

**ITEM 14 : STEEL AND METAL WORKS****GENERAL**

General Requirements contain provisions and requirements essential to these specifications; and apply to this Section, whether or not referred to herein.

**SCOPE OF WORK**

The work includes the furnishing of all labor, materials, equipment and other incidentals necessary for the fabrication and installation of structural steel and miscellaneous metal works as specified in relevant items of these specifications and as indicated on the drawings.

**SUBMITTAL**

1. Before placing orders for materials for the steel and metal works, the Contractor shall submit to the Engineer for approval shop drawings for all steelwork. All project shop drawings shall show the dimension of all parts, method of construction, bolts, welding sectional areas and other details.
2. The detail of connections shown on the shop drawings shall be such as to minimize formation of pockets to hold condensation, water or dirt. A minimum gap between abutting angles and the like shall be provided wherever possible to eliminate any traps and facilitate maintenance painting.
3. No materials shall be ordered nor fabrication commenced until the shop drawings are approved by the Engineer.

**STORAGE OF MATERIALS**

Structural materials, either plain or fabricated, shall be stored above the ground upon platforms, skids, or other supports. Materials shall be kept free from dirt, grease, and other foreign matter and shall be protected from corrosion.

**MATERIAL REQUIREMENTS**

1. Unless specified herein all steel structures and metals shall conform with the requirements of "Steel and Metal Works." Connections where details are not specified or indicated herein, shall be designed in accordance with the American Institute of Steel Construction (AISC), Manual of Steel Construction, latest edition.
2. Structural steel works consisting of channels, gusset plates and other structural steel shape shall be as indicated on the drawings and shall be structural carbon steel conforming to ASTM A 36. Shapes shall be as given in AISC, Manual of Steel Construction.
3. High strength structural bolts, shall conform to ASTM A 325, Types 1 or 2. Nuts shall conform to ASTM A 560, Grade A, heavy hex style, except nuts 38 mm (1-1/2 inch) may be provided in hex style. Washers shall conform to ANSI B 18.22.1, Type B.
4. Electrodes for arc welding shall be E70 series conforming to American Welding Society Specifications A5.1.
5. Tests are required under the ASTM Standards for steel to be used in the Works and shall be carried out in the presence of the Engineer and at least four (4) days notice must be given to him of the dates proposed for such tests. Four (4) calendar days notice on which

- fabricated steelwork will be ready for inspection in the Contractor's yard.
6. Standard bolt shall conform to ASTM A 307 Carbon Steel Externally Threaded Standard Fasteners.

## **EXECUTION**

### **QUALIFICATION**

Qualification of steel fabricators, erectors and welders shall comply with the requirements.

### **FABRICATION REQUIREMENTS**

#### **1. Workmanship**

Fabrication shall be performed within the permissible tolerance by the approved fabricator. All workmanship shall be of the best quality with respect to internationally recognized standards of practice.

#### **2. Cutting**

Low-carbon structural steel may be cut by machine-guided torch instead of by shears or saw. Harmful notches, burrs, irregularities, etc., shall not be developed at the cut surface.

#### **3. Contact Faces**

Contact surfaces between bases or other elements bearing directly upon bearing plates shall be ground or milled as necessary for full effective bearing. Edges for welding shall likewise be properly prepared.

#### **4. Bolt Holes**

Bolt holes shall be according to engineering practice and as specified in these specifications. Gas burning of holes will not be permitted.

#### **5. High Strength Bolt Assembly Preparation**

Surfaces of high strength bolted parts in contact with bolt heads and nuts shall not have a slope of more than 1:20 with respect to a plane normal to the bolt axis.

Where the surface of a high strength bolted part has a slope of more than 1:20, a beveled washer shall be used to compensate for lack of parallelism.

High strength bolted parts shall fit solidly together when assembled and shall not be separated by gaskets or any other interposed compressible materials.

When assembled, all joint surfaces including those adjacent to washers shall be free of scale except tight mill scale, and shall be free from dirt, loose scale, burrs, and other defects that would prevent solid seating of parts.

Contact surfaces of friction-type joints shall be free from oil, paint, lacquer or galvanizing.

#### **6. Welding**

All welding shall be done only by welders certified as to their ability to perform in accordance with accepted testing requirement.

Welding of parts shall be in accordance with structural standards and the Standard Code for Arc and Gas Welding in Building Construction of AWS, and shall only be done where shown, specified, or permitted by the Engineer.

Damage to galvanized areas by welding shall be thoroughly cleaned with wire brushing and all traces of welding flux and loose or cracked zinc coating shall be removed prior to painting. The cleaned area shall be painted with two coats of zinc oxide-zinc dust paint. The paint shall be properly compounded with a suitable vehicle in the ratio of one part zinc oxide to four parts zinc dust by weight. As an alternative to the above, the Contractor may submit for approval the use of a galvanizing rod or galvanizing solder to repair damaged areas.

The welding machine shall be a stable welder, and have suitable functions for the dimension of materials to be welded. The auxiliary tools used for welding shall perform sufficiently and adequately.

The welding machine used for field welding shall be of readily adjustable for electric current.

## 7. Shop Assembly

Structural units furnished shall be assembled in the shop. An inspection shall be made to determine that the fabrication and the matching of the component parts are correct.

Jigs shall be used for the assembly of units as much as possible to maintain appropriate position of mutual materials.

Approval of the Engineer shall be required when drilling temporary bolt holes or welding temporary support to the assembled structure.

The tolerances shall not exceed those allowed by codes and each unit assembled shall be closely checked to insure that all necessary clearances have been provided and that binding does not occur in any moving part.

In order to maintain accurate finished dimensions and shape, appropriate reverse strain or restraint shall be provided as required. Assembly and disassembly work shall be performed in the presence of the Engineer, unless waived in writing by the Engineer any errors or defects disclosed shall be immediately remedied by the Contractor.

Before disassembly for shipment, component parts of the structures shall be match marked to facilitate erection in the field.

## FABRICATION TOLERANCES

### 1. Dimensional Tolerances for Structural Work

Dimensions shall be measured by means of an approved calibrated steel tape at the time of inspection. Unevenness of plate work shall not exceed the limitation of the standard mill practice as specified in the American Institute of Steel Construction, "Manual of Steel Construction".

### 2. Camber

Reverse camber in any structural steel members in excess of 1/1,000 of the span length shall cause rejection. The minimum dead load camber for any structural steel member

shall be as allowed by Code, or otherwise specified.

## INSPECTION AND TEST OF WELDING

### 1. Inspection of Welding

Inspection of welding shall be executed for the following work phases.

#### a. Before Welding

Scum, angle of bevel, root clearance, cleaning of surface to be welded, quality of end tab, drying of welding rod.

#### b. During Welding

Welding procedure, diameter of coil and wire, type of flux, welding current and voltage, welding speed, welding rod position, length of arc, melting, cleaning of slag of each level under surface chapping, supervision of welding rod.

#### c. After Execution of Welding

Assurance of bead surface, existence of harmful defects, treatment of crater, quality of slag removal, size of fillet, dimension of extra fill of butt welding, treatment of end tab.

### 2. Testing of Welding

Twenty percent (20%) of welds contributing in the overall strength of the structure and which will be inaccessible for the inspection in service shall be tested.

Welding shall be tested by ultrasonic test to the extent specified herein or as directed by the Engineer.

Where partial inspection is required, the ultrasonic test shall be located at random on the welds so as to indicate typical welding quality.

If ten percent (10%) of the random ultrasonic tested indicate unacceptable defect, the remaining eighty percent (80%) of the welding shall be tested. Repair welding required shall be ultrasonic tested after the repairs are made.

## CORRECTIONS

In lieu of the rejection of an entire piece or member containing welding which is unsatisfactory or which indicates inferior workmanship, corrective measures may be permitted by the Engineer whose specific approval shall be obtained for making each correction. Defective or unsound welds or base steel shall be corrected either by removing and replacing the entire weld, or as follows.

1. Excessive convexity or overlap shall be reduced by grinding.
2. Undercuts, lack of weld shall be repaired with necessary reinforcement of weld after removal of any foreign materials such as slag, dust, oil, etc.
3. Any defects such as slag inclusions, incomplete fusion, or inadequate joint penetration, shall be completely removed, cleaned and re-welded.

4. Cracks in welds or base steel, shall be removed to sound steel throughout their length and 5cm beyond each end of the crack, followed by welding. The extent of the crack, depth and length, shall be ascertained by the use of acid etching, magnetic particle inspection or other equally positive means.

The removal of welded steel shall be done by chipping, grinding, oxygen cutting, oxygen gouging, or air carbon arc gouging and in such a manner that the remaining welded steel or base steel is not nicked or undercut. Defective portions of the welding shall be removed without substantial removal of the base steel.

## INSTALLATION

### 1. Installation Program

#### a. Prerequisite Condition

Prior to executing steel fabrication and field installation, the Contractor shall prepare a comprehensive installation program including engineering supervision organization, fabrication procedures, field installation procedures, material application, machinery applications, inspection procedure, scope and standard of quality judgment, and submit to the Engineer for approval.

#### b. Special Technical Engineering

Special technical engineering different from contract specifications can be applied upon receiving approval of the Engineer.

### 2. Installation Requirement

#### a. Setting of Anchor Bolt and Others

- a. 1. Anchor bolts shall be set in accurate position by using templates.
- a. 2. The setting method shall be proposed to the Engineer for his approval before setting starts.
- a. 3. The threads of bolt shall be cured with an appropriate method against rust and/or any damage before tightening.
- a. 4. Non-shrink mortar shall be placed under base plates, well cured to obtain the sufficient strength before bearing loads are applied to base plates.

#### b. Temporary Bracing

- b. 1. Temporary bracing shall be installed as necessary to stay assemblies and assume loads against forces due to transport, erection operations or other work.
- b. 2. Temporary bracing shall be maintained in place until permanent work is properly connected and other construction installed as necessary for support, bracing or staying of permanent work.
- b. 3. Extent and quality of temporary bracing shall be as necessary against wind and other loads, including seismic loads not less than those for which the permanent structure is designed to resist.

**c. Adequacy of Temporary Connections**

During erection, temporary connection work shall be securely made by bolting and/or welding for all dead load, wind and erection stresses.

**d. Alignment**

No permanent bolting or welding shall be done until the alignment of all parts with respect to each other shall be true within the respective tolerances required.

**e. Field Welding**

- e. 1. Any shop paint or surfaces adjacent to joints where field welding is to be executed shall be wire brushed to remove paint/primer.
- e. 2. Field welding shall conform to the requirements specified herein, except as approved by the Engineer.

**f. High Strength Bolts**

Final tightening of high strength bolts shall be done by using manufacturer's power operated equipment without any overstress to the threads.

**g. Correction of Errors**

- g. 1. Corrections of minor misfits by use of drift pins, and reaming, chipping or cutting will be permitted and shall be provided as part of erection work.
- g. 2. Any errors to be corrected or adjusted, preventing proper assembly, shall be immediately reported to the Engineer, and such corrections or adjustments shall be made as necessary and approved by the Engineer.
- g. 3. Cutting or alterations other than as approved will not be permitted.

**h. Erection**

- h. 1. Erection and installation shall be as per approved shop drawings.
- h. 2. Each structural unit shall be accurately aligned by the use of steel shims, or other approved methods so that no binding in any moving parts or distortion of any members occurs before it is finally fastened in place.
- h. 3. Operations, procedures of erection and bracing shall not cause any damage to works previously placed nor make overstress to any of the building parts or components. Damage caused by such operations shall be repaired as directed by the Engineer at no extra cost to the Employer.

## **GALVANIZING**

### **PREPARATION**

All mild steel parts exposed to weather shall be hot-dipped galvanized after fabrication in accordance with the requirements of ASTM A 123 or ASTM A 153. Prior to galvanizing, the surfaces shall be cleaned of dirt, weld splatter, grease, slag, oil, paint or other deleterious matters. The steel surfaces shall be chemically de-scaled and cleaned with the same abrasive blast or other suitable method as approved by the Engineer.

### **COATING**

The zinc coating shall consist of uniform layers of commercially pure zinc free from abrasions, cracks blisters, chemical spots or other imperfections, and shall adhere firmly to the surface of the steel. The weight of zinc coating per square meter of actual surface shall not be less than 550 grams. Any surface damaged subsequent to galvanizing shall be given two coats of approved zinc rich paints.

### **PAINTING**

This work shall consist of the preparation of the metal surfaces, the application, protection and drying of the painted surfaces, and supplying of all tools, tackle, scaffolding, labor and materials necessary for the entire work. Painting shall be applied in the field or shop as approved by the Engineer.

Unless otherwise specified or approved, all painting work for structural steel shall comply with the requirements of this Section.

### **SHOP PAINTING**

All structural steel shall be given a shop primer after fabrication and cleaning before delivery to the site.

All steel work shall be thoroughly dried and cleaned of all loose mill scale, rust and foreign matters by means of sand blasting or other suitable methods approved by the Engineer before shop painting shall be applied. Each individual piece shall be painted prior to assembly. Portions where field welding or field contact with concrete is required shall not be painted.

Except for galvanized surfaces and items to be encased in concrete, clean ferrous metal surfaces shall be given one coat of Amerlock 400 Epoxy Primer at 100 Microns or approved equal. Additional coat shall be applied to surfaces that will be concealed or inaccessible for finish painting by Amerlock 400, Top Coat at 150 Microns with color or equivalent.

### **FIELD PAINTING**

After erection, the Contractor shall thoroughly prepare and clean the entire surface of all structural steel from all dirt, grease, rust or other foreign matters. The entire surface of all members shall then be field painted.

### **MATERIALS**

1. Structural Steel Work
  - a. After surface preparation, steelwork shall be given one coat of approved prefabricating primer.

- b. Before final assembly of steelwork at the fabricator's shop, two shop coats of special red lead primer shall be applied to the surface of sections to be in permanent contact, meeting faces and all other concealed surfaces. After final assembly, but before delivery to the project site, the steelwork shall likewise be given two shop coats of special red lead primer.

## 2. Galvanized Steelwork

All galvanized steelwork shall be treated with zinc chromate two-pack etch primer followed by one coat of non-etch zinc chromate primer.

## 3. Miscellaneous Metal Work

Unless otherwise specified in other Sections of the Specifications or shown on the drawing, miscellaneous metal works such as ladders, structural steel ladder rungs, etc. shall be given two shop coats of epoxy primer and two coats of epoxy enamel.

## CONSTRUCTION METHODS

### 1. Cleaning of Surfaces

Surfaces of metal to be painted shall be thoroughly cleaned; removing rust, loose mill scale, dirt, oil or grease, and other foreign substances. Unless cleaning is to be done by sand blasting, all weld areas, before cleaning is started, shall be neutralized with a proper chemical, after which they shall be thoroughly rinsed with water.

Three methods of cleaning are provided herein. The particular method to be used shall be as directed by the Engineer.

### 2. Hand Cleaning

The removal of rust, scale, and dirt shall be done by the use of metal brushes, scrapers, chisels, hammers or other effective means. Oil and grease shall be removed by the use of gasoline or benzene.

Bristle or wood fiber brushes shall be used for removing loose dirt.

### 3. Sandblasting

All steel shall be cleaned by sandblasting. The sandblasting shall remove all loose mill scale and other substances. Special attention shall be given to cleaning of corners and re-entrant angles. Before painting, sand adhering to the steel in corners and elsewhere shall be removed. The cleaning shall be approved by the Engineer prior to any painting which shall be done as soon as possible before rust forms.

### 4. Flame Cleaning

All metal, except surface inside boxed members and other surfaces which shall be inaccessible to the flame cleaning operation after the member is assembled, shall be flame cleaned in accordance with the following operations.

- a. Oil, grease, and similar adherent matter shall be removed by washing with a suitable solvent. Excess solvent shall be wiped from the work before processing with subsequent operations.



- b. The surface to be painted shall be cleaned and dehydrated (free from occluded moisture) by the passage of oxyacetylene flames which have an oxygen to acetylene ratio of at least 1.0. The oxyacetylene flames shall be applied to the surfaces of the steel in such a manner and at such speed that the surfaces are dehydrated; dirt, rust loose scale in the form of blisters or scabs, and similar foreign matters are freed by the rapid, intense heating by the flames. The number arrangement and manipulation of the flames shall be such that all parts of the surfaces to be painted are adequately cleaned and dehydrated.
- c. Promptly after the application of the flames, the surfaces of the steel shall be wire brushed, hand scraped wherever necessary, and then swept and dusted to remove all free materials and foreign particles.
- d. Paint shall be applied promptly after the steel has been cleaned and while the temperature of the steel is still above that of the surrounding atmosphere.

## 5. Weather Conditions

### a. Exterior Coatings

Coatings to surface shall not be applied during foggy or rainy weather, or under the following surface temperature conditions: below 4°C, or over 35°C, unless approved by the Engineer.

### b. Interior Coatings

Coatings shall be applied when surfaces to be painted are dry and the following surface temperatures can be maintained: between 18 to 35°C during the application.

## 6. Application

- a. Paint shall be factory tinted and mixed. All paint shall be field mixed before applying in order to keep the pigments in uniform suspension.

### b. Field Painting

When the erection work is complete, including all bolting and straightening of bent metal, all adhering rust, scale, dirt, grease or other foreign materials shall be removed as specified above.

As soon as the Engineer has examined and approved each steel and metal works structures, all field bolts, all welds, and any surfaces from which the top or first coat of paint has become worn off, or has otherwise come defective shall be cleaned and thoroughly covered with one coat of paint.

Surfaces to be bolted and surfaces which shall be in contact with concrete, shall not be painted. Surfaces which shall be inaccessible after erection shall be painted with such field coats as are required. When the paint applied for retouching the shop coat has thoroughly dried, and the field cleaning has been satisfactorily completed, such field coats as are required shall be applied. In no case shall a succeeding coat be applied until the previous coat is dry throughout the full thickness of the paint film. All small cracks and cavities which were not sealed in a watertight manner by the first field coat shall be filled with a pasty mixture of red lead and linseed oil before the second coat is applied.

The following provision shall apply to the application of both coats. To secure a maximum coating on edges of plates or shapes, bolt heads and other parts subjected to special wear and attack, the edges shall first be striped with a longitudinal motion and the bolt heads with a rotary motion of the brush, followed immediately by the general painting of the whole surface, including the edges and bolt heads.

The application of the second field coat shall be deferred until adjoining concrete work has been placed and finished. If concreting operations have damaged the paint, the surface shall be re-cleaned and repainted.

**c. General Manners**

Painting shall be done in a neat and workmanlike manner. Paint may be applied with hand brushes or be spraying, except aluminum paint which preferably shall be applied by spraying. By either method the coating of paint applied shall be smoothly and uniformly spread so that no excess paint shall collect at any point. If the work done by spraying is not satisfactory to the Engineer hand brushing shall be required.

**d. Brushing**

When brushes are used, the paint shall be so manipulated under the brush as to produce a smooth, uniform, even coating in close contact with the metal or with previously applied paint, and shall be worked into all corners and crevices.

**e. Spraying**

Power spraying equipment shall be used to apply the paint in a fine spray. Without the addition of any paint, the sprayed area shall be immediately followed by brushing, when necessary, to secure uniform coverage and to eliminate wrinkling, blistering and air holes.

**f. Removal of Paint**

If the painting is unsatisfactory to the Engineer the paint shall be removed and the metal thoroughly cleaned and repainted.

## **ITEM 15 : MOORING AND FENDERING SYSTEM**

### **SCOPE OF WORK**

1. The work includes furnishing of all labor, materials and equipment to complete the installation of mooring bollards and fenders in piers/wharves.
2. The work shall include the supply, transport, handling, storage and installation of fenders systems in the newly constructed piers.
3. The Contractor shall furnish and install the necessary fittings as shown on the drawings and/or specified.

Supplementary parts necessary to complete and install each item of works shall be included whether or not shown or specified. The Contractor shall furnish to relevant trades all anchors, fastenings, inserts, fittings, fixtures or the like to be installed on or required for securing the works.

The Contractor shall submit shop drawings of all fitting works prior to placing orders and commencement of any fabrication.

### **MATERIAL REQUIREMENTS**

#### **MOORING SYSTEM**

Designated load capacity of mooring bollards shall be as shown in the drawings, and shall be referred to as the maximum load capacity. The mooring bollards shall be at rupture stage upon reaching the maximum load capacity.

Mooring bollards shall be of the dimensions, weights, capacities and designs as shown in the drawings and shall be fabricated by approved manufacturer with cast steel conforming to the requirements indicated in the plan/drawings, or approved equivalent.

The size of the bolts, nuts and washers shall be in accordance with the specifications provided in the plans/drawings. The anchor plate shall be connected to the holding down bolt as shown in the plans/drawings. All bolts, nuts, washers etc., that are exposed shall be hot-dip galvanized.

Samples of the bolts, nuts, washers and anchor plates shall be submitted to the Engineer for approval before being used in the Works.

The upper part of bollards and base plates which are not embedded in concrete shall be painted. The surface of bollards shall be cleaned thoroughly by wire brush or other means prior to painting to remove rust or any other contamination which may interfere with bond of paint to metal.

The exposed surface shall be coated with rust proof paint and finishing paint, which shall be coal-tar epoxy of 120m micron thickness in accordance with JIS K5623 or the approved standard.

#### **Base Steel:**

Chemical composition and mechanical properties of base metal to be used for fabrication of mooring bollard and its accessories shall comply with ASTM A36 and other required standard stated therein.

**Concrete Foundation :**

Concrete foundation for mooring bollards shall conform to the requirements of the Section concerning "Reinforced Concrete".

**Visual Inspection :**

All mooring bollards delivered to Site shall be inspected by the Engineer for any signs of flaws or defect inimical to usage.

**Mill Test Certificates:**

Two (2) copies of mill test reports shall be submitted certifying that materials meet the specified standards.

**Test Inspection:**

Inspection of all materials and methods of fabrication shall be carried out by the Contractor. However, the Engineer reserves the right to inspect all facilities at any time during the manufacture to ensure that the materials and workmanship are in accordance with Specifications and the best of workmanship.

## FENDER SYSTEM

The rubber fenders should comply with the performance requirements specified in the table provided on the plan/drawings of RDF.

### PHYSICAL PROPERTIES OF MATERIALS

The rubber for the fenders shall be of high quality natural rubber, synthetic rubber or mixed rubber blended with carbon black used in the rubber industry and shall have sufficient resilience and anti-ageing, weathering, abrasion, wear and oil resistant properties. The rubber dock fenders shall be free from bubbles, cracks and other harmful defects.

The physical properties of the rubber compound used for the fenders shall comply with the following requirements:

**Physical Properties and Test Method**

Test Item		Properties	Test Method	
Physical Test	Before Aging	Tensile Strength	Test piece: Dumbell No. 3	ASTM D412
		Elongation		ASTM D1456
		Hardness	Spring Type hardness test (Type A)	ASTM D2240
	After Aging	Tensile Strength	Aging by air heating: 70±1°C x 96 hours.	ASTM D412
		Elongation		ASTM D1456
		Hardness		ASTM D2240
	Compression Test		Heat treatment: 70±1°C x 22 hours.	ASTM D395

Note: Equivalent Standards are acceptable.

### FITTINGS AND ANCHORAGE

Anchor bolts and connecting hardware shall be fabricated using type of steel specified (ASTM A36) and to the required shapes and sizes shown on the approved plan/drawings.

### TESTING, SAMPLING, INSPECTION, ACCEPTANCE, MARKING AND PACKAGING

#### Testing

Sample rubber dock fenders that shall be incorporated in the project shall be subjected to tests. It shall pass the required energy absorption and reaction force at a certain deflection as indicated in the plan.

The Contractor shall be required to submit test certificates showing compliance to the above requirements. The test certificates shall be certified by an independent testing institute / organization recognized by the Authority.

Ten percent (10%) of the total number of fenders to be supplied and rounded to a unit shall be tested for performance. The fender shall be compressed repeatedly three (3) times to the maximum deflection at the speed from 2 to 8 cm. per minute. The load and deflection values shall be recorded with the precision of 0.1tf and 0.5mm respectively. The results shall be plotted in the form of load-deflection-energy absorption curves. The average data obtained in the second and third test loading shall be considered as performance values.

### Inspection

All fenders of each type shall be inspected for compliance to specified dimensions and all fenders shall be inspected for any sign of flaw or defect inimical to its use.

All anchor bolts and fittings shall be inspected. The material used for the fabrication of bolts and fittings shall be covered by the manufacturer's certified mill certificate and shall be verified by the Authority.

### Acceptance Tolerance

The acceptance tolerance shall be based on the following:

#### 1. Fender Dimension

Length	:	-2% to +4%
Width	:	-2% to +4%
Height	:	-2% to +4%
Thickness	:	-2% to +8%

#### 2. Anchor Bolt Holes in Fender

Diameter of the Hole	:	+2.0mm
Pitch of the Hole	:	+4.0mm

#### 3. Acceptance tolerance for all fenders supplied shall be as follows:

E = Energy absorption,	$E \geq$ Specified E but not less than 10% of the specified E
R = Reaction force,	$R \leq$ Specified R but not more than 10% of the specified R

## Marking

All fender units shall be clearly numbered and marked. Each fender shall have the following markings.

1. Fender type and manufacturer's name or trade mark
2. Production serial number
3. Date of manufacture or its abbreviation
4. Main dimensions
5. Project identification as follows:

Name of Port/Project : \_\_\_\_\_

Year supplied : \_\_\_\_\_

## Packaging

The fenders shall be packaged on wooden crate or wrapped individually with Polypropylene sheets except when shipped containerized. The bolts and fittings should be placed in crates and suitably treated for protection when transported by sea and stored in port areas.

## EXECUTION

### MOORING / FENDERING SYSTEM

All units shall be installed at the locations shown on the drawings and as directed by the Engineer.

## **ITEM 16 : DRAINAGE WORKS**

### **SCOPE OF WORK**

The works shall consist of excavation, backfilling and construction of lateral drains, construction of manholes, reconnection to existing lateral and other related works in accordance with the dimensions, size, elevation and grade as shown on the drawing and shall conform with the Specification.

At least thirty (30) days before the start of any construction related to drainage works, the Contractor shall submit to the Engineer for his approval, shop drawings of the drainage work he intends to construct. The shop drawings shall include the materials and the general method of installation he intends to employ.

### **MATERIAL REQUIREMENTS**

#### **SELECTED FILL**

Fill shall be in accordance with Item "Reclamation and Fill".

#### **CRUSHED AGGREGATE BASE COURSE**

Gravel base course shall be in accordance with Item "Crushed Aggregate Base Course".

#### **CONCRETE**

Mixing/Casting and steel reinforcements shall be in accordance with Item "Reinforced Concrete" while the dimensions shall be as shown on the Drawings.

#### **CEMENT MORTAR**

Cement mortar shall consist of one part portland cement to two parts of fine aggregate with water added as necessary to obtain the required consistency.

#### **REINFORCED CONCRETE PIPE**

The fabrication of reinforced concrete pipes shall conform to the Specifications of ASTM C-76. The Engineer reserves the right to inspect and test the pipe delivered for intended purpose. Defects that are discovered after acceptance of delivery of the pipe but before installation shall be a cause for rejection.

Reinforced steel bar for pipe shall be in accordance with Item "Reinforced Concrete" while concrete to be used shall be 4,000 psi.

### **EXECUTION**

#### **EARTHWORKS**

All earthworks for concrete pipe culvert shall conform to the lines, grades and elevations shown on the drawings or as directed by the Engineer.



The lateral drain shall be excavated to the depth, grade and width established by the Engineer. The bedding surface shall provide a firm foundation of uniform density throughout the entire length. Soft, spongy, or otherwise unstable material encountered that will not provide a firm foundation for the concrete drainage shall be removed to the full width of the trenches and replaced by suitable material to a depth of not less than 30 cm. 100mm thick gravel bedding shall be used as foundation or otherwise as specified.

#### PIPE LAYING

The pipe shall be tested for water-tightness of joints before backfilling the trench. Unsatisfactory work shall be corrected without additional cost to the PPA. The collar shall have set sufficiently prior to backfilling.

#### LATERAL DRAIN

Concrete cover and the existing steel gratings shall be set to the required elevations as shown on the drawings to fit the adjoining surfaces and shall be installed after the adjoining concrete is struck off and finished, and the fit on the frames shall be such that there is no rocking.

All completed structures shall be thoroughly cleaned of any accumulations of silts, debris or foreign matter of any kind, until finally accepted and put into service.

#### CATCH BASIN INLETS, MANHOLES AND OUTLETS

Lid frames shall be set to the required elevations as shown on the drawings to fit the adjoining surfaces. Lids shall be installed after the adjoining concrete is struck off and finished, and the fit on the frames shall be such that there is no rocking.

Where reconstruction of existing catch basin inlets, manholes, outlets, or similar structures are indicated, the work shall be in accordance to the details and elevations as shown on the drawings, including re-installation of existing metal frames, grates and lids, or replacing of concrete covers instead of grates that may have been lost or found lacking. All completed structures shall be thoroughly cleaned of any accumulations of silts, debris or foreign matter of any kind, until finally accepted and put into service.

#### FIELD DENSITY TEST

Field Density tests to determine the percent of compaction of the fill material shall be conducted until a field density of at least 95 percent of the maximum dry density in accordance with AASHTO T180, Method D has been achieved. In place density determination shall be made in accordance with AASHTO T191.

**ITEM 17 : PROJECT BILLBOARD**

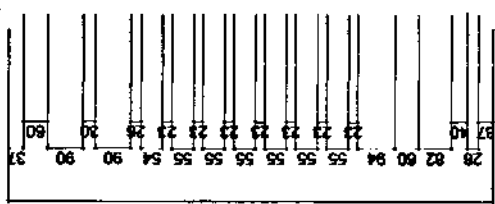
***SPECIFICATION***

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.



1219 (4 ft.)

2438 (8 ft.)

**(Name of Project and Location)**

CONTRACTOR

EFFECTIVITY OF CONTRACT

CONTRACT COMPLETION DATE

CONTRACT COST

IMPLEMENTING OFFICE

SOURCE OF FUND

•

PHILIPPINE PORTS AUTHORITY

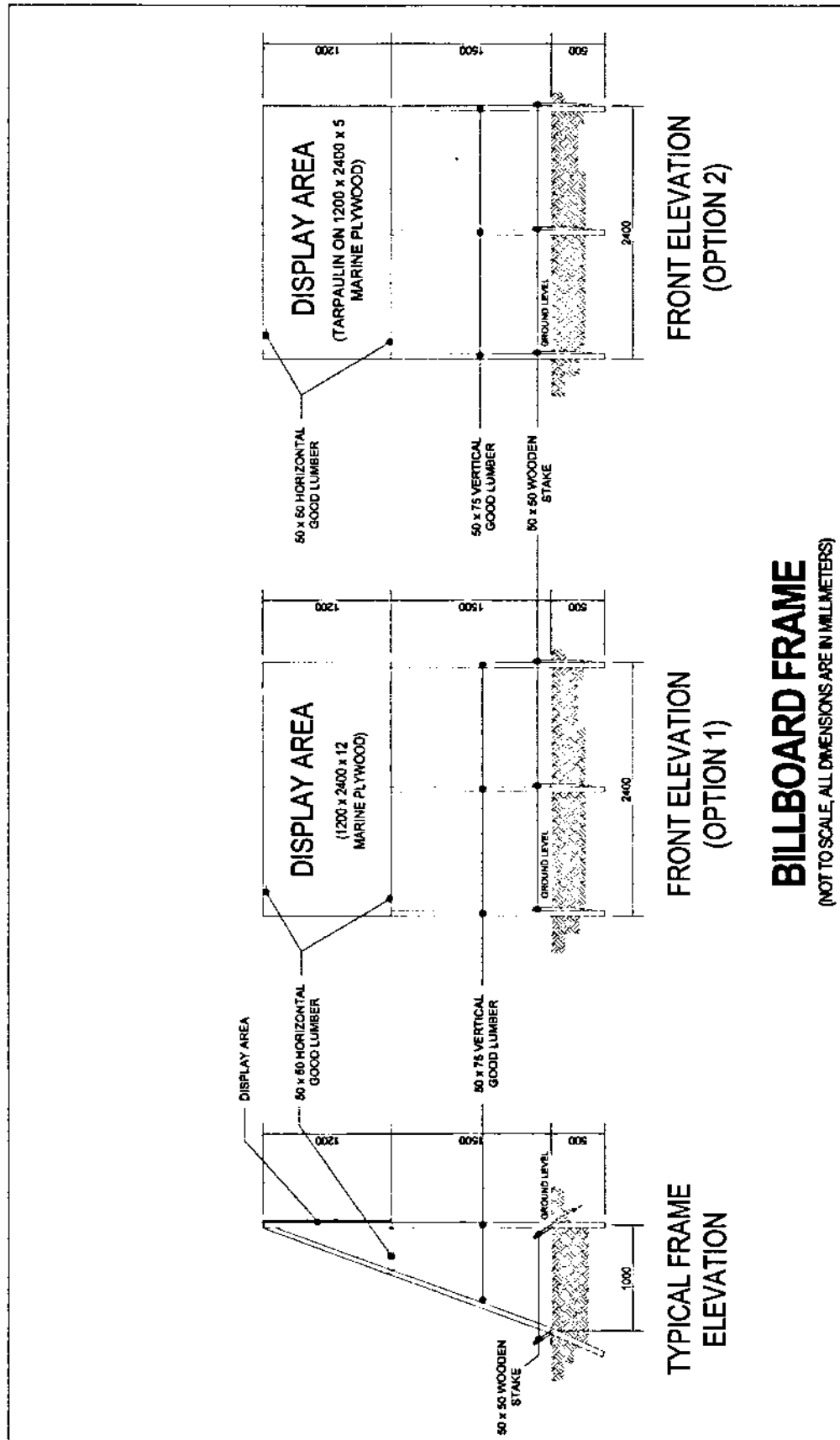
37mm YELLOW BORDER LINE

WHITE BACKGROUND

ARIAL BLACK TEXT

ARIAL BLUE TEXT

**STANDARD PROJECT BILLBOARD**



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

## ITEM 18 : SAFETY SIGNAGES AND BARRICADES

### DESCRIPTION

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

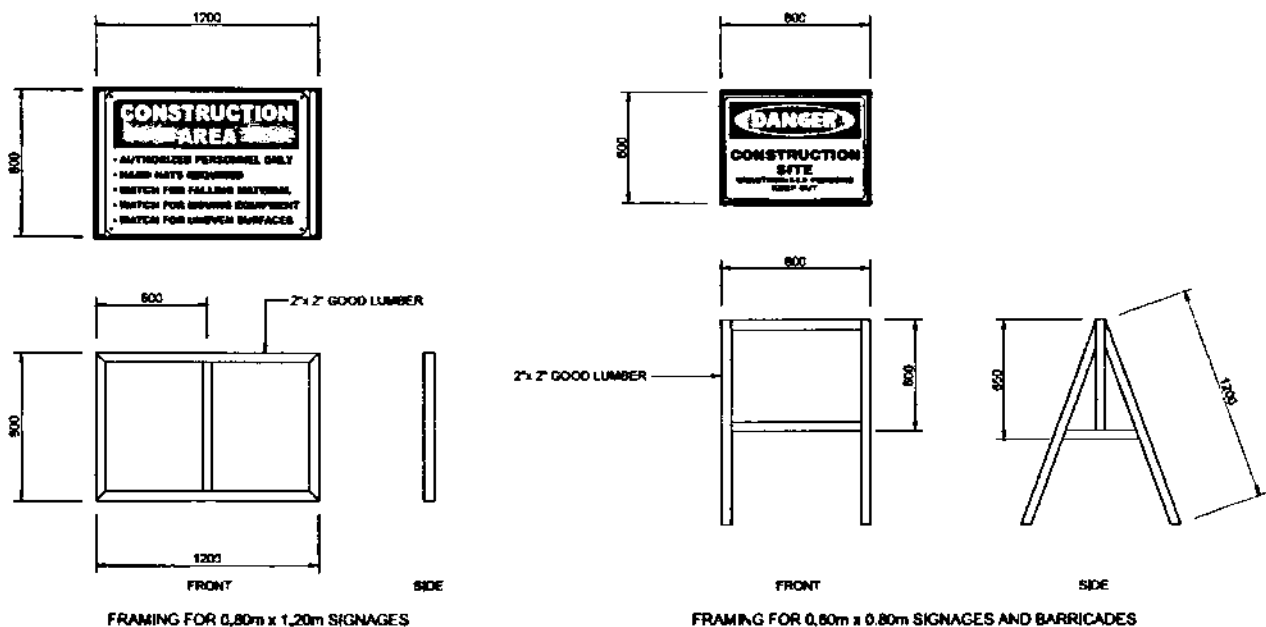
### SPECIFICATION

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

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

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

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



### STANDARD PLAN FOR SIGNAGES AND BARRICADES

**SECTION VII**

**PROJECT DRAWINGS**

## SECTION VII

# PROJECT DRAWINGS (SEE ISSUED APPROVED PLANS)

### LIST OF DRAWINGS:

#### Back-Up Area with RoRo Ramp and Platform

1	of	21	Development Plan, Vicinity Map, General Notes, List of Drawings
2	of	21	General Plan
3	of	21	Piling and Anchorage Plan
4	of	21	Off-Shore Elevation, Sectional Elevation A-A (Section @ Roro Ramp)
5	of	21	Sectional Elevation "B", Sectional Elevation - "C"
6	of	21	Sectional Elevation @ Sta. 0+015, Sectional Elevation @ Sta. 0+030
7	of	21	Sectional Elevation @ Sta. 0+045, Sectional Elevation @ Sta. 0+060
8	of	21	Sectional Elevation @ Sta. 0+075, Sectional Elevation @ Sta. 0+090
9	of	21	Sectional Elevation @ Sta. 0+105, Sectional Elevation @ Sta. 0+120
10	of	21	Detail of Anchor Blocks, Detail of Coping Walls, Detail of 35-Ton Bollard Attachment, Detail of Retaining Wall
11	of	21	Plan @ Ro-Ro Ramp, Sectional Elevation @ Ro-Ro Ramp, Detail of Wing Wall, Detail of G.I. Pipe Railing, Typ. Det. of Anchor Deadman
12	of	21	Detail of Pavement @ Ro-Ro Ramp, Detail of Pavement Joint @ Ro-Ro Ramp, Detail of Mooring Block for 35-Ton Mooring Bollard, Detail of R.C. Curb @ Rock Bulkhead
13	of	21	Detail of Rubber Dock Fender V-500H X 1500L, Detail of 35-Ton Mooring Bollard (Tee-Head)
14	of	21	Detail of Pre-Stressed Concrete Sheet Pile
15	of	21	Detail of R.C. Corner Sheet Piles
16	of	21	Detail of R.C. Corner Sheet Piles
17	of	21	Detail of Interlocking Concrete Paving Blocks, Detail of Shear Key, Detail of R.C. Ditch, Sectional Plan of I.C.P.B.
18	of	21	Off-Shore Elevation of R.C. Curb, Coping Wall and Fendering System, Detail of Tie Rods
19	of	21	Storm Drainage Layout
20	of	21	Typical Detail of Lateral Drainage, Detail & Framing of Trench Grate, Detail of Catch Drain Manhole, Section @ Outfall 21
21	of	21	Detail of 450mm X 450mm Pre-Stressed Concrete Pile

**SECTION VIII**

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





**BILL OF QUANTITIES**  
**CAPINPIN PORT EXPANSION PROJECT**  
 Port of Capinpin, Brgy. Puting Buhangin, Ordon, Bataan

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
<b>BILL NO. 1</b>	<b>GENERAL EXPENSES</b>				
1.01	Mobilization, demobilization and cleaning	lot	1		
1.02	Rental of temporary site office and residence for the Engineer and staff	mo.	17		
1.03	Maintain temporary site office and residence for the Engineer and staff	mo.	17		
1.04	Provide Construction Safety and Health Program in the execution of the project	mo.	17		
<b>TOTAL FOR BILL NO. 1</b>					



**BILL OF QUANTITIES**  
**CAPINPIN PORT EXPANSION PROJECT**  
 Port of Capinpin, Brgy. Puting Buhangin, Orion, Bataan

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
<b>BILL NO. 2</b>	<b>BACK-UP AREA WITH RORO RAMP AND PLATFORM</b>				
2.01	Excavation of existing seabed up to required elevation	cu.m.	3,048		
2.02	Chp-off existing R.C. curb, flush to deck level and smoothen with mortar	l.m.	99		
2.03	Supply and deliver to site 350mm x 600mm PSC sheet piles	l.m.	5,328		
2.04	Supply and deliver to site RC corner sheet piles (CP) of various section				
	a. CP - 1	l.m.	16		
	b. CP - 2	l.m.	16		
	c. CP - 3	l.m.	16		
	d. CP - 4	l.m.	16		
	e. CP - 5	l.m.	16		
	f. CP - 6	l.m.	16		
	g. CP - 7	l.m.	16		
2.05	Handle, pitch and drive 350mm x 600mm PSC sheet piles and RC corner piles	l.m.	5,440		
2.06	Chipping of driven PSC sheet piles and RC corner piles up to cut-off elevation including disposal of debris	no.	340		
2.07	Supply and deliver to site 450mm x 450mm PSC anchor piles	l.m.	160		
2.08	Handle, pitch and drive 450mm x 450mm batter PSC anchor piles	l.m.	160		
2.09	Chipping of driven PSC piles up to cut-off elevation including disposal of debris	no.	8		



**BILL OF QUANTITIES**  
**CAPINPIN PORT EXPANSION PROJECT**  
 Port of Capinpin, Brgy. Puting Buhangin, Orion, Bataan

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
2.10	Supply and install tie-rods including accessories a. 60mm Ø x 17m b. 60mm Ø x 15m c. 60mm Ø x 2.50m d. 36mm Ø x 12m	set set set set	10 78 3 22		
2.11	Supply and place gravel bedding	cu.m.	152		
2.12	Supply and place 1,450 psi lean concrete 100mm thk.	cu.m.	26		
2.13	Supply and place 3,500 psi. concrete for the coping wall, retaining wall, wing wall, anchor block, RC curb, lateral drainage and catch drain manhole	cu.m.	697		
2.14	Supply and install steel reinforcement for the coping wall, retaining wall, wing wall, anchor block, RC curb, lateral drainage and catch drain manhole	kg.	64,817		
2.15	Supply and place 3000 kg. armour rocks	cu.m.	2,073		
2.16	Supply and place 1000 kg. armour rocks	cu.m.	1,029		
2.17	Supply and place 50-100 kg. core rocks	cu.m.	11,880		
2.18	Supply and install geotextile fabric	sq.m.	6,104		
2.19	Supply and place sand and gravel fill	cu.m.	51,995		
2.20	Supply, spread and compact selected fill	cu.m.	13,426		
2.21	Supply, spread and compact aggregate base course	cu.m.	1,892		



**BILL OF QUANTITIES**  
**CAPINPIN PORT EXPANSION PROJECT**  
 Port of Capinpin, Brgy. Puting Buhangin, Orion, Bataan

NO. (1)	DESCRIPTION OF WORK (2)	UNIT (3)	QTY. (4)	UNIT PRICE (Pesos) (5)	AMOUNT (Pesos) (4) x (5)
2.22	Construct concrete shear keys including steel reinforcement	sq.m.	325		
2.23	Construct PCC Pavement (300mm thick) including dowel bars	sq.m.	436		
2.24	Supply, spread and compact 10% cement treated base course	cu.m.	1,753		
2.25	Supply and spread leveling sand cushion (50mm thick)	cu.m.	584		
2.26	Supply, deliver and install ICBP (100mm x 200mm x 125mm), 6,000 PSI	sq.m.	11,683		
2.27	Construction of 100mm Ø G.I. pipe railings	lot	1		
2.28	Supply and deliver mooring bollard, T-head, 35T, including accessories	set	13		
2.29	Install mooring bollard, T-head, 35T, including accessories	set	13		
2.30	Supply and deliver rubber dock fender (V-type, 500H x 1500L) incl. accessories	set	15		
2.31	Install rubber dock fender, V-type, 500H x 1500L, including accessories	set	15		
2.32	Supply and install lateral drainage cover including built-up angular frame	l.m.	111		
2.33	Supply and install catch drain manhole cover including built-up angular frame	set	7		
2.34	Supply and install 400mm Ø reinforced concrete pipe	l.m.	3		
<b>TOTAL FOR BILL NO. 2</b>					



**BILL OF QUANTITIES**  
**CAPINPIN PORT EXPANSION PROJECT**  
 Port of Capinpin, Brgy. Puting Buhangin, Ordon, Bataan

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

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

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

### **BILL NO. 1**

#### **GENERAL EXPENSES**

**Item 1.01      Mobilization, demobilization and cleaning**

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

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

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

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

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

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

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

## BILL NO. 2

### BACK-UP AREA WITH RORO RAMP AND PLATFORM

**Item 2.01      Excavation of existing seabed up to required elevation**

The quantity to be paid for shall be the actual volume in cubic meter of existing fill for containment, drainage and port lighting system to be excavated up to desired elevation and disposed in accordance with the plans and specifications and accepted by the Engineer. The contract unit price shall be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Item 3.01      Chip- off existing RC curb, flush to deck level and smoothen with mortar**

The quantity to be paid for shall be the actual length in linear meter of existing RC curb, to be chipped-off, flushed to deck level and smoothened with mortar to be chipped off 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      Supply and deliver to site 350mm x 600mm PSC sheet piles**

The quantity to be paid for shall be the actual length in linear meter of 350mm x 600mm PSC sheet piles to be supplied and delivered 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      Supply and deliver to site RC corner sheet piles (CP) of various sizes**

- a. CP-1
- b. CP-2
- c. CP-3
- d. CP-4
- e. CP-5
- f. CP-6
- g. CP-7

The quantity to be paid for shall be the actual length in linear meter of RC corner sheet piles(CP) of various sizes to be supplied and delivered 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      Handle, pitch and drive 350mm x 600mm PSC and RC sheet piles**

The quantity to be paid for shall be the actual length in linear meter of 350mm x 600mm PSC and RC 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 2.06      Chip-off of driven PSC piles up to required elevation including disposal of debris**

The quantity to be paid for shall be the actual number of driven PSC piles to be chipped-off to cut-off elevation including disposal of debris at the designated area 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      Supply and deliver to site 450mm x 450mm PSC anchor piles**

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mm PSC anchor piles to be supplied and delivered 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      Handle, pitch and drive 450mm x 450mm batter PSC anchor piles**

The quantity to be paid for shall be the actual length in linear meter of 450mm x 450mm batter PSC anchor 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 2.09      Chip-off of driven PSC piles up to cut-off elevation including disposal of debris**

The quantity to be paid for shall be the actual number of driven PSC piles to be chipped-off to cut-off elevation including disposal of debris at the designated area 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      Supply and install tie rods including accessories**

- a. 60mm  $\varnothing$  x 17m
- b. 60mm  $\varnothing$  x 15m
- c. 60mm  $\varnothing$  x 2.5m
- d. 36mm  $\varnothing$  x 12m

The quantity to be paid for shall be the actual number in set of tie rod 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 2.11      Supply and place gravel bedding**

The quantity to be paid for shall be the actual volume in cubic meters of gravel bedding 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 2.12      Supply and place of 1,450 psi lean concrete 100mm thk.**

The quantity to be paid for shall be the actual volume in cubic meters of 1,450 psi lean concrete 100 mm thick 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 2.13      Supply and place 3,500 psi concrete for coping wall, retaining wall, wing wall, anchor block, RC curb, lateral drainage and catch basin manhole**

The quantity to be paid for shall be the actual area in square meter of 3,500 psi concrete for coping wall, retaining wall, wing wall, anchor block, RC curb, lateral drainage and catch basin manhole 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 2.14      Supply and installation of steel reinforcements for coping wall, retaining wall, wing wall, anchor block, RC curb, lateral drainage and catch basin manhole**

The quantity to be paid for shall be the actual weight in kilograms of steel reinforcements for coping wall, retaining wall, wing wall, anchor block, RC curb, lateral drainage and catch basin manhole 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 2.15      Supply and place 3000 kg. armour rocks**

The quantity to be paid for shall be the actual volume in cubic meter of 3000 kg. armour rocks 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 2.16      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-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 2.17      Supply and place of 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-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 2.18      Supply and install of geotextile filter**

The quantity to be paid for shall be the actual area in square meters of geotextile fabric 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 2.19      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 to be 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 2.20      Supply, spread and compact selected fill materials**

The quantity to be paid for shall be the actual volume in cubic meter of selected fill materials 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 2.21      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 2.22      Construct concrete shear keys including steel reinforcement**

The quantity to be paid for shall be the actual area in square meter of concrete shear keys including steel 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 2.23      Construct PCC Pavement (300mm thk) including dowel bars**

The quantity to be paid for shall be the actual area in square meter of portland cement concrete pavement (230 mm thk) including asphalt sealer dowel bars for 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 2.24      Supply, spread and compact 10% cement treated base course**

The quantity to be paid for shall be the actual volume in cubic meter of 10% cement treated 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 2.25      Supply and spread leveling of sand cushion (50mm thk.)**

The quantity to be paid for shall be the actual volume in cubic meter of leveling sand cushion in cubic meters to be supplied and spread 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 2.26      Supply, delivery and installation of ICBP (100mm x 200mm x 125mm), 6,000 psi**

The quantity to be paid for shall be the actual area in square meter of ICBP (100mm x 200mm x 125mm), 6,000 psi to be supplied, delivered and installed 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 2.27      Construction of 100 mmø GI pipe railings**

The quantity to be paid for shall be the actual quantity in lot of 100 mmø GI pipe railings 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 2.28      Supply and deliver mooring bollards, T-head, 35T, including accessories**

The quantity to be paid for shall be the actual number in set of mooring bollards, T-head, 35T, including accessories to be supplied and delivered 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 2.29      Install mooring bollard, T-head, 35T, including accessories**

The quantity to be paid for shall be the actual number in set of mooring bollard, T-head, 35T, including 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 2.30      Supply and deliver rubber dock fender (V-type, 500H x 1500L) including accessories**

The quantity to be paid for shall be the actual number in set of rubber dock fenders (V-type, 500H x 1500L) 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 2.31      Install rubber dock fenders, V-type, 500H x 1500L, including accessories**

The quantity to be paid for shall be the actual number in set of rubber dock fenders including 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 2.32      Supply and install lateral drainage cover including built-up angular frame**

The quantity to be paid for shall be the actual length in linear meter of lateral drainage cover including built-up angular frame 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 2.33      Supply and install catch drain manhole cover including built-up angular frame**

The quantity to be paid for shall be the actual number in set of catch drain manhole cover including built-up angular frame 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 2.34      Supply and installation of 400mm dia. Reinforced concrete pipe**

The quantity to be paid for shall be the actual length in linear meter of 400mm dia. reinforced concrete pipes 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.

**BILL NO. 6**

**REIMBURSABLE ITEMS**

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

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

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

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

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

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

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

**MINIMUM EQUIPMENT REQUIREMENTS**

1	unit	Crane barge (319 GW) with 60T crane, owned
1	unit	Tugboat (500hp), owned
1	unit	Clamshell, owned
1	unit	Crawler crane (30T), owned
1	unit	Pile Hammer (Diesel or Hydraulic, 10,500 kg-m), owned
1	unit	Concrete mixer (1-bagger), owned
1	unit	Conc. vibrator (3.50 hp), owned
1	unit	Bar cutter (electric, 25mm dia min.), owned
1	unit	Bar bender (electric, 25mm dia min.), owned
1	unit	Drop hammer (2T), owned
1	unit	Welding machine (400 amp.), owned
1	unit	Dump truck (8 cu.m.), owned
1	unit	Water truck (1,000 gal.) with pump, owned
1	unit	Oxy/Acetylene cutting outfit, owned
1	unit	Plate compactor, (5 hp), owned
1	unit	Jackhammer, owned
1	unit	Air-compressor (250 cfm), owned
1	unit	Concrete cutter, owned
1	unit	Road roller (12.05T, vibratory), owned/leased
1	unit	Road grader (125 hp), owned/leased
1	unit	Payloader ( 80 hp), owned/leased
1	unit	Concrete bucket, owned
1	unit	Transit mixer (5-6 cu.m. Cap.), owned
1	unit	Forklift, (1.36T), owned
1	unit	Concrete screeder, owned
1	unit	Backhoe (0.40 cu.m., 94.30hp), owned/leased
1	unit	Cargo truck, owned

## CONSTRUCTION SAFETY AND HEALTH REQUIREMENTS

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

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

The Contractor shall provide the following minimum requirements:

### LABOR

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

### EQUIPMENT / MATERIALS

#### Personnel Protective Equipment

- |    |       |              |
|----|-------|--------------|
| 55 | pcs.  | Hard Hats    |
| 55 | pairs | Gloves       |
| 12 | pcs.  | Goggles      |
| 2  | pcs.  | Aprons       |
| 1  | pc.   | Safety Belts |
| 55 | pairs | Safety Shoes |
| 1  | pc.   | Life Lines   |

#### Safety Devices

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

Medical and First Aid System                      -                      For seventeen (17) mos.

### NOTE:

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

**SECTION IX**

**BIDDING FORMS**



# Bid Form

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

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

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

We, the undersigned, declare that:

- (a) We have examined and have no reservation to the Bidding Documents, including Addenda, for the Contract **Capinpin Port Expansion Project, Port of Capinpin, Brgy. Puting Buhangin, Orion, Bataan**;
- (b) We offer to execute the Works for this Contract in accordance with the Bid and Bid Data Sheet, General and Special Conditions of Contract accompanying this Bid;

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

BILL NO	DESCRIPTION	TOTAL AMOUNT
1	General Expenses	P
2	Back-Up Area with RoRo Ramp and Platform	P
3	Reimbursable Items	P
	<b>TOTAL AMOUNT OF BID (including VAT)</b>	<b>P</b>

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

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

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

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

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

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

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

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

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

Name of the Contract or Title Of the Project 1]	Owner's Name and Address	Nature/ Scope of Work 2]	Contractor's Role (in percentage) 3]	Total Contract Value At		Date of Award 5]	Value of Outstanding Works	Estimated Time of Completion	% of Accomplishment		Contract Duration 5]	
				Award	Project Completion Date				Planned	Actual	Start	Completed
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 or defined in the contract entered/executed by the parties
- 2] With special reference to the Scope of Works as described/enumerated in the advertised Invitation To Bid.
- 3] Indicate whether as Sole Contractor, Sub-Contractor or Member in a Joint Venture / Consortium
- 4] Indicate the FOREX used if Contract Value is expressed in a currency other than the Philippine Peso. Specify the "Escalation Factor" used to escalate the Contract Value from completion date to the advertisement date of the Invitation to Bid per section 23.11.2 (3) of R.A. 9184.
- 5] State Month and Year.

This Statement shall be supported by:

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

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

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

\_\_\_\_\_  
Date

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

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

NOTE :

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

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

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

\_\_\_\_\_  
Date

## EXPERIENCE RECORD ON SIMILARLY COMPLETED PROJECTS

Similar Major Operations of Work 1)	Unit of Measure	Quantity	Title of the Project				Unit of Measure	Quantity
			Title of the Project	Title of the Project	Title of the Project	Title of the Project		
1. Pile Driving of PSC Piles a. Off-Shore Pile Driving b. On-Shore Pile Driving	l.m. l.m.	2,720 80						
2. Reinforced Concrete Works:	cu.m.	349						
3. Rock Works a) 3000 kg./pc. rocks b) 1000 kg./pc. rocks c) 50-100 kg./pc. rocks	cu.m. cu.m. cu.m.	1,037 515 5,940						
4. Fill Materials	cu.m.	32,711						
5. Portland Cement Concrete Pavement and Shear Keys	sq.m.	381						
6. Interlocking Concrete Block Pavement	sq.m.	5,842						

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

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

Name of Firm/Applicant

Authorized Signing Official

Date

## FINANCIAL DATA

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

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

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

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

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

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

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

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

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

### NOTES:

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

## LIST OF CONTRACTOR'S PERSONNEL

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

Position of Key Personnel	Name	No. of Key Personnel	Similar Experience in the Position (Years) 1)	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					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 of Safety and Health Construction Related 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. Minimum qualification requirements: (work experience is similar in nature and complexity to the project to be bid with regard to Registration Particulars of the Contractor's License)

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

Name of Firm/Applicant

Authorized Signing Official

Date

REVISED FORM (September 2012)

## LIST OF CONTRACTOR'S EQUIPMENT UNITS

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

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

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

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

Name of Firm/Applicant

Authorized Signing Official

Date

REVISED FORM (January 2011)



## OMNIBUS SWORN STATEMENT FOR SOLE PROPRIETORSHIP

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

### AFFIDAVIT

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

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

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

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

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

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

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

**NAME OF NOTARY PUBLIC**

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

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

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

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

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

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

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

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

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

## OMNIBUS SWORN STATEMENT FOR PARTNERSHIP OR COOPERATIVE

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

### AFFIDAVIT

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

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

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

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

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

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

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

**NAME OF NOTARY PUBLIC**

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

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

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

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

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

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

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

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

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

**OMNIBUS SWORN STATEMENT FOR CORPORATION OR JOINT VENTURE**

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

**A F F I D A V I T**

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

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

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

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

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

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

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

**NAME OF NOTARY PUBLIC**

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

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

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

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

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

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

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

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

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

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

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

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

I, the undersigned, declare that:

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

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

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

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

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

**NAME OF NOTARY PUBLIC**

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



## CONSTRUCTION METHODOLOGY

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

### MINIMUM SCOPE OF CONSTRUCTION METHODOLOGY

The **Works** consists of:

#### **A. BACK-UP AREA WITH RORO RAMP AND PLATFORM**

- a. Excavation of existing sea bed and of fill materials (3,048 cu.m.)
- b. Chip-off of existing R.C. Curb, flush to deck & smoothen with mortar (99 l.m.)
- c. Supply/drive 350 mm x 600mm PSC sheet piles and RC corner piles (5,440 l.m.)
- d. Supply/drive 450 mm x 450mm PSC anchor piles (160 l.m.)
- e. Supply and install tie-rods including accessories (113 set)
- f. Supply and place gravel bedding (152 cu.m.)
- g. Supply/place 1,450 psi lean concrete 100 mm thk. (26 cu.m.)
- h. Supply/place 3,500 psi concrete (697 cu.m.)
- i. Supply/installation of reinforcing bars (64,817 kg.)
- j. Supply/installation of 3000 kg armour rocks (2,073 cu.m.)
- k. Supply/installation of 1000 kg armour rocks (1,029 cu.m.)
- l. Supply/installation of 50-100 kg core rocks (11,880 cu.m.)
- m. Supply/installation of geotextile fabric (6,104 sq.m.)
- n. Supply/place fill materials (65,421 cu.m.)
- o. Construction of Shear Keys including reinforcement (325 sq.m.)
- p. Construction of PCCP including aggregate base course. (436 sq.m.)
- q. Supply, deliver & install ICBP incl. 10% CTB and leveling sand (11,683 sq.m.)
- r. Construct 100 mm GI pipe railings (1 lot)
- s. Supply/installation of mooring bollard (35T) (13 set)
- t. Supply/installation of RDF (V500H x 1500L) (15 set)
- u. Supply/installation of lateral drainage cover incl. built-up angular frame (111 l.m.)
- v. Supply/installation of catch drain manhole cover incl. built-up angular frame (7 l.m.)
- w. Supply/installation 400 mm ø reinforced concrete pipe (3 l.m.)

#### **NOTES:**

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

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

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

## MANPOWER SCHEDULE

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

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

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

MANPOWER (Minimum)	CONTRACT DURATION ( _____ Calendar Days)																
	M O N T H L Y																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Project Manager																	
Project Engineer																	
Materials Engineer																	
Construction Safety and Health Officer																	
Foreman																	
Specify other applicable positions, ie.:																	
- Carpenter																	
- Steelman																	
- Mason																	
- Electrician																	
- Rigger																	
- Others																	

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

## EQUIPMENT UTILIZATION SCHEDULE

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

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

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

[illegible]

Signature  
(Authorized Signing Official)

## CASHFLOW BY QUARTER AND PAYMENT SCHEDULE

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

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

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

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

## NOTES

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

Signature  
(Authorized Signing Official)

**SECTION X**

**CONTRACT FORM**

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

**C O N T R A C T**  
**CAPINPIN PORT EXPANSION PROJECT**  
**PORT OF CAPINPIN, BRGY. PUTING BUHANGIN, ORION, BATAAN**

KNOW ALL MEN BY THESE PRESENTS:

This Contract, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, in Manila, Philippines, by and between:

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

- and -

\_\_\_\_\_, a corporation duly organized and existing in accordance with Philippine laws, with office and business address \_\_\_\_\_, represented in this act by \_\_\_\_\_, duly authorized for this purpose, as evidenced by Secretary's Certificate \_\_\_\_\_, a copy of which is hereto attached and made an integral part hereof as Annex "A", and hereinafter referred to as "**CONTRACTOR**"

**W I T N E S S E T H:**

WHEREAS, in accordance with Republic Act No. 9184 and its Implementing Rules and Regulations, PPA advertised and published in a newspaper of general circulation and posted on the PPA website and G-EPS as well as in its bulletin board, an Invitation to Bid for the *Capinpin Port Expansion Project, Port of Capinpin, Brgy. Puting Buhangin, Orion, Bataan*;

WHEREAS, the **CONTRACTOR** and other prospective bidders submitted their respective bids for the foregoing project;

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

WHEREAS, pursuant to Head Office BAC Resolution No. \_\_\_\_\_ Series of \_\_\_\_\_, award of the contract was made to the **CONTRACTOR** in a Notice of Award dated \_\_\_\_\_, in the amount of \_\_\_\_\_ (P \_\_\_\_\_), after submission of the required documents within the prescribed period and compliance to the conditions stipulated in the IRR;

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

NOW, THEREFORE, for and in consideration of the foregoing premises and the mutual covenants, stipulations and agreements herein contained, the PPA and the **CONTRACTOR** have agreed, as they do hereby agree, and contract as follows:

## ARTICLE I

### CONTRACT DOCUMENTS

1.01 The following documents shall constitute integral parts of this Contract, as fully as if the contents of the said documents are reproduced, incorporated and set forth herein, and shall govern and control in full force and effect the rights and obligations of the Parties, except as otherwise modified by the terms and conditions of this Contract, or by mutual agreement in writing of both parties, to wit

- a. Contract Agreement
- b. Bidding Documents
- c. Winning bidder's bid, including the Eligibility requirements, Technical and Financial Proposals and all other documents / statements submitted
- d. Performance Security
- e. Notice of Award of Contract; and
- f. Other contract documents that may be required by existing laws and the PPA such as:
  - (1) Construction Schedule and S-Curve
  - (2) Manpower Schedule
  - (3) Construction Methods
  - (4) Equipment Utilization Schedule
  - (5) Construction Safety and Health Program approved by the DOLE
  - (6) Pert / CPM
  - (7) Duly Approved Program of Work and Cost Estimates
  - (8) Certificate of Availability of Funds
  - (9) Abstract of Bids
  - (10) Resolution of Award

1.02 All Contract documents are and shall remain as the property of the PPA.

1.03 The words and expressions in this Contract shall have the same meanings respectively assigned to them in the Contract Documents referred to above.

## ARTICLE II

### CONTRACTOR'S UNDERTAKING SCOPE OF WORK

2.01 The CONTRACTOR, in consideration of the payment to be made by the PPA to the CONTRACTOR, as stated in the Contract Documents and this Contract, the latter hereby covenants to execute and complete the *Capinpin Port Expansion Project, Port of Capinpin, Brgy. Puting Buhangin, Orion, Bataan*, in conformity in all respects with the provisions of this Contract, as follows:

=====	
ITEMS	TOTAL AMOUNT
=====	
1. General Expenses	P
2. Back-Up Area with RoRo Ramp and Platform	P
3. Reimbursable Items	P
	_____
<b>TOTAL AMOUNT</b>	<b>P</b>

2.02 The CONTRACTOR agrees to commence, perform and complete the work called for and defined in this Contract at its sole cost and expense, and to fully and faithfully furnish all materials, tools, labor supplies, equipment, services and superintendence for the implementation of this Contract in

accordance with the schedule in the Contract Documents forming integral parts of this Contract.

**2.03** The CONTRACTOR guarantees, among others, that all tools, equipment, machineries, instruments, accessories and materials it will supply or deliver or install and/or use in the construction and workmanship of all his work under the Contract, shall be brand new and in accordance with the Contract Documents.

**2.04** The CONTRACTOR recognizes the position of trust and confidence reposed in it under this Contract, and agrees to perform its obligations hereunder in the most efficient and competent manner, use its skill and good judgment, always set in good faith, and carry out the execution of this Contract in the most sound, expeditious and economical manner consistent with the interest of the PPA.

### **ARTICLE III**

#### **CONSIDERATION**

**3.01** For and in consideration of the full, satisfactory and faithful performance by the CONTRACTOR of all its undertakings defined in and provided for under this Contract and Contract Documents, the PPA agrees to pay the CONTRACTOR the total amount not exceeding (P \_\_\_\_\_),

Philippine Currency, inclusive of the 12% value added tax, payment to be made and computed on the basis of final quantities at the unit bid price for each item of work actually performed and finished for each pay item as determined and accepted by PPA and in the manner set forth in the Contract Documents, as full compensation for everything furnished and done by the CONTRACTOR under this Contract, including all works required but not specifically mentioned, and also for all losses and damages to the CONTRACTOR arising out of the work aforesaid, from the action of the elements, or from any obstruction or difficulty encountered in the prosecution of this Contract, for all expenses incurred by or in consequence of the suspension or discontinuance of the contract herein specified and for faithfully completing the contract and the whole thereof, at the time and in the manner provided in the Contract Documents.

It is agreed and understood that all bid prices specified in this contract shall be considered as fixed prices, and therefore not subject to price adjustment and escalation during the contract implementation, except under extraordinary circumstances and upon prior approval of the Government Procurement Policy Board (GPPB) or when a Treaty or International or Executive Agreement Expressly allows it. Any request for price escalation under extraordinary circumstances shall be submitted by PPA to the National Economic and Development Authority (NEDA). Extraordinary circumstances shall refer to events that may be determined by the NEDA in accordance with the Civil Code of the Philippines and upon recommendation of the PPA.

**3.02** Final and full payment of the consideration herein above-mentioned shall be upon full completion of the project and fulfillment by the CONTRACTOR of all the terms and conditions set forth in this Contract.

However, it is agreed that no payment or payments made under this Contract, except the final payment upon issuance of Certificate of Completion and Acceptance, shall be understood as performance of this Contract, either wholly or in part, and no payment shall be construed to be an acceptance of defective work or improper implementation thereof.

**3.03** Any payment due and payable to the CONTRACTOR may be set off against liquidated damages payable to the PPA by the CONTRACTOR under this Contract.

**3.04** It is likewise understood that the CONTRACTOR shall show proof evidencing payments by the CONTRACTOR of labor, materials, supplies, insurance premiums, etc., used in the work, before any payment is made to it.

For this purpose, the CONTRACTOR shall, before payment is made on the works accomplished, submit an affidavit certifying to the fact of payments of said labor, materials, supplies, equipment, insurance premiums, etc.



3.05 All payments shall be subject to existing government accounting and auditing rules and regulations.

3.06 Progress payments are subject to retention of ten percent (10%) referred to as the "retention money". Such retention shall be based on the total amount due to the contractor prior to any deduction and shall be retained from every progress payment until fifty percent (50%) of the value of works, as determined by the PPA are completed. If, after fifty percent (50%) completion, the work is satisfactorily done and on schedule, no additional retention shall be made; otherwise, the ten percent (10%) retention shall be imposed.

3.07 The total "retention money" shall be due for release upon final acceptance of the works. The CONTRACTOR may, however, request for the substitution of the retention money for each progress billing with irrevocable standby letters of credit from a Universal or Commercial Bank, of amounts equivalent to the retention money substituted for and acceptable to PPA, provided that the project is on schedule and is satisfactorily undertaken. Otherwise, the ten percent (10%) retention shall be made. Said irrevocable standby letters of credit to be posted in favor of PPA shall be valid for a duration to be determined by PPA and will answer for the purpose for which the ten percent (10%) retention is intended, i.e., to cover uncorrected discovered defects and third party liabilities.

## ARTICLE IV

### PERFORMANCE SECURITY

4.01 To guarantee the faithful performance of the CONTRACTOR of its obligations under this Contract, it shall post prior to the signing of the Contract a performance security in the form of irrevocable letter of credit issued by a Universal or Commercial Bank, and acceptable to PPA or a combination thereof as may be required by PPA, in accordance with the following schedule:

- |    |  |  |
|----|--|--|
| a. | Irrevocable,<br>letter of credit issued by a Universal or<br>Commercial Bank | - Ten Percent (10%) of the total<br>contract price                           |
| b. | any combination of the foregoing   | - Proportionate to share of form with<br>respect to total amount of security |

4.02 This performance security shall be denominated in Philippine Pesos and posted in favor of PPA, and shall be forfeited in favor of PPA in the event it is established that the CONTRACTOR is in default in any of its obligations under this Contract.

4.03 Subject to the conditions of the Contract, the performance security may be released by PPA after the issuance of the Certificate of Acceptance of the project, provided that PPA has no claims filed against the CONTRACTOR or the surety company and there are no claims for labor and materials filed against the contractor.

4.04 The CONTRACTOR shall post an additional performance security following the schedule above to cover any cumulative increase of more than ten percent (10%) over the original value of the contract as a result of amendments to order or change orders, extra work orders and supplemental agreements as the case may be. The CONTRACTOR shall cause the extension of the validity of the performance security to cover approved contract time extensions.

4.05 In case of a reduction in the contract value or for partially completed works under this contract which are usable and accepted by PPA, and the use of which in the judgment of PPA shall not affect the structural integrity of the entire project, PPA may allow a proportional reduction in the original performance security, provided that any such reduction is more than ten percent (10%) and that the aggregate of such reductions is not more than fifty percent (50%) of the original performance security.

## ARTICLE V

### COMPLETION TIME: LIQUIDATED DAMAGES

5.01 The CONTRACTOR agrees and obligates itself to perform and complete all works provided for in this Contract within \_\_\_\_\_ calendar days (including Sundays and Holidays), reckoned not later than seven (7) calendar days from issuance of the Notice to Proceed. Notice to Proceed shall be issued after this Contract has been signed by the Parties hereof.

5.02 Time is of the essence of this Contract. Should the CONTRACTOR refuse or fail to satisfactorily complete the work within the specified contract time, plus any time extension duly granted and is hereby in default under the contract, the CONTRACTOR shall pay the PPA for liquidated damages, and not by way of penalty, an amount as provided in the conditions of contract, equal to at least one-tenth (1/10) of one (1) percent of the cost of the unperformed portion of the works for everyday of delay.

5.03 The project or a portion thereof may be deemed usable when it starts to provide the desired benefits as certified by the Facilities Construction and Maintenance Department of PPA.

5.04 It is understood that the damages herein provided are fixed and agreed liquidated damages and to be entitled to such damages, PPA does not have to prove that it has incurred actual damages. Such amount shall be deducted from any money due or which may become due the CONTRACTOR under the contract and/or collect such liquidated damages from the retention money or other securities posted by the CONTRACTOR, whichever is convenient to PPA.

5.05 In case that the delay in the completion of the work exceed a time duration equivalent to ten percent (10%) of the specified contract time plus any time extension duly granted to the CONTRACTOR, PPA may rescind the contract, forfeit the CONTRACTOR's performance security and take over the prosecution of the project or award the same to a qualified contractor through negotiated contract.

5.06 In no case, however, shall the total sum of liquidated damages exceed ten percent (10%) of the total contract price, in which event the contract shall automatically be taken over by PPA or award the same to a qualified contractor through negotiation and the erring CONTRACTOR's performance security shall be forfeited. The amount of the forfeited performance security shall be aside from the amount of the liquidated damages that the CONTRACTOR shall pay PPA under Section 5.02 hereof and impose other appropriate sanctions.

## ARTICLE VI

### EXTENSION OF CONTRACT TIME

6.01 Should the amount of additional work of any kind or other special circumstances of any kind whatsoever occur such as to fairly entitle the CONTRACTOR to an extension of contract time, PPA shall determine the amount of such extension; provided that PPA is not bound to take into account any claim for an extension of time unless the contractor has prior to the expiration of the contract time and within thirty (30) calendar days after such work has been commenced or after the circumstances leading to such claim have arisen, delivered to PPA notices in order that it could have investigated them at that time. Failure to provide such notice shall constitute a waiver by the CONTRACTOR of any claim. Upon receipt of full and detailed particulars, PPA shall examine the facts and extent of the delay and shall extend the contract time for completing the contract work when, in PPA's opinion, the findings of facts justify an extension.

6.02 No extension of contract time shall be granted the CONTRACTOR due to (a) ordinary unfavorable weather conditions; and (b) inexcusable failure or negligence of CONTRACTOR to provide the required equipment, supplies or materials.

6.03 Extension of contract time may be granted only when the affected activities fall within the critical path of the PERT/CPM network.

**6.04** No extension of contract time shall be granted when the reason given to support the request for extension was already considered in the determination of the original contract time during the conduct of detailed engineering and in the preparation of the contract documents as agreed upon by the parties before contract perfection.

**6.05** Extension of contract time shall be granted for rainy/unworkable days considered unfavorable for the prosecution of the works at the site, based on the actual conditions obtained at the site, in excess of the number of rainy/unworkable days predetermined by the PPA in relation to the original contract time during the conduct of detailed engineering and in the preparation of the contract documents as agreed upon by the parties before contract perfection and/or for the equivalent period of delay due to major calamities such as exceptionally destructive typhoons, floods and earthquakes, and epidemics, and for causes such as non-delivery on time of materials, working drawings, or written information to be furnished by the PPA, non-acquisition of permit to enter private properties within the right-of-way resulting in complete paralization of construction activities, and other meritorious causes as determined by the PPA's authorized Engineer and approved by the PPA. Shortage of construction materials, general labor strikes, and peace and order problems that disrupt construction operations through no fault of the CONTRACTOR may be considered as additional grounds for extension of contract time provided they are publicly felt and certified by appropriate government agencies such as DTI, DOLE, DILG and DND, among others. The written consent of bondsmen must be attached to any request of the CONTRACTOR for extension of contract time and submitted to the PPA for consideration and that the validity of the performance security shall be correspondingly extended.

## **ARTICLE VII**

### **ENTIRE CONTRACT**

**7.01** Provisions to the contrary notwithstanding, it is agreed that this is an entire contract for one whole complete work and that partial payments on account by the PPA or the use of parts of the work or equivalent shall not constitute an acceptance of any part of the work before its entire completion and final acceptance in writing by the PPA.

## **ARTICLE VIII**

### **CONTRACTOR'S LIABILITY**

**8.01** The Parties, likewise, hereby agree that the employees of the CONTRACTOR are not employees of the PPA; hence, the PPA shall not in any way be liable or responsible for any personal injury or damages including death sustained or caused by any of the employees of the CONTRACTOR and/or his sub-contractor or agent or supplier whether or not occurring during the performance of their duties. The CONTRACTOR agrees and binds itself to indemnify the PPA for whatever injuries or damages caused or occasioned or contributed to by the failure, negligence or conduct of the CONTRACTOR and/or its employees, sub- contractors, agent and supplier or consultants arising out of or in connection with or on the occasion of the performance of this Contract. The CONTRACTOR shall, at all times, stand solely liable and/or responsible for the enforcement of, and compliance with all existing laws, rules and regulations and binds itself to save and hold the PPA free and harmless from any and all liability in respect thereof and/or arising therefrom and/or by reason of this Contract and its implementation.

## **ARTICLE IX**

### **RESPONSIBILITY OF THE CONTRACTOR**

**9.01** The CONTRACTOR shall assume full responsibility for the entire contract work until its final acceptance by the PPA and shall be held responsible for any damage or destruction of works until such final acceptance.

**9.02** The CONTRACTOR shall be fully responsible for the safety, protection, security and convenience of its personnel, third parties and the public at large, as well as the works, equipment,

installation and the like to be affected by the construction work.

9.03 Any actionable act or acts of \_\_\_\_\_ arising out of or in the course of this Contract shall be understood and binding as an act of \_\_\_\_\_ and vice-versa.

## ARTICLE X

### INSPECTION AND CONSTRUCTION OF CONTRACT WORK

10.01 Inspection of the contract work shall be made by the PPA while such contract work is in progress to ascertain that the completed works or stages comply in all respects, with the standards and requirements set forth in the Contract Documents. Notwithstanding such inspection, the CONTRACTOR shall be held responsible for the acceptability of the finished works. The CONTRACTOR shall promptly correct all works determined by the PPA as failing to meet requirements, at CONTRACTOR's own expense.

## ARTICLE XI

### NON-ASSIGNMENT AND NO SUBCONTRACT

11.01 The CONTRACTOR shall not, without the written approval of the PPA, assign, transfer, pledge, sub-contract, or make any other disposition of interest in this Contract. Any unapproved assignment, transfer, pledge, sub-contract or any other disposition, shall be sufficient ground for the PPA to terminate or cancel this Contract *motu proprio* without need of judicial action pursuant to Section 19.04 hereof. Should the PPA give its written approval, such consent shall not relieve the CONTRACTOR of its responsibilities under the Contract. The CONTRACTOR shall ensure that the terms and conditions of any such sub-contract shall comply and conform with the terms and conditions of the Contract. The CONTRACTOR shall be responsible for the observance by any such sub-contractor of the terms and conditions of the Contract.

11.02 If any portion of the project sub-contracted is not prosecuted faithfully in accordance with the Contract, the sub-contractor shall be removed or replaced immediately upon the written request of the PPA, provided, however, that any failure of PPA to make such a request shall not relieve the CONTRACTOR of its obligations under the contract. PPA shall not be responsible for the delays or costs incurred by the CONTRACTOR because of the disapproval or removal of the sub-contractor or because of the late submittal of its or his approval.

## ARTICLE XII

### INSURANCE

12.01 The CONTRACTOR shall, prior to the commencement of work, secure the standard CONTRACTOR's all risk insurance (CARI) from the Government Service Insurance System (GSIS) or any insurance company duly certified by the Insurance Commission as authorized to issue such insurance, to insure the works against all losses or damages arising from whatever cause for which the CONTRACTOR is responsible under the Contract.

## ARTICLE XIII

### WARRANTY

13.01 The CONTRACTOR shall assume full responsibility for the contract work from the time project construction commenced up to final acceptance thereof by the PPA and shall be held responsible for any damage or destruction of the works, except those occasioned by force majeure. The CONTRACTOR shall be responsible for the safety, protection, security, and convenience of its personnel, third parties, and the public at large, as well as the works, equipment, installation and the like to be affected by the construction work.

13.02 The defect liability period for the project covered by this Contract shall be one (1) year from project completion up to final acceptance thereof by the PPA. During this period, the CONTRACTOR shall undertake and complete the repair works, at its own expense, of any damage to the said project within NINETY (90) DAYS from the time the PPA General Manager or his duly authorized representative has issued an order to undertake repair. In case of failure or refusal to comply with this order, PPA shall undertake such repair works and the CONTRACTOR shall fully reimburse the former for all the expenses incurred therein upon demand.

13.03 After final acceptance of the project by the PPA, the CONTRACTOR shall be responsible for structural defects and/or failure of the said project within the period of FIFTEEN (15) YEARS from the date of final acceptance thereof by the PPA. For this purpose, the CONTRACTOR shall put up a warranty security in the form of letter of credit issued by a Universal or Commercial Bank or Bank guarantee confirmed by a Universal or Commercial Bank and acceptable to PPA in accordance with the following schedule:

- |  |   |
|--|---|
| a. Letter of Credit issued by a<br>Universal or Commercial Bank  | - Five percent (5%) of the total contract price |
| b. Bank guarantee confirmed by a<br>Universal or Commercial Bank | - Ten percent (10%) of the total contract price |

The warranty security shall be denominated in Philippine Pesos, remain effective for one (1) year from the date of issuance of the Certificate of Final Acceptance by PPA and be returned only after the lapse of the said one (1) year period.

#### ARTICLE XIV

##### TAXES, LICENSES, PERMITS AND FEES

14.01 The CONTRACTOR's tax, licenses, permits, fees and all other taxes, fees or charges of whatever form, kind or nature due or which may be due to the national and/or local government units and/or its instrumentalities/agencies on account of the performance and completion of the work stipulated herein, fees for the testing of materials and samples and fees for the testing and inspection of the installation by all agencies having jurisdiction and all necessary and incidental expenses relative thereto including preparation of documents and notarial fees shall be paid for and obtained by the CONTRACTOR on its own account. Should the PPA be compelled to advance the same, PPA is hereby authorized to deduct the amount advanced from whatever amount due the CONTRACTOR from PPA.

14.02 The CONTRACTOR shall pay taxes in full and on time and that failure to do so shall entitle PPA to suspend payment to the CONTRACTOR. Further, the CONTRACTOR shall during the term of this Contract regularly present to PPA a tax clearance from the Bureau of Internal Revenue (BIR) as well as a copy of its income and business tax returns duly stamped and received by the BIR and duly validated with the tax payments made thereon.

#### ARTICLE XV

##### AGREEMENT MODIFICATION

15.01 No modification, alteration or waiver of any provision herein contained shall be binding on the Parties hereto unless evidenced by a written amendment signed by the parties hereof.

15.02 A variation order (change order/extra work order) may be issued by PPA under the conditions set forth in the applicable provisions of Republic Act No. 9184 and its Implementing Rules and Regulations.

15.03 The PPA may, at any time by written order and without notice to the Sureties, direct the CONTRACTOR to perform additional/extra work necessary to and within the General Scope of the project as bid and awarded. The CONTRACTOR shall be paid for additional/extra work items whose unit

prices shall be derived based on the following:

- a. For additional/extra works duly covered by change orders involving work items which are exactly the same or similar to those in the original contract, the applicable unit prices of work items in the original contract shall be used.
- b. For additional/extra works duly covered by Extra Work Orders involving new work items that are not in the original contract, the unit prices of the new work items shall be based on the direct unit costs used in the original contract (e.g. unit cost of cement, rebars, form lumber, labor rate, equipment rental, etc.). All new components of the new work item shall be fixed prices, provided the same is acceptable to both PPA and the CONTRACTOR, and provided further that the direct unit costs of new components shall be based on the CONTRACTORS's estimate as validated by PPA via documented canvass in accordance with existing rules and regulations. The direct cost of the new work item shall then be combined with the mark-up factor (i.e., taxes and profit) used by the contractor in his bid to determine the unit price of the new work item.

15.04 Request for payment by the CONTRACTOR for any extra work shall be accompanied by a statement, with the approved supporting forms, giving a detailed accounting and record of amount for which he claims payment. Said request for payment shall be included with the CONTRACTOR's statement of progress payment.

## **ARTICLE XVI**

### **SUSPENSION OF WORK**

16.01 The PPA or its duly authorized representative shall have the authority to suspend the work wholly or partly by written order for such period as may be deemed necessary, due to force majeure or any fortuitous events or for failure on the part of the CONTRACTOR to correct bad conditions which are unsafe for workers or for the general public to carry out valid orders given by PPA or to perform any provisions of the Contract, or due to adjustment of plans to suit field conditions as found necessary during construction. The CONTRACTOR shall immediately comply with such order to suspend the work wholly or partly.

In case of total suspension, or suspension of activities along the critical path, which is not due to any fault of the CONTRACTOR, the elapsed time between the effective order of suspending operation and the order to resume work shall be allowed the CONTRACTOR by adjusting the contract time accordingly.

## **ARTICLE XVII**

### **INDIVISIBILITY OF OBLIGATION**

17.01 It is the intent of the Contract that all the documents, annexes and addenda forming part hereof, shall be read together and that each and every provision or stipulation hereof be given full force, effect and applicability. However, in the event that one or more provisions or stipulations herein be declared null and void by the courts, or otherwise rendered ineffective, the remaining provisions and stipulations shall not be affected thereby.

## **ARTICLE XVIII**

### **ARBITRATION/REMEDY AND RELIEF**

18.01 Should there be any dispute or difference of any kind whatsoever which shall arise between the parties in connection with the implementation of this Contract, the Parties hereto shall make every effort to resolve amicably such dispute or difference by mutual consultation. In the event that such dispute or disagreement be not resolved to their mutual satisfaction, the matter shall be submitted to arbitration in the Philippines according to the provisions of Republic Act No. 876, otherwise known as the "Arbitration Laws" and Republic Act No. 9285; otherwise known as the "Alternative Dispute Resolution Act of 2004".

Provided, however, that disputes that are within the competence of the Construction Industry Arbitration Commission to resolve shall be submitted thereto. Provided, further, that, by mutual agreement, the parties hereto may agree in writing to resort to other alternative modes of dispute resolution. Provided, finally, that the arbitration proceeding shall be without prejudice to the right of PPA to rescind or terminate this contract in accordance with Article XIX, Section 19.04 hereof.

18.02 Should the PPA be constrained to resort to court action to enforce or safeguard its rights and interests under this Contract, the CONTRACTOR shall be liable to the PPA for attorney's fees in an amount equivalent to Twenty Percent (20%) of the total sum claimed in the complaint, exclusive of other damages and the expenses of litigation. Venue of all court actions in connection with or arising out of this contract shall be laid exclusively in the proper court of the City of Manila.

18.03 It is clearly understood that in case a dispute or disagreement arises between the PPA and the CONTRACTOR regarding the manner by which the latter is performing works, the CONTRACTOR shall follow the instruction of the PPA relative thereto, otherwise, it shall have no right to ask for arbitration or go to court for relief.

## ARTICLE XIX

### OTHER COVENANTS

19.01 It is expressly agreed and understood that in case of irreconcilable conflict between the provisions of this Contract and the provisions of any of the contract documents, the former shall be controlling.

19.02 It should also be clearly understood that any payment or failure of the PPA to demand compliance with any of the terms and conditions of this Contract or any act of liberality on the part of the PPA shall not be construed or considered as a waiver on the part of the PPA for the enforcement of this Contract, nor shall it relieve the CONTRACTOR of any of its obligations provided thereunder.

19.03 Under no circumstances shall the PPA be held liable for the payment of any extra work, or extra cost of work, change of work, or change order undertaken without the prior written approval of the PPA to perform said work.

19.04 Notwithstanding any provision to the contrary, the PPA has the right to terminate, cancel and/or rescind this Contract *motu proprio*, in case of breach thereof by the CONTRACTOR, without need of judicial action by giving at least TEN (10) Days written Notice to that effect to the CONTRACTOR, which Notice shall be final and binding on all the parties. In such event, the PPA may take over and continue the project, and the contracts and agreements entered into by the CONTRACTOR with third parties, which the PPA in its discretion, may want to assume are hereby conclusively deemed assigned to the PPA. For this purpose, the CONTRACTOR here agrees and obligates itself to incorporate or cause to be incorporated in any contract or agreement with third parties, as same is connected with or related to the performance of any or all of the CONTRACTOR's obligations and undertakings hereunder, a stipulation providing for its assignability to and assumption by the PPA, at the option of the PPA. It is further agreed and understood that upon receipt of the Notice mentioned above, the CONTRACTOR cannot remove, withdraw or pull-out any of the equipment, machineries, tools, materials, and/or supplies brought to the project site without the written approval of the PPA.

Within thirty (30) days after termination, cancellation or rescission of this Contract, the Parties shall settle their respective accountabilities as of the date of termination, cancellation or rescission, including the refund of any and all advances made plus legal interest from date of receipt of the amount or amounts advanced.

19.05 It is expressly agreed that whenever the CONTRACTOR is behind schedule in its contract work and incurs ten (10%) percent or more negative slippage based on its approved PERT/CPM, the PPA may undertake the whole or portion of the unfinished work by administration or by negotiation through another qualified CONTRACTOR.

Whenever a work activity in the project is not being done on schedule per approved PERT/CPM, the PPA shall notify and direct the CONTRACTOR to immediately undertake such work activity. If within fifteen (15) days from receipt of such notice, the CONTRACTOR fails to start work and to show a satisfactory performance, PPA may take over the whole or portion of such work and have such work done by administration or award the same to another qualified contractor through negotiated contract at the current valuation price.

19.06 The PPA has the right to require the CONTRACTOR to supply and provide the required tools, materials, supplies, equipment, facilities, and to increase the number of workers assigned to the work when exigencies of the service so require. Should the CONTRACTOR fail, refuse or neglect to comply with the same, PPA shall have the option to take over the project in whole or in part or award the same to another CONTRACTOR through negotiated contract at the current valuation price. Any increase in cost which the PPA may incur as a result of its take-over of the project pursuant to Sections 19.04, 19.05 and 19.06 shall be borne by and charged to the CONTRACTOR.

19.07 The CONTRACTOR shall provide and do everything necessary to perform its obligations under this Contract according to the true intent and meaning of all the Contract Documents taken together, whether the same may or may not be shown or described particularly in the drawings, plans and specifications provided that the same can be inferred therefrom. Should the CONTRACTOR find discrepancy in the drawings, plans and specifications, it shall immediately refer the same to the PPA, whose decision shall be followed.

19.08 The CONTRACTOR agrees and obligates itself to restore to its original condition, on its own account, any public road, pavement, streets or open space and/or public or private property which are excavated or in any manner used by the CONTRACTOR in connection with the performance of its obligations under this Contract.

19.09 The CONTRACTOR agrees and binds itself to hold and save PPA free and harmless from any damage, claims and rights of action by third parties arising out of or by reason of this Contract and all injuries that may be suffered by PPA due to the failure, negligence, delay or conduct on the part of the CONTRACTOR and/or its employees in the performance of their obligations under this Contract.

19.10 No final payment of the contract shall be made to the CONTRACTOR without the Certificate of Completion and/or Acceptance from the Office of the Municipal Engineer of the Municipality concerned of the local works to be restored mentioned in Section 19.08 hereof, otherwise the cost of restoration shall be made available out of any collectible/receivable by the CONTRACTOR from the PPA.

19.11 Notwithstanding any extra work, change of work or orders made, if any, by the PPA, it is agreed that the same shall be completed within the period herein fixed and provided.

19.12 The CONTRACTOR shall hold the PPA free and harmless from whatever suit and hereby binds and obligates itself to indemnify the PPA for any and all liabilities, losses, damages, judgment, awards, fines, penalties and all expenses, legal or otherwise, of whatever kind and nature, arising from and by reason of this Contract, due to the fault, negligence, act, omission, delay, conduct, breach of trust or non-observance or violation of this Contract or any stipulation and warranty by the CONTRACTOR and/or any of its employees, agents, representatives or sub-contractors.

## ARTICLE XX

### SPECIAL REPRESENTATION

20.01 The CONTRACTOR hereby represents that all documents it submitted which form integral parts hereof are authentic and duly executed with all the required formalities for the same, and that the facts and/or date contained therein are true and correct. A breach of this representation including all misrepresentation in the documents or suppression of material facts therein, which if known, could have disqualified the CONTRACTOR such that this contract would not have been made and entered into, gives the PPA the immediate right or recourse to **motu proprio** rescind, abrogate or otherwise terminate the contract without need of judicial action, in accordance with Section 19.04 hereof.



20.02 The CONTRACTOR hereby warrants that it has not given nor promised to give any money, gift or any material favor/consideration to any official or employee of the PPA to secure this Contract; that any violation of this warranty shall be sufficient ground for the PPA to revoke or cancel this Contract extrajudicially or without need of judicial intervention.

#### ARTICLE XXI

#### BUDGETARY REQUIREMENT

21.01 The parties hereto hereby adopt and incorporate herein by reference, Letter of Instruction No. 767 dated 16 November 1978, issued by the Office of the President, as implemented by the Letter Circular, dated 7 December 1978, of the Department of Budget and Management.

#### ARTICLE XXII

#### EFFECTIVITY

22.01 This Contract shall become effective after the same shall have been signed by the Parties hereof.

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

#### PHILIPPINE PORTS AUTHORITY

By:

Jay Daniel R. Santiago  
General Manager

By:

#### WITNESSES:

Mark Jon S. Palomar  
Chairperson Head Office Bids and Awards Committee

#### ACKNOWLEDGMENT

REPUBLIC OF THE PHILIPPINES)  
City of \_\_\_\_\_ ) S.S.

BEFORE ME, a Notary Public for and in the City of \_\_\_\_\_, this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared the following:

NAME	Proof of Identity	DATE	PLACE
Jay Daniel R. Santiago	_____	_____	_____

Known to me and to me known to be the same persons who executed the foregoing instrument as:

POSITION	COMPANY	CTC No.	DATE	PLACE
General Manager	Philippine Ports Authority	_____	_____	_____

and they acknowledged to me that the same is their own free act and deed as well as the free and voluntary act of the corporation they represent.

This foregoing instrument is a Contract for the *Capinpin Port Expansion Project, Port of Capinpin, Brgy. Puting Buhangin, Orion, Bataan*, consisting of 13 pages, including this page on which this acknowledgment is written, signed by the parties and their instrumental witnesses on each and every page thereof.

IN WITNESS WHEREOF, I have hereunto affixed my hand and notarial seal on these presents at the place and on the date first above written

Doc. No. \_\_\_\_\_;  
Page No. \_\_\_\_\_;  
Book No. \_\_\_\_\_;  
Series of 20 \_\_\_\_\_;