



MARIANO MARCOS STATE UNIVERSITY
Bids and Awards Committee

INVITATION TO MAKE AN OFFER: Negotiated Procurement

21-025

THE PROJECT: repair and Rehabilitation of guard House (2 units)

Number of Working Days: 65 calendar days

ABC: P395,591.44

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 **December 21, 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

December 15, 2021

NATHANIEL R. ALIBUYOG
BAC CHAIR

Received: _____

Received: _____

Received: _____

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

PROJECT INFORMATION DOCUMENT

Project Title : Repair and Rehabilitation of Guard House (2 units)

Project Location : MMSU, Batac City, Ilocos Norte

The project calls for the furnishing of all materials, labor, tools and equipment needed for the repair and rehabilitation of two-unit guard house in front of MMSU FEM Hall Building, MMSU Batac Campus, City of Batac, Ilocos Norte. The said project shall be done in strict conformity with the designs, plans, drawings and other details, as well as the specifications, this Project Information Document and other related contract documents prepared and approved for this project.

It also calls for the employment of men power with the appropriate skills and expertise to undertake the specific items of work and to enable the contractor to produce and deliver to the satisfaction of the owner the needed services and output required of this undertaking. In addition, the Contractor shall have adequate and readily available construction tools and equipment to be utilized during the construction activities of the project. It is also a must as it is necessary that the Contractor shall have regularly at the site a qualified project Engineer to administer strictly the implementation of the project, including maintaining a log book of construction activities, as well as receiving authorized University Officials and Inspectors.

General Instructions

Specifically, the project covers the repair and rehabilitation of guard houses. The contractor shall ensure that the construction activities shall not interfere, obstruct and disturb any on-going operation of the other areas and facilities of the campus and the adjoining road; hence, the contractor shall construct a temporary security or peripheral fence to enclose and isolate the working area from the other facilities of the campus. 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.

The lot where the proposed project will be put up has existing small concrete structures housing equipment for water supply and for power supply. All of dismantled and throwaway materials shall be disposed of properly in a designated place; however, all dismantled and removed materials from the building that are still in good condition or can be re-used shall be turned over to the University. Other existing water and power lines, as well as other service utilities within the area of construction which will hinder construction works shall be relocated,

however, said relocation shall be done only after proper consultation with those in-charge of the affected utilities in the University.

The prospective bidders shall submit a bid proposal for the above-mentioned project with the following scope of works:

Roughing Works. This includes the demolition of existing kitchen sink counter, Chipping of floor for tile works including C.R. area. This also includes the washing of exterior wall to be able to appreciate the design of the building. Before and after the construction, the contractor is advised to clear and clean the area prior to the turn over.

Tile Works. This includes installation of 0.60mx0.60m semi polished tiles for the interior floor and all others areas shown in the approved plans and drawings with the appropriate tile adhesive. Layout the tiles in such a way that the gap between each tile on all sides shall be kept to a maximum of two millimeters (2 mm). 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 end-user prior to purchasing and installation.

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 or ¼" thick cement fiber board (hardiflex) with ceiling joist to be metal furring. All ceiling joist must be properly fastened with rivet 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.

Painting Works. This scope of works includes painting of Ceiling and interior walls, with three (3) 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 exterior concrete walls, apply one coat of latex primer and two coats of elastomeric weather proofing paint of the color to be chosen by the Owner.

Painting preparations for masonry surfaces shall include application of masonry putty or skimcoat to correct uneven wall surfaces during the process.

Mill Works. This item shall consist of furnishing of all materials, hardware, tools, labor and services necessary for the fabrication, delivery and installation of wooden doors of the type and size as shown in the schedule of doors and windows for this project. It also includes the fabrication, delivery and installation of analok framed windows of the type and sizes as shown in the schedule of doors and windows of the plans and drawings prepared and approved for this project. The Contractor is required to show

sample for approval for the quality, color and style of these said materials prior to purchasing and installation.

Plumbing Works. This item shall consist of furnishing and installation of all materials and fixtures as shown in the plans and providing of all required tools and equipment for the satisfactory operation of the entire plumbing and sanitary system all of which shall be in accordance with the latest edition of the National Plumbing Code and specifications.

Material Requirements: 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 Fixtures and Accessories:

- Water closet shall be vitreous china, free standing toilet combination, close coupled push button dual flush, siphon jet flushing system, soft close seat cover and complete with fittings and mounting accessories.
- Lavatory shall be vitreous china, counter type with rear overflow, and complete with lever type faucets, supply pipe, stainless p-trap and mounting accessories.
- Toilet paper holder shall be vitreous china wall mounted. Color shall reconcile with the adjacent fixture and facing tiles. Refer location to the supervising architect.
- Soap holder shall be vitreous china, wall mounted. Color shall reconcile with the adjacent tile works. Refer location to the supervising architect.
- Faucets shall be lever type made of stainless steel for interior use.
- Floor drains shall be made of stainless steel, measuring 10cmx10cm and provided with detachable stainless strainer.

Plumbing Installation:

Soil Pipe- 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. 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.

Electrical Works.

- a. 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 1 (one) licensed electrical practitioner PEE/REE/RME on the job site as a 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 are 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, whichever is more convenient.
- d. Sample of each fixture, wires, wiring devices, circuit breaker panels shall be submitted for approval by the technical committee or inspection committee of the University prior to their installation. *No installation shall be made without the approval of materials by the technical committee of the University.*
- e. Pipes should be installed in a workman like manner, *it should be painted the same color as the surface it is installed.*
- f. Panel boards, enclosures, pull boxes and wire gutters shall be gauge no. 16 galvanized materials, rust proof and powder coated finish. Panel boards shall be the bolted type complete with tin plated copper busbar.
- g. All circuit breakers shall be bolt-on type and must have a label. It is a must that the arrangement of circuit breakers and busbars shall conform with the panel board diagram provided in the plans approved by the end-user to avoid the occurrences of unbalanced loading.
- h. All wires shall be copper 99%, plastic insulated for 600V type THHN, lead free, stranded, except for the feeder lines, transformer wirings, ecb wirings, THW must be used or approved brand by the technical committee of the University. **ONLY ONE (1) BRAND OF WIRE SHALL BE USED.**
- i. Conduit/cable tray shall be supported for permanent connection following the latest PEC and/or refer the approved plans.
- j. No termination of wires shall be done inside the conduits.
- 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. All switches and convenience outlets shall be the wide series type and shall be rated in 15 amperes respectively. Convenience outlet shall be in 3 wire grounding type.

- m. The mounting heights of wiring devices shall be as follows:
 - Light switches – 1.4 m above finished floor line
 - Convenience outlets – 0.30 m above finished floor line or as required
 - Panel Board – 1.8 m above finished floor line to the center of the main MCCB or as required
- n. Grounding system - 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.
- o. Maximum number of wires inside the cable tray shall be observed (20% of the total cross-sectional area).
- p. Existing electrical system shall remain functional and normal operation until the new electrical system is ready to be energized.
- q. All wirings shall be tested for circuit continuity and shall be tested to assure that the wiring system is free of short-circuit, accidental grounding or other defects prior to normal system operation.
- r. Tests shall be performed after all wiring is completed and connected ready for the attachment of the fixtures and equipment and again after fixture and equipment are connected ready for use. Tests shall be made with an instrument capable of measuring accurately the resistance involved and having a voltage rating of 500 volts. Reading shall be taken after the voltage has been applied continuously for one minute. The insulation resistance between the conductors and between each conductor and ground shall be measured.
- s. Tests shall be done for each item of control equipment will function not less than five times. All tests shall be performed in the presence of the university inspection or technical committee. All test results shall be submitted in three copies.
- t. Energize the system. After the contractor has assured himself that the wiring systems are free of faults, the contractor shall energize the system from their normal power source and confirm that the system is operational as required by the contract documents, prior to final inspection.
- u. In case that a conflict arises in specification and quality of materials, installation procedure and in the plans and drawings as well as in the contract documents before and during the implementation stage, the same should be referred to the end-used, and PPDO for proper resolution of the said conflict.

SUPPLEMENTARY PROVISIONS

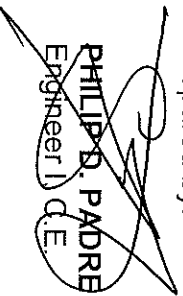
All other items or scope of works not mentioned in this document but shown and/or indicated in the plans, drawings and specifications, except where it is specifically mentioned as "to be provided by others", the contractor shall likewise furnish all materials, labor and equipment necessary to complete the same. In case that a conflict arises 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 for proper resolution of the said conflict.

Where the above-mentioned items or scope of works require the approval of the quality and design of the materials to be used or their testing before they are installed, embedded in concrete or enclosed with specified covering materials, the contractor shall secure from the University clearance or permission related hereto. After all the works have been completed, the surrounding immediate areas affected in the execution 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 **SIXTY-FIVE (65) calendar days** from receipt of the Notice to Proceed.

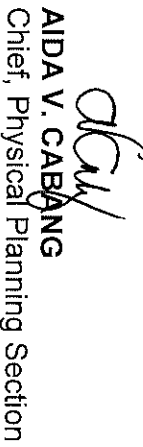
B. The Approved Budget for the Project to be bid is **The Hundred Ninety-Five Thousand Five Hundred Ninety-One and 44/100 Pesos (Php.) 395,591.44**

Prepared by:


PHILIP D. PADRE
Engineer I, C.E.


LEMUEL JOSRIVA P. BAGAYYAS
Engineer I, E.E.

Checked by:


AIDA V. CABANG
Chief, Physical Planning Section


ROMEO B. BABILAO
Director, PPDO



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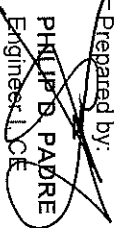
BILL OF QUANTITIES


Project Title : Repair and Rehabilitation of Guard House (2 Units)
 Project Location : MMSU, City of Batangas, Ilocos Norte

Item No.	Description	Quantity	Unit
Twin-Gate Entrance Arch			
1.0	General Requirements		
	Temporary Facility	1.00	lot
	Temporary Site Enclosure	1.00	lot
	Health and Safety Requirements	1.00	lot
	Temporary Connection for Electrical and Water (to be requested)	1.00	lot
2.0	Roughing Works		
	Demolition		
	Chipping of Floors	1.00	lot
	Cleaning of exterior walls		
	Cleaning and Cleaning		
3.0	Tile Works		
	0.60m x 0.60m Semi Polish Tile	26.28	sq.m.
4.0	Ceiling Works		
	4' x 8' x 4.5mm Cement Board		
	1" x 3" Metal Furring	26.28	sq.m.
	1" x 1" Wall Angle		
	Connections and Fasteners		
5.0	Painting Works		
	Masonry	163.48	sq.m.
6.0	Millworks		
	Doors:		
	0.67m x 2.50m Wood Panel Door with Wooden Jamb and Complete Accessories (See plan for details)	2.00	sets
	0.70m x 2.10m Wood Panel Door with Wooden Jamb and Complete Accessories (See plan for details)	2.00	sets
	0.60m x 2.10m Swing-In Door Hollow Core Flush Type Wood Door with Complete Accessories (See plan for details)	1.00	set
	Windows:		
	2.08m x 1.04m 1/4" thick Tinted Glass on Alanok Aluminum Frame	2.00	sets
	Sliding Window with Steel Grills (See plan for details)		
	1.55m x 1.04m 1/4" thick Tinted Glass on Alanok Aluminum Frame	2.00	sets
	Sliding Window with Steel Grills (See plan for details)		
1.06m x 1.04m 1/4" thick Tinted Glass on Alanok Aluminum Frame	4.00	sets	
Sliding Window with Steel Grills (See plan for details)			
0.50m x 0.50m Awning Window 1/4" thick Tinted Glass on Alanok Aluminum Frame (See plan for details)	2.00	sets	
7.0	Plumbing Works		
	Fixtures		
	Sewer Line Fittings	1.00	lot
	Water Line Fittings		
8.0	Electrical works		
	Circuit Breakers and Enclosures		

	Pipes, Conduits and Fittings	1.00	lot
	Conductors, Lead Free		
	Lighting Fixtures, Wiring Devices, and Others		
9.0	Mobilization/Demobilization		
	Mobilization/Demobilization	1.00	lot

Prepared by:


PHILIP B. PADRE
 Engineer, LCE


LEMUEL JOSNUA P. BAGAYYAS
 Engineer, EE

Checked by:


AIDA V. CABANG
 Chief, Physical Planning Section

Recommending Approval:


ROMEO S. LANTIGUA
 Director, PPDO



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City of Batac, 2906, Ilocos Norte

SPECIFICATION

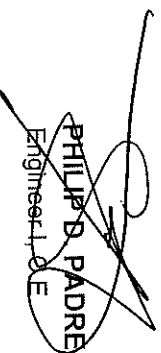
Project Title: Repair and Rehabilitation of Guard House (2 units)

Project Location: MMSU, City of Batac, Ilocos Norte

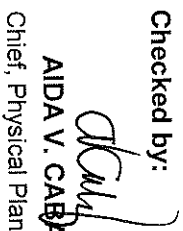
ITEM NO.	DESCRIPTION
I	<u>Roughing Works</u> Demolition Existing Kitchen Sink <u>Chipping Works</u> Floors and C.R. tiles <u>Cleaning</u> Exterior Wall (can use a pressure washer)
II	<u>Tile Works</u> Floor 0.60 x 0.60 Semi Polish tile C.R. Floor and Wall Tiles
III	<u>Ceiling Works</u> 4' x 8' x 4.5mm Cement Board 1" x 3" Metal Furring 1" x 1" Wall Angle
IV	<u>Painting Works</u> Skimcoat Flat Latex White (1 coat) Latex Paint - Off White (2 coats)
V	<u>Milworks</u> Doors: Wood Panel Door with Wooden Jamb and Complete Accessories (See plan for details) Swing-in Door Hollow Core Flush Type Wood Door with Complete Accessories (See plan for details) Windows: 1/4" thick Tinted Glass on Alanok Aluminium Frame Sliding Window with Steel Grills (See plan for details) Awning Window 1/4" thick Tinted Glass on Alanok Aluminium Frame (See plan for details)
VI	<u>Plumbing Works</u> <u>Plumbing Fixtures and Accessories</u> Double Flush Water Closet (with Complete Accessories)

	<p>Stand alone Lavatory (with complete accessories) Kitchen Sink with complete accessories and fixtures Floor Drain Soap Holder Tissue Holder 0.60 x 0.60 Wall Mounted Mirror with complete accessories</p> <p>Sewer Line (uPVC Pipes and Fittings) uPVC Pipe (Show material sample for approval prior to purchasing of said material)</p> <p>Water Line (PP-r Pipe and Fittings) PP-r Pipe PN20 (Show material sample for approval prior to purchasing of said material)</p>
<p>VII</p>	<p><u>Electrical Works</u> Circuit Breakers and Enclosures General Requirements: Ga. #16 Galvanized Materials, Powder Coated Finish, with complete Ground Lugs All bolt-on type Circuit Breakers</p> <p>Pipes, Conduits and Fittings It must meet the standard thickness and diameter stated in the program of works.</p> <p>Conductors, Lead Free It must be UL listed brands, lead free, and at least 99% made from copper wire.</p> <p>Lighting Fixtures, and other Wiring Devices Duplex Convenience Outlets must be Wide Series, with Grounding and Cover Plate Switches must be Wide Series, with Cover Plate</p> <p>12W LED Flat Lamp, E27 Base, 6500K Daylight, 1100 Lumens 3W LED Mini Downlight Round Swivel, 6500K Daylight, 220 Lumens</p>

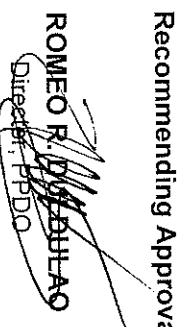
Prepared By:


PHILIP B. PADRE
Engineer 1, E.E.

Checked by:


AIDA V. CABANG
Chief, Physical Planning Section

Recommending Approval:


ROMEO R. DURBILAO
Director, FPDO

LEMUEL JOSHUA P. BAGAYAS
Engineer 1, E.E.



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INDIVIDUAL PROGRAM OF WORK

Name/Location of Project:		Appropriations:						
Repair and Rehabilitation of Guard House (2 units)		Source of Fund						
		Issued Obligated Authority:						
		Released:						
		Calendar Days to Complete:						
Project Category:		Desirable Starting Date:						
0 Vertical Construction								
Project Description:								
Minimum Equipment Requirement								
Description		No.	Technical Personal Required					
			Description					
			Number					
ESTIMATED COST OF PROPOSED WORK								
Item No.	Description	% of Total	Unit	Quantity	Direct Cost	Indirect Cost	Adjusted Cost	Total Cost
Repair of Guard Houses								
I	Roughing Works							
II	Tile Works							
III	Ceiling Works							
IV	Painting Works							
V	Millworks							
VI	Plumbing Works							
VII	Electrical Works							
	Total							

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DETAILED ESTIMATES

Item No.: 1	Quantity:
Description: Roughing Works	Unit: lot

MATERIALS COST	Quantity	Unit	Unit Price	Sub-Total
Total Materials Cost			Sub-Total Unit Cost	
Total Equipment Cost			Sub-Total Unit Cost	
LABOR COST			Sub-Total Unit Cost	

DIRECT COST:
 DIRECT UNIT COST:

Plus Indirect Cost:
 OCM
 CP
 VAT
 Indirect Unit Cost:

Total Direct and Indirect Cost:



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DETAILED ESTIMATES

Item No.:	II	Quantity:	
Description:	Tile Works	Unit:	sq.m.

MATERIALS COST		Quantity	Unit	Unit Price	Sub-Total
0.60m x 0.60m Semi Polish Tile			pcs.		
Tile Adhesive			bags		
Portland Cement			bags		
Screened Sand			cu.m.		
Tile Grout			bags		
4" Diamond Cutter			pcs.		
Total Materials Cost				Sub-Total Unit Cost	
		Quantity	days	Unit Price	Sub-Total
Total Equipment Cost				Sub-Total Unit Cost	
Description		Quantity	Unit	Unit Price	Sub-Total
Total Labor Cost				Sub-Total Unit Cost	

DIRECT COST:
 DIRECT UNIT COST:

Plus Indirect Cost:
 OCM
 CP
 VAT
 Indirect Unit Cost

Total Direct and Indirect Cost:



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DETAILED ESTIMATES

Item No.:	III	Quantity:	
Description:	Ceiling Works	Unit:	sq.m.

MATERIALS COST	Description	Quantity	Unit	Unit Price	Sub-Total
		4' x 8' x 4.5mm Cement Board		pcs.	
	1" x 3" Metal Furring		pcs.		
	1" x 1" Wall Angle		pcs.		
	Blind Rivet		box		
	Total Materials Cost			Sub-Total	
				Unit Cost	
EQUIPMENT COST	Description	Quantity	days	Unit Price	Sub-Total
	Total Equipment Cost			Sub-Total	
				Unit Cost	
LABOR COST	Description	Quantity	Unit	Unit Price	Sub-Total
	Total Labor Cost			Sub-Total	
				Unit Cost	

DIRECT COST:
 DIRECT UNIT COST:

Plus Indirect Cost:
 OCM
 CP
 VAT
 Indirect Unit Cost

Total Direct and Indirect Cost:

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DETAILED ESTIMATES

Item No.: IV	Quantity:
Description: Painting Works	Unit: sq.m.

MATERIALS COST	Quantity	Unit	Unit Price	Sub-Total	
Masonry: Masonry/ Putty Flat Latex White Latex Paint - Off White 9" Roller Brush with Pan 4" Paint brush 2" Paint Brush		gals. gals. gals. pcs. pcs. pcs.			
Total Materials Cost			Sub-Total Unit Cost		
	Description	Quantity	days	Unit Price	Sub-Total
Total Equipment Cost			Sub-Total Unit Cost		
	Description	Quantity	Unit	Unit Price	Sub-Total
Total Labor Cost			Sub-Total Unit Cost		

DIRECT COST:
 DIRECT UNIT COST:

Plus Indirect Cost:
 OCM
 CP
 VAT
 Indirect Unit Cost:

Total Direct and Indirect Cost:

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DETAILED ESTIMATES

Item No.:	V	Quantity:			
Description:	Millworks	Unit:		lot	

MATERIALS COST	Quantity	Unit	Unit Price	Sub-Total
Doors: 0.67m x 2.50m Wood Panel Door with Wooden Jamb and Complete Accessories (See plan for details)		set		
0.70m x 2.10m Wood Panel Door with Wooden Jamb and Complete Accessories (See plan for details)		set		
0.60m x 2.10m Swing-in Door Hollow Core Flush Type Wood Door with Complete Accessories (See plan for details)		set		
Windows: 2.08m x 1.04m 1/4" thick Tinted Glass on Alanok Aluminum Frame Sliding Window with Steel Grills (See plan for details)		set		
1.55m x 1.04m 1/4" thick Tinted Glass on Alanok Aluminum Frame Sliding Window with Steel Grills (See plan for details)		set		
1.06m x 1.04m 1/4" thick Tinted Glass on Alanok Aluminum Frame Sliding Window with Steel Grills (See plan for details)		sets		
0.50m x 0.50m Awning Window 1/4" thick Tinted Glass on Alanok Aluminum Frame (See plan for details)		set		
Includes Material, Fabrication, Delivery and Installation				
Total Materials Cost			Sub-Total Unit Cost	
EQUIPMENT COST				
Total Equipment Cost			Sub-Total Unit Cost	
LABOR COST				
Total Labor Cost			Sub-Total Unit Cost	

DIRECT COST:
 DIRECT UNIT COST:

Plus Indirect Cost:
 OCM
 CP

VAT
Indirect Unit Cost:

Total Direct and Indirect Cost:

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DETAILED ESTIMATES

Item No.: VI	Quantity:
Description: Plumbing Works	Unit: lot

Description	Quantity	Unit	Unit Price	Sub-Total
MATERIALS COST				
Fixtures:				
Double Flush Water Closet (with Complete Accessories)		set		
Stand alone Lavatory (with complete accessories)		set		
Kitchen Sink with complete accessories and fixtures		set		
Floor Drain		pc.		
Soap Holder		pc.		
Tissue Holder		pc.		
0.60 X 0.60 Wall Mounted Mirror with complete accessories		set		
Sewer Line Fittings:				
4"dia PVC Pipe S1000		pc.		
4"dia PVC Wye		pc.		
2" x 4" PVC Wye Reducer		pcs.		
4" C.O.		pc.		
2"dia PVC Pipe S1000		pc.		
2"dia. PVC Elbow		pc.		
2"dia. PVC 1/8 Vent		pc.		
2" dia PVC P-Trap		pcs.		
PVC Solvent		can		
Water Line Fittings:				
1/2"dia PPr Pipe		pcs.		
1/2"dia PPr Elbow Female Adaptor		pcs.		
1/2"dia PPr Elbow		pcs.		
1/2"dia PPr Tee		pcs.		
1/2"dia PPr Gate Valve		pcs.		
Total Materials Cost			Sub-Total	
			Unit Cost	
EQUIPMENT COST				
Description	Quantity	days	Unit Price	Sub-Total
Total Equipment Cost			Sub-Total	
			Unit Cost	
Description	Quantity	Unit	Unit Price	Sub-Total
Total Labor Cost			Sub-Total	
			Unit Cost	

DIRECT COST:
 DIRECT UNIT COST:
 Plus Indirect Cost:

OCM
CP
VAT
Indirect Unit Cost

Total Direct and Indirect Cost:



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

DETAILED ESTIMATES

Item No.:	VII	Quantity:	lot		
Description:	Electrical Works	Unit:			
	Description	Quantity	Unit	Unit Price	Sub-Total
I. Circuit Breakers and Enclosures					
	Panelboard - Guard House (Eastern Part) 2P, 2-Wire, 240V with ground in NEMA 1, Wall Mounted Enclosure Main: 60AT, 2P, 30KAIC, 240V, MCCB Branches: 1 - 15AT, 2P, 30KAIC, 240V, MCCB 4 - 20AT, 2P, 30KAIC, 240V, MCCB 1 - 30AT, 2P, 30KAIC, 240V, MCCB		set		
	Panelboard - Guard House (Western Part) 2P, 2-Wire, 240V with ground in NEMA 1, Wall Mounted Enclosure Main: 60AT, 2P, 30KAIC, 240V, MCCB Branches: 1 - 15AT, 2P, 30KAIC, 240V, MCCB 4 - 20AT, 2P, 30KAIC, 240V, MCCB		set		
	SUB-TOTAL (I. Circuit Breakers and Enclosures)				
II. Pipes, Conduits, and Fittings					
	Adapter with Locknut / Straight Connector 20mmØ, PVC Pipe 20mmØ, PVC 25mmØ, EMT Short Elbow 20mmØ, PVC 25mmØ, EMT Coupling 25mmØ, EMT Clamp, with Tox and Screw #8 25mmØ, EMT		pcs. pcs. pcs. pcs. pcs. pcs. pcs.		
	SUB-TOTAL (II. Pipes, Conduits, and Fittings)				
III. Conductors, Lead Free					
	14.0mm2 THW 8.0mm2 THW 3.5mm2 THW 2.0mm2 THW		meters meters meters meters		
	SUB-TOTAL (III. Conductors, Lead Free)				
IV. Wiring Devices					
	Utility Box, 2"X4" Junction box with Cover, Octagonal Duplex Convenience Outlet with Cover Plate, Grounding Type, Wide Series Switches, Wide Series, with Cover Plate 1-gang, Single Pole, Single Throw Switch 2-gang, Single Pole, Single Throw Switch		pcs. pcs. sets sets sets		

MATERIALS COST

Electrical Tape, Vini, Big			rolls		
SUB-TOTAL (IV. Wiring Devices)					
V. Fixtures, and Others					
12 Watts LED Flat Lamp, E27 Base, 6500K Daylight, 1100 Lumens			pcs.		
E27 Ceiling Receptacle, 3 1/2" Diameter, with Screw Ivory, 6A, 250V ~			pcs.		
3 Watts LED Mini Downlight Round Swivel, 6500K Daylight, 220 Lumens			pcs.		
SUB-TOTAL (V. Fixtures, and Others)					
Total Materials Cost				Sub-Total	
				Unit Cost	
Description				Unit	Unit Price
				Quantity	Sub-Total
Total Equipment Cost				Sub-Total	
				Unit Cost	
Description				Unit	Unit Price
				Quantity	Sub-Total
Total Labor Cost				Sub-Total	
				Unit Cost	

DIRECT COST:
DIRECT UNIT COST:

Plus Indirect Cost:
OCM
CP
VAT
Indirect Unit Cost:

Total Direct and Indirect Cost:



PHYSICAL PLANNING AND DEVELOPMENT OFFICE
 2/F 202 ADMINISTRATION BLDG. MARINO MARCOS STATE UNIVERSITY
 CITY OF BATAVIA, 2908 LACOS NORTE
 TELEFAX: +63 (7)792-9191

FROM THE OFFICE:
 DRAWN BY: BJAY B. BAYANG
 PREPARED BY: AIDA V. CABANG
 ARCHITECT

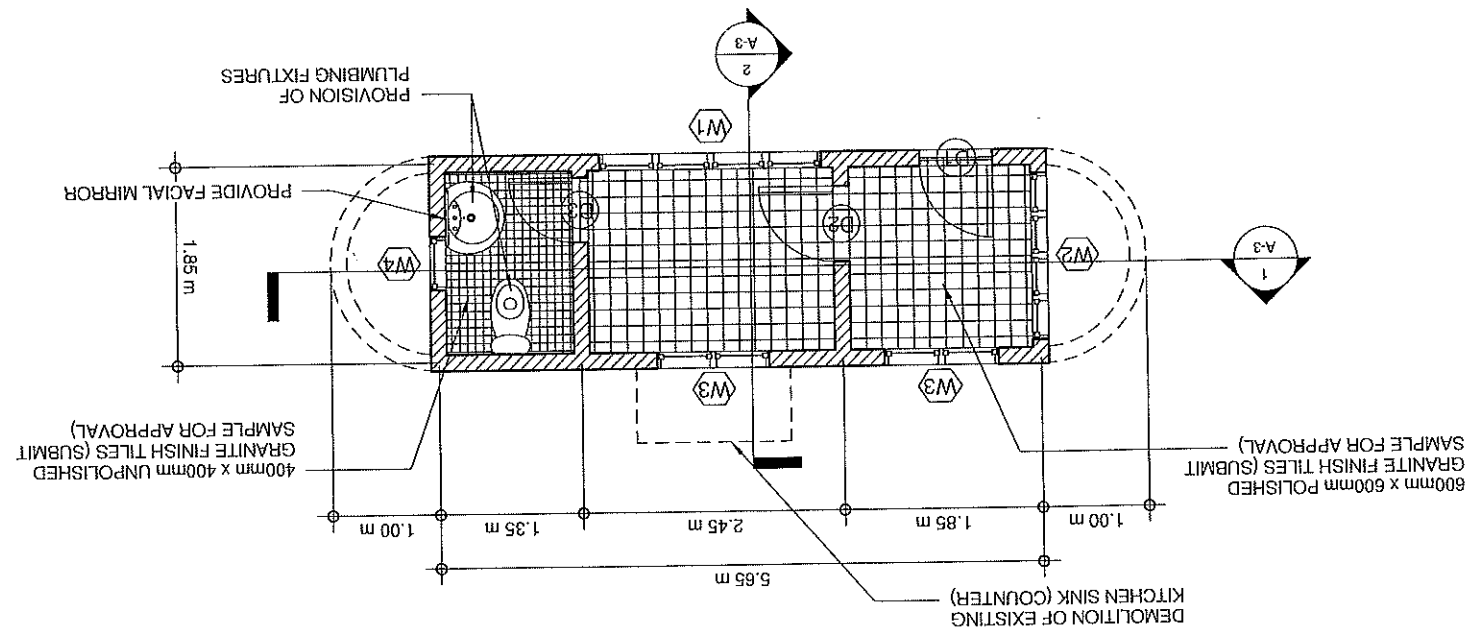
PROJECT TITLE: REPAIR OF GUARD HOUSE AT TWIN GATE (EASTERN PART)
 LOCATION: MMSU-TWIN GATE, CITY OF BATAVIA, LACOS NORTE
 CHECKED/REVIEWED BY: AIDA V. CABANG
 CHIEF, PHYSICAL PLANNING SECTION

RECOMMENDING APPROVAL: HOMERILLILLO
 DIRECTOR
 APPROVED BY: SHIRLEY C. BARRUIS
 UNIVERSITY PRESIDENT

SHEET NO.: A-1
 SHEET CONTENT: CONFORME:

- REPAIRS TO BE UNDERTAKEN
1. REPAIRING OF INTERIOR WALLS & CEILING
 2. REPAIR OF CEILING
 3. INSTALLATION OF NEW ELECTRICAL SYSTEM
 4. PROVISION OF NEW DOORS & WINDOWS
 5. PLUMBING WORKS

1 FLOOR PLAN
 1 : 50 meters





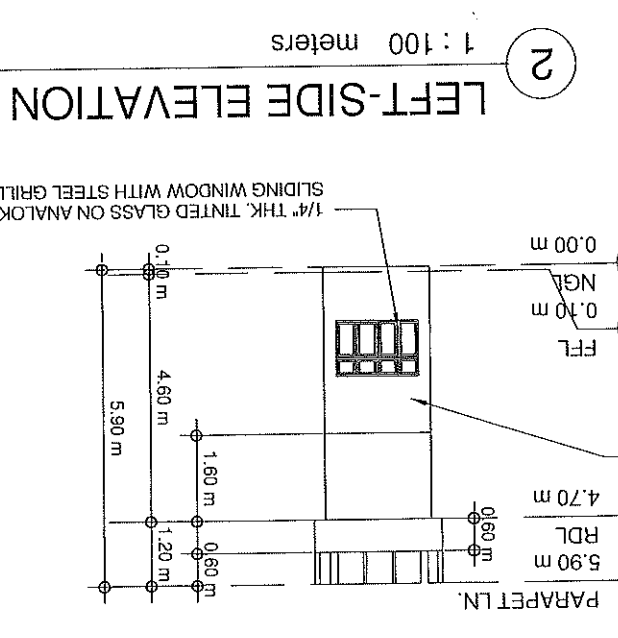
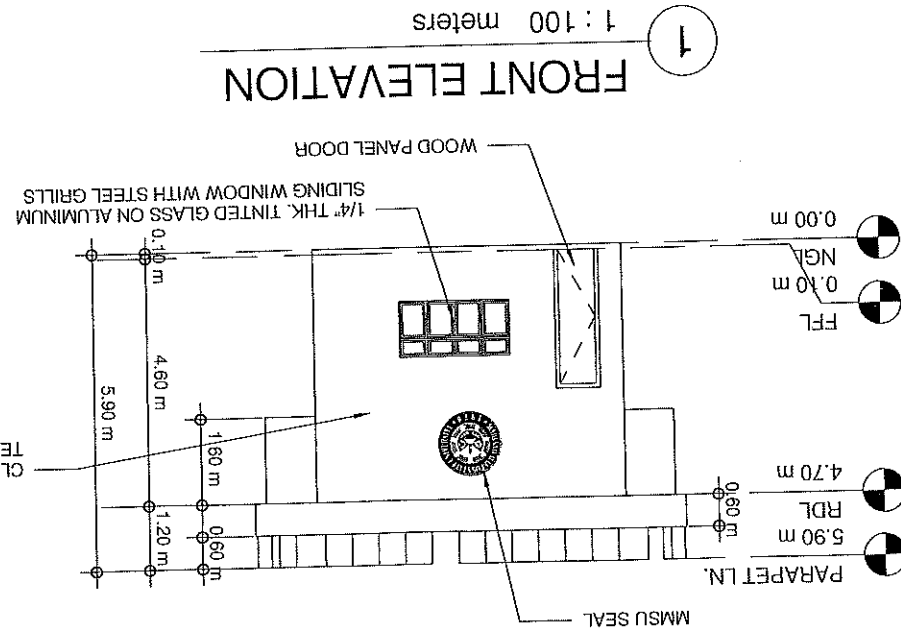
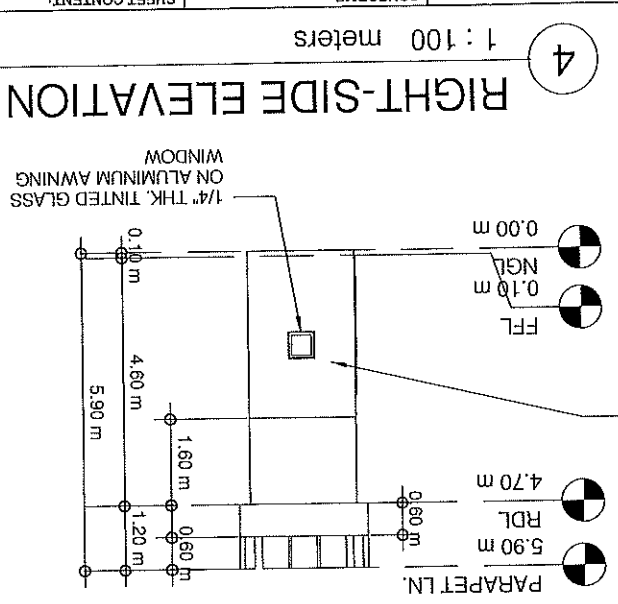
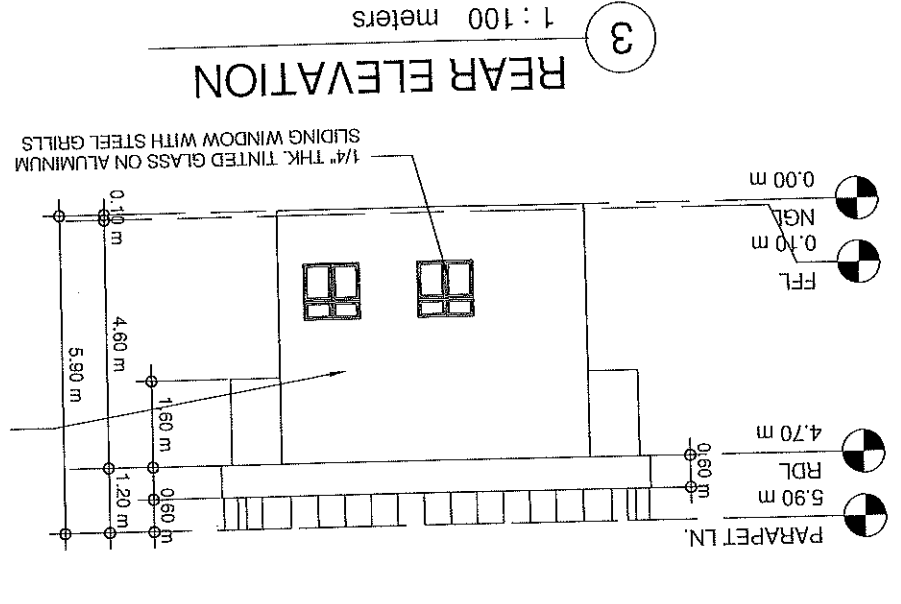
PHYSICAL PLANNING AND DEVELOPMENT OFFICE
 2/F 202 ADMINISTRATION BLDG. MARIKINA MARCOS STATE UNIVERSITY
 CITY OF BAYANG, 2908 LLOCOS NORTE
 TEL/FAX: +63 (77)392-3191

PREPARED BY: AIDA V. CABANG
 DRAFTSMAN

PROJECT TITLE: REPAIR OF GUARD HOUSE AT TWIN GATE (EASTERN PART)
 LOCATION: MMSU-TWIN GATE, CITY OF BAYANG, LLOCOS NORTE

RECOMMENDING APPROVAL: ROBERTO B. DUKULAO
 DIRECTOR, PPD
 CHECKED/REVIEWED BY: AIDA V. CABANG
 CHIEF, PHYSICAL PLANNING SECTION
 APPROVED BY: SHIRLEY C. AGUIRRE
 UNIVERSITY PRESIDENT

FROM THE OFFICE: DRAWN BY: PROJECT TITLE: CONFORMS: SHEET CONTENT: SHEET NO: A-2





PHYSICAL PLANNING AND DEVELOPMENT OFFICE
 2/F 202 ADMINISTRATION BLDG. MARIKINA MARCOS CITY OF BATAO, 2905 LLOCOS NORTE
 TEL/FAX: 469 (777)92-9191

PREPARED BY: AIDA V. CABANG
 ARCHITECT

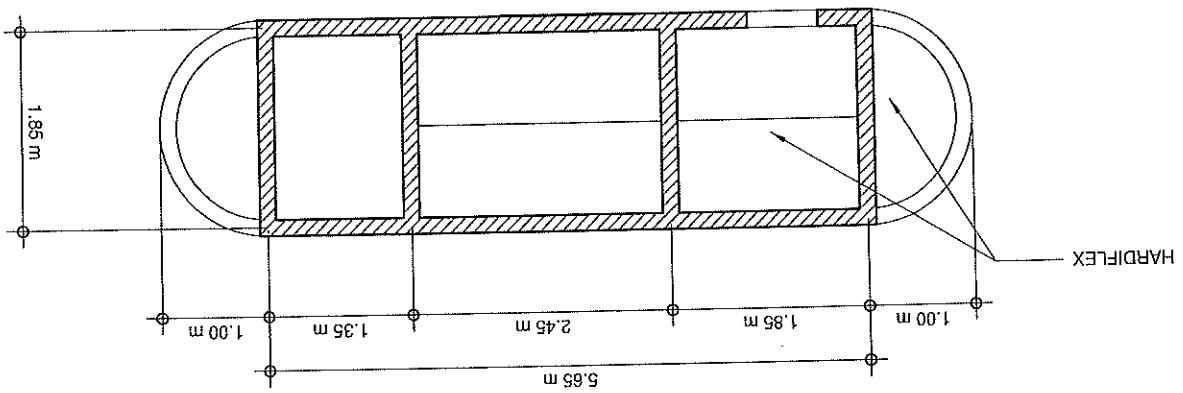
CHECKED/REVIEWED BY: AIDA V. CABANG
 CHIEF, PHYSICAL PLANNING SECTION

RECOMMENDING APPROVAL: HON. JOSE ABLEDO
 PRESIDENT

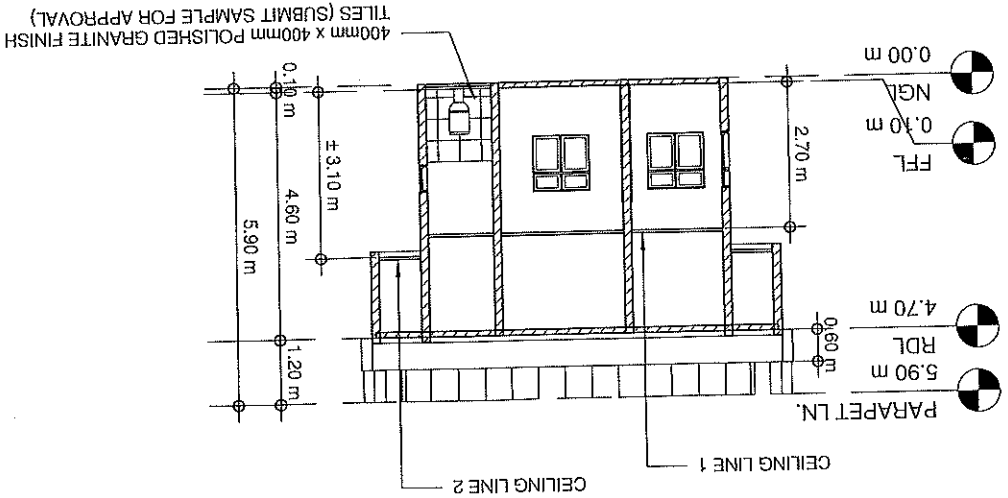
APPROVED BY: SHIRLEY Q. AGUIPIS
 UNIVERSITY PRESIDENT

FROM THE OFFICE: DRAWN BY: BJAY M. BAYANG
 DRAFTSMAN
 PROJECT TITLE: REPAIR OF GUARD HOUSE AT TWIN GATE (EASTERN PART)
 LOCATION: LAMSU-TWIN GATE, CITY OF BATAO, LLOCOS NORTE
 CHECKED/REVIEWED BY: AIDA V. CABANG
 CHIEF, PHYSICAL PLANNING SECTION
 RECOMMENDING APPROVAL: HON. JOSE ABLEDO
 PRESIDENT
 APPROVED BY: SHIRLEY Q. AGUIPIS
 UNIVERSITY PRESIDENT
 SHEET NO.: A-3
 SHEET CONTENT: CONFORME:

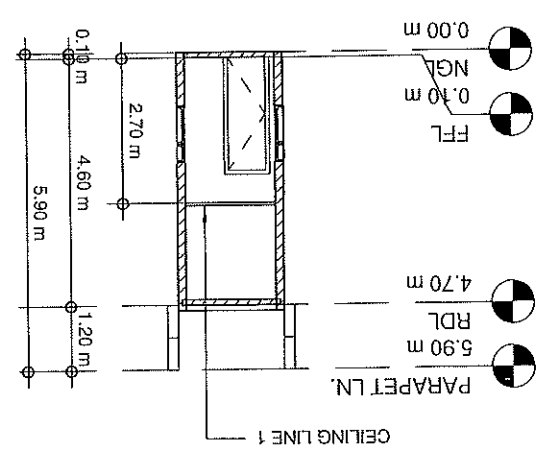
3 REFLECTED CEILING PLAN
 1 : 50 meters



1 LONGITUDINAL SECTION
 1 : 100 meters



2 CROSS SECTION
 1 : 100 meters





PHYSICAL PLANNING AND
DEVELOPMENT OFFICE
2/F 202 ADMINISTRATION BLDG. MARICINA MARCOS
STATE UNIVERSITY
CITY OF BATAVIA, 2008 ILOCOS NORTE
TEL/FAX: +63 (7)792-3191

ARCHITECT
AIDA V. CABANG

CHIEF, PHYSICAL PLANNING SECTION
AIDA V. CABANG

SECTION HEAD
ROMBERTO G. DULAOG

UNIVERSITY PRESIDENT
SHIRLEY S. AGUIPIS

FROM THE OFFICE:

DRAWN BY:

BJAY R. BAYANG
DRAFTSMAN I

PROJECT TITLE:

REPAIR OF GUARD HOUSE AT TWIN GATE (EASTERN PART)

CONFORMS:

SHEET CONTENT:

SHEET NO. A-4

APPROVED BY:

RECOMMENDING APPROVAL:

CHECKED/REVIEWED BY:

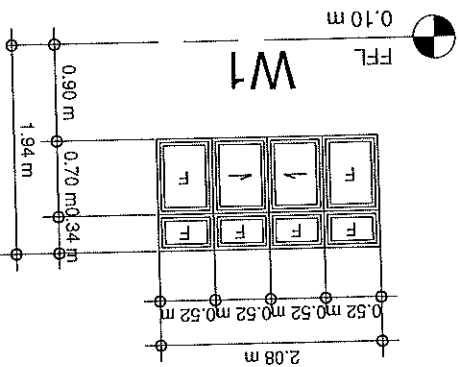
PREPARED BY:

SCHEDULE OF DOORS AND WINDOWS

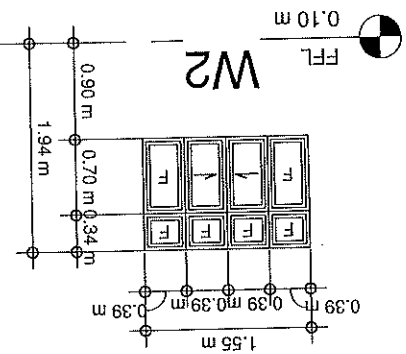
1 : 50 meters

1

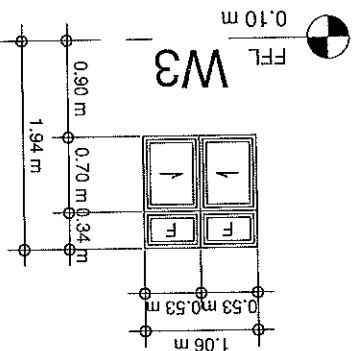
1/4" THK TINTED GLASS ON
SLIDING WINDOW WITH
ANALOK ALUMINUM FRAME
STEEL GRILLS
1 - SET



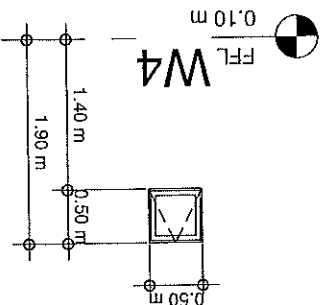
1/4" THK TINTED GLASS ON
SLIDING WINDOW WITH
ANALOK ALUMINUM FRAME
STEEL GRILLS
1 - SET



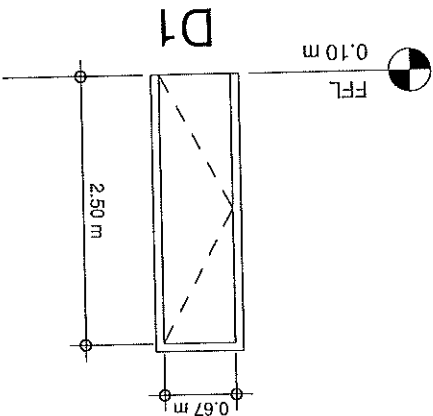
1/4" THK TINTED GLASS ON
SLIDING WINDOW WITH
ANALOK ALUMINUM FRAME
STEEL GRILLS
2 - SETS



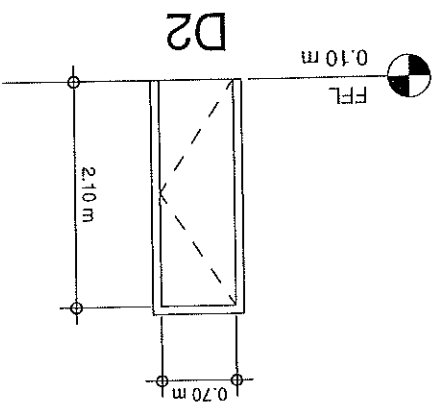
AWNING WINDOW
1/4" THK TINTED GLASS ON
ANALOK ALUMINUM FRAME
1 - SET



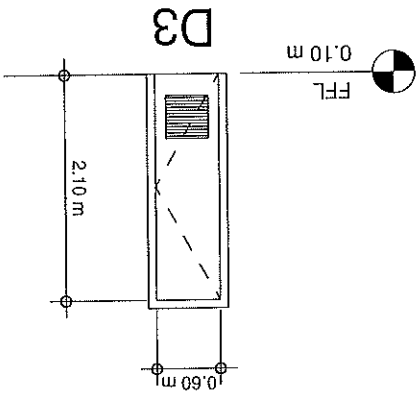
WOOD PANEL DOOR WITH
WOODEN JAMB AND
COMPLETE ACCESSORIES
1 - SET



WOOD PANEL DOOR WITH
WOODEN JAMB AND
COMPLETE ACCESSORIES
1 - SET



SWING-IN DOOR
HOLLOW CORE FLUSH TYPE
WOOD DOOR (LAMINATED)
1 - SET





PHYSICAL PLANNING AND DEVELOPMENT OFFICE

2/F 202 ADMINISTRATION BLDG. MARICINA MARCOS STATE UNIVERSITY
CITY OF BATAVIA, 2908 LIGONON NORTE
TELEFAX: 463 (777)92-3191

FROM THE OFFICE:

LEMMUEL, JOSEFA P. BAGAYAS
ELECTRICAL ENGINEER

PREPARED BY:

BJAY A. BAYANG
DRAFTSMAN I

DRAWN BY:

PROJECT TITLE:

REPAIR OF GUARD HOUSE AT TWIN GATE (EASTERN PART)

LOCATION: KMSU-TWIN GATE, CITY OF BATAVIA, LIGONON NORTE

CHECKED/REVIEWED BY:

AIDA V. CARANG
CHIEF, PHYSICAL PLANNING SECTION

RECOMMENDING APPROVAL:

ROMEO A. TULLUAO
REGISTERED PROFESSIONAL ELECTRICAL ENGINEER

APPROVED BY:

SHIRLEY D. AGRUPIS
REGISTERED PROFESSIONAL ELECTRICAL ENGINEER

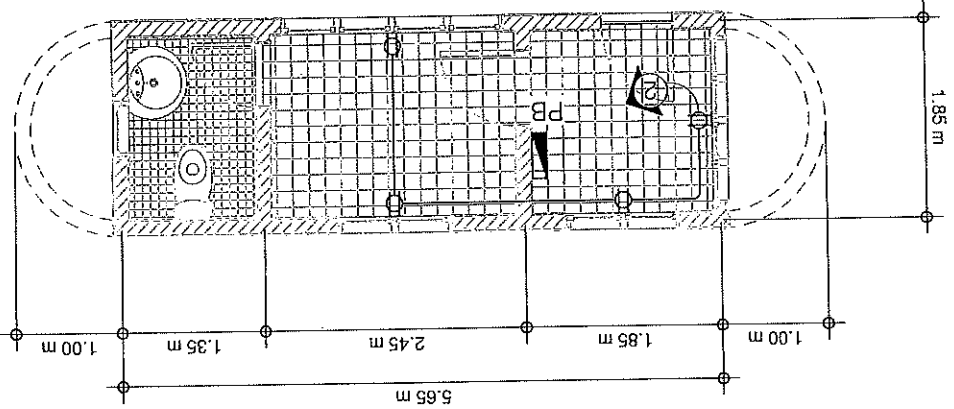
SHEET NO.:

E-1

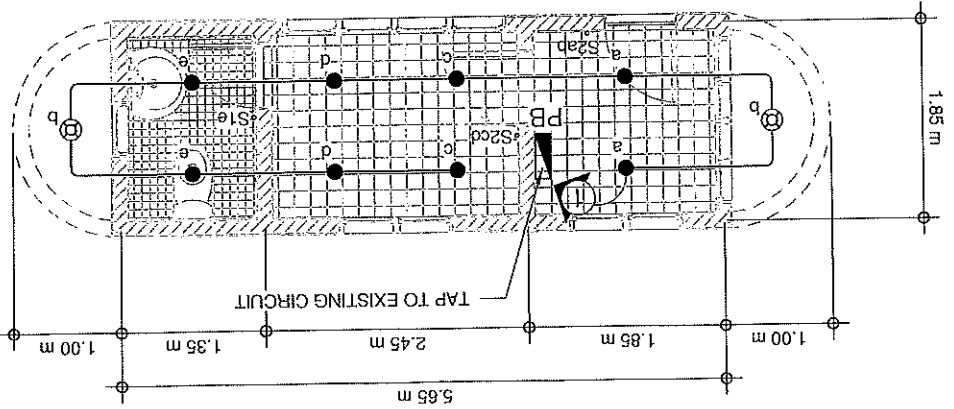
SHEET CONTENT:

CONFORME:

3 CONVENIENCE LAYOUT PLAN
1 : 50 meters



1 LIGHTING LAYOUT PLAN
1 : 50 meters



2 LEGEND / SYMBOLS

DESCRIPTION	SYMBOL
SERVICE ENTRANCE	
CIRCUIT BREAKER	
PANEL BOARD	
KILOWATT HOUR METER	
GROUND	
CIRCUIT HOMERUN	
12W LED FLAT LAMP, E27, BASE, 6500K DAYLIGHT, 1100 LUMENG	
3W LED MINI DOWNLIGHT ROUND SWIVEL, 6500K DAYLIGHT, 220 LUMENG	
CONVENIENCE OUTLET	
1 GANG- SINGLE POLE TOGGLE SWITCH 15A, 300V	S1
2 GANG SWITCH	S2
3 GANG SWITCH	S3



PHYSICAL PLANNING AND DEVELOPMENT OFFICE
 FROM THE OFFICE:
 2/F 202 ADMINISTRATION BLDG. MARINO MARCOS STATE UNIVERSITY
 CITY OF BAYAN, 2908 BACOD NORTE
 TELEFAX: +63 (7)792-3181

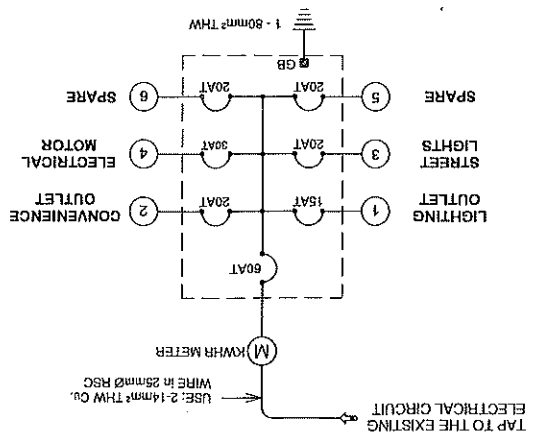
PROJECT TITLE: REPAIR OF GUARD HOUSE AT TWIN GATE (EASTERN PART)	CONFORME:	SHEET CONTENT:	SHEET NO.: E-2
DRAWN BY: BLAY A. BAGAYAS	PROJECT TITLE: REPAIR OF GUARD HOUSE AT TWIN GATE (EASTERN PART)	CONFORME:	SHEET CONTENT:
PREPARED BY: LEMUEL JOSEPH T. BAGAYAS ELECTRICAL ENGINEER	CHECKED/REVIEWED BY: AIDA V. CABARRA CHIEF, PHYSICAL PLANNING SECTION	RECOMMENDING APPROVAL: ROMEO T. BAYAN PHYSICAL PLANNING SECTION	APPROVED BY: SHIRLEY C. KRUPIS UNIVERSITY PRESIDENT

1 SCHEDULE OF LOADS

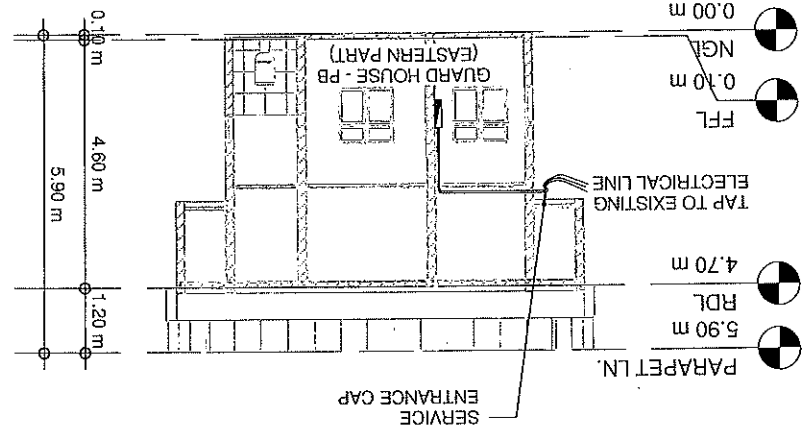
CIRCUIT NUMBER	LOAD DESCRIPTION	VA LOAD	POLE	AF	AT	CIRCUIT BREAKER	CONDUCTOR	CONDUIT
1	2 - 12W LED FLAT LAMP	24VA	2	100	15	2 - 2.0mm ²	THHN	20MM
	8 - 3W LED MINI DOWNLIGHT ROUND SWIVEL	24VA						
2	4 - 180VA CONVENIENCE OUTLET	720VA	2	100	20	2 - 3.5mm ²	THHN	20MM
3	STREET LIGHTS (EXISTING)	1200VA	2	100	20	2 - 3.5mm ²	THHN	20MM
4	2.0 HP ELECTRIC MOTOR	2760VA	2	100	30	2 - 3.5mm ²	THHN	20MM
5	SPARE	1500VA	2	100	20	2 - 3.5mm ²	THHN	20MM
6	SPARE	1500VA	2	100	20	2 - 3.5mm ²	THHN	20MM
TOTAL		7728						

COMPUTATION OF LOAD:
 IFL = 33.5999
 USE = 2-14.0mm² THW & 1-8.0mm² THW in 25mm² RSC
 FEEDER PROTECTION:
 USE = 2 POLE, 60AT, 240V, 100AF, 60HZ, MCB

2 PANEL BOARD DIAGRAM



3 SECTION DETAIL



1 : 100 meters



FROM THE OFFICE:
PHYSICAL PLANNING AND DEVELOPMENT OFFICE
 2/F ADMINISTRATION BLDG. MARIKINA MARCOS STATE UNIVERSITY
 CITY OF BATAO, 2908 LLOCOS NORTE
 TELEFAX: +63 (77) 92-9191

DRAWN BY: **BLAY A. CAYANG**
 DRAFTSMAN

PROJECT TITLE: **REPAIR OF GUARD HOUSE AT TWIN GATE (EASTERN PART)**

CONFORMS: _____

SHEET NO.: _____
 SHEET CONTENT: _____
 SHEET NO.: P-1

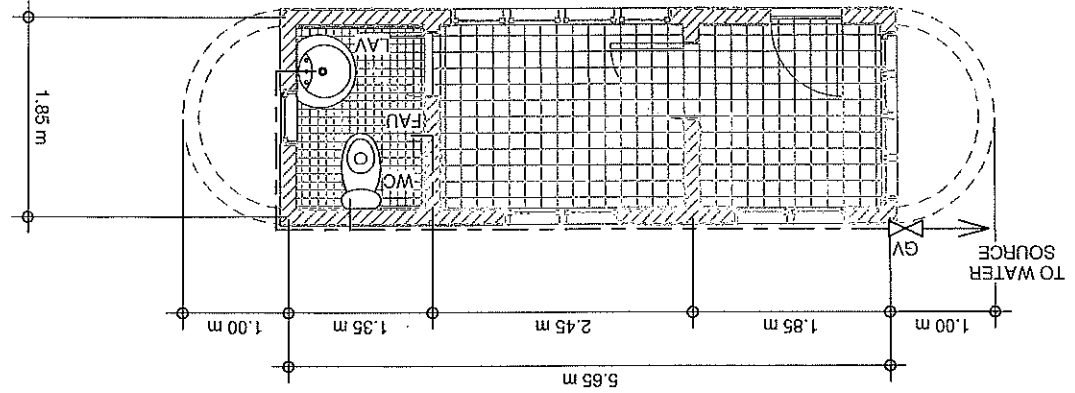
APPROVED BY: _____
 SHIRLEY S. MAGRUPIS
 UNIVERSITY PRESIDENT

RECOMMENDING APPROVAL: _____
 DIRECTOR

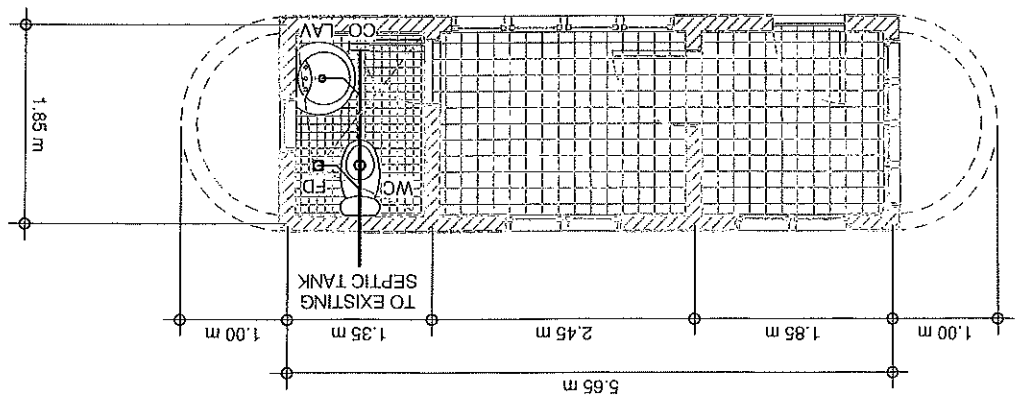
CHECKED/REVIEWED BY: _____
 AIDA V. CABARRO
 CHIEF, PHYSICAL PLANNING SECTION

PREPARED BY: _____
 FRANZ STANING PAJINAG
 ENGINEER

② WATERLINE LAYOUT PLAN
 1 : 50 meters



① SEWERLINE LAYOUT PLAN
 1 : 50 meters



③ PLUMBING SYMBOLS

SYMBOLS	DESCRIPTION
WC	WATER CLOSET
LAV	LAVATORY
FD	FLOOR DRAIN
SH	SHOWER HEAD
SD	SHOWER DRAIN
SV	SHOWER VALVE
HB	HOSE BIBB
CO	CLEAN OUT
FAU	FAUCET
VSP	VENT STACK PIPE
ds	DOWNSPOUT
KS	KITCHEN SINK
— —	CHECK VALVE
— —	GATE VALVE
⊙(M)	WATER METER
— —	WATER LINE
— —	ROOF LEADER LINE
— —	SEWAGE LINE