



Republic of the Philippines
CAVITE STATE UNIVERSITY
 Don Severino delas Alas Campus
 Indang, Cavite

BILL OF QUANTITIES

NAME OF PROJECT: REPAIR AND IMPROVEMENT OF WHITE HOUSE (Converted to Center for Population and Public Health under the College of Medicine) ABC: ₱ 2,788,569.49 COLLEGE/UNIT/CAMPUS: MAIN CAMPUS					
Item No.	Description	Unit	Quantity	Unit Price (Pesos)	Amount (Pesos)
I	Dismantling/Chipping Works (Pesos _____ _____ and _____ centavos)				
II	Masonry and Tileworks (Pesos _____ _____ and _____ centavos)				
III	Carpentry Works (Pesos _____ _____ and _____ centavos)				
IV	Steel Works (Pesos _____ _____ and _____ centavos)				
V	Miscellaneous Works (Pesos _____ _____ and _____ centavos)				
VI	Electrical Works (Pesos _____ _____ and _____ centavos)				
VII	Plumbing Works (Pesos _____ _____ and _____ centavos)				

VIII	Painting Works (Pesos _____ _____ _____ and _____ centavos)				
GRAND TOTAL _____					
Write grand total in words _____ _____ _____ _____					

Submitted by: _____ Date: _____

Name of Bidder/Bidder's Representative: _____

(Signature over Printed Name)

Position: _____

Construction Company/Contractor: _____

CAVITE STATE UNIVERSITY

SCOPE OF WORKS:

IMPROVEMENT OF WHITE HOUSE (CONVERTED TO CENTER FOR POPULATION AND PUBLIC HEALTH UNDER THE COLLEGE OF MEDICINE)

A. GENERAL DESCRIPTION

1. The project should be finished in 90 calendar days.
2. Actual site inspection is a must.
3. The area should be cleared/cleaned before and after the construction work. Unusable used formworks, excessive soil fill and all other unwanted debris of construction works should be disposed properly.
4. Cleaning up of site, clearing, hauling and disposal of waste and construction debris. Restoration of any damages shall also be done before exiting the area.

B. TECHNICAL DESCRIPTION

I. Dismantling/Chipping Works

1. This work consists of chipping of the existing steel casement windows together with the analog frame partition with door at the main entrance of the building, existing tiles of Comfort Room at the ground floor, chipping of selected portion of beam for the anchor bolt to be hooked in bars, chipping of one existing panel door for its relocation and dismantling of ground floor ceiling to be replace by metal furring frame excluding the wooden floor joist.

II. Earthworks

A. Disposal of excess and unsuitable materials

1. Any excess materials resulting from all earthwork operations not required or unsuitable for backfill as directed by the project inspector, shall be disposed by the contractor at his expense.

III. Masonry Works

This work includes furnishing of materials, equipment and perform labor required to complete concrete unit masonry and tile works. This also include plastering as required and specified in the plans.

A. CHB Laying

1. Concrete unit masonry work of the type and thickness indicated shall be provided and shall be properly coordinated with the works of other trades. All concrete masonry works shall be in accordance with the requirements of the Building Code.
2. Concrete hollow blocks shall be of standard manufacture, machine vibrated and shall have fine and even texture and well-defined edges.
3. All exterior concrete hollow blocks to be used for walls shall be at least **150mm.** thk. while concrete hollow blocks for interior walls unless otherwise indicated, shall be **100mm.** thk. for interior CHB where plumbing pipes and fitting shall be located, the thickness shall be at least **150mm.** thk.
The concrete hollow block walls shall be laid, and the cells filled with cement mortar consisting of 1 part portland cement and 3 parts sand by volume. They shall be reinforced with round deformed reinforcing bars **10 mm. Ø**, spaced not more than **0.80m** on centers, both ways. The mixture of cement plaster for concrete hollow block wall finishes shall be 1 part cement and 3 parts sand.
4. All exposed surfaces of concrete hollow block walls shall be finished with the specified materials indicated on the elevation drawings.

IV. Miscellaneous Works

1. This work includes the furnishing of materials, equipment and labor required for the completion/installation of doors and windows as shown in the drawing. See architectural drawings for details, locations and other requirements.
2. Safety precaution and procedure shall be observed in determining the sizes and in providing the required clearances by measuring the actual opening to receive the glass.
3. Glass breakage caused in executing the work or by faulty installation shall be replaced by the contractor without extra cost.

4. All glass shall be accurately cut to fit openings and set with equal bearing on the entire width of plane.
5. Improperly installed glass which does not fully meet requirements of its grade will not be accepted and shall be replaced without extra cost.
6. Doors, windows, door frames and window frames shall conform to sizes, designs and kind of materials shown in the detail or schedule of doors and windows.
7. Stair Cover
Use gypsum board 9mm x 4' x 8'
8. Scaffolding Rental
Scaffolding for RENT (H-frame) Galvanized Iron (H-frame) Thickness: Schedule 40
Height: 1.7m Width: 1.2m.
1 set is inclusive of 2 cross braces.

V. Electrical Works

1. Supply and installation of panel board and circuit breakers. G.E, Himel, Schneider or approved equal.
 - a. MDP – Main (125AT, 200AF, 3P, 230V, MCCB) and Branches (1-40 AT 3P, 6-30 AT 2P, 3-20AT 2P, 3-15 AT 2P, 1-15 AT 2P, and 1-spare
 - b. DISCONNECTING MEAN – Main (125AT, 200AF, 3P, 230V, ECB) in Nema 3R enclosure to be installed at service entrance concrete pedestal.
 - c. 30 AT, 2P, 230V, Circuit breaker w/ NEMA 3r Panel enclosure for ACU power (6 sets).
 - d. 40 AT, 3P, 230V Circuit breaker w/ NEMA 3r Panel enclosure for ACU (1 set).
 - e. Manual Transfer Switch with 2-125 AT MCCB and NEMA 3r Metal Enclosure
NOTE: Bolt-on type, NEMA Standard should be used.
2. Supply and installation of copper conductor wires, IMC/RSC conduits, junction, AMCO and utility box from electrical panels to electrical devices.
 - a. RSC or IMC pipe for service entrance and all exposed electrical conduits.
 - b. THHN/THWN copper wire. Phelps dodge/Philflex or approved equal. 99.9% copper conductor wire, fire retardant. Refer to Schedule of loads for proper color coding of wires.
 - c. Metal utility, junction and AMCO surface type boxes.
 - d. Support brackets/hangers, clamps and rods should be galvanized steel.
 - e. Double hole conduit strap.
3. Supply and installation of electrical fixtures/switches/outlets and other electrical devices in accordance with the plan.
 - a. 2-18W T8 (4ft.) LED tube light w/ diffuser. Philips, Firefly or approved equal.
 - b. 12W LED downlight, vertical recessed, round with 6" casing (22 sets). Philips, Firefly or approved equal.
 - c. Emergency light twin head and outlet (10 sets). Philips, Firefly or approved equal.
 - d. Switches (Bticino, National or its equivalent).
 - e. Two gang convenience outlets with ground (Bticino, National or its equivalent).
 - f. Weather-proof, two gang convenience outlet with ground (Bticino, National or its equivalent)
 - g. Electric KWH meter, Three Phase, 230V, 200 Amps, 60 Hz, 4 wire, Digital Type with ST7 Meter base.
 - h. Compact/integrated solar street light, 20 Watts, 2,200 lm, IP 65 (5 sets). See E-11 for details and specs. Consult inspectors for the exact location of street lights.
4. Construction of concrete encasement underground raceway from MDP to service entrance pedestal (CP 1 to CP 2) as indicated in the plan. See E-9 and E-10 for details.
5. Supply and installation of GI steel post with pedestal, secondary accessories and attachments (9 sets). See E-10 specification and details.
6. Supply and installation of electrical service entrance concrete pedestal, copper

- conductor wires, metal conduits and accessories. See E-10 specification and details.
7. Supply and installation of GI steel post with pedestal, brackets for street lights (5 sets). See E-11 for details.
 8. Painting of conduit pipes and repair/repainting of walls to be chipped.
 - a. Skim coat
 - b. Latex flat
 9. Electrical wiring and layout is to be connected from MDP to existing distribution transformers as indicated in the plan. Provide the necessary connectors & equipment for the wiring installation.
 10. 12 kW, three phase, 230 v, 60 Hz, diesel power generator set. Including the generator housing.
 11. Tapping to the existing distribution transformers, electrical testing and commissioning.
 - a. Phase sequence test.
 - b. Continuity test.
 - c. Insulation test.

NOTE: Electrical testing and guarantee, electrical supervision and final electrical inspection report should be signed and sealed by Professional Electrical Engineer with notary public.

12. Consult inspectors for details and extent of work.

VI. Plumbing Works

1. This work includes the furnishing of materials, labor, tools and equipment to complete the plumbing system of building. Refer to the drawings for location and extent of work involved.
2. This work shall include the furnishing and installation of the following each complete and in proper operating condition.
 - a. Single compartment and three compartment stainless 304 kitchen sink with foot operated faucet complete with accessories.
 - b. Brass floor drain
3. All works shall be executed in full accordance with the requirements of all governmental agencies having jurisdiction thereof and with the requirement and recommendations of the following:
 - a. National Plumbing Code of the Philippines
 - b. Underwriter's Laboratories
 - c. All applicable codes and ordinance of the municipality and laws of the Republic of the Philippines
4. It is not intended that the drawings shall show every pipe, fitting and valve. However, all such items whether or not specifically mentioned or indicated in the drawings, shall be furnished and installed if necessary to complete the system in accordance with the best of trade and to the satisfaction of the project inspector.
5. Pipes and fittings for water supply line shall be **Polypropylene Random Copolymer (PPR)**
6. For soil, vent, waste pipes and fittings, all pipes and fitting for sewer line must be **Polyvinyl Chloride (ORANGE) S-1000.**
7. Clean-outs shall be of the same size as the pipe consisting of a long sweep quarter bend or 1/4 bend extended to an easily accessible place.
8. Joining material shall be **polyvinyl chloride cement.**
9. Septic tank shall be of the size, shape and design indicated and shall be provided complete with all appurtenances required including manhole cover.
10. Plumbing fixtures including faucets shall be with the best quality. American standard or its equivalent. See plans for the extent of work required.
11. Install pipes approximately as shown on the drawings and as directed during installation, as straight and as direct as possible, forming right angles or parallel lines with walls and other pipes neatly spaced. Keep all horizontal runs of piping except where concealed in partitions, as high as possible and close to walls. Maintain

minimum slope of 0.01 (1/8" fall/foot) on all soil and drain lines.

12. Horizontal waste pipe 3" Ø and smaller shall have a minimum grade of 6 mm (1/4") per foot and 4" Ø and larger shall be 1/8" per foot. Vertical vent pipes may be connected to a vent line carrying other fixtures. The connection must at least be 1.20 m. (4 feet) above floor on which the fixtures are located to prevent the use of any vent lines. Horizontal waste lines receiving the discharge from two or more fixtures shall be provided with vents, unless separating venting of fixtures is noted.
13. Do not cover or enclose work until it has been properly and completely inspected and approved. Should any work be covered up or enclosed prior to all required inspections and approvals, uncover the work as required. After it has been completely inspected and approved, make all repairs and replacements with such materials necessary to approval of the project inspector.

VII. Painting Works

A. Concrete/Masonry

1. This work includes the painting of some portion of CHB wall and interior flooring using power floor to conform the requirements with good manufacturing practices.
2. Repair minor surface imperfections with skim coat. Let dry, sand then, spot coat with top coat color.
3. Apply two coats of colored factory mixed dirt resisting semi-gloss latex.

Note: Color of paint will depend upon the preference of the end-user. Paints and its accessories should be BOYSEN or approved equal.

- C. Contractor of the said project must provide an as-built plan of the project at the end of the contract as a requirement for the release of their final billing.
- D. For color/types of any fixtures or materials to be used on site, consult the end-user and the inspector for approval. Consult the plan and the scope of work for the extent of tasks of the contract. If possible, let the end-user sign your sample as proof of approval.
- E. The plans, detailed drawings and these specifications shall be considered as complementing each other, so that what is mentioned or shown in one, although not mentioned or shown in the other, shall be considered as appearing on both. **In case of conflict between the two, generally, the scope of work prevails.**
- F. Resident site engineer is a must for the projects to be undertaken by the contractor of the university. Safety engineer is a must as per DOLE requirement. **Note: All key personnel should be included in the list of personnel for submission.**
- G. In cases of participation in two or more projects, the set of workers and foreman shall be different per project, however, the set of engineers and equipment may be reused.
- H. Construction safety and health program as well as construction schedule (PERT/CPM/S-Curve) shall be provided by the winning bidder.
- I. All public utilities used by the winning contractor in the construction of the project, such as electricity, water, telephone, etc., shall be for the sole account of the contractor.
- J. See plans/consult the end-user and project inspector for details and extent of work. The silence of specifications, plans, special provisions and supplementary specifications as to any detail, or the apparent omission therein of detailed description or definition of the quality of materials and workmanship shall be regarded to mean that only materials and workmanship of first-class quality are to be used or employed.