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هيئة الأشغال العامة
PUBLIC WORKS AUTHORITY

PREQUALIFICATION DOCUMENT FOR

**PRE CONTRACT AND GENERAL SUPERVISION
PROFESSIONAL CONSULTANCY SERVICES FOR
THREE SPECIFIC HEALTHCARE PROJECTS AT
HAMAD BIN KHALIFA MEDICAL CITY (HBKMC)**

S/No.	Project Name	Project ID
1	- Design of Central Sterilization - Design of Robotic Material Distribution System (Rail)	BA 14/15 D 045 ST
2	Design of new Tertiary Hospital on RH Campus	BA 14/15 D 048 G
3	Design of Specialist Diagnostic Centre	BA 14/15 D 049 ST

PROCEDURES AND PROJECT BRIEF PART 2: PROJECT BRIEF (for each Project)

Authority

Public Works Authority
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State of Qatar

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1. INTRODUCTION

1.1 General

- 1.1.1 The State of Qatar is a peninsula located on the northeast coast of the much larger Arabian Peninsula with a total land area of approximately 11,500 square kilometres. The population is approximately 1.7 million inhabitants (2009 census) with almost 83% of the inhabitants residing in Doha and its main suburb Al-Rayyan.
- 1.1.2 The State of Qatar has experienced rapid economic growth over the last several years. This economic growth has resulted in increased demand for the State to construct and provide first-class infrastructure such as government buildings (hospital, schools, and the like) transportation networks (harbours, airports, highways, pavements etc.) and services (power, water, sewerage, waste disposal etc.).
- 1.1.3 This increased demand has consequently placed extraordinary requirements on the relevant government entities and their resources. It has become necessary to enhance the capacity of these government entities in order to deliver the required infrastructure.
- 1.1.4 The Public Works Authority (PWA) also known as Ashghal, hereinafter referred to as the "Authority" is responsible for the planning, design, procurement construction, assets management, and delivery of infrastructure and building works in the State of Qatar.
- 1.1.5 The Authority contributes to the economic and social development of the State of Qatar through implementing public projects in accordance with the approved plans of the State. In coordination with other agencies in the State, the Authority implements and programs the execution of public projects consistent with the approved State objectives and allocated budget.
- 1.1.6 The Authority's tasks also include preparation of studies, designs, and technical specifications for the public projects; Contracting for implementation of public projects and overseeing the work; implementing major maintenance projects according to the plans, programs and studies developed; as well as implementation, management, operation and maintenance of drainage, groundwater, surface water and water treatment projects.
- 1.1.7 Through its major departments, the Authority strives to develop the State's infrastructure and public amenities to the level of international standard achieved by developed countries and communities, and in general, it contributes to the overall sustainable development of the State in economic and social areas of the State.
- 1.1.8 The Authority consists of administrative units set out below:
- First: Administrative units under the Minister of Municipality and Urban Planning: The Internal Audit Unit.
 - Second: Administrative units under the President including Office of the President, Public Relations and Communication Unit, Legal Affairs Department and Corporate Development & Planning Department.

- 1.1.9 The Authority's major business unit consists of five major sectors as below:
- Asset Affairs
 - Buildings Affairs
 - Infrastructure Affairs
 - Shared Services Affairs
- 1.1.10 **Asset Affairs:** This sector handles operation and maintenance of assets through two departments namely, Drainage Operation and Maintenance (O&M) Department and Road O&M Department.
- 1.1.11 **Buildings Affairs:** This sector is subdivided into Designs and Projects Departments; dedicated to government building projects such as schools, ports, recreational facilities, healthcare facilities and other government buildings.
- 1.1.12 **Infrastructure Affairs:** This sector is subdivided into Local Roads and Drainage and Expressway departments.
- 1.1.13 **Technical Support Affairs:** this sector consists of three departments:
- Contracts Department, which is responsible for procurement, process and procedures in the delivery of the Authority Projects.
 - Engineering Business Support Department, which provides technical support for the Projects in terms of project planning, estimating, tracking and documentation.
 - Quality and Safety Department, which is responsible for the quality control of projects and safety at work sites and offices.
- 1.1.14 **Shared Services Affairs:** All other departments that deal with technical support come under this sector including Administration and Finance Department, Human Resources Department, General Services Department and Information Services Department.
- 1.1.15 In addition to internal departments, the Authority has recently appointed a number of Program Management Contracts and Management Contractors to deliver services on behalf of Infrastructure Affairs, Asset Affairs and Building Affairs respectively.
- 1.2 Project Procurement**
- 1.2.1 The Project shall be procured via two (2) stages:
- 1.** Pre-qualification for Pre Contract and General Supervision Professional Consultancy Services for Three Specific Healthcare Projects at Hamad Bin Khalifa Medical City (HBKMC)
 - 2.** Invitation to Tender for Pre Contract and General Supervision Professional Consultancy Services for Three Specific Healthcare Projects at Hamad Bin Khalifa Medical City (HBKMC)

3. PROJECT BRIEF

2.1. General

2.1.1. This document forms part of the brief for complete Design of Three Different Healthcare Projects within Hamad Bin Khalifa Medical City vicinity at different locations, the projects are as follows:

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1	- Design of Central Sterilization - Design of Robotic Material Distribution System (Rail)	BA 14/15 D 045 ST
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2.1.2. The Clinical and Facilities Master plan is a vital component of HMC's Strategic Plan to achieve its purpose of delivering the best and safest care in the region. It is an integrated plan which weaves together clinical, academic, research plans and related services. The outcome of the Clinical and Facilities Master plan will be the creation of a peaceful and healing environment that best serves the needs of HMC's patients; and attracts and retains highly talented people.

To sustain this environment, HMC's central Doha campus will be transformed into Hamad Bin Khalifa Medical City (HBKMC), a sophisticated urban healthcare district with completely integrated infrastructure and facilities. HBKMC will be formed of distinct quarters, one of which will house the above five projects that are some of them healthcare projects and others are for public services.

Each of the above projects has a Design Brief and this Design Brief outlines the requirements for a key facility within the HBKMC Master plan.

2.2. Project Brief and Location

This document contains the project brief for each of the aforesaid projects along with its location; However, Detailed project description will be issued later during the Tender Stage.

2.2.1 – Design of Central Sterilization

- Design of Robotic Material Distribution System (Rail) - BA 14/15 D 045 ST

A) Project Brief for BA 14/15 D 045 ST

Public Works Authority (PWA) is seeking a Consultant Design Team for a Robotic and Integrated Logistics System (RAILS) distribution center and Central Sterile Supplies Department to be of distribution. Since the CSSD function is planned to be located on campus as proven in the CSSD feasibility studies the best location is at the distribution center to reduce dependency on road transportation and the associated challenges.

PWA is seeking a world class facility which matches the aims and ambitions of the country itself. The building or buildings will be beautiful, logical and truly centered around the staff and the service they are providing. We are seeking a team that is able to consider every part of the building with Rigor, and overcome and celebrate the technical challenges that such a building presents. Cultural Sensitivities and respect for Islam will be an integral part of the design, without

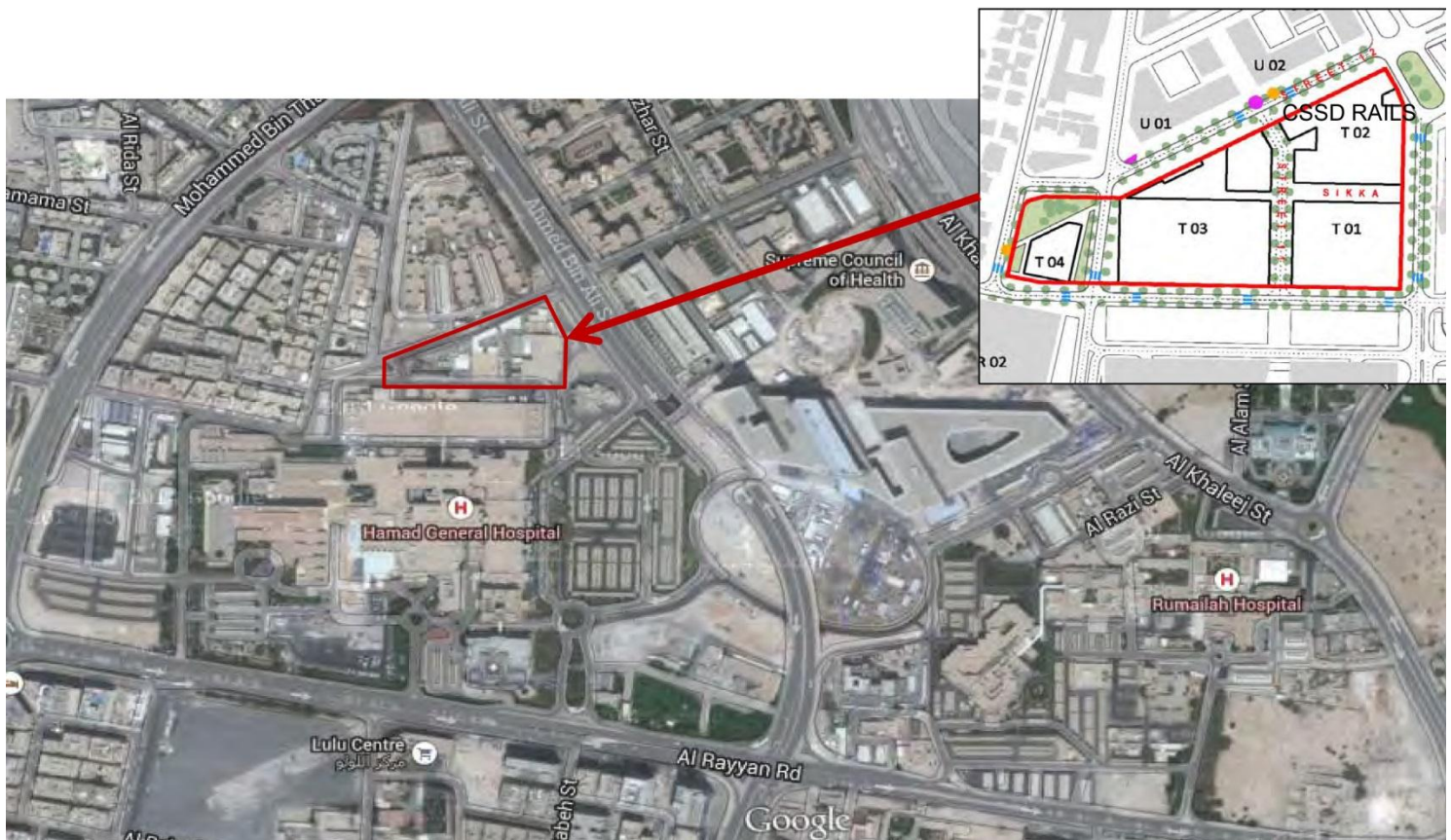
resorting to historical Cliché. The facility will be a thoroughly modern vision of Qatar.

The facility will have the most sophisticated technical equipment and will take advantage of the latest building technology. The Building Services will be coordinated with the architectural concept and complimentary to the facility's service-centered values.

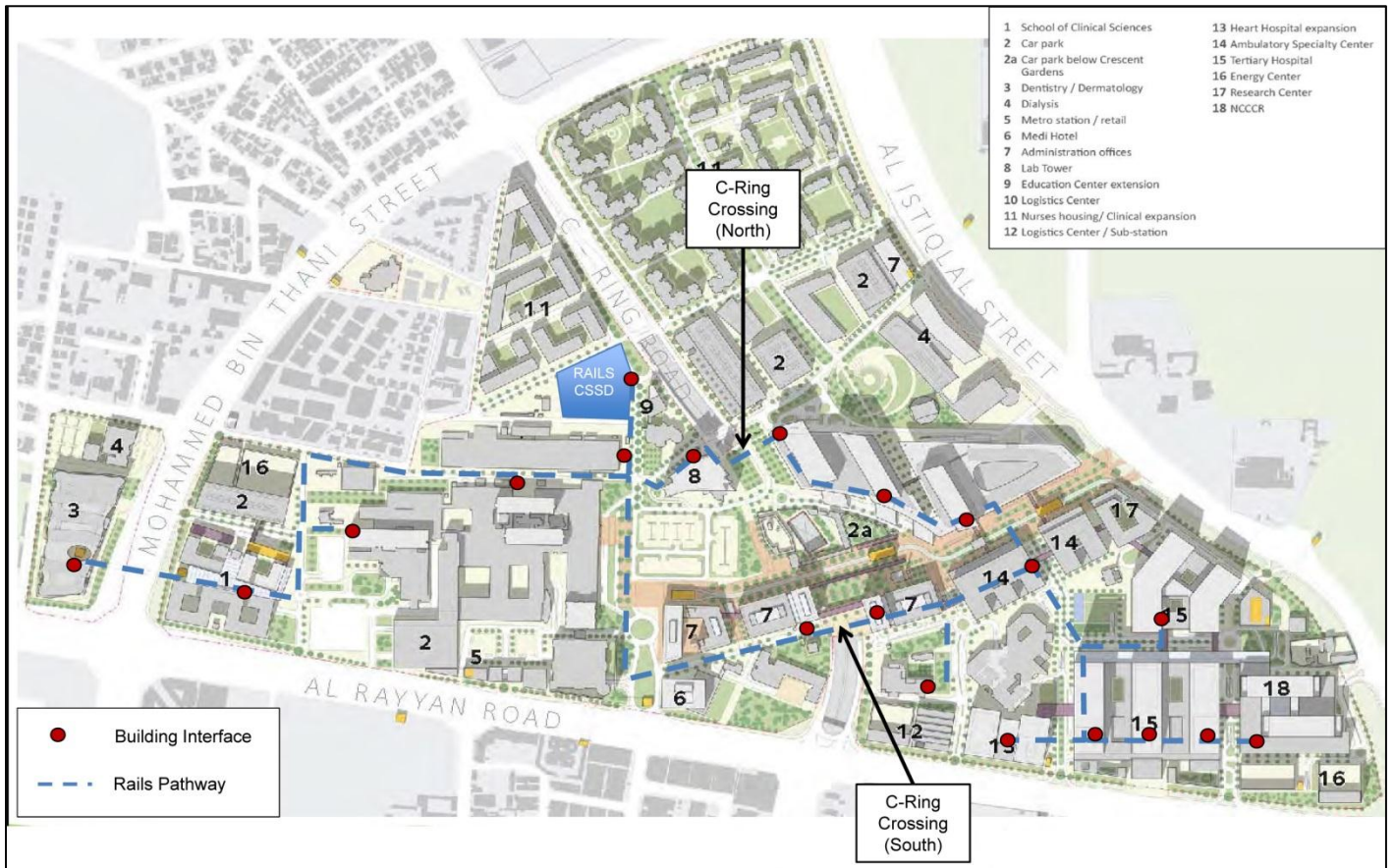
Moreover, it is required to provide a total are project of 12,000.0 m²

- A New building to accommodate a new state of the art Central Sterile Services Department (CSSD) of total BUA 7,000.0 m² and a distribution warehouse to support a Robotic and Integrated Logistics System (RAILS)
- A network of pathways, below and above ground, to connect the RAILS distribution warehouse of total BUA 5,000.0 m² with all major facilities on the Hamad Bin Khalifa Medical City (HBKMC) campus

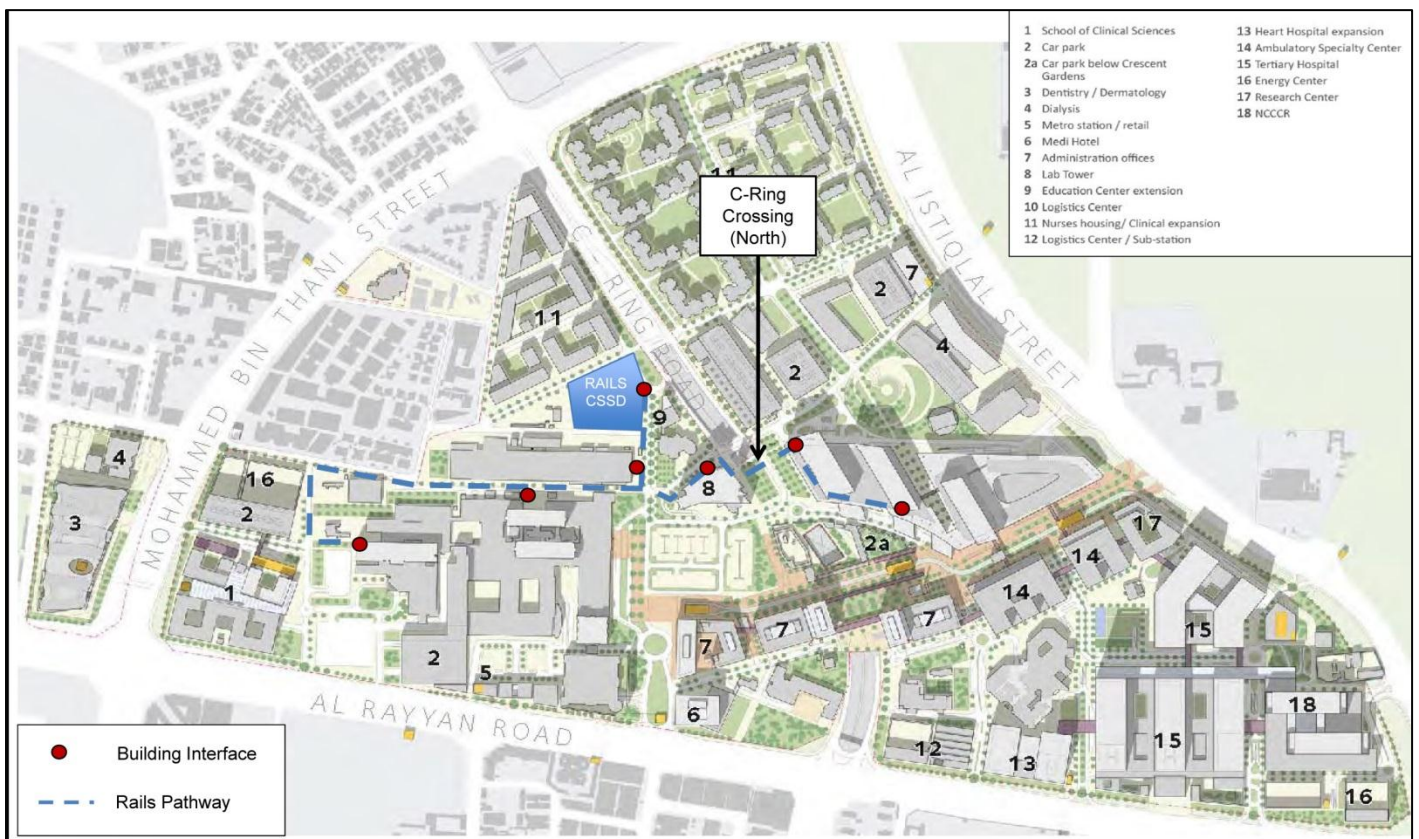
B) Project Location for BA 14/15 D 045 ST



Phase -1



Phase-2



2.2.2. Design of new Tertiary Hospital on Rumailah Hospital Campus- BA 14/15 D 048 G

The vision for future of Hamad Medical Corporation's Hamad Bin Khalifa Medical City campus in Central Doha is a place to heal, a place to work, a place to discover, a place to learn, a place to live and place to relax and rejuvenate. It will be a community of care and a platform for 21st century Qatar to meet the world. At the centre of this vision, and the centre of advanced tertiary medical care, services, and facilities for Qatar, HBKMC will initiate its future with the development of a New Tertiary Hospital. The new Hospital will be the heart of a vibrant and clinical campus that will generate additional clinical, education and research over time, and an exemplary environment for patient care.

A) Project Brief for BA 14/15 D 048 G

The Key Project Goals The following key goals have been identified during the master plan and briefing stages, as a basis for a detailed goals statement in the Brief:

- As a dedicated ambulatory environment on the HBKMC campus, the Tertiary Hospital will become the home for multi-specialty adult clinical practices and relevant educational, and research programs;
- The environment at Tertiary Hospital will be a safe, comfortable, and easy-to-navigate place providing amenity, respite, calm, and cultural familiarity to the patient and their family;
- The clinical environment will reflect the organization and components to support best practice;
 - Dedicated facilities will be planned to support future workload;
 - The facilities will integrate all of the components of a strong academic healthcare environment, including conference, learning at all levels, mentoring, and research;
 - The environment will be integrated as a comprehensive whole to respond efficiently and effectively to emergencies and to support catastrophic events on a local or regional level;
 - Clinical services will be interconnected to support distribution of resources across the site;
 - The patient care environment will be developed on a universal standard. It will be adaptable to patient encounters across a range of clinical specialties by building the service model around the patient needs as the institute models evolves over time;
 - The functional location and adjacencies which optimize patient care and experience, will address the challenge of unmet staffing needs;
 - Future-proofing flexibility, adaptability, and expandability in function, building systems, adjacencies, and clinical layouts;
 - Promoting the good stewardship of resources, adapting to environmental conditions in the most responsible way.
 - Compliance and consistency with the HBKMC Master Plan.

Rehabilitation Institute beds, and VVIP suites. They will be arranged in standard units where applicable, with recognition that some service lines require specific configurations and / or support accommodation to effectively deliver care.

The clinical services profile summary is as follows and more detailed will be provided during the Tender stage:

1. Inpatient care.

The Tertiary hospital will have capacity for approximately 1,456 beds, including both acute and critical care tertiary beds, future shelled beds, mental health beds, Qatari Rehabilitation Institute beds, and VVIP suites. They will be arranged in standard units where applicable, with recognition that some service lines require specific configurations and / or support accommodation to effectively deliver care.

2. Institutes.

The size and configuration of the Tertiary Hospital will support the creation of institutes and clinical centres of excellence where they support efficient and effective patient care and the goals of the organization. In their most defined and separate form, they will be evidenced as identifiable facilities, such as the Heart Hospital, or they may take a virtual form, taking advantage of the critical mass of co-located services and clinical knowledge to create clinical pathways and synergies that evolve into identifiable excellence.

3. Emergency Department.

The new Tertiary Hospital will become the primary access point for patients arriving for care. The model of care for the ED will change to incorporate patients currently triaged and diagnosed in the Heart Hospital. Patients from the NCCCR may also present at this location although they will maintain an urgent care centre within the NCCCR.

The Emergency Department will be developed using standardized treatment room sizes organized into groups of 12 to 20 rooms. The size of these groupings will be determined by the need to serve sub-populations, including the SML population, Male and Female Qatari, non-Qatari, and children in discrete secots of the department.

4. The interventional services platform.

The Tertiary Hospital integrates Surgical and Interventional Procedures on a single, integrated platform. Procedural suites can be planned to adapt over time to new interventional techniques including hybrid and image-guided modalities. Care-based models of organization are intuitively logical assuming that specialized personnel will be more effective if they can work collaboratively to meet the needs of a distinct patient population and do not need to travel between care and treatment locations, increasing their availability to respond to emergencies. This model is particularly effective in large specialty hospitals like the Tertiary with a wide range of highly specialized clinical services coming together in an advanced patient care environment.

5. Pediatrics.

The National Health Strategy for pediatric care delivery reflects the changes that will take place on the 2015 opening of Sidra Medical and Research Center. Sidra will be the specialty pediatric service hub coordinating inpatient and specialty pediatric care delivery for the country. In keeping with the National Health Strategy, primary pediatric care will continue in the local community, possibly expanding to incorporate urgent care delivery at selected sites.. HMC

will continue to offer pediatric emergency services and observation at all sites and will continue to provide emergency observation and trauma response on the HBKMC. While the later may focus on children from 15-17, emergent / as-needed care for younger children will be available.

A) Project Location for BA 14/15 D 048 G



2.2.3 Design of Specialist Diagnostic Centre- BA 14/15 D 049 ST

The centre of advanced ambulatory services for HBKMC, and the functional and operational heart of Tertiary services at HBKMC, The Ambulatory Specialty Centre (Specialist Diagnostic Centre) is planned to align with the advanced tertiary medical care, services, and facilities for HMC in the Rumailah Quarter. Physically located in the centre of the Rumailah Quarter, HBKMC's tertiary medical district, the new complex will greatly expand specialty tertiary ambulatory services, promote an integrated academic medical enterprise, and provide the highest level of services to the adjacent Tertiary and Specialty Hospitals.

A) Project Brief for BA 14/15 D 049 ST

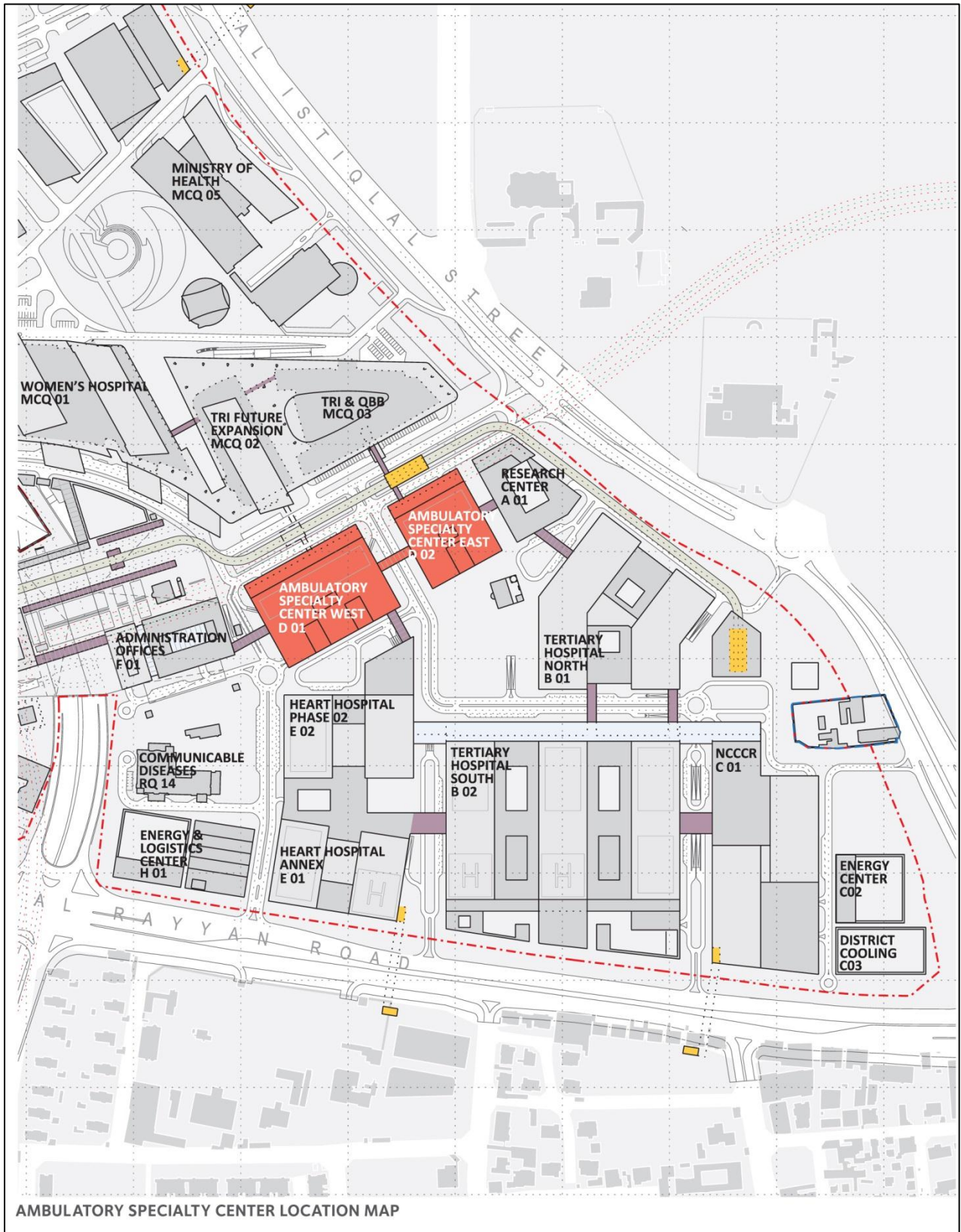
The new Ambulatory Specialty center will provide the following:

- Over 300 patient encounter / examination spaces, arranged primarily in 12-16 room clinic pods
- 10-12 Operating / Interventional Procedure Rooms supported by specialized or minor procedure rooms
- 7-8 major modality Imaging Rooms with additional diagnostic and therapeutic modalities.
- Clinical Support services, including Phlebotomy Services, Outpatient Pharmacy, and Allied Health Professionals
- Other support services, including Admissions and Health Records, Health and Safety, building Support Service, and Staff Amenities

B) Project Location for BA 14/15 D 049 ST



General project location in HBKMC



2.3. Key Success Criteria

2.3.2. General

The key success criteria for the project are as follows:

- optimisation of the project schedule is paramount, to bring the facility on line as soon as this can be achieved;
- that the project is delivered within the agreed budget and with a minimum level of client change;
- that the design and completed project is delivered and commissioned to a high standard of finish and function;
- that the scheme will provide state-of-the-art facilities, intended to support tertiary care excellence and expanded capacity, delivered in a safe and sustainable way; and
- That the delivery of the project exploits the opportunities around prefabrication for the principal elements of the scheme; in support of the schedule and quality objectives identified above.

2.3.3. Hamad Bin Khalifa Medical City Master plan

2.3.4. HMC have appointed a master planner, to develop a strategic and holistic approach to the development of the Hamad Bin Khalifa Medical City.

2.3.5. It is important to note that the master planning exercise is due to be completed by December 2013. Considerations include an understanding of the following:

- the number and extent of any interfaces;
- requirements for clinical service connectivity to optimise medical services for Qatar;
- the extent of physical interface that require architectural consideration;
- opportunities for landscaping spaces;
- demands on infrastructure; and
- The timing of the respective projects to unitise design development activities.

2.3.6. Road Widening Scheme

2.3.7. There are a number of planned changes to the road networks inside and outside the site boundary of Hamad Bin Khalifa Medical City. The size, position and capacity of the road networks close to the site are changing and it is necessary for the changes to be fully understood and the design for entry and egress to the site, circulation etc. considered accordingly.

2.3.8. Further information is available from the PWA's Highways Department. The designers are expected to liaise with the Highway Department on current available information.

2.3.9. HMC Design Standards

2.3.10. The Hamad Medical Corporation generally adopts Qatari and British design standards. Consultants are to design in accordance with and to exceed the minimum requirements of the British Standards and the UK's Department of Health planning and design guidance, i.e. Space for Health Planning and Design Manuals, Health Technical Memoranda and Health Building Notes.

- 2.3.11. The Consultant shall submit a full list of supporting design and construction standards documents upon which they intend to base their design. For the avoidance of doubt, facility operation and maintenance regimes must be catered for by the design.
- 2.3.12. HMC standards for space planning and design are subject firstly to Qatar law, followed by Qatari guidance documents or manuals, and finally the departmental policies which will direct planners, designers, contractors and consultants as well as end users to the relevant planning and design manuals and industry standards.

2.3.13. Qatar Metro

- 2.3.14. As part of an integrated approach to transport the State of Qatar are working to establish an attractive, safe and highly sophisticated railway system within Qatar and connected to the Kingdoms of Bahrain and Saudi Arabia.
- 2.3.15. The railway network will comprise of four Metro lines and high speed long distance passenger lines and freight lines. The Qatar Integrated Railway Project (QIRP) has a budget of QAR130 Billion and is intended to be operational for the World Cup in 2022 and fully complete by 2026.
- 2.3.16. The Qatar Metro is planned to be four lines, comprise of 100 stations and have an overall length of 358km. The lines will run in tunnels, at grade and elevated viaducts.

The "RAILS Distribution Centre" will provide logistics support for the entire HBKMC campus. In the current scenario it will be the primary distribution center for goods which will come from the central warehouse in logistics village. The goods will come picked into carts ready to be transported where they are required (ordering department) by the AGV's through a network of dedicated tunnels, pathways, bridges and elevators. Combined with the RAILS center will be the CSSD which is to be placed in the same facility to combine the synergies of distribution. Since the CSSD function is planned to be located on campus as proven in the CSSD feasibility studies (that will be provided during the Tender stage) the best location is at the distribution center to reduce dependency on road transport and the associated challenges.

2.3.17. Academic Health System

- 2.3.18. The National Health Strategy (NHS) 2011-2016 "Caring for the Future" identifies as one of its principle goals 'A skilled national workforce'. It highlights the importance of the recruitment, retention and education of a high quality workforce – a modern, learning and supported workforce.
- 2.3.19. Academic Health Systems (AHS) are partnerships between learning and research institutions and healthcare providers. They are recognised internationally as a model for pioneering research and medical discoveries and for making them available to patients. They are synonymous around the World with the delivery of the highest quality patient care, academic and research excellence, and overall health improvement.
- 2.3.20. The AHS, while drawing on international experience, is intended to meet the healthcare needs of Qatar today and in the future. It also seeks to improve health and wellbeing whilst expanding the boundaries of knowledge and ensuring a modern, flexible and sustainable workforce. The system will see partners build joint infrastructures in clinical care, research, education, community engagement, human resources development and information systems.

- 2.3.21. Qatar's AHS is the first of its kind in the Middle East region and is being developed with local partners in health care delivery, education and research and in collaboration with a number of renowned international centres of excellence
- 2.3.22. The AHS initiative emphasises maximization of physical adjacencies, improving care pathways, ensuring internal mobility of multidisciplinary care, and integrating clinical practice with education and research; in effect to put the patient at the centre of care and to refine care pathways.

2.3.23. Infrastructure

- 2.3.24. Given the extent of on-going development and improvement works being carried out and planned in the near future at the Hamad Bin Khalifa Hospital campus, the impact on the existing infrastructure such as power, water and drainage are key considerations.
- 2.3.25. Accordingly, the design team are expected to engage with HMC's master planner, Statutory Authorities, service providers and the other design teams on adjacent developments in order that robust and reliable solutions can be developed.
- 2.3.26. Early estimates of projected power loadings will be required in order to permit discussions to commence with Kahramaa and provisions secured in good time.

2.3.27. GSAS Requirements

- 2.3.28. The Global Sustainability Assessment System (GSAS) is a 'green building' rating system developed and administered by an independent body known as the Gulf Organisation for Research and Development (GORD). As a matter of internal policy all PWA projects are expected to achieve a minimum target rating of 3 stars; this target may be higher for particular projects depending on other project specific considerations. All the projects are required to be certified not less than 3 stars status or more as specified.
- 2.3.29. The rating system addresses a range of locally relevant sustainability issues that are encapsulated into 8 overarching categories. In each of these categories, there are a number of credits that set out specific design requirements and performance targets. While the level of performance of any given building might vary across the different credits; typically, every credit within the GSAS rating system is required to be attempted.
- 2.3.30. At each stage in the building lifecycle – design, construction and operation – a qualified GSAS Certified Green Professional (CGP) needs to be involved to ensure that appropriate strategies and documentation have been undertaken/produced and for all liaison required with the GORD. The designers are requested to incorporate within their design team a suitably qualified and experienced person, along with all fees associated with the submission and approvals process for GSAS and GORD.

2.4. Schedule of Accommodation

- 2.4.2. Summary – a schedule of accommodation detailing the required net room areas for each department is to be prepared by the Consultant.

Validation - HMC will support re-evaluation of the schedule of accommodation.

3. Brief scope of services required

3.1 A detailed description of scope of work to be delivered under this appointment will be provided in the Invitation to Tender (ITT) documentation. For the purposes of this Pre-Qualification Questionnaire document the services can be summarised - not limited-as:

- Review/Validate the Project Brief and schedule of accommodation.
- Concept Design;
- Scheme Design;
- Technical Design;
- Production Information.... Etc as per the Contract Documents
- Tender Documents and Services;
- General Supervision- during construction stage
- DCU services

4. Initiated projects – key stages

Stage	CSSD / RAILS	Tertiary	Ambulatory
A - Mobilisation	CD + 30	CD + 30	CD + 30
B - Pre-Design	CD + 75	CD + 90	CD + 75
C - Concept Design	CD + 135	CD + 210	CD + 150
D - Scheme Design	CD + 210	CD + 330	CD + 265
E - Technical Design	CD + 330	CD + 480	CD + 385
E1 - Tender Action	CD + 660	CD + 840	CD + 740
F - Tender and Construction Documents	CD + 360	CD + 510	CD + 420
F1 - Design Clarifications	CD + 1940	CD + 2850	CD + 1750
G - Completion of Pre Contract Commercial Management	CD + 660	CD + 840	CD + 740
H - Completion of Pre Contract Project Management	CD + 660	CD + 840	CD + 740
I - Construction Supervision - Enabling Works - Main Contract	CD + 1940	CD + 2850	CD + 1750
J - Demobilisation	CD + 1970	CD + 2880	CD + 1780
K - Project Close / Maintenance Period	CD + 2370	CD + 3280	CD + 2180