

Project Title : PROPOSED CONSTRUCTION OF TAGOLOAN RIVER BASIN FLOOD
FORECASTING AND WARNING CENTER (TRBFFWC)
Location : Sitio Malaiba, Brgy. Casinglot, Tagoloan, Misamis Oriental

CONSTRUCTION SPECIFICATIONS AND SCOPE OF WORKS:

The specification shall govern the methods of construction and kinds of materials to be used for the proposed building shown in the plans and detail drawings.

The plans, detail drawings and these specifications shall be considered as complementing each other, so whatever mentioned or shown in one, although not shown or mentioned on the other, shall be considered as appearing on both. In case of conflict between the two, it should be referred to the designing Architect/Engineer for solution.

GENERAL CONDITION:

All parts of the construction shall be finished with first class workmanship to the fullest talent and meaning of the plans and these specifications, and to the entire satisfaction of the Architect/Engineer and the Owner.

The construction shall conform to all requirements of the National Building Code, as well as the rules & regulations of the Tagoloan Misamis, Oriental, Philippines.

CLEARING THE SITE:

The building site shall be leveled and cleaned of any rubbish, roots & objectionable matters to a suitable sub-grade.

All such unsuitable material shall be removed from the building site and spread uniformly over the areas adjacent to the proposed building, or be disposed otherwise, as may be directed by the Architect/Engineer in charge of the construction.

STAKING-OUT THE BUILDING LINES.

The building lines shall be staked out and all lines and grades in drawings established before any excavation is started. Batter boards and reference marks shall be erected in such places where they will not be disturbed during the excavation of the building.

EXCAVATION:

All excavations shall be made to grade indicated in the drawings. Where the building site is covered with any kind of fill, the excavation of footings shall be made deeper until the stratum for safe bearing capacity of the soil is reached.

Whenever water is encountered on the excavation process, it shall be removed by bailing out or pumping carefully not to disturb the surrounding soil practices or removed.

BACKFILLS:

After concrete foundations are hard enough to withstand pressure resulting from fills, materials removed from excavation shall be used for backfill around them.

Backfill and fill shall be placed in layers not exceeding 150mm in thickness. Each layer shall be thoroughly compacted by wetting and rolling.

CONCRETE WORKS:

All concrete shall be mixed thoroughly until there is a uniform distribution of cement and aggregates, and should be deposited near its final position, care being taken to avoid the segregation of aggregates.

Water to be used for mixing concrete shall be clean and free from injurious amount of oil, acids alkalis, salt and other organic materials.

CONCRETE PROPORTIONS:

All concrete work shall be done in accordance with the standard specification for plain and reinforced concrete as adopted by the Philippine Government. Cement to be used shall be *Portland* cement or any other equivalent brands readily available in the locality. Alternative cements so selected must meet the requirements of Portland cements and approved the Architect/Engineer in charge of the construction.

The following proportions of concrete mixtures shall be used for the various parts of the building.

Columns & Footings	Class A(1:2:4)
Conc. Holl. Blk. Ftgs	Class B (1:2 ½:5)
Reinforced Conc. Beams & Slabs	Class A(1:2:4)
Conc. Slab floor on fill	Class C(1:2:6)

Class A concrete shall be a mixture of 1 part cement, 2 parts fine aggregates and 4 parts Coarse aggregates by volume, plus enough clean water to make mixture into Pliable paste.

Class B concrete shall be a mixture of 1 part cement, 2½ parts fine aggregates and 5 parts coarse aggregates by volume, plus enough clean water to make mixture into pliable paste.

Class C concrete shall be a mixture of 1 part cement, 3 parts fine aggregates and 6 parts coarse aggregates by volume, plus enough clean water to make mixture into pliable paste.

The **Fine Aggregate** for concrete shall consist of natural sand, or of finest materials with similar characteristics, clean, hard and durable grains, free from organic materials or loam.

The **Coarse Aggregate** for concrete shall consist of crush rock of durable and strong qualities, or coarse aggregates to be used shall vary from 20 mm to 40 mm (¾" to 1½").

FORMS FOR CONCRETE WORKS:

All forms for concrete works shall be properly braced or tied together so as to maintain the correct to prevent bulging and water seepage.

Forms shall not be removed until the concrete has attained sufficient strength to support its own weight and any loads that may be placed on it. Side forms must be placed under the beams or girders until they have attained their strength.

CONCRETE SLAB FLOORS ON FILL

Concrete slabs on fill shall be poured on a gravel bed of not less than 50 mm thick. Each concrete slab course to be poured shall be monolithic with rebars of 10mm @ 0.20m on center both ways (Class B).

CONCRETE ROOF SLAB

It shall be made waterproof by adding *waterproofing* compound to the concrete mixture with a proportion of 1 *package waterproofing* for every one bag cement used in the based on class A concrete.

STEEL REINFORCING BARS:

All steel reinforcing bars to be used shall be standard with PS marks or dots round deformed bars with lugs or projections on their sides to provide a greater bond between the no. 16 G.I. wire.

An steel reinforcing bars shall conform to the number, size and spacing as indicated in the drawings for footings, columns, slabs, beams and concrete block walls schedule or other coating which will destroy or reduce the bond with concrete and shall have a concrete spacer to ensure the integrity concrete cover on rebars.

CONCRETE HOLLOW BLOCKS:

Concrete hollow blocks to be used shall be **150 mm** thick on exterior walls and **100mm** on interior wall unless otherwise specified.

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 bars, 10mm diameter, spaced 0.60m and 0.80 m centers horizontal & vertical respectively.

All exposed surfaces of concrete hollow blocks walls shall be finished with cement plaster.

The mixture of cement plaster for concrete hollow block wall finished shall be 3 part cement 4 parts sand.

FRAMES:

All woods frames from doors shall be done as much as possible with carefully fitted mortise 2 tenon joints. All windows & door frames to be installed w/ wood preservative after they have been installed in place.

ELECTRICAL WORKS:

The electrical works shall be done in accordance w/ the approved plans and under the direct supervision and control of a licensed Electrical Engineer or Master Electrician.

All electric works & materials shall conform to the provisions of the latest edition of the Philippine or National Electric Code.

The electrical wiring shall be installed three coliable PVC electrical conduit, fittings and appearances conforming with 180 dimensions.

The type of electrical services to be supplied to the building shall be 220V, AC, single phase.

There shall be only one service drop from Misamis Oriental Electric Cooperative (MORESCO) pole to the proposed building. Electric wires for lighting and power shall not be smaller than 2.0 sq.mm and 3.5 sq.mm, 600V insulation respectively.

The spare circuit shall be provided with an empty PVC pipe, size 20mm dia. w/c should extend at least 300 mm above the ceiling line. The grounding lines shall be color coded for easy identification. The panel board shall be provided w/ a directory.

PLUMBING WORKS:

All plumbing works shall be done in accordance with the approved plans and under the direct supervision of a licensed Sanitary Engineer or Master Plumber.

The plumbing installation shall conform with the provisions of the National Plumbing Code and the rules and regulations of the locality.

Piping for drain, vent, waste shall be PVC push on type. For in house water supply installation PVC pipe and fittings shall be used.

STORM DRAINAGE:

All downspout from roof gutters shall end in concrete catch basin connected w/ PVC pipes 75 mm dia. leading to the street gutter or main storm drainage line.

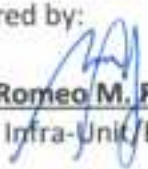
All painting works shall be done with the use of Latex Paint/Enamel Paint Products.

Before any painting is done, all surfaces shall be cleaned, smoothed and freed from dust, dirt, grease, rust or other foreign substances. All paints shall be spread evenly and carefully.


No painting shall be done on outside work in extremely cold frostily, foggy or dump weather. Painting to be done on cold weather should be performed when the temperature is above 50deg F.

No adulteration of paint with other brands shall be allowed.

Prepared by:


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Noted by:


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SCOPE OF WORK

Project Title: CONSTRUCTION OF TAGOLOAN RIVER BASIN FLOOD FORECASTING AND WARNING CENTER

Project Location: Sitio Malaiba, Brgy. Casinglot, Tagoloan, Misamis Oriental

- I. Mobilization and Demobilization
Acquisition of Construction and Occupancy Permits
- II. Structural Works
 - Excavation of foundation of column & wall footing
 - Wall footing foundation
 - Column footing foundation
 - Tie beam
 - Backfilling
 - Excavation of foundation of column & wall footing
 - Wall footing foundation
 - Column footing foundation
 - Tie beam
 - Concrete column
 - Rectangular beam
 - Concrete floor slab
 - Entrance canopy
 - Overhang slab canopy
 - Ground flooring
- III. Masonry Works/Partitions
 - Masonry works/wall
 - Partitions
 - Plastering finishing
- IV. Soil Poisoning
- V. Ceiling Works
- VI. Tile Works
- VII. Ground Floor Door
- VIII. Ground Floor Window

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IX. Plumbing Works 1st Floor

X. Water Line

XI. Painting Ground Floor

XII. Structural Works – Second Floor

- Concrete Column
- Rectangular Beam
- Concrete Floor Slab (Roof Deck)
- Ground flooring

XIII. Masonry Works

- Masonry works/wall
- Masonry works/parapet
- Masonry works/partitions
- Plastering/Finishing

XIV. Ceiling Works

XV. Waterproofing Works

XVI. Tile works

XVII. Second Floor/Door

XVIII. Second Floor/Window

XIX. Second Floor Sanitary

XX. Waterline

XXI. Fixtures

XXII. Stairs, railings and civil works

- For stair inside
- Column footing
- Column
- Lintel Beam landing
- Slab for stair landing
- Stair step
- Excavation



REPUBLIC OF THE PHILIPPINES
Department of Science and Technology
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- Column footing excavation
- Steel railing
- Column post
- Checkered steel plates for steps and landing
- Footing column pedestal
- Stairs, railings and civil works

XXIII. Painting Second Floor

XXIV. Septic Vault (2m. x 3m. x 2m.)

XXV. Electrical System

XXVI. Electrical service Entrance Post and 3 manholes (pullbox)

XXVII. Flagpole

XXVIII. Installation of outside Second floor (Steel stairway)

XXIX. Formworks and Scaffolding

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