



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

BILL OF QUANTITIES

CONSTRUCTION OF FACULTY HOUSING (2 nd POSTING)			Bill of Quantities		
ABC: ₱ 7,936,125.80					
COLLEGE/UNIT/CAMPUS: MAIN CAMPUS					
Item No.	Description	Unit	Quantity	Unit Price (Pesos)	Amount (Pesos)
I	EARTHWORKS (Pesos _____ _____ and _____ centavos)				
II	CONCRETE WORKS (Pesos _____ _____ and _____ centavos)				
III	MASONRY WORKS (Pesos _____ _____ and _____ centavos)				
IV	TILE WORKS (Pesos _____ _____ and _____ centavos)				
V	CARPENTRY WORKS (Pesos _____ _____ and _____ centavos)				
VI	TRUSSES AND ROOFING WORKS (Pesos _____ _____ and _____ centavos)				
VII	MISCELLANEOUS WORKS (Pesos _____ _____ and _____ centavos)				
VIII	ELECTRICAL WORKS (Pesos _____ _____ and _____ centavos)				

IX	PLUMBING WORKS (Pesos _____ _____ and _____ centavos)				
X	PAINTING WORKS (Pesos _____ _____ and _____ centavos)				
GRAND TOTAL _____					
Write grand total in words _____ _____ _____					

Submitted by: _____ Date: _____
 Name of Bidder/Bidder's Representative: _____
 Position: _____
 Construction Company/Contractor: _____

CAVITE STATE UNIVERSITY

SCOPE OF WORK:

A. CONSTRUCTION OF FACULTY HOUSING (FOUR UNITS DUPLEX) – 2nd POSTING

GENERAL NOTES:

1. The project should be finished in 120 calendar days.
2. Actual site inspection is a must. The construction includes 4 units duplex houses, that are suited for 8 occupants.

B. Technical Description

I. Earthworks

- A. Site Preparation/Temporary enclosure/ Mobilization/ Demobilization/ Office/ Bunkhouse/ Billboard/etc.
 1. Site temporary enclosure may be sack or any suitable materials that may enclose the workplace.
- B. Clearing, Excavation and Backfilling
 1. This work includes excavation for all columns/wall footings, tie beam and septic tank.
 2. All clearing works including cutting of trees is included but permits shall be processed by the university. Also, there is an existing slab to be dismantled.
 3. The area should be cleared/cleaned before and after the construction work at least six meters away from the building line. Unusable used formworks, excessive soil fill and all other unwanted debris of construction works should be disposed properly.
- C. Additional fill and soil poisoning
 1. Provide additional fill.
 2. The entire area for the proposed building should be treated with termite proofing.
 3. Gravel fill = 0.05m. fill.

II. Concrete Works

- A. Cast-in-place concrete
 1. Concrete works include footings, columns, stiffener columns, wall footing, slabs, beams, stairs, concrete counters, ledge/canopy, perimeter walk and all other concrete components needed to complete the structure.
 - Lintel beams shall be provided above all openings of doors and windows: provide 0.15m x 0.20m beam reinforced with 2-12mm Ø deformed bars tied with stirrups spaced at 0.15 meters on center. .
 - Slab on fill and pathwalk are 4" thick with 10mm Ø deformed bars spaced at 0.40m on center bothways. Pathwalk should be provided with 4" CHB zocalo on its perimeter of the building. (Width =1.0m.; Thickness = 0.10m.)
 - Compaction of soil filling to establish elevations is a must.
 2. Job mixing may be allowed but only with the use of concrete mixers.
 - a. A concrete strength of **3000 psi** or a 1:2:3 concrete proportion is to be used.
 - b. Fabrication and testing of concrete samples shall be done by the contractor. Sample test results shall be attached to the billing.
 3. Concrete works should be plain cement finished.
 4. Provide necessary tools and equipment needed for concrete works.
- B. Steel Reinforcement
 1. Use deformed bar grade 33.
 2. Provide necessary tools and equipment needed for steel works.
 3. See plan for details and extent of work.

III. Masonry Works

1. Installation of CHB reinforced with 10mmØ deformed bar spaced at 0.60m on center every three layers.
 - a. CHB 5" for the perimeter/exterior walls and septic tank.
 - b. CHB 4" for interior/partition walls.
2. Non-load bearing CHB may be used provided its durability and source is approved by the inspector/university.
3. Masonry works should be plastered plain cement.

IV. Tile Works

Supply and installation of the following:

1. Ceramic colored tiles (locally made) 0.40m. x 0.40m. for the concrete counters and whole floor area of the building. Tiles must be accented with dark colors.

2. For comfort room:
 - a. 12" x 12" unglazed ceramic colored tiles for flooring.
 - b. 12" x 12" glazed tiles for the entire wall (from floor to ceiling)
3. Use tile adhesive for tiling.
4. Use colored tile grout to finish tile works.
5. Consult the end user for color preference of tiles.

V. Carpentry Works

1. Provide necessary form lumber and scaffolding needed for the completion of the project.
2. Provide ceiling works.
 - a. Use cement board 3/16" thick for ceiling board.
 - b. Use metal furring as ceiling runner and ceiling joist at 0.40m. on center both ways.
 - c. Any commercially available decorative wooden molding may be used to all ceiling perimeter and corners.
 - d. Provide 3/16" x 1" flat bar coated with primer and paint for ceiling hanger every 1.20m. both ways.
 - e. Any commercially available pre-painted ceiling spandrel shall be provided including ceiling spandrel with holes for ventilation for every 1 meter and all corners of the eaves.

Note: Choices on commercially available materials need the approval of the inspectors/university.

VI. Rafters and Roofing Works

A. Rafters:

1. See plans for sizes of tubular and other details for the installation of steel rafters.
 - All tubular should be 2.0mm thick.
2. This work also includes painting of two (2) coats of epoxy primer and two (2) coats of QDE black.
3. Provide necessary tools and equipment.
4. All joints connections should be fully welded.
5. Use galvanized CEE purlins 16, 2" x 4" at 0.60m. on center.
6. Provide ¼" x 2" angle bar for purlins connector or cleats.
7. Provide 4-16mm Ø anchor bolts with nut and washer for each support.

B. Roofing

1. Adopt gauge 26 (0.5mm.) rib type pre-painted roof sheet.
2. Adopt gauge 26 (0.5mm.) prefabricated and stainless gutter.
3. Adopt gauge 26 (0.5mm.) prefabricated and stainless flushing.
4. Adopt gauge 26 (0.5mm.) prefabricated and pre-painted fascia cover.
5. Adopt gauge 26 (0.5mm.) prefabricated stainless flushing.
6. All attachments for roofing sheet shall be 2 & ½" teck screw for metal.
7. Provide water sealant for all attachments (water sealant should be provided for both inside and outside surface of teck screw head).

VII. Miscellaneous Works

Supply and installation of the following:

1. Doors

- | | |
|------|---|
| 8.0 | sets D-1 Pre-painted steel door, complete with heavy duty accessories |
| 8.0 | sets D-2 Pre-painted steel door, complete with heavy duty accessories |
| 16.0 | sets D-3 Flush door with 2" x 5" KD jamb, complete with all accessories |
| 8.0 | sets D-4 PVC, complete with all accessories |

2. Windows

- | | |
|------|---|
| 24.0 | sets W-1 Aluminum sliding window with ¼" thick clear glass on powder coated finish aluminum frame; complete with all accessories; with 12mm. square bar grills |
| 16.0 | sets W-2 Aluminum awning window with ¼" thick clear glass on powder coated finish aluminum frame; complete with all accessories; with 12mm. square bar grills |
| 8.0 | sets W-3 Aluminum sliding window with ¼" thick clear glass on powder coated finish aluminum frame; complete with all accessories; with 12mm. square bar grills |
| 8.0 | sets W-4 Aluminum awning and fixed window with ¼" thick clear glass on powder coated finish aluminum frame; complete with all accessories; with 12mm. square bar grills |

VIII. Electrical Works

1. Supply and installation of feeder line and secondary post including all its accessories (Bolt-on type Nema Standard should be used)
 - Installation of MDP, ACP, LP and all other panel boards on the plan and their circuit breakers.
2. Supply and installation of wiring/ conductors and PVC conduit/ junction box/ utility box from main/sub-main panel to convenience outlet/ lighting outlet/ ACU outlet
 - a. THWN stranded wire (Phelp dodge or approved equivalent)
 - b. PVC conduit orange pipe with sizes as indicated on the plan
 - c. Utility and junction boxes should be PVC and deep type.
3. Supply and installation of electrical fixtures/ switches/ outlets/ and other electrical devices:
 - a. Switches (Bticino, National or its equivalent)
 - b. Convenience and weather proof outlets, special outlets (Bticino, National or its equivalent)
 - c. Outlets for ACU, Emergency light, exhaust fan (Bticino, National or its equivalent)
 - d. LED light 7W (24 sets)
 - e. Pin light with 5W LED bulb (64 sets)
4. Construction of four service entrance posts. Each post shall have 2 units CB: 2 units 50A circuit breaker (weatherproof) with casing.
5. Tap to the source.
6. Include testing and commissioning.
7. Consult inspectors and plan for details and extent of works.

IX. Plumbing Works

A. Water Supply Line

1. Adopt PPR pipes and fittings for water line ($\frac{1}{2}$ " \varnothing).
2. Tapping to source is included.
3. No pipe should be embedded without testing it to leak.

B. Sewer Line

1. Adopt PVC heavy duty orange pipes and fitting (Sanimold type with O-ring or its equivalent) for ventilation and the whole sewer line system including the septic vault fittings
 - Use 4" \varnothing for water closet and main line
 - Use 3" \varnothing for downspout
 - Use 2" \varnothing for lavatory and ventilation

Note: Maintain a 2% slope on all CR floorings towards the drain.

C. Fixtures

Provide the following for the comfort rooms:

1. Floor drains should be 3" \varnothing PVC orange pipes with brass drain fixture (16pcs)
2. Colored tank type water closet
3. Wall hung type lavatory.
4. Stainless kitchen sink (deep type) should be in its standard dimension with heavy duty goose neck faucet (8 units)
5. American standard made faucets (24 pcs)
6. Brass Roof Drain Dome Type (16 pcs)
7. Provide all the needed tank type water closets and wall hung lavatories which shall be colored complete with heavy accessories. (American Std., HCG or its approved equal).
8. Provide gate valves and water meter for each unit (see plan for location).

D. Septic tank

1. Construction of new septic tank with pipes extending to the nearest disposal area. See plan for details.

E. Catch basin

1. All catch basins must be connected with 4" \varnothing and 6" \varnothing PVC orange pipes S-1000 towards its disposal. Disposal of sewer line is to the nearest existing drainage.

X. Painting works

The whole building should be painted (both exterior and interior) including doors.

A. Wood

1. Apply one coat of 1ft enamel white paint. Allow to dry overnight.
2. Repair minor surface imperfections with suitable putty. Let dry then sand.
3. Apply at least two (2) coats of QDE in the desired color. Allow an overnight

intercoating interval.

B. Metal

1. Apply epoxy primer by brush or spray. Allow to dry for 24 hours. Apply suitable putty in imperfections.
2. Apply at least two (2) coats of QDE in the desired color.

C. Concrete

1. Treat the surface with concrete neutralizer. Mix one part with 16 parts water by volume.
2. Apply skim coat as primer. Repair minor surface imperfections with a suitable putty. Let dry, then sand.
3. Apply at least two coats of colored dirt resistant semi gloss latex paint (factory mixed).

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

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. **In the event that discrepancies on plans and scope of work occur, generally, the scope of work prevails.**

E. 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.