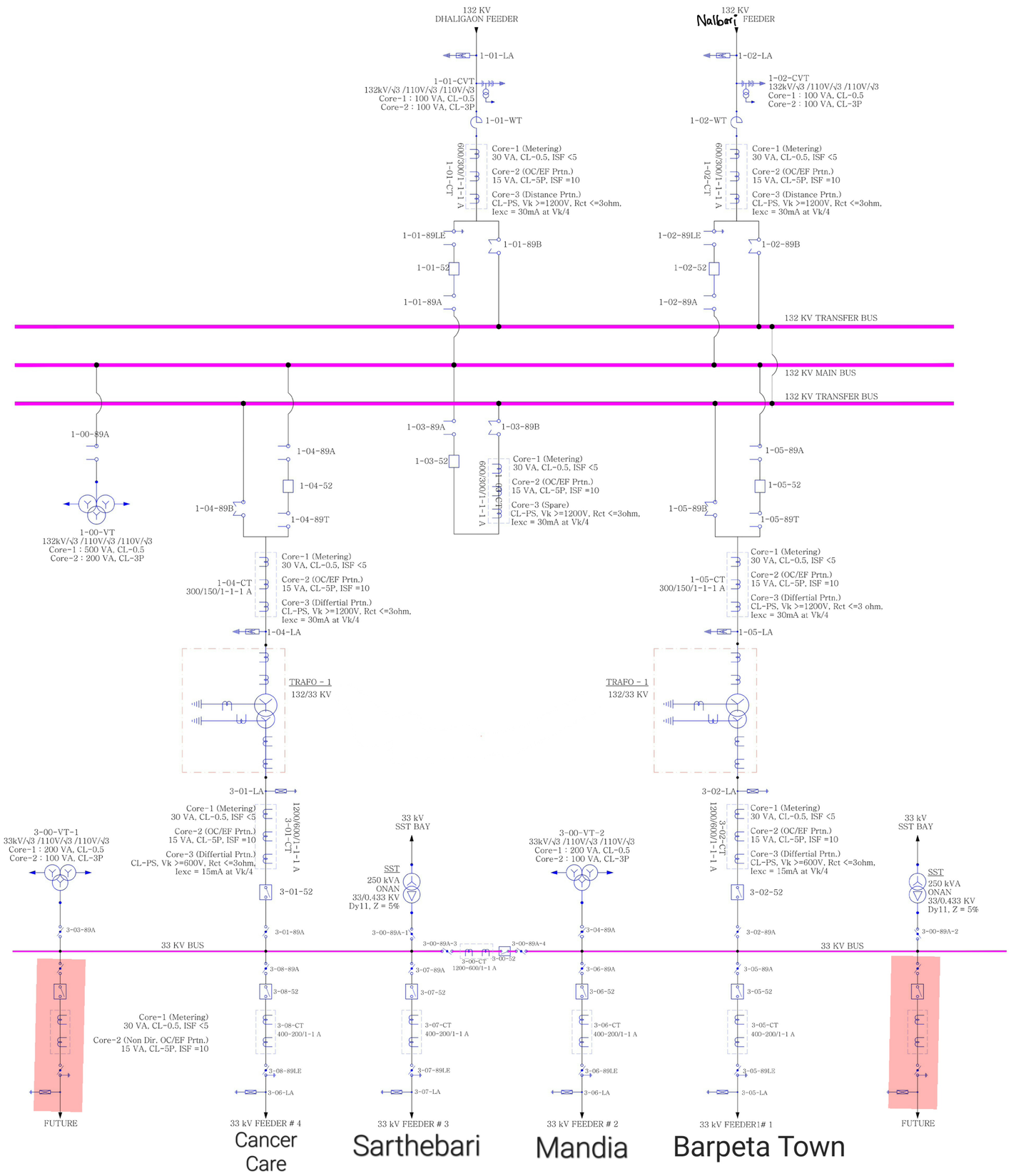


EQPT. NUMBERING SYSTEM :

KV LEVEL
1 - FOR 132 kV
2 - FOR 220 kV
3 - FOR 33 kV

BAY NO.
00 - FOR BUS

EQPT. IDENTIFICATION
89 - FOR ISO
52 - FOR CB

ADDITIONAL INFORMATION
FOR ISO (89):
A - FOR MAIN BUS
B - FOR TRANSFER BUS
L - FOR LINE
T - FOR TRAFO.
E - WITH E/S

(e.g. : 1-01-CT = 132 KV - Bay No. 01 - CT
1-02-89LE = 132 KV - Bay No. 02 - Line ISO With 1 E/S)

## 132 kV EQUIPMENTS :

| SL. NO. | DESCRIPTION | RATING | LEGENDS |
|---|---|---|---|
| 1 | SF6 Circuit Breaker (CB) | 132 kV, 1250A, 31.5 kA (3 Sec.) 3 Ph. | |
| 2 | Power Transformer (Not in scope of Win Power) | 132/33 kV, 3 Ph. | |
| 3 | HCB Isolator w/o Earth Switch | 132 kV, 1250A, 31.5 kA (1 Sec.) 3 Ph. | |
| 4 | HCB Isolator with 1 Earth Switch | 132 kV, 1250A, 31.5 kA (1 Sec.) 3 Ph. | |
| 5 | HCB Isolator w/o Earth Switch (Tandem Type) | 132 kV, 1250A, 31.5 kA (1 Sec.) 3 Ph. | |
| 6 | Lightning Arrestor (LA) | 120 kV, 10 kA, Gapless Metal (Zinc) Oxide, 1 Ph. | |
| 7 | Coupling Capacitor with Potential Device (CVT) | 132 kV, 1 Ph, 4400pF | |
| 8 | Voltage Transformer (VT) | 132 kV, 1 Ph, 2 Core | |
| 9 | Current Transformer (CT) | 132 kV, 1 Ph, 3 Core | |
| 10 | Wave Trap (WT) | 132 kV, 800 A, 10 kA, 0.2mH, 1 Ph. | |

## 33 kV EQUIPMENTS :

| SL. NO. | DESCRIPTION | RATING | LEGENDS |
|---|---|---|---|
| 1 | SF6 Circuit Breaker (CB) | 33 kV, 1250A, 25 kA (3 Sec.) 3 Ph. | |
| 2 | HDB Isolator w/o Earth Switch | 33 kV, 1250A, 25 kA (1 Sec.) 3 Ph. | |
| 3 | HDB Isolator with 1 Earth Switch | 33 kV, 1250A, 25 kA (1 Sec.) 3 Ph. | |
| 4 | Lightning Arrestor (LA) | 30 kV, 10 kA, Gapless Metal (Zinc) Oxide, 1 Ph. | |
| 5 | Current Transformer (CT) | 33 kV, 1 Ph | |
| 6 | Voltage Transformer (VT) | 33 kV, 1 Ph, 2 Core | |

NOTE :

1. THE PARAMETERS FOR WHICH THE SAME IS DESIGNED :

| DESCRIPTION | VALUE | VALUE |
|---|---|---|
| Nominal System Voltage (kV) | 132 | 33 |
| Highest System Voltage (kV) | 145 | 36 |
| Lightning impulse Withstand Voltage (kVp) | 650 | 170 |
| Power Frequency Withstand Voltage , kV(rms) | 230 | 70 |
| maximum fault Level | 31.5 kA/1 Sec | 25 kA/1 Sec |
| Creepage Distance (Min.) | 3625 mm | 900 mm |

ASSAM ELECTRICITY GRID CORPORATION LIMITED

DRAWING_TITLE
SINGLE LINE DIAGRAM

BARPETA 132/33 KV SUBSTATION

DRAWING_NUMBER
AEGCL/Barpeta/SLD/01

SHEET
1 OF 1