MARIANO MARCOS STATE UNIVERSITY

Bids and Awards Committee

INVITATION TO MAKE AN OFFER: Negotiated Procurement

21-017

THE PROJECT: Refurbishment of CBEA Dean's office
Number of Working Days: 50 calendar days
ABC: P357,319.27

1. The Mariano Marcos State University (MMSU), with offices at Quiling Sur, City of Batac, Ilocos Norte, invites the public to make an offer to furnish all labor, materials, tools and equipment necessary and proper for the implementation of the above Project as per approved designs, plans and drawings.

2. This process is in accordance with Section 53 of R.A. 9184, the Government Procurement reform Act and Section 53.9 of the Implementing Rules and Regulations where interested and qualified contractors are to submit proposals.

4. The offer must be in writing submitted at the address below on or before **November 12, 2021; 2:00 PM** together with the following documents:

   a) The amount of the offer in writing duly signed by the person making the offer, indicated in numbers and figures.
   b) The particulars of the offer as to labor, materials, tools, equipment and other work details.
   c) Documents in support of the legal, technical and financial capability of the person making the offer, which documents shall be confirmed and verified (3 copies).

5. It is understood that any offer may be accepted or rejected, or the process invalidated, at any time prior to contract award, without liability to anyone.

6. Documents for this procurement may be secured from the MMSU BAC Secretariat at the address below or downloaded from the MMSU website or from the Philippine Government Electronic Procurement System (PhilGEPS) website.

7. For questions and inquiries, please write or email the University President, thru the BAC Chair, at the address indicated below.

Mariano Marcos State University
Quiling Sur, City of Batac
www.mmsu.edu.ph

November 8, 2021

NATHANIEL R. ALIBUYOG
BAC CHAIR

Received: _____ Received: _____ Received: _____

Republic of the Philippines
MARIANO MARCOS STATE UNIVERSITY
City of Batac, 2906, Ilocos Norte

BILL OF QUANTITIES

Project Title: **Refurbishment of CBEA Dean's Office**

Project Location: **MMSU CBEA, City of Batac, Ilocos Norte**

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
I	Demolition Works	1.00	lot
II	Electrical Works	1.00	lot
III	Tile Works	18.46	sq.m.
IV	Millworks	1.00	lot
V	Ceiling Works	29.5525	sq.m.
VI	Masonry and Plastering Works	4.41	sq.m.
VII	Painting Works	99.1225	sq.m.
VIII	Plumbing Works	1.00	lot
IX	Mechanical Works	1.00	lot

Republic of the Philippines
MARIANO MARCOS STATE UNIVERSITY
City of Batac, 2906, Ilocos Norte

SPECIFICATIONS

Project Title: **Refurbishment of CBEA Dean's Office**
Project Location: **MMSU-CBEA, City of Batac, Ilocos Norte**

ITEM NO.	DESCRIPTION
I.	***Demolition Works*** Demolition/Chipping of existing tiles and fixtures of comfort rooms Removal of existing ceiling system
II.	***Electrical Works*** **Panelboards, and Enclosures (Rustproof) Circuit Breaker: All Bol-On Type** 20AT, 2P, 240V, 22KAIC, Bolt-On Type with NEMA 1 Enclosure, MCB **Pipes, Conduits, Fittings, and Boxes** Adapter with Locknut / Straight Connector 20mm Ø, PVC Pipe, Thick Wall 20mm Ø, 2.2mm thick, PVC Elbow, Long, Thick Wall 20mm Ø, PVC Junction Box with Cover, Octagonal Utility Box, 2X4 **Conductors, Lead Free** 3.5 mm^2, THHN 2.0 mm^2 THHN **Lighting Fixtures, Wiring Devices, and Others** 3 Watts, LED Mini Downlight Round Swivel, 2700K Warm White, 220 Lumens 12 Watts, LED Panel Surface Type Ceiling Lamp, 6500K Daylight, 1200 Lumens, Ø 170MM Switches, Wide Series, with Cover Plate 1 Gang, Single Pole, Single Throw Switch 2 Gang, Single Pole, Single Throw Switch 3 Gang, Single Pole, Single Throw Switch Electrical Tape, Vinyl, Big Duplex Convenience Outlet with Cover Plate, with grounding, wide series
III.	***Tiling Works*** 300mm x 300mm Granite Tiles Portland Cement Sand (S-1) Tile Grout Gravel 3/4"
IV.	***Millworks*** 2.10m x 0.70m Solid Wood Panel Door with Door Jamb, Door Handle, Hinges and other accessories
V.	***Ceiling Works*** 4.5mm Fiber Cement Board 19mm x 50mm Furring Channel 12mm x 38mm Carrying Channel Suspension Rod Hanger Channel Clip 50mm x 50mm Wall Angle 5/32 Blind Rivets Metal Screw 1"

VI.	***Masonry and Plastering Works*** **Masonry Works** 4" CHB Portland Cement Sand (S-1) 10mm RSB #16 Tie Wire **Plastering Works** Portland Cement Fine Sand
VII.	***Painting Works*** **Masonry Painting** Concrete Neutralizer Concrete Sealer/Primer Patching Compound Semi-Gloss Latex Consumables **Ceiling Painting** Concrete Sealer/Primer Patching Compound Semi-Gloss Latex Consumables
VIII.	***Plumbing Works*** **Plumbing Fixtures and Accessories** Dual Flush Water Closet with softclose cover Wall Hung Lavatory with Cabinet (Complete) 4"x4" Stainless Floor Drain Bidet (hand showe) complete Wall Mounted Tissue Paper Dispenser 500ml Wall Mounted Soap Dispenser Face Mirror **Water Line Pipes and Fittings** 20mm dia. PP-r Gate Valve 20mm dia. Angle Valve (one-way) 20mm dia. Angle Valve (two-way) 20mm dia. Flexible Hose 20mm dia. PP-r Female Adapter 20mm dia. PP-r Elbow 20mm dia. PP-r Tee 20mm dia. PP-r Coupling 20mm dia. PP-r Pipe PN20 Teflon Tape 1" **Sewer Line Pipes** 4" dia. PVC Cleanout Stainless P-Trap 1 1/4" (for lavatory) 2" dia PVC Trap 4" dia PVC Wye 4" dia PVC Elbow 1/8 bend 2"x4" PVC Wye 4" dia PVC Elbow 1/4 bend 2" dia PVC Elbow 1/4 bend 2" dia PVC Elbow 1/8 bend 4" dia PVC Pipe S1000 2" dia PVC Pipe S1000 400cc PVC Pipe Cement (neltex)

IX.	***Mechanical Works*** Split Type Wall Mounted - Inverter Type, 16, 860 Btu/ hr or higher, complete with all accessories and mounting (see plan details) 53 CFM Axiel Exhaust Fan Ceiling Mounted Type 100mm Exhaust Flexible Ducting, 5 meters 100mm Stainless Vent Cap 3/4" PVC Pipe 3/4" PVC Elbow 187 cu.m/min Ceiling Fan

Republic of the Philippines
MARIANO MARCOS STATE UNIVERSITY
Batac, Ilocos Norte

PROJECT INFORMATION DOCUMENT

Project Title : Refurbishment of CBEA Dean's Office
Project Location : MMSU CBEA, City of Batac, Ilocos Norte

GENERAL INSTRUCTIONS

The project calls for the furnishing of all materials, labor, tools and equipment needed for the refurbishment of cashier's office. The proposed project is located at the MMSU CBEA, City of CBEA, Ilocos Norte. The said project shall be done in strict conformity with the designs, plans, drawings and other details, as well as the specifications and workmanship for all scope of works, this Project Information Document and other related contract documents prepared and approved for this project. It is highly recommended that the contractor shall conduct site inspection for them to have an idea on the existing condition of the office.

It also calls for the employment of required men power with the appropriate skills and expertise to undertake the specific items of work of this particular undertaking and to enable the contractor to produce and deliver to the satisfaction of the owner the needed services and output required of this undertaking. It is a must as it is necessary that the contractor shall have regularly at the site a qualified Project Engineer/Architect to administer strictly the implementation of the project, including maintaining a logbook of construction activities, as well as receiving authorized University Officials and Inspectors and Safety Officer.

General Instructions

The contractor shall ensure that the construction activities must not interfere, obstruct and disturb any adjacent rooms and other facilities; hence, the contractor shall isolate the working area from the other portions of the building. In addition, the contractor shall be required to provide its own water and power supply system needed in the proper execution of the various works for the duration of the contract.

1. ***DEMOLITION WORKS.*** This works include the removal of ceiling system, comfort room tiles, comfort room sewer line and water line and other obstruction in the working area. If there are areas or sections that will be affected by the dismantling/demolition works to be undertaken, the contractor is required to restore and bring it back to its original state, as part of the contract.

   All materials removed shall be disposed of properly in a designated place, however all dismantled and removed materials that are still in good condition or can be re-used shall be turned over to the University.

2. ***ELECTRICAL WORKS***

a. Electrical works shall be done by a duly accredited electrician (NC II) under the direct supervision of a licensed Electrical Practitioner PEE/REE/RME.

b. The contractor shall provide one (1) licensed electrical practitioner PEE/REE/RME on the job site as resident project supervisor for the electrical works. No installation shall be done without the presence of the project supervisor.

c. *Before starting any works, the contractor must provide its metering equipment (KWHr Meter) for the power consumption throughout the project construction.* The power consumption shall be paid by the contractor to the university after all works is furnished. The provision shall be limited to equipment for drilling and cutting only but not including welding machines. Welding works shall be done outside the project site premises or other power supply shall be used by the contractor.

d. Sample of each fixture, conductors, wiring devices, lighting fixtures and other accessories shall be submitted for approval by the project inspector or technical committee of PPDO or the University prior to their installation. *No installation shall be made without the approval of materials by the project inspector or technical committee.*

e. Pipes should be installed in a workman like manner, *it should be painted the same color as the surface where it is installed.*

f. Panel boards, enclosures, pull boxes, and wire gutters shall be gauge #16 galvanized materials, rust proof powder coated finished. Panel board shall be all bolted type, complete tin-plated copper busbar.

g. All circuit breaker shall be bolt-on type and must have a proper labeling of circuits. It is a must that the arrangement of circuit breakers and busbars shall conform the panel board diagram provided in the approved plans by the PPDO to avoid the occurrence of unbalanced loading.

h. All wires shall be copper 99%, plastic insulated of 600V Type THW/THHN or as specified in the approved plans and specifications, lead free, stranded, or approved equal brand by the PPDO / Technical Working Group. *Only One (1) brand of wire shall be used.*

i. Conduits to be installed shall be supported for permanent connection following the latest Philippine Electrical Code (PEC) and/or being referred from the approved plans.

j. No termination of wires inside the manhole and conduits shall be done.

k. Color coding of wires shall be observed following the latest PEC: Line A (red), Line B (yellow), Line C (blue), and Ground (green).

l. The mounting heights shall be as follows:
   - A/C Outlet : not less than 0.4m above finished floor as required

- Switches : 1.4m above finished floor
- Convenience Outlet : 0.3m above finished floor or as required
- Panel Board : 1.8m above finished floor to the center of the main or as required.

m. Grounding system. Provide grounding wires for all the circuit and grounding terminal lugs of all gutters and panel boards. All exposed non-current-carrying metallic parts of electrical equipment, metallic raceway system, grounding conductor and neutral conductor or wiring system shall be grounded. The ground connection shall be made at the main service equipment and shall be made to the driven rods on the exterior of the building.

n. Maximum number of wires inside the cable tray shall be observed (20% of the total cross-sectional area). Also, maximum number of wires inside the pipes and conduits must be observed.

o. Existing electrical system shall remain functional and normal operation until the new electrical system is ready to be energized.

p. All wiring shall be tested for circuit continuity and shall be tested to assure that the wiring system is free from short-circuit, accidental grounding or other defects prior to normal system operation.

q. Tests shall be performed after all the wiring is completed and connected, specifically for main feeder and sub-feeder. The instrument to be used for testing must be capable of measuring accurately the resistances involved and having a voltage rating of 500 volts. Reading shall be taken after the voltage has been applied continuously for one (1) minute. The insulation resistance between the conductors and between each conductor and ground shall be measured, also.

r. Tests shall be done for each item of control equipment not less than five times and must be functional after the testing. *All tests shall be performed in the presence of the university inspection or technical committee. All tests results shall be submitted in three copies.*

s. Energize the Electrical System. After the contractor has assured that the wiring system is free of faults, the Contractor shall energize the system from their normal power sources and confirm that the system is operational as required by the contract documents, prior to final inspection.

t. In case of conflict in specifications and quality of materials, installation procedure and in the plans and drawings as well as in the other contract documents before and during the implementation stage, the same should be referred to the end-user and the technical committee for proper resolution of the said conflicts.

3. ***TILEWORKS.*** This includes installation of 300mm x 300mm granite tiles with the appropriate tile adhesive. Layout the tiles in such a way that the gap between each tiles on all sides shall be kept to a maximum of two millimeters (2mm). Apply tile grout in between the laid out tiles using appropriate color consistent with the shade of

the tiles or as approved by the end user. The contractor shall present samples of the tiles to be used for the approval by the user prior to purchasing and installation.

4. ***MILLWORKS.*** This item shall consist of furnishing of all materials, hardware, tools, labor and services necessary for the fabrication, delivery and installation of solid wood panel door of the type and size as shown in the Program of Works and drawings of the project. Sample of materials, design and color of the materials to be installed must be first approved by the PPDO and the end-user prior to purchasing and installation.

5. ***CEILING WORKS.*** The work under this item shall consist in furnishing of all the required materials, tools and equipment, as well as labor necessary for the satisfactory completion of all carpentry and joinery works in strict accord with the drawings, details and specifications for this project.

   Ceiling boards shall be 4.5 mm thick cement fiber board with ceiling joist and nailers to be metal furring and carrying channel. All ceiling joist and nailers must be properly fastened prior to the installation of ceiling boards. Before installing the ceiling boards, the contractor shall notify the University for the inspection by the Inspection team or designated inspectors to inspect the framing system of the ceiling works for approval.

6. ***MASONRY AND PLASTERING WORKS.*** This includes the furnishing of all materials, labor and tools necessary in the construction and installation of CHB, as well as those areas indicated in the plans and drawings and application of cement plaster finish of both sides of the wall surfaces ready for painting and of other finishing materials. The sizes of CHB and the reinforcement bars to be used shall be in accordance with those specified in the drawings and details.Plaster for cement finish shall be freshly prepared and uniformly mixed in the proportion by volume of one (1) part Portland cement and three (3) parts sand.

7. ***PAINTING WORKS.*** This scope of works includes painting of all masonry walls, ceiling boards and other surfaces with three coats of paints following the approved brand and quality of painting materials specified in the Program of Work and other related contract documents.

   For all interior concrete walls, apply latex primer and finish it with semi gloss latex. Painting preparations for masonry surfaces shall include application of masonry putty to correct uneven wall surfaces during the process.

   For fiber cement boards, except for the application of concrete neutralizer, adopt the surface preparations and painting procedures for painting and finishing of concrete surfaces.

8. ***PLUMBING WORKS.***
   Material Requirement. All piping materials, fixtures and appliances fitting accessories whether specifically mentioned or not but necessary to complete this item shall be furnished and installed. Pipes shall be of quality made by reputable manufacturers free from defects, and shall be true, smooth and cylindrical. Pipes and fittings for Sanitary lines shall be unplasticized Polyvinyl Chloride Series 1000. Pipes and fittings for Water lines shall be Polypropylene Pipe (PPr Pipe).

Plumbing Installation. All soil and drainage pipe shall be sloped at 2% or 2cm per 1.0 meter run but in no case flatter than 1%. All changes in pipe sizes such as soil and waste lines shall be made with reducing fittings or recessed reducers. All changes in direction shall be made by appropriate use of 45 degrees fittings for soil and waste lines. All pipes shall be cut accurately to measurements and shall be worked into place without springing or forcing. All joints shall be neatly applied with marine epoxy to avoid leakage in sewer line pipes. All piping systems for water and drainage to be embedded in concrete shall be free of any leak, hence, they shall be subjected to water test before concrete is poured. All other pipes and conduits shall be laid out in locations as indicated in the plans and drawings. Laying out of all piping systems and conduits shall be thoroughly inspected by the technical representative/s of the University before concrete is poured. All pipes and conduits shall be properly secured with tie wires, straps or the like as an assurance that they will not be dislocated during the pouring activities. All plumbing and sanitary works shall be undertaken under the strict supervision of a Mechanical/Sanitary Engineer or a Master Plumber which shall be done in accordance with the plans, drawings, and specifications and of the methods as prescribed by the latest edition of Plumbing Code of the Philippines, Sanitary Code of the Philippines and the Mechanical Code of the Philippines. Upon completion, thoroughly clean all fixtures and accessories to leave the work in a polished condition. The whole system, including all installed fixtures shall be tested for leaks and proper functioning.

9. *MECHANICAL WORKS*

a. Unit installation must conform to the manufacturers recommendation and all engineering/architectural designed by MMSU.

b. Refrigerant and condensate drains thru wall must be provided with sleeve or silicon/rubber protection.

c. Condesate lines from the indoor units must be provided with main drain

d. Refrigerant line must be insulated with no less 1" thick rubber installation. Likewise, drains must be properly insulated.

e. Installation must conform to PME Code and the National Building Code. A mechanical permit should be secured prior to installation.

f. Aircon installers must be dealers accredited technicians to include one(1) year maintenance.

After all the works have been completed, the surrounding immediate areas affected in the prosecution of the project shall be cleaned and cleared of all excess materials and debris, temporary structures, facilities and utilities used during the construction period. All spillages and scattered caused by the painting work, grouts, adhesives, as well as markings and signage shall likewise be removed to the full satisfaction of the Owner.

A. Time is a very important factor in the implementation of this project and as such, all works indicated in the plans, specifications and in this document shall be fully

completed within **50 calendar days** from receipt of the Notice to Proceed. The given duration of the project is already inclusive of pre-determined unworkable days.

B. Before final acceptance by the end-user, the Contractor shall post a warranty security in accordance with the following schedule as prescribe in Section 62.2.3.3 of RA 9184

Form of Warranty Security	Amount of Warranty Security (Equal to percentage of the Total Contract Price)
a) Cash or Letter of Credit issued by a Universal or Commercial Bank: Provided, however, that the LC shall be confirmed or authenticated by a Universal or Commercial Bank, if issued by a foreign bank.	Five percent (5%)
b) Bank guarantee confirmed by a Universal or Commercial Bank.	Ten percent (10%)
c) Surety bond callable upon demand issue by GSIS or a surety or insurance company duly certified by the Insurance Commission as authorized to issue such security.	Thirty percent (30%)

to cover warranty against structural defects to cover the following periods as follows in accordance with Section 62.2.3.2

C. Permanent Structures (15 years)
D. Semi-Permanent Structures (5 years)
E. Other Structures (2 years)

B. The Approved Budget for the Project to be bid is **Three Hundred Fifty Seven Thousand Three Hundred Nineteen and 27/100 Pesos Only (Php. 357,319.27)**

Prepared by:

JEREMIAH ROGER P. CALUYA
Civil Engineer

LEMUEL JOSHUA P. BAGAYAS
Electrical Engineer

ARSENIO P. GUILLERMO
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DENNIS CLYDE G. ACANTILADO
Mechanical Engineer/Master Plumber

Checked by:

AIDA V. CABANG
Chief, Physical Planning Section

Noted by:

ROMEO R. DULDULAO
Director, PPDO

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MARIANO MARCOS STATE UNIVERSITY
City of Batac, 2906, Ilocos Norte

DETAILED ESTIMATES

ITEM NUMBER	I			1.00	
DESCRIPTION	**Demolition Works**			**lot**	
	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	Total Price
MATERIALS COST					
	Total Materials Cost			Sub-Total:	-
				Unit Cost:	-
	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
EQUIPMENT COST					
				Sub-Total:	-
				Unit Cost:	-
	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
LABOR COST	Construction Foreman		days		
	Skilled Laborer		days		
	Unskilled Laborer		days		
				Sub-Total:	-
				Unit Cost:	-

DIRECT COST:	-
UNIT COST:	-
Plus Indirect Cost:	
OCM	-
CP	-
VAT	-
Indirect Cost:	-
Total Direct and Indirect Cost:	-

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DETAILED ESTIMATES

Item No.: **II**	Quantity:	**1.00**
Description: **Electrical Works**	Unit:	**lot**

MATERIALS COST

Description	Quantity	Unit	Unit Price	Sub-Total
I. Panelboards, and Enclosures (Rustproof) Circuit Breaker: All Bolt-On Type				
20AT, 2P, 240V, 22KAIC, Bolt-On Type with NEMA 1 Enclosure, MCB		set		
SUB TOTAL I. (Panelboards, and Enclosures)				
II. Pipes, Conduits, Fittings, and Boxes				
Adapter with Locknut / Straight Connector				
20mm ø, PVC		pcs.		-
Pipe, Thick Wall				
20mm Ø, 2.2mm thick, PVC		pcs.		-
Elbow, Long, Thick Wall				
20mm ø, PVC		pcs.		-
Junction Box with Cover, Octagonal		pcs.		-
Utility Box, 2X4		pcs.		-
SUB TOTAL II. (Pipes, Conduits, Fittings and Boxes)				-
III. Conductors, Lead Free				
3.5 mm^2, THHN		roll		-
2.0 mm^2 THHN		meters		-
SUB TOTAL II. (Conductors, Lead Free)				-
IV. Lighting Fixtures, Wiring Devices, and Others				
3 Watts, LED Mini Downlight Round Swivel, 2700K Warm White, 220 Lumens		pcs.		-
12 Watts, LED Panel Surface Type Ceiling Lamp, 6500K Daylight, 1200 Lumens, Ø 170MM		pc.		-
Switches, Wide Series, with Cover Plate				
1 Gang, Single Pole, Single Throw Switch		pc.		-
2 Gang, Single Pole, Single Throw Switch		pc.		-
3 Gang, Single Pole, Single Throw Switch		pc.		-
Electrical Tape, Vinyl, Big		rolls		-
Duplex Convenience Outlet with Cover Plate, with grounding, wide series		pcs.		-
SUB TOTAL III. (Lighting Fixtures, Wiring Devices, and Others)				-
Total Materials Cost			Sub-Total	-
			Unit Cost	-

EQUIPMENT COST

Description	Quantity	Unit	Unit Price	Sub-Total
Electric Drill		days		
Total Equipment Cost			Sub-Total	-
			Unit Cost	-

LABOR COST

Description	Quantity	Unit	Unit Price	Sub-Total
PEE/REE/RME		days		
Accredited Electrician		days		
Electrical Helper		days		
Total Labor Cost			Sub-Total	-
			Unit Cost	-

DIRECT COST:	-
DIRECT UNIT COST:	-
Plus Indirect Cost:	
OCM	-
CP	-
VAT	-
Indirect Cost:	-
Total Direct and Indirect Cost:	-

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DETAILED ESTIMATES

ITEM NUMBER	III				18.4600
DESCRIPTION	**Tile Works**				**sq.m.**
	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	Total Price
MATERIALS COST	300mm x 300mm Granite Tiles		pcs.		-
	Portland Cement		bags		-
	Sand (S-1)		cu.m.		-
	Tile Grout		bags		-
	Gravel 3/4"		cu.m.		-
	Total Materials Cost			Sub-Total:	-
				Unit Cost:	-
	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
EQUIPMENT COST					
				Sub-Total:	-
				Unit Cost:	-
	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
LABOR COST	Construction Foreman		days		-
	Skilled Laborer		days		-
	Unskilled Laborer		days		-
				Sub-Total:	-
				Unit Cost:	-

DIRECT COST: -
UNIT COST: -

Plus Indirect Cost:
OCM -
CP -
VAT -
Indirect Cost: -

Total Direct and Indirect Cost: -

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DETAILED ESTIMATES

ITEM NUMBER	**IV**			**1.00**	
DESCRIPTION	**Millworks**			**lot**	
	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	Total Price
MATERIALS COST	2.10m x 0.70m Solid Wood Panel Door with Door Jamb, D Door Handle, Hinges and other accessories		set		-
	Total Materials Cost			Sub-Total:	-
				Unit Cost:	-
EQUIPMENT COST	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
				Sub-Total:	-
				Unit Cost:	-
LABOR COST	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
	Construction Foreman		days		-
	Skilled Laborer		days		-
	Unskilled Laborer		days		-
				Sub-Total:	-
				Unit Cost:	-

DIRECT COST: -
UNIT COST: -

Plus Indirect Cost:
OCM -
CP -
VAT -
Indirect Cost: -

Total Direct and Indirect Cost: -

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DETAILED ESTIMATES

ITEM NUMBER	**V**				**29.5525**
DESCRIPTION	**Ceiling Works**				**sq.m.**
	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	Total Price
MATERIALS COST	4.5mm Fiber Cement Board		pcs		-
	19mm x 50mm Furring Channel		pcs		-
	12mm x 38mm Carrying Channel		pcs		-
	Suspension Rod Hanger		pcs		-
	Channel Clip		pcs		-
	50mm x 50mm Wall Angle		pcs		-
	5/32 Blind Rivets		pcs		-
	Metal Screw 1"		pcs		-
	Total Materials Cost			Sub-Total:	-
				Unit Cost:	-
	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
EQUIPMENT COST					
				Sub-Total:	-
				Unit Cost:	-
	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
LABOR COST	Construction Foreman		days		-
	Skilled Laborer		days		-
	Unskilled Laborer		days		-
				Sub-Total:	-
				Unit Cost:	-

DIRECT COST: -
UNIT COST: -

Plus Indirect Cost:
OCM -
CP -
VAT -
Indirect Cost: -

Total Direct and Indirect Cost: -

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DETAILED ESTIMATES

ITEM NUMBER	**VI**				**4.4100**
DESCRIPTION	**Masonry and Plastering Works**				**sq.m.**
	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	Total Price
MATERIALS COST	**Masonry Works = 1.47 sq.m.**				
	4" CHB		pcs		-
	Portland Cement		bags		-
	Sand (S-1)		cu.m.		-
	10mm RSB		pcs		-
	#16 Tie Wire		kgs		-
	Plastering Works = 2.94 sq.m.				
	Portland Cement		bags		-
	Fine Sand		cu.m.		-
	Total Materials Cost			Sub-Total:	-
				Unit Cost:	-
	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
EQUIPMENT COST					
				Sub-Total:	-
				Unit Cost:	-
	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
LABOR COST	Construction Foreman		days		-
	Skilled Laborer		days		-
	Unskilled Laborer		days		-
				Sub-Total:	-
				Unit Cost:	-

DIRECT COST: -
UNIT COST: -

Plus Indirect Cost:
OCM -
CP -
VAT -
Indirect Cost: -

Total Direct and Indirect Cost: -

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DETAILED ESTIMATES

ITEM NUMBER	**VII**				**99.1225**
DESCRIPTION	**Painting Works**				**sq.m.**
	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	Total Price
MATERIALS COST	**Masonry Painting = 69.57 sq.m.**				
	Concrete Neutralizer		liter		-
	Concrete Sealer/Primer		gal		-
	Patching Compound		gal		-
	Semi-Gloss Latex		gal		-
	Consumables				-
	Ceiling Painting = 29.5525 sq.m.				
	Concrete Sealer/Primer		gal		-
	Patching Compound		gal		-
	Semi-Gloss Latex		gal		-
	Consumables				-
	Total Materials Cost			Sub-Total:	-
				Unit Cost:	-
EQUIPMENT COST	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
				Sub-Total:	-
				Unit Cost:	-
LABOR COST	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
	Construction Foreman		days		-
	Skilled Laborer		days		-
	Unskilled Laborer		days		-
				Sub-Total:	-
				Unit Cost:	-

DIRECT COST:	-
UNIT COST:	-
Plus Indirect Cost:	
OCM	-
CP	-
VAT	-
Indirect Cost:	-
Total Direct and Indirect Cost:	-

Republic of the Philippines
MARIANO MARCOS STATE UNIVERSITY
City of Batac, 2906, Ilocos Norte

DETAILED ESTIMATES

ITEM NUMBER	**VIII**				**1.0000**
DESCRIPTION	**Plumbing Works**				**lot**
	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	Total Price
MATERIALS COST	**Plumbing Fixtures and Accessories**				
	Dual Flush Water Closet with softclose cover		set		-
	Wall Hung Lavatory with Cabinet (Complete)		set		-
	4"x4" Stainless Floor Drain		pcs		-
	Bidet (hand showe) complete		pcs		-
	Wall Mounted Tissue Paper Dispenser		pcs		-
	500ml Wall Mounted Soap Dispenser		pcs		-
	Face Mirror		set		-
	Water Line Pipes and Fittings				
	20mm dia. PP-r Gate Valve		pcs		-
	20mm dia. Angle Valve (one-way)		pcs		-
	20mm dia. Angle Valve (two-way)		pcs		-
	20mm dia. Flexible Hose		pcs		-
	20mm dia. PP-r Female Adapter		pcs		-
	20mm dia. PP-r Elbow		pcs		-
	20mm dia. PP-r Tee		pcs		-
	20mm dia. PP-r Coupling		pcs		-
	20mm dia. PP-r Pipe PN20		pcs		-
	Teflon Tape 1"		rolls		-
	Sewer Line Pipes				
	4" dia. PVC Cleanout		pcs		-
	Stainless P-Trap 1 1/4" (for lavatory)		pcs		-
	2" dia PVC Trap		pcs		-
	4" dia PVC Wye		pcs		-
	4" dia PVC Elbow 1/8 bend		pcs		-
	2"x4" PVC Wye		pcs		-
	4" dia PVC Elbow 1/4 bend		pcs		-
	2" dia PVC Elbow 1/4 bend		pcs		-
	2" dia PVC Elbow 1/8 bend		pcs		-
	4" dia PVC Pipe S1000		pcs		-
	2" dia PVC Pipe S1000		pcs		-
	400cc PVC Pipe Cement (neltex)		can		-
	Total Materials Cost			Sub-Total:	-
				Unit Cost:	-
EQUIPMENT COST	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
				Sub-Total:	-
				Unit Cost:	-
LABOR COST	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
	Plumber		days		-
	Pipe Fitter		days		-
	Unskilled Laborer		days		-
				Sub-Total:	-
				Unit Cost:	-

DIRECT COST:	-
UNIT COST:	-
Plus Indirect Cost:	
OCM	-
CP	-
VAT	-
Indirect Cost:	-
Total Direct and Indirect Cost:	-

Republic of the Philippines
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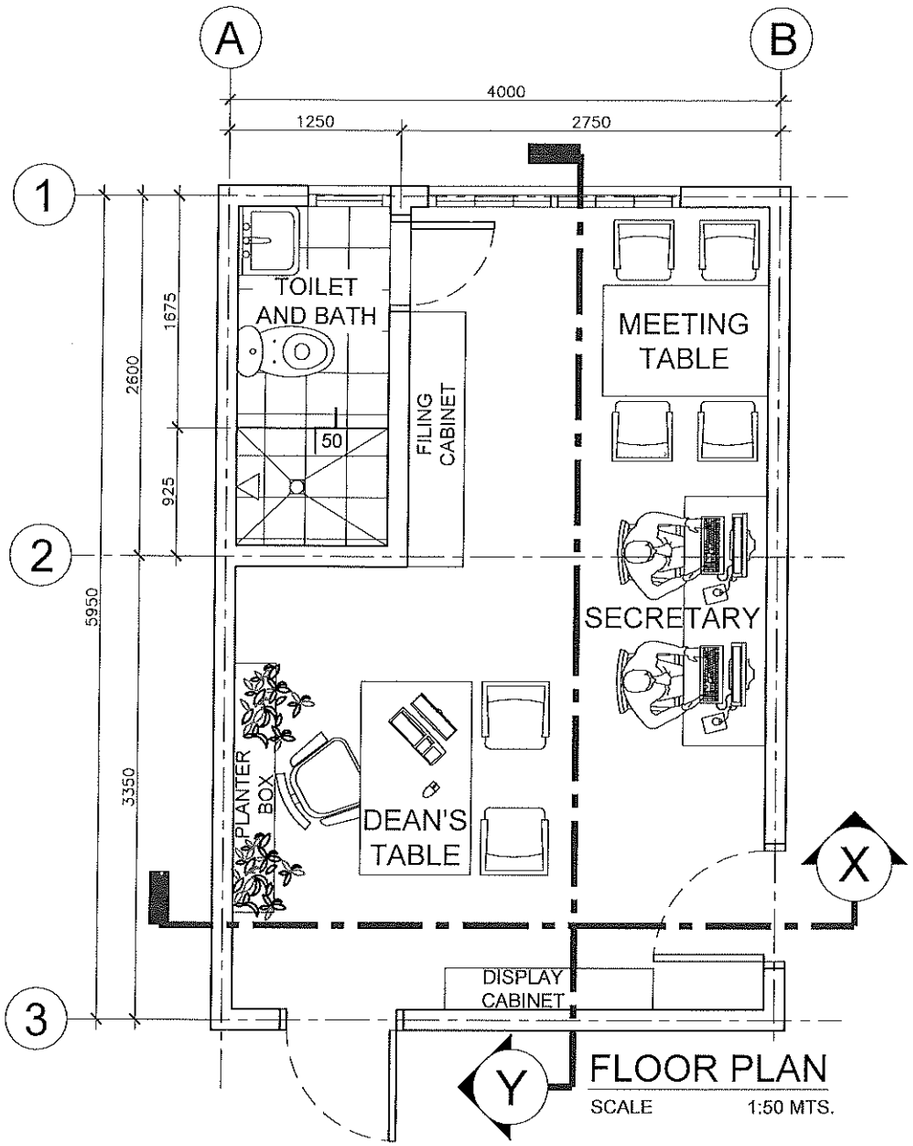
DETAILED ESTIMATES

ITEM NUMBER	**IX**				**1.0000**
DESCRIPTION	**Mechanical Works**				**lot**
	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	Total Price
MATERIALS COST	Split Type Wall Mounted - Inverter Type, 16, 860 Btu/ hr or higher, complete with all accessories and mounting (see plan details)		set		-
	53 CFM Axiel Exhaust Fan Ceiling Mounted Type		set		-
	100mm Exhaust Flexible Ducting, 5 meters		set		-
	100mm Stainless Vent Cap		set		-
	3/4" PVC Pipe		pcs		-
	3/4" PVC Elbow		pcs		-
	187 cu.m/min Ceiling Fan		sets		-
	Total Materials Cost			Sub-Total:	-
				Unit Cost:	-
	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
EQUIPMENT COST					
				Sub-Total:	-
				Unit Cost:	-
	DESCRIPTION	QUANTITY	DAYS	RATE	Total Price
LABOR COST	Construction Foreman		days		-
	Skilled Laborer		days		-
	Unskilled Laborer		days		-
				Sub-Total:	-
				Unit Cost:	-

DIRECT COST: -
UNIT COST: -

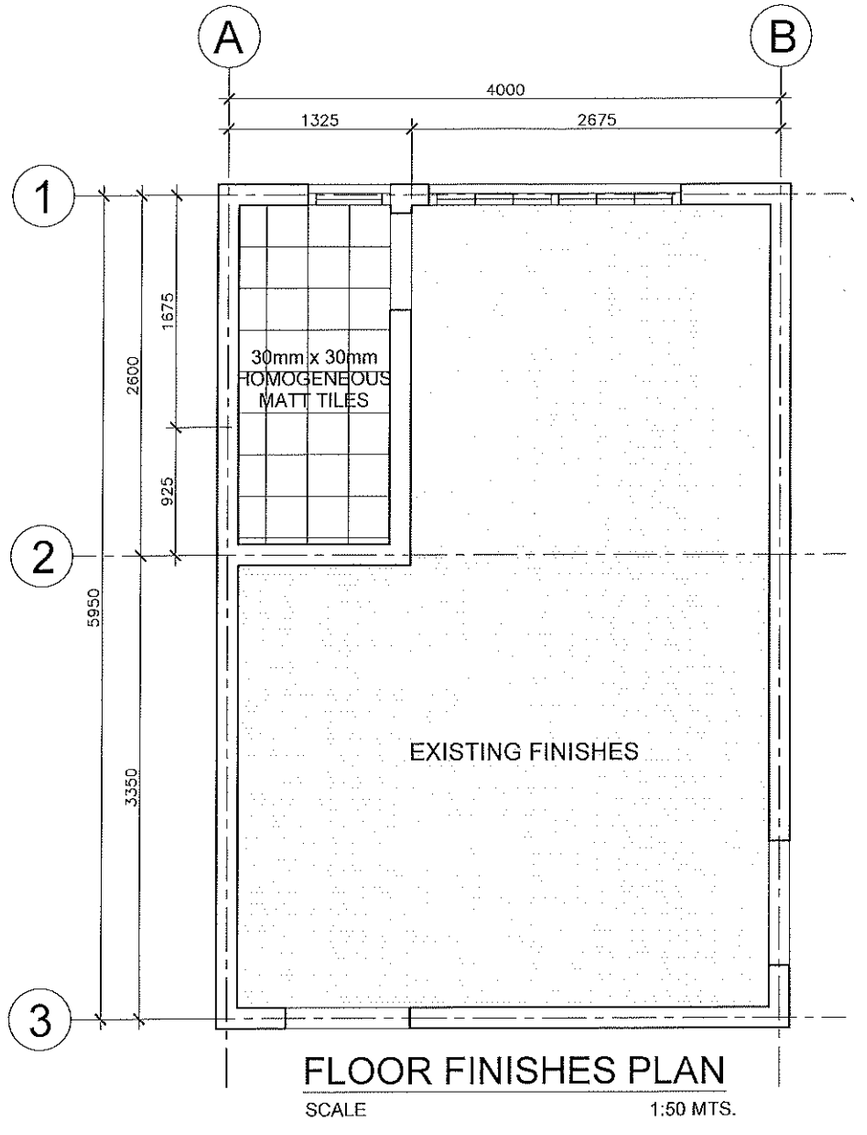
Plus Indirect Cost:
OCM -
CP -
VAT -
Indirect Cost: -

Total Direct and Indirect Cost: -



FLOOR PLAN

SCALE 1:50 MTS.



FLOOR FINISHES PLAN

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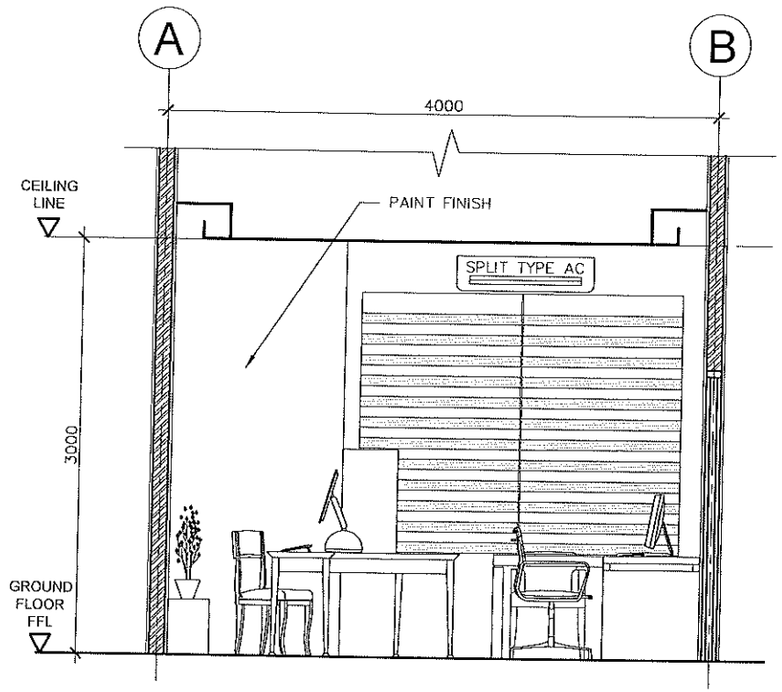
FROM THE OFFICE:	DRAWN AND PREPARED BY:	PROJECT TITLE:	CONFORME:	APPROVED BY:	SHEET CONTENTS:	SHEET NO:
PHYSICAL PLANNING AND DEVELOPMENT OFFICE ROOM 202 FEM HALL, MARIANO MARCOS STATE UNIVERSITY City of Batac,2906 Ilocos Norte Telefax: +63 (77) 792-3191	DAVE CLARK E. PASCUA DRAFTSMAN II CHECKED AND REVIEWED BY: AIDA V. CABANG CHIEF, PHYSICAL PLANNING	REFURBISHMENT OF CBEA DEAN'S OFFICE LOCATION: MMSU CBEA, CITY OF BATAC, ILOCOS NORTE	ANGELINA B. ABROJENA DEAN, CBEA RECOMMENDING APPROVAL: ROMEO R. GULDULAO DIRECTOR, PPDO	SHIRLEY C. AGRUPIS UNIVERSITY PRESIDENT	AS SHOWN REVISION AND DATE:	A-1 1 | 6



SECTION 'X'

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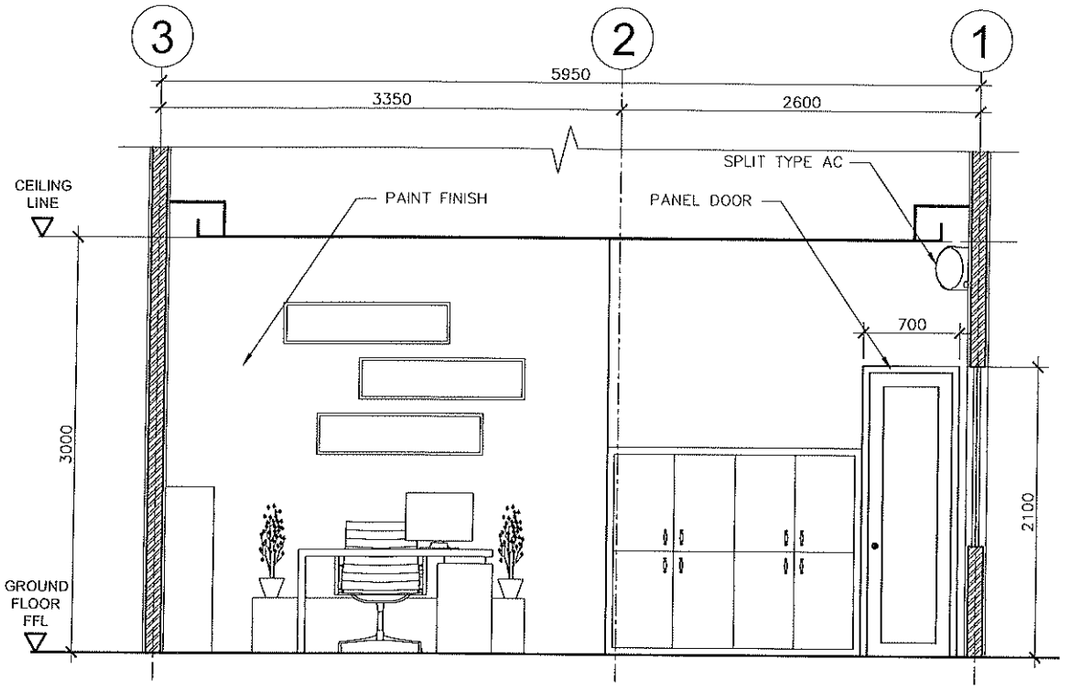

SECTION 'Y'

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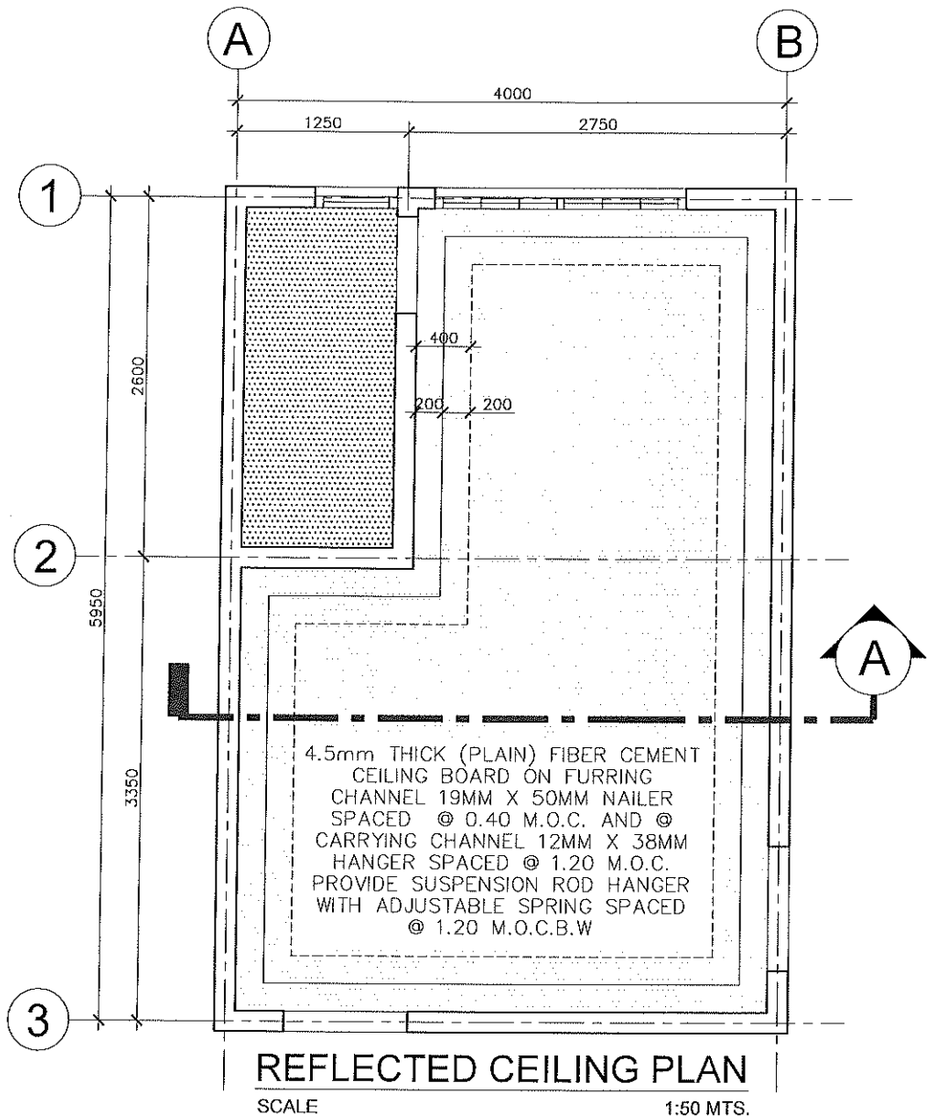

REFLECTED CEILING PLAN

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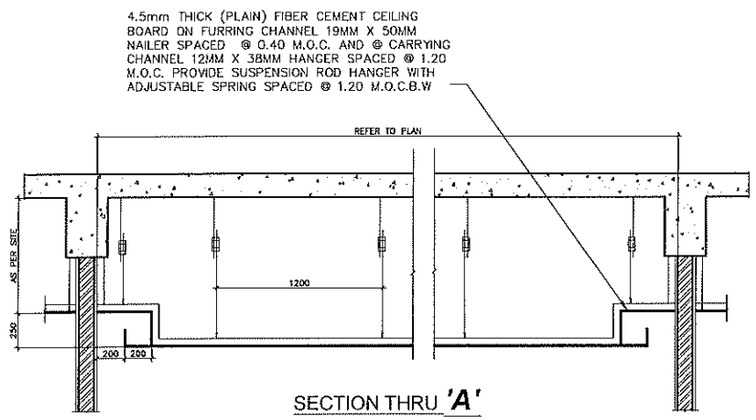

SECTION THRU *'A'*

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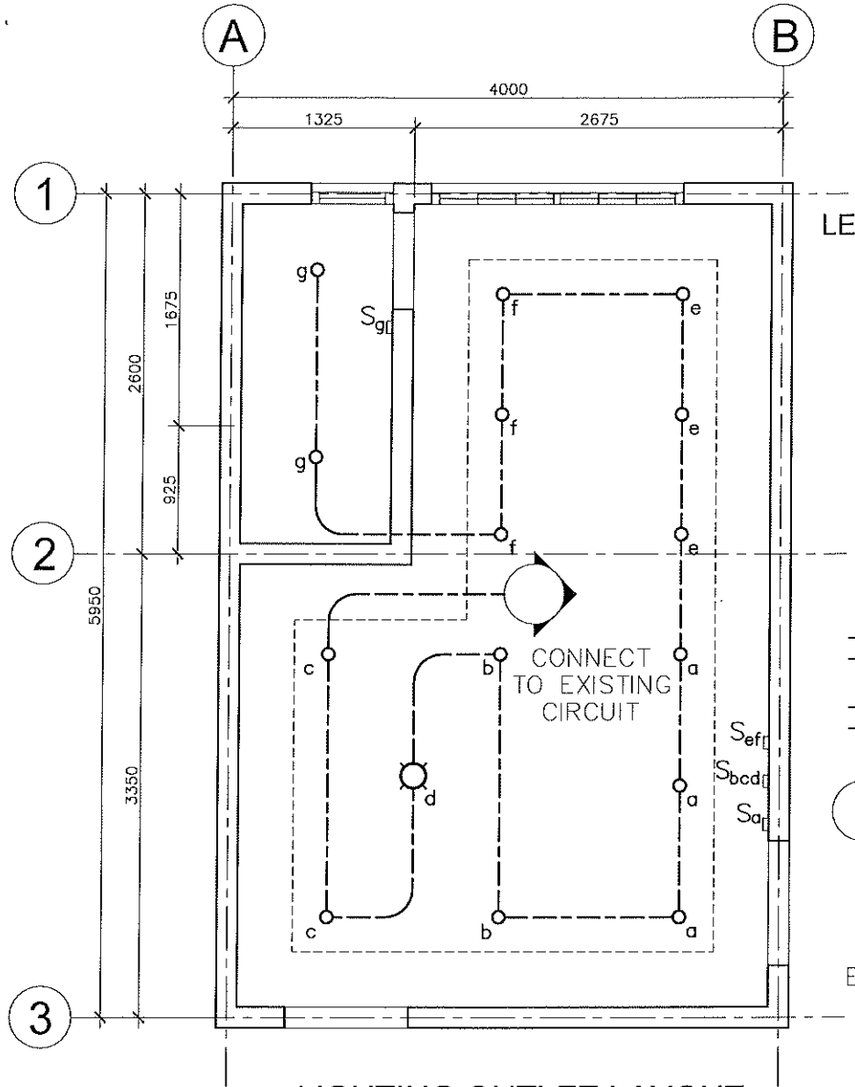
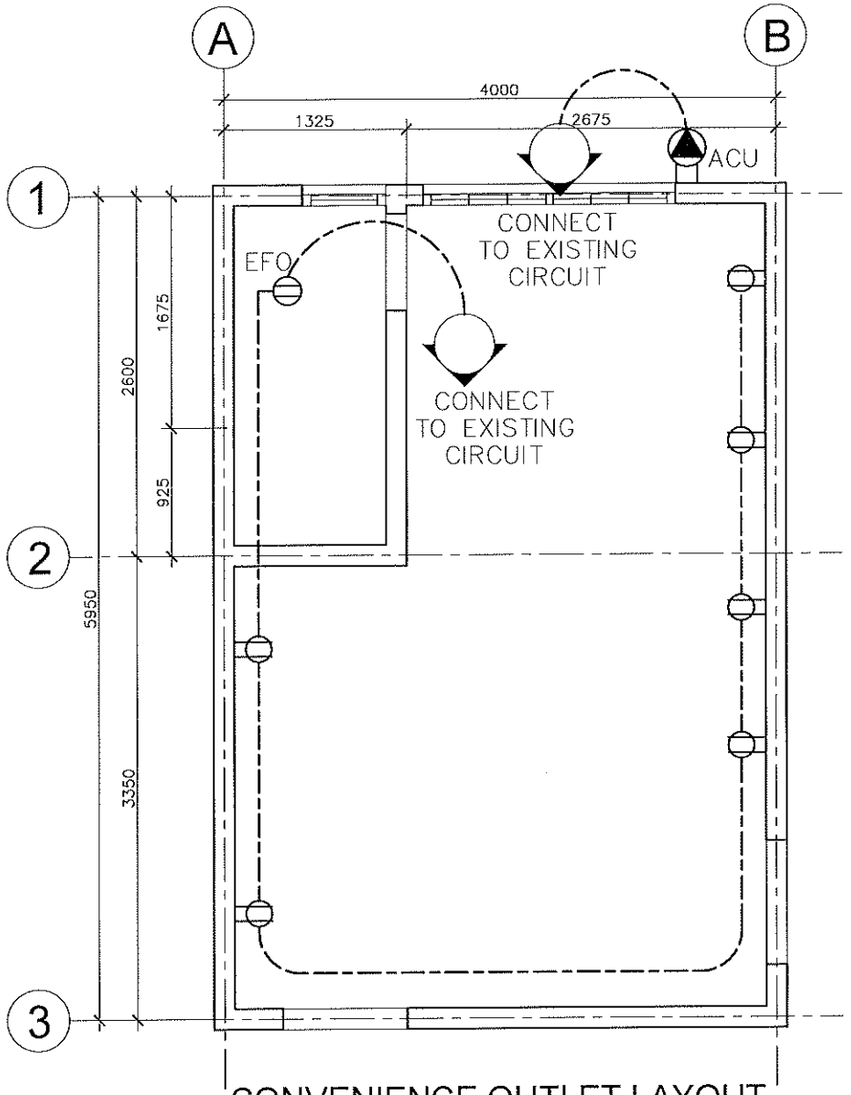


LEGEND:

- 3WATTS 77ømm MINI DOWNLIGHT ROUND SWIVEL, 6500K DAYLIGHT, 220 LUMENS
- 12WATTS 170ømm LED PANEL SURFACE TYPE CEILING LAMP, 6500K DAYLIGHT, 1200 LUMENS
- ACU
- DUPLEX CONVENIENCE OUTLET
- CIRCUIT HOMERUN
- S[] - SWITCH
- EFO - EXHAUST FAN OUTLET

LIGHTING OUTLET LAYOUT

SCALE 1:50 MTS.



CONVENIENCE OUTLET LAYOUT

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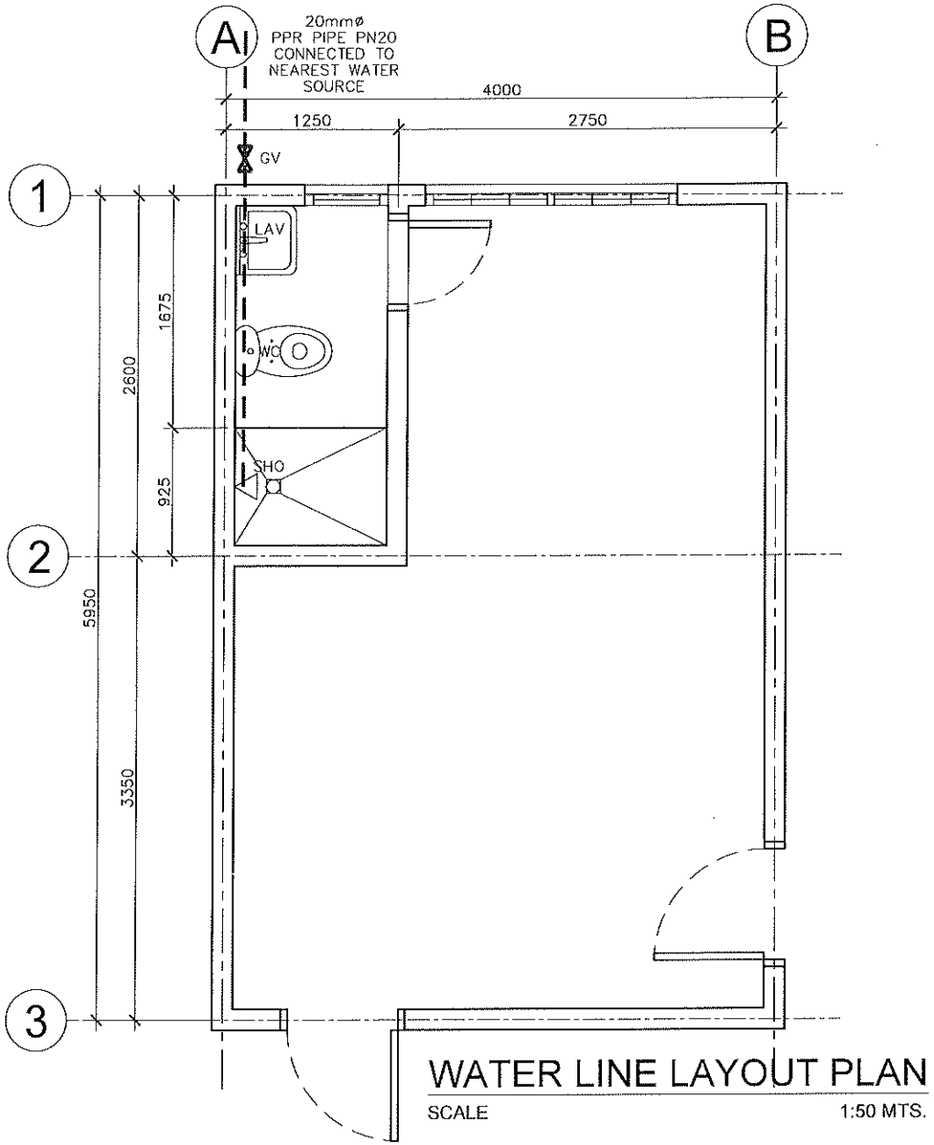
PHYSICAL PLANNING AND DEVELOPMENT OFFICE ROOM 202 FEM HALL, MARIANO MARCOS STATE UNIVERSITY City of Batac,2906 Ilocos Norte Telefax: +63 (77) 792-3191	DAVE CLARK E. PASCUA DRAFTSMAN II PREPARED AND CHECKED BY: LEMUEL JOSHUA P. BAGAYAS ELECTRICAL ENGINEER	REFURBISHMENT OF CBEA DEAN'S OFFICE LOCATION: MMSU CBEA, CITY OF BATAC, ILOCOS NORTE	ANGELINA B. ABROJENA DEAN, CBEA RECOMMENDING APPROVAL: ROMEO R. DULDULAO DIRECTOR, PPDO	SHIRLEY C. AGRUPIS UNIVERSITY PRESIDENT	AS SHOWN REVISION AND DATE:	E-1 4 | 6



WATER LINE LAYOUT PLAN

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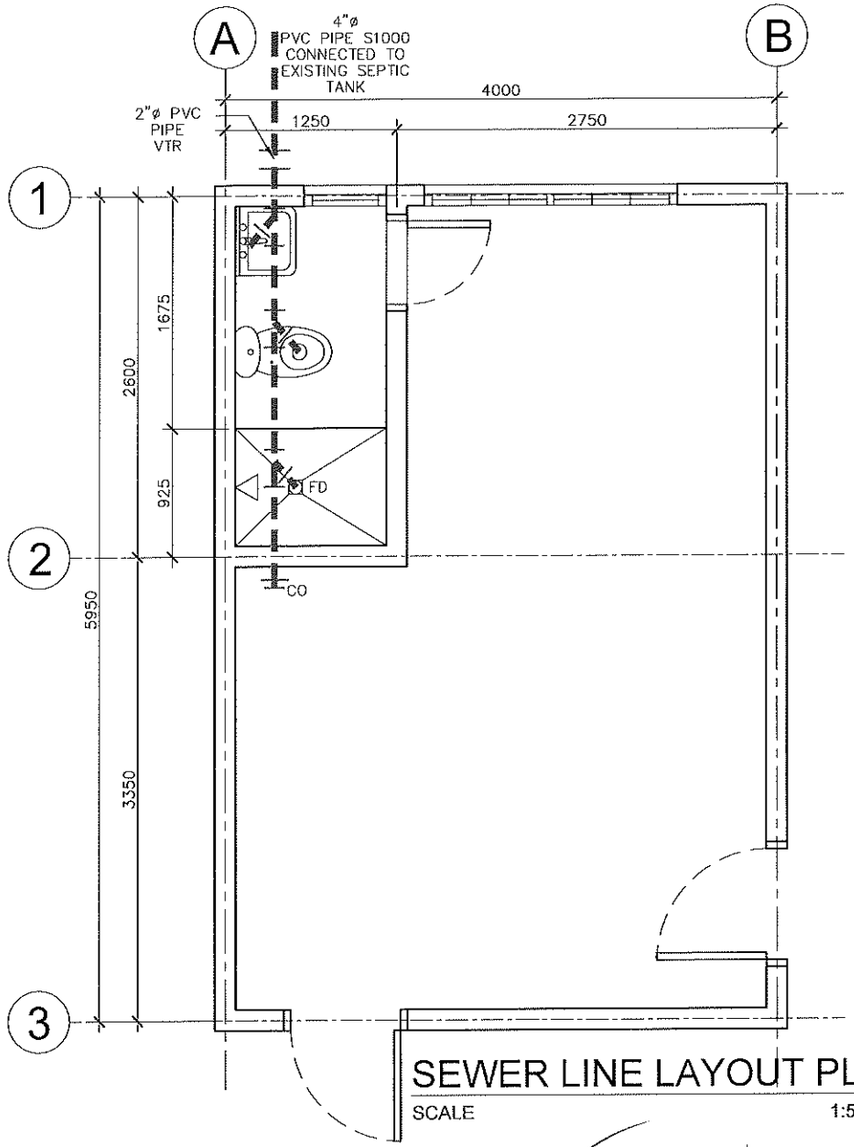

SEWER LINE LAYOUT PLAN

SCALE 1:50 MTS.

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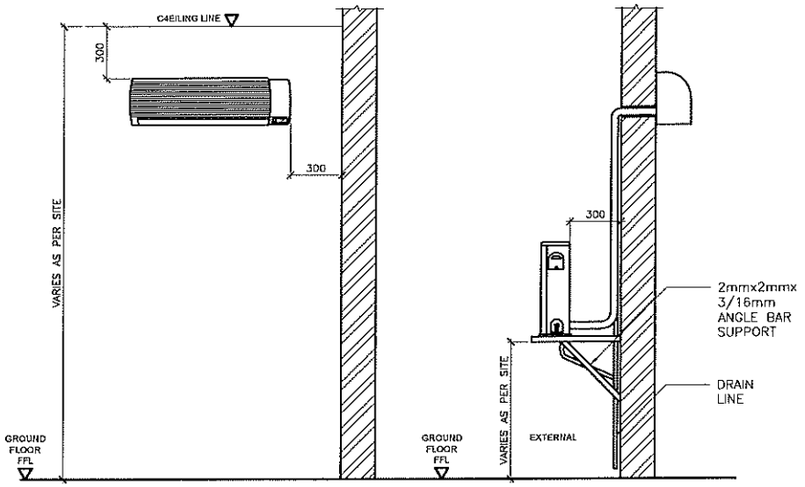
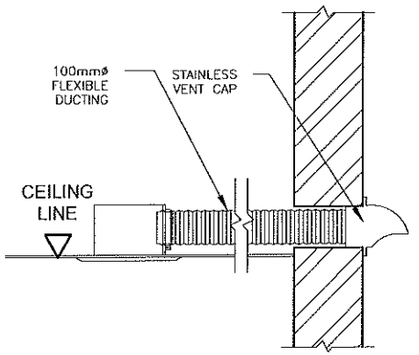
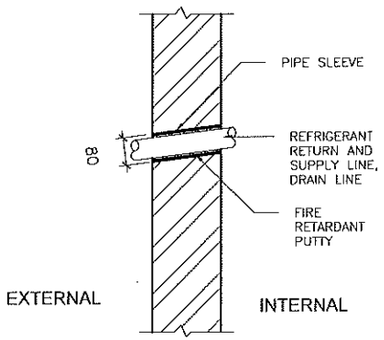


INDOOR UNIT DETAIL
SCALE 1:40 MTS.

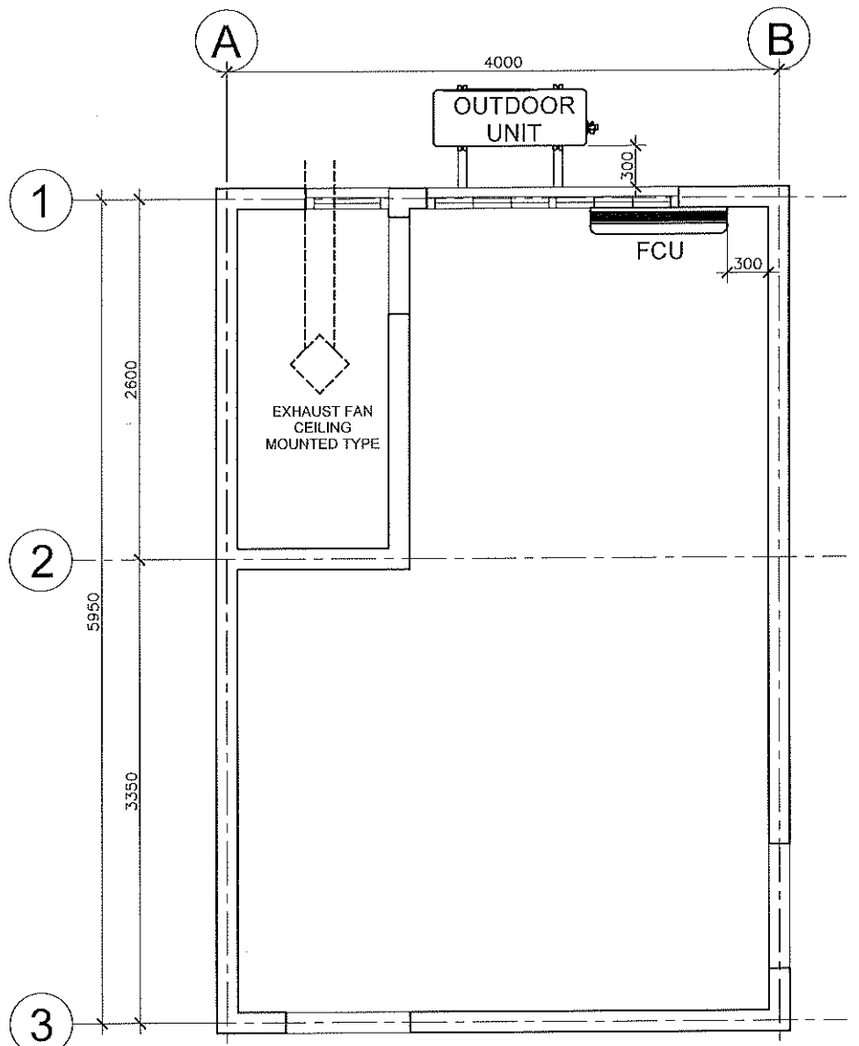
OUTDOOR UNIT DETAIL
SCALE 1:40 MTS.



EXHAUST FAN SECTION DETAIL
SCALE 1:20 MTS.



PIPE THROUGH WALL DETAIL
SCALE 1:20 MTS.



ACU AND EXHAUST FAN LAYOUT
SCALE 1:50 MTS.

SCHEDULE OF EQUIPMENT

N T S

SPECIFICATIONS

DESCRIPTION	QTY	AIR VOLUME, (CFM)	AIR VOLUME, (M^3/HR)	FAN SPEED, (RPM)	MOTOR, (WATTS)	WEIGHT, (KG)
AXIEL EXHAUST FAN CEILING MOUNTED TYPE	1	53	90	860	13	2

SPECIFICATIONS

DESCRIPTION	COOLING CAPACITY					V	Hz	PH	PF	EFFY	I	RATED POWER INPUT, KW	FULL LOAD CURRENT, KW	AMPACITY Iw
	QTY	KW	BTU/HR	KJ/HR	HP									
SPLIT TYPE WALL MOUNTED - INVERTER TYPE	1	5	16, 860	17, 872	1.5	230	60	1	80%	90%	4.9	1.12	6.8	8.45

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