Pre-Capital Submission Form (PCSF)

Proposing Health Service Provider (HSP) Information

Proposed Project Name:	Scarborough Cluster Redevelopment Options	**For LHIN Use Proposal #:**	
HSP Name (Legal):	Rouge Valley Health System & The Scarborough Hospital	**For MOHLTC Use HCIS#:**	
Site Name, Address and Postal Code:	2867 Ellesmere Rd. Scarborough, ON M1E 4B9 & 3050 Lawrence Avenue East, Scarborough, Ontario, M1P-2V5	**LHIN:**	
Submission Date:	January 21, 2014		

Facility Type– Please Select	
Public Hospitals (including own funds projects as per legislation)	☒
Community Health Centres	☐
Community-Based Mental Health Programs	☐
Community-Based Substance Abuse (Addiction) Programs	☐
Long-term Care Supportive Housing Providers (typically supporting programs for the frail elderly, acquired brain injury, physically disabled and HIV/AIDS)	☐

	HSP Primary Contact	**HSP Secondary Contact**
Name:	**Rik Ganderton, CEO, RVHS** **Robert Biron, CEO, TSH**	**Rick Gowrie**
Email:	**rganderton@rougevalley.ca** **rbiron@tsh.to**	**rgowrie@rougevalley.ca**
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HSP Approval:		
CEO/ED Name:	**Rik Ganderton & Robert Biron**	
CEO/ED Signature:		

Section 2 – Proposal Overview

Build Type Descriptions

Addition	☒	**Green field**	☒	**Infrastructure**	☒
Renovation	☒	**Remediation**	☐	**Leasehold Improvement**	☐
Brown field	☒	**Decommissioning**	☒	**Property acquisition**	☒
				Other	

Service Type Descriptions

Is this a proposal for a single or multi-service project?

Acute	☒	**ELDCAP**	☐	**Mental Health – Longer Term**	☐
Ambulatory	☒	**Emerg**	☒	**Rehab**	☒
CCC	☒	**Neonatal ICU**	☒	**Infrastructure**	☒
Adult Critical Care/ICU	☒	**Provincial Program**	☒	**Mental Health – Acute**	☒
Other Service Type	☒ Nephrology; Oncology; Cardiac; Stroke				
Support Service – Please Select					
Laboratory	☒	**CT**	☒	**Food Services**	☒
Pharmacy	☒	**Allied Disciplines**	☒	**Housekeeping**	☒
General DI	☒	**Counselling**	☒	**Maintenance**	☒
MRI	☒	**Staff Facilities**	☒	**Other**	☒

Completion Guideline: *It is expected that the response to Section 3 (Part A and Part B) will be completed in 15 regularly spaced pages.*

Section 3 - Proposal

PART A

Program/Service Proposal – LHIN Review

1. Provide a narrative description of the program/service need to be addressed by this initiative. Examples include, but are not limited to:

    a. Need for new program(s)/service(s).
    b. Need for expanded program(s)/service(s).
    c. Need for program redesign or integration.

The Central East LHIN's 2013-16 Integrated Health Services Plan takes its cue from the Ministry of Health and Long-Term Care's Action Plan for Health and the common objectives of Ontario's 14 LHINs. It is rooted in the CE LHIN's commitment to lead the creation of an integrated local health care system that delivers on better health for the community, better patient experience, and better value-for-money. Within the CE LHIN, east Scarborough is served by The Scarborough Hospital (TSH) and Rouge Valley Health System (RVHS). There are four primary sites associated with the two hospital corporations – TSH General; TSH Birchmount; RVHS Centenary which primarily serve Scarborough and RVHS Ajax which provides hospital services to West Durham residents.

The Central East Local Health Integration Network (Central East LHIN) Board passed a motion at its March 2013 meeting directing Rouge Valley Health System (RVHS) and The Scarborough Hospital (TSH) to participate in a Facilitated Integration process to design and implement a Scarborough Cluster hospital services delivery model – through integration of front-line services, back office functions, and leadership and/or governance – in order to improve client access to high quality services, create a readiness for future health system transformation and make the best use of the public's investment.

It is clear that each hospital has many strengths and both have introduced initiatives to strengthen their position and services within the health care system. Based on the current environment, understanding of the changing landscape and the current situation of the hospitals, the question being examined is whether or not the two hospital corporations are better positioned to provide sustainable and quality care to their communities as independent corporations or as a merged organization. Both RVHS and TSH recognize that, in order to support the plan for health care, they must continue to adapt to the growing needs of their communities, continue to explore integration opportunities and draw upon their previous integration experiences, including strategic alliances with primary care and other community partners. This is aligned to the broader vision for Ontario's health care transformation and to pursuing an integrated health system approach to delivering high-quality and responsive care for the Scarborough and west Durham communities. As a merged organization, long- term opportunities include:

- Centres of Excellence – Centres of Excellence provide more local access to a broader and deeper range of clinical expertise to our communities. Examples already exist for Cardiology and Nephrology and further development of these services is feasible. These services provide local access to world-class clinical care for our communities. Future opportunities could include (but are not limited to) Maternal Child, Oncology, Orthopaedics, Urology, Palliative Care and Post Acute Care.
- Development of Ambulatory Centres/Clinics – Growth or creation of new outpatient services; including multiple surgical outpatient clinics, as well as disease site clinics for Oncology provide better access to residents of Scarborough and west Durham.
- More effective integration with all sectors of the broader health care delivery system – these opportunities have strong potential for increasing the quality of care and the patient experience. For example, in the Mental Health program, by combining the Psychogeriatric Outreach Programs the relationship with long-term care homes could be simplified and more seamless care provided. Another example involves Palliative Care where a merged single hospital organization could standardize transitions with community providers to make them more seamless and less complex for patients and families.

RVHS and TSH have jointly completed a high level current state assessment of hospital facilities to assess the existing building infrastructure and its condition. When the condition of these facilities is compared to other hospital facilities in the province, it becomes clear that there is a significant burden in terms of ongoing maintenance, needed facility upgrade and operational cost penalties. The TSH General Campus, RVHS Centenary Site, and TSH Birchmount Campus FCI scores are above the median (0.23) for Ontario hospitals. TSH Birchmount Campus is in the lowest 10th percentile of Ontario Hospitals indicating a need for extensive repairs or replacement. Both RVHS and TSH, as evidenced by multiple, high cost emerging capital projects ($.5B) and substantial facilities renewal costs ($1B) projected to 2033, are:

- at capacity and unable to accommodate increasing workload;
- not configured for efficient clinical services, with limited flexibility for adoption of new practices;
- not able to meet emerging contemporary planning standards, and have limited space to support many basic functions; and,
- extremely challenged to accommodate proper infection prevention and control practices.

Roughly 49% of the assets are over 30 years old, and the majority of the investment that is required is attributed to assets and/or components that are characterized as being 'beyond useful life" and "unreliable"; thus signalling that there may be more scope for improvement, further investment or disposal. Facilities and capital redevelopment leaders are focussed on mitigation strategies for the significant backlog maintenance requirement to ensure that high and significant risk backlog is prioritized, based on the risk it poses, for investment within the finite resources available. Based on activity projections, current service delivery models and current hospital facility planning guidelines, the space at each of the hospital sites would need to be significantly redeveloped in order to meet contemporary standards and address risk impacts to patient care.

The two hospitals are further constrained due to very large working funds deficits. The ability to borrow is becoming more limited and any surpluses being generated are being used to replace equipment that is 2 or 3 times older than the Ontario average. While TSH/RVHS recognize that

redevelopment of hospital facilities will be costly, this cannot be a barrier to moving forward; especially when measured against the costs associated with maintaining sub-standard facilities. The Current State report has also not considered specific locations and/or a configuration of services. Consequently, TSH/RVHS seeks to complete the development of a Long Range Service Needs Assessment and Facilities Plan for delivery of services in the Scarborough cluster.

2. Provide a statistical description of the program/service need to be addressed by this initiative: This should include:

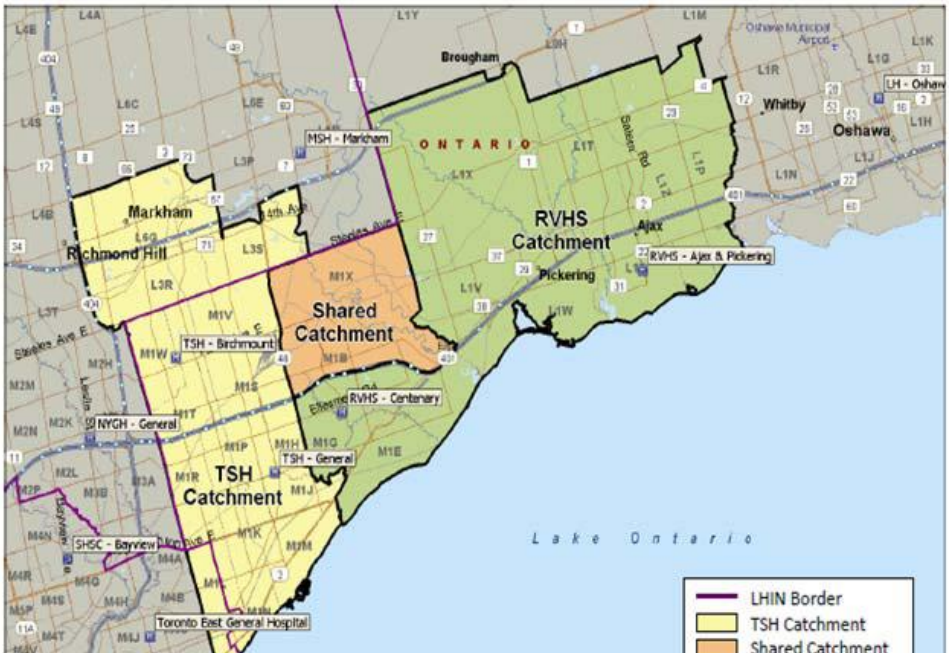
    a. Demographic profile (current and projected population for 5, 10 and 20 years).
    b. Utilization profile (current and projected demand for 5, 10 and 20 years).

RVHS and TSH are the results of previous integration efforts dating back to 1999. The Scarborough cluster represents 40% of the total Central East LHIN population. The community served is one of the most diverse and multicultural areas of the GTA.

- RVHS catchment area: 612,022
  - Centenary: 3.2%
- TSH catchment area: 926,994
  - 3.1% growth from 2006

Both the RVHS and TSH communities are anticipating significant growth. The overall population growth in the Central East LHIN is forecasted to be 17% from 2011 to 2021 (Source: Ministry of Finance Population Projections by LHIN from C2011-2036, based on Census Survey data up to 2010). As the communities grow, inpatient cases are anticipated to grow by 13.3% over five years and 27.7% over 10 years. Over the next 10 years, percentage growth in cases will be the largest in specialized medical and surgical care such as vascular surgery, urology and cardiac care and the smallest in psychiatry, obstetrics and plastics. A summary of Key Facts for clinical profiles, market share growth, and population growth projections by patient clusters is attached.

While Scarborough is not experiencing extensive growth at this time it should be noted that the 3 facilities have been in place for a significant period and have, as noted above, reached capacity some time ago. They are serving well over a million residents.



Given the close geographic proximity of the three Scarborough hospital sites (minimum distance is 6 km between sites, while maximum distance is 12 km), demographic challenges and age characteristics are largely similar, including an aging population, high density as well as lower income levels and higher unemployment in Scarborough. Overall, both the RVHS and TSH communities have vulnerable populations. The two hospital corporations serve similar populations and experience similar challenges related to market share.

3. Describe how this program(s)/service(s) need supports local health system integration and a unified system of care.

    a. MOHLTC – Provincial programs (e.g. Cardiac Care and Transplantation)
    b. LHIN – Integrated Health Services Plan, Clinical Services Plan, agreement with Provincial Agencies such as Cancer Care Ontario and Ontario Renal Network, as required
    c. HSP – Strategic Plan, Organizational Goals, Accountability Agreements

The Central East LHIN's 2013-16 Integrated Health Services Plan is rooted in the CE LHIN's commitment to lead the creation of an integrated local health care system that delivers on better health for the community, better patient experience, and better value-for-money. Using the framework of the four guiding principles – Collaboration, Accessibility, Sustainability and Excellence – significant opportunities and benefits have been identified by TSH/RVHS to improve care, access and value. Stakeholder input and the output of the Working Groups have provided concrete ideas that would benefit the communities of Scarborough and west Durham. These opportunities can be achieved by designing a strong, single hospital with a new brand and a shared vision. Together the two hospitals can position themselves to better respond to the needs of their communities, address fiscal challenges more effectively, and take advantage of the fast changing health care environment. A merged hospital would continue to provide regional programs; it would strengthen existing programs; and it could develop new or enhanced services

for the community through Centres of Excellence, clinics and partnerships with other providers. The merger of the two organizations has the potential to create a hospital system that is positioned to succeed through the broader health system transformation, to deliver increased quality, access and range of services not currently available to the citizens of Scarborough and west Durham. Overall, the strength of this value proposition is not in the short-term, but rather in the longer-term in which the hospitals are able to position themselves to better serve their communities, create a shared vision for a transformed local health care system, address fiscal challenges together, and take advantage of the fast changing health care environment. The rationale for focusing on the merger option is to:

- Develop a long-term vision for hospital services for the Scarborough and west Durham communities;
- Develop a solution that has the potential to maintain access and maintain or improve quality while dealing with ongoing health system transformation and funding constraints;
- Develop a solution that will make the hospitals more competitive in response to government changes to the funding model;
- Ready the two hospital corporations for continuing health system transformation by developing a platform for better connecting with other sectors, such as primary care and community agencies;
- Ensure that separate governance and management structures would not be a barrier to identifying benefits as they have in the past; and,
- Overcome a history of limited collaboration between the two hospital corporations over the last 40 years.

4. What discussions have occurred and please describe what level of support has been received from other stakeholders with regard to this initiative? Other stakeholders may include:

    a. Internal staff, physicians and/or Board members
    b. Other HSPs
    c. Neighbouring LHINs
    d. Provincial agencies (e.g. Cancer Care Ontario)
    e. Service partners
    f. Community stakeholders [Local Health System Integration Act, Section 16 (6) Each health service provider shall engage the community of diverse persons and entities in the area where it provides health services when developing plans and setting priorities for the delivery of health services. 2006. c. 4, s. 16 (6)]

The Central East Local Health Integration Network (Central East LHIN) Board passed a motion at the March 2013 meeting directing Rouge Valley Health System (RVHS) and The Scarborough Hospital (TSH) to participate in a Facilitated Integration process to design and implement a Scarborough and west Durham hospital services delivery model – through integration of front-line services, back office functions, and leadership and/or governance structures – in order to improve client access to high quality services, create a readiness for future health system transformation and make the best use of the public's investment. The Central East LHIN took the lead in establishing the planning structure for the Facilitated Integration, an Integration Leadership Committee (ILC), to oversee the Facilitated Integration Planning activities. The ILC prepared and submitted a Planning Framework, key to which are the guiding vision and principles that were developed with full engagement and support by the ILC to guide the work of the two hospitals in the identification and evaluation of integration options.

The two hospitals have participated in a process to learn more about each other with a view to identifying opportunities where they have the potential to be stronger together. Fifteen groups made up of front line leaders, physicians, clinicians and administrators were established to look at the current state of 11 clinical programs and 4 back office areas and to generate integration ideas that would improve quality, access and care for the citizens of Scarborough and west Durham. The groups were tasked with soliciting input from key stakeholders to inform the completion of workbooks that identified over 40 potential integration opportunities with associated benefits, risks and mitigation strategies. In addition to the work of the clinical and back office Working Groups, an extensive stakeholder engagement process was undertaken to solicit input from community groups, staff and physicians, citizens of Scarborough and west Durham, politicians, and other stakeholders to explore the benefits and risks of a possible merger. Over 400 stakeholders provided direct input and were engaged over a three month period. Furthermore, some 16,000 persons participated in telephone town halls and there were more than 130,000 social media hits. The following is a summary of the internal and external stakeholder input:

- There are opportunities to provide better coordination of care and access through a single hospital organization.
- Improve opportunities to build on each hospital's strengths to create stronger local, regional and provincial programs and position the hospital system as a strong player in other health system integrations and partnerships, such as with primary care, long-term care and other health and community service providers.
- Better opportunities to improve facilities together than independently – both hospital corporations require significant facility infrastructure renewal and expansion and as a united organization, will have a stronger voice with the province for capital investments.
- There are opportunities for financial savings through the elimination of duplication, such as back office services and management, as well as efficiency opportunities.
- Greater ability to attract more physician specialists for advanced care through a merged hospital corporation.
- Working together, instead of competing, the hospitals could increase their market share and repatriate patients travelling to other GTA hospitals.
- Scarborough and west Durham residents deserve a strong hospital system with a shared vision for the future, a competitive brand and one voice.
- The community is open to the idea of a merger – there is overall neutral to positive support for the merger.

Based on the analysis of the Working Groups and understanding of experiences of mergers in other jurisdictions, including Ontario, stakeholders do not believe the value proposition can be solely financial. The value proposition must be a combination of qualitative and quantitative opportunities, and ultimately, it must demonstrate value for the patients and communities.
A number of stakeholders emphasized the importance of creating a hospital system to support the attraction and retention of talented physicians, clinicians and care providers. A strong hospital system is an essential component of a strong, local health care system. Some stakeholders summarized the new hospital system as a "magnet hospital" for patients, donors, physicians, clinicians, staff and community partners.

Key Facts:

- Facilitated Integration website (www.leadingforpatients.ca) – more than 4,700 visits and

15,400 page views.

- Two Telephone Town Halls – 8,380 on call Sep. 24 and 7,500 for Oct. 8.
- Staff Town Halls – two sessions reaching four hospital sites, videos posted online.
- Media relations – community newspapers, ethnic media, television and radio resulting in more than 72 stories.
- Media ads – reached more than 2 million via newspapers and radio ads to promote Telephone Town Halls.
- Social media on Twitter and Facebook – more than 140,000 views on Facebook.
- Reach out to elected officials – weekly calls to MPPs, regional and municipal councils.
- Online survey – 126 responses.
- 22 community roundtables with more than 150 participants.

5. Describe any significant operational implications in terms of:

    a. Operating cost
    b. Staffing

TSH and RVHS are not able to describe the operating cost and staffing implications at this time. Operating costs and staffing implications will be identified during the Stage 1 Proposal planning process when additional detailed information will be available.

Both RVHS and TSH have a challenging financial starting point to manage going forward. To varying degrees, both organizations have weak balance sheets with constrained liquidity and cash flow. As a result, both have very limited financial means to replace aged equipment and buildings and to invest in improving services.

Under the HSFR, both hospitals have experienced near flat or negative funding, while having to address budget gaps driven by cost inflation, increasing patient volumes and patient complexity. While these gaps have been addressed for the 2013/14 fiscal year, the effort to balance the budget means that, in some cases, capital investments have been limited.

Based on these funding and budget pressures including inflation, population growth and increasing acuity, each hospital will need to continue to find ways to reduce costs. Overall:

- Both hospitals are facing flat or negative Provincial funding (similar to all hospitals) – combined with increasing patient volumes, complexity and a growing population.
- Both hospitals are facing inflation of 4-5% with flat revenue and a requirement to balance their budget.
- HSFR being rolled out by the provincial government is creating an increasingly competitive environment between hospitals for patients, funding, capital and health human resources. With the close proximity of hospital sites in Scarborough this competitiveness is not beneficial and could potentially drive negative impacts for patients.
- Both hospitals have tight balance sheets with constrained liquidity and cash flow although one at least has cash resources and has not drawn on its short-term borrowing facilities.
- Both hospitals have varying but constrained or limited financial means to replace aged

equipment and buildings and to invest in improving services, although investments have been made over the last five years.

The two hospital corporations are running out of capacity to restructure services to improve efficiency. The next steps will have to include service reductions or eliminations. The Hospitals believe this can be avoided, minimized or deferred through the merger. RVHS and TSH will be stronger and more resilient together. Specifically, from a financial perspective, the estimated net cumulative operating savings impact is in the range of $7.6 million to $9.6 million by the end of year three. If a facility renewal were to occur, then the total potential benefits from operational efficiencies and economies of scale increases up to an estimated $41 million. This would need to be confirmed as part of detailed facility planning exercise.

One clear, but not necessarily directly quantifiable, benefit is that the combined organization would be of a size that could more easily withstand the impacts of funding reform and health system transformation, over the next few years, by adjusting services, programs and staffing such that services could be retained with possible reductions, but prevent service elimination. In essence, a larger organization (in fewer sites) is more able to adjust service delivery to maintain those services, compared to smaller, fragmented separate organizations.

6. Describe any alternative program/service solutions considered to address the need identified in Question 1 and 2 above. Examples may include:

    a. Integration opportunities.
    b. Program /service redesign opportunities.
    c. Alternative service delivery models.

Examples of integration already exist for Cardiology and Nephrology and further development of these services is feasible. These services provide local access to world-class clinical care for our communities. Future opportunities could include Maternal Child, Oncology, Orthopaedics, Urology, Palliative Care and Post Acute Care. Development of Ambulatory Centres/Clinics provides the opportunity to grow or create new outpatient services; including multiple surgical outpatient clinics, as well as disease site clinics for Oncology providing better access to residents of Scarborough and west Durham. More effective integration with all sectors of the broader health care delivery system presents further strong potential for increasing the quality of care and the patient experience. For example, in the Mental Health program, by combining the Psychogeriatric Outreach Programs the relationship with long-term care homes could be simplified and more seamless care provided. Another example involves Palliative Care where a merged single hospital organization could standardize transitions with community providers to make them more seamless and less complex for patients and families.

How clinical services might be delivered differently in the future, factors driving the need for change and alternative service delivery models will be addressed in future stages of planning. The planning for hospital facilities presents an opportunity for ensuring both Ministry and CELHIN priorities are incorporated into the proposed service delivery model. Planning should focus on confirming unmet needs, the development of an integrated service delivery model and avoiding unnecessary duplication. Considerations to be addressed through the development of a Long

Range Service Needs Assessment and Facilities Plan may include the planning and development of new hospital facilities as well as the potential revitalization of one or more of the existing facilities for the development of ambulatory centres consistent with the Ministry Action Plan.

PART B

Development Concept – MOHLTC Review

7. What amount of space, based on space benchmarks, is required to meet the program need identified in Part A?

This will be developed during the next stage of planning. However, possible options for review in the next stage include:

- Option 1 – build a single new full service acute facility of about 800 beds and the potential revitalization of one or more of the existing facilities for the development of one or two free standing urgent care/ambulatory care facilities, which could provide up to 24 hour emergency care with access to on-site short stay beds (24-48 hours).

- Option 2 – build two new full service acute facilities; facility size to be in the 600-650 bed range – one north and one south of the 401.

Both options assume further development of areas of specialization and elimination of unnecessary duplication. The following are Projected bed equivalents assuming:

- National average Length of Stay;
- Bed equivalents at 90% occupancy accounting only for population growth;
- Projections stratified by <65 years old and > 65 years old; and,
- 2011/12 inpatient data.

Scarborough Cluster	2011	5Yrs (2016)	10Yrs (2021)	15Yrs (2026)	20YRs (2031)	25Yrs (2036)
Acute	648	736	843	967	1089	1123
Post Acute (CCC/Rehab)	66	79	91	108	124	136
Mental Health	100	107	114	121	128	134
Total	814	922	1047	1195	1340	1393

It is recognized that there are many emerging strategies (i.e. Ministry Action Plan, HSFR, Community Specialty Clinics, etc.) and changes in clinical practice that will likely impact (i.e. reduce) the final determination of bed requirements. Those impacts will be more fully explored and factored during the next phases of the capital planning and design.

8. Does the HSP have this space available to it now?

The hospital sites located in Scarborough do not meet contemporary standards for planning, systems, and infrastructure requirements. Based on current configurations all Scarborough sites are already at capacity. However, revitalization of one or more of the existing facilities for the development of ambulatory care centres could be feasible.

9. Is it practical to renovate the existing space to meet the program need identified in Part A?

Options could include new facilities, redeveloped and expansion of existing sites and/or a combination of both. The Long Range Service Needs Assessment and Facilities Plan would allow the hospitals and community to determine the best option for future service delivery options and facility renewal in the Scarborough cluster. However the current state of the 3 Scarborough sites make new/replacement/revitalized facilities the most likely conclusion.

10. Does the HSP have physical support and operational support available to serve the existing space, (e.g. pharmacy, food services)?

This will be developed during the next stage of planning. Expansion of some or all support areas will be required.

11. Describe the proposed physical infrastructure changes required to support the program/service need identified in Part A. This may include:

    a. Renovation to existing infrastructure.
    b. Development of new infrastructure.
    c. Relationship to any other capital projects (approved or proposed).

To be detailed in the next stage of planning. The following emerging capital projects at both TSH and RVHS will potentially be impacted.

Strategy	2012	2013	2014	2015	2016	5 Yr. Plan
	Actual		Assumptions			
HIRF Funding (VFA Requirements)	$2,800,000	$3,100,000	$2,500,000	$2,500,000	$2,500,000	$13,400,000
Capital Projects *(MOH Approval needed)*						
ED/Ambulatory Care -Birchmount				$20,000,000		$20,000,000
Mental Health- Birchmount					$1,000,000	$1,000,000
Elevator Replacement-Birchmount				$2,000,000		$2,000,000
Plumbing Upgrade Project-General		$4,900,000				$4,900,000
Master Plan- General			$217,000,000			$217,000,000
Diagnostic Imaging Concourse-General	$8,000,000		$2,000,000			$10,000,000
HVAC Upgrade-General				$4,800,000		$4,800,000
Hemodialysis Isolation-General			$3,100,000			$3,100,000
Total						**$262,800,000**

Master Plan (MP) – TSH General (above) only refers to Phase 1 that is currently awaiting MOHLTC Capital approval and includes: Surgical Suites, CPU, Oncology and Support Services. There are 5 phases to the TSH current MP going out 30 years ultimately replacing most of the existing inpatient units (Tower, East and Central and Crockford wings) while building ambulatory and inpatient infrastructure.

Strategy	2011/12	2013/14	2014	2015	2016	5 Yr. Plan
	Actual		Assumptions			
HIRF Funding (VFA Requirements)	$524,355	$429,214				$953,569
Capital Projects *(MOH Approval needed)*						
Cardiac Catheterization (RVC)				$39,000,000		$39,000,000
Tower Retrofit (RVC)					$100,000,000	$100,000,000
Total				$39M	$100M	$139M

12. Describe the physical infrastructure deficiency related to the program(s)/service(s) need identified in Part A. This may include:

    a. General condition.
    b. Capacity to continue supporting program(s)/service(s) delivery.

A merged organization would be the seventh largest of more than 150 hospital corporations in Ontario. It would rank first in surgical cases, but it would have some of the oldest operating rooms in the province at the TSH General site (circa 1957). It would rank second overall in total emergency department visits, with severely undersized emergency departments at the RVHS Centenary and TSH Birchmount sites. Together, the combined organization would have the following volumes:

- Rank 1st in day surgical cases: 75,000;
- Rank 2nd in emergency visits: 235,000;
- Rank 2nd in acute separations: 57,000;
- Rank in the top ten for intensive care days (25,000), ambulatory care visits (728,000) and average beds staffed and in operation (1,046); and,
- Rank in the top 25 for inpatient days for Mental Health (32,000), Rehabilitation (18,000) and Complex Continuing Care (26,000).

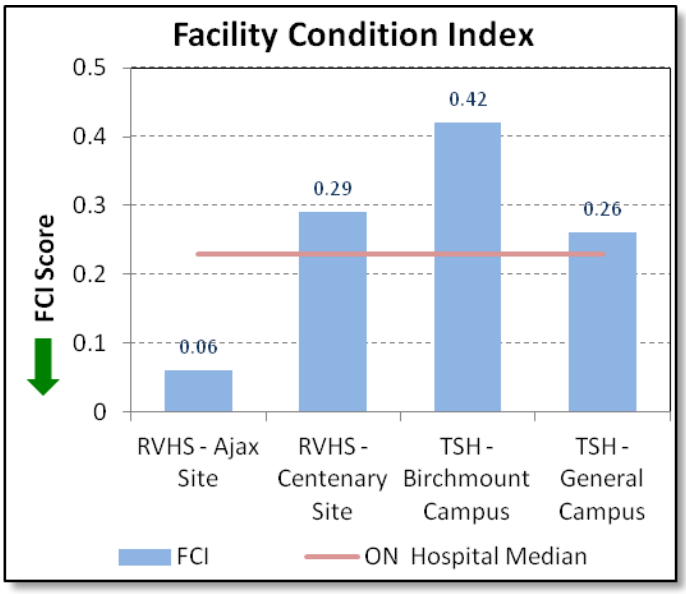
Currently, the two organization's physical facilities, particularly in Scarborough, are in need of renewal as evidenced by the Facility Condition Index (FCI) scores. The FCI is a standardized measure of the extent to which a building requires repairs or replacement and is calculated as the ratio of deferred maintenance dollars to replacement dollars. A high FCI score indicates a higher need for remediation or renewal investment relative to the facility's value. The FCI scores for RVHS Centenary ,TSH General, and TSH Birchmount sites are above the median (0.23) for Ontario hospitals and the TSH Birchmount score of 0.42 is high (bottom 10th percentile), indicating a need for extensive repairs or replacement. It should be recognized that, while the Facility Condition Assessment is a collection of detailed facility data to support a capital renewal and deferred-maintenance program by identifying, estimating, and prioritizing existing deferred maintenance and predicting capital-renewal requirements, the FCI measures the current condition of the facility and the cost of remedying deferred maintenance. In other words it

typically does not address capital-renewal requirements associated with redevelopment projects.

The Scarborough hospitals as evidenced by multiple, high cost emerging capital projects ($400M) and substantial facilities renewal costs ($900M projected to 2033), are:

- not configured for efficient clinical services;
- at capacity and provides limited flexibility for adopting new practices or accommodating increasing workload;
- not able to meet emerging contemporary planning standards, and has limited space to support many basic functions; and,
- challenged to accommodate proper infection prevention and control practices.

Roughly 49% of the assets remain over 30 years old, and the majority of the investment that is required is attributed to assets and/or components that are characterized as being 'beyond useful life" and "unreliable"; thus signalling that there may be more scope for improvement, further investment or disposal.



Hospitals are responsible for ensuring that their facilities are in a good state of repair by managing their capital assets and planning renewal activities. The Ministry of Health and Long-Term Care established the Health Infrastructure Renewal Fund (HIRF) in 1999 to assist hospitals in renewing their hospital facilities. The HIRF program was reformed in 2004 to streamline minor (less than $1 million) infrastructure renewal project approvals and to distribute infrastructure renewal funds annually to public hospitals. Since 2011/12, TSH has received $5.9M in HIRF funding and RVHS roughly, $3M. Despite this funding assistance, both Hospitals are challenged to keep up with the level of spend necessary to maintain the facilities in a good state of repair.

TSH

The TSH General campus is very old and out of date: 35% of the facility is 30 to 50 years old; 43%

is over 50 years old. The General has experienced a patchwork of expansions and repairs over the years, and as a result, it is not configured for efficient clinical services. Patient and treatment rooms are not to standards, there is a lack of proper isolation rooms, operating rooms (circa 1957) are very small and basic services (gases, electrical outlets, suction etc.) are on the periphery and not readily accessible to patient care providers creating hazardous working conditions for staff. Patient Flow within the hospital is a challenge as buildings are not linked on many levels and it is hard for patients and visitors to navigate the site. Due to construction of many different buildings over time, and lack of connectivity, there are numerous sets of elevators; however, dedicated elevators for waste, patients or supplies do not exist, contributing to potential cross contamination and infection control issues. This type of aging facilities makes providing a safe patient experience a significant challenge. The Birchmount campus is a newer site (approximately 30 years old) but, unfortunately, has had no significant infrastructure investment since it was built. Elevator capacity is significantly lacking (there are only two patient elevators and two service elevators and a shelled shaft for a third elevator has never been completed) creating a back log for patients and visitors resulting in long wait times and delays. The elevators need complete replacement as they break down frequently and sourcing replacement parts is becoming almost impossible. The ED at this location is very busy and not designed for the volumes of patients seen today; patients wait in the corridors and flow into and out of the ED is very poor and congested. Triage is inadequate and provides no patient privacy.

RVHS–RVC
Major deficiencies of existing space relative to contemporary guidelines are in bed and bed-related functions, the number of one-bed rooms and in the size of all bedrooms and ensuite washrooms. Patient rooms are sub-optimal from a care delivery perspective and, as a result, ICD guidelines cannot be fully accommodated without impacting bed complement and undertaking significant renovations. Inpatient units today tend to be more compact shapes than the elongated rectangles of the past; compact rectangles, modified triangles, or even circles have been used in an attempt to shorten the distance between the nurse station and the patient's bed. Built on the Friesen concept, patient rooms are at a distance from the nursing station and direct sight-lines are compromised. Outpatient-related functions are dispersed and detract from quality of care while impeding efficiencies. The ED is handling more than 3 times the volume (60,000+ visits annually) that it was designed for and is frequently overcrowded; patients wait in the corridors and flow into and out of the ED is very poor and congested. There is no separation of walk-in traffic from ambulance traffic. Triage is inadequate with only one triage station and there is no patient privacy.

Although functional, operating suites are aged and in need of updating to meet contemporary planning standards.

In summary, delivering similar services at separate sites, in very old facilities that do not meet contemporary standards, would severely constrain the merged organization's ability to improve quality of care, manage potential risk to patient care and realize further operating efficiencies and improve performance.

13. Describe alternative infrastructure solutions considered.

Alternative infrastructure solutions will be considered during development of the Stage I Submission. These may include new hospital facilities (green build), redevelopment and/or revitalization of existing sites, and/or a combination of the two approaches.

14. Describe any development challenges expected, including:

    a. Site planning
    b. Phasing/decanting

As noted earlier, when current configuration is taken into consideration, the three Scarborough sites are at capacity and will present challenges for long term renewal. The geography will pose challenges for site planning and overall capital project development. Development challenges will be explored and addressed in progressive planning stages.

15. If physical infrastructure will be vacated, what is the intended use of the vacated space?

The potential future use of vacated facilities will be considered during development of the Long Range Service Needs Assessment and Facilities Plan.

16. Provide preliminary capital cost estimate (in current year dollars) noting any assumptions in projecting costs.

    While it is premature to document the initial preliminary cost estimate, a high level order of magnitude capital cost estimate was developed. Although two potential options have been identified to-date, for the purpose of this submission, only one option is being costed at this time. Since Option 1 best aligns with current government policy direction it was selected for this exercise. Option 1 - build a single new full service acute facility of about 800 beds and the potential revitalization of one or more of the existing facilities for the development of one or two free standing urgent care/ambulatory care facilities, which could provide up to 24 hour emergency care with access to on-site short stay beds (24-48 hours). However, the development of a Long Range Service Needs Assessment and Facilities Plan will better inform the implications of various service delivery model options including the quantitative costs (i.e., capital, operational, transitional, etc.), the qualitative factors for considerations, as well, the specific scope of the project/request for capital approval.

    Based on the following chart, it is assumed that an 800 bed facility would cost roughly $1.6B assuming roughly 2,300 sq. ft. per bed and roughly $873/sq. ft. It is assumed that this is based on the DBFM model of procurement and that potential land acquisition costs are excluded. Based on the Traditional Model of procurement, where the risk retained by the public sector is excluded and it is further assumed that this represents a 30% premium under the AFP model of procurement, the cost of the Traditional approach for a 800 bed facility would approximate $1.125B. The revitalization of one or more of the existing facilities for an ambulatory care centre(s) is excluded. Again it should be noted that the cost presented here is based on the current preliminary forecast need of 800 beds. Should fewer beds be required, based on the

planning and design activities which take into account current government policy direction, the estimate would correspondingly be lower.

Opening Date	Hospital	City	Beds	$Million	SF	Square Footage per Bed	Cost per Bed	Cost per SF
2007	WOHS Brampton	Brampton	608	614	1,200,000	1,974 SF/Bed	$ 1,009,868.42 /Bed	$ 511.67 /SF
2011	North Bay	North Bay	420	551	720,000	1,714 SF/Bed	$ 1,311,904.76 /Bed	$ 765.28 /SF
2013	Niagara	St. Catharines	375	759	970,000	2,587 SF/Bed	$ 2,024,000.00 /Bed	$ 782.47 /SF
2015	Humber	Toronto	656	1,750	1,800,000	2,744 SF/Bed	$ 2,667,682.93 /Bed	$ 972.22 /SF
2015	Halton	Oakville	602	2,000	1,500,000	2,492 SF/Bed	$ 3,322,259.14 /Bed	$1,333.33 /SF
	TSH/RVHS Projected		800	1,608	1,841,637	2,302	$ 2,067,143.05	$ 872.99

Item	Cost	Assumptions (e.g., cost per sq. foot of renovation)
Construction Costs for space required for delivery of services (new construction or renovations)		
Any premium for renovations to existing conditions		
Any premium for phasing and decanting		
Any premium for land and/or building acquisition (for community-based agencies)		
Ancillary Costs		
Furniture and Equipment (including minor equipment)		
Post Contract Contingency Allowance		
Estimated Total Cost		

17. Is this project proposed to be:

Ministry cost shared	☒
Own Funds	☐

18. Explain how your HSP plans to provide for its share of the capital costs by identifying all proposed sources and amounts of funding, including any funding partners.

A comprehensive process will be used to identify the sources of funds including the potential for

DBFM, alternate financing, partnering, fundraising by the Hospital's Foundation, etc.

If the HSP has supporting documentation that explains its development concept, please submit

Appendix: Key Facts

Clinical Profiles by Site

Table 1: Clinical Profile – Acute Inpatient

Organization	Rouge Valley Health System		The Scarborough Hospital		
Site	Centenary	Ajax	General	Birch-mount	Merged Volumes
Acute Inpatient Discharges	14,702	8,187	17,994	11,873	52,756
CE LHIN Resident % of Site Discharges	87%	98%	75%	68%	80%
Market Share of CE LHIN Residents Total Discharges	10%	6%	11%	7%	34%
Market Share of Scarborough Residents Total Discharges	20%	1%	27%	16%	65%
Market Share of Durham Resident Total Discharges	7%	16%	2%	1%	26%

Source: 2012/13 Intellihealth DAD

Table 2: Clinical Profile – Emergency Departments

Organization	Rouge Valley Health System		The Scarborough Hospital		
Site	Centenary	Ajax	General	Birch-mount	Merged Volumes
Emergency Visits	62,464	61,324	63,579	47,262	234,629
CE LHIN Resident % of Visits	93%	96%	85%	70%	87%
- Emergent & Potentially Life Threatening	15%	13%	24%	17%	17%
- Urgent & Potentially Serious	52%	47%	55%	57%	52%
- Less Urgent & Semi-Urgent	29%	35%	18%	24%	27%
Market Share of Scarborough Residents Total Visits	28%	1%	28%	17%	74%
Market Share of Durham Resident Total Visits	3%	24%	1%	0%	28%

Source: 2012/13 Intellihealth NACRS

Table 3: Clinical Profile – Specialty Ambulatory

Organization	Rouge Valley Health System		The Scarborough Hospital		
Site	Centenary	Ajax	General	Birch-mount	Merged Volumes
Day Surgery, Cardiac Cath Lab, Oncology & Renal Visits	31,694	9,630	118,081	17,023	176,428
Market Share of Scarborough Resident Day Surgery	24%	1%	23%	18%	66%
Market Share of Scarborough Resident Cath Lab	55%				55%
Market Share of Scarborough Resident Oncology	9%		30%	1%	40%
Market Share of Scarborough Resident Renal Dialysis			78%		78%
Market Share of Durham Resident Day Surgery	7%	15%	3%	2%	27%
Market Share of Durham Resident Cath Lab	67%				67%
Market Share of Durham Resident Oncology	6%		3%	0%	9%
Market Share of Durham Resident Dialysis			7%		7%

Source: 2012/13 Intellihealth NACRS

Table 4: Clinical Profile – Other Inpatient Programs

Organization	Rouge Valley Health System		The Scarborough Hospital		
Site	Centenary	Ajax	General	Birch-mount	Merged Volumes
Complex Continuing Care Discharges	12,488	8,767			21,255
CE LHIN Resident Share of CCC Days	95%	97%			96%
Site Share of CE LHIN Resident CCC Days	6%	5%			11%
Inpatient Rehabilitation Discharges	535	329		297	1,161
CE LHIN Market Share	11%	7%		5%	23%
Inpatient Mental Health Discharges CE	1,372			1,158	2,530
LHIN Resident % of Discharges Market	87%			76%	82%
Share of CE LHIN Mental Health Discharges	23%			17%	40%

Source: 2011/12 Intellihealth CCRS, OMHRS

Table 5: Summary of Clinical Sites Profiles

Summary of Clinical Site Profiles					
Organization	Rouge Valley Health System		The Scarborough Hospital		Merged Volumes
Site	Centenary	Ajax	General	Birchmount	
Acute Inpatient Discharges	14,702	8,187	17,994	11,873	52,756
CE LHIN Resident % of Site Discharges	87%	98%	75%	68%	80%
Market Share of CE LHIN Residents Total Discharges	10%	6%	11%	7%	34%
Market Share of Scarborough Residents Total Discharges	20%	1%	27%	16%	65%
Market Share of Durham Resident Discharges	7%	16%	2%	1%	26%
Emergency Visits	62,464	61,324	63,579	47,262	234,629
CE LHIN Resident % of Visits	93%	96%	85%	70%	87%
- Emergent & Potentially Life Threatening	15%	13%	24%	17%	17%
- Urgent & Potentially Serious	52%	47%	55%	57%	52%
- Less Urgent & Semi-Urgent	29%	35%	18%	24%	27%
Market Share of Scarborough Residents Total Visits	28%	1%	28%	17%	74%
Market Share of Durham Resident Total Visits	3%	24%	1%	0%	28%
Day Surgery, Cardiac Cath Lab, Oncology & Renal Visits	31,694	9,630	118,081	17,023	176,428
Market Share of Scarborough Resident Day Surgery Market	24%	1%	23%	18%	66%
Share of Scarborough Resident Cath Lab	55%				55%
Market Share of Scarborough Resident Oncology	9%		30%	1%	40%
Market Share of Scarborough Resident Renal Dialysis			78%		78%
Market Share of Durham Resident Day Surgery	7%	15%	3%	2%	27%
Market Share of Durham Resident Cath Lab	67%				67%
Market Share of Durham Resident Oncology	6%		3%	0%	9%
Market Share of Durham Resident Dialysis			7%		7%
Complex Continuing Care Discharges	12,488	8,767			21,255
CE LHIN Resident Share of CCC Days	95%	97%			96%
Site Share of CE LHIN Resident CCC Days	6%	5%			11%
Inpatient Rehabilitation Discharges	535	329	297		1,161
CE LHIN Market Share	11%	7%	5%		23%
Inpatient Mental Health Discharges	1,372			1,158	2,530
CE LHIN Resident % of Discharges	87%			76%	82%
Market Share of CE LHIN Mental Health Discharges	23%			17%	40%

Source: Acute Inpatient: 2012/13 Intellihealth Discharge Abstract Database (DAD); Emergency, Day Surgery and Ambulatory: 2012/13 Intellihealth National Ambulatory Care Reporting System (NACRS); Complex Continuing Care and Rehabilitation and Ontario Mental Health Reporting System: 2011/12 IntelliHealth.

Market Share and Patient Volumes

Table 6: Projected Market Share Growth of a Merged Organization

Patient Cluster Category	RVHS & TSH Inpatient Sites				Merged Volume
	Rouge Valley Health System		The Scarborough Hospital		
	Centenary	Ajax	General	Birchmount	
Separations					
Primary	6,256	4,610	7,609	5,014	23,489
Secondary	4,780	3,069	5,014	2,760	15,623
Tertiary	1,651	254	827	223	2,955
Quaternary	89	55	105	53	302
Market Share					
Primary	10%	7%	12%	8%	37%
Secondary	10%	6%	11%	6%	33%
Tertiary	15%	2%	7%	2%	26%
Quaternary	5%	3%	5%	3%	15%

Patient Cluster Category based on Hay Level of Care Methodology
Source: 2012/13 Intellihealth DAD

Table 7: Projected Inpatient Volume Growth for Central East LHIN

	Volume & Projection			Change from 2012	
Patient Cluster Category	2012/2013 (Actual)	2017 (Estimated)	2022 (Estimated)	2017	2022
Inpatient Cases	123,719	140,173	158,007	13.3%	27.7%
Emergency Visits	614,626	672,904	735,836	9.5%	19.7%
Day Surgery	140,850	159,355	179,310	13.1%	27.3%
Cardiac Cath Lab	6,336	7,374	8,543	16.4%	34.8%
Oncology	128,172	148,544	170,663	15.9%	33.2%
Renal Dialysis	146,699	169,330	195,381	15.4%	33.2%
CCC Assessments	3,026	3,576	4,188	18.2%	38.4%
Rehabilitation Episodes	4,356	5,122	6,021	17.6%	38.2%
Mental Health IP Episodes (Adult)	5,184	5,541	5,861	6.9%	13.1%

Source: 2012/13 Intellihealth DAD and NACRS, 2011/12 Intellihealth CCRS, OMHRS and NRS data, Ministry of Finance growth projections.

Table 8: Estimated Inpatient Volumes

CE LHIN: Estimated Inpatient Volumes in 2017 and 2022					
	Discharges			Change from 2012	
Patient Cluster Category	**2012/2013 (Actual)**	**2017 (Estimated)**	**2022 (Estimated)**	**2017**	**2022**
Cardiac Surgery	1,163	1,360	1,587	16.9%	36.5%
Cardiology	12,152	14,201	16,458	16.9%	35.4%
Dental/Oral Surgery	152	153	158	0.8%	3.7%
Endocrinology	2,056	2,315	2,614	12.6%	27.1%
Gastro/Hepatobiliary	8,378	9,553	10,832	14.0%	29.3%
General Surgery	9,310	10,458	11,720	12.3%	25.9%
Gynaecology	3,208	3,444	3,734	7.3%	16.4%
Haematology	2,311	2,605	2,931	12.7%	26.8%
Neonatology	17,310	19,063	21,116	10.1%	22.0%
Nephrology	1,176	1,372	1,591	16.6%	35.3%
Neurology	4,151	4,788	5,508	15.4%	32.7%
Neurosurgery	1,444	1,620	1,814	12.2%	25.6%
Non-Acute	4,314	5,066	5,883	17.4%	36.4%
Obstetrics	17,572	19,235	20,474	9.5%	16.5%
Ophthalmology	234	264	296	12.8%	26.5%
Orthopaedics	9,605	11,109	12,752	15.7%	32.8%
Other Internal Medicine	6,577	7,592	8,689	15.4%	32.1%
Other Reasons	1,636	1,897	2,186	15.9%	33.6%
Otolaryngology	2,897	3,209	3,555	10.8%	22.7%
Plastic Surgery	699	760	821	8.8%	17.4%
Psychiatry	1,445	1,473	1,586	2.0%	9.8%
Pulmonary	9,519	11,120	12,913	16.8%	35.7%
Thoracic Surgery	574	665	770	15.9%	34.2%
Urology	5,046	5,920	6,913	17.3%	37.0%
Vascular Surgery	790	930	1,103	17.7%	39.7%
Grand Total	**123,719**	**140,173**	**158,007**	**13.3%**	**27.7%**

NOTE: Growth projections are based on demographics alone. Current utilization rates are assumed to stay fixed.
Source: 2012/13 Intellihealth DAD and Ministry of Finance growth projections