



Multi-Year Health Facility Infrastructure Capital Submission 2018

Please Note: The following information is being provided to the Ministry of Health for the purpose of obtaining advice, proposals, recommendations, analyses or policy options for the Minister of Health, Treasury Board and Cabinet in relation to the Provinces' Capital Plan.

Executive Summary

The Alberta Health Services 2018 Multi-Year Health Facility Infrastructure Capital Submission describes priority major capital needs (projects over \$5 million). The following information is provided to the Ministry of Health to inform the capital funding process of the Government of Alberta. The submission:

- is mandated in the Health Facilities Capital Program Manual as a major step in the planning and project approval process and is submitted to HEALTH and INFRA by May 31 of each year;
- outlines the overall planning and management of health infrastructure;
- communicates the planning and capital investments needed to effectively maintain the existing asset base and modify it as needed to support service delivery strategies;
- provides the Ministers of Health and Infrastructure with the information needed to recommend appropriate future funding for health infrastructure;
- provides a rational and compelling context to Alberta Health (HEALTH) and in turn to Treasury Board and Finance, for annually assessing individual project recommendations relative to provincial capital proposals (including all the ministries' capital submissions) and priorities;
- when possible provides a preliminary estimate of operating costs for the proposed capital investments; and

- acknowledges the significant capital investment in the 2017 budget year and discussions with Alberta Health regarding a 2018 Submission that maintains consistency with last year's submission.

The report takes into account direction from the Government of Alberta and the priorities outlined in the AHS 2017-2020 Health Plan and Business Plan supporting its key desired outcomes of:

- Improved health outcomes for all Albertans.
- The well-being of Albertans is supported through population health initiatives.
- Albertans receive care from highly skilled care providers and teams working to their full scope of practice.
- A high quality, stable, accountable and sustainable health system.

The AHS Capital Management Strategic Capital Planning team continues to work towards completing Needs Assessments or Strategic Options Analysis for all high priority initiatives identified by Zones or Provincial Programs across the province. These investigations will better inform decision-making and prioritization activities in the future and help ensure the most important projects are identified and presented to Government.

Overview of Infrastructure

1.0 Overview of Infrastructure

AHS is responsible for owning, operating, funding and leasing facilities supporting the delivery of health care. Currently, AHS utilizes in excess of 1,000 owned buildings and leased spaces (including license agreements) for direct care delivery and support services. AHS leased spaces are in both private and government owned buildings.

Most services are directly delivered by AHS in either owned or leased space. Services are also funded by AHS and provided by voluntary and private partners in AHS or non-AHS owned or leased space.

AHS also has key partnerships with universities and colleges acknowledging our shared responsibility to educate and train health professionals of the future, and support ongoing biomedical research and innovations.

As would be anticipated with a large volume of owned and leases spaces, there is wide variability in the condition and age of facilities.

1.1. AHS-Owned Space

AHS owns the majority of the area/space from which services are offered or are required to support health service delivery. The total number of AHS-owned (standalone) buildings is

approximately 500, ranging from the largest urban hospital to small rural service or maintenance buildings.

Acute care hospitals, which comprise the majority of the owned building area, are the most expensive facilities to build and operate within AHS' complement of building assets.

Across the province there are just over 300 continuing care facilities in operation, approximately one-third are owned and operated by AHS, the remaining facilities are owned and operated by private and voluntary organizations.

1.2. Shelled and Vacant Space

A number of acute sites have unfinished shelled and/or vacant space, which has been set aside for specific future development (see the following table).

Some of the spaces that have been shelled for future use have had considerable preparatory work done in anticipation of fit-out (e.g., partial mechanical/plumbing system installs, floor coring etc.). Originally proposed future uses were based on previously developed strategic facility master plans. Most of the vacant space listed below will require redevelopment.

Unfinished Shelled / Vacant Spaces		
Facility	Shelled / Vacant Space (m ²)	Proposed Future Use
Foothills Medical Centre McCaig Pavilion	2,940 Shelled	<ul style="list-style-type: none"> Operating Theatres
Foothills Medical Centre 11 th Floor West Wing	1,500 Vacant	<ul style="list-style-type: none"> Inpatient or Outpatient Clinical
Foothills Medical Centre 6 th Floor Clinical Wing	1,500 Vacant	<ul style="list-style-type: none"> Inpatient Clinical (Planning Underway for NICU Expansion)
Peter Lougheed Centre	7,750 Shelled	<ul style="list-style-type: none"> Emergency Department Laboratory Services Mental Health Short Stay Unit (MHSSU) / ICU Support Space
Rockyview General Hospital	9,100 Shelled	<ul style="list-style-type: none"> Laboratory Services ICU/CCU Ambulatory Services GI Space
Richmond Road Diagnostic Treatment Centre	8,130 Vacant	<ul style="list-style-type: none"> Administration / Support Services Ambulatory Services
Calgary South Health Campus	10,517 Shelled	<ul style="list-style-type: none"> ICU Emergency Department Diagnostic Imaging Outpatient Dental Cardiac ICU Day Cardiology Surgical Intervention Suites
Red Deer Regional Health Centre – Ambulatory Annex	76 Vacant	<ul style="list-style-type: none"> Ambulatory Expansion
Chinook Regional Hospital	6,440 Shelled	<ul style="list-style-type: none"> Renal Dialysis Two Inpatient Units

Unfinished Shelled / Vacant Spaces		
Facility	Shelled / Vacant Space (m ²)	Proposed Future Use
Chinook Regional Hospital Level 3	1,985 Vacant	<ul style="list-style-type: none"> ICU/CCU Medical/Surgical Beds
Medicine Hat Regional Hospital	410 Shelled	<ul style="list-style-type: none"> Diagnostic Imaging
Medicine Hat Regional Hospital – Level 3	2,048 Vacant	<ul style="list-style-type: none"> Unassigned
Medicine Hat Regional Hospital – Level 6	1,244 Vacant	<ul style="list-style-type: none"> Mental Health Inpatient
Alberta Hospital Edmonton (Building 12)	2,110 Vacant	<ul style="list-style-type: none"> Addictions and Mental Health Inpatient Units
Kaye Edmonton Clinic	13,030 Shelled	<ul style="list-style-type: none"> Ambulatory Clinics
Mazankowski Alberta Heart Institute	3,870 Shelled	<ul style="list-style-type: none"> Cardiac Services

1.3 Leased Space

AHS presently manages a portfolio of over 300 leases with an annual operating budget of approximately 90 million dollars. This value considers the rental of the space itself and related operating costs (i.e. systems maintenance, custodial and utilities).

The primary groups that occupy the leased spaces include:

- Acute Care (including Cancer Care)
- Urgent Care
- Public Health and Community Care
- Corporate Services

- Continuing Care
- Addiction and Mental Health
- Emergency Medical Services (EMS)

Strategic lease management is an essential asset strategy when flexibility is required regarding service location, the need to meet increasing demand or where expediency is critical.

Internal capital funds are required to complete leasehold improvements or alternatively AHS Real Estate negotiates an allowance in the lease that provides the required capital; however this can increase the lease operating budget as the capital is amortized over the lease term. Either scenario requires an additional funding source.

1.4 Asset Divestiture Plan

AHS owns a large inventory of assets; however a number of properties have become surplus to its requirements. Not all owned lands and buildings have a strategic value in the long-term. AHS is completing the required due diligence to assess the needs, condition and value of these properties.

AHS may sell surplus properties subject to approval from the Minister of Health. AHS is required to obtain an independent appraisal of fair market value (FMV) of the property. Properties must be sold for FMV unless the property will be used for the ongoing benefit of other government agencies. The AHS Real Estate land disposal process can create issues for timely, effective handling of land disposal projects. The process for disposal includes: Senior Executive Sponsorship, Government of Alberta (GoA) approval, property condition assessment, appraisal,

marketing, sale documentation and closing. Subject to GoA approval, AHS can proceed with the process.

All transactions in land are subject to legislation (Regional Health Authorities Regulation – AR 15/95) that requires AHS to:

- Obtain the Minister of Health’s approval (Section 2.6).
- Receive fair value for the transaction (Section 2.71(1). Less than fair market value can be received where “the property will be used for the ongoing benefit of residents of the health region.”

The proceeds from the sale of an interest in land can result in one of the three outcomes below:

- proceeds from the sale are deposited in the AHS account;
- the funds are treated as ‘general revenue’ by AHS; or
- land is transferred for a nominal sum and there are no proceeds.

AHS is in the process of performing due diligence on a number of properties which are likely to be surplus to the long-term needs of the delivery of health care. Currently, AHS has a number of sites that are under contract and follow a government approved process for disposition. Anticipated timing for this process is approximately 12 to 18 months per transaction. AHS will spend approximately \$300,000 in required due diligence (e.g., appraisals, environmental assessments etc.) to complete the transactions. This estimated expense does not consider the cost of demolition. The list of sites for disposition is included below.

North Zone

- Clear Hills County vacant land
- Fort Vermillion Staff Housing property
- Edson Community Health Services property
- Former High Prairie Health Complex property (minus AHS residential property)

Edmonton Zone

- Edmonton Recruitment House property

South Zone

- Empress Home Care office
- Grand View Nursing Home, Cardston
- Taber Health Unit

Central Zone

- Valley Park Manor, Red Deer
- Eckville vacant lands
- Drayton Valley Condo Unit (Horizon Village)

The following sites are under active contract to be transferred and/or sold:

Central Zone

- Red Deer Nursing Home property

North Zone

- Hythe residential vacant land
- Fort Vermillion residential vacant land
- Grand Cache treed lot vacant land

South Zone

- Raymond Care Centre property

1.5 Infrastructure Maintenance Program

The Infrastructure Maintenance Program (IMP) is a Government funding source for projects with a value less than \$5 million. This ongoing program is intended for the planned repair, maintenance and renewal of health facilities and plays a critical role in preserving AHS owned assets. Capital Management works directly with zone leadership to develop a rolling three-year plan for IMP projects according to an allocation formula. The plan is then submitted to INFRA and HEALTH for review and support.

The Government of Alberta 2018-2023 Fiscal Plan (March 16, 2017) identifies Health Care Facilities – Capital Maintenance and Renewal allocations as follows:

- \$130.5 million 2018-2019 (estimate)
- \$108.9 million 2019-2020 (target)
- \$110.4 million 2020-2021 (target)
- \$185.0 million 2021-2022 (target)
- \$165.0 million 2022-2023 (target)

The three-year rolling IMP plan anticipates spending the full amount available to AHS from the Capital Maintenance and Renewal funding on an annual basis. Over the past few years AHS Project Management has increased its capacity and ability to utilize all of the funding, for example in 2017-18 fiscal year AHS Project Management had approximately 650 active IMP projects, with an average monthly expenditure of \$ 12 million dollars.

Typical areas of focus for IMP spending in the upcoming years include:

- building and staff security system upgrades and replacements;
- electrical system upgrades and replacements;
- mechanical systems upgrades and replacements;
- exterior building and roof repairs or upgrades;
- life safety systems (fire alarm, nurse call etc.) upgrades and replacements;
- interior finishes upgrades and replacements; and/or
- minor functional projects.

The multi-year project list is subject to adjustments as issues and priorities emerge.

Capital Submission Priorities

2.0 Capital Submission Priorities

The following table identifies the top priorities for the 2018 submission, the submission history, current documentation status and potential next steps.

Project	Previously Requested	Documentation Status		Next Steps
		Needs Assessment	Business Case	
Glenrose Rehabilitation Hospital - Energy Centre (services the entire campus – see *Note 2 below)	Yes	No	Yes	Design
Provincial Sterile Instrument / Medical Device Reprocessing Upgrades Phase 1	Yes	Yes	Yes	Design
Foothills Medical Centre Kitchen Redevelopment	Yes	Yes	Yes	Design
Lethbridge Chinook Regional Hospital Inpatient Unit Fit-Out	Yes	N/A	N/A	Design
Peter Lougheed Centre Emergency Department, Laboratory Development, and Mental Health Short Stay Unit / ICU	Yes	Yes	Yes	Design
Rockyview Hospital Fit-Out for Intensive Care Unit and Coronary Care Unit	Yes	Yes	Yes	Design
Calgary Cyclotron	Yes	Yes	Yes	Design
University of Alberta Hospital (Walter Mackenzie Health Sciences Centre) Brain Centre (Phased Neuro ICU)	Yes	Yes	In Development	Functional Program
Red Deer Regional Health Centre Redevelopment and Expansion	Yes	Yes	Pending	Business Case

*Notes:

1. Projects are not listed in priority order.
2. The Energy Centre will service the Royal Alexandra Hospital (RAH), Capital Care Norwood, Glenrose Rehabilitation Hospital (GRH), new CAMH, and additional RAH redevelopment.

2.1 Priority Project Descriptions

2.1.1 Glenrose Rehabilitation Hospital Energy Centre

Project Description / Scope of Work:

Upgrade of the Glenrose Rehabilitation Hospital Energy Centre to meet the increased demand of the expanded and redeveloped RAH/Glenrose/Norwood Campus. The scope of work will include expansion of the Energy Centre to about 4,000 square metres (from 1,942 square metres), additional and upgraded equipment and changes or enhancements to delivery piping, conduits and tunnels.

Rationale for Project:

The Energy Centre was built in 1986 with an upgrade and expansion in 2009. The uninterrupted power supply (UPS) is well beyond its 20 years of service life and the boiler equipment has also reached its load capacity for steam generation and delivery. There is no physical room for expansion and much of the equipment is beyond its useful life. Redevelopment of Royal Alexandra Hospital, Glenrose Rehabilitation Hospital, Capital Care Norwood, and new CAMH are dependent on an upgraded and expanded Energy Centre.

Capital Project Cost Estimate:

Costing for the proposed Energy Centre Redevelopment, including co-generation capacity is estimated at \$96 million (based on the 2017 Business Case).

Operating Expenditure Impact:

Facility Maintenance and Engineering operational costs will be minimal with no additional staff required.

Inclusion of electrical co-generation on the RAH/Glenrose/Norwood Campus will reduce energy costs dramatically. The Business Case projects approximate annual operating costs savings of \$2 million per year for 2021 increasing up to \$3.9 million per year by 2037 when full campus buildout is achieved.

Current Status of Project: Business Case completed November 2017.

2.1.2 Provincial Sterile Instrument / Medical Device Reprocessing Upgrades - Phase 1

Project Description / Scope of Work:

AHS has completed a high level review of all Medical Device Reprocessing (MDR) sites in the province to assess compliance with Provincial Infection Prevention Control Standards. The reviews consider operational issues, equipment and infrastructure requirements. Phase 1 represents the eight highest priority sites requiring remediation.

Rationale for Project:

MDR services occur in over 100 AHS facilities and in more than 300 areas within various AHS sites. Reprocessing includes all the steps necessary to make a contaminated reusable medical device ready for its next intended use. MDR is an essential service, supporting patient safety, and directly impacts the prevention of transmission of infections from reusable medical devices used in the delivery of health care.

Accreditation Canada has established standards for Reprocessing and Sterilization of Reusable Medical Devices; many AHS sites have been identified as deficient in past Accreditation surveys.

Capital Project Cost Estimate:

Based on consultant studies that have been completed to date (dates range from 2011 to 2014), the following were the high level capital cost estimates for the eight Phase 1 MDR sites.

- Cold Lake Healthcare Centre – \$1.957 million
- Northern Lights Regional Health Centre - \$11.488 million
- Westlock Health Centre - \$5.256 million

- Lac La Biche Health Centre - \$3.290 million
- Sturgeon Community Hospital – \$9.079 million
- Red Deer Regional Health Centre - \$26.262 million
- Peter Lougheed Centre - \$27.525 million
- Foothills Medical Centre - \$8.554 million

Operating Expenditure Impact:

The impact on operating costs will vary by site and is identified in the site specific consultant reports. There will be a marginal reduction in maintenance costs as obsolete, more problematic equipment is replaced. The opportunity to streamline MDR services on a Zone or Provincial basis may be available as the site reviews continue and smaller sites are studied.

Current Status of Project:

A Needs Assessment for Phase 1 was completed in April 2013. The province wide consultant review is now complete and will inform subsequent phases and future requests. Two of the eight sites (Cold Lake Healthcare Centre and Lac La Biche Healthcare Centre) are being implemented by AHS Project Management with IMP funding, with the remainder of the Phase I sites proceeding to design with Alberta Infrastructure taking the lead. In Budget 2018, the Government of Alberta announced full funding of two Phase 1 MDR sites; Red Deer Regional Health Centre and Peter Lougheed Centre in Calgary.

2.1.3 Foothills Medical Centre Kitchen Redevelopment

Project Description / Scope of Work:

This project will provide a complete renovation of the Nutrition and Food Services area at the Foothills Medical Centre (FMC) to replace obsolete equipment, correct non-compliant code issues, and upgrade the overall functionality, efficiency and safety of food service delivery.

Rationale for Project:

The FMC kitchen is a 1960s facility that has not had any major upgrade or renovations. Nutrition and Food Services at the FMC currently provides approximately 950 patient meals served three times per day, as well as over \$1.2 million annual transactions serving retail food service customers through multiple venues at the site. In order to maintain these services, the kitchen requires upgrades and modernization.

Due to the complex nature of the project and the need to maintain operations throughout the redevelopment process, use of an adjacent temporary modular kitchen during renovation of the existing FMC Nutrition and Food Services is the recommended alternative. The project will have an estimated timeline of 41 months.

Capital Project Cost Estimate:

Based on the revised Business Case (October 2014) the estimated cost for the recommended alternative was approximately \$61.2 million.

Operating Expenditure Impact:

Operating costs will marginally increase by approximately \$0.4 million per year due to an increase in electricity consumption. Patient food services for the new Calgary Cancer Centre are excluded. This requirement will be accommodated in the new Cancer Centre facility.

Current Status of Project:

A Preliminary Business Case was completed in June 2010 when the project was submitted as part of the 2011-2014 Capital Submission. A detailed Service Delivery Model and Redevelopment Study was completed in October 2012. This study was submitted to HEALTH as a Business Case equivalent. An updated Business Case was completed in October 2014.

2.1.4 Lethbridge Chinook Regional Hospital Inpatient Unit Fit-Out

Project Description / Scope of Work:

The prior submission's project scope has been modified slightly to include the following:

- fit out of one of the two 32-bed inpatient units located in shelled in space in the New Addition at the Chinook Regional Hospital (CRH); and
- permanently opening the 12-bed over capacity Medical/Surgical Unit (Unit 3B) at the hospital.

The remaining shelled in space intended for the second 32-bed Inpatient Unit will be developed in the future.

Independently, Covenant Health is planning for a new 100-bed continuing care facility in Lethbridge, this is an important component in the overall CRH Bed Capacity Project.

Rationale for Project:

Fitting out one of the two shelled in units and permanently opening Unit 3B in combination with providing additional continuing care capacity in Lethbridge will address existing and future bed capacity demands.

The CRH experiences a daily average range of 40 to 50 individuals waiting placement (25% of the total available adult inpatient beds in the facility). Currently there are very few continuing care beds available in Lethbridge. While there are daily efforts applied to enact overcapacity protocols at the hospital, the use of up to eight overcapacity medical/surgical beds at CRH (Unit 3B) has been almost continuous in the past year.

Permanently opening the 12-bed overcapacity medical/surgical Unit 3B at the CRH will not require any capital improvements.

Covenant Health submitted an updated Business Case in June 2017 for the proposed 100-bed continuing care facility.

Capital Project Cost Estimate:

The cost to fit out one 32 bed inpatient unit would be approximately \$16 million. It would take about 18 to 24 months to complete this project.

Operating Expenditure Impact:

The annual operating costs for the new 32 bed inpatient unit are estimated at \$8.6 million. The annual Capacity Plan funding for the new 100 bed continuing care facility will be \$4.5 million to covenant and \$1 million to AHS for support costs for a total of \$5.5 million. The cost to operate the 12 beds on Unit 3B would be approximately \$3.3 million per year.

Current Status of Project:

The 32-bed inpatient units intended for the shelled in space in the New Addition were included in functional programming as part of the Major Capital Project scope. The fit out of the proposed 32-bed inpatient unit can proceed into design upon funding approval.

Covenant Health holds the land for the development of the 100-bed continuing care facility with the intent of moving into the design/build phase upon funding approval.

2.1.5 Peter Lougheed Centre Emergency Department, Laboratory Development, and Mental Health Short Stay Unit and Psychiatric ICU

Project Description / Scope of Work:

The Peter Lougheed Centre (PLC) East Wing expansion project was separated into four phases; two of the four phases were completed in 2010 with the funding available. Future incomplete phases envisioned expansion of the busiest emergency department in Calgary and reallocation of existing lab space to another floor. Expanded ED space will include planning for an Addictions Mental Health Short Stay Unit and a Psychiatric ICU.

Rationale for Project:

Both the PLC ED and Lab spaces are insufficient to support current patient volumes and the infrastructure does not meet current standards in terms of Infection Prevention and Control (IPC), and Occupational Health and Safety. Upgrades to both the ED and the Lab space are required for staff to have a more efficient work space that can flexibly respond to the changing needs for both departments. The development of the new Mental Health Short Stay Unit will better support mental health patients with close proximity to the ED. The vacated existing Mental Health Short Stay unit will be redeveloped as a Psychiatric ICU which will add new capacity that is urgently needed within the zone.

Capital Project Cost Estimate:

Preliminary estimate based on the Business Case (December 2013) was approximately \$97 million and does not include the Psychiatric ICU redevelopment costs.

Operating Expenditure Impact:

To be confirmed.

Current Status of Project: The project has been identified since the Master Plan completion in 2005. A Needs Assessment and Business Case equivalent have been completed. Currently, functional programming and design have been funded and are set to begin in the spring of 2018.

2.1.6 Rockyview General Hospital Fit-Out Shelled Space for Intensive Care Unit and Coronary Care Unit

Project Description / Scope of Work:

Development of the fifth floor of the south addition of Rockyview General Hospital (RGH) for a new 20-bed combined Intensive Care Unit (ICU) and Coronary Care Unit (CCU) unit. The new unit would provide enhanced space for patients, families and staff in terms of meeting standards and guidelines and providing infrastructure to support best patient care.

Rationale for Project:

The unit has not had any major upgrades or renovations for 35 years and cannot accommodate emerging technologies, new equipment or support new methodologies in patient care delivery. There are issues related to IPC standards, storage and space.

Capital Project Cost Estimate:

The Project Overview Report (September 2017) estimated the cost at \$42.15 million.

Operating Expenditure Impact:

Based on the current ICU/CCU activity, the estimated full operating costs for seventeen beds (ten ICU, seven CCU) is \$24.4 million which includes a contingency of ten percent. One time incremental costs are expected to be incurred and estimated at \$0.61 million.

Current Status of Project:

The project was identified in the RGH Master Plan completed in 2005. A Needs Assessment was completed in May 2013 followed by a Project Overview Report completed in September 2017.

2.1.7 Calgary Cyclotron

Project Description / Scope of Work:

The development and operation of a cyclotron and radiopharmaceutical production facility in Calgary is recommended.

Three alternative sites for the proposed facility at or near Foothills Medical Centre (FMC) are reviewed in the Business Case (2014). Proximity is critical as radiopharmaceuticals decay during transport. A location immediately west of the FMC Special Services Building is the preferred alternative because it offers the best integration and most efficient delivery of radiopharmaceuticals to FMS facilities.

The project would be designed to provide the functionality and space needs as described in the Calgary Cancer Project Functional Program (June 2014) Section 5.7.1.

Rationale for Project:

The proposed project would enable an expansion of Positron Emission Tomography (PET) scanning capacity in Southern Alberta and continuity of Single Photon (SPECT) imaging. These valuable diagnostic tools will see increasing demand due to demographic trends. Patient experience will be improved by eliminating service disruptions caused by inconsistent radiopharmaceutical supply to Southern Alberta, and offering access to additional PET/SPECT imaging opportunities due to development and production of a broader scope of isotopes and radiopharmaceuticals.

Capital Project Cost Estimate:

The estimated capital cost for the recommended development option at the FMC site was \$36.3 million as determined in the Business Case completed in October 2014.

Operating Expenditure Impact:

At the time of the writing of the Business Case, partial operation of the Calgary Cyclotron facility was projected for the 2019/2020 fiscal year. There would be a ramp up period for the proposed facility. Annual costs were projected at \$5.7 million for the first full year of operations (2020/2021), reaching \$6.3 million in fiscal year 2025/2026, and \$6.800 million in fiscal year 2030/2031.

Current Status of Project:

A Business Case was completed in October 2014.

2.1.8 University of Alberta Hospital (Walter C. Mackenzie Health Sciences Centre) Brain Centre (Neuro ICU)

Project Description / Scope of Work:

The overall development of a clearly-recognizable Brain Centre at the University of Alberta Hospital (UAH) will enhance patient care and safety, improve operational efficiencies and provide additional beds for the neurosciences program in the Edmonton Zone. It will provide additional program space required to support patient, family and staff needs to meet existing standards. The Neuro ICU represents the next key stage of the Brain Centre through the creation of a new 20-24 private bed ICU with an in-unit CT suite.

Rationale for Project:

The existing 10 bed Neuro ICU provides a combination of intensive care and rehabilitation support but has not been renovated in the past 30 years resulting in patient safety and care challenges. The existing unit is a fully open ward that does not meet current critical care standards.

The preferred development approach for the new Neuro ICU includes the use of Level 5 to create 20-24 new private Neuro ICU beds and an integrated CT suite. It will support in-room rehab and aligns with the long-term vision for the site. A necessary prerequisite to this development is to relocate other inpatient beds and non-acute offices and clinics to shelled areas of the Mazankowski Alberta Heart Institute and the Kaye Edmonton Clinic. The preparatory work makes good use of existing underutilized space as well as upgrades to aging infrastructure.

Capital Project Cost Estimate:

INFRA estimates a capital project cost of \$131 million.

The University of Alberta Hospital Foundation (UAHF) continues to view the Brain Centre as a top fundraising priority and has raised over \$46 million to date for various neuroscience projects including and Inter-operative MRI Surgical Suite, Advanced Imaging and Gamma Knife Centre, Neurovascular Interventional Suite and Stroke Ambulance Pilot Project. The foundation remains committed to supporting this initiative contingent upon government funding contributions and choosing a development approach that positively contributes toward the long-term vision.

Operating Expenditure Impact:

A \$33.7 million or 68% incremental annual operating cost is projected based on an increase from 10 to 24 ICU beds.

Current Status of Project:

The Brain Centre and the Neuro ICU project has been identified since the UAH Master Plan since 2000 and reconfirmed through long-term master planning updates in 2016. A Health Economics Assessment and Needs Assessment for the Brain Centre is complete and supports the case for its development. A Business Case for the 20-24 Neuro ICU Phase is under development.

2.1.9 Red Deer Regional Health Centre Redevelopment and Expansion

Project Description / Scope of Work: The Red Deer Regional Hospital Centre (RDRHC) Master Plan 2014 identified the need for additional inpatient bed capacity at the site. The Master Plan recommended the construction of a new inpatient tower and simultaneous expansion of supporting services to meet short and medium-term service demands. In December 2015, a Needs Assessment was completed validating the Master Plan. A refresh of the Needs Assessment has been undertaken in recognition of a comprehensive strategy to move more services into the community as identified in recent Central Zone service planning activities.

Rationale for Project: There are a number of key factors identified by the RDRHC Needs Assessment supporting the need for near-term expansion and redevelopment. RDRHC is currently not meeting AHS performance measure targets for emergency room wait times, length of stay, and also has longer wait times for surgical procedures. Medical beds have been consistently operating well over 100% occupancy for a number of years. RDRHC is experiencing significant growth in acuity as its role as a regional referral centre increases. Tertiary services in Calgary and Edmonton refer patients sooner to RDRHC after treatment also increasing inpatient demand at the site.

Capital Project Cost Estimate: To be confirmed.

Operating Expenditure Impact: To be confirmed.

Current Status of Project: An update to the original Needs Assessment is currently under review by Alberta Health and Alberta Infrastructure. Additional input from zone and site leadership, staff and other stakeholders is underway. The detailed project description/scope of work will be determined upon

completion of the Needs Assessment Update. Budget 2018 included one million dollars for “Red Deer Health Capital Planning”, it is anticipated these funds will be used initially to advance the Business Case.

Note: In addition to the nine top priorities listed, it should be acknowledged that significant capital projects which are not included on the 2018 Capital Submission Priorities, but had appeared on previous years' lists, continue to be a high priority for AHS moving forward. These projects are highlighted here to emphasize the on-going need for enhanced infrastructure to ensure standards of patient care and patient safety are met. These projects include Continuing Care new builds / refurbishments / replacements throughout the Province.

2.2 Parking Structures

HEALTH legislation mandates that parking operates as an *ancillary service*, which means that no government-provided health care dollars can be used to build new parking capacity. All parking-related costs, including maintenance, major repairs, and the planning and construction of new facilities must be fully recovered through revenue collected from users of the service. Many of the parking capital projects described in this section will be funded through debt financing which will be repaid through parking fees.

AHS builds and upgrades structures to meet safer parking standards as well as encourages transportation demand management measures such as ride sharing and alternate modes of transportation, but recognizes that parking remains essential for most patients and staff. AHS is committed to providing parking services that are sustainable, effective, and efficient for all.

Table 3 summarizes ongoing or pending parking initiatives.

Table 3

Location	Number of Stalls	Estimated Cost (\$M)	Comments
Grande Prairie Regional Hospital Parkade	1,100	\$36	Construction of the above ground parkade and connecting pedway began in early 2018. The project will be 100% funded from the Parking Infrastructure Reserve. Completion date to coincide with the opening of the hospital in the fall of 2019.
Foothills Medical Centre Lot 1 Replacement	2,030	\$75	Construction began in the fall of 2016 and is anticipated to take approximately 2 years to complete. Design work was funded from the Parking Services Internal Reserve while the construction was debt financed
Calgary Cancer Centre Project	1,650	\$157	Calgary Cancer Centre will be constructed on FMC Lot 7 and will require 1650 underground parking stalls. Construction will be funded using a combination of debt financing and Parking Infrastructure Reserve.
Alberta Children's Hospital	503	\$25.5	A 500 stall, 2 level expansion of the parkade has been approved. The project will be 100% funded from the Parking Infrastructure Reserve. Construction is expected to start in the spring of 2018 and be completed by the summer of 2019.
Royal Alexandra Hospital / Glenrose Rehabilitation Hospital	800 Not confirmed	\$35 estimate only	ELT has approved \$2M in funding from the Parking Infrastructure Reserve to design a parkade on the RAH campus. Design work will begin in the spring of 2018. AHS has not approved construction.
Edmonton General Hospital	650	\$25	Replacement of the EGCCC parkade has been approved. The project will be 100% funded from the Parking Infrastructure Reserve. It is anticipated construction will begin in the spring of 2018 and be completed in the fall of 2019.
Major Repairs and Upgrades	N/A	\$8	Structural, mechanical, electrical, and architectural upgrades to existing parking structures and surface lots. Upgrades will be funded from the Parking Services Internal Reserve and operational accounts.
Edmonton, Calgary, Lethbridge	N/A	\$6	Suicide prevention fence and screening will be added to 11 existing parkades in Edmonton, Calgary, and Lethbridge. The project will be funded from the Parking Infrastructure Reserve. Construction is expected to begin in 2018.

3.0 Conclusion

The Capital Submission is updated and resubmitted each year to reflect the ever-changing needs of the dynamic health system in Alberta.

The Capital Submission identifies the high priority capital projects which support AHS' strategic directions and current fiscal realities, and are aligned with the Government of Alberta's direction and priorities.

It is being provided to the Ministry of Health to aid in the development of their Health Plan for recommendations to Treasury Board and Cabinet in relation to the Province's Capital Plan.

Appendix A: Potential Future Major Capital Projects

Not in order of priority.

Zone	Project Name
South	Bassano Health Centre Redevelopment or Replacement
	Bow Island Health Centre Redevelopment
	Brooks Health Centre Redevelopment
	Cardston Hospital Facility Replacement with an Integrated Hospital / Health Centre
	Chinook Regional Hospital – Phase 2
	Consolidation of Oyen Health Centre, Community Care and Primary Care Services
	Inpatient Psychiatry Services Including Child and Youth
	Lethbridge (Permanent) Medical Detox and Residential Treatment Facility (35 bed)
	Medicine Hat Community Health Services Building (Consolidation)
	Medicine Hat Regional Hospital – Phase 2
Calgary	Addiction and Mental Health (144 Long-Term Beds)
	Airdrie Health Centre Expansion
	Alberta Children’s Hospital - Expansion Brain Health Program
	Calgary Community Health Centre Upgrade/Expansion
	Foothills Medical Centre – Cardiac Catheter Lab Renovations
	Foothills Medical Centre – Cardiac Function Clinic
	Foothills Medical Centre - Emergency Department Ambulance Bay
	Foothills Medical Centre - Integrated Stroke Treatment Unit
	Foothills Medical Centre – Medication Room Upgrade
	Foothills Medical Centre – On-call Rooms Renovation
	Foothills Medical Centre – Renal/Transplant Renovation North Tower
	Foothills Medical Centre – Renovation of 9th Floor Cardiac Clinics
Foothills Medical Centre – Spine/Neurology Unit Expansion	

Zone	Project Name
Calgary (continued)	Foothills Medical Centre – Stephenson Advanced Cardiac Imaging Centre
	Foothills Medical Centre – Unit 21/22 (Mental Health) Renovation
	Foothills Medical Centre – Unit 26 Renovations
	Foothills Medical Centre – Wireless Network Upgrade
	Foothills Medical Centre NICU Renovations and Expansion
	Foothills Medical Centre Surgical Capacity (McCaig OR Suite)
	New North Health Campus Land Acquisition
	North Health Campus Development
	North Health Centre Development (AHS already owns the land)
	Peter Lougheed Centre – East Wing Basement Redevelopment for Staff Lockers, etc.
	Peter Lougheed Centre - West Wing (Carnet Centre) for HPTP, Day Medicine and GI Endoscopy Renovation
	Richmond Road Diagnostic Treatment Centre - Fit out of Shelled Space
	Rockyview General Hospital - Ambulatory Redevelopment (Medical Device Reprocessing, Pharmacy, Pre-admission clinic)
	Rockyview General Hospital - Fit-Out Shelled Space for Laboratory
	Rockyview General Hospital - GI/GU Expansion
	Rockyview General Hospital – Highwood Building Interim Renovations: DI / OR, Expansions, etc.
	Rockyview General Hospital – Maternal Newborn Services
	Simulation Centre Hub – eSim Program
	South Health Campus - Women’s Pavilion
	South Health Campus Mental Health Pavilion
Southern Alberta Forensic Psychiatry Centre Redevelopment Phase II	
Strathmore District Hospital Redevelopment	
Central	Consort Hospital and Care Centre Renovation
	Coronation Hospital and Care Centre Renovation
	Innisfail Health Centre Redevelopment
	Lacombe Hospital and Care Centre Redevelopment
	Lloydminster Hospital Redevelopment

Zone	Project Name
Central (continued)	Olds Hospital and Care Centre Redevelopment and Expansion
	Our Lady of the Rosary Redevelopment (Castor)
	Rocky Mountain House Health Centre Replacement
	St. Joseph's General Hospital Redevelopment (Vegreville)
	St. Mary's Continuing Care Centre Redevelopment (Trochu)
	St. Mary's Hospital Emergency Department and Triage Expansion (Camrose)
	Stettler Hospital and Care Centre Redevelopment
	Sundre Hospital and Care Centre Replacement
	Three Hills Health Centre Renovation
	Wainwright Health Centre Replacement
	Wetaskiwin Hospital and Health Centre Expansion and Renovation
Edmonton	Adult Ambulatory Clinics relocate from the UAH to KEC as per Master Plan
	Alberta Hospital Edmonton / Henwood Redevelopment
	Alberta Hospital Edmonton Redevelopment
	Alberta Hospital Edmonton Specialty Care Program Expansion (Schrag Pavilion)
	Edmonton Addiction and Mental Health Urgent Care Centre
	Edmonton Colorectal Screening Centre
	Edmonton General Hospital Infrastructure Stabilization and Renewal
	Edmonton North East Community Health Centre
	Edmonton Stollery Children's Hospital New Tower Development as per Master Plan
	Edmonton Zone Hospice Beds (Zone wide)
	Glenrose Rehabilitation Hospital Redevelopment (Accessibility Improvements, Nursing Units, Aquatic Therapy)
	Grey Nun's Community Hospital - ED and Main Floor Expansion
	Grey Nun's Community Hospital – Service Relocation into Community
	Grey Nuns Vascular Surgery OR
	Mazankowski Alberta Heart Institute (MAHI) Fit Out of Shelled Space as per Master Plan
Misericordia Community Hospital - New Bed Tower (medical and surgical beds)	

Zone	Project Name
Edmonton (continued)	Misericordia Community Hospital and Villa Caritas Mental Health Consolidation (on main campus)
	Misericordia Community Hospital Redevelopment of Existing Treatment Centre
	Royal Alexandra Hospital Redevelopment – New Clinical Services Building, Existing Building Demolition and New Acute Care Tower
	Royal Alexandra Hospital - Final Phase
	Stollery Children’s Hospital - New Tower Development (as per Master Plan)
	Stollery Children’s Hospital Cardiac Move and Beds
	Sturgeon Community Hospital – Endoscopy and Ambulatory Clinic Redevelopment (Phases 3 and 4 of current project) and Inpatient Bed Expansion
	Sturgeon NICU Development
	University of Alberta Hospital 18 Bed Inpatient Unit
	University of Alberta Hospital Development Phase 1 (includes KEC Expansion and new Clinical Support Building)
	University of Alberta Hospital Development Phase 2 (includes new Inpatient Tower and renovations to existing WMC)
	University of Alberta Hospital Emergency Department Second Floor Redevelopment
	University of Alberta Hospital Medical Outpatient Unit Expansion
	University of Alberta Hospital Transplant Redevelopment
	Westview Redevelopment
	Youville Home Redevelopment and Renewal
North	Beaverlodge Hospital Replacement
	Bonnyville Health Centre Emergency Department and Triage Expansion
	Cold Lake Healthcare Centre Redevelopment
	Elk Point Healthcare Centre Redevelopment
	Grande Cache Healthcare Centre Redevelopment
	High Level Health Centre Expansion
	La Crete Health Facility Redevelopment
	Lac La Biche Healthcare Centre Redevelopment
	Peace River Primary Care Centre Consolidation
	QEII Hospital and Mackenzie Place Redevelopment, Grande Prairie

Zone	Project Name
North (continued)	St. Paul Healthcare Centre Redevelopment
	St. Theresa General Hospital Redevelopment Fort Vermilion
	Westlock Healthcare Centre Redevelopment
	Whitecourt Hospital Redevelopment
Province-Wide	Expand Community Residential Housing with Care and Supports for Children with Medical Complexity
	Expansion of Community Housing and Support Programs for People with Mental Illness (Edmonton and Calgary)
	Long-Term Care and Supportive Living New Builds, Refurbishment and Replacement (to 2025)
	Province-wide Medical Device/Sterile Instrument Processing Upgrades Phase 2
Seniors Health	Long-Term Care Additional Bed Capacity (Calgary Zone)
	Long-Term Care and Supportive Living Refurbishment and Replacement (Province-Wide)
Addictions and Mental Health	Increase Bed Capacity (non-acute mental health beds) Province-wide
Cancer Care	Cross Cancer Institute Phase 1 Development (includes renovations to pharmacy and vaults)
	Cross Cancer Institute Phase 2 (major renovation and expansion)
Diagnostic Imaging	Stollery Children's Hospital Pediatric Diagnostic Imaging Renovation
Provincial Laboratory	Foothills Medical Centre New Provincial Laboratory for Public Health
Pharmacy Services	Barrhead Health Care Centre Automated NE Zone Medication Distribution Centre Redevelopment
	Medicine Hat Regional Hospital Pharmacy Renovations
	Pharmacy Sterile Compounding Compliance
Nutrition & Food Services / Linen & Enviro. Services	Laundry Modernization Phase 1 – Lethbridge and Ponoka
	Laundry Modernization Phase II - QEII Hospital, Red Deer Regional Health Centre and Northern Lights Regional Health Centre
EMS	Edmonton EMS Response Improvement Initiative
	EMS Provincial Rural Infrastructure Improvement Project
Alberta Kidney Care	Chinook Regional Hospital Renal Unit Relocation/Expansion (to shelled space in new addition)
	Olds Hospital Renal Satellite Unit Redevelopment
	Red Deer New 30 Station Satellite Unit
	Rockyview General Hospital Renal Unit

Appendix B: References

Alberta Health Services. *Alberta Health Services Health and Business Plan 2016-2017*. Retrieved April 2017 from:
<https://www.albertahealthservices.ca/assets/about/publications/ahs-pub-health-business-plan.pdf>

Government of Alberta - Business Plan 2017-20 Health (March 16, 2017). Retrieved April 2017 from:
<https://finance.alberta.ca/publications/budget/budget2017/health.pdf>

Government of Alberta - Treasury Board and Finance. Population Projection Alberta and Census Divisions 2016-2041 (June 2016). Retrieved April 2017 from:
<https://open.alberta.ca/dataset/5336155/resource/509cc23c-e135-4004-b4dc-4845a12d273c>

Government of Alberta / Alberta Health Services. *Creating Connections: Alberta's Addiction and Mental Health Strategy (September 2011)*. Retrieved March 2014 from:
<https://open.alberta.ca/publications/9780778583226>

Government of Alberta - *Valuing Mental Health: Report of the Alberta Mental Health Review Committee 2015*. Retrieved June 2016 from:
<https://open.alberta.ca/dataset/d8413604-15d1-4f15-a979-54a97db754d4/resource/1a5e7a16-3437-428e-b51f-4ba9201767a4/download/alberta-mental-health-review-2015.pdf>

Government of Alberta *Changing Our Future: Alberta's Cancer Plan to 2030*. Retrieved May 2016 from:
<http://www.health.alberta.ca/initiatives/cancer-plan.html>

Health Quality Council of Alberta - Alberta Quality Matrix for Health. Retrieved March 2014 from:
https://d10k7k7mywg42z.cloudfront.net/assets/5328869d4f720a651500030b/User_Guide_R290506.pdf

Alberta Health Services. *Community and Rural Health Planning Framework*. Retrieved June 2016 from:
<https://www.albertahealthservices.ca/info/page4057.aspx>