

TABLE OF CONTENTS

	<u>PAGE</u>
Part 1 – Scope of Services - The Brief	
1. DEFINITIONS, ABBREVIATIONS AND ACRONYMS	C1/1
1.1. Interpretation	C1/1
1.2. Defined Terms	C1/1
1.3. Abbreviations and Acronyms	C1/3
2. INTRODUCTION	C1/5
2.1. General	C1/5
2.2. Project Brief Document Hierarchy	C1/6
2.3. Professional Services Agreement	C1/7
3. INTRODUCTION	C1/8
3.1 Professional Services Agreement.	C1/8
3.2 Description of Construction Contract Works	C1/8
3.3 Supporting Information	C1/9
3.4 Other Information	C1/9
4.0 DESCRIPTION AND SCOPE OF SERVICES TO BE PROVIDED	C1/9
4.1 General Scope of Services	C1/9
4.2 Services to be Provided of Particular Application	C1/10
5.0 DEMOBILISATION	C1/37
6.0 PERIOD OF ENGAGEMENT	C1/38
6.1 Consultant’s Mobilization Period.	C1/38
6.2 PSA Services Engagement Period.	C1/38
6.3 Working Hours.	C1/38
6.4 Total PSA Engagement Period.	C1/39
7.0 STAFF RESOURCES TO BE PROVIDED	C1/39
8.0 SPECIAL REQUIREMENTS	C1/41
9.0 SPECIAL GENERAL CONTRACT CONDITIONS AND REQUIREMENTS	C1/41

10.0	PROFESSIONAL QUALIFICATIONS & CRITERIA FOR PROJECT STAFF	C1/42
10.1	General Requirement and Criteria.	C1/42
10.2	Qualification and Experience.	C1/44
10.3	Submittal of CV's for Approval.	C1/49
10.4	Approval of CV's and Credentials.	C1/49
11.0	OPERATING RESOURCES	C1/51
9.1	Minimum Equipment to be provided.	C1/51
9.2	Facilities provided by the Works Contractor	C1/51
12.0	OFFICE RESOURCES AND EQUIPMENTS	C1/51
13.0	PWA PROJECT GATEWAY REVIEW PROCESS	C1/51
14.0	GSAS REQUIREMENTS	C1/52

1. DEFINITIONS, ABBREVIATIONS AND ACRONYMS

1.1. Interpretation

- 1.1.1. For the purposes of the Project Brief, defined terms shall have the meaning set out in the General Conditions of Engagement. Additional defined terms necessary for interpretation of the Project Brief are set out below.

1.2. Defined Terms

- 1.2.1. “**Applicable Codes or Standards**” the engineering codes and standards identified by the Consultant, and non-objected by the Engineer, as being relevant and applicable to the Project, and which shall be used by the Consultant, third parties to achieve a uniformity of approach throughout the Project.
- 1.2.2. “**Assure**” means the task to review and give a statement of non-objection.
- 1.2.3. “**Assurance**” means the commitment to Assure.
- 1.2.4. “**Authority Having Jurisdiction**” means any Governmental, regulatory or code / standard review and / or enforcement agency having authority to review, approve or otherwise regulate the Project.
- 1.2.5. “**Authority’s Requirements**” means the document entitled Authority's Requirements, as included in the construction contract or contracts, and any additions and modifications made thereto in accordance with the Agreement. Such document specifies the purpose, scope, and / or design and / or other technical criteria, necessary for the execution of the construction contract or contracts.
- 1.2.6. “**Authority to Mobilise**” means the formal permission for personnel mobilisation issued by the Engineer enacted using the Authority’s standard Authority to Mobilise (ATM) form.
- 1.2.7. “**Baseline Programme**” shall mean the programme as non-objected by the Engineer representing the Services to be provided under the Agreement.
- 1.2.8. “**BIM**” shall mean building information management and is defined as the process involving the generation and management of a digital representation of the physical and functional characteristics of the Project.
- 1.2.9. “**Building Information Model**” means the result of BIM and shall be a shared knowledge resource used to support the Project throughout the design, procurement, construction, testing and commissioning and operational and maintenance phases of the life cycle of the Project.
- 1.2.10. “**CADD Standards Manual**” means the computer aided design development guidance manual to be developed by the Consultant in conjunction with the Engineer.
- 1.2.11. “**Central Planning Office**” means the Government office set up to provide Project coordination and integration planning between the various government departments.
- 1.2.12. “**Concept Design**” means the stage of design as defined in the Scope of Services and Deliverables particularly stated for this stage within this document. This represents Key Stage A of the Project.
- 1.2.13. “**Consents Register**” means the record of requirements of and relevant processes for meeting requirements of the Utilities and other public (or privately owned) facilities or assets that may require disturbance by the works, which shall be set up and maintained by the Consultant in conjunction with the Engineer.
- 1.2.14. “**Consultant Leader**” means the person who shall be non-objected by the Engineer to be the primary point of contact with the Engineer for the performance of the design services until completion of the Project.

- 1.2.15. “**Contractor**” means the Contractor(s) appointed by the Authority and responsible for carrying out all physical works relating to the Project. The Contractor(s) may include, but are not limited to enabling works Contractors, advance works Contractors, design and build Contractors, specialist fit-out Contractors etc.
- 1.2.16. “**Core Team**” means the Consultant’s personnel to be present in Qatar for the term of the Agreement and as defined by the Consultant by Key Stage.
- 1.2.17. “**Cost Consultant**” shall mean the cost consultant appointed by the Authority to provide cost consultancy services to the Authority
- 1.2.18. “**Deliverables**” means the end result of efforts expended under particular sections of the Agreement to be submitted to the Engineer for review as identified in this document and other Agreement Documents.
- 1.2.19. “**Design Development**” means the stage of design as defined in the Scope of Services and Deliverables particularly stated for this stage within this document. This represents Key Stage B of the Project.
- 1.2.20. “**Design Implementation Plan**” (DIP) is the collection of documents which collectively define, describe and encompass the Consultant’s proposed systems, methods, procedures, processes, sequencing of activities and how these combine to deliver the Consultant’s Scope of Services. Forms part of the Project Execution Plan (PEP).
- 1.2.21. “**Independent Checking Engineer**” shall mean the consultant appointed by the Authority to carry out the role of the Independent Checking Engineer under a design and build contract should this approach be applied.
- 1.2.22. “**Key Date**” means pre-defined dates in the Master Programme, as may be amended by the issue of a Change Addendum, against which specified performance shall be attained by the Consultant.
- 1.2.23. “**Key Stage**” means a pre-defined element of the Services within which specific performance of associated services must be attained.
- 1.2.24. “**Maintenance Period**” means the period of four hundred (400) Days following opening for beneficial use within which the Contractor shall have an obligation to rectify defects that may arise in the completed Works.
- 1.2.25. “**Master Programme**” means the activity time plan designed and implemented by the Engineer covering all activities and tasks, including labour and other economic resourcing, which together constitute the entire scope of works under the Project.
- 1.2.26. “**Monthly Progress Report**” means the detailed management report to be considered at the monthly meeting.
- 1.2.27. “**Peer Review**” means the independent assessment of an author’s work by others recognised in the relevant profession as being qualified to at least the level of capability and experience of the author of the work to be assessed (reviewed), as meeting standards of quality and safety that would be expected by the profession, whether of design, construction or operation and maintenance.
- 1.2.28. “**Plant**” means the complete mechanical and electrical plant (MEP) and functioning element of the Works.
- 1.2.29. “**Production Information**” means the stage of design as in the Scope of Services and Deliverables particularly stated for this stage within this document. This represents part of Key Stage C of the Project.
- 1.2.30. “**Project**” means any aspect of the assignment, management and administration for the Work, for example: site investigation, design, supervision, construction, etc.
- 1.2.31. “**Project Execution Plan**” (PEP) means the Consultant’s comprehensive suite of fully integrated and fully functioning plans, systems and procedures for the Project.

- 1.2.32. **“Scope of Services”** means the description of the Services set out in this document and other Agreement documents.
- 1.2.33. **“Statutory Approvals”** means any and all approvals, non-objections, authorisations ratifications etc. required from Qatari Ministries, the Authority, government agencies, local government agencies etc. as are, from time to time, required for completion of the Project.
- 1.2.34. **“Technical Design”** means the stage of design as defined in the Scope of Services and Deliverables particularly stated for this stage within this document. This represents Key Stage C of the Project.
- 1.2.35. **“Tender Documentation and Action”** means the stages of design as defined in the Scope of Services and Deliverables particularly stated for this stage within this document. This represents Key Stage D of the Project.
- 1.2.36. **“Utility”, “Utilities”** shall mean, inter alia, any water, irrigation, sanitary, storm water drainage, gas, electric, fibre optic, cables, traffic control systems, ITS infrastructure, pipelines, landscaping, or the like above, at or below onshore ground level or offshore sea or seabed level impacting on or interfacing with the Services.
- 1.2.37. **“Value Engineering”** means the process of carrying out design review studies with the objective of exploring alternative designs that would result in added value to the deliverables.

1.3. Abbreviations and Acronyms

AHJ	Authority Having Jurisdiction
BOH	Back of House
CADD	Computer Aided Design Development
CAR	Corrective Action Request
CD	Commencement Date
CDC	Centre for Disease Control
CEO	Chief Executive Officer
COO	Chief Operations Officer
CPO	Central Planning Office
CSC	Construction Supervision Consultant
DIP	Design Implementation Plan
DCSC	Design and Construction Supervision Consultant
EIA	Environmental Impact Assessment
EDMS	Electronic Document Management System
EMS	Environmental Management System
F&B	Food and Beverage
GIS	Geographic Information System
IT	Information Technology
KPI	Key Performance Indicator
MEP	Mechanical, Electrical & Plumbing
MMUP	Ministry of Municipal and Urban Planning
NCR	Non Conformance Report

O&M	Operation and Maintenance
OH&S	Occupational Health and Safety
PEP	Project Execution Plan
PMDS	Project Management Delivery System
PMP	Project Management Plan
PSA	Authority Professional Services Agreement Ed 2010 (Rev A)
PWA	Public Works Authority
QAR	Qatari Riyals
QCS	Qatar construction Standard
QMS	Quality Management System
QSAS	Qatar Sustainable Assessment System
RACI	Responsible, Accountable, Consulted, and Informed
SEA	Strategic Environmental Assessment
WBS	Work Breakdown Structure

2. INTRODUCTION

2.1. General

- 2.1.1. 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.
- 2.1.2. 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, transportation networks and services.
- 2.1.3. The Public Works Authority (Ashghal), hereafter referred to as the 'Authority', is responsible for the planning, design, procurement construction, asset management, and delivery of infrastructure and building works in the State of Qatar.
- 2.1.4. The Authority contributes to the economic and social development of the State 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 programmes the execution of public projects consistent with the approved State objectives and allocated budget.
- 2.1.5. 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, programmes and studies developed; as well as implementation, management, operation and maintenance of drainage, groundwater, surface water and water treatment projects.
- 2.1.6. 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. In general it contributes to the overall sustainable development of economic and social areas in the State.
- 2.1.7. The Authority consists of administrative units set out below:
- A. Administrative units under the Minister of Municipality and Urban Planning: The Internal Audit Unit; and
 - B. Administrative units under the President including Office of the President, Public Relations and Communication Unit, Legal Affairs Department and Corporate Development & Planning Department.
- 2.1.8. The Authority's major business units consist of five (5) major 'Directorates' as below:
- A. Asset Affairs;
This Directorate handles operation and maintenance of assets through two (2) departments:
 - (a) Drainage Operation and Maintenance (O&M) Department; and
 - (b) Road Operation and Maintenance (O&M) Department.

B. Buildings Affairs

This Directorate consists of two (2) departments:

- (a) Design Department; and
- (b) Project Department;

dedicated to government building projects such as schools, ports, recreational facilities, healthcare facilities and other government buildings.

C. Infrastructure Affairs

This Directorate consists of three (3) departments:

- (a) Local Roads Department;
- (b) Drainage Department; and
- (c) Expressway Department.

D. Technical Support Affairs

This Directorate consists of three (3) departments:

- (a) Contracts Department, which is responsible for procurement, process and procedures in the delivery of the Authority's projects;
- (b) Engineering Business Support Department, which provides technical support for the projects in terms of project planning, estimating, tracking and documentation; and
- (c) Quality and Safety Department, which is responsible for the quality control of projects and safety at work sites and offices.

E. Shared Services Affairs

All other departments that provide technical support come under this sector including: Administration and Finance Department; Human Resources Department; General Services Department; and Information Technology Department.

2.1.9. The Authority is implementing the Project as part of its efforts to develop the State's infrastructure and public amenities for the benefit of the public.

2.1.10. The Consultant has been selected by the Authority to assist in the Project's implementation by undertaking the services set out in accordance with this Scope of Services.

2.2. Project Brief Document Hierarchy

2.2.1. This document is the first part of five (5) documents which will comprise Section C [Project Brief] within the Condition of Engagement (PSA).

2.2.2. The five (5) parts comprising Section C [Project Brief] are to be read and construed as a composite whole and shall be taken as mutually explanatory of one another. In the event of an ambiguity, discrepancy or inconsistency within the documents, the order of precedence shall be as follows:

- A. Part 1: Scope of Services; this document
- B. Part 2: Authority's Requirements,
- C. Part 3: Services Implementation;
- D. Part 4: Project Data; and
- E. Part 5: Authority's Policies and Procedures.

2.2.3. This document sets out the duties to be performed by the Consultant and the Deliverables required from the Consultant together with duties of the Authority.

2.3. Professional Services Agreement

2.3.1. The Consultant shall be appointed under the terms and conditions of the Professional Services Agreement (PSA) General Conditions of Engagement – 2010 Edition Rev A to provide professional services to the Authority.

3. INTRODUCTION

3.1 Professional Services Agreement

3.1.1 The Consultant shall be appointed under the terms and conditions of the Professional Services Agreement (PSA) General Conditions of Engagement 2010 Edition (Revision A) to provide Post-Contract Professional Consultancy Services to Building Affairs of the Public Works Authority hereinafter to be referred to by the abbreviation PWA.

3.1.2 The Professional Service Agreement (PSA) General Conditions of Engagement 2010 Edition (Revision A) shall hereinafter be referred to by the abbreviation PSA.

3.2 Description of Construction Contract Works.

3.2.1 The Construction Contract Works consists of 2 Packages (Package F1 and F2) and both packages are assigned to 2 different Contractors . Each Package of Construction Contract Works will have different commencement and completion date as per the milestones stated in the Contract and the total duration of the Project for **Package F1 is 540 days** and **Package F2 is 600 days**.

3.2.2 The Works comprises of Construction, Completion, Testing & Commissioning and Maintenance of Masjids & Imam House and Quran Teaching Centre at Various Locations- Package F1 and Package F2 listed hereunder:

1. Package F1

- 1) MASJID AND IMAM HOUSE AT ABU SIDRA > Pin No. 55310002
- 2) MASJID AND IMAM HOUSE AT AL MERAAD > Pin No. 55741054
- 3) MASJID AND IMAM HOUSES AT AL MERAAD > Pin No. 55741738
- 4) MASJID AND IMAM HOUSE AT MUAITHER> Pin No. 55602348
- 5) MASJID AND IMAM HOUSE AT MUAITHER> Pin No. 55602487
- 6) MASJID AND IMAM HOUSE AT MUAITHER> Pin No. 55496277
- 7) DEMOLISH AND REBUILD MASJID UM GHWELINA SALWA ROAD> Pin No. 82050003
- 8) MASJID AND IMAM HOUSES AT MUAITHER > Pin No. 53260126
- 9) MASJID AND IMAM HOUSES MEHAIRJA> Pin No. 54364080

2. Package F2

- 1) MASJID AND IMAM HOUSES AT AL WAKRA >Pin No. 90450260
- 2) MASJID AND IMAM HOUSE AT AL WAKUR> Pin No. 91030750
- 3) FRIDAY MASJID AND IMAM HOUSES AT UM SNEAM> Pin No. 56381992
- 4) MASJID AND IMAM HOUSE AT AL WAKRA > Pin No. 90030063
- 5) QURAN TEACHING CENTER AT ABU NAKLAH > Pin No. 81016021

- 6) MASJID AND IMAM HOUSE AT ABU NAKLAH > Pin No. 81010235
- 7) DEMOLISH AND REBUILD MASJID AT ALMARKEH> Pin No. 83000097
- 8) DEMOLISH AND RECONSTRUCTION MASJID AND IMAM HOUSE AT AL THOMAMA>pin No. 47024069
- 9) MASJID AND IMAM HOUSE AT AL MASHAF >PIN No. 91020042

3.2.3 The above site locations are subject to change by PWA.

3.2.4 The Package F1 and F2 Projects comprises of Masjids, Quran Teaching Centres and Imam Houses. The construction method is generally of reinforced concrete structure and block work with all associated finishes, services and external works including boundary wall, gates, paving works and bitumen work including car parking and all associated soft and hard landscaping etc.

The Works include reinforced concrete structure, finishes, mechanical, electrical, landscaping, testing commission and handover.

3.3 Supporting Information

3.3.1 All relevant drawings and documentation currently held by Building Affairs are available for inspection within the Building Affairs.

3.3.2 The Tender/Contract documents for the Construction Contract are deemed to form part of the documentation and information, the Tenderer must address when preparing his Tender.

3.4 Other Information

3.4.1 The Engineer may employ a Project Management (PM) Consultant to manage the Construction and Consultancy Contracts of the Awqaf Projects Department of Building Affairs. The Consultant shall coordinate with the PM Consultant and provide any information required and/or carry out instructions of PM as directed by the Engineer.

4.0 DESCRIPTION AND SCOPE OF SERVICES TO BE PROVIDED

4.1 GENERAL SCOPE OF SERVICES

4.1.1 The extent of the Services shall include the deployment of complete supervision consultant's team to carry out post-contract consultancy, site supervision and post-contract quantity surveying professional services for the construction, completion and Maintenance of 2 Projects which comprises of Masjids, Imam Houses and Quran Teaching Centre at Various Locations (Package F1 and F2) as stipulated in the foregoing paragraph.

4.1.2 The consultant is required to provide full Post-Contract Professional Consultancy Services for General Supervision, Site Supervision and Quantity Surveying in accordance with Professional Services Agreement (PSA) General Conditions of Engagement 2010 Edition (Revision A), .

4.1.3 As each Package to commence on site and complete on different dates as per the milestones stated in the respective Contracts and the Consultant shall schedule the period of services as per the Contractors milestones and as directed by the Engineer.

The Public Work Authority (PWA) has the right to reduce/extend the period of services of supervision staffs of any sites at any time as per the requirement of each site.

4.2 SERVICES TO BE PROVIDED OF PARTICULAR APPLICATION

The Scope of Services is to be amplified and added to as follows and the Consultant's attention is drawn to the fact that the following responsibilities, whether explicit or implied in the above PSA Table of Services, shall also include but are not necessarily limited to:

4.2.1 General Supervision:

- (a) Manage the project cost and commercial risk during the construction and maintenance periods.
- (b) Administer the construction contract within delegated authority and advise the Engineer and the Contractors in all matters regarding the requirements and interpretation of the Contract Documents.
- (c) Set up and implement the Project Management System to ensure effective and efficient management of Project delivery to the determined time, cost and quality requirements, within high standards of HSE and Risk management practices.
- (d) Ensure that all contract notices are issued within appropriate timescales.
- (e) Ensure that the contractor produces a Project Execution Plan (PEP), within 14 days from contract award, to cover all aspects of his works – to include programme, quality, HSE, commercial and financial, project controls, logistics, statutory authority liaison, temporary works design, construction, commissioning, handover, reporting and communication.
- (f) In liaison with the contractor, visit the project sites and ensures that an approved site mobilization plan and short term programme is in place prior to commencement of works on site.
- (g) Plan for, and ensure the co-ordination with any activities by others within or adjacent to the site.
- (h) Proactively improve HSE management and ensure compliance with the Contractor's stated HSE plan, objectives and procedures, as well as legal and statutory requirements. Ensure adequate and effective HSE supervision and chair weekly HSE meetings and inspections, and report weekly, and as required, to the Engineer, together with recommendations to address any issues raised. Assist the Engineer to follow up on any incidents, including insurance matters.
- (i) Manage the submission and approval of risk assessments and method statements.
- (j) Monitor and inspect the works to assure that materials and workmanship conform with the contract requirements.
- (k) The Consultant shall use all reasonable care and diligence and exercise its best efforts to discover any breach of the construction contract, and if it becomes aware of any breach, it shall immediately notify PWA thereof, and shall submit to PWA its

- recommendations for appropriate remedial action. The Consultant, however, does not guarantee that a contractor will not breach its contract.
- (l) Arrange for and/or provide continuous field administration and inspection of each construction contract by home office personnel of the Consultant and its sub consultants who are expert in the technical areas of work involved in the Project. The Consultant shall provide such field administration and inspection continuously during the Construction contract and shall require its sub consultants to provide such field administration and inspection continuously during the Construction contract when work in the sub consultant's specialty is in progress. Said services shall be provided without additional compensation.
 - (m) Monitor and review, on a weekly basis, the construction progress and performance and advise PWA of same. Assist PWA in achieving the specified completion date and advise PWA of actions that could be taken to prevent or eliminate delays.
 - (n) Develop, with the contractor, a time schedule covering the preparation of all submittals. Ensure all submittals are scheduled – shop drawings, design details, samples, mock-ups, sub-contract approvals, method statements, risk assessments, CVs, statutory approvals.
 - (o) Monitor and record the flow of submittal information and actively pursue submittals in line with the programme for the works
 - (p) The Consultant shall review and take required action for all submittals and samples furnished by the contractor within five (5) working days of receipt of same; provided, however, the same are submitted in accordance with the agreed submittal schedule. Provide responses to Requests for Information from the Contractors as soon as possible but not later than 7 calendar days from receipt.
 - (q) Establish a permit/statutory approval schedule linked to the project schedule for construction, testing, commissioning and handover. Facilitate and monitor communication between the contractor and statutory authorities to ensure the timely availability of utility services.
 - (r) Assume complete responsibility for its interpretation of the drawings and specifications. For interpretations affecting contract cost and/or material substitution, concurrence of the interpretation must be obtained from PWA.
 - (s) Take positive action, within the limits of the Consultant's authority hereunder and under the provisions of the applicable construction contract, to safeguard the interests of PWA whenever necessary or appropriate.
 - (t) On submission of any claim by the contractor, the Consultant shall keep a daily record of all labour, plant equipment and materials on site associated with such claim.
 - (u) Prepare and submit to PWA, a detailed estimate, evaluation, and recommendation on any claim, proposed change orders, or site instructions, and contractor's proposals for such work, and assist in negotiation with the Contractor 30 calendar days from notice for claim.
 - (v) Consultant shall prepare all Change Request form and Site Instructions. Prepare and submit to PWA, a detailed estimate, evaluation, and recommendation on any claim proposed change orders or site instructions and Contractor's proposal for such work and assist in negotiation with the Contractor. Except in the case of an emergency which

- threatens safety or substantial injury to property, neither the Consultant nor any of its representatives can authorize any Variation Order or field order or change in the work covered by the construction contract without the prior written approval of PWA.
- (w) Keep records and logs setting forth the field progress, the submission and processing of shop drawings and samples, requests for information and their disposition, non-conformance and open items and their disposition, and the progress of the Project as it relates to each requisition for payment of each contractor.
 - (x) Conduct site meetings, at least weekly, with representatives of the various trades and of the contractors engaged in the construction of the Project and prepare and distribute minutes of such meetings.
 - (y) Submit weekly progress reports to PWA during the Construction Contract of the Project based upon personal observation of the Consultant or its staff, which reports shall include, but are not limited to, an analysis of the construction time schedule in relation to field progress and anticipated delays in construction.
 - (z) Review, approve and assemble written guarantees, user-manuals and record drawings required of each contractor and submit to PWA. The Consultant shall inventory all Spare Parts.
 - (aa) Prepare and supervise all Building and Facility Commissioning Plans to be implemented by the Contractor, Consultant and User.
 - (bb) Review and approve As-Built drawings prepared by the Contractor. Final As-Built drawings will be submitted by the Consultant in electronic format on CD in accordance with the requirements of PWA.
 - (cc) Inspect the Project continuously throughout the term of the construction contract and furnish a monthly punch list and/or report to PWA of observed discrepancies, deficiencies and incomplete items.
 - (dd) Manage outstanding commercial or technical issues during the maintenance period, ensuring that any issues or snags reported by the building user are managed and resolved.
 - (ee) Provide the service outlined in this agreement thru out the term of the construction contract, to verify status of structure, finishing, M&E item performance, usage of spare parts and repair/replacement tasks. Ensure thru out, the contractor is responding to all requirements of the construction contract including maintenance tasks as per the contract requirement and issue monthly status report.
 - (ff) If the Contractor does not remediate the project snag list work or project deficiencies in a manner considered by the Supervision Consultant or PWA in a timely manner, the

Supervision Consultant will assist PWA in the procurement of an alternative contractor to complete the defined punch list items or project deficiencies.

- (gg) Inspect the remediation of defects and advise the Engineer on the issue of the certificates for defect rectification and Maintenance Certificate. Transfer all project documentation to the Engineer.
- (hh) Verify any outstanding project invoices and prepare payment certification and provide commercial management services in respect of agreement of the Contractor's Final Account, and obtain the Engineer's agreement in writing.
- (ii) If any descriptions of services outlined within this contract are in conflict, the more stringent description of services shall supersede the less stringent description of services.

4.2.2 Site Supervision

The Site Supervision Services to be carried out by the Consultant shall include but are not necessarily limited to:

- a) Monitoring / Inspection of work.
- b) Ensuring the Health & Safety requirement is being carried out in compliance with the Contract and the PWA safety requirements. Safety reports shall be submitted on weekly bases according to the format required by PWA.
- c) Ensuring the Works is being carried out in compliance with the Contract requirements.
- d) Assume and verify the quality of material at site.
- e) Check and approve work, in compliance with the specifications.
- f) Prepare list of outstanding works.
- g) Issue non conformance notices, and ensure that prompt close out of non – conformance is managed.
- h) Review, co-ordinate and recommend contractor's technical transmittals.
- i) Process and reply to technical queries.
- j) Review and co-ordinate design documents.
- k) Review and study changes to the original design proposed by Contractor and reproduce reports and drawings if required for approval.
- l) Attend progress and technical meetings with PWA, contractors and engineers. Carry out any duty as delegated by the Project Manager etc. Provide and distribute Minutes of Meetings (MOM).
- m) Examine and report on the Contractors proposed methods and programme.
- n) Inspect materials, manufactured goods, equipment and site work as necessary to ensure that the whole works are being carried out in accordance with the Contract Documents and advise the Engineer and the Contractor if they are not satisfactory.

-
- o) Develop, with the contractor, the Inspection and Test Plan (ITP), and clearly identify and schedule the Witness and Hold points for inspection.
 - p) Witness the checking of surveying instruments and the calibration of equipment, including torque wrenches, pressure gauges and piling equipment.
 - q) Carry out tests on materials, manufactured goods, machinery, equipment and site work required by the Specifications, by good practice and by a Schedule of Tests to be provided by the Engineer and advise the Contractors regarding results.
 - r) Witness the driving of all piles and witness all pile tests and inspect all pile records.
 - s) Inspect and approve all excavations for foundations before concreting. Advise PWA of any significant geotechnical variations encountered.
 - t) Inspect all embedded work, including reinforcing steel and conduits, before it is covered up.
 - u) Check the principal survey points and the principal temporary bench marks on the site and the line and level of the Works from time to time.
 - v) Make arrangements for the commissioning of the electrical and mechanical installations, and for the witnessing of acceptance tests by all concerned parties and government departments.
 - w) Submit a weekly Report or Reports at such frequency as the Engineer requires. The format and content of the reports shall be agreed with PWA during the setting up of the Management System for the project. The reports shall include, but not limited to statements regarding:-
 - 1. Labour and supervision on site.
 - 2. Plant and equipment on site.
 - 3. Progress in relation to the Contractors original and current programmes.
 - 4. Activities started during month.
 - 5. Activities completed during the month.
 - 6. Major deliveries to site.
 - 7. Changes, delay and difficulties
 - 8. Any discrepancies between the Works and the requirements of the Contract Documents.
 - 9. Recommendations regarding interim payments
 - 10. A tabulation of claims submitted by the Contractor, and identification of the risk of further claims
 - 11. An assessment of the anticipated final cost of the works, excluding professional fees
 - x) Advise the Engineer in the event of any persistent failure by the Contractors to comply with the Contract Documents and in the event of an unsatisfactory rate of progress.

- y) An assessment for the delay in the construction work and submit reasonable Advise and solutions for covering this delay corporate with the contractor in early stage by submit recovery programme to Ashghal

4.2.2.1 Quality Assurance Program

The Consultant will as a minimum provide the following services as part of the quality assurance program and provide weekly reports to Ashghal as to results and recommendations with regards to each of the following items:

- a) Monitoring of testing activities in the Contractor's laboratory to assure that tests are properly carried out.
- b) Monitoring of sample taking in the field to ensure compliance with testing procedures.
- c) Periodic checking of calibration of all laboratory equipment.
- d) Reviewing of materials testing results to ensure compliance with specifications. Recommendations to the Engineer regarding how corrective action is implemented in the case of unacceptable results, and how borderline materials are dealt with.
- e) Sample taking, jointly with Contractor's staff, and coordination of testing by Qatar General Organization for Standards and Metrology for required independent testing.
- f) Reviewing of all independent laboratory test results submitted by the Contractor as part of the material approval process.
- g) Witnessing of all tests required by the Inspection and Test Plan as part of the commissioning of the works.
- h) Consultant shall monitor and control the Safety aspects of the project as part of his scope of services and as per QCS and PWA's safety regulations.
- i) Consultant shall co-ordinate with the concerned department in PWA regarding implementation of QA/QC and Safety regulations for this project.

4.2.2.2 Project Administration Services

- a) The Consultant shall provide Project Administration services for the duration of the construction activities. Additional time must be allowed by the Consultant to finalize Owner's and Contractor's claims and review, inspect and certify completion of outstanding Construction Contractor's works during the Construction Contract maintenance period.
- b) The Consultant's Project Manager shall have the overall responsibility for the supervision services and shall continuously monitor the site and the contractors work to ensure that the services are carried out satisfactorily.
- c) The Consultant's Project Manager will be responsible for but not limited to the followings and provide weekly reports to Ashghal as to results and recommendations with regards to the following:
 - (i) Ensuring that Construction Works are carried out to the specified standard and quality and in compliance with the Contract requirements.
 - (ii) Ensuring the Health & Safety requirement is being carried out in compliance with the Contract.

- (iii) Ensuring that the Quality System is applied, as far, as is applicable, to construction operation and workmanship which are in compliance with the Project requirements.
- (iv) Ensuring that work does not continue on any section where he considers the quality of work to be in question.
- (v) Controlling the project program to ensure timely and economic completion.
- (vi) Ensuring that corrective actions are taken on identified problems.
- (vii) Completion and preparation of project specific quality procedures/ documentation, whenever this is required.
- (viii) Participating in reviews to determine the status adequacy and effectiveness of quality procedures/ documentation.
- (ix) Produce over all Master Planning of the week.
- (x) Submit approved format Progress Report on weekly basis showing the planned, actual percentage for each activity, progress brief, Contractor resources at site, two weeks look ahead, progress photos, material submittal status, drawings status, etc... This report to be generated by the Consultant and to be submitted in hard and soft copy.
- (xi) Collect data required for deciding duration and resources for each activity.
- (xii) Produce daily, weekly or biweekly detailed planning as required.

4.2.2.3 Drawings and Documentation

- a) Consultants are required to employ computerized methods in carrying out the work. All surveys, drawings or documents produced by the Consultant shall be recorded in digital form, the Consultant shall provide (if required) the Engineer with copies of these records in a Building Affairs approved format. Drawings shall be in a format suitable for input to the latest version of AutoCAD and agreed in advance with Building Affairs. All documentation provided by the consultant will be provided into the P6 Primavera/ Expedition project monitoring system implemented and updated daily by the consultant.
- b) All data, drawings and documents prepared under this project shall, after being approved by the Engineer, become the property of the Engineer and shall be at the sole disposal of the Engineer. Such data, drawings and documents shall not be subsequently altered without the prior permission of the Engineer.

4.2.2.4 As-Built Drawings and Records

The Consultant's responsibilities with regard to reviewing and approving of As-built drawings and records are as follows.

- a) The Consultant shall review, revise and approve the Contractor's drawings reflecting in detail the As-built conditions of the project. All final approved As-built documentation must be stamped and signed "Approved As-Built Records" by the Consultants accordingly.
- b) On conclusion of reviewing, revising and on final approval by the Consultant of the Contractor's As-Built drawings and documentation, the Consultant shall prepare and put

together a complete 'As-built Documentation Package' for the project and deliver it to the Engineer for obtaining the necessary approvals and release/clearance certificate from the relevant Public Works Authority's concerned Department.

- c) The 'As-built Documentation Package' shall be delivered to the Engineer within thirty (30) days from the provisional taking over of the works, and shall include but not necessarily be limited to:
 - (i) Two prints of every drawing issued by the Consultants, Contractor, Specialist Sub-contractors and Suppliers, marked up to show the whole of the Works as built.
 - (ii) The copies of all manufactures manuals issued in connection with the Works.
 - (iii) One copy of every report, piling record, test result, site instruction, or correspondence issued or received in connection with the Site Monitoring of the Works.
 - (iv) All Utility Services approvals from all relevant agencies.
 - (v) As-Built surveys.

All of the above must be replicated in digital form in the appropriate electronic format/software etc. All documentation provided by the consultant will be provided into the P6 Primavera / Expedition project monitoring system implemented and updated daily by the consultant.

- d) The Consultant shall be responsible for obtaining the necessary approvals and release/clearance certificates from the relevant Public Works Authority's concerned Department.
- e) The Consultant shall maintain an independent record of all data pertaining to the As-built records and shall ensure that the contractor maintains his data and information up to date. The Consultant shall ensure that access to the contractor's files is available to the Engineer at any time.
- f) The staff deployed by the Consultant based either on the site or supported by main or sub offices, shall be fully conversant with the preparation of digital designs and As-built records of the type specified in the contract for the works.
- g) The Consultants site staff shall be responsible for checking all data gathered by the Contractor in the development of the data base for the preparation of the As-built drawings, and for conducting spot checks of actual works for the determination of the accuracy of the data collected and approve and stamp the As-built survey and record drawings prepared by the Contractor.
- h) As built drawings shall be prepared in the latest version of AutoCAD

4.2.2.5 Special Requirements

- 4.2.2.5.1 Attendance and continued responsibilities during the Works Maintenance period, up to and including the issuance of the Maintenance Certificate of the Works includes but is not limited to the all of the required provisions of the Consultant including the coordination and scheduling of the completion of incomplete or unacceptable work by the Contractor, its inspection and acceptance of the Works throughout the Maintenance Period as required and to confirm that all necessary repairs have been satisfactorily carried out.

- 4.2.2.5.2 The Consultant shall prepare all presentation materials when asked to do so. He is expected to give several presentations relating to the works to Public Works Officials, other officials and the public. He is also expected to assist in presentation given by PWA.
- 4.2.2.5.3 On completion of his contract services, the Consultant shall deliver to the Engineer in digital form on CD the complete file system for the project, fully indexed and cross referenced, together with original drawings, Equipment Operation Manuals and Warranties, Certificates, and Shop Drawings provided for the purpose of Construction, Equipment Maintenance and Operations, Facility Commissioning and site supervision.
- 4.2.2.5.4 The Consultant shall also make a digital copy of the signed PSA Supervision Contract document and include same for DCU clearance.
- 4.2.2.5.5 All specified site staff were necessary are required to attend all site and other project meetings throughout the currency of the Agreement, including the Period of Maintenance. The Consultant will provide detailed Meeting Minutes of all project meetings.

4.2.3 Post-Contract Quantity Surveying

- (1) For the provision of these services the Consultant shall employ an approved Quantity Surveying practice duly registered with the Accrediting and Classifying Committee as a sub-consultant, except where the Tenderer is himself registered to practice Quantity Surveying
- (2) The Quantity Surveying services to be carried out by the Consultant shall be as stated in the Conditions of Engagement and as supplemented and/or amended by the Project Brief and all relevant notices or circulars issued by Public Works Authority and/or MMAA.

The Scope of Services shall also include but are not necessarily limited to:

- (a) Consultant is to note that adherence to the approved budget is of paramount importance and regular cost planning exercises shall be required throughout the post-contract phase to ensure that the awarded contract sum is not exceeded.
The Consultant is to forewarn the Engineer immediately should he consider that the budget is being exceeded and is to offer suggestions and recommendation to rectify the situation.
- (b) The Consultant shall prepare a Final Account incorporating all Variation Orders and Site instructions which shall be completed within **30 calendar days** of the Practical Completion Certificate for Works being issued by the Engineer. The format of the Final Account will be to the approval of the Engineer.
- (c) The Consultant shall prepare the Variation Order ready for Engineer signature within **30 days** from notice of claim of any change in the Contract or any Site Instructions issued by the Engineer, if the Contractor failed to incorporate the same, Consultant shall immediately within **14 days** time finish the required Variation Order with all required calculations documents and provide the same to the Engineer for review and approval.
- (d) The Quantity Surveyor shall prepare Variation Orders in connection with the changes in the Works or claims submitted by the Contractor and shall ascertain by admeasurements or other means for the purpose of the Variation Order(s). The Variation Order(s) shall be in accordance with the work done or omitted or by other methods with all the details required and is to be measured by records and drawings.

The Quantity Surveyor shall prepare records and drawings every month of such works and should be raised to the Engineer's Representative to take the provisional agreement on the Variation Order in terms of data, method of measurement and pricing then, give notice to the Contractor's Representative who shall forthwith attend for reading and ratification.

Each Variation Order shall include:

- i. The reasons for the change(s).
- ii. The cost and time involved.
- iii. Built-Up rate.
- iv. Supporting Documents.

4.2.4 Project Administration

Within the level of authorities delegated by the PWA to the Consultant, the Consultant shall undertake specific Project Administration activities. These include but are not limited to:

1. Assessment of the Project
2. Overall Project Scope Management;
3. Project Planning;
4. Project Stakeholder Management and Public Involvement;
5. Project Environmental Management;
6. Project Environmental Assessment & Coordination;
7. Project Sustainability Planning;
8. Project Controls;
9. Commercial Management;
10. Project Initiation and Delivery Planning;
11. Project Quality Management & Assurance;
12. Health, Safety and Security Management;
13. Design Management
14. Construction Management
15. Project Communications Management
16. Project Close Out and Project Maintenance Period Management.

4.2.4.1 Assessment of the Project

- a) The objective of this task is for the Consultant to carry out a detailed assessment of the Project Documents including availability of data, develop a realistic baseline Project delivery plan including master schedule and budget and staff mobilization plan.

- b) The stated objective of this task shall be achieved in accordance with the following phases:
 - (i) Review the status of current project;
 - (ii) Review prepared Project plans;
 - (iii) Review the overall project scope by meeting with the concerned Construction Phase government departments and the other Construction Phase stakeholders.
 - (iv) Review current design documents, standards, construction specifications, procurement strategies, contract engagement conditions, project constraints and opportunities, the PWA existing business procedures and Qatar construction industry practices and capabilities;
 - (v) Submit draft Project assessment report to the PWA including Construction Contract master schedule of project and budget

4.2.4.2 Overall Project Scope Management

- a) Within the authorities delegated to the Consultant, he shall:
 - 1. Coordinate requirements and schedules with the concerned Construction Contract government departments and the other Construction Contract Stakeholders including the PWA and its other program managers, Statutory and Permitting Authorities, and Public Utility Providers.
 - 2. Document the overall Construction Contract Project scope requirements in a baseline Project requirements document which will be included in the Project Delivery System.
 - (a) All Project Administration Reporting shall be in accordance with the requirements of PWA.
 - 3. Initiate, manage, and report on studies and surveys including:
 - a. Traffic Impact Study (Where required by PWA - Study by others)
 - b. Topographical Survey (Survey by others)
 - c. Bathymetric Survey; (Where required by PWA - Survey by others)
 - d. Geotechnical Investigation and Report; (Investigation and Report by others)
 - e. Risk Management Report (Report by Consultant)
 - f. Buildability Assessment Report (Report by Consultant)

4.2.4.3 Establishment of Project Management Delivery System

- a) The Consultant shall establish and deliver a comprehensive suite of fully integrated and fully functioning plans, systems and procedures for the Project.
- b) The Consultant shall prepare and implement a Project Management Delivery System with two main parts:
 - 1. Project Management Plan (PMP) which should include, as a minimum, the Project organizational structure; Project team responsibilities and reporting relationships; and,

2. Project Implementation Plan (PIP) which should include, as a minimum, coordinated plans to collectively define, describe and encompass the Consultant's proposed, systems methods, procedures, confirmation processes, sequencing of activities, and the like and shall show how these combine together to demonstrate that the services meet the PWA requirements.
- c) The PIP shall contain, as a minimum, the following:
- (a) Stakeholder Management and Communication Plan:
 - i) Construction Phase Stakeholders, including the Client, PWA, PWA Project Managers, Statutory and Permitting Authorities, and Public Utility Providers.
 - (b) Environmental Management System (EMS);
 - (c) Sustainability Plan;
 - (d) Project Controls;
 - i) Risk and Opportunity Management Plan;
 - ii) Work Breakdown Structure;
 - iii) QS and Cost Control Plan;
 - iv) Project Master Schedule;
 - v) Change Control Management System;
 - vi) Document Management System; and
 - vii) Reporting System.
 - (e) Commercial Management:
 - i) Cost Control System; and
 - ii) Claims Management Plan.
 - (f) Quality Management System (QMS);
 - (g) Health, Safety and Security Management System (HSSMS);
 - (h) Construction Supervision:
 - i) Construction Supervision Manual; and
 - ii) Construction Standards and Specifications.
 - (i) Communication Management Plan;
 - (j) Maintenance Period Management Plan;
 - (k) Consultant's Demobilisation Plan.
- d) Unless otherwise stated, all Plans and documents shall be submitted in preliminary form within 1 month of the Commencement Date followed by detailed Plans within 3 months of the Commencement Date. Further submissions shall be made:
- (a) When required in accordance with the Consultant Services programme;
 - (b) When requested by the PWA; and
 - (c) Whenever any change occurs that invalidates the information contained in the previously submitted and reviewed document, within 14 days of the occurrence of such change.

4.2.4.4 Stakeholder Management and Public Involvement

1. Stakeholder Management

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- (a) The Consultant shall confer and coordinate with relevant government agencies and departments having jurisdiction during the Construction Phase, the various agencies within the PWA organisation and applicable Qatari legal authorities having jurisdiction regarding the delivery of the Project as required.
- (b) The CSC shall:
- i) Identify the Project Construction Contract stakeholders including:
 - Those with a mandated authority role over the projects such as the Municipality and Civil Defence, Ministry of Environment and other government agencies and ministries;
 - Construction Contract Stakeholders including the PWA and its other program managers, Statutory and Permitting Authorities, and Public Utility Providers.
 - Those whose activities will be affected by the projects such as the utilities; and
 - Those who should be consulted and kept informed.
 - ii) Instigate, manage and report on regular meetings with the programme and project stakeholders;
 - iii) Represent the Project at meetings with the stakeholders;
 - iv) Provide responses to requests from stakeholders for project level information;
 - v) At the initiation stage of a project;
 - vi) Confirm the ownership/description of the land and all relevant ROWs;
 - vii) Identify the project Construction Contract stakeholders;
 - viii) Prepare a flow chart showing how the project can gain the necessary permits and approvals;
 - ix) Identify the utility infrastructure and interfaces and any necessary utility and traffic diversions;
 - x) Manage the preparation, submittal and approval of the documents required by the Construction Contract authorities for the instigation of the project;
 - xi) Assist the PWA with the resolution of disputes with the authorities of causes of delay.
 - xii) Support the PWA in communication with the project Construction Contract stakeholders in accordance with the stakeholder management plan;
 - xiii) Instigate, manage and report monthly on regular meetings with the project stakeholders;
 - xiv) Manage the preparation, submittal and approval of the document required by the Construction Phase authorities for the planning of the Construction Contract of the project;
 - xv) Liaise with the Construction Phase stakeholders concerning the planning of the necessary utility diversions and traffic diversion schemes; and
 - xvi) Manage the preparation, submittal and approval of the documents required by the Construction Contract authorities for the completion of the project.
2. Regulatory and Inter-Agency Approval Coordination.
- (a) PWA shall assist the Consultant in coordination with Construction Contract regulatory agencies and other Construction Contract stakeholders who have an interest or are participants in the Project and facilitate resolution of issues related to, construction.
- (b) The PWA will assist the Consultant to secure the necessary Construction Contract permits and regulatory approvals in a timely and efficient manner. All Fees for permits will be paid by others.

- (a) Where the Construction Contractor is required by the Construction Contract, Regulation, or Statute to submit Applications for Permits and Utilities, the Consultant will review the Contractors Applications and Schedule for Application Submittals prior to the Construction Contractors submittal of such applications.
 - (b) Consultant will review, monitor and report on the progress of all Permit and Public Utility Applications, and, the status and Schedules of all such Application Approvals, planned interconnections, and Issuance of all Permits and Approvals.
3. Public Outreach / Relations Management. – The Consultant shall provide the following services:
 - (a) This overall Public Involvement shall include any required citizen regulatory and inter-agency approval coordination, technical advisory committees, task forces, public hearings and workshops and utilities coordination with the public and private utility providers.
 - (b) The Consultant shall provide the PWA continued response to public inquiries and comments on the Construction Phase of the Project.
4. Utilities Coordination – the Consultant shall provide the following services:
 - (a) Utility shall mean any water, irrigation, sanitary, storm, gas, electric, fibre optic, cables, pipelines or any other utility associated with the Projects comprising the Programme.
 - (b) The Consultant shall administer, negotiate, and perform all tasks necessary to obtain any and all utility permits.
 - (c) The Consultant shall attend any required meetings with utility agencies personnel to review schedule, scope, and cost adjustments, or relocations of any kind. Furthermore, the Consultant shall confer and coordinate with utilities; produce minutes and reports. All Fees for permits will be paid by others.
 - (d) Where the Construction Contractor is required by the Construction Contract, Regulation, or Statute to submit Applications for Permits and Utilities, the Consultant will review the Contractors Applications and Schedule for Application Submittals prior to the Construction Contractors submittal of such applications.
 - (e) Consultant will review, monitor and report on the progress of all Permit and Public Utility Applications, and, the status and Schedules of all such Application Approvals, planned interconnections, and Issuance of all Permits and Approvals.

4.2.4.5 Environmental Management

1. Environmental Management System
 - (a) In order to minimise the environmental impact, the Consultant shall establish and administer an over-riding Environmental Management System (EMS), which shall be effective throughout the lifecycle of the Project.
 - (b) This EMS shall be fully compliant with local legislation, applicable regulations and codes of practice. The EMS shall be modelled around the requirements of ISO14001:2004 “Environmental Management Systems Requirements with Guidance for Use” and the underlying philosophy to promote a culture of continuous improvement.
 - (c) The over-riding EMS shall involve stakeholders as recommended by the Consultant and as designated by the PWA including but not limited to the PWA, third parties, the public (as agreed by the PWA), Consultants, and the Contractors.
2. Environmental Management Assurance
 - (a) By means of formal review and comment, the Consultant shall acquire a thorough knowledge of the intentions of all participating Construction Contract parties with regards to environmental management. The Consultant shall verify and validate the effective implementation of such Construction Contract plans by means of surveillance, audit and inspection of the Project activities and the associated records.

- (b) The Consultant shall conduct monthly performance reviews involving an assessment of the EMS and Sustainability Objectives against the agreed requirements to ensure that actions are identified and implemented to address improvement opportunities and compliance.

4.2.4.6 Environmental Assessment & Coordination

1. Assessment
 - (a) The Consultant shall ensure compliance with environmental regulations and guidelines in Qatar.
 - (b) The Consultant shall ensure that any required Construction Contract submissions are prepared in a timely manner and monitor submissions, approvals and issue of permits by authorities.
2. Coordination
 - (a) The Consultant shall;
 - i) Confirm the Construction Phase environmental permits required and maintain a proactive approach with the various authorities to ensure prompt resolution of any issues arising;
 - ii) Manage the project's Construction Contract environmental activities in accordance with the PWA
 - iii) Oversee the preparation of any relevant Construction Environmental Management Plan (CEMP) to be developed by the contractor during the construction process;
 - iv) Liaise with the contractors for the surveys and with others as required on associated environmental issues;
 - v) Coordinate the Tendering and provide oversight of any specialty Environmental Consultants or Contracts required during the Construction Contract.
 - vi) Confirm the environmental permits required and maintain a proactive approach with the various authorities to ensure prompt resolution of any issues arising;
 - vii) Review the short-listed contractors' previous environmental performance as part of the Construction Contractors tendering process;
 - viii) Review and approve, or enforce revision of the CEMP and procedures;
 - ix) Issue environmental non-compliance reports to the contractor and the PWA;
 - x) Maintain an environmental non-compliance register;
 - xi) Monitor that environmental non-compliances are rectified;
 - xii) Identify trends in environmental non-compliances and proactively identify with the contractor, measures to stop the trends and
 - xiii) Prepare final reports for PWA and Monitor the preparation and submittal of Final reports by the contractor on environmental management.

4.2.4.7 Sustainability Planning

- a. The PWA adopts Qatar Sustainable Assessment System (QSAS) and the concept of sustainable developments in its public building projects. The PWA signed a Memorandum of Understanding with Barwa & Qatari Diar Research Institute (BQDRI) on the provision of measures to adopt, apply and develop a sustainable building concept to create a better living environment for natives and residents
- b. The Consultant shall ensure that the PWA's Sustainability Objectives and monitoring requirements are communicated and implemented throughout the Construction Contract of the Project to all parties and participants.
- c. The over-riding sustainability objectives, as administered by the Consultant, shall involve all stakeholders including but not limited to the PWA, third parties, the public (as agreed by the PWA), Consultants and the Contractors.
- d. The Consultant shall:

- i) Manage the project's sustainability activities in accordance with the PWA STANDARDS;
- ii) Prepare the list of criteria regarding short-term sustainability during construction
- iii) Set out the inter-relation with either the QSAS accreditation or other green building guidelines and, if required, document how the project will achieve the accreditation;
- iv) Monitor the design and execution of the works against the requirements of the PWA STANDARDS; and
- v) The *Consultant* shall prepare final QSAS compliance reports and monitor the preparation of the reports by the contractor on sustainability management.

4.2.4.8 Project Controls

1. Risk Management

- (a) The Consultant shall provide a Risk and Opportunity Management Plan for approval by the PWA, incorporating a systematic risk management process and strategy to be applied for the Project.
- (b) The Risk and Opportunity Management Plan should provide a framework by which risks will be identified during the Construction Phase and assessed as well as setting out the risk response and control strategies to be followed.
- (c) The Consultant shall carry out Construction Contract Project -wide risk management using documented processes, procedures.
- (d) The Consultant shall perform a quantification analysis of the possible cost and schedule impacts resulting from the identified risks as part of the Risk and Opportunity Management Plan.
- (e) The Consultant shall structure a process for documenting and reporting on the status of identified risks on a regular basis throughout the Project.
- (f) All Project Controls Reporting shall be in accordance with the requirements of PWA.

2. Cost Estimating, Budgeting & Cost Management

- (a) The Consultant shall prepare a Cost Management Plan for the Project and submit updates each month to the PWA for approval. During Construction, the Consultant shall make all required checks of Construction tasks / components to ensure legitimacy of costs and efforts and report progress / findings in their Cost Management Monthly Reports.
- (b) The Consultant shall analyze and report to the PWA the cost of various construction alternatives proposed by the Contractor throughout the Construction Contracts. As a part of the cost analysis, the Consultant will consider costs related to efficiency, useful life, maintenance, energy and operations.
- (c) The Consultant shall retain qualified cost estimators duly certified by the State of Qatar with relevant experience in architectural, civil, structural, building services and other related areas of public facility planning and construction work to provide up-to-date cost estimates and cash-flow projections.
- (d) The Consultant shall provide Certified Q/S oversight and review, and, shall issue regular reports to the PWA on of the Contactor's cost estimates, as well as providing support to the PWA.
- (e) The Consultant shall recommend, in coordination with the PWA a plan and procedure for implementation, review and approval for all Variation Orders. Consultant shall provide QA approved Q/S staff to review all Consultants and the PWA generated Variation Orders. The Consultant shall make recommendations, and the empirical basis for Consultant recommendations, to BA concerning review and approvals of all Variation Orders.

3. Project Master Schedule
 - (a) In association with the Project Development Plan, the Consultant shall develop and maintain a Project Master Schedule using the latest Primavera Enterprise scheduling software version or an approved equivalent, using the Critical Path Method (CPM) the PWA Database, EBSD requirements
 - (b) The scheduling format shall be utilized throughout the Construction Contract of the Project, and shall be required to be utilized by all involved Consultants and Contractors.
 - (c) The Project Master Schedule shall be as per the Commencement Date of the Consultant Agreement.
 - (d) The Project Master Schedule shall specify the proposed start and finish dates for each activity and the dates by which certain activities (critical path activities) must be complete.
 - (e) As deemed necessary throughout the Project, and/or as requested and approved by the PWA, the Consultant shall recommend and make revisions to the Project Master Schedule.
 - (f) The Consultant shall evaluate and validate Project schedules prepared by the Contractors and report to the PWA on the overall compliance with milestone objectives and the viability of the schedules.

4. Change Control
 - (a) The Consultant shall develop and establish a Change Control Management System for approval by the PWA.
 - (b) The system shall be compatible with the PWA change control applications and solutions used.

5. Document Control
The Consultant shall provide administrative and document control support to the overall Construction Contract of the Project. This shall include, but not be limited to, implementation and management of an Electronic Document Management System and oversight of Contractor, and Suppliers document control activities consistent with the PWA's Contract Management document control system.

6. Software and IT Facilities.
The Consultant shall provide the necessary software and IT facilities needed at his own cost including servers which should be housed in the State of Qatar.
The Consultant shall possess and provide all required software, software licenses, hardware, and qualified trained staff to operate same, at no additional cost to PWA, to provide all required management, administration and reports to PWA as required under this contract.

4.2.4.9 Progress Monitoring and Reporting

The Consultant shall collect, analyze, track, monitor and report on a Monthly and Quarterly basis. The reports should include the following as a minimum:

Quarterly – An Executive Overview report of the CSC portfolio to supplement the Monthly detailed project report noted below.

- a. Project staffing report at the portfolio level highlighting any particular issues;
- b. The Consultant's payment status report; and
- c. A Portfolio looks ahead for the coming Quarter highlighting any strategic/relationship/interface issues.

Monthly – a detailed Management report that will provide the 'Project Record' however will be reviewed on an exception basis only at the monthly meeting.

- a. General status of the project highlighting, by exception, issues where unacceptable progress or outcomes are anticipated with proposed mitigation;
- b. Consultant resourcing;
- c. Scope definition status;

- d. Stakeholder issues;
- e. Procurement status;
- f. Construction and handover status;
- g. Risk management plan supported by mitigation and register;
- h. Detailed schedule report;
- i. Detailed cost/budget report;
- j. Change/variation report;
- k. Environmental issues;
- l. Sustainability issues;
- m. Project Progress Photographs (digital jpeg – 24 min.)
- n. Monthly PWA Project Tracking Report
- o. Interface issues; and
- p. Monthly look ahead.

4.2.4.10 Commercial Management

1. Construction Contract Procurement Management

- (a) The Consultant is encouraged to recommend the procurement / contract strategies that will provide the most efficient delivery vehicle in respect of value for money, time and quality.
- (b) Following approval of the Construction Contract Procurement and Contracting Strategy, the Consultant shall for the Project Identify the services (if required) to be procured during the Construction Contract in accordance with the requirements of the project and the detailed procurement schedule including (if required) but not limited to the following:
 - i) Construction Contract Surveys;
 - ii) Construction Phase Designers;
 - iii) Special Environmental Studies and Mitigation Plans
 - iv) Other Construction Contract consultants such as those for environmental reports, facilities management, commissioning and training;
 - v) Enabling works contractor if required;
 - vi) Main works contractor if required;
 - vii) Other services;
 - viii) Identify and report on suitable service suppliers and contractors for the project Construction Contract procurement methodology adopted;
 - ix) Manage the Construction Contract procurement of the required services as necessary through the stages of expressions of interest, prequalification, tendering and award in accordance with the PWA STANDARDS including;
 - x) Prepare and issue prequalification questionnaires;
 - xi) Analyse and report on the prequalification documents received;
 - xii) Prepare tender documents; Prepare and issue Construction Phase requests for proposals and requests for tender;
 - xiii) Manage the Construction Contract tendering process including the answering of requests for clarification;

- xiv) Arrange, chair and minute pre-tender, mid-tender and post-tender interviews;
- xvi) Analyse and report on the proposals and tenders received, using an evaluation method approved by the PWA with recommendations regarding award;
- xvii) Arrange, chair and minute contract negotiation meetings between the PWA, the service suppliers and the contractors;
- xviii) Monitor the procurement activities of the main works contractor in accordance with the PWA STANDARDS.

2. Contract Administration.

The Consultant shall within the authority delegated to the Consultant by the PWA:

- a. Supervise, review, monitor, evaluate and provide a monthly report on all sub- Consultant, Specialty Consultant and Contractor contracts. The Consultant shall keep the PWA fully informed of any issues which may have a contractual implication;
- b. Advise the PWA of any instances where Construction Contract Consultants or Contractors are in breach of the contractual obligations or where Construction Contract Consultants or Contractors are not complying fully with their contractual obligations;
- c. Evaluate all claims received from Construction Contract Consultants or Contractors and provide recommendation to the PWA. As and when requested by the PWA the Consultant shall actively participate in all negotiations necessary to resolve claims;
- d. Undertake pre-contract Construction Contract Consultant and Contractor briefing sessions, during which the Construction Contract Consultants and Contractors will receive information from the Consultant regarding the Project, schedule, technical and administrative requirements, amongst others;
- e. Identify the contract forms and typical particular Conditions of Engagement which can be used for the project;
- f. Identify schemes for the incentivisation of consultants and contractors including measurement against key performance indicators (**KPIs**) – Not Applicable
- g. Assist the PWA in the contractual negotiation of claims;
- h. Prepare and manage the contracts with the service suppliers (if required) and contractors in accordance with the PWA STANDARDS;
- i. Manage the closing out of the contracts in accordance with the PWA STANDARDS; and
- h. Manage the provision of warranties by the contractor.

3. Bonds and Insurances

The Consultant shall ensure that for each of the contracts, the necessary bonds and insurances are executed by the Construction Contract Consultants and Contractors concerned and renewed and/or extended in due time as required.

4. Budget and Cost Control

- (a) The Consultant shall provide oversight of the Master Budget. The Consultant shall identify variances from planned budget together with reasons and proposed measures, if any, to rectify and/or mitigate the identified variances.

- (b) The Consultant shall develop and update monthly a cost system, which shows Project cash flow requirements; records of committed costs; anticipated costs remaining, and overall estimate cost to complete.
 - (c) The Consultant shall review, analyze, and recommend to the PWA in a written report, the comparative cost estimates, man-hour estimates and Proposed Variation Orders (PVOs)
 - (d) All Budget and Cost Control Reporting shall be in accordance with the requirements of PWA.
5. Application for Payment & Invoice Processing
- (a) The Consultant shall review all Applications for Payments for completeness, accuracy and compliance. After reviewing the Application for Payment documents, the Consultant shall forward all such to the PWA with a written statement advising of the findings and making recommendations. The CSC shall resolve all issues pertaining to Applications for Payments with applicants.
 - (b) The Consultant shall review all invoices for completeness, accuracy and compliance. The Consultant shall forward all such invoice documentation to the PWA, certifying the financial accuracy of all invoices submitted. The Consultant shall resolve all issues pertaining to invoices with applicants. The Consultant shall provide the PWA with a written statement advising of the findings and making recommendations.
 - (c) All Applications for Payment and Invoice Processing Reporting shall be in accordance with the requirements of PWA.
6. Variation Assessment
- (a) The Consultant shall review all applications for variations and variation orders for completeness, accuracy and compliance. After reviewing the application documents, the Consultant shall forward all such to the PWA with a written statement advising of the findings and making recommendations. All recommendations shall specifically reference the Contract Basis for that recommendation.
 - (b) The Consultant shall identify and track the cause and sources for variations; such as design error and end user change of requirement, and shall track them in accordance with the requirements of PWA.
 - (c) The Consultant shall review and determine the acceptability and validity of Consultants' or Contractors' requests for changes and variations of any kind, and shall provide written recommendations to the PWA for the appropriate action it should take.
 - (d) The Consultant shall assess and value all variations proposed by the PWA, and shall provide written recommendations to the PWA for the appropriate action it should take.
 - (e) The Consultant shall if so instructed by the PWA, develop supplemental contract documentation for variations, negotiate with consultants or contractors and issue variations in accordance with the terms of the relevant contract.
 - (f) All Variation Order Reporting shall be in accordance with the requirements of PWA.
7. Claims Management
- (a) The Consultant shall review all claim applications for completeness, accuracy and compliance using the PWA's claims management system. After reviewing the Application for Payment documents, the Consultant shall forward all such to the PWA with a written statement advising of the findings and making recommendations. All recommendations shall specifically reference the Contract Basis for that recommendation.

- (b) The Consultant shall identify and track the cause and sources for claims; such as design error, and end user change of requirement
 - (c) The Consultant shall keep the PWA fully advised of any issues it becomes aware of that could give rise to a contractual claim for time and/or cost. Where the Consultant advises of an issue the Consultant shall propose, where suitable, measures that the PWA may employ in order to mitigate the contractual claim.
 - (d) The Consultant shall review and determine the validity of claims of any kind submitted by Consultants' or Contractors', and shall provide the PWA with written advice and recommendations for the appropriate action that should be taken, including any mitigation measures that may be taken. The Consultant shall assess the likely cost and time entitlements of any claims that may be deemed valid or as instructed by the PWA. All recommendations shall specifically reference the Contract Basis for that recommendation.
 - (e) The Consultant shall establish, implement and maintain systems to capture relevant and necessary contemporaneous information that may be relevant to anticipated or submitted claims. The Consultant shall include in periodic reporting the status of all claims, actions proposed and taken and progress of these actions.
 - (f) All Claims reporting shall be in accordance with the requirements of PWA.
8. Final accounts
The Consultant shall manage the preparation, submittal, review and settlement of final accounts.

4.2.4.11 Project Initiation and Delivery Planning

The Consultant shall be responsible for identifying all Construction Contract activities to ensure that projects requirements, end user specifications, statutory approval requirements, long lead items are all identified and taken into consideration.

1. Construction Contract Specialty Consultant

The Consultant shall review end user requirements and the nature of works to determine if Construction Contract specialty design is needed. If so, the Consultant if approved by the PWA shall manage the procurement and delivery of such services.

2. Enabling Work

The Consultant shall determine if any Construction Contract enabling works are needed and if approved by the PWA to manage the procurement and delivery of such works.

3. Land Acquisition and Property Interface Management as requested by the PWA,
The Consultant shall:

- (a) Provide confirmation of the interfaces with existing and proposed adjacent properties and developments. This shall include coordination with relevant authorities and the various agencies within the PWA and applicable legal authorities having jurisdiction;
- (b) Shall assist the PWA in providing and reviewing Legal Descriptions, easement plans, property surveys and other documents and/or services required as part of the project.

4 Procurement Strategy Support

The Consultant shall establish and report what Construction Contract contracts shall be made for each project, including any advance or enabling works contracts.

5. Logistics Planning

The Consultant shall prepare and coordinate logistics plans for the Project, that identify logistics issues that should be pursued at the Project level which can provide benefits to the delivery of projects as a consequence of early commencement.

6. Constructability and Construction Method Reviews

- (a) The Consultant shall organize and conduct Construction Contract stakeholder review meetings to review, amongst others, aspects of constructability, construction interfaces and construction methods.
- (b) These review meetings shall have representatives from the Project Construction Contract Stakeholders, and, relevant industry representatives.

4.2.4.12 Quality Management & Assurance

1. **Quality Management System**

- (a) The Consultant shall establish and administer a Quality Management System (QMS), which defines all the Project processes and has the necessary flexibility to be applicable throughout the lifecycle of the Construction Contract of the Project.
- (b) This QMS shall be fully compliant with local legislation and any applicable regulations and codes of practice. The QMS shall be modelled around the requirements of ISO9001:2008 "Quality Management Systems Requirements" and the underlying philosophy to promote a culture of continuous improvement.
- (c) The QMS shall be administered by the CSC and may involve all stakeholders including, but not limited to, the PWA, third parties, the public (as agreed by the PWA), consultants and the contractors.
- (d) The Consultant shall ensure that the QMS policy is communicated throughout the project and enable the PWA to witness any defined Quality Control points.

2. **Quality Management Deliverables**

The Consultant shall:

- a. Manage the project quality assurance system and quality control plan in accordance with the PWA STANDARDS;
- b. Monitor the design, and construction activities and quality of the works against the requirements of the contract documents and the PWA STANDARDS;
- c. Review all test report, material and equipment submittals and certify compliance or non-compliance with the Contract Document. Were special test or investigations are required to confirm compliance or non-compliance, the Consultant shall identify all special test and investigations required and manage the tendering of all PWA approved special tests and investigations.
- d. Report on the Construction Contract consultants' and contractor's failure to comply with the requirements of the project quality assurance system and quality control plan;
- e. Monitor the issuing of quality non-compliance by the contractor reports to the contractor by the consultant and the completion of a quality non-compliance register;
- f. Monitor the rectification of quality non-compliances;
- g. Identify trends in quality non-compliances and proactively identify with the consultants and the contractor measures to stop the trends;
- h. Monitor the preparation and submittal of final reports by the consultant and contractor on quality management; and
- i. Manage the completion of all rectification works.

3. Quality Assurance & Audit

By means of formal review and approval, the Consultant shall acquire a thorough knowledge of the intentions of all parties participating in the Construction Contract of the Project with regards to quality assurance and quality control. The Consultant shall verify and validate the effective implementation of such plans by means of surveillance and audit of project activities and the associated records.

The Consultant Audits

- a. The *Consultant* shall carry out audits of all the activities in QMS at quarterly intervals, or at such other intervals as the PWA may require, ensuring the continuing suitability and effectiveness of the quality system. Reports of each such audit shall be submitted promptly to the PWA.
- b. The *Consultant* shall submit for review by the PWA details of the inspection and testing activities.

The PWA Quarterly QMS Audits

- a. Quality audits may be conducted by the PWA to verify the implementation and maintenance of the QMS as specified herein.
- b. During the Construction Contract period, upon receipt of Corrective Action Request (CAR), Non Conformance Report (NCR), or similar issued as a result of quality audit, the *Consultant* shall submit for review a proposed corrective and preventive action plan within fourteen (14) days of notification.

Non-conformances

- a. The *Consultant* shall maintain a Nonconformity Register to indicate the status of all nonconformities, which are identified by the PWA and the *Consultant*. The *Consultant* shall issue a written report to the PWA on all Nonconformity findings reported.
- b. The PWA shall have the right to suspend work activities should a party fail to address non-compliances. The *Consultant* shall establish an approved, documented mechanism that prioritizes the resolution of such issues. Accordingly, contract documents shall include the PWA's rights and the established mechanism.
- c. Where the PWA orders a suspension of any defective works or part thereof, such suspension shall continue until the Consultant has satisfied the PWA that satisfactory corrective action has been taken to eliminate the cause of the suspension.
- d. The PWA shall, in accordance with the Contract and as recommended by Consultant, deduct the value (including any approved defective work value factors) of defective works from monies due within Interim Payment Certificates until Corrective Actions are implemented and deemed by the PWA to be effective.

4.2.4.13 Health, Safety and Security Management

1. HSSMS System

- (a) The *Consultant* shall within the authority delegated to the *Consultant* by the PWA, work closely with the PWA, Civil Defence, Police, Security Forces Consultants and Contractors to develop preliminary Health, Safety and Security Plans. Where necessary and if approved by the PWA, the *Consultant* shall contract, manage and coordinate specialized Health, Safety and Security Consultants to develop plans and provide advice and guidelines to ensure that the proper provisions are incorporated within the designs.
- (b) In order to ensure a safe and healthy work environment for all Project staff at all times, the *Consultant* shall establish and administer and shall issue a report to the PWA on an over-riding health and safety management system as approved by the PWA which will

- be effective throughout the lifecycle of the Project, from commencement through to start-up and operations.
- (c) This Health and Safety Management System (HSSMS) shall be fully compliant with local legislation, any applicable regulations and codes of practice. The HSMS shall be modelled around the requirements of BS OHSAS18001:2007 "Occupational Health and Safety Management Systems - Requirements" and the underlying philosophy to promote a culture of continuous improvement. The *Consultant* shall ensure that the PWA's health & safety policy is communicated throughout the Project. In addition, the *Consultant* must ensure that the Project wide health and safety culture is based around the fundamentals of risk management such that the hazards associated with the Project environment are regularly assessed in order that perceived project risks can be mitigated at the earliest opportunity.
- (d) The over-riding HSMS shall involve all stakeholders (as agreed by the PWA), including but not limited to, the PWA, third parties, the public, Consultants and the Contractors.
2. HSSMS Deliverables
The *Consultant* shall as approved by the PWA:
- a. Establish the project outline for a health, safety and security management system and plan;
- b. Manage the project health, safety & security plan in accordance with the PWA STANDARDS;
- c. Review and approve, as necessary, all health, safety and security management plans and procedures to ensure compatibility with the project's plans and procedures;
- d. Monitor the construction activities against the requirements of the project's health, safety and security management plan;
- e. Monitor the preparation of method statements by the contractor and their approval by the site supervision consultant;
- f. Monitor the provision by the contractor of personal protective equipment;
- g. Monitor the provision by the contractor of health and safety inductions, briefings and lunch-box talks;
- h. Monitor the provision by the contractor of site safety signage and notice boards;
- i. Monitor the provision of the contractor of site security measures;
- j. Report on the consultants' and contractor's failure to comply with the requirements of the health, safety and security management system and plan;
- k. Monitor the issuing of health, safety and security incident reports by the contractor and notifications to it by the site supervision consultant and the completion of a health, safety and security incident register;
- l. Identify trends in health, safety and security non-compliances and proactively identify with the contractor measures to stop the trends; and
- m. Monitor the preparation and submittal of final reports by the site supervision consultant and contractor on health, safety & security management.
3. HSSMS Assurance and Audit
- (a) By means of formal review and approval, the CSC shall acquire a thorough knowledge of the intentions of all parties participating in the Project with regards to quality assurance, safety, and quality control. The CSC shall verify and validate the effective implementation of such plans by means of surveillance and audit of project activities and the associated records.
- (b) The Consultant Audits
- i) The Consultant shall ensure that audits of all the activities in HSSMS are carried out at monthly intervals, or at such other intervals as the PWA may require, ensuring the continuing suitability and effectiveness of the HSSMS system. Reports of each such audit shall be submitted promptly to the PWA.
- ii) The Consultant shall submit for review by the PWA details of inspection and testing activities.

- (c) PWA Audits
 - i) HSSMS audits may be conducted by the PWA to verify the implementation and maintenance of the HSMS as specified herein.
 - ii) During the Contract period, upon receipt of Corrective Action Request (CAR), Non Conformance Report (NCR), or similar issued by the Consultant as a result of HSSMS audit, the Consultant shall submit for review a proposed corrective and preventive action plan within fourteen (14) days of notification.
- (d) Non-conformances
 - i) The Consultant shall maintain a Nonconformity Register to indicate the status of all nonconformities, which are identified by the PWA and the Consultant.
 - ii) The PWA shall have the right to suspend work activities should a party fail to address non-compliances. The Consultant shall establish an approved, documented mechanism that prioritizes the resolution of such issues. Accordingly, contract documents shall include the PWA's rights and the established mechanism.
 - iii) Where the PWA orders a suspension of any defective works or part thereof, or as recommended by the Consultant, such suspension shall continue until the Consultant has satisfied the PWA that satisfactory corrective action has been taken to eliminate the cause of the suspension.
 - iv) The PWA shall, in accordance with the Contract, deduct the value (including any approved defective work value factors) of defective works from monies due within Interim Payment Certificates until Corrective Actions are implemented and deemed by the PWA to be effective.

4.2.4.14 Construction Management

1. Throughout the Construction and Maintenance Phase, the Consultant shall provide monthly, or as requested by PWA, Project Review presentations to PWA of work completed or underway by the Contractor and CSC at the PWA offices. Project Reviews shall be coordinated by the Consultant as approved by PWA. Consultant shall provide in English full written Minutes of Meetings to PWA within 2 working days of presentation. Presentation material will be in hard copy and/or digital format. Consultant shall provide (eight) 11x17 hardcopies of all drawing materials and 8.5x11 hardcopies of all final and draft monthly reports, budget reports, construction progress photos (24 photos min. unless otherwise specified by PWA), project schedules, etc. presented at monthly Construction Report Meetings. Digital copies of monthly presentations/reports shall be delivered to PWA in PDF format and circulated in accordance with the requirements of PWA.
 2. On Projects already commenced and in which the Contractor has already been appointed by the PWA, the Consultant shall supervise, monitor and manage the Contractor, including their compliance with their contracts, preparation of construction management plans, safety and security of the works, progress, quality and environmental aspects.
 3. The Consultant shall identify critical construction issues such as material or resource shortages or logistics issues, which may delay the construction works and resolve such issues, which are within his delegated authorities and recommend resolution of issues. The Consultant shall provide monthly reports on this issue to the PWA.
3. The Consultant shall liaise and manage the interfaces between Design Consultants, Supervision Consultants, other Consultants, and the Contractors, including Contractors requests for information and change requests and shall issue a monthly report to the PWA.

5. The Consultant shall supervise and, as part of the monthly based project reporting process to the PWA, report on the following:
 - (a) Review and approve Contractors' submittals;
 - (b) Issue site instructions;
 - (c) Inspect and accept the works;
 - (d) Supervise the testing and commissioning; preparation of construction records (including as-built drawings, test certificates), maintenance methods and manuals; and final handover of the works; and
 - (e) Supervise training that will be provided by the contractor.

6. The Consultant shall:
 - (a) Establish the outline methodologies for constructing the project and document them in the **PWA STANDARDS**;

 - (b) Identify project wide processes, which will facilitate the construction of the projects such as:
 - i) The avoidance or mitigation of critical construction issues such as:
 - ii) Monitor and shall issue a report to the PWA on the project construction works;
 - iii) Assist the delivery teams to resolve issues which may delay the construction works;
 - iv) Prepare an outline logistics plan for the project at project initiation stage;
 - v) Identify critical construction issues such as material or resource shortages or logistics issues for each project and proactively work to avoid or mitigate the effects;
 - vi) Manage the construction works and logistics in accordance with the PWA STANDARDS;
 - vii) Arrange, chair and minute the construction start-up meetings;
 - viii) Update the construction management section of the PWA STANDARDS on receipt of the relevant plans from the contractors;
 - ix) Monitor and report on the site supervision consultant and the contractors regarding the safety and security of the works, their progress, their quality and their performance regarding sustainability and environmental management;
 - x) Liaise between the programme management team, the contractors and the designers to ensure that any barriers to the progress of the works which are outside the control of the enabling works contractor are removed;
 - xi) Maintain a proactive approach with the contractors to identify issues, which may represent hazards to the completion of the works safely, on time, to budget and within environmental targets. Work with the team members to create strategies and plans to remove each hazard, reduce its risk of occurrence or mitigate the associated impacts;
 - xii) Monitor the execution of the works for conformance with the contract documents;
 - xiii) Advise the enabling works contractor regarding failure of the contractor to conform to the requirements of the contract documents;
 - xiv) Instigate, manage and minute meetings at site with the contractors;
 - xv) Monitor and record the contractor's physical progress on site;
 - xvi) Monitor the acceptance of the works by the site supervision consultant;
 - xvii) Liaise with the stakeholders in accordance with the protocols for communications and in particular concerning the execution of the necessary utility diversions and traffic diversion schemes;
 - xviii) Instigate manage and minute meetings at site with PWA, the contractor and the design consultants' site teams; and
 - xix) Monitor training by the contractor as required.

4.2.4.15 Communications Management.

1. The Consultant shall:
 - (a) In accordance with the requirements of PWA, establish and document the protocols for the stakeholders reporting to the PWA in accordance with the PWA STANDARDS using the PWA Contract Management systems;
 - (b) In accordance with the requirements of PWA coordinate the type, content and frequency of reports from the project team and document this in the PWA STANDARDS;
 - (c) Manage the Project controls system to provide accurate reports to the PWA on the status of the Project;
 - (d) Monitor the delivery teams type, content and frequency of reports to be submitted to the programme management team and document this in the PWA STANDARDS;
 - (e) Manage communications in accordance with PWA standards;
 - (f) Manage the project document control system; and
 - (g) Instigate, manage and report on the meetings in accordance with the meetings schedule;
 - (h) The term report, plan (when referring to schedules or procedures) study, notification, record used in this contract shall mean written report, written plan, written study, written notification and written record submitted to PWA in both hard and soft copy.

4.2.4.16 Project Close Out / Maintenance Period Management.

1. The Consultant shall:
 - (a) Provide the procedures for the handover of the completed works and the verification of the provision of the scope requirements;
 - (b) Provide the review and submittal of
 - i) Testing and commissioning plans and results;
 - ii) As-built drawings; and
 - iii) Operations manuals, warranties, manuals, and certificates.
 - (c) Provide the supervision of the testing and commissioning;
 - (d) Provide the acceptance of building works by the site supervision consultant; and
 - (e) Provide the hand-over of the project including the collation and delivery of the necessary documentation produced, and to be provided, by the contractor such as operating manuals, executed warranties, and test certificates.
 - (f) The Consultant shall work closely with the PWA to provide an integrated Asset Management System. The system should be a common language to code all assets from initial design stage to final de-commissioning.
2. Project Lessons Learned Report
The Consultant shall provide a comprehensive Project Lessons Learned Report outlining the following:
 - i) Variation Order Summary
 - ii) Reasons for Project Schedule Delays that can be avoided in the future
 - iii) Contract language conflicts or ambiguities to be remediated
 - iv) Design Details that resulted in project problems
 - v) Construction Operations that resulted in project problems
 - vi) Specialty Consultants or Sub-Contractors that resulted in project problems
 - vii) Specification Details that resulted in project problem
 - viii) Material or Equipment Specifications that resulted in project problems
 - ix) Health and Safety Issues that resulted in project problems
 - x) Environmental Issues that resulted in project problems
 - xi) Project Control Issues that resulted in project problems

5.0 DEMOBILISATION

- (a) Demobilization (Period): means 2 months period prior to the completion of the contract and/or in the event of Termination and/or Consultant's default, (per contract conditions) 2 months after the issue of a notice to terminate.
- (b) The Consultant shall within 3 months of the date of commencement of the contract prepare and submit to the PWA a programme for effecting Demobilization. The programme shall set out in such manner as the PWA may reasonably require the sequence in which and dates by which the Consultant proposes to perform his Demobilization obligations under the Contract and the date(s) by which the Consultant reasonably requires that the PWA should provide any further documentation or information or take any other action to permit the Consultant so to perform his Demobilization obligations.
- (c) The Consultant shall prepare and submit to the PWA with each Project, details of the personnel of suitable qualifications and experience whom the Consultant proposes to employ on effecting Demobilization in accordance with the Project. The Consultant shall use all reasonable endeavors to employ and make available personnel and resources conforming to such proposals.

The Demobilization shall encompass, as a minimum:-

- i) Ensuring non essential expenditure is reduced as rapidly as possible;
- ii) The provision to the PWA of a full and complete set of any documents, manuals or other information, which the PWA may require;
- iii) The supply to the PWA of any equipment supplied to the Consultant by the PWA or the cost of which has been included in any invoices or applications submitted by the Consultant to the PWA;
- iv) That subcontract and or supplier contracts are assigned (as directed by the PWA);
- v) That account substantiation details are provided to allow the PWA to calculate the amount due to the Consultant for works properly authorized;
- vi) That Technology and Information Transfer is effected; and
- vii) The transfer of Intellectual Property Rights shall be carried out in accordance with the relevant provisions of the conditions of contract.

6.0 PERIOD OF ENGAGEMENT

6.1 Consultant's Mobilization Period

- (a) The Consultant shall submit the names and CV's of alternate Site Staff candidates (alternate to the approved "Tender Offer" candidates should they no longer be available) and make these candidates available for interviews for approval by the Engineer within four (4) week mobilization period.
- (b) Mobilization Period shall commence **30 days** prior to Construction Commencement Date and shall include Pre-Construction Project Administration Services.
- (c) The Consultant Senior Site Staff shall review the construction contract document, drawings, specifications, etc. of the project for compliance with Project Referenced Standards. Should the Consultant Site Staffs find discrepancies

and/or ambiguities in the contract document, drawings, specification, etc., during the review, the PWA shall be immediately notified. A comprehensive report of all the discrepancies and/or ambiguities shall be submitted to the Engineer with corresponding recommendations as to what actions shall be taken within **30 days** from commencement date of the services. The Consultant shall make the necessary arrangements with the Building Affairs Project Manger to have access to all relevant documentation in this regard. The Consultant shall allow for any and all associated costs in compliance with the above in his tender/contract price.

6.2 PSA Services Engagement Period.

The PSA Services shall start from the commencement of the engagement, which shall also be the start of the construction contracts of the **Package F1 and F2** as per the Project Duration Schedule (See attached).

The total duration of the construction supervision period shall be **600 days** plus **400 days** Maintenance Period, starting from the commencement date.

The Maintenance Period shall commence after the completion of the Works of each individual sites.

The Public Work Authority (PWA) has the right to reduce/extend the period of services of supervision staffs of any sites at any time as per the requirement of each site.

The **600 days** shall be represented for payment instalment periods as **20 months** (these are not calendar months and could be termed as 'PSA contract months').

If in the opinion of the Consultant, more staff than the minimum specified is required to carry out the services, he is to allow for such additional staff as necessary in his Tender Price.

6.3 Working Hours.

The minimum working hours shall be Ten (10) hours per day from 7 am to 5 pm including one (1) hour break, six working days per week.

Beyond the above said minimum working hours and on public holidays, the consultant shall consider in his price provision of the necessary staff (s) in case of unavoidable circumstances such as cast concrete works and/or emergency cases.

The Consultant shall take into account the "time completion" and the nature of the construction works in that it may be necessary for the contractor to work outside normal hours and weekends and the Consultant shall therefore allow within the Consultant bid costs for providing site staff to work regular, evening, and/or night shifts, or weekends in addition to normal working hours as necessary.

All payrolls shall be in accordance with the Laws of State of Qatar.

6.4 Total PSA Engagement period

The total 'PSA Engagement period' is represented as follows:

- Construction Supervision Period. 600 days
- Maintenance Period 400 days
- Total PSA Engagement period **1000 days**

7.0 STAFF RESOURCES TO BE PROVIDED

7.1 The minimum Site Personnel required and the minimum period for which the Consultants shall provide in accordance with Clause 10 of the Project Brief is as follows:

ITEM	DESCRIPTION	Qty	Min. Site Attdn. (in %)		PSA Months	REMARKS
			Package			
			F1	F2		
A	<u>Site Staff as Specified</u>					
1	Project Manager (Civil)	1	45%	55%	20	For Package F1 and F2
2	Construction manager	1	-	100%	20	For Package F2
3	Construction manager	1	100%	-	18	For Package F1
4	Senior Civil Engineer	1	45%	55%	20	For Package F1 and F2
5	Senior Architect	1	45%	55%	20	For Package F1 and F2
6	Senior Electrical Engineer	1	45%	55%	20	For Package F1 and F2
7	Senior Mechanical Engineer	1	45%	55%	20	For Package F1 and F2
8	Senior Quantity Surveyor (Chartered)	1	45%	55%	20	For Package F1 and F2
9	Senior Planning Engineer	1	45%	55%	20	For Package F1 and F2
10	Safety manager 1	1	-	100%	20	For Package F2
11	Safety manager 2	1	100%	-	18	For Package F1
12	Electrical Engineer 1	1	-	100%	18	For Package F2
13	Mechanical Engineer 1	1	-	100%	18	For Package F2
14	Electrical Engineer 2	1	100%	-	16	For Package F1
15	Mechanical Engineer 2	1	100%	-	16	For Package F1
16	Site Engineer (Civil/Architect)	1	-	100%	18	For Package F2
17	Site Engineer (Civil/Architect)	2	-	100%	16	For Package F2
18	Site Engineer (Civil/Architect)	1	-	100%	15	For Package F2
19	Site Engineer (Civil/Architect)	1	-	100%	12	For Package F2
20	Site Engineer (Civil/Architect)	1	100%	-	18	For Package F1
21	Site Engineer (Civil/Architect)	3	100%	-	12	For Package F1
22	Site Engineer (Civil/Architect)	1	100%	-	13	For Package F1
23	QA/QC engineer 1	1	-	100%	20	For Package F2
24	QA/QC engineer 2	1	100%	-	18	For Package F1

25	Document Controller	4	45%	55%	20	1 No. For Package F1 , 1 No for Package F2 and two numbers exclusively for building affairs
26	GSAS Certified Personal	1	45%	55%	20	For Package F1 and F2

- a) The above listed Personnel shall attend all necessary and appropriate site and other project meetings throughout the currency of contract including the Period of Maintenance except for item 8 as noted above.
- b) The specification of site staff in the Project Brief does not relieve the Consultant in any way of providing whatever staff, expertise, or other personnel resources which may be required for the full compliance of his duties, obligations and liabilities in terms of the Professional Services Agreement, Conditions of Engagement and Project Brief.
- c) If, in the opinion of the Consultant, more Staff than the minimum specified is required to carry out the services, he is to allow for such additional staff as necessary in his Tender Price and include this cost by prorating this cost within the individual line items indicated within Section G -Schedule B1.

7.2 Site Staff

(a) General Obligations

- i) The Consultant is required to maintain daily attendance sheet for the staff deployed on site and shall obtain weekly approval from PWA.
- ii) For periods of vacation, the Consultant shall provide a replacement of similar qualifications to ensure continuity of service. The Consultant shall inform PWA in not less than four (4) weeks advance about staff vacations or anticipated long periods of absence. Replacements shall only be mobilized after their approval by PWA. All approved replacement staff shall be on-site a minimum of 2 week prior to leave of original staff personnel for complete information transfer and project orientation without additional cost to PWA.
- iii) The Consultant shall ensure that during vacations or long periods of absence of the designated and approved staff; that suitable alternative staffing arrangements are made in agreement with PWA. The replacement staff shall have prior knowledge of the project and have similar qualifications and experience to ensure continuity of service.
- iv) No consultant site staff(s) shall be allowed to go on annual leave unless minimum 6 months of services had been completed from the approval of PWA.
- v) The consultant shall provide replacement of any staff(s) that is on sick leave exceeding 7 days.
- vi) Clause 18.4.3 (penalty for delay to mobilisation) shall be applied should the consultant fails to provide the replacement staff(s) in accordance with the requirements stated in item b, c, and d above , the same penalty shall be also applied to any staff exceeded the number of sick leaves allowed in labour law.

(b) Site Staff Engaged Full Time

- i) Site staff employed by the Consultant in terms of the Professional Services Agreement and Conditions of Engagement shall work full time on the Project for the full duration of the engagement (or specified part of the engagement) at normal working hours and any other additional hours that are reasonably necessary, at no extra cost to the contract, in the executing of their duties and obligations in terms of the contract.
- ii) The said staffs is expressly prohibited to carry out any work, tasks or provide services for the Consultants other than that work, tasks or services directly related to the project or as directed by the PWA.
- iii) Site staff shall work regular evening or night shifts, or weekends as required by the programme and execution of the Construction Works or as directed by the PWA. Regular evening or night shifts, or weekend work in addition to normal hours shall not be deemed to be additional services and the Consultant shall allow for same in his Tender Price.

(c) Site Staff Engaged Part Time

General conditions and Requirements

- i) Part time shall be a minimum period or periods other than full time within the period of engagement for which the specific designated site staff are required for the purposes of the Professional Service Agreement.
- ii) The mobilization and amount of actual attendance required is the responsibility of the Consultant and shall be sufficient to carry out the functions and duties necessary in terms of the Professional Service Agreement and Project Brief. If in the opinion of the Consultant, more than the minimum period specified is required to carry out the services, he is to allow for such additional costs as necessary in his Tender Price.
- iii) The actual attendance shall be as and when the site staffs is required at any time during the full period of engagement for the purpose of carrying out the services in terms of the professional Service Agreement and Project Brief.

8.0 SPECIAL REQUIREMENTS -

8.1 The Consultant shall provide Biometric Attendance Machine at each site location.

9.0 SPECIAL GENERAL CONTRACT CONDITIONS AND REQUIRMENTS-

9.1 General.

9.1.1 The Engineer reserves the right to increase or reduce, both the level and duration of supervision subject to giving four (4) weeks' notice of intent to the Consultant. In each case the fee shall be adjusted using the monthly rates quoted in the fee offer.

9.1.2 The Consultant office shall provide necessary Head/Sub office support to the Engineer, referred in the fulfilment of their obligations during the currency of the Professional Services Agreement and during the maintenance period of the Contracts being supervised.

9.1.3 The Consultant shall allow for and his fee is deemed to include for the cost of procurement of all and any data or plans for which a charge may be levied by any Authority.

10.0 PROFESSIONAL QUALIFICATIONS AND CRITERIA FOR PROJECT STAFF

10.1 General Requirement and Criteria.

10.1.1 The Consultant shall provide suitably qualified staff as described in this brief and fully capable of representing and acting on behalf of Building Affairs.

The Tenderer is to submit qualified candidates who clearly demonstrate the Consultant's ability to provide an optimum service to ensure the project as a whole is carried out in the most cost effective manner and completed in time, while fully complying with Building Affairs and International standards of technical, operational and safety requirements.

The Engineer reserves the right to review all or any staff assigned to the project on a regular basis.

10.1.2 No staff member shall be allocated to or removed from the site without the Engineer's approval. Staff curricula vitae shall, in all instances, be submitted for the Engineer's consideration and approval prior to appointment to the site staff.

10.1.3 All the key individual members of the Team shall have:

- (a) Proven ability to manage projects of similar size and nature to deliver completed quality work on time and within budget.
- (b) Proven ability to coordinate a multi-disciplinary team on projects of similar size and nature
- (c) Proven ability to work cooperatively and effectively with a wide variety of interests/authorities.
- (d) The Architects, Engineers and all other key personnel and must have extensive knowledge and experience in respect of international contract laws as they apply to large scale construction.
- (e) Must be fully computer literate and able to utilize computer technology to access data, maintain records, generate reports, etc. and in particular any project specific engineering and construction relevant software. This is particularly applicable to all degree qualified Engineers.
- (f) Must be fluent in English both written and spoken with an excellent capability in written technical skills as well as oral and written communication skills. This is particularly applicable to all degree qualified Engineers and Surveyors.

10.1.4 The design Referenced Standards and specifications applied to all projects under Building Affairs control are based on QCS, QSAS, NFPA, ANSI, and IBC practices. It is therefore expected that the staff allocated to fill positions designated as Architect and/or Engineer will be fully conversant with and have had practical experience with these standards and specifications.

10.2 Qualification & Experience

The specified site and supervision staffs shall have the following minimum qualifications and criteria and must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA) during the period of the services. The successful tenderer has to provide the undertaking letter expressing his commitment to submit the necessary valid UPDA accreditation for all the supervision staffs within 60 days from the date of awarding the contract.

10.2.1 Project Manager:

The incumbent of this post shall be responsible for the overall coordination of the entire project's site supervision, contractual & technical team and shall have good experience in multi-project control.

- i) Degree in Architecture Engineering from an accredited University with internationally recognized professional credentials in Project Management (PMP/PMI).
- ii) Minimum 20 year experience in Construction Project Management of large projects with a high concentration in Contract Administration and site supervision experience.
- iii) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-**Grade A**
- iv) Fully conversant with computer system mainly management software such as Primavera and Microsoft Projects (with international certificates).
- v) Able to coordinate and monitor all disciplines of work related to the project. This includes both management of the site supervision team as well as the Contractors, Subcontractors and other appropriate specialties.
- vi) Able to control Contractors and Subcontractors in conformance with Contract documents, drawings and specifications. This includes a working knowledge with local and international specifications that may relate to the project.
- vii) Able to monitor progress of Works and carry out updating, planning and preparing Progress Reports as required by the Engineer.
- viii) At least one (1) year working with the company and minimum three (3) years working in the Arabian Gulf Region and/or with internationally renowned company.
- ix) Previous experience in projects of approximately QR. 200,000,000.00 on similar job.

10.2.2 Construction Manager:

- i) Degree in Civil Engineering from an accredited University with internationally recognized professional credentials in Project Management (PMP/PMI).
- ii) Minimum 15 year experience in Construction Management of large projects with a high concentration in site supervision experience.
- iii) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-**Grade A**
- iv) Fully conversant with computer system mainly management software such as Primavera and Microsoft Projects (with international certificates).
- v) Able to coordinate and monitor all disciplines of work related to the project. This includes both management of the site supervision team as well as the Contractors, Subcontractors and other appropriate specialties.
- vi) Able to control Contractors and Subcontractors in conformance with Contract documents, drawings and specifications. This includes a working knowledge with local and international specifications that may relate to the project.
- vii) Able to monitor progress of Works and carry out updating, planning and preparing Progress Reports as required by the Project Manager and/or Engineer.
- viii) At least one (1) year working with the company and minimum three (3) years working in the Arabian Gulf Region and/or with internationally renowned company.
- x) Previous experience in projects of approximately QR. 200,000,000.00 on similar job.

10.2.2. Senior Civil Engineer

- i) Degree in Civil Engineering from an accredited University.
- ii) Minimum 15year experience in building construction on similar projects.
- iii) At least one (1) year working with the company and minimum 3 year experience in the Arabian Gulf Region and/or internationally renowned company.
- iv) Previous in projects of at least QR. 100,000,000.00 on similar projects.
- v) Experience gained from working with well established Civil/Structural Engineering companies.
- vi) Possess appropriate technical background and ability to control the Contractor and Subcontractors conformance with Contract document including drawings and specification.
- vii) Possess working knowledge of local and international specifications which may relate to the Work.
- viii) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-Grade A

10.2.3 Senior Architect engineer :

- i) Degree in Architectural Engineering from an accredited University.
- ii) Minimum 15 years' experience as an Architect in building construction or similar projects.
- iii) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-**Grade A**
- iv) At least one (1) year working with the company and minimum 3 year experience in the Arabian Gulf Region and/or internationally renowned company.
- v) Previous experience in projects of at least QR. 150,000,000.00 on similar job.
- vi) Fully conversant with AutoCAD, Microsoft office etc.
- vii) Ability to check, modify and approve shop drawing in full compliance with the requirements.
- viii) Ability to check and approve the material submittal which is complies with specification and drawing .
- ix) Ability to check and approve the work on site .
- x) At least (10) year experience in supervision on site and fallow up the work progress with contractor, subcontractor and supplier.
- xi) Possess working knowledge of local and international specifications which may relate to the Work and approval of material.

10.2.4 Senior Electrical Engineer (Full Time)

- i) Graduate of Electrical Engineering from an internationally recognized institution.
- ii) Minimum Total of fifteen (15) years post-graduate experience with at least (7) years' Experience in Consultancy (supervision) as Architectural Engineer or Equivalent.
- iii) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-Grade A
- iv) At least one (1) year working with the company and minimum 3 year experience in the Arabian Gulf Region and/or internationally renowned company.
- v) Possess appropriate technical background and ability to control the contractor's and subcontractors' conformance with the contract documents including drawings, specifications, etc. This includes a working knowledge of local and international specifications that may relate to the work.
- vi) Previous experience in project that is fully automatic operation system.
- vii) Previous experience in projects of at least QR. 150,000,000.00 on similar job.
- viii) Ability to check and approve works in full compliance with the requirements.

10.2.5 Electrical Engineer

- i) Degree in Electrical Engineering from an accredited University.
- ii) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-Grade B
- iii) Minimum 10 years' experience gained from established Electrical Engineering Consultants on similar projects.
- iv) At least one (1) year working with the company and minimum 3 year experience in the Arabian Gulf Region and/or internationally renowned company.
- v) Previous experience in project that is fully automatic operation system.
- vi) Previous experience in projects of at least QR. 150,000,000.00 on similar job.
- vii) Ability to check and approve works in full compliance with the requirements.
- viii) Possess appropriate technical background and ability to control the contractor's and subcontractors' conformance with the contract documents including drawings, specifications, etc. This includes a working knowledge of local and international specifications that may relate to the work.

10.2.6 Senior Mechanical Engineer.

- i) Degree in Mechanical Engineering from an accredited University.
- ii) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-Grade A
- iii) Minimum 15 years' experience gained from established Mechanical Engineering Consultants on similar projects.
- iv) At least one (1) year working with the company and minimum 3 year experience in the Arabian Gulf Region and/or internationally renowned company.
- v) Previous experience in projects with centralized air conditioning & fire fighting systems and BMS.
- vi) Previous experience in projects of at least QR. 150,000,000.00 on similar job.
- vii) Ability to check and approve works in full compliance with the requirements.
- viii) To be fully aware with Kahramaa regulations and requirements.
- ix) To be fully aware with Qatar Civil Defense Department requirements and regulations.
- x) Possess appropriate technical background and ability to control the contractor's and subcontractors' conformance with the contract documents including drawings, specifications, etc. This includes a working knowledge of local and international specifications that may relate to the work.

10.2.7 Mechanical Engineer

- i) Degree in Mechanical Engineering from an accredited University.
- ii) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-Grade B
- iii) Minimum 10 years' experience gained from established Mechanical Engineering Consultants (supervision) on similar projects.
- iv) At least one (1) year working with the company and minimum 3 year experience in the Arabian Gulf Region and/or internationally renowned company.
- v) Previous experience in projects with centralized air conditioning & fire fighting systems and BMS.
- vi) Previous experience in projects of at least QR. 100,000,000.00 on similar job.
- vii) Ability to check and approve works in full compliance with the requirements.
- viii) To be fully aware with Kahramaa regulations and requirements.
- ix) To be fully aware with Qatar Civil Defense Department requirements and regulations.
- x) Possess appropriate technical background and ability to control the contractor's and subcontractors' conformance with the contract documents including

drawings, specifications, etc. This includes a working knowledge of local and international specifications that may relate to the work.

10.2.8 Senior Quantity Surveyor (Chartered):

- i) Must be a Chartered Quantity Surveyor and RICS member or equivalent institution.
- ii) Degree in Quantity Surveying or equivalent from an accredited University.
- iii) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-Grade A
- iv) Minimum fifteen (15) years pre & post-contract experience in similar project and preferred to have experience in the Gulf region with registered Engineering Consultants.
- v) Previous experience in projects of at least QR 200,000,000.00 on similar job.
- vi) At least one (1) year working with the company and minimum 3 year experience in the Arabian Gulf Region and/or internationally renowned company.
- vii) Must be computer literate, fluent in English language both written and spoken with an excellent technical skills as well as oral and written communication skills.
- viii) Fully conversant with the local General Conditions of Contract and Standard Method of Measurement and QCS and possess working knowledge in Variation Orders and Cost Analysis/Claims & FIDIC

10.2.9 Senior Planning Engineer:

Qualifications:

B.Sc. degree in a relevant engineering discipline with certification in planning and scheduling of projects and in using Primavera applications (Primavera Project Management /P6 and Primavera Contract Management/Expedition) and cost engineering with minimum 15 years' experience 3 of which should be in a similar role with engineering consultancy or project management consultancy.

Experience:

- i) At least 15 years project management experience in planning, scheduling and cost engineering, including at least 3 years using Primavera Project Management (P6), Primavera Contract Management (Expedition);
- ii) Good oral and written English language, with good report writing, analytical and computer skills;
- iii) Extensive knowledge and experience in project planning, budgeting, cost phasing and control from the project initiation to close out phases, utilising computer based systems (Primavera Project Management 'P6' & Primavera Contract Management 'Expedition'), within the framework of an integrated project services function for the effective management of a wide range of concurrent projects, to meet the business plan objectives;
- iv) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-**Grade A**
- v) Familiarity with the techniques for schedule impact analysis;
- vi) Completed at least one project in same role that is comparable in complexity and size to the project;
- vii) Preferably, have minimum 3 years' experience in the gulf region; and
- viii) Preferably, fully conversant with the standard forms of Contracts used in PWA projects.
- ix) Previous experience in projects of at least QR. 200,000,000.00 on similar projects in both construction and design services.

Responsibilities:

The Candidate shall be responsible for all issues and services related to the Primavera Project Management and Primavera Contract Management including but not limited to the following:

- i) Using latest version of Primavera Project Management (P6) and Primavera Web software for monitoring and reviewing: baselines - updated project schedules – cost;
- ii) Create Dashboards and Project Workspace;
- iii) Using latest version of Primavera Contract Management (Expedition) as contract document management software to track correspondences, drawings, submittals, material & equipment procurement, daily reports, transmittals, minutes of meetings, Bill of Quantities, proposals, requests for inspection, requests for clarification, change orders, invoices, payment requisitions and snag lists and linking the Project information in Primavera Contract Management to the Primavera Enterprise Schedule;
- iv) Coordinating with the Engineer in the review and integration of the schedule into the Authority's database and will guide the Contractor in preparation of the schedule to be compatible with the integration requirements;
- v) Coordinate the schedule update through the Primavera Web Interface;
- vi) Reviewing contractor's work program submissions including all narratives and supporting information, and provides analysis and findings;
- vii) Maintain integration with OP&M System;
- viii) Verifying actual progress and comparing actual performances to original plans;
- ix) Monitoring, adjusting and updating the cost plan and cash flows accordingly and the consolidating of these results in Consultant monthly reports;
- x) Estimating time element of change orders and submits his analysis to the Engineer and incorporating within the master schedule after authorisation;
- xi) Evaluating Contractor's extension of time requests and preparing recommendations to the Engineer; and
- xii) Follow up OP&M System implementation requirements.

10.2.10 Site Engineer (Civil)

- i) Degree in Civil Engineering from an accredited University.
- ii) Minimum 10 year experience in building construction on similar projects.
- iii) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-**Grade B**
- iv) At least one (1) year working with the company and minimum 3 year experience in the Arabian Gulf Region and/or internationally renowned company.
- v) Previous in projects of at least QR. 100,000,000.00 on similar projects.
- vi) Experience gained from working with well established Civil/Structural Engineering companies.
- vii) Possess appropriate technical background and ability to control the Contractor and Subcontractors conformance with Contract document including drawings and specification.
- viii) Possess working knowledge of local and international specifications which may relate to the Work.

10.2.11 Site Engineer(Architect)

- i) Degree in Architecture from an accredited University.
- ii) Minimum 10 year experience as an Architect in building construction of similar projects.

- iii) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-**Grade B**
- iv) At least one (1) year with the company and at minimum three (3) years working experience in the Arabian Gulf Region and/or with internationally renowned company.
- v) Previous experience in projects of approximately QR. 100,000,000.00 on similar job.
- vi) Fully conversant with AutoCAD, Microsoft office, etc...
- vii) Ability to check and approve works in full compliance with the requirements.
- viii) Possess appropriate technical background and ability to control the contractor's and subcontractors' conformance with the contract documents including drawings, specifications, etc. This includes a working knowledge of local and international specifications that may relate to the work.

10.2.12 QA/QC Engineer

- i) Bachelor Degree in a relevant engineering discipline.
- ii) Minimum of Total seven (7) years post-graduate experience with at least (3) years' Experience in Consultancy (supervision) in similar construction projects.
- iii) Must possess a valid certificate from the Engineer's Accrediting and Classifying Committee of Urban Planning & Development Authority (UPDA)-Grade B
- iv) To manage, monitor and interpret the contract design drawings and documents.
- v) To coordinate with various sub-contractors and other project trades.
- vi) To be fully aware of Qatar Construction Code and specifications in relation to construction works, PWA QA/QC policies.
- vii) To prepare reports, attend inspections, maintain work quality and coordinate with the project management team.
- viii) Previous experience in projects of approximately QR. 100,000,000.00 on similar job.
- ix) Responsible for all issues and services related to quality assurance and quality control including enhancement , development and implementation of all appropriate techniques, process , procedures and compliance requirement.

10.2.13 Safety Manager :

- i) Bachelor Degree in a relevant engineering discipline.
- ii) Minimum of Total fifteen (15) years post-graduate experience with at least (5) years' Experience in Consultancy (supervision) in similar construction projects.
- iii) Previous experience in the Gulf region.
- iv) Should be a member of relevant professional body such as Institution of Occupational Safety and Health (IOSH) or Equivalent.
- v) Be responsible for identifying H&S issues from a planning and design perspective and also during the execution stages.
- vi) Fully conversant with the local General Conditions of Contract and QCS.
- vii) Accredited from the Engineers and Consulting Offices Accrediting Committee (UPDA) as a **Grade "A"** Engineer.

10.2.14 Document Controller:

The Document Controller shall report to and assist the Engineer and is responsible but not limited to:

- i) Receive, register, distribute and file correspondence.
- ii) Manage out-going correspondence's reference number.
- iii) Establish and maintain a system for filing and registration for the project.
- iv) Receive, register and distribute technical submittals.
- v) Receive, register, distribute and file drawings and specifications.

- vi) Prepare periodical reports within field of work.
- vii) High proficiency in written and spoken English and Arabic.
- viii) Computer literate with extensive knowledge in Microsoft Word, Excel, Power Point, etc.
- ix) At least one (2) years' experience with Project management documentation system and possess a valid certificate from approve institute.

10.3 Submittal of CVs for Approval.

The Consultant shall submit CVs and photocopies of all relevant qualifications for each nominated site staff with his Fee Tender (see Section D – Technical submission)

10.4 Approval of CVs & Credential.

10.4.1 The proposed candidates must be available and may be subject to being interviewed by Building Affairs for final approval before recommendation for award is made.

10.4.2 Acceptance of the tender as a whole will not imply automatic approval of any staff candidates submitted with the tender. Full submissions will be required to be presented to the Engineer for his written approval as required by the Conditions of Engagement and Project Brief.

Prior to the award of the contract to the selected Tender, the Public Works Authority reserves the right to re-evaluate any or all of the nominated site staff candidates. The Consultant shall at the written request of the Public Works Authority make all or any of the candidates available for interviews and or provide any documentation as deemed necessary for the purpose of re-evaluation.

11.0 OPERATING RESOURCES

11.1 Minimum Equipment to be provided by the Consultant

11.1.1 General

- (1) The Consultant is reminded and referred to PSA – Edition 2010 in regard to all necessary facilities to be provided by the Consultant to effectively carry out the services.
- (2) The Consultant shall provide his staff with mobile phones, computers, printers and stationeries etc. so as to be carried out all the services on time and with the qualities as described in this document.
- (3) The Consultant shall also provide "Biometric Attendance Machine" at each site location that is capable of producing printed attendance reports. The aforesaid reports shall serve as the attendance sheets and shall be included in each monthly payment request. The Consultant shall submit copy of Biometric attendance reports to the Building Affairs regularly on weekly basis and/or as required by the Engineer's Representative.

11.1.2 Transport.

The Consultant is further reminded that in terms of the above Conditions of Engagement he shall provide all the facilities they need to carry out the services, including but not limited to all transport necessary for all site and other staff to effectively carry out their duties and responsibilities on-site and off-site to and from the base offices, site locations and any other Departmental offices or other office or location as directed by the Engineer or as necessary in carrying out the Works.

11.2 Facilities provided by the Works Contractor.

The Contractor will provide all site office space required for the Consultants supervision team including furniture.

12.0 OFFICE, RESOURCES AND EQUIPMENT

- (a) The Consultant will maintain a Project Office in Doha for the duration of the Project, which will be provided by the Consultant, for the use by the Consultant and associated Project staff. The facility will include working spaces, conference area(s), some private offices and sufficient parking facilities.
- (b) The Consultant will be required to equip the office as needed to effectively and efficiently carry out the tasks it is assigned, and/or contractually engaged to execute.

13.0 PWA PROJECT GATEWAY REVIEW PROCESS

The Consultant shall be responsible for project compliance in accordance with a series of approval gateways. These are milestones in the project lifecycle beyond which the project shall not proceed without specific management and funding approval from PWA. At each approval gateway, a Project Review of the technical scope, projected whole life cost and programme for the project will be a pre-requisite for approval to proceed to the next stage.

Project Construction Contract Gateways are briefly described as follows:

Approval Gateway 4, Project Change/Variance – Conducted when a project is at variance or is forecast to be at variance with the agreed programme in terms of cost, time, scope or output. It includes:

- a) Confirmation that variation is an effective solution to PWA's needs;
- b) Confirmation that project can proceed with the approved change;
- c) Confirmation of change in project budget or programme;
- d) Confirmation that project drivers, output and delivery requirements are still relevant following the change; and
- e) Confirmation of Approvals, timeline/milestones for all non-PWA stakeholders.

Approval Gateway 5, Delivery – Beneficial Use – Conducted when any asset, created or modified by the project, is capable of use by the Asset owner. It includes:

- a) Confirmation of PWA/Client Satisfaction;
- b) Confirmation of expenditure to date and forecasts to project close;
- c) Confirmation of the scope of all outstanding works and services;
- d) Confirmation of acceptance by Client of the asset for beneficial use;
- e) Approval of all information necessary for updating the PWA Asset Inventory;
- f) Approval of as built records and details of any assets taken out of operational use;
- g) Confirmation of Approvals delivery for all non-PWA stakeholders.
- h) PWA Approval of all Deliverables required in Construction Phase

Approval Gateway 6, Project Closure – Completed prior to end of Contract. It includes:

- a) Re-Confirmation of PWA/Client Satisfaction;
- b) Confirmation of all Maintenance Period Deliverables Completed by Contractor and Consultant
- c) Confirmation that the anticipated outputs and benefits of the project have been delivered;
- d) Confirmation of the actual cost incurred for the project;
- e) Confirmation of the actual impact on O&M costs;
- f) Confirmation that all project documentation has been committed to archive and is retrievable; and

For the avoidance of doubt, the Approval Gateway is a critical milestone in the development of each project and successful completion relies on the timely publication and distribution of all relevant documentation.

The Consultant shall be responsible for planning, arranging and recording the output of each gateway review and shall undertake the same duties for repeated gateway reviews should the Project circumstances so dictate.

14.0 **GSAS REQUIREMENTS**

The Construction supervision Consultant shall follow the requirements during the construction and maintenance period stages to achieve the final scores required to obtain the final GSASv.2 Certificate” **(3 Stars)**” as indicated in the attached in Section E Part 3 (Letter of Conformance-LOC) through satisfying **(Part 1 Conformance to Design Audit)** as indicated in the latest GSAS Technical Guide V 2.1 and the attached **GSAS OVERALL CERTIFICATION FLOWCHART** and by adhering strictly its supervision to comply with the Project’s specifications and design.

1. The Construction supervision Consultant shall hold a valid certificate as a licensed construction service provider (SPL).
2. The Construction supervision Consultant shall appoint a GSAS Certified Green Professional (CGP) with a valid certificate, for the Project to facilitate site inspection and collection of data by GORD during GSAS Field Audits to validate the claimed scores which is obtained during Design Stage has been strictly maintained during construction and maintenance stage.
3. The Construction supervision Consultant’s GSAS-CGP shall sufficiently demonstrate the evidences such as site inspection report, photographs, bill of materials, and other construction documents are complying to the GSAS criterion, before the submittals are forwarded to GSAS-Trust.
4. The Construction supervision Consultant shall be responsible for all costs/ fees relevant to GSAS related service provider licences or green professional certifications , verification and coordination with GORD for GSAS Field Audits for site inspections during construction stage till obtaining the GSAS Final Design Certificate with a rating of 3 Stars.
5. The Construction supervision Consultant shall submit the original of the GSAS Final Design Certificate mentioned in (Part 1 Conformance to Design Audit) as shown in attached GSAS Overall Certification Flowchart and any relevant certificates to the
6. Engineer / Engineer’s representative.

Chart showing the Contract Construction Period for package F1:

Type of mosque	Duration per month																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
(M126A) 55741738	MASJID ,IMAM HOUSE TYPE (4) AND MOATHEN HOUSE TYPE (5A) AT AL MERAAD																	
(FM2) pin: 55741054	MASJID AND IMAM HOUSE TYPE (4) AT AL MERAAD																	
(DM5) Pin : 55602487	MASJID AND IMAM HOUSE TYPE (10) AT MUAITHER																	
(DM5) Pin: 55602348	MASJID AND IMAM HOUSE TYPE (5A) AT MUAITHER																	
(DM11) Pin: 53260126	MASJID AND IMAM HOUSES TYPE (4) AT MUAITHER																	
(DM5) pin: 55496277	MASJID AND IMAM HOUSE TYPE (5A) AT AL MUAITHER																	
(DM11) pin: 55310002	MASJID AND IMAM HOUSE TYPE (5A) AT ABU SIDRA																	
(DM5) pin: 54364080	MASJID AND IMAM HOUSES TYPE (5A) MEHAIRJA																	
(DM8) Pin :82050003	DEMOLISH AND REBUILD MASJID AT UM GHWELINA SALWA ROAD																	

Chart showing the Contract Construction Period for package F2:

Type of mosque	Duration per month																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Private design Pin : 47024069	DEMOLISH AND RECONSTRUCTION MSJID AND IMAM HOUSE AT AL THOMAMA																			
(116A) Pin: 91030750	MASJID AND IMAM , MOATHEN HOUSE TYPE (10B) AT ALWKAIR																			
(DM5) Pin : 90450260	MASJID AND IMAM HOUSE TYPE (5A,4)																			
(DM5) Pin : 90030063	MASJID AND IMAM HOUSE TYPE (5A)																			
(DM9) Pin: 91020042	MASJID AND IMAM HOUSE TYPE (10B)																			
(116A) pin: 56381992	MASJID AND 2 IMAM HOUSE TYPE (7) IN UM SNEEM																			
pin: 81016021	QURAN TEACHING CENTER TYPE (A)																			
(DM5) pin: 81010235	MASJID, IMAM HOUSE TYPE (4) AND MOATHEN HOUSE TYPE (5A)																			
(M94A) pin: 83000097	DEMOLISH AND RECONSTRUCTION MSJID AT AL MARKIA SALWA ROAD																			