



**Republic of the Philippines
SOCIAL SECURITY SYSTEM
LUZON NORTH 2 DIVISION
TUGUEGARAO BRANCH**

CANVASS FORM no. _____

SEALED CANVASS

Date: _____

Sir / Madam:

Please furnish us with your quotation on or before _____ for the following items:

No.	Quantity	PARTICULARS	Unit Cost	Total Cost
<u>Supply, Delivery and Installation of:</u>				
1	1 unit	Aircon-Split Type Floor Mounted - 3TR	P _____ /Unit	P _____
2	2 units	Aircon - Window Type - 2.5HP	P _____ /Unit	P _____
			TOTAL P	

Approved Budget: P352,000.00

Delivery Terms: 30 Calendar Days from receipt of approved Job Order / Purchase Order.

Payment Terms: Supplier shall be paid in accordance with Government Terms.

Price validity : Three (3) months

Area of Delivery: Tuguegarao City, Cagayan

Mode of Evaluation: Per unit

- NOTE/S:**
- 1.) The winning bidder **MAY** be required to post a Performance Bond within Three (3) Calendar Days from receipt of Notice of Award equivalent to 5% Cash, Cashier's / Manager's Check, 10% Bank Guarantee / Draft or 30% Surety Bond callable upon demand, of the contract price. Performance bond is **MANDATORY** in case of **INFRASTRUCTURE PROJECT**.
 - 2.) The supplier is required to indicate his PhilGeps Registration Number on the canvass form.
 - 3.) The SSS shall withhold the applicable taxes from the amount payable in accordance with the BIR regulations.
 - 4.) Please specify brand name / model being offered.
 - 5.) For further inquiries, kindly call HECTOR A. TOLLO, JR. at (078) 844-1512/(078) 844-2108
 - 6.) THE UPDATED SSS CERTIFICATE OF COMPLIANCE, BIR 2303, MAYOR'S PERMIT/BUSINESS PERMIT, PHILGEPS REGISTRATION NUMBER, INCOME/BUSINESS TAX RETURN SHALL BE SUBMITTED TOGETHER WITH YOUR QUOTATION. THE OMNIBUS SWORN STATEMENT IS TO BE SUBMITTED AFTER EVALUATION. NON-SUBMISSION OF THE FOREGOING DOCUMENTS SHALL BE A GROUN FOR DISQUALIFICATION.
 - 6.) Please see attached Scope of Work and Technical Specifications.

This is to certify that my Company is updated in the payment of contributions and loans to SSS and the data / quotation indicated are valid.

Owner/Company Representative
(Sign over Printed Name)

Reminder : Price quotation should be made with extra care taking into account the specification and unit of quantity to avoid errors. The offeror binds himself to this quotation **TERMS & CONDITIONS**.

Very Truly Yours,

JANET D. CANILLAS
Acting Head

Tel No. (078) 844-1512/ (078) 844-2108
E-mail Address: tuguegarao@sss.gov.ph

Please indicate below your Business Name, Address and Telephone Number and Date Received.

Your Business SSS No. _____
PhilGeps Registration No. _____
TIN no. _____
Date Received _____

(Business Name)

(Address & Telephone No.)

*In case of Self-Employed, please indicate your SSS number.

HECTOR A. TOLLO, JR.
Canvasser

Position: CEO I

Date: _____

ENGINEERING & FACILITIES MANAGEMENT DEPARTMENT

Date : June 23, 2020

PROJECT

: Supply, Delivery and Installation of Three (3) Air-Conditioning Units at
SSS Aparri Service Office

LOCATION

: Cartagena Building, Quirino corner R. F. Balsa Street, Barangay Centro 2,
Aparri, 3515 Cagayan

SUBJECT

: Detailed Cost Estimate

ITEM NO.	DESCRIPTION	QTY	UNIT	MATERIALS COST		LABOR COST		DIRECT COST	MARK-UP	VAT (12% DC&MU)	INDIRECT COST	TOTAL COST
				UNIT	TOTAL	UNIT	TOTAL					
1	Supply, Delivery & Installation of One (1) 3TR Floor Mounted Air-Conditioning Unit											
1.1	Equipment											
1.1.1	Brand New 3TR Floor Mounted Split Type Air-Conditioner with Horizontal Discharge Air-Cooled Condensing Unit Power Supply: 220-230V, single phase, 60Hz Cooling Capacity Rated: 10.55KW (36000 BTU/Hr) Power Consumption: 3.80KW Maximum piping length: 30 meters Refrigerant: R-410a Compressor Warranty: Five (5) years complete with standard accessories including dismantling and hauling of units and accessories to be replaced	1	set	81,900.00	81,900.00	4,095.00	4,095.00	85,995.00	12,899.25	11,867.31	24,766.56	110,761.56
1.2	Installation Works											
1.2.1	Suction Copper Pipe, for 3TR A/C Unit Hard-drawn, 20ft/length	1	lg	1,650.00	1,650.00	495.00	495.00	2,145.00	536.25	321.75	858.00	3,003.00
1.2.2	Discharge Copper Pipe, for 3TR A/C Unit Hard-drawn, 20ft/length	1	lg	1,000.00	1,000.00	300.00	300.00	1,300.00	325.00	195.00	520.00	1,820.00
1.2.3	Copper Tube Fittings	1	lot	500.00	500.00	150.00	150.00	650.00	162.50	97.50	260.00	910.00

ITEM NO.	DESCRIPTION	QTY	UNIT	MATERIALS COST		LABOR COST		DIRECT COST	MARK-UP	VAT (12% DGRMU)	INDIRECT COST	TOTAL COST
				UNIT	TOTAL	UNIT	TOTAL					
1.2.4	Refrigerant	2	kgs	750.00	1,500.00	225.00	450.00	1,950.00	487.50	292.50	780.00	2,730.00
1.2.5	Pipe Insulation for Suction Line, 6ft/lg	2	lgs	135.00	270.00	40.50	81.00	351.00	87.75	52.65	140.40	491.40
1.2.6	Pipe Insulation for Discharge Line, 6ft/lg	2	lgs	110.00	220.00	33.00	66.00	286.00	71.50	42.90	114.40	400.40
1.2.7	Polyethylene Film Cladding, 4" (white tape)	1	rolls	80.00	80.00	24.00	24.00	104.00	26.00	15.60	41.60	145.60
1.3	Electrical Works											
1.3.1	1/2inØ PVC Conduit	2	lgs	70.00	140.00	21.00	42.00	182.00	45.50	27.30	72.80	254.80
1.3.2	1/2inØ Liquid Tight Flexible Conduit	4	mtrs	75.00	300.00	22.50	90.00	390.00	97.50	58.50	156.00	546.00
1.3.3	Fittings and other accessories	1	lot	300.00	300.00	90.00	90.00	390.00	97.50	58.50	156.00	546.00
1.3.4	Communication Wiring, Royal Cord #14, 4-Core	4	mtrs	75.00	300.00	22.50	90.00	390.00	97.50	58.50	156.00	546.00
1.3.5	Grounding Wire, 2.0mm ² Ø THHN Wire, Lead-Free	4	mtrs	16.00	64.00	4.80	19.20	83.20	20.80	12.48	33.28	116.48
1.3.6	Feeder Line, 5.5mm ² Ø THHN Wire, Lead-Free	8	mtrs	36.00	288.00	10.80	86.40	374.40	93.60	56.16	149.76	524.16
1.3.7	ECB 40AT, 2P, 18KAIC, 230V, NEMA 3R Enclosure, Bolt-on, Surface Mounted, Industrial Type	1	set	3,000.00	3,000.00	900.00	900.00	3,900.00	975.00	585.00	1,560.00	5,460.00
1.4	Other Works to Complete the Installation											
1.4.1	Platform and Mounting Brackets for both units and Supports for both units and refrigerant lines	1	lot	2,500.00	2,500.00	750.00	750.00	3,250.00	812.50	487.50	1,300.00	4,550.00
	1.4.1a. 50 x 50 x 3mm Thick Angle Bar											
	1.4.1b. Threaded Rod with Clamp											
	1.4.1c. Welding Rod											
	1.4.1d. Nuts and Bolts											
	1.4.1e. Neoprene Pads											
	1.4.1f. Supports											
	1.4.1g. Others to complete the installation											
1.4.2	Nitrogen Gas and Flushing Agents	1	lot	250.00	250.00	400.00	400.00	650.00	162.50	97.50	260.00	910.00
1.4.3	Welding works including appropriate supports, fittings and other consumables	1	lot	250.00	250.00	400.00	400.00	650.00	162.50	97.50	260.00	910.00
1.4.4	PVC Drain Pipe Connection with proper clean-out	1	lot	250.00	250.00	400.00	400.00	650.00	162.50	97.50	260.00	910.00

ITEM NO.	DESCRIPTION	QTY	UNIT	MATERIALS COST UNIT	MATERIALS COST TOTAL	LABOR COST UNIT	LABOR COST TOTAL	DIRECT COST	MARK-UP	VAT (12% DCRMU)	INDIRECT COST	TOTAL COST
	Including declogging of existing drain line											
1.4.5	Testing and Commissioning	1	lot	250.00	250.00	400.00	400.00	650.00	162.50	97.50	260.00	910.00
1.4.6	Miscellaneous items and services	1	lot	550.00	550.00	165.00	165.00	715.00	178.75	107.25	286.00	1,001.00
	SUB TOTAL											137,446.40
2	Supply, Delivery & Installation of Two (2) 2.5HP Window Type Room Air-Conditioners											
2.1	Equipment											
2.1.1	Brand New 2.5HP Window Type Room Air-Conditioner with wireless remote control / soft panel	2	sets	40,000.00	80,000.00	2,000.00	4,000.00	84,000.00	12,600.00	11,592.00	24,192.00	108,192.00
	Cooling Capacity: 20,800 BTU/hr											
	Refrigerant: R-410a											
	Energy Efficiency Ratio: 9.8 kJ/h-watt (minimum)											
	Compressor Warranty: Five (5) years											
	Electrical Data: 220V, single phase, 60Hz											
	Including necessary electrical wirings, circuit breakers, air-con outlets and conduits											
	SUB TOTAL											108,192.00
	TOTAL PROJECT COST											245,638.40

Prepared by:

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 Antonio V. Trinos, Jr
 Senior Engineer, EMT-1

Reviewed & Checked by:

[Signature]
 George N. Carreon
 SSO V, EMT-1

Recommending Approval:

[Signature]
 Stephen P. Yap
 CEO IV, Engineering Section

Approved by:

[Signature]
 Baltazar C. Cajilig
 Acting Head, EFMD



Supply, Delivery and Installation of Three (3) Air-Conditioning Units at SSS Aparri Service Office located at Cartagena Building, Quirino corner R. F. Balisi Street, Barangay Centro 2, Aparri, 3515 Cagayan

PROJECT : Supply, Delivery and Installation of Three (3) Air-Conditioning Units at SSS Aparri Service Office
SUBJECT : TECHNICAL SPECIFICATIONS
DATE : June 23, 2020

SECTION I: GENERAL PROVISIONS

1.0 SUMMARY

This section includes the scope of work, system description and general requirements to complete the air-conditioning systems of the project.

2.0 GENERAL REQUIREMENTS:

The contract drawings indicate the extent and general arrangement of the air conditioning systems. If departures from the drawings are deemed necessary, details of such departures and the reasons therefore shall be submitted to the Engineer and/or his representative for approval. No such departures shall be made without the prior written approval of the Engineer or his authorized representative.

2.1 APPLICABLE STANDARDS: All materials, machinery, and equipment shall be of the required quality used in good commercial and trade practice and shall be essentially the standard products of reputable manufacturers. The acceptability of these items including their workmanship and method of installation shall be established by the following:

- a. Philippine National Standard (PNS)
- b. The Philippine Mechanical Engineering Code.
- c. The Philippine Electrical Code.
- d. Fire Code of the Philippines.
- e. Building code of the Philippines
- f. American Society of Heating, Refrigerating & Air-Conditioning Engineers (ASHRAE).
- g. American Society of Mechanical Engineer (ASME).
- h. National Fire Protection Associations (NFPA).
- i. Air Moving and Conditioning Association (AMCA).

2.2 EQUIPMENT SCHEDULE: As soon as practicable, after date of the award of the contract, a complete schedule of the equipment proposed for installation shall be submitted for the approval of the Engineer showing dimensions and arrangement of the equipment necessary clearances. The schedule shall include catalogs, diagrams, and drawings. In the event any items or equipment contained in the schedule fails to comply with the specifications, such item may be rejected. ***If applicable***

2.3 SHOP DRAWINGS: As soon as practicable, after award of the contract and prior to installation, complete shop drawings, showing the sizes and the type of equipment, together with complete duct and piping layout and electrical connections shall be submitted to the Engineer for approval. ***If applicable***



Supply, Delivery and Installation of Three (3) Air-Conditioning Units at SSS Aparri Service Office located at Cartagena Building, Quirino corner R. F. Balisi Street, Barangay Centro 2, Aparri, 3515 Cagayan

- 2.4 AS-BUILT PLANS: "As -Built" drawings is required prior to issuance of certificate of completion. "As -Built" drawings shall be furnished the building owner. The As-Built plan shall be of 20" x 30" blue print, signed and sealed by a Professional Mechanical Engineer. The As-Built plans shall include all contract drawings with the necessary revisions and modifications resulting in change from the original drawings, supplemented by such schematic, isometric, or other types of drawings as may be necessary to provide a clear understanding of installed systems "AS-BUILT".
- 2.5 LOCAL LAWS AND ORDINANCES: Aside from herein specified, the equipment and materials to be furnished and the installation of the systems shall conform to local laws, codes and other ordinances that are in force. If necessary, the contractor shall secure a permit to install from authorized agency having a jurisdiction over the place of installation and before final acceptance by the Owner a final certificate of inspection and a permit to operate the system shall be secured from the same government agency. Fees and other expenses due on these permits shall be borne by the contractor.
- 2.6 All tools, equipments, safety gadgets, medical kits shall be provided to ensure safety of the personnel and property against accidents and any untoward incidents that may affect the execution of the project.

3.0 COORDINATION OR WORK DONE BY OTHER TRADES:

- 3.1 It shall be the responsibility of this Contractor to closely coordinate his work with other trade concern to avoid conflicts and to insure the smooth and proper installation of the project.
- 3.2 This contractor shall carefully check space requirements to make sure that his equipment, air ducts, pipes, dampers, motor controllers, etc. can be installed in the space allotted for the same.

4.0 DESCRIPTION OF SYSTEMS:

The air-conditioning units shall be split type unit and window type units. The fan coil unit shall be floor mounted for 3TR Unit. The Compressor shall be rotary or scroll type compressor. The air-cooled condensing units shall be installed as per plan.

5.0 DESCRIPTION OF WORKS:

5.1 WORKS INCLUDED:

In general, the work under this section shall include but is not limited to the following principal items:

- a. Supply, Delivery & Installation of One (1) 3TR Floor Mounted Air-Conditioning Unit, complete with standard accessories.
- b. Supply, Delivery & Installation of Two (2) 2.5HP Window type Room Air-Conditioners, complete with standard accessories.



Supply, Delivery and Installation of Three (3) Air-Conditioning Units at SSS Aparri Service Office located at Cartagena Building, Quirino corner R. F. Balisi Street, Barangay Centro 2, Aparri, 3515 Cagayan

- c. Supply and Installation of Refrigerant Piping System with thermal insulation materials, aeroflex rubber (refer to manufacturer's recommendation for pipe sizes), Hard-drawn.
- d. Supply and installation of complete drainage system equipped with appropriate clean-out and fittings, rigidly anchored with independent supports and hangers.
- e. Fabrication and installation of FCU and ACCU platforms and refrigerant hangers. ACCU Platforms shall be extended for maintenance purposes and shall be provided with rubber vibration eliminators, 0.5 inch thick (minimum). Fabricated platforms, mounting brackets, supports and other metal structures shall be painted with epoxy primer and finish with QDE paint suitable for outdoor application. Provide rubber pads for all mounting platforms.
- f. Furnish and installation of refrigerant, flushing agents and other consumables.
- g. Supply and installation of brand new feeder line from brand new outdoor unit to brand new Enclosed Circuit Breakers (ECB's) and electrical wiring system from indoor units up to outdoor units. Supply and installation of other electrical components necessary to complete the project.
- h. Supply and installation of materials, consumables and other services not mentioned but are necessary to be rendered to complete the installation of electro-mechanical equipment and facilities and all other works/services. See to it that sufficient number of anchorage is provided to safely secure the equipment and facilities for this project. Cleaning and housekeeping shall be observed during the entire project implementation.
- i. Conduct appropriate testing and commissioning of all air-conditioning units and make sure that all mechanical and electrical parameters are operating in good condition. Submit complete report of equipment operation supported with measured and recorded electrical and mechanical parameters obtained during the testing and commissioning.
- j. The contractor is required to perform/conduct complete maintenance servicing and cleaning of all brand new A/C equipment within the warranty period.

SECTION 2: DESCRIPTION OF EQUIPMENT

1.0 AIR-COOLED CONDENSING UNITS

- a. Units shall have capacity and configuration as shown on the drawings and as manufactured by a reputable manufacturer. All units shall be furnished factory assembled, tested and piped complete with compressors, fans, motors, integrally wired control panel, starters, spring type vibration isolators, steel base, and refrigerant control accessories. Unit shall have heavy gauge corrosion protected weatherproofed casing.
- b. Compressors shall be scroll type and rated to operate at not more than 3,500 RPM at full load. Units shall be equipped with reversible oil pumps, shut-off valves, oil level sight



Supply, Delivery and Installation of Three (3) Air-Conditioning Units at SSS Aparri Service Office located at Cartagena Building, Quirino corner R. F. Balisi Street, Barangay Centro 2, Aparri, 3515 Cagayan

glass, high and low pressure cut-outs, oil safety switches and crankcase heaters to control oil dilution during shut-down.

- c. Condenser coils shall be seamless copper with mechanically bonded aluminum plate fins. Coil size, refrigerant circuiting and number of rows deep shall be compatible with the compressor displacement and capacity at the specified operating conditions with minimum refrigerant pressure drop.
- d. Condenser fans shall be statically and dynamically balanced propeller type fans directly driven by totally enclosed and inherently protected motors.
- e. Motor starters, control components and power terminal shall be grouped in an accessible control box inside the unit casing. Electrical components shall be pre-wired and control circuits shall be independently protected with fuses or breakers. Compressor protection shall include automatic relays to prevent excessive compressor short cycling.
- f. A complete operating charge of refrigerant 22 and compressor oil shall be furnished.

2.0 FAN COIL UNITS

- a. Units shall be floor mounted slim type or as specified in the equipment schedule.
- b. Unit shall have capacity at the operating conditions specified. They shall include the evaporator coil, expansion valve, centrifugal type air circulation blower, permanent type air filter, condensate drip pan and insulated decorative cabinet with discharge plenum, supply and return air grilles.
- c. Fan motors shall be equipped with overload protection.

SECTION 3: BASIC MATERIALS AND METHODS

1.0 REFRIGERANT PIPING

- a. Refrigerant piping shall be type L, hard drawn seamless copper, suitable for a working pressure of 2413kPa/350psig (refer to manufacturer's recommendation for refrigerant pipe sizes). Fittings shall be wrought copper or brass designed for use with high temperature solder and suitable for a working pressure of not less than 2413kPa/350psig. Joints from soldered to threaded joints shall be made with standard adapter fittings using high temperature solder. Pipes or tubing shall be cut accurately to measurements established at the building lines. All piping shall be laid straight and no pipe shall be laid against other metal without insulation. After cutting, the tubing shall be reamed, all burrs removed and the internal surfaces thoroughly cleaned. While soldering pipes and fittings together, a continuous flow of inert nitrogen gas must be applied to sweep the internal surface of the tubing to avoid the formation of oxide inside.
- b. Condensate drain piping shall be of PVC pipe and sized to liberally dispose of the condensate to the nearest floor drain. A P-trap with a clean out plugs shall be provided at the outlet for each drain pan.



Supply, Delivery and Installation of Three (3) Air-Conditioning Units at SSS Aparri Service Office located at Cartagena Building, Quirino corner R. F. Balisi Street, Barangay Centro 2, Aparri, 3515 Cagayan

- c. Pipe supports, and hangers shall be provided and fabricated in a workmanship manner out of steel angles, rods and flat bars. Metal to metal contact between pipes and hangers must be avoided by providing a 3mm. Thick rubber in between.
- d. Supports on horizontal lines shall be spaced at not more than 1.80 meters on center. All piping must be properly anchored so that no stress placed on equipment connection by expansion.
- e. Pipe sleeves shall be of standard PVC pipes with sufficient diameter to provide a minimum clearance of 6mm around the pipe and in case of insulated pipe approximately 6mm around the insulation. Pipe sleeves shall be installed whenever a pipe passes masonry or concrete. Pipes should not be permitted to pass through bearing walls, beams, or columns.
- f. Piping insulation shall be applied on all refrigerant suction and condensate drain lines. Insulation material shall be flexible elastomeric pipe insulation 2.5mm thick. Joints shall be sealed with appropriate contact adhesive. All refrigerant pipes shall be wrapped by polyethylene film cladding together with the wiring conduit.
- g. Refrigerant pipe sizes to be installed should be confirmed with the equipment supplier prior to installation at the job site.
- h. Upon completion of the installation, the entire refrigerant circuit shall be pressure and leak tested. Dry nitrogen gas should be used with a tracer of the type of refrigerant charge of the system. The high and low side shall be subjected to a pressure of 350 psig. These test pressures should be maintained for 24 hours and any leaks found within the period must be immediately corrected. Leak detector to be used shall either be halide or electronic type. Dehydration should be in accordance with the equipment manufacturer recommendations. The triple evacuation should be employed bringing down the vacuum to 0.180 inch mercury absolute in each step or equivalent to 32° F indicated by the wet bulb vacuum indicator.

2.0 REFRIGERANT VALVES

- a. Refrigerant valves shall be installed in the suction and discharge lines adjacent to the compressor and on the liquid line discharge side of the condenser. The valves shall be wrought copper or brass for use with R-22 and R410a, suitable for a working pressure of 2413kPa.
- b. Thermostatic expansion valves of the proper capacity shall be installed in the refrigerant supply line to the evaporator. They shall be of the diaphragm type, externally equalized and must be of such optimum size as to maintain a full active evaporator under all load conditions and yet reduce the possibility of flooding the refrigerant to the compressors during part load conditions.
- c. Dehydrators in combination with strainers shall be installed in the refrigerant line on the inlet side of the thermostatic expansion and solenoid valves. They shall have brass or copper bodies designed for a working pressure of 2413 KPa.



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- d. Sight glasses shall be combination of liquid and moisture indicators and shall be installed in the refrigerant lines to indicate whether or not the systems are properly charged and whether or not refrigerant in the system is dry.

3.0 CONTROL SYSTEM

- a. Operation of the air conditioning system shall be fully automatic. They shall be capable of maintaining at full or partial loads inside conditions of 25°C D.B. (plus or minus 1.11 C) and 50% relative humidity (plus or minus 5% RH). Room thermostat shall control the operation of the compressor thru relays.
- b. The controls shall be wired in such a way that whenever a condensing unit is in operation the fan coil unit is also in operation.
- c. The compressor crankcase heater must be of such capacity as to provide sufficient heat to the oil in the crankcase during inoperative periods so that serious oil foaming and slugging shall be prevented. The heater must be automatically energized whenever compressor operation stops and de-energized when the compressor starts.

4.0 WIRING

All electric power and control wiring necessary to be provided by the Contractor shall be accomplished in accordance with the requirements of the electrical plans and specifications and shall conform to the PEC. Wiring system including materials shall also comply with the Manufacturer's Recommendation.

5.0 PAINTING AND FINISHING

Pipe hangers, duct hangers, un-insulated piping and other ferrous metal work that have not received factory painting shall be thoroughly cleaned and apply two (2) coats of rust preventive paint such as epoxy primer or red oxide.

6.0 VIBRATION ABSORBING FOUNDATION

All items for mechanical equipment shall be properly isolated from the building structure by means of vibration absorbing foundation. Each foundation shall include an adequate number of standard vibration isolation units. The Contractor is advised to submit a shop drawing of the proposed steel platform for the condensing units at the roof that is signed and sealed by a structural engineer for approval by the Architect prior to fabrication.

7.0 TESTING AND BALANCING

Upon completion of installation and when the system is ready for operation, capacity and general test shall be conducted by a competent and experienced engineer to be furnished by the Contractor. These tests shall demonstrate the specified capacities of the equipment and in accordance with the manufacturer's recommendation.

All instruments to be used shall be of the Industrial Grade, recently calibrated and of the proper type to suit the type of system being tested and balanced.



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All piping shall be pressure tested at 1½ times the design working pressure. The pressure shall be held for 24 hours and no pressure loss shall appear at the end of this period. All leaks shall be repaired and test repeated.

During this test, the Contractor shall demonstrate to the satisfaction of the Owner that all parts are installed correctly and operating properly. The Contractor shall be responsible for the satisfactory performance and all operating parameters such as temperature, current, voltage, electrical controls, etc.

8.0 TECHNICAL PUBLICATIONS

The Contractor shall furnish the Owner three (3) copies of the maintenance and operational manual upon completion of the project. The manual shall be bound between hard covers and shall contain but is not limited to the installation and operating instruction, maintenance procedures, illustrations and drawings, detailed descriptions, tests, adjustments, safety precautions and parts list.

9.0 GUARANTEE AND SERVICE

The air conditioning equipment and accessories furnished/installed under this part of the specifications shall be guaranteed for a period of one (1) year date of acceptance thereof, and materials and equipment furnished shall be free from any defects in the materials, workmanship and design. At any time within the warranty period after acceptance and upon proper notice, the Contractor shall rectify any and all deficiencies including replacement of parts or the entire units without additional cost to the Owners/SSS, if such deficiencies have been caused directly or indirectly by inferior materials, faulty workmanship and/or defective design or parts. Expendable items such as oil, refrigerant, belts, filters, etc., are included in this one year guarantee. During the guarantee period the Contractor shall perform free quarterly cleaning and servicing for all installed units and free monthly inspection for the proper and efficient operation of the system.

10.0 HOUSE KEEPING

Any damaged incurred during the activity shall be restored or repaired by the Contractor at his own expense and shall be done at the satisfaction of the client/SSS. Paint dropping and other stains relative to the project shall be removed from all areas. During the process of the work and on the completion of the project, the Contractor shall remove from premises all dirt, debris, rubbish and waste materials caused by him in the performance of his work. He shall remove all tools, scaffolding and surplus materials after completion and acceptance of the work. All affected areas that will be damaged for the access of roughing-in installation shall be restored at its original state/conditions.



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GENERAL CONDITIONS

- a. Prospective bidders are required to conduct site inspection to determine all necessary considerations and include the same in their proposal of any incidentals, materials and activities those are necessary to be furnished and executed to complete the project. Submit brochures of Air-conditioner brand being offered.
- b. Extra precautionary measures shall be observed. Otherwise, any damage incurred due to the fault of the contractor shall be replaced with a new one for the account of the supplier/contractor.
- c. Prior to the implementation of the project, the contractor is required to present to the Branch Head or his/her authorized representative all the materials required for the installation and repair job to determine that all technical specifications are complied with.
- d. The completed project shall be presented to the Branch Head for acceptance provided with complete documentations including the actual record of the operating parameters such as voltage, current and pressure reading of the air-conditioning unit. The actual record of the operating parameters shall be conducted by the winning contractor in the presence of SSS representatives.
- e. Equipment/Materials and Service Performance/Quality of Workmanship
 1. One (1) year for workmanship and all material defects from the date of acceptance.
 2. Five (5) years for compressor upon acceptance of the completed project.
 3. Quarterly Maintenance shall be done by the winning contractor within the warranty period.
- f. Certificate of Completion and Acceptance (COCA) shall be issued after due observation of the equipment's performance.
- g. Completion: Thirty (30) calendar days from receipt of approved Job Order/Purchase Order.

Prepared by:

Reviewed by:


ANTONIO V. TRINOS, JR
Senior Engineer, EMT-1


GEORGE N. CARREON
SSO V, EMT-1

Recommending Approval:

Approved by:


STEPHEN P. YAP
CEO IV, Engineering Section


BALTAZAR C. CAJILIG
Acting Head, EFMD