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TERMS OF REFERENCE

**RENOVATION OF LOCAL AREA
NETWORK AND INSTALLATION OF
ADDITIONAL NODES FOR
WORKSTATION AT OVERSEAS
SHIPPING SERVICE (OSS) OFFICE**

I. INTRODUCTION

The Maritime Industry Authority (MARINA) was created on 01 June 1974 as an attached Agency to the Office of the President (OP). With the issuance of Presidential Decree No. 474, otherwise known as the "Maritime Industry Decree of 1974", to integrate the development, promotion and regulation of the maritime industry in the country and the creation of the Ministry (now Department) of Transportation (DOTr) by virtue of Executive Order No. 546, the MARINA was attached to the DOTr for policy and program coordination on 23 July 1979.

II. OBJECTIVE

Rehabilitation of existing Local Rea Network and installation of additional nodes for the workstation at the Overseas Shipping Service (OSS).

III. PROVIDER'S QUALIFICATIONS

- Contractor must have at least two (2) years of experience in supply, delivery, installation, testing and commissioning of network equipment, structured cable system, server room design and construction and database system development
- At least two (2) similar projects in supply, delivery, installation, testing and commissioning of network equipment, structured cable system, server room design and construction and database system development. This should be vouched by a Certificate of Completion from at least one Government Agency in the Philippines.
- The Bidder shall shoulder all damages and will take sole responsibilities against all liabilities and damages arising from injuries or disabilities to persons, or damages to property occasioned by any or omission of the contractor, or any of his subcontractors, including any and all legal expenses or otherwise.
- The Bidder shall be responsible for all required permits.
- The Bidder shall be held solely responsible for any property or personal damages or claims, including damage to existing structures, systems,

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equipment and/or site caused by the Bidder shall repair or replace it to its original condition at no additional cost to the office.

- The Bidder should have been operating in the Philippines for two (2) years and is registered with SEC or DTI.
- The Bidder must provide to the satisfaction of the Client any other documentation deemed necessary to establish any and all claims or representation that they make in the bidding documents.

IV. DELIVERABLES

LOCAL ARE CONNECTION 24 NODES

- CAT 5E, UTP Cables with RJ45 connector
- CAT 5E UTP Patch Panel
- CAT 5E Data Outlet and Modular Jacks
- CAT 5E Patch Cable
- Gigabit Switch
- Router
- Intermediate Distribution Frame (1' x 19")
- Uninterruptible Power Supply 1000VA (UPS)

V. TECHNICAL SPECIFICATIONS

GENERAL REQUIREMENTS:

1. MANUFACTURER

Only products listed under the Underwriters Laboratories (UL) and Telecommunications Industry Association/Electronics Industries Alliance (TIA/EIA) standards will be accepted.

2. General Specification

CAT 5E Unshielded Twisted Pair (UTP) Cable shall be primarily use for distribution that will run through from IDF to Switches and Routers.

All cable trays for horizontal homeruns shall be sized accordingly based on the number of nodes and at least thirty percent (30%) provision for expansion. Minimum size of cable tray should be at least 300mm width and 100mm depth (W x D);


PASSIVE COMPONENT

1. CAT 5E Cables

- Horizontal cabling shall be 23 AWG, 100-Ohm, 4-pair UTP; UL/NEC CMR rated, round design, round solid filler, non-bonded pairs, in white PVC jacket.
- Cable jacketing shall be lead-free.
- Cable performance characterized up to 600MHz.
- Cable shall meet or exceed the performance requirements of ANSI/TIA/EIA-568B.2-1. Must be confirmed by independent testing laboratory.
- Must be Gigabit Ethernet Zero-bit Error Rate tested and confirmed by independent testing facility.
- Cable shall be UL listed.

2. CAT 5E Patch Panels

- Patch panels shall be 1RU and provide 48 modular jack ports, with universal wiring that maybe terminated to T568A or T568B.
- Patch panel modular jacks shall be configured as 6-port, replaceable modules.
- The front of each module shall be capable of accepting 9mm to 12mm labels. Each port shall be capable of accepting an icon to indicate its function.
- Patch panel shall terminate the building cabling on 110-style insulation displacement connectors.
- Patch panel shall meet or exceed the performance requirements of ANSI/TIA/EIA-568B.2-1.
- Must have sensor strip conductive pads within the panel.
- Must include a rear clip that secures and protects the mated connection of the sensor strip and analyzer I/O cable assembly.
- Patch panel must be UL Listed.

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3. **CAT 5E Data Outlet/Modular Jacks**

- Modular jacks shall be terminated using a 110-style pc board connector, color-coded for both T568A and T568B wiring.
- CAT 5E modular jacks shall meet the performance requirements listed in ANSI/TIA/EIA-568B.2-1.
- Flexibility to support 180° or 90° cable termination with bend-limiting strain relief.
- Modular jack shall be UL Listed

4. **Faceplates**


- Must be surface-mounted, 2-port single-gang.
- Each port shall be provided with an icon to indicate its function.
- Faceplates shall accommodate two labels and provide a clear polycarbonate cover for each. Faceplates shall be light almond in color.

5. **CAT 5E Patch Cords**

- Patch cable assemblies must be factory-manufactured with stranded CMR UTP cable and color-matched snag less rubber boots.
- Work area patch cord shall be 7 ft while Equipment cords shall be 4 ft in length.
- Must contain a 9th conductor that is external to the original copper cable assembly.
- External probes must contact with a conductive pad on the sensor strip.
- One patch cord per user outlet and equipment connectivity must be provided.

6. **Cable Organizer**

- Horizontal cable management hardware must be 1 RU.
- Must have black-coated finish.

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VII. OTHER INSTRUCTIONS:

Labeling

All jacks, panels and frames shall be clearly labeled. Labels should be tamper resistant and made with a label maker at the station end. Data frames should be created with label maker. Label color shall be black on white.

Testing

All cables and termination hardware shall be 100% tested for defects in installation and to verify cable performance under installed conditions. Any defect in the cabling system installation including but not limited to cable, connectors, patch panels, and connector blocks shall be repaired or replaced in order to ensure 100% useable conductors in all cables installed.


CAT 5E UTP Cable Installations

Shall pass the following end-to-end Testing Parameters using Level III Cable Tester:

- Attenuation
- Attenuation to Crosstalk Ratio (ACR)
- PowerSum Attenuation to Crosstalk Ratio (PSACR)
- Near End Crosstalk (NEXT)
- PowerSum Near-End Crosstalk (PSNEXT)
- Equal Level Far-End Crosstalk (ELFEXT)
- PowerSum Equal Level Far-End Crosstalk (PSELFEXT)
- Return Loss
- Propagation Delay
- Delay Skew
- Transfer Impedance

VIII. TECHNICAL SUPPORT

The Bidder shall provide technical support via telephone/fax, on-site assistance to resolve technical and other related problems. Resolution can be delivered in the form of telephone, electronic and/or on-site resolution. It shall refer to a condition wherein the reported problem is resolved by the proponent to the satisfaction of the end-user.

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The Bidder shall resolve a problem within twenty-four (24) hours after it was reported by MARINA in any available and fastest means of communications.

IX. WORK REQUIRED

- The supplier shall include additional components required to make the system operate, although not specifically detailed in this specification.
- The work herein described shall fully completed in every detail for the function designated and its hereby required that the Bidder in accepting the contract, agrees to furnish all apparatus, materials and labor not herein specifically mentioned or included to furnish but which may found necessary to complete, perfect or test any portion of the network or function.

X. REMOVAL OF DEFECTIVE UNAUTHORIZED WORK

- Any defective work, whether the result of poor workmanship, defective materials, damaged through carelessness or any other cause, found to exist prior to acceptance, shall be removed immediately and replaced by work and material which shall conform to the approved specifications, or shall be otherwise remedied in an acceptable manner.

XI. MISCELLANEOUS

- MARINA shall have the authority to impose rules and regulations in compliance with the requirements of the project.
- The contractor shall ensure that there will be minimal disruption to the day-to-day operation of OSS Office during the implementation of the project.
- All work shall be performed in a workmanlike manner. MARINA personnel may observe the work procedures and workmanship of the bidder but such observation will not relieve the bidder from the responsibility for performance.
- Dismantling of existing (old cabling) upon completion of new structured cabling systems infrastructure.

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XII. MAINTENANCE, SUPPORT AND WARRANTY

- The Bidder warrants that it shall conform strictly to the terms and conditions of this Terms of Reference.
- A warranty period of one (1) year shall commence upon issuance of the Certificate of Acceptance

XIII. PROVISION OF DOCUMENTATION


- The provider shall provide a complete documentation for every deliverable which must be submitted to MARINA.
- The documentation must be written in English of durable construction with concise and high quality presentation to include but not limited to the following:

XIV. TIME FRAME

The project must be completed within seven (7) calendar day's period from the issuance of Notice to Proceed.

XV. APPROVED BUDGET FOR THE CONTRACT

The Approved Budget for the Contract (ABC) is Ninety Thousand Pesos (P 90,000.00), inclusive of all government taxes and charges.

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