GA DRAWINGS SHALL BE GOT APPROVED BEFORE FABRICATION.
THE PANEL HAS TO BE SPECIFICALLY FABRICATED AS PER THE SPACE AVAILABLE AT PANEL ROOM IN BASEMENT.
THE EXISTING COLUMN POSITIONS WILL ALSO BE CONSIDERED.

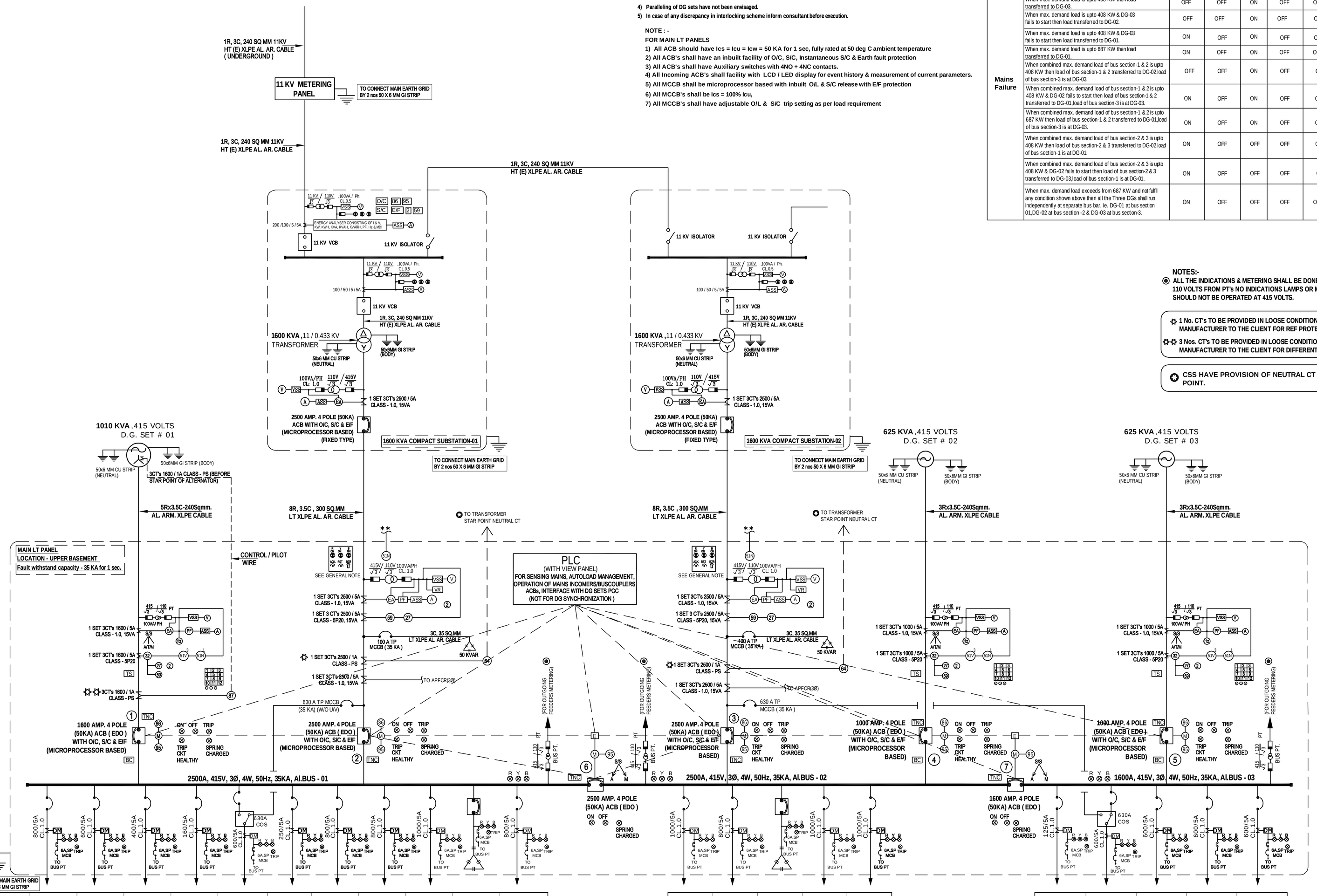
This PLC system shall have.

1) The PLC shall have a provision of Interlocking between different Incomers & Bus couplers to avoid Paralleling of two different supplies from Transformer & DG sets.
2) Logic to AUTO START & AUTO STOP for each DG sets.
3) Taking data from Energy Analysers and issuing and selecting starting commond for DG set as per above logic. Further it shall also be possible to START/STOP DG sets in Manual/Test Mode.
4) Paralleling of DG sets have not been envisaged.
5) In case of any discrepancy in interlocking scheme inform consultant before execution.

NOTE : -
FOR MAIN LT PANELS
1) All ACB should have Ics = Icu = Icw = 50 KA for 1 sec, fully rated at 50 deg C ambient temperature
2) All ACB's shall have an inbuilt facility of O/C, S/C, Instantaneous S/C & Earth fault protection
3) All ACB's shall have Auxiliary switches with 4NO + 4NC contacts.
4) All Incoming ACB's shall facility with LCD / LED display for event history & measurement of current parameters.
5) All MCCB shall be microprocessor based with inbuilt O/L & S/C release with E/F protection
6) All MCCB's shall be Ics = 100% Icu,
7) All MCCB's shall have adjustable O/L & S/C trip setting as per load requirement

Interlocking Scheme For PLC load manager.

Conditions		(BREAKER POSITION)						
	EQUIP.	DG-01 (1010 KVA)	CSS-01 (1600 KVA)	B/C	CSS-02 (1600 KVA)	D.G.- 02 (600 KVA)	B/C	D.G.- 03 (600 KVA)
	ACB No.	1	2	6	3	4	7	5
Mains "ON"	Under normal condition total load is at Transformer.	OFF	ON	OFF	ON	OFF	ON	OFF
Mains Failure	When max. demand load is upto 408 KW then load transferred to DG-03.	OFF	OFF	ON	OFF	OFF	ON	ON
	When max. demand load is upto 408 KW & DG-03 fails to start then load transferred to DG-02.	OFF	OFF	ON	OFF	ON	ON	OFF
	When max. demand load is upto 408 KW & DG-03 fails to start then load transferred to DG-01.	ON	OFF	ON	OFF	OFF	ON	OFF
	When max. demand load is upto 687 KW then load transferred to DG-01.	ON	OFF	ON	OFF	OFF	ON	OFF
	When combined max. demand load of bus section-1 & 2 is upto 408 KW then load of bus section-1 & 2 transferred to DG-02,load of bus section-3 is at DG-03.	OFF	OFF	ON	OFF	ON	OFF	ON
	When combined max. demand load of bus section-1 & 2 is upto 408 KW & DG-02 fails to start then load of bus section-1 & 2 transferred to DG-01,load of bus section-3 is at DG-03.	ON	OFF	ON	OFF	OFF	OFF	ON
	When combined max. demand load of bus section-1 & 2 is upto 687 KW then load of bus section-1 & 2 transferred to DG-01,load of bus section-3 is at DG-03.	ON	OFF	ON	OFF	OFF	OFF	ON
	When combined max. demand load of bus section-2 & 3 is upto 408 KW then load of bus section-2 & 3 transferred to DG-02,load of bus section-1 is at DG-01.	ON	OFF	OFF	OFF	ON	ON	OFF
	When combined max. demand load of bus section-2 & 3 is upto 408 KW & DG-02 fails to start then load of bus section-2 & 3 transferred to DG-03,load of bus section-1 is at DG-01.	ON	OFF	OFF	OFF	OFF	ON	ON
	When max. demand load exceeds from 687 KW and not fulfill any condition shown above then all the Three DGs shall run independently at separate bus bar. ie. DG-01 at bus section 01,DG-02 at bus section -2 & DG-03 at bus section-3.	ON	OFF	OFF	OFF	ON	OFF	ON



NOTES:-
ALL THE INDICATIONS & METERING SHALL BE DONE THROUGH 110 VOLTS FROM PT's NO INDICATIONS LAMPS OR METERING SHOULD NOT BE OPERATED AT 415 VOLTS.

1 No. CT's TO BE PROVIDED IN LOOSE CONDITION BY THE PANEL MANUFACTURER TO THE CLIENT FOR REF PROTECTION.
3 Nos. CT's TO BE PROVIDED IN LOOSE CONDITION BY THE PANEL MANUFACTURER TO THE CLIENT FOR DIFFERENTIAL PROTECTION.

CSS HAVE PROVISION OF NEUTRAL CT BEFORE STAR POINT.

LEGENDS

SYMBOLS	DESCRIPTION
	11 KV VCB (VACCUM CIRCUIT BREAKER)
	ACB (AIR CIRCUIT BREAKER)
	HRC FUSES
	(MCCB) MOULDED CASE CIRCUIT BREAKER
	POTENTIAL TRANSFORMER
	CURRENT TRANSFORMER
A	AMMETER
V	VOLTMETER
ASS	AMMETER SELECTOR SWITCH
VSS	VOLTMETER SELECTOR SWITCH
	INDICATING LAMP
EA	ENERGY ANALYZER WITH MDI
PF	POWER FACTOR METER
Hz	FREQUENCY METER
	CAPACITOR
VR	VOLTAGE RELAY
	M.C.B. (MINIATURE CIRCUIT BREAKER)
DM	DUAL REGISTER ENERGY METER
	ISOLATOR
	PUSH BUTTON
S/S L R	SELECTOR SWITCH
TNC	TRIP/NORMAL/CLOSE SWITCH WITH LOST MOTION DEVICE
	ANUNCIATION WINDOW WITH
86	MASTER TRIP RELAY
59	OVER VOLTAGE RELAY
95	TRIP CIRCUIT SUPERVISON RELAY
64	RESTRICTED EARTH FAULT RELAY
50	INST. O/C RELAY
51	IDMT RELAY
50/51	IDMT & INSTANTANEOUS RELAY
59	OVER VOLTAGE RELAY WITH TIMER
27	UNDER VOLTAGE RELAY WITH TIMER
2	TIMER
32	REVERSE POWER RELAY
87	DIFFERENTIAL RELAY
BC	BATTERY CHARGER
TS	TEMPERATURE SCANNER
51V	VOLTAGE RESTRAINED OVER CURRENT RELAY
51N	IDMT EARTH FAULT RELAY
51G	SENSITIVE EARTH FAULT RELAY

GENERAL NOTE:- In normal case all three lamps shall be "ON" to indicate that incoming power supply is available. In case of power resumption after failure buzzer shall ring to indicate that power supply is resume, there shall be one push button to acknowledge the same.

FEEDER NUMBER	F - 1	F - 2	F - 3	F - 4	F - 5	F - 6	F - 7	F - 8	F - 9	F - 10	F - 11
CIRCUIT BREAKER RATING IN AMPS	800 A TP MCCB (35 KA)	630 A TP MCCB (35 KA)	400 A TP MCCB (35 KA)	160 A TP MCCB (35 KA)	630 A (W/O U/V Protection) TP MCCB (35 KA)	250 A TP MCCB (35 KA)	800 A TP MCCB (35 KA)	800 A TP MCCB (35 KA)	1000 A TP MCCB (35 KA)	1000 A TP ACB (50 KA)	800 A TP MCCB (35 KA)
CABLE SIZE IN SQ. MM. 'AL'	3R, 3.5C, 300	2R, 3.5C, 300	1R, 3.5C, 300	1R, 3.5C, 70	2R, 3.5C, 240	---	2R, 3.5C, 240	2R, 3.5C, 240	---	---	---
FEEDER DESCRIPTION	RISING MAINS TOWER - A2	RISING MAINS TOWER - C2	RISING MAINS TOWER - E2	COMMERCIAL	FIRE FIGHTING	CLUB	RISING MAINS TOWER - G2	RISING MAINS TOWER - I2	BASEMENT VENTILATION-02	CAP. PANEL-01 450 KVAR	SPARE

F - 12	F - 13	F - 14	F - 15	F - 16
1000 A TP MCCB (35 KA)	800 A TP MCCB (35 KA)	1000 A TP ACB (50 KA)	1000 A TP MCCB (35 KA)	1000 A TP MCCB (35 KA)
3R, 3.5C, 300	2R, 3.5C, 240	---	---	---
RISING MAINS TOWER - D2	RISING MAINS TOWER - F2	CAP. PANEL-02 450 KVAR	BASEMENT VENTILATION-01	SPARE

SOLAR PANEL (At Terrace) (Photo-voltaic) → BATTERY (At Basement) → DUAL MODE U P S (At Basement) → (TO SOLAR PANEL)

F - 17	F - 18	F - 19	F - 20	F - 21
125 A TP MCCB (35 KA)	630 A TP MCCB (35 KA)	630 A TP MCCB (35 KA)	630 A TP MCCB (35 KA)	630 A TP MCCB (35 KA)
1R, 3.5C,70	2R, 3.5C, 185	3R, 3.5C, 240	2R, 3.5C, 185	...
TO SOLAR CELL (UPS)	MAIN COMMON SER. PANEL	RISING MAINS TOWER - B2	RISING MAINS TOWER - H2	SPARE

rev. no.	date	revision
R0.	13.10.2015	GFC ISSUED.

project
GARDENIA -11 / 75
AT PLOT NO-GH-11, SECTOR 75,NOIDA FOR - M/S AIMS MAX GARDENIA DEVELOPERS Pvt.Ltd.

title
ELECTRICAL DRAWING
(FOR TOWER - A2,B2,C2,D2,E2,F2,G2,H2 & I2)

subtitle
MAIN SCHEMATIC DIAGRAM
(SHEET 01 OF 02)

drawing released for
☐ APPROVAL ☐ SUBMISSION
☐ TENDER COPY ■ CONSTRUCTION

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