



**TERMS OF REFERENCE
CCTV PROJECT**

I. Overview

These Terms of Reference (TOR) call for the supply and installation of a Closed Circuit Television (CCTV) System between key buildings in across University of the Philippines Mindanao Campus, notably:

1. The CCTV System includes but not limited to the following:
 - a. Control room setup and installation
 - b. CCTV System and Repository
 - c. CCTV Cameras
 - d. LED Monitors in Control Room
 - e. Integration of existing and new CCTV Cameras and DVR
 - f. Installation
 - Labor, Materials
 - Civil works (if any)
 - Electrical provision/installation
 - Setup and configuration
 - Testing and commissioning
 - Other necessary components
 - g. Documentation
 - User manuals
 - Network diagram
 - Line diagram
 - Expansion plan (scalable design)
 - h. User training
 - CCTV Control Room user-groups
 - Administrator user-groups
 - Mobile user-groups
 - i. Warranty
 - One (1) year warranty on hardware and software with next business day replacement for active devices
 - j. Technical support
 - Two (2) years on-site free labor and technical support
 - Two (2) years 24x7 help desk facility and virtual technical support

This shall include the supply, installation and testing of high-quality cables, connectors, related cabling hardware, outlets, cable trays, racks, interconnect hardware, or any applicable or necessary materials, supplies or hardware, as well as construction, fabrication, restoration or other works necessary to undertake and complete the installation to the satisfaction of the End-User.



2. Installation of CCTV Cameras at the following locations:
 - a. Road networks
 - b. Administration-CHSS Building
 - c. College of Science and Math (CSM) Building & Complex
 - d. Human Kinetics Center
 - e. School of Management Building
 - f. Kalimudan Student Complex
 - g. Sports Complex Training Gym (Human Kinetics Building)
 - h. Integration of CCTV at the Admin Bldg, Library and EBL to the new CCTV System
3. Installation of monitors at the Control Room
4. Installation of CCTV Signage at the entrances of all buildings covered and other strategic location.

II. Breakdown of Required Materials & Labor:

1. CCTV System and Other hardware and software requirements

1.1. Software and Operating System:

- a) Windows based
- b) With necessary OS and Software licenses
- c) Should be able to access specific buildings and camera location
- d) Should be able to display all CCTV cameras in the campus in the control room
- e) Should be able to display limited CCTV coverage as specified to specific user or user-groups
- f) Intelligent and advance software is preferred

1.2. Remote Access:

- a) Can be accessed through all mobile platforms (android, windows, IOS) through user accounts with restrictions
- b) Restrictions can be configured by specific location or CCTV camera

1.3. Storage

- a) Should have automatic backup system

2. CCTV Camera

2.1. **Features:** FHD cameras (has multiple advanced and special features like PTZ, IR, night vision and other sensors, for viewing approaching objects);

3. Camera Metal Post

- 3.1. Four (4) poles for PTZ outdoor cameras
- 3.2. One (1) pole for two (2) bullet cameras
- 3.3. Underground cat6 cabling enclosed with electrical standard $\frac{3}{4}$ PVC pipe



4. **Monitors**

- 4.1. To be installed at the control room

5. **Workstations**

- 5.1. To be installed at the control room

6. **Switches, and Other components**

- 6.1. To be installed at designated locations

7. **Labor**

- 7.1. Setup and installation of the CCTV System including but not limited to cameras, monitors, and server/s
7.2. Cable Laying and Pulling for video, network and electrical provisions
7.3. Installation and Roughing-ins of cable runways, pipes, clips, etc.
7.4. Installation of housing hardware, and other similar equipment.
7.5. Integration of CCTV cameras across buildings
7.6. Testing and Documentation

8. **Codes and Standards**

- 8.1. Work shall be installed according to the latest Philippine Electric Code (PEC), Plumbing Code, National Structural Code of the Philippines, Fire Code of the Philippines, the National Building Code and the "Compilation of Building Telecommunication Cabling Systems for Philippine Standards by BICSP".

- 8.2. Minimum technical standards covering the CCTV system shall adhere to, but are not limited to the following standards:

a) **Cabling and Components:**

- ANSI/TIA/EIA-568-C.0, Generic Telecommunications Cabling for Customer Premises
- ANSI/TIA/EIA-568-C.1, Commercial Building Telecommunications Cabling Standard

b) **Telecommunication Pathways**

- ANSI/TIA/EIA-568-B, Commercial Building Standard for Telecommunications

Pathways and Spaces

c) **Grounding and Bonding**

- Philippine Electrical Code
- ANSI J/STD-607-A-2002, Commercial Building Grounding (Earthing) and Bonding

Requirements for Telecommunications

d) **Administration and Labeling**

- ANSI/TIA/EIA-606A-2002, Administration Standard for Commercial

Telecommunications Infrastructure

- 8.3. Contractor must have at least a (C / B / A / AA / AAA) - Category License issued by the Philippine Contractors Accreditation Board (PCAB), classified under SP-CF (Specialty - Communication Facilities) or SP-EE (Specialty - Electrical Works).



8.4. Contractor must have at least one (1) Employed Certified Professional of brand they offer to ensure that the solution provided and the system to be implemented is based to standards.

III. CCTV INSTALLATION, DOCUMENTATION AND TESTING

1. Setup and Execution:

1.1. Contractor shall perform all items of work under the terms of reference; all equipment, labor, machinery, materials, tools, supplies, transportation and incidental expenses necessary to prosecute the work to completion shall be shouldered by the Contractor.

1.2. Safety Measures: contractor is required to install warning signs and barricades for the safety of the general public. All workers shall wear the necessary safety devices to ensure safety and proper identification throughout the project.

1.3. Identification and campus ingress/egress: contractors are required to submit the list of the names of their workers, machinery and vehicles that will be entering campus premises to the Office of the Vice Chancellor for Administration, Information Technology Office and the Physical Plant Office.

1.4. Contractor shall observe proper installation of electrical and data wiring, cameras, monitor, etc. at all times during installation to prevent kinking, damaging or shortening the life of the cable and the equipment.

1.5. Labeling: All cables and hardware shall be identified and properly labeled using machine printed labels with the Contractor's name, contact address and number, date of installation of the system, and the duration of the system warranty.

2. Testing Procedures:

2.1. Testing of CCTV should be done in all buildings and the control room.

2.2. All capabilities of the CCTV System should be working.

2.3. Network connectivity and viewing of all camera should be stable and has no lags or delays.

2.4. All cameras should have no obstruction.

3. Submittals:

The contractor shall submit the following for approval:

3.1. Site Map and inter-building connectivity locations

3.2. Technical data of system components;

3.3. Cable routing and terminations

3.4. Floor plan showing placement of cable trays, and other major components.



UNIVERSITY OF THE PHILIPPINES MINDANAO

Office of the Chancellor
Information Technology Office



Furthermore, the contractor shall provide three (3) sets of the following, upon project turn-over:

- 3.5. Operation Manual(s)
- 3.6. Network diagram
- 3.7. Line diagram
- 3.8. Expansion plan