

- **(W-A1) Sliding Window**
 - 6mm thk tempered clear viewing glass on aluminum powder coat finish including installation and accessories.
 - Dim: 1.20m x 1.15m
- **(W-A2) Fixed Window**
 - 6mm thk tempered clear viewing glass on aluminum powder coat finish including installation and accessories.
 - Dim: 0.60m x 1.50m
- **(W-A3) Fixed Window**
 - 6mm thk tempered clear viewing glass on aluminum powder coat finish including installation and accessories.
 - Dim: 2.20m x 0.60m
- **(W-A4, W-A5, W-A6, W-A7, W-A8 & W-A9) Swing & Fixed Window**
 - 6mm thk tempered clear glass on aluminum powder coat finish including installation and accessories.
- **(W-A10) Awning Window**
 - 6mm thk tempered clear glass on aluminum powder coat finish including installation and accessories.
 - Dim: 2.10m x 1.50m
- **(W-P1, W-P2 & W-P3) Existing Window to be refurbished**
 - Replacement of broken glass panels and accessories and repair/repainting of steel framing.
- **(W-P4) Lead Lined Window**
 - 6mm thk Tempered clear viewing glass in aluminum powder coat finish w/ lead lining in compliance w/ ASTM B749 including installation and accessories.
 - Dim: 0.30m x 0.30m
- **(W-P5) Awning/Fixed Window**
 - 6mm thk tempered clear viewing glass w/ frosted film in aluminum powder coat finish, heavy duty lever handles, including installation and accessories.
 - Dim: 2.60m x 3.20m
- **(W-P6) Awning/Fixed Window**
 - 6mm thk tempered clear viewing glass w/ frosted film in aluminum powder coat finish, heavy duty lever handles, including installation and accessories.
 - Dim: 2.00m x 3.20m
- **(W-P7) Awning/Fixed Window**
 - 6mm thk tempered clear viewing glass w/ frosted film in aluminum powder coat finish, heavy duty lever handles, including installation and accessories.
 - Dim: 1.32m x 3.20m
- **(GR) Window Interior Grilles**
 - 25mm x 25mm x 6mm angular bar frame w/ 12mm square bar grilles in epoxy paint finish.

Division 9 – Finishes

09500 Ceiling

Scope of Work

The work covered by this Item shall consists of furnishing all ceiling finishes, equipped with fixing accessories including materials, labor, tools equipment and in accordance with Plan and/or shop drawings and as herein specified.

Material Requirement

- Use 600mm x 600mm x 6mm bio-composite board moisture and fire resistant: 1000kg/m³ normal dry density, 14N/mm² flexural strength & 2.5kj/mm² impact strength, on powder coated T-runner, painted finish.
- Use 4.5mm thick fiber cement board on metal furring, painted finish.
- Use 4.5mm thick fiber cement board w/ lead sheet lining treatment in compliance with the ASTM B749.

Construction Requirements

- Provide all the necessary preparation of ceiling.
- Hanger rod with adjustable clip shall be at 1.00 m maximum interval both ways but provide additional hanger and support on critical areas.
- Provide all the necessary accessories and framing for proper installation.
- Ensure adequate hanger and support to all the utilities on the area.
- Restore all affected areas.

09600 Flooring

Scope of Work

The work covered by this Item shall consists of furnishing all floor finishes, including all necessary surface preparations, floor leveling, materials, labor, tools equipment and in accordance with Plan and/or shop drawings and as herein specified.

Material Requirement

- (FF-05)
 - Self-leveling Epoxy, Non-slip, Non- abrasive, Chemical Resistant and High Traffic floor finish.
- (FF-06)
 - 600mm x 600mm Porcelain Tiles [Polished Surface].
- (FF-08)
 - 1.50mm x 900mm x 3mm thick vinyl planks.
- (FF-10)
 - 600mm x 600mm Porcelain Tiles [Matte Surface].
- Submit sample and layout of tiles for approval of CPDMO Project Architect/Engineer and End-users.

Construction Requirements

For Tiles

Installation

- The Contractor shall carefully examine all surfaces over which the tiles are to be set.
- Floor surfaces that are to receive vinyl planks shall be clean; thoroughly dry; smooth; firm and sound; free from oil, paint, wax, dirt, and any other damaging materials.
- Start in the center of the room or work area and work from the center towards the edges.
- Keep tile lines and joints square, symmetrical, tight and even and each floor in a true, level plane, except where indicated as sloped.
- Vary edge width as necessary to maintain full size tiles in the field but no edge tile shall be less than one half the field tile sizes, except where irregular shaped rooms make it impossible.
- Provide proper adhesive, tile grout and floor leveling.

Tile Laying Design

- The tile laying design shall be indicated on Plans and in the colors selected and approved by the CPDMO Architects/Engineers/Inspectors for each area.
- All joints shall be parallel to wall lines except otherwise indicated on plan.
- Where line patterns of tile run perpendicular to lines of other tiles, they shall be laid truly at right angles.
- Gaps between tiles must be consistent as indicated on plan or referred by the implementing unit.

Adhesive

- Adhesive shall be applied in accordance with the adhesive manufacturer's printed directions unless specified or directed otherwise.
- Smoking, the use of open flames, and other sources of ignitions are strictly prohibited in the area where solvent containing adhesives are being used or laid.

Cutting, Cleaning and Protection

- Cut ceramic floor tile to and fit around all permanent fixtures, pipes and outlets.
- Cut edges, fit and scribe to walls and partition after flooring has been applied.
- After the vinyl tiles and accessories are laid and set, it shall be cleaned with a cleaner as recommended by the manufacturer and a coat of approved seal polish.
- After the floor has been waxed, they shall be carefully protected against damage, either with heavy building paper or by keeping traffic off the floors until the area is ready for use.

For Epoxy Paint Finish Flooring

- Prepare the surface thoroughly by cleaning all dust and residue using industrial vacuum and ensure that there are no oil or other liquid/chemical on the surface
- Apply two coats of primer to the surface after the necessary preparation. Ensure the area is proper ventilated.
- Fill all cracks and holes with epoxy grout.

- Gaps between tiles must be consistent as indicated on plan or referred by the implementing unit.

Adhesive

- Adhesive shall be applied in accordance with the adhesive manufacturer's printed directions unless specified or directed otherwise.
- Smoking, the use of open flames, and other sources of ignitions are strictly prohibited in the area where solvent containing adhesives are being used or laid.

Cutting, Cleaning and Protection

- Cut ceramic floor tile to and fit around all permanent fixtures, pipes and outlets.
- Cut edges, fit and scribe to walls and partition after flooring has been applied.
- After the vinyl tiles and accessories are laid and set, it shall be cleaned with a cleaner as recommended by the manufacturer and a coat of approved seal polish.
- After the floor has been waxed, they shall be carefully protected against damage, either with heavy building paper or by keeping traffic off the floors until the area is ready for use.

For Laminate and Vinyl Finish

- Prepare the surface properly and apply necessary skim coat or putty to ensure the surface is flat before application of adhesive.
- Apply necessary adhesive as indicated in manufacturer's guide for proper application.
- Contractor should ensure proper installation, termination and junction of finishes to existing wall and floors as per building property standards.
- Submit sample of tiles for approval of CPDMO Project Architect/Engineer and End-users.

09910 Paints and Coatings

Scope of Works

- This Item shall consist of furnishing all paints, enamels, varnishes and other products to be used including labor, tools and equipment required as shown on the Plans and in accordance with this Specification.

Materials Requirements

- Specified materials shall be delivered to the job site bearing manufacturers' name, brand name, type of paint, analysis showing all important constituents of the paint, color of paint and instructions for thinning.
- Specified item and/or its components shall be handled in such manner as to prevent damage. The same shall be properly protected from harmful elements or damage by other work prior to its incorporation into the Project.
- Store materials in a well-ventilated space designated for the storage and mixing of paint. Materials delivered to the site shall be properly stored as to minimize exposure to extremes of temperature.

Quality Assurance

- The University reserves the right to subject material samples to test at his expenses. If such material tests do not meet the specified standards, the cost will be charged to the Contractor.
- Number of coats, where specified, is minimum. Contractor shall apply as many as required to meet specifications for solid, uniform appearance. Where film thickness in mils is specified, spot checks will be made to determine compliance with specified thickness.

Submittals

- Submit 2 samples of each and every color or finish (including all coats). Where the same color or finish is to be applied over different materials, samples of each shall be submitted on different materials, where practical.
- Sample size shall be a minimum of 150 mm x 150 mm (6" x 6").

Protection

- Paint materials shall be properly protected from damage, providing for adequate storage space. Take all necessary precautions to prevent fire, such as keeping oily rags in U. L. approved metal containers or removing from building at the end of each day's work.
- All work fittings, furniture, etc., are to be suitably protected during execution of the work. Splashes on floors, walls, etc. are to be removed during progress of work and on the whole, left clean and perfect upon completion.
- No exterior or exposed painting shall be carried out under adverse weather conditions, such as extremes of temperature, during rain, fog, etc., or if there is excessive dust in the air.

Lead Content and Warning Labels

- The material manufacturer shall state the lead content on the label of any paint product container based on metal percentage of total solids.
- The label of any paint product exceeding 0.5% lead content shall include the following statement: "This paint contains more than 0.55 lead content and shall not be used on surfaces accessible to children."

Repair of Defective Work

- All defective or damaged work shall be restored to initial condition.
- All voids, cracks, nicks, etc., will be repaired with proper patching material and finished flush with surrounding surfaces.
- Marred or damaged shop coats on metal shall be spot-primed with appropriate metal primer.
- Defective or damaged items and/or components, which cannot be repaired or restored to initial conditions, shall be removed and replaced to the satisfaction of the Architect at no additional cost to the Owner.

Cleaning

- Upon completion of the building, the Painting Contractor shall remove all paint spots from all finished work, remove all empty cans and leave the entire premises free from rubbish or other debris caused by his work. He shall remove his equipment from the premises. He shall clean off all glass free from paint spots and smears and shall present the work clean and free from all types of blemishes.

Products

General:

- Materials are specified to establish the standards of grade and quality desired for the work, principal pigments and vehicle types and minimum percentage of solids content by volume.
- The products of Manufacturers not named may be submitted for use provided they are equal in quality and grade to the primers and finishes specified as approved by the Architect. If substitute paint products are desired, a statement shall be submitted to the Architect giving the Manufacturers name, proposed primer and finish for each paint system, analysis for each type of paint, and the use or uses intended. Failure to submit such statements will be cause for rejection.
- In cases where the name of a brand or supplier is mentioned under a particular specification, only paint or primer of that manufacturer is acceptable and no substitution shall be permitted on the grounds that the brand specified is not available in the local market. Materials of one manufacturer shall not be applied over that of another, except in the case of shop primer coat.

Color, Gloss and Texture:

- Refer to Finish Schedule. All work is to be completed without deviation from these unless written approval is received from the Architect. No extra cost shall be allowed because of the color variety scheduled.

Execution

General:

- Work-in-place, on which specified work is to be applied, shall be examined to insure that conditions are satisfactory for application of specified materials. Any defect, which may influence satisfactory completion of specified work, shall be report, in writing, to the Architect. Absence of such notification will be construed as acceptance of work-in-place.
- Do not apply exterior paint in damp or rainy weather or until surfaces have thoroughly dried from the effects of such weather.
- Before start of painting, remove finish hardware, accessories, plates, lighting fixtures, and similar items, as approved by the Architect, except U.L. Labels on Fire Door and Frames, which must not be removed. Use only workmen skilled in the applicable building trade for removal and reinstallation of finished item in-place.
- The following items shall be masked or protected with suitable covering:
 - Sealing, caulking and glazing compounds (unless otherwise directed by the Architect).
 - Glass.
 - Gauges, thermometers and other recording devices.
 - Moving parts of machinery and other mechanical equipment - such as: shafts, couplings, valve stems, and the like.
 - Coated decorative sheet metal work.
 - Sprinkler heads and the like.
 - U.L. Labels

Surfaces Preparation As Applied To Various Substrate

(a) Wood

New Surface:

- Surface to be painted should be clean and dry, free from oil, grease, dust, dirt, contaminants and all loose girt or mortar; sand rough edges remaining, countersink nail heads for putty applications.
- Dust off surfaces completely then wipe with a clean rag.

(b) Metal

New Surface:

- Surface to be painted should be clean and dry, free from oil, grease, dust, dirt, wax, solder flux, and other contaminants by wiping with mineral spirits or paint thinner.
- Remove rust by wire brushing, sanding or scraping.
- Where maximum performance of protective coatings is necessary (e.g. Industrial Plants), prepare surface by blast cleaning.

(c) Concrete:

New Surface:

- Surface to be painted should be clean and dry, free from oil, grease, dust, dirt, contaminants and all loose girt or mortar.
- Treat with masonry neutralizer. Mix (1) liter of B-44 with (16) liters of water. Apply liberally by brush and let dry overnight.
- Rinse with water to remove white crystals that form on the surface. Let dry.

Paint Application

- **General:** Specified work shall be done by skilled painters in a workmanlike manner. All spaces shall be broom-cleaned before painting is started. Surface to be painted shall be clean, dry, smooth and adequately protected from dampness. Each coat of paint shall be allowed to dry at least twenty-four (24) hours before succeeding coat is applied. Finish work shall be uniform, of approved color, smooth and free from runs, sags, defective coverage, clogging or excessive flooding. If surfaces are not adequately covered, as determined by the CPDMO Architect/Engineers/Inspectors, further coat shall be applied to the satisfaction of the CPDMO Technical Group. Edges of paint adjoining other materials or colors shall be sharp and clean without overlapping.
- **Paint Mixing:** Paint mixing and thinning shall be done only in accordance with directions of Manufacturer. Paint must be strained free from all skin and extraneous substances and shall be thoroughly mixed in a clean container during use.
- **Methods of Application:** Exterior first coats and Interior first coats shall be applied by brush, except on shop-primed surfaces, which shall be applied by brush or roller. All primer shall be applied by brush. Succeeding coats over field-primed surfaces and all coats over shop-primed surfaces may be applied by brush roller or spray. Distemper brushes are to be of approved type and less than 15 cm in width. Rollers for applying enamel shall have a short nap. Spray equipment shall be as recommended by the manufacturer of the paint used. Areas inaccessible to spray painting shall be coated by brushing or suitable method.

- **Coating:** Consecutive coats of paints are to be slightly differing tints except in the case white. Each coat shall be allowed to harden before the next is applied. Rubbing down between coats is to be done with fine abrasive paper.
- **Wood Finishing:** Wood to have natural satin varnish finish shall be stained as required and sealed as soon as such items are delivered to the job site. Seal all ends to exclude moisture. Knotting shall be carried out by using shellac dissolved in spirit or approved ready mixed compound.
- **Woodwork and Metal Work:** Primed or undercoated woodwork and metalwork shall not be left in an exposed or unsuitable situation for an undue period before completing the painting process. Stopping and filling shall be deemed to be included for all metal works, plaster works, and wood work specified to be used to produce a surface ready for priming and painting.
- **Final Touch-Up:** Upon completion, finish work shall be touched-up and restored where damaged and left in good condition.

Painting Schedule

General:

- **Painting Systems** shall be applied to surfaces as scheduled. All walls to be painted shall be plastered prior to painting. All under slabs to be painted shall have fair-faced concrete.
- **Film Thickness:** As recommended by paint manufacturer for the paint specified, includes thickness in mils and number of coats.

Scope of Works

The work to be done under this item consist of furnishing all required materials, tools, equipment and labor and performing all operations necessary for the satisfactory completion of supply and installation of autopsy table and autopsy sink in strict accord with applicable drawings, details and these Specifications.

Division 12 – Furnishing & Accessories

Section 12400 Furnishing & Accessories

General

- All casework shall be of modern design and constructed in accordance with the best practices of the wood furniture industry. Construction and design will result in "built-in" installations of cabinetry that have the appearance of flush overlay construction without protuberances.

Scope of Works

- The work to be done under this item consist of furnishing all required materials, tools, equipment and labor and performing all operations necessary for the satisfactory completion of supply and installation of autopsy table and autopsy sink in strict accord with applicable drawings, details and these Specifications.
- Submit sample and layout of tiles for approval of CPDMO Project Architect/Engineer and End-users.

Material Requirements

• Wall Mount Autopsy Station, Right Sink

- All stainless steel construction with welded seams and joints, ground and polished to a smooth finish.
- Exhaust duct with 8"/20cm x 10"/25cm grill.
- Full length specimen shelf.
- Large radii on all inside corners for easy cleaning and required sanitation.
- Large single-compartment sink with rapid and positive drainage.
- Cart-to-sink locking mechanism with slide latch accessible from either side of the carrier.
- Factory installed electrical and plumbing line.
- GFCI duplex receptacle w/ waterproof cover.
- Instrument drawer.
- Heavy duty commercial waste disposer ½ hp and switch
- Light fixture over the work area
- Deluxe aspirator with reverse flow additional waste removal: "reverse flow" feature instantly relieves suction clogging by providing a reverse pressure of water.
- Hot and cold water fixture with convenient goose neck faucet and wrist blade handles.
- Spray hose assembly with cold water control valve, nozzle and 10ft./3m of flexible hose
- Dissecting area rinse assembly with cold water valve.
- Complete backsiphon protection provided by reduce pressure principle assembly.
- See plan for details.

• Standard Autopsy Carrier w/ scale

- 31"/79cm (W), 82"/208cm (L), 36"/91cm(H)Foot, 38.25"/97cm(H)Head.
- Design Load: 500lbs./227 kg.
- Stainless steel grained finish, all welds match adjoining surface.
- Permanent slope of 1.5"/3cm.
- 8"/20cm casters, all with brake mechanism.
- See plan for details.

Scope of Work

- This item shall consist of supply & installation of window blinds with accessories including labor, tools, equipment, and the satisfactory performance in undertaking the proper installation of the system as shown on the Plans and in accordance with this Specifications.
- Submit sample and layout of tiles for approval of CPDMO Project Architect/Engineer and End-users.

Section 12500 Furniture

Scope of Work

- This item shall consist of supply & installation of office tables and chairs with accessories including labor, tools, equipment, and the satisfactory performance in undertaking the proper installation of the system as shown on the Plans and in accordance with this Specifications.

Material Requirements

- Staff Tables 1
Main: 1500mm (L) x 600mm (W) x 750mm (H)
Side: 900mm (L) x 450mm (W) x 700mm (H)
25mm thick machine pressed HPL Finish worktop, powder coated metal frame, 18mm x 350mm x 1500mm worktop partition in fabric finish, and modesty panel PVC grommet w/ powder coated mobile pedestal.
- Staff Tables 2
Main: 1500mm (L) x 600mm (W) x 750mm (H)
Side: 900mm (L) x 450mm (W) x 700mm (H)
25mm thick machine pressed HPL Finish worktop, powder coated metal frame, PVC grommet w/ powder coated mobile pedestal.
- Staff Tables 3
Main: 1200mm (L) x 600mm (W) x 750mm (H)
25mm thick machine pressed HPL Finish worktop, powder coated metal frame, PVC grommet w/ powder coated mobile pedestal.
- Reception Table
Worktop: 1500mm (L) x 700mm (W) x 750mm (H)
25mm thick machine pressed HPL Finish worktop, powder coated metal frame for frosted plexiglass, PVC grommet w/ powder coated mobile pedestal.
- Meeting Table
Dim: 1800mm (L) x 900mm (W) x 750mm (H)
25mm thick machine pressed HPL Finish worktop, powder coated metal frame,
- Staff Chair
Star base-ball casters, armrest, and hydraulic adjustable height mid-height mesh back w/ PU chair foam.
- Meeting/Visitor's Chair
PU leather seat in sled type powder coated frame

Division 15 – Mechanical

15400 Plumbing System

Scope of Work

- This item shall consist of supply of all plumbing system with accessories including labor, tools, equipment, testing, and the satisfactory performance in undertaking the proper installation of the system as shown on the Plans and in accordance with this Specifications

Construction Notes

- All plumbing works included herein shall be executed in accordance to the provision of the Revised National Plumbing Code of the Philippines, 1999 Edition, The National Plumbing Code and Local Rules and Regulations of the Municipality.
- Coordinate the drawings with other related drawings and specifications. The Engineer and/or Architect shall be notified immediately of any discrepancy found herein.
- All pipes shall be installed as indicated, any relocation required for proper

execution of the plumbing work shall be with prior approval of the Engineer and/or Architect.

- Proposed sanitary utilities shall conform to the actual location, depth and invert elevations of all existing pipes and structures as verified by the Contractor.
- All slopes for horizontal drainage shall maintain two percent (0.02) and one percent (0.01) minimum unless otherwise specified.
- Water supply pipe to fixture shall be sized in accordance with the manufacturer's recommendations and/or plumbing code.
- All branches of fixture or group of fixtures shall be provided with air chamber made of capped vertical extension pipe of 300mm min. to 450mm maximum.
- All water lines shall be hydrostatically tested at 100psi for a period of two (2) hours before buried or covered. Galvanized iron (G.I.) pipes directly in contact with soil shall be provided with two coats of coal tar and wrapped with jute sack and painted with coal tar.
- The Contractor shall verify all existing utilities at site and coordinate the work with the sewer and waterline service connecting/tapping point.
- All pipe sizes and other dimensions are in millimeter (mm) unless otherwise specified and are indicative of inside diameter.

Material Requirements

A. Waterline / Water Distribution

- Use Polypropylene (PPR) type system for cold and hot (as needed) waterline pipes and fittings jointing by socket fusion, conforming to ASTM F1335
- Confer to Project Architect the brand and approved equivalent.
- Provide sample for approval.

B. Sanitary Lines / Sanitary Sewerage

- Use Polyvinyl Chloride (PVC) Series 1000 pipes and fittings for sanitary lines (sewer, vent and waste pipes), conforming to ASTM 2729
- Confer to Project Architect the brand and approved equivalent
- Provide sample for approval.

C. Plumbing Fixture

- Water closet: floor mounted, ceramic glazed finish, one piece tank type, low consumption 4.5 LPD, dual flush with toilet seat & cover. Including spray/bidet and accessories.
- Lavatory: semi-countertop type ceramic glaze single lever ceramic disc faucet [brass chrome plated]. Including all necessary accessories.
- Shower: stainless shower with complete fittings and accessories, submit sample for approval
- Floor drain: brass/stainless steel plate with slotted opening strainer complete with powder coated cast iron frame;

Construction Requirements

- Make the necessary preparation works for the installation of water system, sanitary and plumbing fixture, on the specified area.
- Ensure proper installation of the system, tap to the nearest water distribution area, and to the nearest sewer area
- Ensure complete and proper installation of brackets and supports.
- Testing shall be done for the whole system and equipment's in the presence of the Engineer and Owner or his representative.

- All restoration and rehabilitation works shall be done on the affected areas to the same features with the existing or as per the required finish.

Section 15700-Heating, Ventilating and Air Conditioning Equipment

- Supply and installation of brand new 2.0TR, & 2.5TR ceiling cassette inverter type, 1.0TR, & 1.5TR wall mounted type including other works needed like coring and waterproofing/and application of sealant to the cored area with fire retardant sealant.

Division 16 - Electrical

Workmanship and Materials

- All works shall be done in accordance with the requirements of the latest edition of the Philippine Electrical Code and National Safety Code. Nothing contained in these specifications or shown on the plan shall conflict with the requirements of these Codes, any discrepancies should be consulted to the Project Inspector / Electrical Engineer.
- All materials and equipment to be used and installed hereunder shall be of the approved type bearing the stamp or approval of the proper authorities concerned. Locally made or constructed materials shall first be approved before installation.
- All works shall be done in workmanlike manner and should present a neat and mechanical appearance when completed.

Plans

- The accompanying drawings shall indicate the general arrangement of the equipments, outlets and other works. When it is necessary to deviate from the arrangement indicated on plans in order to meet the structural conditions, such deviation shall be made at the expense of the Contractor and upon approval from the Project Inspector / Electrical Engineer.
- The outlets and circuit breakers shown on the plan are diagrammatic and approximately correct as to location. Minor changes shall be made through the Contractor at his own expense. The exact location of all outlets and switches shall be determined by the Project Inspector/Electrical Engineer and the same shall be located accordingly. The Contractor shall be responsible for the accurate location of all outlets with respect to doors, partitions, water pipes, cabinets and other facilities.

16050 Basic Electrical Materials and Methods

Conduit System

- PVC Conduit pipes is primarily required for this work. Conduit runs shall be well supported especially on ceiling and slab, concrete encased on soil. All conduits placed on walls and partition shall be embedded, exposed layout will not be allowed. Conduit ends shall be provided with an end bell or adapter with locknut and bushing. Conduit shall enter knockouts squarely. Locknuts and bushing shall be used at termination of conduits in outlets, pull or junction boxes, panels and cabinets. Locknuts shall be screwed tight. Bends and offsets shall be avoided if possible, but when necessary it shall be made with an approved Field bend or pipe / conduit bending machine. The use of pipe tee or vice bending conduits will not be permitted.

Restrictions

- Supply and installation of all material not shown in the drawing nor mentioned in this specification but necessary for the completion of the construction works shall be included. Coordination with CPDMO and Project Inspector should be done for proper installation of all wiring systems.

16070 Hangers and Supports

- All electrical pipes and accessories shall be using appropriate hangers and support follow existing features. Exposed layout on walls and partition inside offices shall not be allowed. Chipping works required.

16080 Testing

- Complete testing of the system involved in operation and provision of all system apparatus for making test and guarantee for a period of one (1) year after acceptance of the project and shall agree to repair and make good at no additional cost to the end user.

16140 Wiring Devices

Wiring Devices

- All wiring devices to be used hereunder shall be new and of approved type. All wall switches shall be top-action quiet-matic type, wide series, bases to be fire-resistant and non-absorptive material. When more than one switches is indicated in the same location, they shall be mounted in gang under a common plate.
- Convenience outlet shall be duplex-type, universal & flush-type with fire-resistant non-absorptive bases, minimum rating of 16 amperes at 250 volts wide series.
- Suitable single pole and heavy-duty switches shall be installed where indicated on the plans. Sample of wiring devices shall be presented for approval. Minor relocations and re-circuiting shall be the liability of the Contractor.
- 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

- 2-20W, 600x600mm DIFFUSED LED PANEL SURFACE MOUNTED
- 50/54 WATTS LED Flexible Strip Kit (Warm White)
- Emergency Light 2-1.5W LED(22hrs)
- 2-40W, 1200x600, TROFFER LIGHT C/W T8 LED LAMPS, WHITE FINISH 1.50m
- LED PANEL LIGHT ROUND 18W DAYLIGHT
- STANDARD LED DOWNLIGHT 12W, SURFACE MOUNTED WHITE
- LED PANEL LIGHT SQUARE 12W

16410 Panel Boards, Enclosed switches and Circuit Breakers

- PBG-1 @ 70AT, 3 pole, 18KAIC with 12 branch circuits @ 12-20AT, 2 pole.
- PBG-2 @ 150AT, 3 pole, 22KAIC with 15 branch circuits @ 13-30AT, 2 pole & 2-40AT, 2 pole bolt-on type.
- PBS-1 @ 70AT, 3 pole, 18KAIC with 7 branch circuits @ 2-20AT, 2 pole & 5-30AT, 2 pole bolt-on type.
- PBS-2 @ 70AT, 3 pole, 18KAIC with 8 branch circuits @ 8-30AT, 2 pole bolt-on type.
- PBT-1 @ 125AT, 3 pole, 22KAIC with 12 branch circuits @ 5-20AT, 2 pole, 3-30AT, 2 pole & 4-40AT, 2 pole bolt-on type.
- PBT-2 @ 100AT, 3 pole, 22KAIC with 13 branch circuits @ 9-20AT, 2 pole, 3-30AT, 2, & 1-40AT pole bolt-on type.
- 30AT, 2 pole, NEMA 3R, Enclosure
- 40AT, 2 pole, NEMA 3R, Enclosure
- The enclosure shall be galvanized steel of code thickness, powdered coated enamel finish and shall be installed plumb and symmetrical with the surrounding devices.
- 20mmØ, 32mmØ, 40mmØ, 65mmØ, 100mmØ PVC conduit pipe with fittings and complete accessories
- 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.
- Supply and installation of complete wiring devices, 1 meters patch cords Information data outlet 8 pin CAT6, RJ45 snap in jacks and other accessories ready for use.
- Complete termination and testing of cables, tagging (using tagging machine), labeling of each terminal for easy identification. Submission of test results shall be required.

Conduit Pipes and Accessories

- 1" 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

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, **COMPLETION OF THE RENOVATION OF BIOCHEMISTRY, ANATOMY AND PATHOLOGY DEPARTMENT.**


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 **One Hundred Eighty (180) 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.

Prepared by:


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