

A. GENERAL REQUIREMENTS**SECTION 01
SUMMARY OF WORKS****PART 1 GENERAL REQUIREMENTS**

All works incidental to the completion of the above-mentioned major of work items shall be part of the scope of work. During the execution of the work, the Project-In-Charge shall see to it that port operations shall not be affected, and the site must be free of dirt and debris at all times.

PART 2 SCOPE

The work includes the furnishings of all materials, labor tools and equipment and the performance of all operations necessary for the construction and completion of the project: **REPLACEMENT OF DAMAGED V-TYPE RUBBER DOCK FENDERS AT BERTHS 5-7, PORT OF CAGAYAN DE ORO**, including all appurtenances necessary to complete the work and as known on the drawing.

PART 3 LOCATION

The proposed work is located at the Port of Cagayan de Oro City.

**SECTION 02
CONTRACT DOCUMENTS****PART 1 GENERAL**

The Contractor shall use the English Language and the Modern metric system of weights and measurements in all documents, drawings and corresponding related to the Contract.

PART 2 DEFINITIONS

The following terms used in the Contract Documents shall be interpreted as follows:

2.1 OWNER: **PHILIPPINE PORTS AUTHORITY, PMO-MISAMIS ORIENTAL/CDO**

2.2 COMMITTEE is the **PMO-MOC BIDS AND AWARDS COMMITTEE**

PART 3 CHANGE ORDERS

With a written request, the Owner may at anytime issue revisions to the Contract Documents and drawings or additional drawings.

PART 4 RECORDS

The Contractor shall keep all documents, books and other records concerning the contract with the work for a period of five (5) years reckoned from receipt of final payment.

SECTION 03 SITE REQUIREMENTS

1.1 LOCATION AND BOUNDARIES OF SITE

- A. The contractor during the performance of this contract will be restricted to the use of the work site, haul roads and assigned housing and messing storage and laydown areas assigned by the OWNER. The contractor shall comply with the national standards, conditions and minimum health protocols for construction and use of site offices work site and laydown areas.
- B. The location of those parts of the site allocated for the permanent works together with all boundaries are shown on the site plan included with the contract drawings. The contractor is advised to ascertain this area during his site visit and he shall take such measures given within these conditions and exercise such care as to protect this area and boundaries during the course of the works and as may be directed by the Engineer.
- C. The contractor shall install and/or put in place barricades, or temporary fencing to enclose the work areas as shown on the site plan and all other areas allocated by the Engineer. The contractor shall not allow his workmen or any other person to pass beyond the limits of the site other than the purpose of access.

1.2 ACCESS TO SITE

- A. Within the OWNER's area, the OWNER shall designate the access and egress routes for the contractor's use. The contractor shall be entirely responsible for the provision of any sign or direction on any such route that he may consider necessary for the guidance of his staff, workmen and visitor, for obtaining permission that may be required from any authority for the use of such or the provisions of such signs or directive.

1.3 SITE WORKING SPACE

- A. The contractor shall take note of the area for building operations available within the site area and shall confine his apparatus storage lots of materials, and operations of his workforce within those confines and to the direction of the Engineer and shall not unreasonably encumber the site with untidy material.

1.4 STAGING AREAS

- A. The contractor will not be allocated staging areas outside the site boundaries.

SECTION 04 PROJECT HEALTH AND SAFETY

1.1 CONTRACTOR'S RESPONSIBILITY FOR SAFETY

The Contractor shall be solely and entirely responsible for the safety of all people entering and/or working on the site and for all members of the general public affected in any way by the activities of the Contractor in connection with the execution of the works on the site, including the delivery and removal of construction equipment, materials and goods to and from the site.

The Contractor shall also be held solely and entirely responsible for the adequate protection of the whole of the Works at all times (including safe storage of materials and goods not yet incorporated into the Works and partially completed work) until the issuance of the Certificate of Completion for the Works.

The Contractor shall comply with all the laws, regulations and the like of any Authority having jurisdiction over the Site, including those relating to safety of persons and road users, etc., and shall maintain the Site in a safe condition.

To ensure the safety not only of his own personnel but also those of the OWNER, the Engineer and all others with legitimate reason to be on the Site, The Contractor shall at all times maintain the Site in a clean, tidy and organized fashion. The Contractor shall ensure that his supervisory personnel fully understand the need for such a policy and shall make them responsible for its proper implementation.

The Contractor shall also assume full responsibility for the adequacy, stability and safety of all On-Site operations and methods of construction, including all Temporary Works.

1.2 CONTRACTOR'S CONSTRUCTION SAFETY AND HEALTH PLAN

Before construction work commences, the Contractor shall prepare a Construction Safety and Health Plan detailing all the necessary rules, regulations and procedures to be implemented on the Site in respect of health and safety aspects and emergency procedures, a copy of which must be deposited with the Engineer for his review and approval. The Construction Safety and Health Plan shall incorporate a Safety Statement signed by the Project Manager, setting out the Contractor's policy in regard to safety in the workplace.

The construction safety and Health plan shall be in accordance with the requirements of Department Order No. 13 "Guidance Governing Occupational Safety and Health in the Construction Industry" of the Department of Labor and Employment and "Construction Guidelines for Project Implementation during the period of the Public Health Emergency" issued by the Philippine Domestic Construction Board (PDCB) and the Construction Industry Authority of the Philippines (CIAP).

1.3 CONTRACTOR'S SITE SAFETY OFFICER

The Contractor shall engage a full time Site Safety Officer to be based on the site, whose specific duty will be to consider and deal with all safety matters and who shall be present on the site from the outset of the Contractor's on-site activities. The site safety officer shall have proven experience in site safety plan implementation and be fully conversant with safety requirements relating to construction site in general and with Contractor's Construction Safety and Health Plan for the works in particular.

The contractor's representative, assisted by the site safety officer, shall be responsible for ensuring that the Construction Safety and Health Plan is fully and effectively implemented throughout all areas of the site. As part of the campaign to ensure an accident-free working environment on the Site, and to better the understanding of all issues involved, the site safety officer shall arrange for safety seminars to be held for all workers before they commence working on the site.

1.4 PROTECTION MEASURE FOR WORKERS AND THE PUBLIC

The contractor shall ensure that the methodology of all work activities is thoroughly thought out beforehand, with special consideration being given to safety precautions at hazardous work areas, not only to protect the workers but also all others who may be affected by such activities. Wherever work is such that workers or passers-by may be in danger, the Contractor shall ensure that all necessary walkways, overhead protection, barriers, guard rails and the like are properly in place

before such work begins, and that adequate signs are erected to notify people of the danger of deviating from the designated walk area.

The sequence and timing of construction operations shall be in full accordance with good, safe construction practice.

1.1 AVAILABILITY OF FIRE FIGHTING EQUIPMENT, FIRST AID FACILITIES AND EMERGENCY SERVICES

The Contractor shall draw up appropriate emergency escape procedures for and designate appropriate escape routes from all structures and construction work areas on the Site, to ensure that all personnel can be evacuated quickly and safely in the event of an emergency occurring.

The Contractor shall provide and maintain fire extinguishers, fully charged and other facilities necessary for reasonable fire protection throughout the site. The Contractor shall also provide and maintain, at easily accessible locations throughout the site adequate first aid kits at least to the standard as may be required by current legislation or subsequent amendments thereto, together with reasonable quantities of bandages, sterile materials and other supplies for first-aid treatment of minor injuries.

The Contractor shall determine the location of the nearest available hospital (or other appropriate medical services), fire station and police station, and shall maintain an updated list of such information posted at strategic locations throughout the site.

1.2 CONSTRUCTION GUIDELINES FOR PROJECT IMPLEMENTATION DURING THE PERIOD OF PUBLIC HEALTH EMERGENCY

The Contractor shall abide to PPA Engineering Circular No. 01-2020 dated 15 May 2020 and the Philippine Domestic Construction Board (PDCB) on the Construction Safety Guidelines for Project Implementation During the Period of Public Health Emergency.

The Contractor is directed to implement the following:

- A. Only persons from Twenty-One (21) to Fifty-Nine (59) years of age, without pre- **existing health conditions, such as, but not limited to Immunodeficiency, comorbidities or other health risk and who did not come in contact with someone with COVID-19 shall be allowed to be included in the workforce.**
- B. The Contractor shall provide for their personnel/workers the necessary welfare facilities and amenities.
- C. Compliance to social distancing, proper hygiene and mandatory wearing of face masks and other protective personnel equipment shall be ensured for all on-going projects as precautionary measures to avoid and contain the spread of COVID-19 in the work place.
- D. Field Offices, employees' quarters, bunkhouses and other common areas shall be maintained to ensure cleanliness and daily disinfection of said areas must be conducted accordingly.
- E. Contractors shall provide disinfection facilities such as handwashing station, footbath and others to be placed at various locations.
- F. Contractors shall ensure that their project is in compliance to DOLE DO No. 13 Series of 1998. Personnel and workers shall be provided with the supply of vitamins particularly Vitamin C and other over the counter medicines quarantine facilities and oxygen tanks for emergency purposes.
- G. Safety Officer of the Contractor shall regularly conduct briefing on the information regarding COVID-19 construction protocols on top of other safety requirements.
- H. As preventive measure, daily monitoring of the pre and post work health conditions of workers shall be undertaken by the Contractor's Health/safety officer particularly the temperature, blood pressure and exposure monitoring. Personnel with symptoms relative to COVID-19 shall be immediately isolated and quarantined for fourteen (14) days and if necessary, brought to the DOH COVID-19 treatment facility under strict confidentiality/privacy.

- I. Daily health monitoring report shall be prepared by the Safety Officer and to be submitted to the assigned PPA Project Engineer.
- J. Proper protocols in accordance with the DTI and DOLE Interim Guidelines and the Local Government Unit Policy on work place prevention and control of COVID-19 shall likewise be strictly observed.
- K. Daily work activities shall be under strict monitoring by the Safety Officer to ensure compliance with safety standards and quarantine protocols.
- L. Sharing of construction and office equipment is discouraged. However, if it cannot be avoided, disinfection of equipment in between transfer shall be conducted.
- M. All materials and equipment brought inside the project site shall be disinfected as much as possible.
- N. Non-essential personnel, visitors and general public shall be restricted to enter the project site. All personnel entering the construction site premises on a temporary basis shall be properly logged and checked for symptoms. Gatherings, liquors, and/or merry-making are strictly prohibited in the project site.
- O. Clustered and staggered deployment of employees within the construction site shall be observed to minimize personnel contact.
- P. The Contractor shall submit to the OWNER the inventory of work activities including the proposed sequencing of activities to be followed and undertaken to comply to the required social distancing. Break times shall be conducted in a staggered manner.

SECTION 05 QUALITY CONTROL

1.1 DEFINITION

Specific quality control requirements for the WORK are indicated throughout the Contract Documents. The requirements of this sections are primarily related to performance of the Work beyond furnishing of manufactured products. The term "Quality Control" includes inspection, sampling and testing, and associated requirements.

1.2 SAMPLING AND TESTING

- A. All RDF's to be incorporated in the project shall be subjected to performance testing. This requires a mandatory testing for all items and be subject to 100% test.
- B. Unless otherwise indicated, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM and AASHTP as applicable to the class and nature of the article or material considered; however, the OWNER reserves the right to use any generally-accepted system of sampling and testing which, in the opinion of the PPA Project Engineer will ensure the OWNER that the quality of Work is in full accord with the Contract Documents.
- C. Any waiver by the OWNER of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee or substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial Work, shall not be construed as a waiver of any requirements of the Contract Documents.
- D. Notwithstanding the existence of such waiver, the PPA Project Engineer reserves the right to make independent investigations and test, and failure of any portion of the Work to meet any of the requirements of the Contract Documents, shall be reasonable cause for the PPA Project Engineer to require the removal or correction and reconstruction of any such Work in accordance with the General Conditions.

B. SITEWORKS

**SECTION 01
RUBBER FENDER SYSTEM**

1.1 GENERAL PROVISIONS

A.	The Contractor shall be deemed to have satisfied himself of the site conditions, and to have included in his unit prices provision for all risks that may arise during or in connection with the work.
B.	All workmanship shall be of the best quality appropriating to each category of work, except where otherwise stated or approved by the PPA Project Engineer. These specifications are intended to cover all Labor, materials, tools and equipment required for the execution of this project. All materials used in the works shall be of the best quality of their respective kinds as specified or described in herein , drawing and Bill of Quantities.
C.	The Contractor shall provide suitable equipment, skilled labor and appropriate temporary works such as scaffoldings to ensure safety in the areas to be installed as well as in the adjacent area.
D.	The Contractor shall submit to the PPA Project Engineer details of his proposed construction equipment and methods. Any revision to this proposal, which in the light ensuing experience appear desirable, shall be submitted for approval to the PPA Project Engineer. No work shall be carried out to the approval of the Engineer/Engineer's representative.
E.	If required by the Engineer, the contractor shall erect and maintain at its own expense suitable and approved temporary fencing to enclose such areas of the work to be carried out to the satisfaction of the PPA Project Engineer or his representative.

1.2 INTERFERENCE WITH PORT OPERATIONS

A.	During the execution of the work, the Contractor shall not interfere with the shipping, navigation and other traffic in the port.
B.	The Contractor shall make arrangements with the operations people on the schedule of demolition and related works to keep port operation activities undisturbed at all times.
C.	The Contractor shall execute the work in such a manner that he does not interfere or damage existing services located in the proximity of the jobsite. He shall be responsible for any damage of interference of these services and shall carry out all necessary repairs at his own expense to the satisfaction of the PPA Project Engineer or his representative

1.3 MATERIAL REQUIREMENTS

A.	<p>Physical Properties</p> <p>Material for rubber fenders will be one of the international accepted materials.</p> <p>Test methods shall conform to JIS K6301 or equivalent.</p> <p>The rubber material used for rubber fenders shall be a compound of natural rubber and synthetic rubber of high quality having sufficient resilience, anti-aging, weather and wear resistant property according to the following table.</p> <table border="1"> <thead> <tr> <th></th><th>Property</th><th>Requirement</th><th>Test Method (JIS K6301)</th></tr> </thead> <tbody> <tr> <td rowspan="2">Tension test (before aging)</td><td>Hardness (HS)</td><td>77 max.</td><td>Spring type Hardness type</td></tr> <tr> <td>Tensile Strength (kg/cm2)</td><td>160 min.</td><td>Test piece Dumbell No. 3</td></tr> </tbody> </table>				Property	Requirement	Test Method (JIS K6301)	Tension test (before aging)	Hardness (HS)	77 max.	Spring type Hardness type	Tensile Strength (kg/cm2)	160 min.	Test piece Dumbell No. 3
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	<p>Tension test (after aging)</p> <p>Elongation (%)</p> <p>Hardness</p> <p>Tensile Strength (kg/cm²)</p> <p>Elongation</p> <p>Tear resistance (kg/cm²)</p> <p>Compression Set (%)</p> <p>Oil Resistance (volume change)</p>	<p>350 min.</p> <p>+8 max. from original value</p> <p>not less than 80% of original Value</p> <p>not less than 80% of original Value</p> <p>70 min.</p> <p>60 min.</p> <p>30 max.</p> <p>60 max.</p> <p>20 max.</p>	<p>Air heating 70 °C x 96 hrs.</p> <p>Test piece</p> <p>25 °C x 24 hrs.</p>
B.	<p>Anchor</p> <p>Anchor Bolts and connecting hardware shall be fabricated from type SUS 304 stainless steel to the required shapes and sizes as shown on the approved shop drawings, and conforming to JIS G 4303 or equivalent.</p>		
C	<p>Testing</p> <p>The Contractor shall be required to submit test certificates showing compliance to the above requirements. The test certificates should be certified by an independent inspection organization recommended by the Contractor and approved by the Engineer.</p> <p>All fenders shall be tested for performance. The fender shall be compressed repeatedly three times to the minimum deflection at speed from 2 to 8 cm. per minute.</p> <p>The load and deflection values shall be recorded with a precision of 0.5 mm. The results shall be plotted in the form of load-deflection-energy absorption curves. The average data obtained in the second and third test loadings shall be considered as performance values. The tests and reporting shall be carried by an approved laboratory and shall be supervised and certified by the independent inspection organization.</p> <p>If any of the tested fenders fail to satisfy the performance requirements, retesting shall be conducted on all fenders of the same type.</p>		
D	<p>Sampling of Specimen</p> <p>The specimens of rubber shall be taken at the mixing stage directly from each batch of rubber compound for manufacturing of fenders.</p> <p>The specimens shall be tested for compliance with requirements as specified in paragraph b of this Sub-section.</p>		
E	<p>Inspection for Dimension</p> <p>The fenders shall be inspected by the independent inspection organization.</p> <p>One fender out of five fenders of each type shall be inspected for compliance with dimensions.</p> <p>Five percent (5%) of anchor bolts and fittings shall be selected at random and inspected. Materials for bolts and fittings to be covered by certified steel manufacturer's mill sheet shall be verified by the independent inspection organization.</p>		
F	<p>Acceptance Tolerance</p> <p>The acceptance tolerances shall be as stipulated in the following:</p>		

	<p>a. Fender Dimension</p> <table><tr><td></td><td>Length</td><td>Width</td><td>Height</td><td>Height Thickness</td></tr><tr><td>Tolerance</td><td>+4% -2%</td><td>+4% -2%</td><td>+4% -2%</td><td>+8% -2%</td></tr></table>		Length	Width	Height	Height Thickness	Tolerance	+4% -2%	+4% -2%	+4% -2%	+8% -2%
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	<p>b. Anchoring Bolt Holes in Fender</p> <table><tr><td></td><td>Diameter of the Hole</td><td>Pitch of the Hole</td></tr><tr><td>Tolerance</td><td>+2 mm</td><td>+4 mm</td></tr></table>		Diameter of the Hole	Pitch of the Hole	Tolerance	+2 mm	+4 mm				
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	<p>c. Acceptance tolerance for all fenders supplied as follows:</p> <table><tr><td>E=Energy Absorption</td><td>E ≥ Specified E but not less than 10% of the specified E</td></tr><tr><td>R =Reaction Force</td><td>E ≤ Specified R but not more than 10% of the specified R</td></tr></table>	E=Energy Absorption	E ≥ Specified E but not less than 10% of the specified E	R =Reaction Force	E ≤ Specified R but not more than 10% of the specified R						
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	<p>d. Performance requirements shall conform to paragraph c of Subsection 3.13.1.3</p> <p>As basis for acceptance of all finished fenders supplied, a tolerance of +10% on the performance requirements indicated will be acceptable.</p> <p>The cost of tests and inspection required herein are all for the Contractor's account.</p>										
G	<p>Marking</p> <p>All fender units shall be clearly numbered and marked. Each fender shall have the following marking:</p> <p>a. Fender type and manufacturer's name or trademark</p> <p>b. Production serial number</p> <p>c. Date of manufacturing</p> <p>d. Main dimensions (length, height)</p> <p>e. Bill number in accordance with the project code specified in the Bill of Quantities.</p>										
H	<p>Warranty</p> <p>The Contractor shall guarantee the fenders against any defects that are attributable to faulty design and manufacture and shall also guarantee the performance of the fenders under normal working conditions. The guarantee shall be for a minimum period of 12 months from the date of the issuance of Taking-Over Certificate of the Works.</p> <p>During the period of guarantee, repairs and replacement of defective fender units and/or material shall be carried by the Contractor at his own cost.</p>										

1.4 EXECUTION

A.	All fenders shall be installed at the locations shown on the drawings and in accordance with the approved manufacturer's recommendations and shop drawings.
B.	During the removal and installation of rubber dock fenders, the Contractor shall provide the traffic safety signs for the area to secure from any untoward incident.
	The removed rubber dock fenders must be brought to a safe place intended for proper stocking by the owner and to be determined by the Engineer.
	Removal/Replacement of Rubber dock fenders shall be done in proper sequence so as not to hamper the port operations. A removed rubber dock fender shall be replaced immediately.
	Damaged rubber dock fender during transportation, installation and in any matter impair the characteristics and general requirements of rubber dock fender shall not be installed.

1.5 MEASUREMENT AND PAYMENT

A.	Measurement and payment of the quantities of rubber fender system shall be based on the number of sets of rubber fender systems completely installed with anchor bolts with necessary sleeves and certified by the Engineer.
B.	Payment stated above shall be full compensation for all labor, materials and equipment and all preparatory and incidental works necessary to complete the work.