Project Number:
2011-6005

Site Address:
3080 Prince Edward Street
Vancouver, BC
Canada     V5T 3N4

Prepared By:
• Kasian Architecture Interior Design And Planning Ltd.
• Resources Management Consultants (Alberta) Ltd.
• Bush Bohlman and Partners
• Genivar
• James Bush and Associates
Table of Contents

1. EXECUTIVE SUMMARY ....................................................................................................................................... 3
2. INTRODUCTION .................................................................................................................................................. 4
3. STRATEGIC CONTEXT, SERVICE REVIEW & HOSPITAL PROFILE ............................................................ 6
4. PROPOSED SERVICE PLAN SUMMARY, OVERALL REQUIREMENTS AND PRIORITIES.......................... 10
5. EXISTING SITE ANALYSIS ........................................................................................................................... 17
   a. Site Location ................................................................................................................................................. 17
   b. Lower Mainland Context .............................................................................................................................. 17
   c. Community Context ..................................................................................................................................... 17
   d. Site Details ................................................................................................................................................... 18
   e. Zoning ........................................................................................................................................................... 19
   f. Zoning Analysis ............................................................................................................................................. 19
   g. Building / Site Statistics ............................................................................................................................... 19
   h. Existing Use Floor Plans ............................................................................................................................... 22
   i. Building / Site Sections ................................................................................................................................. 28
   j. Site / Community Character / Photos .......................................................................................................... 29
6. URBAN PLANNING ANALYSIS .......................................................................................................................... 31
   a. Transportation - Vehicular ........................................................................................................................... 31
   b. Transportation - Non-Vehicular ..................................................................................................................... 32
   c. Greenscape Analysis ................................................................................................................................... 33
7. MASTER CONCEPT PLAN .................................................................................................................................. 34
   a. Master Program Space Summary ................................................................................................................ 34
   b. Options for Renewal .................................................................................................................................... 37
   c. Costing and Construction Schedules .......................................................................................................... 56

Appendices: (Bound under separate cover)

Appendix 1: RMC Ltd. Detailed Back-Up
Appendix 2: Mechanical, Electrical, and Structural Assessment Reports
1. EXECUTIVE SUMMARY

Purpose of the Master Concept Plan

The Master Concept Plan is a living document that helps guide decision making for clinical services and the physical expansion and improvement of the Mount St. Joseph Hospital (MSJ) site. It identifies and explains opportunities over short, medium and long term planning timeframes: in this case 0-5 years, 5-15 years and 15+ years. This comprehensive view ensures that all interests and service plans are accounted for and integrated into one planning document with flexibility to adapt to future needs and trends. It also supports the development of business cases required to obtain the funding approvals necessary to proceed with the priority projects identified in the plan.

Proposed Service Plan Summary, Overall Requirements and Priorities

MSJH Profile Information:

Current volumes, CMGs and demographics confirm that MSJH is and foreseeably will continue to be a Community Hospital. The primary role of MSJ is to serve its immediate community. Considering the age of the patients served, the entire hospital needs to be Elderly friendly.

Bed Requirements

Current funded beds: 101  Projected beds by 2030: 125

Note: Excludes existing 100 residential care beds to be relocated on site elsewhere. Existing space does not meet Complex Care requirements

Critical Priorities

- Emergency:
  Project need: 22 treatment spaces to support projected volume of approximately 30,000 visits/year by 2030;
  Current space has 18 treatment bays that are undersized and many other space deficiencies. It will continue as a 12 hr service

- Geriatric Psychiatry:
  Projected increase from 16 to 30 beds; unit does not meet CSA Z8000 space guidelines, i.e. lacks single patient rooms and adequate staff and patient/family support space.

- Surgery
  MDR has many space challenges and requires expansion as soon as possible. A plan has been developed by PHC to allocate a portion of the Central Stores (Supply Chain) space to expand the MDR Operating Room and PACU projected increase to 5 OR’s and 12-15 PACU spaces by 2030.

The Master Concept Plan

The plan provides:

- A master program space summary which projects space requirements for the 9 functional components of the hospital.
- Two options for renewal with pro’s and con’s of each as well as details of the planning principles and conceptual strategies upon which they are based.
- Class D project cost estimates and schedules for implementation of each Option.

Options A and B

Both envisage Phase 1 construction of a new Emergency Department located to maintain critical relationships with the Surgery, MDR and Imaging Departments, and to facilitate their subsequent expansion/renovation.

Option A relocates the Geriatric Psychiatric Unit to space when vacated by Residential Care and construction of some additional floor area. This will facilitate renovations in existing inpatient areas and reduce operational disturbances during construction. It provides a total of 125 beds.

Option B maintains the Geriatric Psychiatric Unit in its existing location and minimizes construction of additional floor area. It accepts some reduction of ideal space standards e.g. more semi private rooms than that of Option A. It provides a potential bed total ranging from 128 to 134.

Cost Estimates

The Class D estimated total project costs are:

<table>
<thead>
<tr>
<th>Option</th>
<th>Critical Priorities:</th>
<th>High Priorities:</th>
<th>Remainder:</th>
<th>Total:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Option A</td>
<td>$46,911,200</td>
<td>$66,508,100</td>
<td>$38,219,900</td>
<td>$151,639,200</td>
</tr>
<tr>
<td>Option B</td>
<td>$33,855,600</td>
<td>$63,825,300</td>
<td>$41,036,400</td>
<td>$138,717,500</td>
</tr>
</tbody>
</table>

Schedules for Implementation:

The schedule for Option A requires relocation of Residential Care to have taken place before the Geriatric Psychiatric Unit upgrade construction can proceed. This is considered unlikely prior to 2017. This limitation does not apply to Option B

Recommendation:

Due to lower costs and an acceptable balance between ideal and essential needs OPTION B which allows the opportunity to address the Geriatric Psych upgrade during Phase 1 is considered the preferred solution. It also maintains flexibility to incorporate some aspects of Option A if future needs so indicate.
2. INTRODUCTION

This report contains the Master Concept Plan including the master program for Mount St. Joseph Hospital (MSJ). It describes the current and future scope of services, the space required to support the projected services, the key adjacencies required for each program/service, the site development opportunities to support future expansion and the preferred development strategy.

Providence Health Care (PHC) is one of the largest Catholic health care organizations in Canada having served British Columbia for over 115 years. It owns and operates eight acute and residential care facilities in Vancouver with a total of 646 acute care, 760 residential, 76 rehabilitation and 12 hospice beds. In addition, PHC oversees the operation of 7 community dialysis clinics across the VCH region and several sites for research into and treatment of mental illness and addictions.

PHC is a party to the Master Agreement between the Denominational Health Association and the Province of BC, under which it maintains the right to own, manage, operate and conduct the affairs of its health facilities, and to plan and deliver health services in collaboration with other health bodies. As an affiliate, PHC receives its operating and capital funding through Vancouver Coastal Health (VCH), including designated funding for provincial programs from the Provincial Health Services Authority (PHSA).

Providence operates its programs under a consolidated model, allowing it the opportunity to deliver or relocate services across its various sites including St. Paul’s (SPH), Mt. St. Joseph (MSJ) and Holy Family Hospital (HFH). It is currently advancing plans for the renewal of St. Paul’s Hospital and for its various residential facilities as part of Vancouver Coastal Health’s regional strategy. There is currently no Master Plan for MSJ.

In March 2011, Providence Health Care (PHC) initiated a detailed analysis of the current status of Mount Saint Joseph (MSJ) Hospital in terms of service volumes and activities, Resource Intensity Weighting (RIW) scores, costs of operations, physical space utilization (including challenges) and community needs projected to 2030 so as to provide a basis for determining recommendations for the future role of the hospital. The results of this study were foundational to development of the Master Concept Plan.

Purpose and Composition of the Master Concept Plan

The Master Concept Plan is a living document that helps guide decision making for clinical services and the physical expansion and improvement of a health facility site. A Master Concept Plan identifies and explains opportunities over short, medium and long term planning timeframes. This comprehensive view ensures that all interests and service plans are accounted for and integrated into one planning document with flexibility to adapt to future needs and trends.

To gain a clear understanding of the short, medium and long-term priorities of a site, the planning team undertakes a comprehensive and collaborative process to ensure all interests – internally and externally - are heard. The information collected includes, but is not limited to:

- Review of clinical services, service descriptions, capacities, current pressures, infection control best practices, evidence based design, future projections & planning priorities (referred to as the Master Program)
- Centralized/integrated support service management across the Health Authorities;
- Centralized clinical program management across Providence Health;
- New lower mainland planning initiatives;
- New or changing provincial planning initiatives;
- The increased role of families in care;
- Population density and changing traffic patterns and transportation challenges;
- Related Municipal plans and site renewal opportunities;
- Understanding the reality of limited resources.
- Flexibility for future technology

The Master Concept Plan shows development areas and proposed building dimensions; the Master Concept Plan indicates future health service opportunities, development projects, timelines and development cost projections. With this documentation, the province and regional health leadership are able to determine priorities for major funding and resource decisions. In concrete terms, the Master Concept Plan will become the basis for a series of recommendations for the PHC Executive team and Board of Governors.

The Master Program is the key program/service input into the development of the master concept plan. It describes in words and component areas the program requirements for the 9 program components identified for master programming at MSJ.

This documentation will inform Providence Health Care’s strategic plan for the future of Mount Saint Joseph Hospital and will form the basis of a series of business cases for priority projects.
Information Gathering and Documentation
• Collected, analyzed, and documented the information and data required to develop the Master Program.
• Held user group meetings with each program component.
• Started an iteration process whereby programming assumptions provided in the user group meetings were verified and accepted at the steering committee level.

Program Parameters
• Established the key planning and programming parameters and assumptions for each program component.

Master Program Draft Document Production and Review
• Confirmed component scope and functions, workloads, staffing, operations global space allocations.

Master Program Final Document Production and Approvals
• Completed the program documentation including space information and design criteria.

Master Concept Plan
• The team (led by Kasian) developed site development opportunities that were presented and evaluated in a workshop setting with key stakeholders.
• Preferred site development strategies were identified, a preliminary phasing plan and costing developed.
• The key features of the master planning methodology included the following:
  • Throughout the programming work, the team ensured that functional needs were adequately reflected in the space allocations in order to achieve optimum use of resources, and to accommodate future change and flexibility.
  • The team developed and reviewed all programmed space allocations in relation to method of use, function, occupancy, equipment requirements, and other key parameters.
  • The team programmed space allocations based on workload projections and numbers of staff and users, anticipated type of activities and equipment and their functional requirements, as well as programming standards and guidelines.
  • The team incorporated user meetings, group discussions, and other participatory activities into the work plan to achieve effective stakeholder/ user involvement.

Glossary of Terms

Building Gross Square Metres or Building Gross Area (BGSM) - The sum of all building floor areas measured to the outside face of exterior walls for all stories or areas having floor surfaces. Building gross area includes component gross areas, general circulation, mechanical and electrical space, exterior walls and structure.

Component Gross Square Metres (CGSM) - The portion of a building assigned to a specific component

Circulation - The movement of patients, staff, public and materials within the building and site, typically categorized as follows:
  • Dedicated Circulation: Circulation for specified people or material, which may or may not require a control point.
  • Internal Circulation: The system of connecting links (corridors, stairs, etc. within components, connecting rooms of a component or directly connecting contiguous components.
  • General Circulation: Public connecting links (corridors, stairs, elevators, entrances, etc.) between components and serving the building as a whole.
  • Restricted Circulation: Internal circulation for specified people, which can be entered only by passing a control point.

Component or Functional Component - A cohesive grouping of activities or spaces that are related by service or physical arrangement and therefore grouped / organized in the Master Program. A component may or may not be a department since the term ‘department’ refers to an administrative organization rather than a functional organization of space and activities.

Component Gross Square Metres (CGSM) - The portion of a building assigned to a specific component (department), including net areas, internal circulation, partitions and small mechanical shafts. For programming purposes, the CGSM is often determined by multiplying the total net square metres by a component gross-up factor.

External Relationships - The prioritized functional relationships and proximities of one component to another.

FTE - Full Time Equivalent - A term used to express the conversion of a number of annual paid hours into the number of individuals who, if they were working a complete shift on a regular schedule basis, would be required to accommodate that number of hours.

Internal Relationships - The prioritized functional relationships and proximities between rooms/areas within a component.

Maximum Headcount - The number of people actually working in a component or area at peak utilization, which includes full time, part time and casual employees. The headcount is often a key parameter in determining facility requirements.

Net Square Metres (NSM) - The horizontal area of space assignable to a specific function. The net area of a room is measured to the inside face of wall surfaces.

Project Parameters - Establishes the key planning and programming parameters and assumptions for the project, including the strategic vision, the scope of programs and services (clinical, education and research), functional components, the operational framework, physical/site parameters, and financial parameters and/or project schedule if known.

Acknowledgements
Kasian and RMC Resources Management Consultants (Alberta) Ltd. wish to acknowledge the input, review and support from Providence Health Care staff, the User Groups, and the Project Management Team.
3. STRATEGIC CONTEXT, SERVICE REVIEW & HOSPITAL PROFILE

Mount St. Joseph Hospital is a community based hospital located on the east side of Vancouver. It operates 101 acute care beds, 19 Surgical Day Care beds and 100 complex residential care beds with a multicultural approach to service delivery and clinical programs.

The original acute care hospital was built in 1944. A series of additions were constructed in 1955, 1976 and 1993. In 2003 the hospital’s role in providing care to elderly patients with complex physical and psychological needs was enhanced with the relocation there of geriatric services from the former St. Vincent’s Hospital.

Emergency Department (ED) visits are classified by Canadian Triage and Acuity Scale (CTAS) levels:
- CTAS 1 = Resuscitation
- CTAS 2 = Emergent
- CTAS 3 = Urgent
- CTAS 4 = Semi-Urgent
- CTAS 5 = Non-Urgent

Recent ED Volumes are:

<table>
<thead>
<tr>
<th>CTAS</th>
<th>2009/10</th>
<th>2010/11</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTAS 1</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>CTAS 2</td>
<td>914</td>
<td>890</td>
</tr>
<tr>
<td>CTAS 3</td>
<td>5,756</td>
<td>5,703</td>
</tr>
<tr>
<td>CTAS 4</td>
<td>12,348</td>
<td>12,955</td>
</tr>
<tr>
<td>CTAS 5</td>
<td>1,741</td>
<td>1,508</td>
</tr>
<tr>
<td>Unclassified</td>
<td>57</td>
<td>53</td>
</tr>
<tr>
<td>Total</td>
<td>20,832</td>
<td>21,122</td>
</tr>
</tbody>
</table>

Patients presenting to MSJ ED requiring admission were admitted as follows:

<table>
<thead>
<tr>
<th>Inpatient Admissions from the Emergency Department</th>
<th>% of ED Admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>3BC Inpatient Medicine</td>
<td>67.8%</td>
</tr>
<tr>
<td>4W Inpatient Surgery</td>
<td>12.4%</td>
</tr>
<tr>
<td>Operating Room</td>
<td>4.8%</td>
</tr>
<tr>
<td>4E Inpatient Geriatric Medicine</td>
<td>4.2%</td>
</tr>
<tr>
<td>1S Inpatient Geriatric Psychiatry</td>
<td>3.0%</td>
</tr>
<tr>
<td>Intensive Care Unit</td>
<td>4.1%</td>
</tr>
<tr>
<td>Transferred to St. Paul's Hospital</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Case Mix Group (CMG)</th>
<th>% of CMG Admissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>4E Inpatient Geriatric Medicine Admissions</td>
<td>805 Rehabilitation</td>
</tr>
<tr>
<td>670 Dementia</td>
<td>693 Depressive Episode without ECT</td>
</tr>
<tr>
<td>671 Other Admission with Major Intervention</td>
<td>671 Organic Mental Disorder</td>
</tr>
<tr>
<td>86%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Overall inpatient volumes and statistics are:

<table>
<thead>
<tr>
<th>Inpatient Volumes</th>
<th>2009/10</th>
<th>2010/11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Discharges</td>
<td>3,639</td>
<td>3,336</td>
</tr>
<tr>
<td>Occupancy Rate</td>
<td>98%</td>
<td>100%</td>
</tr>
<tr>
<td>Alternate Level of Care (ALC) Rate</td>
<td>13%</td>
<td>15%</td>
</tr>
</tbody>
</table>
Most of MSJ's patients are elderly.

Average age by inpatient unit are:

<table>
<thead>
<tr>
<th>Average Patient Age</th>
<th>2009/10</th>
<th>2010/11</th>
</tr>
</thead>
<tbody>
<tr>
<td>4E Inpatient Geriatric Medicine</td>
<td>82.2</td>
<td>71</td>
</tr>
<tr>
<td>15 Geriatric Psychiatry</td>
<td>78.8</td>
<td></td>
</tr>
<tr>
<td>3BC Inpatient Medicine</td>
<td>70.3</td>
<td></td>
</tr>
<tr>
<td>4W Inpatient Surgery</td>
<td>59.8</td>
<td></td>
</tr>
<tr>
<td>Overall Average Patient Age</td>
<td>69</td>
<td>71</td>
</tr>
</tbody>
</table>

According to the HAY Group Benchmarking Report 2009, the average community 2 hospital has 12.2% Tertiary / Quaternary weighted cases as a percentage of total inpatient cases. The percentage at MSJ is 22.8% indicating a general higher level of complexity.

Figure 1 – Local Health Areas
75.2% of the inpatients cared for at MSJH reside in the 6 Local Health Authority Areas (LHA) surrounding the hospital with the majority of these patients coming from Midtown, North East and South Vancouver LHAs and to a lesser extent the Downtown Eastside as shown by the smaller red circled area in Figure 2.

### Inpatient Market Share and Origin - MSJ - FY 2010 to FY2011

<table>
<thead>
<tr>
<th>LHA</th>
<th>Burnaby Hospital</th>
<th>Holy Family Hospital</th>
<th>Lions Gate Hospital</th>
<th>Mt St Joseph Hospital</th>
<th>Richmond Hospital</th>
<th>St Paul's Hospital</th>
<th>Vancouver General Hospital</th>
<th>Total % of total MSJ volume from LHA (Origin)</th>
<th>% of LHA volume seen at MSJ (Market Share)</th>
</tr>
</thead>
<tbody>
<tr>
<td>161 City Centre</td>
<td>54</td>
<td>43</td>
<td>128</td>
<td>169</td>
<td>76</td>
<td>3451</td>
<td>221</td>
<td>1957</td>
<td>6099</td>
</tr>
<tr>
<td>162 Downtown Eastside</td>
<td>190</td>
<td>20</td>
<td>67</td>
<td>355</td>
<td>50</td>
<td>2318</td>
<td>97</td>
<td>1604</td>
<td>4701</td>
</tr>
<tr>
<td>163 North East</td>
<td>1585</td>
<td>39</td>
<td>127</td>
<td>448</td>
<td>57</td>
<td>700</td>
<td>151</td>
<td>2047</td>
<td>5154</td>
</tr>
<tr>
<td>164 Westside</td>
<td>57</td>
<td>88</td>
<td>92</td>
<td>236</td>
<td>142</td>
<td>1214</td>
<td>446</td>
<td>3966</td>
<td>6234</td>
</tr>
<tr>
<td>165 Midtown</td>
<td>174</td>
<td>32</td>
<td>54</td>
<td>555</td>
<td>62</td>
<td>670</td>
<td>159</td>
<td>2336</td>
<td>4042</td>
</tr>
<tr>
<td>166 South</td>
<td>966</td>
<td>85</td>
<td>56</td>
<td>765</td>
<td>328</td>
<td>685</td>
<td>248</td>
<td>3497</td>
<td>6630</td>
</tr>
<tr>
<td>Other LHA</td>
<td>834</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3362</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The catchment area for General Ambulatory and Emergency Department services at MSJH is consistent with that for inpatient services. Specialty services however serve a broader geographic area as conceptually illustrated by the larger red circled area in Figure 2.

52.3% of the Ophthalmology cases at MSJ come from the 6 LHA’s with fairly even distribution across five of the LHA with the exception being a smaller proportion of cases coming from 162 - Downtown Eastside. The other 47.7% of the Ophthalmology cases at MSJ come primarily from other parts of Vancouver Coastal Health (VCH) and Fraser Health Authority (FHA).

67.8% of the Rapid Access Breast Clinic cases come from the 6 LHAs with fairly even distribution across 5 of the 6 LHA with the exception being a smaller proportion of cases coming from 162 - Downtown Eastside. The remaining 32.2% of the cases seen at the Rapid Access Breast Clinic come from other parts of VCH (8.9%), as well as FHA (19.1%). In 3.2% of the cases patient residence location is unknown.
Volume Projections

Historic and current service volumes, anticipated trends in health care and population growth and aging were used by Infoquest Technologies Inc. to forecast future demand for service at MSJ. Projections were based on the following:

- 95% occupancy
- 7.2% ALC
- Case mix constant
- Demand constant
- 1% efficiency on total acute days (typical and atypical)
- Medium projection scenario

### Emergency Department Projections - MSJ - FY 2010 to FY 2030

<table>
<thead>
<tr>
<th>FY 2010</th>
<th>FY 2015</th>
<th>FY 2020</th>
<th>FY 2025</th>
<th>FY 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>21,122</td>
<td>22,668</td>
<td>24,224</td>
<td>26,021</td>
<td>27,987</td>
</tr>
</tbody>
</table>

Emergency Department visits are projected to increase 15% between 2010 and 2020 with a further increase of 15.5% from 2020 to 2030

### Ambulatory Projections - MSJ - FY 2010 to FY 2030

#### Geriatric Outpatient Clinic

<table>
<thead>
<tr>
<th>FY 2010</th>
<th>FY 2015</th>
<th>FY 2020</th>
<th>FY 2025</th>
<th>FY 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,162</td>
<td>2,250</td>
<td>2,322</td>
<td>2,786</td>
<td>3,453</td>
</tr>
</tbody>
</table>

Volumes are expected to increase by 7% to 2020 and an additional 49% to 2030

#### Multipurpose Ambulatory Clinic

<table>
<thead>
<tr>
<th>FY 2010</th>
<th>FY 2015</th>
<th>FY 2020</th>
<th>FY 2025</th>
<th>FY 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,737</td>
<td>6,046</td>
<td>6,342</td>
<td>6,645</td>
<td>6,951</td>
</tr>
</tbody>
</table>

Volumes are expected to increase by 11% to 2020 and an additional 10% to 2030

#### Rapid Access Breast Clinic

<table>
<thead>
<tr>
<th>FY *2011</th>
<th>FY 2015</th>
<th>FY 2020</th>
<th>FY 2025</th>
<th>FY 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,073</td>
<td>4,298</td>
<td>4,560</td>
<td>4,797</td>
<td>5,028</td>
</tr>
</tbody>
</table>

*Clinic is relatively new - data from 2011 was used as basis for projection

Volumes are expected to increase by 12% to 2020 and an additional 10% to 2030

#### Procedures (including Ophthalmology)

<table>
<thead>
<tr>
<th>FY 2010</th>
<th>FY 2015</th>
<th>FY 2020</th>
<th>FY 2025</th>
<th>FY 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,708</td>
<td>9,688</td>
<td>10,813</td>
<td>12,053</td>
<td>13,466</td>
</tr>
</tbody>
</table>

Volumes are expected to increase by 24% to 2020 and an additional 25% to 2030

### Surgery Projections (Inpatient & Day) - MSJ - FY 2010 to FY 2030

<table>
<thead>
<tr>
<th>FY 2010</th>
<th>FY 2015</th>
<th>FY 2020</th>
<th>FY 2025</th>
<th>FY 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,970</td>
<td>5,464</td>
<td>5,999</td>
<td>6,751</td>
<td>7,655</td>
</tr>
</tbody>
</table>

Surgical activity is projected to increase 21% between 2010 and 2020 with a further increase of 28% from 2020 to 2030

### Inpatient Projections - MSJ - FY 2010 to FY 2030

<table>
<thead>
<tr>
<th>FY 2010</th>
<th>FY 2015</th>
<th>FY 2020</th>
<th>FY 2025</th>
<th>FY 2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,362</td>
<td>3,916</td>
<td>4,058</td>
<td>4,567</td>
<td>5,178</td>
</tr>
</tbody>
</table>

Inpatient volumes are projected to increase of 21% between 2010 and 2020 with a further increase of 28% from 2020 to 2030

The number of inpatient beds at MSJ will need to increase to meet the projected demand.

### Inpatient Bed Projections by Unit - MSJ - FY 2010 to FY 2030

<table>
<thead>
<tr>
<th>2010 Actual</th>
<th>2015 Projected</th>
<th>2020 Projected</th>
<th>2025 Projected</th>
<th>2030 Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alternate Level of Care (ALC)</strong></td>
<td>15.4%</td>
<td>7.2%</td>
<td>7.2%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Efficiency Gains</td>
<td>Remains Constant</td>
<td>Remains Constant</td>
<td>Remains Constant</td>
<td>Remains Constant</td>
</tr>
<tr>
<td>Case Mix</td>
<td>Remains Constant</td>
<td>Remains Constant</td>
<td>Remains Constant</td>
<td>Remains Constant</td>
</tr>
<tr>
<td>Market Share</td>
<td>Remains Constant</td>
<td>Remains Constant</td>
<td>Remains Constant</td>
<td>Remains Constant</td>
</tr>
<tr>
<td>Occupancy Rate</td>
<td>101%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
</tr>
<tr>
<td>Beds Required</td>
<td>101</td>
<td>102</td>
<td>107</td>
<td>115</td>
</tr>
</tbody>
</table>

Given the demographic and service volume projections increases in bed numbers are needed primarily for geriatric services as follows:

### Notes:
1. Excludes the 100 residential care beds
2. Projected bed numbers based on projections provided by Infoquest (October 2011).
3. Assumes 95% occupancy and an ALC rate of 7.2%
4. The allocation of beds by program type could change depending on the future health needs of the population.
4. PROPOSED SERVICE PLAN SUMMARY, OVERALL REQUIREMENTS AND PRIORITIES

Current volumes, CMGs and demographics confirm that MSJH is a Community Hospital. Projections indicate no change to this designation. Given this, the primary role of MSJ will be to continue to serve its immediate community. Considering the age of the patients served at MSJH, the entire hospital must be Elderly friendly.

Overview of the Chapter
This section of the report presents master program priorities and key planning parameters that directed the development of the plan. The service planning information was used to project workload and staffing which are the key space drivers. The chapter also includes information on bed projections, planning parameters for each master program, and the space summary based on the master programs.

Master Program Priorities & Planning Parameters
This section of the chapter presents the master program priorities and planning parameters including highlights from the 9 master programs.

Master Program Priorities
The master program priorities that emerged from this planning work are as follows:

- Mitigate risk — address regulatory non-compliance or health safety issues
- Enhance operational efficiency
- Improve space utilization
- Improve patient wayfinding, amenity and satisfaction
- Build future capacity
- Renew/retool physical plant (New Program Technology)

Key Planning Parameters
The following high level planning parameters were used to develop and evaluate the site development options.

Operational Parameters
- Program and service space will be designed to support a person-centred care model
- Needs of special patient populations must be reflected in design, e.g. elderly patients
- Reception and waiting space will be a shared resource
- Meeting space will be a shared resource in the facility
- As much as possible, outpatient programs and services will be co-located to maximize operational efficiency and facilitate patient way-finding. All space will be designed to be flexible-use and shared.
- Co-locate the Emergency Department, Medical Imaging and the Laboratory
- There will be restricted access in treatment and staff areas

Physical Parameters
- The site will offer an open, elder friendly, well lit, cheerful and inviting environment.
- The space will be designed in a flexible manner to accommodate current and future service requirements.
- The Emergency Department (ED) will be developed in new space and the vacated space will accommodate other clinical services.
- Direct convenient access from parking facilities to the main entrance and high volume ambulatory programs is essential.
- Minimize the number of internal moves and renovations required to accommodate program space needs, appreciating the operational impacts and disruption to existing services.
- Improve circulation as highlighted below:
  - Link the Emergency and Surgical Daycare waiting areas to main corridors
  - Link East Level 0 and West Level 1 entrances
  - Remove barriers through Level 0 main corridor
## Master Program Highlights

Highlights of the master program are summarized in the following tables. The complete master program space summary is appended in Section 7 Master Concept Plan.

<table>
<thead>
<tr>
<th>Component</th>
<th>Highlights</th>
</tr>
</thead>
</table>
| 1. Administration, Staff & Physician Facilities       | ✓ Offices located in a former inpatient unit; space larger than required if a modern office layout was used.  
✓ Require a large meeting room to support staff educational events (100 sqm).  
✓ Require an improved physician on call suite.                                                                                       |
| 2.1 Pastoral Care                                      | ✓ Chapel and related office space located on Level 1.  
✓ No additional space requirements.                                                                                                        |
| 2.2 Tapestry Foundation                                | ✓ Located on Level 1; could be located elsewhere but ideal to maintain a presence at MSJ of 5 staff members.  
✓ Require work space for 5 additional staff members by 2020.                                                                                |
| 2.3 Volunteer Resources                                | ✓ Gift shop located on Level 0 near a main entry and waiting area for Diagnostics.  
✓ Future volunteer lounge and additional retail storage area included in the master program (current office space located on Level 1).                  |
| 3.1 Health Information Management                      | ✓ Expected increase in patient volumes could be absorbed by current staff.  
✓ No additional space requirements.                                                                                                         |
| 3.2 Infection Control                                  | ✓ Current office work space located in the Laboratory office area (Level 0).  
✓ Current location and space works well to meet future needs.                                                                               |
| 3.3 Pharmacy                                           | ✓ Located in renovated space (renovated in 2004) on Level 4; current location infringes on potential future expansion of the inpatient unit (4 East).  
✓ Could be located elsewhere as long as it is a secure location and close to patient elevators.                                               |
| 3.4 Professional Practice & Education                 | ✓ Project the need for additional teaching lab and UBC Faculty of Medicine space.  
✓ A larger staff education room included under the Administration component.                                                                 |
| 4.1 General Ambulatory                                 | ✓ Current location on Level 3  
✓ Cardiology outpatient services now operating from this space identified as ample for current and future requirements.                                                                          |
| 4.2 Laboratory                                         | ✓ Current space adequate for current and future workload projections.  
✓ Laboratory space would benefit from a renovation to achieve a more open concept plan to further support a unidirectional work flow.  
✓ Approximately 50 sqm of vacated space available at back of the laboratory that could be used for another service but it would be difficult to access. |
| 4.3 Medical Imaging                                    | ✓ Good functional relationship to the Emergency department.  
✓ Requires additional space for Ultrasound and General Radiography.  
✓ Anticipate replacement of some diagnostic equipment.  
✓ An MRI is not contemplated for the site.                                                                                                  |
| 5.1 Emergency A CRITICAL PRIORITY                      | ✓ Project the need for 22 treatment spaces to support the projected volume of approximately 30,000 visits/year by 2030; currently have 18 treatment spaces that are undersized.  
✓ The current space has many deficiencies.                                                                                                  |
| 5.2 Critical Care                                      | ✓ ICU located in recently renovated space (renovated in 2005) on Level 3 that is quite functional; requires improved soiled utility and physician work spaces.  
✓ Currently have 4 of 6 beds in operation. No additional beds beyond 6 projected.                                                              |
| 5.3 Respiratory Therapy                                | ✓ The RT staff and testing space located on Level 0 in functional space.  
However, the overall layout of the ambulatory area on Level 0 requires reorganization, e.g. insufficient waiting space and treatment spaces in several locations which can hamper patient and staff flow. |
| 6. Medicine                                            | ✓ Unit 3 BC – Acute Medicine inpatient unit does not meet CSA Z8000 space guidelines, i.e. does not have single patient room accommodation throughout the unit, inadequate staff and patient/family support space, etc. Projected to remain at 43 beds.  
✓ Multi-purpose Ambulatory Clinics located on Level 0; require additional IV therapy, exam room and related support space. |
| 7. Surgery                                             | ✓ Unit 4 West –Surgery inpatient unit is projected to remain at 16 beds; the overall space is adequate but there are challenges with the space, e.g. insufficient patient washrooms and support space.  
✓ Operating Room and PACU projected to increase – from 4 to 5 ORs by 2030 and 12-15 PACU spaces; current space built in the 1960’s and requires replacement.  
✓ Surgical Daycare has a good functional relationship to the OR; require 4 additional stretcher spaces; require an additional endoscopy suite and a cystoscopy suite.  
✓ Rapid Access Breast Clinic requires additional space; projected space assumes MSJ will be a ‘hub’.  
✓ Ophthalmology procedure area in recently renovated space (renovated in 2004); requires additional waiting and staff support space.  
✓ Ophthalmology Clinic currently located at St. Paul's Hospital could be relocated with procedure area to improve efficiency and patient experience.  
✓ MDR has many space challenges and requires expansion as soon as possible; a plan has been developed by PHC to allocate a portion of the Central Stores space to expand the MDR. |

**MDR A CRITICAL PRIORITY**

- Project the need for 22 treatment spaces to support the projected volume of approximately 30,000 visits/year by 2030; currently have 18 treatment spaces that are undersized.
- The current space has many deficiencies.
8. Elder Care

- Unit 4 East - Geriatric Medicine inpatient unit is projected to increase from 22 to 30 beds; the unit has single and double occupancy rooms; requires improved rehabilitation area.
- Unit 1 South - Geriatric Psychiatry is projected to increase from 16 to 30 beds; the unit does not meet CSA Z8000 space guidelines, i.e. does not have single patient rooms, or adequate staff and patient/family support space.
- Residential Care (100 beds) is located on Level 2; the space notes not meet the complex care space requirements, i.e. neighbourhood size of 24-28 residents, single room accommodation, all rooms should have ceilings lifts, no shared bathrooms, etc.; residential care should be located elsewhere on campus in a suitable facility.
- Geriatric Ambulatory Clinic has a small clinic area on Level 1; there is clinic space available on Level 3 with the Cardiology service.
- ECT requires a proper suite located proximal to the OR/PARR to maximize patient safety and clinical efficiency - current location is on 1 South although the vast majority of patients are outpatients.

9.1 Biomedical Engineering

- Require additional work space as service volumes grow.
- Morgue requires its own entrance; currently must pass through BME to access the morgue.

9.2 Food Services

- Will remain a contracted service.
- Space adequate for current and future service projections.

9.3 Housekeeping

- Will remain a contracted service.
- Current central housekeeping room undersized and requires additional space to accommodate equipment and supplies.
- Any new clinical space will incorporate housekeeping closets.

9.4 IMIS

- An expansion will require additional data room space.

9.5 Laundry/Linen

- Acute care linen is a contracted service.
- PHC operates the personal care laundry for residential care; the space is adequate to support residential care needs.

9.6 Plant Services

- Located on Level 0.
- Any expansion will require additional plant infrastructure; amount of space to be determined at a later date.

9.7 Protection Services

- Current location for security staff members works well.
- A new Emergency will include adequate security personnel space.

9.8 Supply Chain & Morgue

- Loading dock requirements will likely require further review depending on materials management policies.
- As mentioned above, a portion of the Central Stores area could be reallocated to MDR (162 sqm).
The following table summarizes the appropriateness of existing components in terms of layout, size and priority for improvement.

Legend:  Good  |  Fair  |  Poor

<table>
<thead>
<tr>
<th>Component</th>
<th>Functional/Space Evaluation</th>
<th>Space Requirements</th>
<th>Master Plan Priority</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Location Overall Layout Room Sizes Meets Benchmarks</td>
<td>Current CGSM Projected CGSM Difference Current/Proj</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Administration, Staff &amp; Physician Facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site Administration</td>
<td></td>
<td></td>
<td>54.9 26.0 26.0</td>
<td>26.0 26.0  28.9 Low</td>
</tr>
<tr>
<td>Meeting Facilities</td>
<td></td>
<td></td>
<td>n/a</td>
<td>256.6 256.6 256.6</td>
</tr>
<tr>
<td>OH&amp;S</td>
<td></td>
<td></td>
<td>n/a</td>
<td>43.2 24.0 24.0</td>
</tr>
<tr>
<td>Staff Facilities</td>
<td></td>
<td></td>
<td>n/a</td>
<td>249.5 249.5 249.5</td>
</tr>
<tr>
<td>Other Staff Work Space</td>
<td></td>
<td></td>
<td>n/a</td>
<td>164.8 118.8 118.8</td>
</tr>
<tr>
<td>Physician Facilities</td>
<td></td>
<td></td>
<td>n/a</td>
<td>70.8 86.8 86.8</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td></td>
<td>739.8 761.7 761.7</td>
</tr>
<tr>
<td>2.1 Pastoral Care</td>
<td></td>
<td></td>
<td>n/a</td>
<td>213.9 213.9 213.9</td>
</tr>
<tr>
<td>2.2 Tapestry Foundation</td>
<td></td>
<td></td>
<td>n/a</td>
<td>71.3 136.3 136.3</td>
</tr>
<tr>
<td>2.3 Volunteer Resources</td>
<td></td>
<td></td>
<td>n/a</td>
<td>61.0 116.0 116.0</td>
</tr>
<tr>
<td>3.1 Health Info Management</td>
<td></td>
<td></td>
<td>n/a</td>
<td>474.9 474.9 474.9</td>
</tr>
<tr>
<td>3.2 Infection Control</td>
<td></td>
<td></td>
<td>n/a</td>
<td>12.0 12.0 12.0</td>
</tr>
<tr>
<td>3.3 Pharmacy</td>
<td></td>
<td></td>
<td>n/a</td>
<td>143.0 143.0 143.0</td>
</tr>
<tr>
<td>3.4 Professional Practice &amp; Educ.</td>
<td></td>
<td></td>
<td>n/a</td>
<td>35.0 241.5 241.5</td>
</tr>
<tr>
<td>4.1 Cardiology</td>
<td></td>
<td></td>
<td>Yes</td>
<td>300.0 300.0 300.0</td>
</tr>
<tr>
<td>4.2 Laboratory</td>
<td></td>
<td></td>
<td>Yes</td>
<td>323.8 323.8 323.8</td>
</tr>
<tr>
<td>4.3 Medical Imaging</td>
<td></td>
<td></td>
<td>No</td>
<td>618.5 738.5 738.5</td>
</tr>
<tr>
<td>5. Emergency Services &amp; ICU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1 Emergency</td>
<td></td>
<td></td>
<td>No</td>
<td>414.6 924.0 924.0</td>
</tr>
<tr>
<td>5.2 ICU</td>
<td></td>
<td></td>
<td>No</td>
<td>382.9 540.0 540.0</td>
</tr>
<tr>
<td>Component</td>
<td>Location</td>
<td>Overall Layout</td>
<td>Room Sizes</td>
<td>Meets Benchmarks</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>--------------</td>
<td>----------------</td>
<td>------------</td>
<td>------------------</td>
</tr>
<tr>
<td>5.3 Respiratory Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inpatient Acute Medicine Unit 3 BC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi-purpose Amb. Clinics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Surgery</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inpatient Surgery Unit 4 West</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Room / PACU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surgical Day Care/ Endoscopy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rapid Access Breast Clinic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ophthalmology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Elder Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inpatient Geriatric Medicine Unit 4 East</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inpatient Geriatric Psychiatry Unit 1 South</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complex Residential Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geriatric Ambulatory Clinics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.1 Biomedical Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.2 Food Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.3 Housekeeping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Component</td>
<td>Location</td>
<td>Overall Layout</td>
<td>Room Sizes</td>
<td>Meets Benchmarks</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------</td>
<td>----------------</td>
<td>------------</td>
<td>------------------</td>
</tr>
<tr>
<td>9.4 IMIS</td>
<td>🌟</td>
<td>🌟</td>
<td>🌟</td>
<td>n/a</td>
</tr>
<tr>
<td>9.5 Laundry/Linen</td>
<td>🌟</td>
<td>🌟</td>
<td>🌟</td>
<td>n/a</td>
</tr>
<tr>
<td>9.6 Plant Services</td>
<td>🌟</td>
<td>🌟</td>
<td>🌟</td>
<td>n/a</td>
</tr>
<tr>
<td>9.7 Protection Services</td>
<td>🌟</td>
<td>🌟</td>
<td>🌟</td>
<td>n/a</td>
</tr>
<tr>
<td>9.8 Supply Chain (incl. Morgue)</td>
<td>🌟</td>
<td>🌟</td>
<td>🌟</td>
<td>n/a</td>
</tr>
</tbody>
</table>
ADJACENCY MATRIX

The following chart presents the key adjacencies between program components. The red circle indicates a critical adjacency, the green circle a close adjacency requirement, and the grey circle a convenient adjacency.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Admin Staff &amp; Physician Facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>Admin Staff &amp; Physician Facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Pastoral Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.1</td>
<td>Pastoral Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2 Tapestry Foundation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.2</td>
<td>Tapestry Foundation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3 Volunteer Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.3</td>
<td>Volunteer Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 HIM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.1</td>
<td>HIM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.2 Infection Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.2</td>
<td>Infection Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.3 Pharmacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.3</td>
<td>Pharmacy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4 Prof Practice &amp; Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.4</td>
<td>Prof Practice &amp; Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Cardiology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.1</td>
<td>Cardiology</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2 Laboratory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.2</td>
<td>Laboratory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.3 Medical Imaging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.3</td>
<td>Medical Imaging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1 Emergency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.1</td>
<td>Emergency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.2 ICU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.2</td>
<td>ICU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.3 Respiratory Therapy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.3</td>
<td>Respiratory Therapy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>Medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Surgery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
<td>Surgery</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Elder Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
<td>Elder Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.1 Biomedical Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.1</td>
<td>Biomedical Engineering</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.2 Food Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.2</td>
<td>Food Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.3 Housekeeping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.3</td>
<td>Housekeeping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.4 MIS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.4</td>
<td>MIS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.5 Laundry/Linen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.5</td>
<td>Laundry/Linen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.6 Plant Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.6</td>
<td>Plant Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.7 Patient Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.7</td>
<td>Patient Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.8 Supply Chain &amp; Macheage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.8</td>
<td>Supply Chain &amp; Macheage</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

In regards to the benchmarks and peer hospital comparisons used to develop the master programs, RMC used the following:

- CSA Z8000 Space Planning Guidelines (2011)
- Bed Planning Guidelines, New Zealand
- Health Facility Planning Guidelines recently published from Australia
- AIA Planning and Design Guidelines for Bariatric Healthcare Facilities and other AIA facility planning publications
- SpaceMed Space Planning Guidelines 2008 publication (Cynthia Hayward - author)
- Future of the Operating Room, Innovation Center, Washington, DC
- RMC functional programming information from other health facility planning projects, e.g. Strathcona Community Hospital (Sherwood Park, AB), Misericordia Community Hospital and Grey Nuns Community Hospital (Edmonton, AB), Foothills Medical Centre (Calgary, AB), Edmonton Tertiary Level Ambulatory Clinic (not to mention the other health centres we have planned in Alberta)
- RMC planning work undertaken in the Lower Mainland, e.g. Surrey Memorial Hospital, Royal Columbian Hospital (New Westminster), Burnaby Hospital and Langley Memorial Hospital
- Mental Health Unit planning guidelines from BC and Ontario
5. EXISTING SITE ANALYSIS

a. Site Location
Mount Saint Joseph Hospital is located at 3080 Prince Edward Street, Vancouver, BC. It is bounded to the west by Prince Edward Street, to the north east by the major Kingsway arterial, to the south by 15th avenue and to the east by a 4 storey residential/commercial building.

b. Lower Mainland Context
MSJ is a community hospital with a multi-cultural approach to service delivery. It provides acute care and complex residential care to the neighborhood of Mount Pleasant as well specific clinical programs e.g. Ophthalmology, to a wider area of the lower mainland.

c. Community Context
Mount Pleasant is one of Vancouver’s oldest and most diverse neighborhoods. It extends from False Creek and Great Northern Way on the north, Clark Drive on the east, 16th Avenue on the south and Cambie Street on the west. It faces an uncertain future as development pressures coupled with long standing social development issues currently make it a 'community on the edge'. Its inner-city proximity to the downtown core, the new Olympic Village construction on False Creek, the changing identity along adjacent Main Street etc. all contribute to this uncertainty. Though Mount Pleasant has in the past had a high proportion of younger, renting and therefore a more transient population there is a trend towards an older, property owning demographic with a multi-ethnic make-up. MSJ maintains its strong historical links to Vancouver’s Asian community.
d. Site Details

Mount St. Joseph Hospital is located on property owned by Providence Health Care Society (PHC). The legal address is:

Lot E, Block 131, 133 & Suburban Block 134A, Plan VAP23125, District Lot 264A, PID-017-023-904: Containing the hospital, and shown as 1 on the photograph to the right.

The site area is 17,970m²

The site slopes 4.9m from a high point at the main entrance to the site from Kingsway to a low point at the junction of Prince Edward Street and 15th Avenue. The floor levels of the hospital take advantage of this slope to provide grade level entrances to Level 0 from the south and west sides and to Level 1 at its north east side.

Surface parking for 213 cars is primarily on the northern and eastern sides of the site. A loading bay serving Food Services and the Supply Chain is accessed from 15th Avenue to the south.

The northerly parking areas are landscaped and contain mature tree screening. A 8” C.I. water main and an 18” combined sewer serve the MSJ site from 15th Avenue. As indicated in the structural consultants report (Appended) the foundations of the buildings are designed for bearing capacities varying from 4000-7500 PSF, indicating reasonably firm ground conditions.

PHC also owns an adjacent property at Prince Edward Street, shown as 2 on the photograph to the right. The legal description is:

Lot E, Block 131, District Lot 264A, Plan 1771 and 185 Except Plan P t in Plan 6961 PID 015-673-332.

The site area is 5180m².

The former Convent of the Missionary Sisters of the Immaculate Conception occupies the site. It is currently leased to the City of Vancouver for use as a shelter for the homeless. Surface parking for 86 cars which is included in the hospital's current requirement of 213 spaces.
MOUNT SAINT JOSEPH HOSPITAL MASTER CONCEPT PLAN

e. Zoning

The City of Vancouver zoning applicable to the site is RM-4. That zone “permits medium density residential development, including a variety of multiple dwelling types to encourage the retention of existing buildings and good design and to achieve a number of community and social objectives through permitted increases in floor area”. Institutional (hospital) use is permitted under C-2 designation that is also applicable. These zoning designations also apply to the Convent Site.  
The Mount Pleasant RM-4 Guidelines, last amended in 1992 apply but do not make specific reference to the MSJ Site. A Mount Pleasant Community Plan, integrated with other city initiatives and adopted by the city in November 2010 provides general guidelines for planning processes and development in the Mount Pleasant Community, including a suggestion of “larger scale on Kingsway vs. smaller scale on Main St”. 
The Mount Pleasant Community Planning Program, commenced in 2007, is still underway therefore new requirements may apply to the MSJ Site in the future.

f. Zoning Analysis

The development permit issued for the 1993 additions and the associated drawings indicate a conditional permitted floor space ratio (FSR) of 1.45. The actual floor space ratio approved by the permit was 1.10 leaving a 0.35 potential for further development. An FSR higher than 1.45 would require negotiation with the city.

A building setback of 20ft (6.09m) applies for all property lines.

g. Building / Site Statistics

i. Existing Building Floor Area (BGSM)

<table>
<thead>
<tr>
<th>Level</th>
<th>BGSM</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>1,241m²</td>
</tr>
<tr>
<td>0</td>
<td>6,506</td>
</tr>
<tr>
<td>1</td>
<td>3,692</td>
</tr>
<tr>
<td>2</td>
<td>3,606</td>
</tr>
<tr>
<td>3</td>
<td>3,424</td>
</tr>
<tr>
<td>4</td>
<td>2,964</td>
</tr>
<tr>
<td>Total</td>
<td>21,433m²</td>
</tr>
</tbody>
</table>

Note: These areas, provided from the PHC AutoCAD data base vary from the total of 213,706 sq. ft. (19,854m²) in the City of Vancouver 1993 Development Permit due to exclusions allowed in the latter.

ii. Allowable Floor Area

The City of Vancouver (hospital) site area 17,970m² compares with the PHC database total of 17,964.6m. 
An FSR of 1.45 would permit a total floor area of 26,056m².

The C-2 designation indicates a permitted FSR of .75 but with potential for an increase up to 2.5 at the discretion of the Director of Planning. To test this beyond the currently limit of 1.45 would require a specific and detailed submission.

Option A as presented under Section 7 Master Concept Plan has an overall building area marginally greater than the allowable 1.45 FSR for the Hospital site by itself. Option B is within the allowable FSR.

We suggest that there would be more flexibility for future development if the Hospital site and the adjacent Convent site were to be consolidated to become a single legal property;

- In both options the alignment of the north demarcation between the two properties limits the width available for the new Emergency Department unless the properties are consolidated. This constraint could prove detrimental to layout options for the Emergency Department when detail planning proceeds.
- A single legal property would also simplify coordination of hospital project needs with future developments that may be considered for the Convent Site.

iii. Parking Stalls

The off-street parking requirement of 213 (maximum 73 small cars) currently applies to the site. Increases to floor area of the acute hospital components will require additional parking i.e. 1 car per 93m² of gross floor area. 
A loading requirement of 7 spaces currently applies. 
The options for renewal as shown is Section 7 are anticipated to require up to 120 extra parking spaces to replace those lost because of expanded building foot print and increased floor area.
iv. Building Age

The first building on the site was constructed in 1944. An east wing, including a pastoral chapel was added in 1955.

In 1976 the east wing was extended to provide new in-patient units and diagnostic and treatment components, including emergency on Level 0 of the north side of the 1955 east wing. This also included a new boiler room, nutrition services, material management, laundry and staff facilities on the south side of the 1955 east wing. Further construction in 1993 entailed limited seismic upgrades to the 1944/1955 wings, a Level 4 addition to two 1976 east wings and other Level 0 additions to the 1976 construction.
v. The Existing Hospital Buildings

There are five floor levels plus partial basement areas below the largest and principle floor level (Level 0). The floor to floor heights are:

- Fourth to Top of Roof Slab: 3.162m
- Third to Fourth: 3.20m
- Second to Third: 3.20m
- First to Second: 3.352m
- Level 0 to First: 3.352m

The roof of the 1976 Emergency / Surgical extension was constructed higher than the first floor level of the adjoining wings in order to accommodate the ceiling height standards required for those functions. Though the roof slab as designed to allow use as a future floor, the level difference with the adjoining wings (0.53m) precludes that potential for most hospital functions. The roofs of the other wings have a wood frame superstructure above the structural concrete slab for mechanical distribution ductwork etc. It is contained within parapet walls.

The main public entrance to the hospital is in the 1944 building on Level 0 accessed from Prince Edward Street. A subsidiary public entrance in the 1976 building is on Level 1 accessed from public parking and facing Kingsway. Its connection to the main east-west corridor on Level 0 is via stairs or elevator though this is currently restricted. Other entrances for loading and staff exists on Level 0 with access from East 15th Avenue.

Building Systems

Two mechanical rooms are located in the 1955 building, one on each side of the Level 0 east-west corridor. Their floors are lower than Level 0 to provide additional height for boilers etc. Four other mechanical rooms are located respectively on Levels 1, 2, 3 & 4 of the 1976 building. The emergency generator is on Level 0 at the eastern end of the 1976 building. The emergency generator is on Level 0 at the eastern end of the 1976 building. Refer to the structural, mechanical and electrical reports in Appendix 2 for further details of the existing building systems including their compliance with current building code and other standards. Key deficiencies include:

- Though the 1944 and 1955 buildings had a seismic retrofit in 1993 intended to bring them up to 1985 NBCC seismic levels they still contain extensive clay tile partitions. Any building renovations should consider their removal for life safe performance.
- Due to the age of mechanical and plumbing systems an audit is recommended to assess their condition and compliance with current CSA Standards.
- Though the single emergency generator was upgraded 10 years ago a second generator is recommended to provide for back-up and to meet CSA Z32-09.
- Very few patient bathrooms conform to BC Building Access Handbook Guidelines and in the 1944/1955 buildings most doors to visitor and patient bathrooms are undersized.

Elevators

The 1944/1955 Buildings contain two OTIS electric traction type elevators with a rating of 3500lbs/1587kg. The 1976/93 building contains two Montgomery electric traction type elevators with a rating of 4000lbs/1814kg. A fifth Sumito cable type elevator with a rating of 2000lbs/900kg is located at the north east (exterior) corner of the surgical day care unit to serve the storage area at the basement level.

Building Exterior

Exterior walls on the west building consist of brick veneer supported on cast concrete walls. The 1976 east addition uses precast concrete panels, which are self supporting. The main roofing includes two roofing systems. The west building has Built Up Roofing (BUR) with a stone base coating to protect the roof assembly. The super structure roof over the 1976 east addition is a modified bitumen product. The 1944/55 building window assemblies vary however most windows utilize a single fixed paned insert with two awning style operable aluminum frames. The windows in the 1976/93 buildings are similar but have double glazing units. The exterior doors are painted steel flush panel type with steel frames at service entries and aluminum framed glass curtain walls at most patient entry points. As the hospital entries have been reconfigured over the years, the older patient entry points all appear to be equipped with barrier free access.

Building Interior

The typical floor finishes are terrazzo in the 1944/55 buildings and resilient vinyl sheet products in the 1976 east addition. There is a small amount of carpeted areas in key offices. Service areas, mechanical rooms and some stairs, have painted or sealed concrete floors. Ceiling finishes are primarily acoustical tiles, painted plaster or gypsum board. Typical wall finishes are painted gypsum board, painted concrete masonry units (electrical and mechanical rooms), plastic laminate walls (kitchen food prep areas and toilets).

Hazardous Materials

The buildings were constructed before the 1978 deadline precluding installation of asbestos containing materials as defined by Providence Health Care and Mount Saint Joseph Hospital. The Mount Saint Joseph Hospital Asbestos Inventory Report prepared by Astech Consultant LTD dated February 28th 1989 indicates the presence of asbestos primarily in the ceiling areas of patient floors and at HVAC pipe installations within mechanical spaces. Subsequent testing in 2008-2009 by Pacific Environmental in various areas of the hospital of walls and ceiling plaster, joint compound, textured coatings, and vinyl flooring found that none were asbestos containing.

Existing Use Floor Plans

The drawings that follow indicate level by level the current use and space occupied by the departmental components of the hospital.
h. Existing Use Floor Plans

Existing Use Floor Plans
Level -1  1:600
Existing Use Floor Plans
Level 2
1:600
Existing Use Floor Plans
Level 4
1:600
i. Building / Site Sections
j. Site / Community Character / Photos

The Mount Pleasant Community Plan referred to on page 19 places the hospital site in the “Central” zone of the overall Mount Pleasant Community and designated as an apartment area. It overlaps the “South” zone which is designated duplex/infill area.

The hospital site is flanked to the north and to the west by 3 and 4 storey residential buildings. Immediately adjacent to the south the 4 storey SUCCESS Housing (Harvard Building) contains offices, the Canadian Institute of Technology and street level commercial (including a pharmacy).

At the junction of Kingsway and Fraser Street a small commercial node will be combined with a larger commercial area south of 16th Avenue in a future Neighborhood Centre Planning program. This will form a secondary node on Kingsway to a more major redevelopment envisaged by the Community Plan at the triangle north of Broadway between Main Street and Kingsway and south of Broadway on Kingsway to 10th Avenue (or further).
6. URBAN PLANNING ANALYSIS

a. Transportation - Vehicular
b. Transportation - Non-Vehicular
c. Greenscape Analysis
This section presents the outcome of the study process.
It includes:

a) Master program which summarizes the existing and projected space requirements.

b) The options for renewal with pros/cons of each as well as details of the planning principles and conceptual strategies on which they are based.

c) Costs and schedules of implementation of the options.

### a. Master Program Space Summary

<table>
<thead>
<tr>
<th>Program Components</th>
<th>Master Program - Existing Space</th>
<th>Master Program - Projected Space</th>
<th>Difference Existing &amp; Projected CGSM</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CGSM</td>
<td>x BFO</td>
<td>BSQM</td>
<td>CGSM</td>
</tr>
<tr>
<td>1. Administration, Staff &amp; Physician Facilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Site Administration</td>
<td>54.9</td>
<td>1.23</td>
<td>67.5</td>
<td>26.0</td>
</tr>
<tr>
<td>• Meeting Facilities</td>
<td>226.6</td>
<td>1.23</td>
<td>226.6</td>
<td>368.6</td>
</tr>
<tr>
<td>• O/RHS</td>
<td>51.3</td>
<td>1.23</td>
<td>53.1</td>
<td>22.0</td>
</tr>
<tr>
<td>• Staff Facilities</td>
<td>252.5</td>
<td>1.23</td>
<td>308.9</td>
<td>249.5</td>
</tr>
<tr>
<td>• Other Staff Offices</td>
<td>164.8</td>
<td>1.23</td>
<td>262.7</td>
<td>119.8</td>
</tr>
<tr>
<td>• Physician Facilities</td>
<td>7.0</td>
<td>1.23</td>
<td>87.1</td>
<td>95.0</td>
</tr>
<tr>
<td>Subtotal</td>
<td>753.8</td>
<td>910.0</td>
<td>761.7</td>
<td>934.5</td>
</tr>
<tr>
<td>2. Pastoral Care, Volunteers &amp; Tapestry Foundation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Pastoral Care</td>
<td>213.9</td>
<td>1.23</td>
<td>263.1</td>
<td>213.9</td>
</tr>
<tr>
<td>2.2 Tapestry Foundation</td>
<td>71.3</td>
<td>1.23</td>
<td>97.7</td>
<td>136.3</td>
</tr>
<tr>
<td>2.3 Volunteer Resources</td>
<td>5.0</td>
<td>1.23</td>
<td>75.0</td>
<td>115.0</td>
</tr>
<tr>
<td>Subtotal</td>
<td>340.2</td>
<td>425.8</td>
<td>466.2</td>
<td>573.4</td>
</tr>
<tr>
<td>3. Clinical Support Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 Health Information Management</td>
<td>47.9</td>
<td>1.32</td>
<td>62.9</td>
<td>47.9</td>
</tr>
<tr>
<td>3.2 Infection Control</td>
<td>12.0</td>
<td>1.32</td>
<td>15.8</td>
<td>12.0</td>
</tr>
<tr>
<td>3.3 Pharmacy</td>
<td>143.9</td>
<td>1.32</td>
<td>183.0</td>
<td>143.9</td>
</tr>
<tr>
<td>3.4 Professional Practice &amp; Education</td>
<td>35.0</td>
<td>1.32</td>
<td>48.2</td>
<td>241.5</td>
</tr>
<tr>
<td>Subtotal</td>
<td>164.3</td>
<td>877.7</td>
<td>871.4</td>
<td>1,150.2</td>
</tr>
</tbody>
</table>
### 4. Diagnostic Support Services

<table>
<thead>
<tr>
<th>Program Components</th>
<th>Master Program - Existing Space</th>
<th>Master Program - Projected Space</th>
<th>Difference Existing</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CGSM  x BFG  BSIM</td>
<td>CGSM  x BFG  BSIM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 Cardiology</td>
<td>300.0  1.32  396.0</td>
<td>300.0  1.32  396.0</td>
<td>0.0</td>
<td>Current space on Lvl 3 includes 1 Cardiology office (#327), Echo room (#328), ECG room (#329), work area (#330) &amp; exam spaces (to be shared with Elder Care in future), current space is an estimate (to be confirmed by architect).</td>
</tr>
<tr>
<td>4.2 Laboratory</td>
<td>332.8  1.32  427.4</td>
<td>332.8  1.32  427.4</td>
<td>0.0</td>
<td>Vacant space at the back of the lab available for future expansion or otherwise (estimate 50 sqm).</td>
</tr>
<tr>
<td>4.3 Medical Imaging</td>
<td>618.5  1.32  816.4</td>
<td>738.5  1.32  974.8</td>
<td>120.0</td>
<td>Current space on Lvl 0 includes the main department @ 363 sqm and record storage @ 55 sqm. Future expansion space includes radiological reading space and future expansion space for modalities (Ultrasound, 1 CT scan room plus support space @ 60 sqm). MRI not foreseen.</td>
</tr>
</tbody>
</table>

Subtotal: 1,242.3  1,539.8  1,362.3  1,790.2 | Difference: +120.0 CGSM

### 5. Emergency Services & ICU

<table>
<thead>
<tr>
<th>Program Components</th>
<th>Master Program - Existing Space</th>
<th>Master Program - Projected Space</th>
<th>Difference Existing</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CGSM  x BFG  BSIM</td>
<td>CGSM  x BFG  BSIM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1 Emergency</td>
<td>414.6  1.32  543.8</td>
<td>924.0  1.32  1,219.7</td>
<td>695.4</td>
<td>Estimate future need for 22 treatment spaces and 2 female assessment spaces (currently have 18 treatment and 2 female space) that are greatly undersized.</td>
</tr>
<tr>
<td>5.2 ICU</td>
<td>382.3  1.32  505.4</td>
<td>540.0  1.32  712.8</td>
<td>172.4</td>
<td>In recently renovated space, require improved support space. Projected space based on best practice space planning guidelines of 30 sqm per bed x 8 beds.</td>
</tr>
<tr>
<td>5.3 Respiratory Services</td>
<td>429.7  1.32  564.4</td>
<td>423.0  1.32  554.4</td>
<td>0.0</td>
<td>PFT lab and staff work area on Lvl 0 (546 sqm, #154, #155).</td>
</tr>
</tbody>
</table>

Subtotal: 839.5  1,019.1  1,500.0  1,978.9 | Difference: +668.5 CGSM

### 6. Medicine

<table>
<thead>
<tr>
<th>Program Components</th>
<th>Master Program - Existing Space</th>
<th>Master Program - Projected Space</th>
<th>Difference Existing</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CGSM  x BFG  BSIM</td>
<td>CGSM  x BFG  BSIM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1 Unit 3 BC</td>
<td>1,419.9  1.32  1,862.3</td>
<td>3,013.0  1.32  3,973.2</td>
<td>1,044.2</td>
<td>Projected space assumes a total of 43 beds in future @ 20 CGSM per bed.</td>
</tr>
<tr>
<td>6.2 Multi-purpose Ambulatory Clinic</td>
<td>145.2  1.32  191.7</td>
<td>270.0  1.32  356.4</td>
<td>124.8</td>
<td>Current space on Lvl 0 includes a waiting area, 1 procedure room, 4 exam rooms, an IV therapy area with 6 spaces and support space. Future space assumes a full clinic model with 12 exam rooms and support space with a total spaces of 270 sqm. Note: There are unused spaces adjacent to this area, e.g. former screening mammography room #69 @ 20.1 sqm and former Cardiology space @ 45.3 sqm.</td>
</tr>
</tbody>
</table>

Subtotal: 1,564.9  2,053.3  3,259.0  4,329.6 | Difference: +1,724.9 sqm
## MOUNT SAINT JOSEPH HOSPITAL MASTER CONCEPT PLAN

### 1. Surgery

- **Unit 4 West**
  - Existing CSSM: 1,034.0
  - EFG: 1.32
  - DGSM: 1,316.1
  - Projected CSSM: 1,120.0
  - EFG: 1.32
  - DGSM: 1,477.4
  - Difference: 363.4
  - Comments: Future beds as part current allocation of 16 beds; projected space based on 70 CSSM per bed.
- **Operating Room / PACU**
  - Existing CSSM: 782.6
  - EFG: 1.32
  - DGSM: 1,030.6
  - Projected CSSM: 1,260.0
  - EFG: 1.32
  - DGSM: 1,716.0
  - Difference: 655.4
  - Comments: Projected space of 5 ORs by 2020 (1,056 cases/year) assuming 1,000 cases per OR; 12-15 PACU spaces (normally 10 spaces) and related support space.
- **Surgical Day Care / Endoscopy**
  - Existing CSSM: 464.5
  - EFG: 1.32
  - DGSM: 613.1
  - Projected CSSM: 602.0
  - EFG: 1.32
  - DGSM: 821.0
  - Difference: 218.9
  - Comments: Projected need for 2 Endoscopy Suites (currently 1, 3 Endoscopy Suite, procedures currently done in the procedure space in Operating Room, 24 surgical day care spaces (an increase of 4 from current 20 spaces), and support space for an additional 157.5 sqm.
- **Rapid Access Breast Clinic**
  - Existing CSSM: 165.3
  - EFG: 1.32
  - DGSM: 219.2
  - Projected CSSM: 278.0
  - EFG: 1.32
  - DGSM: 365.4
  - Difference: 187.2
  - Comments: Currently located in the former ICU space on Level 3, includes 3 exam rooms, projected space as a half.
- **Ophthalmology**
  - Existing CSSM: 386.1
  - EFG: 1.32
  - DGSM: 509.7
  - Projected CSSM: 435.0
  - EFG: 1.32
  - DGSM: 575.7
  - Difference: 120.8
  - Comments: Currently located on LV 1 with 3 procedure rooms, 6 recovery spaces and support space and adjacent outpatient clinic with 4 exam rooms. Future space includes additional waiting space, additional surgical space, add more exam rooms and change out exam rooms. Current clinic space estimated at 749.6 sqm.
- **MRI (formerly SPT)**
  - Existing CSSM: 204.1
  - EFG: 1.32
  - DGSM: 275.0
  - Projected CSSM: 448.0
  - EFG: 1.32
  - DGSM: 699.5
  - Difference: 221.5
  - Comments: Located on LV 9 adjacent to ORs, MRI space definable, a functional program prepared by Karlin (Aug 2000) projected a total space need of 446.9 CSSM which can be accomplished by reducing Supply Chain space by approximately 182 sqm.

**Subtotal**: 5,022.9

### 2. Elder Care

- **Unit 4 East**
  - Existing CSSM: 964.0
  - EFG: 1.32
  - DGSM: 1,296.9
  - Projected CSSM: 2,260.0
  - EFG: 1.32
  - DGSM: 2,721.0
  - Difference: 454.1
  - Comments: Currently 20 beds, project a bed requirement of 30 beds @ 70 CSSM per bed.
- **1 South**
  - Existing CSSM: 1,425.2
  - EFG: 1.32
  - DGSM: 1,867.3
  - Projected CSSM: 2,610.0
  - EFG: 1.32
  - DGSM: 3,170.0
  - Difference: 557.8
  - Comments: Currently 46 beds, project a bed requirement of 70 beds @ 70 CSSM per bed.
- **Residential Care**
  - Existing CSSM: 2,957.2
  - EFG: 1.32
  - DGSM: 3,771.5
  - Projected CSSM: 5,770.0
  - EFG: 1.32
  - DGSM: 7,154.6
  - Difference: 1,384.1
  - Comments: Projected space based on 100 residential spaces @ 37.3 sqm per resident space as per VGH recommendation.
- **Geriatric Ambulatory Clinic**
  - Existing CSSM: 17.6
  - EFG: 1.32
  - DGSM: 23.5
  - Projected CSSM: 27.6
  - EFG: 1.32
  - DGSM: 36.9
  - Difference: 13.4
  - Comments: Current clinic space estimated at 74.6 sqm. Space available on LV 9 to share with Cardiology - 6 exam rooms + support space and the future Medicine Ambulatory Care Clinic module space.
- **EGT**
  - Existing CSSM: 0.0
  - EFG: 1.32
  - DGSM: 0.0
  - Projected CSSM: 0.0
  - EFG: 1.32
  - DGSM: 4.6
  - Difference: 4.6
  - Comments: EGT secondary recovery space currently in Room #145; on the 1st South patient unit; an EGT suite should be located proximal to Surgery program for access to PAT.

**Subtotal**: 5,541.8

### 3. Clinical Logistics Support Services

8.1 Biomedical Engineering

- Existing CSSM: 36.6
  - EFG: 1.32
  - DGSM: 47.5
  - Projected CSSM: 63.6
  - EFG: 1.32
  - DGSM: 73.2
  - Difference: 20.1
  - Comments: Current space on LV 4 (50.00), additional work space (25.00 CSSM) required to support projected expansion of ORs, ER and allied services.

8.2 Food Services

- Existing CSSM: 722.6
  - EFG: 1.32
  - DGSM: 951.5
  - Projected CSSM: 776.0
  - EFG: 1.32
  - DGSM: 971.5
  - Difference: 215.0
  - Comments: No additional space projected.

8.3 Housekeeping

- Existing CSSM: 36.6
  - EFG: 1.32
  - DGSM: 45.0
  - Projected CSSM: 65.9
  - EFG: 1.32
  - DGSM: 82.3
  - Difference: 16.4
  - Comments: Additional storage space for equipment and supplies (550 CSSM). Any new program space will include appropriately sized housekeeping rooms.

8.4 IMS

- Existing CSSM: 72.7
  - EFG: 1.32
  - DGSM: 94.4
  - Projected CSSM: 72.7
  - EFG: 1.32
  - DGSM: 94.4
  - Difference: 0.0
  - Comments: Current space located on LV 0 (#12150) and LV 1 (#12170 and #12190).

8.5 Laundry/Linen

- Existing CSSM: 156.0
  - EFG: 1.32
  - DGSM: 200.0
  - Projected CSSM: 160.0
  - EFG: 1.32
  - DGSM: 200.0
  - Difference: 0.0
  - Comments: Assumes residential care personal laundry will continue to be done elsewhere and other laundry services will continue to be contracted.

8.6 Plant Services

- Existing CSSM: 216.5
  - EFG: 1.32
  - DGSM: 286.3
  - Projected CSSM: 216.5
  - EFG: 1.32
  - DGSM: 286.3
  - Difference: 0.0
  - Comments: Located on LV 9, an expansion will require additional plant infrastructure space THD at a later date.

8.7 Protection Services

- Existing CSSM: 30.0
  - EFG: 1.32
  - DGSM: 39.0
  - Projected CSSM: 30.0
  - EFG: 1.32
  - DGSM: 39.0
  - Difference: 0.0
  - Comments: Space includes an office on Level 1 (#11101A) and a space on LV 2 (44111).

8.8 Supply Chain & Morgan

- Existing CSSM: 434.0
  - EFG: 1.32
  - DGSM: 539.0
  - Projected CSSM: 272.0
  - EFG: 1.32
  - DGSM: 334.6
  - Difference: 482.4
  - Comments: Current mangue is 21.1 sqm; Supply Chain area reduced in space (185 sqm) to accommodate MDR expansion as per functional plan. Mangue requires relocation - currently must enter the mangue through Biomedical Engineering.

**Subtotal**: 1,761.3

### Total Master Program Areas

- Existing CSSM: 15,613.9
  - EFG: 20,148.7
  - DGSM: 24,182.2
  - Projected CSSM: 31,383.0
  - EFG: 20,148.7
  - DGSM: 31,383.0
  - Difference: 4,960.3
  - Comments: (Note: Residential care projected space = 5,760.0 CSSM)
b. Options for Renewal

At the outset of the psychical planning process there was agreement that the following principles should guide planning choices:

Clinical Drivers

- Mount Saint Joseph Hospital role as a community hospital will continue.
- The Emergency Department will stay within the hospital or in linked new space. It will continue as a 12 hour service.
- Though residential care requires more appropriate space than it currently occupies, community considerations suggest an on-site relocation for the new space is preferred over an off-site location.
- Level 0 offers the best opportunities for growth.

Program Parameters

- Emergency, MDR & Geriatric Psych In-patient are first priorities (respectively) for remedial action.
- 3BC (Acute Medicine) in-patient unit upgrading and surgery OR's are identified as second priorities.
- Consolidation of Ambulatory Care, currently in various locations is operationally needed.

Design Drivers

- Potential uses for the 1944/1955 buildings may be limited by their configuration as well as their condition.
- There is need to improve the clarity of circulation and way-finding both externally and internally. The latter applies in particular to Level 0 and Level 1.
A variety of strategies were discussed at the outset. These ranged from shifts of some components on Level 0 to the south side of the primary east/west corridor to enable phased expansion of the diagnostic and treatment components remaining on its north side - to a major new tower in the north east sector of the site to replace significant elements of the existing hospital.

The latter strategy was ruled out as unfeasible, recognizing that funding approval was unlikely. A strategy providing for a phased series of smaller projects was judged to be more achievable.

Removal of residential care, currently on Level 2, to the convent site (or elsewhere off-site) is key to reorganization of the existing components on Levels 3 & 4 above. It is seen as likely only to be achievable in the 2017-2026 period if the highest priority needs (Emergency and SPD) are to be successfully accomplished first and within the next five years.

The concept illustrated by Figure 1 was therefore developed as the best strategy. It envisages Phase 1 construction of:

- A new Emergency Department adjacent to its current entrance. Access to its existing entry and to Surgical Daycare would be maintained until the new department is completed.
- New space for MDR adjacent to its current location.

This will maintain critical adjacencies with Medical Imaging and Operating/PACU and set the stage for relocation of the main entrance and consolidation of Ambulatory Clinics in due course.

An option with the new Emergency Department would be to provide parking space on its roof to compensate for spaces lost due to the increased building footprint.
Figure 2 illustrates potential future expansion of the hospital wings on the indicated levels to accommodate the functional program requirements as currently proposed or as needs may evolve in due course.

While the expansion shown for the west and centre wings are feasible, the east wing expansion likely offers the most benefit due to its proximity to the 1972/93 buildings in-patient levels.

The centre wing expansion would be limited to Level 2 unless the new ICU on Level 3 is relocated to allow access to expansion space on Level 3 (as well as expansion space on Level 4 beyond the existing building perimeter).

Expansion of the west wing is less favored due to its relative distance from the newer in-patient areas and its age related considerations.
Proposed Option A

A proposed Option A as illustrated on pages 41-47 was developed. It envisages a 3 phased achievement based upon the priorities of needed improvements, best current practice spatial standards / departmental inter-relationships and functional practicalities to implement the improvements. It provides a total of 125 beds.

Phase 1: 1-5 Years

Due to the expanded floor areas required by the highest priority components and the need to keep them all operational during construction a first phase to construct a new Emergency Department outside and adjacent to its current footprint is proposed. This will the stage for a decanting process to facilitate redevelopment and expansion of MDR, Medical Imaging, and Surgery, while maintaining their operational needs and their critical adjacencies. Though the existing Material Management (Supply Chain) area is larger than its projected need it is provided for in new below grade space adjacent to its current location which maintains its current proximity to the loading dock. This allows the expansion needs of MDR & Surgery to be accomplished. Additional parking spaces to replace those lost because of the new Emergency Department and the overall floor area increase it incurs could be accommodated on its roof.

Phase 2: 6-10 years

A solution for the third priority: Geriatric Psych In-patient Unit (1 South) currently located on Level 1 of the 1976 building would be to relocate it to Level 2 once that space is vacated by residential care. In that location, its projected substantial expansion needs could be accommodated and it would have a better relationship to other hospital components. Relocation of Geriatric Psych. offers an opportunity to consolidate and improve access to Ambulatory Care. Its clinics which currently are spread over Level 0, Level 1 and Level 3 could be consolidated into one location close to a new main public entrance. This is not achievable near the current primary public entrance on Level 0 due to lack of space. Development of a new primary public entrance on Level 1 would provide convenient patient access to the existing Ophthalmology Clinic, consolidated and relocated multi-purpose Ambulatory clinics and a potentially relocated Surgical Day Care / Endoscopy component also in close proximity.

These Phase 2 opportunities are dependent upon relocation of Residential Care. A potential way to achieve that without substantial capital cost would be to seek private interest in constructing a larger development on the Convent site that would incorporate the residential space needs on a lease basis. Such a development could contain street level commercial and upper private residential units. It could also provide for the hospital parking needs arising from other increases to floor area as well as replacement of existing car spaces lost by new construction.

Such a development would involve a rezoning negotiation with the City and to be successful strong community support would be necessary. Phase 2 may also address smaller Acute Care redevelopment or expansion needs as determined on a priority basis, an example might be the addition of Level 4 on the north wing of the 1976 building.

Phase 3: 10+ years

This phase will address Acute Care growth needs as determined closer to that time. It could involve extension to one or more of the existing wings of the hospital as illustrated.

The key organization of Option A is:

Level -1:
• No Changes

Level 0:
• New Emergency Department constructed outside and adjacent to its current footprint
• New Supply Chain, Morgue, Housekeeping space constructed
• Expanded MDR in existing Supply Chain space
• Expanded Imaging, Operating Room/PACU, ECT in vacated emergency space
• New Rapid Access Breast Clinic Construction

Level 1:
• Surgical Day Care / Endoscopy in vacated Geriatric Psych
• New Main Entrance, Admitting, Waiting
• All multi-purpose Ambulatory Clinics including Cardiology

Level 2:
• Expanded Psych IPU (30 Beds) and Geriatric Ambulatory Clinics when residential vacated
• Professional Practice and Education
• New large meeting room

Level 3:
• In-patient Acute Medicine Unit - 35 Beds
• Existing ICU expanded to 6 beds
• Health Information management

Level 4:
• Inpatient Geriatric Medicine Unit (30 Beds) including north wing infill expansion
• Inpatient Surgical Unit (16 Beds)
• Inpatient Acute Medicine Unit (8 Beds)
Proposed Use Floor Plans

Option A

Level 2

1:600
Proposed Use Floor Plans  **Option A**  
Level 4  
1:600
Options B

A subsequent approach based on minimizing need for construction of additional building footprint (except for a new emergency department) was explored. It resulted in Options B illustrated on pages 49-54.

This option envisages a phased achievement similar to Option A. That:

- Aims to accommodate the in-patient components within the 1976/93 wings to the fullest extent possible.
- It renovates the Geriatric Psychiatric 1 South component in its existing Level 1 location with a 26 bed total due to space constraints. To meet the programmed total of 30 beds, a further 4 beds are provided in the Geriatric Medicine Unit on Level 3.
- Maintains the operating room/PAR, surgical daycare, MDR/SPD and supply chain components within the Level 0 existing footprint.
- Expands ambulatory care on Level 3, to include the Geriatric Psych OPD component, the Rapid Access Breast clinic and Respiratory Services. Ophthalmology to remain in existing location on Level 1.
- Construct a new entry addition at Level 1 with Material management below on Level 0.
- Develop a new MDR in former Material Management space.
- Expand OR/PACU into former ED/MDR space.
- Retain SDC in its existing location - expanding as required as part of the OR/PACU renovation.

It was accepted that this approach may necessitate some reduction of ideal spatial standards and/or departmental inter relationships in the interest of achieving approvals to proceed with the desired improvements. Detailed considerations included:

- Provision of 34% semi private and 66% private rooms. (Versus 100% private rooms in Option A.) Four bed rooms are not to be retained regardless.
- A reduction of existing Geriatric Psych in-patient day space by consolidation of dining, conference, activation and PT/OT functions into one multi-purpose room. This suggested due to observed low usage of the current generous individual rooms serving those functions.
- Replacement of Level 0 space currently occupied by staff lockers/washrooms with Supply Chain and Morgue functions. For convenience and better security locker/washroom provisions are better accommodated in close proximity to the staff in the individual areas of the hospital. It is assumed that the adjacent Laundry on Level 0 will be required at least until the Residential Care unit on Level 2 is relocated on site or elsewhere.

Please see page 55 for an analysis of the pro's and con's of each Option.

The key organization of Options B is:

Level -1:
- No changes

Level 0:
- Differs from Option A only in respect of relocation of the Rapid Access Breast clinic and Respiratory Services to level 3 and a smaller new construction area for Supply Chain.

Level 1:
- Geriatric Psychiatry IPU (26 Beds) retained in current location with Ambulatory Clinic and Administration relocated to Level 3.
- Harvest Rooms A and B relocated from Level 3.
- Relocated physician facilities to provide with expanded space, vacated space for volunteer resources.

Level 2:
- Inpatient Acute Medicine Unit - 43 Beds

Level 3:
- Inpatient Surgical Unit - 25 Beds
- Existing ICU Expanded to 6 Beds
- All Ambulatory Care Clinics including Geriatric Ambulatory Clinic and Cardiology

Level 4:
- Inpatient Geriatric Medicine Unit to accommodate 34 bed total (30 Geriatric and 4 Geriatric Psychiatry) - requires north wing roof infill expansion.
- Professional practice and education, new large meeting room and physicians on-call in the 1944 Building

Total Beds Range 128 to 134
Proposed Use Floor Plans  Option B
Level 2

LEGEND
- Medicine IPU
- Plant Services

1:600
Proposed Use Floor Plans  Option B
Level 3

1:600
### Comparison of Proposed Options

<table>
<thead>
<tr>
<th>Option A</th>
<th>Pro</th>
<th>Con</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New Emergency and Supply Chain space enables least operational impact on adjacent functions during construction.</td>
<td>1. Cost of new space and additional parking required due to increased building footprint/floor area.</td>
<td>1. Cost of new space and additional parking required due to increased building footprint/floor area.</td>
</tr>
<tr>
<td>2. Consolidation of Ambulatory Care with new public entrance on Level 1 offers ideal convenience.</td>
<td>2. Dependent upon relocation of residential care from Level 2 and Geriatric Psych / south from its existing location.</td>
<td>2. Geriatric Psych IPU remains on Level 1 and not dependent upon relocation of Level 2 existing residential.</td>
</tr>
<tr>
<td>4. Relocation of Geriatric Psych to Level 2 avoids operational factors during renovations if it remained in its current location.</td>
<td>4. Cost of new space and increased building footprint/floor area.</td>
<td>4. Space available on Level 3 for Surgical IPU will allow more beds than 16 projected: Range 19-25.</td>
</tr>
<tr>
<td>5. Larger than program area for Operating Rm / PACU offers more flexibility for future changes and minimizes impact during construction progress.</td>
<td>5. Cost of new space and increased building footprint/floor area.</td>
<td>5. In-fill of north wing roof on Level 4 enables Geriatric Medicine IPU to incorporate 4 bed shortfall of Geriatric Psychiatry bed total on Level 1 into a more compact IPU of 34 beds. Also retains professional practice/education and new large meeting room on this level within the 1944 building.</td>
</tr>
<tr>
<td>6. New space for breast clinic on Level 0 offers better proximity to Medical Imaging.</td>
<td>6. Cost of new space and additional parking required due to increased building footprint/floor area. Separation from other Ambulatory Care Clinics.</td>
<td>6. New Level 0 space under Level 1 Main Entry Lobby for Supply Chain facilitates redevelopment process for MDR and reduces need for concurrent relocation of staff facilities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Option B</th>
<th>Pro</th>
<th>Con</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New Emergency and Supply Chain Space enables least operational impact on adjacent functions during construction.</td>
<td>1. Cost of new space and additional parking required due to increased building footprint/floor area. Less than Option A but Operating Room/PACU and Daycare Surgery is less than program area.</td>
<td>1. Cost of new space and additional parking required due to increased building footprint/floor area.</td>
</tr>
<tr>
<td>2. Geriatric Psych IPU remains on Level 1 and not dependent upon relocation of Level 2 existing residential.</td>
<td>2. Operational factors to be considered during renovations. Bed total(on Level 1) reduced from 30 to 26 and less day space due to limited available floor area.</td>
<td>2. Not near Medical Imaging.</td>
</tr>
<tr>
<td>4. Space available on Level 3 for Surgical IPU will allow more beds than 16 projected: Range 19-25.</td>
<td>4.</td>
<td></td>
</tr>
<tr>
<td>5. In-fill of north wing roof on Level 4 enables Geriatric Medicine IPU to incorporate 4 bed shortfall of Geriatric Psychiatry bed total on Level 1 into a more compact IPU of 34 beds. Also retains professional practice/education and new large meeting room on this level within the 1944 building.</td>
<td>5. Cost of new space and additional parking required due to increased building footprint/floor area.</td>
<td></td>
</tr>
<tr>
<td>6. New Level 0 space under Level 1 Main Entry Lobby for Supply Chain facilitates redevelopment process for MDR and reduces need for concurrent relocation of staff facilities.</td>
<td>6. Cost of new space and increased building footprint/floor area.</td>
<td></td>
</tr>
</tbody>
</table>
c. Costing and Construction Schedules

These tables summarize the phasing and Class D costing for Options A and B respectively. They do not include costs for relocation of the Residential Care Unit currently on Level 2 of the existing building.

- A 0-1 year period for development and approval of an overall Business Case, a 1-5 year period for Phase 1, a 6-10 year period for Phase 2 and 10 years+ for Phase 3 is assumed.

- The remedial projects are ordered by priority with their individual construction & project cost estimates (based on current costs) indicated. For each phase a consolidated additional amount is also shown to cover escalation to start of construction, related building infrastructure improvements, lower priority projects, design and engineering fees, equipment costs, etc as in footnote below. This consolidated amount will need to be apportioned to arrive at total project cost estimates for individual remedial projects.

### Option A Phasing

<table>
<thead>
<tr>
<th>Project</th>
<th>Priority</th>
<th>Construction Cost</th>
<th>Project Cost Estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Emergency Department Space</td>
<td>Critical</td>
<td>$7,700,000</td>
<td>$12,010,400</td>
</tr>
<tr>
<td>New ROT Space</td>
<td>Critical</td>
<td>$2,090,000</td>
<td>$4,010,400</td>
</tr>
<tr>
<td>Supply Chain</td>
<td>Medium</td>
<td>$780,000</td>
<td>$1,263,000 + $1,050,000 base bid + 5% review</td>
</tr>
<tr>
<td>Remedial Infrastructure and Other Costs*</td>
<td>$6,800,000</td>
<td>$6,214,000 + $2,000,000 base bid/plus 5% review</td>
<td></td>
</tr>
</tbody>
</table>

**PHASE 1 TOTAL:** $25,398,800

**PHASE 2 TOTAL:** $32,077,200

**PHASE 3 TOTAL:** $46,247,600

### Option B Phasing

<table>
<thead>
<tr>
<th>Project</th>
<th>Priority</th>
<th>Project Cost</th>
<th>Project Cost Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Emergency Department Space</td>
<td>Critical</td>
<td>$7,700,000</td>
<td>$13,010,400</td>
</tr>
<tr>
<td>New ROT Space</td>
<td>Critical</td>
<td>$2,090,000</td>
<td>$4,010,400</td>
</tr>
<tr>
<td>Remedial Medical (S) + Supply Chain</td>
<td>Medium</td>
<td>$780,000</td>
<td>$1,263,000 + $2,000,000 base bid/plus 5% review</td>
</tr>
<tr>
<td>Remedial Infrastructure and Other Costs*</td>
<td>$5,810,000</td>
<td>$5,582,000 + $2,000,000 base bid/plus 5% review</td>
<td></td>
</tr>
</tbody>
</table>

**PHASE 1 TOTAL:** $30,855,600

**PHASE 2 TOTAL:** $46,247,600

**PHASE 3 TOTAL:** $59,288,200

### Notes

- Includes apportioned costs for:
  - Related building upgrades required i.e. seismic, hazardous materials, building systems,
  - Required work to related common areas.
  - Change Orders during construction.
  - Design and engineering fees
  - Soft costs and project administration
  - Payable HST
  - Escalation to start of construction
  - Design contingency
  - Equipment allowances

* Includes apportioned costs for:
  - Related building upgrades required i.e. seismic, hazardous materials, building systems,
  - Required work to related common areas.
  - Change Orders during construction.
  - Design and engineering fees
  - Soft costs and project administration
  - Payable HST
  - Escalation to start of construction
  - Design contingency
  - Equipment allowances

June 5, 2012
Note:

- This schedule for accomplishment of Option B over the assumed periods for Phases 1, 2 and 3 does not provide time allowances for preparation and approval of the business case for individual projects. The high level phasing time frames shown reflect priorities and a high level notional financing plan. The project schedules may change as financing and approval conditions change.
- It recognizes that in some cases a construction start on certain projects will be dependent upon completion of construction of a prior project.
- As shown the construction of many projects overlaps with others and if individually tendered could result in several general contractors on the hospital site concurrently. This may not be of concern where projects are not located in close proximity to each other however where they are in close proximity consolidation may be advisable to avoid potential responsibility disputes as well as for cost advantages.
- When the scope and timing of the project is more developed a construction management approach to implementing the work may offer further cost and operational advantages.

### MOUNT SAINT JOSEPH HOSPITAL - MASTER CONCEPT PLAN SCHEDULE (post project approval) - OPTION "B"

| Phase | Project Cost | Project Description | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-------|--------------|---------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|----|----|----|----|----|----|----|----|----|----|----|
| 1.1   | $1,504,800   | Auxiliary Clinics  | 6      | 9      |        |        |        |        |        |        |        |         |    |    |    |    |    |    |    |    |    |    |
| 1.2   | $380,000     | Radiology Expansion | 6      | 4      |        |        |        |        |        |        |        |         |    |    |    |    |    |    |    |    |    |    |
| 1.3   | $577,400     | Housekeeping Rooms | 3      | 3      |        |        |        |        |        |        |        |         |    |    |    |    |    |    |    |    |    |    |
| 3.1   | $229,000     | Other              | 6      | 9      |        |        |        |        |        |        |        |         |    |    |    |    |    |    |    |    |    |    |

**Legend:**
- Design/CD
- Construction