OUTLETS, BOXES AND FITTINGS

a. All outlets of whatever kind, for all systems, 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 owned expense. In general outlet boxes should be at least 100mm in 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 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.

WIRES AND CABLES

a. All wires shall be copper, soft-drawn and annealed, shall be 100% conductivity, shall be smooth and true of a cylindrical form and shall be within the actual size called for.

b. All wires and cables shall comply with the requirements of the Underwriters Laboratories, the ASTM and ICEA as they apply for the usage.

c. Wires and cables for power and lighting system shall be plastic insulated for 600 volts working pressure type "THHN/THWN-2" unless otherwise noted on plans or specified.

d. Tag Marking

In general, branch circuit conductors and cables shall be properly marked by means of a printed tag taped on each wire indicating origin/load and or panel(s) where load is connected.

e. Splices and Termination Components

If applicable, for wire connectors and for insulating tape. Connectors for 5.5 mm^2 and smaller diameter wires shall be insulated, pressure-type in accordance with (twist-on splicing connector). Provide solderless terminal lugs on stranded conductors.

DEVICE PLATES

Provide one piece device plates for outlets and fittings to suit the devices installed. Plates on unfinished walls and on fittings shall be of zinc-coated sheet steel or cast metal having round or beveled edges. Plates on finished walls shall be satin finish stainless steel or brushed –finished aluminum, minimum 0.03 inch thick. Screws shall be machine type with countersunk heads in a

color to match the finish of the plate. The use of sectional type device plates will not be permitted. Plates installed in wet locations shall be sealed in gaskets. Device plates for telephone and intercommunication outlets shall have a 3/8-inch bushed opening in center.

WALL SWITCHES AND PLATES

Wall switches in general should be rated 10 amperes at 230 volts or with ampere and voltage ratings as required. Switches shall be flush mounting and of the rocker type, spring operated. The type of switches shall be tumbler operation, and the color, plating and appearance of wall plates shall be as selected by the Engineer. Appropriate samples shall be submitted prior to purchase of wall switches and face plates.

WALL RECEPTACLE AND PLATES

a. Receptacle outlets shall be 15 amperes, 230 volts, 2 pole, 3 wire parallel slot, grounding type. Parallel slot outlet rated 15 amps. 125 v grounded types shall be acceptable for use with 230v system. Locking type and other special purpose outlets shall be as indicated in the plans.

b. Provide weatherproof receptacle plate cover for each convenience receptacle outlet indicated as weatherproof.

PANELS AND CABINETS

a. Standard panels and cabinets, as much as possible shall be used and assembled on job. All panels shall be dead front construction, furnished with trims for flush or surface mounting. Cabinets shall be of code gauge steel with gutters at least 100mm wide and if necessary, it must be made wider. The trim for all panels shall be finished in industrial grey enamel over a rust inhibitor.

b. Lighting panels shall be equipped with branch circuit breakers as required and mains as noted on Plans or Panel Schedule.

c. Panel board main bus work shall be ampacity rated to equal or exceed overcurrent protective device immediately ahead of it. All buss work shall be properly secured to withstand available short circuit forces at the location.

d. Distribution panels shall be of the same type as lighting panels except equipped with one pole, two poles and three poles air circuit breakers of sizes, voltages ratings and interrupting capacity as called for on plans.

INDIVIDUAL BREAKERS

a. Provide individual circuit breakers were indicated on plans. Voltage ratings shall be suitable in each case of service application. Enclosures shall be General Purpose, NEMA type I, except where specifically noted on plans or assembled on panel cabinets.

f

All protective devices should meet NEMA and U.L specifications. Short circuit rating shall be as indicated on the plan.

b. Circuit breakers shall consist of a quick-make, quick -break type entirely trip-free operating mechanism with contacts, arc-interrupter, and thermal magnetic trip unit for each pole, all enclosed in a molded-phenolic case. The thermal magnetic trip unit shall provide time-delayed overload protection, and in case of overload or short circuit current in any one pole the circuit trips instantaneously. Circuit breaker shall be trip indicating, when tripped position of breaker handle midway between "ON" and "OFF" positions.

c. All circuit breakers shall be bolt-on type unless noted otherwise.

d. All circuit breakers rated above 225 amps shall have interchangeable trip units. Unless otherwise specified, minimum interrupting rating for 230 volts circuit breakers shall be 10,000 amperes.

PANELBOARD BUSES

All bus panels shall be copper support bus bars on bases independent of circuit breakers. Main buses and back pans shall be designed so that breakers may be changed without machining, drilling, or lapping. Provide separate ground bus for connecting grounding conductors; bond to steel cabinet.

EXECUTION

INSTALLATION

a. Wiring Methods

Provide insulated conductors installed in conduits, except where specifically indicated or specified otherwise or required by PEC and NFPA to be installed otherwise. Provide insulated equipment grounding conductor in feeder and branch circuits, including lighting circuits. Provide insulated, conductor for grounding conductors installed in conduits or raceways.

b. Conduit Installation

Unless indicated otherwise, conceal conduit within finished walls, ceilings, and floors. Keep conduit a minimum of 150mm away from parallel runs of flues and steam or hot water pipes. Install conduit parallel with or at right angles to ceilings, walls, and structural members were located above accessible ceilings and where conduit will be visible after completion of project. Run conduits in crawl space under slab as if exposed.

1. Where conduits rise through floor slabs, curved portion of bends shall not be visible above finish slab.

2. Conduit Support:

   Conduit shall be supported by pipe straps, wall brackets, hangers, or ceiling trapeze. Fasten by wood screws to wood; by toggle bolts on hollow masonry units; by concrete inserts or expansion bolts on concrete or brick; and by machine screws, welded studs, or spring tension clamps on steelwork. Threaded C-clamps may be used on rigid steel conduits only. Do not weld conduits or pipe straps to steel structures. Load applied to fasteners shall not exceed one-fourth of the proof test load. Fasteners attached to concrete ceilings shall be vibration resistant and shock resistant. Holes cut to depths of more than 40mm in reinforced concrete beams or to depths of more than 20mm in concrete joints shall not cut main reinforcing bars. Fill unused holes. In partitions of light steel construction, use sheet metal screws. In suspended-ceiling construction, run conduit above ceiling. Do not support conduit by ceiling support system. Spring-steel fasteners may be used for lighting branch circuit conduits supports in suspended ceilings in dry locations.

3. Changes in direction of runs with symmetrical bends or cast-metal fittings. Make field-made bends and offsets with hickey or conduit-bending machine. Do not install crushed or deformed conduits. Avoid trapped conduits. Prevent plaster, dirt or trash

from lodging in conduits, boxes, fittings, and equipment during construction. Free clogged conduits of obstructions.

4. The Contractor shall install pull wires in empty conduits in which wire is to be installed by others. The pull wire shall be 2.0mm^2 zinc- coated steel or plastic having not less than 91 kgs tensile strength. Leave not less than 300mm of slack at each end of the pull wire.

5. Conduit Installed in Concrete Floor Slabs

   Locate so as not to adversely affect structural strength of slabs. Install conduit within middle one-third of concrete slab. Do not stack conduits. Space conduits horizontally for at least three diameters, except in cabinet locations. Curved portions of bends shall not be visible above the finish slab. Increase slab thickness as necessary to provide minimum 25 mm cover over conduits. Where embedded conduits cross expansion joints, provide suitable watertight expansion fittings and bonding jumpers. Conduit larger than 25mm trade size shall be parallel with or at right angles to main reinforcement; when at right angles to the reinforcements, the conduit shall be closed to one of the supports of the slab.

6. Fasten conduits to sheet metal boxes and cabinets with two locknuts where required by PEC and NFPA 70, where insulated bushings are used, and where bushing cannot be brought into firm contact with the box; otherwise, use minimum single locknut and bushing. Locknuts shall have sharp edges for digging into walls of metal enclosures. Install bushings on ends of conduits, and provide insulating type where required by PEC and NFPA 70.

7. Flexible Connection:

   Provide flexible connection of short length, 1.8 meters maximum for recessed and semi-recessed lighting fixtures.

c. Boxes, Outlets, and Supports

Provide boxes in wiring or raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures. Boxes for metallic raceways shall be cast-metal, hub-type when located in wet locations, when surface mounted on outside of exterior surfaces, when installed exposed up to 2.1meters above interior floors and walkways, or when installed in hazardous areas. Boxes in other locations shall be sheet steel, except that aluminum boxes may be used with aluminum conduit. Each box shall have the volume required by PEC and NFPA 70 for the number of conductors enclosed in the box. Boxes for mounting lighting fixtures shall not be less than 100 mm2 or octagonal, except that smaller boxes may be installed as required for fixture configurations as approved. Boxes for use in masonry-block or tile walls shall be square-cornered, tile-type, or standard boxes having square-cornered, tile-type covers. Provide gaskets for cast-metal boxes installed flush with outside of exterior surfaces. Provide separate boxes for flush or recessed fixtures when required by fixture terminal operating temperature. Fixtures shall be readily removable for access to boxes unless ceiling access panels are provided. Support boxes and pendants for surface-mounted fixtures on suspended ceilings independently of ceiling supports or make adequate provisions for distributing load over ceiling support members. Fasten boxes and supports with wood screws on wood, with bolts and expansion shields on concrete or brick, with toggle bolts on hollow masonry units, and with machine screws or welded studs on steel. In open overhead spaces, cast boxes threaded to raceways need no separate support except were used for fixture support; support sheet metal boxes directly from building structure or by bar hangers. Where bar hangers are used, attach bar to raceways on opposite sides of box, and support raceway with approved type fastener maximum 600mm

from the box. When penetrating reinforced concrete members, avoid cutting reinforcing steel.

1. Boxes for use with raceway systems shall be minimum 40mm deep, except where shallower boxes required by structural conditions are approved. Boxes for other than lighting fixture outlets shall be minimum 100mm2, except that 100 by 50mm boxes may be used where only one raceway enters outlet.

2. Pull Boxes:

   Pull boxes shall be constructed of not less than the minimum size required by PEC and NFPA 70 of code-gauge aluminum or galvanized sheet steel, except where cast-metal boxes are required in locations specified herein. Boxes shall be furnished with screw-fastened covers. Where several feeders pass through common pull boxes, the Contractor shall tag the feeders to indicate clearly electrical characteristics, circuit number, and panel designation.

d. Mounting Heights

The Contractor shall mount panelboards, and circuit breakers, and main disconnecting panel so the height of the operating handle at its highest position is maximum 1.8 meters above floor. Mount lighting switches 1.4 meters above finished floor, receptacles 300mm above finished floor and other devices. The Contractor shall measure mounting heights of wiring devices and outlets to center of device or outlet.

e. Conductor Identification

Provide conductor identification within each enclosure where tap, splice, or termination is made.

f. Splices

Make splices in accessible locations. Make splices in conductors 5.5 mm^2 and smaller diameter with insulated, pressure-type connector. Make splices in conductors 8.0 mm^2 and larger diameter with solderless connector and cover with insulation material equivalent to conductor insulation.

g. Covers and Device Plates

Install with edges in continuous contact with finished wall surfaces without use of mats or similar devices. Plaster fillings are not permitted. Plates shall be installed with alignment tolerance of 3mm. Use of sectional-type device plates is not permitted. Plates installed in wet areas must be gasketed.

h. Electrical Penetrations

Openings around electrical penetrations through fire resistance-rated walls, partitions, floors, or ceilings shall be sealed to maintain fire resistive integrity as tested by ASTM E 814.

i. Grounding and Bonding

In accordance with PEC and NFPA 70. Ground all exposed, noncurrent-carrying metallic parts of electrical equipment, metallic raceway systems, grounding conductor in metallic and non-metallic raceways, and conductor of wiring systems. Make ground connection to driven

ground rods on exterior of building. Where ground fault protection is employed, ensure that connection of ground does not interfere with correct operation of fault protection.

1. Grounding Conductor

   Provide grounding equipment in feeder and branch circuits, including lighting circuits. Grounding conductors shall be separated from electrical system neutral conductors. Provide insulated, conductor for grounding conductors installed in conduit or raceways.

2. Resistance

   Maximum resistance-to-ground of grounding system shall not exceed 10 ohms under normally dry conditions. Where the resistance obtained exceeds 10 ohms, contact the Engineer for further instructions.

FIELD QUALITY CONTROL

Furnish test equipment and personnel and submit written copies of test results. Give the Engineer five (5) working days notice prior to each test.

a. Devices Subject to Manual Operation

   Each device subject to manual operation shall be operated at least five times, demonstrating satisfactory operation each time.

b. Test on 600-volt wiring

   Test 600 volt wiring to verify that no short circuits or accidental grounds exist. Perform insulation resistance tests on wiring No. 14mm^2 (6 AWG) and larger diameter using instrument which applies voltage of approximately 500 volts to provide direct reading of resistance. Minimum resistance shall be 25,000 ohms.

c. Grounding System Test

   The Grounding system shall be tested to ensure continuity and resistance to ground is not excessive. Test each ground rod for resistance to ground before making connections to rod; tie grounding system together and test for resistance to ground. Make resistance measurements in dry weather, not earlier than 48 hours after rainfall. Submit written results of each test to the Engineer and indicate location of rods as well as resistance and soil conditions at the time measurements were made.

INTERIOR LIGHTING

SUBMITTALS

Data, shop drawings showing mounting heights, and reports shall employ the terminology, classifications, and methods prescribed by the IES Lighting Handbook, as applicable, for the lighting system specified.

a. Manufacturer's Data

1. Vertical Downlight Recessed Mounted
2. Vertical Downlight Surface Mounted

PRODUCT

VERTICAL DOWNLIGHT RECESSED MOUNTED TYPE

a. This fixture with glass cover looks very simply but provides protection to LED bulbs. Metal sheet housing gives durability, while mirrored reflection brings additional lighting effects. They are equipped with a glass cover that provides a smart overhead illumination solution, very modern and contemporary for decoration. It's best for indoor lighting.

VERTICAL DOWNLIGHT SURFACE MOUNTED TYPE

b. Surface Downlight – the housing or frame of this fixture is made of steel plate and with powder coating under high temperature. It is resistant to abrasion as well as pressure, not easy to be tarnished. As you will notice, it specializes in light reflectors that are made of high-quality pure aluminum. Endurable lamp holder for extremely high temperatures guarantees the safety and durability of the LED light bulbs. The other parts like springs, elastic slices and other tightening fittings make the down light firmly recessed and easy to install.

The Contractor shall provide the type of materials as shown in the plan.

LED BULB

Being the next modern, energy-efficient lighting, it offers brighter lights than both its predecessors, improving on lower wattage at the same brilliance and longer life spans. This is a lot of savings in terms of lower electricity bills and maintenance costs.

Powered by light emitting diodes and circuitry, the advantage is that it eliminates the harmful chemicals found in your typical compact bulb. LED making it non-hazardous and Eco-friendly. With a very low defect rate of 1% a year and lifetime of over 30,000 hours. Therefore, this product will stand the test of time.

Specifically designed that can easily transition to LEDs without necessarily revamping your current lighting setup. LED bulbs have a wide range of applications from lighting households, schools, and offices, illuminating covered parking lots, warehouses.

This LED Bulb provide every household or business in the Philippines access to energy efficient and environmentally friendly lighting alternatives set at reasonably low and affordable prices.

EXECUTION

INSTALLATION

Installing or retrofitting a T-8 tube light ensures optimal performance. This guide is intended for qualified electricians or lighting technicians.

It is the responsibility of the contractor to install, maintain and operate the device in such a manner as to comply with all state and local laws, ordinances and regulations.

No power to the fixture at source. Ensure you are working with standard T-8 Fluorescent Light fixture; unpack the LED Tube Light; Open the fixture housing; Re-connect the Hot (L) wire to one end and Neutral (N) wire to the other end; Check to ensure wiring is done correctly then close the fixture housing; Affix warning labels to fixtures near socket so they are visible to tube light installers. Re-connect power to the fixture and turn on switch.

Recessed and semi-recessed fixtures may be supported from suspended ceiling support system ceiling tees if the ceiling system support rods or wires are provided at a minimum of four rods or wires per fixture and located not more than 150 mm from each corner of each fixture. Do not support fixtures by ceiling acoustical panels. Where fixtures of sizes are indicated to be centered in the acoustical panel, support such fixtures independently or with at least two 20mm metal channels spanning, and secured to, the ceiling tees. Providing rods or wires for lighting fixture supports under this section of the specifications. Additionally, for recessed fixtures, provide support clips securely fastened to ceiling grid members, a minimum of one at or near each corner of each fixture.

GROUNDING

Ground non-current-carrying parts of equipment as specified in "Interior Wiring Systems." Where the copper grounding conductor is connected to a metal other than copper, provide specially treated or lined connectors suitable for this purpose.

FIELD TESTS

The Contractor will provide electric power and apparatus / instruments required and carry out the field tests.

a. Operating Test

Upon completion of the installation, conduct an operating test to show that the equipment operates in accordance with the requirements of this section.

b Insulation Resistance Test

Perform as specified in "Interior Wiring Systems", both before and after connection of fixtures and equipment.

c. Ground Resistance Tests
Perform as specified in "Interior Wiring System."

ITEM 26 : GROUNDING SYSTEM AND LIGHTNING PROTECTION

GENERAL

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

1. American National Standards Institute (ANSI)

   ANSI C135.30 (1988) Zinc-Coated Ferrous Ground Rods for Overhead or Underground Line Construction

2. Institute of Electrical And Electronics Engineers (IEEE)

   IEEE Standard 81 (1983) Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Potentials of a Ground System

3. National Fire Protection Association (NFPA)

   NFPA 70 (2007) National Electrical Code
   NFPA 780 (2007) Lightning Protection Code

4. Underwriters Laboratories (UL)

   UL Elec Const Dir (2007) Electrical Construction Materials Directory
   UL 96 (2005) Lightning Protection Components
   UL 96A (2007) Installation Requirements for Lightning Protection Systems
   UL 467 (2007) Grounding and Bonding Equipment

5. Institute of Integrated Electrical Engineer (IIEE)

   PEC (2002) Philippine Electrical Code

6. Philippine National Standard (PNS)

   BS (2002) Bureau of Standard

RELATED REQUIREMENTS

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

1. System Requirements

   Materials shall consist of standard products of a manufacturer regularly engaged in production of lightning protection systems and shall be manufacturer's latest UL approved design. Lightning protection system shall conform to PEC, NFPA 70, NFPA 780, UL 96 and UL 96A.

SUBMITTALS

1. Shop Drawings

Overall lightning protection system for each major component

2. Test Reports

Grounding system test
Lightning protection system inspection

3. Certificates

UL listing or label

QUALITY ASSURANCE

In each standard referred to herein, consider the advisory provisions to be mandatory, as though the word "shall" has been substituted for "should" wherever it appears.

1. Installation Drawings

a. Submit installation shop drawing for the overall lightning protection system. Drawings shall include physical layout of the equipment, mounting details, relationship to other parts of the work, and wiring diagram.

b. Submit detail drawings for each major component to include manufacturer's descriptive and technical literature, catalogue cuts, and installation instructions.

2. UL Listing or Label

Submit proof of compliance, label of acceptable evidence. In lieu of label or listing, submit written certificate from an approved, nationally recognized testing organization equipped to perform such services, stating that items have been tested and conform to requirements and testing methods of Underwriters Laboratories.

SITE CONDITIONS

Contractor will become familiar with details of the work, verify dimensions in the field, and advise the Engineer of discrepancies before performing work. Deviations from contract drawings will not be made without prior approval of the Engineer.

MATERIAL REQUIREMENTS

MATERIALS

Do not use a combination of materials that form an electrolytic couple of such nature that corrosion is accelerated in presence of moisture unless moisture is permanently excluded from the junction of such metals. Where unusual conditions exist which would cause corrosion of conductors, provide conductors with protective coatings or oversize conductors. Where mechanical hazard is involved, increase conductor size to compensate for hazard or protect conductors by covering them with or tubing made of nonmagnetic material.

1. Main and Bonding Conductors

   NFPA 780 and UL 96

2. Copper

   Provide copper conductors on non-metallic stacks that do not weigh less than 144.83 kg per 300 meters and provide cable such that the size of any strand in the cable is not less than 2.0mm^2.

COMPONENTS

1. Air Terminals

   Provide terminals in accordance with UL 96. Support air terminals by suitable brace, with guides, not less than one-half the height of the terminal.

2. Ground Rods

   Provide ground rods made of copper-clad steel conforming UL 467. Provide ground rods that are not less than 20mm in diameter and 3000mm in length. Do not mix ground rods of copper-clad steel, stainless steel, galvanized ferrous, or solid copper on the job.

3. Connections and Terminations

   Provide connectors for splicing conductors that conform to UL 96, class as applicable. Conductor connections can be made by clamps or welds (including exothermic). Provide style and size connectors required for the installation.

4. Connector Fittings

   Provide connector fittings for "end-to-end", "Tee", or "Y" splices that conform to NFPA 780.

5. Lightning Protection Components

   Provide bonding plates, air terminal supports, clips, and fasteners that conform to UL 96 classes as applicable.

EXECUTION

INTEGRAL SYSTEM

Lightning protection system consists of air terminals, down conductors, ground connections, grounding electrodes and ground loop conductor. Electrically interconnect lightning protection system to form the shortest distance to ground. Do not use non-conducting parts of the structure as part of the building's lightning protection system. Conductors are required to be in protective sleeves.

1. Air Terminals

   Air terminal design and support conforming to NFPA 780. Rigidly connect terminals to, and make electrically continuous with, down conductors by means of pressure connectors or crimped joints of T-shaped malleable metal. Provide pressure connector or crimped joint with a dowel or threaded fitting to connect ground rod conductor with air terminal. Set air terminals at ends of structures not more than 610mm from ends of ridges. Where non-metallic spires is present, mount air terminal to the side. In addition, where spires project

more than 3050mm above the building, conductors continue from air terminal to nearest down conductor securely connect thereto.

2. Down Conductors

Make down conductors electrically continuous from air terminals to grounding electrodes. Equally and symmetrically spaced down conductors about the perimeter of the structure. Protect conductors where necessary, to prevent physical damage or displacement to the conductor.

a. Ground Connections

Securely connect conductor forming continuations of down conductors from structure to grounding electrode in a manner to ensure electrical continuity between the two. Provide clamp type connections or welds (including exothermic) for continuation. Attach down conductor to ground rods by welding including exothermic, brazing, or clamping. Provide clamps suitable for direct burial. Protect ground connection from mechanical injury. In making ground connections, take advantage of all permanently moist places where practicable, although avoid such places where area is wet with wastewater that contains chemical substances, especially corrosive to metal.

b. Grounding Electrodes

Provide grounding electrode for down conductor. Extend driven ground rods into the existing undisturbed earth for not less 3050mm. Set ground rods less than 610mm nor more than 3050mm, from the structure. After the completed installation, measure the total resistance to ground using the fall-of-potential method described in IEEE Standard 81. Maximum resistance of a driven ground rod shall be 10 ohms, under normally dry conditions. Make connections between ground conductors and electrically ground continuous.

FIELD QUALITY CONTROL

1. Grounding System Test

Test the grounding system to ensure continuity and that resistance to ground is not more than 10 ohms. Test the ground rod for resistance to ground before making connections to the rod. Tie the grounding system together and test for resistance to ground. Make resistance measurements in dry weather, not earlier than 48 hours after rainfall. Include in the written report: locations of ground rods, resistance, and soil conditions at the time that measurements were made. Submit results of each test to the Engineer.

2. Lightning Protection System Inspection

Make visual inspections to verify that there are no loose connections which may result in high resistance joints and that conductor and system components are securely fastened to their mounting surfaces and are protected against accidental mechanical displacement.

ITEM 27 : PROJECT BILLBOARD

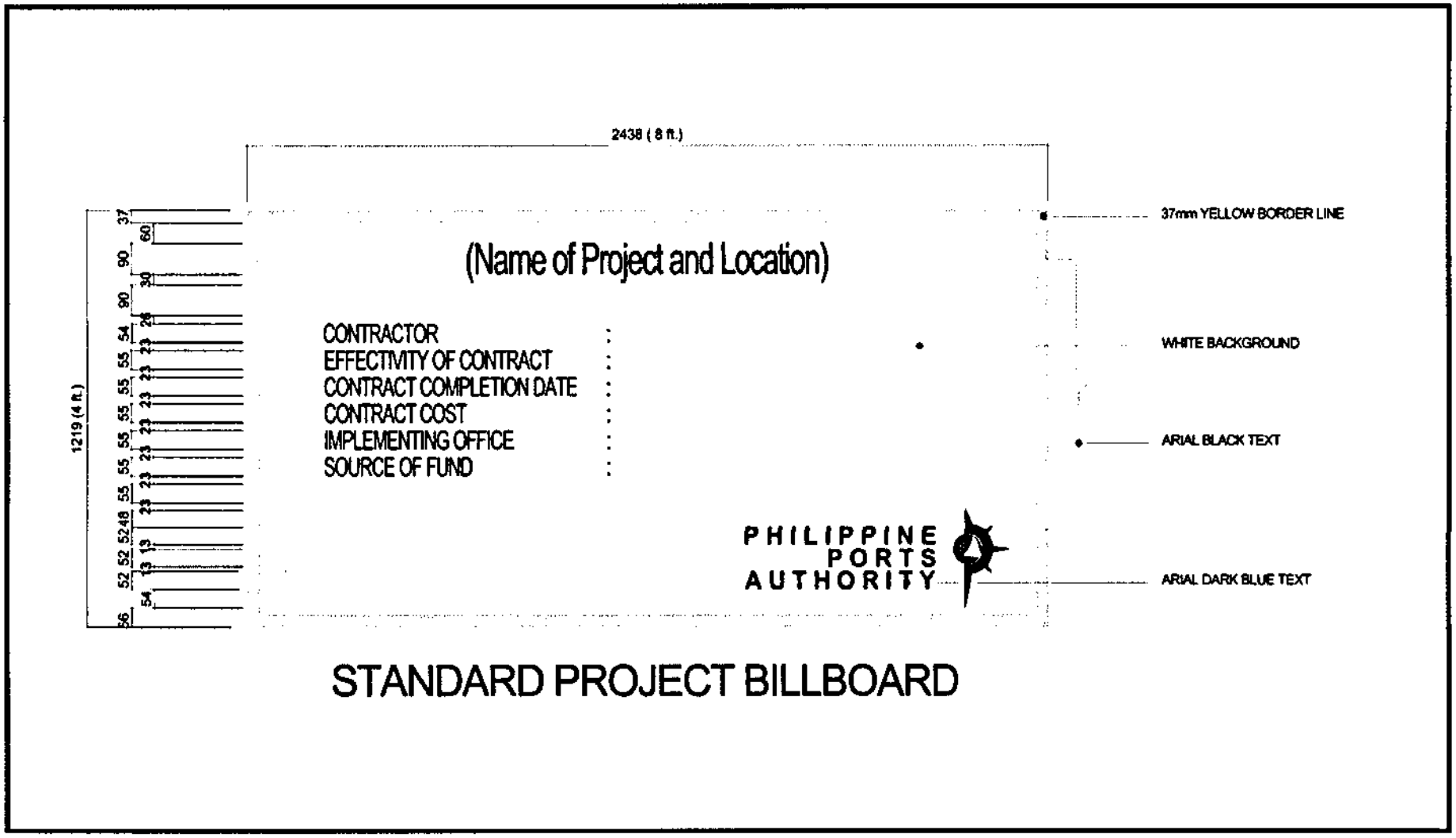
SPECIFICATION

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

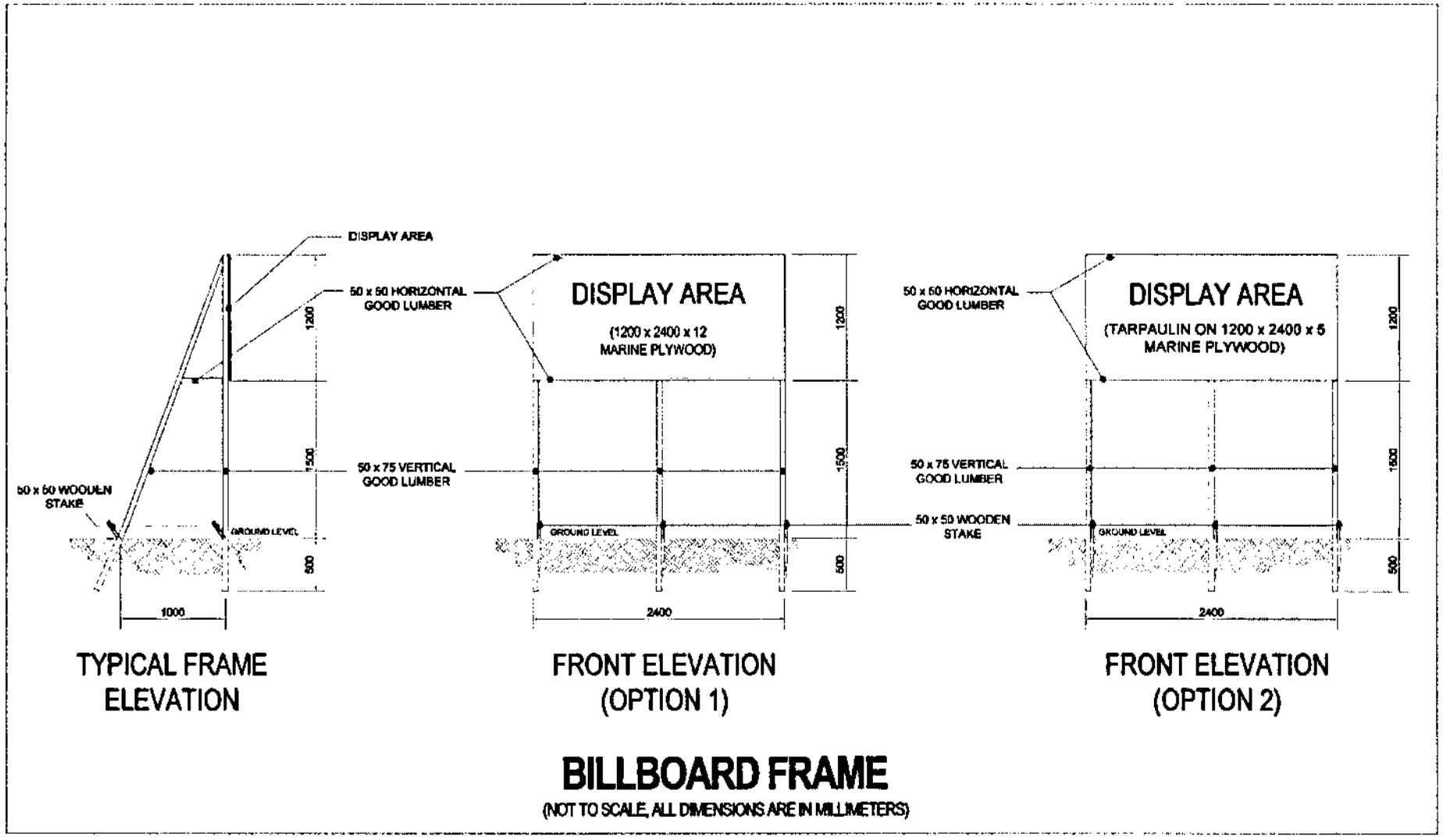
The size and specifications of materials for the standard billboard shall be 4ft. x 8ft. (1,200mm x 2,400mm) using ½ inch (12mm) marine plywood or tarpaulin poster on 3/16 inch (5mm) marine plywood.

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

See attached drawings for further details of the standard billboard.



STANDARD PROJECT BILLBOARD



BILLBOARD FRAME

(NOT TO SCALE, ALL DIMENSIONS ARE IN MILLIMETERS)

ITEM 28 : 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.

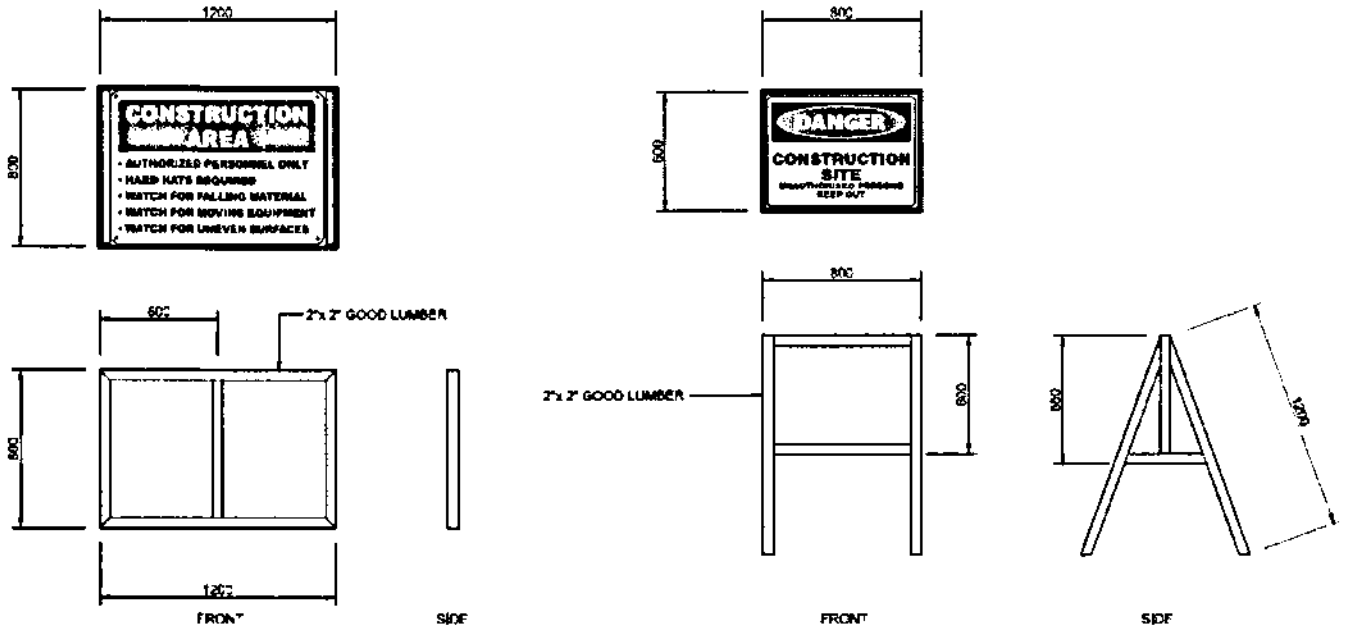
SPECIFICATION

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.



FRAMING FOR 0.80m x 1.20m SIGNAGES

FRAMING FOR 0.60m x 0.80m SIGNAGES AND BARRICADES

STANDARD PLAN FOR SIGNAGES AND BARRICADES

SECTION VII

DRAWINGS
(APPROVED PLANS)

SECTION VII

DRAWINGS AND APPROVED PLANS
(SEE ISSUED APPROVED PLANS)

LIST OF DRAWINGS:

MARINE STRUCTURES

1 OF 42 - DEVELOPMENT PLAN, GENERAL NOTES, DESIGN PARAMETERS, LIST OF DRAWINGS AND LOCATION MAP.

02 OF 42 - PLAN SHOWING EXISTING FACILITIES.

03 OF 42 - GENERAL PLAN.

04 OF 42 - PORT OPERATIONAL PLAN.

05 OF 42 - STORM DRAINAGE LAYOUT PLAN.

06 OF 42 - SHEET PILING PLAN.

07 OF 42 - STATION 0+000 & STATION 0+010.

08 OF 42 - STATION 0+020 & STATION 0+030.

09 OF 42 - STATION 0+040 & STATION 0+050.

10 OF 42 - STATION 0+060 & STATION 0+070.

11 OF 42 - STATION 0+080.

12 OF 42 - STATION 0+090.

13 OF 42 - STATION 0+100.

14 OF 42 - STATION 0+104.50.

15 OF 42 - LINE 0+000.

16 OF 42 - LINE 0+010.

17 OF 42 - LINE 0+020.

18 OF 42 - LINE 0+030.

19 OF 42 - LINE 0+040.

20 OF 42 - LINE 0+050 & LINE 0+060.

21 OF 42 - LINE 0+070 & LINE 0+080.

22 OF 42 - KEY SHEET PILING PLAN, DETAIL OF WALE SPLICE, CHANNEL/WALE SECTION, PILE CONNECTOR & DETAIL OF TIE ROD.

23 OF 42 - TYPICAL ELEVATION OF DRAINAGE SYSTEM, TYPICAL PORTLAND CEMENT CONCRETE PAVEMENT DETAILS & DETAIL OF CATCH DRAIN MANHOLE.

24 OF 42 - DETAIL OF ANCHOR WALL, DETAIL OF CONCRETE BLOCKS, DETAIL OF RETAINING WALL - 1 & DETAIL OF RETAINING WALL - 2.

25 OF 42 - TYPICAL PLAN OF CHB FENCE, TYPICAL ELEVATION OF CHB FENCE, DETAIL OF CHB FENCE & DETAIL OF COLUMN/RC CURB.

26 OF 42 - R.C. PIER PLAN, SCHEDULE OF MOORING BOLLARDS (TEE-HEAD) & SCHEDULE OF FENDERING SYSTEM (V-TYPE)

27 OF 42 - R.C. PIER PILING PLAN, R.C PIER PILE SCHEDULE (450mm x 450mm PSC PILES) & BREAKWATER PILE SCHEDULE (450mm x 450mm PSC PILES).

28 OF 42 - R.C. PLATFORM PLAN & SCHEDULE OF FENDERING SYSTEM (V-TYPE).

29 OF 42 - R.C. PLATFORM PILING PLAN & R.C PLATFORM PILE SCHEDULE (450mm x 450mm PSC PILES).

30 OF 42 - OFFSHORE ELEVATION OF R.C. PIER & BREAKWATER PILES ELEVATION OF R.C. PIER.

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SECTION VIII

BILL OF QUANTITIES and ATTACHMENTS

SECTION VIII – BILL OF QUANTITIES

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BID SUMMARY

PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT

Port of Pio Duran, Pio Duran, Albay

NO.	DESCRIPTION OF WORK	AMOUNT (Pesos)
BILL NO. 1	GENERAL EXPENSES	
BILL NO. 2	REMOVAL, DISPOSAL AND EXCAVATION WORKS	
BILL NO. 3	IMPROVEMENT AND EXPANSION OF PORT OPERATIONAL AREA	
BILL NO. 4	CONSTRUCTION OF R.C. PLATFORM	
BILL NO. 5	CONSTRUCTION OF RORO RAMPS (4 UNITS)	
BILL NO. 6	CONSTRUCTION OF R.C. PIER WITH BREAKWATER PILES	
BILL NO. 7	CONSTRUCTION OF FENCE, GATE, PUMPHOUSE AND GUARDHOUSE	
BID PRICE		

Name of Firm	Name of Bidder/Authorized Representative (Signatory's Legal Capacity)	Date

BILL OF QUANTITIES
PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
Port of Pio Duran, Pio Duran, Albay

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**1 GENERAL EXPENSES**				
1.01	Mobilization, demobilization and cleaning	lot	1		
1.02	Rental of temporary site office and residence for the Engineer and staff	mo.	24		
1.03	Maintain temporary site office and residence for the Engineer and staff	mo.	24		
1.04	Provide Construction Safety and Health Program in the execution of the project.	mo.	24		
	TOTAL FOR BILL NO. 1				

Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
Port of Pio Duran, Pio Duran, Albay

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**2 REMOVAL, DISPOSAL AND EXCAVATION WORKS**				
2.01	Demolish and dispose existing concrete pavement at the existing Port Operational Area, Guardhouse, Drainage System and Pumphouse	sq.m.	2,318		
2.02	Demolish and dispose existing RoRo Ramp superstructure up to required elevation	sq.m.	333		
2.03	Scraping of existing aggregate base course	cu.m.	632		
2.04	Demolish and dispose portion of the existing retaining wall prior to Port Operational Area expansion	cu.m.	51		
2.05	Cut and dispose existing piles up to MLLW	no.	63		
2.06	Chip-off and dispose portion of existing RC curb, flush to required elevation and smoothen with mortar	l.m.	89		
2.07	Remove existing mooring bollard and turn-over to the authority	no.	4		
2.08	Remove existing rubber dock fender and turn-over to the authority	no.	6		
2.09	Remove and dispose existing fence and gate including turn-over of material with value to Authority	l.m.	30		

Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
Port of Pio Duran, Pio Duran, Albay

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
2.10	Remove and dispose existing guardhouse including turn-over of material with value to Authority	sq.m.	11		
2.11	Remove and relocate existing lamp post as directed by the Engineer	no.	3		
2.12	Excavate portion of existing seabed prior to placing of core rocks	cu.m.	3,822		
2.13	Excavation and backfilling works for electrical, drainage and foundation works	cu.m.	376		
	TOTAL FOR BILL NO. 2				

Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
Port of Pio Duran, Pio Duran, Albay

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**3 IMPROVEMENT AND EXPANSION OF PORT OPERATIONAL AREA**				
3.01	Supply and deliver to site Z-Type steel sheet piles (Sx = 4,228 cm3/m, Steel grade = S355) including additional pile connector	m.t.	446		
3.02	Supply and install dowel bars for steel sheet piles	kg.	3,788		
3.03	Handle, pitch and drive z-type steel sheet piles	l.m.	3,120		
3.04	Supply and install steel waling and splice plate for the steel sheet piles	kg.	12,669		
3.05	Supply and place 3,500 psi concrete for the retaining wall, anchor block, RC curb, pile caps, mooring block and fendering block drainage and electrical works	cu.m.	709		
3.06	Supply and install steel reinforcement for the retaining wall, anchor block, RC curb, pile caps, mooring block and fendering block drainage and electrical works	kg.	56,750		
3.07	Supply and place gravel bedding	cu.m.	46		
3.08	Supply, fabricate and install concrete blocks including lifting bars (3.50 m x 1.00 m x 1.00 m)	set	27		
3.09	Supply and place 50-100 kg. core rocks	cu.m.	5,903		
3.10	Supply and place 1000 kg. armour rocks	cu.m.	1,525		

Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
Port of Pio Duran, Pio Duran, Albay

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
3.11	Supply and install tie-rod including accessories a.) 44mm Ø x 15.00m	set	100		
3.12	Supply and install geotextile fabric	sq.m.	3,994		
3.13	Supply and place sand and gravel fill	cu.m.	19,759		
3.14	Supply, spread and compact aggregate sub-base course	cu.m.	5,692		
3.15	Supply, spread and compact aggregate base course	cu.m.	1,232		
3.16	Construct portland cement concrete pavement (300mm thk) Including dowel bars and construction joint	sq.m.	6,162		
3.17	Supply and lay 600mm dia. reinforced concrete pipe including accessories	l.m.	80		
3.18	Construct catch drain manhole including accessories	no.	6		
3.19	Supply, deliver and install port lighting system including relocation of existing lamp posts	lot	1		
3.20	Supply deliver and install wastewater treatment facility including testing, commisioning, civil works and other accessories	lot	1		
	TOTAL FOR BILL NO. 3				

Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
Port of Pio Duran, Pio Duran, Albay

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**4 CONSTRUCTION OF R.C. PLATFORM**				
4.01	Supply and deliver to site 450mm x 450mm PSC piles	l.m.	2,996		
4.02	Handle, pitch and drive 450mm x 450mm PSC Vertical piles	l.m.	2,112		
4.03	Handle, pitch and drive 450mm x 450mm PSC Batter piles	l.m.	884		
4.04	Chip/cut and dispose portion of newly driven PSC piles	no.	122		
4.05	Supply and place 3,500 psi concrete for superstructures	cu.m.	430		
4.06	Supply and install steel reinforcement for superstructures	kg.	74,219		
4.07	Suppy and install construction joints (BWT 100 x12) angle bar, hot-dipped galvanized including dowel bars	l.m.	105		
4.08	Supply and deliver to site mooring bollard (35 Tons, T-head) including accessories	set	6		
4.09	Install mooring bollards (T-head type) and accessories	set	6		
	TOTAL FOR BILL NO. 4				

Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
Port of Pio Duran, Pio Duran, Albay

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**5 CONSTRUCTION OF RORO RAMPS (4 UNITS)**				
5.01	Supply and deliver to site 450mm x 450mm PSC piles	l.m.	1,872		
5.02	Handle, pitch and drive 450mm x 450mm PSC Batter piles	l.m.	1,872		
5.03	Chip/cut and dispose portion of newly driven PSC piles	no.	72		
5.04	Supply and place 3,500 psi concrete for superstructures	cu.m.	331		
5.05	Supply and install steel reinforcement for superstructures	kg.	67,583		
5.06	Suppy and install construction joints (100mm x 100mm x 10mm) angle bar, hot-dipped galvanized including dowel bars	l.m.	88		
5.07	Supply and install WT steel ramp protection (ASTM A572, Grade 50) including accessories	set	20		
5.08	Supply and deliver to site rubber dock fender (V-type, 500H x 1,500L) including accessories	set	12		
5.09	Install rubber dock fender and accessories	set	12		
	TOTAL FOR BILL NO. 5				

Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
Port of Pio Duran, Pio Duran, Albay

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**6 CONSTRUCTION OF R.C. PIER WITH BREAKWATER PILES**				
6.01	Supply and deliver to site 450mm x 450mm PSC piles	l.m.	6,050		
6.02	Handle, pitch and drive 450mm x 450mm PSC Vertical piles	l.m.	4,074		
6.03	Handle, pitch and drive 450mm x 450mm PSC Batter piles	l.m.	1,976		
6.04	Chip/cut and dispose portion of newly driven PSC piles	no.	275		
6.05	Supply and place 3,500 psi concrete for superstructures	cu.m.	618		
6.06	Supply and install steel reinforcement for superstructures	kg.	90,726		
6.07	Suppy and install construction joints (100mm x 100mm x 10mm) angle bar, hot-dipped galvanized including dowel bars	l.m.	24		
6.08	Supply and deliver to site rubber dock fender (V-type, 500H x 1,500L) including accessories	set	18		
6.09	Install rubber dock fender and accessories	set	18		
6.10	Supply and deliver to site mooring bollard (35 Tons, T-head) including accessories	set	10		
6.11	Install mooring bollards (T-head type) and accessories	set	10		
	TOTAL FOR BILL NO. 6				

Name of Bidder/Authorized Representative
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BILL OF QUANTITIES
PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
Port of Pio Duran, Pio Duran, Albay

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
BILL NO.	**7 CONSTRUCTION OF FENCE, GATE, PUMPHOUSE AND GUARDHOUSE**				
7.01	Supply and apply soil treatment	sq.m.	17		
7.02	Subgrade preparation	sq.m.	17		
7.03	Supply, spread and compact aggregate sub-base course	cu.m.	13		
7.04	Supply, place and compact gravel bedding	cu.m.	14		
7.05	Supply & place 3,500 psi. concrete for building structure	cu.m.	56		
7.06	Supply & install steel reinforcement for building structure (Grade 40)	kg.	4,651		
7.07	Supply & install steel reinforcement for building structure (Grade 60)	kg.	4,504		
7.08	Construct 3,500 psi. concrete slab, stairs and ramp on-fill including reinforcement	sq.m.	90		
7.09	Supply, fabricate and install steel framing gate including accessories and metal corrosion protection	kg.	1,785		
7.10	Construct 150mm thick CHB wall including reinforcement	sq.m.	55		
7.11	Supply and place 13mm thick cement Plaster finish	sq.m.	76		
7.12	Supply and apply Elastomeric paint (2-coats)	sq.m.	76		
7.13	Supply and apply Flat latex paint (2-coats)	sq.m.	11		

Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
Port of Pio Duran, Pio Duran, Albay

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
7.14	Supply and apply Quick dry enamel paint (2-coats)	sq.m.	8		
7.15	Supply and apply water proofing	sq.m.	195		
7.16	Supply and install Aluminum Composite Panels and accessories	sq.m.	217		
7.17	Supply and install 0.6m x 0.6m Unglazed Ceramic Floor Finish	sq.m.	11		
7.18	Supply and place rough cement finish	sq.m.	67		
7.19	Supply and install 0.3m x 0.6m Ceramic Wall Tiles	sq.m.	27		
7.20	Supply and install stone cladding including accessories	sq.m.	103		
7.21	Supply and install PVC Ceiling including accessories	sq.m.	172		
7.22	Supply and install 12mm thk. Gypsum board on 0.40mm thk galvanized steel ceiling suspension system at 0.40m O.C. (furring) carrying channel) and suspension rod	sq.m.	11		
7.23	Supply and install fabricated Marine Plywood Finish Flush Doors, and PVC Louver Door including door jambs, hinges, locksets and other accessories	lot	1		
7.24	Supply and install fabricated powder coated aluminum windows including accessories	lot	1		
7.25	Supply and install Toilet Fixtures and accessories	lot	1		

Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

BILL OF QUANTITIES
PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
Port of Pio Duran, Pio Duran, Albay

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
7.26	Supply and install water line pipes and fittings including accessories	lot	1		
7.27	Supply and install sewerage pipes and fittings including accessories	lot	1		
7.28	Supply and install drainage pipes and fittings including accessories	lot	1		
7.29	Construct septic vault including fittings and accessories	no.	1		
7.30	Construct catch basin including accessories	no.	2		
7.31	Construct perimeter fence (CHB)	l.m.	176		
7.32	Construct pumphouse including appurtenances	lot	1		
7.33	Construct guard outpost	lot	1		
7.34	Supply, deliver and install electrical materials	lot	1		
7.35	Supply and deliver office furnitures	lot	1		
7.36	Supply, deliver and install PPA Logo including accessories	lot	1		
7.37	Reconstruct portion of the demolished PCCP for the guardhouse, guard outpost, pumphouse, fence, drainage and electrical works	sq.m.	552		
	TOTAL FOR BILL NO. 7				

Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

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 of 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.

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

REMOVAL, DISPOSAL AND EXCAVATION WORKS

Item 2.01 **Demolish and dispose existing concrete pavement at the existing Port Operational Area, Guardhouse, Drainage System and Pumphouse**

The quantity to be paid for shall be the actual area in square meter of existing concrete pavement at the Existing Port Operational Area, Guardhouse, Drainage System and Pumphouse to be demolished including proper disposal of debris 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 **Demolish and dispose existing RoRo Ramp superstructure up to required elevation**

The quantity to be paid for shall be the actual area in square meter of existing RoRo Ramp superstructure to be demolished up to required elevation including proper disposal of debris 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 **Scraping of existing aggregate base course**

The quantity to be paid for shall be the actual volume in cubic meter of aggregate base course to be scraped 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 portion of the existing retaining wall prior to Port Operational Area expansion**

The quantity to be paid for shall be the actual volume in cubic meter of existing portion of retaining wall to be demolished prior Port Operational Area Expansion, including proper disposal of debris 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 **Cut and dispose existing piles up to MLLW**

The quantity to be paid for shall be the actual number of existing piles to be cut up to MLLW, including proper disposal of debris 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 and dispose portion of existing RC curb, flush to required elevation and smoothen with mortar**

The quantity to be paid for shall be the actual length in linear meter of portion of existing RC curb to be chipped off, flushed to required elevation and smoothen with mortar including proper disposal of debris 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 existing mooring bollard and turn-over to the authority

The quantity to be paid for shall be the actual number of existing mooring bollard to be removed, including turn-over to the authority 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 2.08 Remove existing rubber dock fender and turn-over to the authority

The quantity to be paid for shall be the actual number of existing rubber dock fender to be removed, including turn-over to the authority 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 2.09 Remove and dispose existing fence and gate including turn-over of material with value to Authority

The quantity to be paid for shall be the actual length in linear meter of existing fence and gate to be removed and disposed, including turn-over of material with value to the authority 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 2.10 Remove and dispose existing guardhouse including turn-over of material with value to Authority

The quantity to be paid for shall be the actual area in square meter of existing guardhouse to be removed and disposed, including turn-over of material with value to the authority 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 2.11 Remove and relocate existing lamp post as directed by the Engineer

The quantity to be paid for shall be the actual number of existing lamp post to be removed and relocated 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 2.12 Excavate portion of existing seabed prior to placing of core rocks

The quantity to be paid for shall be the actual volume in cubic meter of portion of existing seabed to be excavated prior to placing of core rocks 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 2.13 Excavation and backfilling works for electrical, drainage and foundation works

The quantity to be paid for shall be the actual volume in cubic meter of existing fill materials to be excavated and backfilled for electrical, drainage and foundation works 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

IMPROVEMENT AND EXPANSION OF PORT OPERATIONAL AREA

Item 3.01 **Supply and deliver to site Z-Type steel sheet piles (Sx = 4,228 cm3/m, Steel grade = S355) including additional pile connector**

The quantity to be paid for shall be the actual weight in metric ton of Z-Type steel sheet piles (Sx = 4,228 cm3/m, Steel grade = S355) including additional pile connector to be 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 **Supply and install dowel bars for steel sheet piles**

The quantity to be paid for shall be the actual weight in kilogram of dowel bars for steel sheet piles 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 3.03 **Handle, pitch and drive z-type steel sheet piles**

The quantity to be paid for shall be the actual length in linear meter of z-type steel sheet piles to be handled, pitched, and driven 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 **Supply and install steel waling and splice plate for the steel sheet piles**

The quantity to be paid for shall be the actual weight in kilogram of steel waling and splice plate for the steel sheet piles 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 3.05 **Supply and place 3,500 psi concrete for the retaining wall, anchor block, RC curb, pile caps, mooring block and fendering block, drainage and electrical works**

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi. concrete to be supplied and placed for the retaining wall, anchor block, RC curb, pile caps, mooring block and fendering block, drainage and electrical works 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 3.06 **Supply and install steel reinforcement for the retaining wall, anchor block, RC curb, pile caps, mooring block and fendering block, drainage and electrical works**

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcement to be supplied and installed for the retaining wall, anchor block, RC curb, pile caps, mooring block and fendering block, drainage and electrical works 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 **Supply and place gravel bedding**

The quantity to be paid for shall be the actual volume in cubic meter of gravel bedding to be supplied and placed 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 **Supply, fabricate and install concrete blocks including lifting bars (3.50 m x 1.00 m x 1.00 m)**

The quantity to be paid for shall be the actual number in set of concrete blocks including lifting bars (3.50 m x 1.00 m x 1.00 m) 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 3.09 **Supply and place 50-100 kg. core rocks**

The quantity to be paid for shall be the actual volume in cubic meter of 50-100 kg. core rocks to be supplied and set-in placed in accordance with the plans and specifications and accepted by the Engineer. Hydrographic/Topographic Surveys before and after placing of core rocks shall be made to determine the actual elevations along the cross sections and the actual quantities for payment. Volume due to settlement as established using settlement plates shall also be considered for payment. 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 1000 kg. armour rocks**

The quantity to be paid for shall be the actual volume in cubic meter of 1000 kg. armour rocks to be supplied and set-in placed, in accordance with the plans and specifications and accepted by the Engineer. Hydrographic/Topographic Surveys before and after placing of armour rocks shall be made to determine the actual elevations along the cross sections and the actual quantities for payment. Volume due to settlement as established using settlement plates shall also be considered for payment. 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 tie-rod including accessories**
a.) 44mm Ø x 15.00m

The quantity to be paid for shall be the actual number in set of tie rod (44mm Ø x 15.00m) including accessories 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 3.12 Supply and install geotextile fabric

The quantity to be paid for shall be the actual area in square meter of geotextile fabric, 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 3.13 Supply and place sand and gravel fill

The quantity to be paid for shall be the actual volume in cubic meter of sand and gravel fill, supplied and set-in-place in accordance with the plans and specifications and accepted by the Engineer. Hydrographic/Topographic Surveys before and after placing of sand and gravel fill shall be made to determine the actual elevations along the cross sections and the actual quantities for payment. Volume due to settlement as established using settlement plates shall also be considered for payment. 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, spread, and compact aggregate sub-base course

The quantity to be paid for shall be the actual volume in cubic meter of aggregate sub-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 3.15 Supply, spread, and compact aggregate base course

The quantity to be paid for shall be the actual volume in cubic meter of aggregate 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 3.16 Construct portland cement concrete pavement (300mm thick) including dowel bars and construction joint

The quantity to be paid for shall be the actual area in square meter of portland cement concrete pavement (300mm thick) including dowel bars and construction joint, to be 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 3.17 Supply and lay 600mm dia. reinforced concrete pipe including accessories

The quantity to be paid for shall be the actual length in linear meter of 600 mm dia. reinforced concrete pipe including accessories to be supplied and laid 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 3.18 Construct catch drain manhole including accessories

The quantity to be paid for shall be the actual number of catch drain manhole including accessories to be 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 3.19 Supply, deliver and install port lighting system including relocation of existing lamp posts

The quantity to be paid for shall be the actual lot of port lighting system to be supplied, delivered and installed, including relocation of existing lamp posts 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 3.20 Supply deliver and install wastewater treatment facility including testing, commissioning, civil works and other accessories

The quantity to be paid for shall be the actual lot of wastewater treatment facility including testing, commissioning, civil works and other 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.

BILL NO. 4

CONSTRUCTION OF R.C. PLATFORM

Item 4.01 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 450mm x 450mm PSC piles to be 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 4.02 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 to be handled, pitched, and driven 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 Handle, pitch and drive 450mm x 450mm PSC Batter piles

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mm PSC Batter piles to be handled, pitched, and driven 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 Chip/cut and dispose portion of newly driven PSC piles

The quantity to be paid for shall be the actual number of portion of newly driven PSC piles to be chipped/ cut, including proper disposal of debris 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 Supply and place 3,500 psi concrete for superstructures

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete to be supplied and placed for superstructures 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 4.06 Supply and install steel reinforcement for superstructures

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcement to be supplied and installed for superstructures 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 4.07 Supply and install construction joints (BWT 100 x12) angle bar, hot-dipped galvanized including dowel bars

The quantity to be paid for shall be the actual length in linear meter of construction joints (BWT 100 x12) angle bar, hot-dipped galvanized including dowel bars 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 4.08 Supply and deliver to site mooring bollard (35 Tons, T-head) including accessories

The quantity to be paid for shall be the actual number in set of mooring bollard (35 Tons, T-head) including accessories to be 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 4.09 Install mooring bollards (T-head type) and accessories

The quantity to be paid for shall be the actual number in set of mooring bollards (T-head type) and accessories to be 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

CONSTRUCTION OF RORO RAMPS (4 UNITS)

Item 5.01 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 450mm x 450mm PSC piles to be 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 5.02 Handle, pitch and drive 450mm x 450mm PSC Batter piles

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mm PSC Batter piles to be handled, pitched, and driven 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 Chip/cut and dispose portion of newly driven PSC piles

The quantity to be paid for shall be the actual number of portion of newly driven PSC piles to be chipped/ cut, including proper disposal of debris 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 5.04 Supply and place 3,500 psi concrete for superstructures

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete to be supplied and placed for superstructures 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 5.05 Supply and Install steel reinforcement for superstructures

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcement to be supplied and installed for superstructures 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 Supply and Install construction joints (100mmx100mmx10mm) angle bar, hot-dipped galvanized including dowel bars

The quantity to be paid for shall be the actual length in linear meter of construction joints (100mmx100mmx10mm) angle bar, hot-dipped galvanized including dowel bars 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 5.07 **Supply and install WT steel ramp protection (ASTM A572, Grade 50) including accessories**

The quantity to be paid for shall be the actual set of WT steel ramp protection (ASTM A572, Grade 50) including accessories 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 5.08 **Supply and deliver to site rubber dock fenders (V-type, 500H x 1,500L) including accessories**

The quantity to be paid for shall be the actual number in set of rubber dock fenders (V-type, 500H x 1,500L) including accessories to be 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 5.09 **Install rubber dock fenders and accessories**

The quantity to be paid for shall be the actual number in set of rubber dock fenders and accessories to be 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

CONSTRUCTION OF R.C PIER WITH BREAKWATER PILES

Item 6.01 **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 450mm x 450mm PSC piles to be 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 6.02 **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 to be handled, pitched, and driven 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 6.03 **Handle, pitch and drive 450mm x 450mm PSC Batter piles**

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mm PSC Batter piles to be handled, pitched, and driven 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 6.04 Chip/cut and dispose portion of newly driven PSC piles

The quantity to be paid for shall be the actual number of portion of newly driven PSC piles to be chipped/ cut, including proper disposal of debris 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 6.05 Supply and place 3,500 psi concrete for superstructures

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi concrete to be supplied and placed for superstructures 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 6.06 Supply and install steel reinforcement for superstructures

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcement to be supplied and installed for superstructures 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 6.07 Supply and install construction joints (100mmx100mmx10mm) angle bar, hot-dipped galvanized including dowel bars

The quantity to be paid for shall be the actual length in linear meter of construction joints (100mmx100mmx10mm) angle bar, hot-dipped galvanized including dowel bars 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 6.08 Supply and deliver to site rubber dock fenders (V-type, 500H x 1,500L) including accessories

The quantity to be paid for shall be the actual number in set of rubber dock fenders (V-type, 500H x 1,500L) including accessories to be 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 6.09 Install rubber dock fenders and accessories

The quantity to be paid for shall be the actual number in set of rubber dock fenders and accessories to be 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 6.10 Supply and deliver to site mooring bollard (35 Tons, T-head) including accessories

The quantity to be paid for shall be the actual number in set of mooring bollards (35 Tons, T-head) including accessories to be 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 6.11 Install mooring bollards (T-head type) and accessories

The quantity to be paid for shall be the actual number in set of mooring bollards (T-head type) and accessories to be 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. 7

CONSTRUCTION OF FENCE, GATE, PUMPHOUSE AND GUARDHOUSE

Item 7.01 Supply and apply soil treatment

The quantity to be paid for shall be the actual area in square meter of surfaces to be supplied and applied with soil treatment in accordance with the plans and specifications 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 7.02 Subgrade preparation

The quantity to be paid for shall be the actual area in square meter of subgrade preparations undertaken 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 7.03 Supply, spread, and compact aggregate sub-base course

The quantity to be paid for shall be the actual volume in cubic meter of aggregate sub-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 7.04 Supply, place, and compact gravel bedding

The quantity to be paid for shall be the actual volume in cubic meter of gravel bedding 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 7.05 Supply and place 3,500 psi. concrete for building structure

The quantity to be paid for shall be the actual volume in cubic meter of 3,500 psi. concrete for building structure, 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 7.06 Supply and install steel reinforcements for building structure (Grade 40)

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcements (Grade 40) to be supplied and installed for building structure, in accordance with the plans and specifications 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 7.07 Supply and install steel reinforcements for building structure (Grade 60)

The quantity to be paid for shall be the actual weight in kilogram of steel reinforcements (Grade 60) to be supplied and installed for building structure, in accordance with the plans and specifications 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 7.08 Construct 3,500 psi concrete slab, stairs and ramp on-fill including reinforcement

The quantity to be paid for shall be the actual area in square meter of 3,500 psi. concrete slab, stairs and ramp on-fill including reinforcements, to be 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 7.09 Supply, fabricate and install steel framing gate including accessories and metal corrosion protection

The quantity to be paid for shall be the actual weight in kilogram of steel framing gate including accessories and metal corrosion protection, 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 7.10 Construct 150 mm thick CHB wall including reinforcement

The quantity to be paid for shall be the actual area in square meter of 150 mm thick CHB wall including reinforcement, to be 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 7.11 Supply and place 13mm thick cement plaster finish

The quantity to be paid for shall be the actual area in square meter of 13mm thick cement plaster 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 7.12 Supply and place Elastomeric paint (2 coats)

The quantity to be paid for shall be the actual area in square meter of Elastomeric paint (2 coats) 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 7.13 Supply and place Flat latex paint (2 coats)

The quantity to be paid for shall be the actual area in square meter of Flat latex paint (2 coats) 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 7.14 Supply and apply Quick drying enamel paint (2 coats)

The quantity to be paid for shall be the actual area in square meter of Quick drying enamel paint (2 coats) to be 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 7.15 Supply and apply waterproofing

The quantity to be paid for shall be the actual area in square meter of waterproofing to be 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 7.16 Supply and Install Aluminum composite panels and accessories

The quantity to be paid for shall be the actual area in square meter of Aluminum composite panels and accessories, 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 7.17 Supply and install 0.6m x 0.6m Unglazed Ceramic Floor Finish

The quantity to be paid for shall be the actual area in square meter of 0.6m x 0.6m Unglazed Ceramic Floor Finish, 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 7.18 Supply and place Rough cement finish

The quantity to be paid for shall be the actual area in square meter of Rough cement 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 7.19 Supply and install 0.3m x 0.6m Ceramic wall tiles

The quantity to be paid for shall be the actual area in square meter of 0.3m x 0.6m Ceramic wall tiles 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 7.20 Supply and install stone cladding including accessories

The quantity to be paid for shall be the actual area in square meter of stone cladding including accessories 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 7.21 Supply and install PVC ceiling including accessories

The quantity to be paid for shall be the actual area in square meter of PVC ceiling including accessories 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 7.22 Supply and install 12mm thick Gypsum board on 0.40mm thick Galvanized Steel Ceiling Suspension System at 0.40m O.C. (Furring), 0.60m O.C. (Carrying Channel), and suspension rod

The quantity to be paid for shall be the actual area in square meter of 12mm thick Gypsum board on 0.40mm thick Galvanized Steel Ceiling Suspension System @ 0.40m O.C. (Furring), 0.60m O.C. (Carrying Channel), and suspension rod, 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 7.23 Supply and install fabricated Marine Plywood Finish Flush Doors, and PVC Louver Door including door jambs, hinges, lockset and other accessories

The quantity to be paid for shall be the actual lot of fabricated Marine Plywood Finish Flush Doors, and PVC Louver Door including door jambs, hinges, lockset and other accessories, 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 7.24 Supply and install fabricated powder coated aluminum windows including accessories

The quantity to be paid for shall be the actual lot of works required in the supply and installation of fabricated powder coated aluminum windows including accessories 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 7.25 Supply and install toilet fixtures and accessories

The quantity to be paid for shall be the actual lot of works required in the supply and installation of toilet fixtures and accessories 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 7.26 Supply and install water line pipes and fittings including accessories

The quantity to be paid for shall be the actual lot of works required in the supply and installation of water line pipes and fittings including accessories, 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 7.27 Supply and install sewerage pipes and fittings including accessories

The quantity to be paid for shall be the actual lot of works required in the supply and installation of sewerage pipes and fittings including accessories, 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 7.28 Supply and install drainage pipes and fittings including accessories

The quantity to be paid for shall be the actual lot of works required in the supply and installation of drainage pipes and fittings including accessories, 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 7.29 Construct septic vault including fittings and accessories

The quantity to be paid for shall be the actual number of septic vault including fittings and accessories to be 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 7.30 Construct catch basin and accessories

The quantity to be paid for shall be the actual number of catch basin and accessories to be 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 7.31 Construct perimeter fence (CHB)

The quantity to be paid for shall be the actual length in linear meter of perimeter fence (CHB) to be 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 7.32 Construct pumphouse including appurtenances

The quantity to be paid for shall be the actual lot of works required in construction of pumphouse including appurtenances 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 7.33 Construct guard outpost

The quantity to be paid for shall be the actual lot of works required in construction of guard outpost 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 7.34 Supply, deliver and install electrical materials

The quantity to be paid for shall be the actual lot of works required in supply, delivery and installation of electrical materials 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 7.35 Supply and deliver office furniture

The quantity to be paid for shall be the actual lot of works required in supply and delivery of office furniture 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 7.36 Supply, deliver and install PPA Logo including accessories

The quantity to be paid for shall be the actual lot of works required in supply, delivery and installation of PPA Logo including accessories 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 7.37 Reconstruct portion of the demolished PCCP for the guardhouse, guard outpost, pumphouse, fence, drainage and electrical works

The quantity to be paid for shall be the actual area in square meter of portion of the demolished PCCP for the guardhouse, guard outpost, pumphouse, fence, drainage and electrical works to be reconstructed 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.

FACILITIES TO BE PROVIDED FOR THE ENGINEER & HIS STAFF

RENTAL OF SITE OFFICE AND RESIDENCE FOR THE ENGINEER & STAFF

The Contractor shall provide a temporary site office and residence (rental) with an area of at least 48 square meters for use of the Engineer and his staff for the whole duration of the project.

MINIMUM MAJOR EQUIPMENT REQUIREMENTS

2	unit/s	Air Compressor (250 cfm, minimum), owned
1	unit/s	Backhoe (0.50 cu.m., 94.30hp, minimum), owned
1	unit/s	Clamshell, owned
1	unit/s	Concrete cutter, owned
1	unit/s	Concrete Mixer (1 bagger, minimum), owned
1	unit/s	Concrete bucket, owned
1	unit/s	Concrete Screeder, owned
2	unit/s	Concrete Vibrator (3.5 hp, minimum), owned
1	unit/s	Crane Barge (319 GW, minimum) with 60T crane, owned/leased
1	unit/s	Crawler Crane (30T, minimum), owned/leased
1	unit/s	Pile Hammer (Diesel, 10,500 kg.m.), owned/leased
1	unit/s	Pile Hammer (Diesel, 7,500 kg.m., min. -13,500 kg.m, max. or hydraulic equivalent), owned/leased
4	unit/s	Diving equipment (complete), owned/leased
1	unit/s	Drop Hammer (2T, minimum), owned
1	unit/s	Dump Truck (10T net Capacity, minimum), owned
2	unit/s	Bar Bender (electric, 25mm dia min.), owned
2	unit/s	Bar Cutter (electric, 25mm dia min.), owned
2	unit/s	Jackhammer, owned
2	unit/s	Jackhammer (U/W), owned/leased
2	unit/s	Oxy/Acetylene cutting outfit, owned
1	unit/s	Payloader (110 hp, minimum), owned
1	unit/s	Plate Compactor (5 hp, minimum), owned
1	unit/s	Road Grader (125 hp, minimum), owned/leased
1	unit/s	Road Roller (10T, vibratory, minimum), owned/leased
1	unit/s	Transit Mixer (10 tons net capacity, minimum), owned/leased
1	unit/s	Tugboat (500hp, minimum), owned/leased
2	unit/s	U/W cutting equipment, owned/leased
1	unit/s	Water Truck with pump (1,000 gal., minimum), owned
1	unit/s	Welding Machine (400 amp., minimum), owned
1	unit/s	Cargo Truck (2T capacity, minimum.), owned
1	unit/s	Backhoe Breaker Attachment, owned/leased

CONSTRUCTION SAFETY AND HEALTH REQUIREMENT

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:

L A B O R

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

EQUIPMENT / MATERIALS

Personnel Protective Equipment

77	pcs.	Hard Hats
77	pcs.	Gloves (rubberized)
77	pcs.	Safety Glasses/Goggles (clear)
154	pcs.	Long sleeve T-shirt
4	pcs.	Aprons
8	pc.	Safety Belts
77	pairs	Safety Shoes
8	pc.	Life Lines

Safety Devices

1	lot	Barricades
1	lot	Warning signs (Signages)
2	unit/s	Fire extinguisher (10kg)

Medical and First Aid System - Twenty-Four (24) mos.

NOTE:

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

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

Materials/Items of Work	*Required Tests*	*Minimum Incremental Frequency of Tests*
I. Construction of Pier/Wharf, Platform and Ramp		
Structural Concrete (SC)		
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
Piling (P)		
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

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)	
	- Under 14" (355 60mm) Outside Diameter	2 from 200 pipe of fraction thereof
	- 14" to 36" (355 6 to 914mm) Outside Dia	2 from 100 pipe or fraction thereof
	- Over 36" (914mm) Outside Diameter	2 from 3000ft (914m) or fraction thereof
	Mechanical/Tensile	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	All units
	Performance Test for Energy Absorption and Reaction Force	All units
Accessories		
Washer and Fixing Bolt, Anchor Bolt	Physical Test	All units
	Quality Test for Chemical Composition and Mechanical Properties	One per fabrication

Materials/Items of Work	***Required Tests***	***Minimum Incremental Frequency of Tests***
Mooring Bollard (MB) and Accessories (Hexagon Nuts, Plain Washer, Anchor Ring and Anchor Bolt)	Physical Test Quality Test for Chemical Composition and Mechanical Properties	All Units One per fabrication
II. Construction of Back-Up Area, Causeway and Pavement		
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 Coase 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)

Materials/Items of Work	*Required Tests*	*Minimum Incremental Frequency of Tests*
Rocks	Test for Apparent Specific Gravity and Abrasion	For every 1,500 cubic meter or fraction thereof
Geotextile Filter	Physical and Mechanical Test	One per batch
	Mill Certificate	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	For every 1,500 cubic meter or fraction thereof
	Laboratory California Bearing Ratio (CBR)	For every 2,500 cubic meter or fraction thereof
	Field Density Test	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	For every 300 cubic meter or fraction thereof
	Quality Test for Grading, Plasticity, Abrasion and Laboratory Compaction Test	For every 1,500 cubic meter or fraction thereof
	Laboratory California Bearing Ratio (CBR)	Same frequency as Selected Fill
	Field Density Test	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

Materials/Items of Work	***Required Tests***	***Minimum Incremental Frequency of Tests***
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)	Same frequency as SC (F)
	Flexural Test	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 Ditch/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)

Materials/Items of Work	*Required Tests*	*Minimum Incremental Frequency of Tests*
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) 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	All units
	Coating Thickness Magnetic Thickness Measurement	1 set (3 specimen) for every 100,000 sq mm or fraction thereof

Materials/Items of Work	***Required Tests***	***Minimum Incremental Frequency of Tests***
Sacked Concrete		
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
Rubble Concrete		
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
Earthworks		
A Sub-grade preparation	Grading Test Plasticity Test (LL,PL,PI) Laboratory Compaction Test	For every 1,500 cubic meter or fraction thereof
	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
B Structure Excavation	If excavated materials shall be used as Backfill Grading Test Plasticity Test (LL,PL,PI) Laboratory Compaction Test	For every 1,500 cubic meter or fraction thereof
	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

Materials/Items of Work	*Required Tests*	*Minimum Incremental Frequency of Tests*
III Port Operations Building/Passenger Terminal Building/Transit Shed/Warehouse		
STRUCTURAL WORKS	Refer to Structural Concrete (SC) and Piling Works (P)	
ARCHITECTURAL WORKS		
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
ELECTRICAL AND MECHANICAL WORKS		
Wires / Cables	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per shipment
Electrical Devices	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per shipment
Fire Alarm System	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
Wiring Devices	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per shipment

Materials/Items of Work	Required Tests	Minimum Incremental Frequency of Tests
Protective Devices	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per shipment
Telephone System	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
CCTV System	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
CATV System	Inspection and Evaluation Report from the Engineer 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 Testing and Commissioning	One per item
Conduit Pipes	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
Lighting Fixtures	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item
PLUMBING WORKS		
Pipes	Inspection and Evaluation Report from the Engineer Testing and Commissioning	One per item

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

BID RELATED FORMS

SECTION IX – BID RELATED FORMS

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Bid Form for the Procurement of Infrastructure Projects

[shall be submitted with the Bid]

BID FORM

Date : _____
Project Identification No. : _____

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

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental Bid Bulletin Numbers _____, the receipt of which is hereby duly acknowledged, we, the undersigned, declare that:

a. I/We have no reservation to the PBD, including the Supplemental Bid Bulletins, for the Procurement Project: **Pio Duran Port Expansion and Rehabilitation Project, Port of Pio Druan, Pio Duran, Albay;**

b. I/We offer to execute the Works for this Contract in accordance with the PBD;

c. The total price of our Bid in words and figures, excluding any discount offered below, is: _____;

d. The discounts offered and the methodology for their application, if any, are: _____;

e. The total bid price in words and figures, after applying the applicable discount, includes the cost of all taxes, such as, but not limited to[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties], which are itemized in the Detailed Estimates.

f. This Bid shall remain valid within a period stated in the PBD, and it shall be binding upon me/us at any time before the expiration of that period;

g. If our bid is accepted, I/we commit to enter to a contract and provide a performance security in the form, amounts, and within the times prescribed in the PBD, and hereby acknowledge the consequences under the IRR of RA No. 12009 on forfeiture of Bid Security or enforcement of Bid Securing Declaration and on Blacklisting;

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon the Bidder.

I/We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

I/We certify/confirm that we comply with the eligibility requirements pursuant to the PBD.

The undersigned is authorized to submit the bid on behalf of **[Name of the Bidder]** as

evidenced by the attached *[State the Written Authority]*.

I/We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.

Duly authorized to sign the Bid for and behalf of:

[Insert Bidder's Name]

[Signature over Printed Name]
[Position/Designation]

[Date]

Contract Form

[not required to be submitted with the Bid, but it shall be submitted within ten (10) days after receiving the Notice of Award]

CONTRACT FOR [INSERT PROJECT TITLE]

THIS CONTRACT executed on the _____ day of _____ 20_____ between:

Philippine Ports Authority, a government agency of the Republic of the Philippines, hereinafter called "the Entity";

-and-

[Name of Contractor], Filipino of legal age or a company duly organized and existing under the laws of **[city and country]**, with principal office at **[name and address of Contractor]**, hereinafter called "the Contractor".

WHEREAS, the Entity invited Bids for certain goods and ancillary services, particularly *[Brief description of Project]*;

WHEREAS, the Contractor submitted a responsive bid and was awarded the contract for the procurement in the total amount of **[contract price in words and figures in specified currency]**, hereinafter referred to as the "Contract Price."

NOW, THEREFORE, for and in consideration of the foregoing premises, the parties hereby agree as follows:

1) Unless otherwise stated, terms and expressions used in this Contract shall have the same meanings as those assigned to them in the Conditions of Contract, which form an integral part of this Contract.

2) The following documents as required by the Implementing Rules and Regulations of Republic Act No. 12009 shall be deemed to form and be read and construed as integral part of this Contract, *viz.*:

   a) Philippine Bidding Documents (PBD);

      i. Drawings/Plans;
      ii. Scope of Work;
      iii. Invitation to Bid;
      iv. Instructions to Bidders;
      v. Bid Data Sheet;
      vi. Bid Form, including all the documents/statements contained in the Bidder's bidding envelopes, as annexes, and all other documents submitted (e.g., Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;
      vii. Bill of Quantities;
      viii. General and Special Conditions of Contract;
      ix. Supplemental Bid Bulletins, if any; and
      x. Other contract documents that may be required by existing laws and/or the Entity.

   b) Winning bidder's bid, including the Eligibility Requirements, Technical and Financial Proposals, and all other documents or statements submitted;

c) Performance Security;

d) Notice of Award of Contract; and the Bidder's Conforme thereto; and

e) Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBD, such as but not limited to the Notice to Proceed and Warranty Security.

3) In consideration of the Contract Price of **[total contract price in words and figures]**, or such other sums as may be determined in accordance with the terms of the Contract, the Supplier agrees to deliver and perform the items and related services for the **[Project Title]** described herein in accordance with the terms and conditions specified in the Contract and its annexed documents.

4) The **Philippine Ports Authority** agrees to pay the above-mentioned sum to the Supplier in accordance with the schedule and manner provided in the Bidding Documents and its annexes.

5) Any dispute, difference, or claim arising out of or relating to this Contract, including its existence, validity, interpretation, breach, or termination thereof, may be submitted to arbitration or other form of alternative dispute resolution in accordance with the applicable law, such as Republic Act (RA) No. 9285 (Alternative Dispute Resolution Act of 2004) or Executive Order No 1008, series 1985 (Construction Industry Arbitration Law).

IN WITNESS WHEREOF, the parties hereto have caused this Contract to be executed in accordance with the laws of the Republic of the Philippines on the day and year first above written

For the Procuring Entity Head of the Procuring Entity or Duly Authorized Representative	*For the Bidder* Duly authorized to sign the Contract for and behalf of *[Bidders Name]*:
[Signature over Printed Name][Position/Designation] *[Date]*	*[Signature over Printed Name]* *[Position/Designation]* *[Date]*
[Name and Signature] *Witness – Procuring Entity*	*[Name and Signature]* *Witness- Supplier*

ACKNOWLEDGMENT

BEFORE ME, A Notary Public for and in the _____, City/Province of _____, this _____ day of _____, 20_____, personally appeared the above-named persons who have satisfactorily proven to me their identity, through their identifying documents written below their names and signatures, that they are the same persons who executed and voluntarily signed the foregoing instrument consisting of ____ pages, including this page where this Acknowledgement is written, which they acknowledged before me as their free and voluntary act and deed.

WITNESS MY HAND AND SEAL this ___ day of *[month] [year].*

NAME OF NOTARY PUBLIC
Notarial Commission No. _____
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 Sole Proprietorship

[Note: The duly accomplished form shall be submitted with the Bid]

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

OMNIBUS SWORN STATEMENT

I, _____, of legal age, [Civil Status], [Nationality], and with residence at _____, 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 _____ with office address at _____;

2. As the owner and sole proprietor or authorized representative of _____, 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 **Pio Duran Port Expansion and Rehabilitation Project, Port of Pio Druan, Pio Duran, Albay** of the **Philippine Ports Authority**, [insert "as supported by the attached duly notarized Special Power of Attorney" for 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; by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity;

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 **[Name of Bidder]** and its spouse are not related by consanguinity or affinity up to the third civil degree to the Head of the Procuring Entity, Procurement Agent (if engaged), End-User or Implementing Unit, project consultants, head of the Project Management Office, or the members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat;

7. It is understood that failure to faithfully disclose its relationship with the HoPE, members of the BAC, the TWG, and the BAC Secretariat, the head of the PMO or the end-user unit or implementing unit, and the project consultants of the Procuring Entity, or of the procurement agent by consanguinity or affinity up to the third civil degree, as well as its submission of beneficial ownership information containing false entries shall be subject to blacklisting under Section 100 of the IRR of RA No. 12009, without prejudice to criminal and civil liabilities under applicable laws, including their accessory penalties, if any.

8. **[Name of Bidder]** complies with existing labor laws and standards; and

9. **[Name of Bidder]** is aware of and has undertaken the following responsibilities as a Bidder:

a. Carefully examine all of the Bidding Documents;
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 [Project Title].

10. *[**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.

11. In case advance payment was made or given to **[Name of Bidder]**, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability under existing laws.

IN WITNESS WHEREOF, I have hereunto set my hand this __ day of ___, 20__ at _____, Philippines.

Duly authorized to sign the Bid for and behalf of:

_____
[Bidder's Name]

[Affiant's Signature over Printed Name]
[Position/Designation]
[Date]

JURAT

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
Notarial Commission No. _____
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, Corporation, Cooperative, or Joint Venture

[Note: The duly accomplished form shall be submitted with the Bid]

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

OMNIBUS SWORN STATEMENT

I, _____, of legal age, [Civil Status], [Nationality], and with residence at _____, 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 _____ 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 **Pio Duran Port Expansion and Rehabilitation Project, Port of Pio Druan, Pio Duran, Albay** of the **Philippine Ports Authority**, as supported by the attached 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; by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity;

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. Select one, delete the others:

    - *If partnership*: The partnership itself and the partners of [Name of Bidder] are not related by consanguinity or affinity up to the third civil degree to the Head of the Procuring Entity, Procurement Agent (if engaged), End-User or Implementing Unit, project consultants, head of the Project Management Office, or the members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat;

    - *If cooperative:* The cooperative itself and members of the board of directors, general manager, or chief executive officer of [Name of Bidder] are not related by consanguinity or affinity up to the third civil degree to the Head of the Procuring Entity, Procurement Agent (if engaged), End-User or Implementing Unit, project consultants, head of the Project Management Office, or the members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat;

    - *If corporation, or joint venture:* The corporation or joint venture itself, and officers, directors, and controlling stockholders of [Name of Bidder] are not related by

consanguinity or affinity up to the third civil degree to the Head of the Procuring Entity, Procurement Agent (if engaged), End-User or Implementing Unit, project consultants, head of the Project Management Office, or the members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat;

7. It is understood that failure to faithfully disclose its relationship with the HoPE, members of the BAC, the TWG, and the BAC Secretariat, the head of the PMO or the end-user unit or implementing unit, and the project consultants of the Procuring Entity, or of the procurement agent by consanguinity or affinity up to the third civil degree, as well as its submission of beneficial ownership information containing false entries shall be subject to blacklisting under Section 100 of the IRR of RA No. 12009, without prejudice to criminal and civil liabilities under applicable laws, including their accessory penalties, if any.

    - *In case of corporations:* **[Name of Bidder]** declares its beneficial ownership information consistent with its updated General Information Sheet or Beneficial Ownership Declaration Form or any other document duly submitted to the SEC and has maintained a valid and updated file therein in compliance with Sections 20.2.9.1, 81, and 82 of the IRR of Republic Act (RA) No. 12009.

8. **[Name of Bidder]** complies with existing labor laws and standards; and

9. **[Name of Bidder]** is aware of and has undertaken the following responsibilities as a Bidder:

    a. Carefully examine all of the Bidding Documents;
    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 [Project Title].

10. **[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.

11. In case advance payment was made or given to **[Name of Bidder]**, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability under existing laws.

IN WITNESS WHEREOF, I have hereunto set my hand this __ day of ___, 20__ at _____, Philippines.

Duly authorized to sign the Bid for and behalf of:

[Insert Bidder's Name]

[Affiant's Signature over Printed Name]
[Position/Designation]
[Date]

JURAT

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
Notarial Commission No. _____
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 _____.

Bid Securing Declaration Form

[The duly accomplished form shall be submitted with the Bid if bidder opts to provide this type of bid security]

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.

BID SECURING DECLARATION

Project Identification No.: _____

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

I/We, the undersigned, declare that:

1. I/We 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 shall enter into contract with the Procuring Entity and furnish the required performance security within ten (10) calendar days as indicated in the Bidding Documents, from receipt of the Notice of Award;

   b. I/we will be automatically disqualified from bidding for any procurement contract with any Procuring Entity upon receipt of your Blacklisting Order; and

   c. I/We will pay the applicable fine within fifteen (15) days from receipt of the written demand by the Procuring Entity for the commission of acts resulting to the enforcement of the Bid Securing Declaration under Sections 52.2 (a), 63.2, 69.1 and 100, except 100.3 (c), of the IRR of RA No. 12009; without prejudice to other legal action the government may undertake;

	Applicable Fine
a) in the case of a single bidder	i) two percent (2%) of the Approved Budget for the Contract (ABC); or ii) the difference between the evaluated bid price and the ABC whichever is higher
b) in the case of multiple bidders	i) two percent (2%) of the ABC; or ii) the difference between the evaluated bid prices with the bidder with Lowest Calculated/Highest Rated Bid and the bidder with the next Lowest Calculated/Highest Rated Bid,

	and so on whichever is higher
c) in case of violations committed prior to the opening of the financial envelope	i) a fixed amount of two percent of the ABC,

3. I/We 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/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right; and
   c. I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this ____ day of *[month] [year]* at *[place of execution]*.

Duly authorized to sign the Bid for and behalf of:

[Insert Bidder's Name]

[Signature over Printed Name]
[Position/Designation]
[Date]

JURAT

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
Notarial Commission No. _____
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 _____

STATEMENT OF THE BIDDER'S ALL ONGOING GOVERNMENT AND PRIVATE CONTRACTS, INCLUDING CONTRACTS AWARDED BUT NOT YET STARTED

I hereby declare that all ongoing contracts, including awarded contracts yet to be started coinciding with the contract to be bid are listed below:

Name of outstanding Contracts 1]	Owner's Name and Address	Scope of Work 2]	Contractor's Role and Percentage of Participation 3]	Total Contract Amount or Value 4]	Date of Contract and NOA 5]	Value of Outstanding Works 6]	Accomplishment (in percentage, %) 7]		Contract Duration 8]	
							Planned	Actual	Start of Project	Estimated Completion Date
A) Government Contracts										
i. On-going										
ii. Awarded but not yet started										
B) Private Contracts										
i. On-going										
ii. Awarded but not yet started										

NOTE:

1] As appearing in the contract executed by the parties.
2] With special reference to the Scope of Works of the Project as described/enumerated in the Contract.
3] Indicate the percentage of participation and 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.
5] As appearing in the Contract and Notice of Award (NOA).
6] Amount or 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.
7] Percentage of Accomplishment as of the preceding month which should not be earlier than two (2) months from the date of bid submission.
8] As appearing in the Notice to Proceed and Contract.

This Statement shall be supported by:

a) Notice of Award
b) Notice to Proceed and Contract

Name of Firm	Name of Bidder/Authorized Representative (Signatory's Legal Capacity)	Date

Revised: September 2021

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

Name of the completed Contract 1]	Owner's Name and Address	Scope of Work 2]	Contractor's Role and Percentage of Participation 3]	Total Contract Value At 4]			Date of Award 5]	Contract Duration 6]	
				Award	Completion	Escalated Value to Present Prices		Start	Completed

NOTE :

1] As appearing in the contract executed by the parties.
2] With special reference to the Scope of Works of the Project as described/enumerated in the Contract.
3] Indicate the percentage of participation and 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. Attached the computation for the escalated contract value.
5] As appearing in the Notice of Award.
6] As appearing in the Notice to proceed and Certificate of Completion.

A. The Bidder must have completed an SLCC that is similar to the procurement project to be bid, and whose value must be equivalent to at least fifty percent (50%) of the ABC, adjusted to current prices using the Philippine Statistics Authority (PSA) consumer price indices. A contract is considered to be "similar" to the contract to be bid if it has the same Major Categories of Work as stated in the Bid Data Sheet (BDS).
B. This Statement shall be supported by:
   a. Notice of Award, Notice to Proceed and Contract.
   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. The said Certificate of Acceptance shall contain the following: 1) Name of project owner that issued the certificate, 2) Name of Contractor/ Constructor, 3) Name of Contract, and 4) Contract Duration.
   c. Recapitulation or Final Bill of Quantities.

Name of Firm	Name of Bidder/Authorized Representative (Signatory's Legal Capacity)	Date

Revised: September 2026

STATEMENT OF THE BIDDER'S EXPERIENCE ON SIMILAR CATEGORIES OF WORK INCLUDING OTHER COMPLETED CONTRACTS SIMILAR TO THE CONTRACT TO BE BID

Work Description	Unit of Measure	Quantity	SLCC similar to the contract to be bid 1]	Other completed contracts similar to the contract to be bid 1]			Unit of Measure 1]	Quantity 1]
			Name of the contract	Name of the contract	Name of the contract	Name of the contract		
Similar Category of Work:								
1. Pile Driving works (Offshore)	l.m.	7,019						
2. Reinforced Concrete works	cu.m	1,072						
3. Placing of fill materials	cu.m	12,726						
Other Qualifying Experience Requirement:								
4. Rockworks (50-1000 kg/pc)	cu.m.	3,714						
5. Construct Portland Cement Concrete Pavement (PCCP)	sq.m	3,081						

NOTE:
1] As appearing in the Recapitulation and/ or Final Bill of Quantities.
This statement shall be supported by:

a. Notice of Award, Notice to Proceed and Contract.
b. Project Owner's Certificate of Final Acceptance issued by the project owner other than the Contractor or Constructors Performance Evaluation System (CPES) Final Rating, of at least satisfactory. The said Certificate of Acceptance shall contain the following: 1) Name of project owner that issued the certificate, 2) Name of Contractor/Constructor, 3) Name of Contract, and 4) Contract Duration.
c. Recapitulation and/ or Final Bill of Quantities.

Name of Firm	Name of Bidder/Authorized Representative Signatory's Legal Capacity	Date

Revised: September 2026

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 procurement project 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.

STATEMENT OF THE BIDDER'S KEY PERSONNEL PLEDGED FOR THE CONTRACT TO BE BID

I hereby declare that the following key personnel are qualified and available for the duration of the contract to be bid:

Position of Key Personnel 1]	Name	No. of Key Personnel	Similar Experience in the Position (Years) 2]	Total Experience in the Position (Years)	Attachment(s)	Annex(es)
Project Manager					PRC License (CE Preferred) Complete Qualification and Experience Data Certificate of Commitment	Annex "_"
Project Engineer					PRC License (CE Preferred) Complete Qualification and Experience Data Certificate of Commitment	Annex "_"
Materials Engineer II					PRC License (CE Preferred) Submit Valid and Renewed DPWH Certificate of Accreditation Submit Accreditation Identification Card as Materials Engineer Complete Qualification and Experience Data Certificate of Commitment	Annex "_"
Construction Safety and Health Officer					Certificate in Construction Occupational Safety and Health (COSH) training course issued by DOLE Accredited Trainings Complete Qualification and Experience Data Certificate of Commitment	Annex "_"
Foreman					Complete Qualification and Experience Data Certificate of Commitment	Annex "_"
Other Position(s)					Complete Qualification and Experience Data Certificate of Commitment	Annex "_"

NOTE: 1] As stated in the Bid Data Sheet
2] The number of years of experience of the key personnel shall be as indicated in the qualification and experience data or curriculum vitae.

Minimum qualification requirements: The key personnel must have a work experience that is similar in nature and complexity to the contract to be bid.

Project Manager - Five (5) years
Project Engineer - Three (3) years
Project Architect - 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
Construction Safety and Health Officer – One (1) year

Name of Firm	Name of Bidder/Authorized Representative (Signatory's Legal Capacity)	Date

Revised: September 2026

STATEMENT OF THE BIDDER'S EQUIPMENT PLEDGED FOR THE CONTRACT TO BE BID

I hereby declare that the following equipment are in good operating condition and available for the duration of the contract to be bid:

DESCRIPTION (Type, Model, Make)	No. of Unit(s)	Capacity/ Output 1]	Owned, Leased, and/or under purchased agreement 2]	Proof of Ownership/ Leased/ Under Purchase Agreement (Mark as Annex "A.....Z") 3]	OTHER INFORMATION (As Applicable)				
					Manufacturer	Engine Serial No.	Chassis No./ Name of Vessel	Location	Status

NOTE:

1] The unit of capacity of the pledged equipment shall be as indicated in the Proof of Ownership, 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), Ton. (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). If the capacity of the pledged equipment is not indicated in the Proof of Ownership/Lease Contract/Purchased Agreement, submit other proof of capacity such as specifications, brochures or other verifiable printouts indicating the model name, model number and other details of the equipment.

2] Indicate if the pledged equipment are owned, leased or under purchase agreement.

3] If the pledged equipment is owned, it should be in the name of the bidder. Submit proof of ownership, i.e. deed of sale, sales invoice, official receipt; For owned Water Truck, Dump Truck, Cargo 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.

If the pledged equipment is leased/under purchase agreement, submit the following:

For equipment under lease agreement:

a. certification of availability of equipment from the equipment lessor for the duration of the project
b. duly Notarized copy of lease contract
c. For Water Truck, Dump Truck, Cargo Truck and Transit Mixer submit LTO Certificate of Registration and valid Official Receipt

For equipment under purchase agreement:

a. certification of availability of equipment from the equipment vendor
b. duly Notarized copy of purchase agreement
c. For Water Truck, Dump Truck and Transit Mixer submit LTO Certificate of Registration and valid Official Receipt or copy of conduction sticker, whichever is applicable.

If the pledged barge/tugboat is leased/under purchase agreement, submit certification of availability of barge/tugboat from the equipment lessor/vendor for the duration of the project, and duly Notarized copy of lease contract/purchased agreement together with a copy of the Marina Certificate of Ownership and valid Cargo Ship Safety Certificate.

The Minimum Major Equipment Requirements are listed in Section 8, Annex 3.

Name of Firm	Name of Bidder/Authorized Representative (Signatory's Legal Capacity)	Date

Revised: April 2025

CONSTRUCTION METHODOLOGY

Name of Project : _____

Project Description : _____

Location : _____

MINIMUM SCOPE OF CONSTRUCTION METHODOLOGY

A. REMOVAL, DISPOSAL AND EXCAVATION WORKS

1. Demolition and disposal of existing concrete pavement, roro ramp, & retaining wall
2. Scraping of existing aggregate base course.
3. Cutting and disposal of existing piles.
4. Chipping and disposal of existing R.C. Curb
5. Removal of existing rubber dock fenders and mooring bollards
6. Removal and disposal of existing fence, gate, and guardhouse.
7. Removal and relocation of existing lamp post.
8. Excavation and backfilling works.

B. IMPROVEMENT AND EXPANSION OF PORT OPERATIONAL AREA

1. Supply, deliver, driving of steel sheet piles including installation of connectors and dowel bars.
2. Supply and installation of steel waling and splice plate for steel sheet piles.
3. Supply and installation of rebars for retaining wall, R.C. curb, pile caps, anchor, mooring & fender blocks.
4. Supply and placing of concrete for retaining wall, R.C. curb, pile caps, anchor, mooring & fender blocks.
5. Supply and placing of gravel bedding.
6. Supply, fabrication and installation of concrete blocks.
7. Supply and placing of core rocks and armour rocks.
8. Supply and installation of Tie-rods.
9. Supply and installation of geotextile fabric.
10. Supply, placing of sand and gravel fill materials.
11. Supply, spreading and compaction of aggregate sub/base course.
12. Construction of portland cement concrete pavement.
13. Construction of catch drain manhole and laying of reinforced concrete drainage pipe.
14. Supply and installation of port lighting system including relocation of existing lamp post.
15. Supply, delivery and installation of wastewater treatment facility.

C. CONSTRUCTION OF R.C. PLATFORM

1. Supply, delivery and driving of PSC piles including chipping/cutting of newly driven piles.
2. Supply and installation of rebars for the superstructure.
3. Supply and placing of concrete for superstructure.
4. Supply and installation of hot-dip galvanized construction joint.
5. Supply, delivery and installation of mooring bollards.

D. CONSTRUCTION OF RORO RAMPS (4 UNITS)

1. Supply, delivery and driving of PSC piles including chipping/cutting of newly driven piles.
2. Supply and installation of rebars for the superstructure.
3. Supply and placing of concrete for superstructure.
4. Supply and installation of hot-dip galvanized construction joint.
5. Supply and installation of WT steel ramp protection.
6. Supply, delivery and installation of rubber dock fenders.

E. CONSTRUCTION OF R.C. PIER WITH BREAKWATER PILES

1. Supply, delivery and driving of PSC piles including chipping/cutting of newly driven piles.
2. Supply and installation of rebars for the superstructure.
3. Supply and placing of concrete for superstructure.
4. Supply and installation of hot-dip galvanized construction joint.
5. Supply, delivery, installation of rubber dock fenders and mooring bollards.

F. CONSTRUCTION OF FENCE, GATE, PUMPHOUSE AND GUARDHOUSE

1. Construction of perimeter fence (complete with CHB, steel framing, cyclone wire and barbed wire)
2. Construction of gate with guardhouse and guard outpost (complete with structural and architectural finishes)
3. Construction of pumphouse (complete with structural and architectural finishes.)

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.

_____
Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

Revised: September 2021

MANPOWER SCHEDULE

Name of Project : _____

Project Description : _____

Location : _____

MANPOWER (Minimum)	CONTRACT DURATION (_____ Calendar Days)																							
	MONTHLY																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Project Manager																								
Project Engineer																								
Materials Engineer II																								
Construction Safety and Health Officer																								
Foreman																								
Specify other applicable positions, ie.:																								
- Carpenter																								
- Steelman																								
- Mason																								
- Electrician																								
- Rigger																								
- Others																								

_____
Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

Revised: September 2021

EQUIPMENT UTILIZATION SCHEDULE

Name of Project : _____

Project Description : _____

Location : _____

EQUIPMENT (Minimum)	No. of Units	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	17	18	19	20	21	22	23	24

_____
Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

Revised: September 2021

CASHFLOW BY QUARTER AND PAYMENT SCHEDULE

Name of Project: : _____

Project Description : _____

Location : _____

Project Duration (days or months)	Payment Schedule (Monthly, In Pesos)	Cash flow (Quarterly, In Pesos)
TOTAL		

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.

_____
Name of Bidder/Authorized Representative
(Signatory's Legal Capacity)

Revised: September 2021

H.O. - BIDS AND AWARDS COMMITTEE - EP
CHECKLIST OF BIDDING DOCUMENTS
PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
PORT OF PIO DURAN, PIO DURAN, ALBAY
ABC - Php 520,479,926.29

	REQUIREMENTS
I.	**TECHNICAL COMPONENT ENVELOPE (1 orig. and 6 copies)**
	CLASS "A" DOCUMENTS
	LEGAL DOCUMENTS
	(a) Valid PhilGEPS Registration Certificate
	(Platinum Membership) (all pages)
	TECHNICAL DOCUMENTS
	(b) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid;
	(c) Statement of the Bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules;
	a. Same Major Categories of Work
	1. Supply, delivery and driving of piles (offshore)
	2. Supply and placing of fill materials
	3. Supply and placing of reinforced concrete works
	b. Experience Record on Similarly Completed Projects
	1. Similar Category of Work
	i. Pile Driving Works (Offshore)
	ii. Reinforced concrete Works
	iii. Placing of Fill materials
	2. Other Qualifying Works
	i. Rockworks (50-1000 kg/pc)
	ii. Construct Portland Cement Concrete Pavement (PCCP)
	(d) Special PCAB License in case of Joint Ventures; and registration for the type and cost of the contract to be bid; and
	(e) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission; or Original copy of Notarized Bid Securing Declaration; and
	(f) Project Requirements, which shall include the following:
	a. Organizational chart for the contract to be bid;
	b. List of contractor's key personnel to be assigned to the contract to be bid, with their complete qualification and experience data:
	Project Manager
	Project Engineer
	Materials Engineer II
	Construction Safety and Health Officer
	Foreman
	c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be:
	2 unit/s Air Compressor (250 cfm, minimum), owned
	1 unit/s Backhoe (0.50 cu.m., 94.30hp, minimum), owned
	1 unit/s Clamshell, owned
	1 unit/s Concrete cutter, owned
	1 unit/s Concrete Mixer (1 bagger, minimum), owned
	1 unit/s Concrete bucket, owned
	1 unit/s Concrete Screeder, owned
	2 unit/s Concrete Vibrator (3.5 hp, minimum), owned
	1 unit/s Crane Barge (319 GW, minimum) with 60T crane, owned/leased
	1 unit/s Crawler Crane (30T, minimum), owned/leased
	1 unit/s Pile Hammer (Diesel, 10,500 kg.m.), owned/leased
	1 unit/s Pile Hammer (Diesel, 7,500 kg.m., min. -13,500 kg.m, max. or hydraulic equivalent), owned/leased
	4 unit/s Diving equipment (complete), owned/leased
	1 unit/s Drop Hammer (2T, minimum), owned
	1 unit/s Dump Truck (10T net Capacity, minimum), owned
	2 unit/s Bar Bender (electric, 25mm dia min.), owned

H.O. - BIDS AND AWARDS COMMITTEE - EP
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PIO DURAN PORT EXPANSION AND REHABILITATION PROJECT
PORT OF PIO DURAN, PIO DURAN, ALBAY
ABC - Php 520,479,926.29

	REQUIREMENTS
	2 unit/s Bar Cutter (electric, 25mm dia min.), owned
	2 unit/s Jackhammer, owned
	2 unit/s Jackhammer (U/W), owned/leased
	2 unit/s Oxy/Acetylene cutting outfit, owned
	1 unit/s Payloader (110 hp, minimum), owned
	1 unit/s Plate Compactor (5 hp, minimum), owned
	1 unit/s Road Grader (125 hp, minimum), owned/leased
	1 unit/s Road Roller (10T, vibratory, minimum), owned/leased
	1 unit/s Transit Mixer (10 tons net capacity, minimum), owned/leased
	1 unit/s Tugboat (500hp, minimum), owned/leased
	2 unit/s U/W cutting equipment, owned/leased
	1 unit/s Water Truck with pump (1,000 gal., minimum), owned
	1 unit/s Welding Machine (400 amp., minimum), owned
	1 unit/s Cargo Truck (2T capacity, minimum.), owned
	1 unit/s Backhoe Breaker Attachment, owned/leased
	(g) Original duly signed Omnibus Sworn Statement (OSS); and
	if applicable, Original Notarized Secretary's Certificate in case of a
	corporation, partnership, or cooperative; or Orginal Special Power of Attorney
	of all members of the joint venture giving full power and authority to its
	officer to sign the OSS and do acts to represent the Bidder.
	FINANCIAL DOCUMENTS
	(h)The prospective bidder's computation of Net Financial Contracting Capacity
	(NFCC).
	CLASS "B" DOCUMENTS
	(i) If applicable, duly signed joint venture agreement (JVA) in accordance which
	R.A. No.4566 and its IRR in case the joint venture is already in existence;
	or
	stating that they will enter into and abide by the provisions of the JVA in the
	instance that the bid is successful.
II	**FINANCIAL COMPONENT ENVELOPE**
	(j) Original of duly signed and accomplished Financial Bid Form; and
	Other documentary requirements under RA No. 12009
	(k) Original of duly signed Bid Prices in the Bill of Quantities; and
	(l) Duly accomplished Detailed Estimates Form, including a summary sheet
	indicating the unit prices of construction materials, labor rate, and
	equipment rentals used in coming up with the bid; and
	(m) Cash Flow by Quarter.