



**United Nation Development Programme**

**Package No. 3**

**Rehabilitation of Omar Bin El Khattab, Al Karama, and Saeed Dakka  
Roads in Jabalia  
by Using Crushed Material**

**PAL 10-71488**

**Bill of Quantity (BOQ)**

# Bill of Quantity (BOQ)

## PREAMBLE TO BILL OF QUANTITY (BOQ)

### **1. GENERAL**

The nature of this contract is re-measured unit price contract and the Bill of Quantity (BOQ) shall reflect this fact.

BOQ shall be read and construed in conjunction with other Contract Documents.

General directions and description of work and material given in the Technical Specification are not necessarily repeated in the Bill of Quantity. The Technical Specification forms an integral part of the Bill of Quantity.

The Tenderer is obliged to check the number of the pages of the Bill of Quantity and should any be found missing or duplicated or the figures of writing indistinct, the Tenderer must notify the Employer/Engineer at once and have the matter rectified before the Tender is submitted. No liability whatsoever will be accepted in respect of any claim for errors in the Tenderer's offer resulting from failure to comply with the fore-going.

The Tenderer is deemed to have visited the site/s and fully acquainted himself as to the location of each of the items and works to be carried out and to all conditions which may affect the performance of the works, including but not limited to:

- Access for the storing dump site and UNDP crushing site as well as access to required services
- Restrictions applicable to working in GAZA Strip area.
- All safety regulations and employer site safety procedures.
- All Palestinian regulations.

The Tenderer is also deemed to have surveyed the actual condition of the site and buildings and made his own assessment of the type and extent of the works prior to submitting his offer.

### **2. QUANTITIES**

Although practical care was exercised in preparing the BOQ, all quantities given herein shall be deemed to be estimated quantities of the work to be done. They are not to be taken as actual and correct quantities of the work to be executed and they do not absolve the contractor of his obligations under the Contract. At any time, the actual quantities increase or decrease, hence, it is understood that the actual quantities increase or decrease is expected risk and no claim whatsoever will be taken into consideration for extra cost in that respect by employer. Any claim whatsoever submitted for cost or extra expenses incurred from such increase or decrease will not be accepted by Employer/Engineer except where else stipulated in the Contract.

### **3. MATERIALS**

All materials used are to be of the best new available, subject to the Employer/Engineer approval, durable nature, guaranteed, not liable to any base exchange and manufactured according to applicable **BS, ASTM or DIN Standards**. Execution also is subject to approval of Employer/Engineer and shall be in conformance of the best available common practice in engineering codes at the time of execution.

Items that contain materials or products of special make with names of manufacturers are to be taken as samples of what will be required. Subject to the Employer/Engineer approval, the Contractor may, at his discretion, offer similar products of other make if the equivalent quality of the specified materials is obtained. In this case, the Contractor shall submit a description and/or drawings showing all technical conditions, characteristics, make, type and address of Manufacturer, etc., of the materials offered as alternatives.

### **4. PRICES AND CURRENCY**

The prices given, by the Contract, hereunder in the BOQ shall be in **United States Dollars** or **ILS**. Furthermore inflation and escalation or changes whatsoever shall not be subject of claim later on.

The Unit Prices entered against the various items in the following Bill of Quantities include all operation costs for execution, completion and maintenance of the various items of the works finished completely in every respect till the final acceptance as specified or described in the Tender Documents, with or without modifications, either by way of additions or deductions, or alterations as may be offered in writing during the progress of the works, and include, without being limited to, all what is deemed necessary particularly referred to in the Tender Documents.

The Unit Price shall cover all costs of every kind whatsoever including, without being limited to, all charges for additional site installations, relocation, supervision, labor, transportation and supply of materials; the provision, maintenance, use and efficient repair of all plant, equipment and appliance of every kind, the construction and maintenance of all temporary works, the performance of all services and the fulfillment of all obligations and responsibilities herein defined.

The Tenderer shall be deemed to have fully considered all the conditions, obligations, and requirements of the Tender Documents before entering the respective unit price against the various items of the Bill of Quantities.

The Unit Prices given hereunder the BOQ shall also include erection, installation, fixing, and re-fixing of all elements. These prices shall also include taxes, visa for labor, gate passes, accommodations for the Contractor's staff and labors, all required insurance and work permits, guarantees, bonds, traffic plan requirements, safety procedures, etc. and all requirements necessary to have the work maintained until its final handing over.

The Unit Prices given hereunder in the Bill of Quantity for this work shall also include overheads, risks, profit etc. and all other financial matters to have all these civil works completed.

The works, materials or activities listed in the following shall always be considered as supportive works to be included in the Unit Prices bid for any item in the Bill of Quantities:

- Any measurement for execution and payment of the works, including the provision of measuring instruments, gauges, setting out marks, marking paint and relevant tools, labor, etc., the maintenance and preservation of gauges and setting-out marks during the execution of the works.
- Provision of small tackle tools or any other equipment required for the execution of the works.
- Supply of consumable materials for the Contractor's equipment.
- Removal of all contamination (refuse, debris, building rubbish and the like) arising from or in connection with the Contractor's work to locations approved by the engineers
- Protection of the executed works and of the items made available for execution of the works from damage, fire, inclement weather, vandalism and theft etc., until the time of final acceptance.
- Transportation of all materials and structural components from the storage places on site to the points of use and return transportation, if required.
- Submitting and transporting any samples required.
- Carrying out tests on materials and works, etc., that is required by the Engineer.
- Fuel and lubricants for operation of Contractor's equipment.
- All safety precautions and measures for safeguarding labor as well as securing surrounding areas.
- Lighting of the work site.
- Maintenance , repair or reconstruct damaged infrastructure resulted by contractor's activities

## **5. RIGHTS OF EMPLOYER**

The following rights are reserved to the Employer:

- To omit individual items mentioned in the Schedule of Prices if not required in the opinion of the Employer and/or to replace them should it be more advantageous to execute them in another way.
- To order execution of alternative or provisional items as if they were main items.
- To order execution of additional works as well as alternatives of works, always in conformity with the conditions outlined in the Contract.

Any order and/or delivery of material or equipment by the Contractor for performance of the works may only be based on instructions and/or approved execution drawings by the Employer/Engineer.

All equipment and materials for installation and finishing works to be incorporated in this contract shall prior to ordering and/or delivery by the Contractor, be approved by the Employer/Engineer both in respect of quality and type as well as of quantity.

#### **6. SITE ACCESS AND STORAGE**

The Tenderer shall visit all sites and ascertain the location of required access onto these sites and the location of allowance for complying with the requirements and for the reinstatement to original condition of all roads and areas used or disturbed by the Contractor to the satisfaction of the Engineer.

#### **7. SITE INSTALLATION**

All costs of labor, works, provisions, materials and equipment for Site Installations required by the Contractor and stipulated in the Tender Documents shall be included in the various unit prices of the Bill of Quantities. No extra payment will be allowed by the Employer for any of these activities.

#### **8. DURATION**

The total duration of the contract is **Four (4)** calendar months including weekends, holidays and official holidays. Official weekends are Fridays and Saturdays.

#### **9. OTHER CONTRACTOR'S OBLIGATIONS**

- The Contractor has to submit Detailed Shop Drawings to be approved by the Engineer before commencement of the work, and all required materials should be supplied as specified and subject to the Engineer approval.
- The Contractor has to fix the underground services that may be damaged during his work.
- The Contractor has to maintain the Existing Open Channels flow during construction.
- All works has to be done according to the Engineer's instructions, Drawings and specification.
- The Contractor has to repair any damages of any services at full satisfaction of relevant Service Authority
- The contractor has to test on his own expenses, the sub-grade CBR before commencement of work, In case the CBR value less than 15%, then soil replacement should be applied.
- The contractor has to check the upper 30 cm below the top of the sub-grade to verify that they are uniform, and any rubbish material or saturated /wet soil shall be removed and replaced with suitable material approved by the Engineer ,  
**NO EXTRA COST SHALL BE PAID FOR SUCH REPLACEMENT**
- The contractor has to Execute any required side slope according to specifications, drawings , and Engineer's instructions

- Price will include costs of removing and/or relocating of all obstacles such as debris, garbage, trees and existing services in addition to the required materials necessary for work completion according to engineer's instructions and specifications.
- The contractor has to coordinate with Municipalities regarding garbage containers location.
- The contractor should include in his price the costs of cut and removal of trees roots, backfilling, watering, and compaction in layers with clean sand as specified and according to the Engineer instructions, the price will also include relocation of Power, Telephone poles and networks to sidewalk.
- Price will include costs of adjusting the levels of existing manholes (in any diameter) to suit the new situation. Replacing covers, frames, rings if defected and all materials and work required to complete the task.
- The contractor has to remove the existing base coarse during preparation works and transport it wherever directed by the engineer to the related Municipality.
- The price will include costs of cutting and removing of the existing asphalt pavement layer and transporting the removed material to a site approved by the Engineer
- Prices for excavation item shall include the removal of any buried structure not to be part of the proposed roads, including transport of excavated, surplus material and buried structure (not to be part of the proposed roads) to a location approved by the engineer or his representative outside the site, workmanship and anywhere else, needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.
- Quantities of excavation shall be measured according to the dimensions mentioned in the drawings(engineering measurements in m<sup>2</sup>)
- Back-filling item should be in layers (25cm max. each & compaction test 97%). Prices shall includes material supply, watering, compacting, transporting, testing and anywhere else, needed, all according to drawings, specifications, conditions and direct instructions by the Engineer or his representative.
- Suitable clean sand should be used for back-filling in layers (25cm max. each & compaction test 97%), selected from the approval excavated soil or imported. Prices shall includes supply, watering, compacting, transporting, testing and anywhere else, needed, all according to drawings, specifications, conditions and directed instructions by the Engineer or his representative.
- The contractor shall check and ascertain that the Benchmark used by him and its elevation is accurate and correct in all respects. The contractor shall check the surveying work. If correction is needed, the contractor has to redo the surveying work on his own.

## Rehabilitation of Omar Bin El Khattab, Al Karama, and Saeed Dakka Roads in Jabalia by Using Crushed Material

### Bill of Quantity of Omar Bin El Khattab Road

| Item No. | Description  | Unit           | Qty.  | Unit Price (US\$) | Total (US\$) |
|----------|--|----------------|-------|-------------------|--------------|
| 1.1      | Clean, excavate and fill carriageway and sidewalks with clean dense sand from natural ground level to the bottom of the sub-base layer design level including watering, compaction not less than 97% & CBR not less than 15% ,all according to drawing and technical specifications .  | m <sup>2</sup> | 15200 |                   |              |
| 1.2      | Transport and lay approved crushed stone base coarse 30 cm thick in two layers( each layer 15cm thickness) with CBR > 80% for the carriage way to the levels shown in the drawings . Price includes transporting crushed material, watering and compaction to reach 98 % of maximum dry density. The work includes all tests as per specifications and Engineer’s instructions. Grader must be used in spreading and leveling of final layer.<br><br><b>Note:</b> Crushed materials to be transported from UNDP crushing site west of Khanyounis (GAN-OR ex-settlement). | m <sup>2</sup> | 15200 |                   |              |
| 1.3      | Supply, spread and compact 5cm thick granular sand “Kurkar” with CBR > 30%. The price shall include spreading , leveling, watering and compaction.   | m <sup>2</sup> | 15200 |                   |              |
|          | <b>Total of Omar Bin El Khattab Road</b>   |                |       |                   |              |

**Rehabilitation of Omar Bin El Khattab, Al Karama, and Saeed Dakka  
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PAL 10-00071488**

**Bill of Quantity of Al Karama Road**

| Item No. | Description   | Unit           | Qty.  | Unit Price (US\$) | Total (US\$) |
|----------|---|----------------|-------|-------------------|--------------|
| 2.1      | Clean, excavate and fill carriageway and sidewalks with clean dense sand from natural ground level to the bottom of the sub-base layer design level including watering, compaction not less than 97% & CBR not less than 15% ,all according to drawing and technical specifications .   | m <sup>2</sup> | 18800 |                   |              |
| 2.2      | Transport and lay approved crushed stone base coarse 30 cm thick in two layers( each layer 15cm thickness) with CBR > 80% for the carriage way to the levels shown in the drawings . Price includes transporting crushed material, watering and compaction to reach 98 % of maximum dry density. The work includes all tests as per specifications and Engineer’s instructions. Grader must be used in spreading and leveling of final layer.<br><br><b>Note:</b> Crushed materials to be transported from UNDP crushing site west of Khanyonis (GAN-OR ex-settlement). | m <sup>2</sup> | 18800 |                   |              |
| 2.3      | Supply, spread and compact 5cm thick granular sand “Kurkar” with CBR > 30%. The price shall include spreading , leveling, watering and compaction.  | m <sup>2</sup> | 18800 |                   |              |

| Item No. | Description   | Unit | Qty. | Unit Price (US\$) | Total (US\$) |
|----------|---|------|------|-------------------|--------------|
| 2.4      | <p>Modify the path of the high voltage electrical network in Al Karama road . The price include all workmanship, safety precautions, supplying and installing all approved materials, testing, and commissioning of the electrical network according to drawings, GEDCO specifications and engineer's instructions. The price also includes routing out the old poles and handing it to GEDCO.</p> <p>The item includes the following works:</p> <ul style="list-style-type: none"> <li>- Substitute electrical high voltage steel pole 70/80 with new one 80*90 including hot galvanized base, excavation and installation of the base, casting concrete for the foundation, reconnection of existing network on the pole and all necessary works, cables, arms, all materials, and accessories</li> <li>- Ditto but for two electrical high voltage wooden poles to be substituted with two U14.</li> <li>- Ditto but only to relocate one High voltage U14 pole to the new location .</li> </ul> | LS   | 1    |                   |              |
|          | <b>Total of Al Karama Road</b>  |      |      |                   |              |

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**Bill of Quantity of Saeed Dakka Road**

| Item No. | Description   | Unit           | Qty. | Unit Price (US\$) | Total (US\$) |
|----------|---|----------------|------|-------------------|--------------|
| 3.1      | Clean, excavate and fill carriageway and sidewalks with clean dense sand from natural ground level to the bottom of the sub-base layer design level including watering, compaction not less than 97% & CBR not less than 15% ,all according to drawing and technical specifications .   | m <sup>2</sup> | 8000 |                   |              |
| 3.2      | Transport and lay approved crushed stone base coarse 30 cm thick in two layers( each layer 15cm thickness) with CBR > 80% for the carriage way to the levels shown in the drawings . Price includes transporting crushed material, watering and compaction to reach 98 % of maximum dry density. The work includes all tests as per specifications and Engineer’s instructions. Grader must be used in spreading and leveling of final layer.<br><br><b>Note:</b> Crushed materials to be transported from UNDP crushing site west of Khanyonis (GAN-OR ex-settlement). | m <sup>2</sup> | 8000 |                   |              |
| 3.3      | Supply, spread and compact 5cm thick granular sand “Kurkar” with CBR > 30%. The price shall include spreading , leveling, watering and compaction.  | m <sup>2</sup> | 8000 |                   |              |
|          | <b>Total of Saeed Dakka Road</b>  |                |      |                   |              |

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Summary:

| SN. | Description                              | Total (US\$) |
|-----|--|--------------|
| 1.  | <b>Total of Omar Bin El Khattab Road</b> |              |
| 2.  | <b>Total of Al Karama Road</b>           |              |
| 3.  | <b>Total of Saeed Dakka Road</b>         |              |
|     | <b>Total (US\$)</b>                      |              |
|     | <b>Vat (0%)</b>                          | <b>0.00</b>  |
|     | <b>Grand Total (US\$)</b>                |              |

Grand Total (in letters):-----

Contractor's Name:-----

Signature and Stamp:-----

Date:-----