

Annex 1_ RUD_TM_Supervision Consultant Services Brief

RFP

**SUPERVISION CONSULTANT
SERVICES BRIEF**

Contents

1	PART 1: PROJECT BRIEF	3
1.1	GENERAL	3
1.2	DEFINITIONS.....	3
1.3	ABBREVIATIONS	4
1.4	PROJECT REQUIREMENTS AND GUIDELINES.....	5
1.4.1	Project Type and the Employer Standard	5
1.4.2	Project Information	5
1.4.3	Plot Development Regulations.....	5
1.4.4	General Guidelines.....	5
1.4.5	The Employer Development Objectives.....	6
1.4.6	Employer Information on Appointment.....	7
2	PART 2 – SCOPE OF SERVICES.....	7
2.1	GENERAL.....	8
2.2	SCOPE OF SERVICES TO BE PERFORMED.....	7
2.3	PHASE 1 – EXECUTIVE REVIEW AND VALIDATION OF EXISTING DESIGN.....	9
2.4	PHASE 2 – SUPERVISION CONSTRUCTION SERVICES.....	10
2.5	PHASE 3 – DEFECTS LIABILITY PERIOD (DLP).....	20
3	CONSULTANT ROLES AND RESPONSIBILITIES.....	20
3.1	Liaison with Employer.....	21
3.2	Consultant General Responsibilities.....	21
4.0	PART 3 - DELIVERABLES: DRAWINGS AND DOCUMENTS.....	24

1 PROJECT BRIEF

1.1 GENERAL

1.2 DEFINITIONS

The definitions set out in Article 1.1 of the Agreement shall also be adopted in this Services Brief, unless the context otherwise requires.

Further, in this Services Brief, unless the context otherwise requires, the following capitalized words, if any, shall have the following meanings:

Terms	Definition
Authority Approval Strategy	means the strategy produced by the Consultant for the preparation, submission and obtaining of Local Authorities approvals and NOCs for the Project if required
Consultant Team	means the entire team of consultants appointed by the Employer to provide consultancy services for the Project, including the Consultant, covering all the Design Services, and Other Consultants.
Design Services	means the design services as listed in this Services Brief, which form part of the Services and to be performed in the Stages .
Deliverables	means the Consultant Information prepared by the Consultant in the performance of the Services and any document prepared by the other Consultant Team.
Issued For Construction Documents or IFC Documents	means the Tender Documents prepared, amended (if required) and issued to the Contractor for construction in accordance with this Services Brief.
Other Consultant	means other consultant(s) appointed by the Employer to provide services (other than the Services) and as set out in this Services Brief.
Procurement Strategy	means the strategy for preparing and issuing Tender Documents for works packages (i.e. enabling works package, main works package, Provisional Sum and Prime Cost packages) in accordance with the Employer's requirements.
Existing Design	means any design data, designs, drawings, sketches, schematics, specifications, data, calculations, reports, opinions, findings, models (including computer programmes) and any other information whether in paper or other hard format or in electronic format produced or prepared by other consultant(s) appointed by the Employer for the construction and completion of the Project.
Project Budget	means the budget provided by the Employer for the Project.
Project Quality Plan or PQP	means the document of the same name governing the administration of the Consultant's quality assurance processes and procedures in the performance of the Services.
Technical Design	means the detailed design produced by the Consultant as more particularly described under Stage 4 of this Services.
Tender	means the finalisation, management, coordination and preparation of Tender Documents, and issue of Tender Documents to tenderers, evaluation and awarding of the tender(s) for the Works

Any reference to a section, item or appendix is a reference to a section, item or appendix of this Services Brief, unless otherwise indicated or the context otherwise requires.

1.3 ABBREVIATIONS

AOR	Architect of record
EOR	Engineer Of Record
BMS	Building Management System
BOH	Back of House
BOQ	Bills of Quantities
BUA	Built Up Area
CCTV	Closed Circuit TV
CGI	Computer Generated Imagery
CR	Commercial Registration
CV	Curriculum Vitae
DB	Distribution Board
DMP	Design Management Plan
EH&S	Environment, Health & Safety
ELV	Extra Low Voltage
ESD	Environmentally Sustainable Design
FAR	Floor Area Ratio
FF&E	Furniture, Fixtures & Equipment
FOH	Front of House
FTP	File Transfer Protocol
GCS	Guestroom Control System
GFA	Gross Floor Area
GRP	Glass-fibre Reinforced Plastic
HOS	Head Office System
H&S	Health & Safety
HVAC	Heating, Ventilation, Air Conditioning
IBC	International Building Code
ID	Interior Design
IDR	Interval Data Recorder
IFC	Issued For Construction
LPG	Liquid Petroleum Gas
LTHW	Low Temperature Hot Water
MATV	Master Antenna TV
MCC	Motor Control Centre
MDR	Maintenance Data Recorder
MEP	Mechanical Electrical Plumbing
MTHW	Medium Temperature Hot Water
NOC	No Objection Certificate
O&M	Operations & Maintenance
OS&E	Operating Supplies & Equipment
PABX	Private Automatic Branch Exchange
PCC	Process Control Centre
PMS	Power Management System
POS	Point of Sale
PQP	Project Quality Plan
PT	Post Tensioned
PTE	Pre Tender Estimate
QA	Quality Assurance
QC	Quality Control
QS	Quantity Surveyor
RC	Reinforced Concrete
RCP	Reflected Ceiling Plan

RFP	Request For Proposal
SMATV	Satellite Master Antenna TV
TSE	Treated Sewage Effluent
UKAS	United Kingdom Accreditation Service
UPS	Uninterruptible Power Supply
VAV	Variable Air Volume
VE	Value Engineering
VOC	Verification of Conformity
WBS	Work Breakdown Structure

1.4 PROJECT REQUIREMENTS AND GUIDELINES

1.4.1 Project Type and the Employer Standard

The project design up to obtaining Building Permit and issue of IFC drawings will be carried out by others. This Services Brief describes the services required for the project from the Consultant to review and validation of the IFC documents, and provide technical support, verification, supervision and contract administration services on behalf of the Employer during the Construction Period in compliance with all the Employer and Local authorities requirements.

1.4.2 Project Information

The following project information is included with this Services Brief:

- a) Affection Plan

1.4.3 Area Renovation Regulations

Area Renovation Regulations	Project Brief Requirements
Permitted Area Use(s)	Commercial retail real estate – shopping center
Floor Area (m2)	~25000 sq. m. (as per drawings)
Ceiling Area (m2)	~3000 sq.m (as per drawings)
Building Configuration	GL + L1 + L2

1.4.4 General Guidelines

Aspect	General, Architectural and Site Design Guidelines
Codes and Regulations	<ol style="list-style-type: none"> a) The Consultant shall refer, but are not limited, to following list of Local Authorities codes and regulations for construction compliance and further guidelines: <ul style="list-style-type: none"> • Master Developer requirements • Georgian Labor and Safety Regulations • Civil Defence and NFPA codes b) Employer's requirements

1.4.5 The Employer Development Objectives

The Employer Development Objectives	Requirements
Performance	To ensure the Project performance with the highest quality within all the constraints including but are not limited to that of the Project Budget, limited space opportunities, accessibility, etc.
Time	Time is of the essence. Meeting the program is crucial to the Employer. A design which is flexible, pragmatic and functional will be critical in ensuring that constructability is well considered.
Cost	A design which recognizes the importance of providing a cost effective solution which can be well detailed, robust and functional to ensure a cost premium is not attached to the design proposed. A Cost Estimate or Cost Plan and variations will be developed based on the Consultant's design produced under each design Stage or Phase.
Procurement Strategy	The Procurement Strategy as confirmed/approved by the Employer.
Intent	The amenity and ambience created through the existing environment is maintained and wherever possible enhanced through inventive development layout and design.

1.4.6 Employer Information on Appointment

Subject to the Agreement, the Consultant will also receive the following relevant Project briefing documentation, as compiled and approved by the Employer:

- a) Latest project brief and product definition as agreed with the Employer and/or the operator (if applicable)
- b) The Issued for Construction drawings and documents as received from the Lead Design consultant including all documents related to Authority approvals- Requirement obtained by the lead consultant.

SCHEDULE 1

SERVICES BRIEF PROJECT BRIEF, SERVICES AND DELIVERABLES

2.0 PART 2 – SCOPE OF SERVICES

2.1 GENERAL

The Employer intends to ensure highest quality of works with provided by Contractor(s) and approved by Employer timeline, within approved by Employer Budget in a real estate project to be known as **Tbilisi Mall Interior Renovation**.

PROJECT SPECIFICS

Project Estimated Duration
Project Estimated Value
Floors Layouts
Employer's Requirements

2.2 SCOPE OF SERVICES TO BE PERFORMED

This Services Brief describes the Services required for the Project from the supervision consultant to commence supervision of the execution stage of Construction Contracts by acting as the Engineer under each Construction Contract and to provide Architect of Record (hereinafter called as AOR) services, technical support, verification, supervision and contract administration services on behalf of the Employer during the Construction Period. The Services shall be carried out in the following Phases:

- Phase 1 – Executive review and validation of existing design
- Phase 2 – Supervision construction services
- Phase 3 – Defects Liability Period (DLP)

The Consultant shall implement, use and monitor the Employer Information management system for Project related documentations and communications to carry out the tasks and duties set out in this Schedule. The Consultant will implement and carry out the tasks and duties set out in this Schedule using formal submission and approvals computer software tracking systems in line with the Employer's Site Procedure Manual and the Employer's other procedure.

If the Employer employs other parties or consultants to provide other consultancy services for the Project, the Consultant shall closely liaise and coordinate with all the parties throughout all Phases of the Project and shall provide them with all required information, drawings, schedules, coordination, etc. to enable them to undertake their scope of services on the Project.

The Consultant shall satisfy the requirements of the Local Authorities on the supervision of the Project (if required). Subject to the prior approval of the Employer, the Consultant shall incorporate all such requirements in the supervision of the Project.

The Consultant will co-ordinate and supervise any tests and investigations for the Project. Prior to submission, drafts of all reports shall be discussed with the Employer. After such discussions have taken place the Consultant will amend and formally submit the reports to the Employer for his acceptance and approval.

The time scale for the completion and submission of the various Phases of the Services to be provided shall be as set out in the Schedule of the Construction Agreement.

The Consultant shall submit a monthly report to the Employer throughout the Phases, the content and format of the report shall be proposed by the Consultant for the Employer's approval. The report shall contain, as a minimum:

- a) Executive overview
- b) Progress with approvals/NOC's/specialist studies
- c) Progress vs Programme/Forecast
- d) Value Engineering studies and recommendations as instructed by the Employer. The Consultant shall identify areas for study and carry out the technical and cost studies and recommend the preferred option to the Employer.
- e) Budget control.
- f) Problem areas.
- g) Variations.

The Consultant shall attend monthly or bi-monthly (as required by the Employer) coordination meetings with the Employer's representatives.

The Services are for providing design review and supervision services for the project with building configuration as per clause 1.4.3. The Consultant acknowledges that execution of the project is to comply with the local Authorities regulations and requirements pertaining to the issue of separate individual permit/approval and payment for, the works executed for the project from escrow accounts.

Subject to the Agreement, the Consultant may communicate with third parties in the performance of the Services. All communications with a third party shall be copied to the Employer.

2.3 PHASE 1 – Executive review and validation of existing design

This stage starts from the date supervision consultant receives formal written instruction from employer. Under this Phase the Consultant shall review the Existing Design provided by the project architect as part of the Employer Information and shall inspect the Works that have been commenced and/or completed up to the date of this Agreement ("**Completed Works**") and submit a detailed report in relation to the Existing Design and the Completed Works ("**Design Review Report**") to the Employer. The Design Review Report shall, amongst other things, outline the following:

- a) set out any errors, omissions or defects in the Existing Design and the Completed Works, and the Consultant's recommendations for rectifying any such errors, omissions or defects;
- b) advise as to whether the Existing Design and Completed Works comply with all local laws, statutes, building codes and regulations, and if not, the Consultant's recommendations for achieving such compliance;
- c) advise as to whether the Existing Design and Completed Works comply with national professional practice and standards or, where these are not available or applicable, the appropriate international standards, and if not, the Consultant's recommendations for achieving compliance with either national professional practice and standards or the appropriate international standards as the case may be;
- d) advise as to whether the Existing Design and Completed Works have properly taken into account local conditions including any adverse effects of ground, atmospheric and environmental conditions, and if not, the Consultant's recommendations for ensuring that the Existing Design does so;
- e) Advise as to whether the Existing Design includes proven designs, equipment and materials, and if not, the Consultant's recommendations for ensuring that the Existing Design does so.

As part of the Design Review Report, the Consultant shall also provide a schedule of potential Value Engineering items and similar recommendations which could improve the cost effectiveness of the

Project. The Consultant shall exercise all due care, skill and diligence in reviewing the Existing Design under this Phase 1.

When the Consultant is satisfied that the Existing Design satisfy and/or comply with the Employer's and the Project's requirements and also complies with the relevant laws and regulations, the Consultant shall endorse (in the form and number of sets required by the relevant Local Authorities and/or the Contractor) the Existing Design and immediately issue the endorsed Existing Design documents to the Local Authorities for approval or to the Contractor for construction of the Works, as the case may be.

The Consultant agrees and acknowledges that upon endorsement of the Existing Design, it shall be responsible for the correctness and completeness of the Existing Design. The Consultant guarantees that the Existing Design shall be free from any errors, omissions and/or defects. Neither the approval by the Employer, the Contractor or the Local Authorities of the Existing Design nor the failure of the Employer, the Contractor or the Local Authorities to discern any defect therein shall absolve or relieve the Consultant of any of its responsibilities, duties and obligations under the Agreement.

The Employer shall, if necessary, through the Consultant or other consultants arrange to carry out the amendments and modifications to the Existing Design in accordance with the recommendations contained in the Design Review Report.

The Employer may also instruct the Consultant to carry out amendments and modifications to the Existing Design for any reasons other than that stated in the preceding paragraph including incorporation of any additional requirements resulting from changes to the Local Authority regulations related to the Existing Design and the Consultant shall do so.

In the event the Consultant carries out any amendments and modifications to the Existing Design, the Consultant shall obtain approval for the amended/modified Existing Design ("**Revised Existing Design**") documents from the Local Authorities, if required, and also issue the Revised Existing Design documents to the Contractor for construction of the Works.

The Consultant agrees and acknowledges that it will be responsible for the correctness and completeness of the Revised Existing Design documents. Neither the approval by the Employer, the Contractor or the Local Authorities of the Revised Existing Design documents nor the failure of the Employer, the Contractor or the Local Authorities to discern any defect, error or omission therein shall absolve or relieve the Consultant of any of its responsibilities, duties and obligations under the Agreement and at law.

2.4 PHASE 2 – Supervision construction services

This Phase involves the mobilization, contract administration and site supervision services during Construction Period. It also involves the appropriate monitoring and approving of the testing and commissioning of the Project.

The Consultant shall not proceed with the supervision services under this Phase without the written instruction to commence from the Employer.

Subject to the Consultant having received an instruction from the Employer, the Consultant shall carry out the tasks and duties under this Phase to supervise the construction of all the Works required to be constructed for the Project by the Contractor(s). The Employer intends to engage the Consultant to provide all the supervision Services under this Agreement based on a lump sum fee to be split as monthly payments based on progress attained by the Contractor during the Construction Period.

The following is a detailed but non-exhaustive description of the tasks for this Phase.

2.4.1 Responsibilities of the Consultant as AOR and Resident Engineer:

The prime objective of the Consultant, acting in his capacity as AOR and Engineer, is to take the responsibility of the design produced by another consultant, including but are not limited to the following - Technology applied, Works consequences and logistic provided by Contractor and approved by Employer, Floor pattern compliance with approved design drawings, Dust protection measures provided by Contractor and approved by Employer, Public Health and Safety Regulations, etc.

Responsibility is applicable to all approved and/or in the process of being approved by the relevant Local Authorities through a written statement to the Employer and relevant Local Authority as may be deemed necessary on account of the change of AOR and Engineer.

The Consultant's nominated Resident Engineer in conjunction with the Employer's authorized representative shall be responsible for obtaining all required approvals. Including but not limited to PT slabs, revised architectural layouts, revised parking-layout, CCTV and security, kitchen and laundry equipment's, HACCP, swimming pools, etc. If required by the project.

2.4.2 Design Documentation

The Consultant, following the issue and acceptance of the Design Review Report, as stated above in Phase 1, shall prepare and submit all relevant design documents, drawings and reports for review and approval of the relevant Local Authorities that may be deemed necessary to successfully transfer building permits from Local Authorities to enable the Consultant to perform the supervision services.

2.4.3 Approvals/NOCs from relevant Local Authorities

The Consultant shall liaise and coordinate with the relevant Local Authorities to obtain all the necessary approvals and/or NOC's, as may be required in part or full for the progress of construction program at Site, including but not limited to the necessary changes to the drawings, documents, etc. that may become necessary by virtue of review and approval process of the relevant Local Authorities and/or potential changes initiated by the Employer at a later date.

2.4.4 Specialist Services

The Consultant shall be responsible for co-ordinating, supervising and progressing the services of the specialist consultants nominated by the Employer and obtaining necessary approvals from the relevant Local Authorities including but not limited to security and closed circuit television (CCTV) system, swimming pools, HACCP, post tensioned (PT) slab, etc.

2.4.5 Construction Site Supervision Services:

The Services include the Consultant acting as the "Engineer" under each Construction Contract with the duties as prescribed therein and the Consultant shall for this purpose have such powers, discretion, functions and authorities as prescribed therein or as otherwise advised by the Employer in writing and shall exercise such powers, discretion, functions and authorities in the manner required.

The prime objective of the Consultant, acting in his capacity as Engineer, is to obtain quality production within the time frame and budget allocation as specified in the Construction Contract. This objective is deemed to be achieved through proper and firm administration of the Construction Contract that will render the required control of quality, cost and time. The Consultant will implement and carry out the following tasks using formal submission and approvals tracking systems in line with the Employer Site Procedures Manual and other Employer procedures.

The Consultant's nominated Resident Engineer will be responsible to manage and coordinate the site supervision team and be the primary representative of the Consultant to the Employer as related to Site

construction matters. The Resident Engineer and the Consultant Design Manager are to coordinate the proper handover of the Design stages documents to the site supervision team. The Consultant is to prepare and issue to the Employer a site supervision handover plan for review and approval within fourteen (14) days of the award of a Construction Contract. This site supervision handover plan will contain all the appropriate design related services handover information and is to be prepared and handed over by the Consultant Design Manager to the Resident Engineer.

When instructed by the Employer, the Consultant shall compile, print and issue to the Employer all the specified deliverables as included in Part 3 – Deliverables, in accordance with the requirements included in the Employer Design Management Pack, including all IFC Documents approved by the Employer for issue to the Contractor.

The Services shall include the supervision of all Works required to be constructed for the Project.

2.4.6 Organization and Mobilization

Duties include amongst others:

- a) Liaison as required with the Master Developer, Local Authorities or other controlling body for the development of the Project, and keeping the Employer informed of any issues regarding the same, in a timely manner.
- b) Ensure that the Contractor complies with any Project specific process and any procedures of any Master Developer or other controlling body for the development of the Project.
- c) Plan and mobilize the Consultant's staff to the Site.
- d) Ensure submission, and advise the Employer on the Contractor's submissions of evidence of and policies of insurance, and ensuring compliance with the requirements of the Construction Contract.
- e) Ensure submission, and advise the Employer on the Contractor's submission of the Performance Bond (and Advance Payment Guarantee, if any), and ensuring compliance with the requirements of the Construction Contract.
- f) Issue the notice to commence the Works.
- g) Establish the timetable for the mobilization of the Contractor's team in accordance with the agreed work program for Construction Contracts executed after the date of this Agreement.
- h) Mobilize the Consultant's team and necessary resources, and advise the allocation of their duties of the site staff to the Employer and the Contractor.
- i) Manage the procedure associated with taking possession of the Site, verify demarcation and gate levels. Liaise with the Local Authorities, (including any statutory authorities) and their agents in all aspects to ensure the success of the construction.
- j) Establish all necessary communication procedures.
- k) Agree site safety manual and procedures.
- l) Review the Construction Contract documentation and drawings in collaboration with other consultants, if any, and ensure that the Contractor has the latest 'Issued For Construction' (IFC) Documents to enable him to commence the Works.

2.4.7 Review of Contractor's Planning and Programme

The Consultant acknowledges that early liaising with the Employer, Contractor and Local Authorities is essential for the successful completion of the Project.

The Consultant shall ensure the preparation and submission by the Contractor of a construction program which meets the requirements of the Construction Contract and is in accordance with the Employer's Site Procedures Manual. The Consultant shall review this program against the Employer's priorities and the proposed staffing and plant schedules. Any detected irregularities or inadequacies shall be brought to the Contractor's attention by the Consultant and shall, where necessary, be closed-out prior to the actual commencement of construction.

In the preparation of the construction program, the Contractor will be required by the Consultant to consider all interfaces with other contractors and to reflect these interfaces within the program, including any co-ordination requirements. The Consultant shall require the Contractor to discuss such interfaces and any influences on his program with the Consultant and with other affected parties.

The Consultant shall ensure that a proper resource loading shall be implemented by the Contractor to program activities to serve as a tool for measuring performance, productivity and efficiency and anticipate possible deviation from planned duration and budget cost in case of variation.

The Consultant shall ensure that the Contractor's construction program will include, amongst others:

- a) Logic Network (CPM) including Critical Paths
- b) Short construction activities
- c) Activities tabular schedules
- d) Bar Chart schedules
- e) Shop drawings and materials submission and approval schedules
- f) Procurement schedules
- g) Each activity having a clear defined quantity, duration, cost, manpower and equipment resource.
- h) Resource schedules and histograms.
- i) Cost expenditures.
- j) Work Breakdown Structures (WBS)
- k) Subcontractors schedules
- l) Nominations and subcontractors/suppliers sign-offs.
- m) Employer key date milestones
- n) Snagging, testing and commissioning periods
- o) Key services connection and submissions for approvals milestones

This task will include but not limited to the following activities by the Consultant:

- a. Review and approval of Contractor's construction program for compliance with the Employer's priorities, Construction Contract requirements, Employer Site Procedures Manual and major planning standards and techniques. Provide comments to and discuss the same as necessary with the Contractor.
- b. Evaluation of the Contractor's detailed plan including equipment mobilization, material procurement and delivery of shop drawings.
- c. Check the Contractor's arrangements with Local Authorities for the supply of necessary services.
- d. Identification of potential problem areas and obstacles that may affect the works and progress, and recommend appropriate actions.
- e. Review of the Contractor's method statements and temporary works proposals as well as his personnel deployment schedule and duties allocation.
- f. Check (as required by the Construction Contract) the competence and suitability of major subcontractors and suppliers the Contractor proposes to engage.
- g. Advise the Employer and agree with the Employer and the Contractor on the format of various forms and reports as per the Employer Site Procedures Manual.
- h. Advise and agree on the schedule for submission and the types of reports to be prepared.
- i. Establish site safety manual and ensure it is implemented.
- j. Define the need for, and agree on the schedule of all Site meetings.
- k. When necessary, establish and implement procedures for giving the Contractor possession of the Site as stipulated by the Construction Contract in accordance with the agreed program (otherwise provide advance notice to the Employer of possible delays due to lack of possession).
- l. Require the Contractor to provide a cash-flow projection to assist with monitoring project financing.
- m. Require the Contractor to provide an activity-value schedule to assist in progress measurement.
- n. Monitor the status of the sign off of all the nominations, subcontractors/suppliers.

When approved by the Consultant, the construction program will become the primary document for monitoring progress, evaluating performance and for reflecting time and cost impact of variations, if any.

2.4.8 Survey Check and Material Information

This task includes but not limited to the following:

- a. Verification of the staked-out centre line and all traverse points, control points and benchmarks as set out by the Contractor.
- b. Identification of discrepancies, deficiencies, and omissions in the survey works and providing advice to the Employer to request rectification.
- c. Verification of the adequacy of borrow pits and quarries as may be necessary.
- d. Require submissions from the Contractor of information on the planned resources, supply, and testing of the construction materials and components such as: construction water, concrete aggregates and ingredients, cement, pavement materials, bituminous materials, masonry units, steel reinforcement, structural steel/space frames, expansion joints, painting materials, plastics, Insulation materials, roofing materials, electrical equipment and materials, mechanical equipment and materials, metals, wood, pipes and conduits, etc.
- e. Require the Contractor to submit mix design proposals and providing comments and approvals before commencement of Works.

2.4.9 Review of Contractor's Plan for Site Organization

The Consultant shall require the Contractor to submit a layout plan for all temporary site facilities required for approval. The Consultant will check the site facilities such as site accesses, temporary structures, site office and accommodation, laboratory, stocking and staging yards, plant facilities, service roads and parking areas. The Consultant will check all aspects of site facilities sufficiency, adaptability, interconnectivity, suitability, organization, quality, performance, and their non-interference with the permanent works.

This task will include the following duties in accordance with the Construction Contract:

- a. Verify the optimum location of all site facilities with regards to safe and convenient access, available and suitable space for operation, storage and parking as well as strategic interconnectivity during the present and subsequent phases of the Project.
- b. Verify that the site office space is adequate and convenient for the workforce operations, that it is adequately equipped with office machines, communication means, transportation means, utilities, survey equipment, and adequately furnished, maintained and insured.
- c. Verify that the laboratory layout is as specified; with adequate space for office work, storage and testing and that the facility is provided with all essential sampling and testing equipment to conduct the tests specified in the Contract. The facility should also be properly furnished, maintained, ventilated and provided with essential utilities.
- d. Verify that all stockyards, staging areas, and plant areas are sufficient and that they are safe, well maintained, and secure from theft, damage and vandalism.
- e. Verify adequate lighting maintenance.
- f. Verify that the Contractor's forces are safety conscious; that his force are trained and properly equipped with flags, barricades, cones, movable delineators, construction signs, and that his equipment is responsibly operated and equipped with safety devices such as back-up alarms.
- g. Verify the safe placement and maintenance of temporary structures and avoiding adverse impact on the public safety and convenience.
- h. Co-ordinate with Local Authorities regarding issues related to public convenience and safety including impaired clearances, work near schools, hospitals, bus stops, and pedestrians.
- i. Arrange with concerned authorities for expeditious response to emergency and fire and for police enforcement when needed.

2.4.10 Construction Methods

The Consultant will require that, prior to the start of any site activities; the Contractor submits a clearly formulated and well-documented method statement for the Consultant's review.

2.4.11 Time Control

After reviewing and giving consent to the Contractor's program the Consultant shall provide the following Services regularly and promptly:

- a) Monitoring of the program
- b) Monitoring of the construction activities and resources
- c) Checking and requiring the Contractor to update and revise, as necessary, the program.
- d) Conducting regular coordination meetings.
- e) Checking and requiring the Contractor to produce the daily, weekly and monthly reports in accordance with the Employer's Site Procedure Manual.

These Services will include the following integrated duties:

- a. Establish procedures for timely submission of shop drawings and samples for review and approval.
- b. Verify that the schedules of materials and shop drawing submissions and approvals are tied to the program.
- c. Monitor all activities to ensure performance by the Contractor to meet time and quality requirements of the Construction Contract.
- d. Monitor the productivity of labour and plant to verify that sufficient resources are available to complete the Works according to the program.
- e. Monitor materials deliveries with special attention to the list of long lead items as well as identifying the progress.
- f. Informing the Contractor of deficiencies in labour, plant or materials and instructing him to expedite the progress.
- g. Obtain proper feedback from the Site on all construction activities in order to check data in monitoring the construction program.
- h. Maintain regular check on progress by means of the adopted computer techniques, using actual information feedback.
- i. Take pro-active measures to ensure the construction program is achieved
- j. Regularly monitor the construction program to identify potential variance between scheduled and actual progress. Once variances are identified, recommendations will be made with suggestions for rectification.
- k. Require the Contractor to update the construction program on a regular basis and consequently, revise the construction plan accordingly with regard to the critical activities to meet the prescribed target dates.
- l. Require the Contractor to produce a revised construction program to show how the Contractor proposes to complete the Works within the period stated in the Construction Contract, if it becomes apparent to the Consultant that the Contractor is not maintaining satisfactory progress in accordance with the construction program.
- m. Notify the Contractor to take the necessary steps to expedite progress so as to comply with the time for completion stated in the Construction Contract, if the rate of progress of the Works is not in accordance with the construction program.
- n. Conduct regular meetings for overall coordination including as necessary the participation of the Employer, Consultant, Contractor, other contractors and other concerned authorities with a view to ensuring timely completion.

2.4.12 Cost Control

The cost management and quantity surveying services will generally be undertaken by the Employer's cost manager or the quantity surveyor appointed by the Employer. However, the Consultant shall provide the following cost control services in conjunction with the Employer's cost manager or the quantity surveyor:

- a) Process interim payments in conjunction with the Employer's cost manager or the quantity surveyor, and certification to the Employer.
- b) Processing and valuation of variation orders, in conjunction with the Employer's cost manager or the Quantity Surveyor.
- c) Prepare and instruct the Contractor to implement variation orders including instruction related to provisional sum expenditure.
- d) Prepare all tender and associated documents for provisional sum expenditure.
- a) Monitor variation orders.

- e) Closely liaise with the Employer's cost manager, quantity surveyor or others nominated/appointed by the Employer for cost control.

These Services will include the following integrated duties:

- a. Prepare (after approval of the Employer) and implement a system and forms for processing and certifying Contractor's applications for interim payments.
- b. Check and issue monthly and final payment certificates having agreed with the Employer's cost manager or the quantity surveyor (after approval of the Employer) the quantum of completed works with consideration to the results of inspections, testing, and quality control evaluation.
- c. Monitor the Contractor's payments to subcontractors and suppliers (including nominated subcontractors and suppliers) to avoid any delays in processing payments that might have a negative impact on the progress of the Works.
- d. Prepare and submit financial reports in the format and procedure required by the Employer. The Consultant shall include details of the following in the Consultants monthly/quarterly report as agreed with the Employer's cost manager or the quantity surveyor :
 - Value of work completed to date and during the reporting period.
 - Approved and probable variations.
 - Likely claims and progress of claims in hand.
 - Expenditure of provisional sums.
 - Cash-flow projections and expected monthly payments to Contractor; review and verify relevance to the program and providing comments on the cash-flow estimate provided by the Contractor.
- e. Request the Contractor to revise his cash-flow estimates at certain (e.g. quarterly) intervals. Actual payments will be plotted and comparisons made between actual and scheduled payments for the purpose of budget planning and control.
- f. Monitor material loads delivered to the Site and remaining to be delivered.
- g. Adopt, as stipulated in the Construction Contract, a system for the initiation, processing, valuation, obtaining the Employer's approval, and instruct the Contractor to implement any changes in the scope of Works and any consequent variation orders.
- h. Maintain control of agreed variations to keep them to a minimum.
- i. Advise the Employer on all issues related to variations.
- j. Monitor the use of advance payments, if permitted in the Construction Contract, and ensure recovery in accordance with the stipulated conditions.
- k. Control all activities with a bearing on cost.
- l. Identify, when possible, actions that may result in savings.
- m. Evaluate and assist the Employer in agreeing the Contractor's Final Account.
- n. Prepare reports and attend meetings as and when requested by the Employer to provide explanations/clarifications in response to any queries that may be raised by auditors in respect to any of the duties listed above.

2.4.13 Safety and Quality Control

The safety and quality control process aims at ensuring full compliance with the current health and safety legislation, industry standard safe working practices and Construction Contract requirements for all site operations. This is achieved through series of regular reviews, inspections, and testing applied to the Works, resources, Plant (being machinery, apparatus and the like forming part of the permanent works), equipment, materials and material sources. The Consultant is to carry out off site materials inspections and recommendations as required by the Employer.

The Consultant shall fully cooperate with the Employer's audit team in all regards to allow the audit team to undertake their work in auditing the Consultant's quality control for the Project.

To achieve the aims of this task the following Services will be provided by the Consultant:

- a) Review, monitor and audit the Contractor's project safety/quality assurance/quality control plan.
- b) Monitor the Contractor's compliance with safety and environment protection.
- c) Review and approval of materials and shop drawings.
- d) Inspection of operations.

- e) Inspection and testing of materials and plant.
- f) Examination of work before covering up.
- g) Receipt, review of and submit to the Employer "As-built" drawings and "Operation and Maintenance Manual", and a complete set of guarantees, warranties and the like, as may be required by the Construction Contract.
- h) Prepare a list of outstanding Works prior to Taking-Over of the Works.
- i) Inspect the completion of outstanding works and monitoring performance during the Defects Liability Period.

These Services will include the following integrated duties, amongst others:

- a. Review and approve proposals relating to materials, equipment and methods of construction, submitted by the Contractor and advising the Employer. This includes staging proposals and temporary works for construction works.
- b. Review the safety plan/Contractor's quality assurance/quality control (QA/QC) plan for compliance with the requirements of current health and safety legislation, industry standard safe working practices and the Construction Contract.
- c. Continuously monitor the Contractor's safety/QA/QC plans and audit aspects of the same at various intervals.
- d. Obtain from the Contractor and keep a copy on the Site of the current safety regulations and associated equipment, together with first aid and emergency assistance facilities.
- e. Verify that the Contractor is constantly complying with the following requirements:
 - i. Safety measures needed not only to cover workmen/site staff, but the public at large.
 - ii. The provision of adequate warning notices, traffic controls and hazard signals to the benefit of the public, operatives and visitors to the Site.
 - iii. Specific steps are taken to control fire hazards arising during the works and that fire is dealt with using a site specific fire safety plan.
 - iv. The procedural aspects of the Construction Contract and that all laws and statutes on nuisance, pollution, etc., are observed.
- f. Monitor all traffic diversions in coordination with the concerned authorities.
- g. Monitor the Contractor's compliance with limiting interference of the construction operations with public or private thoroughfares or property adjoining the Site.
- h. Inspect the environment control provisions and verify their compliance with requirements of the Construction Contract and Local Authorities.
- i. Monitor all field-testing and results.
- j. Verify the accurate establishment of the necessary field survey control networks.
- k. Check the setting out of all alignments, structures and works for accuracy of line, level, and cross-section.
- l. Progressive review and approval of materials and shop drawings submitted by the Contractor in strict conformity with Construction Contract specification and drawings so as to avoid any variation claims from the Contractor.
- m. Check materials received on the Site, for compliance with the Contractor's approved submissions.
- n. Inspect the Works, construction methods and operations, sampling and all site activities in order to verify compliance with the Construction Contract.
- o. Supervise the installation of all mechanical, electrical and other equipment to ensure the works are constructed in accordance with the design intent and technical specifications.
- p. Verify the manufacturer's certificates and independent tests, and maintain complete records.
- q. Respond to the Contractor's queries diligently regarding ambiguities detected in the Construction Contract documents.
- r. Examine, measure and test materials and Plant before incorporation into the Works. The Consultant is required to inspect during installation and upon completion, all finishes of ceilings, walls, floors, joinery, fittings, external finishes, etc. to ensure that the finish quality is free of any defects and is complying with the requirements of the Construction Contract.
- s. Inspect and test, as described in the Construction Contract, materials and plant during manufacture, fabrication or preparation.
- t. Determine, as a result of the inspection or testing, materials or plant that are defective or not in accordance with the Construction Contract and reject the same. Records of inspection and testing will be kept and analysed in support of any decision to accept or reject the Works or any part thereof.

- u. Examine any part of the Works before covering-up by the Contractor. As appropriate instruct the opening-up of completed work to determine compliance with the requirement of the Construction Contract. Upon completion of any examination, the Consultant shall complete a checklist which shall be provided by the Employer to verify and record the findings of the examination. The Consultant shall submit the completed checklist to the Employer for its review and records. The Employer may arrange for its own examination of any part of the Works that have been examined by the Consultant at any time and instruct the Consultant to carry out any corrective actions.
- v. Issue instructions to the Contractor to ensure the proper execution and control of the Works.
- w. Periodic visits to the Site by Consultant's head office experts for review of construction operation quality.
- x. Progressively check the as-built drawings prepared by the Contractor for fully completed or parts of the work and submitting the final set to the Employer upon finalization.
- y. Advise when required on owner's proposals for residential and retail unit fit-out.
- z. During the testing and commissioning and snagging the Consultant is to control the quality of the installed materials and to ensure that all the installed materials and works are free of any damages, scratches, or anything that compromises the quality of the final works.
- aa. Review retail studies prepared by other consultants appointed by the Employer.
- bb. Review the "Operations and Maintenance Manuals" prepared by the Contractor, in coordination with the Employer, and submitting the final set to the Employer upon finalization.
- cc. Prior to issuance of the Taking Over Certificate:
 - i. Establish with the Contractor, at an appropriate time during the Construction Period, a schedule for testing and commissioning of the Works.
 - ii. Witness the tests performed by the Contractor.
 - iii. Prepare a list of outstanding works and providing the same to the Contractor.
 - iv. Obtain a written undertaking from the Contractor to complete any outstanding work during the Defects Liability Period.
- dd. Prior to issuance of the Defects Liability Certificate and during the Defects Liability Period:
 - i. Inspect and verify that the outstanding Works have been satisfactorily completed by the Contractor.
 - ii. Instruct the Contractor to remedy defects detected as a result of the Consultants' inspection of the Works. The Consultant may require the Contractor to investigate the cause of defects.

2.4.14 Site Meetings and Record Keeping

The Consultant will constantly monitor all site activities related to the Works. Such monitoring shall include maintaining a continuous dialogue with the Contractor and a record of the progress of the Works on site on a daily basis by the provision of the following services:

- a. Arrange an initial site meeting for all relevant parties to discuss and agree on procedure, means of communication, methods for giving approvals, instructions, variations orders, etc. that will form part of the Contractor's QA/QC and safety and which will be based, where relevant and applicable, on the Employer Site Procedures Manual.
- b. Arrange regular site meetings to monitor performance and progress based on the Contractor's program and to discuss problems, coordination issues, etc.
- c. Maintain a daily diary of the progress of the works on Site, containing weather conditions, personnel present and work accomplished, resources applied and shortfalls, deliveries, inspection, survey checks, testing, instructions issued, visits by others, records of meetings, supplemented by field measurements, monthly estimates of quantities of work accomplished by the Contractor will be compiled as a basis for certifying periodic payment.
- d. Maintain up-to-date information relevant to progress, performance, quality, quantities, resources and cost. This information will be used in preparing monthly, final measurement and payment certificates as well as periodic reports.
- e. Maintain project records in a classified and retrievable form covering the various aspects of the Works and Construction Contract.

2.4.15 Weekly/Monthly Progress Reports

The Consultant will prepare monthly progress reports in the format agreed with the Employer on work carried out by the Contractor and highlighting problems, obstacles, shortages and recommendations. The monthly progress report will include, amongst other things, information on progress, (including full colour photos in sufficient number to clearly illustrate progress in detail and in summary form), performance, measurements, quality control, contractual matters, materials, resources, manpower, weather conditions, variation orders, cost related issues (payment certificates, value of work completed to date and during the reported period, approved and probable variations, likely claims and progress of claims in hand, expenditure of provisional sums, cash-flow projections and expected monthly payments to Contractor, balance, etc.), status of all nominations of subcontractors and suppliers for provisional sums packages and prime cost items along with copies of the signed subcontractors/suppliers' agreements, meetings and selected progress photographs showing various aspects of the Works. The weekly progress report is simplified form of monthly progress report to be prepared in a format agreed with the Employer on work carried out by the Contractor and highlighting problems, obstacles, shortages and recommendations.

2.4.16 Claims and Disputes

Through the performance of the Services presented herein, the Consultant will, in liaising with the Employer and other consultants/quantity surveyor appointed by the Employer, provide the required control over time, cost and quality of the Project and in accordance with the Construction Contract thereby reducing the potential for claims from the Contractors for extension of time and/or additional costs. In this context, the Consultant will provide, amongst others, the following Services as well as Services related to policy, programming and cost control.

- a. Advise the Employer on contractual issues;
- b. Identify and notify the Employer of cases where claims may be potential or imminent;
- c. Assist the Employer in settlement of disputes that may arise between the Employer and the Contractor, and attempt to resolve claims without resorting to arbitration or litigation.
- d. Establish and implement methods and procedures to minimize the potential impact of claims, both financially and time wise, through resolution with minimal disruption to ongoing construction activities. This system will include such activities as receiving, reviewing, analyzing, evaluating claims and making timely recommendations to the Employer.
- e. Appraising and advising the Employer on requests for time extensions.
- f. Adjudicating claims submitted by the Contractor.

The Consultant will be required to provide Services during litigation and arbitration if instructed by the Employer.

2.4.17 Completion of Works/Taking-Over

The Consultant will provide the following services in accordance with the Construction Contract:

- a. Establish with the Contractor a schedule for testing and commissioning of the Works in accordance with the approved Contractor's testing and commissioning plan.
- b. Witness tests performed by the Contractor.
- c. Prepare and provide a list of outstanding Works to the Employer and the Contractor.
- d. Obtain a written undertaking from the Contractor to complete any outstanding Works during the Defects Liability Period, and follow-up with the Contractor to ensure compliance.
- e. Issue the Taking Over Certificate after acceptance of the Contractor's application and agreement with the Employer.
- f. Progressively check the "As-built Drawing" submitted by the Contractor and submit the final sets to the Employer upon finalisation.
- g. Review the "Operations and Maintenance Manuals" prepared by the Contractor, in coordination with the Employer and submit to the Employer upon finalisation, the final set with a complete set of guarantees, warranties and the like as may be required by the Construction Contract.
- h. Manage the procedures associated with the issuance of completion certificate by the Local Authorities and liaise with the Local Authorities and their agents in all aspects to ensure the timely issuance of such completion certificate.

- i. Coordinate and prepare the Project compliance report (“**Final Report**”), in a format agreed upon with the Employer, which shall include the reviews of the as built drawings, warranty and guarantee certificates, and operation and maintenance manuals for the Works, and confirmation that the Project meets the expectations as reflected in the Construction Contract. The Final Report shall cover all design disciplines of the Project. Any non-conformances shall be detailed or explained and any recommendations or conclusions provided in the Final Report for the Employer’s consideration and approval. The Final Report shall also summarise all relevant aspects of the Project implementation, financial costs, with specific recommendations for routine maintenance, highlighting locations requiring special care and attention etc.

2.5 PHASE 3 – Defects Liability Period (DLP)

During this Phase, in order to demonstrate under operational conditions the compliance of the Works with the requirements of the Construction Contract, the Consultant’s duties will include provision of a team of the Consultant Personnel, as agreed by the Employer in writing, to conduct regular visits to the Project, at intervals not greater than one calendar month, to inspect/supervise the completion by the Contractor of the outstanding Works as are listed in the Taking-Over Certificate and remedying any defects as have appeared, as well as inspecting the Works for defects that may be detected during this period.

The Consultant will liaise with the facility management company and prepare an inspection report following each visit, identifying detected defects and recommending appropriate actions, and instruct accordingly the Contractor to carry-out the remedial Works, replacements, etc.

At the end of this period, the Consultant will issue the Defects Liability Certificate. After the issuance of the said certificate and as per the Construction Contract, the Consultant will review the Contractor’s Final Statement and issue to the Employer of the Final Payment Certificate. The Consultant will prepare and submit to the Employer the updated Final Report of the Project.

The Services shall include the supervision of any outstanding works and defect rectifications with respect to the Works for the Project during this Phase. The Employer intends to engage the Consultant to provide all the supervision Services under this Agreement based on a lump sum fee to be split as monthly payments based on progress attained by the Contractor during the Construction Period.

Accordingly, the Consultant’s duties during this period are outlined as follows:

2.5.1 Inspection of Works during Defects Liability Period

Duties shall include amongst others:

- a. Inspect and verify that the outstanding Works have been satisfactorily completed by the Contractor including liaison with the facility management company.
- b. Conduct periodic visits to the Project, responding to queries throughout the Defects Liability Period and inspecting for defects during this period.
- c. Instruct the Contractor to remedy defects detected as a result of the Consultant’s inspection of the Works. The Consultant may require the Contractor to investigate the cause of defects.
- d. Participate in the agreed procedure upon for the final taking-over of the Project by the Employer at the end of the Defects Liability Period, e.g. carrying out a survey of the Works and equipment on completion of the period and instructing the Contractor on any required actions prior to issuing the Defects Liability Certificate.

2.5.2 Defects Liability Certificate

The Consultant’s duties shall include the preparation and issue of the Defects Liability Certificate in accordance with the Construction Contract.

2.5.3 Final Payment Certificate and Updated Final Report

The Consultant's duties shall include:

- a. Review the Contractor's Final Statement that will be submitted by the Contractor after the issuance of the Defects Liability Certificate.
- b. Certify and issue to the Employer the Final Payment Certificate that will state that amount finally due, in the opinion of the Consultant, under the Construction Contract.
- c. Update the Final Report, as necessary outlining compliance with or deviations (with reasons) from the Construction Contract and updating all relevant aspects of the Project implementation, financial costs, with specific recommendations for routine maintenance, highlighting locations requiring special care and attention.
- d. Include in the updated Final Report a suitable selection from the project photographic record.

3 CONSULTANT ROLES AND RESPONSIBILITIES

3.1 Liaison with Employer

3.1.1 Construction and DLP Phases

The Employer will nominate an Employer's representative who will be the primary point of contact between the Employer and the Consultant.

Subject to the Agreement, the Consultant may communicate with third parties in the performance of the Services, however all such communications to a third party shall be copied to the Employer's representative.

The Employer will notify the Consultant of the name and contact details of the Employer's representative prior to the commencement of the supervision services.

The Employer's nominated representative will primarily engage, direct and monitor the performance of the Services, responsibilities and duties of the Consultant throughout Phases 1 to 3 of the Services.

3.2 Consultant General Responsibilities

3.2.1 General

- a) The Consultant shall act as lead consultant for the Consultant Team for the delivery of the Services for the Project.
- b) The Consultant has been appointed to facilitate and undertake the site supervision and contract administration services for the Project. The Consultant shall work as an integral part of the Consultant Team to plan, and deliver the Services for the Project.
- c) The general responsibilities of the Consultant with respect to meeting attendance and reporting requirements are set out in the following items.
- d) The Consultant shall coordinate, manage and integrate and deliver the inputs and services of the entire Consultant Team for the Project.
- e) For a more detailed general description of the scope of the services required and the responsibilities of the particular design disciplines, refer to the respective sections in this Services Brief.

3.2.2 Documentation Management

- a) Implement, use and monitor the Employer's Information Management System (i.e. a FTP document management system) and ensure the Consultant Team are posting correctly and working off current and correct information.
- b) Prepare and implement standard documentation and referencing format as contained in the Employer Design Management Pack.
- c) At the start of each Phase, review and monitor the implementation and use of the FTP document management system by the Consultant Team and report to the Employer to ensure the Consultant Team are posting correctly and working off current and correct information.

3.2.3 Meetings

The Consultant shall attend, and also ensure the representatives of the other Consultant Team as appropriate, attend regular (e.g. weekly or fortnightly as required by the Employer) meetings throughout each Phase of the Project. The Consultant shall conduct regular site meetings (as required by the Employer) for overall coordination of site supervision activities, including as necessary the participation of Employer, Other Consultants, Contractors and other concerned Local Authorities with a view to ensuring timely completion of the Project. The Site meetings shall be chaired and minuted by the Resident Engineer.

3.2.4 Conduct Technical On-site Project Meetings

The Consultant shall provide local authority Green Building related construction practices and checklists to communicate the roles and responsibilities of the Contractor if required.

The Consultant shall conduct site workshops with the Contractor to facilitate the implementation of the Green Building requirements into the construction during the Construction Period. The workshops shall also provide guidance to the Contractor and other Consultant Teams on the required construction credit submittals and related regulations and documentation procedures.

The Consultant shall also review the relevant Contractor's shop drawings and construction submittals for alignment with specified Green Building requirements. Additional guidance (if required) shall be given to the Contractor to complete the Green Building construction credit documentation.

The Consultant shall conduct site inspections during the Construction Period, as required, to review and verify the following:

- a) Construction activity pollution prevention measures carried out for the Project;
- b) Construction waste management operations carried out for the Project;
- c) Material tracking sheets and documents prepared for regional materials, recycled materials and low voc content materials;
- d) Construction indoor air quality management programs for the Project;
- e) Building flushing and pollutant monitoring programs; and
- f) Green Building construction credit documents prepared by the Contractor.

3.2.5 Developing and Coordinating a Commissioning Schedule

The Consultant shall conduct an initial commissioning meeting with all Contractors and commissioning team members. The purpose of the meeting is to:

- a) Establish the purpose and proposed process for commissioning the project.
- b) Review the individual roles and responsibilities of each participating commissioning team
- c) member as specified in the construction documents.

3.2.6 Performing Construction Inspections

The Consultant shall carry out the pre-functional checks for the systems which require testing and commissioning to be carried out for the Project, to ensure that the equipment and systems are properly installed, connected and operational and that functional performance testing may proceed without unnecessary delays.

The Consultant shall oversee and document the actual testing performed by the Contractor or vendor to ensure that through functional testing, the dynamic testing of systems is carried out (rather than just components) under full operation.

3.2.7 Supervising Acceptance Tests

The Consultant shall review the HVAC system's test and balance plan prepared by the vendor, to determine general conformance with Employer's requirements.

The Consultant shall review the Contractor and manufacturer's training plans for conformance with specifications and Employer Design Standards.

3.2.8 Preparing the Final Commissioning Report

The Consultant shall prepare and submit the final commissioning report to the Employer, which shall be the primary record document for commissioning for each specific system and the building as a whole. The various sections to be commissioned includes but are not limited to:

- a) Tile flooring;
- b) Vertical wall sections;
- c) Ceiling including "grill" replacement;
- d) Lighting and lighting controls;
- e) Alu column cladding.

3.2.10 Consultancy Completion Certificate

Upon completion of the Services and prior to the Employer issuing the Consultancy Completion Certificate in accordance with Article 4.12, the Consultant shall prepare, complete, compile and handover to the Employer the following documents and/or items:

- a) duly signed No Objection Certificates (NOCs) and all other documents required by the Law for the appointment of any other consultant(s) for the Project to the Local Authority;
- b) submissions to Local Authorities and approvals relating thereto, correspondence files, data, drawings, designs and models and calculations relating to the Project;
- c) any property in his possession including, but not limited to, all of the Employer's equipment which is intended for the execution of the Works;
- d) all related materials, documents, samples, photocopies, and all of the tangible and intangible property belonging to the Employer;
- e) compile and submit to the Employer the following documents, If the Consultant had performed the Services during the Construction Period:
 - i) copies of all correspondence files and all certificates (including payment certificates);
 - ii) records of all material submittals, shop drawings, variations and claims;
 - iii) copies of all documents required to be submitted by the Contractor before issuing the Taking Over Certificate (e.g. as-built drawings, operation and maintenance manuals, warranty certificates, test reports), and
- f) copies of any other document as required by the Employer.

Satisfactory submission of all documentation and/or items as set out above in this item 3.2.10 shall form part of the Deliverables and shall be a condition precedent to payment by the Employer of the retention.

PART 3 – DELIVERABLES: DRAWINGS AND DOCUMENTS

A GENERAL

The Consultant shall obtain the Employer's approval on the format of submission where it is optional. All drawings shall be submitted in AutoCAD and in PDF formats. and programmes shall be submitted utilizing software to the employers approval. .

The Consultant may be required to make more than one submission of drawings / documents in each Phases to comply with the Employer's comments on submissions and to obtain his approval. The Remuneration and the Contract Execution Plan (and subsequent Execution Programs) are deemed to include for the cost and time required for all initial and subsequent resubmissions of all the different packages of the Project.

Throughout the Phases of the Project, detailed area schedules (a template will be provided by the Employer) and individual drawings of all retail and residential units with areas identified, shall be produced by the Consultant for 'sign-off' by the Consultant and the Employer.

The deliverables listed below are indicative only; the Consultant shall provide all relevant information necessary to describe the works and services described in this Schedule 1. All drawings are to be delivered in hard and soft copy.

<u>Reference</u>	<u>No. of formal Copies/Sets</u>	<u>Size</u>
Drawings and documents to the Contractor and to the Employer (total), as may be necessary related to the Services		
(a) 'Issued For Construction' (IFC) Drawings	4	A1
(b) Reduced 'Issued For Construction' Drawings	4	A3
(c) Issued For Construction Documents (Vol.1,2,3, Conditions of Contract, Specifications, Schedules. Etc)	4	A4
(d) Electronic Files for all the above	2 sets	-
Reports		
(a) Design Review Reports	4	A4/A3
(b) Monthly Reports incl. Photos	4	A4
(c) Quarterly Reports incl. Photos	4	A4
(d) Final Reports (including Phase Reports) incl. Photos	4	A4
(e) Electronic Files for all the above incl. Photos	1 set	-
Records, Operating Instructions (as prepared and submitted by the Contractor)		
(a) Records, Operation and Maintenance Manuals	4	A4
(b) Complete set of record (As-built) Drawings and photo	4	A3
(c) As built pdf drawings including areas for all units showing deviations	3 sets	A4 bound
(d) Reduced bound set of record (As-built) Drawings	4	A3
(e) Statement at Completion	4	A4
(f) Final Statement	4	A4
(g) Electronic file of the record (As-built) Drawings in AutoCAD and in PDF formats	2 sets	-