

Preamble:

Rehabilitation of Public Market Obari Statement of Work

Background

The Stabilization Facility for Libya aims to bridge the critical period of transition from initial period of humanitarian relief towards mid- and long-term structural and sector-specific support. It includes time bound quick interventions at the municipality level providing concrete improvements and peace dividends at the community level through rehabilitation of critical infrastructure, building the capacity of local authorities and enhancing local mediation and conflict resolution capacities and processes.

Under this project, UNDP will repair light infrastructure within the conflict affected areas to reverse the physical disruption caused by the conflict and enable the reopening of key services at the municipal level. It will also support quick recovery of businesses that are critical to the survival of whole communities through rehabilitation and provision of equipment. Through these activities it will also aim to boost the capacity of This particular project calls for rehabilitation of Obari Public market located in Obari entrance. The market is a two story building , the required rehabilitation works include civil and architectural works, mechanical works and electrical works. The building parapet was cladded by aluminum panel, which was damaged during the conflict . The required rehabilitation work shall restore the building to its original conditions and to be fully functional after performing the required rehabilitation. The attached photos show the current and the past building fascia

1.0 General

1.1 The Bill of Quantities shall be read in conjunction with the Conditions of Contract, Specifications, Drawings and Employer's requirements and the Tenderer shall provide against the bill rates or in the prices for the full scope of the work covered by the Contract, no claim or variations shall be considered on account of the Tender's failure to comply with this provision.

1.2 The various documents collectively referred to herein as the Bill of Quantities shall jointly constitute the Bill of Quantities referred to in the Conditions of Contract and these preambles are to be read in conjunction with item descriptions in the Bill of Quantities.

1.3 Lump Sum values shall not be inserted where unit rates are applicable and the Tenderer shall ensure that identical items occurring in separate bills are not priced at different rates, unless this is the deliberate intention.

1.4 The Tenderer shall check against the summaries that each copy of the Bill of Quantities is complete in the number of pages and in the reproduction of each page. The Tenderer's unit rates, prices and extensions shall be entered clearly by hand in black ink.

1.5 Unit rates, prices and extensions shall be given in the United state Dollar with cents taken to two decimal places or any other valid currency value taken to two decimal places.

1.6 The Bill of Quantities has generally been measured in accordance with the Principals of Measurement (International) for Works of Construction (June 1979), as published by the Royal Institution of Chartered Surveyors with amendments made to suit local practice and conditions. The Quantities inserted against items in the Bill of Quantities are estimated quantities for the Works for the purpose of Tender evaluation, and the Tenderer shall be deemed to have checked and verified such quantities in the compilation of his Tender Price prior to the submission of his Tender. Upon the award of the Contract, the priced Bill of Quantities shall be used solely for evaluating interim payments due to the Contractor, and as a schedule of rates for establishing the value of variations.

1.7 The Contractor shall not use the Bill of Quantities for the purpose of ordering materials or arranging Subcontractors. References to these activities shall be the Specifications and Drawings and instructions issued by the Engineer.

1.8 All items in the Bill of Quantities shall be deemed to have a monetary value, whether priced or unpriced. In the absence of a unit rate or price against any item, the cost shall be deemed to have been included elsewhere within the Contract Price and the work described to that item shall be executed by the Contractor without any additional payment.

1.9 The descriptions in the Bill of Quantities may be incomplete and the Tenderer is referred to the Drawings, Photographs and Specifications for complete information in respect of all the relevant descriptions, quality, dimensions, capacities, design parameters and the like.

2.0 Format of Descriptions

2.1 In addition to common abbreviations the following have been adopted; POM (I), Principal of Measurement (International) for Works of construction dated June 1979 as published by the royal Institution of Chartered Surveyors, London

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| mm- Millimetre | Pr-Pair |
| M-Linear Meter | No-Number |
| m²- Square Meter | Kg-Kilograms |
| m³- Cubic Meter | |

3.0 Rates

3.1 Rates and Prices shall be all inclusive, comprehensive and include the following:

- a) All obligations imposed by the Contract.

- b) Complying in every respect with the requirements and the considerations of the Specifications and Drawings.
- c) All considerations arising from the definitions incorporated in each Preamble section.
- d) Labour for fixing and all associated costs.
- e) Materials and goods and all associated costs
- f) Fitting and /or fixing materials and goods in any position, hoisting to any height.
- g) Use of Scaffolding, plant, equipment and tools.
- h) Any additional labours usually associated with measured items.
- i) All necessary protection of the Works, removing all casings and temporary covering and making good and clearing away upon completion.
- j) All applicable taxes, duties, charges, government levies, landing charges and transport.
- k) Overheads & profit.

4.0 Measurements

4.1 All measurements are net and the rates shall include for all laps, waste, working space and trade or traditional allowances.

4.2 The pricing of materials shall take account of the following:

- a) Pricing Preambles, Drawings and specifications shall apply reciprocally between the various sections of the Works, unless otherwise described.
- b) Materials shall be of the specified quality unless otherwise described.
- c) All materials shall be transported, handled, stored and fixed in accordance with the printed instruction or recommendations of their manufacturer or suppliers.
- d) Protection of completed work, all casings and temporary coverings and making good and clearing away upon completion.

5.0 Discrepancies

5.1 Any discrepancy arising in terms of these Preambles and the items contained within the Bill of Quantities must be brought to the attention of the Engineer for his clarification prior to the submission of tender.

EARTH WORKS

§ All quantities for excavation have been measured net with no allowance for increase in bulk or working space.

§ The Tenderer shall allow in this excavation rates for excavating in any material, including running sand and rock, commencing excavation at any depth, excavating below the normal water table, excavating around existing services and mains, supporting the vertical sides of excavations, working space and filling soft spots.

§ Rates and Prices to include,

- a) Excavating by whatever means are necessary including hand excavation in any kind of ground, except rock and boulder rock.
- b) Trimming or grading ground to produce level surfaces or surfaces to falls or slopes.
- c) Ramming and compacting sides and bottoms of excavations and supports to sides.
- d) Keeping free from water including any dewatering as necessary.
- e) Any hand excavation required around existing services or the like.

CONCRETE WORK

§ The rates for all concrete work shall include for the following:

- a) Concrete test cubes and testing costs wherever required.
- b) Mixing, hoisting and placing and compacting on the surfaces of any material or on formwork.
- b) The forming any construction joints, including any required preparation for adjacent pours, together with expansion joints or the like.
- d) Curing and protecting concrete surfaces from harmful weather conditions
- e) All necessary keys to concrete surfaces to receive in-situ finishes.

REINFORCEMENT

§ The rates for bar reinforcement shall include for the following;

- a) Positioning and protecting starter bars, Straightening (If required) cutting to length and bending reinforcement to required shapes.
- b) Cleaning and wire brushing.
- c) Provision of supports (excluding links and stirrups) steel binding wire and approved/proprietary distance pieces.

§ The rates for Shuttering or molds as appropriate shall include for the followings;

- a) All cutting and waste including raking curved or circular cutting and notching around pipes, ducting and fittings.
- b) Setting up, strutting and supporting at any height above the structure subject to any limitations imposed by the engineer including all pops, stays struts, wedges and bolts etc.
- c) Carefully coating with shutter oil ensuring that no shutter oil is applied to surfaces of reinforcement.
- d) Rubbing down, filling and making good the surface of concrete after removal of shuttering.

MASONRY

§ The rates for brick walls shall include the following:

- a) Straight raking curved and circular rough or fair cutting, plumbing at angles, cutting and bonding at angles, openings and intersections, building in to and/or against adjacent work, wedging and pinning up to
- b) All necessary keys for in-situ finishing.
- c) All necessary wall ties, dowels, straps, sleeves. Channels and other like fixings built-in
at junctions between brick work and insitu concrete including casting in, drilling,
bolting and the like.
- d) All necessary brick work reinforcement at junctions between brick work and walls
construction joints or the like and openings.

WOODWORK

§ The rates for wood work shall include for the following;

- a) All joints in the running length including structural joints.
- b) Cutting and fitting to steelwork, trimming around opening, notching, boring .
- b) Wood work shall be fixed with non-corroding nails and screws and unless otherwise described all plugging and pellating shall be deemed to be included.

FINISHES

§ The rates for all work-in this section shall include for the followings:

- a) Straight, racking, curved and circular cuttings or the like and all consequent wastages.
- b) All setting out temporary rules, screeds, templates and supports.

- c) Curing and cleaning off/down upon completion.
- d) All labours and making good around pipes, ducting and fittings and the like

Technical specification for Composite Aluminum Panel Cladding:

Panel system requirements include the following components: a. Aluminum-faced composite panels with mounting system. Panel mounting system including anchorages, furring, fasteners, gaskets and sealants, related flashing adapters and masking for a complete installation. b. Panel manufacturer recommends that system should include shop-installed aluminum stiffeners on all panels of 20 square feet or larger. Minimum stiffener recommendation is one per 20 square feet of panel area. c. Parapet coping, column covers, soffits, sills, border and filler items may be indicated as integral components of the panels system or as designed. d. All flashing metal required shall be provided by the panel manufacturer. System to be fabricated and installed per local code requirements.

Quality Assurance A. Composite panel manufacturer shall have a minimum of 10 years' architectural experience in the manufacture of this product. Both panel fabricator and the installer must show proof of past successful collaboration. Fabricator shall be acceptable to composite panel manufacturer. Fabricator and installer shall have a minimum 5 years of experience in architectural metal panel work similar in scope and size to this project. Shop drawings shall show the preferred joint details providing a watertight and structurally sound wall panel system that allows no uncontrolled water penetration, on the inside face of the panel system as determined by ASTM E331. Maximum deviation from vertical and horizontal alignment of erected panels: 6 mm (1/4") in 6 m (20') non-accumulative. Panel fabricator and installer shall assume undivided responsibility for all components of the exterior panel system, including but not limited to, attachment to sub-construction, panel-to-panel joinery, panel-to-dissimilar-material joinery and joint seal associated with the Shop Drawings: Submit shop drawings showing project layout and elevations; fastening and anchoring methods; detail and location of joints, sealants and gaskets, including joints necessary to accommodate thermal movement; trim; flashing; and accessories. Manufacturer's literature shall certify that material meets specifications. Submit fabrication drawings showing location and type of aluminum-extruded stiffeners at typical panels and at corner panels. The fabricator and installer will warrant the wall system for a period of 1 year that the fabrication and installation workmanship will be free from defects. B. The aluminum composite material manufacturer shall warrant for a period of 10 years against Max 5 fade based on ASTM D2244 and Max 8 chalk based on ASTM D4212 and delamination of the paint finish.

Composite Panels shall be Aluminum Composite Material Fire Resistant Core , Panel Thickness (4 mm), Bond integrity When tested for bond integrity, in accordance with ASTM, there shall not be an adhesive failure of the bond a) between the core and the skin or b) cohesive failure of the core itself below the following values. 2. Peel Strength 100 N mm/mm (22.5 in lb./in.) As manufactured 100 N mm/mm (22.5 in lb./in.) After 21 days soaking in water at 70°F 3. Fire Performance ASTM E84 – Passed Class A F. Color: To be chosen by the Engineer. Paint system shall meet the requirements of the international standards.

Fire Resistant is comprised of two sheets of aluminum sandwiching a solid core of extruded thermoplastic material formed in a continuous process using no glues or adhesives between dissimilar materials. The core shall be free of voids and/or air spaces and not contain foamed insulation materials. The bond between the core and the skins shall be a chemical bond. Products laminated sheet by sheet in a batch process using glues or adhesives between materials shall not be acceptable. Aluminum Face Sheets 1. Thickness: 0.020" 2. Aluminum alloy shall be 3000 series or equivalent.

System Characteristics 1. Plans, elevations, details, characteristics and other requirements indicated are based upon standards by one manufacturer. It is intended that other manufacturers, receiving prior approval, may be acceptable, provided their details and characteristics comply with size and profile requirements, and material/performance standards. 2. System must not generally have any visible fasteners, telegraphing or fastening on the panel faces or any other compromise of a neat and flat appearance (excludes face fastened solution). 3. Fabricate panel system to dimension, size and profile indicated based on a design temperature of 68°F (20°C). 4. Fabricate panel system to avoid compressive skin stresses. The installation detailing shall be such that the panels remain flat regardless of temperature changes and at all times remain air- and watertight. 5. The finish side of the panel shall have a removable protective film applied prior to fabrication, which shall remain on the panel during fabrication, shipping and erection to protect the surface from damage

Fabricator and installer must provide an engineered system including fasteners, anchors, spacers, trim, and flashing. Fabricator and installer can purchase necessary extrusions, braces, fasteners, and necessary tools from manufacturer.

System Performance 1. Composite panels shall be capable of withstanding building movements and weather exposures based on the following test standards required by the architect and/or local building codes: a. Wind Load – If system tests are not available, under the direction of an independent third-party laboratory, mockups shall be constructed and tests performed to show compliance to the following minimum standards: i. Panels shall be designed to withstand the design wind load based upon the local building code, but in no case less than 20 pounds per square foot (psf) and 30 psf on parapet and corner panels. Wind-load testing shall be conducted in accordance with ASTM E330 to obtain the following results. ii. Normal to the plane of the wall between supports, deflection of the secured perimeter-framing members shall not exceed $L/175$ or $3/4"$, whichever is less. iii. Normal to the plane of the wall, the maximum panel deflection shall not exceed $L/60$ of the full span. iv. Maximum anchor deflection shall not exceed $1/16"$. At $1\ 1/2$ times design pressure, permanent deflections of framing members shall not exceed $1/100$ of span length and components shall not experience failure or gross permanent distortion. At connection points of framing members to anchors, permanent set shall not exceed $1/16"$. b. Air/Water System Test – Without backup waterproof membrane. If system tests are not available, under the direction of an independent third-party laboratory, mockups shall be constructed and tests performed to show compliance to the following minimum standards: i. Air Infiltration – When tested in accordance with ASTM E283, air infiltration at 1.57 psf must not exceed 0.06 cubic feet per minute per square foot of wall area. ii. Water Infiltration – Water infiltration is defined as uncontrolled water leakage through the exterior face of the assembly. Systems not using a construction sealant at the panel joints (i.e., Dry Systems) shall be designed to drain any water leakage occurring at the joints. No water infiltration shall occur in any system under a differential static pressure of 6.24 psf after 15 minutes of exposure in accordance with ASTM E331. The above tests are on panel systems that do not include a waterproof membrane behind panels

Accessories A. Extrusions, formed members, sheet and plate shall conform with ASTM B209 and the recommendations of the manufacturer. B. Panel stiffeners, if required, shall be structurally fastened or restrained at the ends and shall be secured to the rear face of the composite panel with silicone of sufficient size and strength to maintain panel flatness. Stiffener material and/or finish shall be compatible with the silicone. C. Sealants and gaskets within the panel system shall be as per manufacturer's standards to meet performance requirements. D. Fabricate flashing materials from 0.040" minimum thickness aluminum sheet provided by panel manufacturer to match the adjacent curtain wall/panel system where exposed. Post-painted spray-applied flashings are not acceptable. Provide a lap strap under the flashing at abutted conditions and seal lapped surfaces with a full bead of non-hardening sealant. E. Fasteners (concealed/non-corrosive): Fasteners as recommended by system fabricator and installer

Installation A. Erect panels plumb and level. B. Attachment system shall allow for the free vertical and horizontal thermal movement due to expansion and contraction for a material temperature range of -20°F (-29°C) to $+180^{\circ}\text{F}$ ($+82^{\circ}\text{C}$). Buckling of panels, opening of joints, undue stress on fasteners, failure of sealants or any other detrimental effects due to thermal movement are not permitted. Fabrication, assembly and erection procedure shall account for the ambient temperature at the time of the respective operation. C. Panels shall be erected in accordance with an approved set of shop drawings. D. Anchor panels securely per engineering recommendations and in accordance with approved shop drawings to allow for necessary thermal movement and structural support. E. Conform to panel fabricator's instructions for installation of concealed fasteners. F. Do not install component parts that are observed to be defective, including warped, bowed, dented, scraped and broken members. G. Do not cut, trim, weld or scrape component parts during erection in a manner that would damage the finish, decrease strength or result in a visual imperfection or a failure in performance. Return component parts that require alteration to shop for refabrication, or for replacement with new parts. H. Separate dissimilar metals; use appropriate gaskets and fasteners to

Adjusting and Cleaning A. Remove and replace panels damaged beyond repair as a direct result of panel installation. After installation, panel repair and replacement shall become the responsibility of the general contractor. B. Repair panels with minor damage. C. Remove masking film (if used) as soon as possible after installation. Masking intentionally left in place after panel installation on an elevation shall become the responsibility of the general contractor. D. Any additional protection, after installation, shall be the responsibility of the general contractor to remove. E. Make sure weep holes and drainage channels are unobstructed and free of dirt and sealants.