



United Nations  
Educational, Scientific and  
Cultural Organization



क्षेत्रीय जैव प्रौद्योगिकी केन्द्र  
Regional Centre  
for Biotechnology

## क्षेत्रीय जैवप्रौद्योगिकी केन्द्र

राष्ट्रीय महत्ता की संस्था, संसदीय अधिनियम द्वारा स्थापित  
जैवप्रौद्योगिकी विभाग, भारत सरकार, यूनेस्को के तत्वावधान में

## REGIONAL CENTRE FOR BIOTECHNOLOGY

An Institution of National Importance created through an Act of Parliament  
Department of Biotechnology, Govt. of India, under the auspices of UNESCO

**NAME OF WORK: Supplying, installation, testing and commissioning of Package Type Out Door Electrical Sub- Station including allied civil work and External Electrical Installations for BSL-3 Building in NCR-Biotech Science Cluster at Faridabad (Haryana)**

**Tender No.: RCB/OoC/NIT-01/20-21/PACKAGE ESS**

**CORRIGENDUUM- III Dated 30 th JULY,2020**

**REGARDING CLARIFICATION OF QUERIES OF BIDDERS (PRE BID MEETING DATED 21.07.2020 AT 15.00 hrs.)**

Sr. No.	Query / Observations from the intending bidders	Clarification/Modification by RCB
1	Kindly Provide the SLD as it is not clear in Tender documents on an urgent basis.	Scanned copy of revised SLD now uploaded on tender E-Wizard .
2	Kindly also consider the make of Sudhir, Essenar, C&S for Transformer and CSS.	No change in the make/brand already mentioned in the NIT
3	Kindly Also consider the make of Main LT Panel of Advance Panel and Switch gear, Risha Control Engineers, Adlec, C&S Ambit, LS Power Control Pvt. LTD or channel Partner of ABB, Siemens, Schneider & L&T.	Make of - (i) Advance panel & Switch gear and (ii) Adlec has been included in addition to that already mentioned in the NIT
4	Kindly Confirm that the DG Synchronizing Panel in our scope if it is Please Provide the complete specification and details of synchronizing Process.	The SITC for the synchronizing panel is already included in the scope of the work. The operation of DG sets shall be monitored and controlled by a PLC-based logic panel for auto change-over, auto synchronizing, and auto load-management. The sequence of starting and stopping of DG sets will be governed by the PLC panel as per the load requirement of BSL 3. Lab building. Provision for running of all the three DG at a time is to be made by the agency.
5	Kindly Provide the Complete Details and drawing of Exhaust system for DG Set and also confirm the number of supporting structures required for exhaust pipe with the exact length and height.	An individual exhaust system for each DG set is to be provided. The exhaust stack shall be 4.6 mtrs above the nearest building's height. Indicative sketch is enclosed for other references .



6	Kindly Also Confirm the location of fuel tank of DG Set is it nearby of DG if not kindly Provide the complete details	An individual fuel service tank of minimum 990 ltrs. capacity shall be provided near each DG set as per the manufacturer's specifications.				
7	Kindly provide the Existing Make, Model and Year of Manufacturing Of DG Set	Sr no.	Capacity	Make	Model no.(engine No)	Year of manufacturing
		1.	500 KVA	Kirloskar	10 K18TA	2009
		2.	500 KVA	Kirloskar	10 K18TA	2010
		3.	500 KVA	Kirloskar	10 K18TA	2010
		4.	320 KVA	Kirloskar	KV0	2009
		5.	320 KVA	Kirloskar	DV8	2012
8	Kindly provide the Layout of cable Laying with the exact no. of Runs as it is not clear in SLD	5 runs of 300 sq. mm. cables shall be provided for each LT panel's connection (revised SLD enclosed)				
9	As per the standard and nature of work we will suggest you to kindly extend the completion period from 4 months to 6-8 months	Not accepted , No change .				
10	We will request you kindly revise your payment term and consider:	Not accepted , No change				
A	75% of quoted rate as per Contract against supply of material at site.	Not accepted , No change				
B	15% of quoted rate as per Contract against satisfactory installation of equipment at site.	Not accepted , No change				
C	5% of quoted rate as per Contract upon successful testing & commissioning of equipment at site	Not accepted , No change				
D	Balance 5% of quoted rate as per Contract upon handing over of installation including submission of final approval from the various Statutory Bodies/Authorities or any other Statutory Body.	Not accepted , No change				
11	As Per the Boq only Servicing, installation, testing and commissioning of DG in our scope, kindly clarify if any major part like Engine and Alternator is not working or damaged and need to be replaced or service shall be paid extra as per the actual basis	As mentioned in the BOQ, the cost of spare parts, if required during the overhauling of DG sets, will be reimbursed separately on actual cost basis.				
12	In the view of above, we request you to provide an extension of at least Two weeks from the due date of submission of the Tender and enabling us to submit techno commercially competitive quotes	Date of submission of tender extended already up to 14.08.2020				

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13	11KV Supply source shown as (From Existing ESS). In this regards we are to inform you that Existing 11KV VCB Panel does not have any spare feeder. We are attaching SLD of Existing ESS Drawing No. 08008-MP-S6-SLD-001 dated 05-02-2015. The existing VCB Panel is having 4 Nos outgoing in which 3 Nos used for 3 Nos 2000KVA Transformer and one No for 500KVA PSS.	The SLD of the existing sub-station shows that in the HT panel, there is a provision for 7 nos. 630A VCBs, distributed as 1 no. for incomer, 3 nos. for transformers, 1 no. for 500 KVA PSS, 1 no. for bus-coupler, and 1 no. as spare. The spare VCB shall be connected to the new 1250 KVA PSS with 3 core 240 sq. mm. HT cables. However, if no spare VCB is available in the HT panel for now, additional 630A VCBs are to be added. The second PSS shall receive HT power through the RMU breaker of the first PSS, as shown in the SLD
14	In addition to this capacity of Existing 11KV cable 3CX300 Sq. mm needs to be checked. Already 6500 KVA (341 Amps) load is connected with 1 No 3C X 300 Sq. mm Power cable which is connecting supply source to Existing VCB Panel. In addition to this New Building BSL-3 with load of 2500 KVA (131 Amps) is going to be connected with this existing cable. Total connected load on this existing cable will be around 472 Amps ( 9000 KVA) which is beyond its capacity needs immediate attention	The maximum power demand of the BSL 3 building shall be 70% of 1300 KW. Thus, 2 nos. PSS will be installed, including 1 no. for stand-by
15	As the BSL Power Supply is very specific as such we recommend for another 11KV Panel with 4 Nos VCBs (1 No Incomer + 2 Nos for 1250KVA CSS + 1 No. Spare) Cable route from ESS to 500KVA RMU/CSS is consisting of hard rocks. Hence laying of cable from Existing RMU to BSL is very difficult. In addition to this fault in RMU results in complete isolation of BSL-3 with housing hostel etc. Possibility of disturbing existing system may need deep thinking.	
16	Mandatory item Power Factor Improvement Panel is missing in this NIT. The Main LT Panel does not have provision to get connection from Automatic Power Factor Improvement Panel. We recommend 2 Nos 500KVAR Automatic Power Factor Improvement panel for 2 Nos Bus System. Main LT Panel shall have additional 2 Nos 800A EDO ACB for Automatic Power Factor Improvement Panel.	Accepted as proposed. Bidders may include this cost while quoting their rates accordingly for item no 18 of BOQ.
17	In main LT Panel 2 Nos 400A MCCB is shown as spare for receiving LT Power. In our opinion it should be interlocked with all the Incomers (CSS and all the DG Sets.). To achieve this MCCB to be considered with additional tripping arrangement (Shunt trip/Under voltage trip with Indicators).	2 nos. 400A MCCBs are provided to receive emergency power in case of cable fault or ACB breakdown. In normal operation, both the MCCBs will be switched off. There is no need for interlocking.
18	All the outgoing MCCB shall have additional external Rotary Handle.	Accepted as proposed. Bidders may include this cost while quoting their rates accordingly for item no 18 of BOQ
19	Type of Main LT Panel not defined (Indoor or Outdoor). The IP protection shown as IP54 needs checking. If it is Indoor type it should be IP42 or for outdoor it should be IP55 (Double door type.)	The LT panel / PLC panel is of indoor type. Its IP rating shall be corrected to IP42
20	In NIT SLD CSS is shown with 3 Nos VCB. It needs checking. In general, CSS shall have 1 No 11KV VCB with 2 Nos 11KV Isolators.	The sealed 3-way RMU shall have 1 no. VCB and 2 nos. Isolators. The revised SLD enclosed for further references.

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21	Approved make of CSS- ABB is not manufacturing Dry type transformer with ON LOAD Tap Changer. It is recommended to consider Oil Cooled transformer in CSS. Approved make list of CSS needs revision.	No change in the specification. However, three more makes of CSS i.e. (i) SCHNEIDER (ii) /C&S (iii) VOLTAMP has been included in addition to that already mentioned in the NIT.
22	CSS LT system 2000A, ACB is shown as MDO fixed type with outgoing Bus Duct connection. It should be MDO Breaker with outgoing suitable for cable connection as per SLD. Considering capacity of CSS approx. 1737 Amps, minimum 8 Run 3.5X300 Sq. mm cable needs to be connected. The possibilities of connecting 8 Nos cable in CSS needs attention. It is better to consider Bus Duct connection from 1250KVA CSS to Main LT Panel. Bus duct with IP65/IP66 could be used to run in cable trenches	Refer to the revised SLD (As per point no 1)
23	Another building required to house 11KV Panels and new 11KV cable from Supply source (State Electricity) to new VCB Panel	Shall not be required. Refer to point no -13.
24	The shifting of existing 2 Nos 500KVA DG Sets from Housing, Hostel, and placing of 320KVA DG set and its inter connection with Automatic Main failure panel, Exhaust piping work with exhaust stake require quite considerable time (10-15 days or more). Will it be possible to get shut down?	Work shall have to be executed in Phases as per the direction of Engineer-in -charge without any shut down
25	As per CPCB norms, exhaust smoke should be released above nearest building. Earlier it was not considering with existing 500KVA DG Sets. Now to get pollution certificate this is to be done with 320KVA DG Set also. Approximate weight of 30-35 mtrs high stack is approximate 15-18 MT. It may increase with increase in number of DG Sets. For fair evaluation of rates this items need to be shown separately in the NIT and rates should be in Kgs	An individual exhaust system for each DG set is to be provided. The exhaust stack shall be 4.6 mtrs above the nearest building's height. Detailed sketch is enclosed for other references
26	For connecting 4 Nos 300 sq. mm cable in 500KVA DG Sets, separate Bus Bar box needed with each DG Set.	Provision already exist in BOQ./tender document.
27	For running all the 500KVA DG Sets in parallel, its controller needs to be checked for Incoming breaker ( 3 Pole Breaker with Neutral Contactor in the Main LT Panel or 4 Pole Breaker)	The running of the DG sets and their sequence of starting shall be controlled by the PLC panel as per the load demand
28	In case of major repair of old DG Sets (2 Nos 320KVA and 1 No 500KVA) the department should bear original cost if any	As mentioned in the BOQ, the cost of spare parts, if required during the overhauling of DG sets, will be reimbursed separately on actual cost basis
29	No. of testing hours should be indicated in NIT	The running hours for testing after overhauling shall be as per the OEM specifications

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30	Standard time of delivery of CSS is 16-18 weeks from the date of receipt of approved drawings. The manufacturer took 10-15 days time in sending drawings after receipt of technically and commercially clear Purchase Order from the vendors. In addition to this, Inspection of CSS itself took 10-15 days. The transportation time also to be considered. On arrival of material at site considerable time required for installation testing and commissioning. If decided to go with Bus Duct further time needed for alignment etc. Minimum completion time of this work shall be 6-7 months.	No change from the NIT.
31	The major volume of work involved CSS, LT Panel and cables. All the items are to be procured after paying 100% payment to the manufacturer prior to dispatch. CSS and LT Panel manufacturer accept order only after receipt of 25-30% advance. Hence request to revise terms of payment of NIT.	Not accepted , No change .
32	Eligible works may be considered and accepted for the works such as Internal and External Electrical works with civil jobs. These criteria is being followed by CPWD/PWD and as per guidelines of CVC, Department of Expenditure and Ministry of Finance.	Refer to clause 2 point no 2 line 9, page -5 of the NIT. It shall be read as <b>Similar work means 'Supplying, testing and Commissioning of Outdoor / indoor type Electric substation.</b> No other change in the eligibility Criteria conditions.
33	We request you to add Unique make panels, which are working satisfactorily and widely accepted and supplied in Government sectors such as RCB, THSTI, NII, DDA, MTNL, PWD etc.	Not accepted.
34	Inflation cost of 7% per annum may kindly be considered as per guidelines of CPWD (refer Chapter – 3 Point No. 3.3.6 (iii)b of Manual for procurement of works 2019 under Ministry of Finance, Deptt. of Expenditure, copy enclosed').	Accepted , shall be considered.
35	GST rate may kindly be confirmed enable the bidders to quote their prices without any ambiguity	12%
36	As per the policy of MSME & Aatma Nirbhar Bharat policy, EMD and tender fees are exempted for MSME/NSIC registered companies/firms. Hence, we request you to consider the same for tender fees also in above tender.	No change. Refer to the NIT conditions.
37	All ACBs should be with over load, short circuit & earth fault protection release and the release should have inbuilt current+Voltage parameters on the display & with last 10 trip history. ACB shall be provided with terminal adaptors at both ends (Incoming + Outgoing) & of OEM make. Trip Unit should be with Zone Selective Interlocking & wiring has to be done by panel builder.	Accepted as proposed. Bidders may include this cost while quoting their rates accordingly for item no 18 of BOQ
38	All Thermal Magnetic Release MCCB 36 KA Ics = Icu = 100%. MCCB should be suitable for isolation & should have isolation mark on the rating plate. It should have Class II front facia. All MCCB shall be provided with Overload, Short Circuit & External Earth Fault Protection to avoid unwanted trippin on unbalanced current & to differentiate between over current & earth fault. MCCBs should be provided with electrical fault trip indication contact on the panel door	Accepted as proposed. Bidders may include this cost while quoting their rates accordingly for item no 18 of BOQ

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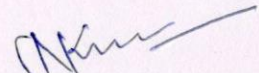
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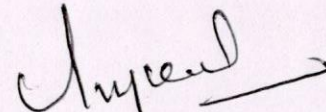


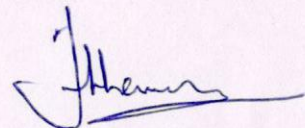
39	All Microprocessor Release MCCB 50 KA Ics = Icu = 100%. MCCB should be suitable for isolation & should have isolation mark on the rating plate. It should have Class II front facia. All MCCB shall be provided with Overload, Short Circuit & External Earth Fault Protection to avoid unwanted trip pin on unbalanced current & to differentiate between over current & earth fault. MCCBs should be provided with electrical fault trip indication contact on the panel door	Accepted as proposed. Bidders may include this cost while quoting their rates accordingly for item no 18 of BOQ
40	<b>For the acceptable makes, the following changes may be made</b>	
A	Main L.T Panel - SHIVALIC / AMBIT /ADLEC /ADVANCE / TRICOLITE	Make of -(i) Advance panel & Switch gear and (ii) Adlec has been included in addition to that already mentioned in the NIT
B	Air Circuit Breaker - L&T (U-Power MTX 4.5) /Schneider (MVS 6V) / Siemens (3WT ETU47WT) / ABB (Emax PR123)	Accepted. These makes are already included in the NIT.
C	MCCB - L&T (DZ) /Schneider (CVS)/ Siemens (3VA) / ABB (Tmax)	Accepted. These makes are already included in the NIT.
D	MCB - L&T /Schneider/ Siemens / ABB	Accepted. These makes are already included in the NIT.
E	Power Capacitors - Schneider /Siemens / L&T / ABB	No change in the list already provided in the NIT
F	Compact Sub Station - Schneider / Siemens / ABB / Sudhir	Three more makes of CSS i.e. (i) SCHNEIDER (ii) /C&S iii) VOLTAMP has been included in the list in addition to that already mentioned in the NIT

  
V.K Arora/RCB(OoC)

  
Narender Kumar/THSTI

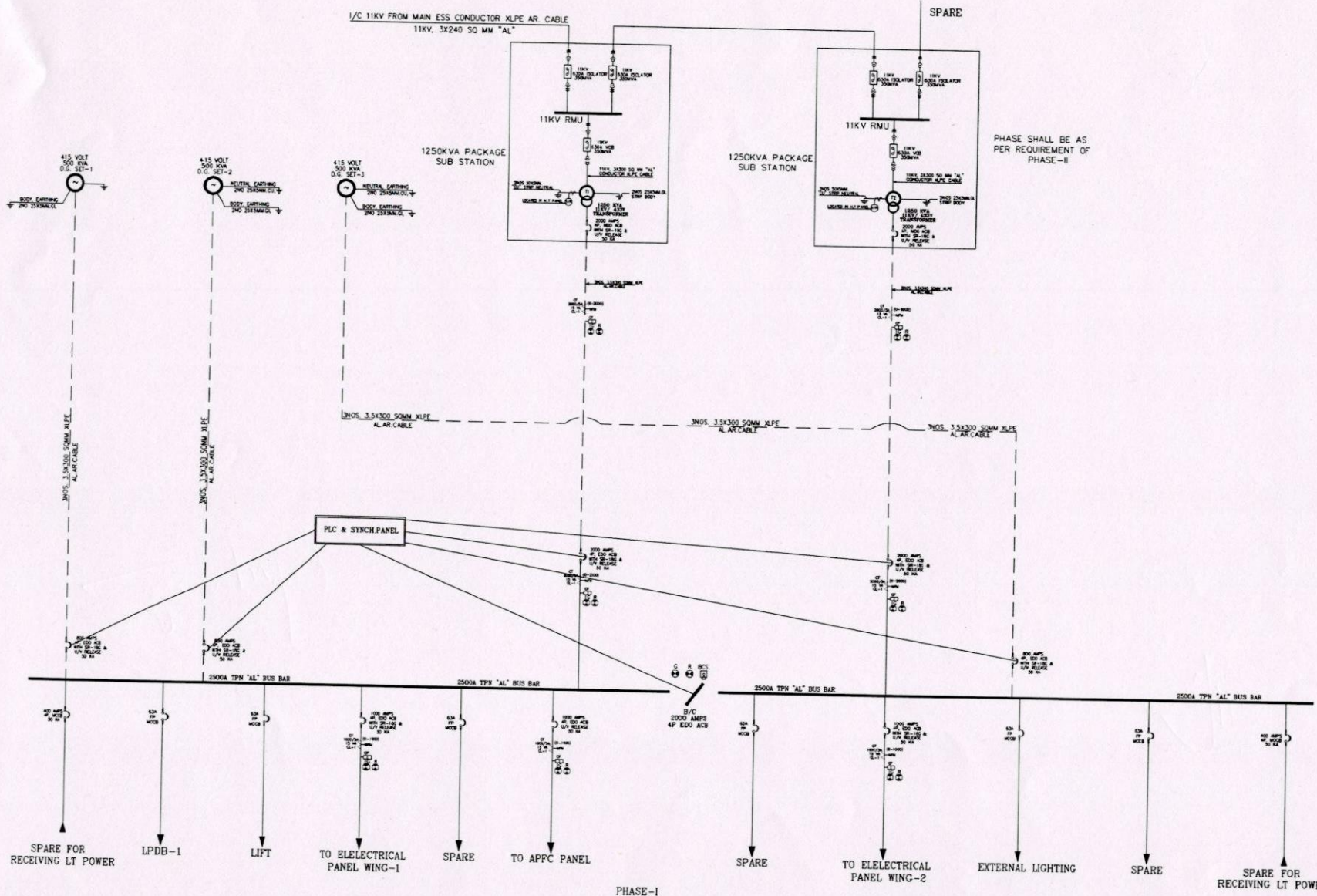
  
R.K Rathore /RCB

  
G.R Agarwal /THSTI

  
Firoz Khan Suri /CEO/OoC.



SLD



S.NO.	DESCRIPTION	SYMBOLS
1	AMMETER	A
2	AMMETER SELECTOR SWITCH	ASS
3	VOLTMETER	V
4	VOLTMETER SELECTOR SWITCH	VSS
5	POWER FACTOR METER	PF
6	FREQUENCY METER	HZ
7	EARTH FAULT RELAY	SFR
8	CURRENT TRANSFORMER	CT
9	PHASE DISCONNECT RELAY	SDR
10	UNDERVOLTAGE RELAY	UVR
11	POTENTIAL TRANSFORMER	PT
12	TRIP	T
13	TRIP NEUTRAL CLOSE	TNC
14	INDICATING LAMP	IL
15	SPRING TYPE	ST
16	WATER TIGHT METER (GROSS W)	WTM
17	WCB	WCB
18	REVERSE POWER RELAY	RPR
19	AUTOMATIC POWER FACTOR CORRECTION RELAY	APFC
20	EARTH FAULT RELAY (INSTANTANEOUS)	SFR
21	INTERLOCKING RELAY	IR
22	MASTER TRIP RELAY	MTR
23	AUXILIARY RELAY	AR
24	OVER CURRENT RELAY (INSTANTANEOUS)	OCR
25	BREAKER OFF GREEN	BOG
26	BREAKER ON RED	BOR
27	BREAKER CONTROL SWITCH	BKS
28	MICROPROCESSOR BASED RELEASE FOR G.C. L.C. & E.F. PROTECTION	MR
29	NEUTRAL ISOLATION CONTACTOR	NIC
30	ELECTRICAL DRAW OUT TYPE	EDT
31	AIR CIRCUIT BREAKER	ACB
32	DIGITAL INVECTION METER WITH MAMBAK LEAKAGE PROTECTION	DM
33	PHASE INDICATING LAMP	PII
34	SPRING CHARGED RED	SCR
35	DC CONTROL SUPPLY HEALTHY RED	CSHR
36	NEUTRAL CONTACTOR OK RED	NOCR
37	OG START PUSH BUTTON GREEN	OSPG
38	OG STOP PUSH BUTTON RED	OSPR
39	EMERGENCY ILLUMINATED PUSH BUTTON RED	EIPBR
40	EMERGENCY STOP PUSH BUTTON	ESPB
41	DC AMMETER	DA
42	DC VOLTMETER	DV
43	TRIPPER	TRP
44	MAN. TEST PUSH BUTTON	MTPB
45	MAN. ACCEPT PUSH BUTTON	MAPB
46	MAN. REED PUSH BUTTON	MRPB

1. WCB - WOUND CASE CIRCUIT BREAKER  
 2. WCB - VACUUM CIRCUIT BREAKER  
 3. EOC - ELECTRICALLY OPERATED DRAW OUT TYPE  
 4. MCO - MANUALLY OPERATED DRAW OUT TYPE

ARCHITECT  
**SURESH GOEL & ASSOCIATES**  
 ARCHITECTS - ENGINEERS - PLANNERS

PROJECT CODE: 080808  
 A4

PROJECT  
 PROPOSED BUILDING PLAN FOR CONSTRUCTION OF HIGH BIOTECH SCIENCE CLUSTER PHASE-1 UNDER THE DEPARTMENT OF BIOTECHNOLOGY, MINISTRY OF SCIENCE AND TECHNOLOGY GOVT. OF INDIA (VILLAGE: BHARATI, HANGA ROAD, HANGA).

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WORKING DRAWING  
 13.6.17

DATE: 13.6.17  
 SHEET NO: 01

SCALE: 1/4" = 1'-0"

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