F.P.L. 230KV LINE
LINE VT'S 138KV-115/69V-115/69V
TO FP&L METERING PANEL (EXISTING TO REMAIN)
TO FP&L METERING PANEL (EXISTING TO REMAIN)
LA (3)
(3) 1200:5 MR 600:5
BUS B2
89-M1
SEL 351-1
TO ETHERNET SW IN NEW CTRL PNL
(3)1200:5 MR 600:5
(3)1200:5 MR
230KV 3000A GCB
52-1
TRIP
TRIP & LO
TRIP & LO
86-1
FROM 86T-1/86T-3/86T-T2 (THIS SHEET) 1
(3)1200:5 MR 1200:5
TO FP&L BUS DIFFERENTIAL PROTECTION (EXISTING TO REMAIN)
(3)1200:5 MR 600:5
TO FP&L METERING CABINET 4
89-M2
FP&L OWNED BUS CCVT'S 138KV-115/68.4V-115/68.4V
(3)
TO FP&L CCVT METERING CABINET
USE CT FOR BUS DIFF
OH 230KV BUS
USE CT FOR BUS DIFF
89-M5
(3)3000:5 MR 800:5
(3)3000:5 MR
SEL 351-2
TO ETHERNET SW IN NEW CTRL PNL
230KV 3000A GCB
52-2
TRIP
TRIP & LO
TRIP & LO
86-2
FROM 86T-1/86T-3/86T-T2 (THIS SHEET) 1
TO FP&L METERING CABINET 5
(3)3000:5 MR 800:5
(3)3000:5 MR 1200:5
TO FP&L BUS DIFFERENTIAL PROTECTION (EXISTING TO REMAIN)
89-M6
NEED TO ADD CT
BUS B2A
89-M3
BUS B2C
89-M4
BUS B2B
LA (3)
(3) 400:5 MR 400:5
(3) 400:5 MR
TO 86T-1
TRIP
63FP-1
T1 45/60/75 MVA 230-13.8KV Z=11.14%
USE CT FOR BUS DIFF
(1) 3000:5 MR 300:5
EACH RESISTOR 20.24 OHMS 400 AMPS 10 SEC
(3) 3000:5 MR
(3) 3000:5 MR
(1) 3000:5 MR 3000:5
49T-1
3000A BUSDUCT
(3) 400:5 MR 150:5
(3) 400:5 MR
TO 86T-3
TRIP
63FP-3
T3 30/40/50/56 MVA 230-13.8KV/4.16KV Z=10.87% AT 13.8KV Z=11.12% AT 4.16KV
USE CT FOR BUS DIFF
(1) 200:5
3
MP
M
400 AMPS 10 SEC
3000A BUSDUCT
LA (3)
(3) 400:5 MR 150:5
TO 86T-2 (THIS SHEET)
TRIP
63FP-2
T2 30/33.5 MVA 230-4.16KV Z=10.86%
(1) 200:5
5.98 OHMS 400 AMPS 10 SEC
3000A BUSDUCT
15KV ARR
5A
(3)
LINE VT'S 14400:120V
4A
(3)
3000:5 C200
SEL 751A-M3
PQM M3
MANAGED ETHERNET SW
MANAGED ETHERNET SW
TO NEW CONTROL PANEL IN SWITCHGEAR ROOM
PQM M4
SEL 751A-M4
LINE VT'S 14400:120V
9A
10A
15KV ARR
3000:5 C200
MAIN T1 3000A
52-3
TRIP
TRIP & LO
TRIP & LO
86-M3
86T-1
TRIP & LO
TO BKR 52-1 52-2
FROM 63FP-1
SEL 787T-1
TIE 3000A
52-14
TRIP & LO
86-TIE
SEL 751A-TIE
96-M4
TRIP
TRIP & LO
52-4
MAIN T3 3000A
FROM 63FP-3
86T-3
TRIP & LO
1
TO BKR 52-1 52-2
SEL 787T-3
BUS T3: 13.8kV; 3000A; 3PH; 3W; 60HZ; 40KA
BUS T2: 4.16kV; 3000A; 3PH; 3W; 60HZ; 50KA
3D
4D
5D
6A
8A
8D
9D
10D
11D
12A
12D
13D
2B
3B
4B
5A
5B
CPT 3 45KVA 13.8KV 120/208V 3-PHASE
150A
CPT 1 50KVA 13.8KV 120/240V 1-PHASE
250A
BUS VT'S 14400:120V
PLANT 1 1200A
52-7
SEL 751A-7
PQM-7
SPARE 1200A
52-15
SEL 751A-15
CPT 2 50KVA 13.8KV 120/240V 1-PHASE
250A
HV4 3000A
HV4
SEL 751A-HV4
PQM-HV4
PRIMARY 1200A
52-5
SEL 751A-5
PQM-5
DBR-D 1200A
52-6
SEL 751A-6
PQM-6
GEN TIE 1200A
52-GT3
SEL 751A-GT3
GEN 1200A
52-G
FM BUS 1 3000
52-12
SEL 751A-12
FM BUS 2 3000A
52-13
SEL 751A-13
BUS VT'S 4200:120V
CPT 50KVA 4.16KV 120/240V 1-PHASE
300A
CS-3
TO 4.16KV STANDBY GENERATOR SWGR DBR-C & DBR-D (THIS SHEET) (BY OTHERS)
7
52-10/11 52-G 52-12 52-13
SEL 587Z
TRIP & LO
86B
BUS T3
SEL 587Z
86B-T3
TRIP & LO
BUS T3 BREAKERS
BUS T1
SEL 587Z
86B-T1
TRIP & LO
BUS T1 BREAKERS
SPARE
3#250MCM & #4 GND
120/240V 3-WAY THROWOVER (83)
6D, 7A
MTS-SS1 (83M) DOUBLE THROW DISC. SW 400A, 3P 120/240V
3#250MCM & #4 GND
EXISTING CABLE TROUGH
(4 SETS) 3-750MCM W/GND
(2 SETS) 3-500MCM W/GND
(2 SETS) 3-500MCM W/GND
GEN TX 1250KVA 13.8KV- 4.16KV
3#1 W/GND
#4/0 TO GROUND GRID
6 (BY OTHERS)
4.16KV SUBSTATION SWITCHGEAR
(3)LA 6KV STATION CLASS
LINE VT'S 4200:120V
2A
(3)
3000:5 C400
SEL 751A-10/11
PQM M10/11
MANAGED ETHERNET SW
TO NEW CONTROL PANEL IN SWITCHGEAR ROOM
MAIN T2 3000A
52-10/11
TRIP
TRIP & LO
TRIP & LO
96-M/11
FROM 63FP-2
86T-2
TRIP & LO
TO BKR 52-1 52-2
787-T2
(3) 3000:5 MR 800:5
(3) 3000:5 MR
TO 86T-2 (THIS SHEET)
TRIP
63FP-2
(3) 3000:5 MR 800:5
(3) 3000:5 MR 1200:5
TO FP&L BUS DIFFERENTIAL PROTECTION (EXISTING TO REMAIN)
EXISTING SUBSTATION CABLE BOX
GND
#4/0 TO GROUND GRID
(3 SETS) 1/C-500MCM/PH & 2/0 GND
(4 SETS) 1/C-750MCM/PH W/GND
(4 SETS) 1/C-750MCM/PH W/GND
3#250MCM & #4 GND
A
B
C
TO FINISH MILL BRK. 52-1 (MAIN-1) DWG. E-10-005
TO FINISH MILL BRK. 52-1 (MAIN-2) DWG. E-10-005
TO NEW 13.8KV SWITCHGEAR 3-WAY THROWOVER SWITCH (83) THIS SHEET (SEE DWG E-36-001 FOR DETAILS)