

- Following features shall be followed: one gang, one way switch, 2 gang, one way switch, 3 gang, one way switch, one gang three way switch, two gang three way switch, three gang three way switch, duplex flush type convenience outlet universal grounding type.

16580 Lighting Fixtures (Submit sample materials for approval)

Lighting Fixtures

1X14watts E27 LED Recessed Gimbal Downlight
 3X12watts E27 LED Recessed Gimbal Downlight
 1x28watts T5 Slim Box Type (cove lights)
 60X60X40watts LED Panel Light
 LED Strip Lights
 4 hours backup for Emergency lights
 Exit Lights

16410 Distribution Panel, Nema Enclosure, Enclosed switches and Circuit Breakers

Main Distribution Panel(swing dead front cover) in NEMA 1 enclosure, main @ 100AT MCCB rated, 3P 25kaic 240V/480V

Metering:

Powerlogic Digital Power Meter, Aux. Supply 240VAC, w/ basic metering plus
 AN RS485 Port for MODBUS PM1200
 Current transformer, Ring Type, Ratio 1600:5A, 15VA, 660V, CI-R71600
 Miniature CB Rated AT 6A, 3P, 20KA @ 240V, iC60N, A9F74306
 Terminal Block, 12 PTS, 25A TB25

Branches: 28 MCCB

Rated at 30AT, 2P, 25KA @ 240V, EZC100F2030P
 Rated at 20AT, 2P, 25KA @ 240V, EZC100F2020P

- MCCB Rated at 30AT, 2P, 25KA @ 240V, EZC1000F2030P

Enclosed Circuit Breakers (MCCB/ECB) for AC1 to AC10

MCCB Rated at 30AT, 2P, 25KA @ 240V, EZC1000F2030P in NEMA 3R enclosure with grounding terminals.

- The enclosure shall be galvanized steel of code thickness, powdered coated enamel finish and shall be installed plumb and symmetrical with the surrounding devices.
- 2" x 4", 4" x 4" PVC utility and junction boxes Pull box with cover enamel coated finished with ½ and ¾ knock outs.
- Electrical tapes, rubber tapes, pull wires, mica tubes and assorted screws

16700 Communications

Structured Cabling System

- Category6 UTP, 4 pairs, unshielded twisted pairs, polyethylene insulated hyper grade non-plenum LAN cable is the general requirements for this structured cabling system. The height of the data outlets is 90cm above finish floor line.
- Supply and installation of complete wiring devices, 2 meters patch cords information data outlet 8 pin CAT6, RJ45 snap in jacks and other accessories ready for use.
- Supply and installation of Intermediate Data Frame Cabinet with two (2) exhaust fan and patch panel, termination and commissioning is included in this scope of work.
- Complete termination and testing of cables, tagging (using tagging machine), labeling of each terminal for easy identification. Submission of test results shall be required.
- Supply and installation of Telephone Terminal Cabinet (TTC) and termination of UTP cable for telephone at the TTC with corresponding tagging and tested

Conduit Pipes and Accessories

- 20mm dia. PVC pipes, couplings, PVC elbows, male adapter, coupling, locknut and bushing.
- 2" x 4", 4" x 4" PVC utility and junction boxes
- Pull box with cover enamel coated finished with ½ and ¾ knock outs.
- Electrical tapes Pull wires, mica tubes and assorted screws

16720 Structured Cabling

Supply and installation of Intermediate Distribution Frame 3' with 2-exhaust fan, 1- 24 port patch panel coupler type, 1-48 port manage switch. CAT6e cable, 1- meter patch cord complete

16730 Telephone System

Supply and installation of digital PABX with 3 trunk lines and 16 extensions including proprietary phone and 12-analogue speaker telephone units with battery back-up.

16740 Fire Alarm Detection System.

Supply and installation of 2 Zone conventional Fire alarm panel with 12 units conventional smoke detectors, Manual pull station and Bell.

16750 CCTV System.

Supply and installation of 16 channel NVR, 16 units 4MP IP Camera, 16 channel POE switch, 4 units 4TB HDD Audio/Video Drive, 19" LED monitor and 2KVA Uninterruptible Power Supply (UPS).

CCTV CAMERA

Dome Type

- Full HD: 1080P (1920x1080) Video resolution with H.264 compression
- Intelligent motion detection
- 4mm Fixed Lens
- IP66 Water proof
- Support auto white balance, auto exposure, auto gain, AES
- Built in IR cut with day and night function
- Support snapshot, remote recording by schedule setting

Digital Video Recorder

- H.264 hardware compression or capable of carrying Full HD video that will enhanced the captured video of CCTV cameras.
- Has RJ-45 port capable for network function.
- Can be used for mobile viewing using IOS and android smartphones and tablets.
- Video file recording can be saved using MPEG-4, AVI or other higher format.
- Has a long schedule wherein activities and troubles are recorded.

Monitor for CCTV

- 19" inches LED TV with HDMI and VGA port and audio out.

TV and DVR Rack

- 5 ft rack where in TV monitors can be mounted and a cabinet below the rack enclosed by glass door for the DVR, TV, and DVR rack should have access for wires and placing of wires properly.

Conduit

- Wire gutter (2x4), PVC pipe inside ceiling, EMT pipe for below ceiling drop, Liquid tight conduit for exposed installation and exposed wires of CCTV cameras.

.NOTE

The foregoing list of item of works does not in any way limit the responsibility of the Contractor to perform all other works necessary for the completion of the project, **(PROPOSED OFFICE FOR DISASTER SIMULATION CENTER).**

GUARANTEE

The Contractor shall guarantee all works under this contract to be free from any technical, material, workmanship and/or factory defects and shall replace and repair to the satisfaction of the Project Architect / Engineer and/or to the Chief of

CPDMO on any part or portion of the work which may fail within **a period of one (1) year after the final acceptance of the system.**

COMPLETION PERIOD

The Contractor is given **Sixty (60) calendar days** to execute the renovation works including the installation all system requirements. The Contractor shall coordinate to the CPDMO Inspector and End-users for the schedule of testing of systems and other related job.

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