



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

BILL OF QUANTITIES

CONSTRUCTION OF MULTI-PURPOSE BUILDING AT TANZA CAMPUS					
ABC: ₱4,114,014.89			Bill of Quantities		
COLLEGE/UNIT/CAMPUS: TANZA 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	MISCELLANEOUS WORKS (Pesos _____ _____ and _____ centavos)				
V	STEEL TRUSSES AND ROOFING WORKS (Pesos _____ _____ and _____ centavos)				
VI	TILE WORKS (Pesos _____ _____ and _____ centavos)				
VII	CEILING WORKS (Pesos _____ _____ and _____ centavos)				

VIII	PAINTING WORKS (Pesos _____ _____ and _____ centavos)				
IX	ELECTRICAL WORKS (Pesos _____ _____ and _____ centavos)				
X	PLUMBING WORKS (Pesos _____ _____ and _____ centavos)				
XI	FORMWORKS (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 MULTI-PURPOSE BUILDING AT TANZA CAMPUS

GENERAL NOTES:

1. The project should be finished in 180 calendar days.
2. Actual site inspection is a must.
3. The area should be cleared/cleaned before and after the construction work at least ten meters away from the building line. Unusable used formworks, excessive soil fill, and all other unwanted debris of construction works should be disposed properly.

B. Technical Description

I. Earthworks

A. Mobilization/Demobilization

Provide the following:

- Billboard
- Bankhouse with office
- Temporary comfort rooms
- Site temporary enclosure may be blue sack or any suitable materials that may enclose the workplace.

B. Excavation/ Backfilling/ Clearing

1. Volume of soil to be excavated: 49.29 cu.m.
2. This work includes excavation for all column/wall footings, tie beam, stair footing, catch basin, septic tank, sewer piping, and water piping.
3. See plan for details.

C. Demolition

1. There is an existing structure for total demolition.
2. Use necessary tools and equipment for the demolition of the structure.
3. Clearing and hauling is included.
4. Consult the end-user/ project inspector for the disposal of all demolished structures.

D. Additional fill and soil poisoning

1. This scope involves hauling, spreading, leveling and compacting of 0.05 m. thick gravel fill on prepared compacted earth soil bedding.
2. Provide additional fill.
3. Provide 0.05m. thick gravel fill on slab on fill, footings, catch basin and septic tank.
4. The entire area for the proposed building should be treated with termite proofing. Use water base termite proofing.

II. Concrete Works

A. Cast-in-place concrete

1. Concrete works include columns, footings, stiffener columns, slab, beams, stairs, roof beams, gutter, lavatory counters, ledge/canopy, elevator and all other concrete components needed to complete the structure.
 - Provide lintel beams for the opening of windows and doors.
2. Strength of concrete to be adopted shall be **3,500 psi**.
3. Concrete works should be plain cement finish,
4. Provide necessary tools and equipment needed for concrete works.

B. Steel reinforcement

1. Use deformed bar grade 40.
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 10 mm Ø deformed bar spaced at 0.60 m. on center every three layers.
 - a. CHB 6" for the perimeter/exterior walls and septic tank.
 - b. CHB 4" for interior/ partition walls.
2. Masonry works should be plastered plain cement.

IV. Miscellaneous Works

A. Doors

- **6 sets D-1:** 1.00 m. X 2.10 m. pre-painted steel panel door complete with all accessories
- **2 sets D-2:** 0.70 m. X 2.10 m. PVC door with louver complete with all accessories
- **1 lot D-3:** 0.60 m. X 1.60m. phenolic door with phenolic partitions complete with all accessories for men's and women's C.R.
- **2 sets D-4:** 0.70 m. X 2.10 m. pre-painted steel panel door complete with all accessories

Notes:

- For D-1 and D-4, install pre-painted steel panel door instead of flush door
- For D-3, install phenolic doors instead of flush door

B. Windows

- **8 sets W-1:** 4 panels pre-painted awning type window with ¼" thick clear

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- glass in powder coated finish aluminum frame complete with all accessories
- **9 sets W-2:** 8 panels pre-painted fixed type window with ¼" thick clear glass in powder coated finish aluminum frame complete with all accessories
- **1 set W-3:** 2 panels pre-painted fixed type window with ¼" thick clear glass in powder coated finish aluminum frame complete with all accessories

Note: Install awning type aluminum window for W-1 instead of jalousie type window

C. Stainless Stair Railing

- Use 2" Ø stainless pipe on handrail
- Use 1" Ø stainless pipe on handrail support
- Consult the project inspector for the details.

D. Phenolic partition

- Install 1 set of phenolic partition at second floor as partition between two rooms
- Use heavy duty accessories and lockset for the movable partition
- Consult the project inspector for the details

V. Steel Trusses and Roofing Works

A. Trusses:

1. See plans for sizes of bar and other details for the installation of steel trusses.
2. This work also includes painting of two coats of epoxy primer.
3. Provide necessary tools and equipment.
4. All joint connections should be fully welded.
5. Use the indicated sizes of steel bars/ sheet for trusses, gusset plates, cross bracing, sag rod, purlins and base plate.
6. See plan for details.

B. Roofing:

1. Adopt gauge 26 (0.6 mm.) rib type pre-painted roof sheet.
2. Adopt gauge 26 (0.6 mm.) prefabricated and pre-painted end flushing and fascia board
3. All attachment for roofing sheets and end flushing shall be 2 ½" teck screw for metal.
4. Provide water sealant for all attachments (water sealant should be provided for both inside and outside surface of the teck screw head.
5. Use stainless gutter. Consult the end-user and project inspector for the gutter design.
6. See plan for details. .

VI. Tiles Works

Supply and installation of the following:

1. 16" x 16" locally made ceramic colored tiles for the hallway, path way, security room, storage and multi-purpose rooms
2. Use unglazed tiles on hallway and pathway
3. For comfort rooms:
 - 16" x 16" unglazed ceramic colored tiles for flooring
 - 12" x 24" glazed ceramic colored tiles for the entire wall from floor to ceiling
4. Use decorative brick design 12" x 24" ceramic tiles for second floor terrace wall
5. Use tile adhesive for tiling.
6. Use 12" x 12" ceramic tiles with groove for the stairs.

Note: Consult the end-user for the color preference of tiles.

VII. Ceiling Works

Provide ceiling works for C.R. at the ground floor and the entire second floor including eaves.

- Use ¼" x 4" x 8" fiber cement board for ceiling board
- Use metal furring as ceiling runner and ceiling joist at 0.40 m. on center both ways and furring clips as fasteners
- Provide decorative wooden 3" molding to all ceiling perimeter and corners.
- Provide carrying channel for ceiling hangers every 1.20 m. both ways.
- Use pre-painted spandrel 4" for the whole area of eaves.
- Provide ceiling ventilation for every 3 meters and all corners of the eaves.

VIII. Painting Works

The whole building should be painted both exterior and interior.

1. Wood

- a. Apply flat wall enamel by brush or spray. Allow to dry for 24 hours. Apply suitable putty on imperfections, then, sand.
- b. Apply at least two coats of Quick Dry Enamel in the desired color.

2. Concrete

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

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

IX. Electrical Works

- A. Supply and installation of panel board and circuit breakers. See schedule of loads and electrical plans for details and specifications. Note: Use Bolt-on type, Nema Standard should be used.
- B. Supply and installation of conductors and PVC conduit/ junction box/ utility box from main panel to convenience outlet/ light outlet/ ACU outlet
 1. PVC conduit orange pipe and RSC/IMC metal conduit.
 2. Utility and junction boxes should be PVC and deep type
 3. THHN and THW CU. stranded wire, Phelps Dodge or approved equal.
 - Refer to the Schedule of loads for size and color coding of conductor wires.
 - THW type of conductor wires for outdoor installation.
- C. Supply and installation of electrical fixtures/ switches/ outlets/ and other electrical devices
 1. Switches (Bticino, National, or its equivalent)
 2. Convenience outlets (Bticino, National, or its equivalent)
 3. 2-T8 LED Fluorescent lamp with diffuser (20 sets)
 4. 10W LED pin light with case (23 sets)
 5. 1-gang ACU outlets
- D. Installation of concrete pedestal, conduit pipes, conductor wires, support brackets and accessories for Electrical Service Entrance.
- E. Include testing and commissioning.
- F. Tapping of the main panel board to the source is included.
- G. Consult plan and project inspector for details and extent of work.

X. Plumbing Works

- A. Water Supply Line
 1. Adopt PPR pipes and fittings for water line
 2. Tapping to the 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 fittings (Sanimold type with O-ring or its equivalent) for ventilation, downspout and the whole sewer line system including septic vault fittings.
 - a. Use 4" Ø for main line and water closet.
 - b. Use 2" Ø and 3" Ø for lavatory
 2. Provide catch basin. See plan for sizes.
 3. Consult the plan and project inspector for details and extent of work.
- C. Fixtures
 1. Provide the following for the comfort rooms:
 - a. Septic tank. See plan for details.
 - b. Lavatory sets with heavy duty faucet and access (2 sets)
 - c. Urinals with control valve and accessories (2 sets)
 - d. Water closet with complete accessories including bidet (3 sets)
 - e. Heavy duty faucets (5 sets)
 - f. Brass floor drain (7 sets)

XI. Formworks

1. Provide necessary formworks and scaffolding for the completion of the project.
- C. Building permits, necessary clearances and other government taxes are to be secured by the contractor.
 - D. 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.
 - E. 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. **Note: In the event that discrepancies on plans and scope of work occur, 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. In cases where there are electrical works, it is required that an electrical engineer or a master electrician be a part of the contractor's team to supervise all electrical works. Likewise, master plumbers must supervise plumbing works. It can be considered when only one person is the master plumber and master electrician at the same time as long as his major duty is supervision of both fields. 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. See plans/consult the end-user and project inspector for details and extent of work. The silence

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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.