prime building axis that defines the front face of the historic Energy Building. This reinforces the cross-site axis from Heather Street into the heart of the new CWHC.

In the final Phase, after the demolition of the 1982 Acute Building, the second Future Hospital Development will be built. It will occupy a portion of the site fronting Oak Street and will be 3 stories in height.

4.4 Height and Form

The building heights range in scale from two stories to eight stories. The higher portions are deliberately broken down into distinct parts which are reflective of the functional floor plate sizes currently needed for inpatient units. This articulated upper portion is divided into four sections which are "hinged" and rotated about the connection points. This creates a "necklace" of similarly scaled parts that wrap around the center of the site, above the lower "podium". Each part is shifted in axis from its neighbour so that the overall building form can respond to the various axes of arrival and street connections. In this way the buildings also create a visually more dynamic and interesting form.

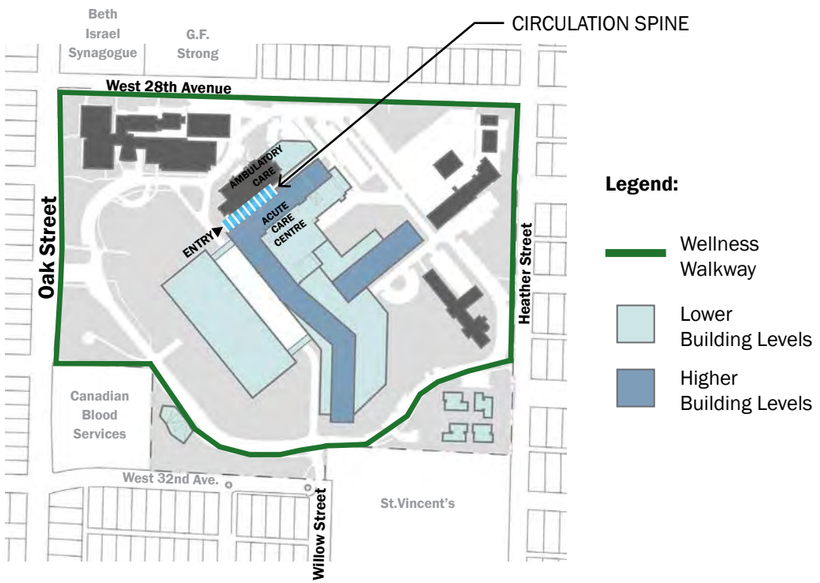
Campus of Care - Maximum Height: 45m

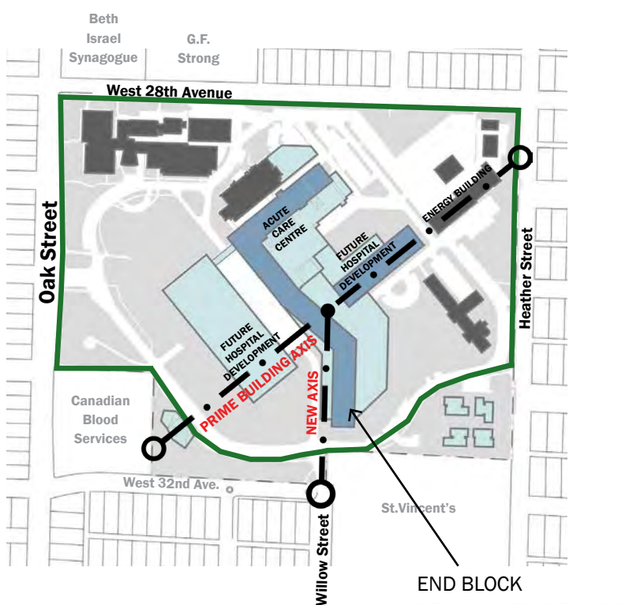
The lower two floors of the development provide a continuous base to the upper articulated "necklace" and house the primary shared clinical support functions for the Hospital. This "podium" level creates a strong base line for the complex and protrudes beyond the upper "tower" portions to provide a suitable scale at the ground plane. The "podium" will be further articulated to reduce the impact of this large building with canopies at building edges and entry points.

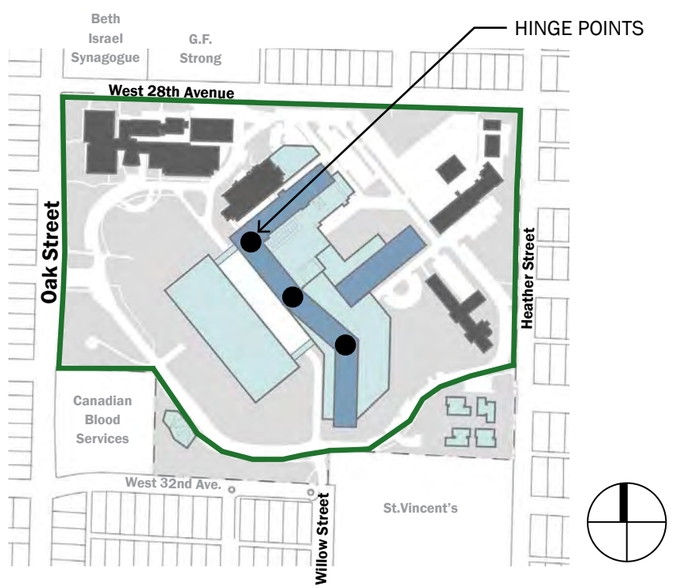
4.5 Building Depth and Width

In many respects, the floor plate sizes and dimensions are derived from the operational and functional demands of a state of the art medical centre. The inpatient unit sizes reflect a programmatic need for all single-patient rooms with ample access to daylight for patients and staff. In turn, the greater involvement of families in patient care requires spaces for family lounges and respite areas. Equally, staff retention is a widely recognized problem in our health care industry and as such the design of the typical floors should recognize the need for access to daylight for staff both during their work and at times when they are on break. While the consistent design of patient rooms leads to a repetitive floor plate design, the other program components requiring daylight offer opportunities to articulate and express different architectural elements. This offers the potential to have larger glazed elements at the outside corners and at prime breaks in the facades.

The reduction of nurse travel time, the location of support functions and the clinical practice model will all determine the ideal length of inpatient unit, which is then reflected in the massing of each of the "beads in the necklace" within the overall massing strategy. Additional opportunities for articulation in the facades are offered by the expression of vertical circulation such as elevators and stairwells. The master plan anticipates that these occur at the ends of the typical floor plates and act as the "hinge" links between the massing of each part of the "necklace".





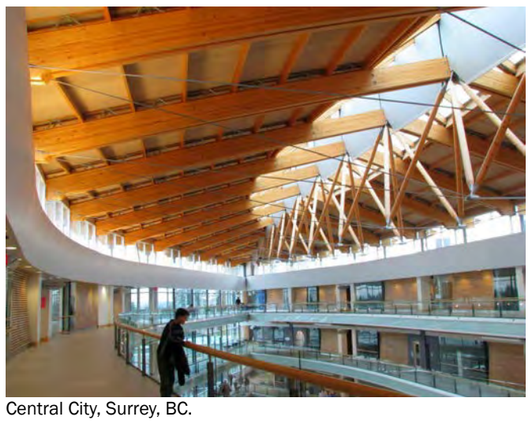


University Medical Center, Princeton, NJ.
HOK / RMJM

Denver Children's Hospital, Denver, CO.
Zimmer Gunsul Frasca Architects

Institute for Medical Research
Madison, WI. HOK

Whistler Library, Whistler, BC.
Hughes Condon Marler



Central City, Surrey, BC.
Bing Thom Architects

5.0 Building Design Principles

New buildings and changes to public realm elements should be designed to make the CWHC campus a friendlier, less institutional place to be a patient, to work, to visit, or to live beside.

- Buildings should be highly articulated and transparent in order to break down their scale,
- utilizing such components as glazing, canopies, shading systems and exposed structural elements.
- The use of a pedestrian scaled perimeter is encouraged, keeping higher massing towards the center.
- Street level expression should be transparent,
- have pedestrian protection from the elements,
- provide clear definition of entrances,
- step up or down with grade changes.
- Landscaping and other "green" treatments to the roof areas are encouraged. Roof decks should provide usable outdoor spaces for staff and patients wherever possible.

Vertical circulation elements, such as stairs, elevators and other program components that are located to the perimeter of the building should be emphasized and located in such a way to reinforce primary entries and intuitive way-finding around the buildings.

5.1 Roof Treatment

The exposed roof areas of the lower "podium" levels offer a significant opportunity for overlook from the inpatient floors above. By landscaping these "deck" areas it will offer views to a natural environment for patients and provide outdoor respite areas for staff, visitors and patients. The Master Plan contemplates that these roofs will be extensively landscaped to provide a valuable outdoor amenity both to be seen and to enjoy. These areas should also help reduce storm water run-off and dependence on City storm system. Natural water run-off could be retained on site and be utilized for site irrigation.

Rooftop mechanical systems, elevator penthouses, and other appurtenances should be integrated into the form and architecture of the building. Careful attention should be paid to the design and screening of mechanical systems to ensure that the adjacent neighbourhood is not affected by noise pollution.

5.2 Windows and Skylights

The amount and distribution of glazing should recognize the current notion that access to daylight can provide a significant improvement in patient outcomes and staff well being. As such, window size and placement, location of skylights and use of internal courtyards should be carefully considered to respond to the internal functional distribution of patients, visitors and staff. Variations in glazing type, patterns and frequency should be encouraged to reduce the overall scale and massing of the larger building elements.

5.3 Entrances

Identifiable entries are vital to the success of a Hospital campus. It is critical that patients and visitors can easily identify and find the entries without distress. The overall architectural massing can contribute considerably to this concern and reinforce the point of entry from afar. The master plan contemplates that vertical elements on the facades would lie directly on axis with the two primary entry points to act as a "markers" to entry points below. At the two main entrances large expanses of glazing should be utilized to reinforce the notion of public access and permeability. Access through the building other then the main points should be limited and controlled as issues of security for staff and patients are a top priority for all hospitals.

Lower scaled canopies further assist this notion, by providing a clearly recognized emphasis at the doorway and drop-off points. From this point of entry, parking access should be clearly understood. For patients and families who self park first, the access from visitor parking to the main lobby should be explicit and simple to find.

In this way, the main entry sequence proposed in the Master Plan proposes a designated arrival and drop-off circle for each hospital but with a linking road between so that visitors can navigate between the entries to each Hospital, much like a departure area at an airport. The road network then allows cars to access the underground parking below the Hospital.

The entrance to the Emergency Department must be clearly identifiable and easy to find. The use of direction signage at all entries and along the Ring Road with strong colours that match the entry will be of great import for anxious parents driving their child to Emergency.

5.4 Exterior Walls and Finishes

The design should incorporate materials that will create a distinct character appropriate to a hospital for children and women. The design approach should avoid a clinical and repetitive aesthetic and instead be friendly and open, using materials that exude warmth and harmony. Excessive use of concrete should be discouraged whilst the use of glass, wood, brick, metal, and stone as the preferred material palette should be encouraged.

The material palette should reinforce the recognition of primary entries, encourage material changes at major height transitions in the massing and clearly express the functional distinction between the inpatient units on the upper floors and the Hospital support services on the lower "podium" floors. Material changes and transitions should express the building hierarchy, prime circulation connections and articulate stairs and elevators. The lower podium levels should be more solid in character with a higher proportion of wall to window area, whilst the upper floors should be expressed in lighter materials and higher amounts of glazing. Surfaces facing the main entry points should be glazed and visually transparent.

HEC Library, Montreal, QC
Dan Hanganu / Jodoin Lamarre Pratte

Abbotsford Hospital and Cancer Centre,
Abbotsford, BC
Musson Cattell Mackey Partnership

Denver Children's Hospital, Denver, CO.
Zimmer Gunsul Frasca Architects

Northern General Hospital, Sheffield, England
Sheppard Robson

Children's and Women's Hospital Signage

Great Ormond Street Hospital
London England

5.5 Awnings and Canopies

Exterior elements such as sun shading devices, balconies, overhangs and canopies should be used to further break down the overall building massing and recognize the pedestrian scale along the building perimeter. Exterior canopies should provide significant rain protection at entries and along building frontages that provide circulation paths between buildings on the site.

5.6 Wayfinding

A good wayfinding system is critical to health care facilities. This one element is often key to a user's hospital experience. Every aspect of design on the site should assist in patient wayfinding, including building massing and design, landscape, architectural elements, interior design, and clear, consistent signage. Visitors need to be able to orient themselves quickly and identify where they need to go under stressful circumstances. Relying too heavily on signage to direct users is rarely successful in a situation where they are likely to be hurried, agitated and otherwise compromised.

The Master Plan improves wayfinding primarily in two ways, by clarifying the organization of the site and simplifying access routes. The clear division of the main Hospital into Children's and Women's components with highly visible and distinct entry points makes it difficult for a visitor to become confused or lost when they first arrive.

Landmarks at the main entrances are the starting point of the wayfinding system. Lighting, landscape and coloured signage are the first indicators upon arrival on site. Signage becomes more detailed within the colour coded system as one enters the site and eventually into the building. Large numbers at floors, colours and themes, based on the building use, tell the user quickly where they are. Floor maps at all circulation points illustrate this effectively. Within a building that has many sections/departments knowing where you are is key to knowing where one needs to go.

By creating direct sight lines to the Children's and Women's entries from the main access points (Oak St. and Willow St. respectively), the new plan makes it immediately obvious where a visitor needs to go. The longer driveways between these access points and the Hospital entries allow time for visitors to make decisions and orient themselves, and the driveway configuration allows for an easy return if incorrect choices are made.

The landscape design should also reinforce intuitive wayfinding throughout the site. Landscape elements can be strategically placed to act as memorable landmarks, used to highlight building entrances, roads and pedestrian walkways. Different uses on the site can be treated with distinct landscape characters as well, helping to distinguish these areas as separate and unique and assisting in orientation. Plantings should use colour and texture to reinforce these notions of unique zones, and to highlight paths and other features as people move throughout the site.

The building itself will provide many of the prominent identifying features to wayfinding, entry and organization.

Building elements such as;
- exterior canopies,
- material changes and,
- massing should direct users very clearly to the main entries.

Information;
- signage
- illustrative floor maps and
- information desks should easily direct people to their destinations within the Hospital.

Open atrium;
- the long atrium along the North side of the building assists in both circulation and wayfinding, as visitors can continually re-orient themselves in relation to this large light-filled space.

Visual Axis;

- views to the outdoors should also be used wherever possible as they will have the same effect of allowing users to orient themselves naturally, as well as providing many other obvious benefits.

Inside the Hospital, colour, large numbers for floors and animal themes can be used effectively to provide background cues to users about where they are within the hospital. Colourful spaces may also be less clinical and intimidating to the young patients being treated here. These systems direct and distract patients, especially children.

Diagram 5.6.1 Wayfinding Diagram

The adjacent map addresses the visual connection to site information, activity markers and building entrances.

Markers that identify the departments should be illuminated, tall and have an assigned colour.

- Illumination allows for ease of night time navigation to the intended destination.
- Height of the markers allow the signage to be seen easily from a distance.
- Colour is a dominate technique in wayfinding systems but should not be too heavily relied upon. This colour should be extended into the internal space of the buildings which is especially helpful when the building is one large mass with departments utilizing sections of the segments.

Signs that physically point in the right direction are visually clearer to comprehend then a sign's with just arrows.

Landmark art objects thoughtfully placed tell the visitor what the function of the space is, such as the Family Commons, Healing Garden or Child Play Gardens. Such visually stimulating objects ease the minds of concerned visitors especially the minds of frightened children.

Please see *Appendix E - Children's & Women's Health Centre of BC - Proposed CD-1(126) Guidelines* for a further detailed discussion on building design principles.

Legend

Main Entrance Markers

info Signage for Buildings

Building/Department Markers

Canopy at Entry Points

6.0 Open Space and Landscape Treatment

Open space allocation on the site strives for a more usable array of spaces and park like settings for the benefit of the community and hospital populations. Previous 'no build' areas largely represented left over areas which remained green but had limited value for active use. Those areas well used by the community are being retained and improved. Additional areas readily accessible to patients and staff are recommended to be reclaimed as demolition proceeds. These areas would be programed for the benefit of both hospital and adjoining communities. Pedestrian corridors through appropriate portions of the site will also be made more user friendly to improve pedestrian connections in the neighbourhood.
Wherever possible, improvements to stormwater management and rainwater harvesting will be incorporated into these spaces, along with other sustainable uses and methods of treatment.

6.0.1 – Landscape Goals

The landscape design should support the overall project to achieve the following objectives:

Use the Open Space to Support Sustainability

The public open space offers a unique opportunity to support the sustainability goals of the Children's and Women's Health Center. The larger contiguous spaces could be used to assist in rainwater harvesting and stormwater infiltration. In addition, surfaces should be designed to maximize infiltration wherever possible. This could include permeable paving or infiltration strips. Hard surfaces could be designed with water storage opportunities designed into the subsurface where feasible. Along pathways and in smaller areas, swales and rain gardens could be used to slow infiltration into the storm water systems and direct stormwater to tanks.
Native planting and drought tolerant planting should be considered wherever possible to reduce the watering requirements on site. Additionally, irrigation systems should be discouraged entirely with localized watering employed at grade. On buildings, where watering may be necessary, high efficiency irrigation systems should be encouraged. Wherever possible, rooftops should be planted to encourage visual access to a green surrounding, to reduce run off speeds, to reduce heat island effect and possibly to provide outdoor space for recreation and relaxation as well as habitat for specific animals. Priority of roof landscape designs should be to promote health and healing. Secondary priority should go to supporting energy systems, including passive solar design. Where access is limited, extensive green roofs should be considered.
Opportunities for using the public open space for multiple purposes should be encouraged including farmers markets, outdoor learning, and fundraising and gathering.

Create a Landmark within the City

The Children's and Women's Health Centre has the potential to be a highly recognizable feature within the city. The landscape design should support this by providing a foreground which highlights the buildings and creating the feeling of buildings placed in harmony within a lush, park-like natural setting. The landscape design should also reinforce connections to vehicular, transit and pedestrian access points, and reference wider connections within the city.

Make Wayfinding Easy and Intuitive

Clear and intuitive routing from the major site access points to hospital entries is critical to reducing the stress of arrival to the hospital. A priority should be given to ensuring quick and direct access to drop-off points and easy access from drop-off areas to parking. The landscape should also reinforce the different uses on the site, helping to intuitively orient visitors and direct them toward distinctive entry areas.

Promote Health and Healing

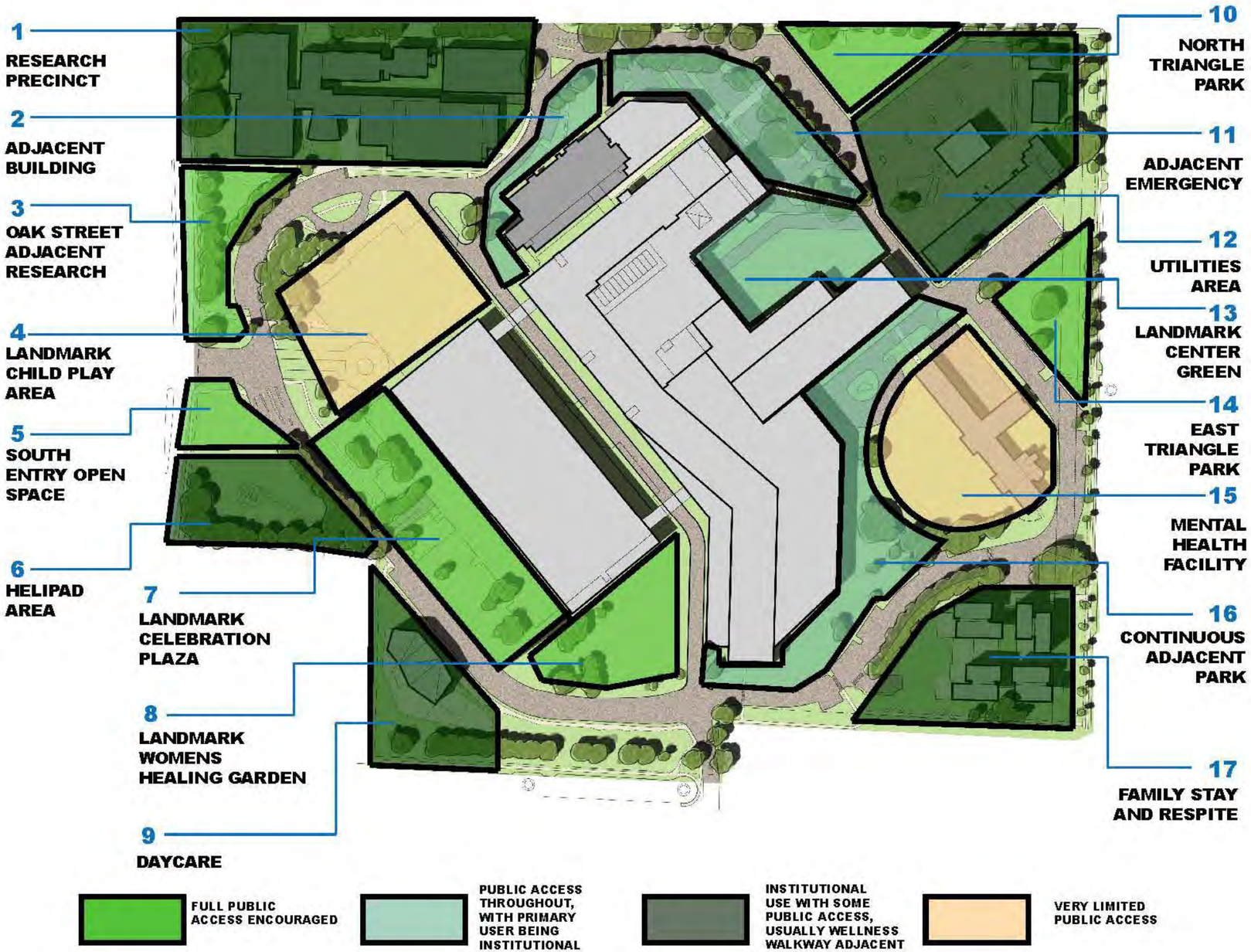
The landscape surrounding the hospital has a unique opportunity to assist in improving the emotional state of patients and to promote healing. Different individuals will find comfort in different types of environments; the landscape design should reflect this by providing a wide variety of experiences, including play spaces for children, secluded contemplative spaces, and open social spaces. The landscape should accommodate wheelchair users and people with portable medical equipment, and be accessible to people at all levels of health and agility.

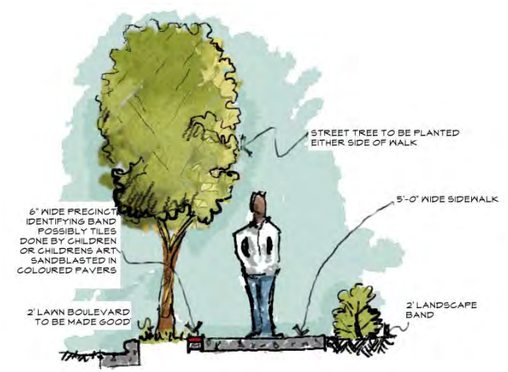
Create a Quality Environment

The quality of materials used in the landscape should be in keeping with the standard of materials used throughout the hospital precinct. Materials should complement the architecture and integrate into the landscape. The design should maximize benefits to the many potential users of the site through diversity and interest of landscape elements, well thought-out pedestrian connections and vehicular flows, and quality furnishings, shade structures and lighting design.

6.1 – Main Site Divisions

Since several diverse open space functions are foreseen, it may be helpful to summarize their key features. Several of these spaces are identified for other uses including, ***Research Precinct***, ***Helipad Area***, ***Utilities Area*** and ***Mental Health Facility***. The areas around the main hospital building have been identified as ***Adjacent Building***, ***Adjacent Emergency*** and ***Continuous Adjacent Park***. These areas allow for pedestrian connections along desire lines, a variety of smaller seating and gathering areas and a visual connection to the landscape from the building. The shared neighborhood use spaces have been identified in the plan as ***North Triangle Park*** and ***East Triangle Park***. These areas are adjacent neighborhood areas and connected to the wellness walk and should take advantage of the larger contiguous spaces to reflect the neighboring landscapes and address the needs of nearby residents. Similarly, the landscape areas directly adjacent Oak Street along the wellness walkway, ***Oak Street Adjacent Research*** and ***South Entry Open Space*** can take advantage of their buffer effect between Oak Street and the hospital. There are 4 unique landmark areas: ***Landmark Celebration Plaza, Landmark Women's Healing Garden, Landmark Child's Play Area*** and ***Landmark Center Green***. The '***Celebration Plaza***' will function to strengthen a sense of identity for the hospital as well provide a location for staging larger outdoor events. The '***Child's Play Area***' will have a pivotal position setting the spirit for the site adjoining the children's entry. Similarly, the '***Women's Healing Garden***' will occupy the entry on the Women's side of the hospital, reinforcing the wayfinding and creating a unique area for healing. The ***Child Day Care Centre*** and ***Family Stay and Respite*** sites have been selected because of their positions on the edges of their uses and proximity to the neighborhoods. An external pedestrian circuit linking four community access 'nodes' would emulate the well received Mount Pleasant 'Wellness Walkway'. The overall layout of the site and building massing have been designed to increase the amount of contiguous open green space, to create recognizable landmarks that define distinct zones within the site, and to improve the legibility of the site for patients, staff and neighbours.





WELLNESS WALKWAY POTENTIAL TREATMENT

Maximize opportunities for seating and walking adjacent the building within robustly landscaped areas. Materials should vary for walking circuits.
Northeast Georgia Medical Center

Use of walls and other structures to maximize access to the outdoors from the building and increase visibility of green from patient rooms.
Swedish's Issaquah Highlands Hospital

Use walls to allow for access to outdoors and increased landscape visibility where grades reduce the light entering the building.
Saint Mary's Hospital, Richmond, VA

6.2 – Open Space Around Main Building

6.2.1 – General

The landscape in this area should create a strong connection between the built environment and public open space, with an emphasis on safety and functionality for patients and staff. The use of these spaces for a variety of small and medium sized gathering spaces and for circuits within the pedestrian routing should be realized.

6.2.2 – Natural Daylighting

The landscape should be designed to maximize access to light for the building areas in these regions. As well, visual connections to the out of doors should be a priority and utilized in these areas, especially where viewlines do not permit sight of the larger landmark and open spaces.

6.2.3 – Access to Outdoors

Physical access to outdoor space should be provided for patients and staff. This should include patios on podium roof decks oriented so that sun and wind exposure will create a pleasant environment and successful green space. It should also include outdoor seating adjacent to services such as coffee shops and eating facilities. When outdoor space is part of a route of travel between functions or buildings, it should be designed to be secure, assist in orientation and provide protection from the weather where logical.

6.2.4 – Maximize Functionality of Public Open Space

Wherever possible, the building site should be used to increase the available public open space. Where this is not possible, the available space shall be maximized for the following functions:

1. Seating and gathering
2. Walking and circulation
3. Physical building access
4. Visual access to green views
5. Buffer

Where spaces are larger a variety of uses may be considered. This area will have the most natural surveillance from interior paces and has the potential to be heavily used by patients and their families as staff, especially when access is made simple and direct.

6.2.5 – Improved Wayfinding

The entrances to different functional zones and buildings should be clearly visible and distinct from one another, as should the adjacent landscape treatment. The design of entrances and landscape areas should be influenced by the interior functions of each zone. These entrances should be intuitively reached by both pedestrian and vehicle traffic, and immediately visible from the main site access points.

The hardscape for the plaza should be designed to hold the hospitals many functions, festivals and fundraisers.

Lights and colours on the building could be used to create excitement for the plaza.

A combination of hardscape and softscape should be laid out in such a way as to create a central gathering area.

6.3 – Entry Plaza

6.3.1 – General

The Celebration Plaza should create an identity for the hospital. This space should be designed with respect to three distinct perspectives: A large enough contiguous hardscape to host events, A physical manifestation of the relationship between women and children represented through art and landscape treatment, A visual landmark to help create a memorable visual landmark with the learning commons as a backdrop.

6.3.2 – Uniquely Identified Entrances

The visibility and clarity of signage and routing in this area are critical for wayfinding upon arrival at the hospital, as well as for identifying the hospital within the city. It is important to visually distinguish the Children's hospital and Women's hospital entries through signage, architectural vocabulary and landscape treatment.

6.3.3 – Vehicle Access and Pedestrian Experience

The focus in this area should be the ease of the patient arrival experience, including intuitive routing and easy drop-off and parking. Vehicle drop-offs and short-term parking should be located immediately adjacent to both the Children's and Women's entries with direct access from there to long-term parking. The intention in this space should be to limit the amount of driving required on site and to improve the pedestrian experience at the building entries.

6.3.4 – Landscape Character

The plaza which stretches from the Children's hospital entry at the north to the Women's hospital entry at the south should be used to explore the relationship between these two phases of life, both practically and metaphorically. The green space in front of the plaza will form a critical function for the hospital zone, creating an up front public accessible area that not only explores the relationship of children and family but more importantly allows for access, play and exploration by groups and individuals from all stages of life. The opportunities within this space may include child play (possibly mimicking the excitement of the child play garden), family picnic, large and small courtyards and gardens for serene contemplation, an amphitheater and walking circuits. The entry sequences from Oak Street and Willow Street should be explored along with their relationships to the Children's hospital and Women's hospital respectively and a definite arrival sequence, that may include entry gateways, artwork, wayfinding elements, lights and signage.

6.4 – Child's Play Garden

6.4.1 – General

The Child's Play Garden is placed in a very important position on the site; it forms the main portion of the entry sequence from Oak Street to the Children's hospital and is immediately adjacent to the hospital entrance so that it can be accessed without crossing vehicle routes. This space should be used to imbue the area around the Children's hospital with a sense of fun and play, as well as being vital to the healing process of patients.

6.4.2 – Healing through Play

The importance of play in the healing process of children cannot be overestimated. According to Joe L. Frost (Parker Centennial Professor Emeritus -University of Texas, Austin and former president of the Association for Childhood Education International), play and creative arts are "the child's natural medium for self-expression; they allow trained adults to determine the nature and causes of behavior; they allow children to express thoughts and concerns for which they may not have words; and they allow for the cathartic release of feelings and frustrations." Play helps children cope with trauma and the stress of illness. The Director of Medical Inpatient Service at the Montreal Children's Hospital, pediatrician Dr. Gary Pekeles, adds, "The fresh air, sunshine and the very feeling of being outdoors do the children a world of good. It is also great for them to have a refuge where they can get away from it all."

6.4.3 – Connection to the Hospital

The play area should be directly adjacent to the facility with no need to cross vehicular routes to access it. Informal surveillance of the play areas should be encouraged through the relationship to staff and waiting areas.

6.4.4 – Safety

Physical barriers, grading and planting should be employed to keep users safe from the adjacent roadway.

6.4.5 – Mix of Play Experiences

The Play Garden should include a variety of play areas and structures to reflect the different preferences, ages, and levels of health of the users, including:

- Play areas designed specifically to appeal to children of different age groups.
- Play areas designed for children who are connected to portable medical equipment.
- Areas for organized games and sports.
- Natural play areas that take advantage of the trees and landscape elements.
- Play structures as oversized pieces of art that act as beacons and stimulate a sense of joy.

Child's Play Garden

6.5 – Healing Garden

6.5.1 – General

"The idea that gardens are beneficial to patients in health care settings dates back as far as the Middle Ages, when European monasteries created elaborate gardens to provide medicines as well as fulfill the spiritual needs of the ill. Today, we know that being surrounded by nature plays a significant role in patient outcome," says Evangeline Lausier, MD, staff physician in internal medicine at Duke Integrative Medicine in Durham. The area adjacent to the new Women's Hospital is designated as a Healing Garden, and should be designed to support the health and well-being of patients through a calming atmosphere and sensory stimulation.

6.5.2. – Size of the Garden

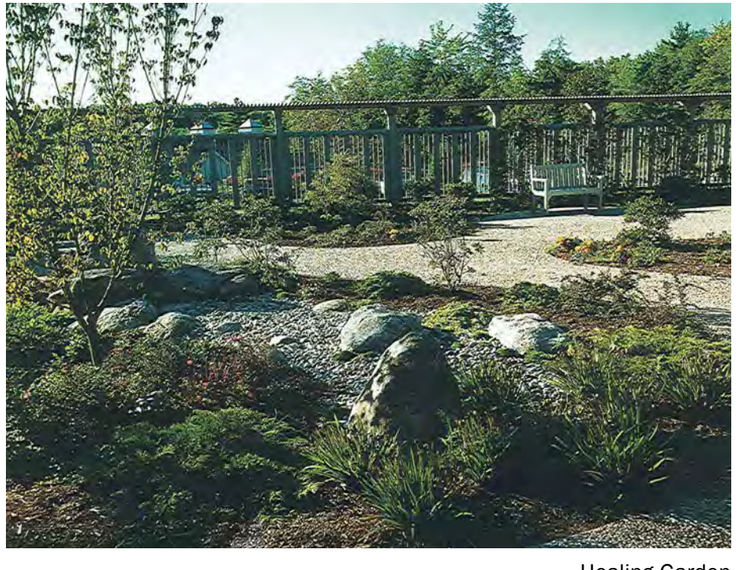
The Healing Garden is placed on another important position on the site, as part of the entry sequence from Willow Street, on the way to the main Women's entry of the hospital. The healing garden should be designed to allow users to immerse themselves in nature and feel completely surrounded by a tranquil natural environment. The area should therefore maximize contiguous green space, as well as making strategic use of planting and grading to create a feeling of privacy and seclusion.

6.5.3 – Variety of Experiences

One of the ways that Healing Gardens successfully reduce stress is by allowing users to focus on the landscape, thereby taking their mind off of their anxiety and promoting a feeling of well-being. This is achieved by creating a varied environment which stimulates the senses. Visual variety should be created through the use of varied planting, including flowers, shrubs, trees, and grassed areas. Plantings should encourage a diverse range of sensory experiences, through scent, colour, texture, and by providing habitat for songbirds and butterflies. Running water is encouraged to help create a pleasant sound-scape. Seating areas should also be varied, and provide a range of thermal sensory experiences through their positioning relative to sun and shade, taking into consideration both daily and seasonal shifts to create pleasurable experiences year-round.

6.5.4 – Wayfinding

The central location of the Healing Garden gives it a special prominence for wayfinding through the site. The main pedestrian routes through the site converge in this garden, and there is the opportunity to create a public pedestrian link through the buildings at this location. These major pedestrian routes should be differentiated from the Healing Garden paths through signage, as well as intuitive visual cues such as paving material, path sizes, and colour accents.



Healing Garden

Pedestrian pathways that meet in the middle of the green, surrounded by vegetation are a priority.

6.6 – Landmark Central Green

6.6.1 – General

The Central Green serves an important purpose in the Children's and Women's Hospital precinct. By being very visible and very central, it allows for opportunities that the other spaces do not. These include cultural and education activities and allowing for connectivity through the landscape

6.6.2 – Central Location

Given the central location of the landmark green, this area should allow for the connection of many paths through the space. In addition to the connectivity, the central green is also visible from a large proportion of the hospital rooms and as such, should allow for views green spaces.

6.6.3 – Culture, Education and Activity

The Central Green should contain an amphitheater for hosting plays and events for the children as well as functioning as an outdoor lecture and education facility. More active uses should be discouraged here.

A small amphitheater built into the green would allow for many activities.

Provide many seating areas throughout the pedestrian network, including wheelchair transfer locations adjacent benches.

Oak Street pedestrian network to provide a more urban treatment, with wider sidewalks directly adjacent the roadway.

Nodes to provide seating areas, as well as dissemination of information between users of the adjacent community and users of the hospital.

Neighbourhood pedestrian routes to create smaller scale, more garden like feeling, while taking advantage of planting locations and a variety of treatments.

6.7 –Wellness Walkway

6.7.1 – General

In 1998 the City of Vancouver commissioned Patrick Mooney and Don Luymes to study a proposed 'Wellness Walkway' for the Mount Pleasant area which would be "a demonstration of how the public realm can be retrofitted to contribute to community health in general and more specifically to respond to the special needs of those with challenges posed by illness, disability or age."

This project received enthusiastic support from residents, property and business owners and the staff of the three local health care facilities.

A similar Wellness Walkway is proposed for the CWHC site consisting of an external circuit with 3 'nodes' that make connections to the community and beyond, and a system of internal paths that create pedestrian routes through the site as well as providing a walkable neighbourhood amenity.
The outdoor grounds, specifically the wellness walkway, is an integral aspect to the Health Centre's success. The walk will be implemented during phasing and the state of the walk will be embellished over a period of time, thus developing it's unique qualities.
It will be the first threshold that patients, staff, visitors and the public experience prior to entering the site. It will be an opportunity for a variety of users to passively exercise, walk/jog, aid in patients recovery from surgery and illness, by and large restore ones overall well being. Along the path there will be opportunities for repose, reflection, play and therapy.

Overall the path will be a lush green belt that will surround and support the centrally orientated "campus of care", thus an asset to all that experience and use it.

The landscape design will be seen as a tranquil park not simply the hospital grounds. A park that is the buffer from the urban pollution.

The walkway should have a distinct wayfinding element that will include a perimeter landscape paving feature as part of the walk. This could include a use of unit pavers, tiles, or paving patterns and materials that capture the distinct nature of the Children's and Women's Health Centre. The perimeter paving offers the opportunity of using public art or artwork done by Children who are visiting the hospital. These items could be incorporated in tiles or embossed in pavers.

Where the walkway is on City property, all upgrades shall be done as part of the City's natural sidewalk replacements and shall be done in conjunction with the City work.

The wellness walk should be protected and enriched in future endeavors as the benefit of such walkway benefit a spectrum of users.

6.7.2 – Wellness Walkway Recommendations

Based on the work by Patrick Mooney and Don Luymes, the following guidelines should be implemented throughout the Wellness Circuit:

- Accessible bench designs
- Wheelchair pads beside benches
- Improved pedestrian scale lighting
- Unified furniture theme with variations relating to zones
- Aromatic planting where appropriate
- Diverse native planting habitat where appropriate
- Shade structures and shelters
- Sunny opportunities for rest
- Unified wayfinding strategy with eye level signage
- Aligned sidewalks/crosswalks
- Minimum 1.8m wide sidewalks
- Planted and lawn boulevards
- Gentle slopes
- Glare reducing pavement solutions
- Street tree plantings
- Saw-cut concrete sidewalks
- Increased seating/rest opportunities/short walks
- Variety of sensory experiences

6.7.3 – Unique sections of the External Walk Circuit

The external circuit of the Wellness Walk should be divided into distinct zones based on adjacencies, connections to pedestrian and transit routes, and nodes that facilitate neighbourhood connections.

- Oak Street Walk Section
- Research Area Walk Section
- Neighbourhood Walk section
- Ronald McDonald House Walk Section
- 32nd to Oak Street Walk Section

6.7.3 .1 – Oak Street Walk Section

This is the most urban section of the Walk, which should be reflected in the character of this zone. The sidewalks along Oak Street should be wide and extend all of the way to the curb. Furniture in this area should reflect an urban colour palette.

6.7.3 .2 – Research Area Walk Section

This section provides the opportunity to create a transition between the urban Oak Street section and the residential Neighbourhood sections. The seating areas should create a sense of separation between the more private uses and the public realm.

6.7.3 .3 – Neighbourhood Walk Section

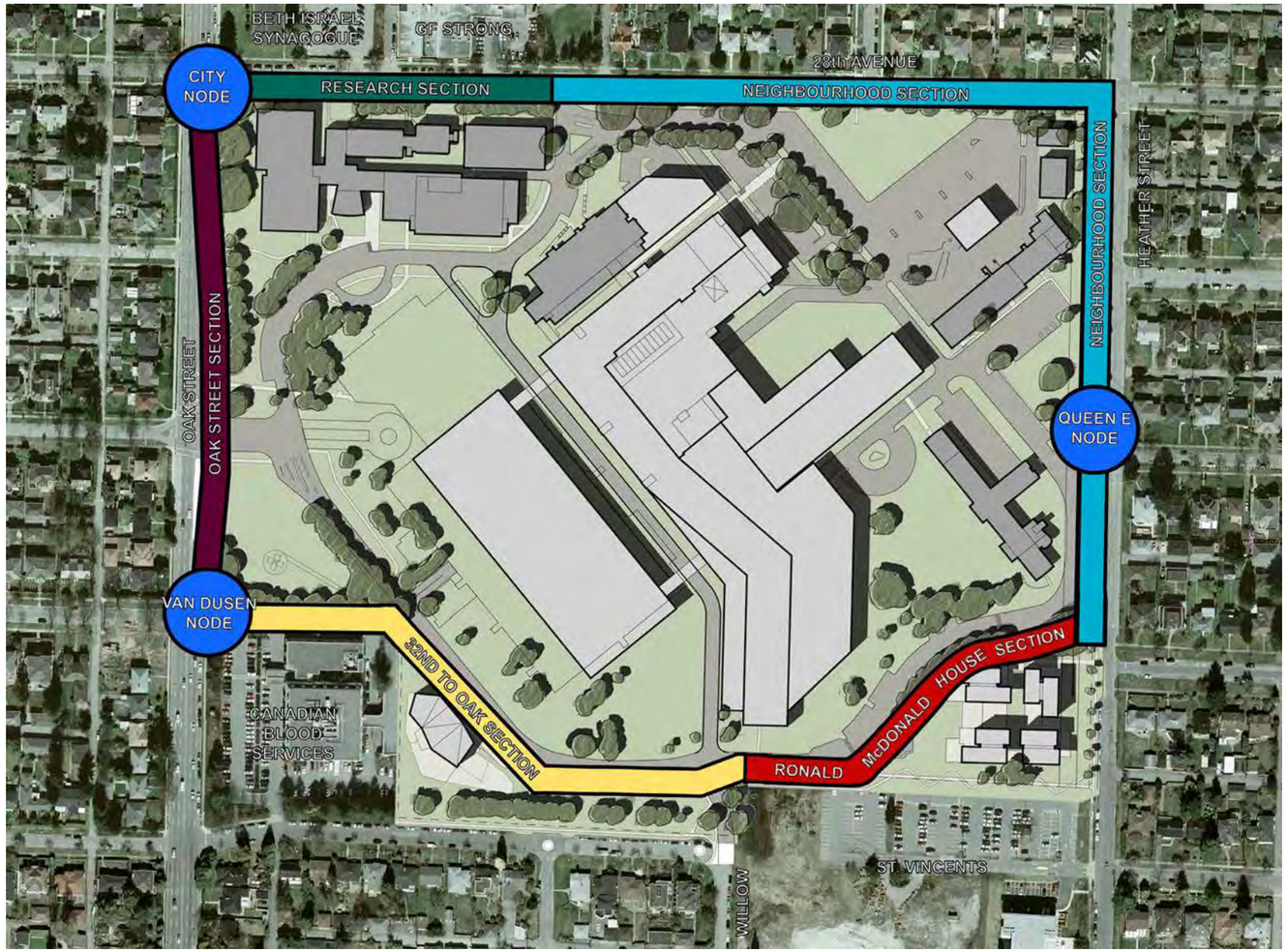
The Neighbourhood Walk sections should reflect the character and treatments of the surrounding residential neighbourhood. There should be a focus on variety in seating areas, shade structures, fencing, boundaries, and borders. The design process for this zone should create a sense of ownership of these areas by the residents of the neighbourhood. Seating areas should focus out to the neighbourhood, rather than towards the hospital, and allow for informal surveillance by residents.

6.7.3 .4 – Ronald McDonald House Section

This section travels through the hospital site, between the Family Stay and Respite location and the Women's Hospital area. This walk should take advantage of the large existing row of trees that it travels under and its proximity to the Ring Road. Because this walkway arrives at Heather Street perpendicular to the continuing sidewalk to the south and the Wellness Walkway to the north, signage and wayfinding will have to be clear.

6.7.3.5 – 32nd Street to Oak Street Walk

In this section of the walk, the path connects from the Ronald McDonald Section through to the southwest side to the Child Day Care Centre site and ends bordering the Canadian Blood Serivces. The walkway will take advantage of the existing berm and incorporate natural landscaping to create a pleasant walk within the Hospital site.



6.7.4 – Nodes

There are three nodes along the external Wellness Walk circuit, located to form connections from the hospital site out into the community. The nodes are:

- Oak Street North / City node
- Queen Elizabeth Park node
- Oak Street South / Van Dusen node

The nodes should act as gathering areas and connect to internal pathways.

Wayfinding techniques used throughout the site should be introduced here. The nodes can also be a place for providing information to hospital visitors about the surrounding areas.

6.7.5 – Main Internal Path Structure

The main internal path system creates pedestrian routes through the site that minimize conflicts with vehicles and follow natural desire lines created by key destinations. These routes should allow for both practical pedestrian movement between site functions and leisurely enjoyment of landscape amenities.

6.7.5.1 – Principles

- Easy wayfinding and clear, distinct routing for main pathways.
- Pleasant seating areas along routes and adjacent to buildings.
- Create connections that cross through the site for use as community pedestrian routes.
- Create a visual connection to patient areas within the hospital.
- Use landscaping to reduce the scale of large buildings and create a neighbourhood character.

6.7.5.2 – Surfaces

Surfaces for plazas should be chosen to integrate with the architectural character and the landscape. A consistent paving scheme should be used that reinforces the hierarchy of both vehicular areas and pedestrian sidewalks. Light broom finished surfaces are encouraged for primary pedestrian routes that include sidewalks and ramps.

6.7.5.3 – Grades

Where paths negotiate sloping grades, maintain a slope that allows easy access to people at varying levels of health and agility. The main circuit should attempt wherever possible to accommodate a less than 5% continuous slope.

6.7.5.4 – Weather Protection

Weather protection should be provided when outdoor space is part of a route of travel between functions or buildings with shared uses. Routes do not have to be completely under cover, but some protection from rain is appropriate.

6.7.5.5 – Materials

Material selection for retaining walls and other structures near the buildings should be made to complement the surrounding architecture and integrate into the landscape.

6.7.5.6 – Landscape

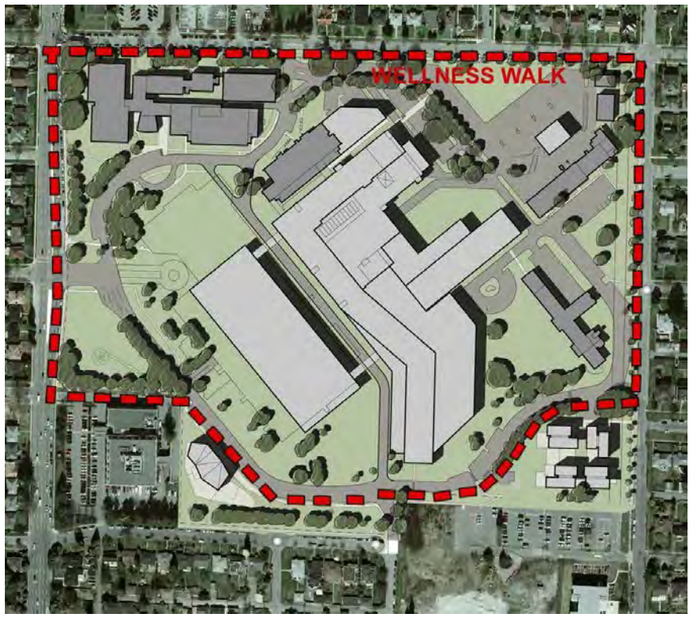
Existing trees should be retained wherever possible, and the landscape should be designed to increase the value of existing vegetation. Soft landscape should be carefully integrated with paved surfaces and exterior walls to create a sense of buildings and spaces being 'in the landscape'. Flowering and ornamental plants should be used to reinforce urban spaces, with additional colour and texture to assist in wayfinding.

6.7.5.7 – Furnishings

A family of furnishings should be used throughout the site to create consistency and identity. Variety and colour choices should be used to reinforce different site zones and assist in wayfinding. Benches, trash receptacles, and other furnishings should be of durable finish and designed for public use. They should be firmly fixed in place to minimize vandalism.

6.7.5.8 – Lighting

Lighting elements should be contemporary, durable, and respond to both the setting and architectural character of the hospital. Public areas should be well-illuminated, with a gradual lighting transition for safety. Light pollution and spill-over from the site should be minimized. Specific pedestrian pathways may be selected for night pathway lighting to maximize safety and security.



WELLNESS WALK: THE SPINE

Provide an organization to the site.

Create a unique and maximized walking circuit for the site and neighbourhood.

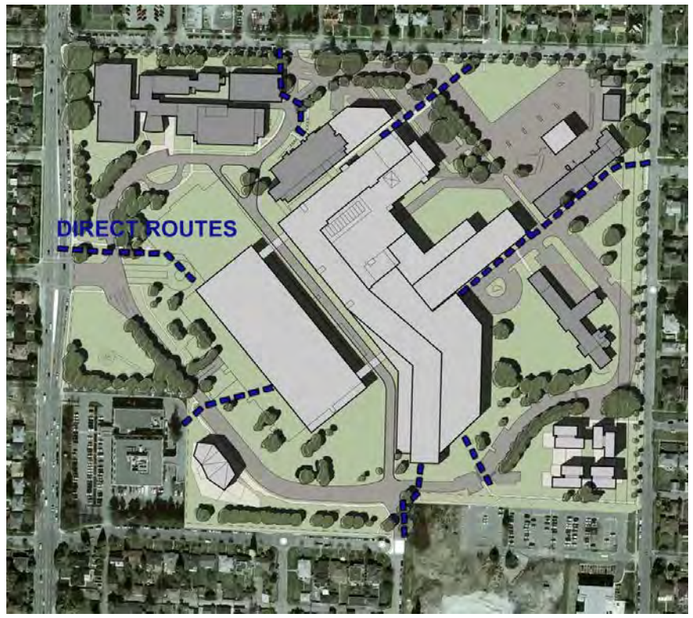
Should be used to blur the public and private spaces where desired.

Wide sidewalks, large boulevards, seating opportunities every 40-50 metres.

Sawcut, light broom finished concrete with a textural wayfinding strip throughout.

Respond to the character of the region it is traveling through.

Use of nodes at heavily travelled corners to assist neighbours, visitors and employees in maximizing their opportunities within this community and outside.



DIRECT ROUTES: GET ME TO THE HOSPITAL

Significant width (2 wheelchairs should be able to pass without difficulty)

Clear and consistent wayfinding elements to indicate a route directly to the hospital.

Building should be visible from the beginning of the path creating a clear sign of the destination.

Little or no seating areas when the distance to the entrance is short.

Plazas at the building should create opportunities to sit.

Internal walking paths that meet direct routes should have seating areas and small plazas visible to and nearby their intersections with the direct routes.

Wellness walkway construction standards should apply to these walks as well.

Walks should wherever possible be separated from the road by a boulevard to create a pedestrian first feel to the space.

INTERNAL PATHS: EXPERIENCES

Variety of widths and materials.

Wherever possible the opportunity to make a circuit should be pursued.

Routes that connect purposes within the precinct should be of a sturdy walking material such as concrete, concrete paver or asphalt.

Opportunities for unique experiences and seating areas/mini plazas should be pursued along all routes at no more than 40 to 50 metres apart.

Different experiential areas of the precinct should have uniquely different elements along the internal paths and in the mini-plazas.

Opportunities for seating should be pursued along the perimeter of the building to take advantage of proximity to building, sun angles, and desire lines.

Access routes through the building, especially at 'knuckles' should be promoted and reinforced with internal walking paths.

STATEMENT OF SIGNIFICANCE **REVISED 7 January 2009**

FORMER SHAUGHNESSY HOSPITAL

4500 Oak Street, VANCOUVER

Note: this SOS is prepared for DYS Architecture for municipal heritage planning purposes. The consent of the owner must be secured for the SOS to be used for other purposes including possible listing on the provincial or federal registers of historic places.

Figure 1: Former main entry

HISTORIC PLACE DESCRIPTION

The former Shaughnessy Hospital building, now part of Children's and Women's Hospital, is a sprawling complex of four storey concrete buildings wings surrounded by other institutional buildings on a large campus in the Oakridge area of Vancouver. The building is listed on the Recent Landmarks in the "A" Category, but is not listed on the Vancouver Heritage Register, nor is it designated. It was included in the City of Vancouver Heritage Interiors Project.

HERITAGE VALUE

The former Shaughnessy Hospital is of heritage value for its history in the evolution of the Children's and Women's hospital complex, as the work of an important architectural firm, for its distinctive architecture with expressive and integrally decorated concrete construction and for its integration of art in the building execution, especially evident at its original entranceway. (Figure 1).

The building of Shaughnessy Hospital was related to its original military purposes in 1940. With many extensions and newer wings the core of the building reflects the legacy of its military origins.

Designed by architects Mercer and Mercer in 1940, the building is a good example of late Art Moderne architectural style, including a particularly fine entranceway. Features of this style include strong horizontal massing with articulated wings, linear elements, corner windows with projecting concrete framing elements and horizontal banding of concrete with aligning window muntin bars, cast in place detailing such as lozenge motifs and chevron patterning (Figure 2 and 3). Stylized columns mark the entrances, the main entry having a bronze grill screen (Figure 4). Noted artist Beatrice Lennie created a pair of bar relief plaster murals depicting military and medical themes to flank the entrance (Figure 6).

The condition of much of the concrete detailing has suffered from deterioration (oxide jacking of reinforcing bars being a likely cause) and in many places the wood sash windows are in need of repair. Evidence of previous painting of the exterior can be found.

Little of value remains on the interior save for some plaster detailing in the original main foyer (Figure 7) and some aspects of the auditorium.

Additions and surrounding new buildings have compromised the setting and exposure of the building, particularly at the main entrance (Figure 8).


Figures 2 and 3 Detail of concrete elements, corner window with damage concrete hood

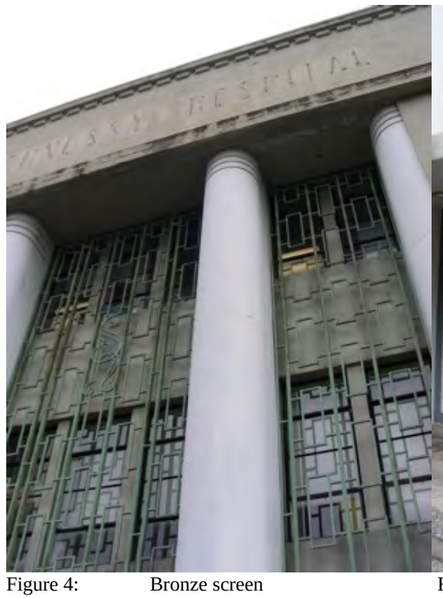


Figure 4: Bronze screen

Figure 5: Former main entry

SHAUGHNESSY HOSPITAL STATEMENT OF SIGNIFICANCE

Figure 6: Beatrice Lennie panel (one of two)

Figure 7: Former main entry foyer

Figure 8: Additions and connector detract from original setting

SHAUGHNESSY HOSPITAL STATEMENT OF SIGNIFICANCE

CHARACTER DEFINING ELEMENTS

Exterior
- building's location at the heart of the hospital campus
- cast in place concrete construction, now painted
- horizontal banding, corner windows
- integrally cast decorative elements
- stylized columns at entrance
- bronzed grill screen at entrance
- Beatrice Lennie bas-relief panels at former main entry

Interior
- plaster detailing in original lobby
- Art Moderne style light fixtures in original lobby

RESEARCH NOTES

Luxton Donald, ed. Building the West: The Early Architects of British Columbia. Vancouver: Talonbooks, 2003

Kalman, Phillips and Ward. Exploring Vancouver. Vancouver UBC Press, 1993

F.G. Consultants. "Take a Look Inside: The City of Vancouver Heritage Interiors Project"; unpublished, 1996

City of Vancouver heritage files

STATEMENT OF SIGNIFICANCE **19 October 2009**

NEW WING (ACUTE CARE WING)

Children's & Women's Health Care Centre
4500 Oak Street, VANCOUVER

For dysarchitecture

Note: this SOS is prepared for DYS Architecture for municipal heritage planning purposes. The consent of the owner must be secured for the SOS to be used for other purposes including possible listing on the provincial or federal registers of historic places.

Figure 1: Main entry

HISTORIC PLACE DESCRIPTION

The New Wing, now the Acute Care Wing, is a five storey hospital structure part of Children's and Women's Hospital, a sprawling complex of institutional buildings on a large campus in the Oakridge area of Vancouver. The building is listed on the Recent Landmarks in the "B" Category, but is not listed on the Vancouver Heritage Register, nor is it designated.

ACUTE CARE WING STATEMENT OF SIGNIFICANCE

HERITAGE VALUE

The New Wing is of heritage value for its history in the evolution of the Children's and Women's hospital complex from its origins as Shaughnessy Military Hospital, as the work of an important architectural firm and for its expressive architectural design.

From 1940 there was rapid growth in the development of Shaughnessy Military Hospital including the main hospital building (1940), the Jean Matheson Memorial Pavilion (1946) and the New Boiler House (1957), all designed by architects Mercer and Mercer. In 1960, the same firm designed the New Wing as an extension of the main Shaughnessy Hospital building.

By 1960, Mercer and Mercer's work at the Shaughnessy site had evolved from the earlier Art Moderne style through the International Style. Evident at the New Wing, design aspect of the International Style include a strictly organized pattern of simple fenestration with horizontal banding, complemented by a distinctive egg-crate type grid of windows at marking the main entrance. The entrance is further emphasized by a row of slender concrete columns and a projecting copper-trimmed canopy with distinctive lozenge-shaped openings.

CHARACTER DEFINING ELEMENTS

Exterior
- building's location at the heart of the hospital campus
- cast in place concrete construction, now painted
- extension of main hospital building
- regular pattern of windows
- horizontal banding,
- central gridded window system
- slender columns at entry
- projecting canopy with copper trim and lozenge shaped openings

RESEARCH NOTES

Luxton Donald, ed. Building the West: The Early Architects of British Columbia. Vancouver: Talonbooks, 2003

Kalman, Phillips and Ward. Exploring Vancouver. Vancouver UBC Press, 1993

City of Vancouver heritage files

STATEMENT OF SIGNIFICANCE **19 October 2009**

JEAN MATHESON MEMORIAL PAVILION

Children's & Women's Health Care Centre

For dysarchitecture

4500 Oak Street, VANCOUVER
(also 4555 Heather Street)

Note: this SOS is prepared for DYS Architecture for municipal heritage planning purposes. The consent of the owner must be secured for the SOS to be used for other purposes including possible listing on the provincial or federal registers of historic places.

Figure 1: Main Entry

HISTORIC PLACE DESCRIPTION

The Jean Matheson Memorial Pavilion, now the Mental Health building, is a large f our storey hospital building at Children's and Women's Hospital, a sprawling complex of institutional buildings on a large campus in the Oakridge area of Vancouver. The building was included in the Recent Landmarks survey in the "A" Category, but is not listed on the Vancouver Heritage Register, nor is it designated.

JEAN MATHESON PAVILION STATEMENT OF SIGNIFICANCE

Figure 2: South elevation

HERITAGE VALUE

The Jean Matheson Memorial Pavilion is of heritage value for its history in the evolution of the Children's and Women's hospital complex from its origins as Shaughnessy Military Hospital, for its commemoration of an important figure in the nursing profession, as the work of an important architectural firm and for its strong architectural expression (Figure 1).

The building of Shaughnessy Hospital was related to its original military purposes in 1940, with the Jean Matheson pavilion being completed at the end of World War II. Designed as the Chest Unit, its original use was for the treatment of tuberculosis for war veterans. The building was named for Jean Matheson who was the matron (director of nursing) of Shaughnessy Military Hospital from 1919-1937. Prior to that Ms. Matheson was the "Matron of World War I's No. 5 General Hospital (B.C.'s contribution to the war effort), in England, Egypt and Salonika" (source: Rumen, Nina " Vancouver's Monuments to Nurses").

Designed by architects Mercer and Mercer in 1946, the building is a good example of the International Style of architectural design, which evolved from the earlier Art Moderne style of Shaughnessy Hospital. Features of this style include strong horizontal lines, linear and stepped massing. Vestiges of Art Moderne can be found in the main entrance (Figure 1) and the central bay of park side façade (Figure 2), where vertical framing and fenestration mark the entrance.

Sunlight and fresh air were considered important aspect of the treatment of tuberculosis. The building is expressive of these qualities by having extensive glazing and access to balconies from most rooms. The building was subject to rehabilitation and additions in 2004/05 by Henriquez Architects for its conversion to the Mental Health unit.

CHARACTER DEFINING ELEMENTS

Exterior
- building's location at the edge of the hospital campus
- park like setting
- stepped, linear massing
- horizontal banding
- extensive glazing including outline of former balcony doors
- vertical framing and detailing of entrance bay
- vertical articulation of central park side bay

RESEARCH NOTES

Luxton Donald, ed. Building the West: The Early Architects of British Columbia. Vancouver: Talonbooks, 2003

Kalman, Phillips and Ward. Exploring Vancouver. Vancouver UBC Press, 1993

Rumen, Nina. "Vancouver's Monuments to Nurses", RNABC History of Nursing Group, web posting revised 2008

City of Vancouver heritage files

STATEMENT OF SIGNIFICANCE **19 October 2009**

NEW BOILER HOUSE (STEAM PLANT)

Children's & Women's Health Care Centre
4500 Oak Street, VANCOUVER

For dysarchitecture

Note: this SOS is prepared for DYS Architecture for municipal heritage planning purposes. The consent of the owner must be secured for the SOS to be used for other purposes including possible listing on the provincial or federal registers of historic places.

Figure 1: Main elevation

HISTORIC PLACE DESCRIPTION

The New Boiler House, now known as the Steam Plant, is a large concrete and glass industrial building with landmark chimney at Children's and Women's Hospital, a sprawling complex of institutional buildings on a large campus in the Oakridge area of Vancouver. The building is listed on the Recent Landmarks in the "B" Category, but is not listed on the Vancouver Heritage Register, nor is it designated.

STEAM PLANT STATEMENT OF SIGNIFICANCE

Figure 2: rear elevation

HERITAGE VALUE

The New Boiler House is of heritage value for its history in the evolution of the Children's and Women's hospital complex from its origins as Shaughnessy Military Hospital, for its role in the operations of the hospital complex, as the work of an important architectural firm, for its distinctive architecture and the expression and visibility of its industrial function.

From 1940 there was rapid growth in the development of Shaughnessy Military Hospital including the main hospital building (1940) and the Jean Matheson Memorial Pavilion (1946). The New Boiler House was added in 1957 to serve the needs of the expanding campus and its eventual evolution to the Children's and Women's Health Care Centre. Commonly known as the Steam Plant, the building was critical to the demands for energy on the site.

At present, the building still provides energy to areas within the Vancouver General Hospital.

Designed by architects Mercer and Mercer in 1957, who had designed other buildings on

campus, the building is a good example of International Style architectural style. The building expresses and celebrates its function with large areas of glass (some coloured) and a landmark chimney. Like its institution neighbours, it is made of concrete with a painted finish.

CHARACTER DEFINING ELEMENTS

Exterior
- building's location at the edge of the hospital campus
- cast in place concrete construction, now painted
- large rectangular window openings with coloured glazing
- prominent location and slender shape of chimney

RESEARCH NOTES

Luxton Donald, ed. Building the West: The Early Architects of British Columbia. Vancouver: Talonbooks, 2003

Kalman, Phillips and Ward. Exploring Vancouver. Vancouver UBC Press, 1993

City of Vancouver heritage files

PLEASE REFER TO THE REZONING DOCUMENTS ISSUED MARCH 6TH 2012
FOR APPENDIX B - CHILDREN'S AND WOMEN'S HEALTH CENTRE TRANSPORATION STUDY
PROVIDED BY OPUS INTERNATIONAL CONSULTANTS (CANADA) LIMITED
(FULL REPORT CONTAINS 452 PAGES)

Fraser Health

Security Management Plan

2008/2009

Fraser Health Authority

Table of Contents

Comparison Table of Existing Phases to Proposed Phases

PREVIOUS MASTER PLAN PROPOSAL OF 4 PHASES (1999 - 2019):

PHASES	DESCRIPTION	FSR	TOTAL AREA (s.m.)
Present - 1999		0.616	115,164
Phase 1	Ambulatory Care & Emergency addition	0.649	121,334
Phase 2	New Psychiatry building & BCW South addition	0.70	130,869
Phase 3	New Oncology / Clinical Wing Education & Research Research Centre addition	0.767	143,394
Phase 4 - 2020	New Shaughnessy Wings Hi-tech Research Buildings	0.85	158,912

(Existing CD-1 Phases approved - from City of Vancouver Policy Report dated May 1999)

PROPOSED MASTER PLAN OF 7 PHASES (2011 - 2035):

PHASES	DESCRIPTION	FSR	TOTAL AREA (s.m.)
Existing (2011-2012)		0.72	135,209
Phase 1 (2011-2013)	Family Stay & Respite Housing Child Day Care Centre Demolition of the Shaughnessy A Wing Demolition of MERU Building Demolition of L Wing	0.70	130,572
Phase 2 (2013-2017)	Acute Care Centre	1.05	196,302
Phase 3 (2017-2020)	Interior renovation of existing 1982 C&W Hospital	1.05	196,302
Phase 4 (2020-2022)	Ambulatory Care - New Build Demolition of Shaughnessy Hospital	1.02	189,908
Phase 5 (2022-2027)	Acute Care Expansion Women's Health Centre Demolition of Brock Farhni	1.31	245,786
Phase 6 (2027-2030)	Future Hospital Development Demolition of Women's Health Centre	1.33	248,663
Phase 7 (2030-2035)	Demolition of 1982 existing Acute Care Hospital Children's and Women's Health Centre Entries Future Hospital Development	1.27	238,360

PLEASE REFER TO THE REZONING DOCUMENTS ISSUED MARCH 6TH 2012
FOR APPENDIX E - CHILDREN'S & WOMEN'S HEALTH CENTRE - DESIGN OBJECTIVES & PRINCIPLES
PROVIDED BY DYS ARCHITECTURE