- Sanitary Installations
- Electrical Installations

Sanitary Works

- All works in connection to the supply of potable water and removal of solid and liquid wastes
- Provide all material, as indicated in the drawings and specified, labor, equipment, tools, temporary supports, and related items required for the satisfactory installation of sanitary works.

…Sanitary Works

- Delivery and storage
- Protection and sterilization
- Testing
  - Air pressure tests and hydraulic pressure tests
  - Water supply and drainage work shall be tested in section as directed by the Engineer after laying and jointing and before being covered up. The test shall be repeated after the pipes are covered up.
  - Valves and taps shall be broken down, lubricated and reassembled before final fixing.
  - At the completion of testing defects in pipelines shall be made good and taps and valves checked for satisfactory flow and closing.

…Sanitary Works

- Pipes
  - Galvanized steel pipes
  - UPVC
    - Indicated on the riser diagrams of drawings
    - Can be used for cold water supply
    - Usually used for solid waste and surface drainage
    - Measured in meter linear stating dia.
- Valves
  - Specified on drawings – giving material and size
  - Enumerated stating dia.

…Sanitary Works

- Precast concrete pipes
  - Solid pipes – for surface drainage and sewage
  - Perforated pipes – for subsurface drainage
- Manholes for inspection
  - Made over granular bed or concrete bed with C- 20 concrete or Class A HCB.
- Septic tanks, Soak away pits and percolation ditches
  - Measured in accordance with each item of work involved

…Sanitary Works

– Sanitary Fixtures

- WC
- HWB
- Urinals
- Shower units
- Kitchen Sinks
- Water heaters

- Toilet roll
- Soap holder
- Towel rail
- Glass mirrors
- floor drain with shallow seal trap

- Sanitary Fixtures shall be enumerated describing the size and type of fixture

Electrical Works

- Supply, erection, installation and testing of electrical wares as generally shown on the electrical drawings.
- Work includes
  - Power, Socket, Light, TV, Telephone, Bell, and Data Systems

…Electrical Works

- General
  - Underground cable ducts
    - Precast concrete - ml
    - galvanized steel pipes - ml
    - PVC pipes – ml
    - Manholes – enumerated stating size
  - Distribution Boards – MDB or SDB
    - Shall be enumerated stating power and voltage supply
  - Conduits for internal wire drawing - ml
  - PVC cables
    - Unless, specifically indicated otherwise, all cables shall have copper conductors.

...Electrical Works

- light, power and socket outlets
  - Light and switch points
  - Socket points
  - Fan Outlets and switch points
  - Bell Points
  - Power Outlets
  - Telephone Outlets
  - Television Antenna Outlet
- Outlet of specified rating fed through PVC insulated conductors as shown in drawing inside thermoplastic conduits of diameter as shown in drawing for recessed installation including junction box with covers and insulating caps.

…Electrical Works

- Outlets are enumerated and understood to include chiseling, laying conduits and installing wires providing junction box and insulating cups
- Fixtures
  - Bell System
  - Fans
  - Air Conditioners
  - Light Fixtures
- Fixtures are also enumerated
- A complete and detailed layout drawing together with the specification of materials used for the works shall be submitted at the completion of works.

…Electrical Works

- Sundry Items
  - Electric poles
  - Photo-voltaic Cells
  - Earthing
  - Lightning Protection System
  - Generator System
- All should be installed according to EEPCO regulations
- They are mostly enumerated