

EMPLOYER'S REQUIREMENTS FOR DESIGN, SUPPLY & INSTALLATION OF CCTV SURVEILLANCE SYSTEMS IN MOSQUES (N1-25 & N1-32) IN HULHUMALÉ

1. PROJECT DETAILS

The Project consists of the design, supply and installation of CCTV surveillance systems in Hulhumalé mosques (N1-25 and N1-32), in accordance with these requirements, approved drawings and specifications.

2. SITE DATA

The mosques are located in Neighbourhood-1 of Hulhumalé.

- a. Masjid Umar Bin Al Khattab (N1-25)
- b. Masjid Al Sheikh Qasim bin Al-Thani (N1-32)

3. GENERAL REQUIREMENTS

The general scope of the Project is to carry out the design, supply and installation of CCTV surveillance systems in mosques (N1-25 and N1-32) in Hulhumalé to completion as per these requirements and as specified in the approved detail drawings and specifications. The Contractor shall design, execute and complete all the Works and remedy any defects therein.

The Employer will provide the requirement drawings which include the design parameters and minimum specification requirements. The Contractor shall prepare the detail designs, specifications and schedules as per these requirements and obtain approval from the Employer.

The Contractor shall visit and inspect the Site and identify the existing Site conditions and submit their proposal inclusive of all identified Site requirements. The Contractor shall submit a full cost breakdown for all the Works based on the Site condition. The Contractor shall verify all measurements on-site prior to any Works. The price proposed shall be deemed to have taken the existing Site condition in to consideration.

The Contractor shall design, fabricate, supply and execute the construction and installation of various Works, equipment, systems, and furniture (wherever applicable), necessary to complete and make ready for operation as per the approved detail drawings, specifications, and Conditions of Contract, and in compliance with applicable standards and codes and requirements of relevant authorities for the Project.

The Contractor shall provide all necessary labour, supervision, Materials and other equipment to accomplish the following works by utilizing trained employees, directly employed, supervised and scheduled by the Contractor. The Contractor will be responsible for the health and safety of their staff. The Contractor will have to conform to the Laws of the Republic of Maldives in all respects in executing the Works.

The Contractor shall verify the requirements prior to supply, construction and installation Works. The Contractor shall not deviate from the design & specifications without prior written approval from the Employer. Any details not shown in the attached drawings, but are required for the completion of the



Project, shall be prepared by the Contractor and approved by the Employer. The Contractor shall also prepare all necessary shop drawings for the completion of the Works.

The work progress and quality of work will be inspected by the Employer throughout the Project duration, to check whether the Works conform with the documents stated in this Employer's Requirements. The Contractor shall facilitate the Employer to carry out these inspections.

The Contractor shall execute and complete the Works within the duration of the Project stipulated in the Conditions of the Contract.

The Contractor shall dispose of any debris or waste materials as per local authority guidelines through WAMCO or any other means arranged by the Contractor. It is the Contractor's obligation to properly dispose of any debris or waste materials throughout the project duration.

The Contractor shall submit all the documents stated in Employer's Requirements (particularly all documents stated herein under Clause 5 [*Contractor's Documents*]) and Conditions of Contract for review and approval. The Employer will check/review whether the submitted documents are practical and give approval/comments. The review period by the Employer is 14 calendar days from the date of full submission of each document.

A maximum of 30 days (within the project duration) will be allocated for design submission, review and approval. Contractor shall submit the design within 15 days from the Commencement Date for Employer's review and approval. The design milestones shall be clearly identified in the work programme.

Notwithstanding the aforementioned, Contractor can commence the physical works on Site only for Works which he has obtained written approval from the Employer.

4. SCOPE OF WORK

The Works shall include, but shall not be limited to, the following.

Prior to commencement of construction works:

- Conduct all necessary surveys, studies and investigations to assess the existing Site conditions and prepare reports where required.
- Prepare detail work schedule.
- Prepare detail CCTV network design showing location and specifications of cameras, cable paths, distribution switches locations, core switch, trench, including detail specifications of all material and equipment. The detailed design shall clearly provide information regarding the monitored area range, and should have option for future expansion. The detail design drawings shall include all architectural, structural and service drawings for all the civil works requirements with details of the civil works, the



space requirements, connection and fixing details, and details of all other associated work that may be required, and obtain the necessary approvals from the Employer.

- **Line Diagram of complete system including UPS capacity and backup power time.**

[Note: Contractor may submit alternative concepts prior to the detail design submission and obtain approval from the Employer to proceed with the alternative concept.]

- Obtaining the necessary approvals from the relevant authorities.

N1-25 Mosque:

All works shall be carried out as per the approved drawings and specifications.

- Supply and installation of CCTV surveillance system to complete including CCTV cameras, network cabling, conduiting, network switch rack and all required accessories, equipment and electrical requirements and connections.
- Supply and installation of ducting from N1-25 Mosque to **N1-32 Mosque**, including trenching, supply and laying of HDPE ducting for pulling of fiber cable at areas **where there are no existing ducts**.
- Supply and installation of all monitoring equipment in the storage room including TV, media converter, hard disk, NVR and other required accessories.
- Transport, supply and laying/pulling fiber cable from N1-25 mosque to **N1-32 Mosque**.
- Site clearance, Site preparation and ground works.
- Removing and relaying of pavers as original condition, where cable route falls under paved areas.
- Termination at **N1-32 Mosque**, testing and commissioning of all completed works and systems and obtaining all necessary approvals from the relevant authorities.

N1-32 Mosque:

All works shall be carried out as per the approved drawings and specifications.

- Supply and installation of CCTV surveillance system to complete including CCTV cameras, network cabling, conduiting, network switch rack and all required accessories and electrical requirements and connections.
- Supply and installation of ducting from N1-32 Mosque to HDC Building termination point, including trenching, supply and laying of HDPE ducting for pulling of fiber cable at areas where there are no existing ducts.
- Supply and installation of all monitoring equipment in the Imam's room including TV,



media converter, hard disk, NVR and other required accessories.

- Transport, supply and laying/pulling fiber cable from N1-32 mosque to HDC Building.
- Site clearance, Site preparation and ground works.
- Removing and relaying of pavers as original condition, where cable route falls under paved areas.
- Termination at [HDC Building](#), testing and commissioning of all completed works and systems and obtaining all necessary approvals from the relevant authorities.

NOTE:

- Contractor shall use existing telephone junction boxes and road crossings and lay ducting where existing ducts are not available.
- Contractor may propose alternatives to the proposed specifications subject to acceptance and approval of the Employer.
- Contractor shall verify all existing dimensions on-Site prior to any design, fabrication/construction works.
- Contractor shall prepare all necessary shop drawings where required.
- Contractor shall include for cleaning, removing and disposing of all debris from all areas.

5. CONTRACTOR'S DOCUMENTS

5.1. Design Submission

Following are the documents that need to be completed and approval obtained from the Employer prior to the commencement of physical works on Site.

- a) Detail CCTV Network design including (but not limited to) the location of cameras, cable paths and switches.
- b) Control room plan, elevations showing location of all the equipment, electronics and accessories in designated control room in each mosque.
- c) Detail Fibre connectivity design from mosques to NOC/HDC buildings including detail specifications and photos of the material components.
- d) Detail design including detailing and sections for all associated civil works including ducting & enclosure works.
- e) Material and Equipment schedule.
- f) BOQ (priced & unpriced).
- g) Design and Technical Specifications for complete Works.
- h) Any other drawings or documents required for local authority approval (if any).

Following the submission and approval of all above Contractor's Documents; the Contractor shall submit:

- Three (3) sets of drawings and design corresponding to "5.1".



- Three (3) sets of all other drawings (if any).
- Soft copies of all drawings (AutoCAD and PDF).
- Soft copies of other documents (MS Word/Excel and PDF).

Note:

Detail designs include (and is not limited to) layouts, plans, elevations, sections, details, and relevant schedules.

All design drawings shall be in compliance with the local authority guidelines and regulations along with the necessary approvals from the relevant local authorities.

All deliverables inclusive of design reports and final layouts should be submitted in digital copy in a CD or USB flash drive, in adherence to the below specifications:

- All field notes and sketches must be digitized and provided in PDF format.
- All reports must be submitted in PDF format.
- All drawings, layouts and maps must be provided in AutoCAD and PDF formats.
- All layouts and maps must be provided to suitable scale in A3 or larger sheets.

5.2. Project Management Plan & Work Programme

The Contractor shall submit the followings documents as soon as practicable after the Contract is signed, but no later than the date stated in Conditions of Contract. These documents should be revised during construction when required.

- (a) Detail Work Programme showing the list of works/tasks in detail with planned start and end dates, durations for each work/task. The Programme shall also include the critical path with all relevant predecessors properly identified. The Programme shall also include the timelines when specific areas of the Site would be required to the Contractor.
 - a. Manpower schedule showing the number and timing of required personals for Works.
 - b. Equipment schedule showing the supplying quantity and timing of major apparatus, machinery, vehicles or any other equipment required for the Works.
- (b) Work methodology or method statement showing the method each work will be carried out, responsibilities of the Contractor's Personnel, inspections and any testing that needs to be carried out.

5.3. Project monitoring documents

The Contractor shall submit the followings documents as detailed below, after the Contract is signed.



- (a) Daily progress report should be submitted daily, showing all the activities carried out at Site, the number of personnel (both direct and indirect), machinery and Plant, major Materials used, weather condition and any other important incidents at Site.
- (b) Weekly progress report should be submitted weekly, showing all the activities carried out at Site, the planned activities for the following week, the number of personnel (both direct and indirect), machinery and Plant, major Materials used, weather condition, progress photos and any other important incidents at Site.
- (c) Monthly progress report should be submitted monthly, at the end of each 30-day period from the Commencement Date, showing all the progress at Site (planned versus actual using a Gantt chart), the number of personnel (both direct and indirect), machinery and Plant, major Materials used, weather chart, Materials approved, claim Notice and claims, variations, financial status, progress photos and any other important incidents at Site and off Site. Additionally, the report shall include the following as a minimum requirement:
 - Ongoing works and upcoming works for next month
 - Incidents/accidents report (if any)
 - Issues and challenges on Site
 - List of attended inspections and its reports
 - List of instructions given on-Site
 - Documentation of approved methodologies
 - Test and analysis report (if any)

Note: Contractor shall arrange periodic sessions where the Employer can carry out a headcount to verify the personnel mentioned in the reports.

5.4. Quality Assurance Documents

The Contractor shall submit the followings, as soon as practicable after the Contract is signed. A format of these documents will be provided by the Employer during the implementation as a guide; however, the Employer may amend these formats at any time.

- a) Material Approval form should be submitted along with the physical sample where applicable, and with other specifics and certificates.
- b) Request for Information should be submitted whenever the Contractor has any doubt about any matter, especially on the drawings or specifications.
- c) Request for Inspection request should be submitted after making the work ready for inspection.

5.5. Billing Format

Interim applications: Billing should be made in the format approved by the Employer; Employer may amend these formats at any time and inform the Contractor.

5.6. Shop Drawings



The Contractor shall submit all shop drawings required to carry out the Works, prior to commencement of any work. The Contractor shall also submit any additional shop drawings requested by the Employer.

5.7. As-built

The Contractor shall submit as-built records as described in the Conditions of Contract. These as-built records shall include (but shall not be limited to):

- (a) As built drawings (1 set each of hard copy and soft copy).
- (b) Technical specifications, operation and maintenance manuals, where required.

6. KEY PERSONNEL

The Contractor must ensure that the required, professional, technical and administrative inputs, required to deliver on the Project are considered, costed and made available to the Works as necessary.

The Contractor shall provide sufficient evidence and detail of qualifications, certification, experience and availability for and of personnel, which must be available for the required time to allow the Contractor to deliver on the requirements of the Contract.

The Employer reserves the right to accept or reject based any changes to the Contractor's personnel. [Any changes to the personnel shall be informed 7 days prior to the change.](#)

The Contractor shall make available all the key personnel required for the whole duration that the Works are being executed as per the Conditions of the Contract.

Position	Qualification
Project Manager	Degree in Business or Technical Engineering or Telecommunications or Project management or relevant field with 7 years of Project Management experience.
Design Engineer	Bachelor's degree or Diploma or Professional certificate in IT or Computer Science or Telecommunication or related field or equivalent
Site supervisor	Diploma in Civil engineering or construction related field with 3 years of experience, or 5 years of experience in Construction field



7. WORK PROGRESS

The work progress and quality of work will be inspected by the Employer throughout the Project duration, to check whether the Works conform with the above-mentioned documents. The Employer will share forms via which inspections shall be requested by the Contractor.

The actual work progress will be determined by the Employer in reference to the submitted Work Programme.

8. STANDARDS

All supply, installation and construction Works shall be carried out in accordance with the detail drawings, and in compliance with the specifications. If no particular standard is stated, then the appropriate “British Standard” shall apply.

9. Attachments

- Location map and requirement drawings
- Minimum network specifications

10. Additional Information:

Site:

The Contractor will be given access to Site area giving the Site boundaries as per the Contract. The Contractor shall assess and take into consideration the difficulties and challenges in respect to all existing Site conditions. The work Programme, Project duration and Contract sum shall be inclusive of such considerations.

Contractor should check the requirement and verify if any additional items are required to complete the Project and inform to the Employer during the Tender inquiry period.

The Contractor shall inspect and assess the Site prior to submitting proposal and clarify all information necessary. The Contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of his tender for the works and of the lump sum price stated in the quotation, which shall be inclusive of all ancillary and other works and expenditure whether separately or specifically mentioned or described in these Requirements and Contract documents or not, which are either indispensably necessary to carry out and bring completion of the Works described in the Contract documents or which may contingently become necessary to overcome difficulties’ before completion.

The Contractor shall also examine the accessibility of routes to Site, nearest material unloading and loading ports/harbor, and take all these matters in to considerations. The contract sum and duration



shall be inclusive of such considerations.

Contractor shall respect the privacy of the visitors at the Site and shall not interfere unnecessarily or improperly with the convenience of the public or the access to and use of all roads and footpaths, irrespective of whether they are public or in possession of the Employer or of others. The Contract sum and duration shall be inclusive of such considerations.

The Contractor shall take into consideration that the mosques are in operation and consider the difficulties and challenges and plan the works accordingly Contractor shall respect the mosque users and shall not interfere unnecessarily or improperly with the convenience of the mosque users or the access to and use of all roads and footpaths, irrespective of whether they are public or in possession of the Employer or of others.

Materials for Works:

All Materials shall be approved by Employer prior to commencing works on Site. The Contractor shall submit a sample with all necessary information including specification/manual/tests certificate etc. to the Employer for Material approval and the Contractor

Working Hours:

Allowable working hours within the mosque are as below. Working within and around the mosque area should be stopped 15 minutes ahead of prayer times and until 15 minutes have passed after prayers have completed.

Saturday – Thursday: 0900 hrs. to 11:30 hrs.
 1330 hrs. to 15:00 hrs.
 1630 hrs. to 17:30 hrs.
 2030 hrs. to 03:00 hrs.

General working hours: From 7:30 am to 5:30 pm & Friday is day of rest

Temporary Services:

The Contractor should examine the accessibility of temporary and permanent services. Regarding temporary connections, it is the Contractor's responsibility to obtain the temporary water and electricity from the service providers, to carry out the construction works and terminate all the temporary connections when the Project is completed. All the cost should be borne by the Contractor including initial setup & termination costs and ongoing monthly bills. If such services are not available in the Site area contractor shall provide on Contractor's own cost alternative methods to obtain electricity, water and any other utility service which is required to complete the work.

The Contractor shall provide and maintain temporary fencing/barriers and gates/access to Site and provide all the necessary safety precautions while carrying out the Project as necessary.



No temporary land will be allocated for the Contractor's temporary facilities such as plant, machinery, vehicles, etc. The Contractor is expected to make own arrangements for storage of Materials, tools, Plants and machinery and staff accommodation as applicable. All necessary logistics & safe transportation of Materials to the Site shall be part of Contractor's scope & respective costs shall be included in the Contract amount.

Others:

Contractor should take all necessary safety measures when carrying out the construction works, including warning signs and tapes to cordon off the working areas and other indications to inform the visitors that work is on-going. Contractor shall also abide to the guidelines of the municipal and relevant local authorities when carrying out the Works.

Contractor shall have adequate fencing/covering of the work areas.

On practical completion of a Project, the Contractor should at no extra cost thoroughly clean the Site by washing all floors, removing paint stains, mortar droppings, and clear Site completely of all debris. This shall include all the routes taken on Site for transportation of materials and any other Site areas the Contractor used for works.

Contractor shall pay all the applicable duties, taxes such as Goods and Services Tax (GST), Withholding Tax (WHT), Business Profit Tax (BPT), other levies empowered by the Maldivian Government for the execution and completion of the whole works and remedying of any defects therein.

