



AHS Multi-Year Health Facility Infrastructure Capital Submission 2021

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 2021 Multi-Year Health Facility Infrastructure Capital Submission describes priority major capital needs (for 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 Alberta Health;
- outlines the overall planning and management of health infrastructure;
- communicates the planning and capital investments needed to meet mandated regulatory requirements and 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 and in turn to Treasury Board and Finance, for annually assessing individual project recommendations relative to provincial capital proposals and priorities; and
- when possible provides a preliminary estimate of operating costs for the proposed capital investments.

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.

Future submissions will be influenced by Alberta Health Services (AHS') new Health and Business Plan that is currently in the approval process.

The top priority projects identified in this year's submission represent a range of projects addressing critical time sensitive accreditation/agency mandated regulatory standards and critical operational needs. The list also attempts to ensure equitable representation of projects across the province, this year's priority does not include top priorities from either Calgary or North Zone as they have had their top priorities recently approved, and those zones do however have projects included in top priority Province-wide initiatives.

AHS' Capital Management Strategic Capital Planning team continues to work towards completing Major Capital 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.

Some of the spaces that have been shelled for future use have had 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 in the following table will require redevelopment.

Unfinished Shelled / Vacant Spaces		
Facility	Shelled / Vacant Space (m ²)	Proposed Future Use
Chinook Regional Hospital (New Addition)	6,440 Shelled	<ul style="list-style-type: none"> Renal Dialysis Two Inpatient Units Staff Support Unassigned Level 4 and 5
Chinook Regional Hospital Level 3	740 Vacant	<ul style="list-style-type: none"> ICU/CCU Expansion Unassigned
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 SIM Lab (Interim Use)
Medicine Hat Regional Hospital – Level 6	2,488 Vacant	<ul style="list-style-type: none"> Mental Health Inpatient
Foothills Medical Centre Main Building 11th Floor West Wing	850 Vacant	<ul style="list-style-type: none"> Inpatient or Outpatient Clinical
Peter Lougheed Centre	1,785 Shelled	<ul style="list-style-type: none"> Acute Inpatient
Calgary South Health Campus	6,900 Shelled	<ul style="list-style-type: none"> ICU Emergency Department Diagnostic Imaging Outpatient Dental Cardiac ICU (currently used for Pandemic Response Unit (PRU)) Day Cardiology Surgical Suites Outpatient Clinics Endoscopy/Bronchoscopy (currently used for PRU)
Richmond Road Diagnostic Treatment Centre	9,175 Vacant and Shelled	<ul style="list-style-type: none"> Administration Support Services Ambulatory Services

Unfinished Shelled / Vacant Spaces		
Facility	Shelled / Vacant Space (m ²)	Proposed Future Use
Rockyview General Hospital	3,350 Shelled	<ul style="list-style-type: none"> Laboratory Services Ambulatory Services Facility Support Space
Red Deer Regional Hospital Centre	198 Shelled	<ul style="list-style-type: none"> ICU Diagnostic Imaging
Red Deer Regional Hospital Centre – Ambulatory Annex	81 Vacant	<ul style="list-style-type: none"> Ambulatory Expansion (potential for NAPRA Compliance)
Alberta Hospital Edmonton (Building 12)	2,110 Vacant	<ul style="list-style-type: none"> Inpatient Addiction & Mental Health
Alberta Hospital Edmonton (Building 8)	1,937 Vacant	<ul style="list-style-type: none"> Inpatient Addiction & Mental Health
Alberta Hospital Edmonton (Building 3)	862 Vacant	<ul style="list-style-type: none"> Forensic Inpatient Addiction & Mental Health
Strathcona Community Hospital	50 Shelled	<ul style="list-style-type: none"> Administrative Outpatient Community Programs
Fort Saskatchewan Community Hospital	215 Shelled	<ul style="list-style-type: none"> Administrative Off Site/Outpatient Community Programs
Kaye Edmonton Clinic	8,162 Shelled	<ul style="list-style-type: none"> Ambulatory Specialty Clinics
Mazankowski Alberta Heart Institute	3,574 Shelled	<ul style="list-style-type: none"> Cardiac Services
Sturgeon Community General Hospital	1,290 Shelled	<ul style="list-style-type: none"> Operating Theatres (two)

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 may sell surplus properties subject to approval from the Minister of Health. AHS is required to obtain an independent appraisal of fair market value of the property. Properties must be sold for fair market value 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 approval, property condition assessment, appraisal, marketing, sale documentation and closing. Subject to Government of Alberta 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.

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 Alberta Infrastructure and Alberta Health for review and support.

The Government of Alberta 2021-2024 Fiscal Plan (February 25, 2021) identifies Health Care Facilities – Capital Maintenance and Renewal allocations as follows:

- \$134.0 million 2021-2022 (target)
- \$107.0 million 2022-2023 (target)
- \$102.1 million 2023-2024 (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 2018-19 fiscal year AHS Capital Management had approximately 725 active IMP projects, with an average monthly expenditure of \$13 million dollars.

In the 2019-20 fiscal year AHS Capital Management had approximately 745 active projects, with an average monthly expenditure of \$7.8 million dollars. The reduction was in response to a reduced annual allocation from previous years down to \$97 million of which AHS expended \$94.1 million. The quantity of projects was slightly higher but the value of the projects were lower. In 2020-21 the budgeted amount of \$110 million was increased by the unspent amount from the previous year for a new budget amount of \$111.1 million; this amount did not include \$0.5 million set aside by Government to be forwarded to the Saskatchewan Health Authority to address needs at the Lloydminster Hospital. Even with stoppages and restrictions put in place by Government related to activities in the healthcare environments during COVID, AHS was able to execute in the order of \$76.7 million of this finding over the fiscal year 2020-21.

The current Capital Plan has a fluctuating value each of the three fiscal years noted with each year less than the previous. A consistent annual allocation of IMP funds is essential in allowing AHS to adequately plan and address ongoing asset maintenance and renewal. Based on current known requirements and AHS project management capacity, an annual allocation in the range of \$145 million per year is required and achievable as evident from previous year performances of \$142.2 million in 2016-17, \$149 million in 2017-18 and \$145.2 million in 2018-19.

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 2021 submission, the submission history, current documentation status and potential next steps.

Project	Previously Requested	Documentation Status		Next Steps
		Major Capital Needs Assessment	Major Capital Business Case	
University of Alberta Hospital Brain Centre (Phased Neuro ICU) Approved for planning only.	Yes	Yes	Yes	Design underway
Provincial Sterile Instrument / Medical Device Reprocessing Upgrades Partially approved.	Yes	Yes	Yes	Design
Red Deer Regional Hospital Centre Redevelopment and Expansion Partially approved.	Yes	Yes	Underway	Functional Program
Stollery Children's Hospital Tower with components of Child and Adolescent Mental Health	Yes	Underway	No	Needs Assessment
Pharmacy Sterile Compounding NAPRA Compliance	Yes	Yes	Yes	Design
Royal Alexandra Hospital New Clinical Services Building (CSB) including Campus Energy Centre Upgrade (ECU)	Yes	No for CSB Yes for ECU	No for CSB Yes for ECU	Needs Assessment for CSB Design for ECU
Lethbridge Chinook Regional Hospital Multi-Service Plan	Yes	Underway	No	Needs Assessment
Northern Alberta Laboratory Upgrade and Relocation Project	Yes	Underway	No	Needs Assessment
Youth Addiction Treatment Centre - Edmonton	Yes	Yes	Yes	Functional Program underway

Note: the projects are not listed in priority order.

In addition to the top priorities listed above, it should be acknowledged that there is demand for other capital projects which are not included on the 2021 top priority list. These projects are identified in **Appendix A - Potential Future Major Capital Projects** and highlight the ongoing need for enhanced infrastructure to ensure standards of patient care and patient safety are met.

2.1 Approved Capital Project Priorities

The following table identifies a number of projects that have funding approval but have not yet proceeded to construction. These projects remain of critical importance to AHS.

Project Name	Phase
Alberta Surgical Initiative	Design/Construction
New Edmonton Hospital	Planning
Royal Alexandra Hospital - Child and Adolescent Mental Health (CAMH) – PROJECT DEFERRED	Design
Provincial Pharmacy Central Drug Production and Distribution Centre	Design
Misericordia Hospital - Planning - Covenant	Planning
Royal Alexandra Hospital - Planning	Planning
Red Deer Health Capital - Planning	Planning
Foothills Medical Centre Neonatal Intensive Care Unit Renovation and Expansion (Foundation supported project)	Design
Rockyview General Hospital GI Clinic Expansion (Foundation supported project)	Planning
Rockyview General Hospital Fit-Out for Intensive Care Unit and Coronary Care Unit (Foundation supported project)	Design
Calgary Cyclotron	Planning
La Crete Maternity and Community Health Centre	Planning
High Prairie Health Complex Demolition	Design/Construction
Recovery Communities	Design

For a full list of the previously approved projects, (including those listed above and those approved for planning only), refer to **Appendix B - Approved / Active Major Capital Projects**.

2.2 Priority Project Descriptions

2.2.1 University of Alberta Hospital Brain Centre (Phased Neuro ICU)

Project Description / Scope of Work:

The development of a clearly-recognizable Brain Centre at the University of Alberta Hospital (UAH) will provide space for current patient care practices and safety standards, improve operational efficiencies and provide additional beds for the neurosciences program in the Edmonton Zone. The Neuro ICU will be a 20 to 24 private-bed ICU with an in-unit CT suite. The project will provide sufficient program space to support patient, family and staff needs consistent with current models of care.

Rationale for Project:

Patient safety and care has been a challenge in the existing 10-bed Neuro ICU. The unit became operational in 1985 and provides a combination of intensive care and rehabilitation support but has not been renovated in the past 30 years. The existing unit is an open ward design that does not meet current critical care nor healthcare facilities standards.

The development approach for the new Neuro ICU recommends creating a 20 to 24 bed Neuro ICU unit on Level 5 complete with single patient rooms and a CT suite integrated within the unit. The location 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 to create sufficient space for the unit. The preparatory work improves aging infrastructure and enables use of existing underutilized space consistent with development plans for the site.

Capital Project Cost Estimate:

Alberta Infrastructure estimates a capital project cost of \$212 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 an 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 by donating \$12 million toward this project, and choosing a development approach that positively contributes toward the long-term vision.

Operating Expenditure Impact:

The 2019 Functional Program identified that based on an increase from 10 to 24 ICU beds a \$27.5 million increase in annual operating cost is projected.

Current Status of Project:

The Brain Centre and the Neuro ICU project has been identified in the UAH Master Plan since 2000 and reconfirmed through long-term master planning updates in 2016. A Health Economics Assessment and Major Capital Needs Assessment for the Brain Centre were completed. A Major Capital Business Case for the 20-24 Neuro ICU Phase was completed in December 2018 and Functional Programming was completed in 2019. Schematic Design was completed in February of 2021 and the project has been on hold while reviewing scoping options. Revised scoping estimates may result in revised project cost estimates.

2.2.2 Provincial Sterile Instrument / Medical Device Reprocessing Upgrades

Project Description / Scope of Work:

AHS completed high-level reviews of all Medical Device Reprocessing (MDR) sites in the province to assess compliance with mandated Provincial Infection Prevention Control (IPC) Standards. The reviews considered operational issues, equipment and infrastructure requirements. Five of the eight Phase 1 MDR sites remain unfunded. Recently nine out of the total eighteen Phase 2 sites were approved for funding (through the Rural Health Facility Revitalization Program or the Investing in Canada's Infrastructure Program). As a result, a total of fourteen highest priority MDR sites remain unfunded and represent the Provincial Sterile Instrument / Medical Device Reprocessing Upgrades sites that are included in this provincial initiative.

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. The following issues support the rationale for the project:

- Accreditation Canada requirements must be met at many sites to maintain “accredited status”.
- Many MDR sites will be impacted by increased surgical workload or changes in surgical case types resulting from the Alberta Surgical Initiative.
- MDR is an essential service, supporting staff and patient safety, and directly impacts the prevention of transmission of infections from reusable medical devices used in the delivery of health care.

Capital Project Cost Estimate:

Cost estimates for Phase 1 MDR sites have been refined following Functional Programming and design phases. Alberta Infrastructure will complete nine Phase 2 MDR site reviews in summer 2021 providing updated Project Overview Reports and cost estimates.

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.

Current Status of Project:

The current status of the Provincial Sterile Instrument / Medical Device Reprocessing Upgrades Phase 1 and Phase 2 is as follows:

- The Peter Lougheed Centre (PLC) MDR in Calgary was fully funded and opening is anticipated in fall 2021.
- Red Deer Regional Hospital Centre (RDRHC) MDR (previously funded in Budget 2018); is deferred pending the Major Capital Business Case completion for the redevelopment of the RDRHC.
- Foothills Medical Centre MDR and satellite MDR areas are currently in Schematic Design with consultants updating the cost estimate.
- Northern Lights Regional Health Centre MDR has been approved to proceed to design.

2.2.3 Red Deer Regional Hospital Centre Redevelopment and Expansion

Project Description / Scope of Work:

The Red Deer Regional Hospital Centre (RDRHC) Master Plan completed in 2014, identified the urgent 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. Since the completion of the Master Plan the addition of Cardiac Services has become a priority for the Central Zone (services to be based at the RDRHC). To accommodate the new inpatient tower, new and expanded services at the RDRHC a new ambulatory focused standalone building is proposed in addition to the new inpatient tower and redeveloped acute space. Decanting services off the site that are not necessary to remain on the site or are better suited in a community setting will facilitate optimal use of the acute centre and the sites limited development capacity.

Rationale for Project:

There are a number of key factors identified by the RDRHC Major Capital Needs Assessment, as well as the Clinical Service plan, which supports 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 has longer wait times than its provincial peers for surgical procedures. Medical beds have been consistently operating well over 100 percent occupancy for a number 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 and in ambulatory care spaces.

Capital Project Cost Estimate:

To be confirmed.

A 2019 commitment of \$100 million was announced to initiate the work. Phase 1 planning addresses Acute Ambulatory programs, Medical Device Reprocessing and Cardiac Program enhancements. These affect both acute and community health infrastructure.

Operating Expenditure Impact:

To be confirmed.

Current Status of Project:

The original Major Capital Needs Assessment was submitted in 2015 and an updated Major Capital Needs Assessment was completed in 2018; this latter document incorporates initiatives identified in the Zone Health Care Plan. The subsequent Clinical Service Plan completed in 2018 aligns with both the Major Capital Needs Assessment and the Zone Health Care Plan. The infrastructure solution is anticipated to engage both community and acute healthcare infrastructure requirements for the city of Red Deer. Budget 2018 included one million dollars for “Red Deer Health Capital Planning”, it is anticipated that these funds will be used initially to advance the Major Capital Business Case due to be complete in the fall of 2021 and support functional programing.

2.2.4 Stollery Children's Hospital Tower with components of Child and Adolescent Mental Health

Project Description / Scope of Work:

The Stollery Children's Hospital would consolidate pediatric services into a single distinct physical location. This distinct identity must remain physically adjacent to and operationally integrated with University of Alberta Hospital (UAH) and the Mazankowski Heart Institute, Kaye Edmonton Clinic, and the University of Alberta to ensure specialized services, personnel, and equipment remain accessible to both Stollery and UAH patients in a fiscally responsible and clinically efficient manner.

A fully completed Stollery will continue to be a level-one trauma center and providing modern primary to quaternary level of care with focus on clinical excellence, family-centred care, and child friendly environment. The plan is to include inpatient beds, 23-Hour Units, and pediatric outpatient services. Also included will be the consolidation of child and youth mental health beds from various existing locations in Edmonton. Virtual technology would support the efficient operation to support patients and substantially reduce the need for built space.

The Stollery Emergency Department could redirect pediatric demand from other Edmonton Zone facilities to treat a total of over 88,000 children annually.

Rationale for Project:

The Stollery Children's Hospital has a tripartite mandate for complex, specialized clinical care, clinical and academic training, and leading-edge research. The Stollery provides highly-specialized health care to children and adolescents in the Edmonton Zone and to those who are referred from the rest of Alberta, western Canada, and northern Canada.

Buildings on the Walter Mackenzie Campus, while very well maintained, are aging out and are unable to accommodate the current and projected demands for specialized health services, nor the growing demand for academic activities on the Campus. Given the mission-critical nature of services provided on the site, addressing these facility/capacity issues is deemed essential to the future of health care in the Edmonton Zone.

Capital Project Cost Estimate:

Capital Project Cost Estimate would be determined during future planning phases (Major Capital Business Case).

Operating Expenditure Impact:

Operating Expenditures would be estimated during future planning phases.

Current Status of Project:

Major Capital Needs Assessment is underway and is anticipated to be completed in fall 2021.

2.2.5 Pharmacy Sterile Compounding NAPRA Compliance

Project Description / Scope of Work:

Today, there are 20 AHS acute care sites across the province (with 34 distinct pharmacy locations including satellite pharmacies) that compound sterile hazardous and non-hazardous products. All dedicated clean rooms where sterile products are prepared will need to be modified to meet regulatory standards issued by the National Association of Pharmacy Regulatory Authorities (NAPRA). Depending on specific site deficiencies, the necessary improvements will require varying degrees of expansion, renovation, equipment and building system upgrades.

Rationale for Project:

In 2017, the Alberta College of Pharmacy (ACP) adopted national regulatory standards for compounding of hazardous and non-hazardous preparations issued by NAPRA. The ACP set aggressive deadlines for AHS hospital pharmacies to meet compliance with these standards effective *July 2021*. Even if ACP does not direct closure of these clean rooms, continued use of non-compliant pharmacy sterile preparation areas and hazardous drug preparation areas with existing infrastructure and equipment deficiencies will present significant risks to patient and staff safety.

Capital Project Cost Estimate:

As determined by comprehensive consultant site reviews conducted in 2019, the degree of compliance with NAPRA standards varies for each pharmacy. In the summer of 2020, Alberta Infrastructure reviewed the consultant reports and subsequently updated the project cost estimates for each site. The total funding requirement to address NAPRA compliance in AHS pharmacies was estimated at approximately \$68 million.

This project was identified as a top priority for AHS in the 2020 Capital Submission, however it remains unfunded despite the criticality of meeting the deadline for compliance set by the ACP of July 2021.

Operating Expenditure Impact:

The proposed renovations to meet NAPRA compliance in AHS hospital pharmacies are anticipated to have a minor impact on ongoing operating costs.

Current Status of Project:

Starting in January 2019, two consultant teams assessed the current state of sterile compounding environments located in the north and south sectors of the province and compared them with the appropriate NAPRA Model Standards for Hazardous and Non-hazardous sterile preparations. Each site reviewed has a separate and comprehensive report detailing the current state assessment and recommended renovation strategy. The Calgary Drug Production Center was added to the compliance facility sites but no consultant report was completed on the site.

A Major Capital Needs Assessment (MCNA) was submitted to Alberta Health in September 2019. Included in the MCNA were the individual site reports that compound hazardous and non-hazardous drugs. In summer of 2020, Alberta Infrastructure reviewed the consultant reports and prepared an updated Costing Report to ensure that each site received the same costing analysis for construction, decant and operation impacts. Alberta Infrastructure is currently updating the costing report prepared last summer and it is anticipated to be completed in fall 2021.

2.2.6 Royal Alexandra Hospital New Clinical Services Building including Campus Energy Centre Upgrade

Project Description / Scope of Work:

The Clinical Services Building (CSB) is a proposed new building at the Royal Alexandra Hospital (RAH) site as recommended in the RAH/GRH/Norwood Campus Master Plan. The new facility will be used for decanting selected services (e.g., minor clinics, education/soft research, hostel, on-call, etc.) from buildings to be demolished to allow for the redevelopment of the RAH site including new inpatient infrastructure and emergency department redevelopment. The CSB will accommodate ambulatory and light use services of the hospital as well as future growth opportunities or leasable space.

Upgrade of the Campus Energy Centre is 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, additional and upgraded equipment and changes or enhancements to delivery piping, conduits and tunnels.

Rationale for Project:

A high-level implementation strategy was developed that involves a new Clinical Services Building to house programs/services decanted from buildings to be demolished and upgrades to the Energy Centre to create capacity for the construction of RAH inpatient and emergency department infrastructure.

Demolition of existing clinical support buildings is required due to the poor condition of existing buildings and the inability to renovate to meet current standards for clinical services. Demolition will allow ensure critical adjacencies for future RAH inpatient capacity.

The Energy Centre was built in 1986 with an upgrade and expansion in 2009. The uninterrupted power supply 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. *Further redevelopment of the campus is dependent on an upgraded and expanded Energy Centre.*

Capital Project Cost Estimate:

The CSB project may be suitable for development using alternate funding sources. The project value and preferred development funding option is subject to confirmation/refinement upon completion of the Major Capital Business Case.

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

Operating Expenditure Impact:

To be determined.

Current Status of Project:

A new Major Capital Needs Assessment for the CSB will be required.

A Major Capital Business Case was completed for the Energy Centre in November 2017.

2.2.7 Lethbridge Chinook Regional Hospital Multi-Service Plan

Project Description / Scope of Work:

The original planning for the Chinook Regional Hospital (CRH) Addition included shelled space for two future inpatient units. Since that time additional inpatient bed capacity needs have changed substantially due to a number of targeted strategies; including but not limited to, alternate level care reductions and average length of stay reductions. As a result, the site has a unique opportunity to address other higher priority needs leveraging a portion of shelled space available. These priorities may include future expansion of Cardiac Services and inpatient and outpatient child and adolescent mental health services at CRH.

The work associated with the Alberta Surgical Initiative, including MDR upgrades, is already funded and integrated in the project scope. The CRH Multi-Service Plan will incorporate other essential priority elements that will be further defined pending completion of a Major Capital Needs Assessment and eventually Major Capital Business Case.

Rationale for Project:

Improvement in patient outcomes is an important driver to establish the Multi-Service Plan at the Chinook Regional Hospital in combination with the enhancement of surgical services that support the ASI. In addition, the CRH Multi Service plan will:

- Provide more equitable patient access to the current accepted standard of care closer to home.
- Enhance the South Zone quality of cardiac and surgical care in Lethbridge and surrounding areas (including opportunity to support cardiac services plan infrastructure requirements

should this be determined as a need in South Zone located in Lethbridge in the future).

- Enable the expansion and redevelopment of the existing ICU/CCU to address future demand and current functional and infrastructure deficiencies.
- Improve the ability to recruit or retain specialists by offering enhanced specialty services in Lethbridge.
- Provide opportunities for new South Zone Child and Adolescent outpatient and inpatient Addiction and Mental Health services, thereby reducing the burden on families having to travel to Calgary for treatment.
- Enhance regional surgical patient care capacity.
- Raise the standard of care for patients and support clinical consultative services in South Zone within Lethbridge.

Capital Project Cost Estimate:

To be determined.

Operating Expenditure Impact:

To be determined.

Current Status of Project:

A Major Capital Needs Assessment for the Lethbridge CRH Multi-Service Plan is currently underway.

2.2.8 Northern Alberta Laboratory Upgrade and Relocation Project

Project Description / Scope of Work:

Currently laboratory services in Alberta are provided through a combination of private (DynaLife Dx) and public services (Alberta Precision Laboratories (APL)).

To address ongoing laboratory infrastructure challenges, a new APL facility is required, located in Edmonton, capable of providing specialized services to the North Sector (Central, Edmonton and North zones) including:

- Provincial Laboratory services including environmental water testing,
- Specialized Public Health testing including infectious disease testing,
- Genetic testing including newborn metabolic, biomedical genetics, molecular diagnostics and pathology, and
- Esoteric testing including toxicology, trace element, transfusion medicine/blood bank services, and special chemistry.

The new facility must be built to ensure the capacity to grow with the population and demographics, to enable efficient service delivery supported by specialized staff combined with automation. The preferred option for this project focuses on the APL infrastructure needs to support mandated public testing services.

Rationale for Project:

The University of Alberta Hospital (UAH) laboratories were built in 1981 and have not had any significant upgrades despite additional equipment and procedures being added over the past +30 years. The spaces for the noted services are functionally outdated and oversubscribed for the existing space allocation. Infrastructure deficits for the APL laboratories, particularly in the Edmonton Zone, have been identified in accreditation reports repeatedly over the last 10-15 years.

The growth in the demand for laboratory testing including advancements in technology including genomics and proteomic technologies are putting additional stress on existing lab facilities. The space limitations are impacting the ability to automate thereby affecting efficiencies that could be achieved. Automation is key to maintaining service volumes in the future since there are limited specialized staff that qualified for performing the work.

The laboratory space at the UAH for acute care is also over extended with significant space constraints, with past concerns noted by the College of Physicians and Surgeons of Alberta during accreditation activities. If specialty testing can vacate acute care space, acute care laboratory functions can be better aligned with available space within the UAH.

Currently, there is a risk to quality, safety, and staff retention as a result of inadequate laboratory space and infrastructure.

Capital Project Cost Estimate:

To be determined during the Major Capital Business Case.

Operating Expenditure Impact:

Based on the projected laboratory volumes up to 2040, the incremental direct operating costs is estimated to be approximately \$38.6M.

Estimates above reflect only direct operating costs and do not reflect any operating costs that may be related to any costs that may be associated with private partnership if a P3 delivery model is chosen. Associated overhead provisions and one-time costs will be incorporated in revised estimates once an infrastructure solution is further investigated at the Major Capital Business Case stage.

Current Status of Project:

A new Major Capital Needs Assessment is underway and is expected to be complete early fall 2021.

2.2.9 Youth Addiction Treatment Centre - Edmonton

Project Description / Scope of Work:

This project proposes the construction of an approximately 3,000 square meter purpose built facility to accommodate Addiction and Mental Health's three residential programs for youth addiction treatment services: Protection of Children Using Drugs (PChAD), the Youth Residential Treatment Program, and the Youth Stabilization Treatment Program. The PChAD, Youth Residential Treatment, and Youth Stabilization Treatment programs are provincial programs operated by AHS that provide essential detoxification, assessment, counselling, and rehabilitation services for youth aged 12 to 18.

The facility is anticipated to require 10-PChAD beds, 10-Youth Residential Treatment beds and 5-Youth Stabilization Treatment beds to provide safe accommodation, counselling and recreation spaces for clients, space for family participation, as well as appropriate support space for staff. The facility could be built on existing land at the Alberta Hospital Edmonton site to provide safe accommodation, counselling and recreation spaces for clients, family participation and staff support.

Rationale for Project:

The AHS PChAD and Youth Residential Treatment programs located at the Yellowhead Youth Centre have been asked to fully vacate by March 2022 to allow government to proceed with an approved redevelopment at the site for the exclusive use of Government of Alberta Children's' Services programs. No existing infrastructure is appropriate for long term use by these programs. Locating the project at Alberta Hospital Edmonton would provide land with existing zoning to support this patient population.

Capital Project Cost Estimate:

The Major Capital Business Case Update estimates a project cost of approximately \$28 to \$31 million. The next phase would be Functional Programming, which would inform a more precise Capital Cost Estimate.

Operating Expenditure Impact:

Operating Expenditures would be estimated during future planning phases (Functional Programming).

Current Status of Project:

A Major Capital Business Case update was completed in June 2020. Functional Programming as well as an assessment of potential locations for the Centre began in February of 2021 and is anticipated to be completed by the end of June 2021.

2.3 Parking Structures

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.

The table below summarizes ongoing or pending parking initiatives.

Location	Number of Stalls	Estimated Cost (\$M)	Comments
Calgary Cancer Centre Project	1,650	\$157	Calgary Cancer Centre is being constructed on FMC Lot 7 and requires 1650 underground parking stalls. Construction will be funded through debt financing.
Edmonton General Continuing Care Centre	650	\$25	Project is on hold.
Calgary Centre for Child & Adolescent Mental Health	156	\$8	Construction began on the building in 2019. The stalls are all underground. The project will be funded from parking revenue.
Major Repairs and Upgrades	N/A	\$10	Structural, mechanical, electrical, architectural, and equipment upgrades to existing structures and surface lots. Upgrades will be funded from the parking revenue.
Edmonton / Calgary / Lethbridge	N/A	\$6	Fall prevention fence / screening will be added to 11 existing parkades in Edmonton, Calgary, and Lethbridge. The project will be funded from the parking revenue. Construction began in 2020 with completion expected by the end of 2021.
Norwood	296	N/A	The Norwood surface lot is being constructed and funded by Alberta Infrastructure. Construction is expected to begin in 2021.

Conclusion

3.0 Conclusion

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

The Capital Submission identifies the high priority capital projects which support AHS' strategic directions, addresses time sensitive mandated or accreditation related requirements. Projects 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 Replacement
	Bow Island Health Centre Replacement
	Cardston Hospital Facility Replacement with an Integrated Hospital / Health Centre
	Chinook Regional Hospital – Phase 2
	South Zone Inpatient and Outpatient Psychiatry Services Including Adult, Child and Youth
	Lethbridge (Permanent) Medical Detox and Residential Treatment Facility (35 bed) – Community Based / Integrated
	Medicine Hat Regional Hospital – Phase 2
	Medicine Hat Addiction and Mental Health and Community Program Services Consolidation
Calgary	Alberta Children’s Hospital - Inpatient Expansion (former Brain Health Program Expansion)
	Alberta Children’s Hospital - Enhanced Day Hospital
	Alberta Children’s Hospital - Research / Administration Tower
	Alberta Children’s Hospital – Mental Health Renovation
	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
	Foothills Medical Centre – Stephenson Advanced Cardiac Imaging Centre
	Foothills Medical Centre – Unit 21/22 (Mental Health) Renovation

Zone	Project Name
Calgary continued	Foothills Medical Centre – Unit 26 Renovations
	Foothills Medical Centre - Kitchen Redevelopment
	New North Health Campus Land Acquisition
	North Health Campus Development
	North Health Centre Development (AHS already owns the land)
	Peter Lougheed Centre – East Wing / Main / Basement Redevelopment
	Peter Lougheed Centre - West Wing 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 - GU Expansion
	Rockyview General Hospital – Highwood Building Interim Renovations: DI / OR, Expansions, etc.
	Rockyview General Hospital – Maternal Newborn Services
	Rockyview General Hospital – Decanting of Trailers - Unit 45 Mental Health Relocation
	Simulation Centre Hub – eSim Program
	South Health Campus – Endo/Bronch Suite (Digestive Health) – Fit out of Shelled Space
	South Health Campus – Expansion Surgical Suites
	South Health Campus Development Phase 1 (Mental Health Pavilion / SW Tower – MH, IPU and Outpatient Services)
	South Health Campus - Women’s 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
	Olds Hospital and Care Centre Redevelopment and Expansion

Zone	Project Name
Central continued	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
	Glenrose Rehabilitation Hospital Redevelopment (Accessibility Improvements, Nursing Units, Aquatic Therapy)
	Grey Nun's Community Hospital – Emergency Department 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
	Misericordia Community Hospital and Villa Caritas Mental Health Consolidation (on main campus)
	Misericordia Community Hospital Redevelopment of Existing Treatment Centre
	Norquest College and Covenant Health Teaching and Research Continuing Care Centre

Zone	Project Name
Edmonton continued	Royal Alexandra Hospital Inpatient Tower and Emergency Department
	Royal Alexandra Hospital - Final Phase
	Stollery Children's Hospital Surgical Clinics
	Stollery Children's Hospital Cardiac Move and Beds
	Sturgeon Community Hospital – Endoscopy and Ambulatory Clinic (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
	Northern Lights Regional Health Centre Dialysis Relocation
	Northern Lights Regional Health Centre Redevelopment
	QEII Hospital and Mackenzie Place Redevelopment, Grande Prairie
	St. Paul Healthcare Centre Redevelopment
	St. Paul Addiction and Mental Health / Acute Inpatient Redevelopment
	Whitecourt Hospital Redevelopment
Seniors Health	Long-Term Care and Supportive Living New Builds, Refurbishment and Replacement
Addictions and Mental Health	Increase Bed Capacity (non-acute mental health beds) 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

Zone	Project Name
Cancer Care	Cross Cancer Institute Main Floor, 5 th Floor and Pharmacy (pre-work to support Phase 1 Development)
	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
Alberta Precision Laboratories (APL)	Calgary Based Lab Infrastructure Project (Diagnostic and Scientific Centre (DSC), Foothills Medical Centre, Provincial Laboratory for Public Health (ProvLab), etc.)
Pharmacy	Medicine Hat Regional Hospital Pharmacy Renovations
Nutrition & Food Services / Linen & Enviro. Services	Decommissioning and Modifications to Laundry Plants
EMS	Edmonton EMS Response Improvement Initiative
	EMS Provincial Rural Infrastructure Improvement Project
Alberta Kidney Care	Northland Village Mall Dialysis Relocation
	Red Deer Regional Health Centre Outpatient Dialysis Unit
	Chinook Regional Hospital Renal Unit Relocation / Expansion
	Queen Elizabeth Hospital Dialysis Expansion / Relocation (Grande Prairie)
	New Satellite Dialysis Unit (located between Calgary and Medicine Hat (location TBD))
	Rocky Mountain House Dialysis Unit Expansion
Olds Hospital Dialysis Unit Redevelopment	

Appendix B: Approved / Active Major Capital Projects

	Project Name	Total Approved Funding (000)	Phase
1	Calgary Cancer Project	1,410,381	Construction
2	New Edmonton Hospital	930,038	Planning
3	Norwood Long Term Care Facility (Edmonton)	369,153	Construction
4	Royal Alexandra Hospital – Child and Adolescent Mental Health (CAMH)	200,000	Design – Deferred – not listed in INFRA source report
5	Bridgeland Complex Continuing Care Facility (Calgary)	130,535	Construction
6	Misericordia Community Hospital Emergency Department	85,000	Construction
7	Provincial Pharmacy Central Drug Production and Distribution Centre	58,676	Edmonton – Design Calgary – On Hold
8	Provincial Sterile Instrument / Medical Device Reprocessing Upgrades Phase 1 Peter Lougheed Centre	22,900 (reflects this projects portion of the envelope funding)	Construction
9	Lloydminster Continuing Care Centre	34,841 60 beds	Construction
10	Climate Leadership Plan Foothills Medical Centre Power Plant Redevelopment (co-generation initiative)	28,000 Generate 8 MW of power. Offset 27,000 tonnes of GHG annually.	Construction
11	Foothills Medical Centre Urgent Power Plant Capacity	24,000	Construction
12	Provincial Heliports	25,010	Construction
13	Peter Lougheed Centre Emergency Department, Laboratory Development, and Mental Health Short Stay Unit / ICU	137,074	Construction
14	Rockyview General Hospital Fit-Out for Intensive Care Unit, Coronary Care Unit, and GI Redevelopment	74,000	Design
15	Provincial Sterile Instrument / Medical Device Reprocessing Upgrades Phase 1- Fort McMurray, Sturgeon, Westlock, Foothills Medical Centre	1,778 - APPROVED FOR FUNCTIONAL PROGRAMMING ONLY	Planning

	Project Name	Total Approved Funding (000)	Phase
16	Red Deer Regional Hospital Centre Renewal Project	100,000	Planning
17	University of Alberta Hospital (Walter Mackenzie Health Sciences Centre) Brain Centre (Phased Neuro ICU)	12,000 - APPROVED FOR PLANNING ONLY	Design
18	Foothills Medical Centre – NICU	37,989 Partial Foundation Supported Project	Planning
19	Calgary Cyclotron	49,543	Planning
20	La Crete Maternity and Community Health Centre	36,604	Planning
21	Alberta Surgical Initiative (formerly requested as Provincial Surgery Access Plan)	81,594	Design/Construction
22	High Prairie Health Complex Demolition	8,000	Design
23	Grande Prairie Regional Hospital (Fit Out Shelled Space)	32,900	Construction
24	Recovery Communities	25,000	Design

Source: Alberta Infrastructure Health Facility Branch Monthly Health Projects Report (dated May 31, 2021)