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.

Division 10 – Specialties

Section 10600 Partitions

Scope of Works

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

Material Requirement

- Use 9mm thick bio-composite board on metal stud puttied, sanded and ready to received paint.
- (GWP-01 to GWP-02) Fixed Glass Panel
  - 10mm thick tempered clear glass w/ security film and frosted sticker on 2" x 4" aluminum powder coated frame, complete with accessories and installation.
- (DWP-01 to DWP-07) Demountable Wall Partitions
  - Glass and High Pressure Laminated Panel Combination, 6mm thick tempered clear glass w/ security film and frosted sticker on aluminum powder coated frame, complete with accessories and installation.

- (OWP-01to OWP-03) Operable Wall Partitions
  - 60mm thk laminated panels, 2.5mm thk x 60mm aluminum profile in silver satin anodized/powder coated fin 38mm for top and 76mm for bottom, 4-wheeled heavy duty roller assembly for every panel capable of any angle high density rockwool insulation, 3mm thk x 60mm x 80mm glider steel track type, retractable top and bottom seal, 32-35 STC Deluxe type.
- Phenolic Partitions with fixing accessories.

Division 12 – Furnishing & Accessories

Section 12400 Furnishing & Accessories

Scope of Work

- This item shall consist of fabrication & installation of Comfort Rooms Signage's, ABS Plastic Locker and Mirrors 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.

Section 12500 Furniture

General

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

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.
- Wall mounted ceramic wash basin. Including all necessary accessories.
- Vessel type ceramic lavatory on 12mm thick solid surface (postformed) countertop supported by 6mm thk fiber cement board on 2" x 2" x 1/4" angle bar.
- Stainless sink on built -up base cabinet plyboard in machine pressed laminated finish.
- Washout Top Spud Urinal (0.5 gpf)
- Stainless Steel Faucet.
- 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.

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

Hangers and Support

- 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

Testing of system

- 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

- 48W, 600x600mm LED PANEL LIGHT DAYLIGHT
- 2-20W, 300 X 1200 MM LED PANEL LIGHT DAYLIGHT
- 12W, 300 X 300 MM LED PANEL LIGHT DAYLIGHT
- 6W, 150 X 150 MM LED PANEL LIGHT DAYLIGHT
- 50/54 WATTS LED Flexible Strip Kit (Warm white)

16410 Panel Boards, Enclosed switches and Circuit Breakers

- PB-1 @ 50AT, 3 pole, 18KAIC MCCB with 12 branch circuits @ 12-20AT, 2 pole bolt-on type.
- PB-2 @ 70AT, 3 pole, 18KAIC MCCB with12 branch circuits @ 12-20AT, 2 pole bolt-on type.
- PB-3 @ 175AT, 3 pole, 35KAIC MCCB with 28 branch circuits @ 20-30AT, 2 pole & 8-40AT, 2 pole bolt-on type.

- PB-4 @ 125AT, 3 pole, 22KAIC MCCB with 13 branch circuits @ 11-30AT, 2 pole & 2-40AT, 2 pole bolt-on type.
- PB-5 @ 125AT, 3 pole, 22KAIC MCCB with 23 branch circuits @ 9-20AT, 2 pole, 12-30AT, 2 pole & 2-40AT, 2 pole bolt-on type.
- PB-6 @ 100AT, 3 pole, 22KAIC MCCB with 26 branch circuits @ 26-20AT, 2 pole, bolt-on type.
- 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, 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 Intermediate Data Frame Cabinet with two (2) exhaust fan and patch panel, termination and commissioning is included in this scope of work.
- 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

- 32 dia. PVC pipes, couplings, PVC elbows, male adapter, coupling, locknut and bushing.
- Roughing ins provision for IMS Requirements for every working table.
- 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, **PROPOSED REHABILITATION AND RENOVATION OF REMAINING BASIC SCIENCE LABORATORIES.**

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:

TRISTAN A. MENDOZA
Engineer I, Civil

ENGR. RYAN BUCUD
Junior Project Assistant

AR. JOVY D. GALVAN
Architect II /AoR

RENATO REMORQUE
Engineer III, Electrical

Certified Correct:

AR. ROSALIE FLORES-BERNARDO
Chief, CPDMO

Recommending Approval:

CHARLOTTE M. CHONG, MD, PhD
Dean, College of Medicine

MICHAEL L. TEE, MD, MHPEd
Vice Chancellor for Planning & Development

ARLENE A. SAMANIEGO, MD.
Vice Chancellor for Administration
MAR 0 2 2020

Approved by:

CARMENCITA D. PADILLA, MD. MAHPS
Chancellor 02 MAR 2020