**Document Title: Method Statement of Work**

<table>
<thead>
<tr>
<th><strong>Work Type</strong></th>
<th>Fiber Optic Cable laying at Sayja (Samail) for the connectivity of Ooredoo Tower DA0109</th>
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</thead>
<tbody>
<tr>
<td><strong>Client</strong></td>
<td><em>Omani Qatari Telecommunications (Ooredoo)</em></td>
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<tr>
<td><strong>Location</strong></td>
<td>Sayja (Samail)</td>
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### Functions

<table>
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<tr>
<th>Prepared By</th>
<th>Reviewed By</th>
<th>Approved By</th>
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<tbody>
<tr>
<td>Functions</td>
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<tr>
<td>Project Engineer/</td>
<td>Project Manager/QC</td>
<td>Customer Representative</td>
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<td>Works in-Charge</td>
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### Signature

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
<th>Date</th>
<th>Date</th>
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<tbody>
<tr>
<td>Alagar Samy</td>
<td>Project Engineer</td>
<td>27.08.2020</td>
<td>27.08.2020</td>
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<tr>
<td>Kumaravel Karunakaran</td>
<td>Key Account Manager</td>
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### REVISION STATUS & ISSUE

<table>
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<tr>
<th>Rev. No.</th>
<th>Date Of Issue</th>
<th>Description</th>
<th>Issued By</th>
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<tr>
<td>1.0</td>
<td>27.08.2020</td>
<td>M.O.S.</td>
<td>Amanul Haque</td>
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### EMERGENCY RESPONSE TEAM

<table>
<thead>
<tr>
<th>Name</th>
<th>Designation</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Alagar Samy</td>
<td>Project Engineer</td>
<td>94036977</td>
</tr>
<tr>
<td>02 Kumaravel Karunakaran</td>
<td>Key Account Manager</td>
<td>94001035</td>
</tr>
<tr>
<td>03 Ravinder Raina</td>
<td>Asst. General Manager</td>
<td>97097301</td>
</tr>
<tr>
<td>04 Najeeb Al-Balushi</td>
<td>HSE Manager</td>
<td>97464404</td>
</tr>
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1. Introduction

1.1 Purpose:

The content of this method statement is to provide guidelines for safe execution of work to cross the existing Oil/Gas pipeline by excavating 1.0 meter trench & Fiber Optic Cable laying at Sayja (Samail) for the connectivity of Ooredoo tower DA0109.

1.2 Scope:

The work shall consist of duct identification, safe excavation for laying of Ooredoo fiber Optic cable, backfilling in layers as per the approved drawing and contract specifications or as directed by the Engineer.

1.3 Reference:

The following document shall be referred:

- Standard specification for utilities / FOC crossings (if any).
- Approved shop/contract Drawing.
2. Responsibilities:

2.1 Site Engineer/ Project Engineer:
- Directing/supervising the site Engineer & Supervisor
- To ensure the work shall be in accordance with the specification, contract drawing shop drawing and as per the Methodology
- To coordinate between the site staff and labor contractor for execution of the work as per schedule
- To ensure maximum utilization of resource & fulfill the QHSE requirement.
- To Monitor daily production & maintain daily site records
- Report to Project Manager

2.2 Engineer / Supervisor:
- To work directing at site and ensure that the work to carried in compliance with approved drawing and contract specification
- To execute the work as per the planned schedule
- To report the Project Engineer

2.3 Material Engineer
- To ensure the material used are meeting the specification requirements
- Follow up and ensuring the material approvals(if required)
- To inform Site Engineer about the quality control at site

2.4 QC Engineer:
- To ensure all the inspection is carried out at site as per project Quality plan and other QC Document.

2.5 HSE Engineer:
- To Implement the HSE management at site
- To analyze the work Hazard and preventive measures, ensure that the site Engineer and supervisor implement it at site
- To ensure all people use PPE at site
- To ensure good housekeeping
- To support the site Engineer for hidden occupational hazards
3. **Control Measures:**

### 3.1 Work Safety:

- All plant, tools, materials and equipment for safety will be checked, soundness and fitness for purpose and within calibration schedule. Explaining the direct or hidden hazards for the activity on a daily basis before starting the work.
- Prior to work commencing on site, a risk assessment must be carried out for hazards and control measures implemented to manage any risk. Ensuring all PPE and safety related Equipment’s / Materials are used.
- Those affected by the works must be made aware of any hazards that they may be affected by.
- Where works being carried out affect any emergency escape routes for those affected must be made aware.
- All electrical power tools must be battery powered and properly tested.
- It should be ensured that the works vehicle and any others engaged in the works are parked safely and will not cause and obstruction or hazard to pedestrians, other road users and emergency services.
- The operatives will barrier the work area at all times to keep the general public safe.
- Carriage and Footway chambers covers must be removed and replaced using the correct lifting keys and roller bars with good Manual Handling techniques being adopted.
- When working in chambers care should be taken to avoid contact with standing water in order to maintain hygiene and minimize the risk of infection.
- On completion of works all covers must be replaced even and level with surrounding surfaces to prevent causing any trip hazards.
- Ensure all waste materials are removed from site, segregated and disposed of within the appropriate waste containers at site. Applicable materials must be disposed of using the appropriate means of recycling.

### 3.2 Important things to remember

- Everyone involved with the works must be made aware of the hazards at site. All employees must be well presented, courteous and professional at all times.
- Ensure continuous liaison and communications at all times with customer, prior to and throughout the duration of all works.
- When working near power cables non-conductive equipment must be used,
3.3 Emergency Response:

- The construction site must be mapped and clearly defined for evacuation routes that are to be used in the case of an emergency.
- The Local Emergency Control Centers should be located and each emergency should be reported and response is required.
- In case of Emergency, following personnel must be available on site to minimize the accidents
  - Fire Aider: A minimum of one Fire Aider should be available (Full or Part Time) at each of the main operating areas
  - Medical Aid Team: In case of any minor accidents there must be one medical team available on site to minimize the effects of injuries; for major the injured person must be send for nearest medical center
- In case of any casualties it should be seated or lying down when being treated as appropriate; if an ambulance is needed, it is called with clear instructions on how to arrive at the scene without delay.
- Toolbox Talk must be done before starting of a job.

3.4 Toolbox Talk

A Toolbox Talk is an informal safety meeting that focuses on safety topics related to the specific job, such as workplace hazards and safe work practices. Meetings prior to work will be done ( normally short in duration and are generally conducted at the job site) prior to the commencement of a job or work shift.

3.5 Personal Protective Equipment:

The term personal protective equipment, or simply PPE, refers to a large group of products designed to protect workers from workplace hazards.

Following are the PPE Item List which will be used on the site at the time of job execution

<table>
<thead>
<tr>
<th>Item</th>
<th>Protection Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helmets</td>
<td>Head Protection</td>
</tr>
<tr>
<td>Work Gloves</td>
<td>Hand Protection</td>
</tr>
<tr>
<td>Safety Glasses/Goggles</td>
<td>Eye Protection</td>
</tr>
<tr>
<td>Work wear(Cover-All)</td>
<td>Protective Clothing</td>
</tr>
<tr>
<td>Safety Shoes</td>
<td>Foot Protection</td>
</tr>
<tr>
<td>Knee Pads</td>
<td>Knee Protection</td>
</tr>
<tr>
<td>Dust Masks</td>
<td>Respiratory protection</td>
</tr>
<tr>
<td>Ear plugs</td>
<td>Hearing Protection</td>
</tr>
</tbody>
</table>
3.6 Site Welfare

- All vehicles must be equipped with an adequate supply of wet wipes and hand towels to allow for personal hygiene to be maintained.
- Fresh drinking water will be made available at Depots for teams to carry adequate volumes.

4. On Site Requirements:

4.1 Manpower:

- Project Manager 1 Part Time
- Project Engineer 1 Part Time
- Site Engineer / supervisor (permit to work Holder, PTA) 1 Full Time
- Foreman 1 Full time/each group
- Machinery Operators As Required
- Skilled Helpers As Required
- Helpers As Required.
- HSE Supervisors 1 Part Time
- QC Inspector 1 Part Time
- Material Engineer 1 Part Time
- Surveyor 1 Part Time
- Survey Helpers 2 Part Time
- Fire Aider 1 Part Time

4.2 Machineries:

- JCB Back Hoe Loader 1 (if required)
- Cable Drum Jack with Stand 1
- Air Compressor for Rope Pulling 1
- Others additional equipment’s As Required

4.3 Materials:

- Ropes for pulling the cables inside the duct
- Soft Sand for Back Filling
- Concrete of grade as per approved drawing
- PVC Sleeves/ Ducts for FOC cable
- Cable Detectors
- Road Signs, Cones Barricades
5. Methodology & Construction Sequence:

5.1 Obtain Permit to Work:
- Shop Drawing shall be prepared and approval and No Objection certificate (NOC) shall be obtained from the Oman Convention & Exhibition Center Engineer and Authorities prior to the Construction at site.

5.2 Site Location Marking:
- The Layout survey shall be conducted before and after the excavation, if required, at site
- The Line Services such as, pipe lines, cables or any other underground/ over ground services are to be identified by the field survey before commencing of any execution. Excavation of these identified services shall be confined by using cable detector and by manual excavation techniques

5.3 Excavation:
- The scope of work is only to pull the cable but wherever required, necessary excavation will be done.

5.3.1 Manual Excavation
- The Location of each excavation shall be verified by any of the existing route marker peg or by means of hand dig trial pit at every 100 meters (if required).
- Manual excavation is to be done within 1.0meter surrounding the existing utilities (if any).

5.3.2 Mechanical Excavation:
- Mechanical excavation shall not commence until trial pits are manually excavated at every 100 meters and working areas are marked so that the Excavation limits are clearly visible to the excavator operator.
- Banks man shall be made available at the work site, who can properly direct the excavator during mechanical excavation.
- Special attention shall be paid at all the times during the excavation to ascertain that the trench wall shall not collapse and if necessary shoring and shuttering shall be provided.
- The required depth is achieved as per the approved shop drawings
5.4 Cable Laying:

5.4.1 Positioning the Cable Drum
When pulling a cable into a duct the drum shall be positioned above the duct so that the cable leaves the drum and enters the duct in a smooth curve. The drum shall be rotated by hand during the installation to ensure that the cable does not become tight between the drum and the duct mouth.

5.4.2 Removing Battens & Lagging
Battens or other drum protection will be removed carefully to ensure that any nails or tools do not damage the cable. Care should be taken when removing any metal strapping used to secure lagging; this strapping may be under considerable tension and can spring with some force when cut.

5.4.3 Drum Control during Pulling
At all times during cable installation, the drum’s rotation shall be controlled and the stability of the drum and jacks monitored.

5.4.4 Cable Pulling:
- The cable shall be supported on free running cable rollers which have no projections or sharp edges.
- A leading roller will be used to support the cable over the entire drum width immediately before being fed into the trench/duct.
- Prior to commencement of pulling, initial tension will be taken up to take the slack out of the bond wire.
- When final roller positions are confirmed and all other services are suitably protected the pull will be started.
- Once the cable has been installed and after accurate measurement, the cable will be cut to length. All cut cable ends must be sealed by capping in accordance with approved procedures.

5.5 Site Restoration:

5.5.1 Backfilling:
- After the ducting works completed, the backfilling operation shall commence only after the satisfactory inspection and approval of Ooredoo officials.
- Soft sand shall be filled till the top of pipeline and then with excavated materials sand free soil shall be used for final backfilling.
5.5.2 Reinstatement:
- On completion of the works the traffic management and site equipment will be removed, the area will have any surplus materials and rubbish removed.
- On completion of the works, or at the end of the working day, all tools and equipment will be removed from the site and the site will be left tidy.
- The area shall be reinstated to the original condition after the completion of the works.

6. Handover:
- Revise As-built Drawings
- Provide customer with any documentation and certification for work performed
- Apply any warning signs (lasers) to light sources
7. **Risk Assessment**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Project Reference</th>
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<tbody>
<tr>
<td>Cable Pulling</td>
<td>Fiber Optic Cable laying at Sayja (Samail) to provide connectivity to Mall of Oman.</td>
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### Assessment Carried out by

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<th>Date</th>
<th>Review Date</th>
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### Hazards Present

- Manual handling
- Falls of persons from heights
- Contact with live electrical conductors and equipment
- Slips, trips and falls

### Control Measures to be Implemented

- A pre-start survey will be carried out to check on route, manpower and equipment requirements, and the foreseeable hazards. The work will be planned to ensure a safe means of access is provided.
- Any equipment required will be in date for servicing and statutory inspections.
- Personal protective equipment will be provided as required by COSHH assessments and the pre-start survey.
- Gloves, foot and head protection will be minimum requirements. Good communications must be maintained between levels when cable is being pulled in multi-story buildings and over long distances.
- Work will be monitored to ensure that additional precautions and equipment is taken into use if edge protection is removed.
- Close supervision is required to ensure that over-stressing of the cable does not occur. Cable pulls will be smooth and maintained at a reasonable rate to ensure control and tension requirements are met.
- Operatives will be trained in manual handling techniques, and instructed in the used and precautions required for the safe use of necessary tools and equipment (lifting and tensioning devices).

Risk assessments and method statements are issued to all workers involved in the activity. This generic assessment must be supplemented by a site specific risk assessment.