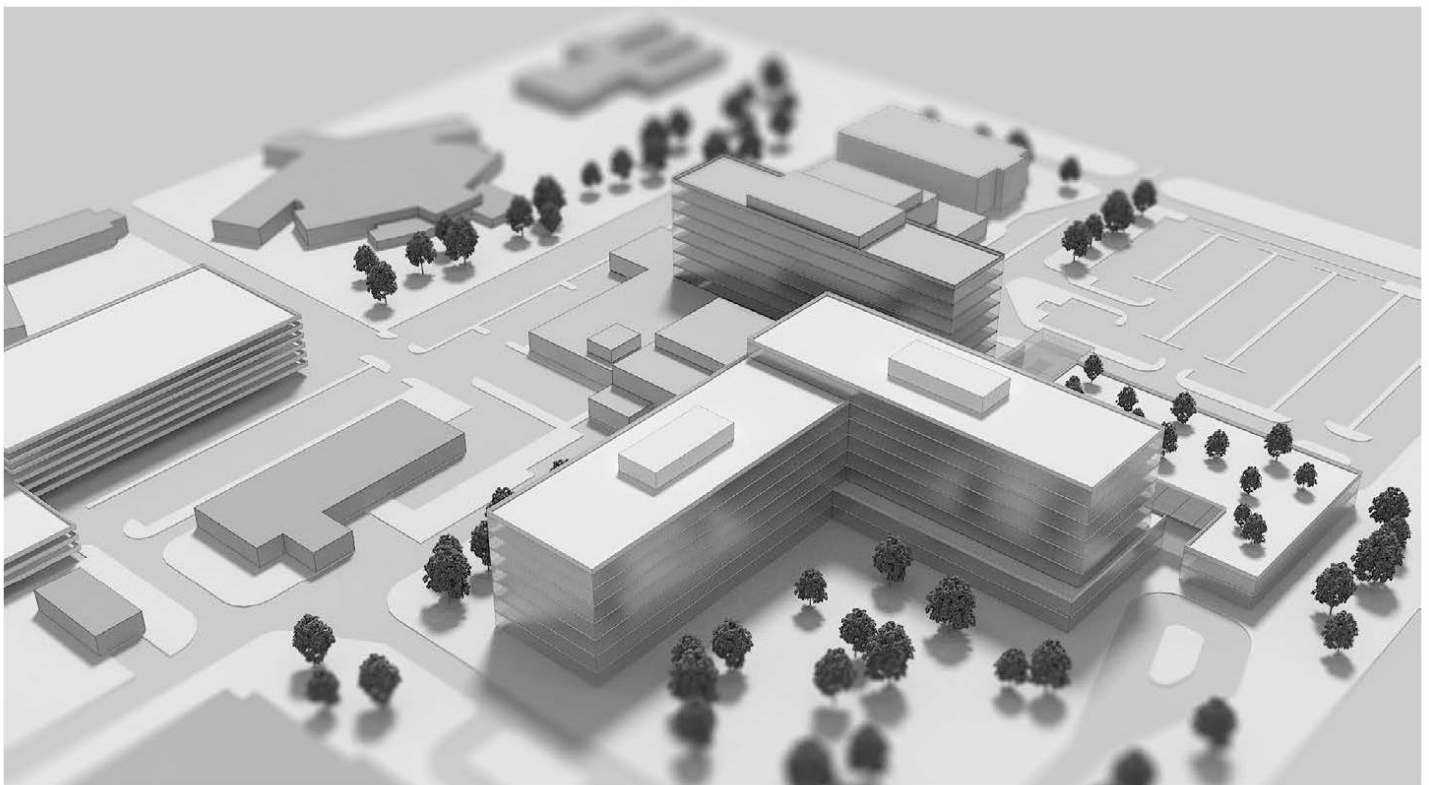


# Covenant Health

## Capital Priorities

December 8, 2016



2016 Visual Depiction of MCH Concept (view from the NW). See Appendix D for more views.



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## Highlights

- Covenant Health is a major partner in the integrated provincial health system, with a significant footprint, extending across the continuum of care from birth to end of life, and plays a leadership role in shaping and delivering health services, supporting Alberta Health Services and the Government in achieving their goals.
- With significant health care infrastructure deficits in Alberta. Covenant Health has identified practical solutions in light of the current economic challenges in Alberta
- This plan includes short and medium term solutions, while ensuring investments made today contribute to long-term goals.
- The Misericordia Community Hospitals (MCH) and Grey Nuns Community Hospital (GNCH) are key to Edmonton's health care delivery, accounting for 30% of the acute care beds in the capital area.
- The failing infrastructure at the MCH and the limited capacity of the GNCH has severely hampered the ability of these hospitals to meet the challenge of Edmonton's rapid growth in the South and West and the at-risk neighbourhoods they serve.
- Incremental capital investment in the ideally located MCH and GNCH is the best solution to address the urgent needs of Edmonton's population south of the North Saskatchewan River, which represents the majority of Edmonton's fastest growing neighbourhoods.
- Building a new hospital for Edmonton is not economically feasible at this time, and is not required.
- The MCH and GNCH are uniquely positioned to develop and sustain modern campuses of care and transformative models for integrated community care to better serve young families, seniors, and those with chronic disease and mental illness.
- The multi-year, phased approach includes leveraging existing capital assets, developing new infrastructure where needed and working with community providers to develop integrated community care centers that will address needs of people close to home, reduce the need for admission, and support safe patient transition back to home.
- The MCH plan includes immediate construction of a new, expanded ED, followed by a new medical/surgery bed tower reflecting best practice care environments and flexible design; consolidation of programs and repurposing of space for mental health and restorative care; a new community care centre; and redevelopment of the existing space.
- The GNCH includes moving services to a new community care centre close to the hospital followed by redevelopment of vacated space, expansion of the ED; a new Vascular surgery suite, and new bed tower to address capacity.
- Other proposed urban long-term capital investments include modernization and replacement beds at the Edmonton General Continuing Care Centre and Youville Home.
- Other non-urban mid- to long-term proposed capital investments include redevelopment at St. Joseph's Hospital in Vegreville, enhancements of the Bonnyville Health Centre and St. Mary's Hospital ED in Camrose, new seniors' capacity in Trochu and repairs to Our Lady of the Rosary Hospital in Castor.

# Executive Summary

## Overview

With significant health care infrastructure deficits in Alberta. Covenant Health has been asked to identify practical solutions to help address this issue, taking into account the current economic challenges in Alberta. This document describes proposed solutions to infrastructure challenges that can be implemented in the short and medium term, while ensuring investments made today contribute to long-term goals.

## Covenant Health

As Canada's largest Catholic provider of health care, Covenant Health serves as a key partner in Alberta's seamless health system, building on a 150-year legacy of quality, caring for the whole person—body, mind and spirit. At the heart of Catholic health care is a deep respect for the intrinsic value and dignity of every human being and an unwavering commitment to serving all people, from all backgrounds and faiths—with particular emphasis on meeting the needs of vulnerable populations such as seniors, those with addiction and mental illness, persons undergoing palliative and end of life care, and rural populations.

Today, Covenant Health plays a leadership role in shaping and delivering health services, supporting Alberta Health Services and the Government of Alberta in achieving their goals. With a total budget of \$855 million our facilities and programs have a significant footprint in Alberta, extending across the continuum of care from birth to end of life. Covenant Health is a major partner in the integrated provincial health system, and the Grey Nuns Community Hospital and Misericordia Community Hospitals are key to Edmonton's health care delivery, accounting for 30% of the acute care beds in the capital area.

## Framework for Edmonton Zone Planning

This document proposes incrementally investing in the GNCH and MCH, while responding to the needs of the population they serve with new models of care that leverage the tremendous assets already in place. Building a new hospital for this sector is not economically feasible at this time, and does not leverage the already existing campus of care. Incremental capital investment in the MCH and GNCH is the best solution to addressing the urgent need for more capacity in south sector.

Edmonton's population south of the North Saskatchewan River accounts for the majority of Edmonton's fastest growing neighbourhoods. The City of Edmonton Growth Study (2014) showed a trend of rapid population growth--45 per cent of the added population occurred within two southern wards, with more than three times the amount of growth as in any of the City's other wards and significant growth projected into the future. Three quarters of Edmonton's growth between 2012 and 2014 occurred south of the North Saskatchewan River and in the west of the city.

The MCH and GNCH anchor this growing portion of the city with strong community and primary care networks with easy access to transportation corridors, with reach from most parts of South Edmonton in 15 minutes by car.

Over the decades, the MCH and GNCH have strengthened health care delivery through established, highly collaborative relationships with health service providers and community. The development of integrated Community Health Centers designed to

address needs of people close to home is a core element of this plan. This includes moving services out of hospitals and working with existing providers to enhance access to a range of outpatient programs and services, reduce the need for admission, and support safe patient transition back to home.

Both hospitals serve a number of neighbourhoods—particularly in West Edmonton—that face significant socio-economic challenges with higher rates of unemployment, lower income levels and higher rates of high school incompleteness. These communities are at risk for lower life expectancy, higher suicide rates, and higher rates of some diseases. They tend to be less mobile, without access to transportation and higher users of hospital services.

Engaging PCNs and existing community partners and providers to determine the most appropriate investments in existing facilities and the development of new community care centres is a powerful opportunity to transform the way we provide care—to create a health system that is built around patient and community needs and to use hospitals in the best possible way.

### **Misericordia Community Hospital (MCH)**

The MCH is uniquely positioned to develop and sustain transformative models for integrated community care to better serve young families, seniors, and those with chronic disease and mental illness. Apart from its aging infrastructure and outdated functional design that does not meet current care standards, the MCH also experiences volume challenges with its emergency department. Originally designed to accommodate 25,000 visits per year it now sees double this number, with 51,214 visits in 2015/16. On average, the MCH sees a 65-74% occupancy rate of stretchers in the emergency department occupied by emergency inpatients (EIPs) awaiting admission.

2030 Planning for the Edmonton Zone identified the MCH as a top capital need. A complete rebuild for the MCH was identified as the preferred option through master planning (carried out in concert with the 2030 planning process). The current fiscal realities, as well as emerging shifts in the model of care, make an incremental approach to site redevelopment favorable.

The MCH vision is for an innovative campus of care, anchoring a strong network of fully accessible social and health services, and designed specifically from a care journey viewpoint to respond to the changing needs of a diverse patient population—especially those most vulnerable. This vision supports enhanced restorative care in the community, seamless transitions between hospital and community, and efficient access to quality, specialist services for the Edmonton Zone, Northern Alberta and Western Canada.

A multi-year, phased approach to deliver a fully modern campus of care capable of meeting the community needs now and into the future would be phased to include:

- *Phase 1 (Immediate)* – New Emergency Department on the current MCH campus, consistent with previous planning to create a high quality and sustainable space without disruption during the construction. This phase would also include creating necessary adjacent space on the second floor of the emergency department for complimentary services as well available decant space, building a parkade, and planning for vehicle and LRT site access given city plans for public transit. Capital costs will be confirmed during detailed design.
- *Phase 2 (Short Term)*: Build a new bed tower with medical/surgical beds to meet the current needs and opportunities for future expansion. Modeling recent

- evidence on best practices in hospital design and construction, build vertically with additional floors finished as the population grows. In the short-term, use the space for medical/surgical beds built to current standards of optimal service efficiency and patient care. Capital costs will be confirmed during detailed design.
- *Phase 3-a (Medium Term)*: Consolidate and enhance geriatric and adult mental health capacity in the existing building while re-purposing Villa Caritas for restorative care in keeping with the original design for the Villa Caritas building. Develop a Community Health Centre in the expanding south west corridor in partnership with the communities being served and the primary care network (PCN). Capital costs will be confirmed during detailed design.
  - *Phase 3-b (Long Term)*: Redevelop the remaining existing MCH for remaining services, including: laboratory, diagnostic imaging, pharmacy, intensive care cardiac care, and operating rooms. Capital costs will be confirmed during detailed design.

### **Grey Nuns Community Hospital (GNCH)**

The GNCH provides wide service coverage and leadership in provision of obstetrical, psychiatric, tertiary palliative care, and vascular surgery. Service demand pressures at the GNCH far exceed capacity on a regular basis, with a 15% increase in visits to the ED in the past five years. The site consistently has the highest number of emergency inpatients (EIPs) in the province. Originally designed to accommodate 23,000 visits per year, the ED had 70,412 visits in 2015-16.

A multi-year, phased approach for the ongoing investment in the GNCH includes:

- *Phase 1 (Urgent)* – Develop a Community Health Centre in close proximity to the hospital, leveraging the strong current partnership with the Southside PCN to address emergency demands. This would utilize existing, available lease space to decant some outpatient services from the hospital. Capital Cost Estimate: \$2.5 million
- *Phase 2 (Short-term)* – Expand ED capacity and footprint to address urgent bed pressures, using Calgary’s Peter Lougheed Center (PLC) design—which included future capacity--to reduce overall project costs. Capital Cost Estimate: \$15.5 million
- *Phase 3 (Short Term)*: Develop Vascular Surgery Integrated Operating Theatres to address existing functional and operational deficiencies to improve access, safety and quality of care to meet current standards for minimally invasive procedures. Capital costs will be confirmed during detailed design.
- *Phase 4 (Long Term)*: Build a new bed tower to address growing populations. Capital costs will be confirmed during detailed design

### **Urban Long Term Care Capital Investments**

The following capital projects are planned for the mid-term (3-5 years) and long-term (6-8 years) as outlined in the document:

- ***Edmonton General Continuing Care Centre*** was previously slated for decommissioning resulting in minimal investment, leaving \$70 million in maintenance required in the next five years. A decision is needed regarding modernization or replacement of the 550 long term care beds. Estimated Capital Cost: \$135 million (for replacement of 550 beds)

- ***Youville Home in St. Albert*** was slated to be replaced, but due to growing bed pressures this project was deferred and instead investments were made to extend the buildings life in 2006 for 10 years (now expired). The building must now be replaced. Estimated Capital Cost: \$26.5 Million (for replacement of 108 beds)

### **Non-Urban Capital Investments**

The following capital projects are planned for the mid-term (3-5 years) and long-term (6-8 years):

- ***St. Joseph's Hospital in Vegreville*** requires replacement to address aging infrastructure at the end of its life cycle to be able to incorporate identified service enhancements to meet the needs of Vegreville and surrounding communities. Estimated Capital Cost: \$50 Million
- ***Bonnyville Health Centre*** requires changes to optimize flow of work through the Emergency Department. Estimated Capital Cost: \$3.6 Million
- ***St. Mary's Emergency Department in Camrose*** presents barriers to flow and safety issues. The proposed phased approach has already been accepted. Estimated Capital Cost: \$4 Million
- ***St. Mary's Continuing Care Centre in Trochu*** provides seniors within the area the opportunity to age in place with estimated need for 45 bed replacement. Capital costs will be confirmed during detailed design.
- ***Our Lady of the Rosary Hospital in Castor*** is in poor condition and requires repairs in keeping with regional service enhancements as determined by Central Zone planning. Capital costs will be confirmed during detailed design.



# Covenant Health Capital Priorities

## 2016-2026

### Introduction

The following capital proposals reflect Covenant's core values to develop care experiences designed around the patient journey, especially those most vulnerable. Facilities must be tailor-made to serve highly diverse patient populations and flexible enough to respond to changing needs effectively and efficiently. Patient flows benefit from processes designed from patients' viewpoints – particular the elderly and those with mental health challenges. Building on leading work in serving vulnerable populations with dignity and respect, Covenant Health is well-positioned to pioneer care environments designed to promote optimum healing and wellness for those most in need: those with mental illness, those needing restorative care, those needing palliative care, rural health services, and seniors.

There is a significant health care infrastructure deficit in Edmonton at the present time, which is forecast to become more pronounced as the city's population continues to expand and age. In addition to the need for timely health infrastructure maintenance, replacement, and expansion, there is growing recognition of the need for a change in the way care is provided. Greater emphasis is needed on preventative and restorative care to ensure enhanced patient outcomes, as well as health system sustainability.

The South and West Sector of the Edmonton Zone is currently served by the Walter Mackenzie Health Sciences Centre as a central hub for quaternary and high-end tertiary care, with the Misericordia Community Hospital (MCH) providing primary, secondary and some tertiary care to the southwest and west, and the Grey Nuns Community Hospital (GNCH) providing primary, secondary and some tertiary care to the southeast and south. Facilities in Leduc, Stony Plain and Devon also play a role in meeting the needs for this catchment.

The South Sector has been and will continue to be the fastest growing area of Edmonton, and is expected to have some of the largest growth in Edmonton projected to the year 2025 (see Appendix A). By 2050, Edmonton's population is forecast to be 2.1 million – a 136 per cent increase over today. The City of Edmonton Growth Study (2014) showed a trend of rapid population growth, with significant growth projected into the future. Edmonton's population grew by 7.4% between 2012-2014. Notably, 45 per cent of the added population occurred within two southern wards – with more than three times the amount of growth as in any of the City's other wards. Three quarters of Edmonton's growth between 2012 and 2014 occurred south of the North Saskatchewan River and in the west of the city. In addition to rapid growth, Edmonton's population is aging. By 2030, a 121 per cent increase is projected in those aged 65 and older<sup>1</sup>.

Both Covenant Health hospitals in this area, the MCH and the GNCH face significant capacity pressures, and the MCH requires major infrastructure renewal (see Appendix B and Appendix C). Enhancing the MCH and GNCH in West and South Edmonton

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<sup>1</sup> Alberta Health Services, "Health care planning for today, and the future – Edmonton Zone 2030 plan" (December 2014), <http://www.albertahealthservices.ca/Blogs/BTH/Posting239.aspx>

presents a tremendous opportunity to rethink and transform the approach to hospital care in Edmonton, and Alberta.

Covenant believes incrementally investing in current facilities, while simultaneously developing integrated community care centres, will best address the needs of the populations being served. This would provide the most efficient model of delivery to sustain and further foster the connection of these sites to vulnerable populations being served in proximity to the existing facilities, and preserve existing care networks created by the location of physician practices near Covenant Health sites.

In the rural and long term care environments that Covenant serves there are also infrastructure needs that must be addressed although they are not yet at the same level of urgency as the MCH and GNCH at this time. These include investments in Bonnyville, Vegreville, and Camrose in the acute care sector in addition to Trochu, Castor, Youville and the Edmonton General Continuing Care.

## Who We Are

### a. A LEGACY OF SERVICE

As Canada's largest Catholic provider of health care, Covenant Health positively influences the health of Albertans and adds value as a key partner in Alberta's seamless health system through our rich history and current role, breadth of programs and services, high quality and performance, and the strength of our people.

Covenant Health builds on a 150-year legacy of our founding congregations of Sisters. These courageous women laid the foundation of Alberta's healthcare system, responding to the everyday needs of communities and the unmet needs of the sick and dying with the highest standards of quality, caring for the whole person—body, mind and spirit.

At the heart of Catholic health care is a deep respect for the intrinsic value and dignity of every human being and an unwavering commitment to serving all people, from all backgrounds and faiths—with particular emphasis on meeting the needs of vulnerable populations such as seniors, those with addiction and mental illness, persons undergoing palliative and end of life care, and rural populations.

We take a holistic and compassionate approach, recognizing the whole person in community, the fundamental link between spirituality and healing, the diverse cultural and spiritual needs of those we serve, and that health and well-being is more than the absence of disease.



#### MISSION

We are called to continue the healing ministry of Jesus by serving with compassion, upholding the sacredness of life in all stages, and caring for the whole person—body, mind and soul.

#### VALUES

As a Catholic organization, we are committed to serving people of all faiths, cultures and circumstances according to our values: Compassion, Respect, Collaboration, Social Justice, Integrity, Stewardship.

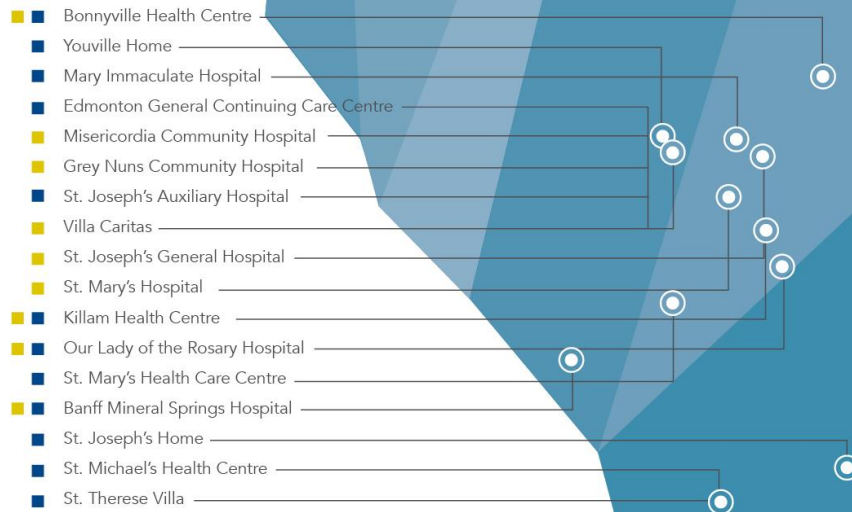
#### VISION

Inspired by our mission of service, we will be leaders and partners in transforming health care and creating vibrant communities of health and healing.

**977**  
ACUTE  
CARE BEDS

**1,512**  
CONTINUING  
CARE BEDS

Covenant Health provides acute care and continuing care at 17 facilities in 12 communities across the province.



That spirit anchors a vibrant corporate culture of compassion and innovation named one of Canada's 10 Most Admired Cultures for 2014, that provides an opportunity for people to grow, flourish and live their calling each day in support of a shared mission.

### b. WHO WE ARE TODAY

Today, Covenant Health plays a leadership role in shaping and delivering health services, supporting Alberta Health Services and the Government of Alberta in achieving their goals. With a total budget of \$855 million our facilities and programs have a significant footprint that extends across the continuum of care and the province.

Our team of over 15,000 staff, physicians and volunteers provide extensive core services, as well as specialty services to meet unmet needs in 12 communities. We work collaboratively to meet the healthcare needs of people across Alberta based on health needs and stakeholder engagement.

Guided by our mission and commitment to exceptional care, Covenant Health finds opportunities and innovations to address unique health needs. We are a trusted partner in leading programs at zone and provincial levels that have a significant health impact for Albertans.

## Covenant Health Overview

**11,120**

EMPLOYEES

**2,536**

VOLUNTEERS

**195,689**

VOLUNTEER HOURS

**812**

PRIME PHYSICIANS

**530,566**

RESIDENT DAYS

**324,789**

ACUTE PATIENT DAYS

**195,649**

EMERGENCY VISITS

**417,083**

OUTPATIENT VISITS

**44,904**

SURGERY CASES

**9,867**

DELIVERIES

**260,064**

DIAGNOSTIC IMAGING EXAMS

**3,236,225**

LABORATORY TESTS

**1,314**

ADDITIONAL PHYSICIANS\*

\*These physicians also have privileges to care for patients and residents in our facilities

**1/10** 

EMERGENCY VISITS IN ALBERTA are to a Covenant Health facility

**1/4** 

PHYSICIANS IN ALBERTA have privileges to provide care at a Covenant Health site

**1/5** 

ALBERTA BABIES ARE BORN at a Covenant Health hospital

**82**

BEDS ACROSS THE PROVINCE providing palliative and end-of-life care

**254**

BEDS ACROSS THE PROVINCE dedicated to caring for those with mental illness

Covenant Health is a major partner in the integrated provincial health system, offering a full continuum of care from birth to end of life. Provincially, 11 per cent of surgical procedures, 10 per cent of all emergency visits, and one in every five births take place in a Covenant Health facility. One in four Alberta physicians have privileges to care for patients and residents at a Covenant Health site.

Covenant Health is aligned with and supports the Government's vision and priorities for the health system. Alberta Health Services (AHS) partners with multiple organizations in a coordinated fashion to implement the direction for health services through the provincial Health Plan. Covenant Health, along with other health services providers, works within that Health Plan, allowing AHS to sustain a comprehensive service delivery model that uses the strengths and skills of each organization to optimize care delivery.

Covenant Health works with AHS in multiple roles, including:

- **Strategic stakeholder** – Contributing as a health system partner in executing the Health Plan for the province. This includes providing input into the overall health trends and needs for Alberta and the zones.
- **Strategic alliance** – Working collaboratively to identify community needs and develop capital master plans that support the delivery of integrated and seamless quality care and community services to patients, clients and their families.
- **Shared services** – Sharing support systems and processes to ensure effective and efficient service delivery. This includes AHS providing capital project management services to Covenant Health.
- **Service provider** – Acting as an independent provider in the competitive environment. As a provider of continuing care services, Covenant Health develops capital plans for expansion of service.

Building on the legacy that the Founding Congregations of Sisters created, Covenant Health operates within the health system under the 1994 Minister's Agreement with the Province, and the Cooperation and Services Agreement with AHS. Additionally, lease agreements are in place between AHS and Covenant Health facilities where ownership has been transferred to the Government. The Sisters, who had built and established many of Covenant Health's facilities, originally held ownership of these facilities. On principles of good faith and due consideration, the Sisters transferred ownership of the health facility assets to the Government in exchange for long term leases.

Quality care is central to our mission of service. Covenant Health programs and services are fully subject to meeting health service delivery standards in the province.

We are accountable for providing services as outlined in the Co-operation and Services Agreement between Covenant Health and AHS. This agreement, finalized in 2010, outlines the delivery of services by Covenant Health, the delivery of shared services by AHS and Covenant Health, and establishes principles and expectations to be followed by both parties.

We are also accountable to meet the requirements of our Catholic sponsors to ensure wise stewardship of our resources, maintain quality of care and uphold our mission and commitment to ethical integrity in all clinical, administrative and business decision-making as model corporate citizens.

### **C. FRAMEWORK FOR PLANNING**

This document proposes incrementally investing in current facilities, while at the same time responding to the needs of the population with new models of care that leverage the tremendous assets already in place.

#### **South and west sector solution**

Edmonton's population south of the North Saskatchewan River accounts for the majority of Edmonton's fastest growing neighbourhoods, with an increase of over 100,000 people predicted for the southwest and southeast by 2018 (Appendix A). The MCH and GNCH anchor this growing portion of the city with strong community and primary care networks. They are located 19 kilometers apart--about 20 minutes driving along Whitemud Drive or 25 minutes driving along the Anthony Henday. With easy access to transportation corridors, these hospitals can be reached from most parts of South Edmonton in 15 minutes by car. Both are located close to public transit hubs, and access will improve in the future as the LRT continues to expand.

Building a new hospital for this sector is not economically feasible at this time, and does not leverage the already existing campus of care. Incremental capital investment in the MCH and GNCH is the best solution to addressing the urgent need for more capacity in south and west sector.

### **Shift to community care**

Capital planning must include a focus on shifting care from facilities to community-based care outside the hospital walls. Over the decades, the MCH and GNCH have strengthened health care delivery through established, highly collaborative relationships with health service providers and community. Administration and physicians work closely with rural and suburban health centres and hospitals to the west and north to ensure effective use of resources and seamless care for patients and residents.

The development of integrated community care centers designed to address needs of people close to home is a core element of this plan. This includes moving services out of hospitals and working with existing providers to enhance access to a range of outpatient programs and services, reduce the need for admission, and support safe patient transition back to home.

Investment in the MCH and GNCH leverages the strong networks of established medical practices and community services in the vicinity of the hospitals, which maximizes physician and community resources, fosters understanding of community needs in hospital planning and strengthens the continuity of care.

### **Designing for patients and communities**

Both hospitals anchor thriving primary care networks serving south and west Edmonton. These physicians are an invaluable resource for enhancing and maintaining community health and wellness—especially among vulnerable populations and in communities with high needs.

Both hospitals serve a number of neighbourhoods—particularly in West Edmonton—that face significant socio-economic challenges with higher rates of unemployment, lower income levels and higher rates of high school incompleteness. These communities are at risk for lower life expectancy, higher suicide rates, and higher rates of some illnesses. They tend to be less mobile, without access to transportation and higher users of hospital services.

Engaging PCNs and existing community partners and providers to determine the most appropriate investments in existing facilities and the development of new community care centres is a powerful opportunity to transform the way we provide care—to create a health system that is built around patient and community needs and to use hospitals in the best possible way.

# Misericordia Community Hospital Proposal

## a. SITE BACKGROUND

The MCH is a full service hospital that serves a large and diverse geographic area, which includes new growing neighbourhoods and established neighbourhoods with high numbers of aging residents and new communities with young families. There are many high-needs communities surrounding the MCH with significant socio-economic challenges and reliant on a range of health and social services.

Deeply-rooted within the community, the MCH has a strong and collaborative relationship with health service providers in rural/suburban regions (i.e. Westview) and with Primary Care Networks (i.e. Edmonton West Primary Care Network) within the zone. This relationship encompasses a variety of interactions, including providing expertise and consultative advice, clinical support, and ongoing work with the Faculty of Medicine, Alberta Health Services, and Alberta Health. The embedded sense of community that defines the MCH has been built up through generations of caring and journeying together with patients and families.

The MCH offers integrated medicine, surgery, psychiatry and obstetrics care; and specialized services in breast surgery/reconstruction, geriatrics and geriatric mental health - being recognized as a hub and service leader in the Edmonton Zone as well as Northern Alberta and Western Canada for many key programs (see Appendix B for details). There is opportunity and energy for these programs to grow and continue to provide care and leadership for generations to come.

Site capacity and infrastructure challenges have been experienced for many years at the 1969 site. The current facility is not designed to provide patient and family-centered care or support efficient care delivery. Staff, physicians and volunteers work tirelessly to ensure the highest quality of care is provided, despite the infrastructure challenges.

Our efforts to mitigate the challenges are limited by the physical design of the building and are an inefficient use of resources that could be better invested in care delivery. The emergency department is a particular pressure point, with current service demand that far outstrips the space available; originally designed to accommodate 25,000 visits per year it saw 51,214 visits in 2015/16. On average, the MCH sees a 65-74% occupancy rate of stretchers in the emergency department occupied by emergency inpatients (EIPs) awaiting admission. Capital renewal for the whole site is urgently needed. (see Appendix B for details).

2030 Planning for the Edmonton Zone identified the MCH, the Royal Alexandra Hospital, and a new hospital for north-east Edmonton as the top capital needs for the zone. A complete rebuild for the MCH was identified as the preferred option through master planning (carried out in concert with the 2030 planning process). However, this is an expensive option requiring significant up-front investment.

The current fiscal realities, as well as emerging shifts in the model of care, make an incremental approach to site redevelopment favorable. The benefits of an incremental redevelopment approach include the following:

- Allow practical and affordable short-term solutions to be identified, advanced and implemented in the context of a long-term vision for the site.
- Respond to the financial realities of Government.

- Optimize the investments already made in the site, including Villa Caritas, and continue to ensure redevelopment of existing space provides quality care environments.
- Allow the greatest needs to be addressed in a timely manner. Specifically, a new emergency department is needed, built to an appropriate size to meet need into the future in a new care environment that is integrated with community services.
- Sustain the current campus of care depended upon by vulnerable populations served at this site.
- Sustain and grow the strong existing clinical and community networks, consisting of a wide range of caregivers and service providers with established roots in the surrounding community.
- Mitigate urgent risks to safe and quality care caused by failing infrastructure.
- Expand ongoing leadership in addiction and mental health, especially geriatric mental health.
- Facilitate growth of restorative care and a shift to community care

## b. PROJECT VISION AND PURPOSE



Capital development of the MCH presents a tremendous opportunity to rethink and transform the approach to hospital care in Edmonton, and Alberta—piloting the very best in design practices, pioneering community and social service integration, elevating patient-centered care, re-imagining environments for growing populations of seniors and those with mental illness, modeling new urban campus of care approaches, with high environmental standards.

The vision for the MCH is for an innovative campus of care, anchoring a strong network of fully accessible social and health services, and designed specifically from a care journey viewpoint to respond to the changing needs of a diverse patient population—especially those most vulnerable. This vision supports enhanced restorative care in the community, seamless transitions between hospital and community, and efficient access



to quality, specialist services for the Edmonton Zone, Northern Alberta and Western Canada (see Appendix B for detailed description).

The purpose of this proposal is to provide a multi-year, phased approach to deliver a fully modern campus of care capable of meeting the community needs now and into the future and to ensure:

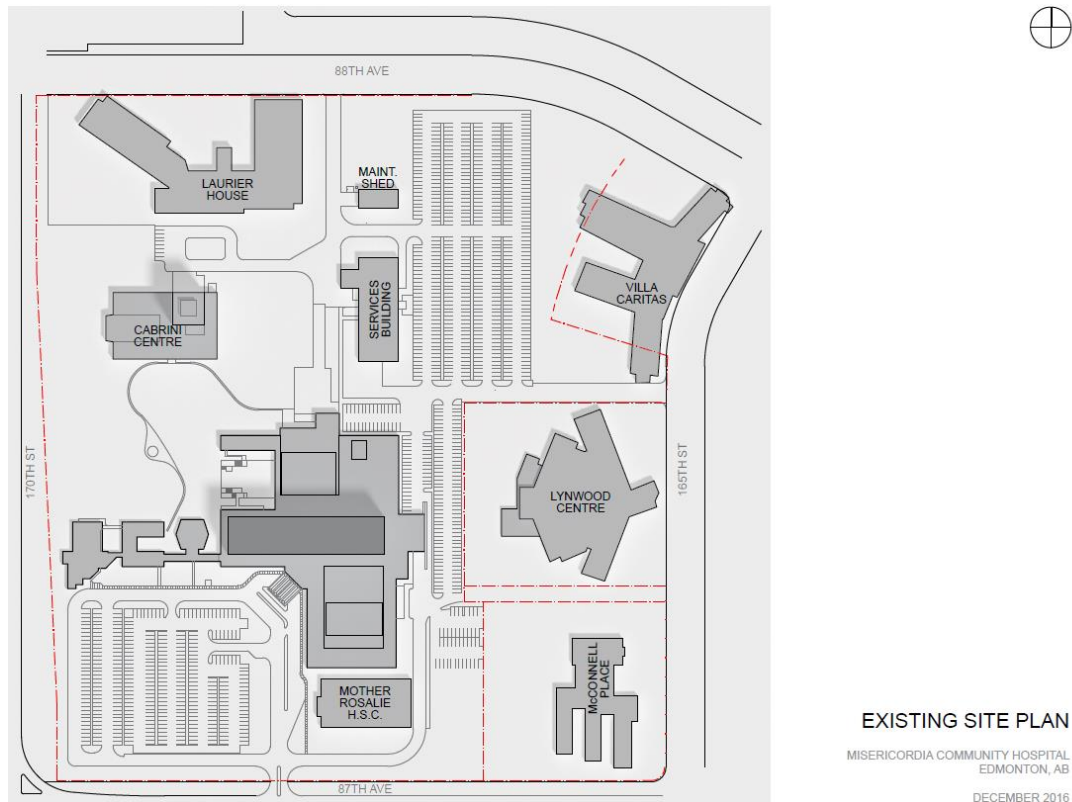
- Urgent risks to safe and quality care caused by failing infrastructure are mitigated;
- Timely expansion of site capacity to meet needs;
- Expansion of ongoing leadership in addiction and mental health, especially geriatric mental health;
- Increased focus and growth on restorative care and a shift to community care; and
- Existing infrastructure, recent investments, and future investments are collectively leveraged and optimized to contribute to the long-term vision for the site.

### c. CRITICAL SUCCESS FACTORS

- **Ensure quality and safety:** Critical infrastructure vulnerabilities must be addressed through early and comprehensive site redevelopment to ensure safety and quality. The site must be significantly expanded and redesigned to address the needs of a growing and aging population and meet current design standards for hospital care.
- **Fully leverage and optimize past investments in the MCH:** The current site, recent critical infrastructure spending (\$25 million), and recent updates to the neonatal intensive care unit (NICU) and mental health unit (\$17 million) will be fully leveraged to ensure future investments in increased capacity contribute incrementally to the long-term site vision.
- **Meet best practices for efficient, effective design:** A key pillar of the 2030 plan is optimizing acute care. Investments in site modernization will align with envisioned improvements in the performance of the acute care system as one part of an integrated continuum of care. Redevelopment of the MCH presents a unique opportunity to implement an exceptionally high performing model of acute care that will strengthen the capacity of the Edmonton Zone, and the health system more broadly, to respond to emerging needs and population growth.
- **Ensure the site continues to provide access for those most vulnerable:** The MCH serves a diverse population, including many vulnerable communities and socio-economic groups. Site design will anticipate and proactively respond to the lived experience of these populations, safeguarding access to the site and ensuring the care journey is person-centered.
- **Build on, strengthen, and sustain linkages:** As the MCH campus of care grows and the model of care shifts, relationships and linkages with community care providers will be strengthened. Current key linkages include Villa Caritas, extended care facilities adjacent to the MCH, excellent relationships with a wide network of physicians, and strong partnerships with PCNs in the catchment area.

## d. REDEVELOPMENT PHASES

**Figure 1: Existing MCH Site Plan Visual Adaptation**



### Phase 1: Emergency Department

There is no doubt the number one priority for redevelopment at the MCH is a renovation of the Emergency Department (ED). The reasons for this include:

- Demand is far in excess of the capacity for which the department was built (designed to accommodate 25,000 visits per year, with 51,214 visits in 2015/16 and a 65-74% occupancy rate of stretchers in the emergency department occupied by emergency inpatients (EIPs) awaiting admission);
- There is a risk in assessing, providing care to a patient and returning them to the waiting room to wait for results or further interventions;
- Hallway care does not allow for appropriate privacy and confidentiality nor does it allow for family to be part of the patient care;
- There is no location for timely assessment of CTAS 3 patients;
- The MCH emergency department is challenged to meet the discharge and admission target timelines;
- Current utilization of space includes using two patient rooms, five chairs and three stretcher spaces in the hallway. Two out of the three stretcher spaces in the hallway are curtained off for patient privacy;
  - This is in contravention to current fire codes and workplace Health and safety standards;
  - Although minor equipment and supplies have been provided for these spaces, it does not allow space for urgent equipment needed;

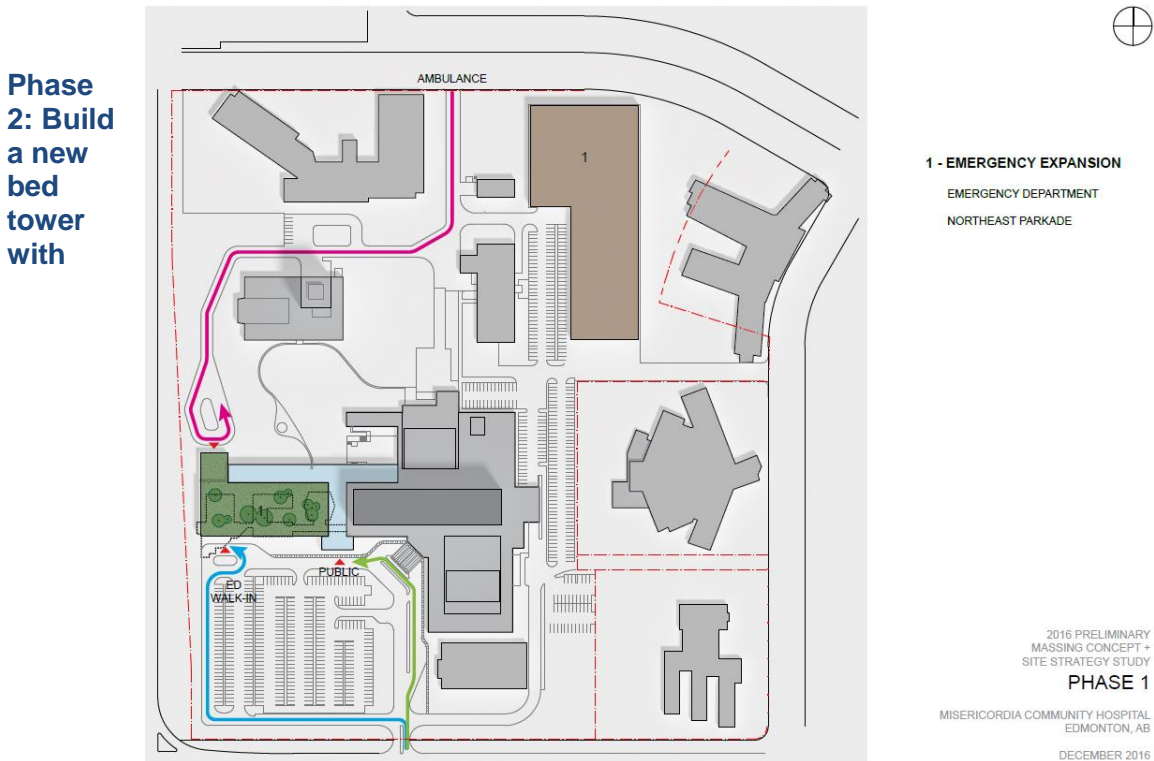
- This space is not monitored, does not have a nurse call bell system and if patient status changes there can be delay in response to patient and/or transfer into appropriate emergency department space already filled to capacity;
- Overcrowding in the hallway has impaired accessibility of EMS, portering and lab services (for patient diagnostic tests) and flow within the department; and
- Inability to provide appropriate and sustainable care to increasing service demands in the area of mental health.

The purpose of this phase is to build a new ED on the current MCH campus, consistent with previous planning. This allows for creation of a high quality and sustainable space without disruption during the construction; and would be an incremental step toward the envisioned long-term site plan that can provide services for many years. Dedicated care spaces tailored to the needs of seniors and those with mental illness would be included in the design. This phase would also include creating necessary adjacent space on the second floor of the emergency department for complimentary services to be co-located to the ED. This space would offer additional decant space to ensure capacity is maintained throughout the project phasing and construction. See Figure 2 for a visual adaption of Phase 1, with the ED development represented by green and blue item 1.

Site access will be explored in partnership with the City of Edmonton to ensure we take full advantage of pedestrian and public transit access without decreasing automobile access to the site. This would ideally be accomplished by locating the future low rail transit line across the street with a pedway to allow access over 87 Avenue.

Lastly, expansion of parking on site would be included in this phase which would be financed and managed through Covenant Health. This structure is represented by the brown item 1 in Figure 2. Overall capital costs for this phase will be confirmed during detailed design.

**Figure 2: Phase 1 Visual Adaptation**



**Phase 2: Build a new bed tower with**

**medical/surgical beds**

In order to make best use of existing spaces, meet current and future care quality standards, and optimize overall campus efficiency, a new bed tower needs to be built. The current standard of 35-bed wards is not possible to achieve within the existing MCH footprint. Given projected increases in site demand outlined in the table below, determined through Edmonton Zone 2030 planning, a new bed tower is required to increase capacity in the most efficient possible way.

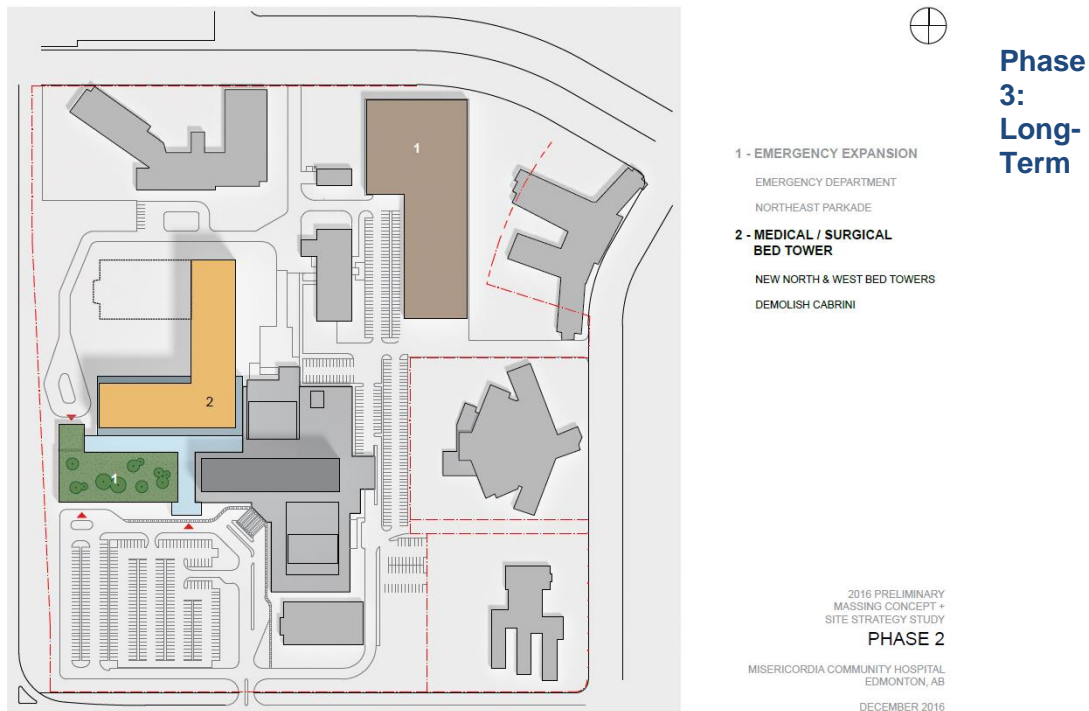
**MCH Bed Tower Current vs. Projected Bed Base (2030)**

<b>Program/Service</b>	<b>2015 Existing</b>	<b>Projected Bed Base (2030)</b>
Cardiac Sciences	10	20
Medicine	122	160
Geriatric Assessment Unit	16	30
Palliative Comfort Care Beds		20
Surgery	91	170
Women's Health - Obstetrics	20	30
<b>Total</b>	<b>259</b>	<b>430</b>

Modeling recent evidence on best practices in hospital design and construction, this tower could be built vertically with individual floors finished as the population grows and funding becomes available. In the short-term, several floors would be completed for the primary use of medical/surgical beds, built to current standards of optimal service efficiency and patient care. This innovative approach was used at the Royal Jubilee Hospital in Victoria, B.C., built in 2010, where several floors in the 500-bed tower were

left vacant, to be utilized at a future date based on need. Figure 2 below provides a visual representation of Phase 2 with the bed tower represented by the yellow item 2. Overall capital costs for this phase will be confirmed during detailed design.

**Figure 3: Phase 2 Visual Adaptation**



### Completion of Site Vision

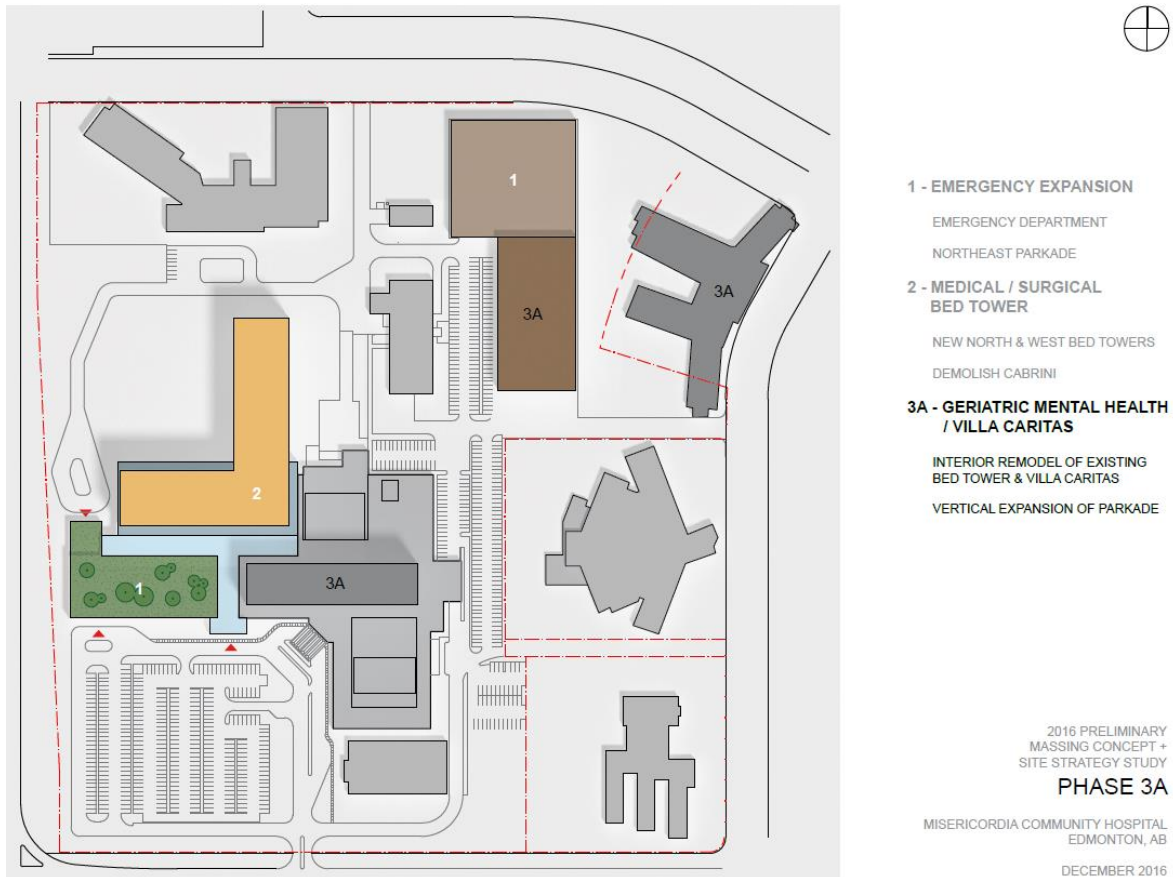
Phase 3 is divided into two parts where the timing is adaptable and interchangeable depending on need and the most effective use of resources and timelines. They thus do not need to be accomplished linearly and we would work with our partners, Alberta Health Services and Alberta Health, and the community to prioritize the work appropriately. Overall capital costs for this phase will be confirmed during detailed design.

### Phase 3-a: Mental Health and Restorative Care and Community Care Centre

Phase 3-a would see the consolidation and redevelopment of inpatient mental health services for the site within the existing MCH space, including transfer of services currently provided at Villa Caritas. Villa Caritas will be transitioned to a restorative care centre in keeping with the original design for the Villa Caritas building. See Figure 4 for a representation of Phase 3-a. The new bed tower is represented by the dark grey item 3a within existing MCH with the other dark grey item 3a representing Villa Caritas. Additionally, to continue building and growing community health partnerships, a Community Health Centre will be developed within this phase in the expanding south west corridor in partnership with the communities being served.

Lastly as part of Phase 3-a, another parking structure will be created through Covenant Health financing. This structure is represented by the dark brown item 3a in Figure 4.

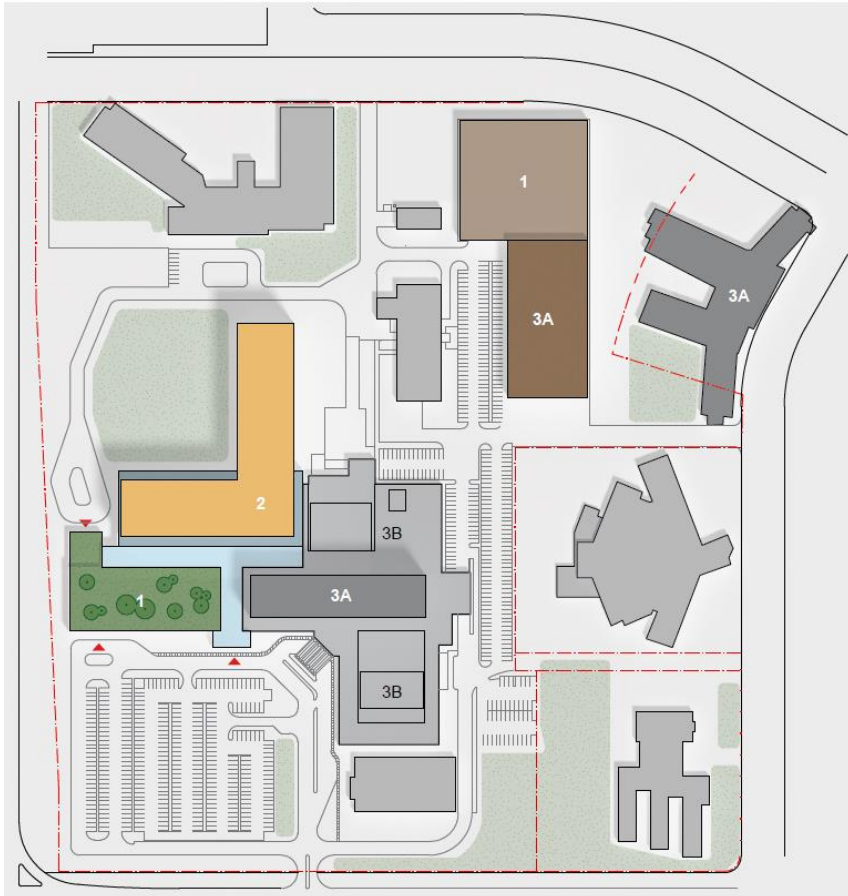
**Figure 4: Phase 3-a Visual Adaptation**



**Phase 3b: Ongoing Development**

Phase 3-b will include redeveloping the remaining existing MCH for all remaining services to ensure access, safety and efficiency, including but not limited to: laboratory, diagnostic imaging, pharmacy, intensive care unit, cardiac care unit, and operating rooms. It is anticipated the current bed tower would be fully leveraged during and after construction of the new tower, with mental health, the recently updated Neonatal Intensive care unit (NICU), lab, iRSM, and diagnostics all well positioned to remain in the existing tower. Detailed design, including analysis of flow and adjacencies, will be carried out in parallel with Phase 2. Phase 3-b can be seen represented in Figure 5 with the existing MCH building represented by the light grey item 3b.

**Figure 5: Phase 3-b Visual Adaptation**



- 1 - EMERGENCY EXPANSION**
  - EMERGENCY DEPARTMENT
  - NORTHEAST PARKADE
- 2 - MEDICAL / SURGICAL BED TOWER**
  - NEW NORTH & WEST BED TOWERS
  - DEMOLISH CABRINI
- 3A - GERIATRIC MENTAL HEALTH / VILLA CARITAS**
  - INTERIOR REMODEL OF EXISTING BED TOWER & VILLA CARITAS
  - VERTICAL EXPANSION OF PARKADE
- 3B - RENOVATION OF EXISTING PODIUM**
  - DIAGNOSTIC, LAB, PHARMACY & SUPPORT SERVICES

2016 PRELIMINARY  
 MASSING CONCEPT +  
 SITE STRATEGY STUDY  
**PHASE 3B**

MISERICORDIA COMMUNITY HOSPITAL  
 EDMONTON, AB  
 DECEMBER 2016

# Grey Nuns Community Hospital Proposal

## a. SITE BACKGROUND

The GNCH is a full service hospital that serves a large and diverse geographic area, including the south side of Edmonton and neighboring communities of Sherwood Park, Strathcona County, Beaumont and Leduc. It also provides wider service coverage and leadership in provision of obstetrical, psychiatric, tertiary palliative care and vascular surgery, serving as the Northern Alberta center for vascular surgery and providing one of the two psychiatric ICUs in Edmonton. (Refer to Appendix C for additional details.)

The catchment area includes a growing population characterized by a culturally diverse and aging population.

Service demand pressures at the GNCH far exceed capacity on a regular basis, with particular pressure in the Emergency Department (ED). ED visits have increased by 15% per annum in the past five years, and the site consistently has the highest number of emergency inpatients (EIPs) (in the province). Moreover, although the ED was originally designed to accommodate 23,000 visits per year, actual visits far exceed this number – with 70,412 visits in 2015-16.

## b. PROJECT VISION AND PURPOSE

The vision for the Grey Nuns is to pioneer a new community care centre approach – one in which health care is planned and structured around people and their community, bringing together providers in health, social services and medical care. Shifting some aspects of care from the hospital into the nearby community will give Edmontonians greater access to the care and supports they need to keep them healthy at home, enable better transitions between home and hospital, and make best use of hospital facility.

The purpose of this proposal is to provide a multi-year, phased approach for ongoing investment in the GNCH that will ensure timely expansion of site capacity to meet needs, and measurably contribute to the shift to community care and care integration. This will ensure

- Timely expansion of site capacity to meet needs;
- A shift to community care and greater community supports;
- Greater integration with community providers and primary care; and
- Enhanced access to hospital care when it is needed, including relieved pressure on emergency departments.

## c. CRITICAL SUCCESS FACTORS

- **Implement a timely response to urgent demand pressures and facilitate the shift to community-based models of care:** Pressing capacity needs must be addressed to ensure safety and quality. Community care alternatives to hospital care must be rapidly established, following which the site must be significantly redesigned, and eventually expanded to address the needs of a growing and aging population.
- **Sustain access for key programs that operate from the site:** The GNCH is a hub for vascular surgery in Northern Alberta, and is a critical provider of



obstetrical and mental health care in the Edmonton Zone. The site must be adapted over time to ensure access to these key programs is sustained.

- **Fully leverage and optimize past investments:** Redevelopment of the GNCH presents a unique opportunity to build on design work completed at the Peter Lougheed Centre (PLC) in Calgary, which has the same original building layout as the GNCH. Lessons learned from the PLC vascular suites expansion have already been leveraged to ensure an efficient approach to the GNCH vascular suite redevelopment. The PLC Emergency Department expansion designs could be more directly reused to expand the GNCH Emergency Department.
- **Ensure the site continues to provide access to diverse and vulnerable populations:** Seniors, palliative care and mental health care are strengths at the site that must be respected and be invested in to ensure they continue to not only provide care but also lead in the design and integration of new models of patient-centered care.

#### d. REDEVELOPMENT PHASES

##### Phase 1: Community Health Centre

The first two phases for the GNCH provides an opportunity to increase site capacity to better position the GNCH to meet current and future service demands and help support overall zone pressures by ensuring the best utilization of resources and space and establishing innovative models of care with community partners. To enable this, we will continue to foster the strong current partnership with the Southside PCN by developing an integrated Community Health Centre in close proximity to the hospital, utilizing existing, available infrastructure – such as the vacant Sobey's, Target or Grant McEwan south campus.

This would create the opportunity to decant some outpatient services from the hospital, while maintaining strong existing relationships with the acute care setting; and shift the model of care to be more community-based, integrated, and person-centered. Decanting programs off-site will create efficiencies and support safe, effective and appropriate patient care.

Once decanting is complete, renovation of the decanted space would need to take place to best utilize the space within the hospital. Options for departments to be decanted could include: clinics, select rehabilitation and outpatient programs, and select office space. The identified commercial lease space adjacent to the GNCH mentioned would require modifications to accommodate the decanted programs.

This would not only provide capacity within the GNCH to address the growing demands for hospital services, but is also aligned with the overall health systems vision to shift care into the community and enhance options available in the community. The Community Health Centre would be located in a space easily accessible to patients, resulting in improved patient satisfaction; and very close to the GNCH to allow for access and integration with hospital services as required while maximizing the use of expensive hospital space for more acutely ill patients.

**Capital Project Cost Estimate:** \$2.5 million.

## Phase 2: Emergency Department Expansion

Expansion of the current emergency department (ED) is needed to keep up with the demand for emergency services. There is no capacity at the GNCH to allow for further incremental growth of the ED. Since the GNCH and the Peter Lougheed Center (PLC) in Calgary were built with the same design, it may be possible to leverage the architectural plans that were used to expand the PLC ED to reduce overall project costs. Notably, the ED expansion at the PLC involved the addition of space that would allow the GNCH to address inpatient capacity needs over time.

Space made available for ED expansion through Phase 1 will be renovated to create more capacity and appropriate care space to care for patients, as follows:

- **Establishing a 48-hour observation unit for admitted patients:** Creating a 48-hour observation unit for admitted patients will improve access and flow by:
  - Moving those patients that require additional diagnostics, short-term treatment and observation to more appropriate care spaces. Currently, the only option for those patients is to be held in the ED or to be admitted to an inpatient unit.
  - Admitting ED patients to a unit that is more appropriate for their acuity freeing up the stretcher space.
  - Placing admitted patients likely requiring a short stay into a more appropriate care space that facilitates timely treatment and discharge. The care model and staffing on the observation unit facilitate timely discharge of those short-stay patients.
- **Establishing a dedicated mental health treatment area:** Establishing a purpose-build care environment will facilitate timely and appropriate care of this vulnerable patient population. Currently there is inadequate space in the department to care for the volume of mental health patients that are seen on a daily basis. It is often mental health patients that end up in hallway stretchers in the ED waiting sometimes days for an inpatient bed—this inappropriate care space in a busy and noisy department without any means for privacy can result in harm of the patient requiring a longer length of stay to treat and stabilize. Hallway care of mental health patients also creates a safety risk. The mental health treatment area will improve access for mental health patients and could divert some inpatient admissions with more appropriate and timely care having an overall benefit to access and flow for the site.

As the last step within phase 2, Unit 23 would be set up as an inpatient day surgery unit and an observation unit for short-stay surgery procedures; and back-fill the current day surgery unit to create a medical unit with high intensity beds. Currently, patients requiring high intensity are boarded in the ED or ICU, which are inappropriate spaces. The opening of additional inpatient medical beds and a 23-hour surgical unit will assist in relieving current emergency inpatient pressures in the ED.

**Capital Project Cost Estimate:** \$14.7 million.

## Phase 3: Vascular Surgical Suites

The regionalization of surgical services in Edmonton over the last decade consolidated all vascular care at the GNCH in September 2008. The GNCH provides all inpatient and outpatient vascular care to a referral population of 2.3 million in Edmonton and Northern Alberta and Northeastern British Columbia.

While the GNCH site infrastructure is in generally good condition, the vascular surgery program is at risk due to the existing equipment's poor radiologic ability and increased exposure of patients to radiation.

Covenant Health has proposed state of the art Vascular Surgery Integrated Operating Theatres at the GNCH, addressing existing functional and operational deficiencies to improve access, safety and quality of care to meet current standards for minimally invasive procedures. Expected outcomes of this investment include the following:

- Improved access and equivalent standard of care for patients requiring endovascular repair (EVAR) procedures regardless of where in the province they are accessing the service;
- Improved patient safety with appropriately sized operating theatres with fixed imaging equipment with higher imaging quality;
- Improved patient outcomes due to minimally invasive procedures; and
- Enhanced ability to recruit and retain vascular surgeons with state-of-the-art facilities.

Several alternatives to accommodate two integrated operating theatres and associated support space have already been developed to outline the impact and feasibility of the preferred alternative for both Vascular Surgery and the GNCH site and will be provided on request. This recommended option, which involves the development of two integrated operating theatres and associated support space within the main surgical suite on the second floor at GNCH, delivers an efficient, viable long term solution to support Vascular Surgery while also balancing and maintaining the sustainability of future development of the main surgical suite and the GNCH site itself. Covenant Health recognizes the need for a longer term vision consistent with the approach taken to address the ED needs as noted above and would look forward to working with all partners, including our providers, AHS, AH and the communities we serve to develop the optimal solution.

**Capital Project Cost Estimate:** \$50 million

#### Phase 4: Build a New Bed Tower

As the last phase for redevelopment, building a new bed tower will allow the site to serve the growing population with expanded services. As shown in the table below, the current 2030 strategy identifies the GNCH as requiring additional capacity of up to 800 beds. Capital costs will be confirmed during detailed design.

#### GNCH Current vs. Projected Bed Base

Program/Service	2015 Existing	Projected Bed Base (2030)
Acute Mental Health	69	113
<b>Mental Health</b>	<b>69</b>	<b>113</b>
Cardiac Sciences	10	36
Critical Care – ICU	8	16
Medicine	128	224
Palliative Comfort Care Beds	23	25
Surgery	61	174
Child Health – NICU	25	50
Women's Health – Obstetrics	31	56
<b>Acute</b>	<b>286</b>	<b>581</b>
Rehab - Acute Rehabilitation		30
Rehab - Restorative Care		64
<b>Rehab</b>	<b>0</b>	<b>94</b>
<b>Total</b>	<b>355</b>	<b>788</b>

## Urban Long Term Care Capital Plan Proposals

Covenant Health operates 1,512 continuing care beds with the majority of those spaces located in the Edmonton Zone. Amongst the beds within Edmonton and the surrounding area, there are two aging facilities where a decision is needed on whether to invest in the existing infrastructure or to build a new facility.

### a. EDMONTON GENERAL CONTINUING CARE CENTRE INFRASTRUCTURE STABILIZATION AND RENEWAL (MID-TERM)

The Edmonton General Continuing Care Centre (EGCCC) provides long term care, restorative care and hospice care to a diverse population in downtown Edmonton. The centre meets an important role in Edmonton, providing specialized care to residents with complex needs and an active and engaging home to a community of younger residents—with one in five residents under 65. There are significant infrastructure issues with the aging EGCCC site that impact Covenant Health's ability to deliver safe and effective care to residents and patients. Many of the care spaces are repurposed acute care units that are not appropriately designed for continuing care programs. Due to capacity pressures in the Edmonton Zone, several units at the EGCCC were opened as temporary spaces. Many of these units have been in operation for several years with no imminent plans to decommission or replace the beds.

The EGCCC was previously slated for decommissioning. As a result, minimal investment has been made to maintain and upgrade the building for several years now. There are significant infrastructure issues with the aging building. Life safety and infection prevention and control challenges are evident due to the age of the building and impact of many years of deferred major maintenance funding.

A facility assessment was completed in 2008 detailing \$70 million in total maintenance events required in the next five years. Projects remaining to be completed are outlined in the list on the right. This demonstrates the magnitude of infrastructure issues with the building. While some investments have been made in recent years, there is still a substantial list of deferred maintenance and major upgrades required to ensure the EGCCC continues to be a safe care environment for the provision of quality care and service. Failure of key systems listed here could have a significant effect on the Edmonton zone by decreasing the long-term care capacity.

In addition to completing critical infrastructure projects, a long-term plan for the 550 beds replacement is required. An immediate decision is required as to whether we will continue to invest in the existing infrastructure or replace the building entirely. Based on recent similar projects, it is anticipated the 550 beds could be replaced for a cost of \$135 million (or \$245,000 per bed).

**Capital Project Cost Estimate: \$135 million**

**Critical Infrastructure – listing of Infrastructure Funding Requests:**

- Roof Study and replacement
- Refurbish steam heating system for AB wings
- Sprinkler System for R Wing
- Replace chilled water distribution System
- Replace steam heating system in wing A and B
- Replace 200 manual valves in various wings
- Install air conditioning in A and B Wings
- Replace 3 steam heating boilers
- Replace nurse call system
- Replace Motor Control centre's #C10A, C10AZ
- Replace 5 motor control CC's in A, B, R and C wings
- Replace public address system site wide
- Replace 3C roof
- Replace Cold Water Pressure Tank

**b. YOUVILLE HOME ORIGINAL BUILDING REDEVELOPMENT (ST. ALBERT) (LONG-TERM)**

Youville Home stands on the site of the first health care Ministry in Alberta and carries on a tradition of over 150 years of service to Albertans. As a combination of the original nursing home built in 1963 and a new facility that opened in 2006, Youville Home provides long-term care with a creative and responsive resident-centred care environment.

The original Youville home building was slated to be replaced but due to growing bed pressures in the Edmonton Zone, the existing building was enhanced in 2006 so that it would be sustainable for another 10 years. As the 10 year window has expired, it is time to develop a long-term plan for enhancement or replacement of the site which currently consists of 232 beds.

If this work does not proceed, the status of the infrastructure of the original Youville Home will continue to deteriorate. This may lead to a catastrophic failure, which would have a significant effect on the Edmonton zone by decreasing the LTC capacity.

**Capital Project Cost Estimate: 108 beds at \$245,000 per bed at \$26.5 Million**

## Non-Urban Capital Plan Proposals

While all of these proposals have strategic importance, it is envisioned that the following capital projects should be planned for the mid-term (3-5 years) and long-term (6-8 years) and would be within the context of zonal planning and the needs of the communities.

### a. ST. JOSEPH'S HOSPITAL REDEVELOPMENT (VEGREVILLE) (MID-TERM)

St. Joseph's Hospital in Vegreville provides a basic range of health services, including acute care, emergency and ambulatory care, and is the home to a primary care network supporting the established and aging rural communities between Edmonton and Lloydminster.

There is a significant need to replace the hospital, as the current facility was constructed in 1962 with additions in 1987. A Facility Evaluation Report was completed in February 2008, identifying significant fire code, health and safety issues (including infection prevention and control); numerous functional, physical, electrical and mechanical deficiencies; as well as several structural issues.

A further study completed in 2011 by Western Management Consultants provided a total of 99 short-term and long-term recommendations including the re-establishment of day procedure / minor surgery capacity, establishment of a Primary Stroke Centre, enhancement of specialty and diagnostic services, and facility redevelopment or replacement.

The key needs are to replace the aging infrastructure and building support systems that are at the end of their life cycle. This would enable identified service enhancements, which may include the following, to be confirmed through area health service planning in concert with Central Zone planning.

- Primary Stroke Centre including CT Scanner;
- Endoscopy and surgery suites including MDR (Medical Device Reprocessing);
- Integration of Public Health, Home Care, and Addictions and Mental Health;
- Collocation of Primary Care Network;
- Obstetrics capacity; and
- Additional inpatient beds for recovery and rehabilitation.

**Capital Project Cost Estimate:** Approximately \$50 Million

### b. BONNYVILLE HEALTH CENTRE REDEVELOPMENT (MID-TERM)

Bonnyville Health Centre (BHC), located in Bonnyville, Alberta is an acute and continuing care facility. This full service hospital supports booming communities in the Wood Buffalo area and provides specialist services to Northern Alberta—with First Nations people making up 15% of the service population. The hospital is a vibrant service hub and training centre, partnering with a strong primary care network, First Nations leaders, and Cold Lake and St. Paul health partners along a corridor of care.

Emerging demands unforeseen when the facility was first planned, over 30 years ago, have created a number of challenges in a variety of departments. In particular, the steady increase in population in this area, due to close proximity to industrial hub Cold Lake, is causing extreme pressure on the Emergency Department (ED). The ED provides a triple role within BHC, acting as an ED, primary care/ambulatory care clinic, and a surgical pre- and post-clinic outpatient department. These functional requirements

create many barriers including excessive traffic throughout the ED, and impede proper triage.

A Master Plan was submitted to Aspen Health Region in 2009. A Facility Infrastructure Capital Need Summary of our Master Plan was sent to AHS in November 2011. In 2013, Croft Architecture and Planning completed a Patient Flow Study focused on improving safety and flow, addressing poorly functioning space, improving the ability to support higher capacity demands, and reducing infection control issues. Significant issues were documented, including the following:

- The current layout does not support efficient patient flow, and contributes to duplication, barriers to patient navigation, and inadequate/unsafe space.
- Overuse of rooms in the pharmacy and ED contributes to delays and rework.
- Obstetric space is at over capacity, resulting in excess movement of patients and a break-down in the steps in the labour, delivery, recovery and postpartum process.

Proposed changes will optimize flow of work through the ED, and between the ED and other areas of the BHC. These changes will improve the quality of the patient/family experience, increasing efficiency, and will be integrated into and implemented in concert with area health service planning as part of North Zone planning.

Non-approval of this project would result in site-wide limitations to improve access and flow, exposing patients and staff to unnecessary risk, and compromising patient treatment and outcomes. The need for additional space and reconfiguration of care zones is urgent. The site has exhausted all opportunities for incremental improvements.

**Capital Project Cost Estimate: \$3.6 Million**

### **c. ST. MARY'S HOSPITAL EMERGENCY DEPARTMENT REDEVELOPMENT AND AMBULATORY EXPANSION (CAMROSE) (LONG-TERM)**

St. Mary's Hospital, built in 1989, is a modern, progressive hospital in Camrose that serves as a referral hospital for a diverse and fast-growing rural community, service centre and retirement destination. The hospital provides a wide range of acute care services, including 24-hour emergency, mental health, women's health and obstetrics, community cancer care centre, coronary care, and diagnostic services. The Emergency Department (ED) has a number of challenges and the current layout creates a dysfunctional approach to meeting patient needs. ED workload is expected to increase over the next 10 years from an estimated 18,000 visits to 22,000 by 2020.

While staff at St. Mary's strive to provide effective and efficient emergency care to patients of Camrose and surrounding area; the current configuration of the ED presents significant barriers to flow, elevates safety issues and challenges operational efficiencies on a daily basis. Specific issues exist in patient confidentiality, ability of staff to monitor traffic through the ED and poor access to required supplies and equipment.

The recommendation is to provide adequate space to meet the needs of patients, implement program upgrades including a new automated pharmacy (Pyxis) and improve staff ability to meet the needs of patients. The project will provide St. Mary's leadership with improved flow in the ED and will seek to address layout barriers and improve efficient and effective flow for both patients and staff.

The proposed phased approach to renovations will improve staff productivity and delay a complete replacement of the ED with a new addition. Master Planning concepts

recommended in 2006 to replace the current emergency department have not been approved by Alberta Health Services.

A project scope confirmation report in June 2014 established a schematic design and capital renewal plan to improve ED flow over four phases. An interim renovation effort now underway (est. \$970,000) will focus on Phase 3 and Phase 4 as outlined in the project scope confirmation report.

The risk of not proceeding with this project is inability to meet the demands of increase ED visits with growing population base.

**Capital Project Cost Estimate:** \$4,000,000

#### d. ST. MARY'S CONTINUING CARE CENTRE (TROCHU) (LONG-TERM)

St. Mary's Continuing Care Centre in Trochu provides local seniors the opportunity to age in place, remaining in their community close to family and loved ones in their final years of life. Providing continuing care and primary care services to a growing, but aging, rural community, St. Mary's is supported by a strong network of community based services and has a collaborative working relationships with the acute care hub in Three Hills.

There is opportunity to diversify the levels of care available on site through the addition of independent living suites and continuing care beds, establishing a campus of care with holistic wrap-around supports that enables seniors to transition seamlessly from one level of care to another, and to reside on site near their spouses who may require a different level of care.

Anticipating long-term demand driven by population aging and longer average lifespans, Covenant Health will work closely with Alberta Health Services to carry out local planning to confirm the number of continuing care beds needed on site, estimated to be approximately 45 beds. Renovations to the existing space at St. Mary's will then be needed to transition current lodge spaces to continuing care beds. Project costing will be established in concert with detailed design work underway in partnership with Alberta Health Services

#### e. OUR LADY OF THE ROSARY REDEVELOPMENT (CASTOR) (LONG-TERM)

Our Lady of the Rosary Hospital provides a full range of health services to Castor. This small hospital supports a stable rural population in central Alberta, as well as several Hutterite colonies with five acute care beds, an emergency department and long term care beds.

The hospital design reflects health care processes of the 1960's and lacks adequate space for diagnostic, ambulatory services and the application of advanced technologies. The facility is in poor condition and requires repairs: however, these repairs do not address the lack of space and capacity issues impacted by population changes and new health care demands in the community. The redevelopment of the hospital will modernize the delivery of health care for the community, now and into the future.

The current need for the development of a new hospital will ensure Covenant Health is well positioned to address both current and future needs, and would allow for health care



delivery priorities to be achieved, to be confirmed through area health service planning in concert with Central Zone planning.

Redevelopment could encompass enhanced diagnostics, addition of surgical and obstetrical services, creation of a primary stroke centre, and other regional service enhancements as determined by plan. Detailed capital costing will be established during the project design phase.

## Appendix A: Edmonton Population Growth

Going forward, current infrastructure risks and pressures will be exacerbated by continued population increases in the Edmonton region, and overall population aging. While growth projections may ultimately be impacted by the current economic slowdown, South and West Edmonton is expected to have some of the largest growth in Edmonton projected to the year 2025. The following table provides a comparison of 2009 population with 2018 projected population. By 2050, Edmonton's population is forecast to be 2.1 million – a 136 per cent increase over today. The City of Edmonton Growth Study (2014) showed a trend of rapid population growth, with significant growth projected into the future. Edmonton's population grew by 7.4% between 2012-2014. Notably, 45 per cent of the added population occurred within two southern wards – with more than three times the amount of growth as in any of the City's other wards. Three quarters of Edmonton's growth between 2012 and 2014 occurred south of the North Saskatchewan River and in the west of the city. In addition to rapid growth, Edmonton's population is rapidly aging. By 2030, a 121 per cent increase is projected in those aged 65 and older<sup>2</sup>.

### Projected Population Increases for Edmonton

Community	2009 Population	2018 Projected Population	Projected Δ
Central	131,178	143,761	+12,583
Northwest	127,761	146,972	+19,211
<b>Southeast</b>	<b>127,568</b>	<b>170,176</b>	<b>+42,608</b>
Northeast	192,280	220,030	+27,750
<b>Southwest</b>	<b>190,688</b>	<b>249,689</b>	<b>+59,001</b>

Data Source: City of Edmonton Open Data Catalogue

Given these trends, Edmonton Zone 2030 Planning identifies priority infrastructure deficits that must be addressed to meet increased health service demand driven by population trends. The following table identifies projected demand increases for the Edmonton Zone for key service areas if no mitigating strategies are undertaken.

### Edmonton Zone Phase II 2030 Projections

Health Service	Projected Change by 2030 if No Mitigating Strategies Are Implemented
Family/GP Practice	39.1% increase
EMS Activity	57% increase in emergency events, 63.6% increase in non-emergency events
Emergency Department Visits	33% increase with 111% increase in visits for aged 65 years +
Acute Care Inpatient Days	59.6% increase (equivalent to 2,200 additional beds)
Rehabilitation Inpatient Days	86% increase
Short Term Home Care	82% increase
Long Term Home Care	138.3% increase
Continuing Care Beds	50.3% increase

<sup>2</sup> Alberta Health Services, "Health care planning for today, and the future – Edmonton Zone 2030 plan" (December 2014), <http://www.albertahealthservices.ca/Blogs/BTH/Posting239.aspx>

Given projected increases in health service demand for the Edmonton Zone, through 2030 planning Alberta Health Services identified a number of strategies to be implemented to mitigate demand increases. Ensuring investments in increased system capacity facilitate the shift to care delivery in the most appropriate and cost effective settings. These shifts included the following:

- Effective health promotion and injury prevention programs (the impact of these strategies on demand is expected to be felt after 2030);
- Increase timely access to community-based primary care through development of 15 Community Health Centres in the Edmonton Zone;
- Shift care delivery out of hospitals and into the community and patient homes whenever possible. A number of specific shifts within this strategic direction are delineated further in the 2030 plan;
- Redesign rehabilitation services to reduce reliance on acute care beds; and
- Optimize the performance of acute care.

Even with implementation of the strategic directions described above, health service demand for the Edmonton Zone is projected to increase significantly by 2030. The following table provides a comparison of status quo demand projections with revised demand projections that account for reductions brought about through the above strategies. It should be noted that thus far there have not been increases in the services to help bend the curve. Targets to reduce reliance on institutional care need to be re-evaluated as they should be achievable and graduated over time.

<b>Health Service</b>	<b>Projected Change with 2030 Plan (approximates)</b>	<b>Projected Change Status Quo (approximates)</b>	<b>% (Reduction) or % Increase</b>
Emergency Department Visits	540,000	700,000	(22%)
Acute Care Beds	3,400	4,500	(24%)
Rehabilitation Beds	850	600	42%
Primary Care Visits	7,600,000	7,000,000	8.6%
Short Term Home Care Visits	7000	4,900	43%

## Appendix B: Misericordia Community Hospital Current State and Opportunities

### a. BACKGROUND

One of five acute care hospitals in the Edmonton Zone, the MCH was built in 1969, and has a current annual budget of \$222 million, 303 funded beds, and over 4,000 staff, physicians and volunteers.<sup>3</sup>

The MCH is a key acute care centre in the Edmonton Zone, and the province. It is the hub of a network of health services in the growing west end of the city, providing essential basic health services to a diverse population. In 2015-16, the MCH saw 2,813 births; 51,214 emergency visits, and 145,877 outpatient visits.<sup>4</sup> It is the site of 75 per cent of breast reconstruction cancer surgeries in the Edmonton Zone, and has the third highest volume for completing hip fracture surgeries in the province.<sup>5</sup>

In addition, the MCH fills a critical niche in the Edmonton Zone. It is the only Zone site providing sarcoma surgery for adult patients with bone cancer, and the only one providing arthroscopy surgery for young patients with hip problems causing immobility.<sup>6</sup> It is also the only site in Northern Alberta offering transanal endoscopic microsurgery for bowel cancers of the lower intestine.

Due to long-standing capacity pressures and infrastructures challenges, redevelopment of the MCH has been long-considered an urgent need. As part of the former Capital Health Growing in Place 2010 plan, the MCH was targeted for redevelopment to address the significant infrastructure issues, and create functional inpatient units. Alberta Infrastructure approved \$100.9 million in capital funding for the MCH Bed Reclamation project with a target to have the work completed by 2010. In 2007, through consultation with Alberta Infrastructure, it was decided that due to the high cost of renovating the existing 1969 era nursing units, the available approved grant funding be used, instead, to construct a new and expanded intensive care unit, intermediate care nursery, emergency department, pharmacy facilities and complete some critical infrastructure upgrades as phase 1 of the MCH redevelopment plan. Planning for a new inpatient tower would replace the concept of renovating the existing inpatient units. After the establishment of Alberta Health Services in 2008, several capital projects—including the MCH Bed Reclamation Project—were paused indefinitely.

### b. VISION

Building a new MCH presents a tremendous opportunity to rethink and transform the approach to hospital care in Edmonton, and Alberta. It is envisioned that a new MCH would serve as a living laboratory for the transformation of the system, piloting the very best in design practices, pioneering community and social service integration, elevating patient-centered care, re-imagining environments for growing populations of seniors and those with mental illness, modeling new urban campus of care approaches, and setting environmental standards.

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<sup>3</sup> Covenant Health, "Misericordia Community Hospital Fact Sheet," [https://www.covenanthealth.ca/media/122758/2015-16\\_edmonton\\_misericordia\\_fact-sheet.pdf](https://www.covenanthealth.ca/media/122758/2015-16_edmonton_misericordia_fact-sheet.pdf)

<sup>4</sup> Ibid.

<sup>5</sup> Covenant Health, *Adding Value to Alberta's Integrated Health System* (March 2015), 6.

<sup>6</sup> Ibid, 8.

### **Innovative and Integrated Campus of Care**

The MCH is uniquely positioned to develop and sustain transformative models for integrated community care to better serve young families, seniors, and those with chronic disease and mental illness. The MCH currently anchors a strong network of social and health services fully accessible by public transit and in close proximity. Building on this, access – particularly for high needs patients such as those residing in the community surrounding and served by the MCH – will be expanded through increased service availability and stronger collaboration among key partners in the innovative campus of care already in place.

### **Care Experience Designed Around the Patient Journey Especially those Most Vulnerable**

The new MCH will be tailor-made to serve a highly diverse patient population and respond to their changing needs effectively and efficiently. Patient flows will benefit from processes designed from patients' viewpoints – particular the elderly and those with mental health challenges. Building on leading work in serving vulnerable populations with dignity and respect, Covenant Health is well-positioned to pioneer a care environment at the MCH especially designed to promote optimum healing and wellness for Alberta's growing vulnerable populations: those with mental illness, those needing restorative care and seniors.

### **Quality Specialist Services for the Edmonton Zone, Northern Alberta, and Western Canada**

Operational practices enabled by modernized facility design will be drastically enhanced to improve care quality at the new MCH. Infection control will be significantly enhanced through use of more single patient rooms and emerging technologies for transportation of medical supplies. Operational efficiency and patient outcomes will be dramatically improved through evidence-based design. Hallmark specialist programs will be sustained and enhanced through modernized care environments.

## **c. PATIENT POPULATION**

The MCH serves a large and diverse geographic area that includes the west side of Edmonton and neighbouring communities of Stony Plain, Spruce Grove, Devon and nearby First Nations communities. The catchment area includes a growing and aging population. The following table provides an overview of some of the key characteristics of the patient population for the MCH.

<b>Characteristics</b>	<b>Details</b>
<b>Socio-economic Indicators:</b>	<ul style="list-style-type: none"><li>• The identified catchment communities have a wide distribution regarding income related indicators.</li><li>• One in five residents of Woodcroft East report after-tax low-income levels, double the provincial average of 10.7%. Jasper Place and Woodcroft West also report higher percentages of low income at 14.2 and 12.5 respectively.</li><li>• Female lone-parent families make up 19.4% of the population of Jasper Place.</li></ul>

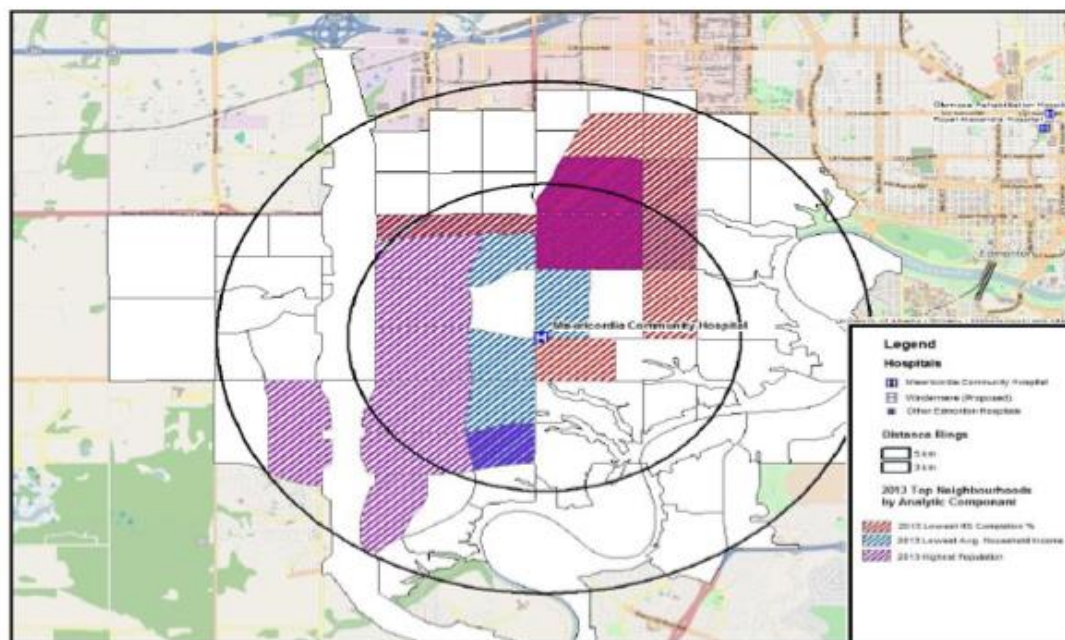
Characteristics	Details
<b>Immigration Status:</b>	<ul style="list-style-type: none"> <li>• Woodcroft East has a higher rate of recent immigrants (7%) compared to the provincial average (4%), with the Philippines, African countries and China as top countries of birth.</li> <li>• English is not the first language spoken at home for a larger proportion of families in Woodcroft East (12.3%) and Jasper Place (14.6) than the provincial average of one in ten. Top languages spoken at home are Tagalog and Chinese.</li> </ul>
<b>Chronic Disease Prevalence Rate:</b>	<ul style="list-style-type: none"> <li>• Four Chronic Disease Prevalence rates (per 100 populations) are available for Alberta. Hypertension, Diabetes, Ischemic Heart Disease and COPD.</li> <li>• Woodcroft East, Woodcroft West and Jasper Place have 20-30% greater prevalence of COPD than the provincial average and higher levels of Diabetes.</li> </ul>
<b>Maternal and Child Health Indicators</b>	<ul style="list-style-type: none"> <li>• There are two catchment communities that have a higher percentage of low birth weight when compared to the provincial experience (6.7%): Woodcroft East and Woodcroft West.</li> <li>• Woodcroft East and Jasper Place have approximately double the prevalence of teen pregnancies at 36.7 and 31.3 per 1000 births compared to the provincial average of 17.4.</li> </ul>
<b>Emergency Department Indicators:</b>	<ul style="list-style-type: none"> <li>• Semi and Non Urgent Visits</li> <li>• The percentage of semi-urgent and non-urgent visits for most communities is similar to the rate/profile experience at the MCH with 36-37% of visits being CTAS 4 or 5.</li> <li>• The Top Three Common Causes for an ED Visit are: <ul style="list-style-type: none"> <li>○ Acute Upper Respiratory Infection</li> <li>○ Mental Health and Behavioral Disorder due to Psychoactive Substance</li> <li>○ Asthma</li> </ul> </li> </ul>

The MCH is ideally located to serve its diverse patient population, which includes established neighbourhoods, newly developed neighbourhoods, and communities from a range of socio-economic backgrounds. In addition, due to its location and specialty programs, the MCH is a hub for patients from Northern Alberta and neighbouring provinces, with a well-established referral corridor between Edmonton and Jasper and for the north.

More specifically, there are many high-needs communities in the area immediately surrounding the MCH, characterized by significant socio-economic challenges. Residents from these parts of the catchment area are heavily reliant on acute care, as well as a range of health and social services.<sup>7</sup> The figure below illustrates the highest-

<sup>7</sup> Covenant Health, *Misericordia Community Hospital Redevelopment: Location Considerations* (August 2014), 3-8.

needs neighbourhoods in the catchment area of the MCH in relation to the current facility location.



**Figure:** Neighbourhoods with lowest high school completion (red); lowest income (blue); and largest population (magenta) in the MCH 5-km catchment area. Source: ArcGIS, City of Edmonton Open Data Catalogue, Misericordia data and HDR analysis

These factors put these communities at risk for lower life expectancy, higher suicide rates and higher rates of some diseases. A quarter of MCH’s Edmonton patients come from two postal codes with the greatest socio-economic challenges. They tend to be less mobile, without access to private vehicles for travel, and higher users of hospital services. Two older communities, which are among the 10 most populated communities in the MCH catchment area, are also among those with the lowest income and levels of education. The 9,500 people who live in these neighbourhoods have higher levels of hospitalization and emergency room visits than the Edmonton average, according to 2010 City of Edmonton data.

#### d. CAPACITY PRESSURES

Population growth, and increasing complexity of care needs, have created a range of capacity pressures at the MCH. The Emergency Department, originally designed to accommodate 25,000 visits per year, saw 51,214 visits in 2015-16. On average, the MCH sees a 65-74% occupancy rate of stretchers in the emergency department occupied by emergency inpatients (EIPs) awaiting admission. The site is especially challenged to meet the needs of mental health patients whose first point of access is through the ED. In addition, on a daily basis, there are over 50 patients waiting transfer of services at both the MCH and GNCH, which equates to approximately 23% of the overall bed base. The current Intensive Care Unit has also been working out of a “temporary” space for over 15 years.

## e. PERFORMANCE OPTIMIZATION INITIATIVES

In order to improve operational efficiency and access/flow, the MCH has implemented a number of initiatives including:

### Broad Access and Flow Initiatives:

- Path to Home - Path to Home is an integral access and flow initiative designed to address acute care service delivery and proactive, inter-professional discharge planning with the patient at the centre of the journey, to create seamless transitions from admission to discharge. Path to Home has been successfully implemented at the MCH in Medicine and Surgery as of the 30<sup>th</sup>, June 2014.
- BELL Implementation (March 2015) – alignment of clinical leadership with a focus on frontline leaders and key competencies to support clinical care and service delivery.
- Bed Allocation Methodology (BAM) – realignment of surgical capacity to medicine following a comprehensive external review process occurred in the summer of 2014.
- Partnership with Primary Care (West PCN) - to promote smooth transition from acute care and direct access to primary care (better utilize the after-hours clinic located at MCH).

### Emergency Services:

- Geriatric Evaluation and Management in Emergency Department - geriatric assessment available in the Emergency Department for patients who are flagged as high risk.
- Mental Health Psychiatrist Services - available in the Emergency Department to address the needs of the mental health patients.
- ED Rapid Assessment Zone (RAZ) Redesign - a fast track area which cares for the CTAS 4 and 5 population. It helps prevent the long 8 hour waits in the waiting room without seeing a physician and it helps to identify the at risk CTAS 3 patients that might have previously continued to wait, thereby putting them at higher health risk.
- Lab and DI Process Redesign – priority assignment of tests for ED patients

### Medicine:

- 4th floor ALC Unit Redesign - to improve care to seniors incorporating restorative care practices to maximize patient outcomes.
- Elder Friendly Care - the MCH sees a large number of seniors at the site (57 % of all ED visits, 25% of inpatient admissions) and is pursuing an Elder Friendly designation. A Steering Committee has been convened to proceed with work on this initiative.

### Surgical Services:

- Utilization of aCATS waitlist data to accommodate additional cancer cases.
- Work with Endoscopy to improve access from the ED to Endoscopy for patients requiring emergency endoscopy procedures.
- Implementation of the fractured hip pathway as part of the Alberta Hip and Knee program to improve access times for surgery for the frail elderly.
- Orthopedic trauma – process development for accepting patients from the zone Orthopedic Consult Line (OCL); improving access time to OR; enhancing throughput from OCL to the Ortho Clinic.



- Mastectomy same day discharge program has been implemented to reduce length of stay.
- Enhanced Recovery After Surgery (ERAS) - a project of the Obesity, Diabetes and Nutrition Strategic Clinical Network, supported by the Surgery Operational Clinical Network, is introducing new and consistent ways of managing care before, during and after surgery. This includes standards around enhanced nutrition, anesthetics, pain control and earlier mobilization of patients after colorectal surgery. Protocols and practices have enhanced care to this patient population at MCH.

The MCH is also a key stakeholder in Access and Flow systems work which includes:

- Edmonton Zone access and flow strategy and planning.
- Orthopedic Trauma service planning and related initiatives.
- Collaborative Practice Model which includes care provider scope of practice. Destination Home and Smooth Transitions including partnerships with Home Care and Primary Care

## f. NOTABLE PROGRAMS

The MCH is a full service urban hospital, for the City of Edmonton and surrounding suburban communities. MCH provides a comprehensive range of services across the continuum of care; from acute to continuing care, ambulatory services to community and day programs. MCH is home to a diverse range of programs and services addressing the healthcare needs of the population. They are recognized within the zone, across the country and in the international arena as a leader in health service delivery. Notable programs and services include:

- Institute for Reconstructive Sciences in Medicine (iRMS): iRMS is a specialized program focused on reconstructive and rehabilitative treatment for patients with head and/or neck trauma, disease or congenital conditions. The institute is world-renowned and is a provincial leader in head and neck reconstruction and research.
- Transanal Endoscopic Microsurgery (TEMS): TEMS is only offered in six facilities across the country. MCH is the only provider of this minimally invasive rectal tumour procedure between Winnipeg to Vancouver.
- Breast Reconstruction Centre of Excellence: The MCH completes approximately 60% of all reconstructive surgeries related to breast cancer in the Edmonton Zone.
- Hyperbaric Oxygen Unit (HBO): The HBO is used for a variety of complex disorders and is available for 24/7 emergency treatment. The HBO is the only publicly-funded unit within the province and is used by a number of programs and services at MCH, including the iRSM and the Wound Care Program for various treatment protocols.

## g. SITE ACCESSIBILITY

To best serve the unique needs of its patient population, the MCH anchors a well-established and innovative campus of care that is integrated with key municipal access points, such as major roadways (87 Avenue and 170 Street) and transit hubs. A future light rail transit station is planned for the MCH site as part of the Valley Line, which will

further contribute to site accessibility, and a wide range of community amenities are present in the surrounding neighbourhoods.<sup>8</sup>

### ***Public Transit***

MCH is easily accessible by patients, staff and visitors travelling by public transit, driving or walking. This is a key consideration for staff and patients—especially those without a vehicle. A public transit stop directly in front of the hospital provides frequent access to eight bus routes. The West Edmonton Mall Transit Centre, just one block west, serves as a main junction for 30 bus routes. The MCH will be a stop on the new Valley Line (Southeast to West Light Rail Transit) approved by the City of Edmonton to run from Mill Woods to Lewis Farms. This LRT line will create direct access between the Grey Nuns Community Hospital (GNCH) and the MCH by 2020.

### ***Automobile use***

Automobile use in several communities in the MCH catchment area is much lower than the city or provincial average (Figure 3). In two communities at greatest risk, over 30% have no access to private vehicles for travel—double the Alberta average. Overall, the population in the lower income communities of the west end is dependent on transit, with one in four or five using public transit to travel to work. People in these communities have more frequent visits to Emergency as well.

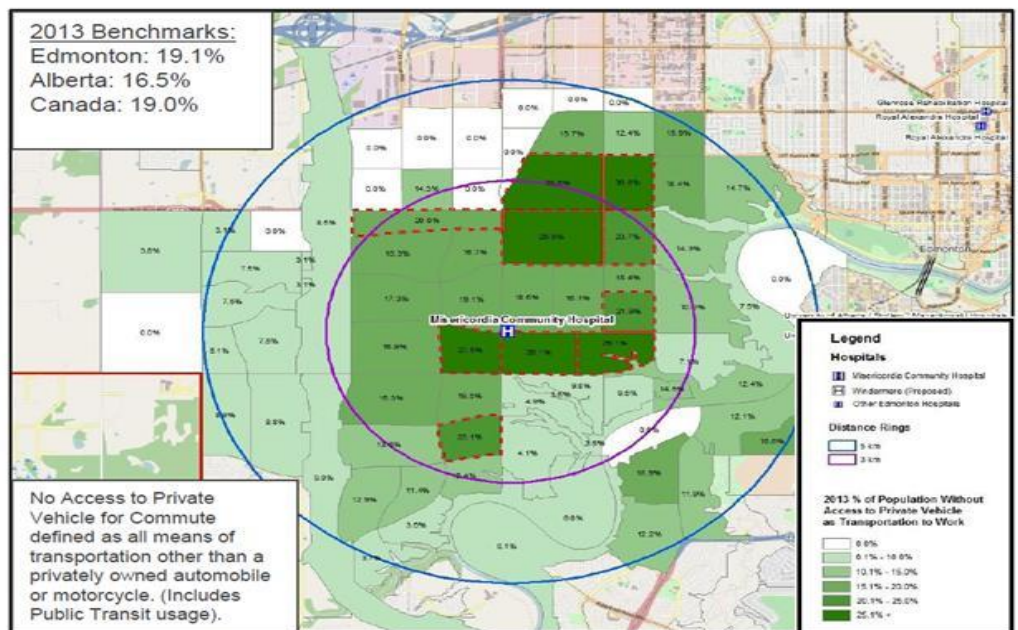
### ***Road Access***

The MCH is currently located on major thoroughway at 87 Ave and 170th NW, with connections to the Whitemud Freeway to the south, the Anthony Henday Drive to the west and the Yellowhead Highway to the north. Development on a new southwest site would require major roadway infrastructure to be completed for proper access and will present a significant change in traffic and wait times for local residents. Traffic in the city flows along major routes, with the Whitemud Freeway experiencing the highest flow of traffic in the city. Based on drive-time analysis, MCH's current location is easily accessible by many residents within the Edmonton Zone, specifically:

- 77,660 (9.2%) reside within a 5-minute drive
- 168,439 (20.9%) live within a 10-minute drive
- 332,922 (41.4%) reside within a 15-minute drive

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<sup>8</sup> Ibid, 7-8.



**Figure 3:** Neighbourhoods with lowest access to a private vehicle for travel in the MCH 5-km catchment area. Source: ArcGIS, City of Edmonton Open Data Catalogue, Misericordia data and HDR analysis

## h. INNOVATIVE HEALTH CAMPUS

The co-location of Capital Care, McConnell Place West, Villa Caritas and the West Edmonton Primary Care Network on the MCH site creates a robust campus with the ability to respond innovatively to population needs. The specialized care provided at Villa Caritas, Alberta’s largest provider of geriatric mental health services, is highly integrated with MCH. The sites share clinical support services and medical expertise to advance practice, provide optimum care and achieve efficiencies.

## i. FUTURE PROJECTED DEMANDS

Given demand projections, the Misericordia Community Hospital (MCH) in west Edmonton has been confirmed through Edmonton Zone 2030 planning as a vital priority for infrastructure renewal, with the acknowledged need stretching back more than a decade. If the current MCH is unable to meet its share of emergency and acute care demands efficiently and reliably, pressure on other facilities in the zone will only increase, and the ability to achieve the desired system transformation will be imperiled.

To guide prudent redevelopment of the MCH and optimize overall system quality, efficiency and economies of scale, a Site Profile and Master Plan for the MCH were developed through 2030 planning, with input from over 300 MCH staff and physicians, and further planning is now underway.

These planning exercises have already concluded that maintaining or replacing current MCH services will not be adequate to address future needs – significant expansion of capacity is required. Between the MCH and Villa Caritas, 924 inpatient beds will be needed to meet projected demand, as compared to 453 currently in place at the two facilities. The following table provides a comparison of the current and projected bed base.

## MCH Current vs. Projected Bed Base

Program/Service	2015 Existing	Projected Bed Base (2030)
AMH - Adult PICU		10*
Geriatric Mental Health Beds	150*	230*
Acute Mental Health	25	60
<b>Mental Health</b>	<b>175*</b>	<b>300*</b>
Cardiac Sciences	10	20
Critical Care - ICU	6	12
Medicine	122	160
Geriatric Assessment Unit	16	30
Palliative Comfort Care Beds		20*
Surgery	91	170
Child Health - NICU	12	24
Women's Health - Obstetrics	20	30
<b>Acute</b>	<b>277</b>	<b>466</b>
Rehab - Acute Rehabilitation		30
Rehab - Restorative Care		128
<b>Rehab</b>	<b>0</b>	<b>158</b>
<b>Total</b>	<b>452*</b>	<b>924*</b>

\* Values include Villa Caritas bed base

## j. RISKS TO SAFETY AND QUALITY FROM AGING AND OUTDATED INFRASTRUCTURE

As 2030 planning for the Zone has demonstrated, the current MCH infrastructure is no longer suitable for the level and model of care required to meet patient needs, particularly given increasing care complexity, changing standards and protocols, and infection control requirements. The staff and volunteers at the MCH continue to provide, and be recognized for, quality care despite these constraints. However, the 1960s building design creates major barriers to staff workflow, patient transport, and the requirements of patient-centred care.<sup>9</sup>

The facility is challenged to meet the needs of its patient population. There is a need to be responsive to increased complexity of care, changing care standards and protocols, infection control requirements, and changing demographics. There are significant infrastructure and patient safety and quality risks that threaten the facility's ability to meet the needs of its patient population. These include patient care areas that have fallen behind current standards, significant deficiencies in the building envelope and ongoing mechanical infrastructure issues that present significant challenges to operations. In addition to serious capacity pressures and configuration issues in many key units and departments, fundamental shortcomings of the current facility include the following.

- An Emergency Department that has outgrown current capacity, with spaces that do not meet infection control requirements and a functional layout that restricts observation and reduces efficiency;
- An ICU that does not meet current standards for safe, efficient patient care, including rooms that are too small for technology advances, rooms without anterooms and/or doors, and no negative pressure rooms meeting current standards;

<sup>9</sup> Alberta Health Services, *Edmonton Zone 2030 Plan*, "Phase 1 Current State Report" (June 2013), 32-33.

- A pharmacy with inadequate space that is not functional for workflow, and a sterile room that does not meet standards; and
- Medicine units with lack of visibility for monitoring, no barrier-free washrooms, and four-bed wards that limit the ability to meet infection control standards.

The rapidly deteriorating condition of the MCH infrastructure contributes to safety concerns and increasing costs. Needed repairs and renovations significantly disrupt patient care, often requiring extended patient displacement. Given the current state of the infrastructure, there is a real risk that a critical system failure could result in the loss of substantial amount of acute care resources.

In 2013, Phase 1 2030 planning for the Edmonton Zone identified a wide range of critical infrastructure risks at the MCH site, stating “there are major facility issues that interfere with patient care and lead to daily crisis management.”<sup>10</sup> An extensive flood in May that year impacted many areas, including two inpatient units (mental health and medicine) requiring their relocation – impacting both units patients, physicians, and staff. A number of water incidents have occurred since the 2013 flood, including a second significant flood that effected the Medical Device Reprocessing Department and suspended surgeries for two weeks.

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<sup>10</sup> Alberta Health Services, *Edmonton Zone 2030 Plan*, “Phase 1 Current State Report” (June, 2013), 32.

## Appendix C: Grey Nuns Community Hospital Current State and Opportunities

### a. BACKGROUND

In 1988, the GNCH opened as a community hospital in the new community of Mill Woods. Since then, the GNCH has evolved into a thriving, acute care hospital with tertiary care referral services. It plays a vital role within the Edmonton Zone and Northern Alberta, providing specialized care such as vascular surgery, stroke care, psychiatric intensive care, palliative care and women's/children's health. As a university affiliated teaching facility, the GNCH educates and trains physicians, nurses and allied health practitioners.

### b. PATIENT POPULATION

The GNCH serves a large and diverse geographic area that includes south side of Edmonton and neighbouring communities of Sherwood Park/Strathcona County, Beaumont and Leduc. The catchment area includes a growing population characterized by a culturally diverse and aging population. The following table provides an overview of some of the key characteristics of the patient population for the GNCH.

Characteristics	Details
<b>Socio-economic Indicators:</b>	<ul style="list-style-type: none"> <li>The identified catchment communities have a wide distribution regarding income related indicators.</li> <li>Millwoods West has the lowest census income per family (\$73,413) while the provincial average income is \$98,240. Both areas have approximately 12% of families with an income below LICO. This is approximately double the provincial rate.</li> <li>In contrast to this, Twin Brooks and Sherwood Park have the highest average census income (\$136, 727 and \$115,526 respectively) when compared to other catchment communities. The number of families with an income below LICO in Twin Brooks is 5.1% and 2.5% in Sherwood Park. (LICO – refers to Low Income Cut Off as defined by Statistic Canada)</li> </ul>
<b>Language:</b>	<ul style="list-style-type: none"> <li>Millwoods West and Millwoods South and East have approximately twice the rate (2.5% and 2.9% respectively) of people who don't speak English or French when compared to the Provincial experience.</li> <li>The provincial top 5 languages spoken at home are Chinese, German, Panjabi, Cantonese, Spanish. While Chinese, Panjabi (Punjabi) and Cantonese are identified as top languages within the identified community areas, several other languages were also identified in the top 5 category. Most notably these include: Tagalog, Korean and German as well as others</li> </ul>
<b>Immigration Status:</b>	<ul style="list-style-type: none"> <li>The provincial percentage of Immigrants who arrived in the last 5 years is 3.2%.</li> </ul>

<b>Characteristics</b>	<b>Details</b>
	<ul style="list-style-type: none"> <li>Several communities in the catchment area have higher rates for this indicator and are as follows: Millwoods West (7.4%), Duggan (6.0%), Millwoods South and East (5.3%), Rutherford (5.4%), and Twin Brooks (3.8%).</li> </ul>
<b>Chronic Disease Prevalence Rate:</b>	<ul style="list-style-type: none"> <li>Four Chronic Disease Prevalence rates (per 100 populations) are available for Alberta. These include: Hypertension (Hypertension: 14.2), Diabetes (5.1), Ischemic Heart Disease: (4.0) and COPD (1.8).</li> <li>Millwoods West and Millwoods South and East had elevated rates for Hypertension (15.1 and 15.0).</li> <li>Communities with elevated Diabetes rates include: Millwoods West (6.6) Millwoods South and East (6.4), and Leduc (5.6).</li> </ul>
<b>Maternal and Child Health Indicators</b>	<ul style="list-style-type: none"> <li>There are two catchment communities that have a higher percentage of low birth weight when compared to the provincial experience (6.8): Millwoods West (8.9% and Millwoods South and East (8.0%).</li> <li>Compared to the birth rate for the province at 27.4, four catchment communities have elevated rates. These are as follows: Rutherford (53.9), Beaumont (34.3), Leduc (30.7) and Millwoods South and East (29.7)</li> </ul>
<b>Emergency Department Indicators:</b>	<ul style="list-style-type: none"> <li>Semi and Non Urgent Visits</li> <li>The percentage of semi-urgent and non-urgent visits for most communities is similar to the rate/profile experience at the GNCH with 38% of visits being CTAS 4 or 5.</li> <li>The exception is Leduc (51.2%) and Beaumont (44.5%) that has increase ED usage for semi or non urgent visits.</li> <li>The Top Three Common Causes for an ED Visit are: <ul style="list-style-type: none"> <li>Acute Upper Respiratory Infection,</li> <li>Disease of the Middle Ear and Mastoid</li> <li>Mental Health and Behavioral Disorder due to Psychoactive Substance as the second or third cause along with Asthma.</li> </ul> </li> </ul>

### **C. CAPACITY PRESSURES**

The Grey Nuns Hospital (GNCH) faces many challenges as a result of the rapidly expanding community population it serves. The challenge is not only to maintain current acceptable access and flow throughout the facility and zone, but to offer services in a way that acknowledges the growing diversity of the catchment population and positions the site for future service delivery.

Service demand pressures at the GNCH far exceed capacity on a regular basis, with particular pressure in the Emergency Department. ED visits have increased by 15% in the past five years, and the site consistently has the highest number of emergency inpatients in Alberta. Moreover, although the ED was originally designed to accommodate 23,000 visits per year, actual visits far exceed this number – with 70,412 visits in 2015-16.

The following table includes further details regarding the clinical context and capacity pressures for the GNCH.

<b>Program Area</b>	<b>Performance &amp; Clinical Challenges</b>
<b>General</b>	<ul style="list-style-type: none"> <li>• The GNCH currently operates 11 overcapacity protocol beds (OCP) and utilizes up to an additional 13 unfunded inpatient bed spaces as part of the site surge plans.</li> <li>• The percentage of ALC days has risen from 8.6% (2012/13) to 9.2% in 2015/16.</li> <li>• The ALOS/ELOS ratio has been consistently below 1.0 for the last 5 years with the GNCH at 0.95 in 2015/16. However, two areas that often have higher than 1.0 ALOS/ELOS ratio are mental health and family medicine suggesting there are opportunities for improvement.</li> <li>• The 30-day readmission rate for the GNCH is at 6.4% (2015/16) which is the lowest in the Edmonton Zone. In large part this can be attributed to the targeted access and flow strategies implemented under Path to Home. There continues to be variances within the site.</li> </ul>
<b>Emergency Department</b>	<ul style="list-style-type: none"> <li>• Visits to the ED have increased in the past 5 years by approximately 15% with a subsequent increase in inpatient admissions. The GNCH ED, originally designed for a capacity of 23,000 patient visits/year, has seen growth that far exceeds the original capacity, reaching 70,412 visits in 2015/16.</li> <li>• Out of 26 stretcher spaces, only 12 are monitored beds.</li> <li>• There are only 2 seclusion rooms (4 are required) and only one negative pressure treatment space.</li> <li>• The ED continues to routinely use 6 hallway spaces plus additional parking spaces for EMS.</li> <li>• The Rapid Assessment area is chaotic and congested with no privacy.</li> <li>• Satellite DI cannot accommodate a stretcher so only extremity studies can be done.</li> <li>• Performance is comparable to the other sites on ED Median Time to PIA(physician initial assessment) and ED LOS for Discharged Patients; GNCH has the longest length of stay for emergency admitted inpatients.</li> </ul>
<b>Mental Health</b>	<ul style="list-style-type: none"> <li>• Volumes at the GNCH have increased 43% since 2005/06 with 1,205 Mental Health patients receiving care in 2015/16.</li> <li>• The adult psychiatry programs have been running at or over capacity for the past 10 years. The GNCH has been regularly operating 4 OCP beds plus 5 surge beds that are used to decant mental health patients from the GNCH ED when the site is experiencing severe ED capacity with either mental health or medicine patients.</li> <li>• Aside from the 10-bed secure psychiatric unit (Unit 92), there is only one room that can be secured on Units 91/93 but it is not a</li> </ul>



<b>Program Area</b>	<b>Performance &amp; Clinical Challenges</b>
	<p>true seclusion room.<sup>11</sup> This leads to both capacity issues as well as safety/risk issues.</p> <ul style="list-style-type: none"> <li>• The ALOS/ELOS has improved significantly at the GNCH over the past 10 years. The ALOS/ELOS ratio was 1.37 in FYE 2006 and 1.09 in FYE 2016. The recent efficiencies in patient access and flow can be attributed to the roll out of Path to Home.</li> </ul>
<b>Women's &amp; Child Health</b>	<ul style="list-style-type: none"> <li>• Since 2004/05, the number of births at GNCH has increased by 37%. There were 6,437 deliveries in 2015/16 with 31 funded beds. It is anticipated to reach 7000 deliveries by fiscal year 2017/18</li> <li>• In the fiscal year 2015/16, the Neonatal Intensive Care Unit (NICU) cared for 274 neonates in 25 funded bassinets. This is an increase of almost 50% or 91 infants compared to ten years ago (prior to April 1, 2009, the NICU had 20 funded bassinets).</li> </ul>
<b>Surgery</b>	<ul style="list-style-type: none"> <li>• Since 2004/05, the number of emergency surgeries has increased by almost 400 cases and over 800 surgical hours per year (1106 cases at 1413 hours in 2004/05 vs. 1502 cases at 2218 hours in 2013/14).</li> <li>• The site's flexibility to respond to surges in demand is also at significant risk.</li> <li>• The Northern Alberta Vascular Centre located at the GNCH provides all inpatient and outpatient vascular care to a referral population of 2.3 million in Edmonton and Northern Alberta/Northeastern British Columbia, Saskatchewan and the Territories.</li> <li>• Physicians at the GNCH have raised serious concerns about the lack of progress in establishing EVAR suites since the program's consolidation in 2008 and are advocating strongly for the inclusion of the development of EVAR suites at the GNCH in Alberta's 5-year Capital Plan.</li> <li>• As an interim measure, a retrofit of two ORs is required to provide safe, quality care for the vascular patients at the site.</li> </ul>
<b>Medicine</b>	<ul style="list-style-type: none"> <li>• There are a total of 104 medical beds for Family Practice and General Internal Medicine patients.</li> <li>• The site lacks a high intensity or step down unit for Critical Care patients and results in patients who are too sick for a medicine unit but not sick enough for the ICU/CCU staying in the ED.</li> <li>• As well, low acuity patients remain in Critical Care longer than required until they are stable enough for the regular inpatient units.</li> <li>• There are multidisciplinary clinics and those to facilitate inpatient follow up and urgent ED consults including Diabetes, General Internal Medicine, Geriatrics, Anticoagulation (including obstetrical medicine), Infectious Diseases, Wound Care</li> <li>• There are 10 Acute Stroke beds, 14 Geriatric beds, 20 Tertiary Palliative Care inpatient beds, and 3 Comfort Care beds for</li> </ul>

<sup>11</sup> Blackwell & Parkin (2013). Coordinated health service and infrastructure planning for the Edmonton Zone. *Alberta Health Services*, p25.

<b>Program Area</b>	<b>Performance &amp; Clinical Challenges</b>
	short-term admission of end-of-life patients who decompensate and cannot be managed at home
<b>Critical Care</b>	<ul style="list-style-type: none"> <li>GNCH has a combined ICU/CCU with 10 Critical Care beds and 8 Cardiac Care beds</li> </ul>

#### d. PERFORMANCE OPTIMIZATION INITIATIVES

In order to improve operational efficiency and access/flow, the GNCH has implemented a number of initiatives including:

- *Path to Home:* This discharge planning initiative has been rolled out site wide and has improved the ALOS/ELOS ratio. This has resulted in the GNCH having the lowest inpatient average length of stay in the Edmonton Zone (5.6 days). While the facility struggles with occupancy rates, the program areas are able to discharge patients quickly.
- *Bed Allocation Management:* In conjunction with the consultant AnalysisWorks, this initiative examined the Surgery and Medicine bed base for efficiencies. As a result of this analysis, 7 surgical beds were converted to medicine beds and a new 12 bed medicine unit was created (unit 45) in April 2014.
- *PACE:* In May 2014, Navigant Consulting was engaged to look at the current footprint and care processes within the ED to identify efficiencies. This initiative created geographical zones of care for increased patient flow and expanded the current footprint of the ED into the Ortho Clinic area providing additional space to care for patients
- *Relocation of office space:* Patient care spaces that were being used as office spaces were reclaimed as patient care spaces in 2014. However, there are 10 remaining patient care spaces that are currently used for student/resident sleep rooms and could be repurposed as care spaces.
- *Mental Health team for the Emergency Department:* Skilled staff will be able to provide the appropriate care for these patients until discharge or an inpatient bed becomes available. In July 2016 a dedicated ED psychiatrist was hired in addition to the dedicated Mental Health team that was created for ED.
- *Access and Flow:*

##### **Transition services optimization**

- Expanded role of Transitions Coordinator
- Collaborative practice model with Transition Services (TS) and Social work (SW) sharing a decision-making relationship
- Complex patient transitions, TS partnered with AHS to develop review process to place patients in the most appropriate setting

##### **Home care transitions pilot**

- Home First is a key focus
- GNCH agreed to be pilot for Home Care / Transition Services, with Home Care and TS working together on transition process for the patient

- Pilot program ended October 2015 valuated and rolled out across Edmonton zone

### **Primary care networks**

- Critical partners for successful discharge and re-admission avoidance
- Covenant Health working with South and West PCN to develop discharge notification / hand-off model
- Provide unattached patients option of family physician
- Work will continue to explore opportunities to partner with the South and West PCN to improve care and services.
- *Process Improvement:* Since our pilot of Lean in 2009, Covenant Health and the GNCH continue to utilize Lean and process improvement methodology to improve our care processes. Over the years, multiple projects have been completed at the site in the ED, Medicine, Lab/DI, Surgery, and Women’s/Child Health. (*Please refer to Appendix 2*)

## **e. CURRENT STATE AND FUTURE PROJECTED DEMAND**

Covenant Health continues to work in partnership with the EZ acute care sites and community stakeholders to design innovative systemic interventions which are targeted to improve patient access and flow. Despite this work, there are limitations to improvement due to physical site capacity to surge including the Emergency department stretcher capacity, and technology for real-time monitoring and responsive deployment of resources.

Several consultant reports (including Navigant & AnalysisWorks) have indicated that the facility has reached a tipping point where clinical expansion has become necessary in order to efficiently serve the people of the GNCH catchment area and Edmonton Zone.

In spite of these pressures, the site’s bed base has not changed substantially to meet increased growth in demand. Since 2007, the current funded bed base of 351 has not changed.

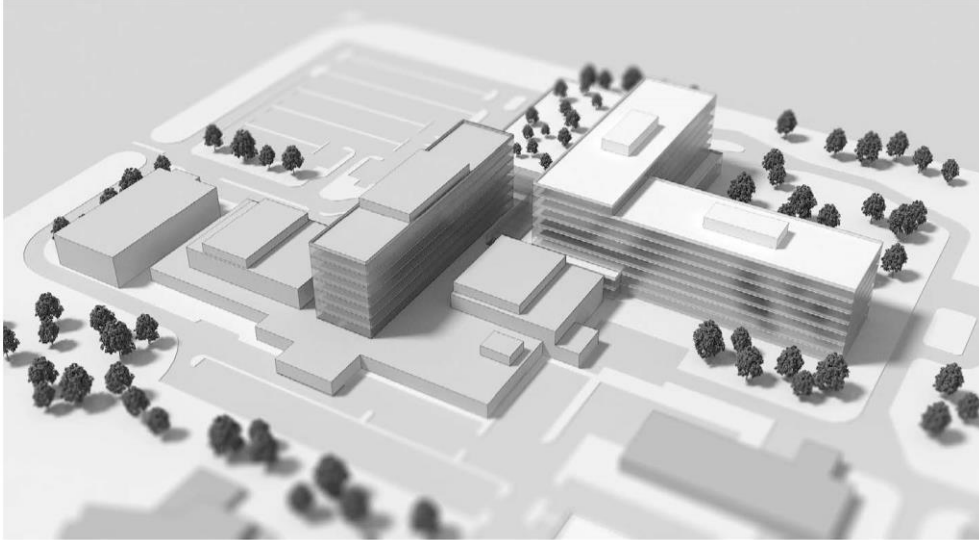
As shown in the table below, the current 2030 strategy identifies the GNCH planned as the final hospital in zone to receive additional capacity (of up to 800 beds by 2028, with construction starting in 2023).

### **GNCH Current vs. Projected Bed Base**

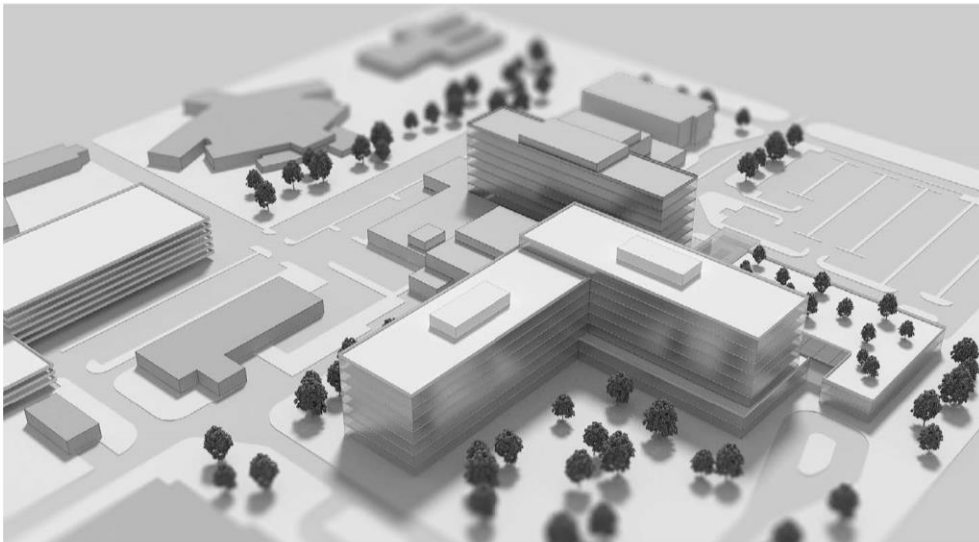
<b>Program/Service</b>	<b>2015 Existing</b>	<b>Projected Bed Base (2030)</b>
Acute Mental Health	69	113
<b>Mental Health</b>	<b>69</b>	<b>113</b>
Cardiac Sciences	10	36
Critical Care – ICU	8	16
Medicine	128	224
Palliative Comfort Care Beds	23	25
Surgery	61	174
Child Health – NICU	25	50
Women's Health – Obstetrics	31	56
<b>Acute</b>	<b>286</b>	<b>581</b>
Rehab - Acute Rehabilitation		30
Rehab - Restorative Care		64
<b>Rehab</b>	<b>0</b>	<b>94</b>
<b>Total</b>	<b>355</b>	<b>788</b>

In addition, Emergency Department visits are projected to increase to 92,629 per year by 2030. This estimate is considered conservative, as it does not account for demand from Beaumont residents.

## Appendix D: 2016 Visual Depiction of MCH Concept



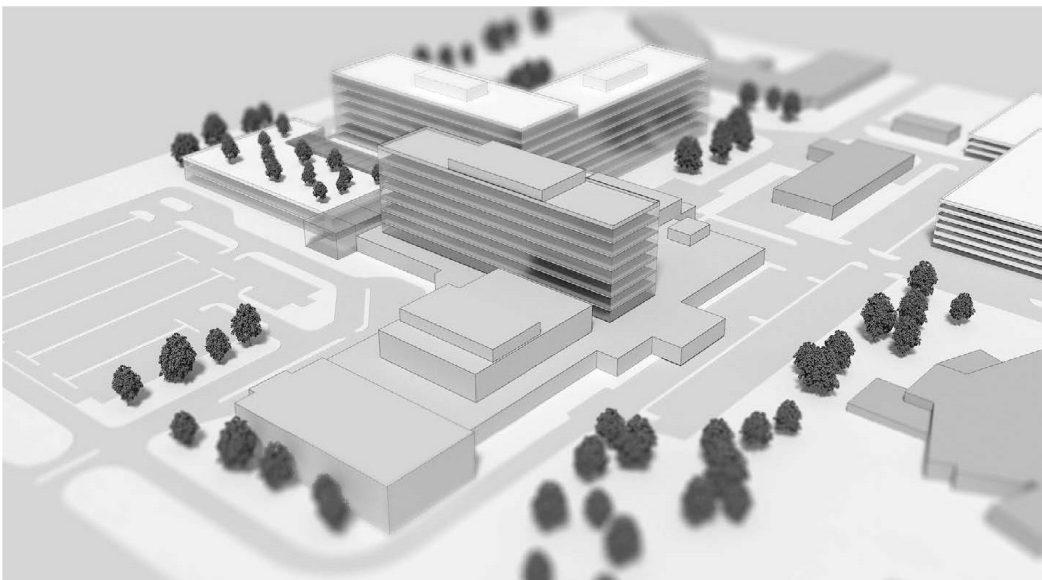
2016 PRELIMINARY  
MASSING CONCEPT +  
SITE STRATEGY STUDY  
**VIEW FROM NORTHEAST**  
MISERICORDIA COMMUNITY HOSPITAL  
EDMONTON, AB  
DECEMBER 2016



2016 PRELIMINARY  
MASSING CONCEPT +  
SITE STRATEGY STUDY  
**VIEW FROM NORTHWEST**  
MISERICORDIA COMMUNITY HOSPITAL  
EDMONTON, AB  
DECEMBER 2016



2016 PRELIMINARY  
MASSING CONCEPT +  
SITE STRATEGY STUDY  
**VIEW FROM SOUTHWEST**  
MISERICORDIA COMMUNITY HOSPITAL  
EDMONTON, AB  
DECEMBER 2016



2016 PRELIMINARY  
MASSING CONCEPT +  
SITE STRATEGY STUDY  
**VIEW FROM SOUTHEAST**  
MISERICORDIA COMMUNITY HOSPITAL  
EDMONTON, AB  
DECEMBER 2016