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**NOTICE OF  
BID BULLETIN  
MODIFICATION ON TECHNICAL SPECIFICATIONS**

**TO** : TO ALL PROSPECTIVE BIDDERS  
**FROM** : THE BAC Chairperson  
**SUBJECT** : Modification of Technical Specifications in all the attached/associated documents in the Invitation to Bid (ITB),  
Abstract of Quotation and Technical Specifications  
**DATE** : September 4, 2019  
**ADDENDUM NO.** : 2019-01

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Please be informed that this Bid Bulletin is issued to inform all prospective bidders for the Modification of Specifications in all the attached/associated documents in the Invitation to Bid (ITB), Abstract of Quotation and Technical Specifications. Please take notice about this change: Solicitation No. RSU-62-19.

Be advised that this addendum is issued to modify or amend the Modification of Specifications in all the attached/associated documents in the Invitation to Bid (ITB), Abstract of Quotation and Technical Specifications. This shall form an integral part of the Bid Documents.

Please Refer to the Bid Bulletin below.

For guidance and information of all concerned.

Yours,

A handwritten signature in black ink, appearing to read 'MARIO A. FETALVER, Jr.', written over a horizontal line.

**Prof. MARIO A. FETALVER, Jr., Ph. D.**  
BAC Chairperson



**PROCUREMENT OF SCIENTIFIC EQUIPMENT FOR THE COLLEGE OF ENGINEERING AND TECHNOLOGY**

**SOLICITATION Number:** RSU-62-19

**ABC:** PhP5,505,520.84

**QTY:** 34

**FROM**

**TO**

**LOT-1:** CIVIL ENGINEERING LABORATORY EQUIPMENTS

**ABC:** PhP1,203,500.00, QTY:3

UNIT	ITEM DESCRIPTION	QTY
unit	<b>Los Angeles Abrasion Machine</b> (220V / 60Hz)with Catch Pan and abrasive charge of twelve hardened steel balls. RPM: 30-33; Electrical 5.8 Amps; Drum diameter: 28in (117mm); Product dimensions: 38 x 40 x 46.5in (965 x 1,016 x 1,181mm), WxDxH; Estimated shipping weight: 1200lbs (544.32kg)	1
unit	<b>Vicat Apparatus with Double-ended Plunger and Needle Assembly</b> , Conical Plastic Mold, Glass Plate. Product dimensions: 12 x 5 x 4in (305 x 127 x 102mm) WxDxH; Estimated shipping weight: 8.0lb (3.63kg)	1
unit	20,000g Capacity Ohaus Heavy-Duty Solution Balance, 0.1g Readability. Capacity:20,000g; Readability: 1.0g; Selectable weighing unit: gram; Platform size 11in (279mm) diameter; Product dimensions: 34x11x11in (864x279x279mm), WxDxH; Estimated shipping weight: 44.0lb (19.96kg)	1
<b>TOTAL</b>	<b>QTY</b>	<b>3</b>

**LOT-1:** CIVIL ENGINEERING LABORATORY EQUIPMENTS

**ABC:** PhP1,203,500.00, QTY:3

UNIT	ITEM DESCRIPTION	QTY
unit	<b>Los Angeles Abrasion Machine</b> (220V / 60Hz) with Catch Pan and abrasive charge of twelve hardened steel balls. RPM: 30-33; Electrical 5.8 Amps; Drum diameter: 28in (711mm); Minimum product dimensions: 38 x 40 x 46.5in (965 x 1,016 x 1,181mm), WxDxH.	1
unit	<b>Vicat Apparatus with Double-ended Plunger and Needle Assembly</b> , Conical Plastic Mold, Glass Plate. Minimum product dimensions: 12 x 5 x 4in (305 x 127 x 102mm) WxDxH.	1
unit	20,000g Capacity Ohaus Heavy-Duty Solution Balance, 0.1g Readability. Capacity:20,000g; Selectable weighing unit: gram; Platform size 11in (279mm) diameter; Minimum product dimensions: 34x11x11in (864x279x279mm), WxDxH.	1
<b>TOTAL</b>	<b>QTY</b>	<b>3</b>

**LOT-2:** MECHANICAL ENGINEERING LABORATORY EQUIPMENTS

**ABC:** PhP1,296,000.00, QTY:4

UNIT	ITEM DESCRIPTION	QTY
unit	<b>Solar-powered Mini Iceplant.</b> Brand new; PLC control flake snow ice machine; capacity: 1-ton; output: 500kgs/day; cooling system: air cooling; compressor: Danfoss; piping & storage: stainless steel 304; ice shape: flakes; voltage: 220V/110V (single phase); ice storage capacity: 100 kgs; Power input: 4kW; connected to Grid tie 5kW solar system with complete accessories and or attachment (inverter, charge controller, grid tie net metering, mounting, cables etc.; dimension: 1300mmx1180mmx2100mm; application: fresh cooling; 1 year field service and maintenance; commissioning and in-service training	1
unit	<b>Fluid-Power equipment</b> (Electric Hydraulic Lift). Brand new; rated Load capacity: 1000 kg; max lifting height: 13m; lift mechanism: telescopic; Motor Power: 3 kw with control and monitoring system and brake safety mechanism; voltage: 300V/220V 50Hz; Table platform size: 2mx1.5m (with secure railings); sturdy base with 4 pcs durable casters; ISO 9001 certification; packed in wooden cases; 1 year maintenance; with commissioning and in-service training; application: fixing ceiling and plastering walls	1
unit	<b>Digital Planimeter LCD with 6-digit figures;</b> measuring range: 10m; accuracy: +/- 0.3%; sensor type: photointerrupter; Resolution: 1mm; Power source: 3 pcs (AAA) battery; automatic conversion unit processor; with software installer; 1 year warranty; in-service training.	2
<b>TOTAL</b>	<b>QTY</b>	<b>4</b>

**LOT-2:** MECHANICAL ENGINEERING LABORATORY EQUIPMENTS

**ABC:** PhP1,296,000.00, QTY:4

UNIT	ITEM DESCRIPTION	QTY
unit	Mini Iceplant. Brand new; PLC control tube ice machine; capacity: 1000 kgs/day; cooling system: air cooling; compressor: Danfoss; piping & storage: stainless steel 304; ice shape: tube; voltage: 220V/60Hz (three phase); ice storage capacity: 100 kgs; Power input: 3.5kW; dimension: 1350mmx1000mmx2000mm; air cooling; 1 year field service and maintenance; commissioning and in-service training.	1
unit	Fluid-Power equipment (Electric Hydraulic Lift). Brand new; rated Load capacity: 1000 kg; max lifting height: 10m; lift mechanism: telescopic; Motor Power: 3 kw with control and monitoring system and brake safety mechanism; voltage: 300V/220V 50Hz; Table platform size: 2mx1.5m (with secure railings); sturdy base with 4 pcs durable casters; ISO 9001 certification; packed in wooden cases; 1 year maintenance; with commissioning and in-service training; application: fixing ceiling and plastering walls	1
unit	Digital Planimeter LCD with 6-digit figures; measuring range: 10m; accuracy: +/- 0.3%; sensor type: photointerrupter; Resolution: 1mm; Power source: 3 pcs (AAA) battery; automatic conversion unit processor; with software installer; 1 year warranty; in-service training.	2
<b>TOTAL</b>	<b>QTY</b>	<b>4</b>

**LOT-3:** TRANSFORMER AND GENERATOR EQUIPMENTS

**ABC:** PhP1,550,000.00, QTY:4

UNIT	ITEM DESCRIPTION	QTY
unit	167 kVA, Single Phase Transformer, complete set (lightning arrester, mounting, etc)	3
unit	100 kVA, three Phase Generator with Auto transfer switch	1
<b>TOTAL</b>	<b>QTY</b>	<b>4</b>

**LOT-3:** TRANSFORMER AND GENERATOR EQUIPMENTS

**ABC:** PhP1,550,000.00, QTY:4

UNIT	ITEM DESCRIPTION	QTY
unit	167 kVA, Single Phase Transformer, complete set (lightning arrester, mounting, etc)	3
unit	100 kVA, three Phase Generator with Auto transfer switch	1
<b>TOTAL</b>	<b>QTY</b>	<b>4</b>



LOT-4: TRANSFORMER AND GENERATOR EQUIPMENTS

ABC: **PhP953,750.00, QTY:20**

UNIT	ITEM DESCRIPTION	QTY
unit	<b>3-Phase Power Analyzer</b> Analyzer; 600Vrms, 30Arms/1Arms Internal Shunts; 20Vpk (2mm Banana Plug); 45-850Hz Range; 5-2000V Range; 30A Shunt (1-200A) & 1A Shunt (12.5mA - 5A); 1ph (2-3W), 3ph (3W,4W,3W - 3V3A); USB Host, USB, Ethernet, RS232, GPIB; Power Input - 100Vto240V, 60Hz, 120VA Max.; 5.2"x15.5"x13.2" Dimension	1
unit	<b>Complete Set PLC Training Equipment</b> (8 Digital I/O; 8 Analog I/O; Temp.Sensor; Humidity Sensor; Floatless Relay; HMI-10" touchscreen Panel; 8 Momentary Button; 8-24V- Pilot Light; 8-24V Dry Contact Relay; 1-PC Set with Software Embedded)	1
unit	<b>5kV DC Max. Insulation Resistance Tester (Megger)</b> Dimension: 9.1x9.1x9.1 Inches; 2-in-1 insulation Multimeter w/Clamp	1
unit	<b>Earth Tester</b> 0-20 Ohm Range (0.10 ohm resolution); 0-200ohm range (0.1ohm resolution); 0-2000ohms range (1ohm resolution); + or - 2% reading + 2 Digits or + or - 0.1ohm; 0-200VAC, 40-500Hz; 80% Operating Humidity; 32-104 deg.F., Operating Temperature	1
unit	<b>Complete Set Electrician Tools</b> (Pliers; Diagonal Side Cutting; Needle Nose Pliers; Strippers; Channel Locks; 6 Models Screwdrivers; Knives&Pocket Knives; Pipe Reamer; Electrician Level; Voltage Detector; Tape Measure; Roto Split; Rock Saw; Multitester; Step Drill Bits; Safety Goggles; Cut Resistive Gloves; Blade Cutter)	5
unit	1-Phase, 230V Automatic Transfer Switch (ATS)	5
unit	3-Phase, 230V/18V Transformer	5
unit	<b>Thermal Scanner</b> (8-14 micron spectral wavelengths; 100,000 imaging pixels and up; Facilitate extreme temperature in excess 2000 deg. F.; imaging sensor refresh rate no less than 46 times per second; rechargeable batteries lasts for 5 hrs & up; Video/images is downloadable to a PC using USB; 2.4 GHz Wireless Transmitter)	1
<b>TOTAL</b>	<b>QTY</b>	<b>20</b>

LOT-4: TRANSFORMER AND GENERATOR EQUIPMENTS

ABC: **PhP953,750.00, QTY:20**

UNIT	ITEM DESCRIPTION	QTY
unit	<b>3-Phase Power Analyzer</b> Analyzer; 600Vrms, 30Arms/1Arms Internal Shunts; 20Vpk (2mm Banana Plug); 45-850Hz Range; 5-2000V Range; 30A Shunt (1-200A) & 1A Shunt (12.5mA - 5A); 1ph (2-3W), 3ph (3W,4W,3W - 3V3A); USB Host, USB, Ethernet, RS232, GPIB; Power Input - 100Vto240V, 60Hz, 120VA Max.; 5.2"x15.5"x13.2" Dimension	1
unit	<b>Complete Set PLC Training Equipment</b> (8 Digital I/O; 8 Analog I/O; Temp.Sensor; Humidity Sensor; Floatless Relay; HMI-10" touchscreen Panel; 8 Momentary Button; 8-24V- Pilot Light; 8-24V Dry Contact Relay; 1-PC Set with Software Embedded)	1
unit	<b>5kV DC Max. Insulation Resistance Tester (Megger)</b> Dimension: 9.1x9.1x9.1 Inches; 2-in-1 insulation Multimeter w/Clamp	1
unit	<b>Earth Tester</b> 0-20 Ohm Range (0.10 ohm resolution); 0-200ohm range (0.1ohm resolution); 0-2000ohms range (1ohm resolution); + or - 2% reading + 2 Digits or + or - 0.1ohm; 0-200VAC, 40-500Hz; 80% Operating Humidity; 32-104 deg.F., Operating Temperature	1
unit	<b>Complete Set Electrician Tools</b> (Pliers; Diagonal Side Cutting; Needle Nose Pliers; Strippers; Channel Locks; 6 Models Screwdrivers; Knives&Pocket Knives; Pipe Reamer; Electrician Level; Voltage Detector; Tape Measure; Roto Split; Rock Saw; Multitester; Step Drill Bits; Safety Goggles; Cut Resistive Gloves; Blade Cutter)	5
unit	1-Phase, 230V Automatic Transfer Switch (ATS)	5
unit	3-Phase, 230V/18V Transformer	5
unit	<b>Thermal Scanner</b> (8-14 micron spectral wavelengths; 100,000 imaging pixels and up; Facilitate extreme temperature in excess 2000 deg. F.; imaging sensor refresh rate no less than 46 times per second; rechargeable batteries lasts for 5 hrs & up; Video/images is downloadable to a PC using USB; 2.4 GHz Wireless Transmitter)	1
<b>TOTAL</b>	<b>QTY</b>	<b>20</b>

LOT-5: SURVEYING DRONE

ABC: **PhP125,000.00, QTY:1**

UNIT	ITEM DESCRIPTION	QTY
unit	Surveying drone. DJI Phantom 4 Advanced. 30min flight time; 7km control range; speed 72kph; video resolution: 4K 60fps; sensor range: 30M; camera resolution: 20Mpixel; App compatibility: iOS 9 or higher and Android 4.4 or higher; Battery life 30min.	1
<b>TOTAL</b>	<b>QTY</b>	<b>1</b>

LOT-5: SURVEYING DRONE

ABC: **PhP125,000.00, QTY:1**

UNIT	ITEM DESCRIPTION	QTY
unit	Surveying drone. 30min flight time; 7km control range; speed 72kph; video resolution: 4K 60fps; sensor range: 30M; camera resolution: 20Mpixel; App compatibility: iOS 9 or higher and Android 4.4 or higher; Battery life 30min.	1
<b>TOTAL</b>	<b>QTY</b>	<b>1</b>



**LOT-6: AGRICULTURAL ENGINEERING LABORATORY EQUIPMENTS**

(ABC: PhP377,270.84, QTY: 2)

UNIT	ITEM DESCRIPTION	QTY
unit	OVEN NATURAL CONVECTION, STANDARD 50 Liters ThermoStable™ ON Ovens, Gravity Convection-type, 50 liters With 2xWire Shelves, Digital Fuzzy Control, Jog-Dial with Push Button, Digital LCD with Backlight, up to 230°C, ±0.5°C with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System ■ Digital Fuzzy Control System Implementing Superior Temperature Accuracy ■ Optimized Air Flow by Gravity Convection Mechanism ■ Patented Jog-Dial Control System ■ UL / CUL Certified ■ CE Certified ■ GD(Good Design)-mark ■ PL(Product Liability) Insurance; Interior Dimension:370x350x420mm; Exterior Dimension: 518x647x724mm; Heater Power 650W;Temp Range:+5degC to 230degC; Control resolution: +/- 0.1 degC; RS 232 port; Heat up time 30min to 100degC; Display: digital LCD with backlight; External material: powder coated steel; Internal material: stainless steel 304; Insulation: wool; Safety device: Over temperature and over current protector, sensor error detector; Net wt: 44kg; Power consumption: 674 W; Power supply: 1phase, 230V, 6Hz. With desiccators 3 units (6", 8" and 12") borosilicate glass with cover and porcelain plate and 1kg desiccant	1
unit	<b>Halogen Moisture Analyzer A&amp;D</b> , Japan Model: MX-50 Capacity: 51g Min. Display-Moisture Content 0.01%/0.1% Min. Display-Weight 0.001 g Temp: 50-200°C With SRA (Secondary Radiation Assist) filter. With SHS (Super Hybrid Sensor). High moisture content measurement at 0.001% resolution. Standard WinCT-Moisture software ( for MS&MX) for real-time graph displaying. With Sodium Tartrate Dihydrate standard for accuracy checking. Laptop for data gathering included; i7 processor.	1
<b>TOTAL</b>	<b>QTY</b>	<b>2</b>

**LOT-6: AGRICULTURAL ENGINEERING LABORATORY EQUIPMENTS**

(ABC: PhP377,270.84, QTY: 2)

UNIT	ITEM DESCRIPTION	QTY
unit	OVEN NATURAL CONVECTION, STANDARD 50 Liters ThermoStable™ ON Ovens, Gravity Convection-type, 50 liters With 2xWire Shelves, Digital Fuzzy Control, Jog-Dial with Push Button, Digital LCD with Backlight, up to 230°C, ±0.5°C with Certificate & Traceability : Controlled by Serial Number, Certificate, Delivery-information, and Traceable Data Base System ■ Digital Fuzzy Control System Implementing Superior Temperature Accuracy ■ Optimized Air Flow by Gravity Convection Mechanism ■ Patented Jog-Dial Control System ■ UL / CUL Certified ■ CE Certified ■ GD(Good Design)-mark ■ PL(Product Liability) Insurance; Interior Dimension:370x350x420mm; Exterior Dimension: 518x647x724mm; Heater Power 650W;Temp Range:+5degC to 230degC; Control resolution: +/- 0.1 degC; RS 232 port; Heat up time 30min to 100degC; Display: digital LCD with backlight; External material: powder coated steel; Internal material: stainless steel 304; Insulation: wool; Safety device: Over temperature and over current protector, sensor error detector; Net wt: 44kg; Power consumption: 674 W; Power supply: 1phase, 230V, 6Hz. With desiccators 3 units (6", 8" and 12") borosilicate glass with cover and porcelain plate and 1kg desiccant	1
unit	<b>Halogen Moisture Analyzer A&amp;D</b> , Japan Model: MX-50 Capacity: 51g Min. Display-Moisture Content 0.01%/0.1% Min. Display-Weight 0.001 g Temp: 50-200°C With SRA (Secondary Radiation Assist) filter. With SHS (Super Hybrid Sensor). High moisture content measurement at 0.001% resolution. Standard WinCT-Moisture software ( for MS&MX) for real-time graph displaying. With Sodium Tartrate Dihydrate standard for accuracy checking. Laptop for data gathering included; i7 processor.	1
<b>TOTAL</b>	<b>QTY</b>	<b>2</b>