

Pull all conductors splice free. Make all conductor connections under screw terminals. Provide insulated barrier type terminal strips at junction points. Use of wire nuts, crimped connectors, or twisting of conductors is prohibited. All control panels shall be dressed out in a professional manner with all wires running in the vertical or horizontal plane, cut to exact length, making all turns at 90 degree angles, and tightly bundled and wire wrapped. Conduit may not enter the top of control panel cabinet.

## FIELD QUALITY CONTROL

### 1. Preliminary Testing

Notify Engineer prior to performing preliminary testing. Contractor shall conduct the following tests during installation of wiring and system components. Any deficiency pertaining to these requirements shall be corrected by the Contractor prior to final acceptance testing of the system. Record results of testing. Submit all test results to the Engineer.

- a. Operation of Entire System. Operate all initiating and indicating devices.
- b. Operation of Supervisory Systems: Operate all portions to demonstrate correctness of installation.
- c. Smoke Detector Test: Clean the smoke detectors in accordance with the manufacturer's recommended procedures. Test smoke detectors using magnet-activated test switch, manufacturer provided test card, or smoke. Use of aerosol sprays to test smoke detectors is prohibited.

### 2. Final Acceptance Testing

The Contractor shall notify the Engineer when the system is ready for final acceptance testing. Request scheduling for final acceptance testing only after all necessary preliminary tests have been made and all deficiencies found have been corrected to the satisfaction of the equipment manufacturer's technical representative and the Engineer and written certification to this effect has been received by the Fire Protection Engineer. The system shall be in service at least 15 calendar days prior to final acceptance testing. The Contractor shall allow at least 15 calendar days between the dates final testing is requested and the date the final acceptance testing takes place. The Contractor shall furnish all equipment, instruments, devices and personnel for this test. The system shall be tested for approval in the presence of representatives of the manufacturer, the Engineer, and the Fire Protection Engineer. All necessary tests shall be made including the following, and any deficiency found shall be corrected and the system retested.

#### a. Entire System

Test the entire system by operating all fire alarm initiating, notification, and signalling devices. Perform tests with the system operating on primary power and repeat the test with the system operating on battery power only. Provide necessary equipment to test smoke detectors and heat detectors.

#### b. Supervisory Systems

All aspects of the supervisory functions of the systems shall be operated. Introduce faults in each circuit at random locations as directed by the Fire Protection Engineer. Verify proper trouble annunciation at the control panel.

### 3. Additional Tests

When deficiencies, defects or malfunctions develop during the tests required, all further testing of the system shall be suspended until proper adjustments, corrections or revisions have been made to assure proper performance of the system. If these revisions require more than a nominal delay, the Engineer shall be notified when the additional work has been completed, to arrange a new inspection and test of the fire alarm system. All tests required shall be repeated prior to final acceptance, unless directed otherwise.

**ITEM 35 : WIRE COMMUNICATION AND SIGNAL SYSTEM****TELEPHONE SYSTEM****GENERAL**

Electrical General Requirements applies to this section with the additions and modifications specified herein.

**DESCRIPTION OF WORK**

The telephone/data system shall consist of an interior system of conduits, outlet, boxes, junction boxes, main distribution frame (MDF) for interconnection of PABX system, telephone/data terminals, telephone/data distribution cables (category 5e).

Should there be conflicts between these specifications and the plans, or conflicts within specifications and plans, these shall be brought to the attention of the Engineer for resolution.

**PRODUCTS****CONDUIT AND FITTINGS**

- a. Conduit shall be polyvinyl-chloride conduit (PVC) where specified, shall be heavy wall, high impact resistant Schedule 40, with factory made bends, couplings and fittings. PVC cement for joints shall be of the same brand as for the PVC pipe.
- b. No conduits shall be used in any system smaller than 20mm (1/2") diameter electric trade size, nor shall have more than four (4) 90-degree bends in any one run and where necessary, pull boxes shall be provided as directed.
- c. No wire shall be pulled into any conduit until the conduit system is completed in all details, in the case of concealed work until all rough plastering masonry has been completed, and in the case of exposed work until the conduit work has been completed in every detail.
- d. The ends of all conduits shall have tightly plugged to exclude plaster, dust and moisture while the construction of the building is in progress. All conduits shall be reamed to remove all burrs.

**OUTLETS, BOXES AND FITTINGS**

- a. At all outlets whatever kind, for all system, there shall be provided a suitable fitting, which shall be either a box or other device especially designed to receive the type of fitting to be mounted thereon.
- b. The Contractor shall consult with the Engineer as to the nature of the various fittings to be used before installing his outlet fittings, and shall conform strictly in the use of fittings, to the nature of the appliance to be mounted on them, so that the work, when the completed will be a finished design.
- c. All outlets on concealed conduit work, provide galvanized pressed steel outlet boxes on standard make. These boxes shall be in all cases standard and where such boxes are not available on the market, special boxes shall be secured by the Contractor at his own

expense. In general outlet boxes shall be at least 100mm diameter, 53mm deep and No. 16 minimum gauge.

#### JUNCTION AND PULL BOXES

- a. Junction and pull boxes, of code gauge steel, galvanized shall be provided as indicated or as required for facilitating the pulling of wires and cables. Pull boxes as finished places shall be located and installed with the permission and to the satisfaction of the Engineer.
- b. All junction and pull boxes on exposed conduit work shall be provided with hubs for threaded pipe entry and covers provided with neoprene gaskets.

#### MAIN TELEPHONE TERMINAL CABINET (MTTC) / INTERCONNECTION OF PABX SYSTEM

- a. All components, connections of MTTC shall conform to EIA/TIA standards.
- b. Cable terminals shall be the type acceptable to the Telephone Company. Terminals shall be Category 5e as required on the plans.

#### TELEPHONE TERMINALS

The telephone terminals shall be wall mounted, terminal blocks shall be mounted on 20mm thick treated wood backboard. Terminal blocks shall be based on cross connection system. Terminal blocks shall have similar design with MTTC.

#### HORIZONTAL CABLE

All horizontal cabling shall be Category 5e (RJ – 45) network cables.

#### TELEPHONE / DATA OUTLETS

All modular jacks shall be data grade Category 5e.

#### SHOP DRAWINGS

Prepare and submit complete shop drawings for the telephone system in accordance with the latest Local Telephone Company.

**ITEM 36 : UNITARY AIR-CONDITIONING SYSTEMS****GENERAL**

"Mechanical General Requirements" applies to this section with additions and modification specified herein.

**GENERAL REQUIREMENTS****1. Unitary Air-Conditioning System**

Air conditioning units in retail stores shall be supplied and installed by the tenant. Capacity of equipment shall not be less than that indicated. In the NFPA standards and SMACNA manuals referred herein, the advisory provisions shall be considered to be mandatory, as though the word "shall" had been substituted for "should" wherever it appears. Reference to the "authority having jurisdiction" shall be interpreted to mean the Engineer.

**2. Refrigerant Piping, Fittings and Accessories**

Refrigerant piping assembly as used in this section includes pipes, flanges, bolting, gaskets, valves, relief devices, fittings, and the pressure containing parts of other piping components. It also includes hangers and supports and other equipment items necessary to prevent overstressing the pressure containing parts.

**a. Piping**

ANSI 15 and ANSI B31.5. Compatible with fluids for which they are being used and capable of withstanding the pressures and temperatures of the service that they are handling.

**b. Tubing**

Refrigerant piping shall be seamless copper tubing, hard drawn, type K, ASTM B88. Tubing used for refrigerant service shall be cleaned, sealed, capped or plugged prior to being shipped from the manufacturer's plant. Fittings for copper tubing shall be wrought copper or bronze, brazing or solder joint type ANSI B16.18 or ANSI B16.22. Copper flared type tubing may be made only in annealed copper tubing ASTM B280 and in nominal sizes smaller than one-inch only for connection to equipment and no larger than 1-3/8 inches diameter for other connections. Flanges shall be of bronze ANSI B16.24.

**3. Corrosion Prevention**

Unless specified otherwise, equipment fabricated from ferrous metals that do not have a zinc coating shall be treated for prevention of rust with a factory coating or paint system that will withstand 125 hours in a salt-spray fog test except that equipment located outdoors shall be tested for 500 hours. The salt-spray fog test shall use a 20 percent sodium chloride solution. Immediately after completion of the test, the coating shall show no signs of blistering, wrinkling or cracking, no loss of adhesion, and the specimen shall show no signs of rust creep age beyond 1/8 inch on either side of the scratch mark. The film thickness of the factory coating or paint system applied on the equipment shall be not less than film thickness used on the test specimen.

**4. Safety Standards**

- a. Design, Manufacture and Installation of Mechanical Refrigeration Equipment: ASHRAE Safety Code for Mechanical Refrigeration.

- b. Machinery Guards: Fully guard drive mechanisms, or other moving parts. Provide guards fabricated of steel and expanded metal, rigidly mounted, and readily removed without disassembly.

## **MATERIAL REQUIREMENTS**

### **UNITARY AIR-CONDITIONING SYSTEMS - SPLIT TYPES**

#### **1. General**

The air-conditioning systems shall be designed, constructed, and rating tested in accordance with ARI Standard 210 for unitary air-conditioning equipment of capacities below 135,000 Btu's per hour and ARI Standard 300 for unitary equipment with capacities of 135,000 Btu's per hour and greater. Units shall be ARI certified. Units with capacities below 135,000 Btu's per hour shall be listed in the ARI Directory of Certified Unitary Air-Conditioners.

#### **2. Performance Rating**

Cooling capacity of unit shall meet the sensible heat requirements and total requirements indicated. In selecting unit size, make true allowance for "sensible to total heat ratio" to satisfy required sensible cooling capacity. Submittals shall include catalogue selection data which accounts for sensible to total heat ratio, entering air-conditions at evaporator, and condenser air-conditions.

#### **3. Air Conditioners, Ceiling Cassette Type**

The air conditioning system has a 4-way air distribution with auto sweep, it can cool an adjacent room using of the 4-way airflow outlets The fresh air intake device and additional outlet grille can condition the air in an adjoining room using one of its 4-way airflow sides..

#### **4. Compressors**

Provide hermetic, semi-hermetic rotary, or screw type provided with all the minimum standard equipment and accessories listed therein. Compressor speed for compressors above 20 tons shall not exceed 1750 rpm. Provide compressors with automatic capacity reduction of at least 50 percent for units over 10 tons. Compressors shall start unloaded. Provide each compressor with devices to protect the compressor from short-cycling when shut-down by safety controls. Provide a pump-down cycle of the non-recycling start type for each compressor 20 tons and over. Provide compressors with vibration isolators. Compressor motor shall be suitable for electric power characteristics as indicated. Motor shall conform to NEMA NG-1. Motor starters shall conform to NEMA ICS. Motors shall be constant speed, squirrel-cage induction, open type or hermetically sealed, low starting current, high-torque type, and shall be furnished with reduced voltage or and magnetic across-the-line type motor starter with weather-resistant enclosures

#### **5. Coils**

- a. Cooling coils shall conform to ARI 410 and to paragraph entitled, Cooling Coils. Coils shall be the type indicated or specified herein.
- b. The air-cooled condenser coil shall be extended-surface fin-and-tube type with seamless copper or aluminum construction. Aluminum alloy conforming to ASTM B210, alloy 1100, shall be used for the tubes, and aluminum alloy conforming to chemical requirements of ASTM B209, alloy 7072, shall be used for fins and sheets. Fins shall be soldered or mechanically bonded to tubes and installed in a metal casing. Coils shall be air tested under water for leakage. After testing, dry coils for remote type units to remove free

moisture, and cap to prevent entrance of foreign matter. Evacuate and seal coils at the factory.

## 6. Filter Boxes

Provide filter boxes with either hanged access doors or removable panels. Filter boxes shall have racks for filters arranged for angle pattern. Filters shall be of type indicated and shall conform to paragraph hereinafter entitled, "Filters".

## 7. Mixing Boxes

Mixing boxes shall be of physical size to match the basic unit and include equal sized flanged openings, each sized to handle full air flow. Arrangement of openings shall be as indicated. Provide openings with dampers of opposed blade type. All damper shafts shall be connected together by one continuous linkage bar. Arrange dampers for manual operation so that when one starts to close from its opened position, the other starts to open from its closed position.

## 8. Controls

### a. Condenser Controls

Provide load pressure control to insure condensing temperature for proper system operation at all ambient temperatures down to 40°F.

- b. Condenser Start-up Control Provide condenser with a start-up control package which permits start-up compressor regardless of low ambient temperatures. Package shall temporarily bypass system low pressure-start to permit start-up whenever minimum ambient temperature is below design evaporator coil suction temperature.

## 9. Refrigerant Circuits

Entire refrigerant circuit shall be dehydrated, purged, and charged with refrigerant and oil at factory. Factory oil charge shall be the full amount required for operation. Factory charge for refrigerant shall be the full amount required for operation.

## 10. Corrosion Protection

Units shall be factory corrosion protected in accordance with paragraph entitled, Corrosion Prevention.

## COOLING COILS

### 1. Direct-Expansion Coils

Direct-expansion coils shall be fin-and-tube type constructed of seamless copper or aluminum tubes and copper or aluminum fins mechanically bonded or soldered or helically wound to tubes. Casing and tube support sheets shall be not lighter than 16-gauge (0.0635-inch nominal thickness) galvanized steel, formed to provide structural strength. Suction header shall be seamless copper tubing or seamless or resistance welded steel tube with copper connection. Supply header shall consist of a distributor to distribute the refrigerant liquid through seamless copper tubing, equally to all the circuit in the coil. Tubes shall be circuited to insure minimum pressure drop and maximum heat transfer. Circulating shall permit refrigerant flow from liquid inlet to suction outlet without causing oil staging or restricting refrigerant flow in coil. Rack coil shall be tested at the factory under water at not less than 300 psi air pressure and shall be suitable for 200 psi working pressure. Each coil shall be completely dehydrated and scaled at the factory upon completion of pressure tests. Coil shall be mounted for counter flow service.

## 2. Filters

Filter shall be of the sectional or panel cleanable type and be capable of filtering the entire air supply.

## 3. Manometers

Provide inclined-type manometers for filter stations of 2,000 cfm capacity or larger including filters furnished as integral parts of air handling units and filters installed separately. Manometers shall be of sufficient length to read at least one inch of water column, shall be graduated in 1/10 inches, and equipped with spirit level. Equip each manometer with over-pressure safety traps to prevent loss of oil, and two three-way vent valves for checking zero setting.

## CLEANING, PAINTING AND IDENTIFICATION

Cleaning, painting and identification of piping shall be as specified under, "Painting" of "Building Works".

## IDENTIFICATION TAGS AND PLATES

Provide equipment, thermometers, valves, and controllers with tags numbered and stamped for their use. Plates and tags shall be of brass or suitable non-ferrous material, securely mounted or attached. Minimum letter and numeral size shall be 1/8 inch.

## EXECUTION

## INSTALLATION

Application and installation practices for unitary air-conditioning systems shall conform to the requirements of an acceptable industry standard for installation of unitary systems.

### 1. General

Install equipment and components in a manner to insure proper and sequential operation of the equipment and its controls. Installation of equipment not covered herein or in manufacturer's instructions shall be installed as recommended by manufacturer's representative. Provide proper foundations for mounting of equipment, accessories, appurtenances, piping and controls including, but not limited to, supported vibration isolators, stands, guides, anchors, clamps, and brackets. Foundations for equipment shall conform to equipment manufacturer's recommendation, unless otherwise shown in the drawings. Set anchor bolts and sleeves accurately using properly constructed templates. Anchor bolts shall be of adequate length and provided with welded-on plates on the head end embedded in the concrete. Level equipment bases, using jacks or steel wedges, and neatly grouted-in with a non-shrinking type of grouting mortar. Locate equipment so that working space is available for all necessary servicing such as shaft removal, disassembling compressor cylinders and pistons, replacing or adjusting drives, motors, or shaft seals, access to water heads and valves of shell and tube equipment, tube cleaning or replacement, access to automatic controls, refrigerant charging, lubrication, oil draining and working clearance under overhead lines. Provide electric isolation between dissimilar metals for the purpose of minimizing galvanic corrosion.



## 2. Unitary Air-Conditioning System

Install system as indicated, in accordance with the requirements of ASHRAE 15-76 and as recommended in the manufacturer's installation and operational instructions.

## 3. Electrical Work

Electric motor driven equipment specified herein shall be provided complete with motors, motor starters, and controls. Electrical equipment and wiring shall be in accordance with Section "Electrical General Requirements". Motor starters shall be provided complete with properly sized thermal overload protection and other appurtenances necessary for the motor control wiring required for controls and devices but not indicated.

## 4. Piping

### a. Piping Sleeves

Pipe sleeves shall be as Galvanized Iron, Schedule 20.

### b. Provide refrigerant driers, sight glass liquid indicators, moisture indicators, and strainers in refrigerant piping for remote installations when not furnished by the manufacturer as part of the equipment.

### c. Locate strainers close to equipment they are to protect. Provide a strainer in the common refrigerant liquid supply to two or more thermal valves in parallel when each thermal valve has a built-in strainer. Install strainers with screen down and in direction of flow as indicated on strainers body.

### d. Solenoid valves shall be installed in horizontal lines with stem vertical and with flow in direction indicated on the valve. If not incorporated as internal part of the valve, provide strainers upstream of the solenoid valve. Provide service valves upstream of the solenoid valve, upstream of the strainer, and downstream of the solenoid valve. Remove the internal parts of the solenoid valve when brazing the valve.

## 5. Auxiliary Drain Pans, Drain Connections, and Drain Lines

Provide auxiliary drain pans under all drain pans of the units located above finished ceilings or over mechanical or electrical equipment where condensate overflow over unit drain pan may cause damage to ceilings, piping, and equipment below. Provide drain lines for all drain and auxiliary drain pans. Trap the drain from bottom pan of air-conditioning units to insure complete pan drainage. Drain lines shall be full size of opening.

## 6. Air Filters

Provide access panels for all concealed valves, controls, dampers, and other fittings requiring inspection and maintenance.

## 7. Inspection Plates and Test Holes

Inspection plates and test holes where required in casings for air balance measurements shall conform to SMACMA High Pressure Low Velocity Duct Construction Standards. Test holes shall be a factory-fabricated, air-tight, non-corrosive test hole with screw cap and gasket. Extend cap through insulation.

## 8. Flashing and Pitch Pockets

Provide flashing and pitch pockets for equipment support and roof penetrations and flashing where piping or ductwork passes through exterior walls.

## FIELD TESTS AND INSPECTIONS

### 1. Tests

All tests shall be performed and materials and equipment required for test shall be furnished by the Contractor. Tests after installation and prior to acceptance shall be performed in the presence of a representative of the Owner and subject to his approval. Equipment and material certified as having been successfully tested by the manufacturer in accordance with referenced specifications and standards will not require retesting before installation. Equipment and materials not tested at the place of manufacturer will be tested before or after installation, as applicable, where necessary to determine compliance with referenced specifications and standards.

### 2. Leak Testing

Upon completion of installation of the air-conditioning equipment, test all factories as well as field refrigerant piping with an electronic-type leak detector to acquire leak tight refrigerant systems. If leaks are detected at the time of installation or during the guarantee period, remove the entire refrigerant charge from the system, correct the leaks and retest the system.

### 3. Evacuation, Dehydration, and Charging

After system is found to be without leaks, evacuate the system using a reliable gauge and a vacuum pump capable of pulling a vacuum of at least 1 mm hg absolute. Evacuate system in strict compliance with the triple evacuation and blotter method or in strict accordance with equipment manufacturer's printed instructions. System leak testing, evacuation, dehydration, and charging with refrigerant shall comply with the requirement contained in an acceptable industry standard.

### 4. Start-Up and Operation Tests

The air-conditioning system and its components shall be started and initially placed under operation and checked to see that it is functioning correctly. Adjust safety and automatic control instruments as necessary to place them in proper operation and sequence. The operational test shall be not less than 8 hours.

### 5. Performance Tests

Upon completion of evacuation, charging, start-up, final leak testing, and proper adjustment of controls, the system shall be performance tested to demonstrate that it complies with the performance and capacity requirements of the specifications and plans. Test the system for not less than 8 hours, during which time hourly readings shall be recorded. At the end of the test period, the readings shall be averaged and the average shall be considered to be the system performance.

### 6. Sound Tests, Air-conditioners, Unitary, Split Type

Sound pressure level measurements shall be conducted on units designated by the Owner. Calculate sound power levels by ASHRAE Systems Handbook and Product Directory. Submit test results and calculations.

**ITEM 37 : DISTRIBUTION TRANSFORMER****SCOPE OF WORK**

The work to be done shall consist of supply, and delivering and installing distribution transformer completed in accordance with all the materials required by First Catanduanes Electric Cooperative, Inc.(FICELCO) of Port of San Andres, Catanduanes, including labor, tools and equipment and all incidental works as found necessary.

**GENERAL REQUIREMENTS**

- a) All works shall be done in accordance with the requirements of the publications and agencies having jurisdiction, as well as the requirements of the approved standards.

1. American National Standard Institute - (ANSI)
2. Institute of Electrical and Electronics Engineers - (IEEE)
3. National Electrical Manufacturer Association - (NEMA)
4. Philippine Electrical Code - (PEC)  
Philippine National Standard - (PNS)

b) Materials Requirements

- o Distribution Transformer,
- o Conventional
- o Pole Type
- o Oil Immersed
- o Self –Cooled
- o Single Phase, 1Ø, 60hz
- o 65 °C Temperature rise

|                      |   |   |
|----------------------|---|---|
| Capacity             | : | 50KVA (verify)                                      |
| Primary Voltage      | : | 7.62 / 13.2 Y kV                                    |
|                      |   | 2-2.5% taps FCAN and                                |
|                      |   | 2-2.5% taps FCBN                                    |
|                      |   | Available on tap changer for de-energized operation |
| Primary BIL Rating   | : | 95kV  |
| Secondary Voltage    | : | 120 /240V   |
| Secondary BIL Rating | : | 30kV  |
| Percent Impedance    | : | ANSI Standard                                       |
| HV/LV Conductor      | : | Copper / Aluminum                                   |
| Insulating Fluid:    |   | Mineral Oil   |
| Core                 | : | Silicon Core  |
| NLL                  | : | 190W  |
| LL                   | : | 650W  |

c) **Standard Test Reports:**1. **Routine Tests**

- Turn Ratio Test
- Voltage Ratio Test
- No Load Loss & Load Loss Test
- Impedance Voltage Test
- Applied Potential Test
- Induced Potential Test

2. **Type of Test**

- Impulse test
- Temperature Rise Test

**PRODUCTS (DISTRIBUTION TRANSFORMER)****External Features**

- High Voltage Bushing
- Low Voltage Bushing
- Tank and Cover
- Pressure Relief Valve
- Tank and Low Voltage Grounding Provision
- Externally Operated No-Load Tap Changer
- Radiators

**Internal Features**

- Core Coil Assembly
- Winding Material
- Insulating Di-Electric Fluid
- Coil Support

**PRODUCTS (GENERAL DESCRIPTION)**

1. **High Voltage Bushing**, the cover mounted and tank - wall high voltage bushing are made of wet process porcelain suitable for both copper and aluminum conductors.
2. **Low Voltage Bushing**, single or double eyebolt or spade terminal made of wet process porcelain.
3. **Tank and Cover**, manufactured from hot-rolled steel sheets and pressure tested to ensure a leak free enclosure. Grit blasted or chemically treated to remove every trace of scale, rust or oil, for better paint adhesion. Outer and inner surfaces are primed with epoxy primer for rust prevention and the outer surface is coated with polyurethane.
4. **Pressure Relief Valve**, gradually releases excess pressure and designed for outdoor condition.
5. **Tank and Low Voltage Grounding Provisions**, provided to help prevent damage to the transformer during electrical surges.
6. **Externally Operated No-Load Tap Changer**, provides up to five (5) primary voltage for convenient changing of high voltage tap connection at no -load.
7. **Radiators**, made of hot-rolled steel sheets these are provided for higher KVA units for added cooling surface.

8. **Core Coil Assembly**, uses a superior transformer insulation system and is permanently centered in the tank using a close fitted steel frame. Materials used for our coils, are wither silicon-iron for our Blue and Silver series or Amorphous metal for our gold line.
9. **Winding Material**, distribution transformer uses a combination of standard copper-aluminum or copper-copper winding materials.
10. **Insulating –Di- Electric Fluid**, used are either mineral oil or an environment friendly high fire point fluid.
11. **Coil Support**, used compatible materials to hold the coil in place and restraint it during short circuit-circuit conditions. Core clamps and clamp angles are also used to ensure that the core and windings are effectively secured even during mechanical stresses.

## **EXECUTION**

### **INSTALLATION**

Shall be in accordance with the code and requirements specified herein.

### **GROUNDING**

Ground all exposed non-current-carrying metallic parts of electrical equipment.

### **WORKMANSHIP**

The work throughout shall be executed in the best and most thorough manner under the direction of and at the satisfaction of the Registered Electrical Engineer or Master Electrician, who will interpret the intent meaning of the drawings and specification and shall have the power to reject any work and materials which in his judgment, are not in full accordance therewith.

### **TESTING OPERATIONS**

When the electrical installation is completed, the Contractor shall test the installed electrical materials and equipment in the presence of Registered Electrical Engineer or Master Electrician. The system shall be free from any defects, shorts or grounds. The Contractor at no extra cost shall furnish all necessary instruments and personnel required for the testing.

### **GUARANTEE**

Upon completion and before final acceptance of the work, the Contractor shall furnish the Engineer a written guarantee stating that all works executed are free from defects on materials and workmanship. The guarantee shall be for a period of one year from the date of the final acceptance. Any work that becomes defective during the said period shall be corrected / replaced by the Contractor at his own expense in a manner satisfactory to the Authority.

**ITEM 38 : PROJECT BILLBOARD**

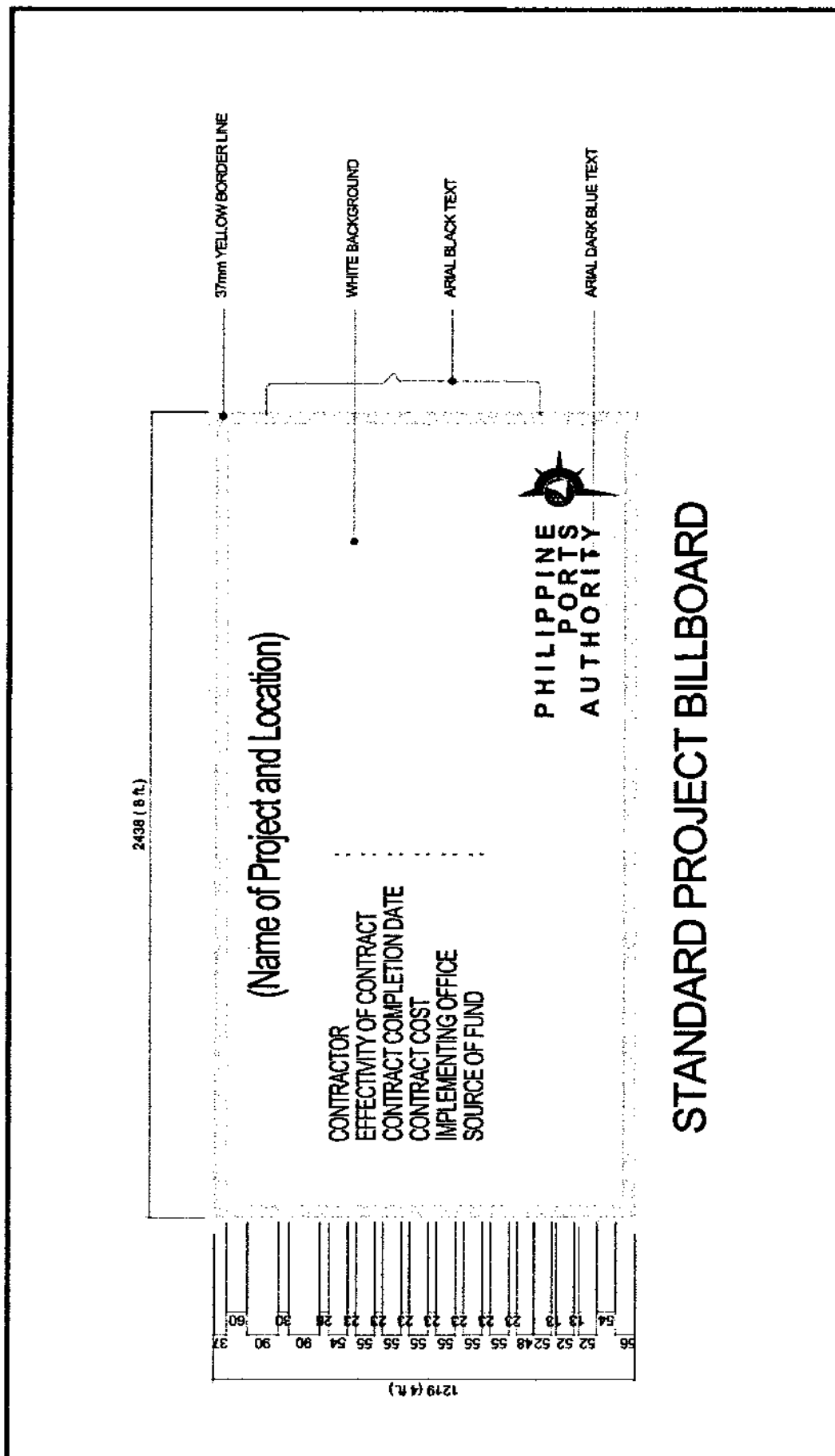
**SPECIFICATION**

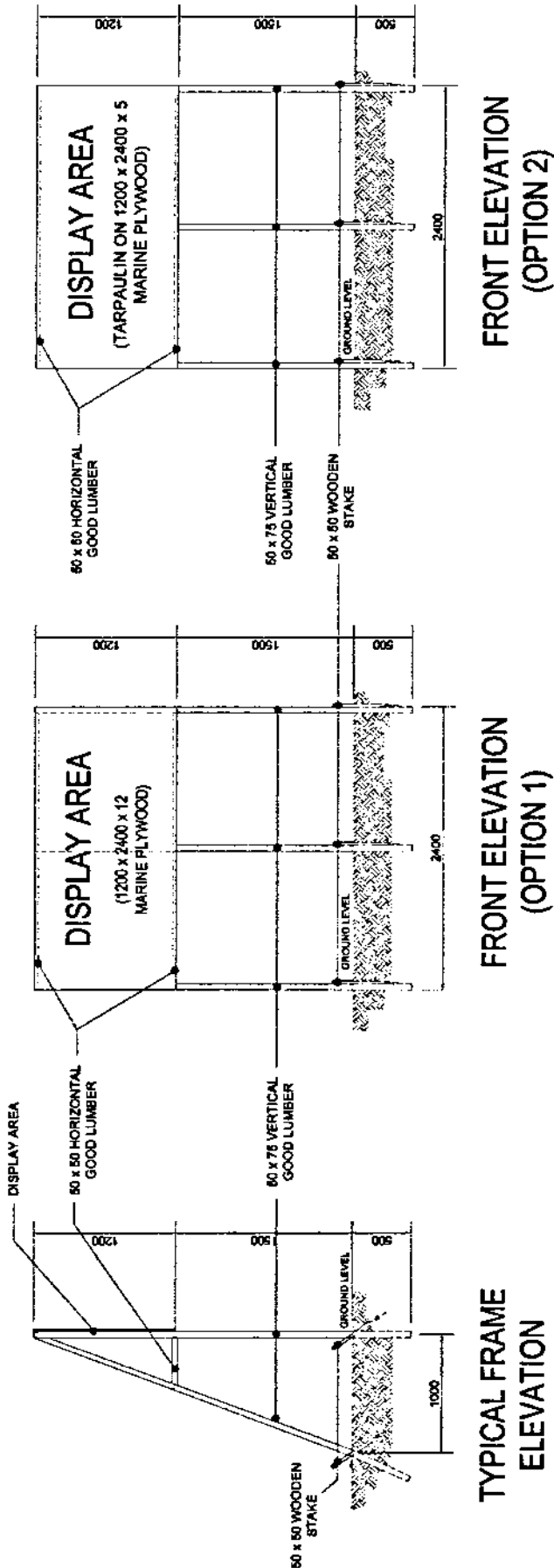
The Project Billboard shall be installed at location(s) designated by the Engineer.

The size and specifications of materials for the standard billboard shall be 4ft. x 8ft. (1,200mm x 2,400mm) using ½ inch (12mm) marine plywood or tarpaulin poster on 3/16 inch (5mm) marine plywood.

Project billboards shall not contain Name(s) and/or picture(s) of any personages.

See attached drawings for further details of the standard billboard.





**BILLBOARD FRAME**  
(NOT TO SCALE, ALL DIMENSIONS ARE IN MILLIMETERS)



“To all our contractors, suppliers, and  
service providers, all we ask is for you to

**SPEED UP**

your contracts and **FINISH**

**AHEAD** of schedule,

**WITHOUT SACRIFICING**

**QUALITY**

of work, and **REASONABLENESS  
OF COST** agreed upon. Gawin niyo  
'yan at hindi tayo maghihiwalay ng  
landas (Do that and we will not part ways).”

A Message from  
DOTr Secretary Arthur Tugade



@DOTrPH

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## ITEM 39 : SAFETY SIGNAGES AND BARRICADES

### DESCRIPTION

This work includes the furnishing and installing of safety signages and barricades in accordance with the specifications and to the details shown below in the drawings, or as directed by the Engineer.

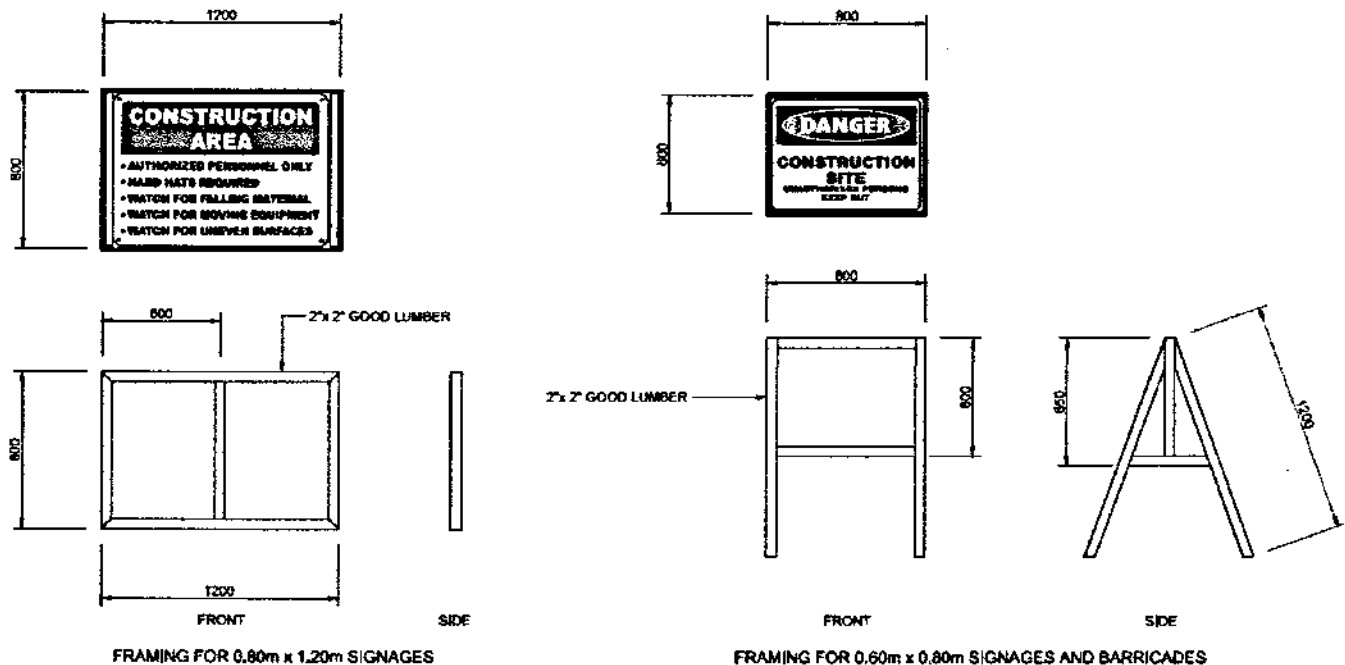
### SPECIFICATION

The Signage's and Barricades shall be installed at location(s) designated by the Engineer.

The sizes of the standard signages shall be 2-2/3ft x 4ft (800mm X 1,200mm) for fixed type and 2ft x 2-2/3ft (600mm x 800mm) for mobile type. For barricade standard 2ft x 2-2/3ft (600mm x 800mm) shall be provided.

The materials to be used for signages and barricades are ½ inch (12mm) marine plywood or tarpaulin poster on 2" x 2" (50mm x 50mm) good lumber frame (see drawing below).

The printing or painting shall be the discretion of the Engineer.



### STANDARD PLAN FOR SIGNAGES AND BARRICADES

**SECTION VII**

**PROJECT DRAWINGS**

# SECTION VII

## PROJECT DRAWINGS (SEE ISSUED APPROVED PLANS)

### LIST OF DRAWINGS:

#### CONSTRUCTION OF PLATFORM WITH RORO RAMP AND RC PIER

|          |  |
|----------|--|
| 01 of 21 | Development Plan, Vicinity Map, General Notes and List of Drawings   |
| 02 of 21 | General Plan   |
| 03 of 21 | Piling Plan (Proposed Pier), Typical Reinforcement of R.C. Deck (Proposed Pier), Pile Schedule (Proposed Pier)   |
| 04 of 21 | Section Detail (Proposed Pier)   |
| 05 of 21 | Section - "1", Section - "2", Typical Detail of Mooring Tee Head & Rubber Dock Fender Block (Proposed Pier)  |
| 06 of 21 | Typical Detail of Pile Cap for Vertical Piles (Proposed Pier), Typical Detail of Pile Cap for Batter Piles (Proposed Pier), Typical Detail of Pile Cap for Vertical Piles (Build-Up), Typical Detail of Pile Cap for Batter Piles (Build-Up) |
| 07 of 21 | Piling Plan (Proposed Platform with Roro-Ramp), Pile Schedule (Proposed Platform with Roro-Ramp)   |
| 08 of 21 | Section Detail (Portion of The Existing Structure to Be Build-Up)  |
| 09 of 21 | Typical Reinforcement of R.C. Deck (Proposed Platform with Roro-Ramp)  |
| 10 of 21 | Section Elevation (Roro-Ramp), Berth Elevation (Roro-Ramp)   |
| 11 of 21 | Reinforcement of R.C. Deck (Roro-Ramp)   |
| 12 of 21 | Section Detail (Proposed Platform)   |
| 13 of 21 | Section of Beam "L"  |
| 14 of 21 | Section "6", Section "7"   |
| 15 of 21 | Section "8", Section "X"   |
| 16 of 21 | Section "C, D, E"  |
| 17 of 21 | Section "B, F"   |

- |          |  |
|----------|--|
| 18 of 21 | Typical Detail of Pile Cap for Vertical Piles (Proposed Platform), Typical Detail of Pile Cap for Batter Piles (Proposed Platform), Typical Detail of Pile Cap for Vertical Piles (Roro-Ramp), Typical Detail of Pile Cap for Batter Piles (Roro-Ramp) |
| 19 of 21 | Typical Detail of Mooring Tee Head Block (Proposed Platform with Roro-Ramp)  |
| 20 of 21 | Typical Section of 600mm Ø X 13mm Thick Tubular Steel Piles  |
| 21 of 21 | Detail of V-Type (500H X 2000L) Rubber Dock Fender, Detail of 35 Tons Mooring Bollard (Tee Head)   |

## **CONSTRUCTION OF PORT OPERATIONS BUILDING**

### **ARCHITECTURAL**

- |            |  |
|------------|--|
| A-01 of 07 | Perspective, Key Plan, Table of Contents, Vicinity Map   |
| A-02 of 07 | Site Development Plan, Blow up Site Development Plan   |
| A-03 of 07 | Floor Plan, Roof Deck Plan, Front Elevation, Rear Elevation  |
| A-04 of 07 | Left Side Elevation, Right Side Elevation, Cross Section and Longitudinal Section, Reflected Ceiling Plan  |
| A-05 of 07 | Schedule of Doors and Windows  |
| A-06 of 07 | Public Toilet Blow-up Plan, Staff Toilet Blow-up Plan, Section Thru A-A, Section Thru B-B, Section Thru C-C, Section Thru D-D, Section Thru E-E, Section Thru F-F, Grab Bar Details, Slop Sink Details, Countertop Details |
| A-07 of 07 | Mirror Details (Typ.), Foot Bath Details (Typ.), PPA Logo, Ladder Details, Reinforced Concrete Canopy Details, Stair Nosing (Rigid Type) Detail, Hand Rail Connection-1 Details, Hand Rail Connection-2 Details            |
| A-08 of 08 | Stair 01 and Ramp 01 Blow Up Plan, Section Thru A-A', Section Thru B-B', Section Thru C-C', Section Thru D-D'  |
| A-09 of 09 | Stair 02 and Ramp 02 Blow Up Plan, Section Thru E-E', Section Thru F-F', Section Thru G-G', Section Thru H-H'  |
| A-10 of 10 | Ramp 03 Blow Up Plan, Section Thru I-I', Section Thru J-J', Section Thru K-K'  |

## **STRUCTURAL**

|            |   |
|------------|---|
| S-01 of 10 | General Notes   |
| S-02 of 10 | Plan Showing Existing Facilities  |
| S-03 of 10 | Concrete Pavement Layout Plan, Section Z, Detail of 300mm thk. PCC Pavement   |
| S-04 of 10 | Pile Layout Plan, Detail of Pile Cap-1 (PC-1), Detail of Pile Cap-2 (PC-2)  |
| S-05 of 10 | Foundation Plan   |
| S-06 of 10 | Slab Details, Detail of Ext. Wall Resting on FTB, Detail of Wall Footing (WF), Typical Detail of Stairs, Detail of Wall Footing (WF-1), Typical Detail of Ramp-1, Typ. Detail of Retaining Wall-1                             |
| S-07 of 10 | Roof Framing Plan, Canopy Framing Plan  |
| S-08 of 10 | Beam Schedule, Typical Detail of Canopy, Typical Detail of Parapet Wall, Typical Slab Reinforcement Detail  |
| S-09 of 10 | Column Schedule, Typical Column Elevation, Lintel Beam Details, Stiffener Column Details, Typical Beam Reinforcement at Column Support, Typical Intermediate Beam Reinforcement at Beam Support, Typical Girder Reinforcement |
| S-10 of 10 | Details of 400mm x 400mm Pre-Stressed Concrete Pile   |

## **PLUMBING**

|            |   |
|------------|---|
| P-01 of 05 | General Notes, Schedule of Pipe (Sewer Line), Schedule of Pipe (Water Line), Details of Septic Tank, Installation Detail of Water Meter, Pipe Trenched Bedding, Typical Section of Catch Basin, Detail of Downspout Layout, Material Specifications |
| P-02 of 05 | Proposed Site Development Plan  |
| P-03 of 05 | Sewer Line Layout Plan, Sewer System Isometric Layout, Legends and Symbols  |
| P-04 of 05 | Water Line Layout Plan, Water Line Isometric Layout, Legends and Symbols  |
| P-05 of 05 | Drainage System Roof Layout Plan, Drainage System Isometric Layout, Legends and Symbols   |

## **ELECTRICAL**

- |            |   |
|------------|---|
| E-01 of 07 | Reflected Ceiling Lighting Layout, Legend   |
| E-02 of 07 | Background Music/Paging Alarm Layout Plan, Notes/ Legend, Single Line Diagram   |
| E-03 of 07 | CCTV/ CATV and Telephone Layout Plan, Telephone Single Line Diagram, CCTV/CATV Single Line Diagram, Legend/ Notes   |
| E-04 of 07 | Lighting Layout Plan, Power Layout Plan, Legend   |
| E-05 of 07 | Fire Detection Alarm Layout Plan, Single Line Diagram, Legends/Notes  |
| E-06 of 07 | Schedule of Load, Summary of Load Schedule, Riser Diagram, Single Line Diagram  |
| E-07 of 07 | Service Entrance of MDP to Concrete Pedestal Post, General Notes, Recommendation, Legend, Detail of Duct Bank, Concrete Pedestal Post, Detail of Handhole |

## **MECHANICAL**

- |             |   |
|-------------|---|
| ME-01 of 01 | Air Condition Layout Plan, Roof Deck Outdoor Air Cooled Condensing Unit, Roof Deck Lightning Layout Plan, Air Terminal Copper Rod, Legend |
| ME-02 of 02 | Mechanical Equipment Schedule, General Notes, Ceiling Cassette Type ACU, Split Type ACU   |

## **PUMP HOUSE**

- |             |  |
|-------------|--|
| PH-01 of 04 | Pump House Location Plan, Floor Plan, Schedule of Door and Windows, Roof Deck Plan, Front Elevation, Rear Elevation, Right Side Elevation, Left Side Elevation   |
| PH-02 of 04 | Concrete Chamber Reinforcement, Platform Reinforcement, Section J-J, Section K-K, Typical Column Section, Detail of Manhole Cover, Column and Beam Plan, Roof Deck Reinforcement, Roof Beam Detail (Pump House), Schedule of Beams |
| PH-03 of 04 | Pump House Plumbing Plan, Section M-M, Section N-N, Approximate Dimension of Stainless Tanks   |
| PH-04 of 04 | Pump House Lighting and Power Layout Plan, Schedule of Load, Riser Diagram/ Panel Board, Legend  |

**SECTION VIII**

**BILL OF QUANTITIES**  
**and**  
**ATTACHMENTS**



# **BILL OF QUANTITIES**

**Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier**  
**Port of San Andres, Catanduanes**



| NO.<br>(1)                  | DESCRIPTION OF WORK<br>(2)   | UNIT<br>(3) | QTY.<br>(4) | UNIT PRICE<br>(Pesos)<br>(5) | AMOUNT<br>(Pesos)<br>(4) x (5) |
|-----------------------------|--|-------------|-------------|------------------------------|--------------------------------|
| <b>BILL NO. 1</b>           | <b>GENERAL EXPENSES</b>  |             |             |                              |                                |
| 1.01                        | Mobilization, demobilization and cleaning                                      | lot         | 1           |                              |                                |
| 1.02                        | Rental of temporary site office and residence for the Engineer and staff       | mq.         | 16          |                              |                                |
| 1.03                        | Maintain temporary site office and residence for the Engineer and staff        | mq.         | 16          |                              |                                |
| 1.04                        | Provide Construction Safety and Health Program in the execution of the project | mq.         | 16          |                              |                                |
| <b>TOTAL FOR BILL NO. 1</b> |  |             |             |                              |                                |

# **BILL OF QUANTITIES**

**Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier**  
**Port of San Andres, Catanduanes**



| NO.<br>(1)                  | DESCRIPTION OF WORK<br>(2)   | UNIT<br>(3) | QTY.<br>(4) | UNIT PRICE<br>(Pesos)<br>(5) | AMOUNT<br>(Pesos)<br>(4) x (5) |
|-----------------------------|--|-------------|-------------|------------------------------|--------------------------------|
| <b>BILL NO.</b>             | <b>2 DEMOLITION &amp; REMOVAL WORKS</b>  |             |             |                              |                                |
| 2.01                        | Demolish and dispose existing concrete pavement prior to the construction of Port Operations Buildings             | sq.m.       | 1,163       |                              |                                |
| 2.02                        | Scrape existing gravel base materials prior to the construction of Port Operations Buildings                       | cu.m.       | 233         |                              |                                |
| 2.03                        | Demolish and dispose existing building/ structure  | sq.m.       | 100         |                              |                                |
| 2.04                        | Demolish and dispose existing structure (RoRo ramp) for build-up   | sq.m.       | 77          |                              |                                |
| 2.05                        | Chip-off portion of existing R.C. Curb, flush to deck level and smoothen with mortar                               | l.m.        | 34          |                              |                                |
| 2.06                        | Chip-off portion of existing mooring block to be aligned to pier and smoothen with mortar                          | cu.m.       | 15          |                              |                                |
| 2.07                        | Removed and turn over to PPA existing mooring bitts, mooring cleats and rubber dock fenders affected by demolition | no.         | 12          |                              |                                |
| <b>TOTAL FOR BILL NO. 2</b> |  |             |             |                              |                                |

## BILL OF QUANTITIES

**Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier**  
**Port of San Andres, Catanduanes**



| NO.<br>(1)        | DESCRIPTION OF WORK<br>(2)   | UNIT<br>(3) | QTY.<br>(4) | UNIT PRICE<br>(Pesos)<br>(5) | AMOUNT<br>(Pesos)<br>(4) x (5) |
|-------------------|--|-------------|-------------|------------------------------|--------------------------------|
| <b>BILL NO. 3</b> | <b>R.C. PLATFORM WITH RORO RAMP ON PILES</b>   |             |             |                              |                                |
| 3.01              | Supply and deliver to site steel pipe piles (A252 Grade 2, 500mm $\phi$ x 10mm thk)  | m.t.        | 320         |                              |                                |
| 3.02              | Application of polyurethane external coating and mastic filler for steel pipe piles (Polyurethane : 32-10 @ 1,500 microns dry film thickness or equivalent | sq.m.       | 857         |                              |                                |
| 3.03              | Supply and Install 10mm thk. reinforcing band at tip of steel pipe piles   | no.         | 63          |                              |                                |
| 3.04              | Handle, pitch and drive vertical steel pipe piles (500mm $\phi$ x 10mm thk)  | l.m.        | 1,271       |                              |                                |
| 3.05              | Handle, pitch and drive batter steel pipe piles (500mm $\phi$ x 10mm thk)  | l.m.        | 1,376       |                              |                                |
| 3.06              | Splice steel pipe piles as directed by the engineer  | no.         | 63          |                              |                                |
| 3.07              | Extract clogged materials from steel pipe piles  | cu.m.       | 34          |                              |                                |
| 3.08              | Cutting of driven steel pipe piles up to cut-off elevation including turn-over to authority of excess piles  | no.         | 63          |                              |                                |
| 3.09              | Supply and install reinforcing steel cage for steel pipe piles   | kg.         | 36,591      |                              |                                |
| 3.10              | Supply and place 3,500 psi concrete filler for steel pipe piles  | cu.m.       | 120         |                              |                                |
| 3.11              | Supply and install steel reinforcement for the superstructure  | kg.         | 63,137      |                              |                                |
| 3.12              | Supply and place 3,500 psi concrete for the superstructure   | cu.m.       | 367         |                              |                                |
| 3.13              | Supply and install hot-dipped galvanized angle bar, 100mm x 100mm x 10mm for construction joints including dowel bars                                      | l.m.        | 18          |                              |                                |

# **BILL OF QUANTITIES**

**Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier**  
**Port of San Andres, Catanduanes**



| NO.<br>(1)                  | DESCRIPTION OF WORK<br>(2)   | UNIT<br>(3) | QTY.<br>(4) | UNIT PRICE<br>(Pesos)<br>(5) | AMOUNT<br>(Pesos)<br>(4) x (5) |
|-----------------------------|--|-------------|-------------|------------------------------|--------------------------------|
| 3.14                        | Supply and deliver to site Rubber Dock Fender (V500H x 1,500L) including accessories | set         | 4           |                              |                                |
| 3.15                        | Install Rubber Dock Fender (V500H x 1,500L) including accessories                    | set         | 4           |                              |                                |
| 3.16                        | Supply and deliver to site Mooring Bollard (35-Tons, T-head) including accessories   | set         | 2           |                              |                                |
| 3.17                        | Install Mooring Bollard (35-Tons, T-head) including accessories                      | set         | 2           |                              |                                |
| <b>TOTAL FOR BILL NO. 3</b> |  |             |             |                              |                                |

## BILL OF QUANTITIES

**Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier**  
**Port of San Andres, Catanduanes**



| NO.<br>(1)        | DESCRIPTION OF WORK<br>(2)   | UNIT<br>(3) | QTY.<br>(4) | UNIT PRICE<br>(Pesos)<br>(5) | AMOUNT<br>(Pesos)<br>(4) x (5) |
|-------------------|--|-------------|-------------|------------------------------|--------------------------------|
| <b>BILL NO. 4</b> | <b>RC PIER INCLUDING BUILD-UP OF EXISTING STRUCTURE</b>  |             |             |                              |                                |
| 4.01              | Chip-off existing concrete piles for build-up up to required elevation, ±0.30m   | no.         | 12          |                              |                                |
| 4.02              | Supply and deliver to site steel pipe piles (A252 Grade 2, 500mm ø x 10mm thk)   | m.t.        | 244         |                              |                                |
| 4.03              | Application of polyurethane external coating and mastic filler for steel pipe piles (Polyurethane : 32-10 @ 1,500 microns dry film thickness or equivalent | sq.m.       | 728         |                              |                                |
| 4.04              | Supply and install 10mm thk. reinforcing band at tip of steel pipe piles   | no.         | 48          |                              |                                |
| 4.05              | Handle, pitch and drive vertical steel pipe piles (500mm ø x 10mm thk)   | l.m.        | 984         |                              |                                |
| 4.06              | Handle, pitch and drive batter steel pipe piles (500mm ø x 10mm thk)   | l.m.        | 1,032       |                              |                                |
| 4.07              | Splice steel pipe piles as directed by the engineer  | no.         | 48          |                              |                                |
| 4.08              | Extract clogged materials from steel pipe piles  | cu.m.       | 26          |                              |                                |
| 4.09              | Cutting of driven steel pipe piles up to cut-off elevation including turn-over to authority of excess piles  | no.         | 48          |                              |                                |
| 4.10              | Supply and install reinforcing steel cage for steel pipe piles   | kg.         | 29,836      |                              |                                |
| 4.11              | Supply and place 3,500 psi concrete filler for steel pipe piles  | cu.m.       | 100         |                              |                                |
| 4.12              | Supply and install steel reinforcement for the superstructure  | kg.         | 45,630      |                              |                                |
| 4.13              | Supply and place 3,500 psi concrete for the superstructure   | cu.m.       | 297         |                              |                                |

## BILL OF QUANTITIES

**Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier**  
**Port of San Andres, Catanduanes**



| NO.<br>(1)                  | DESCRIPTION OF WORK<br>(2)  | UNIT<br>(3) | QTY.<br>(4) | UNIT PRICE<br>(Pesos)<br>(5) | AMOUNT<br>(Pesos)<br>(4) x (5) |
|-----------------------------|---|-------------|-------------|------------------------------|--------------------------------|
| 4.14                        | Supply and install hot-dipped galvanized angle bar, 100mm x 100mm x 10mm for construction joints including dowel bars | l.m.        | 9           |                              |                                |
| 4.15                        | Supply and deliver to site Rubber Dock Fender (V500H x 1,500L) including accessories                                  | set         | 12          |                              |                                |
| 4.16                        | Install Rubber Dock Fender (V500H x 1,500L) including accessories   | set         | 12          |                              |                                |
| 4.17                        | Supply and deliver to site Mooring Bollard (35-Tons, T-head) including accessories                                    | set         | 6           |                              |                                |
| 4.18                        | Install Mooring Bollard (35-Tons, T-head) including accessories   | set         | 6           |                              |                                |
| <b>TOTAL FOR BILL NO. 4</b> |   |             |             |                              |                                |

## BILL OF QUANTITIES

### Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier Port of San Andres, Catanduanes



| NO.<br>(1)        | DESCRIPTION OF WORK<br>(2)  | UNIT<br>(3) | QTY.<br>(4) | UNIT PRICE<br>(Pesos)<br>(5) | AMOUNT<br>(Pesos)<br>(4) x (5) |
|-------------------|---|-------------|-------------|------------------------------|--------------------------------|
| <b>BILL NO. 5</b> | <b>CONSTRUCTION OF PORT OPERATIONS BUILDING</b>   |             |             |                              |                                |
| 5.01              | Excavation and backfilling works for pile cap, wall footing, duct bank, pedestal post, catch basin, septic vault and concrete pipes | cu.m.       | 222         |                              |                                |
| 5.02              | Supply and deliver to site 450mm x 450mm PSC Piles  | l.m.        | 960         |                              |                                |
| 5.03              | Handle, pitch and drive 450mm x 450mm Vertical PSC Piles  | l.m.        | 960         |                              |                                |
| 5.04              | Splice 450mm x 450mm PSC piles as directed by the Engineer  | no.         | 30          |                              |                                |
| 5.05              | Cut/chip and dispose newly driven PSC Piles up to required elevation  | no.         | 30          |                              |                                |
| 5.06              | Subgrade preparation  | sq.m.       | 1,163       |                              |                                |
| 5.07              | Supply and apply soil treatment   | sq.m.       | 756         |                              |                                |
| 5.08              | Supply, place and compact gravel bedding for building foundation, septic vault, catch basin, duct bank and pedestal                 | cu.m.       | 25          |                              |                                |
| 5.09              | Supply and place lean concrete for pile caps  | cu.m.       | 3           |                              |                                |
| 5.10              | Supply & place 4,000 psi. concrete for pile caps, columns, wall footing, beams, slabs, parapet wall, canopy wall and curtain wall   | cu.m.       | 361         |                              |                                |
| 5.11              | Supply & install steel reinforcement for pile caps, columns, wall footing, beams, slabs, parapet wall, canopy wall and curtain wall | kg.         | 73,192      |                              |                                |
| 5.12              | Supply and place new fill materials for POB   | cu.m.       | 783         |                              |                                |

## BILL OF QUANTITIES

**Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier  
Port of San Andres, Catanduanes**



| NO.<br>(1) | DESCRIPTION OF WORK<br>(2)  | UNIT<br>(3) | QTY.<br>(4) | UNIT PRICE<br>(Pesos)<br>(5) | AMOUNT<br>(Pesos)<br>(4) x (5) |
|------------|---|-------------|-------------|------------------------------|--------------------------------|
| 5.13       | Construct 4,000 psi. concrete slab on grade and ramp including reinforcement                | sq.m.       | 814         |                              |                                |
| 5.14       | Construct 150mm thick CHB wal including reinforcement                                       | sq.m.       | 539         |                              |                                |
| 5.15       | Construct 100mm thick CHB wal including reinforcement                                       | sq.m.       | 284         |                              |                                |
| 5.16       | Supply and place 13mm thick cement Plaster finish (2,500 psi concrete)                      | sq.m.       | 2,497       |                              |                                |
| 5.17       | Supply and apply paint for concrete surfaces (2-coats)                                      | sq.m.       | 2,497       |                              |                                |
| 5.18       | Supply and apply paint for wood and metal surfaces (2-coats)                                | sq.m.       | 52          |                              |                                |
| 5.19       | Supply and apply water proofing for to lets, footbaths, stair wells, roof deck and canopies | sq.m.       | 853         |                              |                                |
| 5.20       | Supply and install Aluminum Composite Panels and accessories (C6)                           | sq.m.       | 297         |                              |                                |
| 5.21       | Supply and install 0.60m x 0.60m Unglazed Ceramic Floor Tiles (F1)                          | sq.m.       | 552         |                              |                                |
| 5.22       | Supply and install 0.60m x 0.60m Non-slip Floor Tiles (F2)                                  | sq.m.       | 101         |                              |                                |
| 5.23       | Supply and place Non-skid / Rough Cement Floor Finish (F3)                                  | sq.m.       | 105         |                              |                                |
| 5.24       | Supply and place Tact Tile Finish   | sq.m.       | 18          |                              |                                |
| 5.25       | Supply and Install 0.30m x 0.60m Glazed Ceramic Wall Tiles                                  | sq.m.       | 185         |                              |                                |
| 5.26       | Supply and install Granite countertop   | sq.m.       | 12          |                              |                                |
| 5.27       | Supply and install 50mm x 10mm thk. Stair Nosing (Rigid Type)                               | l.m.        | 82          |                              |                                |



# **BILL OF QUANTITIES**

**Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier**  
**Port of San Andres, Catanduanes**



| NO.<br>(1) | DESCRIPTION OF WORK<br>(2)   | UNIT<br>(3) | QTY.<br>(4) | UNIT PRICE<br>(Pesos)<br>(5) | AMOUNT<br>(Pesos)<br>(4) x (5) |
|------------|--|-------------|-------------|------------------------------|--------------------------------|
| 5.28       | Supply and install Aluminum Clip-in Perforated Panel including accessories<br>(1.20 x 0.60 x 0.70m) (C1)   | sq.m.       | 416         |                              |                                |
| 5.29       | Supply and install Aluminum Clip-in Perforated Panel including accessories<br>(0.60 x 0.60 x 0.70m) (C2)   | sq.m.       | 151         |                              |                                |
| 5.30       | Supply and install stainless steel hand rails and aluminum materials, buffed finish<br>of various sizes including accessories  | lot         | 1           |                              |                                |
| 5.31       | Supply and install fabricated 1.5 mm thk. Aluminum Framed Doors and<br>Windows including glass and accessories   | lot         | 1           |                              |                                |
| 5.32       | Supply and install fabricated Marine Plywood Flush Doors & PVC doors<br>including door jambs, hinges and locksets  | lot         | 1           |                              |                                |
| 5.33       | Supply, fabricate and install Phenolic anti-bacterial water proof Toilet<br>partition 20mm thk, including stainless hinges, lock indicators, bottom<br>support door knobs and coat hooks | lot         | 1           |                              |                                |
| 5.34       | Supply and install Toilet Fixtures and accessories   | lot         | 1           |                              |                                |
| 5.35       | Supply and install water line pipes and fittings including accessories.  | lot         | 1           |                              |                                |
| 5.36       | Supply and install sewerage pipes and fittings including accessories.  | lot         | 1           |                              |                                |
| 5.37       | Supply and install drainage pipes and fittings including accessories   | lot         | 1           |                              |                                |
| 5.38       | Construct septic vault including fittings and accessories  | no.         | 1           |                              |                                |

# **BILL OF QUANTITIES**

**Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier**  
**Port of San Andres, Catanduanes**



| NO.<br>(1) | DESCRIPTION OF WORK<br>(2)  | UNIT<br>(3) | QTY.<br>(4) | UNIT PRICE<br>(Pesos)<br>(5) | AMOUNT<br>(Pesos)<br>(4) x (5) |
|------------|---|-------------|-------------|------------------------------|--------------------------------|
| 5.39       | Construct catch basin including accessories   | no.         | 12          |                              |                                |
| 5.40       | Supply, deliver and install wires and cables of various sizes   | lot         | 1           |                              |                                |
| 5.41       | Supply, deliver and install conduit pipe including fittings of various sizes  | lot         | 1           |                              |                                |
| 5.42       | Supply, deliver and install wiring devices  | lot         | 1           |                              |                                |
| 5.43       | Supply, deliver and install protective devices  | lot         | 1           |                              |                                |
| 5.44       | Supply, deliver and install lighting fixtures   | lot         | 1           |                              |                                |
| 5.45       | Supply, deliver and install lightning protection and accessories  | lot         | 1           |                              |                                |
| 5.46       | Supply, deliver and install auxiliary system:<br>a) Closed Circuit Television (CCTV);<br>b) Community Antenna Television (CATV)<br>c) Background Music / Paging Alarm (BGMPA)<br>d) Fire Detection Alarm System (FDAS)<br>e) Telephone System | lot         | 1           |                              |                                |
| 5.47       | Supply, deliver and install airconditioning unit  | lot         | 1           |                              |                                |
| 5.48       | Supply, deliver and install distribution transformer and its accessories  | lot         | 1           |                              |                                |
| 5.49       | Supply, deliver and install generator set and its accessories   | lot         | 1           |                              |                                |
| 5.50       | Construct Pumphouse including apurtenances  | lot         | 1           |                              |                                |
| 5.51       | Supply, spread and compact gravel base course   | cu.m.       | 81          |                              |                                |

# **BILL OF QUANTITIES**

**Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier**  
**Port of San Andres, Catanduanes**



| NO.<br>(1)                  | DESCRIPTION OF WORK<br>(2)   | UNIT<br>(3) | QTY.<br>(4) | UNIT PRICE<br>(Pesos)<br>(5) | AMOUNT<br>(Pesos)<br>(4) x (5) |
|-----------------------------|--|-------------|-------------|------------------------------|--------------------------------|
| 5.52                        | Construct portland cement concrete pavement (300mm thk.) including reinforcement and asphalt sealant | sq.m.       | 407         |                              |                                |
| 5.53                        | Construct Reinforced Concrete Ductbank, Hand hole & Pedestal Post                                    | lot         | 1           |                              |                                |
| 5.54                        | Supply, deliver and install Gang-chairs and accessories  | lot         | 1           |                              |                                |
| 5.55                        | Supply, deliver and install Cut-Out Signage and logo   | lot         | 1           |                              |                                |
| <b>TOTAL FOR BILL NO. 5</b> |  |             |             |                              |                                |

# **BILL OF QUANTITIES**

**Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier**  
**Port of San Andres, Catanduanes**



| NO.<br>(1)                  | DESCRIPTION OF WORK<br>(2)   | UNIT<br>(3) | QTY.<br>(4) | UNIT PRICE<br>(Pesos)<br>(5) | AMOUNT<br>(Pesos)<br>(4) x (5) |
|-----------------------------|--|-------------|-------------|------------------------------|--------------------------------|
| <b>BILL NO. 6</b>           | <b>REIMBURSABLE ITEMS</b>  |             |             |                              |                                |
| 6.01                        | Provide reimbursable items necessary in the implementation of the project as determined by the Authority | lot         | 1           | 2,605,711.03                 | 2,605,711.03                   |
| <b>TOTAL FOR BILL NO. 6</b> |  |             |             |                              | <b>2,605,711.03</b>            |

## **BASIS OF PAYMENT FOR WORK ITEMS INCLUDED IN THE PROPOSAL**

The work items included in the proposal and the basis of payments are as follows:

### **BILL NO. 1**

#### **GENERAL EXPENSES**

**Item 1.01      Mobilization, demobilization and cleaning**

The quantity to be paid for shall be the minimum equipment requirement enumerated in the bid documents mobilized, demobilized and cleaning of the site and accepted by the Engineer. The contract lump sum price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to mobilize and demobilize all the minimum equipment requirement enumerated in the bid documents including cleaning of the site. Fifty percent (50%) of the total amount shall be payable after the mobilization activity while the remaining (50%) payable after demobilization and cleaning.

**Item 1.02      Rental of temporary site office and residence for the Engineer and staff**

The quantity to be paid for shall be the actual rental for temporary site office and residence for the engineer and staff and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary for the provision of temporary site office and residence for the engineer and staff at least 48.00 m<sup>2</sup>

**Item 1.03      Maintain temporary site office and residence for the Engineer and staff**

The quantity to be paid for shall be the actual services rendered in maintaining the site office and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the maintenance of the temporary site office and residence as well as other expenses such as provision for electric power, telephone bill, potable water supply, janitorial and security services.

**Item 1.04      Provide construction safety and Health Program in the execution of the project**

The quantity to be paid for shall be the actual implementation of construction safety and health program and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the implementation of the Construction Safety and Health Program, as required and approved by the Department of Labor and Employment (DOLE).

## **BILL NO. 2**

### **DEMOLITION AND REMOVAL WORKS**

**Item 2.01      Demolish and dispose existing concrete pavement prior to the construction of Port Operations Building**

The quantity to be paid for shall be the actual area in square meter of existing concrete pavement, demolished and disposed prior to the construction of Port Operations Building in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 2.02      Scrape existing gravel base materials prior to the construction of Port Operations Building**

The quantity to be paid for shall be the actual volume in cubic meter of existing gravel base materials, scraped prior to the construction of Port Operations Building in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 2.03      Demolish and dispose existing building/structure**

The quantity to be paid for shall be the actual area in square meter of existing building/structure, demolished and disposed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 2.04      Demolish and dispose existing structure (RoRo ramp) for build up**

The quantity to be paid for shall be the actual area in square meter of existing structure (RoRo ramp) for build-up, demolished and disposed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 2.05      Chip-off portion of existing R.C. Curb, flushed to deck level and smoothen with mortar**

The quantity to be paid for shall be the actual length in linear meter of portion of existing R.C. Curb to be chipped off, flushed to deck level and smoothened with mortar in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 2.06      Chip-off portion of existing mooring block to be aligned to pier and smoothen with mortar**

The quantity to be paid for shall be the actual volume in cubic meter of portion of existing mooring block to be chipped off, aligned to pier and smoothened with mortar in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 2.07      Remove and turn over to PPA existing mooring bitts, mooring cleats and rubber dock fenders affected by demolition**

The quantity to be paid for shall be the actual number of existing mooring bitts, mooring cleats and rubber dock fenders affected by demolition, removed and turned over to PPA in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**BILL NO. 3**

**RC PLATFORM WITH RORO RAMP ON PILES**

**Item 3.01      Supply and deliver to site steel pipe sheet piles (A252 Grade 2, 500mmØ x 10mm thk.)**

The quantity to be paid for shall be the actual weight in metric tons of steel pipe sheet piles (A252 Grade 2, 500mmØ x 10mm thk.), supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.02      Application of polyurethane external coating and mastic filler for steel pipe sheet piles (Polyurethane: 32-10 @ 1,500 microns dry film thickness or equivalent)**

The quantity to be paid for shall be the actual area in square meter of polyurethane external coating (Polyurethane: 32-10 @ 1,500 microns dry film thickness or equivalent), applied on the steel pipe sheet piles in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.03      Supply and install 10mm thk. reinforcing band tip for steel pipe piles**

The quantity to be paid for shall be the actual number of reinforcing band tip (10mm thk.), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.04      Handle, pitch and drive vertical steel pipe piles (500mm Ø x 10mm thk.)**

The quantity to be paid for shall be the actual length in linear meter of steel pipe vertical piles (500mm Ø x 10mm thk.), handled, pitched and driven in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation and accepted by the Engineers. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.05      Handle, pitch and drive steel pipebatter steel pipe piles (500mm Ø x 10mm thk.)**

The quantity to be paid for shall be the actual length in linear meter of steel pipe batter piles (500mm Ø x 10mm thk.), handled, pitched and driven in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation and accepted by the Engineers. The contract unit price shall be full compensation for

furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.06      Splice steel pipe piles as directed by the engineer**

The quantity to be paid for shall be the actual number of steel pipe piles, spliced as directed by the engineer, in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.07      Extract clogged materials from steel pipe piles**

The quantity to be paid for shall be the actual volume in cubic meter of clogged materials from the steel pipe piles, extracted in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.08      Cutting of driven steel pipe piles up to cut-off elevation including turn-over to Authority of excess piles**

The quantity to be paid for shall be the actual number of driven steel pipe piles, cut-off to required elevation including turn-over to Authority of excess piles, in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.09      Supply and install reinforcing steel cage for steel pipe piles**

The quantity to be paid for shall be the actual weight in kilogram of reinforcing steel cage for steel pipe piles, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.10      Supply and place 3,500 psi concrete filler for steel pipe piles**

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete filler for steel pipe piles, supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.11      Supply and install steel reinforcements for superstructure**

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcements, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.



**Item 3.12      Supply and place 3,500 psi concrete for superstructure**

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete, supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.13      Supply and install hot-dipped galvanized angle bar, 100mm x 100mm x 10mm for construction joints including dowel bars**

The quantity to be paid for shall be the actual length in linear meter of hot-dipped galvanized angle bar, 100mm x 100mm x 10mm for construction joints including dowel bars, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.14      Supply and deliver to site rubber dock fender (V-type 500H x 1500L) including accessories**

The quantity to be paid for shall be the actual quantity in set of rubber dock fender (V-type 500H x 1500L) including accessories, supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.15      Install rubber dock fender (V-type 500H x 1500L) including accessories**

The quantity to be paid for shall be the actual quantity in set of rubber dock fender (V-type 500H x 1500L) including accessories, installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.16      Supply and deliver to site mooring bollard (35T, T-head) including accessories**

The quantity to be paid for shall be the actual quantity in set of mooring bollard (35T, T-head) including accessories, supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.17      Install mooring bollard including (35T, T-head) accessories**

The quantity to be paid for shall be the actual quantity in set of mooring bollard (35T, T-head) including accessories, installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

## BILL NO. 4

### RC PIER INCLUDING BUILD-UP OF EXISTING STRUCTURE

**Item 4.01      Chip-off existing concrete piles for build-up up to required elevation, +0.30m**

The quantity to be paid for shall be the actual number of existing concrete piles for build-up, chipped off up to required elevation, +0.30m in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.02      Supply and deliver to site steel pipe sheet piles (A252 Grade 2, 500mmØ x 10mm thk.)**

The quantity to be paid for shall be the actual weight in metric tons of steel pipe sheet piles (A252 Grade 2, 500mmØ x 10mm thk.), supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.03      Application of polyurethane external coating and mastic filler for steel pipe sheet piles (Polyurethane: 32-10 @ 1,500 microns dry film thickness or equivalent)**

The quantity to be paid for shall be the actual area in square meter of polyurethane external coating (Polyurethane: 32-10 @ 1,500 microns dry film thickness or equivalent), applied on the steel pipe sheet piles in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.04      Supply and install 10mm thk. reinforcing band tip for steel pipe piles**

The quantity to be paid for shall be the actual number of reinforcing band tip (9mm thk.), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.05      Handle, pitch and drive vertical steel pipe piles (500mm Ø x 10mm thk.)**

The quantity to be paid for shall be the actual length in linear meter of steel pipe vertical piles (500mm Ø x 10mm thk.), handled, pitched and driven in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation and accepted by the Engineers. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.06      Handle, pitch and drive batter steel pipe piles (500mm Ø x 10mm thk.)**

The quantity to be paid for shall be the actual length in linear meter of steel pipe batter piles (500mm Ø x 10mm thk.), handled, pitched and driven in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation and accepted by the Engineers. The contract unit price shall be full compensation for

furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.07      Splice steel pipe piles as directed by the engineer**

The quantity to be paid for shall be the actual number of steel pipe piles, spliced as directed by the engineer, in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.08      Extract clogged materials from steel pipe piles**

The quantity to be paid for shall be the actual volume in cubic meter of clogged materials from the steel pipe piles, extracted in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.09      Cutting of driven steel pipe piles up to cut-off elevation including turn-over to Authority of excess piles**

The quantity to be paid for shall be the actual number of driven steel pipe piles, cut-off to required elevation including turn-over to Authority of excess piles, in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.10      Supply and install reinforcing steel cage for steel pipe piles**

The quantity to be paid for shall be the actual weight in kilogram of reinforcing steel cage for steel pipe piles, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.11      Supply and place 3,500 psi concrete filler for steel pipe piles**

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete filler for steel pipe piles, supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.12      Supply and install steel reinforcements for superstructure**

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcements, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.13      Supply and place 3,500 psi concrete for superstructure**

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete, supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.14      Supply and install hot-dipped galvanized angle bar, 100mm x 100mm x 10mm for construction joints including dowel bars**

The quantity to be paid for shall be the actual length in linear meter of hot-dipped galvanized angle bar 100mm x 100mm x 10mm for construction joints including dowel bars, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.15      Supply and deliver to site rubber dock fender (V-type 500H x 1500L) including accessories**

The quantity to be paid for shall be the actual quantity in set of rubber dock fender (V-type 500H x 1500L) including accessories, supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.16      Install rubber dock fender (V-type 500H x 1500L) including accessories**

The quantity to be paid for shall be the actual quantity in set of rubber dock fender (V-type 500H x 1500L) including accessories, installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.17      Supply and deliver to site mooring bollard (35T, T-head) including accessories**

The quantity to be paid for shall be the actual quantity in set of mooring bollard (35T, T-head) including accessories, supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 4.18      Install mooring bollard including (35T, T-head) accessories**

The quantity to be paid for shall be the actual quantity in set of mooring bollard (35T, T-head) including accessories, installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**BILL NO. 5**

**PORT OPERATIONS BUILDING**

**Item 5.01      Excavation and backfilling works for pile cap, wall footing, duct bank, pedestal post, catch basin, septic vault and concrete pipes**

The quantity to be paid for shall be the actual volume in cubic meter of existing materials to be excavated and backfilled for pile cap, wall footing, duct bank, pedestal post, catch basin, septic vault and concrete pipes in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.02      Supply and deliver to site 450mm x 450mm PSC piles**

The quantity to be paid for shall be the actual length in linear meter of PSC piles (450mm x 450mm), supplied and delivered to site in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.03      Handle, pitch and drive 450mm x 450mm PSC vertical piles**

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mm PSC vertical piles, handled, pitched and driven in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation and accepted by the Engineers. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.04      Splice 450mm x 450mm PSC piles as directed by the Engineer**

The quantity to be paid for shall be the actual number of 450mm x 450mm PSC piles, spliced as directed by the Engineer in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation and accepted by the Engineers. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.05      Chip/cut and dispose portion of newly driven PSC piles up to required elevation**

The quantity to be paid for shall be the actual number of portion of newly driven PSC piles to be chipped/cut off up to required elevation and disposed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.06      Subgrade preparation**

The quantity to be paid for shall be the actual area in square meter of subgrade preparation in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.07      Supply and apply soil treatment**

The quantity to be paid for shall be the actual area in square meter of soil treatment, supplied and applied in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.08      Supply, place and compact gravel bedding for building foundation, septic vault, catch basin, duct bank and pedestal post**

The quantity to be paid for shall be the actual volume in cubic meter of gravel bedding for building foundation, septic vault, catch basin, duct bank and pedestal post to be supplied, set-in-place and compacted in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.09      Supply and place lean concrete for pile caps**

The quantity to be paid for shall be the actual volume in cubic meter of lean concrete to be supplied and set-in-place for pile caps in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.10      Supply and place 4,000 psi concrete for pile caps, columns, wall footing, beams, slabs, parapet wall, canopy wall and curtain wall**

The quantity to be paid for shall be the actual volume in cubic meter of 4,000 psi concrete for pile caps, columns, wall footing, beams, slabs, parapet wall, canopy wall and curtain wall to be supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.11      Supply and install steel reinforcement for pile caps, columns, wall footing, beams, slabs, parapet wall, canopy wall and curtain wall**

The quantity to be paid for shall be the actual weight in kilogram of reinforcing steel bars for pile caps, columns, wall footing, beams, slabs, parapet wall, canopy wall and curtain wall to be supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.12      Supply and place new fill materials for POB**

The quantity to be paid for shall be the actual volume in cubic meter of new fill materials to be supplied and set-in-place for POB in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.13      Construct 4,000 psi. concrete slab on grade and ramp including reinforcement**

The quantity to be paid for shall be the actual area in square meter of 4,000 psi. concrete slab on grade and ramp including reinforcement, constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.14      Construct 150mm thick CHB wall including reinforcement**

The quantity to be paid for shall be the actual area in square meter of 150mm thick CHB wall including reinforcement for PTB and pump house, constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.15      Construct 100mm thick CHB wall including reinforcement**

The quantity to be paid for shall be the actual area in square meter of 100mm thick CHB wall including reinforcement, constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.16      Supply and place 13mm thick cement plaster finish (2,500 psi concrete)**

The quantity to be paid for shall be the actual area in square meter of 13mm thk. cement plaster finish (2,500 psi concrete), supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.17      Supply and apply paint for concrete surfaces (2-coats)**

The quantity to be paid for shall be the actual area in square meter of paint for concrete surfaces (2-coats), supplied and applied in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.18      Supply and apply paint for metal and wood surfaces (2-coats)**

The quantity to be paid for shall be the actual area in square meter of paint (2-coats) for metal and wood surfaces, supplied and applied in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.19      Supply and apply water proofing for toilets, foothbaths, stair wells, roof deck and canopies**

The quantity to be paid for shall be the actual area in square meter of water proofing for toilets, foothbaths, stair wells, roof deck and canopies, supplied and applied in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.20      Supply and Install Aluminum Composite Panels and accessories (C6)**

The quantity to be paid for shall be the actual area in square meter of aluminum composite panels and accessories (C6), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.21      Supply and Install 0.60m x 0.60m Unglazed Ceramic Floor Tiles (F1)**

The quantity to be paid for shall be the actual area in square meter of unglazed ceramic floor tiles (0.60m x 0.60m), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.22      Supply and Install 0.60m x 0.60m Non-Slip Floor Tiles (F2)**

The quantity to be paid for shall be the actual area in square meter of non-slip floor tiles (0.60m x 0.60m), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.23      Supply and place Non-Skid / Rough Cement Floor Finish (F3)**

The quantity to be paid for shall be the actual area in square meter of non-skid / rough cement floor finish, supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.24      Supply and Install Tack Tile Finish**

The quantity to be paid for shall be the actual area in square meter of Tack Tile Finish, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.25      Supply and Install 0.30m x 0.60m Glazed Ceramic Wall Tiles**

The quantity to be paid for shall be the actual area in square meter of glazed ceramic wall tiles (0.30m x 0.60m), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.26      Supply and Install Granite countertop**

The quantity to be paid for shall be the actual area in square meter of granite countertop, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.



- Item 5.27      Supply and install 50mm x 10mm thk. Stair Nosing (Rigid Type)**
- The quantity to be paid for shall be the actual length in linear meter of stair nosing (50mm x 10mm thk.), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.
- Item 5.28      Supply and install Aluminum Clip-In Perforated Panel including accessories (1.20 x 0.60 x 0.70m) (C1)**
- The quantity to be paid for shall be the actual area in square meter of aluminum clip-in perforated panel including accessories (1.20 x 0.60 x 0.70m), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.
- Item 5.29      Supply and install Aluminum Clip-In Perforated Panel including accessories (0.60 x 0.60 x 0.70m) (C2)**
- The quantity to be paid for shall be the actual area in square meter of aluminum clip-in perforated panel including accessories (0.60 x 0.60 x 0.70m), supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.
- Item 5.30      Supply and install stainless steel hand rails and aluminum materials, buffed finish of various sizes including accessories**
- The quantity to be paid for shall be the actual quantity in lot of stainless steel hand rails and aluminum materials, buffed finish of various sizes including accessories, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.
- Item 5.31      Supply and install fabricated 1.5mm thk. Aluminum Framed Doors and Windows including glass and accessories**
- The quantity to be paid for shall be the actual quantity in lot of fabricated 1.5mm thk. Aluminum Framed Doors and Windows including glass and accessories, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.
- Item 5.32      Supply and install fabricated Marine Plywood Finish Flush Doors and PVC doors including door jambs, hinges and locksets**
- The quantity to be paid for shall be the actual quantity in lot of fabricated marine plywood flush doors and PVC doors including door jambs, hinges and locksets, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.33      Supply, fabricate and install Phenolic anti-bacterial water proof Toilet partition 20mm thk., including stainless hinges, lock indicators, bottom support door knobs and coat hooks**

The quantity to be paid for shall be the actual quantity in lot of phenolic anti-bacterial water proof toilet partition 20mm thk. including stainless hinges, lock indicators, bottom support door knobs and coat hooks to be supplied, fabricated and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.34      Supply and install Toilet Fixtures and accessories**

The quantity to be paid for shall be the actual quantity in lot of toilet fixtures and accessories, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.35      Supply and install water line pipes and fittings Including accessories**

The quantity to be paid for shall be the actual quantity in lot of water line pipes and fittings including accessories, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.36      Supply and install sewerage pipes and fittings including accessories**

The quantity to be paid for shall be the actual quantity in lot of sewerage pipes and fittings including accessories, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.37      Supply and install drainage pipes and fittings Including and accessories**

The quantity to be paid for shall be the actual quantity of drainage pipes and fittings including accessories, supplied and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.38      Construct septic vault including fittings and accessories**

The quantity to be paid for shall be the actual number of unit of septic vault including fittings and accessories, constructed in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.39      Construct catch basin including accessories**

The quantity to be paid for shall be the actual number of catch basin including accessories, constructed in accordance with the plans and specifications, measured from the tip of piles to cut-off elevation and accepted by the Engineer. The contract

unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work

**Item 5.40      Supply, deliver and install wires and cables of various sizes**

The quantity to be paid for shall be the actual quantity in lot of wires and cables of various sizes to be supplied, delivered and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.41      Supply, deliver and install conduit pipe including fittings of various sizes**

The quantity to be paid for shall be the actual quantity in lot of conduit pipe including fittings of various sizes to be supplied, delivered and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.42      Supply, deliver and install wiring devices**

The quantity to be paid for shall be the actual quantity in lot of wiring devices to be supplied, delivered and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.43      Supply, deliver and install protective devices**

The quantity to be paid for shall be the actual quantity in lot of protective devices to be supplied, delivered and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.44      Supply, deliver and install lighting fixtures**

The quantity to be paid for shall be the actual quantity in lot of lighting fixtures to be supplied, delivered and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.45      Supply, deliver and install lightning protection and accessories**

The quantity to be paid for shall be the actual quantity in lot of lightning protection and accessories to be supplied, delivered and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.46      Supply, deliver and install auxiliary system:**

- a) Closed Circuit Television (CCTV)**
- b) Community Antenna Television (CATV)**
- c) Background Music / Paging Alarm (BGM/PA)**
- d) Fire Detection Alarm System (FDAS)**
- e) Telephone System**

The quantity to be paid for shall be the actual quantity in lot of auxiliary system to be supplied, delivered and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.47      Supply, deliver and install air conditioning system**

The quantity to be paid for shall be the actual quantity in lot of air conditioning system to be supplied, delivered and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.48      Supply, deliver and install distribution transformer and its accessories**

The quantity to be paid for shall be the actual quantity of distribution transformer and its accessories to be supplied, delivered and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.49      Supply, deliver and install generator set and its accessories**

The quantity to be paid for shall be the actual quantity of generator set and its accessories to be supplied, delivered and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.50      Construct Pump house including appurtenances**

The quantity to be paid for shall be the actual quantity in lot of Pump house including appurtenances, constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.51      Supply, spread and compact gravel base course**

The quantity to be paid for shall be the actual volume in cubic meter of gravel base course to be supplied, spread and compacted in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.52      Construct portland cement concrete pavement (300mm thk.) including reinforcement and asphalt sealant**

The quantity to be paid for shall be the actual area in square meter of portland cement concrete pavement (300mm thk.) including reinforcement and asphalt sealant, constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.53      Construct Reinforced Concrete Duct bank, hand hole and pedestal post**

The quantity to be paid for shall be the actual quantity of reinforced concrete duct bank, hand hole and pedestal post, constructed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.54      Supply, deliver and install Gang-chairs and accessories**

The quantity to be paid for shall be the actual quantity in lot of Gang-chairs and accessories to be supplied, delivered and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 5.55      Supply, deliver and install cut-out signage and Logo**

The quantity to be paid for shall be the actual quantity in lot of cut-out signage and Logo to be supplied, delivered and installed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**BILL NO. 6**

**REIMBURSABLE ITEMS**

**Item 6.01      Provide reimbursable items necessary in the implementation of the project as determined by the Authority.**

The quantity to be paid for shall be the actual quantity of determined items by the Authority deemed necessary in the implementation of the project, supplied, delivered and accepted by the Authority. Payment for said items shall be made only upon complete delivery/acceptance of such. The contract lump sum price shall be full compensation for providing all determined items. The Contractor's Profit and Overhead, Contingencies and Miscellaneous (OCM) should not be included in the cost of said items. The amount of bid should be fixed as indicated in the amount stated in the Bid Data Sheet [ITB Clause 13.1(a)] and as provided in the Bill of Quantities (BOQ). Claims for payment shall be supported by Official Receipt(s) (OR) and at least three (3) canvasses. The amount to be paid for shall be the price indicated in the OR but should not exceed the contract lump sum price. The determined items shall be the property of PPA. Operation and maintenance shall be borne by PPA.

## **FACILITIES TO BE PROVIDED FOR THE ENGINEER & HIS STAFF**

### **TEMPORARY FACILITIES OF THE CONTRACTOR**

The Contractor shall provide and maintain such temporary offices, stores, workshops, latrines, housing and messing accommodations as are necessary. The location, dimension and layout of such buildings and places shall be subject to the approval in writing of the Engineer. By the end of the contract, the Contractor shall remove all buildings and the area shall be cleared and graded as required by the Engineer.

### **SITE OFFICE AND RESIDENCE FOR THE ENGINEER & STAFF**

The Contractor shall provide and maintain a temporary site office and residence with an area of at least 48 square meters for use of the Engineer and staff, including all the necessary electricity, water, communication services and consumables.

**MINIMUM EQUIPMENT REQUIREMENTS**

|   |       |   |
|---|-------|---|
| 1 | unit  | Crane Barge (319 GW, minimum) with 60T crane, owned |
| 1 | unit  | Crawler Crane (30T, minimum), owned                 |
| 1 | unit  | Pile Hammer (Diesel, 7,500 kg.m.), owned            |
| 1 | unit  | Drop Hammer (2T, minimum), owned                    |
| 1 | unit  | Concrete Cutter, owned                              |
| 1 | unit  | Concrete Bucket, owned                              |
| 1 | unit  | Concrete Mixer (1-bagger, minimum), owned           |
| 2 | units | Concrete Vibrator (3.5 hp, minimum), owned          |
| 1 | unit  | Bar Cutter (electric, 25mm dia min.), owned         |
| 1 | unit  | Bar Bender (electric, 25mm dia min.), owned         |
| 1 | unit  | Dump Truck (8 cu.m., minimum), owned                |
| 1 | unit  | Water Truck with pump (1,000 gal., minimum), owned  |
| 1 | unit  | Jack Hammer, owned                                  |
| 1 | unit  | Air-Compressor (250 cfm, minimum), owned            |
| 1 | unit  | Plate Compactor (5hp, minimum), owned               |
| 2 | units | Welding Machine (400 amp., minimum), owned          |
| 2 | units | Oxy/Acetylene Cutting Outfit, owned                 |
| 2 | units | Centrifugal Trash Pump, owned                       |
| 1 | unit  | Tugboat (500hp, minimum), owned/leased              |
| 1 | unit  | Road Roller (10T, vibratory, minimum), owned/leased |
| 1 | unit  | Road Grader (125 hp, minimum), owned/leased         |
| 1 | unit  | Payloader (80 hp, minimum), owned                   |
| 1 | unit  | Backhoe (0.40 cu.m., 94.30 hp, minimum), owned      |
| 1 | unit  | Concrete Screeder, owned                            |
| 2 | units | Transit Mixer (5-6 cu.m. cap., minimum), owned      |
| 1 | unit  | Cargo Truck (5T, minimum), owned                    |
| 1 | unit  | Diesel Hammer (13,500 kg.m.), owned                 |

## **CONSTRUCTION SAFETY AND HEALTH REQUIREMEN**

The Contractor shall implement the construction safety and health program in accordance with the applicable provisions of the Occupational Safety and Health Standards (OSHS) of the Department of Labor and Employment (DOLE).

The Contractor, subject to the approval of the Engineer shall provide and maintain throughout the duration of the contract a medical room with at least 15 square meters together with all necessary supplies to be sited in the Contractor's main area.

The Contractor shall provide the following minimum requirements:

### **LABOR**

- |   |     |                           |
|---|-----|---------------------------|
| 1 | no. | Safety Engineer / Officer |
| 1 | no. | Nurse / Health Officer    |

### **EQUIPMENT / MATERIALS**

#### **Personnel Protective Equipment**

- |    |      |              |
|----|------|--------------|
| 73 | pcs. | Hard Hats    |
| 73 | pcs. | Gloves       |
| 7  | pcs. | Goggles      |
| 8  | pcs. | Aprons       |
| 2  | pcs. | Safety Belts |
| 73 | pcs. | Safety Shoes |
| 2  | pcs. | Life Lines   |

#### **Safety Devices**

- |   |       |                   |
|---|-------|-------------------|
| 1 | lot   | Baricades         |
| 1 | lot   | Warning signs     |
| 2 | units | Fire extinguisher |

Medical and First Aid System                      -                      For sixteen (16) mos.

### **NOTE:**

The Contractor shall provide the above-cited minimum construction safety and health requirements or as required by the Engineer.



PPA MEMORANDUM CIRCULAR  
No. 02  
Series of 2018  
Attachment

Page 1 of 10

### REVISED SCHEDULE OF MINIMUM TEST REQUIREMENTS OF CONSTRUCTION MATERIALS FOR PPA INFRASTRUCTURE PROJECTS

| <b>Materials/Items of Work</b>                          | <b>Required Tests</b>  | <b>Minimum Incremental Frequency of Tests</b>   |
|---|--|---|
| <b>I. Construction of Pier/Wharf, Platform and Ramp</b> |  |   |
| <b>Structural Concrete (SC)</b>                         |  |   |
| A Portland Cement                                       | Quality Test   | For every 2,000 bags (40kg) or fraction thereof   |
| B Fine Aggregate  | Quality Test for Grading, Elutriation (wash), Bulk Specific Gravity, Absorption, Mortar Strength, Soundness, Organic Impurities, Unit Weight, % Clay Lumps and Shale | For every 1,500 cubic meter or fraction thereof   |
| C Coarse Aggregate                                      | Quality Test for Grading, Bulk Specific Gravity, Absorption and Abrasion   | For every 1,500 cubic meter or fraction thereof   |
| D Water   | Certificate from the Engineer or Quality Test for Density and Chloride Content   | One per source  |
| E Steel Bars  | Mill Certificate and Quality Test for Chemical Composition and Mechanical Properties   | For every 10,000 kg or fraction thereof   |
| F Concrete  | Compressive Strength on cylinder samples   | 1 set consisting of 3 concrete cylinder samples shall be taken from each day's pouring and to represent not more than 75 cu m of concrete or fraction thereof |
|   | Slump Test   | For every mix   |
| G Admixture and Concrete Curing Materials               | Quality Test   | One per shipment  |
| <b>Piling (P)</b>                                       |  |   |
| A Concrete Piles  | Fabrication Report   | One per fabrication   |
| 1 Concrete  | Same test as for SC (F)  | Same frequency as SC (F)  |
| 2 Steel Bars  | Same test as for SC (E)  | Same frequency as SC (E)  |
| 3 High Tension Strand                                   | Test for Chemical Composition and Mechanical Properties  | For every 20000kg or fraction thereof   |

PPA MEMORANDUM CIRCULAR  
No. 02  
Series of 2016  
Attachment

Page 2 of 10

| Materials/Items of Work             | Required Tests  | Minimum Incremental Frequency of Tests   |
|-------------------------------------|---|--|
| 4 Coarse Aggregates                 | Same Test as for SC (C)   | Same frequency as SC (C)   |
| 5 Fine Aggregates                   | Same Test as for SC (B)   | Same frequency as SC (B)   |
| B Steel Pipe Piles                  | Fabrication Report, Mill Certificate and Quality Test for Chemical and Mechanical properties  | One per fabrication  |
| 1 Steel                             | Chemical Composition (refer below) <ul style="list-style-type: none"> <li>- Under 14" (355 60mm) Outside Diameter</li> <li>- 14" to 36" (355 6 to 914mm) Outside Dia</li> <li>- Over 36" (914mm) Outside Diameter</li> </ul> Mechanical/Tensile | 2 from 200 pipe or fraction thereof<br>2 from 100 pipe or fraction thereof<br>2 from 3000ft (914m) or fraction thereof<br>One (1) tension test shall be made on one length or fraction thereof of each size, or one piece of skelp representing each lot of 200 lengths or fraction thereof of each size |
| 2 Polyurethane Coating              | Mill Certificate and Quality Test   | One per fabrication  |
| 3 Concrete                          | Same test as for SC (F)   | Same frequency as SC (F)   |
| 4 Fine Aggregate                    | Same test as for SC (B)   | Same frequency as SC (B)   |
| 5 Coarse Aggregate                  | Same test as for SC (C)   | Same frequency as SC (C)   |
| 6 Steel Bars                        | Same Test as SC (E)   | Same frequency as SC (E)   |
| 7 Water                             | Same Test as SC (D)   | Same frequency as SC (D)   |
| Rubber Dock Fenders (RDF)           | Physical Test<br>Performance Test for Energy Absorption and Reaction Force  | All units<br>All units   |
| Accessories                         |   |  |
| Washer and Fixing Bolt, Anchor Bolt | Physical Test<br>Quality Test for Chemical Composition and Mechanical Properties  | All units<br>One per fabrication   |

PPA MEMORANDUM CIRCULAR  
No. 02  
Series of 2016  
Attachment

Page 3 of 10

| <b>Materials/Items of Work</b>   | <b>Required Tests</b>  | <b>Minimum Incremental Frequency of Tests</b> |
|--|--|---|
| Mooring Bollard (MB) and Accessories (Hexagon Nuts, Plain Washer, Anchor Ring and Anchor Bolt) | Physical Test<br><br>Quality Test for Chemical Composition and Mechanical Properties | All Units<br><br>One per fabrication          |
| <b>II. Construction of Back-Up Area, Causeway and Pavement</b>                                 |  |   |
| Sheet Piling (SP)  |  |   |
| A Concrete Sheet Piles   |  |   |
| 1 Concrete   | Same test as for SC (F)  | Same frequency as SC (F)                      |
| 2 Steel Bars   | Same test as for SC (E)  | Same frequency as SC (E)                      |
| 3 High Tension Strands   | Same test as for P (A 3)   | Same frequency as P (A 3)                     |
| 4 Fine Aggregates  | Same test as for SC (B)  | Same frequency as SC (B)                      |
| 5 Coarse Aggregates  | Same Test as for SC (C)  | Same frequency as SC (C)                      |
| B Steel Pipe Piles   |  |   |
| 1 Steel  | Same test as for P (B1)  | Same frequency as P (B1)                      |
| 2 Concrete   | Same test as for SC (F)  | Same frequency as SC (F)                      |
| 3 Fine Aggregate   | Same test as for SC (B)  | Same frequency as SC (B)                      |
| 4 Steel Bars   | Same test as for SC (E)  | Same frequency as SC (E)                      |

PPA MEMORANDUM CIRCULAR  
No. 02  
Series of 2016  
Attachment

Page 4 of 10

| <b>Materials/Items of Work</b>           | <b>Required Tests</b>   | <b>Minimum Incremental Frequency of Tests</b>   |
|--|---|---|
| Rocks                                    | Test for Apparent Specific Gravity and Abrasion   | For every 1,500 cubic meter or fraction thereof   |
| Geotextile Filter                        | Physical and Mechanical Test<br>Mill Certificate  | One per batch<br>One per batch  |
| Sand and Gravel Fill                     | Quality Test for Organic Impurities and Grading   | For every 1,500 cubic meter or fraction thereof   |
| Selected Fill                            | Quality Test for Grading, Plasticity and Laboratory Compaction Test<br><br>Laboratory California Bearing Ratio (CBR)<br><br>Field Density Test  | For every 1,500 cubic meter or fraction thereof<br><br>For every 2,500 cubic meter or fraction thereof<br><br>For every layer of 150mm of compacted depth at least one group of three In-situ density test for every 500 sq m or fraction thereof |
| Aggregate Base Course                    | Quality Test for Grading and Plasticity<br><br>Quality Test for Grading, Plasticity, Abrasion and Laboratory Compaction Test<br><br>Laboratory California Bearing Ratio (CBR)<br><br>Field Density Test | For every 300 cubic meter or fraction thereof<br><br>For every 1,500 cubic meter or fraction thereof<br><br>Same frequency as Selected Fill<br>Same frequency as Selected Fill  |
| Portland Cement Concrete Pavement (PCCP) |   |   |
| A Portland Cement                        | Same test as for SC (A)   | Same frequency as SC (A)  |
| B Fine Aggregate                         | Same test as for SC (B)   | Same frequency as SC (B)  |
| C Coarse Aggregate                       | Same test as for SC (C)   | Same frequency as SC (C)  |
| D Water                                  | Same test as for SC (D)   | Same frequency as SC (D)  |
| E Steel Bars (Dowels)                    | Same test as for SC (E)   | Same frequency as SC (E)  |
| F Joint Filler                           | Quality Test  | One (1) per shipment  |

PPA MEMORANDUM CIRCULAR  
No. 02  
Series of 2016  
Attachment

Page 5 of 10

| <b>Materials/Items of Work</b>   | <b>Required Tests</b>                            | <b>Minimum Incremental Frequency of Tests</b>   |
|--|--|---|
| G Admixture and Concrete Curing Material   | Same test as for SC (G)                          | Same frequency as SC (G)  |
| H Concrete   | Same test as for SC (F)<br>Flexural Test         | Same frequency as SC (F)<br>3 beam samples for every 330 sq m or fraction thereof   |
| I Completed Pavement   | Core Test  | 1 set (3 specimen) for every 2,500 sq m and fraction thereof  |
| Interlocking Concrete Blocks   |  |   |
| A Cement   | Same test as for SC (A)                          | Same frequency as SC (A)  |
| B Fine Aggregate   | Same test as for SC (B)                          | Same frequency as SC (B)  |
| C Coarse Aggregate   | Same test as for SC (C)                          | Same frequency as SC (C)  |
| D Water  | Same test as for SC (D)                          | Same frequency as SC (D)  |
| E Admixture & Concrete Curing Materials  | Same test as for SC (G)                          | Same frequency as SC (G)  |
| F Completed Blocks   | Physical Test and Compressive Strength           | 6 blocks per day of fabrication   |
| Cement Treated Base Course (CTB)   |  |   |
| A Portland Cement  | Same test as for SC (A)                          | Same frequency as SC (A)  |
| B Fine & Coarse Aggregates   | Quality Test for Grading, Abrasion and Soundness | For every 1,500 cubic meter or fraction thereof   |
| C Water  | Same test as for SC (D)                          | Same frequency as SC (D)  |
| D Completed CTB  | Field Density Test                               | For every layer of 150mm of compacted depth at least one group of three in-situ density test every 500 sq m or fraction thereof |
| Retaining Wall/Coping Wall/RC Curb/RC Drch/Shear Key/Concrete Blocks/Lean Concrete |  |   |
| A Portland Cement  | Same test as for SC (A)                          | Same frequency as SC (A)  |
| B Fine Aggregate   | Same test as for SC (B)                          | Same frequency as SC (B)  |

PPA MEMORANDUM CIRCULAR  
No. 02  
Series of 2016  
Attachment

Page 6 of 10

| <b>Materials/Items of Work</b>        | <b>Required Tests</b>  | <b>Minimum Incremental Frequency of Tests</b>                                   |
|---------------------------------------|--|---|
| C Coarse Aggregates                   | Same test as for SC (C)  | Same frequency as SC (C)  |
| D Water                               | Same test as for SC (D)  | Same frequency as SC (D)  |
| E Steel Bars                          | Same test as for SC (E)  | Same frequency as SC (E)  |
| F Admixture and Concrete Curing       | Same test as for SC (G)  | Same frequency as SC (G)  |
| G Concrete                            | Same test as for SC (F)  | Same frequency as SC (F)  |
| Tie Rod                               |  |   |
| A Steel                               | Same test as for SC (E)  | One per batch   |
| B Assembly                            | Performance Test (Tension)   | One per batch   |
| Tie Bars and Dowels                   | Same test as for SC (E)  | For every 10,000 kg or fraction thereof per Tie bars and Dowels                 |
| Pipe Culverts and Storm Drains        |  |   |
| A Pipes                               | Test for Strength, Absorption and Physical   | For every 50 pieces   |
| B Mortar or Joint                     | Same Test as for SC (A,B and D)<br>Alternative Test Same test as for SC (F) and Inspection Report                                    | For every 25 pieces   |
| Concrete Hollow Blocks                |  |   |
| A Portland Cement                     | Same test as for SC (A)  | Same frequency as SC (A)  |
| B Fine Aggregates                     | Same test as for SC (B)  | Same frequency as SC (B)  |
| C Water                               | Same test as for SC (D)  | Same frequency as SC (C)  |
| D Concrete                            | Same test as for SC (F)  | Same frequency as SC (F)  |
| E Completed CHB                       | Quality Test   | One for every 500 pieces or fraction thereof                                    |
| Construction Joints (CJ)              |  |   |
| A Angle Bars                          | Test for Physical and Mechanical Properties  | One per batch   |
| B Steel Bars                          | Same test as for SC (E)  | One per batch   |
| C Zinc (Hot Dip Galvanizing) Coatings | Physical Test for Appearance, Stripping, Weighing, Adherence and Adhesion<br><br>Coating Thickness<br>Magnetic Thickness Measurement | All units<br><br>1 set (3 specimen) for every 100,000 sq mm or fraction thereof |

PPA MEMORANDUM CIRCULAR  
No. 02  
Series of 2018  
Attachment

Page 7 of 10

| <b>Materials/Items of Work</b> | <b>Required Tests</b>  | <b>Minimum Incremental Frequency of Tests</b>  |
|--------------------------------|--|--|
| <b>Sacked Concrete</b>         |  |  |
| A Cement                       | Same test as for SC (A)  | Same frequency as SC (A)   |
| B Fine Aggregates              | Same test as for SC (B)  | Same frequency as SC (B)   |
| C Coarse Aggregates            | Same test as for SC (C)  | Same frequency as SC (C)   |
| D Water                        | Same test as for SC (D)  | Same frequency as SC (D)   |
| E Concrete                     | Same test as for SC (F)  | Same frequency as SC (F)   |
| F Sack (jute)                  | Physical Test  | One for every 50 pieces  |
| <b>Rubble Concrete</b>         |  |  |
| A Cement                       | Same test as for SC (A)  | Same frequency as SC (A)   |
| B Fine Aggregates              | Same test as for SC (B)  | Same frequency as SC (B)   |
| C Coarse Aggregates            | Same test as for SC (C)  | Same frequency as SC (C)   |
| D Water                        | Same test as for SC (D)  | Same frequency as SC (D)   |
| E Concrete                     | Same test as for SC (F)  | Same frequency as SC (F)   |
| F Rocks                        | Same test as for ROCKS   | Same frequency as ROCKS  |
| <b>Earthworks</b>              |  |  |
| A Sub-grade preparation        | Grading Test<br>Plasticity Test (LL, PL, PI)<br>Laboratory Compaction Test<br><br>Density Test   | For every 1,500 cubic meter or fraction thereof<br><br>For every layer of 150mm of compacted depth at least one group of three in-situ density test every 500 sq m or fraction thereof |
| B Structure Excavation         | If excavated materials shall be used as Backfill<br>Grading Test<br>Plasticity Test (LL, PL, PI)<br>Laboratory Compaction Test<br><br>Density Test | For every 1,500 cubic meter or fraction thereof<br><br>For every layer of 150mm of compacted depth at least one group of three in-situ density test every 500 sq m or fraction thereof |

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PPA MEMORANDUM CIRCULAR  
No. 02  
Series of 2016  
Attachment

Page 8 of 10

| <b>Materials/Items of Work</b>  | <b>Required Tests</b>   | <b>Minimum Incremental Frequency of Tests</b>      |
|---|---|--|
| <b>III Port Operations Building/Passenger Terminal Building/Transit Shed/Warehouse</b>                        |   |  |
| <b>STRUCTURAL WORKS</b>   |   |  |
| Refer to Structural Concrete (SC) and Piling Works (P)  |   |  |
| <b>ARCHITECTURAL WORKS</b>  |   |  |
| Ceramic – Filled Liquid Membrane / Water Proofing, Hydrophobic Poreblocking Ingredients with Superplasticizer | Physical Property, Mechanical and Chemical Property, Leak Test / Flood Test     | One per shipment                                   |
| Paint   | Quality Test  | One 4-L can for every 100 cans or fraction thereof |
| Ceramic Tile  | Inspection and Evaluation Report from the Engineer                              | One per shipment                                   |
| Stainless Steel   | Inspection and Evaluation Report from the Engineer                              | One per shipment                                   |
| Roofing Materials   | Inspection and Evaluation Report from the Engineer                              | One per shipment                                   |
| Ceiling Materials   | Inspection and Evaluation Report from the Engineer                              | One per shipment                                   |
| <b>ELECTRICAL AND MECHANICAL WORKS</b>  |   |  |
| Wires / Cables  | Inspection and Evaluation Report from the Engineer<br>Testing and Commissioning | One per shipment                                   |
| Electrical Devices  | Inspection and Evaluation Report from the Engineer<br>Testing and Commissioning | One per shipment                                   |
| Fire Alarm System   | Inspection and Evaluation Report from the Engineer<br>Testing and Commissioning | One per item                                       |
| Warning Devices   | Inspection and Evaluation Report from the Engineer<br>Testing and Commissioning | One per shipment                                   |



PPA MEMORANDUM CIRCULAR  
No. 02  
Series of 2016  
Attachment

Page 9 of 10

| Materials/Items of Work              | Required Tests  | Minimum Incremental Frequency of Tests |
|--------------------------------------|---|--|
| Protective Devices                   | Inspection and Evaluation Report from the Engineer<br><br>Testing and Commissioning | One per shipment                       |
| Telephone System                     | Inspection and Evaluation Report from the Engineer<br><br>Testing and Commissioning | One per item                           |
| CCTV System                          | Inspection and Evaluation Report from the Engineer<br><br>Testing and Commissioning | One per item                           |
| CATV System                          | Inspection and Evaluation Report from the Engineer<br><br>Testing and Commissioning | One per item                           |
| Background Music and Paging System   | Inspection and Evaluation Report from the Engineer, Testing and Commissioning       | One per item                           |
| Air Conditioning Units & Ventilation | Inspection and Evaluation Report from the Engineer<br><br>Testing and Commissioning | One per item                           |
| Conduit Pipes                        | Inspection and Evaluation Report from the Engineer<br><br>Testing and Commissioning | One per item                           |
| Lighting Fixtures                    | Inspection and Evaluation Report from the Engineer<br><br>Testing and Commissioning | One per item                           |
| <b>PLUMBING WORKS</b>                |   |  |
| Pipes                                | Inspection and Evaluation Report from the Engineer<br><br>Testing and Commissioning | One per item                           |


PPA MEMORANDUM CIRCULAR  
No. 02  
Series of 2016  
Attachment

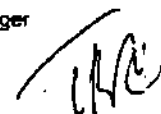
Page 10 of 10

| Materials/Items of Work   | Required Tests   | Minimum Incremental Frequency of Tests                  |
|---|--|---|
| Fixtures  | Inspection and Evaluation Report from the Engineer<br><br>Testing and Commissioning  | One per item  |
| Pipe Culverts   | Compression Strength<br><br>Inspection and Evaluation Report from the Engineer       | For every size not more than 25 pipes cast in the field |
| <b>IV Miscellaneous Materials</b><br>Fencing<br>A Barbed Wire, Cyclone Wire Mesh, Chain Link<br>B Concrete Post | Physical Test (Dimensions and Coatings)<br><br>Refer to Superstructure (SC)          | One per Batch<br><br>Refer to Superstructure (SC)       |
| Lamp Post<br>A Structural Steel<br>B Zinc (Hot Dip Galvanizing) Coatings  | Physical Test (Dimensions)<br>Same test as for SC (E)<br><br>Same test as for CJ (C) | All units<br><br>One per batch                          |
| Drainage Steel Grating  | Same test as for SC (E)<br><br>Inspection Report                                     | One (1) batch   |
| Metal Pipe (Cast Iron Galvanized, etc )   | Physical Test (Dimensions and Coatings)  | 1 per delivery  |
| Welding Works   | Destructive and Non Destructive Test   | One (1) per lot   |

- NOTES**
1. Testing of RDF shall be performed only by an independent Testing Laboratory duly accredited by BRS, DOST and PPA
  2. Testing of other materials shall be performed only by an independent Testing Laboratory duly accredited by BRS and PPA.
  3. All other issuances which are otherwise inconsistent herewith are hereby revoked or otherwise amended.

Approved

  
**RAUL T. SANTOS**  
Officer-In-Charge,  
Office of the General Manager



**SECTION IX**  
**BIDDING FORMS**

## Bid Form

Date: \_\_\_\_\_

ITB No: \_\_\_\_\_

**To: Philippine Ports Authority**  
Bonifacio Drive, South Harbor,  
Port Area, Manila

We, the undersigned, declare that:

- (a) We have examined and have no reservation to the Bidding Documents, including Addenda, for the **Contract Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier, Port of San Andres, Catanduanes**;
- (b) We offer to execute the Works for this Contract in accordance with the Bid and Bid Data Sheet, General and Special Conditions of Contract accompanying this Bid;

The total price of our Bid, excluding any discounts offered below is:

| BILL NO | DESCRIPTION                                      | TOTAL AMOUNT |
|---------|--|--------------|
| 1       | General Expenses                                 | P            |
| 2       | Demolition and Removal Works                     |              |
| 3       | RC Platform with RoRo Ramp on Piles              |              |
| 4       | RC Pier including Build-up of Existing Structure |              |
| 5       | Construction of Port Operations Building         |              |
| 6       | Reimbursable Items                               |              |
|         | <b>TOTAL AMOUNT OF BID (including VAT)</b>       | <b>P</b>     |

The discounts offered and the methodology for their application are: insert information;

- (c) Our Bid shall be valid for a period of 120 days from the date fixed for the Bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (d) If our Bid is accepted, we commit to obtain a Performance Security in the amount of insert percentage amount percent of the Contract Price for the due performance of the Contract;

- (e) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from the following eligible countries: *[insert information]*;
- (f) We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- (g) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared ineligible by the Funding Source;
- (h) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- (i) We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.
- (j) We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for the **Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier, Port of San Andres, Catanduanes of the Philippine Ports Authority.**
- (k) We acknowledge that failure to sign each and every page of this Bid Form, including the Bill of Quantities, shall be a ground for the rejection of our bid.

Name: \_\_\_\_\_

In the capacity of: \_\_\_\_\_

Signed: \_\_\_\_\_

Duly authorized to sign the Bid for and on behalf of: \_\_\_\_\_

Date: \_\_\_\_\_

**STATEMENT OF ALL ON-GOING GOVERNMENT AND PRIVATE CONTRACTS,  
INCLUDING CONTRACTS AWARDED BUT NOT YET STARTED, WHETHER SIMILAR OR NOT SIMILAR IN NATURE**

| Name of the Contract or Title Of the Project<br>1]  | Owner's Name and Address | Nature/ Scope of Work<br>2] | Contractor's Role (in percentage)<br>3] | Total Contract Value At |                    |   | Date of Award<br>5] | Value of Outstanding Works | Estimated Time of Completion | % of Accomplishment |        | Contract Duration<br>5] |           |
|---|--------------------------|-----------------------------|---|-------------------------|--------------------|---|---------------------|----------------------------|------------------------------|---------------------|--------|-------------------------|-----------|
|   |                          |                             |   | Award                   | Project Completion | Escalated Value to Present Prices<br>4] |                     |                            |                              | Planned             | Actual | Start                   | Completed |
| A) Government Contracts<br>i. On-going<br>ii. Awarded but not yet started<br>B) Private Contracts<br>i. On-going<br>ii. Awarded but not yet started |                          |                             |   |                         |                    |   |                     |                            |                              |                     |        |                         |           |

**NOTE:**

- 1] As appearing or defined in the contract entered/executed by the parties
- 2] With special reference to the Scope of Works as described/enumerated in the advertised Invitation To Bid.
- 3] Indicate whether as Sole Contractor, Sub-Contractor or Member in a Joint Venture / Consortium
- 4] Indicate the FOREX used if Contract Value is expressed in a currency other than the Philippine Peso. Specify the "Escalation Factor" used to escalate the Contract Value from completion date to the advertisement date of the Invitation to Bid per section 23.11.2 (3) of R.A. 9184.
- 5] State Month and Year.

This Statement shall be supported by:

- a) Notice of Award and/or Contract
- b) Notice to Proceed

\_\_\_\_\_  
Name of Firm/Applicant

\_\_\_\_\_  
Authorized Signing Official

\_\_\_\_\_  
Date

**STATEMENT OF THE BIDDER'S SINGLE LARGEST COMPLETED CONTRACT (SLCC) SIMILAR TO THE CONTRACT TO BE BID**

| Name of the Contract or Title Of the Project | Owner's Name and Address | Nature/Scope of Work | Contractor's Role and Percentage Of Participation | Total Contract Value At |            |                                   | Date of Award | Value of Outstanding Works | Contract Duration |           |
|--|--------------------------|----------------------|---|-------------------------|------------|-----------------------------------|---------------|----------------------------|-------------------|-----------|
|  |                          |                      |   | Award                   | Completion | Escalated Value to Present Prices |               |                            | Start             | Completed |
|  |                          |                      |   |                         |            |                                   |               |                            |                   |           |

**NOTE :**

1. The prospective bidder must have completed an SLCC that is similar to the contract to be bid, and whose value, adjusted to current prices using the PSA consumer price indices, must be at least fifty percent (50%) of the ABC to be bid.
2. This Statement shall be supported by:
  - a. Notice of Award and / or Notice to Proceed.
  - b. Project Owner's Certificate of Final acceptance issued by the owner other than the Contractor or Constructors Performance Evaluation System (CPES) Final Rating, which must be at least satisfactory.

\_\_\_\_\_  
Name of Firm/Applicant

\_\_\_\_\_  
Authorized Signing Official

\_\_\_\_\_  
Date

## EXPERIENCE RECORD ON SIMILARLY COMPLETED PROJECTS

| Similar Major Operations of Work<br>1]                      | Unit of Measure | Quantity | Title of the Project |                      |                      |                      | Unit of Measure | Quantity |
|---|-----------------|----------|----------------------|----------------------|----------------------|----------------------|-----------------|----------|
|   |                 |          | Title of the Project | Title of the Project | Title of the Project | Title of the Project |                 |          |
| 1. Pile Driving Works                                       | l.m.            | 2,812    |                      |                      |                      |                      |                 |          |
| 2. Reinforced Concrete Works                                | cu.m.           | 623      |                      |                      |                      |                      |                 |          |
| 3. Construction of Passenger Terminal Building              | cu.m.           | 408      |                      |                      |                      |                      |                 |          |
| 4. Construction of Portland Cement Concrete Pavement (PCCP) | sq.m.           | 204      |                      |                      |                      |                      |                 |          |

NOTE: 1] Submit the Certificate of Completion/Certificate of Acceptance by the project owner, Final Recapitulation/Bill of Quantities and/or Constructor Performance Evaluation System (CPES) ratings, 1<sup>st</sup>, 2<sup>nd</sup> & Final visit (if applicable). Projects with no Certificate of Completion/Acceptance and Recapitulation/Bill of Quantities shall not be considered.

2] The Owner's Certificate of Final Acceptance; or the Constructors Performance Evaluation Summary (CPES) Final Rating and/or the Certificate of Completion, must be satisfactory.

Name of Firm/Applicant

Authorized Signing Official

Date

(Revised Form : September 2012)



## FINANCIAL DATA

- A. The prospective bidder's audited Financial Statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "RECEIVED" by the Bureau of Internal Revenue (BIR), or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission.

|                              | Year |
|------------------------------|------|
| 1. Total Assets              |      |
| 2. Current Assets            |      |
| 3. Total Liabilities         |      |
| 4. Current Liabilities       |      |
| 5. Net worth (1-3)           |      |
| 6. Net Working Capital (2-4) |      |

- B. The computation of the bidders Net Financial Contracting Capacity (NFCC) must be at least equal to the ABC to be bid, as follows:

NFCC = [ (Current assets minus current liabilities) (15) ] minus the value of all outstanding or uncompleted portions of the projects under ongoing contracts, including awarded contracts yet to be started coinciding with the contract to be bid.

NFCC = \_\_\_\_\_

Attached herewith are certified true copies of the audited financial statements stamped received by the BIR or BIR authorized collecting agent for the latest/immediately preceding calendar year.

\_\_\_\_\_  
Name of Firm/Applicant

\_\_\_\_\_  
Authorized Signing Official

Date: \_\_\_\_\_

### NOTES:

If Partnership or Joint Venture, each Partner or Member Firm of Joint venture shall submit separate financial statements.

## LIST OF CONTRACTOR'S PERSONNEL

I hereby declare that the following key personnel enumerated below, with attached resume/bio-data, including valid PRC License, for the various positions / functions, are available for the project applied for:

| Position of Key Personnel              | Name | No. of Key Personnel | Similar Experience in the Position (Years)<br>1] | Total Experience in the Position (Years) | Attachment(s)   | Annex(es)   |
|--|------|----------------------|--|--|---|-------------|
| Project Manager                        |      |                      |  |  | PRC License (CE Preferred)<br>Complete Qualification and Experience Data<br>Certificate of Commitment   | Annex " " _ |
| Project Engineer                       |      |                      |  |  | PRC License (CE Preferred)<br>Complete Qualification and Experience Data<br>Certificate of Commitment   | Annex " " _ |
| Materials Engineer                     |      |                      |  |  | PRC License (CE Preferred)<br>Submit Valid and Renewed DPWH Certificate of Accreditation<br>Submit Accreditation Identification Card as Materials Engineer<br>Complete Qualification and Experience Data<br>Certificate of Commitment | Annex " " _ |
| Construction Safety and Health Officer |      |                      |  |  | Certificate of Safety and Health Construction Related Course<br>issued by DOLE Accredited Trainings<br>Complete Qualification and Experience Data<br>Certificate of Commitment  | Annex " " _ |
| Foreman                                |      |                      |  |  | Complete Qualification and Experience Data<br>Certificate of Commitment   | Annex " " _ |
| Other Position(s)                      |      |                      |  |  | Complete Qualification and Experience Data<br>Certificate of Commitment   | Annex " " _ |

NOTE: 1. Minimum qualification requirements: (work experience is similar in nature and complexity to the project to be bid with regard to Registration Particulars of the Contractor's License)

Project Manager - Five (5) years  
Project Engineer - Three (3) years  
Foreman - Five (5) years  
Materials Engineer - One (1) year  
Materials Engineer I - for projects costing up to 100M  
Materials Engineer II - for projects costing more than 100M

Name of Firm/Applicant

Authorized Signing Official

Date

REVISED FORM (September 2012)

## LIST OF CONTRACTOR'S EQUIPMENT UNITS

I hereby declare that the following equipment listed below which are owned, leased or under purchase agreement are in good operating condition and are available for the duration of the project:

| DESCRIPTION<br>(Type, Model,<br>Make) | No. of<br>Unit(s) | Capacity<br>Output<br>2] | Owned, Leased<br>and/or under<br>purchase<br>agreement<br>1] | Submitted Proof of<br>Ownership/Leased/<br>Purchase Agreement<br>(Mark as Annex<br>"A.....Z") | OTHER INFORMATIONS<br>(As Applicable) |                      |                                |          |        |
|---------------------------------------|-------------------|--------------------------|--|---|---------------------------------------|----------------------|--------------------------------|----------|--------|
|                                       |                   |                          |  |   | Manufacturer                          | Engine<br>Serial No. | Chassis No./<br>Name of Vessel | Location | Status |
|                                       |                   |                          |  |   |                                       |                      |                                |          |        |
|                                       |                   |                          |  |   |                                       |                      |                                |          |        |
|                                       |                   |                          |  |   |                                       |                      |                                |          |        |
|                                       |                   |                          |  |   |                                       |                      |                                |          |        |
|                                       |                   |                          |  |   |                                       |                      |                                |          |        |
|                                       |                   |                          |  |   |                                       |                      |                                |          |        |

1] Indicate if owned or leased as listed in the Checklist/Bidding Documents. For owned equipment, as required, submit proof of ownership (i.e. deed of sale, sales invoice, official receipt). For Water Truck, Dump Truck and Transit Mixer submit LTO Certificate of Registration and valid Official Receipt. For owned barge/tugboat, submit Marina Certificate of Ownership and valid Cargo Ship Safety Certificate. For newly purchased barge/tugboat, submit Deed of Sale together with an application for Marina Certificate of Ownership duly received/authenticated by Marina with corresponding valid Cargo Ship Safety Certificate. For leased equipment, submit duly notarized copy of lease contract together with a copy of the Marina Owner's (Lessor's) Certificate and valid Cargo Ship Safety Certificate.

2] The unit of each equipment shall be as indicated in the Checklist/Bidding Documents, i.e GW (for crane barge), DWT (for deck barge and hopper barge), TON (for crane, road roller and drop hammer), kg.-m/blow (for diesel hammer), cu.m (for dump truck), hp. (for tugboat, road grader, bulldozer and concrete vibrator), cfm (for compressor), gal. (for water truck with pump), amp. (for welding machine), bagger (for concrete mixer).

Name of Firm/Applicant

Authorized Signing Official

Date

REVISED FORM (January 2011)

## OMNIBUS SWORN STATEMENT FOR SOLE PROPRIETORSHIP

REPUBLIC OF THE PHILIPPINES)  
CITY OF \_\_\_\_\_)SS

### AFFIDAVIT

I (Name), of legal age, (Civil Status), (Nationality), and residing at (Address), after having been duly sworn in accordance with law, do hereby depose and state that:

1. I am the sole proprietor or authorized representative of (Name of Bidder) with office address at \_\_\_\_\_:
2. As the owner and sole proprietor or authorized representative of (Name of Bidder), I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for (Name of Project) of the Philippine Ports Authority, (as shown in the attached duly notarized "Special Power of Attorney" for the authorized representative);
3. (Name of Bidder) is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government / foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board;
4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
5. (Name of Bidder) is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;
6. The owner or sole proprietor is not related to the Head of Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management office or the end – user unit, and the project consultants by consanguinity or affinity up to the third civil degree;
7. (Name of Bidder) complies with existing labor laws and standards; and
8. (Name of Bidder) is aware of and has undertaken the following responsibilities as a Bidder:
  - a) Carefully examine all of the Bidding Document;
  - b) Acknowledge all conditions, local or otherwise, affecting the implementation of the contract;
  - c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and
  - d) Inquire or secure Supplemental / Bid Bulletin(s) issued for the *Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier, Port of San Andres, Catanduanes*.

9. (Name of Bidder) did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_ 20\_\_ at \_\_\_\_\_, Philippines.

\_\_\_\_\_  
Bidder's Representative / Authorized Signatory

**SUBSCRIBED AND SWORN** to before me this \_\_\_\_ day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. \_\_\_\_\_ and his/her Community Tax Certificate No. \_\_\_\_\_ issued on \_\_\_\_ at \_\_\_\_\_.

Witness my hand and seal this \_\_\_\_ day of [month] [year].

**NAME OF NOTARY PUBLIC**

Serial No. of Commission \_\_\_\_\_

Notary Public for \_\_\_\_\_ until \_\_\_\_\_

Roll of Attorneys No. \_\_\_\_\_

PTR No. \_\_\_\_\_ [date issued], [place issued]

IBP No. \_\_\_\_\_ [date issued], [place issued]

Doc. No. \_\_\_\_\_

Page No. \_\_\_\_\_

Book No. \_\_\_\_\_

Series of \_\_\_\_\_

## OMNIBUS SWORN STATEMENT FOR PARTNERSHIP OR COOPERATIVE

REPUBLIC OF THE PHILIPPINES)  
CITY OF \_\_\_\_\_)SS

### AFFIDAVIT

I (Name), of legal age, (Civil Status), (Nationality), and residing at (Address), after having been duly sworn in accordance with law, do hereby depose and state that:

1. I am the duly authorized and designated representative of (Name of Bidder) with office address at (Address);
2. I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for (Name of Project) of the Philippine Ports Authority, accompanied by the duly notarized Special Power of Attorney, Board/Partnership Resolution or Secretary's Certificate (whichever is applicable);
3. (Name of Bidder) is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government / foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board;
4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
5. (Name of Bidder) is authorizing the PPA General Manager or its duly authorized representative(s) to verify all the documents submitted;
6. None of the officers and members of (Name of Bidder) is related to the PPA General Manager, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management office or the end- user unit, and the project consultants by consanguinity or affinity up to the third civil degree;
7. (Name of Bidder) complies with existing labor laws and standards; and
8. (Bidder) is aware of and has undertaken the following responsibilities as a Bidder:
  - a) Carefully examine all of the Bidding Document;
  - b) Acknowledge all conditions, local or otherwise, affecting the implementation of the contract;
  - c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and
  - d) Inquire or secure Supplemental / Bid Bulletin(s) issued for the *Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier, Port of San Andres, Catanduanes*.

9. (Name of Bidder) did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_ 20\_\_ at \_\_\_\_\_, Philippines.

\_\_\_\_\_  
Bidder's Representative / Authorized Signatory

**SUBSCRIBED AND SWORN** to before me this \_\_\_\_ day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. \_\_\_\_\_ and his/her Community Tax Certificate No. \_\_\_\_\_ issued on \_\_\_\_ at \_\_\_\_.

Witness my hand and seal this \_\_\_\_ day of [month] [year].

**NAME OF NOTARY PUBLIC**

Serial No. of Commission \_\_\_\_\_

Notary Public for \_\_\_\_\_ until \_\_\_\_\_

Roll of Attorneys No. \_\_\_\_\_

PTR No. \_\_\_\_\_ [date issued], [place issued]

IBP No. \_\_\_\_\_ [date issued], [place issued]

Doc. No. \_\_\_\_\_

Page No. \_\_\_\_\_

Book No. \_\_\_\_\_

Series of \_\_\_\_\_

## OMNIBUS SWORN STATEMENT FOR CORPORATION OR JOINT VENTURE

REPUBLIC OF THE PHILIPPINES)  
CITY OF \_\_\_\_\_)SS

### AFFIDAVIT

I (Name), of legal age, (Civil Status), (Nationality), and residing at (Address), after having been duly sworn in accordance with law, do hereby depose and state that:

1. I am the duly authorized and designated representative of (Name of Bidder) with office address at \_\_\_\_\_;
2. I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for (Name of Project) of the Philippine Ports Authority, accompanied by the duly notarized Special Power of Attorney, Board Resolution or Secretary's Certificate;
3. (Name of Bidder) is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government / foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board;
4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
5. (Name of Bidder) is authorizing the PPA General Manager or its duly authorized representative(s) to verify all the documents submitted;
6. None of the officers, directors, and controlling stockholders of (Name of Bidder) is related to the PPA General Manager, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management office or the or end- user unit, and the project consultants by consanguinity or affinity up to the third civil degree;
7. (Name of Bidder) complies with existing labor laws and standards; and
8. (Name of Bidder) is aware of and has undertaken the following responsibilities as a Bidder:
  - a) Carefully examine all of the Bidding Document;
  - b) Acknowledge all conditions, local or otherwise, affecting the implementation of the contract;
  - c) Made an estimate of the facilities available and needed for the contract to be bid, if any; and
  - d) Inquire or secure Supplemental / Bid Bulletin(s) issued for the *Construction of Port Operations Building, Platform with RoRo Ramp and RC Pier, Port of San Andres, Catanduanes*.



9. (Name of Bidder) did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_ day of \_\_\_\_ 20\_\_ at \_\_\_\_\_, Philippines.

\_\_\_\_\_  
Bidder's Representative / Authorized Signatory

**SUBSCRIBED AND SWORN** to before me this \_\_\_\_ day of [month] [year] at [place of execution], Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her [insert type of government identification card used], with his/her photograph and signature appearing thereon, with no. \_\_\_\_\_ and his/her Community Tax Certificate No. \_\_\_\_\_ issued on \_\_\_\_ at \_\_\_\_\_.

Witness my hand and seal this \_\_\_\_ day of [month] [year].

**NAME OF NOTARY PUBLIC**

Serial No. of Commission \_\_\_\_\_

Notary Public for \_\_\_\_\_ until \_\_\_\_\_

Roll of Attorneys No. \_\_\_\_\_

PTR No. \_\_\_\_\_ [date issued], [place issued]

IBP No. \_\_\_\_\_ [date issued], [place issued]

Doc. No. \_\_\_\_\_  
Page No. \_\_\_\_\_  
Book No. \_\_\_\_\_  
Series of \_\_\_\_\_

REPUBLIC OF THE PHILIPPINES)  
CITY OF \_\_\_\_\_)S.S.

**BID-SECURING DECLARATION**  
Invitation to Bid No. \_\_\_\_\_

To : Philippine Ports Authority  
Bonifacio Drive, South Harbor,  
Port Area, Manila

I, the undersigned, declare that:

1. I understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid-Securing Declaration.
2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1 (b), 34.2, 40.1 and 69.1, except 69.1(f), of the IRR of RA 9184; without prejudice to other legal action the government may undertake:
3. I understand that this Bid-Securing Declaration shall cease to be valid on the following circumstances:
  - (a) Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
  - (b) I am declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I failed to timely file a request for reconsideration or (ii) I filed a waiver to avail of said right;
  - (c) I am declared as the bidder with the Lowest Calculated Responsive Bid, and I have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I have hereunto set my hand this \_\_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_ at \_\_\_\_\_, Philippines.

\_\_\_\_\_  
Name of Bidder's Authorized Representative  
(Signatory's Legal Capacity)  
AFFIANT

**SUBSCRIBED AND SWORN** to before me this \_\_\_\_ day of *[month]* *[year]* at *[place of execution]*, Philippines. Affiant/s is/are personally known to me and was/were identified by me through competent evidence of identity as defined in the 2004 Rules on Notarial Practice (A.M. No. 02-8-13-SC). Affiant/s exhibited to me his/her *[insert type of government identification card used]*, with his/her photograph and signature appearing thereon, with no. \_\_\_\_\_.

Witness my hand and seal this \_\_\_\_ day of *[month]* *[year]*.

**NAME OF NOTARY PUBLIC**

Serial No. of Commission \_\_\_\_\_  
Notary Public for \_\_\_\_\_ until \_\_\_\_\_  
Roll of Attorneys No. \_\_\_\_\_  
PTR No. \_\_, *[date issued]*, *[place issued]*  
IBP No. \_\_, *[date issued]*, *[place issued]*  
Doc. No. \_\_\_\_  
Page No. \_\_\_\_  
Book No. \_\_\_\_  
Series of \_\_\_\_.

## CONSTRUCTION METHODOLOGY

Name of Project : \_\_\_\_\_  
Proposed Project Description : \_\_\_\_\_  
Location : \_\_\_\_\_

### MINIMUM SCOPE OF CONSTRUCTION METHODOLOGY

#### A. DEMOLITION AND REMOVAL WORKS

1. Demolition and disposal of existing concrete pavement (1,163 sq.m.)
2. Scraping of existing gravel base materials (233 cu.m.)
3. Demolish and dispose existing building/ structure (100 sq.m.)
4. Demolish and dispose existing structure (RoRo Ramp) for buildup (77 sq.m.)
5. Chip off portion of existing rc curb (34 l.m.)
6. Chip off portion of existing mooring block to be aligned to pier (15 cu.m.)
7. Remove and turn over to PPA existing mooring bitts, mooring cleats and rubber dock fenders affected by demolition (12 no.)

#### B. RC PLATFORM WITH RORO RAMP ON PILES

(Area = 701.50 sq.m)

1. Supply and drive A252 Grade 2, 500mmØ x 10m thk. Steel pipe piles (320m.l. equivalent to 2,647 l.m.) including application of polyurethane external coating (857 sq.m.), cutting (63 pcs.), splicing (63 pcs.) and installation of reinforcing band tip (63 pcs)
2. Supply and place 3,500 psi concrete filler (120 cu.m.) and reinforcing steel cage (36,591 kgs of various sizes) for steel pipe piles including extraction of clogged materials (34 cu.m.)
3. Supply and place 3,500 psi concrete (367 cu.m.) and reinforcing steel bars (63,137 kgs of various sizes) for superstructure
4. Supply and install rubber dock fenders (V-500H x 1500L – 4 sets) and mooring bollard, 35 tons, T-head (2 sets)

#### C. RC PIER INCLUDING BUILD-UP OF EXISTING STRUCTURE

(Area = 61.00m x 9.00m = 549sq.m.)

1. Chip off existing concrete piles for build-up (12 no.)
2. Supply and drive A252 Grade 2, 500mmØ x 10m thk. Steel pipe piles (244 m.l. equivalent to 2,016 l.m.) including application of polyurethane external coating (728 sq.m.), cutting (48 pcs.), splicing (48 pcs) and installation of reinforcing band tip (48 pcs)
3. Supply and place 3,500 psi concrete filler (100 cu.m.) and reinforcing steel cage (29,836 kgs of various sizes) for steel pipe piles including extraction of clogged materials (26 cu.m.)
4. Supply and place 3,500 psi concrete (297 cu.m.) and reinforcing steel bars (45,630 kgs of various sizes) for superstructure
5. Supply and install rubber dock fender, V-type, (V500H x 1500L, 12 sets) and mooring bollard, 35 tons, T-head (6 sets)

**D. CONSTRUCTION OF PORT OPERATIONS BUILDING****(Area = 816.75sq.m.)**

1. Supply and driving of 400mm x 400mm PSC foundation piles (960 l.m.)
2. Construction of 1-storey Port Operations Building (816.75 sq.m., 250 pax)
3. Construction of Pumphouse (17.56 sq.m.)
4. Construction of 300mm thk. Concrete Pavement (407 sq.m.)

**NOTES:**

The narrative construction method will guide and familiarize the contractor and the PPA on how the project shall be carried out in accordance with the highest standard of workmanship.

The construction method shall be consistent with the Bar Chart / S-Curve Schedule, Equipment Schedule and Manpower Schedule.

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Signature  
(Authorized Signing Official)

**MANPOWER SCHEDULE**

Name of Project : \_\_\_\_\_

Proposed Project Description : \_\_\_\_\_

Location : \_\_\_\_\_

| MANPOWER<br>(Minimum)                     | CONTRACT DURATION ( _____ Calendar Days) |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|---|--|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
|   | M O N T H L Y                            |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|   | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Project Manager                           |  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Project Engineer                          |  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Materials Engineer                        |  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Construction Safety<br>and Health Officer |  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Foreman                                   |  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Specify other applicable positions, ie.:  |  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| - Carpenter                               |  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| - Steelman                                |  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| - Mason                                   |  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| - Electrician                             |  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| - Rigger                                  |  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| - Others                                  |  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |

\_\_\_\_\_  
Signature  
(Authorized Signing Official)

**Name of Project** : \_\_\_\_\_

**Proposed Project Description** : \_\_\_\_\_

**Location** : \_\_\_\_\_

[illegible]

Signature  
(Authorized Signing Official)

## CASHFLOW BY QUARTER AND PAYMENT SCHEDULE

Name of Project: : \_\_\_\_\_

Proposed Project Description : \_\_\_\_\_

Location : \_\_\_\_\_

| Project Duration<br>(days or months) | Payment Schedule<br>(Monthly, in Pesos) | Cash flow<br>(Quarterly, in Pesos) |
|--------------------------------------|---|------------------------------------|
|                                      |   |                                    |
|                                      |   |                                    |
|                                      |   |                                    |
|                                      |   |                                    |
|                                      |   |                                    |
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|                                      |   |                                    |
|                                      |   |                                    |
|                                      |   |                                    |
|                                      |   |                                    |
|                                      |   |                                    |
| <b>TOTAL</b>                         |   |                                    |

### NOTES

- The cash flow by quarter and payment schedule should be consistent with the Bar Chart and S-curb.
- Payment schedule shall not be more than once a month.

\_\_\_\_\_  
Signature  
(Authorized Signing Official)



**SECTION X**  
**CONTRACT FORM**

Republic of the Philippines  
**PHILIPPINE PORTS AUTHORITY**  
PPA Building, Bonifacio Drive, South Harbor,  
Port Area, Manila, Philippines

**CONTRACT**  
**FOR THE CONSTRUCTION OF PORT OPERATIONS BUILDING,**  
**PLATFORM WITH RORO RAMP AND RC PIER**  
**PORT OF SAN ANDRES, CATANDUANES**

This Contract made and entered into this \_\_\_\_\_ day of \_\_\_\_\_ 2019, in Manila, Philippines, by and between:

**PHILIPPINE PORTS AUTHORITY**, a government instrumentality created under Presidential Decree No. 857, as amended, with principal office at PPA Building, Bonifacio Drive, South Harbor, Port Area, Manila, represented herein by its duly authorized General Manager, **JAY DANIEL R. SANTIAGO**, and hereinafter referred to as "PPA";

- and -

\_\_\_\_\_, duly organized and existing in accordance with Philippine laws, with office and business address at \_\_\_\_\_, represented in this act by its \_\_\_\_\_, as evidenced by \_\_\_\_\_, a copy of which is hereto attached and made an integral part hereof as Annex "A", and hereinafter referred to as "CONTRACTOR."

**WITNESSETH:**

WHEREAS, in accordance with Republic Act No. 9184 and its 2016 Implementing Rules and Regulations (IRR), PPA advertised and posted on the PPA website and PhilGEPS, as well as on its bulletin board, an Invitation to Bid for the \_\_\_\_\_;

WHEREAS, in response to the said advertisement \_\_\_\_\_ bidders submitted their respective bids for the foregoing project;

WHEREAS, after the opening of bids on \_\_\_\_\_ and the conduct of bid evaluation and post-qualification, the bid submitted by the CONTRACTOR at its unit and lump sum prices set forth in its proposal was found to be the \_\_\_\_\_ Bid in the amount of \_\_\_\_\_ PESOS ( ), Philippine Currency;

WHEREAS, pursuant to Head Office BAC Resolution No. \_\_\_\_\_ Series of \_\_\_\_\_, award of contract was made to the CONTRACTOR in a Notice of Award dated \_\_\_\_\_, in the

amount of \_\_\_\_\_ PESOS (     ), after submission of the required documents within the prescribed period and compliance to the conditions stipulated in the IRR;

WHEREAS, the CONTRACTOR duly accepted the award by signing its Conforme on the said Notice of Award;

NOW, THEREFORE, for and in consideration of the foregoing premises and the mutual stipulations herein contained, PPA and the CONTRACTOR have agreed, as follows:

1. In this Contract, words and expressions shall have the same meanings as are respectively assigned to them in the attached Contract Documents.
2. The following documents shall form part of this Contract:
  - A. Bid Documents consisting of the following:
    - A.1 Invitation to Bid;
    - A.2 Instructions to Bidders;
    - A.3 Bid Data Sheet;
    - A.4 General and Special Conditions of Contract;
    - A.5 Specifications
    - A.6 Drawings/Plans;
    - A.7 Addenda and/or Supplemental/Bid Bulletins, if any;
  - B. Technical and Financial Proposals;
  - C. Performance Security;
  - D. Notice of Award of Contract with the Contractor's Conforme thereto; and
  - E. Other contract documents that may be required by existing laws and PPA, such as:
    - E.1 Construction Schedule and S-Curve;
    - E.2 Manpower Schedule;
    - E.3 Construction Methods;
    - E.4 Equipment Utilization Schedule;
    - E.5 Construction Safety and Health Program approved by the DOLE;
    - E.6 Pert/CPM
    - E.7 Duly Approved Program of Works and Cost Estimates;
    - E.8 Certificate of Availability of Funds;
    - E.9 Abstract of Bids; and
    - E.10 Resolution of Award
3. In consideration of the payments to be made by PPA, the CONTRACTOR commits to complete the Works and remedy any defects therein in conformity with the provisions of this Contract and Contract Documents.

4. In consideration of the execution and completion of the Works and remedying any defects therein, PPA commits to pay the Contract Price or such other sum as may become payable under the provisions of this Contract and Contract Documents.
5. This Contract shall become effective after the same shall have been signed by the Parties hereof.

IN WITNESS WHEREOF, the Parties have hereunto signed this Contract on the date and place first hereinabove written.

PHILIPPINE PORTS AUTHORITY

TIN No. \_\_\_\_\_

By:

**JAY DANIEL R. SANTIAGO**

General Manager

WITNESSES:

\_\_\_\_\_

ACKNOWLEDGMENT