



WRHN

Waterloo Regional
Health Network

Functional Programming Guidebook **V.5**



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v.5	April 19, 2025 - Update Branding to Waterloo Regional Health Network (WRHN)



INTRODUCTION

Welcome

Welcome to the Waterloo Regional Health Network (WRHN) Redevelopment Team's Functional Programming Guidebook.

Functional Programming is an important and exciting milestone in the journey to build a new acute care hospital. Over the next year, program and service teams and the Redevelopment Team will work closely with our contracted experts including health facility planners, architects, engineers and designers to define and document how we want to deliver excellent, innovative care and service to our rapidly growing population, and the spaces that will be needed to accomplish those goals.

Functional Programming is not just a required activity in the process of building a new hospital in the province of Ontario, it is the foundation on which the rest of the design, planning and readiness work for the new hospital will be built. We are excited to guide program and service teams through this important, intensive and hopefully rewarding stage of planning.

Purpose of The Guidebook

This document is intended to be used as a reference and resource through Stage 1.3 Functional Programming. The Guidebook documents important context for the current state of the redevelopment project, including project phasing and scope, planning and design principles and standards, and what can be expected over this next stage of development.

Over the next year, as the Functional Programs and early building designs evolve, the Guidebook will evolve too. The development of the standards and principles and phasing plan has so far been iterative, and we will continue to make changes and updates to the Guidebook as new bodies of work inform standards and principles, and as teams identify important planning considerations that need to be reflected across programs.

The Guidebook is posted on the [WRHN Redevelopment website](#). If you prefer to print this Guidebook, please **doublecheck the website** to ensure you are always using the most up to date version.

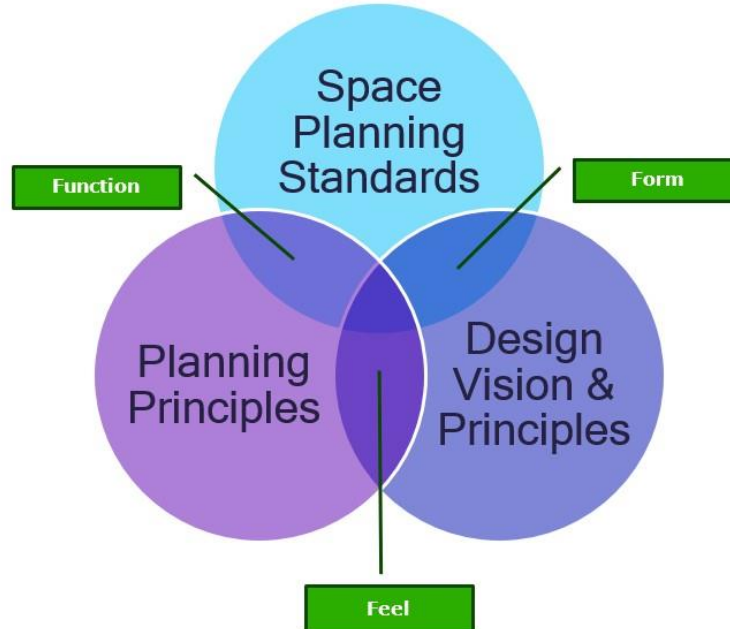
PLANNING WITH INTENTION

Healthcare is ever changing and our current organization context - merging organizations, daily space constraints, increasing patient volumes, population growth, and even project phasing brings significant added complexity. How can we plan to ensure that whatever the next 100 years might bring - new innovations, new pandemics, new models of care, etc. - that we are able to grow and change and adapt in a way that is efficient, cost effective and with the least possible disruption to care and service delivery? “Planning with Intention” is a strategy to ensure that we are making planning and design decisions that, to the best of our ability, are future proof.

Planning with Intention is found in the **3 F’s – Function, Form & Feel**:

- **Function** - how do we need to deliver care and service?
- **Form** - what space do we need to have designed and configured to accomplish that care & service delivery? Form always follows function.
- **Feel** - how do we want patients, families, providers, team members and the public to feel when they are there? Not just how the building looks, but how does it promote healing, wellbeing and provide an overall sense that I am safe and welcome?

To ensure we are planning with intention, a trio of guiding principles and standards - Planning Principles, Design Vision & Principles, and Space Planning Standards - will be used throughout functional programming and beyond to ensure planning and design is able to look beyond today.



PLANNING PRINCIPLES

In late 2023, the Clinical and Enabling Services teams at WRHN's predecessor hospitals (Grand River and St. Mary's General Hospitals (GRH and SMGH) came together to envision the future of care and service delivery across the two organizations. From those engagements, it was identified that a unified service delivery approach was the most effective path forward for our patients, teams and community, and this created the foundation for the future merged organization.

Advancing from the program and service visioning work, several themes developed that set out an aspirational future for harmonized clinical and enabling services delivered over the next 10 to 30 years. These themes reflect the importance of community, new technology and well-integrated infrastructure and will inspire future-oriented models that challenge the status quo.

As we enter the Functional Programming stage, these themes have been translated into eight Planning Principles, a set of guiding criteria that program and service teams will use to inform Functional Programming in terms of how care and services are planned, operationalized and delivered in the future - truly the "function" part of functional programming. These Planning Principles will be looked to alongside the Design Vision & Principles and the Space Planning Standards to provide the program, consulting and redevelopment teams with a foundation on which to create the new hospital.



	Person, Patient & Family-centered Care	Planning must place the person at the centre , providing care that is tailored to the individual and their need, their family and their support system or community. Planning should support patients to access to care at the point of need , promoting seamless navigation and wellbeing.
	Flexibility	Planning should strive to be future proof and must consider the changing and evolving needs of people in the community and rapidly changing models of care, delivery approaches, and technology. This includes flexible space, hybrid rooms, and multi-purpose areas and an increase in virtual or alternative service delivery models .
	Innovation	Planning should be driven by a culture of innovation that encourages teams to think differently, going beyond technology and leveraging the unique assets of the Waterloo Region to push boundaries in care and service delivery, education and research .
	Collaboration	Planning should consider and leverage where possible traditional (e.g. across programs, health organizations, Ontario Health Teams (OHT), governments) and non-traditional (local businesses, technology organizations and innovators, universities) partnerships , with those who can support, enable and improve service delivery.
	Quality, Safety & Inclusivity	Planning should consider how to deliver the highest quality of care, that is appropriate, safe for all, and achieves positive outcomes for patients and providers . Planning must also prioritize culturally appropriate and inclusive care delivery and practices, taking into consideration the diverse group of care providers delivering services as well as the diverse patients, families and community members (e.g. Indigenous persons, persons from minority groups, marginalized communities, persons with disabilities, etc.) of our region.
	Integration	Planning should ensure that processes, systems, information and services are coordinated to support a seamless patient and provider pathway , eliminate redundancies and support unified practices.
	Efficiency	Planning should aim to achieve an optimal level of performance in both care and enabling service delivery, leveraging improved processes and/or technologies that promote standardization, eliminate redundancies and waste (e.g. robotic automation, artificial intelligence, etc.) and deliver value for money .
	Service Delivery	Planning should explore alternative delivery models that represent new ways of working , prioritizing where it is important to invest in services and deliver them within the organization, versus where it is important to partner externally, to ensure sustainability and patient access at the point of need .

DESIGN VISION AND PRINCIPLES

While the Planning Principles look to provide direction for how care and services should function at the new acute hospital, the Design Vision, Principles and Guidelines provide the basis for how the new hospital should feel and look, ensuring the design of the physical space and the elements within not only meet the objectives of the planning principles above, but also create the best possible environment and experience for patients, teams, and our community. Design principles and guidelines, when coupled with space standards and planning guidelines, also give the organization guidance when prioritizing decisions to ensure the project can remain within cost limitations.

The Redevelopment Team partnered with DIALOG, a design practice comprising architects, urban planners and engineers to develop the Building Project Design Vision and Principles using an engagement-focused approach. DIALOG uses the [Community Wellbeing Framework](#) to inform and educate audiences and facilitate discussion to create the vision.

The Redevelopment Team along with DIALOG implemented an extensive community engagement strategy to inform the creation of the [Design Vision, Principles and Guidelines](#).

Design Vision:

Creating an environment that is welcoming and inclusive where everyone can access the best health care and innovation is a way of being. It will be a place where patients receive care, their loved ones/visitors find comfort, and care and service teams excel. Rooted in our history, designed for today's needs, and prepared for tomorrow's challenges, the hospital will promote community wellbeing and champion environmental sustainability.

Seven Design Themes:

- 1) A Hospital That Is Easy to Get To, Easy to Navigate, Welcoming, & Provides a Positive Arrival Experience
- 2) A Hospital That Is Bright, Airy, calming, and Filled with Vibrant Colours, Local Art, and a Sense of Safety
- 3) A Hospital That Embraces Cultural Inclusivity and Community Engagement
- 4) A Hospital That Supports Holistic Care for Patients & Families and Creates a Great Workplace for Staff
- 5) A Hospital That Is Connected to Nature and Promotes Environmental Sustainability
- 6) A Hospital That Fosters Social Connection, Recreation, and a Family-Friendly Environment
- 7) A Hospital That Supports Innovation, Partnerships and Community Involvement through Flexible Design



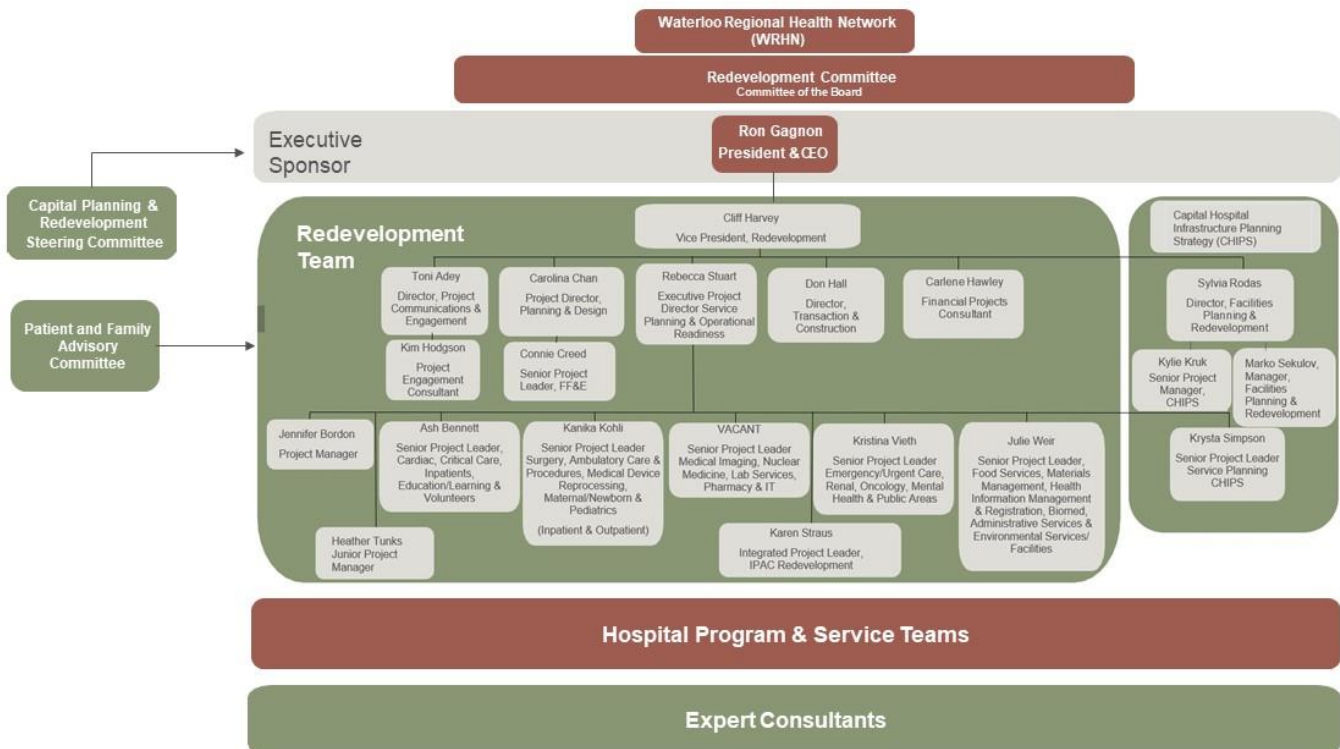
BUILDING PROJECT UPDATES

Project Governance

The Redevelopment Team is accountable to the President/CEO of Waterloo Regional Health Network (WRHN) via the BFCT Steering Committee and is ultimately responsible to the hospital’s Board of Directors, via the BFCT Committee. The building project is supported by a multidisciplinary Redevelopment Team responsible for project planning as per the Ontario Ministry of Health’s Hospital Capital Planning and Approval Policy Manual. The contact information for members of the Redevelopment Team can be found in Appendix C.

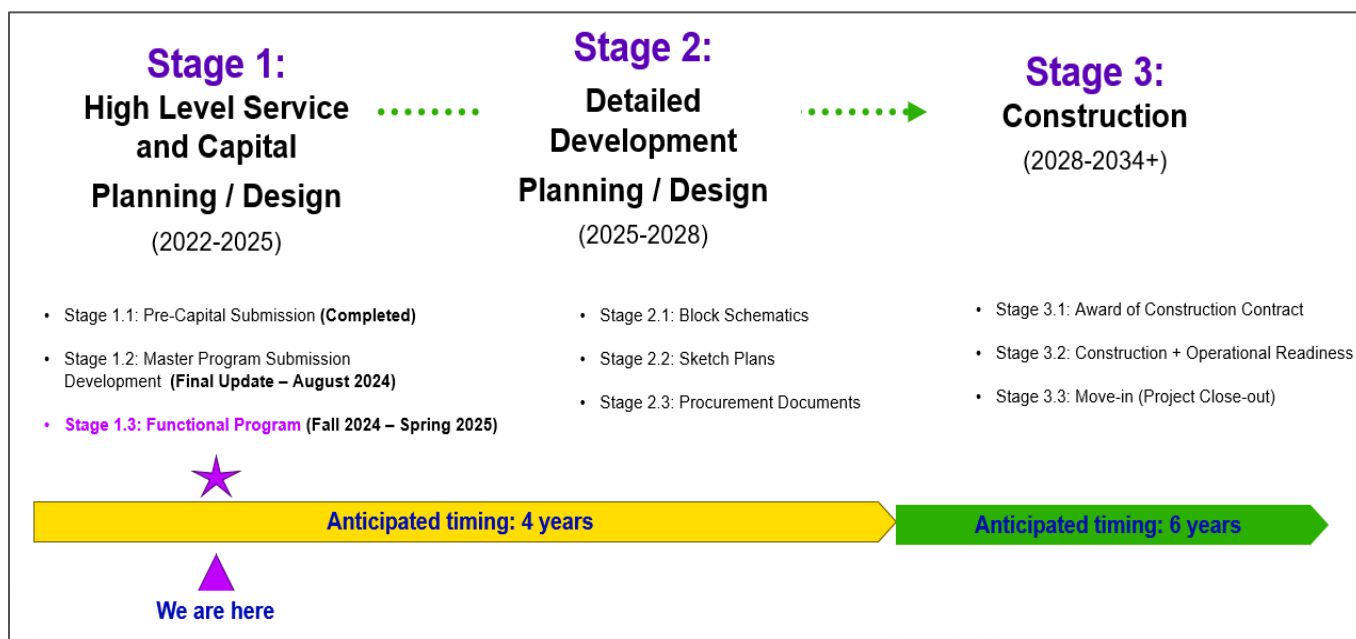
The work of the Redevelopment Team and board committee is supported by skilled consultants, whose expertise ranges from engineering and design to healthcare facility planning to the fairness advisor who supported site selection. A list of the currently engaged consulting team can be found in Appendix D.

Note that as the organizations continue the work of merger and integration, the project’s governance structure will similarly evolve.



Project Timeline

The building of a new acute hospital is governed by the Ministry of Health (MoH) Capital Planning Investment Branch (HCIB) and Infrastructure Ontario (IO). The process has three stages, each with well-defined milestones organizations must achieve to move on to the next phase. As of September 2024, **we are currently in Stage 1.3 Functional Program**.



The MoH Stage 1.3 Functional Program Submission is a major two-part proposal that includes:

Part A Elements

- Program Parameters
- Functional Program

Part B Elements

- Design and Spatial Requirements
- Planning and Design Objectives
- Phasing Plan
- Preliminary Furniture & Equipment List
- Project Budget
- Capital Variance Template
- Local Share Plan
- Project Schedule
- Preliminary Post-Construction Operating Plan

The Functional Program documents detail the planned operational size and scope of services of the facility along with the accompanying capital requirements. The Functional Program expands and refines the Facility Development Plan prepared at Stage 1.2 by describing the components of the proposed solution in greater detail. During this stage, the hospital continues to refine and validate its program costs and demonstrates the sustainability of its proposed future operations by providing

details of its current and projected activities, resources and space needs, and estimated future operating and capital funding requirements. The hospital also provides information about departmental and service relationships and locations, including associated workloads, staffing, equipment and space requirements, and architectural and environmental conditions.

The development of a Stage 1.3 Functional Program submission requires extensive planning expertise and contributions by both internal and external stakeholders. By the end of this stage, the hospital should provide sufficient detail in its submission so that an Architect/Integrated Project Team could design the space. The MoH uses the agreed to functional programming documents produced during this stage as the baseline to later compare any variances in space proposed during the design and pre-tender stages of the project.

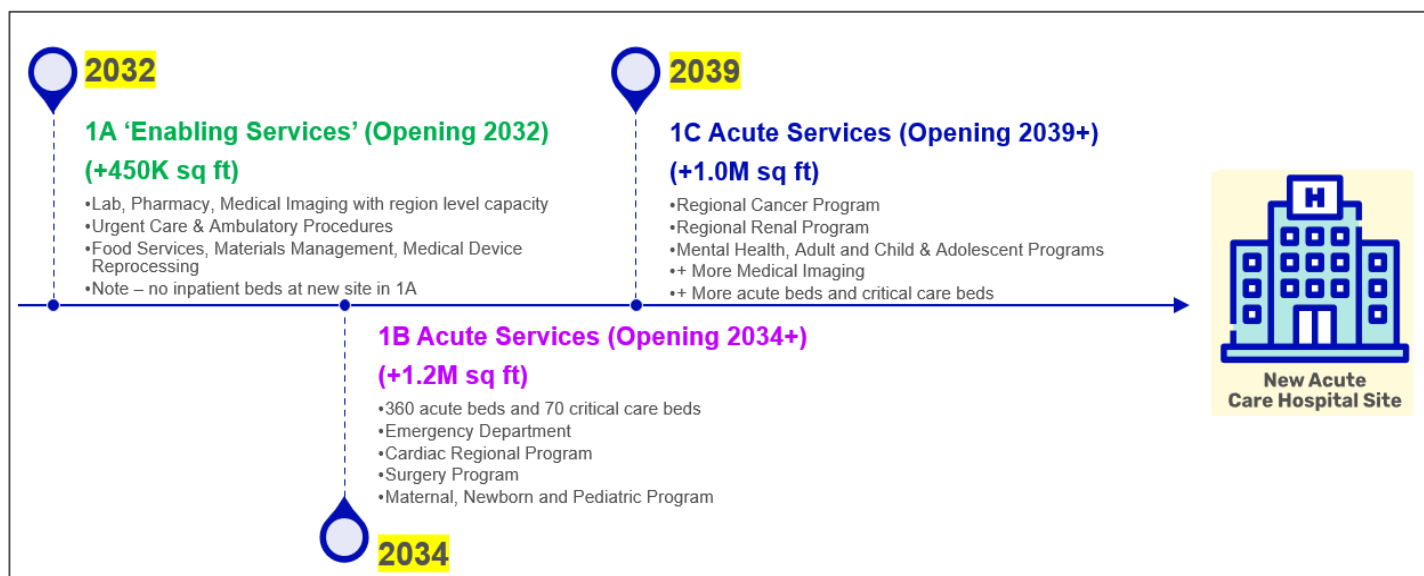
Evolving Project Scope

When the original Master Program (Stage 1.2) was submitted in May 2022, it reflected the original project scope (below), a new acute hospital site, a renovated and repurposed WRHN @ Midtown (GRH KW site), and a renewed and expanded WRHN @ Chicopee (Freeport site). On review, the MoH indicated that due to ongoing challenges in the construction sector, the new acute care hospital site was too large a project to be executed in its entirety at one time. As a result, they asked that the project be phased into smaller components to make the work more feasible.

 <p>New Hospital Site The University <i>Acute Care</i></p> <ul style="list-style-type: none"> • Regional cancer, cardiac and renal programs • Emergency, medicine, surgery, obstetric, pediatric and mental health programs • Full suite of medical imaging services • Beds growing to nearly 900* 	 <p>Renovated and Repurposed Midtown Site <i>UCC and Ambulatory Care</i></p> <ul style="list-style-type: none"> • Urgent Care Centre (UCC) • Outpatient surgery centre • Outpatient medical imaging • Full suite of diagnostic services • Space opportunities for expanded services and community partners 	 <p>Renewed and Expanded Chicopee Site <i>Rehab and Mental Health</i></p> <ul style="list-style-type: none"> • Complex continuing care, rehabilitation and specialized mental health beds • Outpatient rehabilitation, medical imaging, phlebotomy, geriatric services and specialized mental health • Medical imaging services • Beds growing to 350
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Project Phasing

The approximate timelines for the new acute hospital phases opening are as follows:



Phasing of the new acute hospital site means that WRHN @ Midtown will continue to operate as an acute care site until Phase 1C opens, at which time it will transition to an intense ambulatory care site. WRHN @ Chicopee remains planned for growth and redevelopment, but this will now be planned as a separate project. WRHN @ Queen's Blvd. is planned to close when 1B opens, at which time the building will be repurposed under the purview of the St. Joseph's Health System. A graphic detailing the comprehensive picture of the phasing approach, and how the projects and sites align can be found on the next page.

Capital Hospital Infrastructure Planning Strategy

While we work towards the phased opening of the new acute hospital, providing excellent care and service will continue to be a priority at our existing facilities. The Current Hospital Infrastructure Planning Strategy (CHIPS), formerly known as the Coping Strategy, will guide the way in which we manage the needs of today and tomorrow, while preparing for the future. As an integrated work stream with the new hospital planning, the strategy will identify opportunities to optimize the use of space by considering phasing and service delivery strategies, managing existing space and infrastructure constraints while preparing for future use of Midtown and Chicopee sites.

Project Scope and Phasing - Bed and Program Distribution 2030 & Beyond

Year	WRHN @ The University			WRHN @ Midtown	WRHN @ Queen's Blvd.	WRHN @ Chicopee
	Waterloo Region's New Hospital					
	Phase 1A	Phase 1B	Phase 1C			
2030				[H]	[H]	
2031				Capital Hospital Infrastructure Planning Strategy (CHIPS)	Capital Hospital Infrastructure Planning Strategy (CHIPS)	FP1A
2032	Programs: [H] • Urgent Care • Med-Surg Clinics • Hemodialysis Satellite • Medical Imaging • Lab • Pharmacy • Amb. Procedures (Endo/Bronch) • Food Services • Supply Chain • Learning Centre NOTE - there are no beds at new acute hospital in Phase 1A					
2033						
2034		[H]		Programs: [H] • Regional Hemo • Regional Cancer • Regional Chest • Regional Renal • Adult & Child MH • Med/Surg OP Clinics • Operating Rooms OP • Med/Surg Inpatients • Critical Care • Amb. Procedures (Endo/Bronch/Cysto) • Emergency Beds: • Critical Care (28) • Med/Surg (175) • Acute MH (117) • Chest (30) [A]	Hospital closes. All services move to WRHN @ The University and WRHN @ Midtown.	FP1B
2035	Programs: • MSICU & CVICU • Med/Surg Inpatients • Regional Cardiac • LBRP • Pediatrics • NICU • Operating Rooms • Emergency Beds: • Critical Care (60) • Acute Med/Surg (432) • OB (49) • Peds (19+) • NICU (33+)					
2036						
2037						
2038						
2039+			Cancer Centre, Mental Health & remaining inpatient beds at Midtown move to new hospital in 1C	Transition to Ambulatory Care Site Begins		FP2

Phasing & the Functional Program



The need to develop a phasing plan has impacted the approach to creating the MoH submissions. **The development of a Stage 1.3 Functional Program Submission for Phases 1A and 1B began in September 2024.** Phase 1C, Chicopee, and the CHIP strategy will all undergo a functional programming exercise separately in the future, to ensure the operational and design requirements for each are specifically addressed.

To ensure the project continues to progress and achieve all milestone goals, Stage 2 type work for phase 1A will commence immediately following functional programming and in some cases concurrently with user group meetings for 1C, Chicopee and Current Hospital Infrastructure Planning Strategy.

FUNCTIONAL PROGRAMMING

What is a Functional Program?

The functional program is a multi-page document created for every hospital program and service. The document **describes the programs and activities/services** that will be delivered in the new facility, and the resources and **space required to ultimately deliver those services**. The process of developing the document naturally creates opportunities to improve operations through incorporating best practices and standards and efficient processes in planning and design. The functional program is created by the program/service user group, supported by the Redevelopment Team, and facilitated by the expert healthcare facility planners.

Once all the individual program and service functional programs are complete, the architecture team joins the process to facilitate additional user group meetings to test the contents of the functional programs, both at the program/service level and for the whole hospital. The test involves creating designs at a high level and follows the important planning and design rule “**form follows function**”.

Why do a Functional Program?

The Functional Program is a **required step in the project receiving government approval**. More broadly, the Functional Program serves many critical purposes that are foundational to all future steps in the redevelopment process:

- Provides the architects and designers with a clear **guide for how the new facility needs to be designed and built**
- Provides programs and the redevelopment team a **roadmap for the operational planning and change management** required to ready teams to deliver care and service in the new facility space, such as equipment needs, policies and budgets
- Serves as a vital **communication tool** with internal and external partners, funders, and other interested and impacted parties throughout the redevelopment project, through to post-occupancy evaluation

How is a Functional Program created?

Program and service user groups will be guided through **three rounds of user group meetings** by a healthcare facility planning consultant, supported by a member of the Redevelopment Team. Over the course of the three sessions, a Functional Program will be drafted and refined by each team.

Between meetings, teams will be required to review drafts and will be **required to do “homework”** to provide additional supporting information (e.g., projected staffing, volumes, service approaches, business cases) to ensure the Functional Program is fulsome and as accurate as possible.

What Makes an Effective Functional Program User Group?

User Groups are responsible for developing the Functional Program documents, under the guidance of the healthcare facility planner and supported by the Redevelopment Team and developing the test fit of the program with the architects.

User groups are not intended to be exhaustive, but rather representative and focused, bringing together key members of the program and service areas, representatives from any area that has direct and significant impact on the function of the department, and subject matter experts (Furniture, Fixtures & Equipment (FF&E), Infection Prevention and Control (IPAC), Information, Communication and Technology (ICAT), etc.). Other team members will be engaged during the homework periods between each user group meeting to provide additional information, answer questions, identify shared approaches, etc. to ensure the Functional Program is as comprehensive and accurate as possible.

User group members can ensure the meeting of all programming objectives by:

- Arriving at all meetings on time
- Attending all scheduled meetings
- Remain on camera whenever possible and follow all the etiquette of virtual meetings (note, some members of the Redevelopment Team and its consultants may remain off camera to ensure focus remains on the program/service user group members)
- Ask questions to obtain clarification when required
- Bring a future-focused mindset
- Come prepared having reviewed meeting materials and completed required homework

Each user group and program team will be supported by the Redevelopment Team and will have a dedicated **Senior Project Leader (SPL)**. See Appendix B - Redevelopment Team Senior Project Leaders by program.

The **SPL will support the work of the user groups** by:

- Working with the healthcare facility planners, other consultant teams and program leaders to create the standards/assumptions/principles in the Guidebook
- Track deliverables and document during user groups
 - Decisions & rationale
 - Questions/outstanding items that might impact other programs/services
 - Items for follow up in “homework”
- Support/guide/facilitate program teams to complete homework, carrying out supportive tasks as appropriate
 - Data collection and research
 - Clarifying action items and follow ups with health care facility planners
 - Coordinating discussion/planning meetings/workshops, etc.
 - Tracking deliverables

The following table details the roles and responsibilities for key team members throughout the creation of the Functional Program:

Functional Program Tasks	Project Team/ SPL	User Group Members	Program Leaders	Health Facility Planners (Consultants)	Senior Leadership	Board of Directors
1. User Group Engagement						
Attend and Participate in User Group Meetings						
Document discussions, decisions and next steps						
Complete Required Homework						
2. Stage 1.3 - Functional Program Submission Development						
Review Draft Recommendations/FP						
Review Final Functional Program Draft						
Sign-Off on Functional Program Draft			Directors (Admin & Med)		VPs	
Approve Final Functional Program Document			Directors (Admin & Med)		VPs	Final Approval

Responsible	Does the work to complete the task
Accountable	Delegates work and is the last one to review the task or deliverable before it's deemed complete
Consulted	Provides input based on how it will impact their project
Informed	Need to be kept in the loop on the project progress, rather than roped into details of every deliverable

Decision-Making & Escalation

Whenever possible, decision-making during the user group meetings and during the homework period should be by **consensus**. Decisions that may require escalation to Capital Planning & Redevelopment Steering Committee are those that:

- Impacts more than one program or service and does not have consensus among the impacted leads
- Requires the creation of a single organizational standard
- Creates significant organizational impact e.g. on partnerships, strategic or operating plans, structure, etc.
- Diverge from standards and/or benchmarks
- Creates construction or operational cost implications
- Create risks to the successful and timely completion of Stage 1.3

Data Projections Methodology

Stage 1.3 Functional Program is a data-driven process, as program and service teams will use data projections in considering what care and service needs will be over the next few decades, and how those will translate into functional program requirements.

Projections were developed by HCM Group, Inc., in consultation with WRHN. The methodology incorporated population-based volume projections that were highly sensitive to age, gender and patient residence characteristics and hence reflected the hospital's program/service catchment area and local demographics. Then, known or anticipated changes to overall role (e.g. new services, clinical efficiencies, clinical integration) were incorporated to adjust the projections. This methodology has been used for many Ontario hospitals and has been reviewed with the MoH and Ontario Health (OH).

Projections were developed for fiscal years 2032/33, 2037/38 and 2042/43. This was achieved by applying population-based percent changes to the 2022/23 base year volumes. Note that 2018/19 volumes (pre-pandemic) were used as the revised 2022/23 base year volumes for select programs/services to reflect true patient need/demand.

Three main data sources were required for the population-based volume projections:

- Management Information System (MIS) Trial Balance files were obtained from the hospital. MIS statistics represent the planning units (e.g., inpatient days, separations, visits, attendance days and workload units) and have a consistent format across fiscal year, functional center and secondary account for the relevant statistics.
- Patient-specific data were also obtained from the hospital (e.g., Canadian Institute for Health Information (CIHI) records)
- Population estimates and projections were obtained from the Ontario Ministry of Finance (Summer 2023 Release)

Staffing projections at this time will inform space planning, but not be used to develop future operating budgets at this time.

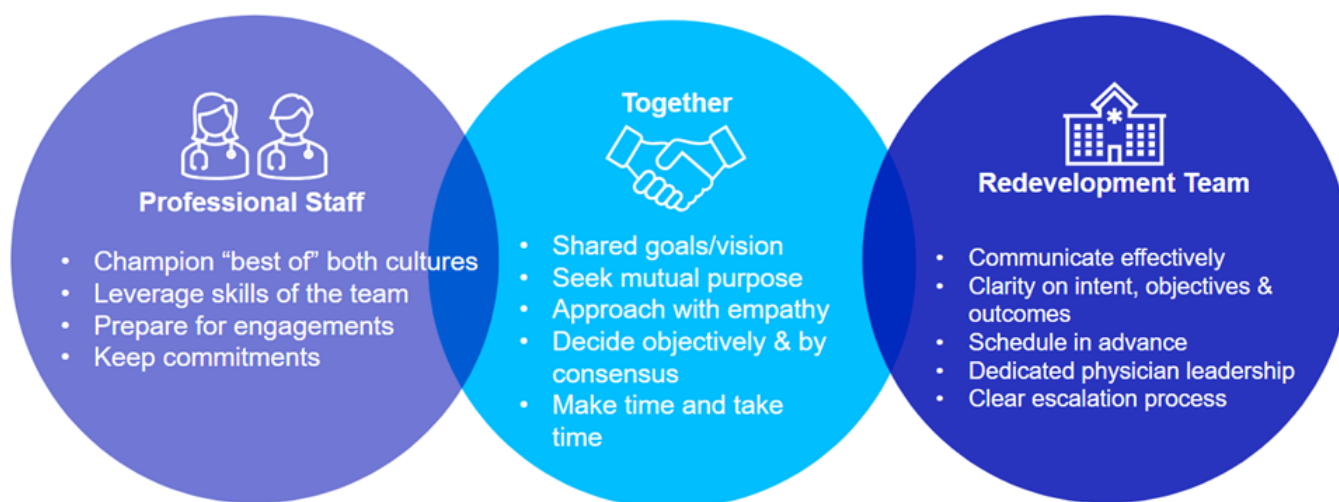
Patient & Family Engagement

Patient and family engagement is critical to the success of planning and designing the new hospital, the redevelopment of Midtown, Chicopee and the Capital Hospital Infrastructure Planning Strategy, ensuring that the services provided are both effective and aligned with the needs of those they serve. Patients, families and the broader community have so far provided excellent insight into the service visioning and design vision and principles work that will guide us through Functional Programming.

A **dedicated Patient and Family Advisory Council** has been formed for the Redevelopment Team. This group will play a crucial role in the design phase of planning and beyond, offering valuable insights and feedback to refine planning, design and layouts. As this infrastructure is established, the Redevelopment engagement team will liaise with the existing patient & family advisory council infrastructure during user groups for any focused engagement required to ensure fulsome completion of programming documents.

Professional Staff Engagement

Professional staff are a key partner in the creation of the Functional Programs and final submission. Professional staff participating in the physician leadership education in the spring of 2024 were asked to provide feedback on strategies and tactics that will make for successful and meaningful physician engagement through the redevelopment phases to come. Their feedback was themed and translated into the framework below. Professional staff and physician leaders will be included in applicable user groups, backed by dedicated physician leadership supporting the Redevelopment Team as required.



SPACE PLANNING STANDARDS

About Space Planning Standards

Space planning standards refer to the specific rules, regulations, norms and other conditions that govern space planning for healthcare facilities. In Ontario, hospital space planning standards focus on optimizing functionality, safety, and patient care. These guidelines ensure efficient workflows, compliance with accessibility regulations, equity across programs & teams and integration of infection control measures and advanced technologies. The goal is to create environments that enhance patient outcomes and staff efficiency while balancing regulatory compliance with practical needs and construction costs.

Space planning standards are derived from a variety of sources (lists not exhaustive):

- **Ministry of Health Planning Standards**
 - Standards documented in policy e.g. [MOH Hospital Capital Planning Policy Manual](#)
 - Recently accepted precedent e.g. a standard that has been recently approved for another redevelopment project
- **Industry Standards & Reference Material**
 - [CAN/CSA Z8000-18 Canadian Health Care Facilities](#)
 - [CAN/CSA Z317.13-17 Infection Control During Construction, Renovation, and Maintenance of Health Care Facilities](#)
- **Legislation and Codes**
 - [Public Hospitals Act](#), [Ministry of Health and Long-Term Care Act](#), [Occupational Health and Safety Act](#), [Health Protection & Promotion Act](#), [Mental Health Act](#), [Accessibility for Ontarians with Disabilities Act](#), [Ontario Building Code](#), [Ontario Fire Code](#), etc.
- **Evidence-based Design**
 - Standards based on current best practice, research, etc.
- **Organizational Standards & Assumptions**
 - Standards based on organizational operational decisions and/or assumptions

Space planning standards combine with the design principles to create the “**form**” of the building, based on the way it needs to function as described in the Functional Program.

Space planning standards also enable the most critical planning priorities – **planning for flexibility, adaptability, and sustainability.**

Form always follows function!

Planning and Designing for Flexibility, Adaptability & Sustainability

In space planning & design, flexibility, adaptability, and sustainability means:

Flexible	Short term, situational ability to respond quickly to a changing need or use the same space in a variety of ways without physically altering it.
Adaptable	Ability to modify a space easily to meet a new or changed requirement of use over a longer period.
Sustainable	The ability of space to be flexible and adaptable over time.

Planning & designing for flexibility, adaptability and sustainability is of critical importance to ensure space can be responsive to:

- Changing patient needs & acuity
- Program growth, change and movement
- The adoption of new technologies & innovations
- Health human resource challenges and the evolving structure/workstyles of teams
- The impact of climate change
- Public health emergencies e.g. mass casualty events, outbreaks, the next pandemic
- Cost constraints - doing more in the same/less space manages construction and operating costs

The MoH will use flexibility and sustainability as a priority principle when evaluating our Functional Program and later elements of planning for approvals. **Flexible, adaptable & sustainable planning is key.**

Planning for flexibility, adaptability & sustainability is priority.

All program/department areas will be planned to maximize flexibility and adaptability using the “**80/20 Rule**” - at least 80% of spaces within a program should conform to standards.

Working Space Planning Standards & Assumptions

The table below represents the number of working space planning standards and assumptions that we will carry into Functional Programming. This list is by no means exhaustive, and we will rely on the expertise of our healthcare facility planners to identify additional standards we should conform to in support of the 80/20 rule, and where we should consider alternative approaches in support of our unique care and service delivery needs.

These standards will evolve over the course of the Functional Programming phase as reports from our consulting partners give us new direction, as decisions are made through the escalation process, and as we need to revisit planning decisions to reevaluate priority and reassess value.

All standards will be confirmed with program teams by the healthcare facility planners during user groups and are subject to refinement based on space configuration.

Clinical Utilization Assumptions

- Utilization standards - hours of operation, weeks in operation per year, etc. will be confirmed with programs during the first round of user group meetings.

Acute Inpatient Units

- Medical/Surgical units will be planned to use a standard configuration
 - 18 beds per pod
 - 36 beds per unit (2 pods)
 - 72 beds per floor
- Inpatient rooms will be standardized to the fullest extent possible
- To promote flexible use of space and the ability to respond to changing patient need, inpatient rooms will consider options to flex to changing patient acuity
- Inpatient rooms will be single occupancy and approximately 290 NSF (net square feet - see Glossary)

Clinical Space

Critical Care

- Critical Care units will be planned in a configuration of 10-12 bed pods
- Critical care rooms will be single occupancy and approximately 335 NSF
- To be determined - washroom configuration & waste disposal

Childbirth & Children's

- Inpatient rooms will be standardized to the fullest extent possible
 - Inpatient rooms will be single occupancy and approximately:
 - Labour room - 455 NSF
 - Postpartum inpatient room - 350 NSF
 - NICU Couplet Care - 430 NSF
 - NICU Standard - 215 NSF
 - Pediatric Inpatient - 290 NSF
-

Ambulatory Clinics

- Clinic spaces will be planned to maximize flexibility and adaptability
- Clinic room will be standardized to approximately 120 NSF
- One enhanced access clinic room of 150 NSF to accommodate bariatric patients, large wheelchairs, etc. will be planned for every 10-12 clinic rooms

Medication Rooms

- Sizing and number of medication rooms will be based on clinical unit type
 - Ambulatory care, imaging, prep/recovery - 130 NSF
 - Emergency, Acute Inpatients - 2 per unit, 150 NSF
 - Critical Care - 1 per pod, 200 NSF

Clinical Space

Operating Room & Procedure Rooms

- Operating rooms and procedure rooms will be of standard size
 - Operating room, general - 590 NSF
 - Operating room, special - 650 NSF
 - Procedure room - 180-250 NSF (depending on configuration)
 - Operative Birthing Suite - 790 NSF
- Operating rooms will be planned for flexibility of procedure type and with consideration of future innovation, new services/procedures and adoption of new technology e.g. leading walls

Telemedicine Spaces

- All clinic/exam spaces should have telemedicine capabilities e.g. webcam, connection to Cerner, etc.

- IPAC standards, informed by ([Canadian Standards Association](#)) CSA Z8000-18 for Canadian Health Care Facilities, will guide functional program development
- The NSF for all patient care spaces includes and accounts for a dedicated hand hygiene sink
- Patient care spaces requiring separation will be planned for a hard divider of some kind, not curtains

Acute Inpatient Units

- 3-4 airborne isolation rooms (445 NSF) per 36 bed unit 1-2 per 18 bed pod)
- At least one airborne isolation room (AIR) per unit to accommodate enhanced access e.g. bariatrics

Critical Care

- 2 negative pressure isolation room (465 NSF) per 10 to 12 bed pod
- In critical care, all AIR will accommodate bariatric patients

Emergency Department

- 10-12% of treatment spaces will be AIR capable, depending on configuration

Childbirth & Children's (incl. NICU)

- Assume 1 negative pressure isolation bassinette

Ambulatory Procedures

- Assume 1 AIR room for bronchoscopy/EBUS and 1-2 corresponding AIR capable recovery spaces

Infection Prevention & Control

Caregiver Presence & Visitors

- Family and caregiver presence will be prioritized, including the infrastructure and amenities to support families and care givers 24/7
- All clinical spaces will be planned to include capacity for companions in seating areas, registration stations, exam and consult rooms and inpatient rooms
- Patient bedrooms will include a defined “family zone”, including a chair and sleeper chair/recliner included in the room (overlapping patient care space when in use)
- Ample outlets for electronic devices in patient rooms and amenity spaces will be planned
- Each inpatient floor will include a patient/family lounge space

Accessibility & Inclusivity

- Planning will adhere to standards (CSA Z8000), best practice and applicable legislation ([Accessibility for Ontarians with Disabilities Act \(AODA\)](#), etc.) with regards to accessibility
- The planning and design teams will strive to ensure that people of all abilities are able, without modification to their normal conduct, to access services, work in the facility, or allow staff to accomplish their work
- Accessibility will consider the physical, cognitive, social, and emotional capabilities, limitations, needs and wants of all people who will use, work in or visit the hospital
- Planning will aim to minimize patient travel from outside the hospital and between various on-site locations provision and provide effective and appropriate aids in wayfinding
- Throughout planning, requirements for enhanced access are required to accommodate clearances and accessibility requirements associated with mobility devices (large wheelchairs, and scooters) and/or bariatric individuals

Education & Learner Spaces

- Education spaces (e.g. training rooms, simulation spaces, library) will be included in the functional program and will be multi-use, standardized, accessible and available to any user
- One shared library/learning resource center will be planned for learners, physicians and staff
- Planning will adhere to all applicable requirements e.g. PARO for the provisioning of medical learner space requirements

Clinical Research & Innovation

- All spaces within the hospital should be considered to be available to support the activities of research and innovation
- To maximize flexibility and efficient use of space, research and innovation space within programs will not be planned, but rather workspaces will be accessible by researchers, clinicians, learners, and others working within program areas
- Clinical program areas will be planned to accommodate research activity; as a result, less dedicated centralized research space will be required in the future

Equipment (Mobile & Shared)

- Equipment strategy to be determined

Information, Communication & Technology (ICAT)

- ICAT standards will be aligned with the organization's digital roadmap
 - Planning for ICAT will prioritize integration, flexibility, interoperability, and data security
-

Automated Guided Vehicles (AGVs) & Pneumatic Tubes

- Automated materials handling requires a significant investment in both square footage and dollars
- During programming, the space implications of these items will be tracked, to inform later decision making
- For consistency and to ensure a streamlined approach, these items will be address in the Materials Management functional program

Autonomous Guided Vehicles/Automated Mobile Robots (AGVs/AMRs)

- To ensure efficient and timely movement of materials across the large footprint of the new hospital, a unified automated conveyance strategy will be planned
- Planning will include square footage to accommodate AGVs/AMRs, including central parking, clean and soiled drop off per elevator lobby, and distributed charging locations

Pneumatic Tubes

- A pneumatic tube system will also be planned for the efficient and timely delivery of small items
- Planning will consider square footage to accommodate tube stations

Environmental Services

- Spaces and corridors will be planned to allow for separation of traffic and provision of distinct transportation routes and handling and storage of clean, sterile, and soiled supplies and equipment
- **Housekeeping rooms** (80 NSF) will be planned for every 7,000 NSF
 - Each department will require a cart.
 - Inpatient units require dedicated rooms and carts
 - Where possible and in alignment with CSA standards, departments should have dedicated rooms
- **Housekeeping closets** (40 NSF) will be used to supplement larger spaces as required. Closets are required primarily for storage.
- **Service rooms** (120 SF) for storage of dedicated equipment will be planned (at minimum) in the following areas: Surgical Suite, MDR, Maternal/Newborn

Note – A workplace study is currently underway which will inform additional standards related to workspaces, meeting rooms, etc. The standards and assumptions below will be updated upon completion of that work.

Below are some general workspace standards that will remain consistent:

- Flexibility and adaptability and the 80/20 rule will also be applied to non-clinical spaces, such as meeting rooms, collaboration spaces, etc.
- Existing workspaces (size, assignment, location, etc.) do not set a precedent for the purposes of this planning
- Shared spaces will consider both auditory and visual privacy

Meeting Spaces

- Meeting rooms will be considered a corporate resource, and not to be considered “owned” by any one program or department
- All meeting spaces will be located off public corridors to promote shared ownership and accessibility

Workspaces & Collaboration Spaces

- Workspace types will be planned based on function and need and use, not exclusively by role
- Shared or hoteling workspace will be provided for individuals who do not require use of workspace for most of their workday(s)
- Offices & workstations will be standardized across programs and departments, including size, furniture and ICAT equipment
- Shared space resources (including meeting space, multi-use rooms and collaborative areas) will be planned to be included through workspaces
- Workspaces will be planned to include a balance of open workspaces and collaboration areas to allow for more private, small team collaboration

Staff Respite Spaces & Amenities

- For all staffed services, staff lounges will be located to provide close access to a meal/relaxation area, they will be interdisciplinary, accommodating all staff working within the area
- Locker facilities will be programmed adjacent to lounge locations to enable access to personal belongings on breaks

Work & Collaboration Spaces

Public Spaces & Amenities

- Planning public spaces and the corresponding wayfinding strategy, approach to registration & welcome centers will take a “no wrong door” approach, meaning no matter where an individual enters the building, their immediate needs (e.g. registration, wayfinding, etc.) are able to be met
- Breastfeeding area(s) in public areas (one per patient entrance) will be planned
- Planning for public amenities such as washrooms will adhere to standards (CSA Z8000), best practice and applicable legislation (AODA, etc.) with regards to accessibility, including considerations for gender neutral spaces

Multifaith Space

- Multi-faith spaces will be configured as open sanctuaries available for reflection, ceremonies, and scheduled services
- A separate prayer/quiet reflection space for staff will be considered

Indigenous Healing Spaces

- Indigenous healing spaces will be planned, separate from multifaith spaces

PART B

What is Part B?

Part B of the MoH checklist takes the Functional Program of Part A and turns it into **diagrams that describe the relationship of departments to each other**, and the **high-level organization of each of those departments**. It also looks at the **major infrastructure and systems** that will go into the building, as well as the **budget and timeline of the construction**.

The largest component of Part B is the diagrams, or the “**blocking and stacking**”, of the building. The objective is to **review how floors are laid out** in the new acute hospital (“blocking”), and **how all those floors fit together** (“stacking”). This includes corridors, entrances/exits, and the path to each of the large blocks of space. It is to ensure that the information the users have provided thus far is accurately represented in diagrams. **These diagrams are not final at this stage**. They are a first pass; a test fit to ensure that what is programmed can fit into a building and onto the site with the correct horizontal and vertical and adjacencies.

There are a number of other workstreams that are developed under Part B, in addition to the blocking/stacking and area tables. These include the following:

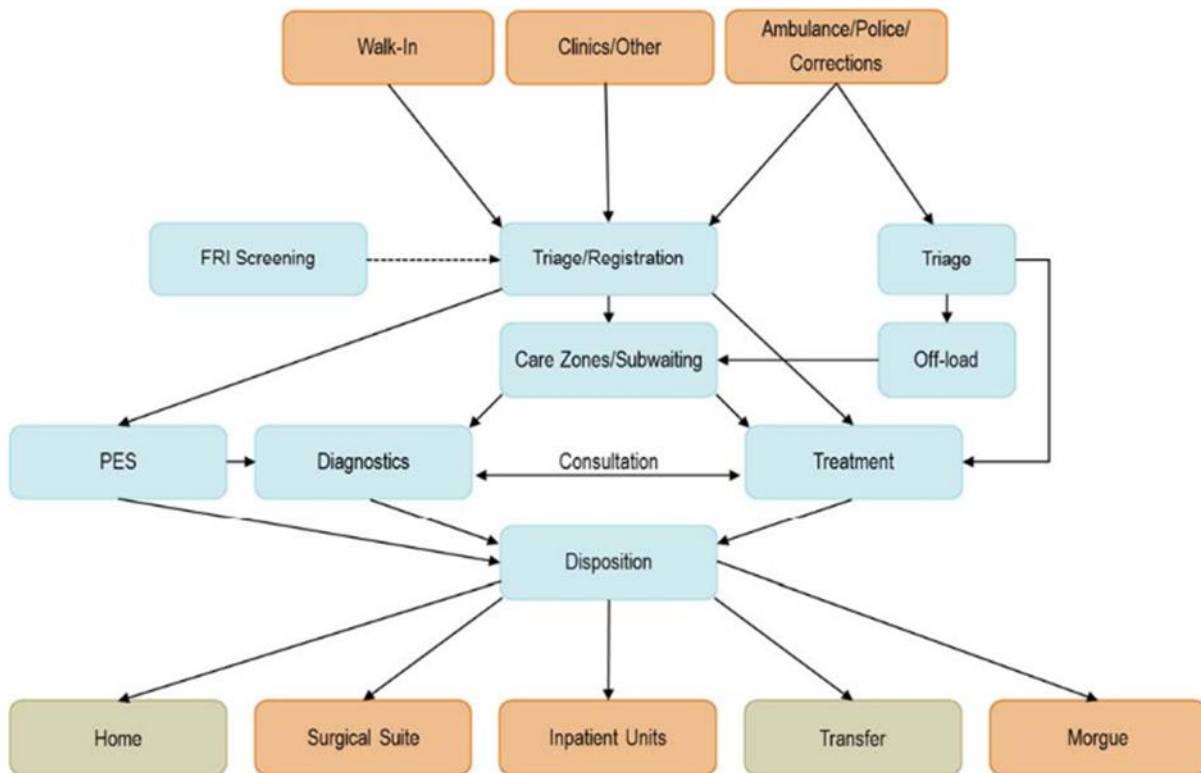
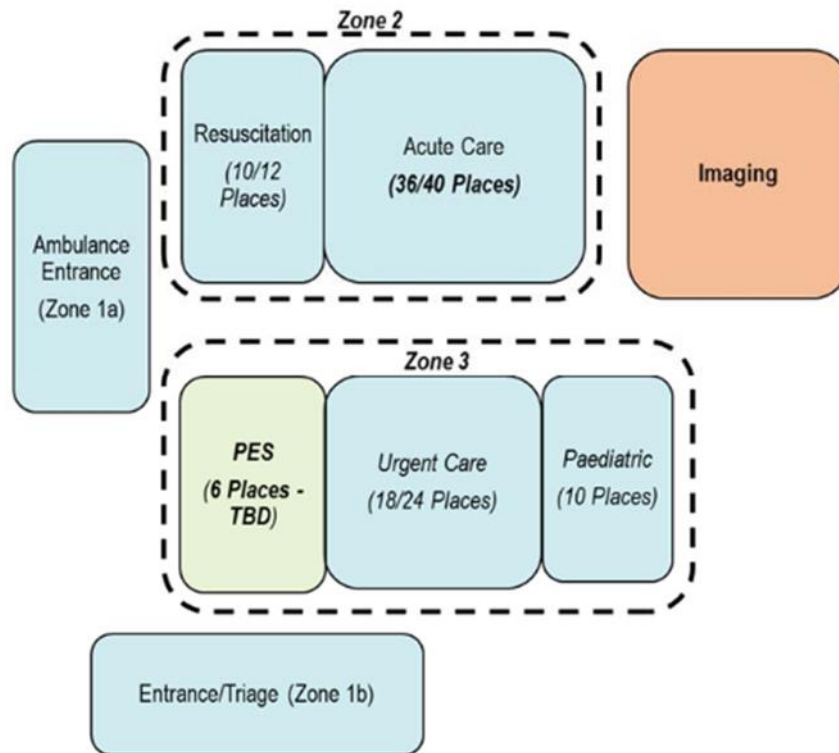
- Design Objectives (including Urban Design / Site Planning, Aviation/Helipad, Signage and Wayfinding Strategy, Indigenous Engagement, Patient & Family Engagement)
- New physical plant requirements, including a structural design brief, mechanical and electrical (M/E) design briefs, sustainability strategy and targets, use of conveyance
- Equipment requirements (FF&E list and budget)
- Phasing Plan
- Project Cost Estimate, Cost Variance Template (CVT), and Local Share Plan (LSP)
- Project schedule
- Letters of Attestation (IPAC, Occupational Health & Safety (OHS), Accessibility)

Block Diagrams

Block Diagrams capture the **program requirements** as depicted in the Functional Program and **describe the adjacencies of departments to each other and to major circulation**, as well as the **internal organization of a department**. They serve as a visual representation of the different area requirements, and the workflow / adjacencies of all the components.

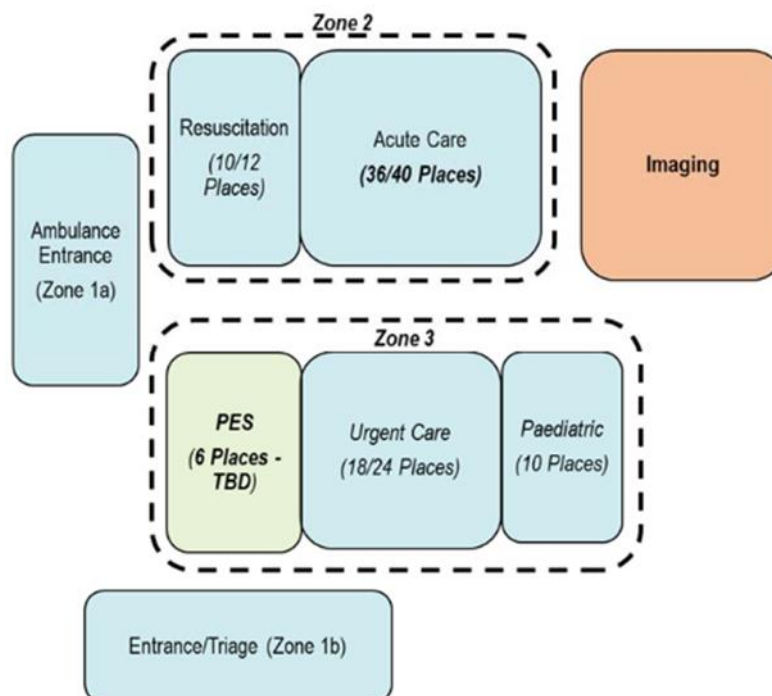
The Functional Program contains internal organization diagrams that describe how zones within each department should relate to each other and, in some cases, other departments. Block diagrams are not a schematic design floor plan, or a final design of the component’s space. They are not intended to show all the rooms in a Functional Program space list, but rather zones and how they relate to each other.

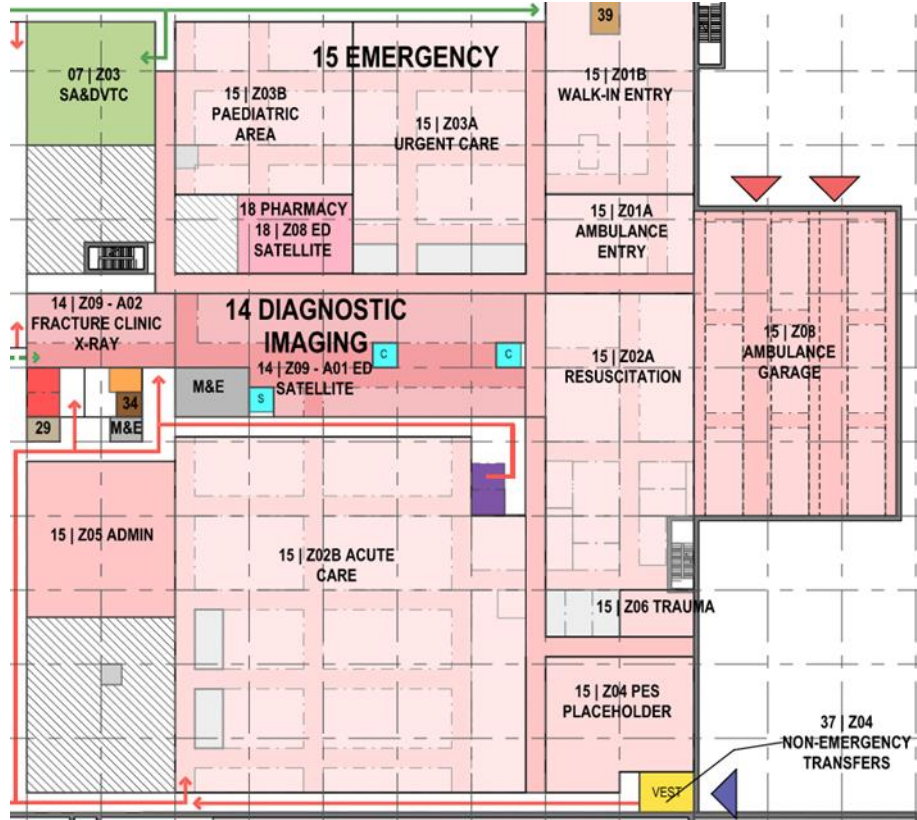
Below is an **example only** that shows an organization of an Emergency Department and how it should relate to Imaging.



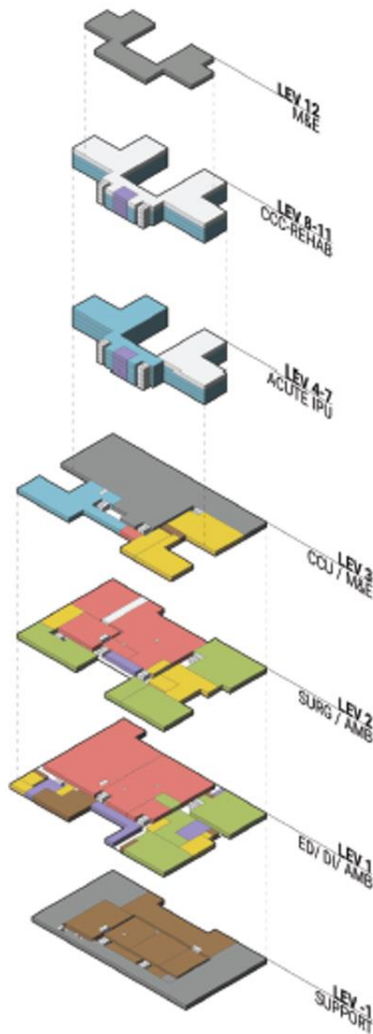
Also included in the Functional Program for each department is a **space list that outlines each room to be included in the department**, and **how those rooms are organized into zones**. Each zone has a corresponding square footage, which the architectural team will use to plan the department. Below is an **example only** of a space list by zones and how that translates to an internal organization diagram, and ultimately, to a block diagram that relates to adjacent departments.

Program A	Area
Zone 1	104 sf
Zone 2	50 sf
Zone 3	120 sf
Zone 4	32 sf





Stacking Diagrams



While block diagrams show the horizontal relationships of departments, **stacking diagrams** show the **vertical relationships of departments** and the **overall organization of a building**. The diagram to the left is an **example only**. Stacking diagrams outline the following:

- Proposed location, vertical and horizontal, and boundaries of all programs
- Major building circulation (vertical/ horizontal)
- Major M/E spaces, shafts, and risers
- Elevator locations and types
- Entrances and exits from the building and programs
- Major blocks or zones and intra-program corridors

Site Plan

On July 22, 2024, GRH and SMGH, joined by the The Honourable Doug Ford, Premier of Ontario, announced the new acute hospital being planned on a future site that is part of the north campus of the University of Waterloo, and part of the David Johnston Research + Technology Park.

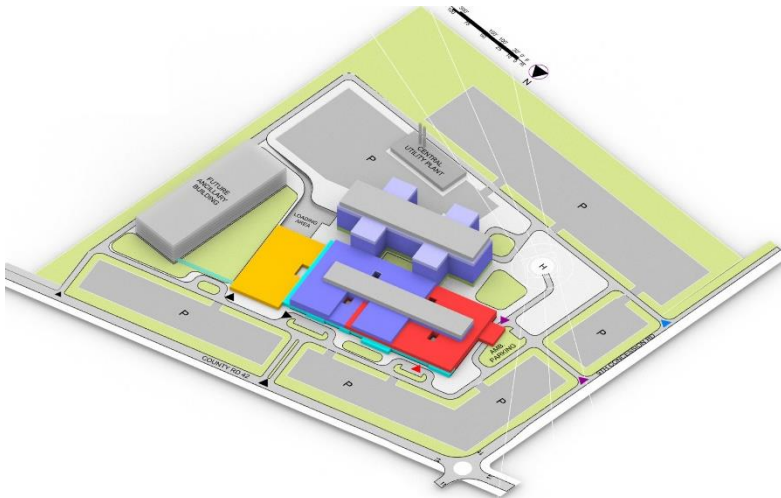


Westmount and Bearinger looking east



Bearinger and Hagey looking west

A site plan is a very important component of the submission. The following is an **example only** that shows the overall organization of a site and includes the following:



- Site Organization
- Building Placement
- Access Points, Parking, and Circulation
- Building Massing and Entrance Locations
- Approach to Urban Design
- Accessibility
- Approach to Landscaping
- Site Servicing
- Traffic Flows

Traffic

The hospitals have retained a traffic consultant who will provide urban transportation advisory services for the new acute hospital. They will help the Redevelopment Team critically assess and update the urban transportation elements of the site plan. They will advise the design team on vehicular flows through the site, parking requirements, parking facilities, and loading dock planning. They will also assist the team to determine where improvements need to be made to Bearinger Road and Hagey Boulevard.

New Physical Plant Requirements

The new physical plant requirements of the report will describe the engineering and energy goals for the project, as well as how these goals will be achieved. A series of meetings will be held to review benchmarks, current standards, and what the goals of the organization are. **One of the goals is for the project to be both WELL and LEED (Leadership in Energy and Environmental Design) certified.**

WELL Certification

The WELL Building Standard outlines best practices for the design, operation, and maintenance of the built environment to support human health and well-being. The following outlines the pre-conditions that need to be met to become a WELL certified facility:



Concept: Air

- Meet Thresholds for Particulate Matter
- Meet Thresholds for Organic Gases
- Meet Thresholds for Inorganic Gases
- Meet Thresholds for Radon
- Measure Air Parameters
- Prohibit Indoor Smoking
- Prohibit Outdoor Smoking
- Ensure Adequate Ventilation
- Mitigate Construction Pollution



Concept: Thermal Performance

- Provide Acceptable Thermal Environment
- Measure Thermal Parameters



Concept: Sound

- Label Acoustic Zones
- Provide Acoustic Design Plan



Concept: Water

- Verify Water Quality Indicators
- Meet Chemical Thresholds
- Meet Thresholds for Organics and Pesticides
- Monitor Chemical and Biological Water Quality
- Implement Legionella Management Plan



Concept: Materials

- Restrict Asbestos
- Restrict Mercury
- Restrict Lead
- Manage Asbestos Hazards
- Manage Lead Paint Hazards
- Manage Polychlorinated Biphenyl Hazards
- Manage Exterior CCA Hazards
- Manage Lead Hazards



Concept: Nourishment

- Provide Fruits and Vegetables
- Promote Fruit and Vegetable Visibility
- Provide Nutritional Information
- Address Food Allergens
- Label Sugar Content



Concept: Light

- Provide Indoor Light
- Provide Visual Acuity



Concept: Mind

- Promote Mental Health and Well-Being
- Provide Connection to Nature
- Provide Connection to Place



Concept: Movement

- Design Active Buildings and Communities
- Support Visual Ergonomics
- Provide Height-Adjustable Work Surfaces
- Provide Chair Adjustability
- Provide Support At Standing Workstations
- Provide Workstation Orientation



Concept: Community

- Provide WELL Feature Guide
- Facilitate Stakeholder Charette
- Promote Health-Oriented Mission
- Develop Emergency Preparedness Plan
- Select Project Survey
- Administer Annual Survey and Report Results

The architectural team will work with the organization to determine if and how these pre-conditions, as well as a series of other optional requirements, can be met to achieve various levels of WELL certification.

LEED Certification

LEED is a certification system for sustainable buildings. The minimum requirement for all new hospitals is LEED Silver; however, the consultants will work with the organization to target LEED Gold or higher. The following outlines the rating system for LEED:



Category: Integrative Process

Integrative Project Planning and Design
Integrative Process



Category: Location and Transportation

Sensitive Land Protection
High Priority Site
Surrounding Density and Diverse Uses
Access to Quality Transit
Bicycle Facilities
Reduced Parking Footprint
Green Vehicles



Category: Sustainable Sites

Construction Activity Pollution Prevention
Environmental Site Assessment
Site Assessment
Site Development – Protect or Restore Habitat
Open Space
Rainwater Management
Heat Island Reduction
Light Pollution Reduction
Places or Respite
Direct Exterior Access



Category: Water Efficiency

Outdoor Water Use Reduction
Indoor Water Use Reduction
Building-level Water Metering
Cooling Tower Water Use
Water Metering



Category: Energy and Atmosphere

Fundamental Commissioning and Verification
Minimum Energy Performance
Building-level Energy Metering
Fundamental Refrigerant Management
Optimize Energy Performance
Enhanced Commissioning
Advanced Energy Metering
Demand Response
Enhanced Refrigerant Management
Green Power and Carbon Offsets



Category: Materials and Resources

Storage and Collection of Recyclables
Construction and Demolition Waste Management Planning
PBT Source Reduction – Mercury
Building Life-Cycle Impact Reduction
Environmental Product Declarations
Sourcing of Raw Materials
Material Ingredients
PBT Source Reduction – Lead, Cadmium, and Copper
Furniture and Medical Furnishings
Design for Flexibility
Construction and Demolition Waste Management



Category: Indoor Environmental Quality

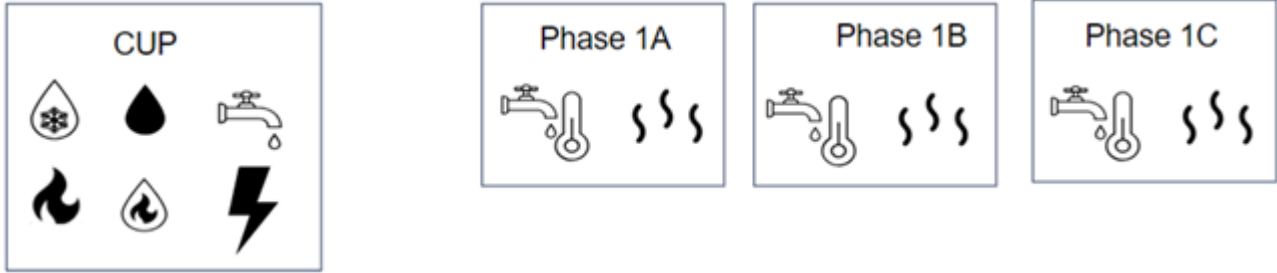
Minimum Indoor Air Quality Performance
Environmental Tobacco Smoke Control
Enhanced Indoor Air Quality Strategies
Low-Emitting Materials
Construction Indoor Air Quality Assessment
Thermal Comfort
Interior Lighting
Daylight
Quality Views
Acoustic Performance

Building Energy and Utility Plants

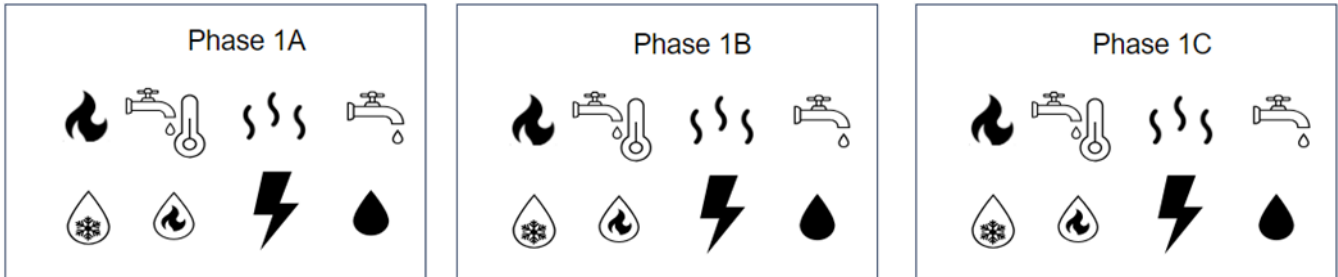
How the hospital will be powered and whether the utility plants that serve the hospital are centralized or decentralized is another important decision at this stage of the project. Canada has committed to the Paris Agreement, which targets all buildings to be net-zero carbon emissions by 2050. As 2050 is within the operational lifespan of the new acute hospital, strategies to design the hospital to be net-zero carbon, or net-zero carbon ready, need to be explored. These include strategies such as electrification and decreasing the dependence on fossil fuels, green fuels, and creating the most energy efficient systems possible.

Centralizing or decentralizing utility plants is another important decision to make at this time, as it will have impact on the organization of the site plan and the ultimate cost of the project. The difference between a central utility plant (CUP), most services are consolidated into one building, separate from the phased hospital buildings, whereas in a decentralized model, each individual hospital building would contain its own services, usually on the rooftop of each. Below shows graphically how the various services are distributed in the two models.

Centralized model with a single CUP outside the 3 Phased hospital buildings:



Decentralized model where each hospital building houses its own services:



Legend:

Building Services

Chilled Water		Domestic Hot Water	
Heating Water		Fuel Oil	
Steam		Natural Gas	
Domestic Water		Electricity	

There are advantages and disadvantages to both models, and the engineering and architectural team will be reviewing these with the hospital leadership.

Furniture, Fixtures and Equipment (FF&E)

Furniture, Fixtures and Equipment Planning (FF&E) is an important piece in developing the total project budget for the new acute hospital. Over the next year, the Redevelopment Team, in partnership with program and service teams, will work closely with contracted experts to develop furniture and equipment plans. **FF&E helps define the functionality and versatility of a space, it creates comfortable, inclusive, and collaborative atmospheres using innovative, sustainable and resilient solutions.** FF&E is used by all, therefore, early and frequent engagement with end users is critical to the success of a project.

The FF&E team will help implement enterprise asset management strategies, like real-time locating, preventative maintenance programs, and central equipment depots to reduce time searching for equipment and promoting sharing of assets. The Redevelopment Team will also align with hospital equipment standardization and capital planning principles.

The Redevelopment Team and consultant teams will develop contract documents to define how FF&E will be procured and installed. In-contract (IC) equipment is included in the scope of the general contractor. The MoH cost shares IC equipment, therefore, it is important to maximize the IC list to get best value from MoH funding. The Not-In-Contract (NIC) equipment is specified and procured by the hospital. NIC gives the hospital full control over the selection of equipment, but the cost is fully borne by the hospital local share.

An FF&E advisor has been engaged in this early planning process to ensure that an equipment list and budgets are accounted for at a high level. The FF&E advisor will also set the equipment plan and strategy in place, which will assist the organization in making informed decisions on FF&E for the new acute hospital.

Staging / Phasing

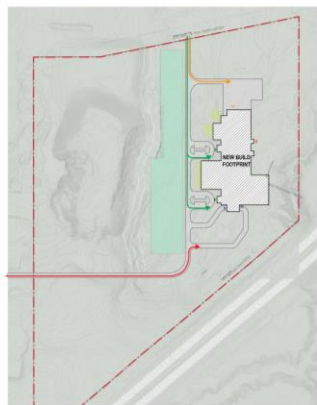
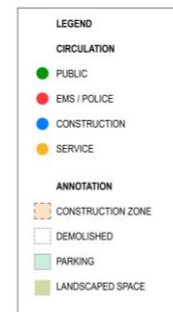
Another important aspect of the Stage 1.3 submission is the phasing of the project. This section outlines **how the building and site will be developed over time** and **how construction activities will be managed**, so that construction activities do not impact the operations of previously constructed phases. It is especially important for this project as it will be a **three-phase development** over a number of years, and the **hospital needs to remain operational during all construction activities** occurring on the site. Staging and phasing diagrams, as the **examples below**, will be included in the submission that will show the following:



1. EXISTING SITE



2. CONNECTION TO MAIN ROADS ON SITE



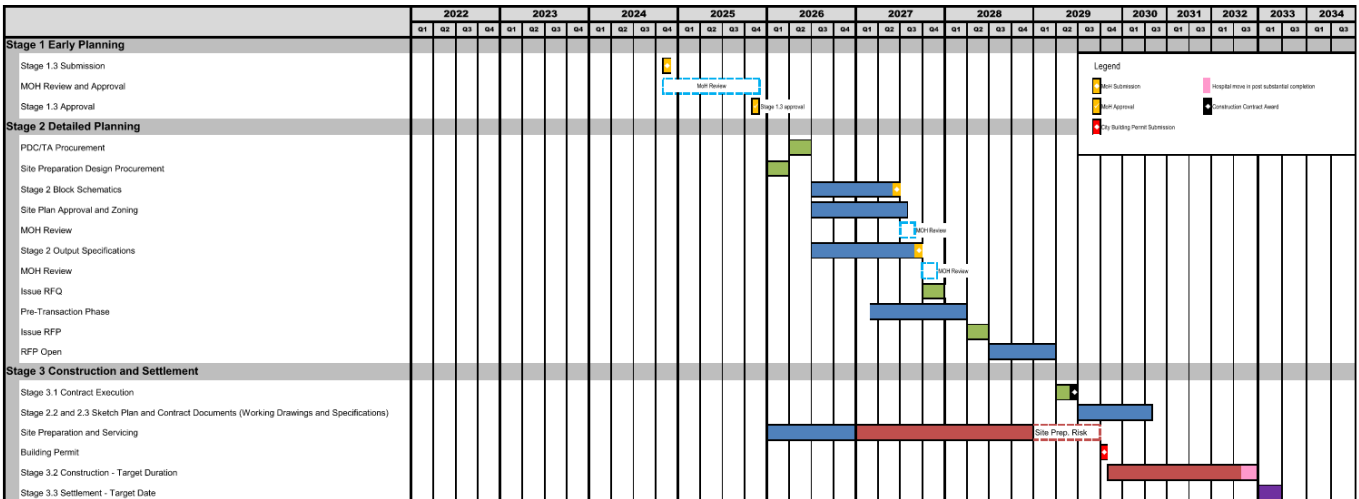
3. NEW HOSPITAL



4. FUTURE EXPANSION

- How the building(s) will be developed over time
- Location of boundaries between construction and the remainder of the site
- Circulation routes (public, emergency, service, staff, etc.) throughout the site at each phase
- Construction access to the site
- Temporary construction(s) on the site

Project Schedule



A **project schedule** will be developed which **outlines all future design and construction activities**, and it will **estimate durations for each activity**. It will also outline periods of time for MoH review and approval to move to the next stage. **All these durations are estimates based on previous project experience and will be adjusted throughout the life of the project**. The project schedule will help to inform the project budget as it will estimate the approximate start, duration, and completion of construction. The quantity surveyor will use this information to estimate how much escalation to apply to the cost estimate. The above is an **example only**.

Project Budget

The hospital has engaged a quantity surveyor who will develop the project budget based on the documents provided by the consultant team. A budget will be developed by multiplying industry standard unit rates for construction of each department by the number of square feet that each department occupies in the block diagrams. They will also apply industry standard unit rates for mechanical and electrical spaces, as well as areas not captured as part of a department (stairs, elevators, public corridors, structure, etc.). The estimate will be broken down by phase and will also propose an allowance for FF&E, based on a preliminary FF&E list. Additionally, the estimate will identify how much of the cost will be borne by the MoH and how much of the cost will be borne by the hospital (Local Share). This will be included in the Capital Variance Template (CVT). The hospitals will include how they propose to fundraise for the Local Share and that plan will also be submitted as part of this submission.

Letters of Attestation

Letters of Attestation are letters from IPAC, Occupational Health and Safety, and Accessibility professionals within the hospital organizations that state that they have been part of the planning discussions, and that the proposal is conforming with all standards relating to CSA, OHSA, AODA, and others. **These letters are required to be submitted as part of this submission**.

Engagement

There will be **three rounds of engagement to develop the block diagrams**, as well as several ad hoc engagements for other workstreams, such as New Physical Plant Requirements, FF&E, Conveyance, Signage and Wayfinding and Indigenous Consulting. The pictures below with block diagrams are **examples only**.



The three rounds of Block Diagram engagement will be broken down as follows:

Round 1:

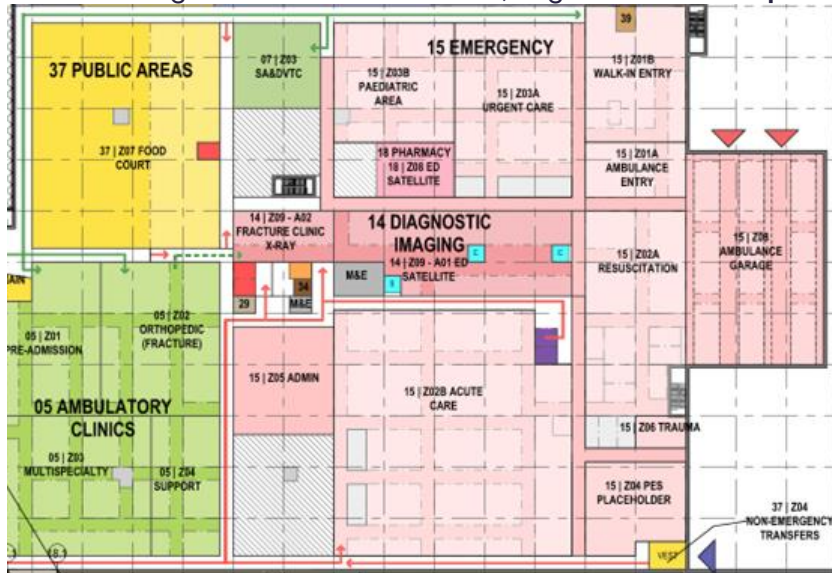
Round 1 will be a series of Super Group engagements where participants will take part in a gaming exercise, led by the architectural team. The participants will **work with blocks that represent each department to come up with the best organization for the hospital**. The goal of these sessions is to come away with the following:

- Location of buildings on site,
- Site circulation and access,
- Blocking and stacking,
- Major horizontal and vertical circulation, and
- Department locations and adjacencies.

Round 2:

In Round 2, the **zone-by-zone layout of each department** will be reviewed. Departments will be grouped to ensure that departments that typically work together collaborate to create synergies.

The following items will be reviewed (diagram is an **example only**):



- Departmental locations,
- Adjacencies,
- Access points,
- Flows,
- Departmental zones,
- General department layout,
- Elevators, stair locations, and
- Location of M/E support spaces.

Round 3:

This will be the final round to **review block diagrams**. Any revisions requested in Round 2 will be incorporated by the architectural team and endorsement of the plans will be required.

Some additional meetings may be required with certain groups. This will be determined as the planning progresses.

Conveyance

Materials Management

A conveyance consultant, under the direction of the architects, will assess the current state of the organizations through review of previous planning, architectural plans of existing WRHN hospital sites, and leadership interviews. This will allow the conveyance consultant to understand current materials management processes and procedures related to material flow at each department. From there, they will move into future-state planning to understand volumes and schedules. They will also develop an operations model database for current conditions and use the model to extrapolate expected future demand for material movements to and from the following streams: Loading Dock (clean and soiled), Materials Management/Supply Chain, Linen (clean and soiled), Waste Management, Dietary/Food Service (distribution), and MDRD (instrumentation transport between MDRD and ORs).

Materials Handling and Vertical Transportation

The conveyance consultant will provide advice and assistance on the use of materials handling technologies and process optimization strategies, including Pneumatic Tube System (PTS) (assumed required), Pneumatic Trash and Linen Systems (PTLS) or Gravity Chutes, and Automated Transport System (ATS), which consists of Automated Guided Vehicles (AGV) and/or Autonomous Mobile Robots (AMR). Leveraging the information developed in the materials management scope of work, the conveyance consultant will define the requirements of the material handling systems and develop and present to the working group a technology transfer presentation that reviews the different material handling solutions available.

They will work with WRHN to determine what material streams will be transported via automation (ATS or PTLs) and develop an analysis to evaluate the different material handling solutions for the hospital. They will provide a life cycle cost analysis to offer insight and recommendations to support the hospital. For the life cycle cost analysis, the conveyance consultant will evaluate all cart movements that will move via automated transport system and provide estimated probable costs for the capital expenditures for each system, compare these to the ongoing operational costs (compared to a fully manual system), and provide MoH submittal content for the recommended material handling solution.

Signage and Wayfinding

The signage and wayfinding consultant, under the direction of the architects, will develop a Wayfinding Strategy Report, in tandem with the Part B work, to effectively guide the design, implementation, and operation of graphics, signage, and wayfinding elements for the new acute hospital. The report will ensure a **cohesive wayfinding approach** and a holistic integration between current WRHN sites and for the new acute hospital. A site visit will be conducted at WRHN's sites to review the existing wayfinding programs. Three to four workshop / design meetings will be held with the hospital User Group and the project team during the span of this scope.

Indigenous

An experienced Indigenous architecture firm has been engaged for this project. This firm has refined their engagement process over 30 years, fostering meaningful, relationship-based involvement with Indigenous communities. This process has been successfully applied in projects ranging from remote fly-in communities to urban and rural Not-for-Profit housing providers, as well as various health facilities. The approach they will take **emphasizes collaboration through early and sustained engagement**, ensuring that **Indigenous identity and traditional values are woven into the design** while maintaining sensitivity to community relationships.

Building on the existing framework, this phase will focus on further incorporating Indigenous perspectives into the project. This will involve facilitating Talking Circles and other participatory methods to gather input, followed by the preparation of a Draft Findings Document to ensure the community's voice is accurately represented. Subsequent steps will include integrating this feedback into the design, with regular touchpoints to refine the process. This continuation strengthens the collaborative model the Indigenous architect has developed, ensuring that Indigenous values remain at the heart of the project as it moves forward.

GLOSSARY

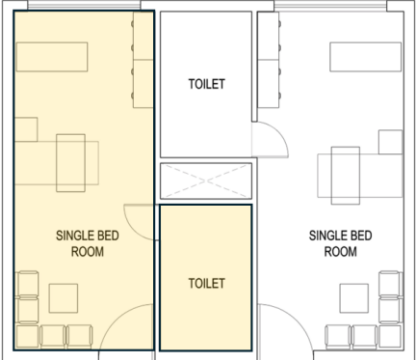
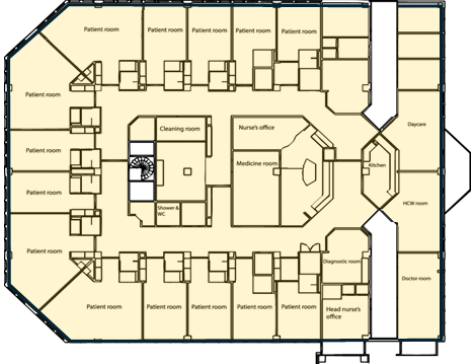

Adjacency - refers to the co-location of space and the extent to which spaces are near each other, horizontally or vertically. Adjacency is important in deciding how areas connect to ensure safe and efficient flow of patients, staff and materials. There are three types of adjacencies:

Type of Adjacency	Distance	Connection Type
Contiguous	The departments are beside each other/share a common wall.	“Immediate” – doored connection from one program into another or connected by short service corridor.
Direct	Can be travelled in less than 150 feet and up to 1 elevator ride	Public Corridor: corridor access is not restricted and will be used by inpatients, outpatients, staff and visitors and functions as entry & orientation circulation.
Convenient	Can be travelled in less than 350 feet and up to 1 elevator ride	Service Corridor: corridor access is only to be used for transport of supplies/services or for patients who are escorted by staff or other organizations

Furniture, Fixtures & Equipment (FF&E) - refers to all the furniture fixtures and equipment required to outfit and operate the new hospital. FF&E can be “loose” items such as desks, chairs, patient beds, wheelchairs, etc. or “fixed” meaning they are installed/wired/built or otherwise considered a physical part of the building e.g. the nurse call system, medical gas infrastructure, etc. Fixed items are generally captured in construction costs, whereas loose items are required to be purchased through local share financing with the community. There are several categories of FF&E:

FF&E Category	Description	Examples
Category 1	Items “fixed” to the facility, requiring utility connections such as sewer or electrical, and generally procured/installed by the construction contractor	Nurse call system, cart washers in MDRD, ceiling mounted patient lifts, lab freezers, etc.
Category 2	Items with utility requirements, but that are movable/relocatable. They may require installation by a vendor but are procured by the hospital.	CT Scanner, medication dispensing cabinets, etc.
Category 3	Items procured by the hospital but do not require significant installation or utility connections.	Desks, portable vital sign machines, chairs, computer monitors, commodes, etc.
Category 4	Items the hospital already owns that will be moved to the new hospital and continue to be used.	Potentially any piece of equipment that is good working order, has usable life span and will fit in new space.

Square Footage - the measurement unit used when identifying and designing space requirements. Square footage is important as it not only tells us how big a space will be, but how much it will cost to build. Square footage is frequently based on a standard, such as the CSA Z8000 standard, or on ministry benchmarks. Square footage is referred to in a few different ways:

Type of Square Footage	Definition	Example
Net Square Feet (NSF)	The usable space within a single room or floor area allocated to a function or group of related functions. NSF excludes the area occupied by walls, corridors and space for engineering installations including duct shafts, chases, etc.	<p>Inside wall-to-wall dimensions of a room, e.g. an inpatient room</p> 
Component Gross Square Feet (CGSF)	The space required to house a whole program or area. It includes all individual net areas, and the internal circulation space required to link together the net areas and accommodate internal walls. CGSF excludes all engineering spaces and interdepartmental circulation elements such as shared public and services corridors, stairways, elevators, etc.	<p>All the NSF of a department added together, including internal hallway/circulation spaces and interior walls, e.g. an inpatient unit</p> 
Gross Square Feet (GSF)	The total amount of square footage on a floor or in a building including all the space within the outside faces of the exterior walls.	

APPENDICIES

Appendix A - User Groups for New Acute Hospital Phases 1A and 1B

Note – some programs with user groups in 1A and 1B will be combined into one user group meeting

Phase 1A User Groups
Ambulatory Care (Medical/Surgical Clinics)
Ambulatory Procedures and Scope Reprocessing
Renal Program Satellite Unit
Urgent Care Centre (same session w/ Emergency Dept Phase 1B)
Laboratory Services
Medical Imaging (same session w/ Phase 1B)
Pharmacy
Education and Learning (incl. medical education/research facilities)
Environmental Services
Facilities, Maintenance and Capital Planning
Food Services
Health Information Management (HIM) and Registration
Information Technology (IT)
Materials Management
Medical Device Reprocessing Department (MDRD)
Public Areas (incl. Retail, Security, Parking and Home/Community Care)
Phase 1B User Groups
Cardiodiagnostic Services, Cardiac Specialty Clinics
Cardiac Catheterization, Structural Heart and Heart Rhythm
Critical Care (includes Respiratory Therapy)
Emergency Department (in same session as Urgent Care, Phase 1A Round 1)
Emergency Department Mental Health Emergency Assessment Unit (EAU)
Emergency Department Imaging Satellite
Childbirth Inpatient Services

Childbirth Outpatient Services
Children's Inpatient Unit
Children's Outpatient Services
Acute Care Inpatient Units
Medical Imaging (same session w/ Phase 1A)
Nuclear Medicine
Surgical Services (excl. APU)
Spiritual and Religious Care
Indigenous Healing Space
Administrative Services (incl. SLT, IPAC, Risk, Finance/Patient Accounts, Quality, Decision Support)
Administrative Services (incl. Human Resources, Organizational Development, Occupational Health/Safety/Employee Wellness)
Biomedical Engineering
Environmental Services
Facilities, Maintenance and Capital Planning
Foundation (included in Public Areas post Round 1)
Health Information Management (HIM) and Registration
Materials Management
Public Areas (incl. Retail, Security, Parking and Home/Community Care) (same session w/ Phase 1A)
Volunteer Services

Green Highlight – indicates sessions that physicians have been secured to attend

Appendix B - Senior Project Leaders by Program

Ash Bennett ashley.bennet@wrhn.ca	Cardiac Clinics, Diagnostic Services and Physician Offices
	Cardiac Catheterization/Electrophysiology/Heart Rhythm
	Critical Care (includes Respiratory Therapy)
	Medical Surgical Inpatient Units
	Education and Learning (incl. medical education/research facilities)
	Volunteer Service
Kanika Kohli kanika.kohli@wrhn.ca	Maternal/Newborn Inpatient Services
	Maternal/Newborn Outpatient Services
	Pediatric Inpatient Unit
	Pediatric Outpatient Services
	Surgical Services (excl. APU)
	Ambulatory Care (Medical/Surgical Clinics)
	Ambulatory Procedures and Scope Reprocessing
	Medical Device Reprocessing Department (MDRD)
VACANT	Medical Imaging
	Emergency Department Imaging Satellite
	Medical Imaging
	Nuclear Medicine
	Laboratory Services
	Pharmacy
	Information Technology (IT)
Kristina Vieth kristina.vieth@wrhn.ca	Urgent Care Centre
	Public Areas (incl. Retail, Security, Parking and Home/Community Care)
	Emergency Department
	Emergency Department Mental Health Emergency Assessment Unit (EAU)
	Mental Health & Addictions (1C)
	Renal Program Satellite Unit
	Spiritual and Religious Care; Indigenous Health
	Oncology (1C)
Julie Weir julie.weir@wrhn.ca	Food Services
	Materials Management
	Health Information Management (HIM) and Registration
	Biomedical Engineering
	Administrative Services (incl. SLT, IPAC, Risk, Finance/Patient Accounts, Quality, Decision Support)
	Administrative Services (incl. Human Resources, Organizational Development, Occupational Health/Safety/Employee Wellness)
	Foundation
	Environmental Services
	Health Information Management (HIM) and Registration
	Facilities Maintenance and Capital Planning
	Environmental Services
Krysta Simpson krysta.simpso@wrhn.ca	All programs – Capital Hospital Infrastructure Planning Strategy (CHIPS)

Appendix C - Redevelopment Team Contacts

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Appendix D - Supporting Consultant Team



DIALOG



FOODSERVICE
PLANNING &
DESIGN INC.



