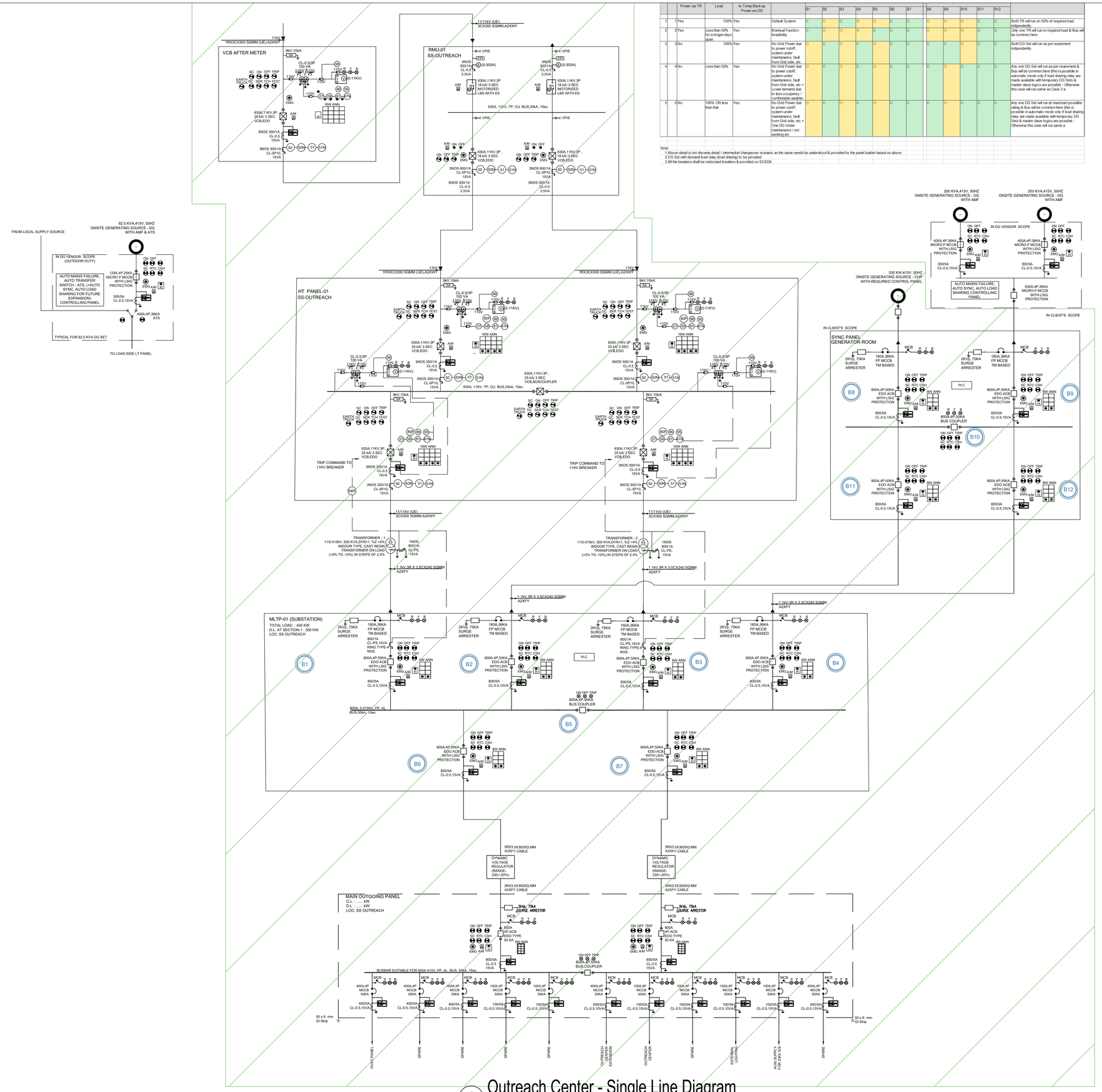
Drawing and design are the property of Vastu Shilpa Consultants and are not to be copied or used without their permission.



		Power via TR	Load	to Temp Back up Power via DG		B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	
1	1	Yes	100%	Yes	Default System	C	O	C	O	O	C	C	O	O	O	C	C	Both TR will run on 50% of required load indipendently
2	2	Yes	Less than 50% for a longer days	Yes	Mannual Function Availability	C	O	C	O	C	C	C	O	O	O	C	C	Only one TR will run on required load & Bus will be common here
3	3	No	100%	Yes	No Grid Power due to power cutoff, system under maintanance, fault from Grid side, etc.	O	C	C	O	C	C	C	C	C	C	O	C	Both DG Set will run as per reurement indipendently
4	4	No	Less than 50%	Yes	No Grid Power due to power cutoff, system under maintanance, fault from Grid side, etc + Lower demand due to less occupency / comfeitable weather	O	C	C	O	C	C	C	C	C	C	O	C	Any one DG Set will run as per reurement & Bus will be common here (this is possible in automatic mode only if load sharing relay are made available with temporary DG Sets & master slave logics are possible - Otherwise this case will run same as Case 3 a
5	5	No	100% OR less than that	Yes	No Grid Power due to power cutoff, system under maintanance, fault from Grid side, etc + One DG Under maintanance / not working etc	O	C	C	O	C	C	C	O	C	C	O	C	Any one DG Set will run at maximum possible rating & Bus will be common here (this is possible in automatic mode only if load sharing relay are made available with temporary DG Sets & master slave logics are possible - Otherwise this case will run same a

Note:
1 Above detail is not showing detail / intermediet changeover scenario as the same needs be understood & provided by the panel builder based on above
2 DG Set with demand load relay (load sharing) to be provided
3 All the breakers shall be motorised breakers & provided on SCADA

LEGEND

	TRANSFORMER
	VACUUM CIRCUIT BREAKER
	EARTH
	CURRENT TRANSFORMER
	ISOLATOR
	INDICATION LAMPS
	SC - SPRING CHANGED
	SP - SERVICE POSITION
	TP - TEST POSITION
	CSH - CONTROL SUPPLY HEALTHY
	RTC - READY TO CLOSE
	LTPB - LAMP TEST PUSH BUTTON
	TCPB - TRIP COIL PUSH BUTTON
	ETPB - EMERGENCY TRIP PUSH BUTTON
E/F	EARTH FAULT RELAY
	KILLO WATT HOUR METER
	MULTI FUNCTION METER
IL	INTERLOCK
49	MACHINE OR TRANSFORMER THERMAL RELAY
27	UNDER VOLTAGE RELAY
59	OVER-VOLTAGE RELAY
51	AC TIME OVER-CURRENT RELAY
51N	TIME DELAY GROUND FAULT RELAY
V	VOLTMETER
VSS	VOLTMETER SELECTOR SWITCH AMMETER SELECTOR SWITCH
ASS	AMMETER
	FUSE
	ANNUNCIATOR
	POTENTIAL TRANSFORMER
	CURRENT TRANSFORMER
27	UNDER VOLTAGE RELAY
59	OVER VOLTAGE RELAY
81	FREQUENCY RELAY
47N	PHASE SEQUENCE RELAY
86	LOCKOUT RELAY
TVM	TRIVECTOR METER
50	INSTANTANEOUS OVER CURRENT RELAY
50N	INSTANTANEOUS EARTH FAULT RELAY
96	PT FUSE FAILURE RELAY
95	TRIP CIRCUIT SUPERVISION RELAY
SA	SURGE ARRESTER
95	PT FUSE FAILURE RELAY
80F	DC FAIL RELAY
98	NUMERIC RELAY FOR TRANSFORMER OTI AND WTI
64R	RESTRICTED EARTH FAULT RELAY
87B	BUS BAR DIFFERENTIAL PROTECTION RELAY
H	HOOTER
A/M	AUTO / MANUAL SWITCH

NOTES & INFORMATION

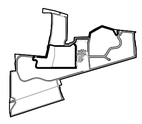
1. ALL DIMENSIONS ARE INDICATED IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. DIMENSIONS TO BE READ AND NOT MEASURED.
3. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE NOTICE OF THE ARCHITECTS / ENGINEERS
4. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH RELEVANT STRUCTURAL, ARCHITECTURAL AND SERVICES DRAWINGS.

FOR DG SET TENDER
Dt.: 25.10.18_R1

No.	Date.	Remarks.
Revisions		

Date	Prints	Issued to	Date	Prints	Issued to
Distribution of Prints					

Key Plan



Consultants

○ **Structural Consultants**
VR SHAH Consulting Engineers

● **Services Consultants**
*dle*MEP Services Consultant, Ahmedabad

○ **Landscape Consultants**
Earthscapes Consultancy Pvt Ltd

○ **Road and Pathways Consultants**
Arhmm Infra Consultants LLP

Project

Nalanda University, Rajgir, Bihar
(**SUBSTATION -1**)

Title

SUBSTATION 1 – SINGLE LINE DIAGRAM FOR 2X200 KVA DG SET PANEL & DG PANEL FOR 82.5 KVA TYPICAL

Dealt : A.P	Drawing No. NUC(1)–SS1–E4.00
Checked : M.T	
Scale : N.T.S	Approved : V.M
Date : 05.03.2018	

VASTU SHILPA CONSULTANTS
Architects I Planners I Urban Designers

'Sangath', Thaltej Road, Ahmedabad - 380054
Phone: 079 - 27454537 Fax: 079 - 27452006
www.sangath.org e-mail: **vsc@sangath.org**

1 Outreach Center - Single Line Diagram