# PRESENTATION ON

## Supply of electric distribution L.T panel & related services for Automation and SCADA system of Operation building of SWTP Phase-1.

PREPARED AND PRESENTED BY
SWTP OP TEAM

# SWTP-1 FILTER GALLARY MDB (SB05-01) AT A GLANCE

- SB05-01 panel situated at operation building, SWTP-1 operates as main distribution panel (MDB) for following items:
  - Filtration control panel, 12 Sets.
  - Air Blowers, 3 Sets- 60kw.
  - Wash Water Pumps, 3 Sets-30kw.
  - Pre-chlorination pump, 2 Sets-11kw.
  - Post-chlorination pump, 2 Sets-4kw.
  - Sump pump, 2 Sets-2.2kw.
  - Air Compressor, 2 Sets-11kw.
  - Lighting load of operation building.
- This panel maintains the rostering and synchronizing of all blowers and pumps.

# SWTP-1 FILTER GALLARY MDB (SB05-01)
# AT A GLANCE
# (Existing Electrical Load )

| SL | Equipment | Total Electrical load (Amps, Estimated) |
|---|---|---|
| 1 | Air Blowers (3 Sets)-6o kw | 174 A |
| 2 | Wash Water pumps (3 Sets)-30kw | 135 A |
| 3 | Pre-chlorination pump (2 Sets)-11kw | 50 A |
| 4 | Post-chlorination pump (2 Sets)-4kw | 18 A |
| 5 | Sump pump (2 Sets)-2.2kw | 12 A |
| 6 | Existing Lighting Load | 80 A |
| 7 | Air Compressor & Air Dryer-5kw | 58 A |
| 8 | DTW Pump (1 Nos)-110kw | 169 A |
| | **Total Existing Electrical Load (A) :** | **696 A** |

# (Addition Electrical Load for On-going SWTP-1 Central SCADA Work)

| SL | Equipment | Total Electrical load (Amps, Estimated) |
|---|---|---|
| 1 | AC (5 Nos) | 65 A |
| 2 | De-Humidifier (2nos) | 6 A |
| 3 | Video wall | 30 A |
| 4 | Operating PC | 12 A |
| 5 | Total lighting (84Nos) | 19 A |
| 6 | Automation Panel | 13 A |
| 7 | Power Socket & office room | 40 A |
| 8 | Others Load | 15 A |
| | **Total Addition Electrical Load (A) :** | **200 A** |

# SWTP-1 FILTER GALLARY MDB (SB05-01)
# AT A GLANCE
# (Existing Electrical Load )

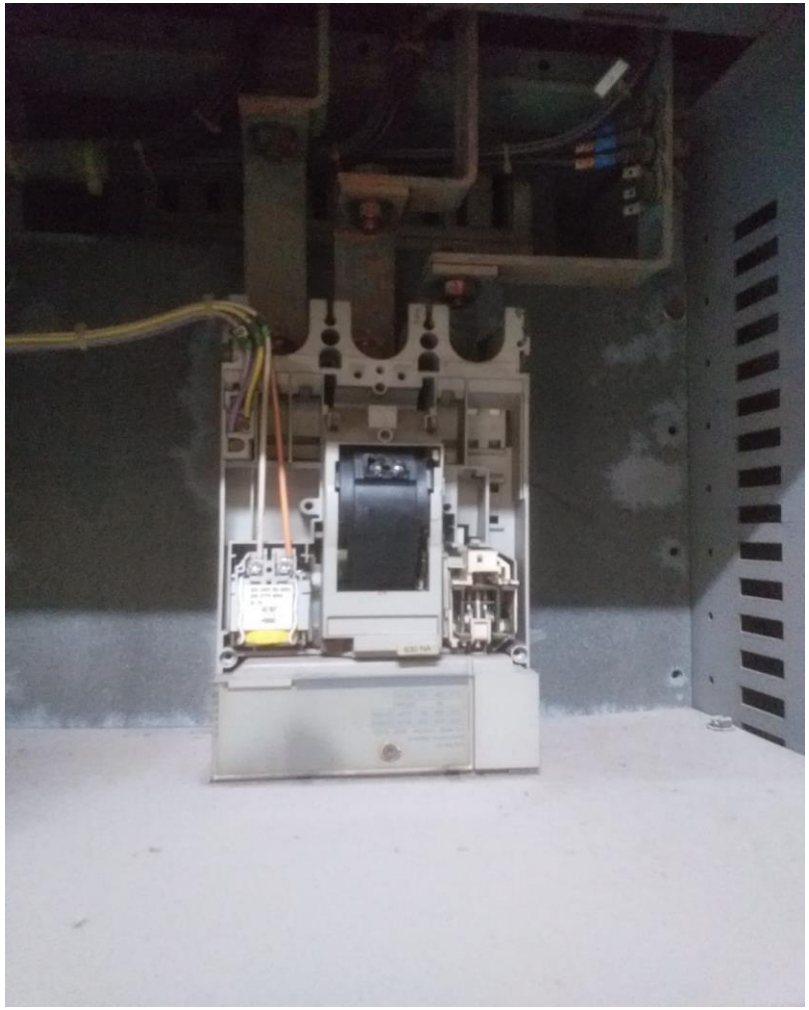
| | |
|---|---|
| **Total Existing Electrical Load (A) :** | **696 A** |
| **Addition Electrical Load for On-going SWTP-1 Central SCADA Work, (A) :** | **250 A** |
| **Upcoming Electrical Load (A) :** | **946 A** |

- Total Existing Electrical Load of SB05-01 panel is 696 A.
- For On-going work of SWTP-1 Central SCADA System, additional 250 A will be needed in near future.
- Total Upcoming electrical load is 946 A.
- **Existing panel's main MCCB is 650 A and existing panel can not serve the additional requirement for the extension project.**

# CURRENT CONDITION OF FILTER GALLARY MDB (SB05-01)


Main 650 A MCCB Condition of SB05-01 Panel

# CURRENT CONDITION OF FILTER GALLARY MDB (SB05-01)



Main 650 A MCCB Condition of SB05-01 Panel

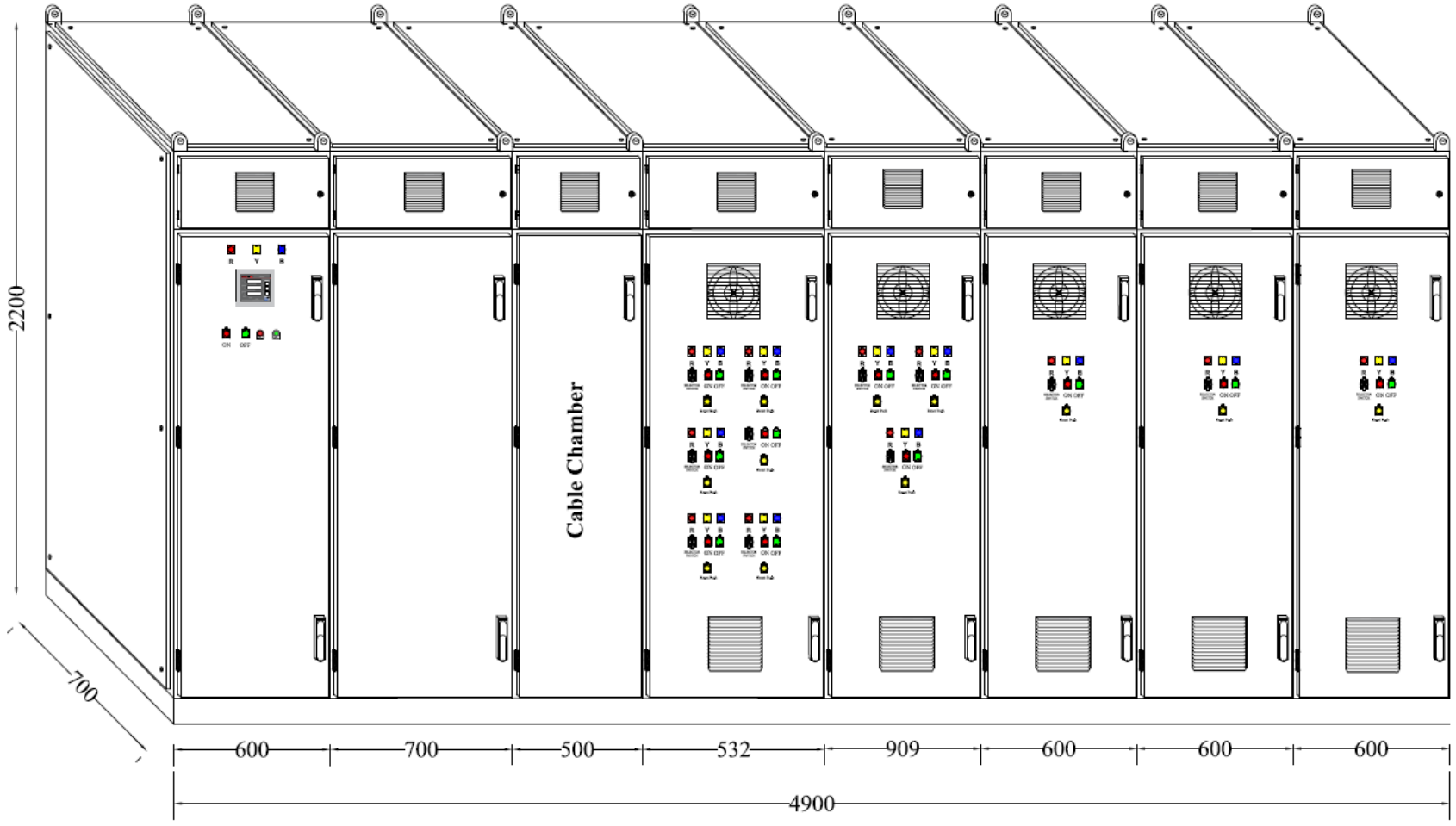
# CURRENT CONDITION OF FILTER GALLARY MDB (SB05-01)


Condition of SB05-01 Panel

# PROPOSED UPGRADATION OF SB05-01 PANEL

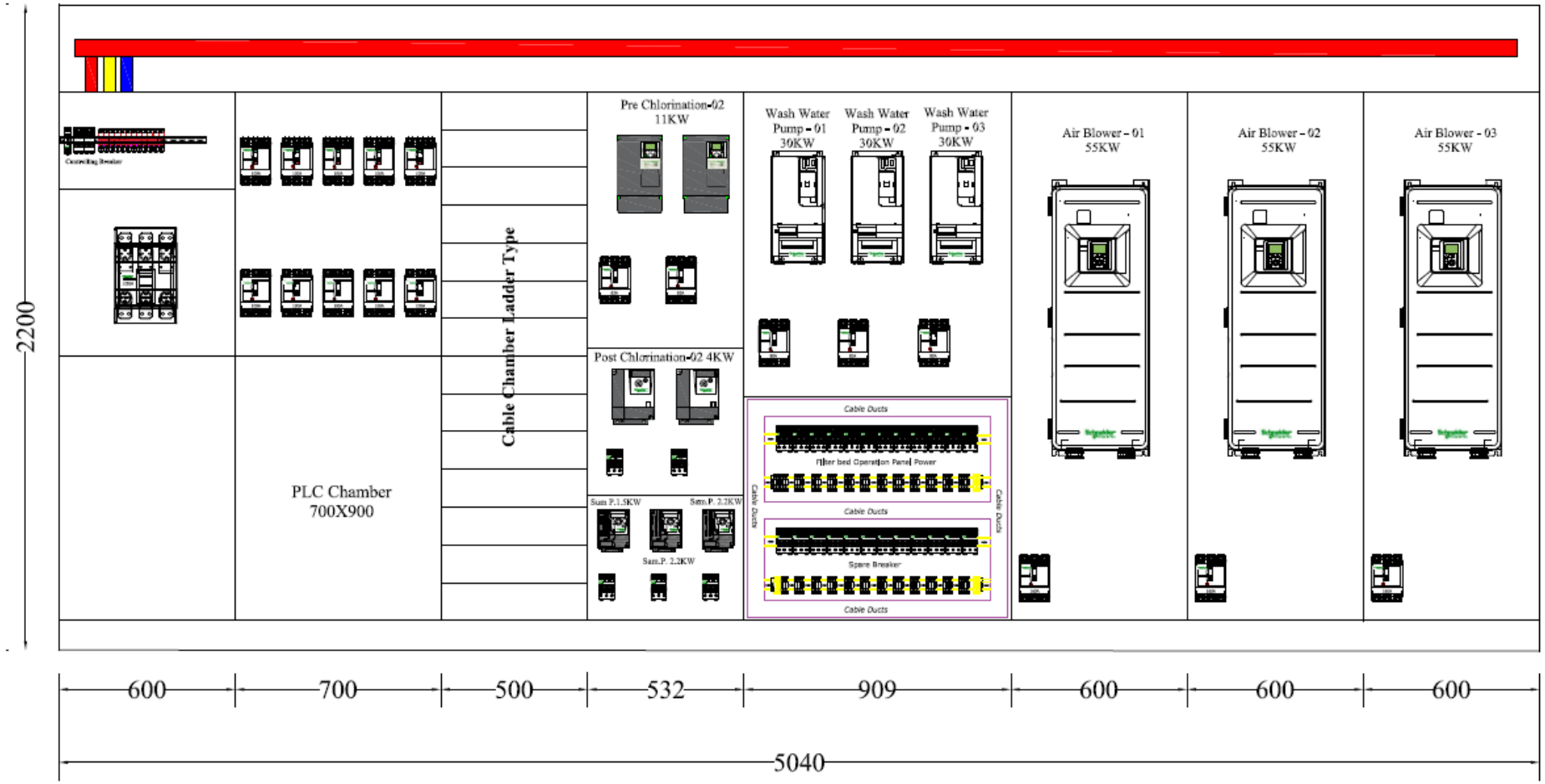
- The proposed SB05-01 panels electrical load capacity of 1250 A, considering upcoming and future scopes.
- The proposed panel will be similar in dimension, as a result it can be easily installed in place of existing panel.
- The proposed panel consists PLC automation based automation system for rostering and scheduling between air blowers, wash water pumps, pre and post chlorination pumps.
- This panel will also work as Master for synchronizing between the filter desk control panels.
- The automation system of this panel will be connected to SWTP-1 Central SCADA System.

# PROPOSED UPGRADATION OF SB05-01 PANEL




ISOMETRIC FRONT VIEW

# PROPOSED UPGRADATION OF SB05-01 PANEL




FRONT INNER VIEW

# PRICE PROPOSAL

| Sl. NO. | DESCRIPTION | QTY | UNIT RATE (BDT) (System Engineering Ltd.) | UNIT RATE (BDT) (RSA Engineering Ltd.) | UNIT RATE (BDT) (SAJ Electric) | UNIT RATE (BDT) (System Automation) |
|---|---|---|---|---|---|---|
| 01 | Filtration Main Distribution Panel Related Items | 1 Set | **2,10,93,441.00 (1st Lowest)** | 2,47,03,441.00 (4th Lowest) | 2,21,55,491.84 (3rd Lowest) | 2,18,67,704.65 (2nd Lowest) |
| 02 | Variable Frequency Drives related Items | 1 Set | | | | |
| 03 | Automation & Control System Related Items | 1 Set | | | | |
| 04 | Power Cables | 950 M | | | | |
| 05 | Related Works | 1 job | | | | |

# RECOMMENDATION

It is necessary to replace the existing SB05-01 MDB panel with proposed panel.

# CHALLENGES

1. Budget and Tendering process, sometimes take long time to finalize.
2. Replacement of panel with minimum power interruption.


# THANK YOU