4.0 ALBERTA INFRASTRUCTURE CAPITAL PROJECT DELIVERY

Chapter 4.0 provides a description of the processes for delivery of Major Health Capital Projects (Major Projects) following Project Approval (see Chapter 3). Major Projects are those for which INFRA has responsibility for delivery. See Chapter 5 for a description of Minor Health Capital Project Delivery (Minor Projects), for which AHS has responsibility.

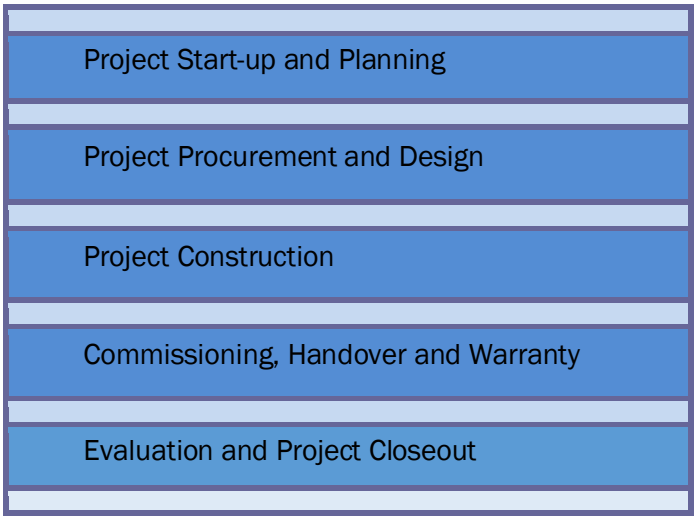
INFRA normally delivers projects that are greater than $5 million (see 4.0 Alberta Infrastructure Project Delivery), while AHS normally delivers projects that are less than $5 million (see Chapter 5).

The Joint Operations Committee may consider amending these responsibilities should it be determined after appropriate review that efficiencies in project delivery will result. Here are four examples where project delivery authority may be amended:

- INFRA may deliver a project that is less than $5 million when an IMP project is combined with a capital project cost of less than $5 million but the TPC is greater than $5 million;
- INFRA may also be responsible for delivery of a number of projects within a site or building where each project would have a Total Provincial Support (TPS) less than $5 million but the cumulative TPS' of all the projects is greater than $5 million;
- AHS may deliver a project that is greater than $5 million when there is a significant foundation contribution that increases the TPC to greater than $5 million, or where the contribution carries significant equipment procurement ; and
- AHS may also be responsible for delivery of a project greater than $5 million if it is co-located with or determined to have synergies with approved IMP projects.

The typical phases of a Major Project are depicted in Table 4 and described within this section of the manual.

Table 4 - Major Project Phases



4.1 Project Start-up and Planning

4.1.1 Major Project Oversight

Oversight for Major Projects, including the organizational roles, authority and responsibilities is described in Table 5 below.

Table 5 – Major Health Capital Projects Oversight

Organizational Role	Authority	Responsibilities
Project Co-Sponsor	HEALTH DM	• Ensures the objectives and scope of the project are met
Project Co-Sponsor	AHS President and CEO	• Ensures the objectives, scope and approach of the project meet the organizational and program objectives of AHS service delivery plans
Project Leader	INFRA DM	• Accountable for delivery of the project according to approved scope and budget

Client Organization	AHS Capital Management and Clinical User Group Representatives	• Act as AHS representatives on the Project Steering Committee and Project Team

4.1.2 Project Management Framework

Generally, a framework for all Major Projects must be developed that:

- establishes clear accountabilities;
- demonstrates how project objectives are linked to funding approvals;
- respects organizational authorities throughout the project life-cycle; and
- establishes a clear decision-making process.

Specifically, the project management framework for Major Projects should:

- align with applicable TBF, HEALTH, INFRA, and AHS legislation, policies and procedures;
- include a Project Charter and organizational chart;
- identify inter-departmental arrangements or non-government participants and their roles and responsibilities;
- establish effective mechanisms for monitoring status and assessing performance, including:
  - reasonableness checks;
  - independent reviews when required; and
  - technical peer teams when required.
- use processes and documents that embody the principles of sound project management, including:
  - common templates and guidelines on document preparation;
  - continuous risk management;
  - standardized contracts; and
  - standardized tools, techniques and methodologies.
- provide suitable Project Managers and technical expertise; and
- include a proactive communication plan.

4.1.3 Project Organization and Approach

A project organization is created following project approval. This process involves HEALTH, INFRA and AHS assigning the necessary staff to undertake specific roles and responsibilities to complete the project.

The project organization is comprised of the Project Director and Project Manager (assigned by INFRA), the Project Team that supports the Project Manager, and the Project Steering Committee. The members of the Project Steering Committee include representatives from existing functional organizations within INFRA, AHS and HEALTH. Each organization commits to providing specialist resources to the Project Team and Project Steering Committee respectively.

There are two lines of authority that are exercised by the Project Director/Project Manager. One line is exercised horizontally across the functional structures by the Project Manager in the day-to-day management of the project, through the Project Team. The other line is exercised vertically through the functional hierarchy of each organization to address organizational decision making. This second line is typically exercised through the Project Steering Committee and includes the AHS Zones/Provincial Programs. The dynamic of the two lines of authority is important to the decision flow as the Project Director/Project Manager will need to confirm that AHS, HEALTH and INFRA review and authorize decisions that impact the project, consistent with their roles and authorities.

Each organization assigns key staff to the Project Team or Project Steering Committee in order to facilitate decision-making throughout the life cycle of the project. The staff must carry the authority to act on behalf of their respective organizations within their assigned roles. However, it is understood that confirmation from the authority within each organization may be necessary. Staff must be familiar with the processes and protocols that relate to their area of expertise or role within the project. For example, the Clinical Liaison works closely with the Project Manager and within the Project Team and carries certain authority on behalf of AHS to provide the necessary input to day-to-day project decisions. Although the Clinical Liaison does not retain sufficient authority to authorize amendments to scope or to approve a Functional Program on behalf of AHS, they are the key contact for INFRA, and are therefore responsible for facilitating those decisions from their organization and ensuring appropriate involvement by AHS staff.

The general responsibilities for the five key project authorities are described below (Project Team, Project Steering Committee, Project Director, Project Manager and Clinical Liaison)

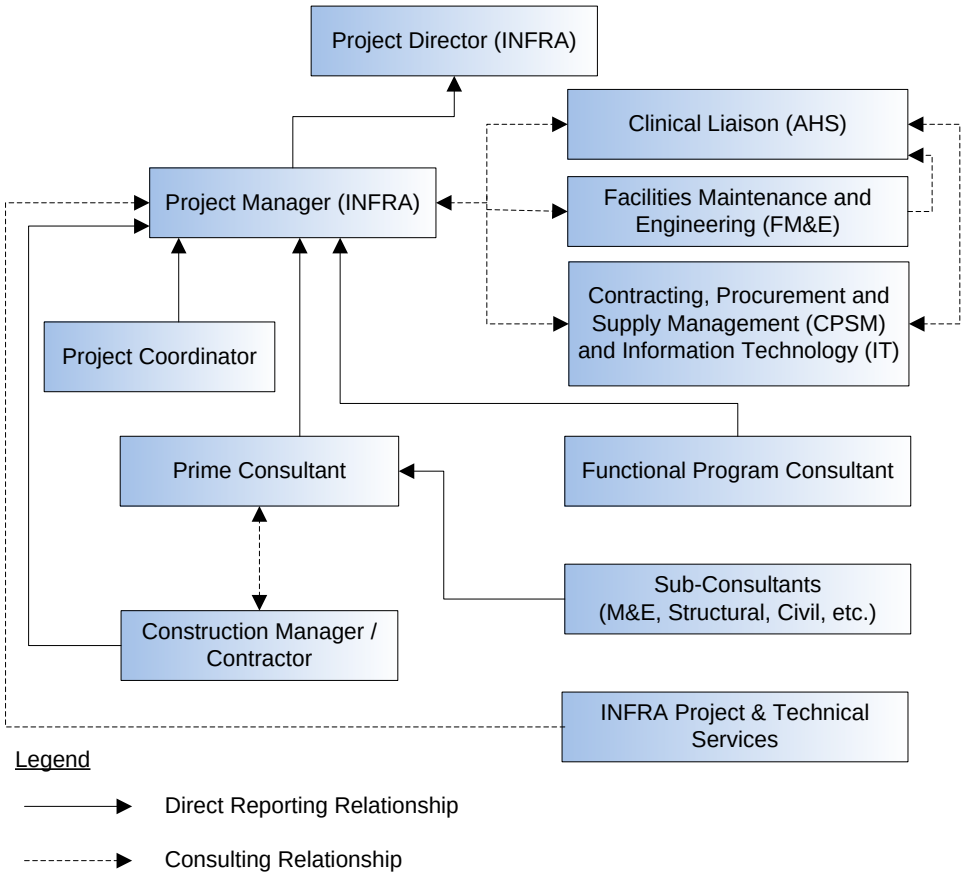
Project Team

The Project Team supports the Project Manager and is comprised of individuals who carry out the project work. This work may be a substantive technical role in achieving the

objectives, or it may be work involved with the management of the project such as maintaining the project schedule.

The general relationship of the Project Team is identified in Figure 3 below. The Project Charter (Appendix 4.1) identifies the members of the Project Team and details their respective responsibilities to the project. The TOR for the Project Steering Committee and Project Team (Appendix 4.2 and Appendix 4.3) are referenced in the Project Charter.

Figure 3 – Project Team



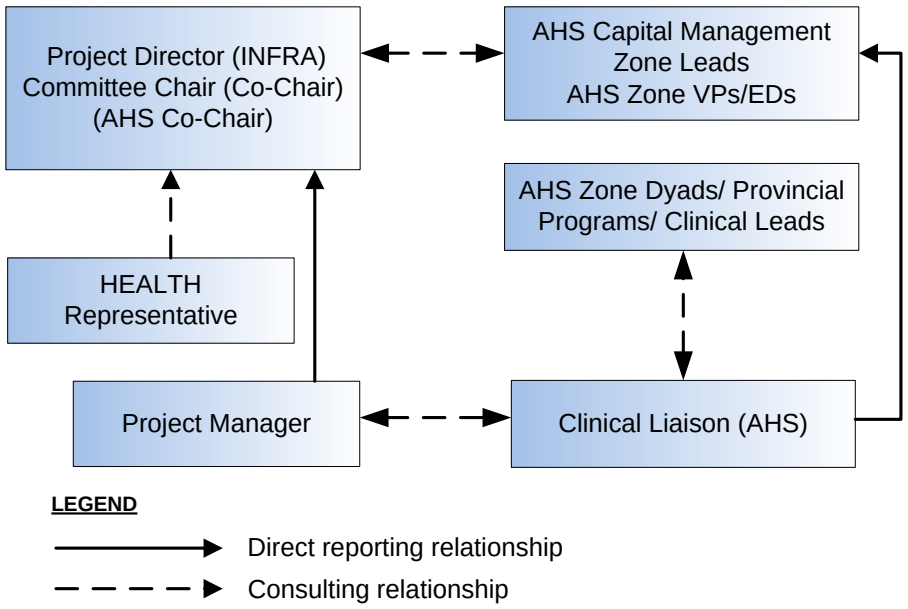
Project Team members are drawn from INFRA and AHS (see 4.1.3 Project Organization). The core members of the Project Team include the Project Manager (INFRA), Clinical Liaison (AHS Zone Capital Management), Facilities Maintenance and Engineering (FM&E) representative (AHS), Furniture and Equipment representative (AHS Contracting, Procurement and Supply Management), IT, Prime Consultant, Prime Contractor, and Design Consultants. Team membership may evolve in size and composition throughout the life of the project.

Committee membership may also include subject matter experts such as INFRAS' Technical Services or AHS' Cancer Care or Infection Prevention and Control (IPC) staff.

Project Steering Committee

As outlined in Figure 4 below is a typical Steering Committee structure, the Project Steering Committee is comprised of key executive and functional members of HEALTH, INFRA and AHS. It provides resolution, feedback or guidance throughout the project on matters relating to scope, program priorities, schedule, cost and quality concerns. The Committee resolves issues brought forward by the Project Team that fall within the approved scope for the project.

Figure 4 - Project Steering Committee



While the Committee is expected to resolve any conflict that may arise within the project, the Project Charter will include a conflict management framework and escalation mechanism for issues that cannot be resolved by the Committee. See TOR (Appendix 4.2) for a complete description of roles and responsibilities for the Project Steering Committee.

To assist with joint decision-making, the Parties may agree to establish joint chairs for the Project Steering Committee involving both INFRA and AHS.

Project Director

The Project Director is assigned by INFRA and provides oversight and guidance to the Project Manager. The Project Director also chairs the Project Steering Committee, unless otherwise agreed amongst the Parties.

Specific responsibilities of the Project Director include:

- approving Project Steering Committee membership and TOR following consultation with HEALTH and AHS;
- verifying project objectives and establishing desired outcomes and timelines in consultation with HEALTH and AHS;
- overseeing project delivery to ensure methods are appropriate and cost-effective;
- implementing effective project monitoring processes and ongoing communication processes with Project Manager and AHS representatives (e.g. Capital Management Zone Vice President/Executive Director, Clinical Liaison, User Groups);
- working with the Project Manager, Clinical Liaison and consultants as needed to provide timely communications to media and stakeholders as required (see section 2.5).
- ensuring project delivery meets the baseline cost, scope and schedule as stated in the approved Project Charter, Business Case, Functional Program or other HEALTH and INFRA Ministerial approved scope documents; and
- approving timelines.

In exceptional circumstances where an issue remains unresolved, the Project Director is expected to elevate the issue following consultation with the Project Steering Committee. Should an issue fall outside of the authority of the Project Steering Committee to resolve (such as scope changes without accompanying funding support) the Chair/Co-Chair of the Project Steering Committee will make representation to the Joint Operations Committee. This will include recommendations for resolution that are in the best interests of the three Parties.

Project Manager

The Project Manager is assigned by INFRA and is the senior project authority who leads the Project Team. The Project Manager has the responsibility and accountability for the delivery of safe, functional, high-quality, cost-effective, and sustainable facilities that meet AHS and HEALTH delivery needs.

The specific responsibilities of the Project Manager include:

- establishing a complete and accurate list of the resources required for project planning, design and implementation;
- managing the project planning and design processes in a manner that ensures HEALTH and AHS needs are documented and met;
- developing and approving in conjunction with AHS and HEALTH, important project planning documents, such as the Project Charter (see section 4.1.5 for project planning documents);
- working with Clinical Liaison and other Project Team members to ensure project objectives are reached;
- developing detailed technical and performance specifications, logistics requirements, business management processes, and acceptance of deliverables (except furnishing and equipment);
- procuring and engaging outside consultants and contractors (e.g., cost consultants, Functional Programmers, urban planning specialists, architects and engineers) see Appendix 9 - Procurement Planning Process Flowchart;
- overseeing all aspects of project construction execution, control, monitoring, commissioning and closure;
- working with the Project Director, Clinical Liaison and consultants as needed to provide timely communications to media and stakeholders as required (see section 2.5);
- coordinating resolution of ongoing operational issues in existing facilities with AHS FM&E, AHS Infection Prevention and Control (IIPC), and User Groups;
- monitoring budgets, forecasting, cash flows, etc. and approve expenditures and change orders (within expenditure officer authority);
- working with CPSM on the planning and implementation of F&E components, and monitoring F&E expenditures;
- working with AHS IT on the planning and implementation of IT components;
- ensuring the Alberta and National Building Codes and INFRA's technical standards are utilized as key resources for scope documentation and project delivery;
- establishing and implementing processes for risk management and mitigation;
- documenting and controlling all project expenditures, contractual commitments and contract changes according to established guidelines; and
- ensuring training is provided to AHS on building systems and that AHS has the opportunity to verify the performance of the building systems prior to handover through effective building and operational commissioning processes.

Clinical Liaison

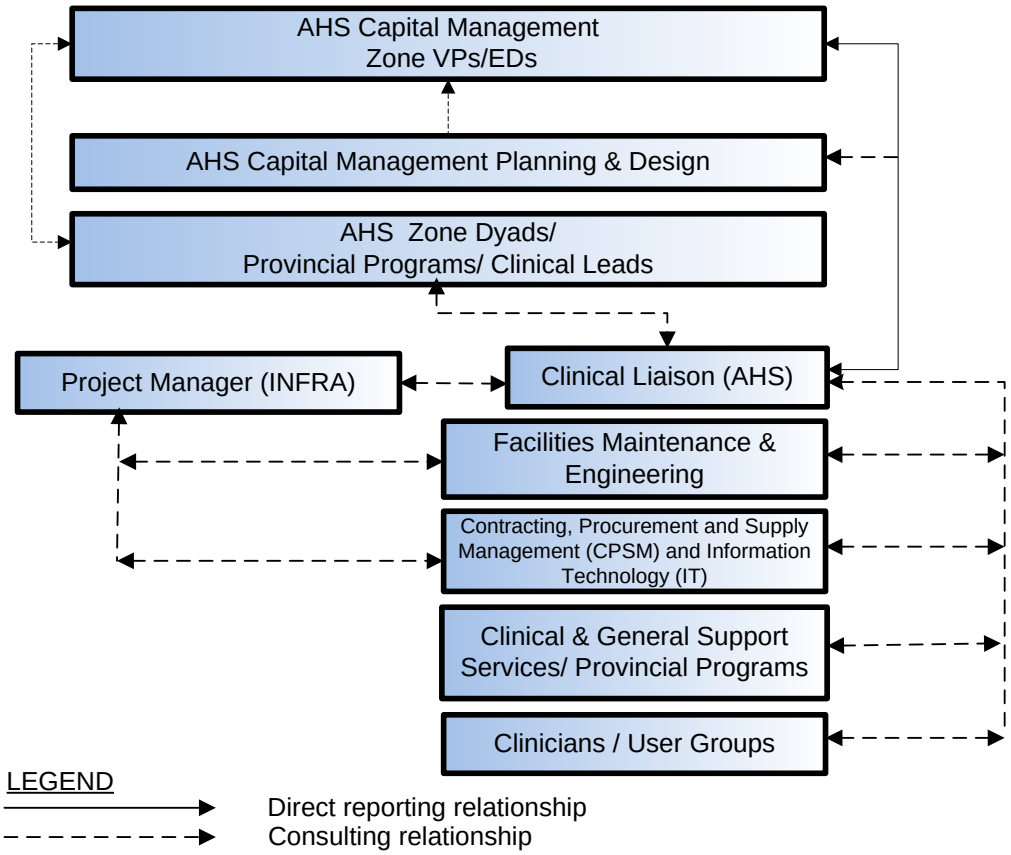
On behalf of AHS, the Clinical Liaison acts as the key functional authority for the operational requirement and as the link between the INFRA Project Manager and AHS Zones/Provincial Programs representatives.

In this role the Clinical Liaison:

- assists in the coordination of resources and input on behalf of AHS through all phases of the project through to Project Close-out;
- represents the interests of AHS through all phases of the project
- represents/assists Zone/Provincial Program leadership in daily decision making on project related matters;
- coordinates the development, review, routing and sign-off of documents by AHS, except where F&E and IT are responsible for the process;
- coordinates project development work that defines the service requirements, including any preliminary studies and initial approvals;
- ensures that project objectives (scope), linked to a validated requirement (needs assessment) are established early in the project planning and maintained through to project completion;
- obtains the necessary functional inputs through a combination of negotiations with functional managers within AHS, and any direction or approvals that may be applied by AHS Capital Management or Zone/Provincial Programs Executive Leads; and
- works with the Project Director, Project Manager and consultants as needed to provide timely communications to media and stakeholders as required (see section 2.5)

The Clinical Liaison supports AHS Capital Management, the Zone Dyads, Provincial Programs staff and Clinical Leads through the relationship outlined in Figure 5.

Figure 5– AHS Project Support



4.1.4 Joint Decision Points and Key Documents

The RASCI Matrix (Appendix 3) identifies key joint decision points and the organizational responsibilities and accountabilities attached to these decisions. The decision points mark a series of gates that the project must successfully pass. The decision points will normally require the preparation of decision documents under the leadership of the Project Manager, and supported by the Project Team, following a period of development and review.

For some joint decision points, consultants manage the document development process, such as the Functional Program. The Project Charter identifies the responsibility for document preparation and the authority for key decisions.

The decision gates include the following as a minimum, and depending on the nature of the project, there may be additional gates to confirm interim outcomes or subsidiary activities/plans:

- Project Charter;
- Project Management Plan;

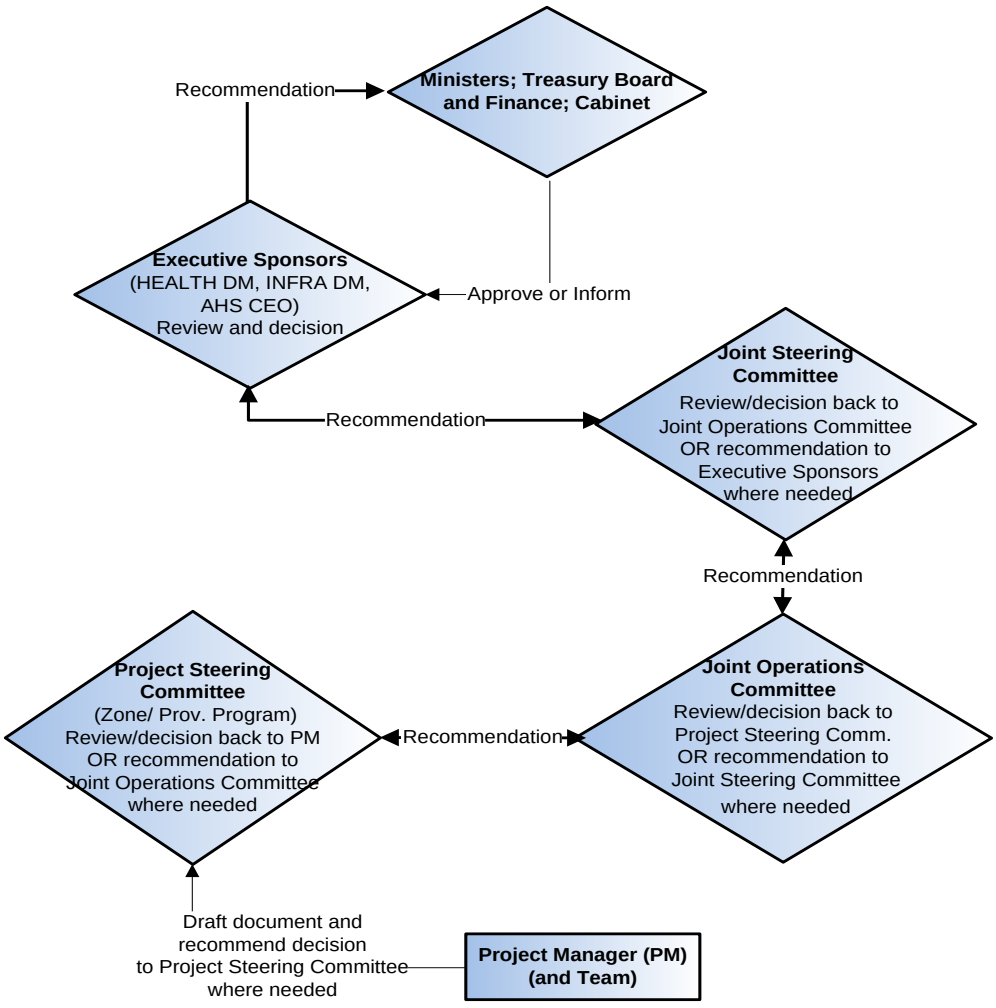
- Functional Program;
- Schematic Design;
- Design Development;
- Working Drawings;
- Building Commissioning;
- Handover;
- Operational Commissioning; and
- Close Out.

The development of the decision documents will normally occur sequentially and must be identified within the project schedule. Where risks can be appropriately managed and depending on the nature of the project, there may be opportunities to overlap the development of the documents to expedite delivery. This implies that a document or process is initiated before a final decision is made on a previous document. While this may be possible, the Project Manager must take into account the risks/impacts of such a course.

Project related decisions are made by the Project Team or the Project Steering Committee. When consensus is not reached or higher approval is required, the issue is elevated to the Joint Operations Committee or to a higher level through the Joint Operations Committee.

Figure 6 provides a representation of the Joint Decision Process flow from the Project Manager through to a decision by the Joint Steering Committee. Where decision authority resides at a level lower than the Executive Sponsors, the decision process will end at that level. This process is used for decisions that are within the approved scope of the project. For the Joint Decision Process dealing with scope changes see section 4.1.6.

Figure 6– Joint Decision Making Process



The steps in the Joint Decision Process are as follows:

- the Project Team reviews the final draft document, after which the Project Manager submits the document to the Project Steering Committee for their review and discussion (for example, a Functional Program). The Project Manager must forward documentation to committee members sufficiently in advance of a scheduled meeting (as laid out in the project plan) to facilitate review not just by committee members but also by any supporting staff to the committee;
- the Clinical Liaison ensures that draft documents are circulated to the appropriate staff within AHS and that feedback is provided according to the timelines established by both the Project Manager and Clinical Liaison; and

- the Project Steering Committee is charged with resolving project decisions that are within the scope and budget of the project.

Sufficient time should be allowed in the project schedule for the document approval process, given the levels of review required and the number of organizations involved.

While decision documents are approved by a single representative on behalf of their respective organizations, the signature signifies that all necessary reviews and approvals have been obtained within that organization.

Inter-organizational decision making and problem resolution must observe project budget and schedule constraints to the extent possible and follow due process for any changes to approved project parameters (see section 4.1.6 for more information).

4.1.5 Project Planning Documents

Project Charter

The Project Charter is an essential document that is prepared as early as possible in the life of a project, generally immediately after Project Approval and the assignment of the Project Director and Project Manager. It establishes the project organization and provides guidance in the form of assigned responsibilities, broad project objectives and constraints. Reporting relationships and delegated authority are clearly defined and documented in the Project Charter for all members of a Project Organization. It is a living document that evolves with the project and is updated as the project and immediate objectives change.

The initial document is drafted by the Project Manager, with significant input from Project Team members who are appointed as early as possible following Project Approval. The benefit of this team approach is that it takes advantage of the institutional and occupational backgrounds of the members of the Project Team. The Project Manager normally drafts those areas dealing with delivery questions, such as time, cost, risk, etc. The Clinical Liaison represents the operational requirements, the process for internal approvals, as well as the schedule.

For more information, see Appendix 4.1 - Project Charter Template. Project Managers may truncate, add to, or combine sections of the document to provide the necessary clarity according to the uniqueness of the project.

The Project Manager presents the completed draft to the members of the Project Steering Committee for their review and agreement. The final draft document is approved by the INFRA Project Director. The Clinical Liaison coordinates the sign-off for AHS.

Project Management Plan

The Project Manager establishes a Project Management Plan (PMP) early in the project life cycle in consultation with Project Team members. A project management plan provides basic information about the project, and describes the planning, execution, monitoring and control, and close-out of the project.

For less complex projects the information provided by the PMP may be included within the project charter and the subsidiary plans.

The Project Director consults with the Project Steering Committee and resolves any outstanding issues between the Parties before approving the Plan. Once approved, the Plan will provide a baseline to monitor progress and measure results. The Plan content will vary depending on the complexity of a project, and for some projects a plan may not be required based on the nature of the project. Templates for the plans are available to the Project Managers through INFRA's Project Implementation Management System (PIMS) site.

The Project Management Plan is an executive summary of several detailed subsidiary management plans (see Table 6). Depending on the nature of the project some of the subsidiary plans may not be required or may developed and provided by consultants/contractors.

Table 6 – Project Management Plan

INPUTS TO PLAN	SUBSIDIARY PLANS
Approved project funding	Scope Management Plan
Needs Assessment	Schedule Management Plan
Business Case	Procurement Management Plan
Project Charter (Project Approved)	Cost Management Plan
Functional Program Framework	Quality Management Plan
Project delivery method	Human Resources Management Plan
Stakeholders' analysis	Communications Management Plan
Initial risk analysis	Claims Management Plan
	Risk Management Plan

INPUTS TO PLAN	SUBSIDIARY PLANS
	Health and Safety Management Plan (under development)
	Environmental Management Plan
	Close out Management Plan
	Building Commissioning/Handover Plan
	Move-In Plan (Note: AHS is responsible for developing)
	Operational Commissioning Plan (Note: AHS is responsible for developing)

Scope, Budget and Schedule

The Project Manager is responsible for the management of the scope, budget and schedule for the project. After forming a Project Team and developing a Project Charter, the Project Manager will confirm the scope, budget and schedule for the project and bring to the attention of the Project Steering Committee Chair any issues or ambiguities requiring clarification.

While the Project Charter provides a broad outline of project scope, the Project Manager may elect to prepare a Scope Management Plan should the project carry a greater degree of complexity. A Scope Management Plan ensures the project includes all the work required to complete the project and *excludes* all the work not necessary to complete the project.
The Scope Management Plan details how project scope will be defined, managed, controlled, verified and communicated to the Project Team and other stakeholders. It clearly defines who is responsible for managing the project's scope and acts as a guide for managing and controlling the scope.

4.1.6 Changes to Approved Project Parameters

While the implementation objective is the delivery of quality projects, on time and within budget, circumstances may arise that necessitate a change in the scope (project objectives), schedule or budget of a project. A proposal to change these parameters may occur any time following the formal approval of a project through to the handover of the facility. Changes, when approved, will modify the project objectives outlined within the Business Case or the last approved change for the project.

It is important to note that TBF approves the overall scope and budget for a project following the submission of the Business Case as part of HEALTH's submission into GoA annual CPP.

Minor Change Requests

INFRA has the authority to approve and implement minor change requests that are consistent with the project objectives and within the approved project budget. The Project Manager prepares change requests with the support of the Project Team. The approval authority for change requests is delineated within INFRA's Expenditure Officer Authority Guidelines. The project's contingency fund provides the financial source for minor change requests.

When a minor change request is contemplated, the Project Manager is responsible for ensuring that all impacted parties are consulted as appropriate, notably the Project Team and in particular the F&E/IT and the FM&E representatives.

Changing the location of a wall or re-locating the entrance to a room would be examples of minor change requests. Such requests are not likely to impact the project objectives or budget.

Major Change Requests (Scope Changes)

To initiate a request to change the project objectives or budget, the organization seeking the change forwards a proposal in writing to the Project Director (the 'Change Proposal'). The process outlined below provides for the review and validation of plausible options and the assessment of any impacts.

The Change Proposal must be feasible and achievable within the project even though additional funding may be necessary. The Proposal must be reviewed and supported by the Project Steering Committee. Where any scope or budget change is required to implement the Change Proposal, the Joint Operations Committee reviews the Change Proposal (following Project Steering Committee recommendation) and in turn provides a recommendation to the Joint Steering Committee regarding implementation. The Joint Steering Committee determines the next steps concerning an amendment to the project objectives or a request for additional project funding.

An example of a major change request would be changing the functionality of a room from administrative space to an operating room. Such a request would impact the project objectives and/or budget.

The Project Manager coordinates the Project Team's work to define the technical requirements and implications of a Change Proposal. The Clinical Liaison works with the Zone Medical Lead and Capital Management Lead to review and validate any changes to program requirements and their implications. The process for reviewing and approving a Change Proposal follows these steps:

- ***Identify Requirements:*** The originator of a Change Proposal must substantiate the request for change. This may require a revisit of the Business Case to analyze and update the program service delivery objectives of the project;
- ***Verification of Change Proposal Requirements:*** Through consultation with the Parties, the Project Manager reviews the Change Proposal and validates the requirement for change through the Project Steering Committee. This review and validation process must take into account any strategies that may mitigate the need or cost of the proposed change, including any synergies with other projects, programs or facilities. During the verification process, the Project Manager consults with INFRA's Health Facilities Branch planning staff and HEALTH who verify whether the proposed change is consistent with the Business Case and project objectives that were approved for delivery by the GoA;
- ***Review Cost and Technical Factors:*** Once the need for the Change Proposal is verified by the Project Steering Committee, the Project Manager prepares an assessment of the cost, schedule and any technical implications of the proposed change. The Project Manager is responsible for ensuring that all parties are consulted as appropriate, notably the Project Team and in particular the F&E/IT representative concerning any F&E/IT impacts;
- ***Project Steering Committee Recommendation:*** Since the Project Steering Committee does not retain the authority to make decisions concerning the implementation of a Change Proposal, the Committee must formulate a recommendation concerning their preferred course of action to the Joint Operations Committee. The Project Director prepares a recommendation to the Joint Operations Committee that details the objectives and options concerning the change, as well as any cost, schedule and technical implications;
- ***Joint Operations Committee:*** The Joint Operations Committee provides executive review of the substantiation for the Change Proposal and the implications of any change. The core members of the Joint Operations Committee may consult with the members of the Project Steering Committee to assure themselves of the appropriateness of the recommendation.

The Project Director attends the Joint Operations Committee meeting to present the Change Proposal on behalf of the Project Steering Committee. The Joint Operations Committee decides whether the change proposal needs to go to the Joint Steering Committee for approval or information. If further analysis is necessary before this recommendation is presented at Joint Steering, the Joint Operations Committee requests this review through the Project Director;

- ***Joint Steering Committee:*** The Joint Steering Committee reviews Change Proposals and determines the next steps. This may include referral to the organization with the authority to resolve the matter, such as HEALTH for decisions concerning policy and funding matters, INFRA for technical matters, or AHS in consultation with HEALTH for operating cost implications; and
- ***Treasury Board and Finance:*** Major changes that require substantial additional funding are elevated to the Executive Sponsor, the Ministers and finally to TBF for funding approval consideration.

4.1.7 Site Selection, Land Acquisition and Divestiture of Assets

Site Selection

For Major Projects involving new construction, the Business Case identifies preferred sites or locations for the project. This is based on the development of a set of criteria consistent with the objectives of the project, which may include:

- proximity to transportation and communication links;
- proximity relative to where residents would best be serviced by the facility, with attention to population centers and access;
- proximity to other community or health facilities that impact the delivery of healthcare services at the new facility;
- the size of the parcel of land and whether it is appropriate for the area plan and facility plan;
- adequate parking facilities;
- topography and soil suitability (soil sampling or an environmental assessment prior to acquisition may be warranted); and
- site survey (may be appropriate prior to acquisition).

Potential sites are reviewed with representatives from the Parties. In this process, the potential sites are evaluated against the project criteria and recommendations are made to acquire the preferred site.

Final site determination and acquisition occurs following approval of the project by the Treasury Board.

Health planning may identify long-term requirements for strategic land acquisitions to facilitate decisions that better take into account the criteria listed above. An example of this requirement could be a strategic project that requires several years of planning to meet a comprehensive geographic need that emerges due to population growth. AHS may identify strategic land acquisitions within its annual Capital Submission (see section 3.3.2 – Part 5).

Land Acquisition and Management

For renovation projects, the Project Manager is responsible to liaise with the FM&E lead from AHS to define the space allocation for the project. This allocation must be consistent with the terms, conditions and policies of the AHS site management authority and must be incorporated into the tender/contract documents.

For projects that require site acquisitions, INFRA will consult with the AHS Capital Management and HEALTH Facilities Planning Branch prior to any decision on a site acquisition. Suitability of the site and its ability to facilitate the scope and program delivery requirements of AHS will be key considerations in the consultation.

INFRA acquires the preferred property using capital funding from within the approved project budget.

The Project Manager is supported by the INFRA Properties Division, Realty Services Branch, for land acquisition. The Properties Division is responsible for completing negotiations, finalizing the terms of sale and any contractual arrangements. The Project Manager also receives support from the Project Steering Committee which includes executive representation from AHS Capital Management.

INFRA's role in land acquisition and management includes:

- negotiating the terms of the land acquisition consistent with current Provincial legislation;
- consulting with AHS on any terms that may impact AHS following the transfer of the land title from INFRA to AHS;
- managing the property through to its handover to AHS, including the payment of taxes, insurances or the maintenance of pre-existing facilities, along with any pre-existing leases that were established within those facilities (these expenses should be identified in the Business Case);

- engaging AHS on any matters that may impact regional or site specific service delivery or facility plans; and
- leading discussions with municipalities or developers to achieve the project parameters or negotiating site development requirements.

Transfer of Title

The title for the property will be transferred by INFRA to AHS at handover of the completed facility. See section 4.4.2 for more information.

Divestiture of Assets

AHS is responsible for determining how it will use the land, buildings or facilities that it owns. AHS will consult with HEALTH and INFRA when considering disposition of an interest in land, a health care facility or a structure used for health care purposes. This ensures that any such transactions are compliant with current GoA legislation, policies and procedures.

4.1.8 Functional Program

A Functional Program is an important step in the project planning process. It describes the scope of services to be addressed by the project and identifies important service or functional requirements that must be met. For each service or functional component, the Functional Program specifies necessary human, technical and building resources. The Functional Program is used to:

- provide instruction for the preparation of a Schematic Design;
- provide clarification for key stakeholders about the scope of the project; and
- provide project costing and estimated operating costs for the project.

The steps in this process include:

- procuring a programming consultant;
- determining the depth of analysis required for each component of a Functional Programming study based on the project's size, complexity and risk;
- developing a Functional Program that takes into consideration the following:
  - the opportunity or challenge that the project is addressing;
  - the strategic alignment between the project's goals and objectives;
  - the major features of the project, its scope of work, space requirements and technical scope;
  - the impact of the project on current operations;
  - the financial operating requirements resulting from the project; and

    - the financial capital requirements of the project and funding sources.
- gaining approval for the Functional Program by HEALTH, AHS, and INFRA Executive Sponsors.

The components of a Functional Program are:

- executive summary;
- assumptions;
- planning parameters;
- activities/functions for each component within the project;
- staff workload/patient volumes;
- functional relationships;
- design criteria/physical requirements;
- schedule of accommodation (e.g., listing of rooms by program requirement, area, intended number of occupants, major equipment etc.);
- F&E/IT requirements and costs (e.g., equipment list);
- impact analysis, including impact on overall facility/system and on core, clinical and support services staff workloads and additional equipment needs from new or additional services;
- development options (Conceptual Development Plan);
- project cost plan;
- operating and incremental operating cost projections; and
- other considerations (e.g. additional items such as site development plan, operational impacts on parking and traffic studies may be included for projects that are large and complex in nature).

The Functional Programming components detailed above may not need to be completed for every project. Moreover, the information provided for each element is scalable to the nature and impact of a project. The overall length of the Functional Program should be kept to a minimum, ensuring that it stays on topic and presents only relevant information in a clear and concise manner. (Refer to Appendix 7 – Functional Program Framework for more detail).

Roles and Responsibilities

INFRA is responsible for leading the development of the Functional Program, including the procurement of a Programming Consultant with funding support from the approved project budget (see Appendix 9 – Procurement Planning Process Flowchart). Both HEALTH and AHS support INFRA in the development of the Functional Program.

The Programming Consultant will report to INFRA and be responsive to AHS in the development of the Functional Program as it is important that the consultant, INFRA, AHS and HEALTH, as needed, establish a partnering approach.

In procuring the Programming Consultant, INFRA invites AHS to participate in the development of the Request for Qualifications (RFQ), if needed, the Request for Proposals (RFP) and the review of the respondent submissions. The INFRA project manager ensures that the consultant establishes a sound methodology for the development of the Functional Program that facilitates the input of AHS Zone Capital Management staff, Clinical and Medical Zone Leads (Zone Dyads), Provincial Programs staff and Clinical Leads. The consultative process to developing the Functional Program includes the review and follow-up of any documentation that the consultant develops.

It is important that the INFRA project manager consults with AHS and HEALTH concerning the identification of the planning parameters and priorities at the inception of the Functional Program, including the objectives, methodology, supporting information and reporting and review process. The Clinical Liaison will provide central coordination of resources and input on behalf of AHS (with the exception of F&E and IT) with particular attention to the input and interaction of both AHS zone and provincial representatives.

As a component in the development of the Functional Program, AHS develops an F&E/IT Equipment Plan that is appended to the Functional Program upon its completion (see section 7.6). The Equipment Plan is used to establish the project's equipment budget. Approval of the Functional Program in turn approves the F&E/IT budget (see section 4.1.10).

The final draft of the Functional Program is prepared by the Programming Consultant and submitted to INFRA for review by the team that participated in its development. Once the team concurs that the objectives of the Functional Program are met, the Project Steering Committee reviews and recommends approval. The Chair of the Project Steering Committee (Project Director) in turn forwards the completed draft and the Project Steering Committee's recommendation to the Senior Vice President, AHS Capital Management for final organizational review and sign-off on behalf of AHS. Following AHS approval of the Functional Program, the Project Director forwards the Functional Program and AHS sign-off to HEALTH for final approval.

4.1.9 Project Funding

GoA Funding

The annual HEALTH submission into GoA's annual CPP includes a description of the proposed or requested GoA funding support, as well as any other funding sources that will support the proposed project.

In most cases, the GoA will provide the primary source of funding, known as the Total Provincial Support (TPS). Capital projects may also receive funding contributions from other sources, such as, charitable donations, other levels of government, third party stakeholders or debt financing by AHS that together make up the total project budget, also known as the Total Project Cost (TPC).

INFRA is responsible for managing all project funding for the projects it is delivering, including that provided by the GoA as well as any other funding source. Project funding from other funding sources is described below.

Other Funding Sources

Other funding sources and specific management responsibilities are outlined in Table 7 below. Also see Appendix 11 – Project Reporting Matrix for more information.

Table 7 – Management Responsibility by Funding Source

FUNDING SOURCE	MANAGEMENT RESPONSIBILITY
Charitable Foundations: Various charitable foundations may seek to contribute funds to a project for the delivery of specific items. The foundation contribution will increase the TPC of the project. (See Appendix 11 for more information).	• AHS will coordinate foundation contribution proposals consistent with the terms that are outlined in an expenditure approval letter from the foundation board. The INFRA Project Manager will coordinate the signing of a foundation contribution agreement between AHS and INFRA that outlines the work to be undertaken and the cost of the work. (See Appendix 8 - Foundation Funding Contribution Agreement). • The agreement identifies the terms that allow INFRA to control and expend the funding contribution for the delivery of specific items as part of the overall capital project, including the payment of invoices.
Ancillary Funding, (e.g. retail pharmacies) AHS is responsible for funding revenue-generating entities, typically accomplished through a debt funding arrangement with the Province. Ancillary funding increases the TPC for the project.	• INFRA Project Managers will coordinate the signing of a funding contribution agreement between INFRA and AHS for ancillary funding. (See Appendix 8 - Charitable Foundations/Ancillary Funding Template). • This agreement will facilitate the management of the funds by INFRA, including the payment of invoices.

FUNDING SOURCE	MANAGEMENT RESPONSIBILITY
IMP: Through authorization by the Joint Steering Committee, IMP projects and their associated funds may be implemented in conjunction with a capital project for reasons of efficiency (see Chapter 6). IMP contributions increase the TPC of the overall project.	• Upon approval to proceed with an IMP funding contribution, INFRA's Finance Branch will coordinate the assignment of funds to INFRA's project budget, thus reducing the annual IMP grant to AHS.
Universities and University Research: Funding contributions may be provided from research grants received through private contributions, or from private or public research organizations such as the Canadian Institute of Health Research. The funding contributions are normally directed to the delivery of specific items within the overall capital project. Research contributions increase the TPC of the project.	• Research funding contributions will be managed in a manner similar to that established for charitable foundation contributions. Research foundations or similar bodies will have additional requirements for timelines and reporting that must be met. These requirements are typically in addition to what is requested by charitable foundations.

The expenditure of funding from third-party contributions is reported by INFRA to AHS on a quarterly basis.

Additional funding from third-parties, such as charitable donations, may come forward after a project has been approved by the GoA and this may impact project scope. When this occurs, Project Managers/Directors must ensure that the proposed change is administered according to section 4.1.6 of the Manual.

Additions to the scope and budget generated through a foundation contribution must be consistent with the overall objectives of the project. Any additions must not adversely impact the approved scope, schedule and budget, or existing facilities and their operations. Should a foundation contribution cause an increase in operating costs, such increases will require the prior consent of HEALTH and AHS.

4.1.10 Alternative Capital Funding

The primary interest for the GoA in Alternative Capital Funding (ACF) for project delivery is to explore ways in which private sector involvement in projects could reduce the provincial capital outlay, reduce overall costs and share risks by taking advantage of core competencies in the private sector.

ACF encompasses a wide range of models with varying implications for risk transfer, ownership and operations. There are three primary alternative funding approaches within health capital projects:

- ***Public Private Partnership (P3)*** - A private sector partner provides infrastructure and/or services that have been traditionally delivered by the public sector. A key component of P3 arrangements is the sharing of the project risks (e.g., design, construction and concession) between the public and private sector partners according to who is better able to manage them. Under the GoA definition of a P3, the public sector contributes debt funding for the capital cost of the project which is repaid by the GoA over the life of the project, typically over a 25 to 30 year service delivery concession. It does not include outsourcing (private partner provides infrastructure on a short-term rental basis or operates and maintains AHS owned infrastructure) or design/build (fixed-price contract for design and construction) options.

The development of a successful P3 arrangement will require attention to a large variety of issues through a detailed planning and analysis process. TBF is responsible for the standards and processes for the development and implementation of P3 procurements. Information on the processes and organizational responsibilities for the development of an ACF project are available through the TBF website at: http://www.treasuryboard.alberta.ca/AlternativeCapitalFunding.cfm.

While INFRA leads the development of a P3 Business Case for major capital projects, a project team that includes direct representation from AHS and HEALTH is essential to evaluate the merits of an ACF or P3 approach. The first step in the P3 evaluation is the Opportunity Paper which considers at a high-level whether the project attributes meet the prerequisites for a P3 delivery model. If the Opportunity Paper provides a positive assessment, INFRA will establish a dedicated Business Case development team in collaboration with HEALTH and AHS to consider the value of proceeding with a P3 procurement. The Business Case findings require review through an executive oversight committee comprised of the DMs of HEALTH, INFRA, TBF, Justice and Attorney General, and

the President and CEO of AHS. If the Business Case and project attributes provide value for money, including the proposed risk transfer and service delivery objectives, the executive committee may recommend to TBF that the project proceed as a P3. P3 procurements will require the development of detailed contract and service delivery specifications. HEALTH and AHS partner with INFRA as members of the project team in the development of the RFQ, RFP and project oversight following contract award. The procurement process is governed by TBF processes outlined at the above link;

- ***Health Authority Borrowing*** – AHS borrows up front capital funds for specific projects, which is paid down by future GoA annual budget allocations; and
- ***User Charges*** – Revenue mechanisms that can be used in combination with other ACF options, or not, involving the collection of charges from the users of a particular capital project. Typically, these funds are used to repay borrowing or commitments under an ACF project.

4.1.11 Furniture and Equipment, Information Technology Planning and Procurement

F&E/IT planning and procurement is integral to the planning and delivery process for a Health Project.

Organizational responsibilities and processes are outlined in Chapter 7.

4.1.12 AHS Planning Considerations

Alberta Health Services has many matters to consider in the planning and delivery of a Health Project. These include, but are not limited to the following:

- Stakeholder Consultation (Patients and Families)
- Wisdom Council
- Infection prevention and control, and
- Simulation-based mock-up evaluations.

Additional information on these considerations is located in Appendix 4.5

APPENDIX 4.5 – AHS PLANNING CONSIDERATIONS

Stakeholder Consultation (Patients and Families, Indigenous Groups)

Patients and Family Centered Care is an integral part of AHS's "Patient First" Strategy. This is not only reflected in the operation of the clinical services provided, but also in how health capital projects are planned and designed. The Project Team (including INFRA project manager and

AHS clinical liaison) is to consider (where appropriate) involving patients and families in the design process and as part of the advisory and planning groups for health capital projects. (http://www.albertahealthservices.ca/info/patientfirst.aspx)

The Project Team (including INFRA project manager, HEALTH Representative and AHS clinical liaison) is to also consider (where appropriate) involving Indigenous groups (including the AHS Wisdom Council) in the design process and as part of the advisory and planning groups for health capital projects. (https://www.albertahealthservices.ca/ac/Page13514.aspx)

4.2 Project Procurement and Design

4.2.1 Standards and Guidelines

The Standards and Guidelines sub-committee of the Joint Operations Committee has been established to:

- review current standards and guidelines that relate to health facility design; and
- provide advice and recommendations to the Joint Operations Committee concerning their implementation or amendment.

Since standards and guidelines relating to health facility design and construction are directly applicable to service delivery and capital costs, all three parties will be members of the sub-committee. Key responsibilities of the sub-committee include the following:

- develop a common understanding on the use of standards and guidelines that would promote safe, high-performing and sustainable buildings;
- develop a prioritized work plan for the purpose of formulating recommendations concerning the relevance and impacts or consequences of approval, including (as a minimum) the following documents:
  - Infection Prevention and Control, including the Canadian Standards Association (CSA) documents including the Z317 and Z8000 (see section 4.3.4 – IPC);
  - Grossing Factors and Net Areas;
  - Building Performance Evaluation methodology and implementation; and
  - Continuing Care Design Guidelines.
- identify impacts, opportunities and obstacles concerning the implementation of standards and guidelines.

4.2.2 Procurement Planning

Procurement involves the selection of qualified consultants and contractors (proponents) for the various phases of major capital projects. The four main contractor/consultant types are:

- Programming Consultant (for Functional Program development);
- Prime Consultant (for design services and contract administration);
- Contractors or Construction Managers; and
- Commissioning Agents.

Additionally, other technical consultants or contractors, including Value Management, Cost Management, Scheduling, and Risk Management consultants, may be engaged by INFRA based on the requirements of an individual project.

Project Managers administer the procurement process in consultation with INFRA technical, procurement and Cost Management staff to ensure best practices. The procurement process is conducted in accordance with GoA legislation, trade agreements and departmental policies, processes and guidelines. While the procurement process typically includes the following steps, some steps may be omitted for less complex projects:

- development of a project delivery model and procurement plan;
- determination of potential proponents (e.g., consultants or contractors);
- solicitation of interest from potential proponents (through a Request for Information process);
- development of RFQ from interested proponents;
- development of RFP and tenders;
- evaluation of proponent submissions;
- contract approvals and awards; and
- communication of the outcomes of the procurement process to the Project Team.

Role of AHS in the Procurement Process

AHS is responsible for informing INFRA of any policy, procedures, or guidelines that may need to be addressed in the tendering process, including RFQ, RFP, contracts, or specifications. AHS will also advise INFRA of any requirement for criminal records checks or any other such limitation to contractor access.

AHS participates as a voting member of the Project Team as required for the development of RFQs and RFPs and review of proponent submissions for the four main contractor/consultant roles (see above). In their review, AHS identifies any contract work or conditions that conflict

with AHS operational policy, procedures, or guidelines. HEALTH may be invited to provide feedback where appropriate.

Communications

Project Managers are responsible for coordinating with INFRA Communications any public announcements at tenders or contract awards. INFRA Communications will consult with HEALTH Communications and AHS Communications prior to making public announcements.

4.2.3 Capital Project Design Process

Role of the Project Steering Committee in Project Design

In addition to the responsibilities outlined in section 4.1.3, the Project Steering Committee assists the design process by providing high-level guidance to the Project Manager.
The Project Steering Committee is responsible for:

- maintaining vision for the project;
- clarifying priorities for project design;
- making decisions when required concerning design options and recommendations brought forward by the Project Manager;
- escalating issues that cannot be resolved by the Steering Committee to the Joint Operations Committee as appropriate. (See Figure 6 – Joint Decision Making Process); and
- assisting and collaborating with the Project Manager and Prime Consultant as needed throughout the design process.

Development and Approval of Design Documents

The Project Manager oversees the project from approval through completion, including the development of the design documents. This includes the procurement of consultants and contractors, and the direction and supervision of the project and consulting teams as appropriate, and according to the composition of the Project Team described in section 4.1.3.

In addition to the Project Manager and design consultants, the Project Team includes the AHS Clinical Liaison and AHS F&E/IT and FM&E representatives. The Project Team may also include INFRA technical resource personnel, user group representatives, cost consultants and commissioning consultants. (See section 4.1.3).

Under the direction of the Project Manager, the team works together in:

- selecting the Prime Consultant(s) to develop the design documents;
- validating a design process with the Prime Consultant that:
  - is structured, iterative, and incorporates ongoing consultation with AHS, HEALTH and other user groups or stakeholders;
  - follows the design process as presented in Appendix 10 - Project Design Flowchart;
  - monitors deviation from approved scope; and
  - follows INFRA procedures and protocols and general industry best practices.
- developing a design schedule with the Prime Consultant that fits within the overall project schedule and key design milestones/checkpoints with particular consideration of the following:
  - schematic design, which includes floor plans and general system descriptions, as summarized in the schematic design report;
  - design development, which is a further development of the schematic design, documents the building plans, building systems design, F&E/IT requirements, and is summarized in the design development report; and
  - contract documents, which include the drawings and specifications that make up the final documents the builder, will use to construct the facility.

At the conclusion of each milestone, the Prime Consultant will submit the applicable design report and any supporting documentation to the Project Manager. AHS and HEALTH will each receive a copy for review and comment. AHS will be given an opportunity to review through the Clinical Liaison. The AHS Clinical Liaison is responsible for getting feedback, consensus and ultimately providing AHS organizational sign-offs for the design documentation at each milestone. Before proceeding to the next design milestone, the Project Team:

- reviews design documents to ensure completeness and compliance with the project scope and user requirements;
- consults with other internal resources or consultants as needed to review the documents and solicit feedback (e.g., INFRA Technical Services Branch); and
- finalizes and approves the milestone design documents.

The Project Team may incorporate design strategies such as integrated design, value management, value engineering, (see Appendix 1.1 - Glossary for definitions) and peer reviews, to ensure the design provides good value for money and meets the requirements of the program. Selection of design strategies will depend on the complexity and risk profile of the project. Design strategies will be done early in the design planning stage, before

schematic design begins. This process will typically be led by the Prime Consultant, in consultation with the Project Team.

Role of Clinical Liaison in Project Design

In addition to the responsibilities outlined in section 4.1.3, throughout the design process, the Clinical Liaison is responsible for:

- coordinating the involvement of appropriate clinical and stakeholder/user groups within AHS, including collecting information and feedback about various components of the design;
- sharing relevant supporting information important to the development of the project design;
- validating that the desired clinical outcomes for the project are being achieved throughout the design process;
- facilitating the resolution of issues or conflicting interests within AHS, and obtaining consensus among AHS stakeholders (e.g., User Groups, FM&E, CPSM, IPC, Construction Safety); and
- acquiring all necessary design approvals on behalf of AHS, in particular at the key milestones for the project.

4.2.4 Leadership in Energy and Environmental Design (LEED®) Planning

INFRA endeavors to provide safe and healthy workplaces that respect the environment for current and future generations. The LEED® Rating System for new construction is the tool used to implement, track and measure the sustainable design goals for new facilities.

INFRA has set the achievement of LEED® Silver as a minimum certification level for new building projects with a TPC equal to or exceeding $5 million. The Ministry also promotes the use of environmentally sustainable designs, practices and products for all projects, including those with a TPC of less than $5 million.

For new construction projects over $5 million, the Ministry has identified the following mandatory LEED® point targets:

- Energy and Atmosphere Credit 3 Enhanced Commissioning. INFRA will retain an independent Building Commissioning Authority early in the design process. See sections 4.4.1, 4.4.2 and 4.4.3 for further information on commissioning;
- Energy and Atmosphere Credit 1 Optimize Energy Performance – target is a minimum of 6 out of 10 energy points;

- Energy and Atmosphere Credit 5: Measurement and Verification*; and
- Materials and Resource Credit 5: Regional Materials – 1 point for 20% Regional Materials.

* Note: Energy modeling and similar initiatives require particular attention to measurement and verification during the project Design Phase (see section 4.2.3).

Representation to the Joint Steering Committee is required to amend the LEED® Silver policy for a specific project. Any considerations on amendment to the policy will need to recognize the Ministry's interest in attaining the maximum possible LEED® points within a sustainable building and facility budget.

Further information on LEED® is available on the Canada Green Building Council's (CaGBC) website at http://www.cagbc.org/.

LEED® Certification Process

As identified in the design scope of work, the project design team will identify a LEED® accredited professional who will be responsible for overseeing and coordinating the entire LEED® process. The LEED® professional reports to the INFRA Project Manager through the Prime Consultant. Their joint role includes:

- registration of the project with the CaGBC using LEED® Canada NC 2009 or the USGBC if using the LEED® 2009 for Healthcare Rating System. (Registration should be made by the prime consultant's LEED® professional on behalf of INFRA);
- development of a LEED® plan;
- tracking of LEED® point achievement;
- advice on design strategy and options;
- preparation and submission of documentation; and
- advocacy to the CaGBC for the Project Team.

Commissioning activities include the building envelope as well as the mechanical and electrical systems. The design and performance of the building envelope is integral to achieving high-performance energy efficient buildings. See section 4.4 for more information on commissioning.

Role of AHS in LEED® Certification Process

The INFRA Project Manager and design team will consult with the AHS FM&E representative throughout the LEED® commissioning and measurement and verification processes. This will ensure building systems are compatible with AHS operational goals and objectives.

4.3 Project Construction

4.3.1 Contract Management

Contract management practices may vary depending on the type of construction delivery method (e.g. Design-Bid-Build, Stipulated Sum, Construction Management).

The Construction Phase for a traditional Design-Bid-Build delivery model typically commences after design and tendering are completed and commensurate with awarding of the construction contract. However, under other models such as Construction Management, retaining the Contractor earlier in the project may be considered in order to provide logistical advice, preliminary and ongoing costing information, and input into the design, phasing, and scheduling of the work. Also, if the construction of the project is being fast-tracked, construction may begin before the design documentation is complete.

Delivery models such as Design-Build or P3 will typically have a single contract with an entity that delivers the design, construction, and possibly other services.

The goal of the construction phase is to produce a built facility that is fully compliant with the scope, the program and service delivery requirements and the contract drawings and specifications, regardless of the project delivery model used.

4.3.2 Roles and Responsibilities

As in other phases of the project, the Project Manager is responsible for managing the Project Team during the Construction Phase of the project. Team members during this phase could include design consultants, construction contractors, specialty consultants, testing agencies, commissioning agents, as well as the Clinical Liaison and various client stakeholders (see section 4.1 – Project Start-up and Planning).

Under the direction of the Project Director, the Project Manager, along with the rest of the Project Team is generally responsible for:

- coordinating all work on the site;
- monitoring the schedule;
- managing project scope and the scope change process;
- monitoring and controlling the budget;
- monitoring and directing design consulting team and other consultants;

- monitoring and directing the Contractor;
- managing any conflict/disputes between parties that may arise;
- approving construction changes;
- approving billings;
- approving completion of milestones;
- managing the construction completion and facility handover phases;
- communicating with the Clinical Liaison on project progress, changes, decisions required, and project completion details;
- communicating with the Project Steering Committee on the project's progress; and
- developing and distribution of project reports.

The Construction Phase is intensive in terms of the amount of administration and communication required amongst the parties. Timely decision making is essential. The Project Manager will seek information and decisions from appropriate parties in a timely manner to ensure ongoing control of the project schedule and budget.

AHS personnel will play a key role in various stages of construction and will need to provide timely responses to change proposals and other requests from the Project Manager. The Clinical Liaison continues to be the key contact for AHS, with the following specific responsibilities during construction:

- consulting with and involving AHS personnel as required or when requested by the Project Manager;
- obtaining decisions required from AHS user groups; and
- liaising with the Project Manager on the project schedule, and coordinating client take-over and operational commissioning.

Facility Maintenance and Engineering (FM&E)

AHS FM&E engagement in facility construction, handover and commissioning differs according to whether construction occurs in or adjacent to an existing facility or at a new location. A renovation site by definition is one which is located within, adjacent to or close to an existing facility, and therefore is likely to have a notable impact on existing AHS facility operations.

For a renovation construction site, FM&E responsibilities include:

- facilitating access by the Contractor and Project Manager to AHS controlled spaces when work is taking place in an operating facility or site;

- coordinating with the Contractor and Project Manager on maintenance of the construction site, including arrangement of utilities tie-ins and building systems, with the assistance of the INFRA Project Coordinator; and
- coordinating with the Project Team for utilities shut downs, utilities tie-ins and building systems and other operational issues with ongoing maintenance and engineering activities in adjacent facilities.

In contrast to a renovation site, a new construction site refers to those sites that are not connected to an existing facility and therefore are likely to have negligible or no impact on existing AHS facility operations. For a new construction site, FM&E responsibilities include:

- providing input into project planning and design process;
- incorporating physical or operational requirements as required throughout the construction period;
- identifying deficiencies in consultation with the Project Manager and ensuring maintainability after Handover (see section 4.4);
- participating in the System Commissioning Phase as required (see section 4.4);
- participating in the building commissioning of the new facility; and
- receiving keys, operational manuals, attending training sessions, etc., at Project Completion and Handover.

Project Manager

The Project Manager is responsible for coordinating FM&E activities with AHS FM&E staff, including:

- construction assistance - coordination of construction activities within the operation of existing linked or adjacent facilities for renovation sites; and
- commissioning assistance - coordination of commissioning activities with AHS FM&E staff for both renovation and new construction sites. The Project Manager involves FM&E throughout the entire life cycle of the project, including design review, site inspections, verification/testing, review of Operations and Maintenance (O&M) manuals, and O&M training (see section 4.4.3 for a description of commissioning process).

4.3.3 Contracting, Procurement and Supply Management and Information Technology

AHS' Contracting, Procurement and Supply Management (CPSM) and Information Technology organizations will be responsible for the following during the Construction Phase:

- procuring F&E/IT that is purchased through the project budget, as well as items that are relocated from existing facilities;
- coordinating F&E/IT delivery and installation requirements with the Project Manager; and
- reporting the F&E/IT budget status to the Project Manager. See section 4.1.10 for more details on CPSM's roles and responsibilities.

4.3.4 Infection Prevention and Control

The design and construction of health capital facilities needs to account for Infection Prevention Control (IPC) policies and operational processes. Project Managers are responsible for ensuring that these are addressed through a consultative process with AHS, respecting AHS IPC policies and local hospital procedures. AHS is responsible for the provincial level IPC guidelines and HEALTH is responsible for the review of these guidelines.

The Joint Operations Committee, Standards and Guidelines Sub-Committee will review IPC processes for consideration in health capital facility design. This effort will address AHS IPC policy as well as external sources e.g. CSA Z8000. See Section 4.2.1 for more details on Standards and Guidelines.

4.3.5 Access Management

The Prime Contractor is responsible for managing and coordinating access to the construction site.

The Project Manager and the FM&E site lead liaise with FM&E personnel in the tendering stage to set specific site standards and requirements prior to preparation of the final contract documents. The general access standards and requirements are described below.

Access Management for Renovation Sites

For construction sites adjacent to an existing facility, the INFRA Project Manager liaises with the FM&E site lead at the tendering stage to identify/determine standards and requirements for:

- utility interface;
- cost recovery (e.g. for FM&E personnel, utility usage);

- site access for construction and INFRA staff;
- environmental management (noise, vibrations, air quality);
- any other site-specific requirements, safety protocols; and
- building systems.

For renovation sites located within an existing facility the same process is followed; however, standards and requirements are more extensive and include:

- involvement of AHS' FM&E personnel throughout the project;
- location of contractor space within the facility;
- contractor responsibilities throughout the project;
- contractor identification process;
- workplace health and safety protocols;
- occupational Health and Safety (OH&S) policies and procedures;
- security protocols and criminal records checks;
- fire and emergency procedures;
- IPC protocols; and
- any other site specific requirements.

Access Management for New Construction Sites

AHS personnel may require access to new construction sites for the following reasons:

- consultation during project planning, administration, construction and building commissioning;
- walk-through prior to Handover;
- storage, testing and/or installation of equipment or furniture prior to Handover (see section 4.1.10);
- security of AHS equipment on site; and
- early commissioning activities, where practical.

In these instances, AHS makes a request to the Project Manager who coordinates access through the Prime Contractor.

4.3.6 Insurance and/or Risk Management

Health capital projects delivered by INFRA require insurance that is appropriate for the project delivery methodology and addresses whether the facility is new construction or a renovation project within existing AHS infrastructure.

The primary insurance policies required for capital projects are Course of Construction and Wrap-up Liability. (See Appendix 1.1- Glossary for definitions).

Risk Management Insurance Branch Responsibilities

The Risk Management Insurance (RMI) branch of TBF collaborates with ministries and agencies throughout government to assist with identifying, measuring, controlling and funding the risk of accidental loss. The program is responsible for all government ministries and agencies subject to the *Financial Administration Act*.

For Construction Management (CM) projects, RMI will arrange the purchase of project insurance on behalf of INFRA.

For other delivery methods, and particularly for the Design-Bid-Build method, the Prime Contractor will be responsible to obtain project insurance during the construction phase prior to handover to AHS and is required to submit evidence of insurance for review by INFRA and RMI to ensure compliance with contract requirements.

Project Services Branch Responsibilities

INFRA's Project Services Branch procurement staff and the Project Manager are responsible for:

- working with the RMI Branch of TBF to develop insurance and risk management wording, including the wording within RFPs, contracts, and the insurance policy documents; and
- liaising with AHS' staff on matters of mutual concern.

Project Manager Responsibilities

Project Manager specific responsibilities include the following:

- prior to the issuance of an RFP for a CM, Design-Bid-Build or a Design-Build project, Project Managers need to liaise with both the INFRA Project Services procurement staff and with RMI concerning insurance requirements. This should be done sufficiently in advance of a tender to ensure insurance is arranged prior to start of construction; and
- prior to issuance of an RFP for a Prime Consultant, Project Managers also need to consult with Project Services Branch procurement staff and RMI to ensure adequate Errors and Omissions (E&O) insurance involving the Prime Consultant is coordinated in a timely manner for projects delivered through a Construction Management or a Design-Bid-Build contract. For Design-Build contracts, the E&O insurance responsibility rests with the Design-Build contractor.

AHS Responsibilities

AHS is responsible for the following:

- risk management and insurance for F&E/IT delivered to a facility under construction;
- property insurance for the facility and F&E/IT at Substantial Performance (or turnover); and
- the AHS FM&E representative to the project informs the AHS risk management and insurance staff of the date when AHS will need to add the facility to their property insurance policy (normally at Substantial Performance).

4.3.7 Occupational Health and Safety

Site safety is an important issue during the Construction Phase of the project, and the assignment of roles and responsibilities for safety is crucial to ensuring a safe working environment for all staff, contractors and consultants.

Under the *Occupational Health and Safety Act of Alberta* (*I OH&S Act*), the owner of a building or site has responsibility for monitoring site safety on that site. The entity responsible for site safety on the site is referred to as the Prime Contractor under *the OH&S Act*, and an owner may assign the Prime Contractor responsibility to another party under the terms of a contractual arrangement, in which case the assigned Prime Contractor assumes the owner's responsibility for all safety on the site. The owner may assume the role of Prime Contractor but will usually designate, through the construction contract, the Contractor (or Construction Manager) as the Prime Contractor for all or part of the site or building.

An important distinction needs to be made between a project involving a new building or site and one that is in an existing facility. In the case of a new facility, INFRA will typically own the property, and title will transfer to AHS at the completion (Handover) of the project. In this instance, INFRA normally assigns Prime Contractor responsibility to the Contractor during the course of construction.

Where the property is already owned by AHS, no title transfer is required; however, formal acknowledgement in the form of a Handover letter (see Appendix 12.6) is required.

In the case of a renovation project, construction work will take place in a facility or site that is typically in operation, and therefore, owned by AHS. AHS staff and patients may be present within the facility during construction activities. This situation requires a more careful delineation of responsibility for safety. AHS will retain overall Prime Contractor responsibility for the site and building even though this responsibility is typically assigned to the Contractor

through the construction contract (for any areas within the building or site for which the Contractor has control).

The Contractor will be subject to AHS' safety policies when working in areas that are jointly occupied by the Contractor and AHS staff, and/or other personnel. The Contractor will be required to establish a safety plan that meets or exceeds AHS policies and OH&S regulations for the areas in which they have assumed Prime Contractor responsibility.

Roles and Responsibilities - New Construction Sites

The Project Manager's responsibility for OH&S includes the following:

- assigning Prime Contractor responsibility under the construction contract;
- checking that the Contractor possesses a current Certificate of Recognition from the Alberta Construction Safety Association;
- reviewing the Contractor's safety plan;
- conducting construction start-up meeting with the Contractor to discuss roles and responsibilities, and review safety plans and procedures; and
- monitoring the Contractor's administration of the safety plan and receiving updates on the Contractor's safety meetings, issues and actions.

AHS participates in discussions relating to OH&S during the Construction Phase prior to the building being turned over to AHS.

Roles and Responsibilities – Renovation Projects

The roles and responsibilities concerning renovation projects for the INFRA Project Manager and AHS are outlined below:

- Project Manager – INFRA, in addition to the responsibilities detailed above, the Project Manager's responsibilities include the following:
  - ensuring clear delineation of areas for which the Contractor and AHS have Prime Contractor responsibility, as well as responsibilities of each party;
  - facilitating discussion of building safety, access, safe work permit system, etc., between the Contractor, AHS and INFRA at the construction start-up meeting; and
  - facilitating project safety meetings in conjunction with regular construction meetings or as required.
- AHS – FM&E and Workplace Health and Safety Advisor:
  - liaising with Project Manager and Contractor on safety issues affecting work in occupied spaces, and/or where there may be overlapping responsibilities;

- coordinating access to spaces that are outside the Contractor's control, issue work permits, etc.;
- participating in project safety meetings as required; and
- conducting safety walk-throughs of contractor area to ensure contractor is adhering to Safety Procedures.

4.3.8 Project Reporting

Through the project lifecycle there are a number of reports that are required. These include quarterly reports and end of cycle reports. Refer to Appendix 11 – Project Reporting Matrix.

The matrix is currently under review.

4.4 Commissioning, Handover and Warranty

4.4.1 Building Commissioning and Manuals

The Building Commissioning formalizes the review and integration of all project expectations during the planning and design, construction, testing/verification and turnover/occupancy phases through inspection and functional performance testing, as well as the oversight of operator training and record documentation.

Building Commissioning is an all-inclusive, quality-oriented process for achieving, verifying, validating and documenting (for both new and upgrade/retrofit construction) that the performance of facilities, systems, and assemblies meets defined objectives and criteria in order to achieve the design requirements. For new construction, it includes all the subsystems such as heating, ventilating and air conditioning (HVAC), plumbing, electrical, fire/life safety, building envelopes, interior systems (e.g., laboratory units), cogeneration, utility plants, sustainable systems, lighting, wastewater, controls, and building security. INFRA may undertake different levels of Building Commissioning detail depending on the size, uniqueness and complexity of the project.

Building Commissioning can also enable higher energy efficiency, environmental health and occupant safety, and improve indoor air quality by ensuring that the building components are working correctly and that the plans are implemented with the greatest efficiency.

INFRA generally retains an independent commissioning authority (CA) to organize, direct and review the commissioning activities for the project. INFRA implements Building Commissioning plans during the planning, design, construction, testing/verification, acceptance and warranty phases of a capital project.

AHS (FM&E) participates in the planning, design, construction, testing/verification, acceptance and warranty processes to acquire information that is necessary to facilitate facility turnover, as well as the ongoing operation and maintenance of building systems. The information acquired relating to the building and new systems is essential for the initial safe operation of the site and the ongoing efficient operation of the building throughout its life cycle. In addition, feedback that FM&E provides through the life cycle of the project supports the development of facilities that take into account maintenance and operations considerations, and minimize the likelihood of costly changes later.

The Contractor is contractually responsible for developing operation and maintenance (O&M) manuals as part of the construction close-out process. The commissioning agent/team and the design team in turn review the manuals for clarity, adequacy of information and accuracy. The manuals provide a guide to the ongoing operation and maintenance of the building systems and are the basis of ongoing training for FM&E operational staff.

Roles and Responsibilities

The Project Manager is responsible for managing the Building Commissioning, including:

- engaging an independent CA as early as possible in the design process, often at the end of schematic design;
- establishing a commissioning team, consisting of the CA, Prime Consultant, sub-consultants, INFRA resources, Contractors and FM&E staff;
- overseeing the development of a commissioning plan, in collaboration with the commissioning team, design team, and FM&E personnel, following the completion of a schematic design report;
- with the assistance of the CA, ensuring the commissioning plan meets relevant standards, including LEED® basic commissioning and enhanced commissioning requirements;
- ensuring the development of manuals and the provision of training on building systems for FM&E operational staff prior to Facility Handover;

- ensuring the project documentation meets the commissioning and O&M manual requirements of INFRA (refer to Alberta Infrastructure's Technical Resource Centre) for additional information on commissioning and O&M manual policy and processes); and
- establishing an agreement for the funding of the FM&E commissioning resources.

FM&E is responsible for the following during the Building Commissioning:

- working closely with the independent CA as a member of the commissioning team;
- providing technical input to the Project Manager and consultants throughout the complete project cycle from design through warranty period;
- assisting in the development of a commissioning plan and test scripts that detail the extent of verification and testing of each building system and associated components;
- reviewing drawings and specifications during the design stage and providing comments to the Project Manager within a set period of time;
- working closely with the Clinical Liaison to keep each other informed and share a common understanding of the project;
- participating in regular site and milestone reviews coordinated with the Project Manager and the Contractor, and providing a list of deficiencies;
- participating in inspections during construction, where appropriate;
- assisting in the development of a validation plan to confirm energy efficiency modeling, system key performance measures (KPIs) targets, etc. as per the project/system original design and engineering requirements;
- assisting in LEED® measurement and verification planning, and managing and monitoring measurement and verification requirements throughout the year post occupancy;
- assisting and witnessing verification and testing of building systems and equipment;
- providing input and reviewing O&M Manuals;
- creating preventative maintenance schedules, preventative maintenance tasks and assist in identifying a critical spare parts inventory;
- attending FM&E O&M Training, including the coordination and scheduling of personnel for participation;
- supporting the development of training documentation for both operations and maintenance staff;
- reviewing record drawings from the contractor and consultants;

- ensuring new building systems and equipment are documented in AHS' Integrated Infrastructure Management System (e-Facilities); and
- working with the Project Manager and the CA to ensure all building systems have been successfully commissioned prior to handover of the project from the contractor.

AHS (CPSM F&E and IT) is responsible for the following during Building Commissioning:

- coordinating commissioning of major equipment and IT systems that link into building systems;
- coordinating commissioning of equipment (Vendor and Diagnostic Imaging (DI)) (See Section 7.10); and

In addition, AHS is responsible for acquiring final sign-off of installation and commissioning by regulatory agencies, such as: Authorized Radiation Protection Agencies (ARPA) and Canadian Nuclear Safety Commission (CNSC).

4.4.2 Facility Handover

Facility Handover means the legal transfer of a facility in terms of the title, authority, insurance and liabilities and as agreed to by both parties. The Project Manager and Clinical Liaison are jointly responsible for managing Facility Handover, in consultation with FM&E personnel.

Steps for Facility Handover

- At the design documentation stage, the Project Manager collaborates with FM&E personnel to clearly define the criteria/conditions to be met for Facility Handover. This information is included in the contract documents as appropriate;
- The criteria/conditions must specify the delineation of Prime Contractor responsibilities if the contractor and owner concurrently have Prime Contractor responsibilities over separate areas, and the extent of those responsibilities;
- The criteria/conditions will also specify details of holdbacks that may be applicable at Handover, and plans of dealing with any liens that may be in place;
- Approximately three months prior to the anticipated date of Facility Handover, the Project Manager will draft a Handover letter, outlining all the terms of the Handover. It will be submitted to AHS for review and comments, so that the terms of the Handover will be confirmed and agreed to prior to the effective date; and
- The Project Manager, in consultation with FM&E personnel, reviews the progress for adherence to the criteria/conditions at specific milestones, including Substantial Performance and Total Performance.

The Handover process could vary by project depending on the client needs, the project complexity and the need for a phased handover of the facility. See Handover letter template Appendix 12.6 INFRA provides a copy of the handover letter to HEALTH.

4.4.3 Operational Commissioning and Move-in Planning

Operational Commissioning is led by AHS (with INFRA participating), and details the clinical and non-clinical operational and move-in requirements. Planning begins in the Functional Programming stage, when operational elements are identified, including operational costing estimates. As the capital project proceeds, the Operational Commissioning Plan is further detailed and refined by AHS. Operational Commissioning may overlap with Building Commissioning as equipment is installed, and may even commence prior to Substantial Performance. It involves activities such as orientation of staff, training in units/work areas prior to move-in, dry runs, and testing of procedures/equipment.

Move-in planning refers to the specific details and schedule for moving staff and patients into a facility (possibly phased over a set period of time) in order to be fully operational.

AHS and INFRA are responsible for the following during Operational Commissioning and the planning and execution of the move-in:

Operational Commissioning – AHS' Roles and Responsibilities

- Coordinating involvement of appropriate clinical and support groups, including sharing relevant supporting information;
- Planning for move-in and start-up by user group(s) to be consistent with an approved operational budget and organizational objectives set out in the Functional Program; and
- Developing operational commissioning plans to guide clinical and support groups as the new facility goes into clinical operation.

Operational Commissioning – INFRA' Roles and Responsibilities

- Ensuring facility and all building systems (e.g. Heating, Ventilation, Air Conditioning (HVAC), controls, security) are commissioned;
- Facilitating the Building Commissioning, including integration tests;
- Facilitating the turnover of project record drawings and O&M manuals;
- Facilitating the prerequisites to obtain occupancy permit(s);
- Facilitating Substantial Performance and Handover;
- Communicating the schedule for completion of Building Commissioning and Handover (phased or one step depending on complexity of project);

- Addressing deficiencies as noted;
- Providing timely communications on changes to completion schedules; and
- Coordinating early site access as required for clinical commissioning.

Move-In Planning– AHS' Role and Responsibilities

- Coordinating the delivery and installation of equipment;
- Commissioning of equipment and IT;
- Ensuring the opening of services is coordinated linking commissioning to other planning and operational initiatives occurring within AHS;
- Establishing move-in sequencing of staff and/or patients for a phased opening of a new facility together with sequenced shut-down of the facility being vacated so that each component is operational and ready for integration with the subsequent component to be moved; and
- Ensuring safety and clinical compliance for program moves with active patients.

While INFRA does not have a direct role in the move-in planning or execution, both AHS and INFRA will be jointly responsible for resolving unexpected findings or warranty issues following move-in.

4.4.4 Warranty Resolution

The warranty period starts at Substantial Performance unless stated otherwise in the warranty certificates. INFRA's Project Managers are responsible for managing the warranty resolution process. Warranty issues are identified and resolved either through an ongoing resolution process, or through a formal warranty evaluation process. These processes are described below.

Ongoing Warranty Resolution Process

This process may be streamlined under various circumstances with the agreement of both parties, particularly for items that are more routine in nature or otherwise straight forward. Also, in cases that are urgent, the parties may also agree, with prior authorization of the Project Manager, to have FM&E contact the contractor directly.

Warranty issues are identified and resolved as they arise during the warranty period. The FM&E Facility Manager identifies potential warranty issues and brings them to the attention of the Project Manager. The Project Manager evaluates each issue with the FM&E Facility Manager and the consultants to determine if it requires rectification by the Contractor. If it is

a warranty issue, the Project Manager contacts the Contractor to discuss and arrange rectification.

The Project Manager, with the support of FM&E, meets with the Contractor to:

- describe the warranty issue;
- outline the expected outcomes of reconciliation;
- develop a timeline for reconciliation consistent with AHS' operational requirements; and
- inspect or review the reconciliation (i.e., was the work satisfactory or issue resolved?).

Formal Warranty Evaluation Process

Before the warranty period expires, the Project Manager initiates a formal warranty evaluation process as follows (see Appendix 12.1 Contract Acceptance Procedures Flowchart for additional information):

- the Project Manager calls a meeting with the FM&E Facility Manager, Contractor and consultants (the Review Team) to bring forward and discuss any outstanding warranty issues;
- the Review Team conducts a site review to identify and verify warranty issues;
- The Prime Consultant compiles a final list of all warranty items requiring resolution, with input from FM&E, INFRA and the Prime Contractor, and forwards the list to the Project Manager for review;
- the Project Manager reviews the list of items with the team to set priorities considering criticality, timelines, client needs, and operational impacts; the Prime Contractor then drafts a work schedule based on the prioritized list of warranty items, for agreement with the Team;
- the Prime Contractor works with FM&E to obtain access, coordinate operational planning, and determine health, safety and IPC procedures to be employed during the rectification work;
- the Prime Contractor notifies INFRA when the work is complete;
- the Project Manager coordinates a review of the completed work; and
- the Project Manager issues a Letter of Total Performance to the Prime Contractor on confirmation by the Prime Consultant that all warranty items have been resolved, providing that all other project deficiencies and prerequisites to Total Performance have been achieved.

4.4.5 Reimbursement of Alberta Health Services Facilities Maintenance and Engineering Expenses

The processes and procedures surrounding the reimbursement of FM&E expenses are under review. In the interim the structure outlined below will be followed.

FM&E costs that AHS incurs as a direct result of construction may be reimbursed by INFRA provided the work and the associated costs have been pre-approved by the Project Manager. Reimbursement of expenses may be approved where work has occurred outside of normal working hours or if there was proof that AHS back filled the position with a casual employee or contractor. Work associated with routine operations that do not create an incremental cost to AHS are not eligible for reimbursement.

To facilitate reimbursement, AHS will submit a summary of all labour costs (detailing name, location, work performed, hours worked and wage costs) and any material costs through an invoice to the project manager quarterly as a minimum. However, the Project Manager may request reporting from AHS on a monthly basis. The Project Manager reviews the AHS summary and authorizes reimbursement as appropriate.

The following work may be considered for reimbursement when approved by the Project Manager (for only those activities that would not otherwise be performed by the Contractor):

- labour for shut downs/system tie-ins;
- labour/material for construction assistance to contractor (e.g. emergency response and remediation due to floods and other unforeseen issues); and
- labour/material for temporary installations/decanting due to construction.

Examples of temporary installations and assistance that may occur as a direct result of construction include:

- locksmith – supplying keys and cylinders, rekeying construction areas, and planning of the keying strategy;
- electronics – assistance with automatic door operation;
- structural – hanging and modifying doors, construction of temporary stands, installation of safety mirrors or shelving, T-bar ceiling removal, the installation or dismantling of scaffolds, creating signage holders, painting and wall repairs;
- electrical – breaker installations, electrical circuit testing, receptacle relocations, power trend monitoring on transformers, creating tube system configuration diagrams and operation requirements, and switching order reviews;

- HVAC – building automation and alarm point setup / review, and programming changes to damper operation; and
- signage – creation of new signs, replacement of existing signs and creating labels.

AHS participates in commissioning activities prior to the handover of the facility as described in section 4.4.1. A request for the reimbursement of expenses associated with the assignment of staff to the activities outlined in section 4.4.1 requires the prior-approval of the Project Manager. Work that does not create an incremental cost to AHS is not eligible for reimbursement.

AHS may request funding of staff on a yearly basis prior to the handover of a facility for the purpose of assisting INFRA with design reviews and commissioning activities. Such requests would normally apply to large or complex projects and may involve the partial or full-time assignment of FM&E personnel. To request funding support from the project, AHS prepares a submission to the Project Manager substantiating their request including a summary of the proposed personnel assignment(s), their duties or responsibilities, duration of assignment and costs (standard industry wages should be utilized unless otherwise approved by INFRA).

The Approval Process Form is in development

4.5 Evaluation and Project Closeout

4.5.1 Project Performance Measures

Additional work is currently underway by Infrastructure. Update to follow in the future.

4.5.2 Best Practices and Lessons Learned Review Process

The term “best practice” refers to documented procedures and processes that have been shown to produce successful results. By identifying programs, activities and strategies that work well, all parties build on strengths for future project development activities.

There are two components to a Best Practices review. They are:

- review of industry best practices by examining published academic papers and other literature documenting successful programs, activities and strategies in health capital project management; and
- lessons learned review at the end of specific stages of a health capital project to identify successes and opportunities for improvement.

The Project Implementation Management System (PIMS) used by INFRA includes a listing of suggested procedures to incorporate best practices and lessons learned into the design and consultant selection phases of capital projects. A best practices review is important for health facility construction management and delivery because it assists managers and staff in continuously improving how they conduct their programs.

INFRA will lead the ongoing process to identify industry best practices, document lessons learned in consultation with HEALTH and AHS.

4.5.3 Post-Occupancy Evaluation

The tri-parties are developing a Post-Occupancy Evaluation (POE) methodology for evaluating new facilities once construction has been completed and the facilities are operating. Once piloted, the process will be reviewed by the Joint Operations Committee for approval and implementation.

A POE is a high level review of a completed project. It determines the success of the project based on whether the clinical and/or technical project objectives set in the approved guiding documents were achieved through the design and construction of the facility.

4.5.4 Building Performance Evaluation (BPE)

A BPE methodology has been developed and will be followed on select projects when a specific design topic requires further study. It is a focused study on one or two design elements.

A BPE will determine the impact of a specific design strategy on a set of outcomes (both anticipated and/or unanticipated) for a HCF project using a hypothesis. A BPE can make inferences about the causal relationship between the design strategies employed and their measured outcomes.

4.5.5 Project Closeout

Closeout

Project closeout occurs at the end of the project life cycle. It is the result of a culmination of activities that begin prior to the handover of a facility, ending with the cessation of all capital financial activity in support of the project.

The closeout process includes closing final contracts, closing the project management office, archiving records and producing the Project Completion Report. The Project Manager is

expected to attain project closeout within three months following the completion of the warranty period (normally one year following the achievement of substantial performance).

While closeout should normally occur three months after the warranty period, unique project requirements that necessitate a phased commissioning process will influence the point where closeout may be possible. As well, significant scope changes that occur late in construction and near handover may delay commissioning and thus impact the date of closeout. For complex projects, F&E and IT procurement may continue for greater than one year following the turnover of a facility. The procurement timeline should be taken into account when determining a target close-out date. In no circumstance will a project plan to complete a close out greater than two years following turnover without prior approval of the Joint Steering Committee.

Standard Close

The Project Steering Committee will review projects that have completed Operational Commissioning to ascertain whether closeout can be achieved within three months after the end of the warranty period. For projects that will close within this period the following process applies:

- complete the Overall Project Status Checklist (PIMS);
- conduct and document lessons learned sessions;
- complete the Project Completion Report;
- close the project office;
- release unneeded funds for reallocation; and
- change the project status to complete.

Note: Projects that are terminated without achieving Substantial Performance (or Interim Acceptance), or the completion of the warranty period, must still follow the closeout process delineated herein.

Project Completion Report

The Project Completion Report formally documents the project outcomes/performance against the approved project goals and objectives. To support continuous improvement and renewal/change, the report contains an important section on "lessons learned". The Project Manager is responsible for the preparation of the Project Completion Report.

The Project Completion Report shall provide an evaluation of the project in terms of:

- attainment of overall project objectives and the resources required;

- achievement of target dates and costs throughout the project;
- responsiveness to user needs;
- quality of workmanship;
- adherence to policies, standards, guidelines and specifications;
- deficiencies and problems; and
- recommendations which might affect future projects ("lessons learned").

For projects that terminate early, an 'Outstanding Issues' section shall be added to the Project Completion Report that includes the following:

- a description of the outstanding work that was not completed and how this work will be addressed (the work plan);
- a breakdown of the resources allocated for the completion of the outstanding work; and
- a synopsis on how the remaining funds were allocated to complete the outstanding issues.

Note: Projects that terminate prior to Substantial Performance or the completion of the warranty period must clearly state what happened to cause the termination and where that leaves the "need" that was not met.

The Project Director (INFRA) is responsible for reviewing the Project Completion Report. Prior to the final review and acceptance by INFRA a draft copy will be circulated for review and comment to the AHS and HEALTH representatives on the Project Steering Committee.

Recommendations for process change may be reviewed as lessons learned, or if significant and necessitate immediate consideration, shall be brought to the attention of the Joint Operations Committee by the Project Director.

Projects that complete or terminate with unresolved issues will complete the Project Completion Report and the accompanying work plan for subsequent review and approval by the Joint Steering Committee.

The Project Completion Report is to be placed on the official project file at INFRA. The lessons learned from individual projects are to be entered into the Consolidated Lessons Learned Library for review and adaptation as appropriate.

Project Completion Report Template

Project staff will use the Project Completion Report template (Appendix 4.4).

Furniture, Equipment and Information Technology

AHS provides a final report on the F&E/IT procurements as outlined in Chapter 7. These reports are reviewed by INFRA and appended to the closeout report that is prepared by the Project Manager.