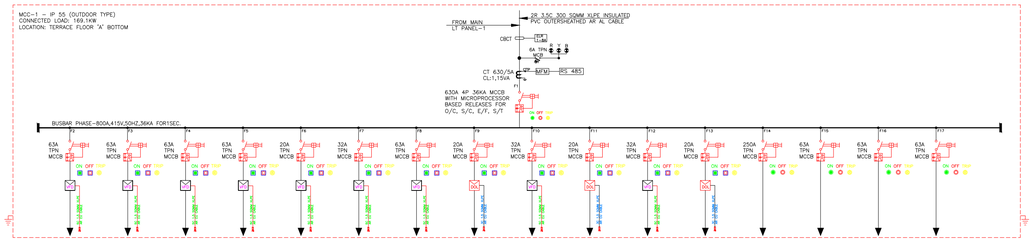
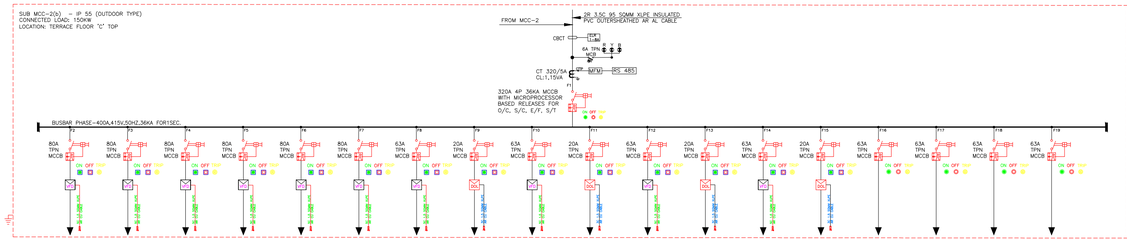


EQP/DES	EAB-1	EAB-2	EAB-3	R EAB-1(RESIDUAL#1)	R EAB-2(RESIDUAL#2)	EAB-4	SCB-1	RECIRCULATION PUMP-1	SCB-3	RECIRCULATION PUMP-3	SCB-2	RECIRCULATION PUMP-2	SCB-4	RECIRCULATION PUMP-4	AIRCOMPRESSOR (4 TOP)	SPARE-1	SPARE-2	SPARE-3
LOAD IN HP	50	20	20	30	20	20	15	2	10	2	10	2	7.5	2	15			
LOAD IN KW	22	15	15	22	15	15	11.2	1.5	7.5	1.5	7.5	1.5	5.5	1.5	15			
CABLE SIZE	3.5C 25 SQMM XLPE PVC AR AL CABLE	3.5C 25 SQMM XLPE PVC AR AL CABLE	3.5C 25 SQMM XLPE PVC AR AL CABLE	3.5C 25 SQMM XLPE PVC AR AL CABLE	3.5C 25 SQMM XLPE PVC AR AL CABLE	3.5C 25 SQMM XLPE PVC AR AL CABLE	4C 6 SQMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	3C 6 SQMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	3C 6 SQMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	3C 4 SQMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	4C 10 SQMM XLPE PVC AR CU CABLE			



EQP/DES	EAB-13	EAB-18	R EAB-7(RESIDUAL#7)	R EAB-8(RESIDUAL#8)	EAB-14	EAB-15	SCB-13	RECIRCULATION PUMP-13	SCB-14	RECIRCULATION PUMP-14	SCB-15	RECIRCULATION PUMP-15	SUB MCC-1(a)	SPARE-1	SPARE-2	SPARE-3
LOAD IN HP	10	15	10	15	2	7.5	10	2	7.5	2	7.5	2	–			
LOAD IN KW	7.5	11.2	7.5	11.2	2.2	5.5	7.5	1.5	5.5	1.5	5.5	1.5	119.7			
CABLE SIZE	3C 6.5QMM XLPE PVC AR CU CABLE	3C 6.5QMM XLPE PVC AR CU CABLE	3C 6.5QMM XLPE PVC AR CU CABLE	3C 6.5QMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	3C 6.5QMM XLPE PVC AR CU CABLE	3C 6.5QMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	3C 4 SQMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	3C 4 SQMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	2R 3.5C 70 SQMM XLPE PVC AR AL CABLE			



EQP/DES	EAB-5	EAB-7	EAB-8	EAB-6	R EAB-3(RESIDUAL#3)	R EAB-4(RESIDUAL#4)	SCB-5	RECIRCULATION PUMP-5	SCB-6	RECIRCULATION PUMP-6	SCB-7	RECIRCULATION PUMP-7	SCB-8	RECIRCULATION PUMP-8	AIRCOMPRESSOR (3 TOP)	SPARE-1	SPARE-2	SPARE-3
LOAD IN HP	20	20	30	20	20	30	15	2	10	2	15	2	15	2				
LOAD IN KW	15	15	22	15	15	22	11.2	1.5	7.5	1.5	11.2	1.5	11.2	1.5	7.5			
CABLE SIZE	3C 16 SQMM XLPE PVC AR AL CABLE	3C 16 SQMM XLPE PVC AR AL CABLE	3.5C 25 SQMM XLPE PVC AR AL CABLE	3C 16 SQMM XLPE PVC AR AL CABLE	3C 16 SQMM XLPE PVC AR AL CABLE	3.5C 25 SQMM XLPE PVC AR AL CABLE	4C 6 SQMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	3C 6 SQMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	3C 6 SQMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	3C 6 SQMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	4C 6 SQMM XLPE PVC AR CU CABLE			



EQP/DES	EAB-17	EAB-19	EAB-20	EAB-19	R EAB-9(RESIDUAL#9)	R EAB-10(RESIDUAL#10)	SCB-17	RECIRCULATION PUMP-17	SCB-16	RECIRCULATION PUMP-16	SCB-18	RECIRCULATION PUMP-18	SUB MCC-2(a)	SUB MCC-2(b)	SPARE-1	SPARE-2	SPARE-3
LOAD IN HP	15	10	10	3	15	10	15	2	10	2	9	2	–	–			
LOAD IN KW	11.2	7.5	7.5	2.2	11.2	7.5	11.2	1.5	7.5	1.5	3.7	1.5	121.6	150			
CABLE SIZE	4C 6.5QMM XLPE PVC AR CU CABLE	3C 6.5QMM XLPE PVC AR CU CABLE	3C 6.5QMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	4C 6.5QMM XLPE PVC AR CU CABLE	4C 6.5QMM XLPE PVC AR CU CABLE	3C 6.5QMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	3C 6.5QMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	3C 4 SQMM XLPE PVC AR CU CABLE	3C 2.5 SQMM XLPE PVC AR CU CABLE	2R 3.5C 70 SQMM XLPE PVC AR AL CABLE	2R 3.5C 95 SQMM XLPE PVC AR AL CABLE			

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5. THIS DRAWING IS FOR SERVICES ONLY, SEE ARCHITECTURAL DRAWINGS FOR BUILDING DETAILS.
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8. REFER SPECIFICATION FOR DETAILS NOT GIVEN IN DRAWINGS.

LEGEND FOR LT SIDE

CBCT	CORE BALANCE CURRENT TRANSFORMER
	PHASE INDICATING LAMPS
	CURRENT TRANSFORMER
ELR	EARTH LEAKAGE RELAY
EFR	EARTH FAULT RELAY
MDC	MAXIMUM DEMAND CONTROLLER
MFM	MULTI FUNCTION METER
	MINIATURE CIRCUIT BREAKER
	MOULDED CASE CIRCUIT BREAKER
DOL	DIRECT ONLINE STARTER
	STAR DELTA STARTER
PB	PUSH BUTTON
	ON/OFF/TRIP ILLUMINATED INDICATORS
	VARIABLE FREQUENCY DRIVE

CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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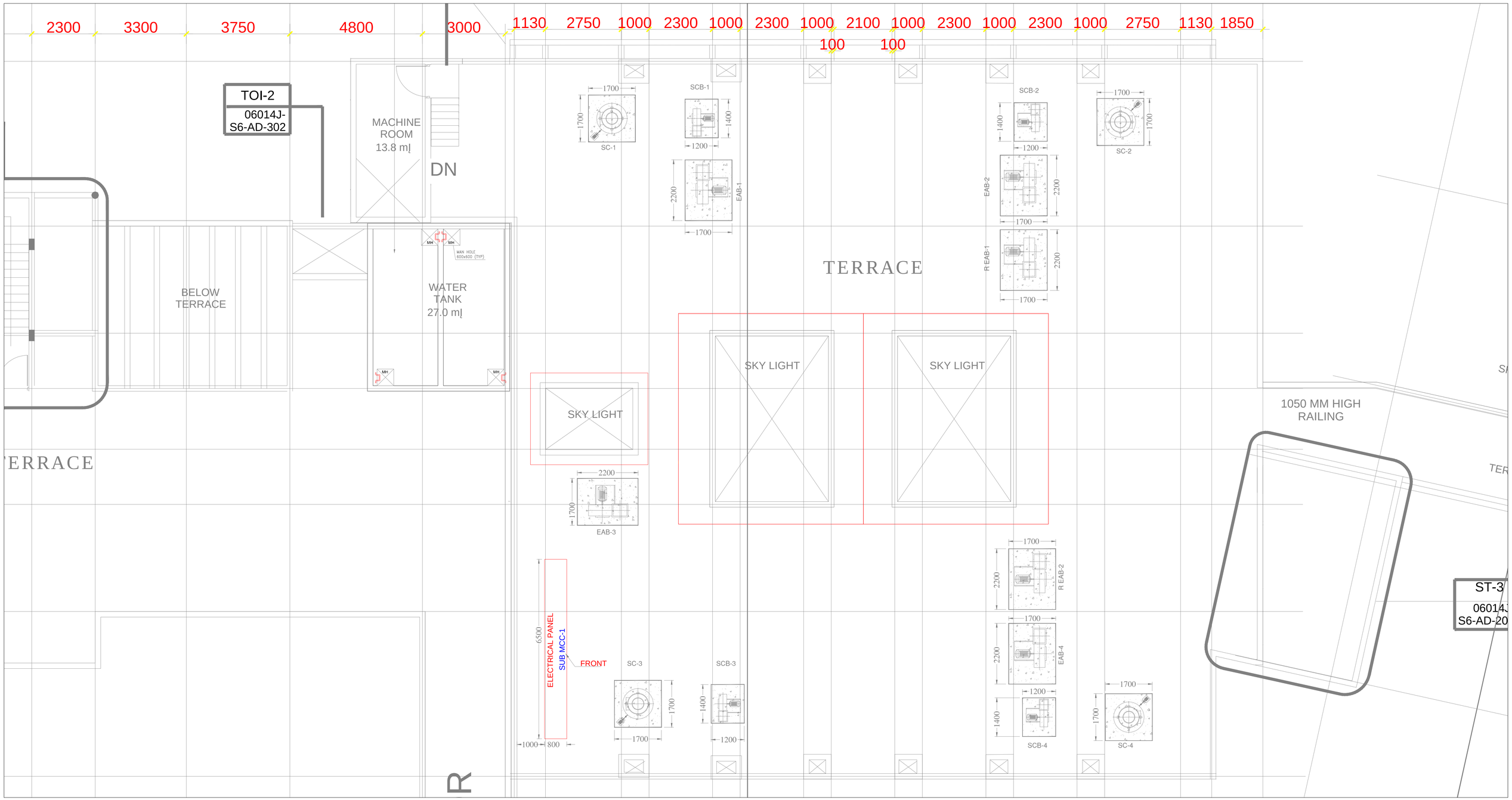
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ – 324
DWG NO:	ELE– 2400
SCALE	NTS

DRAWING TITLE:

ELECTRICAL SLD

DRAWING STATUS : TENDER DRAWING



KEYPLAN

TERRACE FLOOR

CLIENT:

Indian Institute of Science
Bangalore

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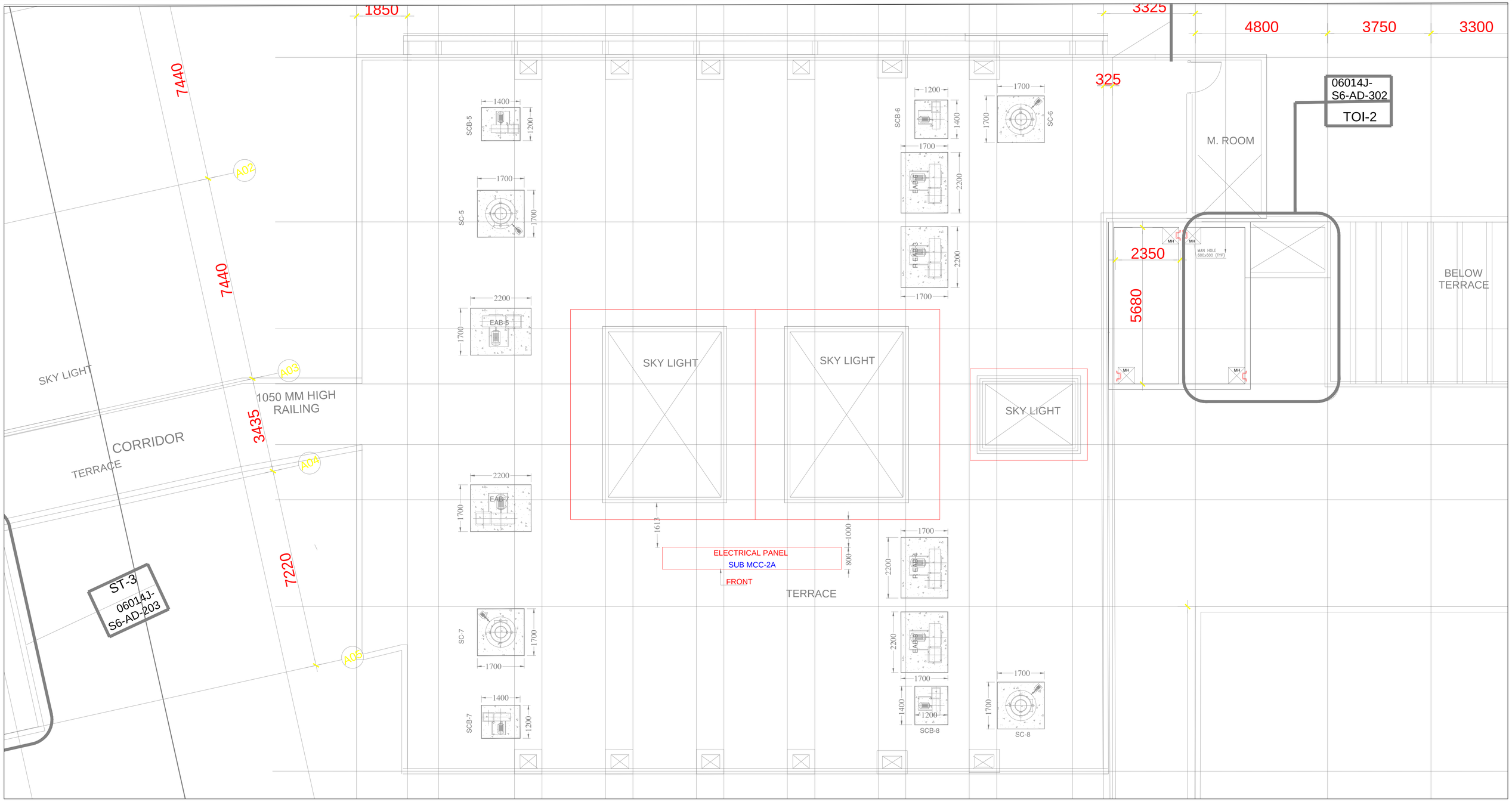
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2411(a)
SCALE	NTS

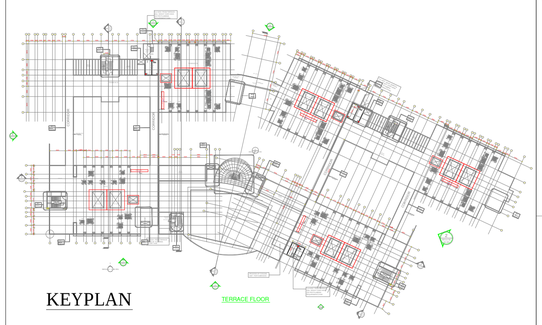
DRAWING TITLE:

SUB MCC-1 PANEL LOCATION LAYOUT
'A' TOP TERRACE FLOOR

DRAWING STATUS : TENDER DRAWING



KEYPLAN



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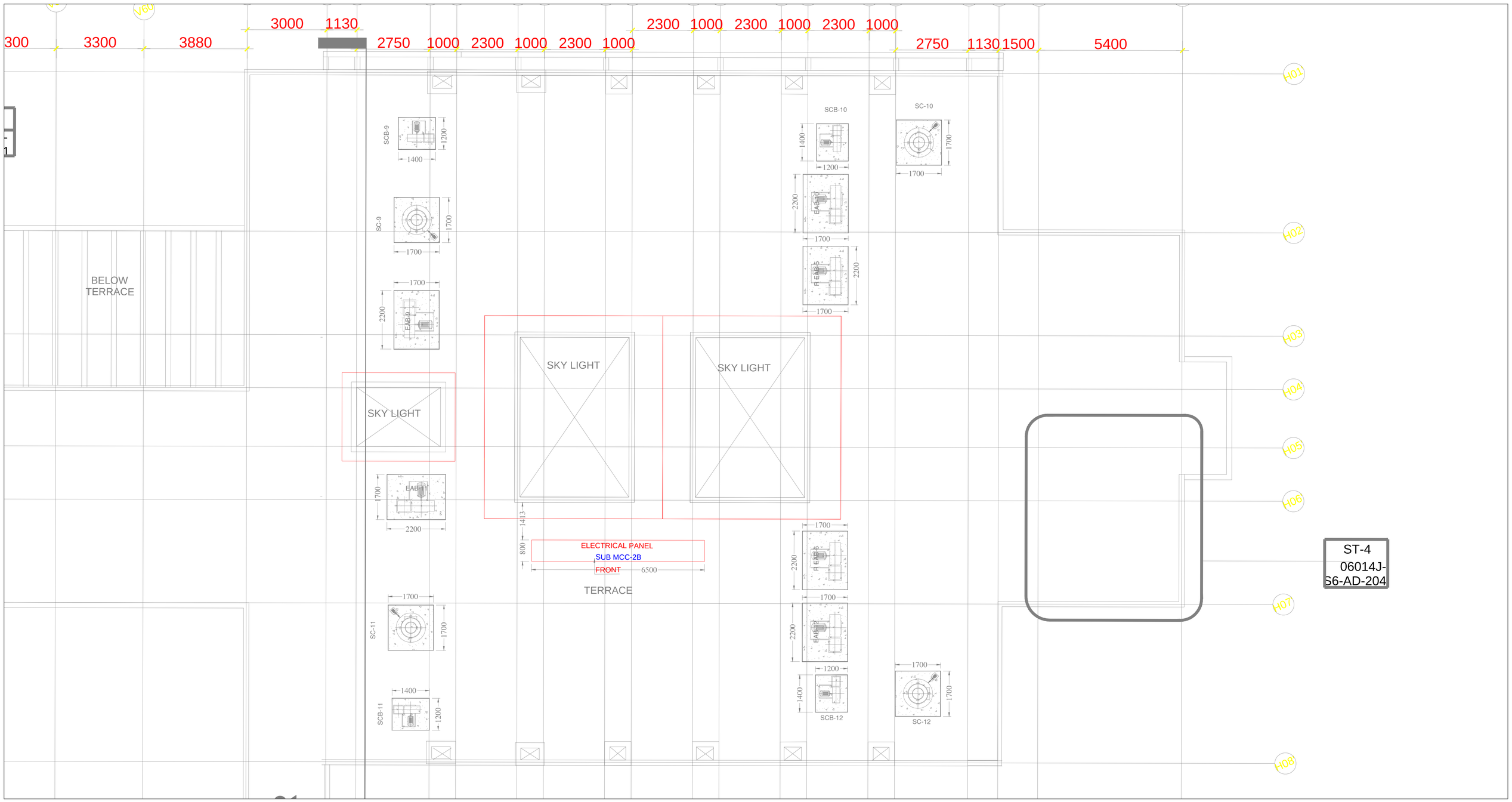
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2411(b)
SCALE	NTS

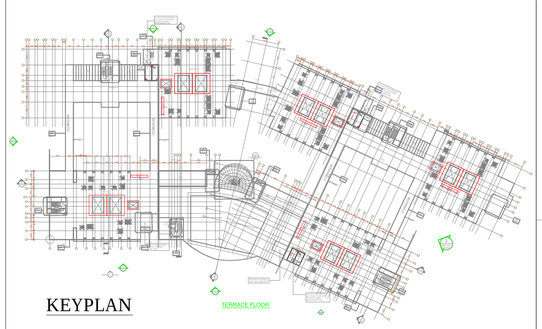
DRAWING TITLE:

SUB MCC-2a PANEL LOCATION LAYOUT
'B' TOP TERRACE FLOOR

DRAWING STATUS : TENDER DRAWING



KEYPLAN



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DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2411(c)
SCALE	NTS

DRAWING TITLE:

SUB MCC-2b PANEL LOCATION LAYOUT
'C' TOP TERRACE FLOOR

DRAWING STATUS : TENDER DRAWING

TERRACE

TERRACE

BELOW
TERRACE

SC-13
1700
1700

1400
1200
SCB-14

1500
800
ELECTRICAL PANEL
MCC-1
FRONT

EAB-13
1200
1400

SCB-13
1200
1400

R EAB-7
1200
1400

EAB-14
1200
1400

1700
1700
SC-14

SKY LIGHT

SKY LIGHT

SKY LIGHT

2200

MACHINE
ROOM
Not Enclosed

EAB-15
1200
1400

R EAB-8
1700
2200

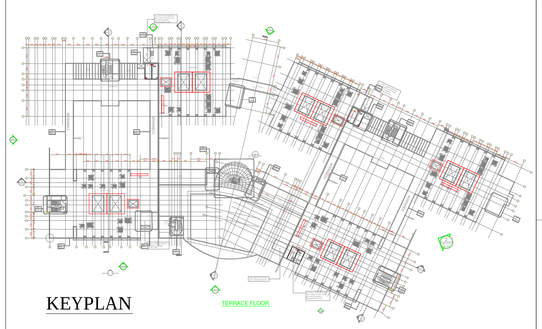
1400
1200
SCB-15

2200
1700
EAB-16

1700
1700
SC-15

A11

KEYPLAN



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CHEMICAL SCIENCES BUILDING.

Architect:

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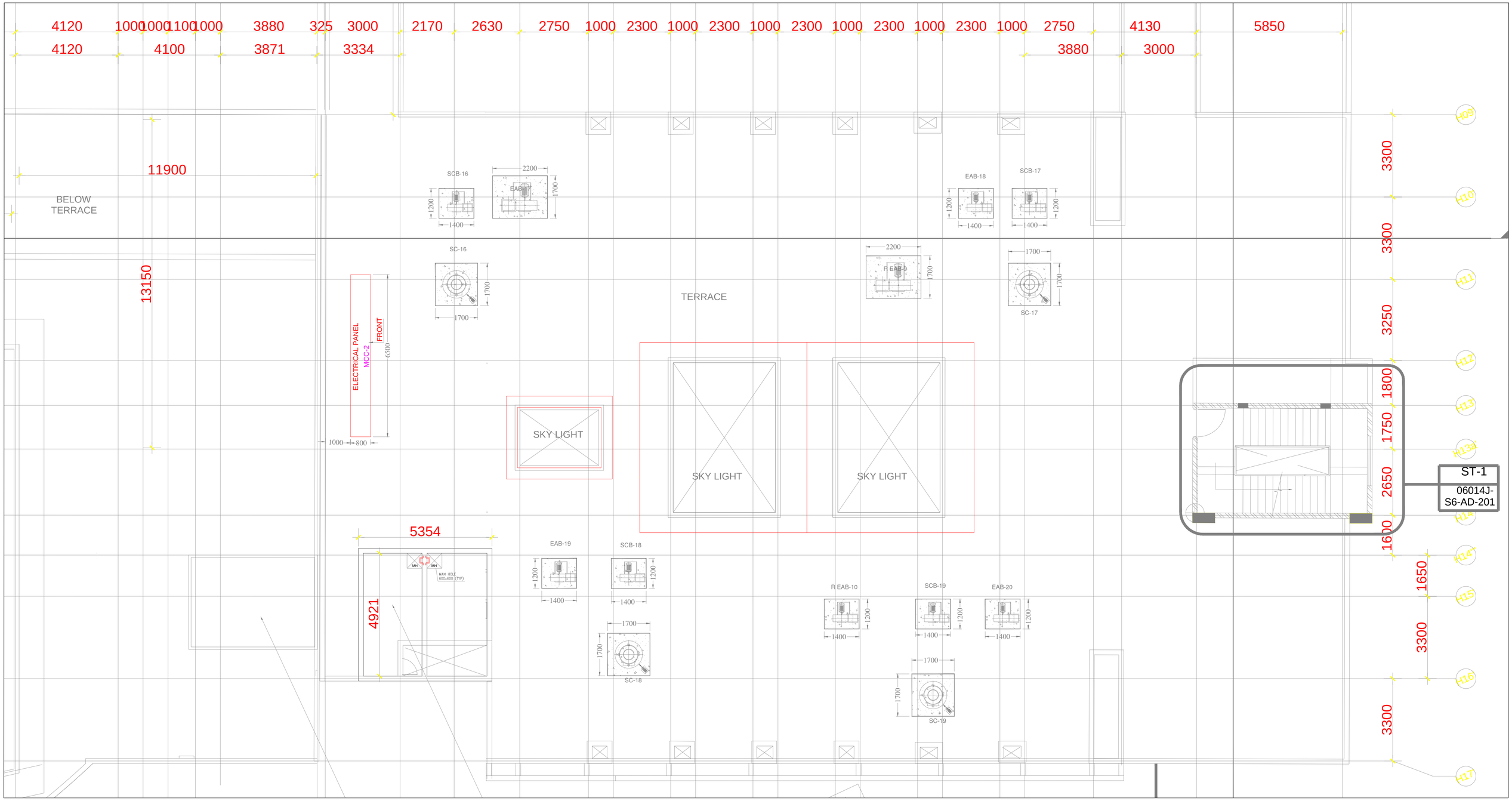
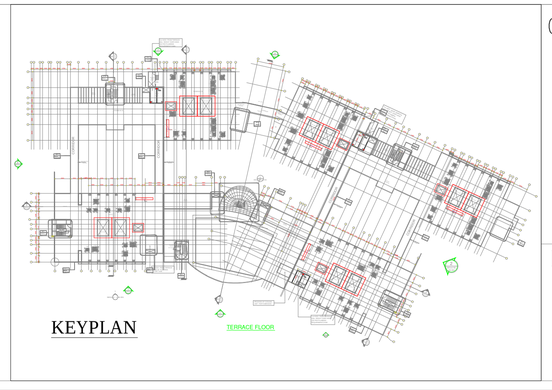
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2411(d)
SCALE	NTS

DRAWING TITLE:

MCC-1 PANEL LOCATION LAYOUT
'A' BOTTOM TERRACE FLOOR

DRAWING STATUS : TENDER DRAWING





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PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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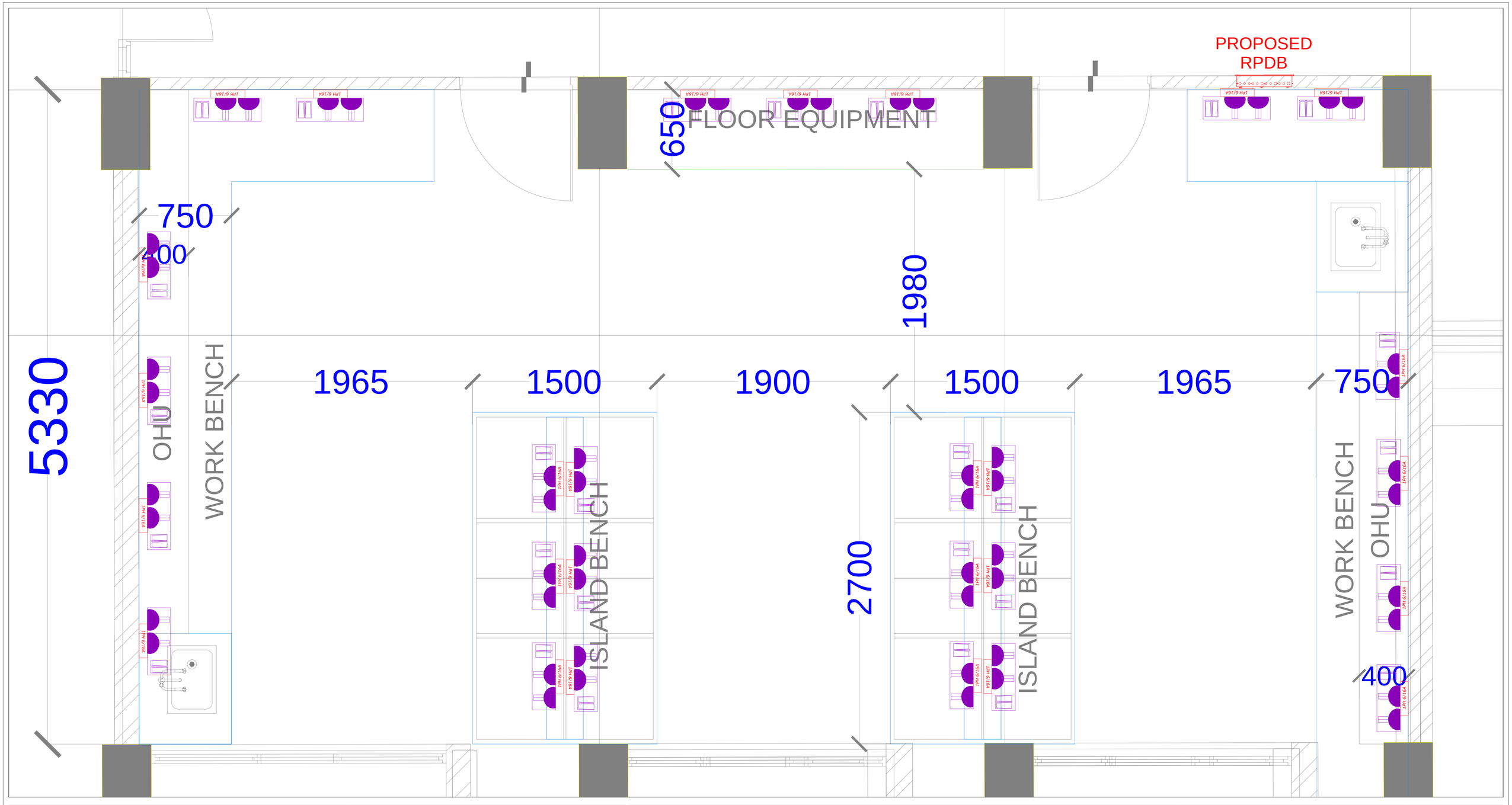
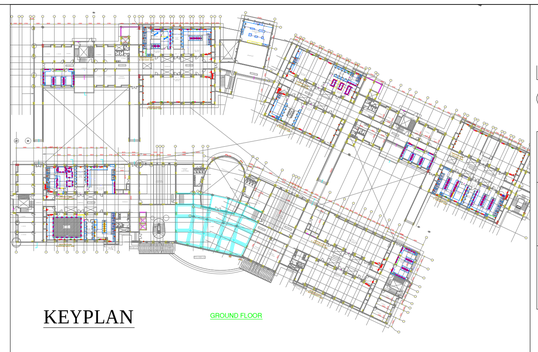
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2411(e)
SCALE	NTS

DRAWING TITLE:

MCC-2 PANEL LOCATION LAYOUT
'C' BOTTOM TERRACE FLOOR

DRAWING STATUS : TENDER DRAWING





KEYPLAN

GROUND FLOOR

LEGEND(GF A–TOP, COMMON INSTRUMENTATION):

SL. NO	SYMBOL	DESCRIPTION	QTY
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	27
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	--

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INDIAN INSTITUTE OF SCIENCE, BANGALORE.

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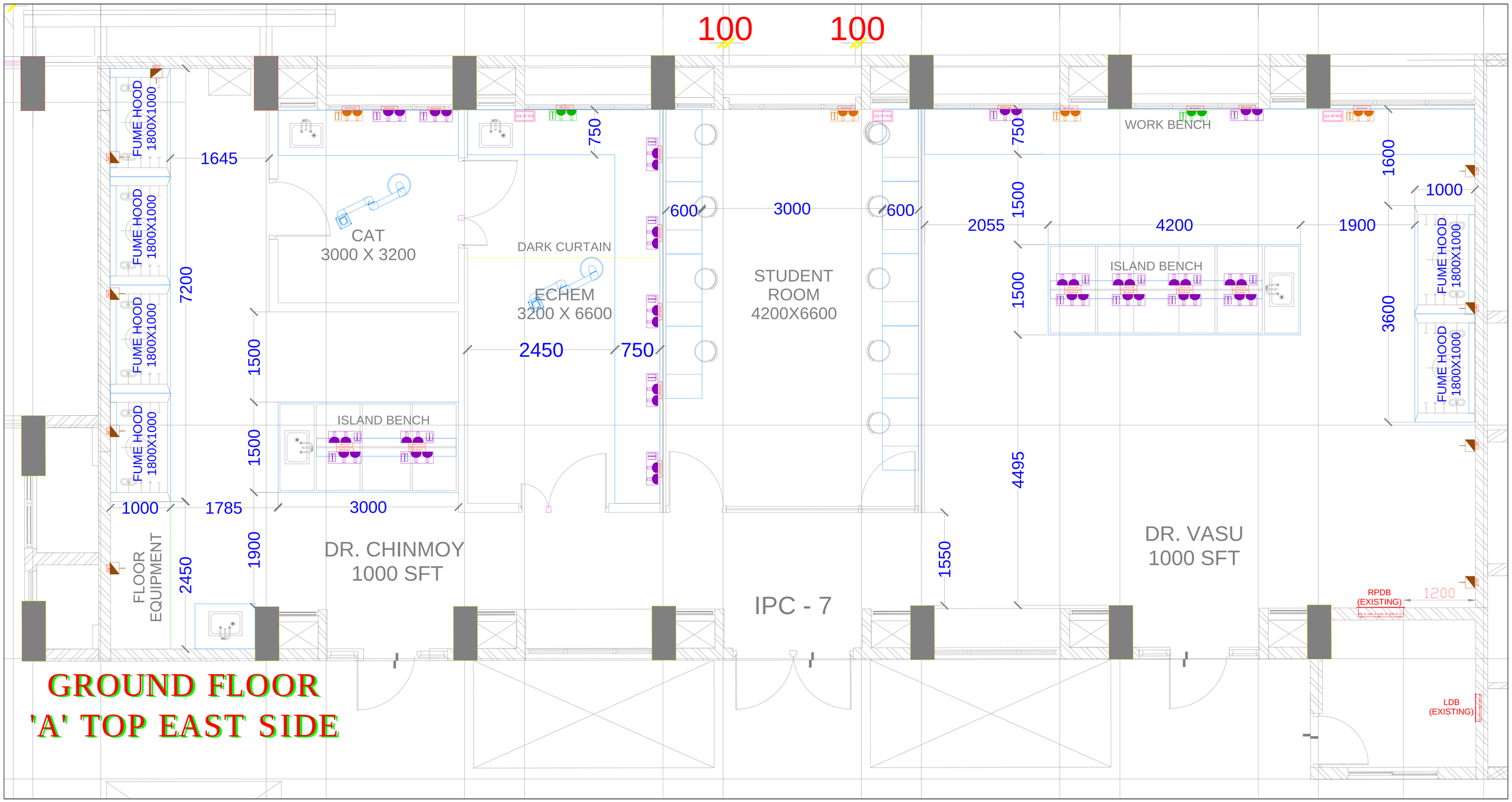
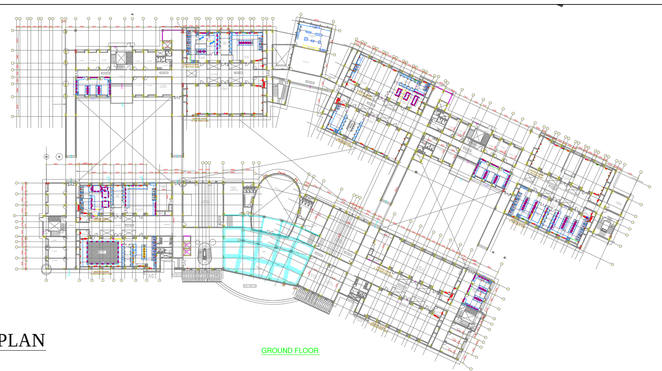
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2441 (a)
SCALE	NTS

DRAWING TITLE:

POWER LAYOUT FOR 'A' TOP COMMON INSTRUMENTATION ROOM AT GF

DRAWING STATUS : TENDER DRAWING





KEYPLAN

LEGEND(EXISTING POWER SOCKETS):

SL.NO	SYMBOL	DESCRIPTION
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
03		20A 1PHASE 3PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 20A SP MCB
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB
05	20A DP MCB	RAW POWER OF 20A DP MCB WITH ENCLOSURE

LEGEND(GF IPC–7,DR.CHINMOY & DR.VASU):

SL. NO	SYMBOL	DESCRIPTION	QTY
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	19
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	--

CLIENT:

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INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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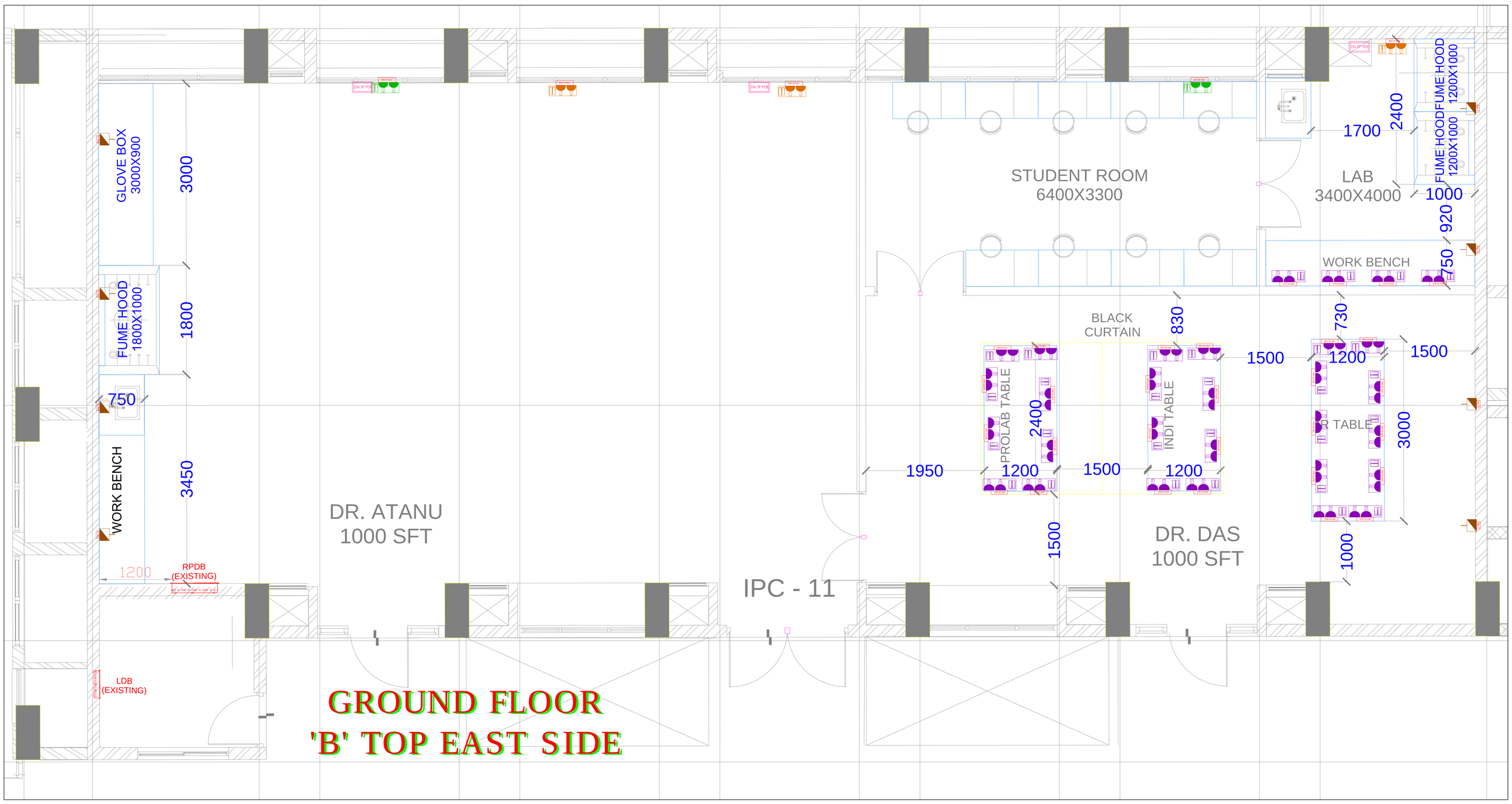
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2441(b)
SCALE	NTS

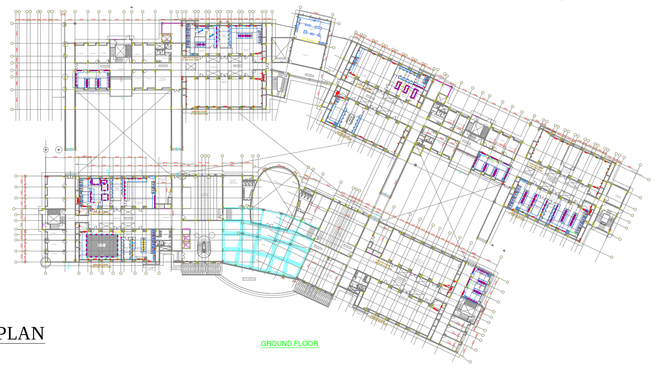
DRAWING TITLE:

POWER LAYOUT FOR IPC-7 AT GF
'A' TOP EAST SIDE

DRAWING STATUS : TENDER DRAWING



KEYPLAN



LEGEND(EXISTING POWER SOCKETS):

SL.NO	SYMBOL	DESCRIPTION
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
03		20A 1PHASE 3PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 20A SP MCB
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB
05	20A DP MCB	RAW POWER OF 20A DP MCB WITH ENCLOSURE

LEGEND(GF,IPC–11,DR.ATANU & DR.DAS.):

SL. NO	SYMBOL	DESCRIPTION	QTY
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	17
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	--

CLIENT:

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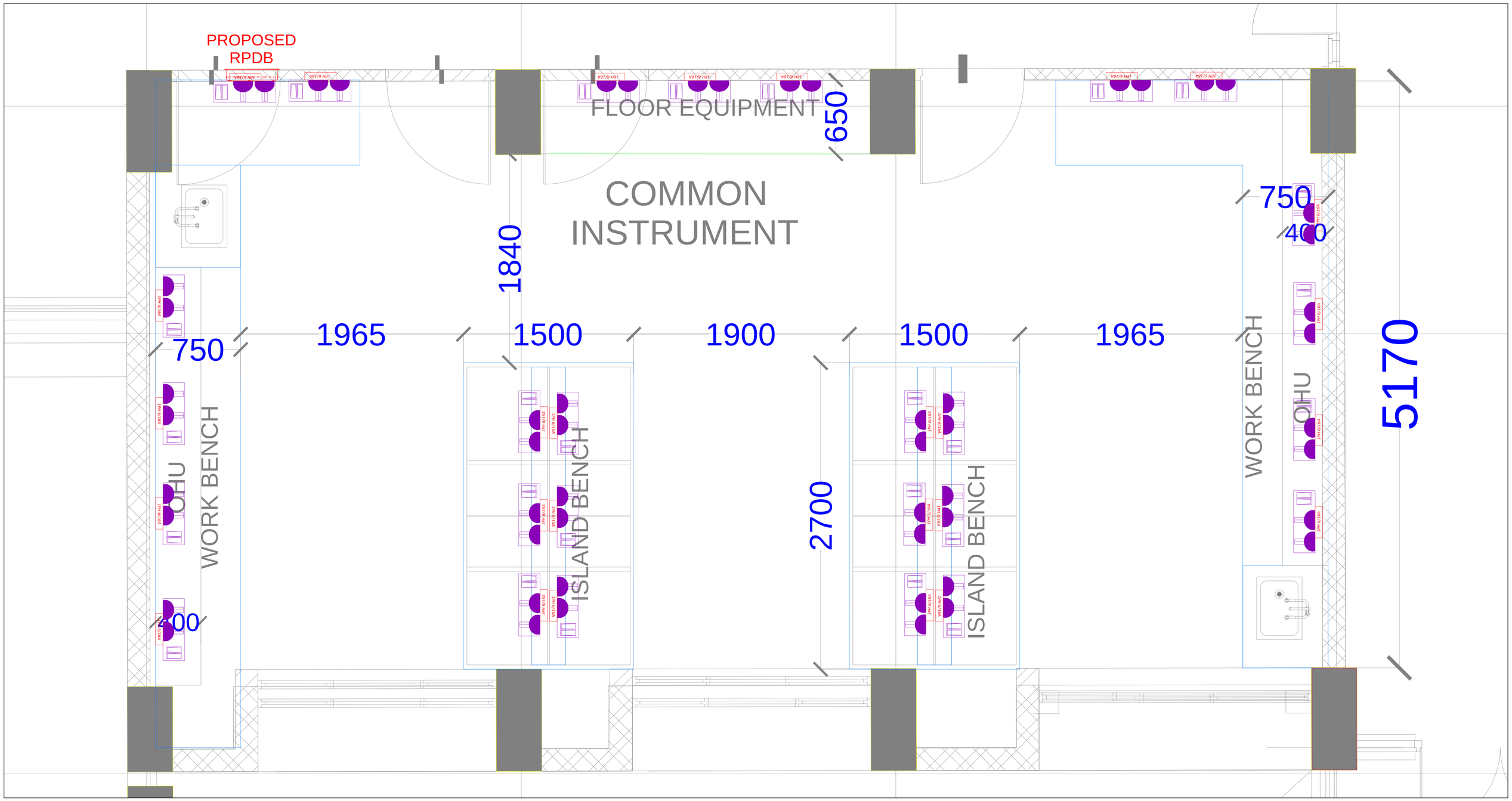
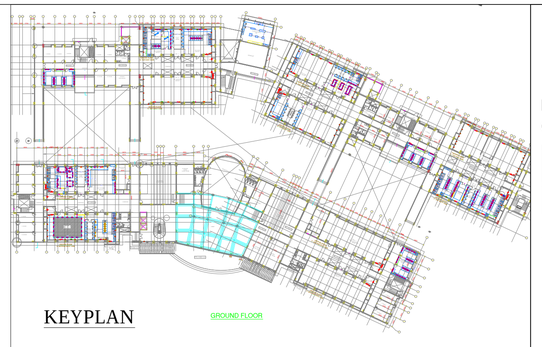
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2441(d)
SCALE	NTS

DRAWING TITLE:

POWER LAYOUT FOR IPC-11 AT GF
'B' TOP EAST SIDE

DRAWING STATUS : TENDER DRAWING





KEYPLAN

LEGEND(GF C-TOP, COMMON INSTRUMENTATION):

SL. NO	SYMBOL	DESCRIPTION	QTY
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	27
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	--

CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
#701, Brigade Rubix, 20 HMT main road
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TEL - 80- 43728155

Consultant:

M J ASSOCIATES
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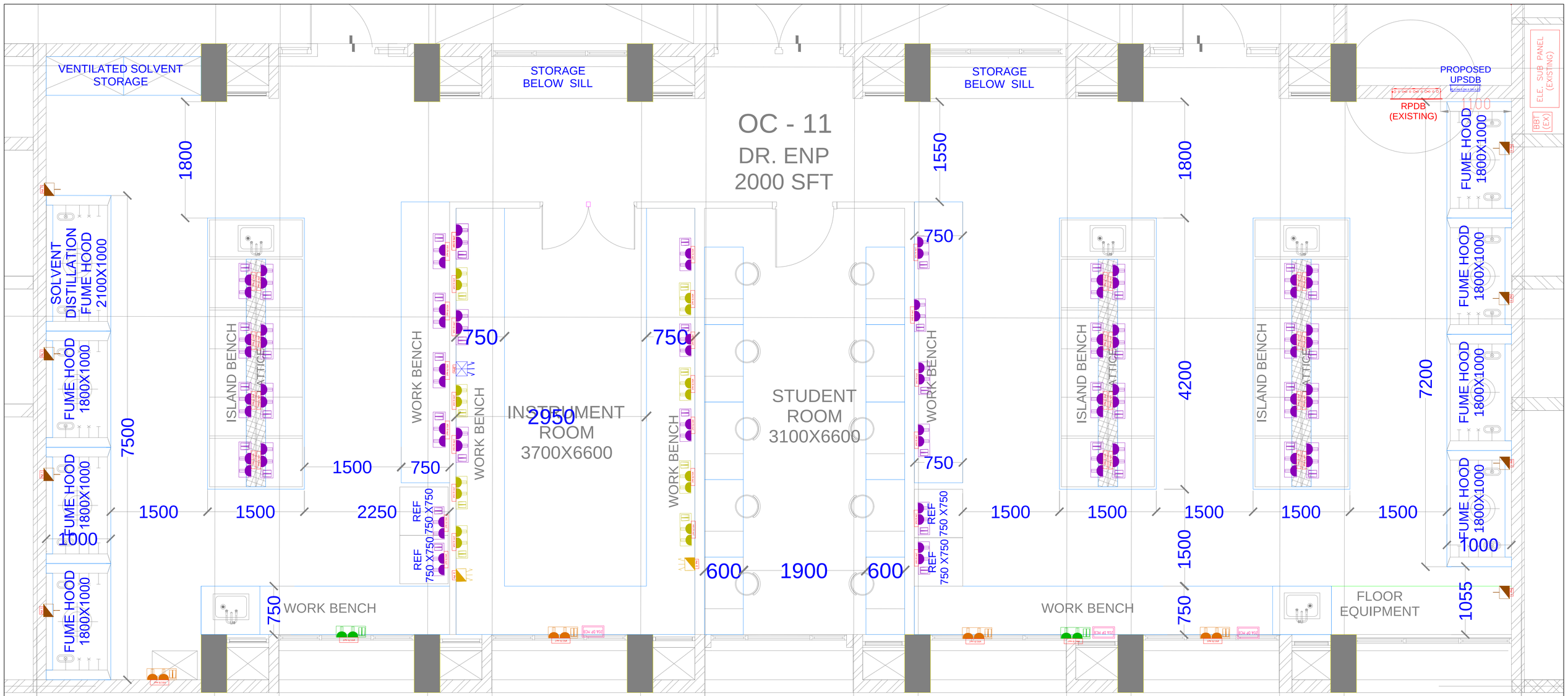
Tele:-22284583,22204636
E-mail:-projects@mjassociates.in/www.mjassociates.in

DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2441 (f)
SCALE	NTS

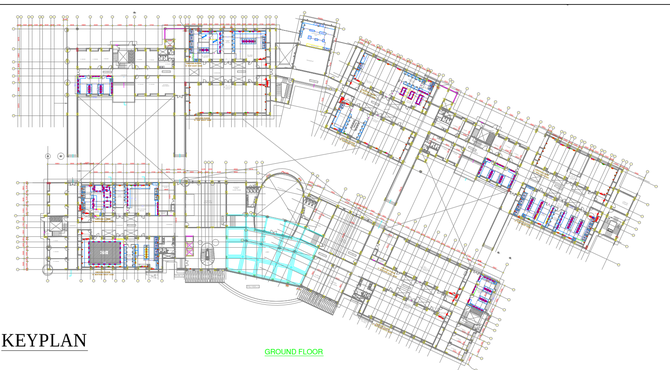
DRAWING TITLE:

POWER LAYOUT FOR 'C' TOP COMMON INSTRUMENTATION ROOM AT GF

DRAWING STATUS : TENDER DRAWING



GROUND FLOOR
'C' TOP WEST SIDE



KEYPLAN

LEGEND(EXISTING POWER SOCKETS):

SL.NO	SYMBOL	DESCRIPTION
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
03		20A 1PHASE 3PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 20A SP MCB
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB
05	20A DP MCB	RAW POWER OF 20A DP MCB WITH ENCLOSURE

LEGEND(GF,OC11,DR.ENP.):

SL. NO	SYMBOL	DESCRIPTION	QTY
01		1NO OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 16A SWITCH	--
02		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	43
03		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	08
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB WITH METAL BACKBOX	02
05		32A 3PHASE 5PIN UPS INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB WITH METAL BACKBOX	01

CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

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Architect:

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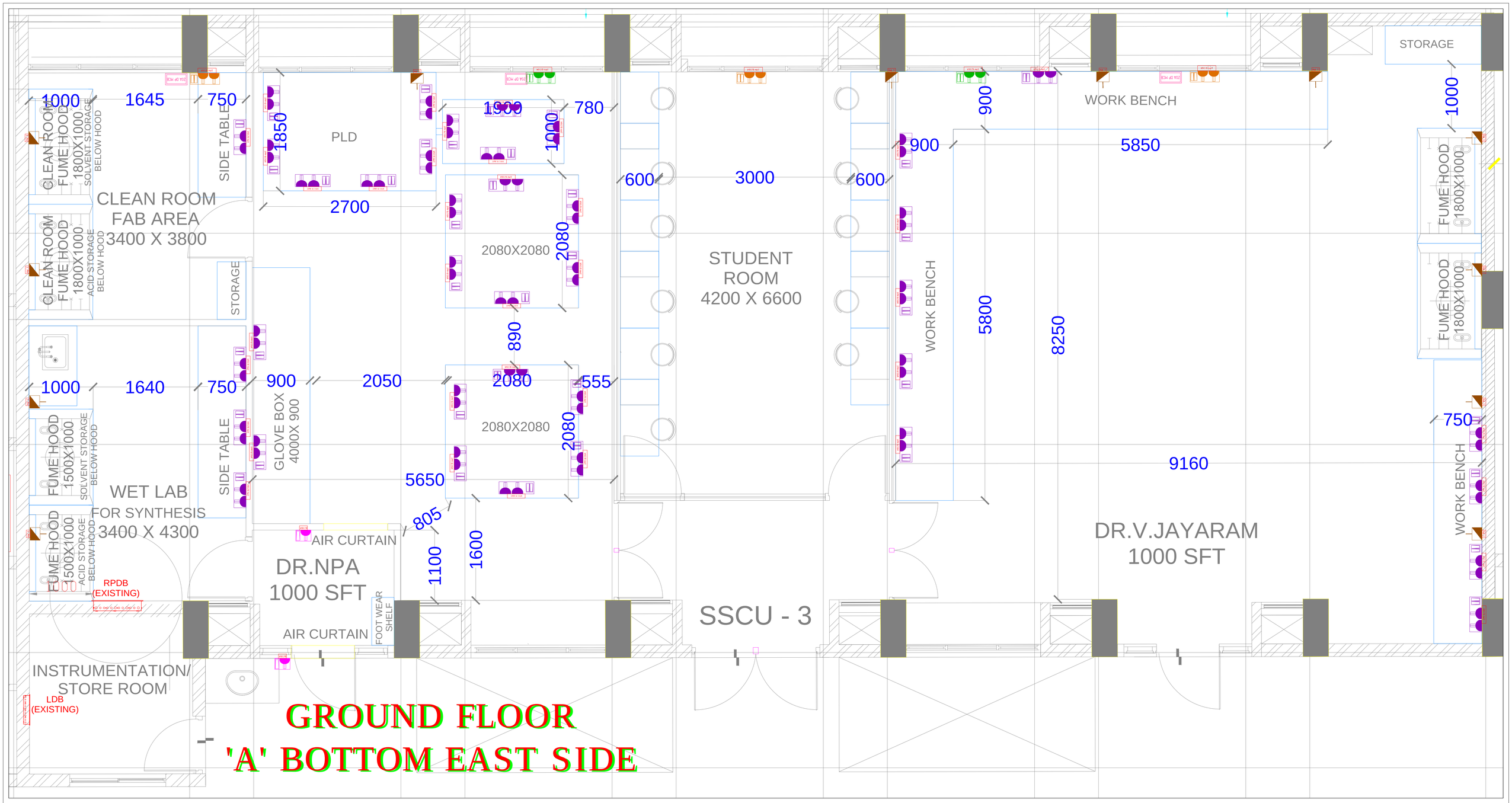
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2441 (h)
SCALE	NTS

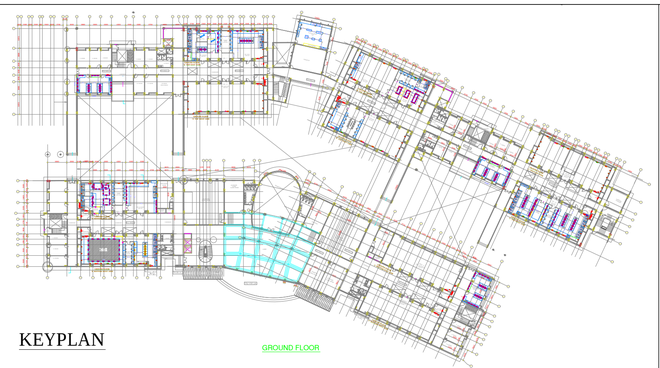
DRAWING TITLE:

POWER LAYOUT FOR OC-11 AT GF
'C' TOP WEST SIDE

DRAWING STATUS : TENDER DRAWING



KEYPLAN



LEGEND(EXISTING POWER SOCKETS):

SL.NO	SYMBOL	DESCRIPTION
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
03		20A 1PHASE 3PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 20A SP MCB
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB
05		RAW POWER OF 20A DP MCB WITH ENCLOSURE

LEGEND(GF SSCU–3, DR.NPA & DR.JAYARAM):

SL. NO	SYMBOL	DESCRIPTION	QTY
01		1NO OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 16A SWITCH	02
02		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	38
03		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	--

CLIENT:

Indian Institute of Science Bangalore

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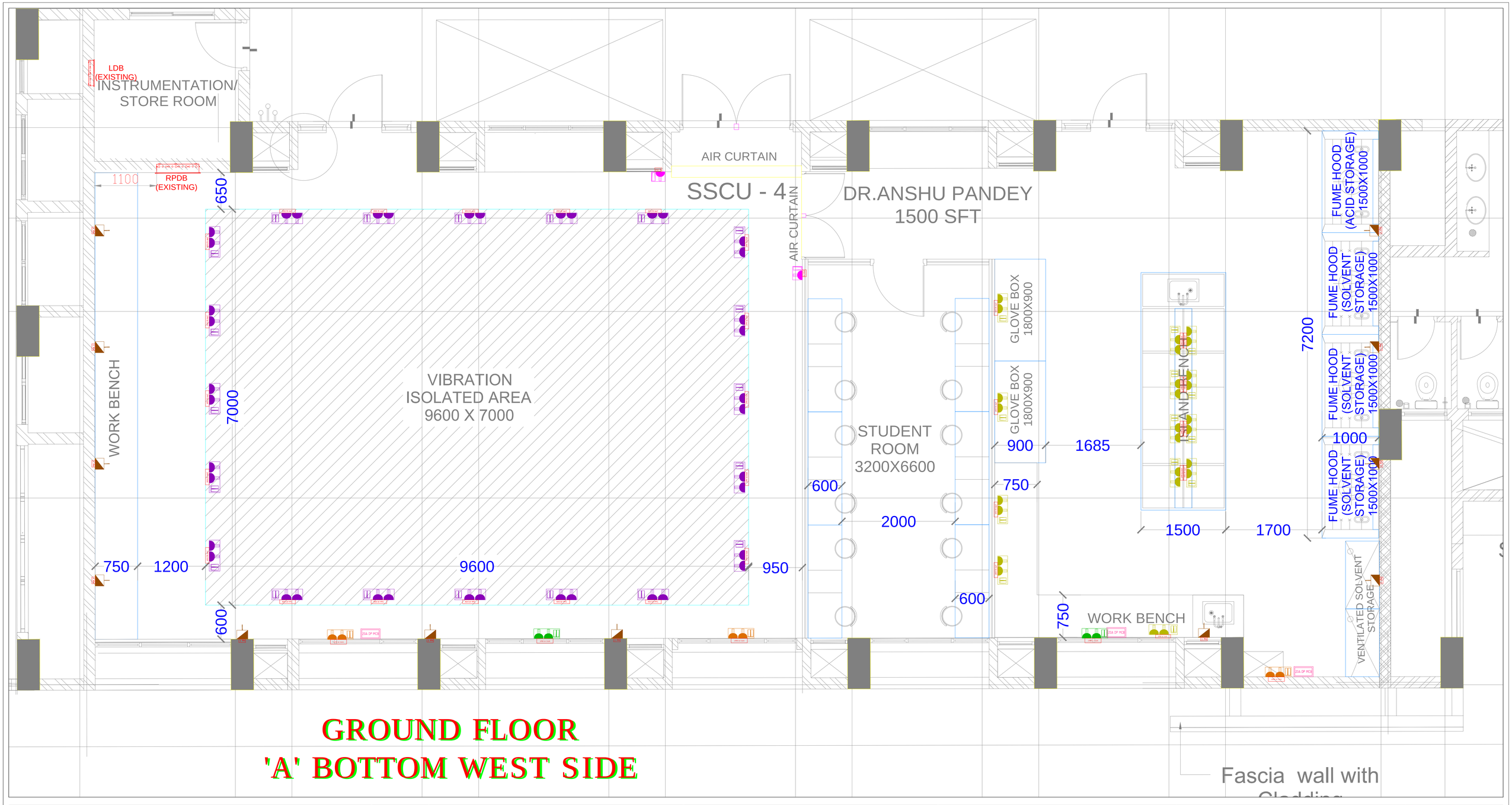
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2441 (j)
SCALE	NTS

DRAWING TITLE:

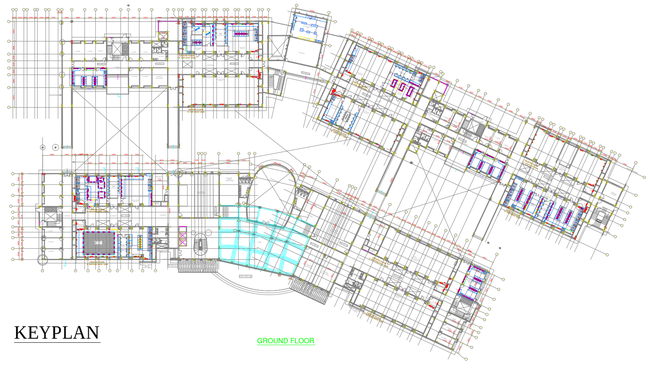
POWER LAYOUT FOR SSCU-3 AT GF 'A' BOTTOM EAST SIDE

DRAWING STATUS : TENDER DRAWING



GROUND FLOOR
'A' BOTTOM WEST SIDE

KEYPLAN



GROUND FLOOR

LEGEND(EXISTING POWER SOCKETS):

SL.NO	SYMBOL	DESCRIPTION
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
03		20A 1PHASE 3PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 20A SP MCB
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB
05	20A DP MCB	RAW POWER OF 20A DP MCB WITH ENCLOSURE

LEGEND(GF SSCU-4, DR.ANSHU PANDEY):

SL. NO	SYMBOL	DESCRIPTION	QTY
01		1NO OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 16A SWITCH	02
02		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	20
03		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	13

CLIENT:

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DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2441 (k)
SCALE	NTS

DRAWING TITLE:

POWER LAYOUT FOR SSCU-4 AT GF 'A' BOTTOM WEST SIDE

DRAWING STATUS : TENDER DRAWING

5340

OHU

WORK BENCH

5349

750

400

1745

ISLAND BENCH

1500

650

2000

COMMON INSTRUMENT ROOM

1750

9650

2700

9750

EQUIPMENT

ISLAND BENCH

1500

1750

PROPOSED RPDB

750

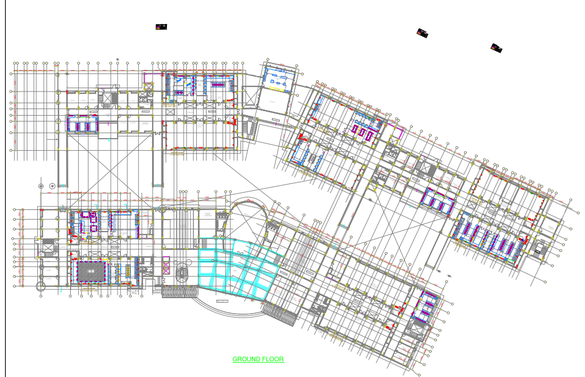
WORK BENCH

OHU

400

1PH 6/16A

KEYPLAN



LEGEND(GF C–BOTTOM, COMMON INSTRUMENTATION):

SL. NO	SYMBOL	DESCRIPTION	QTY
01	1PH 6/16A	2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	27
02	1PH 6/16A	2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	--

CLIENT:

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PROJECT:

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Architect:

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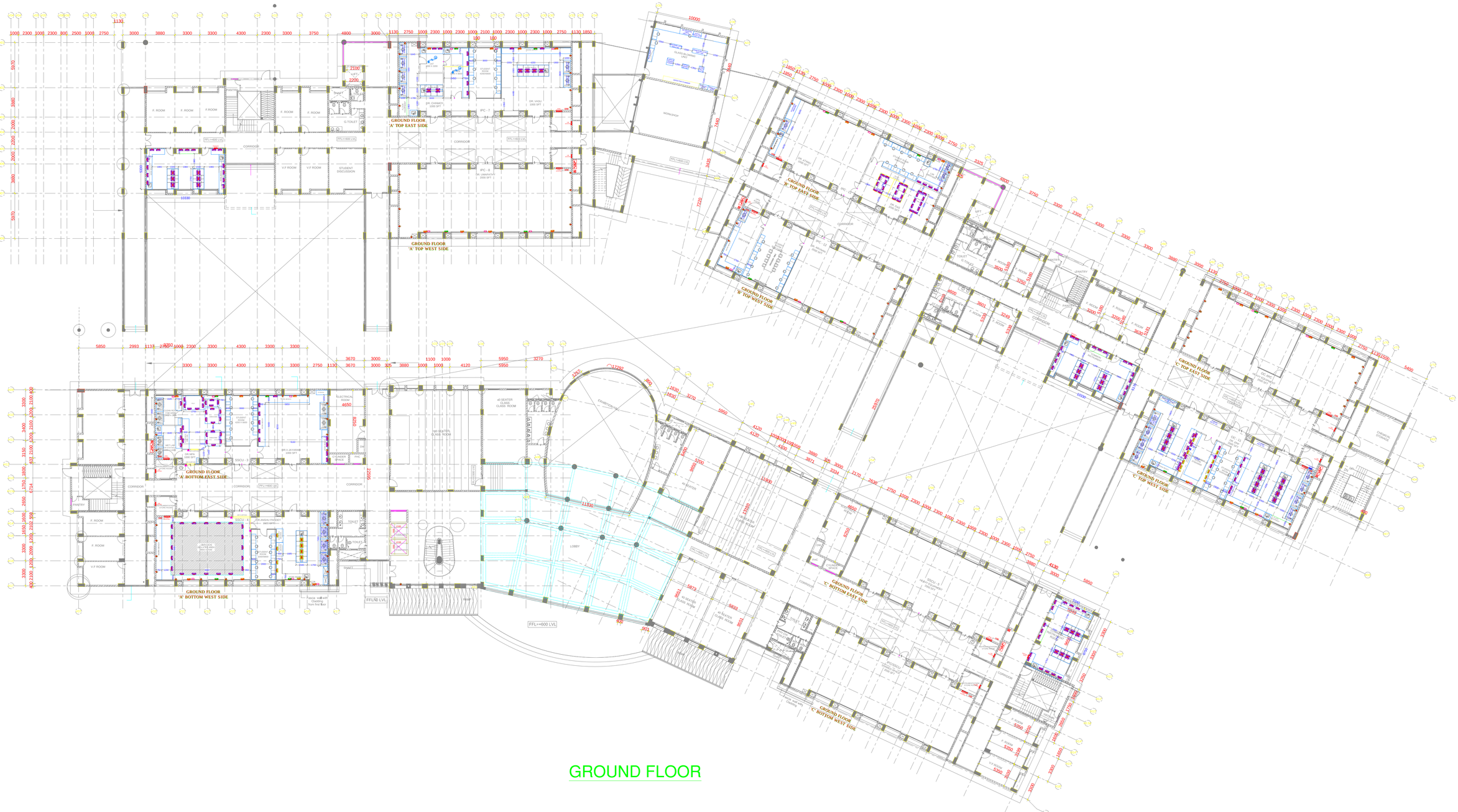
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2441(n)
SCALE	NTS

DRAWING TITLE:

GROUND FLOOR 'C' BOTTOM INSTRUMENTATION ROOM POWER LAYOUT

DRAWING STATUS : TENDER DRAWING



LEGEND(EXISTING POWER SOCKETS):

SL.NO	SYMBOL	DESCRIPTION
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
03		20A 1PHASE 3PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 20A SP MCB
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB
05		RAW POWER OF 20A DP MCB WITH ENCLOSURE

LEGEND(COMMON TO ALL LABS):

SL. NO	SYMBOL	DESCRIPTION
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH

CLIENT:

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PROJECT:

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Architect:

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DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2441
SCALE	NTS

DRAWING TITLE:

POWER LAYOUT FOR GROUND FLOOR

DRAWING STATUS : TENDER DRAWING

PROPOSED
RPDB

FLOOR EQUIPMENT

650

COMMON
INSTRUMENT
ROOM

1980

5330

750

400

1965

1500

1900

1500

1965

750

WORK BENCH

OHU

ISLAND BENCH

2700

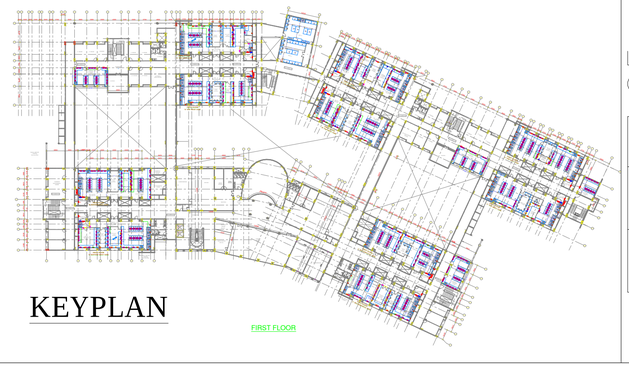
ISLAND BENCH

WORK BENCH

OHU

400

KEYPLAN



FIRST FLOOR

LEGEND(FF A–TOP, COMMON INSTRUMENTATION):

SL. NO	SYMBOL	DESCRIPTION	QTY
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	27
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	--

CLIENT:

Indian Institute of Science
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PROJECT:

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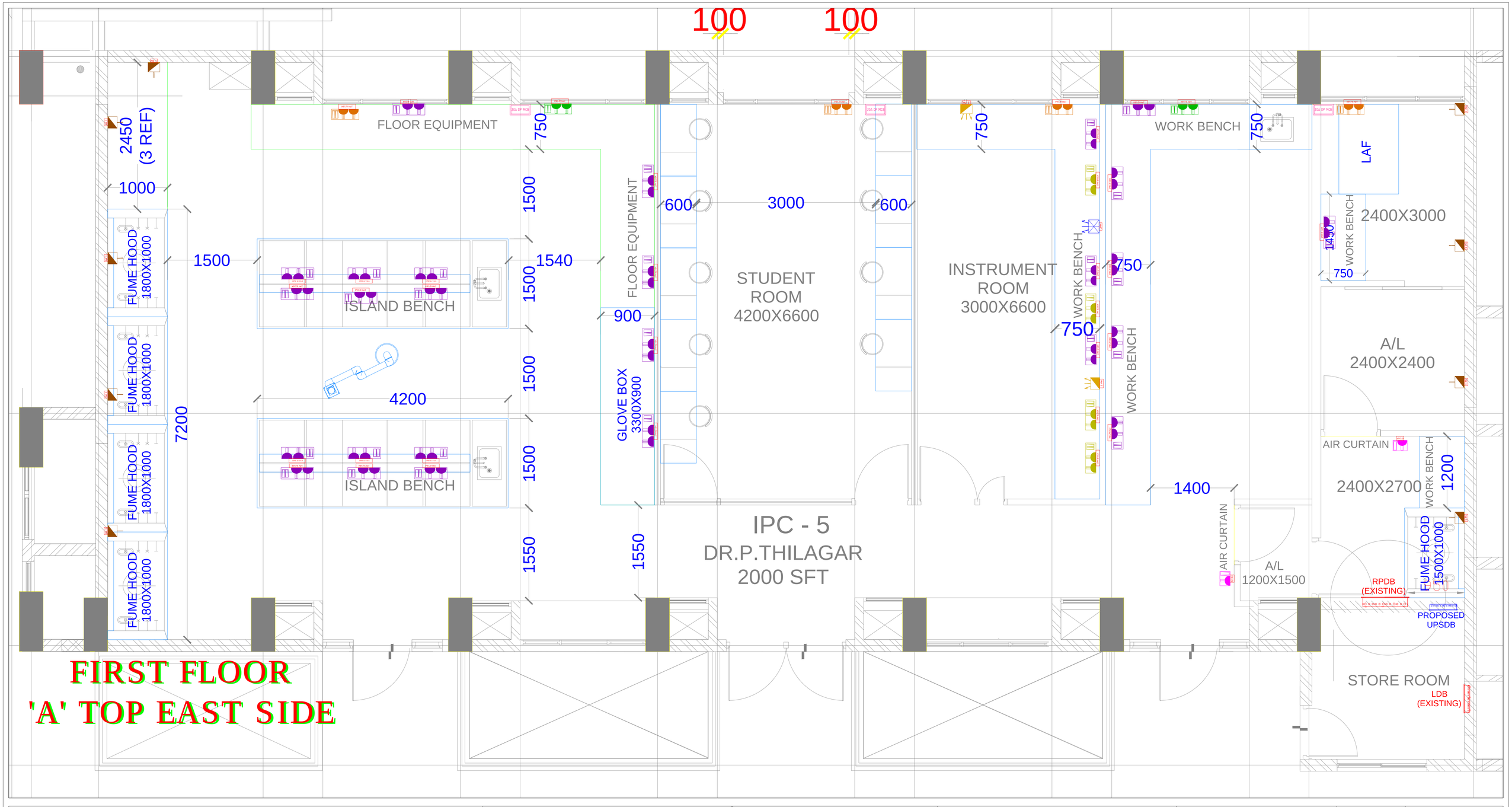
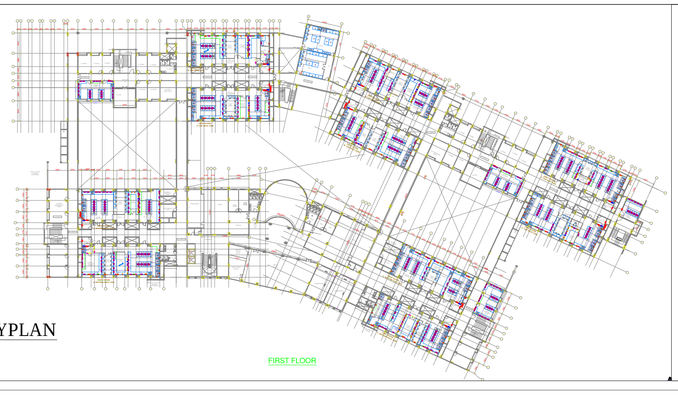
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2442 (a)
SCALE	NTS

DRAWING TITLE:

FIRST FLOOR A TOP COMMON INSTRUMENTATION ROOM POWER LAYOUT

DRAWING STATUS : TENDER DRAWING





KEYPLAN

FIRST FLOOR

LEGEND(EXISTING POWER SOCKETS):

SL.NO	SYMBOL	DESCRIPTION
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
03		20A 1PHASE 3PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 20A SP MCB
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB
05	20A DP MCB	RAW POWER OF 20A DP MCB WITH ENCLOSURE

LEGEND(FF IPC-5,DR.N.THILAGAR):

SL. NO	SYMBOL	DESCRIPTION	QTY
01		1NO OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 16A SWITCH	02
02		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	26
03		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	04
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB WITH METAL BACKBOX	02
05		32A 3PHASE 5PIN UPS INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB WITH METAL BACKBOX	01

CLIENT:

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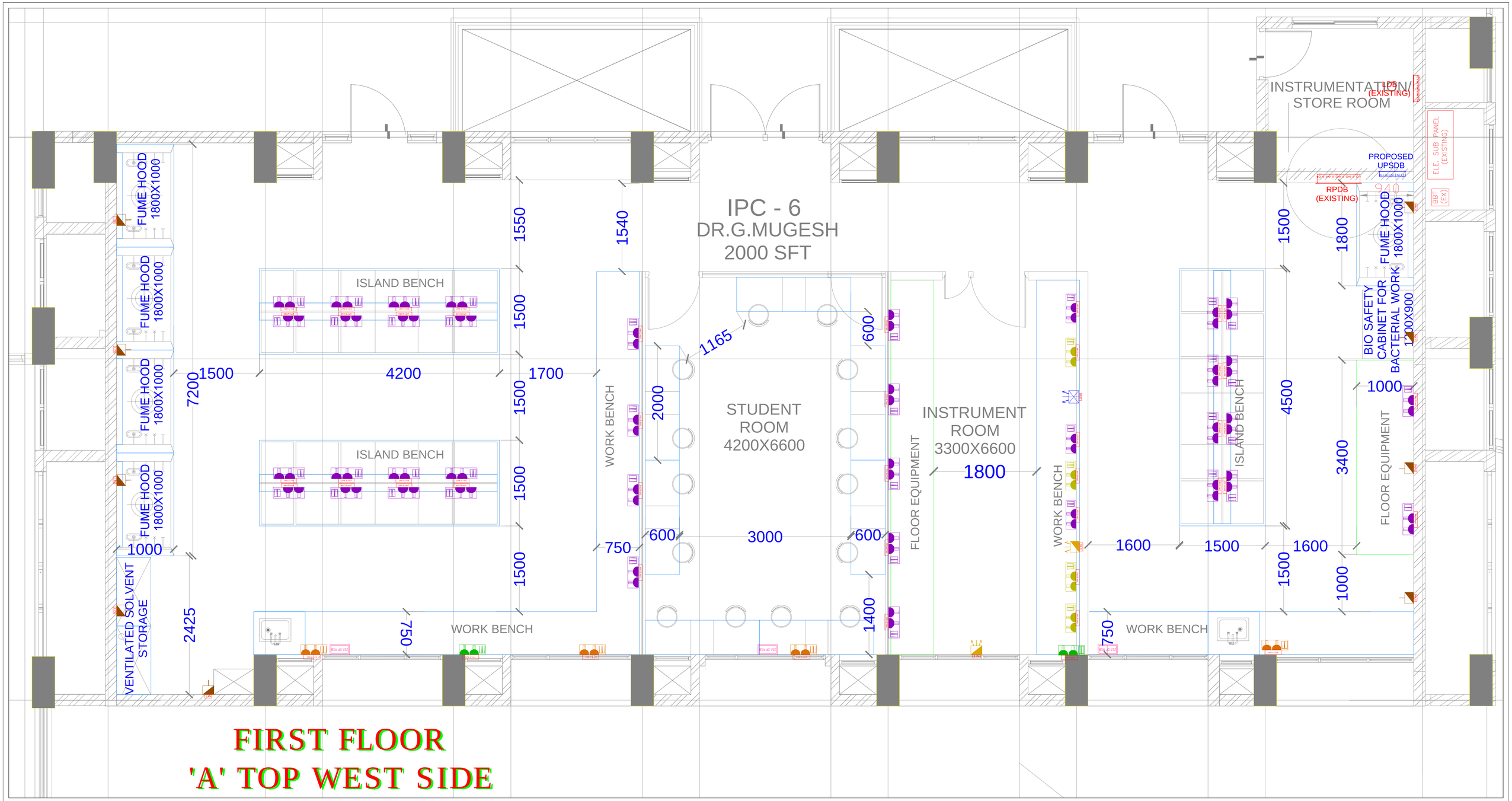
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2442 (b)
SCALE	NTS

DRAWING TITLE:

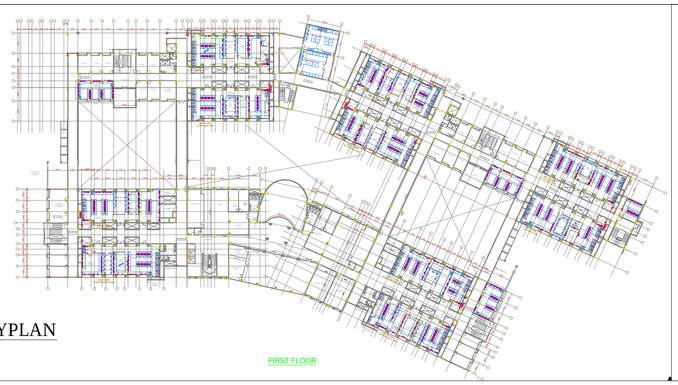
POWER LAYOUT FOR IPC-5 AT FF
'A' TOP EAST SIDE

DRAWING STATUS : TENDER DRAWING



FIRST FLOOR
'A' TOP WEST SIDE

KEYPLAN



LEGEND(EXISTING POWER SOCKETS):

SL.NO	SYMBOL	DESCRIPTION
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
03		20A 1PHASE 3PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 20A SP MCB
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB
05		RAW POWER OF 20A DP MCB WITH ENCLOSURE

LEGEND(FF IPC–6,DR.G.MUGESH):

SL. NO	SYMBOL	DESCRIPTION	QTY
01		1NO OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 16A SWITCH	--
02		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	38
03		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	04
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB WITH METAL BACKBOX	02
05		32A 3PHASE 5PIN UPS INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB WITH METAL BACKBOX	01

CLIENT:

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Consultant:

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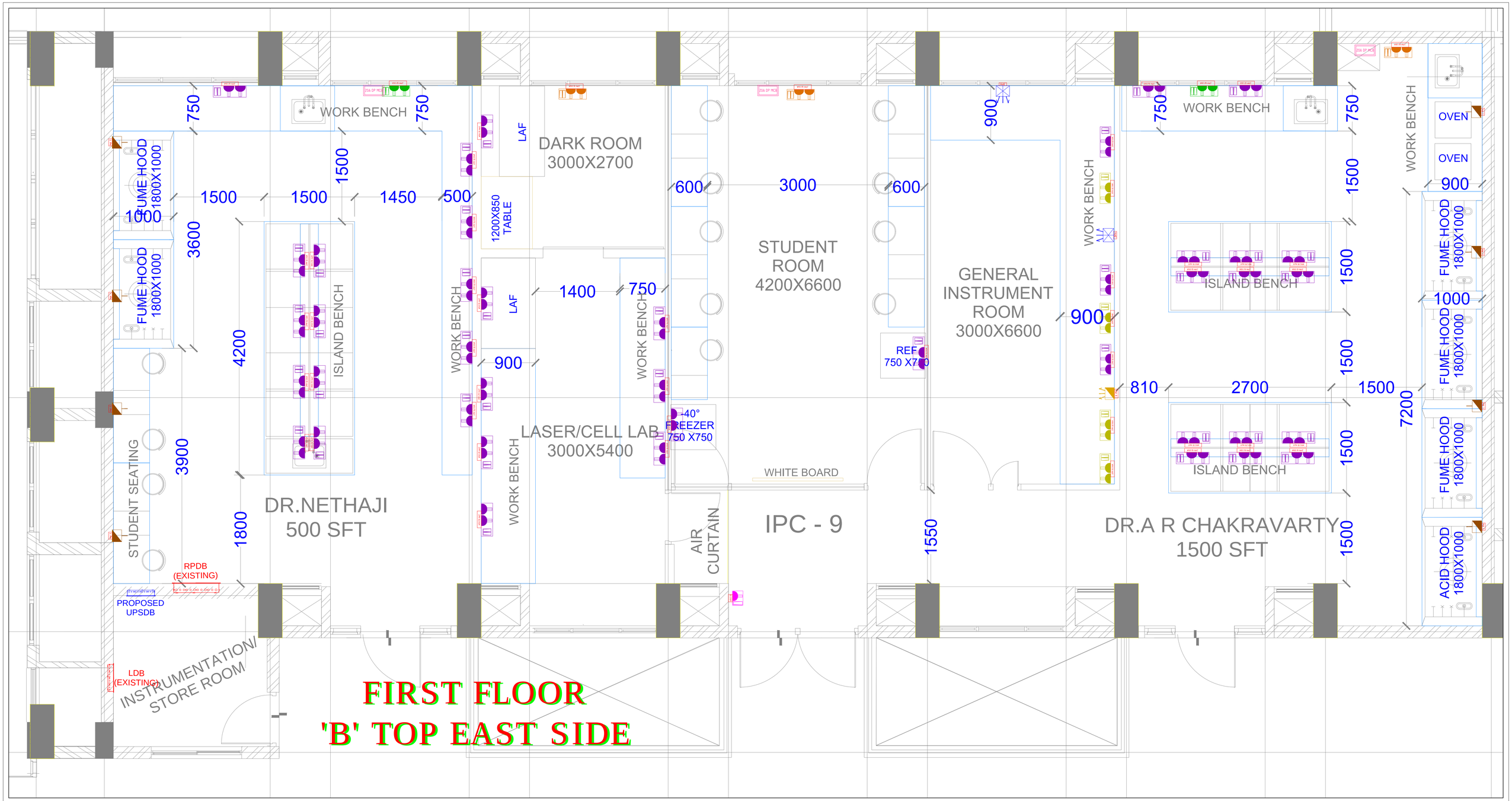
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2442 (c)
SCALE	NTS

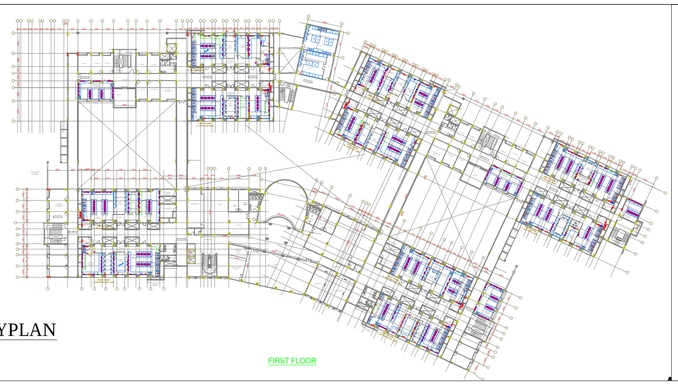
DRAWING TITLE:

POWER LAYOUT FOR IPC-6 AT FF
'A' TOP WEST SIDE

DRAWING STATUS : TENDER DRAWING



KEYPLAN



LEGEND(EXISTING POWER SOCKETS):

SL.NO	SYMBOL	DESCRIPTION
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
03		20A 1PHASE 3PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 20A SP MCB
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB
05	20A DP MCB	RAW POWER OF 20A DP MCB WITH ENCLOSURE

LEGEND(FF IPC-9, DR.NETHAJI & DR.A.R.CHAKRAVARTHY):

SL. NO	SYMBOL	DESCRIPTION	QTY
01		1NO OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 16A SWITCH	01
02		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	41
03		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	04
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB WITH METAL BACKBOX	02
05		32A 3PHASE 5PIN UPS INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB WITH METAL BACKBOX	01

CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
#701, Brigade Rubix, 20 HMT main road
BANGALORE 560 013
TEL – 80– 43728155

Consultant:

M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
#45,1st Floor,8th Main road,
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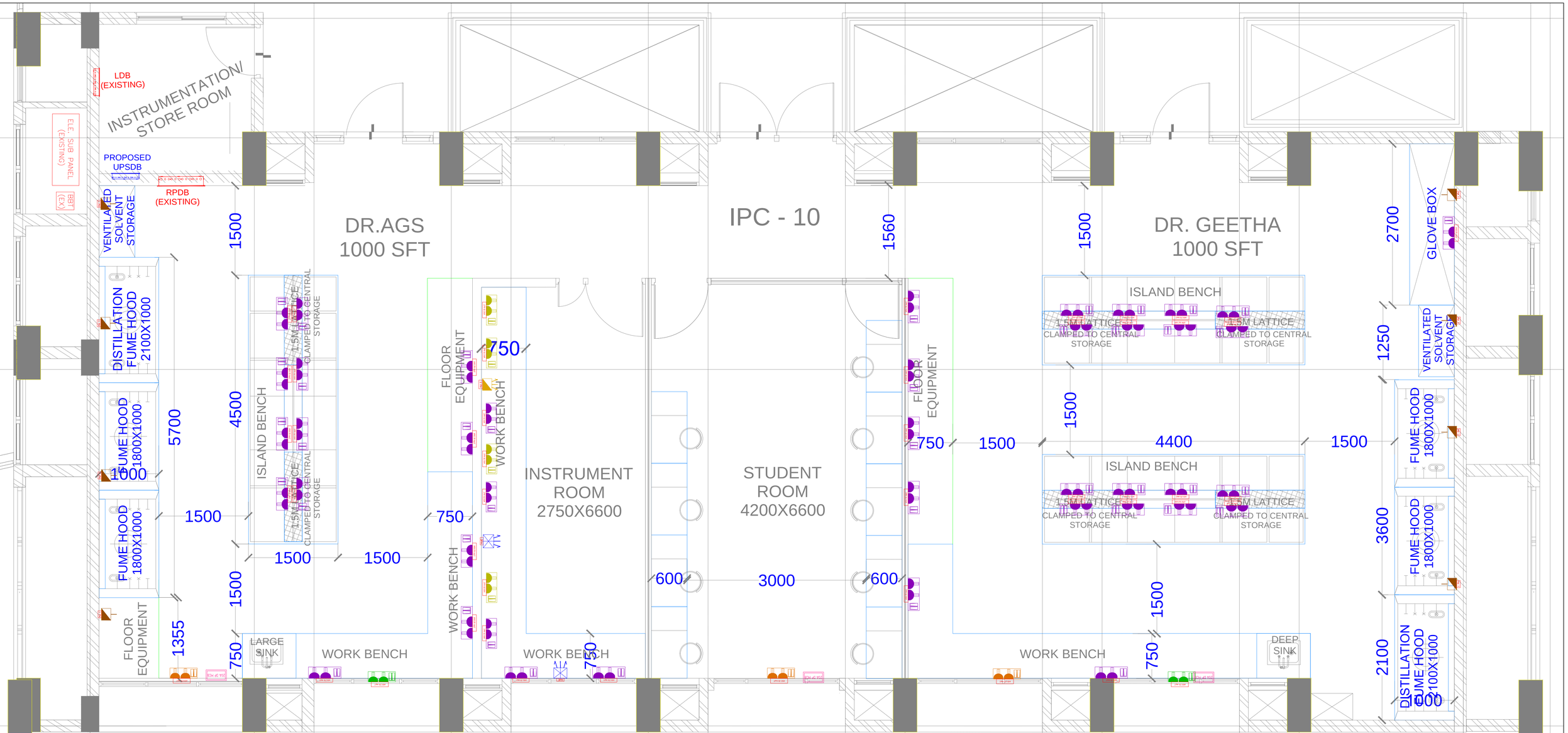
DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2442 (d)
SCALE	NTS

DRAWING TITLE:

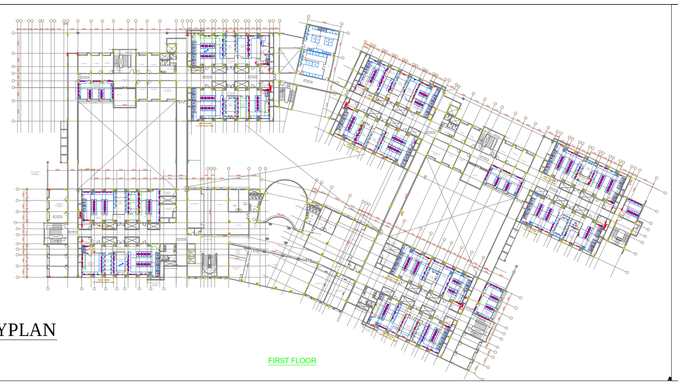
POWER LAYOUT FOR IPC-9 AT FF 'B' TOP EAST SIDE

DRAWING STATUS : TENDER DRAWING



FIRST FLOOR
'B' TOP WEST SIDE

KEYPLAN



LEGEND(EXISTING POWER SOCKETS):

SL.NO	SYMBOL	DESCRIPTION
01		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
02		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH
03		20A 1PHASE 3PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 20A SP MCB
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB
05	20A DP MCB	RAW POWER OF 20A DP MCB WITH ENCLOSURE

LEGEND(FF IPC–10, DR.AGS & DR.GEETHA):

SL. NO	SYMBOL	DESCRIPTION	QTY
01		1NO OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 16A SWITCH	--
02		2NOS OF 6/16A MODULAR RAW POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	40
03		2NOS OF 6/16A MODULAR UPS POWER SOCKET CONTROLLED BY 2NOS OF 16A SWITCH	04
04		32A 3PHASE 5PIN INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB WITH METAL BACKBOX	02
05		32A 3PHASE 5PIN UPS INDUSTRIAL PLUG & SOCKET CONTROLLED BY 32A TP MCB WITH METAL BACKBOX	01

CLIENT:

Indian Institute of Science Bangalore

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DRAWN	CHETAN
CHECKED	SANDEEP
APPROVED	MJA
DATE	23.10.2018
JOB NO	MJ - 324
DWG NO:	ELE- 2442 (e)
SCALE	NTS

DRAWING TITLE:

POWER LAYOUT FOR IPC-10 AT FF 'B' TOP WEST SIDE

DRAWING STATUS : TENDER DRAWING

CLIENT : M/s. INIDAN INSTITUE OF SCIENCE

PROJECT : LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

CONSULTANT : M J ASSOCIATES, BANGALORE.

EXHAUST SUMMARY SHEET

DOC NO: MJ 324 - ESS1

DATE : 27.10.18

REVISION : R1

UNIT NO	BLOCK NAME	ROOM NO.	LAB NO.	ROOM NAME	EQUIPMENT NAME	FUME HOOD					SNORKEL / CABINET / CANOPY HOOD			BLOWER STATIC PRESSURE DROP	MINIMUM BLOWER CAPACITY	MAXIMUM BLOWER CAPACITY	SELECTED BLOWER CAPACITY	MOTOR CAPACITY	BLOWER CAPACITY WITH 10% SAFETY	MOTOR CAPACITY	SELECTED MOTOR CAPACITY	REMARKS
						QTY	MINIMUM EXHAUST CFM / HOOD	TOTAL MINIMUM EXHAUST	MAXIMUM EXHAUST CFM / HOOD	TOTAL MAXIMUM EXHAUST CFM	QTY	EXHAUST CFM / HOOD	TOTAL EXHAUST CFM	INCH IN WG	CFM	CFM	CFM	KW	CFM	KW	IN Kw	
EXHAUST SUMMARY SHEET																						
	"A" TOP																					
	EAST SIDE NORTH WING	GF-	IPC - 7	DR. CHINMOY MAIN LAB	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
				DR. CHINMOY CAT ROOM	SNORKEL	---	---	---	---	---	1	100	100									
				ECHEM ROOM	SNORKEL	---	---	---	---	---	1	100	100									
		FF-	IPC - 5	DR. P. THILAGAR MAIN LAB	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					GLOVE BOX	---	---	---	---	---	1	150	150									
		SF-	IPC - 3	DR. PS MUKHEERJI	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
		TF-	IPC - 1	DR. RAMKI	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
EAB-1								3000		10800			1110	5	4110	11910	11910	16.76	13101	18.44	18.50	
	EAST SIDE SOUTH WING	GF-	IPC - 7	DR. VASU	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		FF-	IPC - 5	DR. P. THILAGAR FUME	5' SOLVENT FUME HOOD	1	200	200	750	750	---	---	---									
				DR. P. THILAGAR MAIN LAB	GLOVE BOX	---	---	---	---	---	1	150	150									
				DR. P. THILAGAR	VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		SF-	IPC - 3	DR. PS MUKHEERJI	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		TF-	IPC - 1	DR. RAMKI	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
EAB-2								1950		7050			1750	5	3700	8800	8800	12.39	9680	13.63	15.00	
	WEST SIDE NORTH WING	GF-	IPC - 8	DR. UMAPATHY	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
		FF-	IPC - 6	DR. G. MUGESH	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
		SF-	IPC - 4	DR. BALAJI	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					5' SOLVENT FUME HOOD	2	200	400	750	1500	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
		TF-	IPC - 2	DR. SAMPATH	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
EAB-3								2400		8700			980	5	3380	9680	9680	13.63	10648	14.99	15.00	
	WEST SIDE SOUTH WING	GF-	IPC - 8	DR. UMAPATHY	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		FF-	IPC - 6	DR. G. MUGESH	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					BIO SAFETY CABINET	---	---	---	---	---	1	150	150									
					CANOPY HOOD	---	---	---	---	---	1	300	300									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		SF-	IPC - 4	DR. BALAJI	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									

		TF-	IPC - 2	DR. SAMPATH	VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
EAB-4								1750		6300			2050	5	3800	8350	8350	11.75	9185	12.93	15.00	
	"B" TOP																					
	EAST SIDE NORTH WING	GF-	IPC - 11	DR. ATANU	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					GLOVE BOX	---	---	---	---	---	1	150	150									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		FF-	IPC - 9	DR. NETHAJI	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		SF-	OC - 9	DR. MRINMOY DE	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					GLOVE BOX	---	---	---	---	---	1	150	150									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		TF-	OC - 7	DR. S. BHATTACHARYA	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
EAB-5								2000		7200			2100	5	4100	9300	9300	13.09	10230	14.40	15.00	
	EAST SIDE SOUTH WING	GF-	IPC - 11	DR. DAS	4' SOLVENT FUME HOOD	1	150	150	600	600	---	---	---									
		FF-	IPC - 9	DR. A R. CHAKRAVARTY	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
		SF-	OC - 9	DR. MRINMOY DE	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
		TF-	OC - 7	DR. S. BHATTACHARYA	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
EAB-6								2400		8700			660	5	3060	9360	9360	13.17	10296	14.49	15.00	
	WEST SIDE NORTH WING	GF-	IPC - 12	DR. ARUNAN	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		FF-	IPC - 10	DR. AGS	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					SOLVENT CABINET	---	---	---	---	---	1	30	30									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		SF-	OC - 10	DR. UDAY MAITRA	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		TF-	OC - 8	FUTURE LAB	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
EAB-7								2250		8100			1530	5	3780	9630	9630	13.55	10593	14.91	15.00	
	WEST SIDE SOUTH WING	GF-	IPC - 12	DR. ARUNAN	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
		FF-	IPC - 10	DR. GEETHA	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	1	30	30									
					GLOVE BOX	---	---	---	---	---	1	150	150									
		SF-	OC - 10	DR. UDAY MAITRA	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
		TF-	OC - 8	FUTURE LAB	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
EAB-8								3000		10800			980	5	3980	11780	11780	18.42	12958	20.27	22.00	
	"C" TOP																					
	EAST SIDE	GF-	OC / IPC	HEAVY EQUIPMENTS	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
		FF-	OC - 5	DR. T K. CHAKRABARTY	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
					6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									

	NORTH WING	SF-	OC - 3	DR. K R. PRABHU	7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
		TF-	OC - 1	DR. A T. BIJU	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
EAB-9								3000		10800			980	5	3980	11780	11780	18.42	12958	20.27	22.00	
	EAST SIDE SOUTH WING	GF-	OC / IPC	HEAVY EQUIPMENTS	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		FF-	OC - 5	DR. T K. CHAKRABARTY	5' SOLVENT FUME HOOD	2	200	400	750	1500	---	---	---									
					6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		SF-	OC - 3	DR. K R. PRABHU	5' SOLVENT FUME HOOD	2	200	400	750	1500	---	---	---									
					6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		TF-	OC - 1	DR. A T. BIJU	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
EAB-10								2800		10200			2000	5	4800	12200	12200	19.08	13420	20.99	22.00	
	WEST SIDE NORTH WING	GF-	OC - 11	DR. ENP	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
		FF-	OC - 6	DR. N. JAYARAMAN	5' SOLVENT FUME HOOD	2	200	400	750	1500	---	---	---									
					6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	4	30	120									
		SF-	OC - 4	DR. SANTANU MUKHERJEE	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
				DR. SANTANU MUKHERJEE INSTRUMENT ROOM	GLOVE BOX	---	---	---	---	---	1	150	150									
		TF-	OC - 2	DR.K R. PRASAD	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
EAB-11								2900		10500			1150	5	4050	11650	11650	18.22	12815	20.04	22.00	
	WEST SIDE SOUTH WING	GF-	OC - 11	DR. ENP	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		FF-	OC - 6	DR. N. JAYARAMAN	5' SOLVENT FUME HOOD	2	200	400	750	1500	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		SF-	OC - 4	DR. SANTANU MUKHERJEE	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		TF-	OC - 2	DR.K R. PRASAD	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					7' WALK IN FUME HOOD	1	350	350	1200	1200	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
EAB-12								3000		10800			1800	5	4800	12600	12600	19.71	13860	21.68	22.00	
	"A" BOTTOM																					
		GF-	SSCU - 3	DR. N. PHANI WET LAB	5' SOLVENT FUME HOOD	1	200	200	750	750	---	---	---									
				DR. N. PHANI CLEAN ROOM	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SOLVENT CABINET	---	---	---	---	---	1	30	30									
				DR. N. PHANI MAIN LAB	GLOVE BOX	---	---	---	---	---	1	150	150									
					PLD SYSTEM	---	---	---	---	---	1	300	300									
					ISOLATOR	---	---	---	---	---	1	100	100									

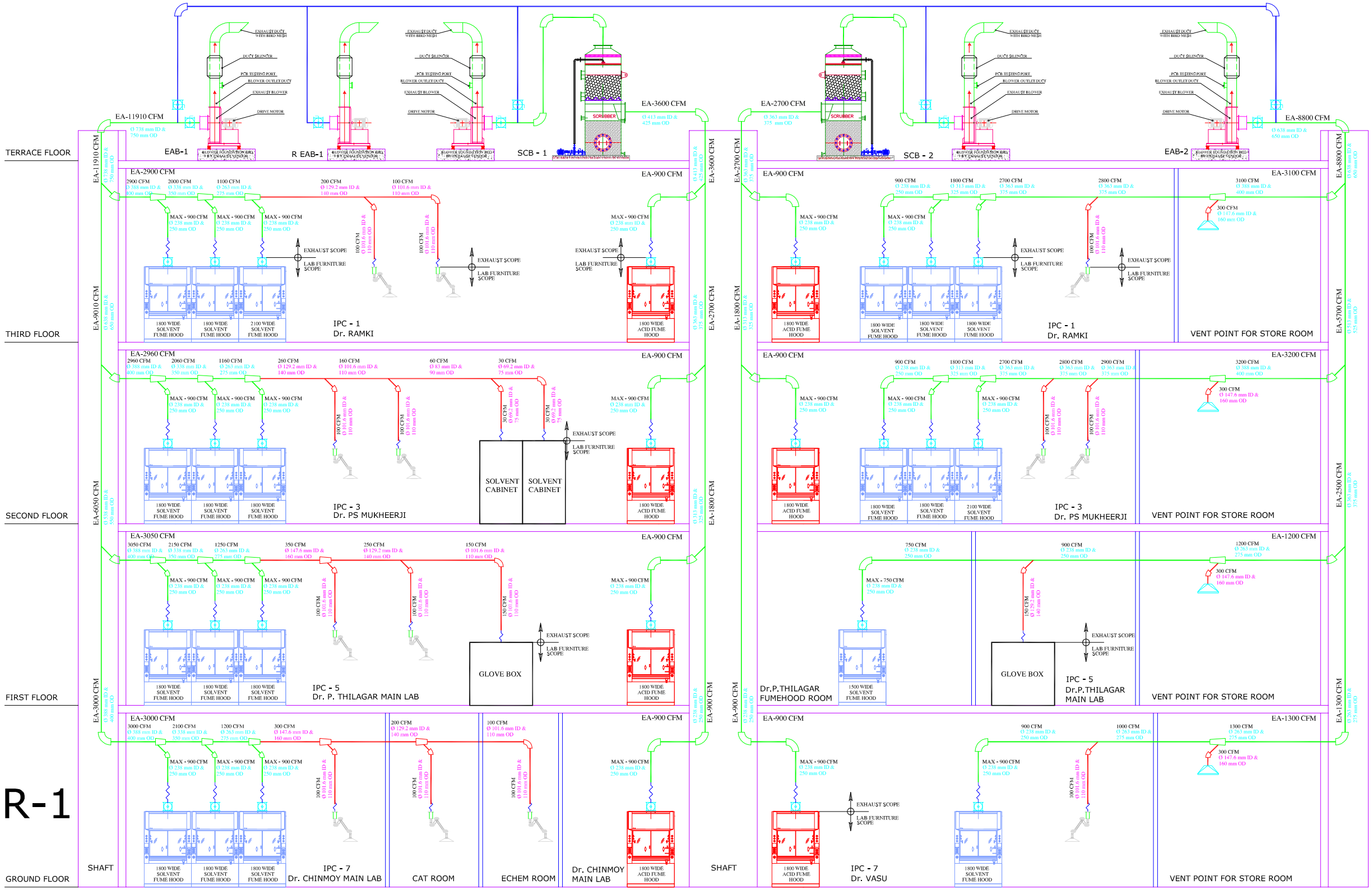
	EAST SIDE NORTH WING			INSTRUMENTATION STORE ROOM	VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		FF-	SSCU - 1	DR. DDS	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		SF-	IPC THEORY	FUTURE	VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		TF-	SSCU THEORY	DR. YASHONATH	VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
EAB-13								700		2550			2040	5	2740	4590	4590	8.08	5049	8.88	11.00	
	EAST SIDE SOUTH WING	GF-	SSCU - 3	DR. V. JAYARAM	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
					SOLVENT CABINET	---	---	---	---	---	1	30	30									
		FF-	SSCU - 1	DR. SR THEORY	SNORKEL	---	---	---	---	---	1	100	100									
		SF-	IPC THEORY	DR. UPENDRA HARBOLA																		
		TF-	SSCU THEORY	FUTURE FACULTY																		
EAB-14								250		900			130	5	380	1030	1030	1.45	1133	1.59	2.20	
	WEST SIDE NORTH WING	GF-	SSCU - 4	ISOLATED AREA	VENT POINT FOR STORE ROOM	---	---	---	---	---	2	300	600									
		FF-	SSCU - 2	DR. SP (AIRLOCK)	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
				DR. SP INSTRUMENT ROOM	SNORKEL	---	---	---	---	---	1	100	100									
				DR. SP INSTRUMENT STORE	VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		SF-	IPC THEORY	DR. BINNY INSTRUMENT STORE	VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		TF-	SSCU THEORY	DR. G REDDY	VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
EAB-15								250		900			1600	5	1850	2500	2500	3.52	2750	3.87	5.50	
	WEST SIDE SOUTH WING	GF-	SSCU - 4	DR. ANSHU PANDEY	5' SOLVENT FUME HOOD	3	200	600	750	2250	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
					GLOVE BOX	---	---	---	---	---	2	150	300									
		FF-	SSCU - 2	DR. AKS	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
				DR. AKS INSTRUMENT ROOM	SNORKEL	---	---	---	---	---	1	100	100									
		SF-	IPC THEORY	DR. SAI RAMESH																		
		TF-	SSCU THEORY	DR. B. BAGCHI																		
EAB-16								1350		4950			760	5	2110	5710	5710	8.04	6281	8.84	9.30	
	"C" BOTTOM																					
	EAST SIDE NORTH WING	GF-	SSCU - 5	HEAVY EQUIPMENT	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
		FF-	SSCU - 6	DR. S. NATRAJAN	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
		SF-	SSCU - 8	DR. ABHISHEK MONDAL	6' SOLVENT FUME HOOD	2	250	500	900	1800	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
		TF-	IPC - 13	UNALLOTED																		
EAB-17								2000		7200			720	5	2720	7920	7920	11.15	8712	12.26	15.00	
	EAST SIDE SOUTH WING	GF-	SSCU - 5	HEAVY EQUIPMENT	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	2	100	200									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		FF-	SSCU - 6	DR. C. SHIVA KUMAR	SNORKEL	---	---	---	---	---	2	100	200									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		SF-	SSCU - 8	DR. TNG	SNORKEL	---	---	---	---	---	1	100	100									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
				DR. A. GOVINDARAJ	SNORKEL	---	---	---	---	---	2	100	200									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		TF-	IPC - 13	UNALLOTED	VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
EAB-18								750		2700			2020	5	2770	4720	4720	6.64	5192	7.31	7.50	
		GF-	IPC / SSCU	SHARED SPACE																		

	WEST SIDE NORTH WING	FF-	SSCU - 7	TNG WET SPACE	SNORKEL	---	---	---	---	---	1	100	100									
					SOLVENT CABINET	---	---	---	---	---	2	30	60									
					GLOVE BOX	---	---	---	---	---	4	150	600									
		SF-	SSCU - 9	FUTURE																		
		TF-	IPC - 14	UNALLOTED																		
EAB-19								0		0			760	5	760	760	760	1.19	836	1.31	2.20	
	WEST SIDE SOUTH WING	GF-	IPC / SSCU	SHARED SPACE	VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		FF-	SSCU - 7	DR. A. J. BHATTACHARYA	6' SOLVENT FUME HOOD	3	250	750	900	2700	---	---	---									
					SNORKEL	---	---	---	---	---	1	100	100									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
		SF-	SSCU - 9	DR. G. DESIRAJU	SNORKEL	---	---	---	---	---	1	100	100									
					VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
				DR. G. DESIRAJU FUME HOOD ROOM	6' SOLVENT FUME HOOD	1	250	250	900	900	---	---	---									
		TF-	IPC - 14	UNALLOTED	VENT POINT FOR STORE ROOM	---	---	---	---	---	1	300	300									
EAB-20								1000		3600			1400	5	2400	5000	5000	7.04	5500	7.74	7.50	
SCRUBBER EXHAUST																						
	"A" TOP																					
	EAST SIDE NORTH WING	GF-	IPC - 7	DR. CHINMOY MAIN LAB	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		FF-	IPC - 5	DR. P. THILAGAR MAIN LAB	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		SF-	IPC - 3	DR. PS MUKHEERJI	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		TF-	IPC - 1	DR. RAMKI	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
SCB-1								1000		3600			0	8	1000	3600	3600	8.11	3960	8.92	9.30	
	EAST SIDE SOUTH WING	GF-	IPC - 7	DR. VASU	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		FF-	IPC - 5	DR. P. THILAGAR MAIN LAB	---	---	---	---	---	0	---	---	---									
		SF-	IPC - 3	DR. PS MUKHEERJI	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		TF-	IPC - 1	DR. RAMKI	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
SCB-2								750		2700			0	8	750	2700	2700	6.08	2970	6.69	7.50	
	WEST SIDE NORTH WING	GF-	IPC - 8	DR. UMAPATHY	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		FF-	IPC - 6	DR. G. MUGESH	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		SF-	IPC - 4	DR. BALAJI	5' ACID FUME HOOD	1	200	200	750	750	---	---	---									
		TF-	IPC - 2	DR. SAMPATH	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
SCB-3								950		3450			0	8	950	3450	3450	7.77	3795	8.55	9.30	
	WEST SIDE SOUTH WING	GF-	IPC - 8	DR. UMAPATHY	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		FF-	IPC - 6	DR. G. MUGESH	---	---	---	---	---	0	---	---	---									
		SF-	IPC - 4	DR. BALAJI	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		TF-	IPC - 2	DR. SAMPATH	---	---	---	---	---	0	---	---	---									
SCB-4								500		1800			0	8	500	1800	1800	4.05	1980	4.46	5.50	
	"B" TOP																					
	EAST SIDE NORTH WING	GF-	IPC - 11	DR. ATANU	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		FF-	IPC - 9	DR. NETHAJI	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		SF-	OC - 9	DR. MRINMOY DE	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		TF-	OC - 7	DR. S. BHATTACHARYA	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
SCB-5								1000		3600			0	8	1000	3600	3600	8.11	3960	8.92	9.30	
	EAST SIDE SOUTH WING	GF-	IPC - 11	DR. DAS	4' ACID FUME HOOD	1	150	150	600	600	---	---	---									
		FF-	IPC - 9	DR. A R. CHAKRAVARTY	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		SF-	OC - 9	DR. MRINMOY DE	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		TF-	OC - 7	DR. S. BHATTACHARYA	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
SCB-6								900		3300			0	8	900	3300	3300	7.43	3630	8.18	9.30	
	WEST SIDE NORTH WING	GF-	IPC - 12	DR. ARUNAN	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		FF-	IPC - 10	DR. AGS	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		SF-	OC - 10	DR. UDAY MAITRA	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		TF-	OC - 8	FUTURE LAB	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
SCB-7								1000		3600			0	8	1000	3600	3600	8.11	3960	8.92	9.30	
	WEST SIDE SOUTH WING	GF-	IPC - 12	DR. ARUNAN	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		FF-	IPC - 10	DR. GEETHA	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		SF-	OC - 10	DR. UDAY MAITRA	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		TF-	OC - 8	FUTURE LAB	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
SCB-8								1000		3600			0	8	1000	3600	3600	8.11	3960	8.92	9.30	
	"C" TOP																					
	EAST SIDE NORTH WING	GF-	OC / IPC	HEAVY EQUIPMENTS	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		FF-	OC - 5	DR. T K. CHAKRABARTY	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		SF-	OC - 3	DR. K R. PRABHU	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		TF-	OC - 1	DR. A T. BIJU	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
SCB-9								1000		3600			0	8	1000	3600	3600	8.11	3960	8.92	9.30	
	EAST SIDE NORTH WING	GF-	OC / IPC	HEAVY EQUIPMENTS	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		FF-	OC - 5	DR. T K. CHAKRABARTY	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		SF-	OC - 3	DR. K R. PRABHU	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
		TF-	OC - 1	DR. A T. BIJU	6' ACID FUME HOOD	1	250	250	900	900	---	---	---									
SCB-10								1000		3600			0	8	1000	3600	3600	8.11	3960	8.92	9.30	

	WEST SIDE NORTH WING	GF-	OC - 11	DR. ENP	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		FF-	OC - 6	DR. N. JAYARAMAN	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		SF-	OC - 4	DR. SANTANU MUKHERJEE	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		TF-	OC - 2	DR.K R. PRASAD	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
SCB-11								1000		3600			0	8	1000	3600	3600	8.11	3960	8.92	9.30
	WEST SIDE SOUTH WING	GF-	OC - 11	DR. ENP	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		FF-	OC - 6	DR. N. JAYARAMAN	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		SF-	OC - 4	DR. SANTANU MUKHERJEE	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		TF-	OC - 2	DR.K R. PRASAD	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
SCB-12								1000		3600			0	8	1000	3600	3600	8.11	3960	8.92	9.30
	"A" BOTTOM																				
	EAST SIDE NORTH WING	GF-	SSCU - 3	DR. N. PHANI WET LAB	5' ACID FUME HOOD	1	200	200	750	750	---	---	---								
				DR. N. PHANI CLEAN ROOM	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		FF-	SSCU - 1	DR. DDS	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		SF-	IPC THEORY	DR. FUTURE																	
		TF-	SSCU THEORY	DR. YASHONATH																	
SCB-13								500		2550			0	8	500	2550	2550	5.74	2805	6.32	7.50
	EAST SIDE SOUTH WING	GF-	SSCU - 3	DR. V. JAYARAM	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		FF-	SSCU - 1	DR. SR THEORY																	
		SF-	IPC THEORY	DR. UPENDRA HARBOLA																	
		TF-	SSCU THEORY	FUTURE FACULTY																	
SCB-14								250		900			0	8	250	900	900	2.25	990	2.48	3.70
	WEST SIDE SOUTH WING	GF-	SSCU - 4	DR. ANSHU PANDEY	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		FF-	SSCU - 2	DR. AKS	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		SF-	IPC THEORY	DR. SAI RAMESH	---	---	---	---	---	---	---	---	---								
		TF-	SSCU THEORY	DR. B. BAGCHI	---	---	---	---	---	---	---	---	---								
SCB-15								500		1800			0	8	500	1800	1800	4.05	1980	4.46	5.50
	"C" BOTTOM																				
	EAST SIDE NORTH WING	GF-	SSCU - 5	HEAVY EQUIPMENT	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		FF-	SSCU - 6	DR. S. NATRAJAN	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		SF-	SSCU - 8	DR. ABHISHEK MONDAL	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		TF-	IPC - 13	UNALLOTED	---	---	---	---	---	---	---	---	---								
SCB-16								750		2700			0	8	750	2700	2700	6.08	2970	6.69	7.50
	EAST SIDE SOUTH WING	GF-	SSCU - 5	HEAVY EQUIPMENT	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		FF-	SSCU - 6	DR. C. SHIVA KUMAR	6' ACID FUME HOOD	2	250	500	900	1800	---	---	---								
		SF-	SSCU - 8	DR. A. GOVINDARAJ	6' ACID FUME HOOD	2	250	500	900	1800	---	---	---								
		TF-	IPC - 13	UNALLOTED	---	---	---	---	---	---	---	---	---								
SCB-17								1250		4500			0	8	1250	4500	4500	10.13	4950	11.15	11.00
	WEST SIDE NORTH WING	GF-	IPC / SSCU	SHARED SPACE	---	---	---	---	---	---	---	---	---								
		FF-	SSCU - 7	DR. TNG WET SPACE	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		SF-	SSCU - 9	FUTURE	---	---	---	---	---	---	---	---	---								
		TF-	IPC - 14	UNALLOTED	---	---	---	---	---	---	---	---	---								
SCB-18								250		900			0	8	250	900	900	2.25	990	2.48	3.70
	WEST SIDE SOUTH WING	GF-	IPC / SSCU	SHARED SPACE	---	---	---	---	---	---	---	---	---								
		FF-	SSCU - 7	DR. A. J. BHATTACHARYA	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		SF-	SSCU - 9	DR. G. DESIRAJU FUME HOOD ROOM	6' ACID FUME HOOD	1	250	250	900	900	---	---	---								
		TF-	IPC - 14	UNALLOTED	---	---	---	---	---	---	---	---	---								
SCB-19								500		1800			0	8	500	1800	1800	4.05	1980	4.46	5.50

CLIENT : INIDAN INSTITUE OF SCIENCE, BANGALORE.				
PROJECT : LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.				
CONSULTANT : M J ASSOCIATES, BANGALORE.				DATE : 27.10.18
EXHAUST BLOWER SCHEDULE SHEET				REVISION : R1
UNIT NO	**SELECTED EXHAUST BLOWER CAPACITY IN CFM**	**STATIC (INCH WG)**	**MJA**	**REMARKS**
EXHAUST BLOWERS				
EAB-1	11910	5	18.5	
EAB-2	8800	5	15	
EAB-3	9680	5	15	
EAB-4	8350	5	15	
EAB-5	9300	5	15	
EAB-6	9360	5	15	
EAB-7	9630	5	15	
EAB-8	11780	5	22	
EAB-9	11780	5	22	
EAB-10	12200	5	22	
EAB-11	11650	5	22	
EAB-12	12600	5	22	
EAB-13	4590	5	11	
EAB-14	1030	5	2.2	
EAB-15	2500	5	5.5	
EAB-16	5710	5	9.3	
EAB-17	7920	5	15	
EAB-18	4720	5	7.5	
EAB-19	760	5	2.2	
EAB-20	5000	5	7.5	
SCRUBBER EXHAUST BLOWERS				
SCB-1	3600	8	9.3	
SCB-2	2700	8	7.5	
SCB-3	3450	8	9.3	
SCB-4	1800	8	5.5	
SCB-5	3600	8	9.3	
SCB-6	3300	8	9.3	
SCB-7	3600	8	9.3	
SCB-8	3600	8	9.3	
SCB-9	3600	8	9.3	
SCB-10	3600	8	9.3	

SCB-11	3600	8	9.3	
SCB-12	3600	8	9.3	
SCB-13	2550	8	7.5	
SCB-14	900	8	3.7	
SCB-15	1800	8	5.5	
SCB-16	2700	8	7.5	
SCB-17	4500	8	11	
SCB-18	900	8	3.7	
SCB-19	1800	8	5.5	
REDUNDANCY EXHAUST BLOWERS				
R EAB-1	11910	5	18.5	
R EAB-2	9680	5	15	
R EAB-3	9360	5	15	
R EAB-4	11780	5	22	
R EAB-5	12200	5	22	
R EAB-6	12600	5	22	
R EAB-7	4590	5	11	
R EAB-8	5710	5	9.3	
R EAB-9	7920	5	15	
R EAB-10	5000	5	7.5	



'A' TOP CLUSTER-1

CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL - 80- 23368319

Consultant:

M J ASSOCIATES
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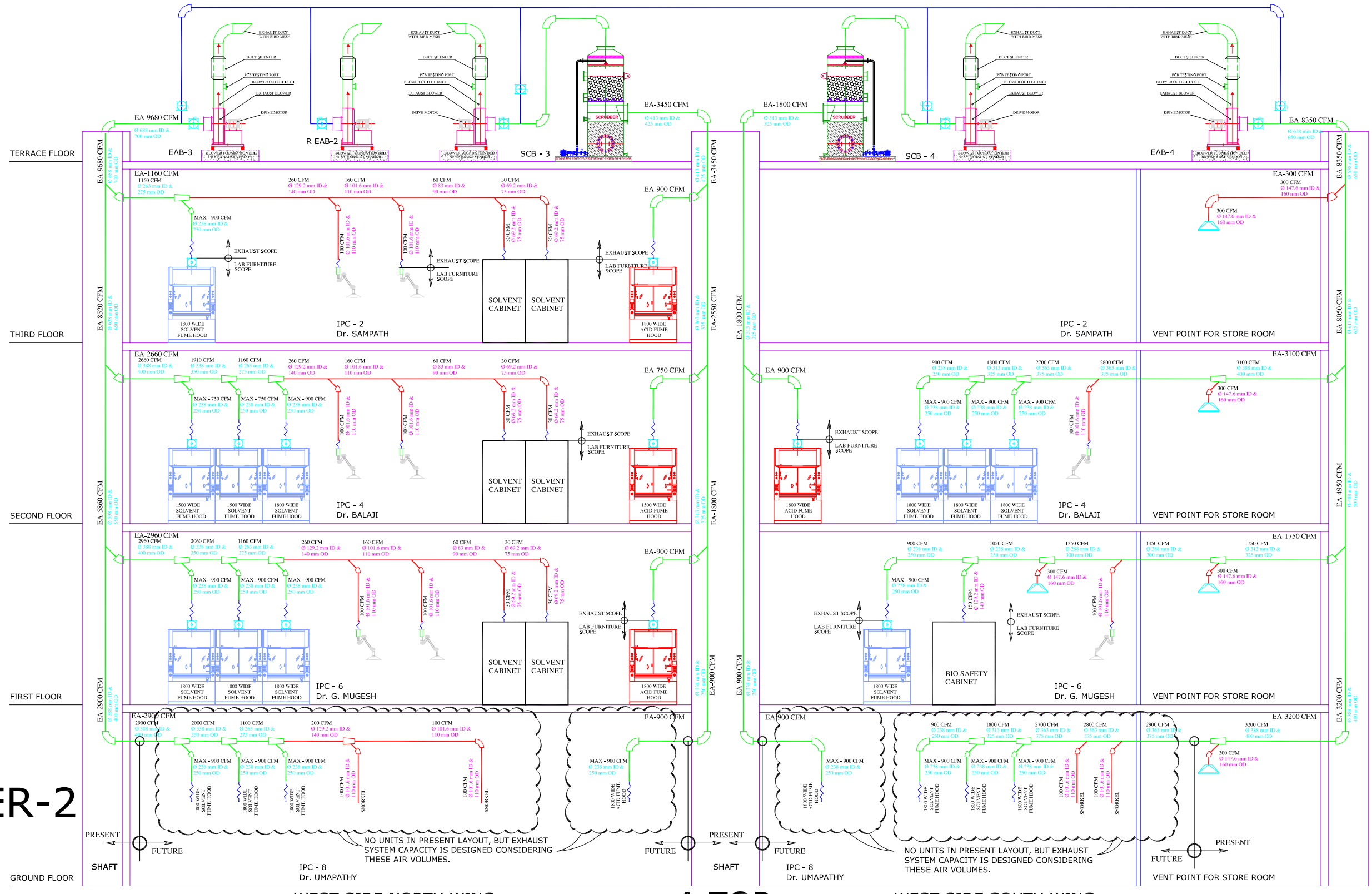
Tele:22284583,22204636
E-mail-projects@mjassociates.in/www.mjassociates.in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2600
SCALE	NTS

DRAWING TITLE:

EXHAUST P & ID FOR CLUSTER - 1

DRAWING STATUS : TENDER DRAWINGS



'A' TOP CLUSTER-2

WEST SIDE NORTH WING

A TOP

WEST SIDE SOUTH WING

CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL - 80- 23368319

Consultant:

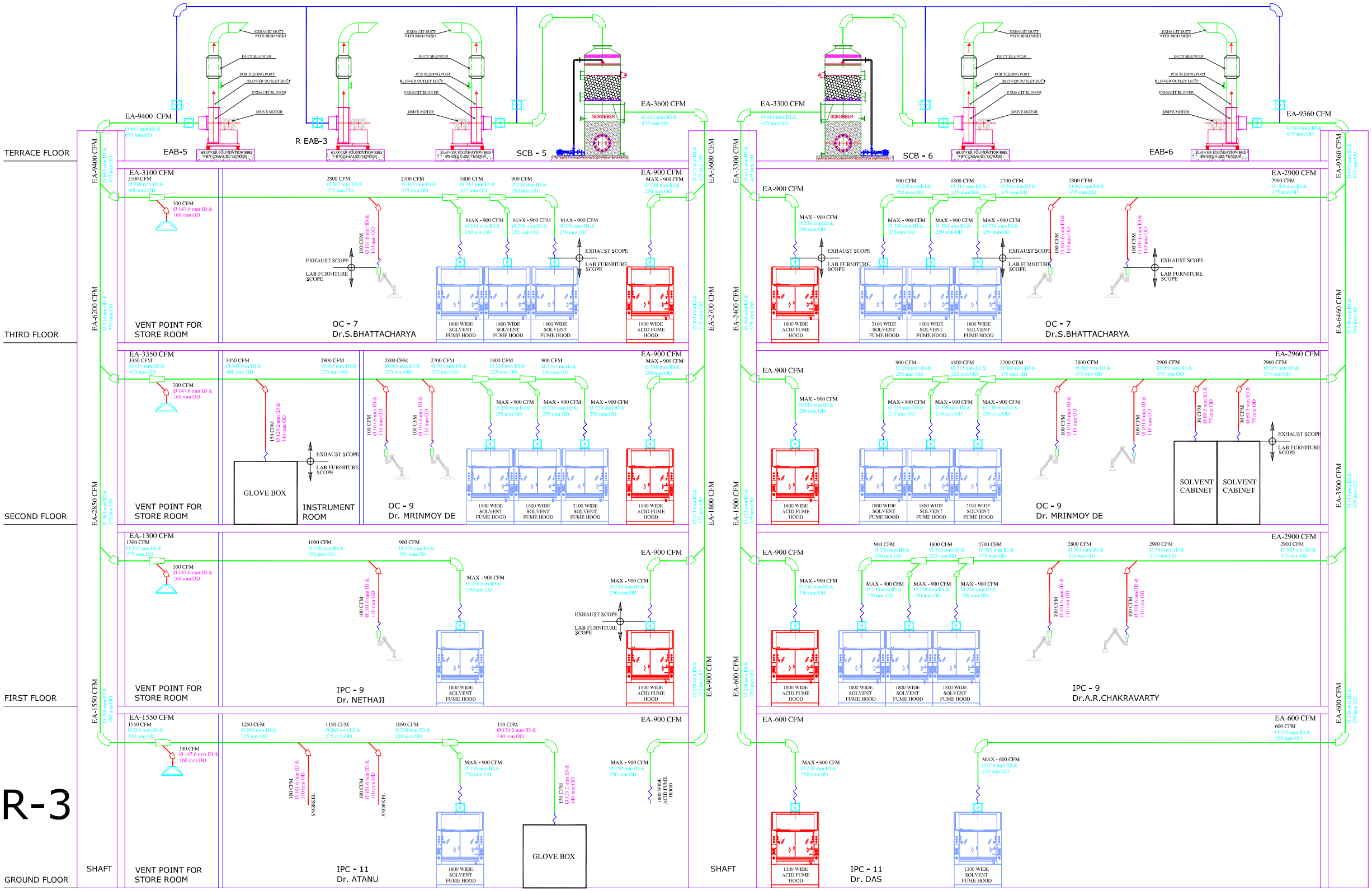
M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
#45,1st Floor,8th Main road,
Vasanth nagar,Bangalore-560 052
Tele:22284583,22204636
E-mail:projects@mjassociates.in/www.mjassociates.in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2601
SCALE	NTS

DRAWING TITLE:

EXHAUST P & ID FOR CLUSTER - 2

DRAWING STATUS : TENDER DRAWINGS

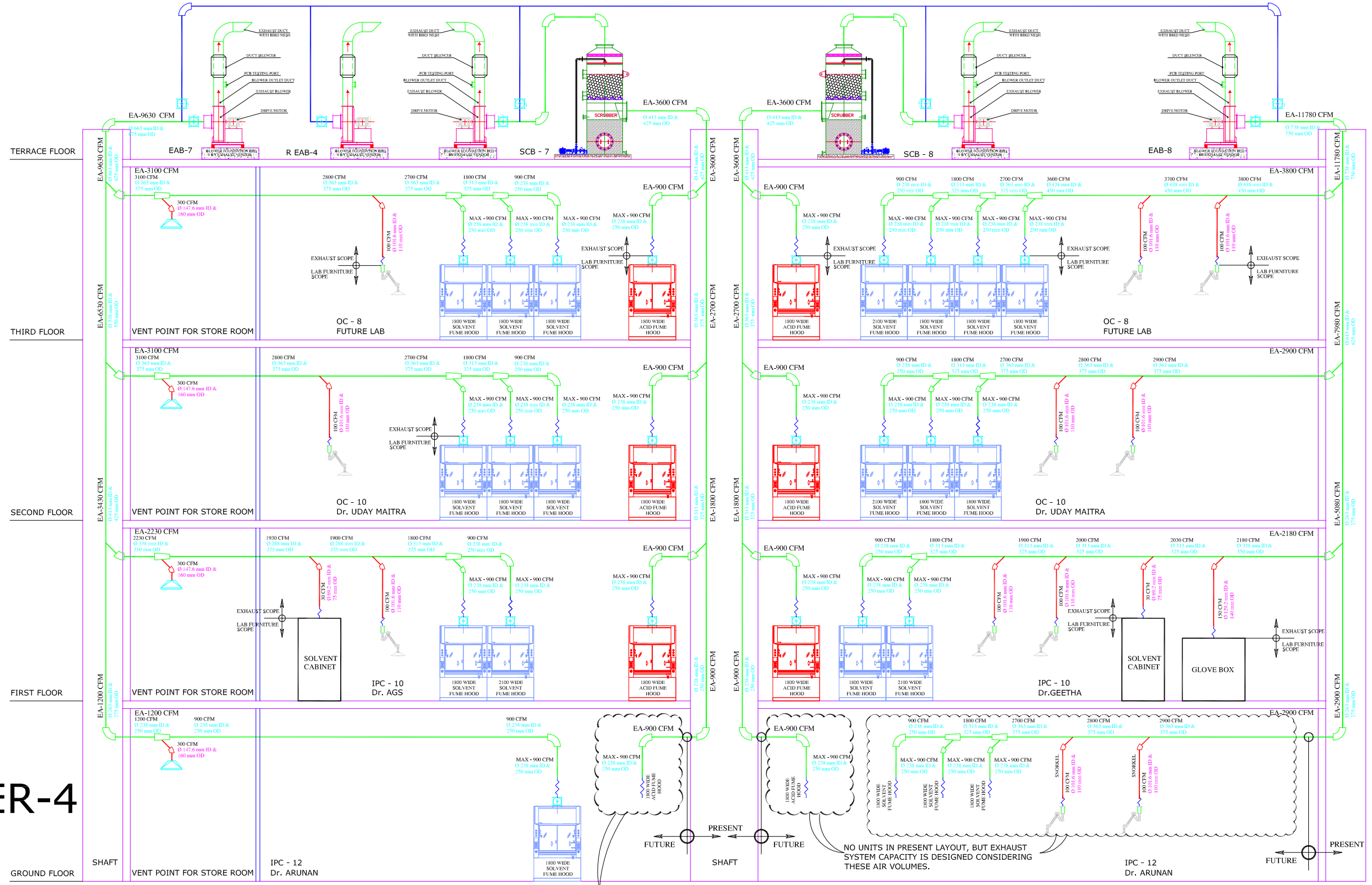


'B' TOP CLUSTER-3

B TOP

CLIENT: Indian Institute of Science Bangalore — INDIAN INSTITUTE OF SCIENCE, BANGALORE.	Architect: Chandroo Iyer Associates, NO 69, 15TH "A" CROSS ,6th MAIN MALLESWARAM BANGALORE 560 055. TEL – 80– 23368319
	Consultant: M J ASSOCIATES, PROJECT ENGINEERING CONSULTANTS, #45,1st Flor,8th Main road, Vasanth nagar,Bangalore-560 052, Tele:-22284583,22204636, E-mail:-projects@mjassociates.in/www.mjassociates.in
PROJECT: LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.	DRAWING TITLE: EXHAUST P & ID FOR CLUSTER - 3
	DRAWING STATUS : TENDER DRAWINGS

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2602
SCALE	NTS



'B' TOP CLUSTER-4

WEST SIDE NORTH WING

B TOP

WEST SIDE SOUTH WING

CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL – 80- 23368319

Consultant:

M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
#45,1st Floor,8th Main road,
Vasanth nagar,Bangalore-560 052
Tele:-22284583,22204636
E-mail-projects@mjassociates.in/www.mjassociates.in

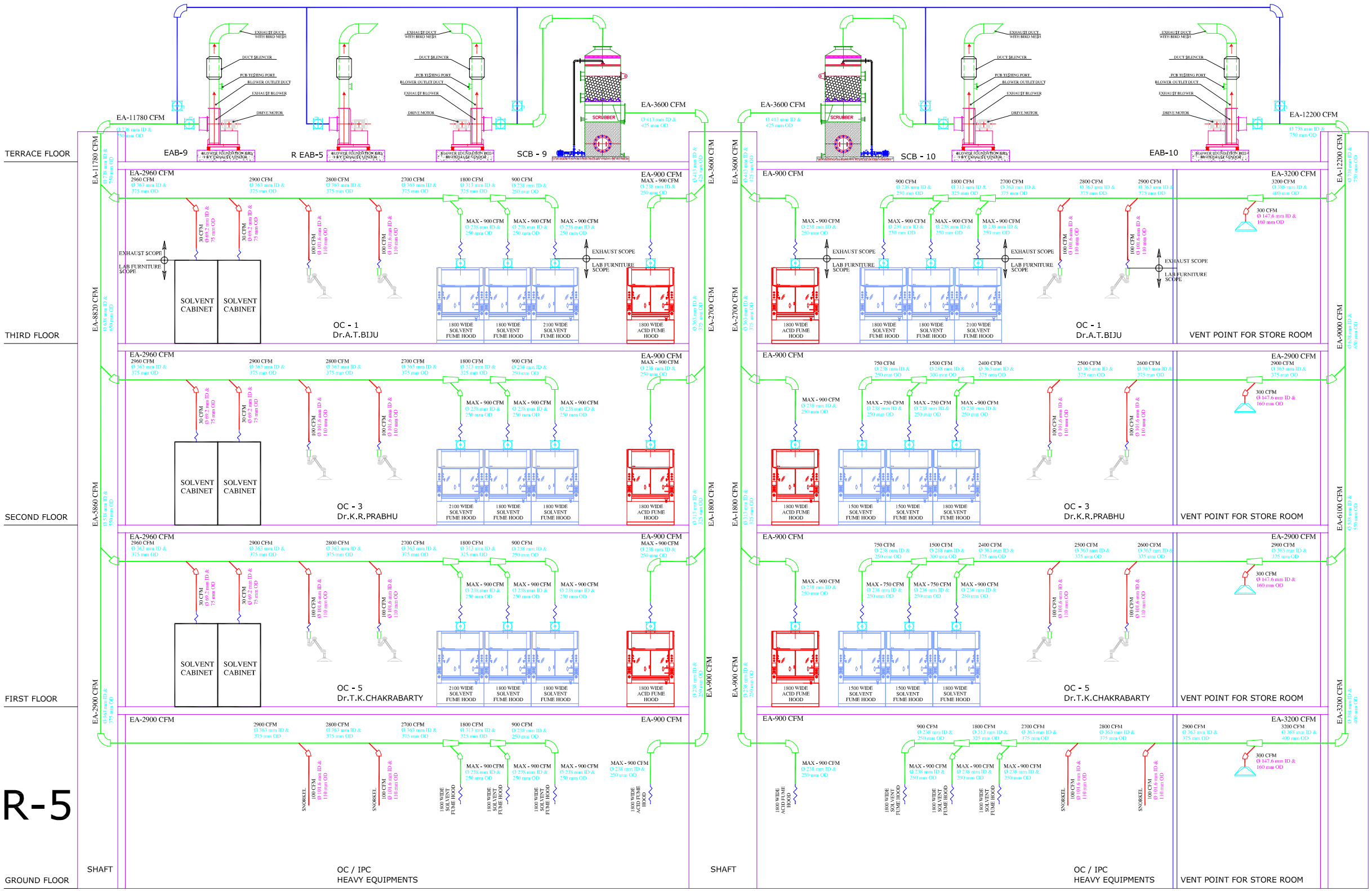
DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2603
SCALE	NTS

DRAWING TITLE:

EXHAUST P & ID FOR CLUSTER - 4

DRAWING STATUS : TENDER DRAWINGS

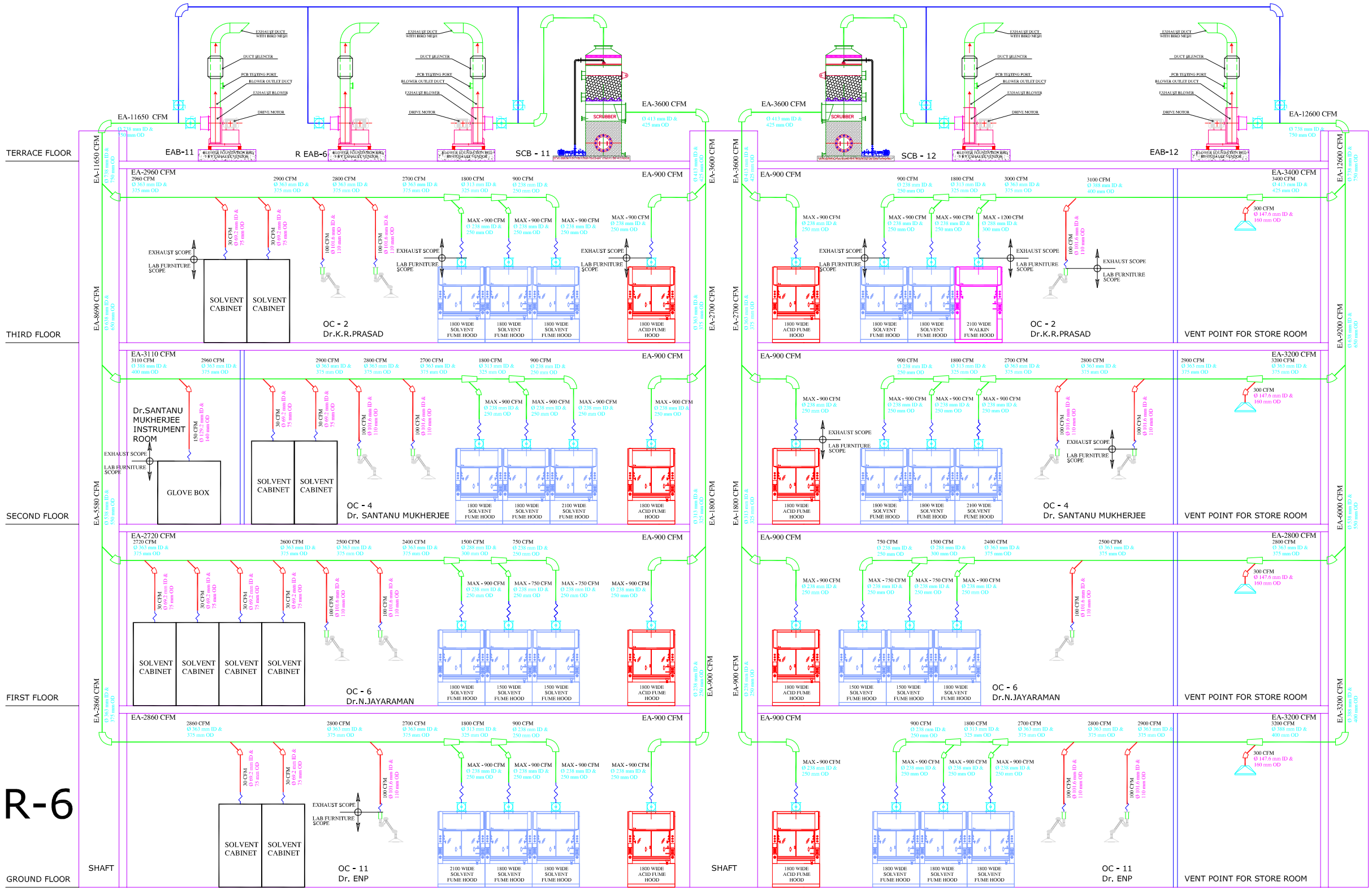
'C' TOP CLUSTER-5



C TOP

CLIENT: Indian Institute of Science Bangalore — INDIAN INSTITUTE OF SCIENCE, BANGALORE.	Architect: Chandroo Iyer Associates, NO 69, 15TH "A" CROSS ,6th MAIN MALLESWARAM BANGALORE 560 055. TEL – 80- 23368319
	Consultant: M J ASSOCIATES, PROJECT ENGINEERING CONSULTANTS, #45,1st Floor,8th Main road, Vasanth nagar,Bangalore-560 052, Tele:-22284583,22204636, E-mail-projects@mjassociates.in/www.mjassociates.in
PROJECT: LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.	DRAWING TITLE: EXHAUST P & ID FOR CLUSTER - 5
	DRAWING STATUS : TENDER DRAWINGS

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2604
SCALE	NTS



'C' TOP
CLUSTER-6

CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL - 80- 23368319

Consultant:

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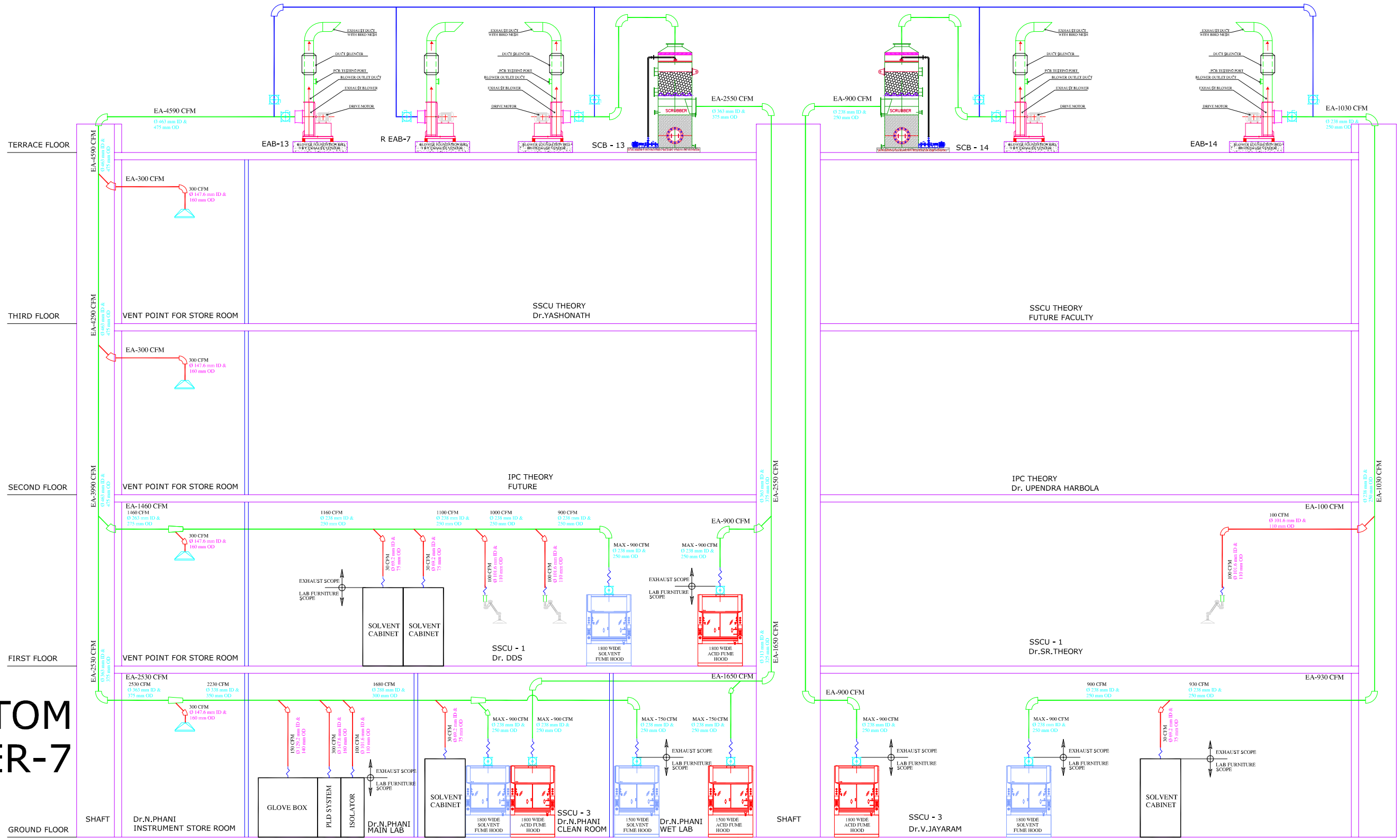
PROJECT ENGINEERING CONSULTANTS
#45,1st Floor,8th Main road,
Vasanth nagar,Bangalore-560 052
Tele-22284583,22204636
E-mail-projects@mjassociates-in/www.mjassociates-in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2605
SCALE	NTS

DRAWING TITLE:

EXHAUST P & ID FOR CLUSTER - 6

DRAWING STATUS : TENDER DRAWINGS



'A' BOTTOM CLUSTER-7

A BOTTOM

CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL - 80- 23368319

Consultant:

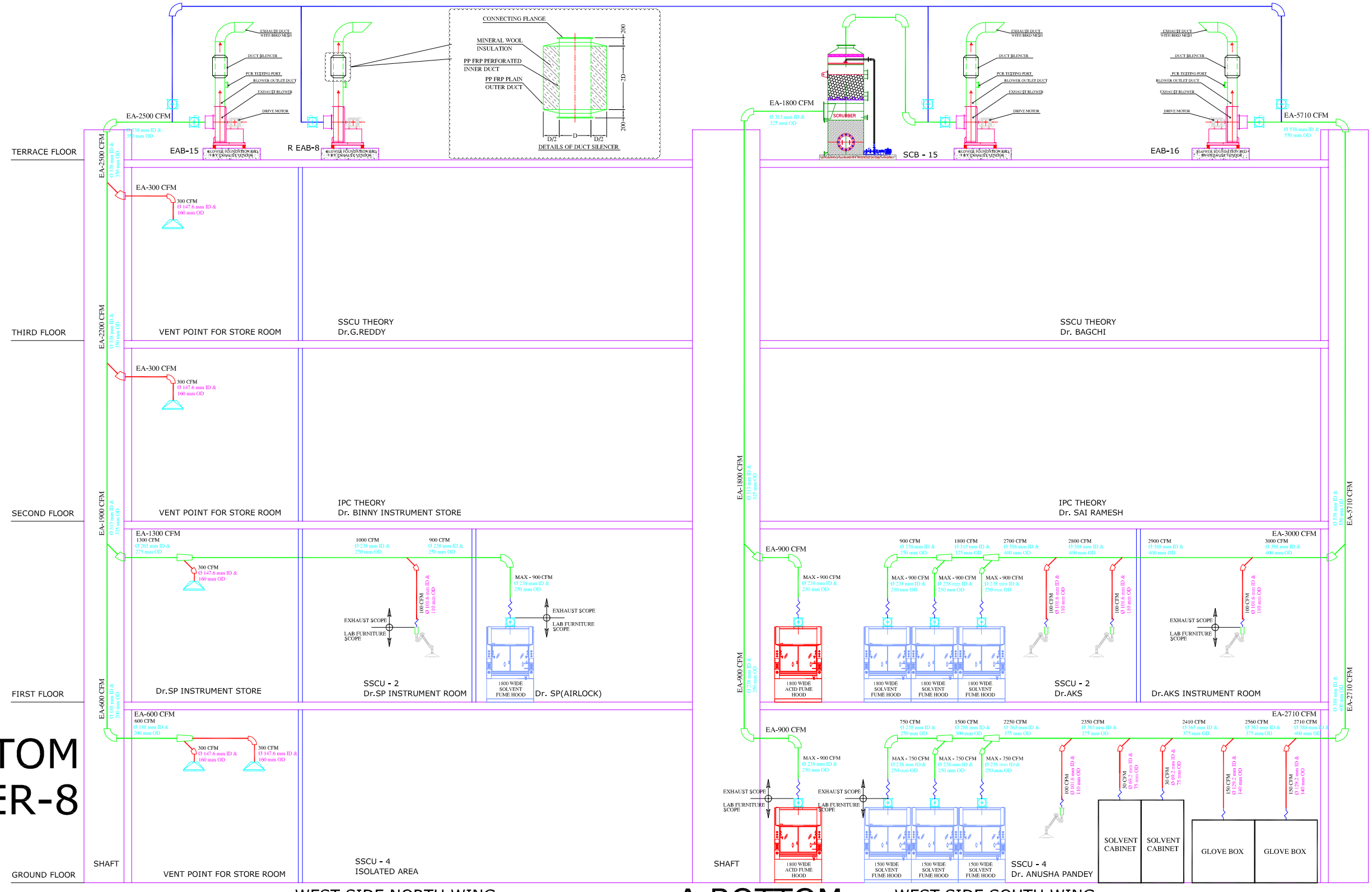
M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
#45,1st Floor,8th Main road,
Vasanth nagar,Bangalore-560 052
Tele-22284583,22204636
E-mail-projects@mjassociates-in/www-mjassociates-in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2606
SCALE	NTS

DRAWING TITLE:

EXHAUST P & ID FOR CLUSTER - 7

DRAWING STATUS : TENDER DRAWINGS



'A' BOTTOM CLUSTER-8

WEST SIDE NORTH WING

A BOTTOM

WEST SIDE SOUTH WING

CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL - 80- 23368319

Consultant:

M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
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Vasanth nagar,Bangalore-560 052
Tele:22284583,22204636
E-mail:projects@mjassociates.in\www.mjassociates.in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2607
SCALE	NTS

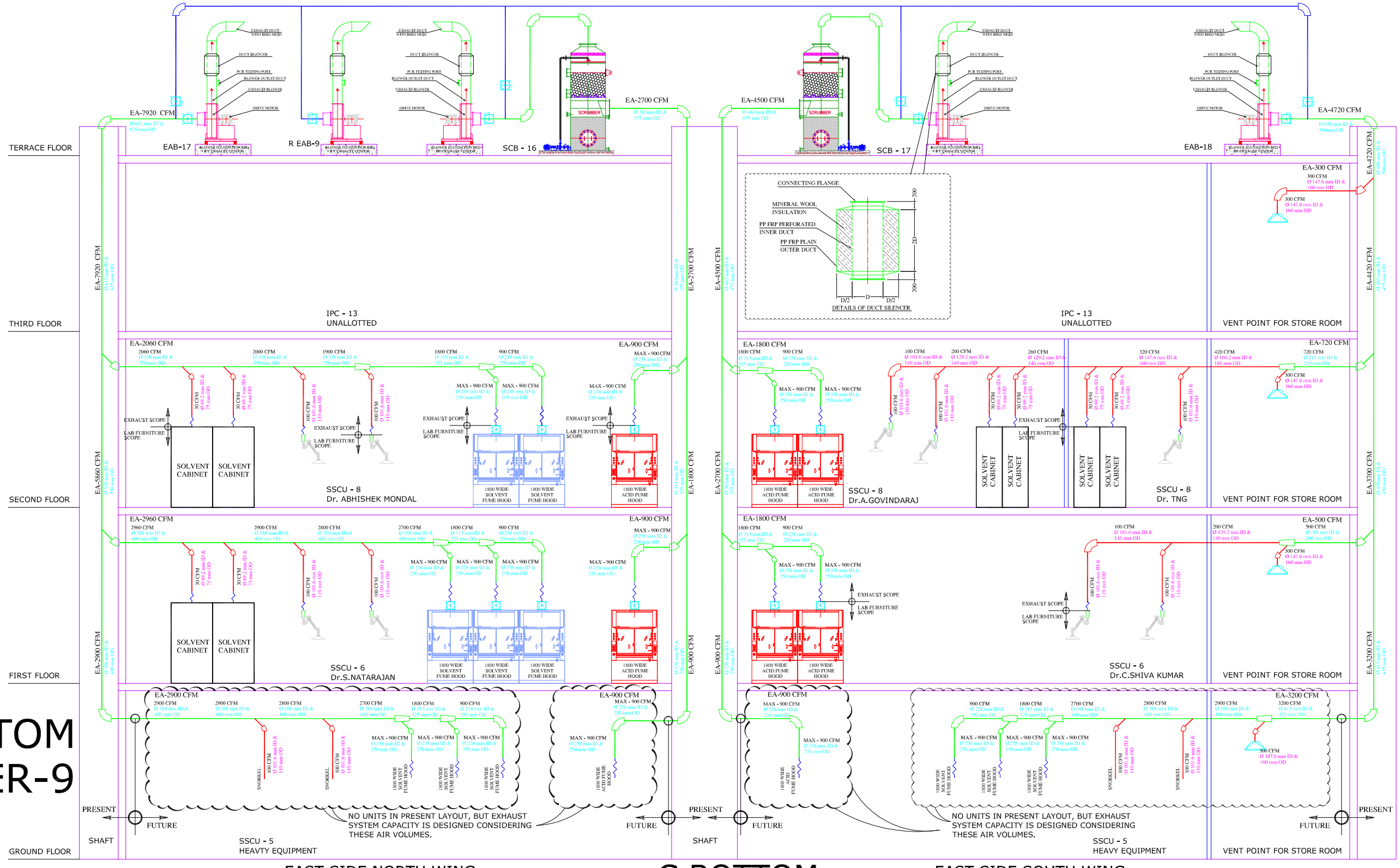
PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE:

EXHAUST P & ID FOR CLUSTER - 8

DRAWING STATUS : TENDER DRAWINGS



EAST SIDE NORTH WING

C BOTTOM

EAST SIDE SOUTH WING

'C' BOTTOM
CLUSTER-9

CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL - 80- 23368319

Consultant:

M J ASSOCIATES
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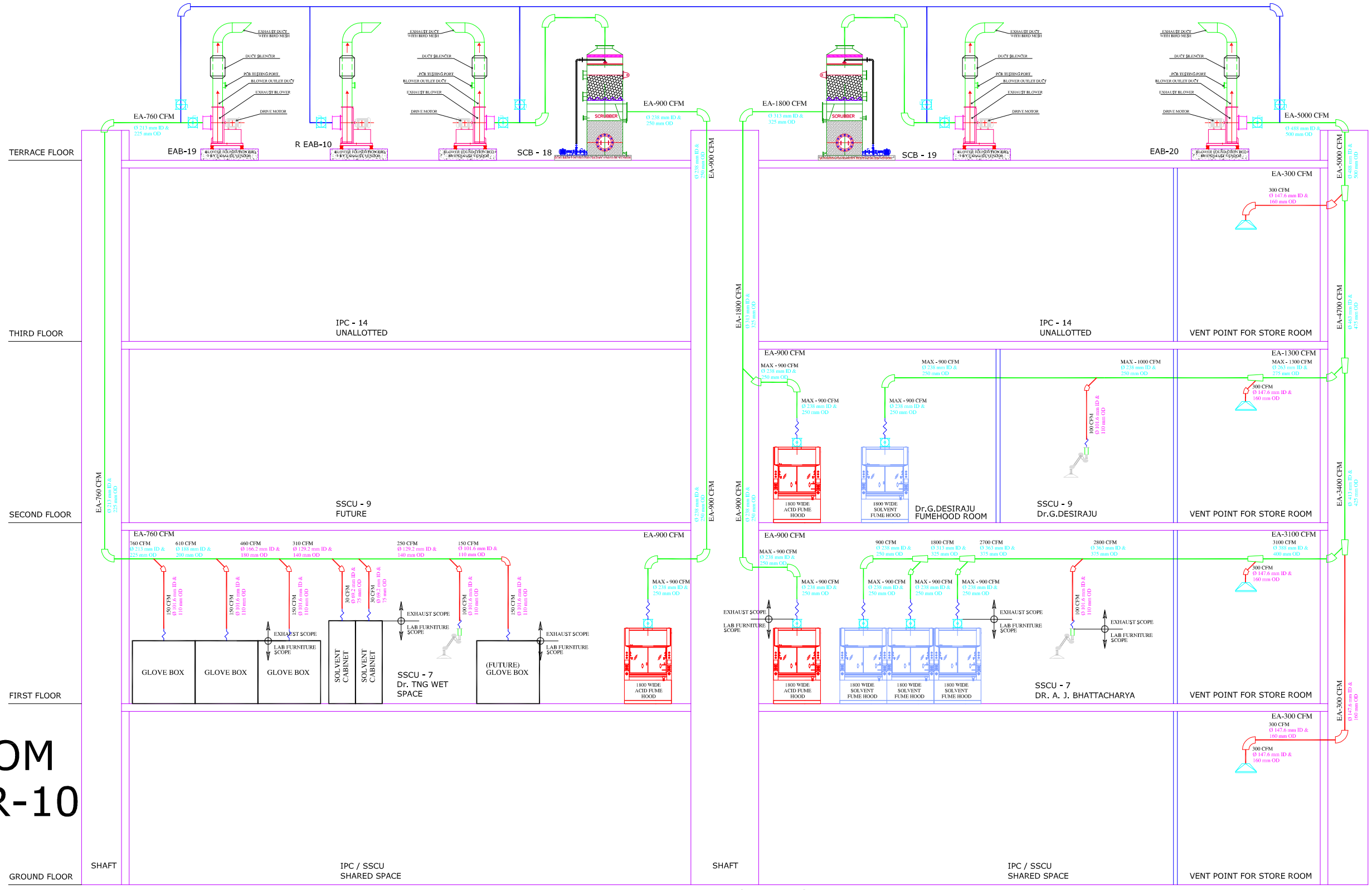
Tele-22284583,22204636
E-mail-projects@mjassociates-in/www.mjassociates-in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2608
SCALE	NTS

DRAWING TITLE:

EXHAUST P & ID FOR CLUSTER - 9

DRAWING STATUS : TENDER DRAWINGS



'C' BOTTOM CLUSTER-10

C BOTTOM

CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL - 80- 23368319

Consultant:

M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
#45,1st Floor,8th Main road,
Vasanth nagar,Bangalore-560 052
Tele:22284583,22204636
E-mail:projects@mjassociates.in\www.mjassociates.in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2609
SCALE	NTS

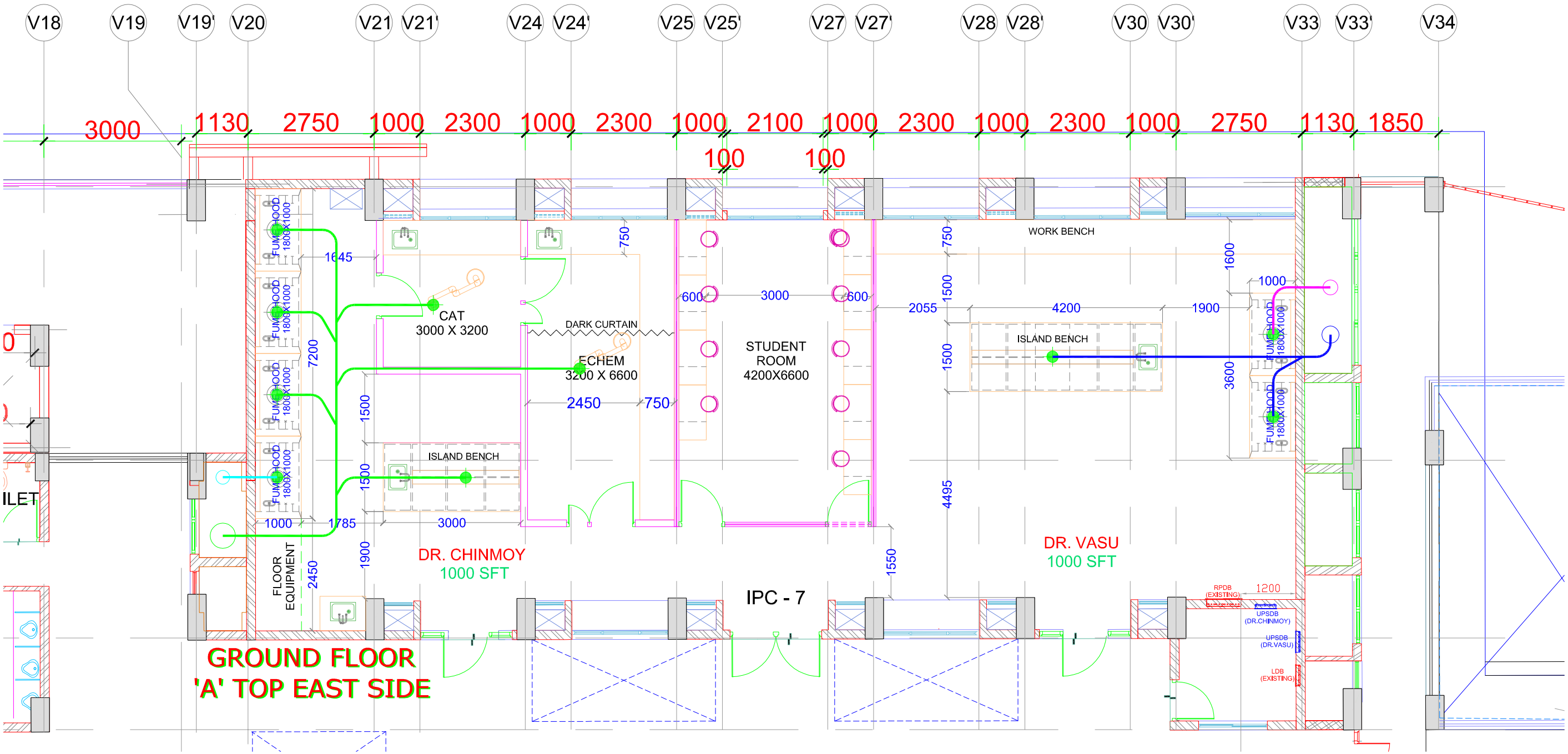
PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE:

EXHAUST P & ID FOR CLUSTER - 10

DRAWING STATUS : TENDER DRAWINGS



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL – 80– 23368319

Consultant:

M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
#45,1st Floor,8th Main road,
Vasanth nagar,Bangalore-560 052
Tele:-22284583,22204636
E-mail:-projects@mjassociates.in/www.mjassociates.in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2620
SCALE	NTS

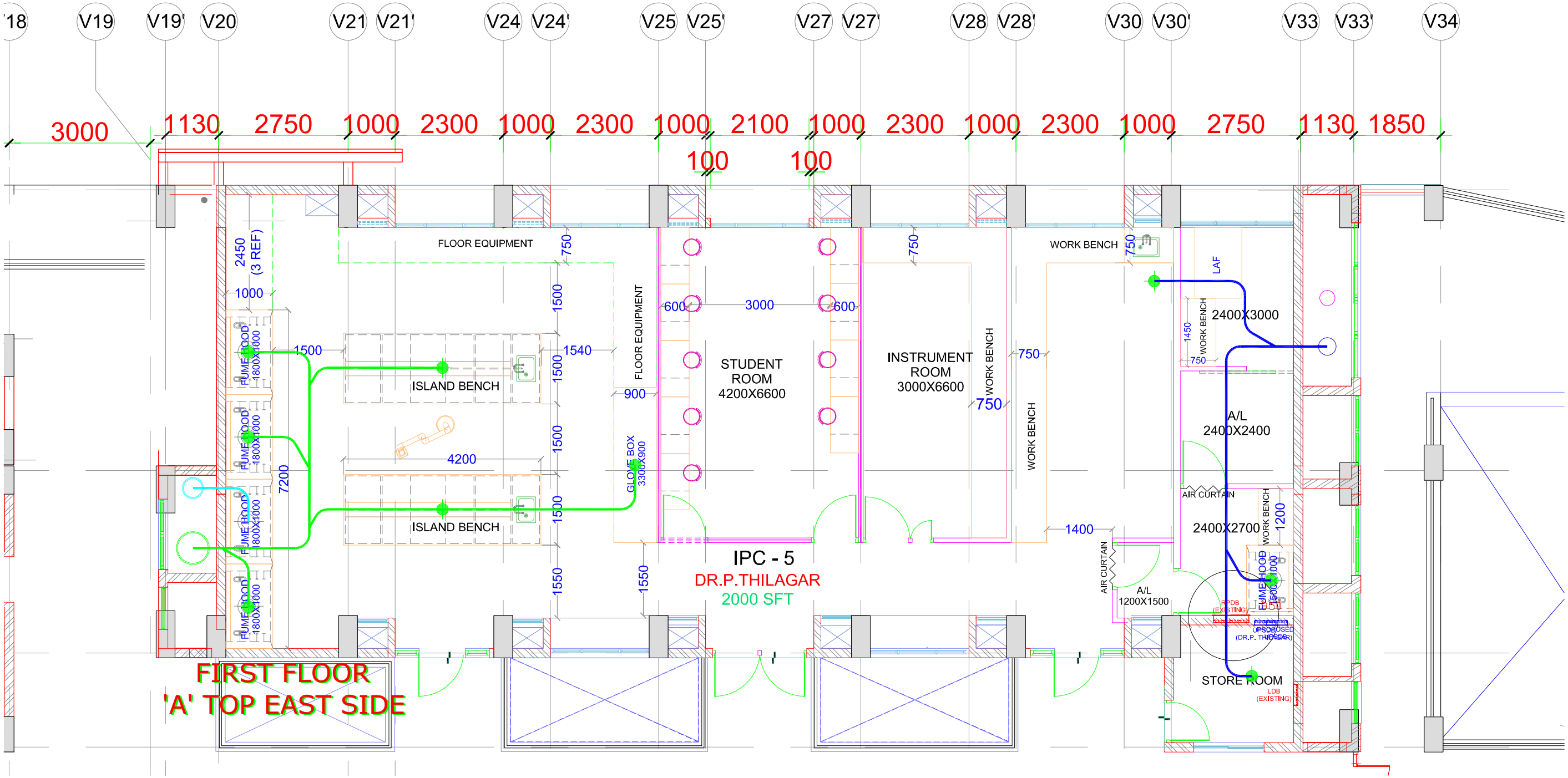
PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE:

GROUND FLOOR EXHAUST SLD FOR CLUSTER - 1

DRAWING STATUS : TENDER DRAWINGS



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL – 80– 23368319

Consultant:

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Vasanth nagar,Bangalore-560 052
Tele:-22284583,22204636
E-mail:-projects@mjassociates.in/www.mjassociates.in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2621
SCALE	NTS

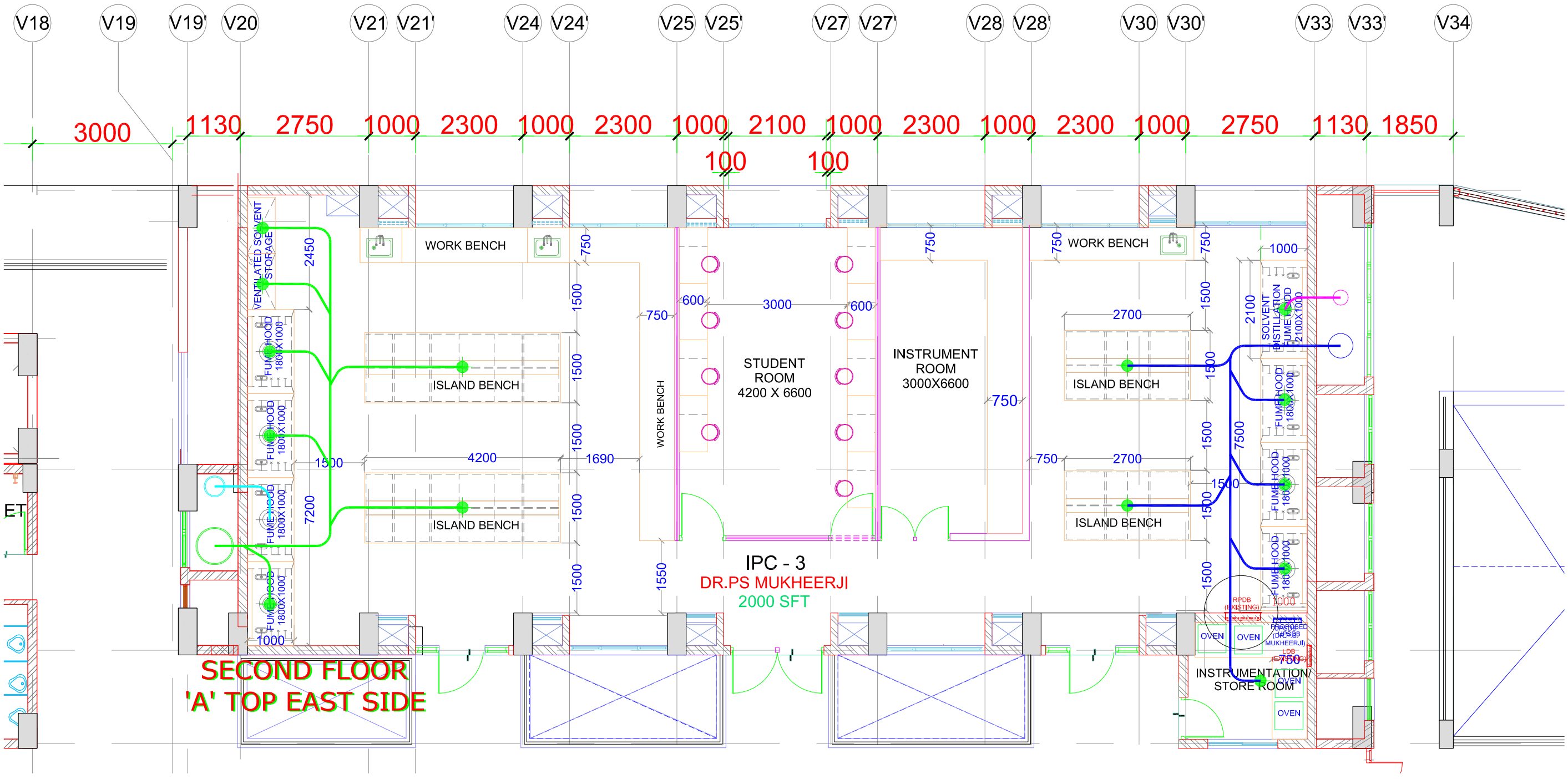
PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE:

FIRST FLOOR EXHAUST SLD FOR CLUSTER - 1

DRAWING STATUS : TENDER DRAWINGS



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL – 80– 23368319

Consultant:

M J ASSOCIATES
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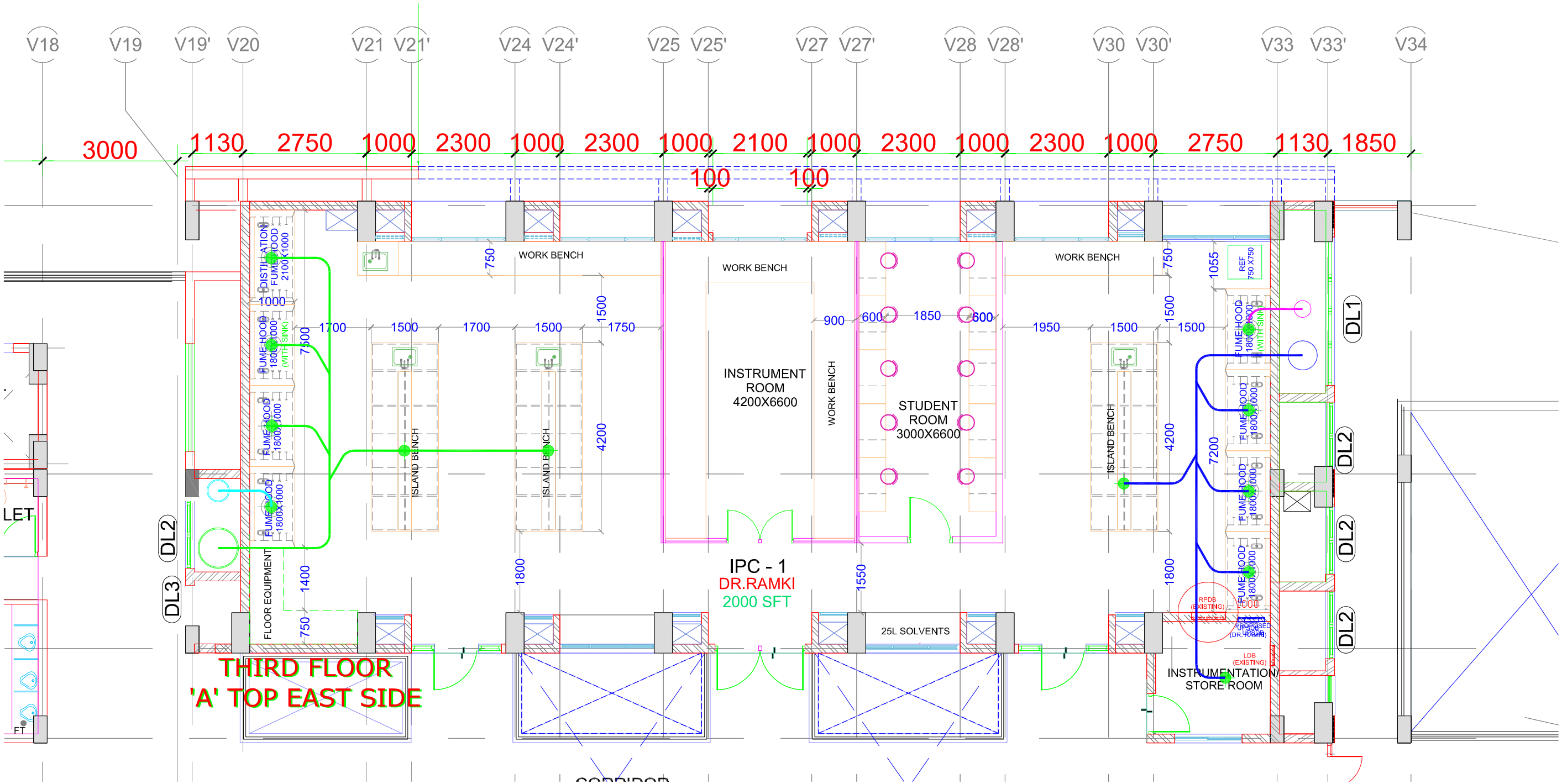
Tele:-22284583,22204636
E-mail:-projects@mjassociates.in/www.mjassociates.in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2622
SCALE	NTS

DRAWING TITLE:

SECOND FLOOR EXHAUST SLD FOR CLUSTER - 1

DRAWING STATUS : TENDER DRAWINGS



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
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TEL – 80– 23368319

Consultant:

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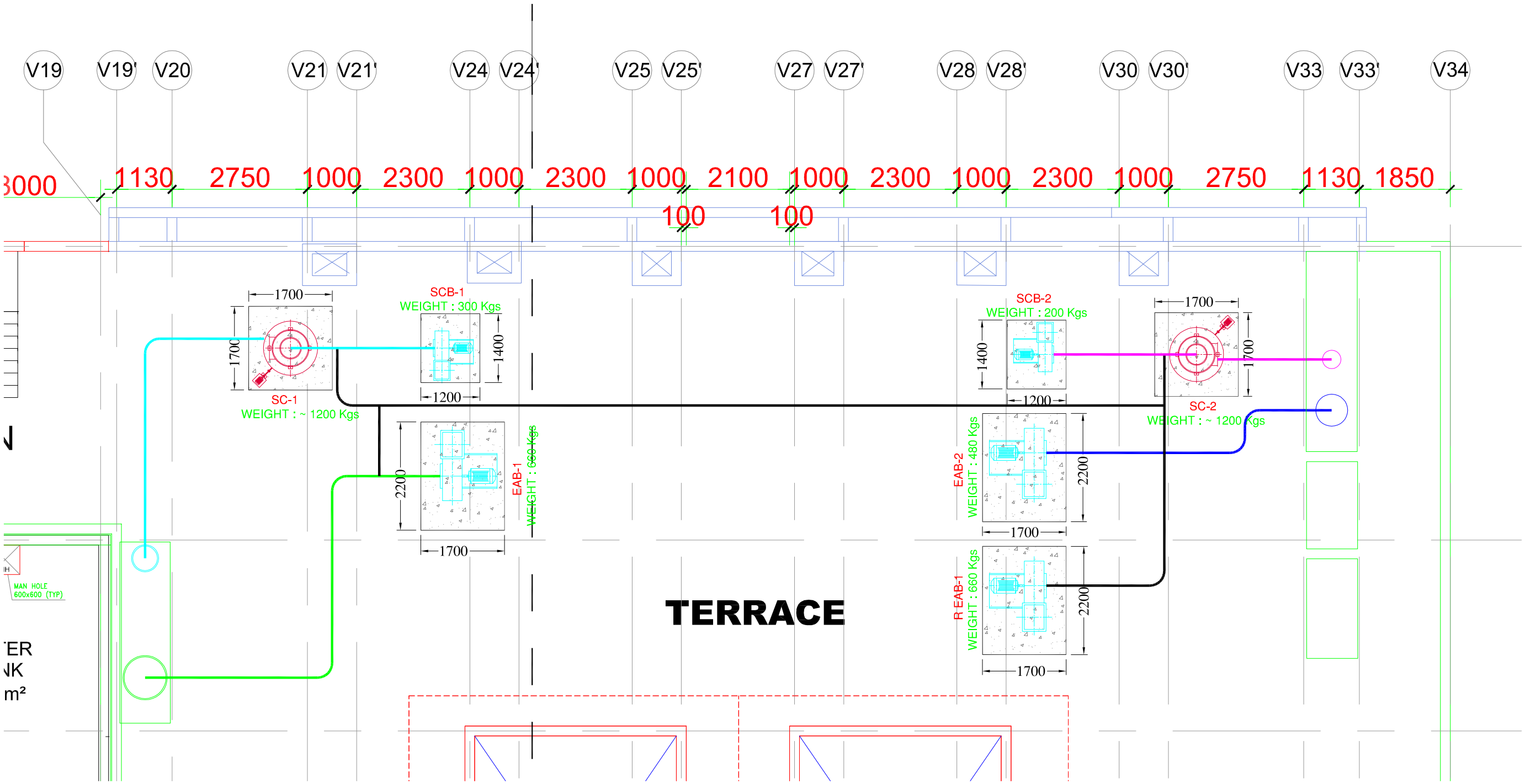
E-mail:s-projects@mjassociates.In/www.mjassociates.In

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2623
SCALE	NTS

DRAWING TITLE:

THIRD FLOOR EXHAUST SLD FOR CLUSTER - 1

DRAWING STATUS : TENDER DRAWINGS



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL – 80– 23368319

Consultant:

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E-mail:s-projects@mjassociates.In/www.mjassociates.in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2624
SCALE	NTS

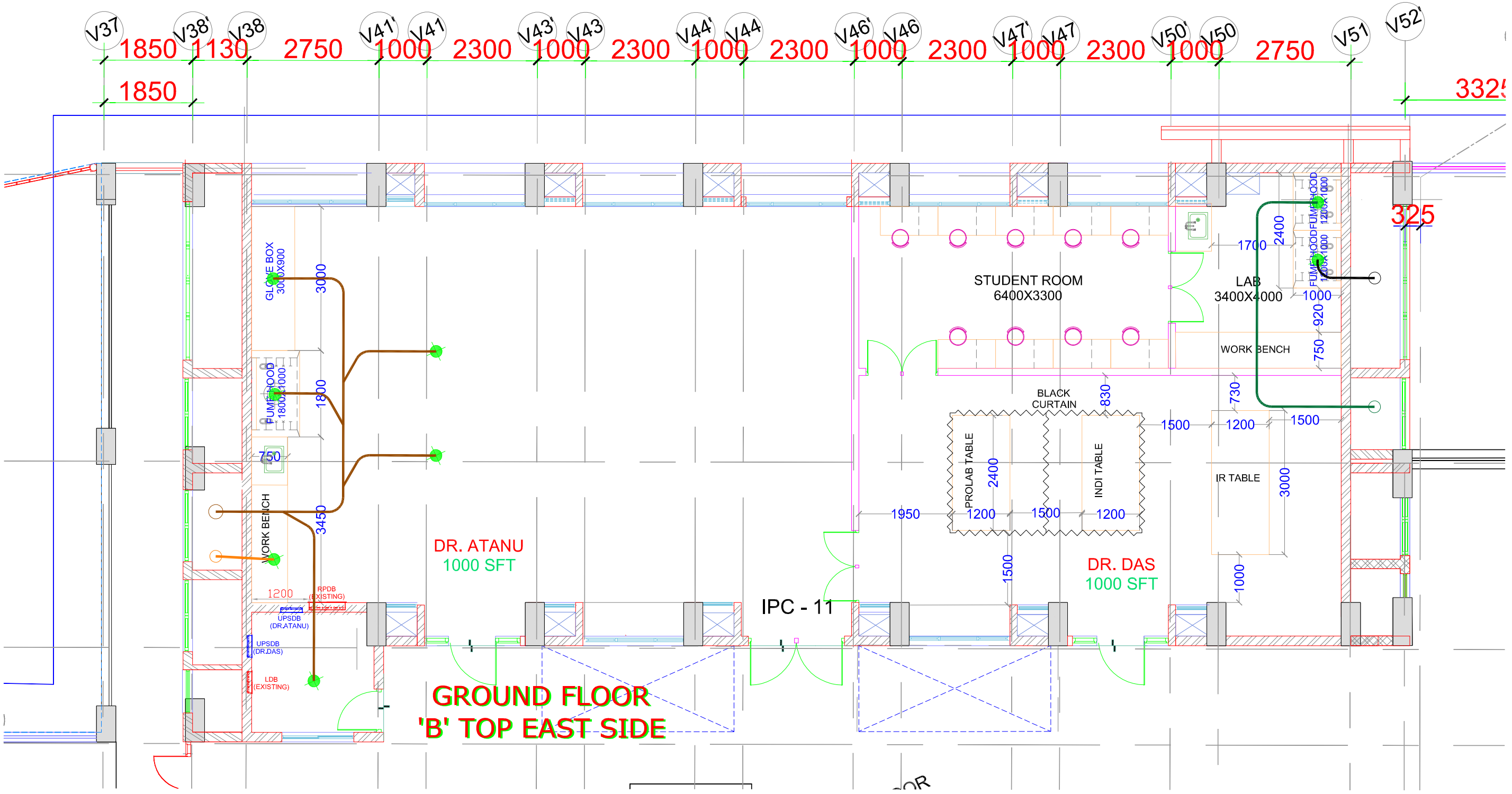
PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE:

TERRACE FLOOR EXHAUST SLD FOR CLUSTER - 1

DRAWING STATUS : TENDER DRAWINGS



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates
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MALLESWARAM
BANGALORE 560 055.
TEL – 80- 23368319

Consultant:

M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
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Tele:-22284583,22204636
E-mail:-projects@mjassociates.in/www.mjassociates.in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2625
SCALE	NTS

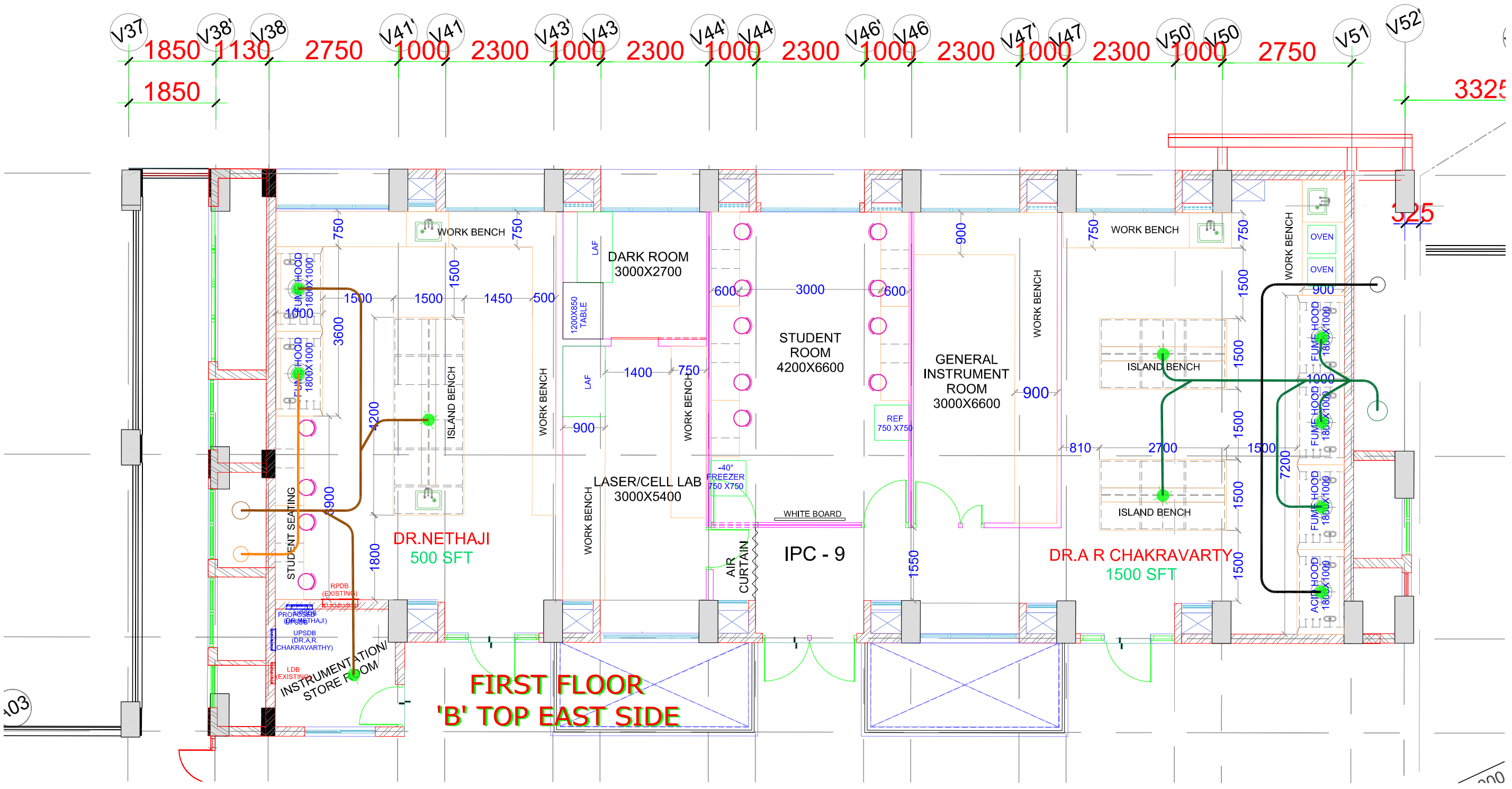
PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE:

GROUND FLOOR EXHAUST SLD FOR CLUSTER - 2

DRAWING STATUS : TENDER DRAWINGS



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL - 80- 23368319

Consultant:

M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
#45,1st Floor,8th Main road,
Vasanth nagar,Bangalore-560 052
Tele:-22284583,22204636
E-mails-projects@mjassociates.In/www.mjassociates.in

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2626
SCALE	NTS

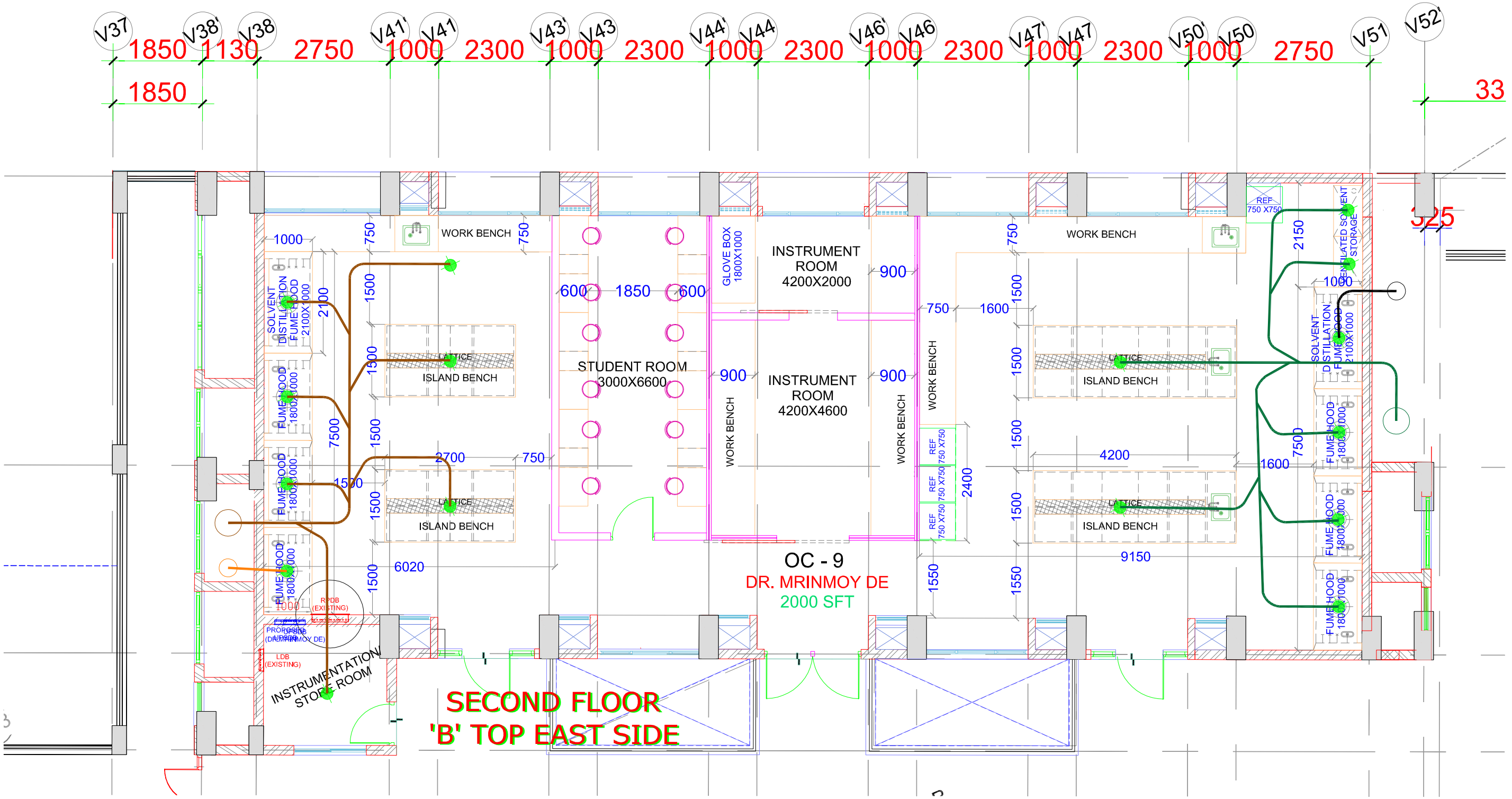
PROJECT:

LABORATORY INTERIOR WORKS FOR
CHEMICAL SCIENCES BUILDING.

DRAWING TITLE:

FIRST FLOOR EXHAUST SLD FOR CLUSTER - 2

DRAWING STATUS : TENDER DRAWINGS



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

Architect:

Chandroo Iyer Associates
NO 69, 15TH "A" CROSS ,6th MAIN
MALLESWARAM
BANGALORE 560 055.
TEL – 80– 23368319

Consultant:

M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
#45,1st Floor,8th Main road,
Vasanth nagar,Bangalore-560 052
Tele:-22284583,22204636
E-mail:s-projects@mjassociates.In/www.mjassociates.In

DRAWN	KIRAN
CHECKED	SESHADRI
APPROVED	SUNDAR
DATE	23.10.18
JOB NO	MJ - 324
DWG NO:	2627
SCALE	NTS

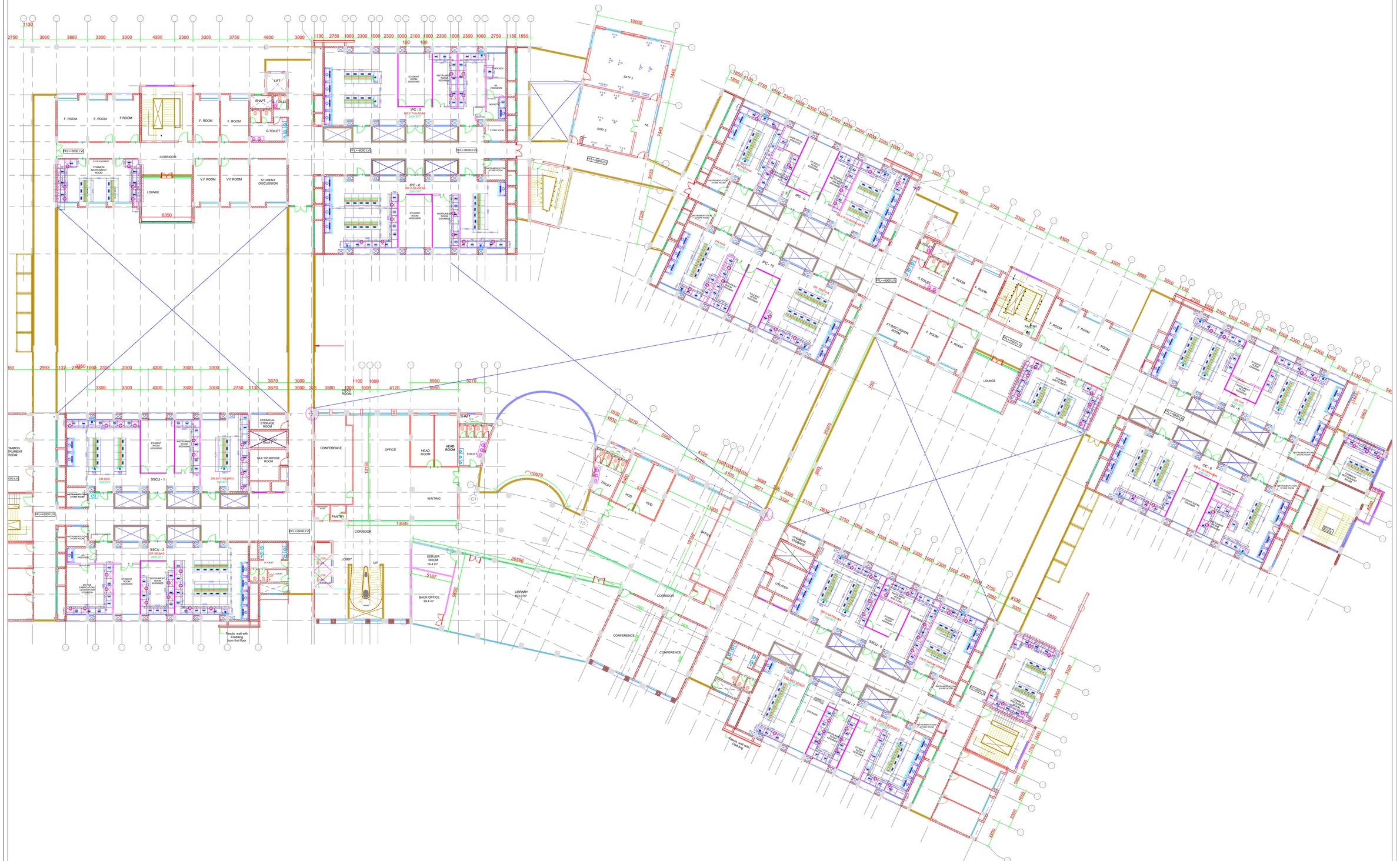
PROJECT:

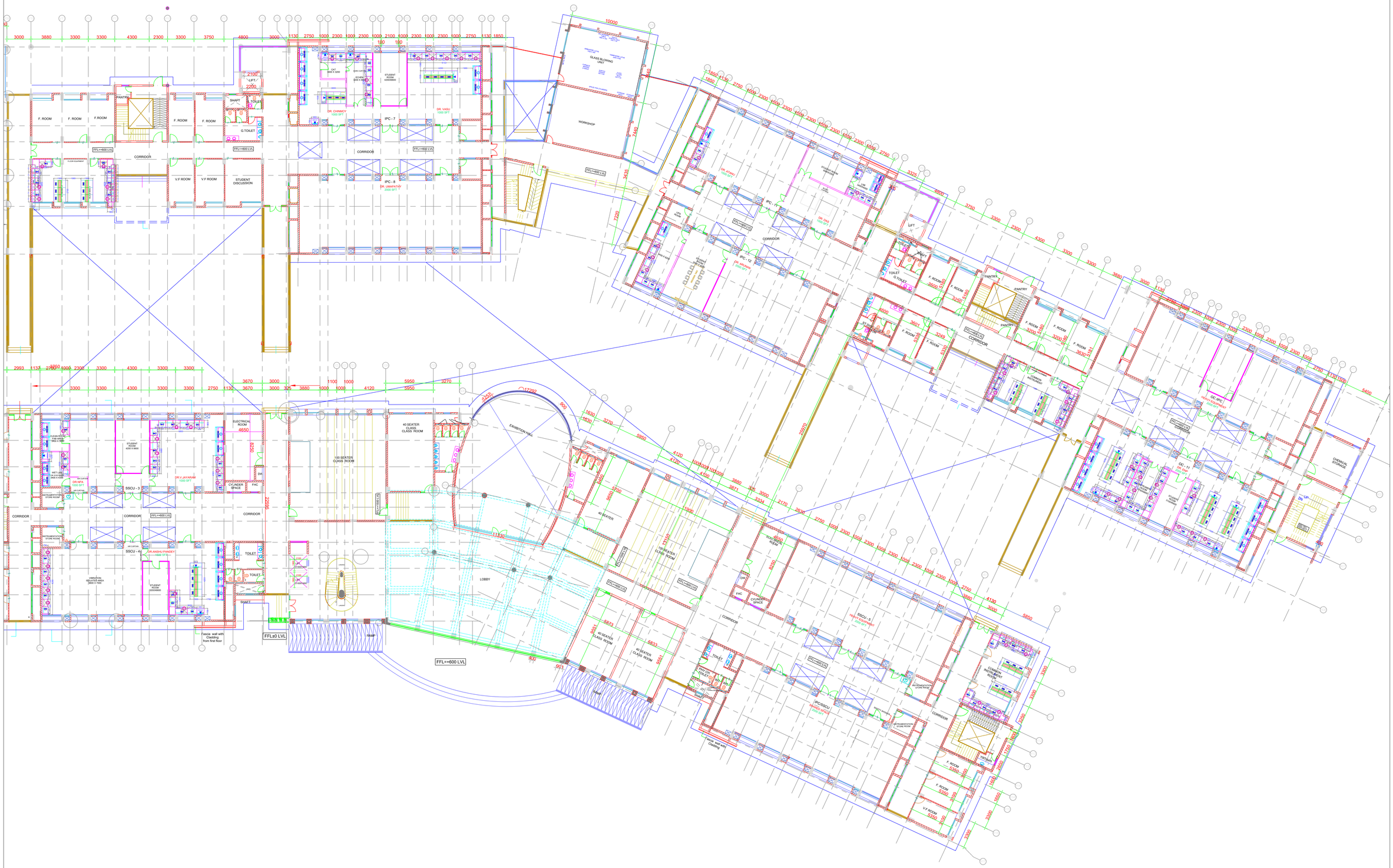
LABORATORY INTERIOR WORKS FOR
CHEMICAL SCIENCES BUILDING.

DRAWING TITLE:

SECOND FLOOR EXHAUST SLD FOR CLUSTER - 2

DRAWING STATUS : TENDER DRAWINGS


F. ROOM
F.ROOM
CORRIDOR
LOUNGE
6350
V.F ROOM
STUDENT DISCUSSION
G.TOILET
LIFT
SHAFT
COMMON INSTRUMENT ROOM
IPC - 5
DRUP THILAGAM
2000 SFT
IPC - 6
DR.SUJATHA
2000 SFT
STUDENT ROOM 4200X6600
INSTRUMENTATION STORE ROOM
STORE ROOM
SATP 2
AHL
FFL=+6000 LVL
IPC - 9
IPC - 10
DR. KAVITHA
1000 SFT
DR. SHANTHI
1000 SFT
DR. SUJATHA
1000 SFT
DR. SUJATHA
1000 SFT
ST.DISCUSSION ROOM
PANTRY
IPC - 11
DR. SUJATHA
1000 SFT
DR. SUJATHA
1000 SFT
DR. SUJATHA
1000 SFT



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SL. NO	DATE		SL. NO	DATE	ISSUED TO
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REVISION

SL. NO	DATE	DESCRIPTION	SL. NO	DATE	DESCRIPTION

CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE:

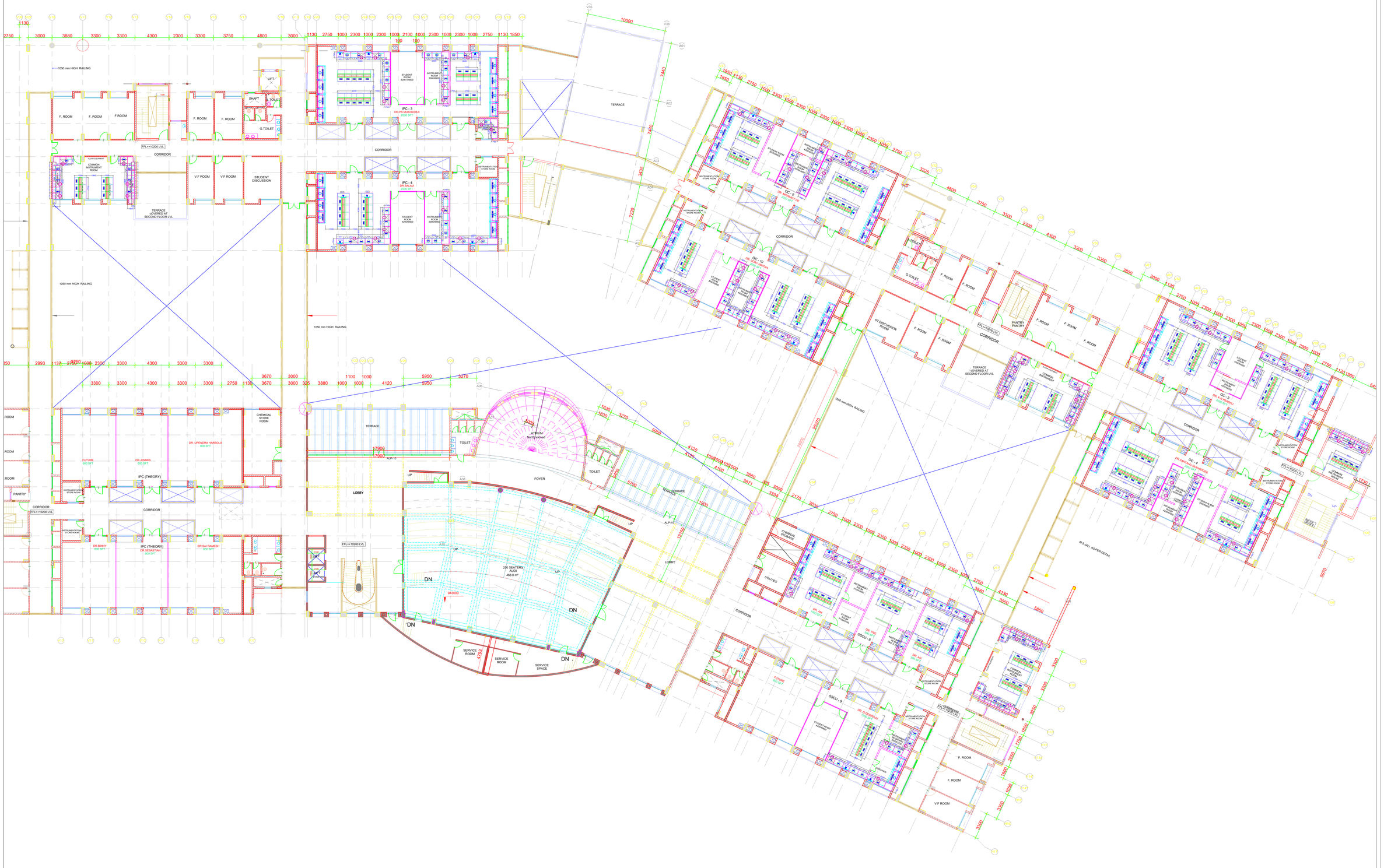
GROUND FLOOR PLAN

Architect: Chandroo Iyer Associates
46 TH, MIDDLE ROAD ,RUT NO.39 31ST MAIN ROAD, THYAGARAJA NAGAR, BSK II STAGE TEL :- 91 - 26682210

Consultant: M.J.ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
NO.4,1ST CROSS ,3RD CROSS, RAJA ROAD, MALLESWARAM, BANGALORE-560 003. TEL :- 91 - 23234455

JOB NO	DATE
C 364	23-10-2018
DRAWING NO:	SCALE	REV.
C364/T-02	NTS	- -

DRAWING STATUS: TENDER DRAWING


1050 mm HIGH RAILING
LIFT
SHAFT
L.TOILET
G.TOILET
F. ROOM
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IPC - 3
DR.S.SACHIDEVA
STUDENT ROOM 4300 X 6800
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TOILET
FOYER
LOBBY
UP
DN
ALP-10
250 SEATERS AUDI
468.0 m²
943000
SERVICE ROOM
SERVICE SPACE
CHEMICAL STORE ROOM
ROOM
FUTURE
600 SFT
DR.JEMMIS
600 SFT
IPC (THEORY)
DR. UPENDRA HARBOLA
600 SFT
PANTRY
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600 SFT
DR.SEBASTIAN
600 SFT
DR.SAI RAMESH
600 SFT
TERRACE
ALP-12
ALP-13
ALP-14
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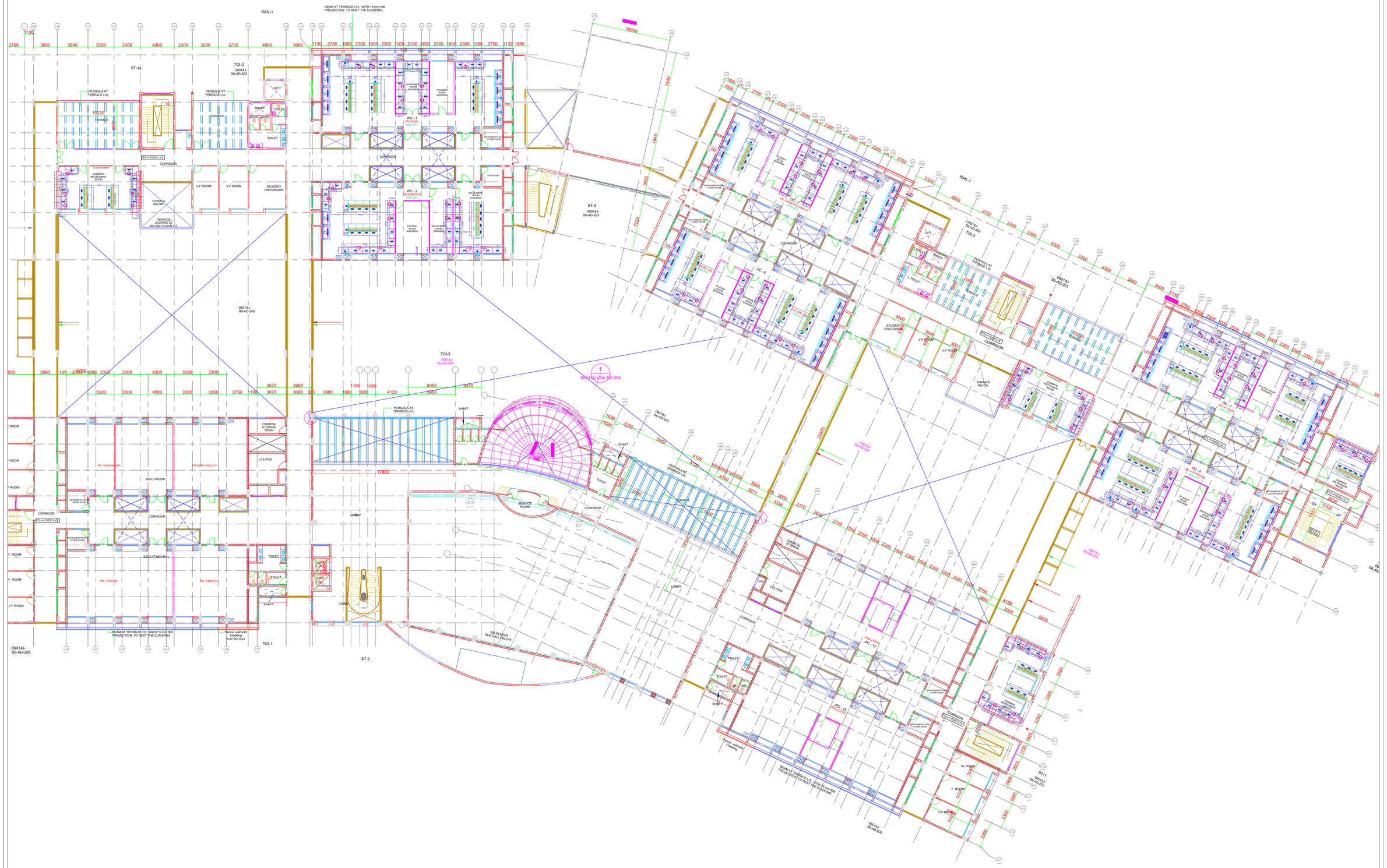

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DRAWING TITLE:

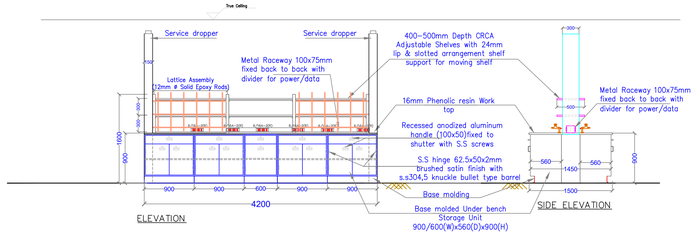
THIRD FLOOR PLAN

ARCHITECT: Chandroo Iyer Associates
46 TH. MAIN,6TH BLOCK ,EAST 4TH M
JAY NAGR MAIN, THYAGARAJA
BANGALORE - 560 028
TEL : 91 - 26560819

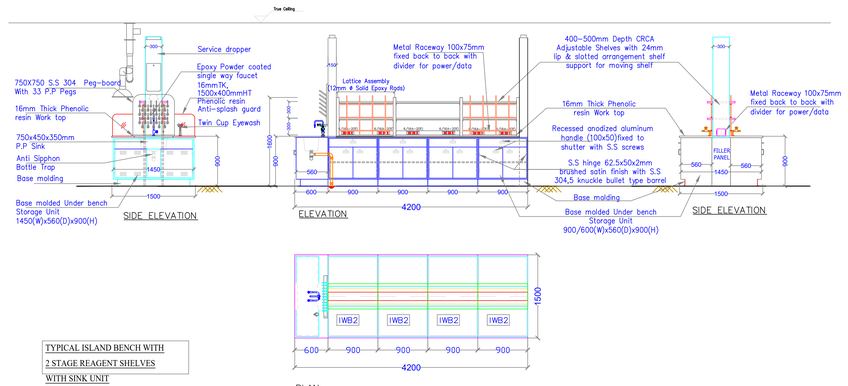
CONSULTANT: M.J.ASSOCIATES
PROJECT CONSULTANTS (BANGALORE)
#8,FLAT NO#8 ,2ND CROSS,
MAC NAIR ROAD,
SHANTHINAGAR,
BANGALORE-560 027.
TEL : 91 - 22274422

JOB NO	DATE
C 364	23-10-2018
DRAWING NO.	SCALE	REV.
C364/T-05	NTS	- -

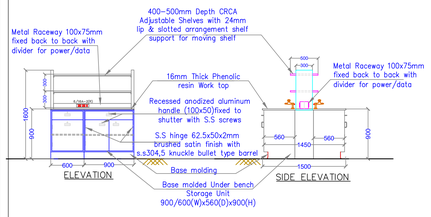
DRAWING STATUS: TENDER DRAWING

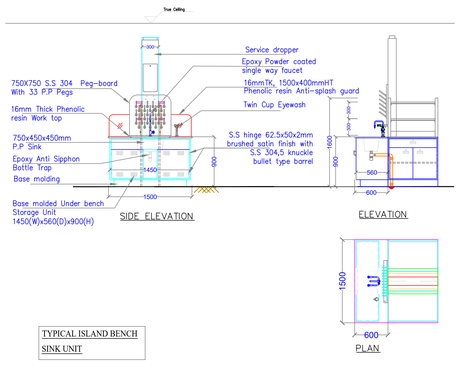


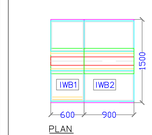
TYPICAL ISLAND BENCH WITH
2 STAGE REAGENT SHELVES
WITHOUT SINK UNIT



TYPICAL ISLAND BENCH WITH
2 STAGE REAGENT SHELVES
WITH SINK UNIT

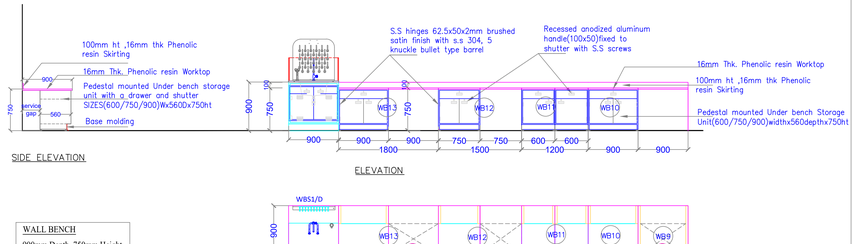




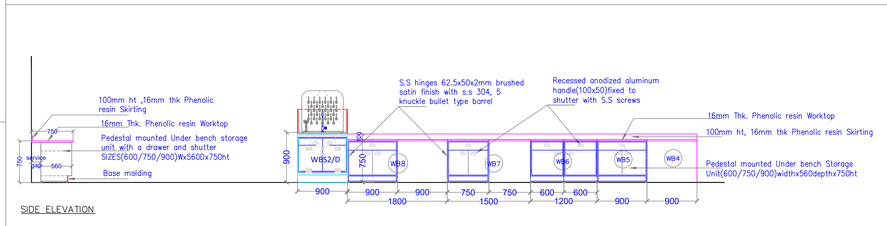


TYPICAL ISLAND BENCH MODULE
WITH 2 STAGE REAGENT SHELVES

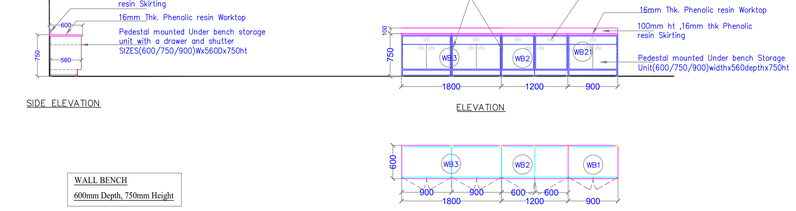
TYPICAL ISLAND BENCH
SINK UNIT



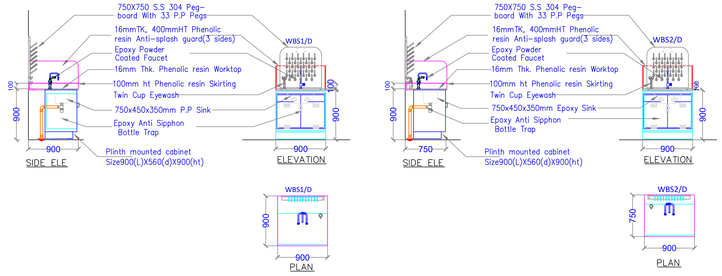
WALL BENCH
900mm Depth, 750mm Height

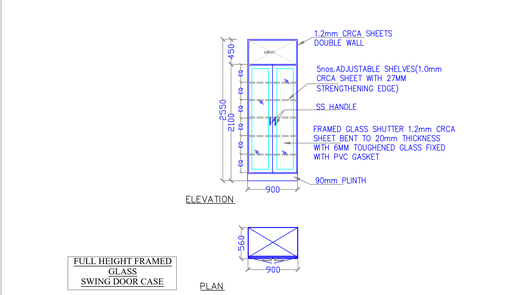


WALL BENCH
750mm Depth, 750mm Height

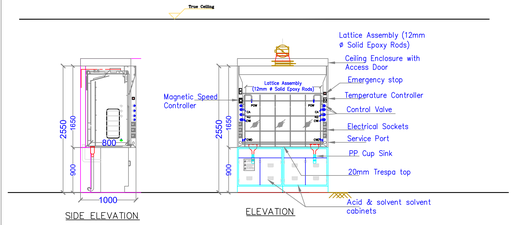


WALL BENCH
600mm Depth, 750mm Height

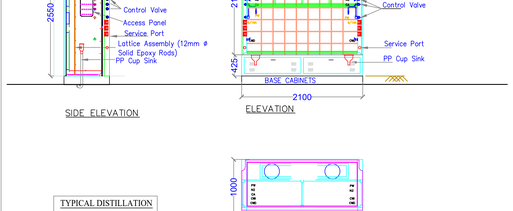




FULL HEIGHT FRAMED
GLASS
SWING DOOR CASE



TYPICAL HOOD
1500/1800X1000X1350



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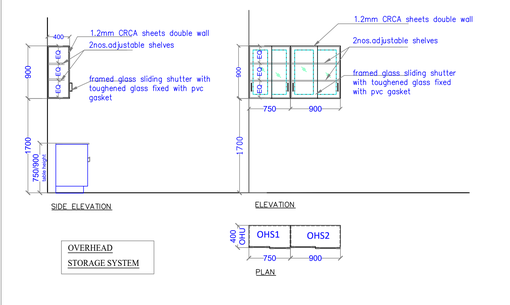
FUME HOOD



OVERHEAD
STORAGE SYSTEM

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CLIENT:
Indian Institute of Science Bangalore
INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE:
LAB FURNITURE
TYPICAL DETAILS

Architect:
Chandroo Iyer Associates
NO 700, BHAGAT NIWAS ,FLAT NO.00 RAMAMURTHY NAGAR EXTENSION BANGALORE 560 016 KARNATAKA
TEL : 91- 8553819

Consultant:
M.J.ASSOCIATES
PROCESS ENGINEERING CONSULTANTS
NO.46,1ST FLOOR ,6TH CROSS, 3RD MAIN ROAD, VASANTHNAGAR, BANGALORE 560 052.
TEL : 91- 8220466

	JOB NO	DATE
	C 364	23-10-2018
DRAWING NO:	SCALE	REV.
C364/T-01	NTS	--

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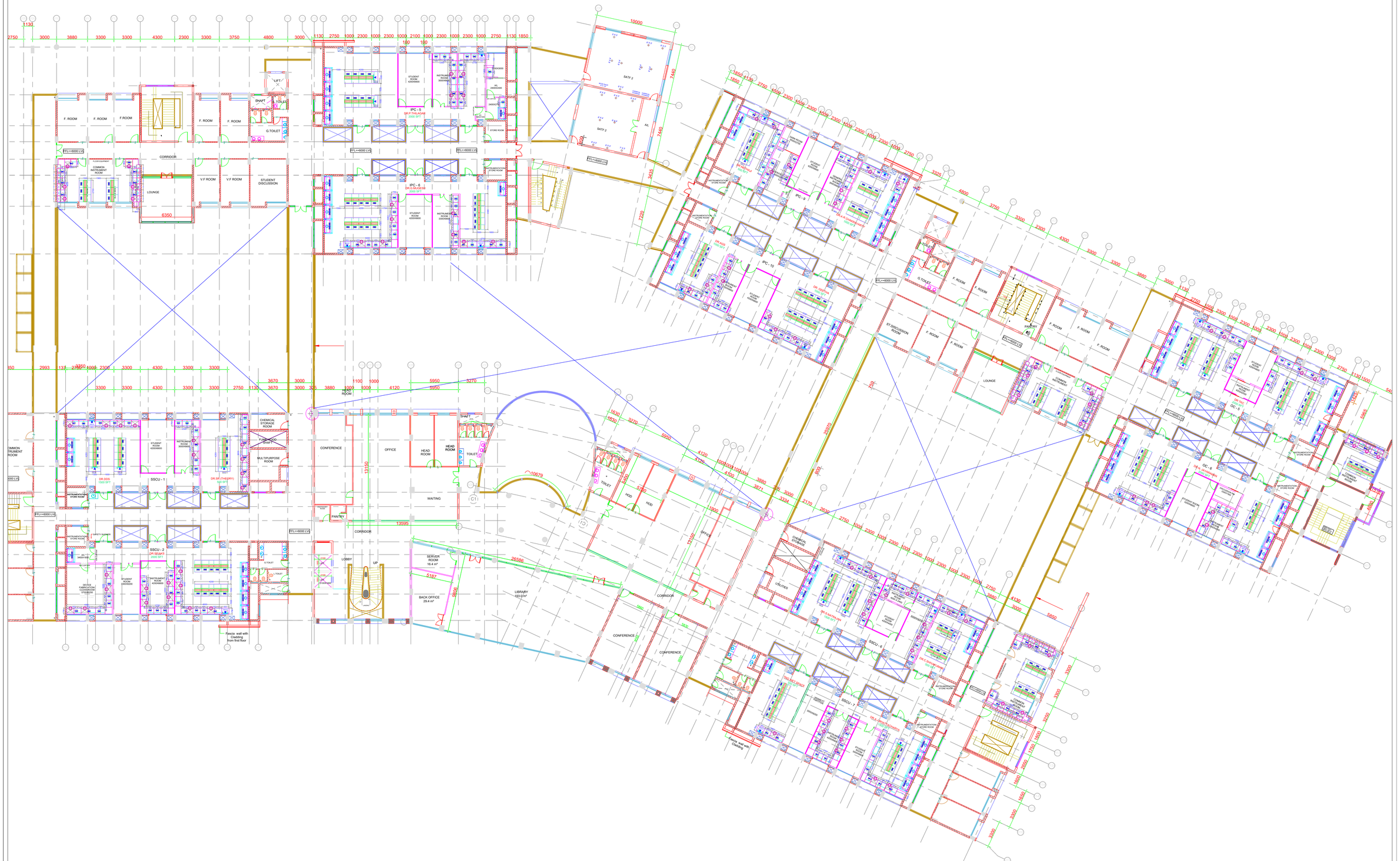
F. ROOM
F.ROOM
CORRIDOR
LOUNGE
6350
V.F ROOM
STUDENT DISCUSSION
G.TOILET
LIFT
SHAFT
COMMON INSTRUMENT ROOM
IPC - 5
DRUP THILAGAM
2000 SFT
IPC - 6
DR.SUJATHA
2000 SFT
STUDENT ROOM 4200X6600
INSTRUMENTATION STORE ROOM
STORE ROOM
SATP 2
AHL
FFL=+6000 LVL
IPC - 9
IPC - 10
DR. KAVITHA
1000 SFT
DR. SHANTHI
1000 SFT
DR. SUJATHA
1000 SFT
DR. SUJATHA
1000 SFT
ST.DISCUSSION ROOM
PANTRY
IPC - 11
DR. SUJATHA
1000 SFT
IPC - 12
DR. SUJATHA
1000 SFT
OC - 5
DR. SUJATHA
1000 SFT
OC - 6
DR. SUJATHA
1000 SFT
SSCU - 1
DR.DDS
1000 SFT
DR.SR (THEORY)
500 SFT
SSCU - 2
DR.SUJATHA
2000 SFT
SSCU - 6
DR. SUJATHA
1000 SFT
SSCU - 7
DR. SUJATHA
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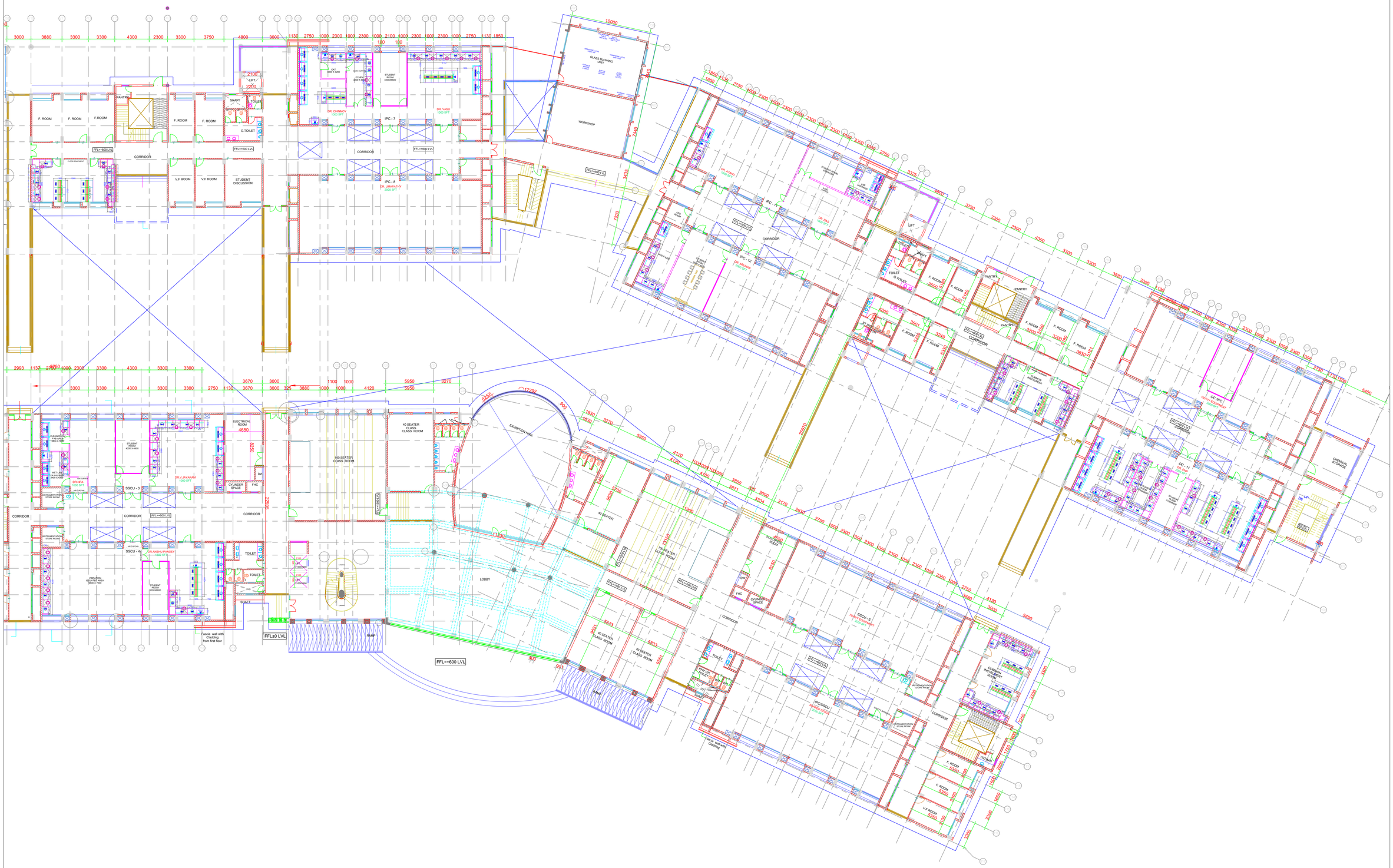

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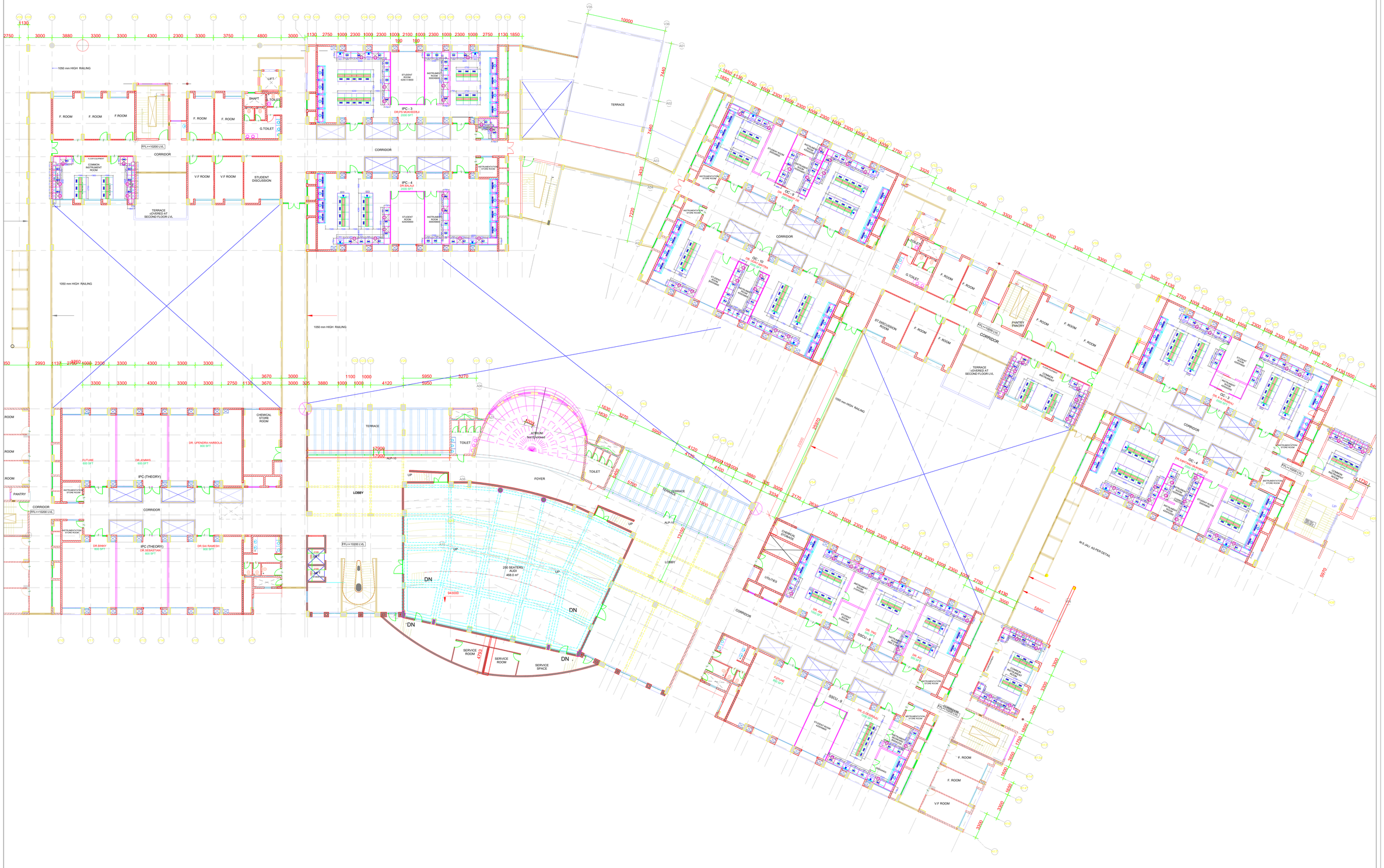
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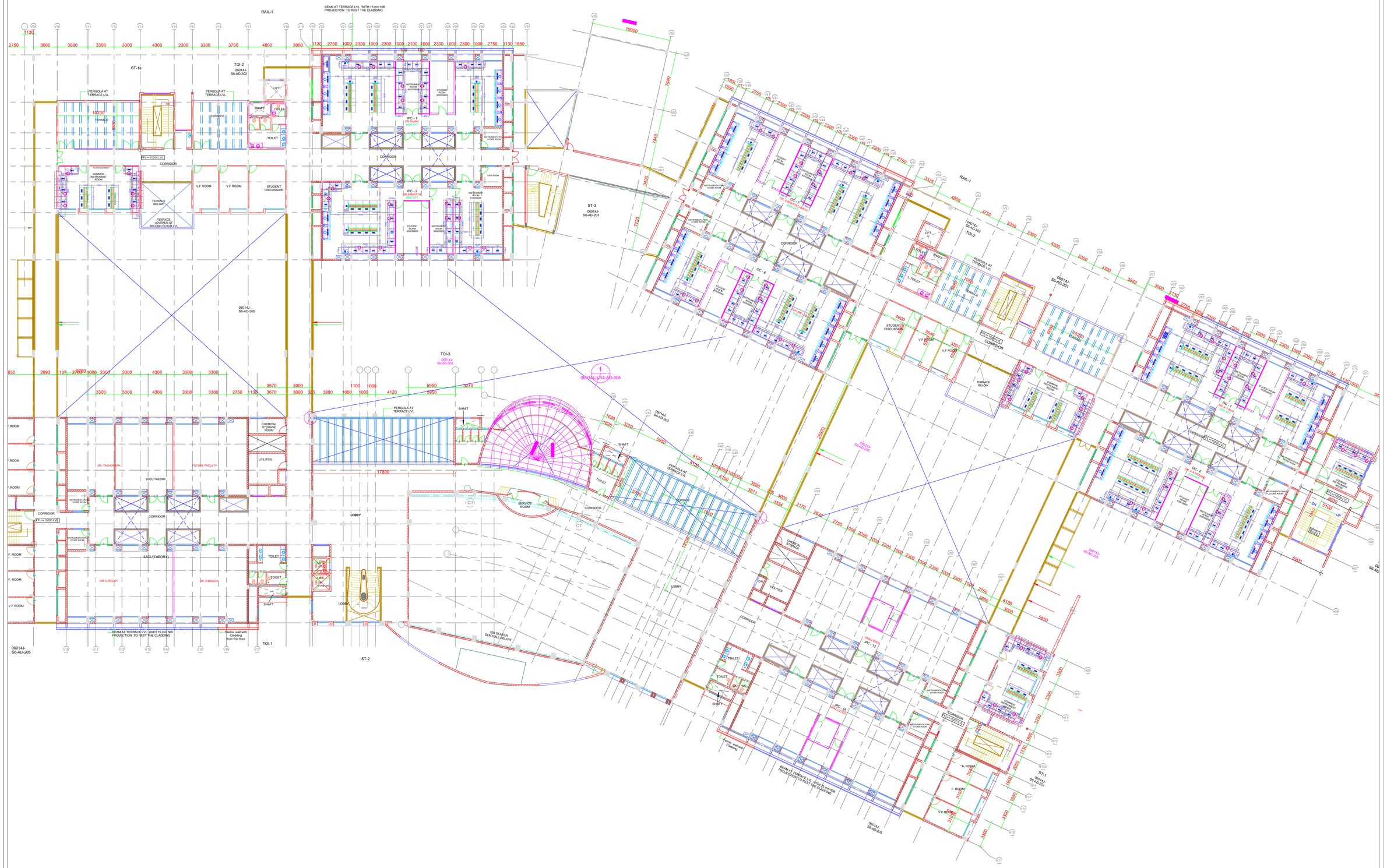

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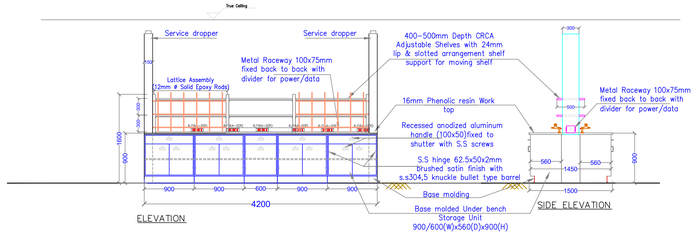
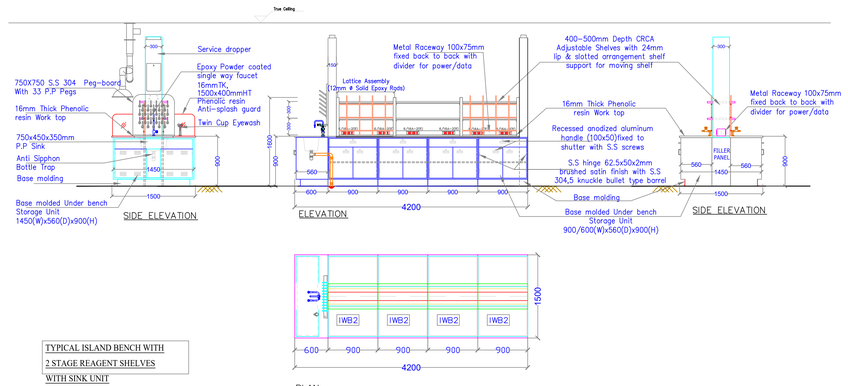


TYPICAL ISLAND BENCH WITH
2 STAGE REAGENT SHELVES
WITHOUT SINK UNIT



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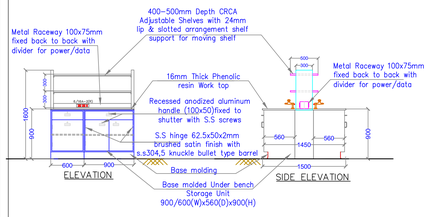
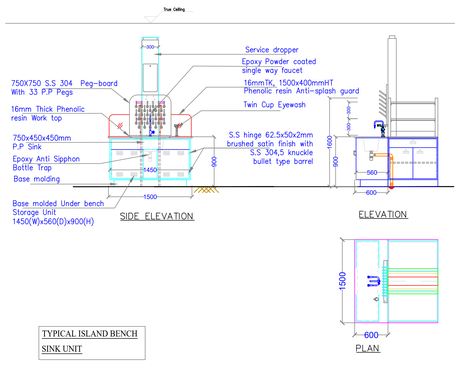
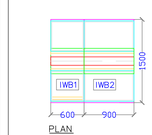
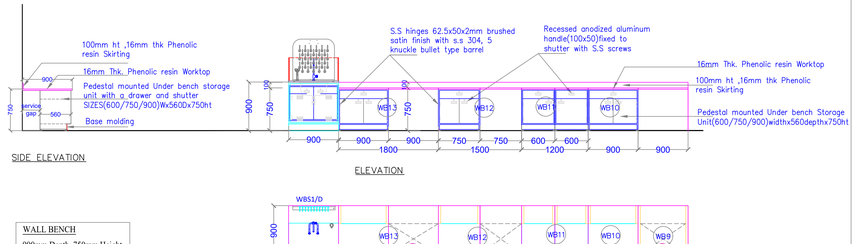




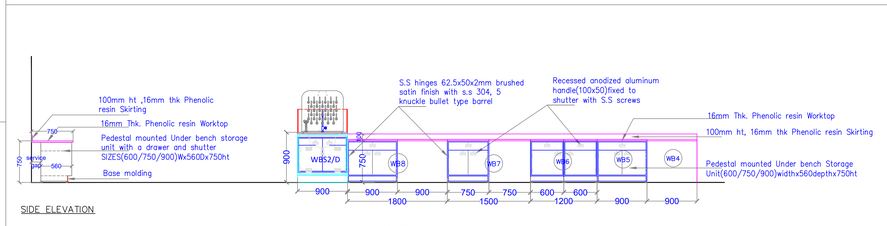


TYPICAL ISLAND BENCH MODULE
WITH 2 STAGE REAGENT SHELVES

TYPICAL ISLAND BENCH
SINK UNIT



WALL BENCH
900mm Depth, 750mm Height



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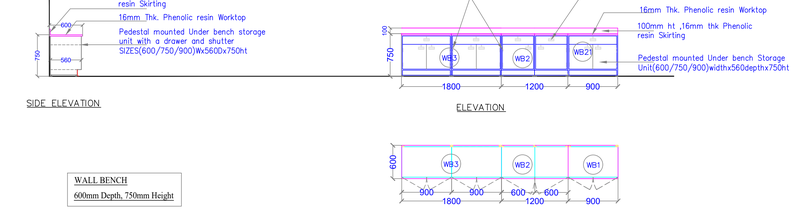
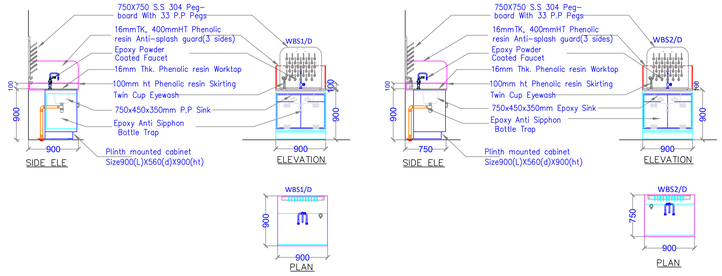
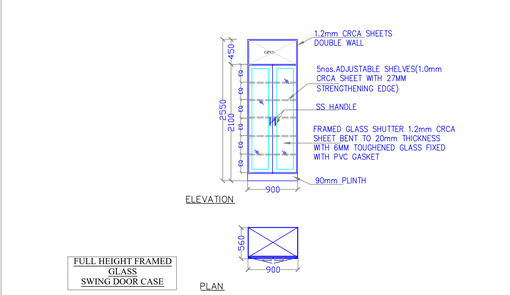
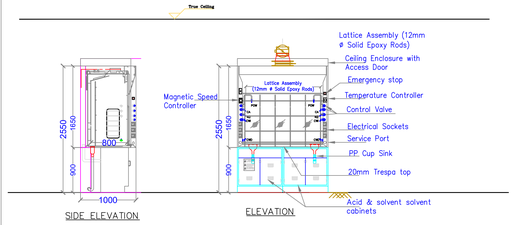


WALL BENCH
600mm Depth, 750mm Height

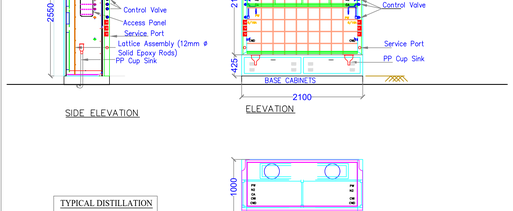




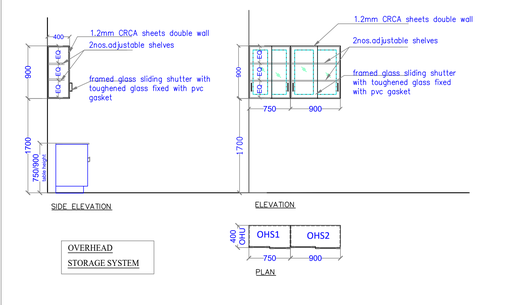
FULL HEIGHT FRAMED
GLASS
SWING DOOR CASE



TYPICAL HOOD
1500/1800X1000X1350



TYPICAL DISTILLATION
FUME HOOD



OVERHEAD
STORAGE SYSTEM

GENERAL NOTE

1. LAB BENCH MODULES CAN BE FACTORY MANUFACTURED, CORNER OR BINDING PIECES SHOULD BE MADE TO SUITE SITE CONDITIONS.
2. GRANITE BENCH HEIGHTS ARE 900MM/750MM INCLUDING GRANITE WORK TOP(FINISHED HT).
3. ALL DIMENSIONS ARE IN MILLIMETERES UNLESS SPECIFIED
4. ALL DIMENSIONS ARE TO BE READ AND NOT SCALED

RECORD OF PRINTS ISSUED

SL. NO	DATE		SL. NO	DATE	ISSUED TO
1.	13.02.2014	ISSUED FOR TENDER			

REVISION

SL. NO	DATE	DESCRIPTION	SL. NO	DATE	DESCRIPTION

CLIENT:
Indian Institute of Science Bangalore
INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE:
LAB FURNITURE
TYPICAL DETAILS

Architect:
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TEL : 91- 8220466

	JOB NO	DATE
	C 364	23-10-2018
DRAWING NO:	SCALE	REV.
C364/T-01	NTS	--

DRAWING STATUS: TENDER DRAWING

GRAPHIC SYMBOLS

	VALVE HANDLE		BF – BUTTERFLY VALVE	ZDL	ZDL – ZERO DEAD LEG VALVE
	GV – GATE VALVE		BV – BALL VALVE	AAV	AAV – AUTOMATIC AIR VENT
	FBV – FLUSH BOTTOM VALVE		AN – ANGLE VALVE		N – NOZZLE
	GV – GLOBE VALVE		HC – FLEXIBLE HOSE		FLANGED CONNECTION
	PV – PISTON VALVE		FT – FILTER		TC – TRI–CLAMP
	DV – DIAPHRAGM VALVE		AMTF – ABSORBENT TYPE MEDIA TUBE FILTER		FLAME ARRESTOR
	DIAPHRAGM OPERATED CONTROL VALVE WITH POSITIONER		VENT FILTER		FLOW GALSS
	DIAPHRAGM OPERATED CONTROL VALVE		SY – 'Y' STRAINER		THERMAL EXPANSION COMPENSATOR
	2SV – TWO WAY SOLENOID VALVE		SIMPLEX STRAINER		CAM LOCK HOSE CONNECTION (FEMALE)
	3SV – THREE WAY SOLENOID VALVE		CONICAL STRAINER		CAM LOCK HOSE CONNECTION (MALE)
	THREE WAY VALVE		TR – TRAP		HOSE NIPPLE
	NV – NEEDLE VALVE		AUTOMATIC DRAIN TRAP		CAPPED THREADED BSP CONNECTION
	MOTOR OPERATED VALVE		FUNNEL FOR DRAIN		TUBING WELD
	CV – CHECK VALVE		BLV – BALANCING VALVE		DAMPER
	FLOAT VALVE		ORIFICE PLATE		SB–SPECTACLE BLIND
	SPRAY BALL		SWAN NECK VENT		FLOW SWITCH
	DUPLEX LINE FILTER		DIAPHRAGM SEAL		FOOT VALVE
	DIAPHRAGM OPERATED CONTROL VALVE WITH POSITIONER &HANDWHEEL		RD – RUPTURE DISC		
	BSTR – BUCKET TYPE STRAINER		BE – BELLOW		
	SG – SIGHT GLASS		CONC. – CONCENTRIC REDUCER / EXPANDER		
	PVBV – PRESSURE VACUUM BREATHER VALVE		ECC. – ECCENTRIC REDUCER / EXPANDER		

INSTRUMENTATION

PG 01	LOCAL INSTRUMENT	I/P	INST. TO PNEUMATIC CONVERTER
E PG 01	LOCAL INSTRUMENT		PNEUMATIC TUBING
PG 01	PANEL INSTRUMENT		ELECTRIC IMPULSE LINE
	LIGHT		ALARM L–LOW H–HIGH
01	INTERLOCK		CAPILLARY TUBE

INSTRUMENTATION VALVE/FLOW METER

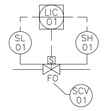
XV 01	MOTOR / ACTUATOR ON/OFF CONTROL	FT 01 MASS	FLOW METER – MASS
CV 01	PNEUMATIC TYPE MODULATING CONTROL VALVE	FT 01 MAG	FLOW METER – MAGNETIC
FO PCV 01	PRESSURE REGULATOR/ BACK PRESSURE REGUALTING SELF ACTING VALVE	FT 01 VORTEX	FLOW METER – VORTEX
PSV 01	PRESSURE SAFETY VALVE	FT 01 ANEM	FLOW METER – ANEMOMETER

FUNCTION SYMBOLS

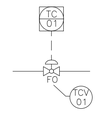
DESCRIPTION	PRIMARY LOCATION		AUXILIARY LOCATION	
	FIELD MOUNTED	ACCESSIBLE TO OPERATOR	INACCESSIBLE TO OPERATOR	ACCESSIBLE TO OPERATOR	INACCESSIBLE TO OPERATOR
PILOT LIGHT	PL			PL	
DISCRETE INSTRUMENTS	LI 01	LIT 01	LIC 01	LIC 01	LIC 01
SHARED DISPLAY SHARED CONTROL	LI 01	LIC 01	LIC 01	LIC 01	LIC 01
COMPUTER FUNCTION	LI 01	LIC 01	LIC 01	LIC 01	LIC 01
PROGRAMMABLE LOGIC CONTROL	LA 01	LIA 01	LDC 01	LDS 01	LIC 01

CONTROL SYSTEMS

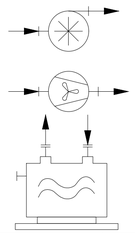
TYPICAL CONTROL SYSTEM REPRESENTATION OF AN AUTOMATED ON/OFF VALVE, COMPLETE WITH AIR OPERATED SOLENOID VALVE AND OPEN AND CLOSED LIMIT SWITCH FEEDBACK TO CONTROL SYSTEM.



TYPICAL CONTROL SYSTEM REPRESENTATION OF A MODULATING CONTROL VALVE LOOP WITH I/P CONVERTER AND POSITIONER



COMPRESSOR, BLOWER

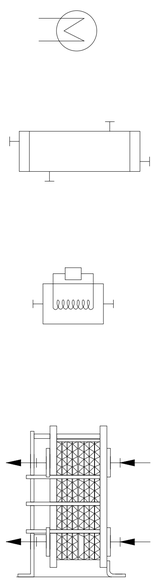


FANS, VACUUM PUMPS & BLOWER

COMPRESSOR

ROTARY SCREW COMPRESSOR

HEATERS



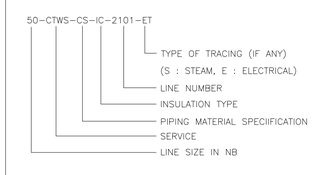
GENERAL / UNSPECIFIED HEATER

SHELL & TUBE HEAT EXCHANGER

ELECTRICAL HEATER

PLATE TYPE HEAT EXCHANGER

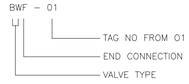
PIPING IDENTIFICATION



INSULATION IDENTIFICATION

IH–HOT INSULATION
IC–COLD INSULATION

VALVE NUMBER



1. BW – BUTTERFLY VALVE
2. BV – BALL VALVE
3. NRV –NON RETURN VALVE
4. CV – PICBV
5. BALV – BALANCING VALVE
6. WT – WAFER TYPE
7. ST –STRAINER
8. S – SCREWED END
9. F – FLANGED END

SERVICE CODE

CTWS – COOLING TOWER WATER SUPPLY
CTWR – COOLING TOWER WATER RETURN
CHWS – CHILLED WATER SUPPLY (HVAC)
CHWR – CHILLED WATER RETURN (HVAC)
CBS – CHILLED BRINE SUPPLY
CBR – CHILLED BRINE RETURN
HWS – HOT WATER SUPPLY (HVAC)
HWR – HOT WATER RETURN (HVAC)
DM – DEMINERALISED WATER
ICA – INSTRUMENTATION COMPRESSED AIR
PA – PROCESS AIR
LPS – LOW PRESSURE STEAM (3.5 kg/cm^2(g))
LPC – LOW PRESSURE CONDENSATE
MPS – MEDIUM PRESSURE STEAM (10.5 kg/cm^2(g))
MPC – MEDIUM PRESSURE CONDENSATE
N2 – NITROGEN GAS
POW – POTABLE WATER
RW – RAW WATER
RO – REVERSE OSMOSIS WATER
HVAC – HIGH VACUUM
VAC – VACUUM
PCTWS – PROCESS TOWER COOLING WATER SUPPLY
PCTWR – PROCESS TOWER COOLING WATER RETURN
PCHWS – PROCESS CHILLED WATER SUPPLY
PCHWR – PROCESS CHILLED WATER RETURN
PCBS – PROCESS CHILLED BRINE SUPPLY
PCBR – PROCESS CHILLED BRINE RETURN
PS – PURE STEAM
WFI – WATER FOR INJECTION
PUW – PURIFIED WATER

EQUIPMENT CATEGORY CODE

A–AGITATOR
B–BLOWER
C–DISTILLATION/SCRUBBER COLUMN
CH – CHILLER
E–EXCHANGER
F – FAN
H–BOILER/HEATER
HE–HEAT EXCHANGER
HWG – HOT WATER GENERATOR
K–COMPRESSOR
M–MOTOR
MD–METAL DETECTOR
MX–MIXER
P–PUMP
R–REACTOR
RFLX – REFLEX LINE
S–SCRUBBER
SF–SIFTER
T–STORAGE TANK
V–VENDOR PACKAGE UNIT
VAC – VACUUM
VF–VENT FILTER
VL – VAPOUR LINE
X–MISCELLANEOUS EQUIP.
FO–FLOW ORFICE
CIP–CLEAN IN PLACE
SIP–STEAM IN PLACE

INSTRUMENT ABBREVIATIONS

BPV BACK PRESSURE VALVE
CI CONDUCTIVITY INDICATOR CUM CONTROLLER
CS CONDUCTIVITY SENSOR
DPS DIFFERENTIAL PRESSURE SWITCH
FC FAILURE TO CLOSE
FE FLOW ELEMENT
FIQ FLOW INDICATOR
FM FLOW METER
FO FAILURE TO OPEN
FT FLOW TRANSMITTER
FTC FLOW TRANSMITTER CONTROLLER
FY ELECTRIC/PNEUMATIC CONVERTOR
FCV FLOW CONTROL VALVE
LG LEVEL GAUGE
LC LOCKED CLOSE
LO LOCKED OPEN
LIC LEVEL INDICATOR CONTROLLER
LT LEVEL TRANSMITTER
LTC LEVEL TRANSMITTER CONTROLLER
LS LEVEL SWITCH
LSL LEVEL SWITCH LOW
LSH LEVEL SWITCH HIGH
PCV PRESSURE CONTROL VALVE
PG PRESSURE GAUGE
PIC PRESSURE INDICATOR CONTROLLER
PT PRESSURE TRANSMITTER
PB PUSH BUTTON
PRS PRESSURE REDUCING STATION
PSV PRESSURE SAFETY VALVE
PVRV PRESSURE VACUUM BREATHER VALVE
RO RESTRICTION ORIFICE
SS SELECTOR SWITCH
SP SAMPLE POINT
STR PUMP START COMMAND
STP PUMP STOP COMMAND
TSV THERMAL SAFETY VALVE
TG TEMPERATURE GAUGE
TIC TEMPERATURE INDICATOR CONTROLLER
TT TEMPERATURE TRANSMITTER
TCV TEMPERATURE CONTROL VALVE
TOC TOTAL ORGANIC CARBON
TOC CONDUCTIVITY INDICATOR CONTROLLER
UV INLINE UV SYSTEM
VFD VARIABLE FREQUENCY DRIVE
XLR PUMP RUN CHECKBACK
XLT PUMP TRIP CHECKBACK
XV ON–OFF VALVE

PUMPS

GENERAL ITEMS

CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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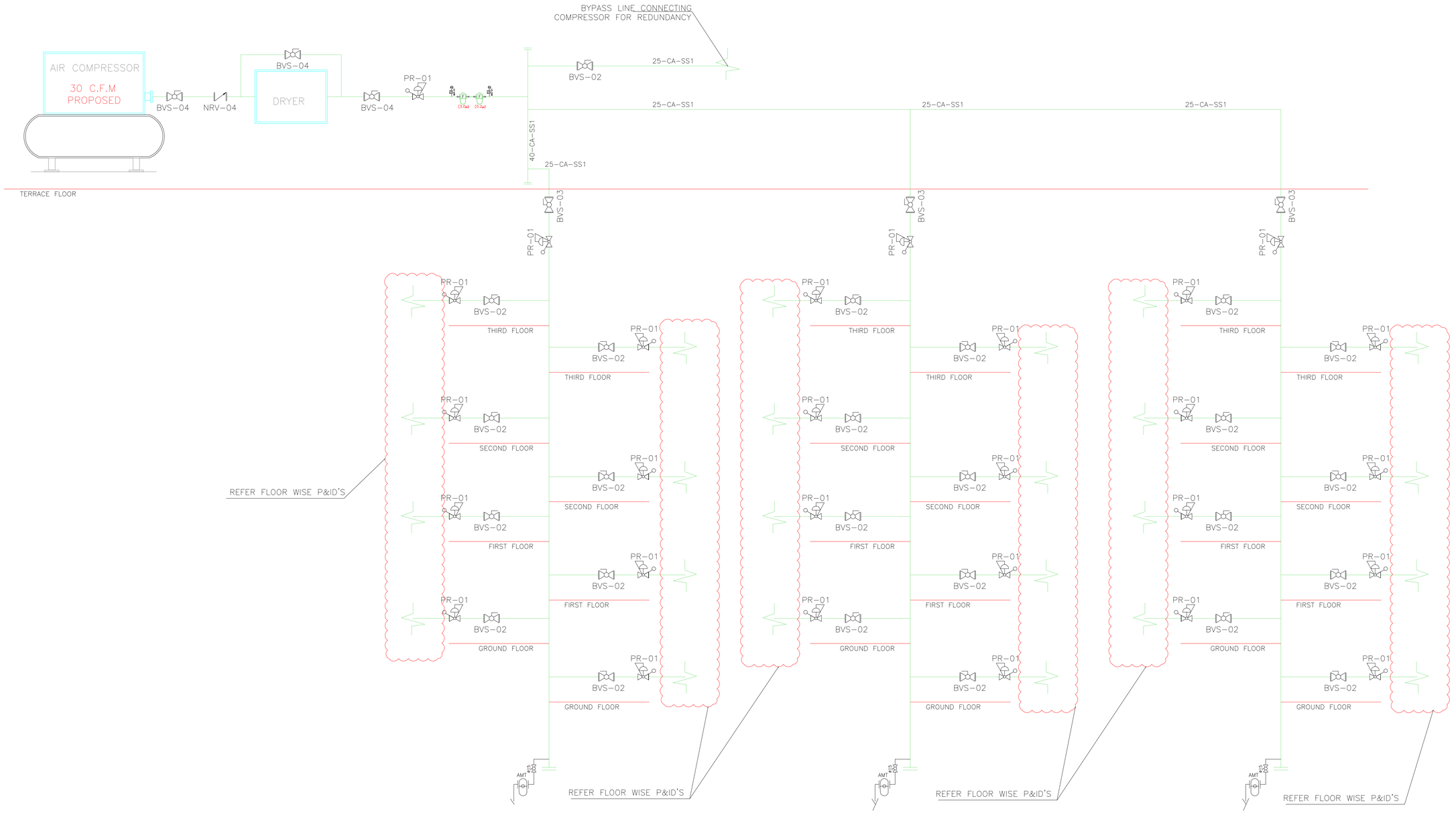
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4800
SCALE	NTS
REVISION	R0

DRAWING TITLE : LEGEND P&ID FOR REFERENCE

DRAWING STATUS : TENDER DRAWING



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	INDIAN INSTITUTE OF SCIENCE, BANGALORE.
Architect:	Chandroo Iyer Associates #701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013. TEL – 080– 43728155
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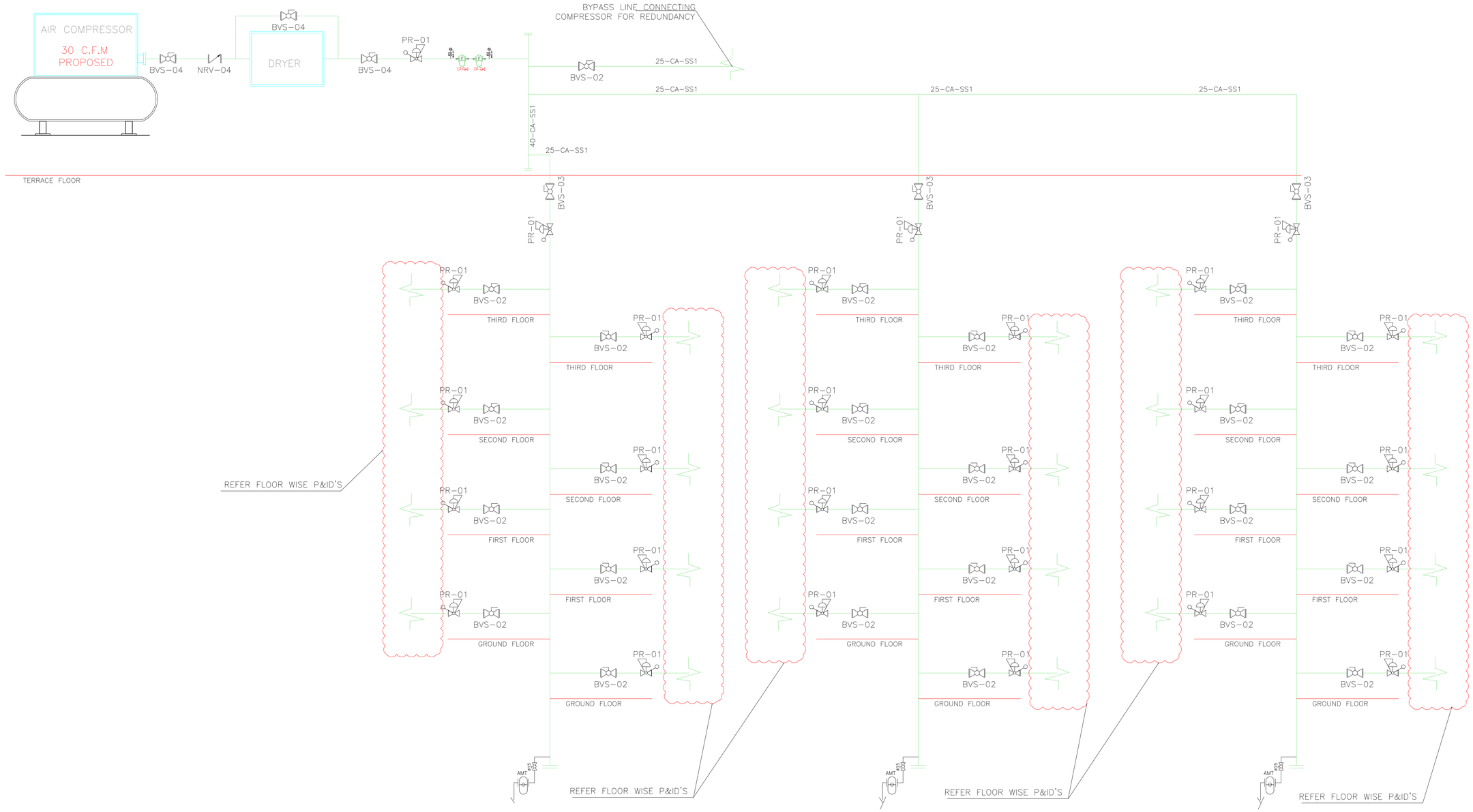
PROJECT:	LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.
DRAWING TITLE :	P&ID FOR COMPRESSED AIR FOR A BLOCK
DRAWING STATUS :	TENDER DRAWING

DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4850
SCALE	NTS
REVISION	R0



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Bangalore

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PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4850(A)
SCALE	NTS
REVISION	R0

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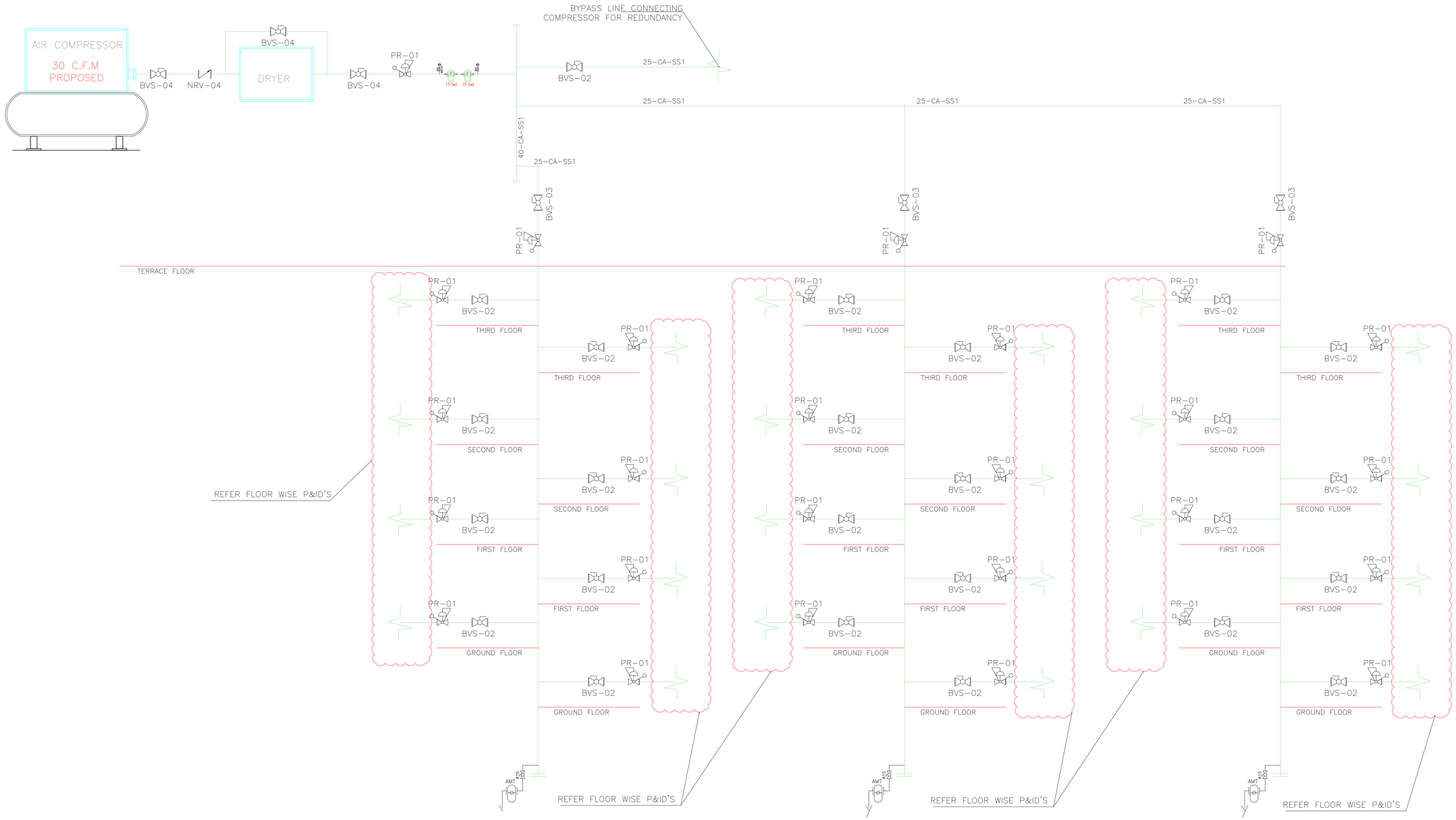
DRAWING STATUS : TENDER DRAWING



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CHECKED	BGK
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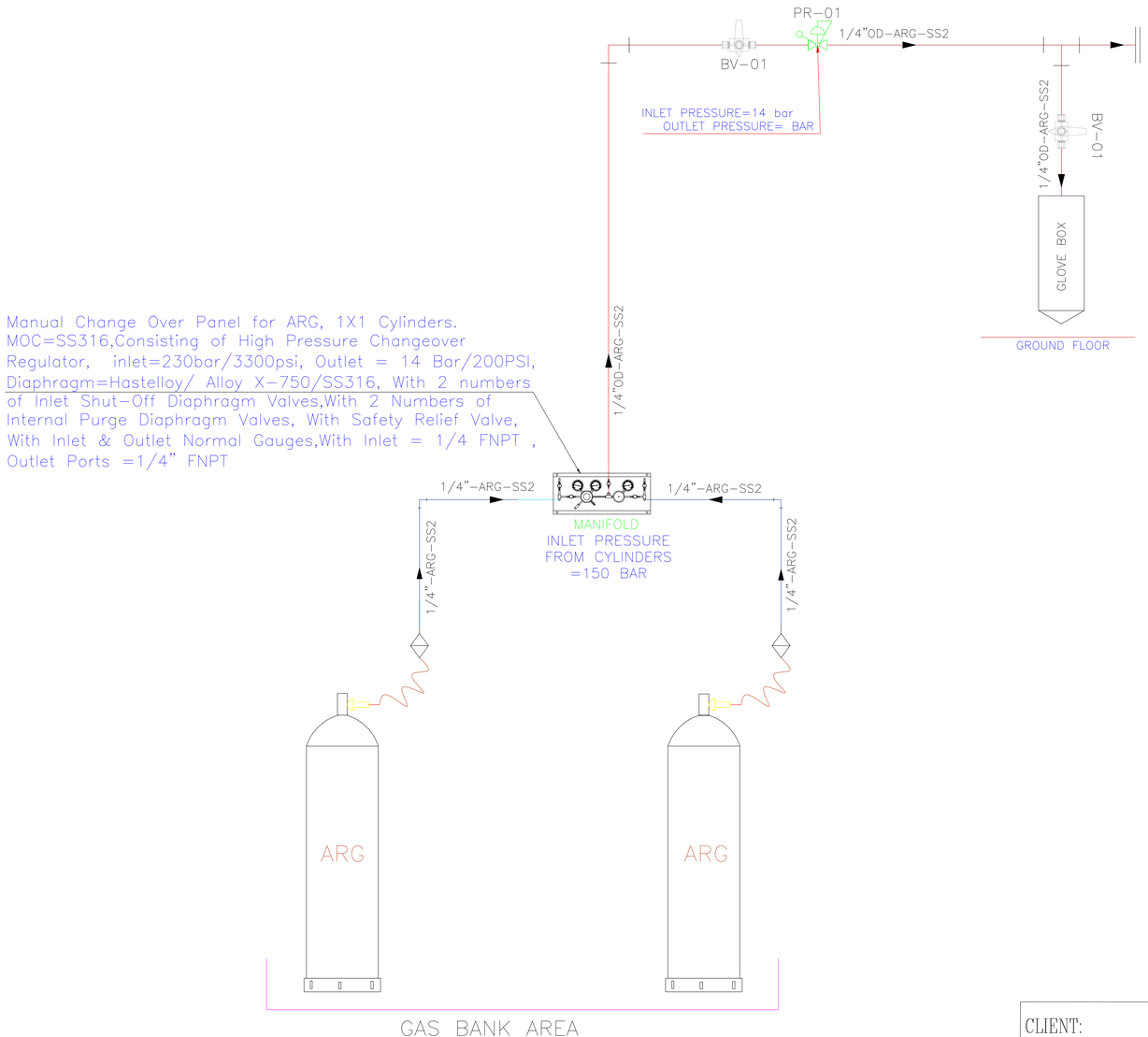
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4850(B)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR C BLOCK

DRAWING STATUS : TENDER DRAWING



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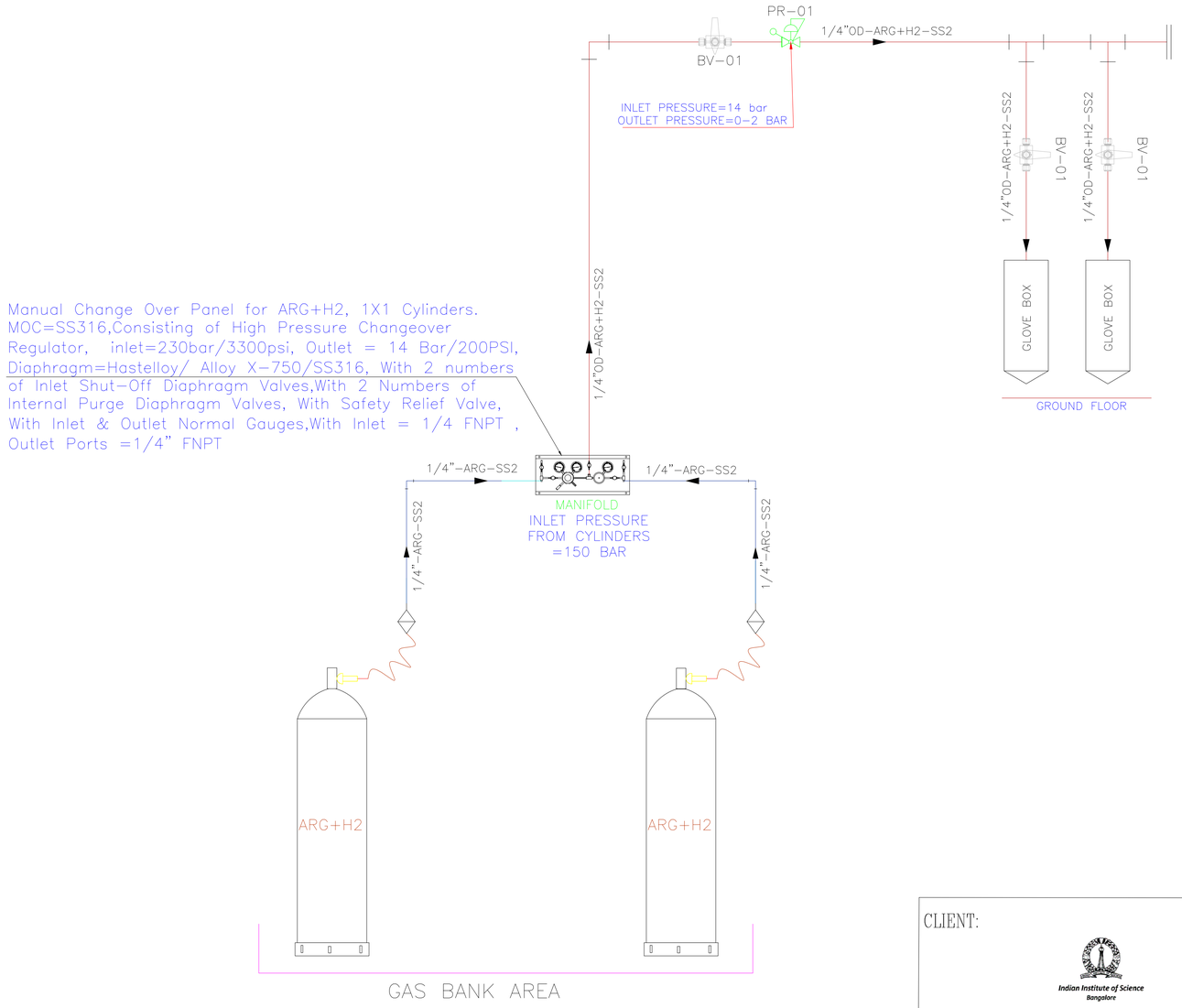
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4815 (n)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR ARGON+HYDROGEN FOR SSCU-3

DRAWING STATUS : TENDER DRAWING



CLIENT:

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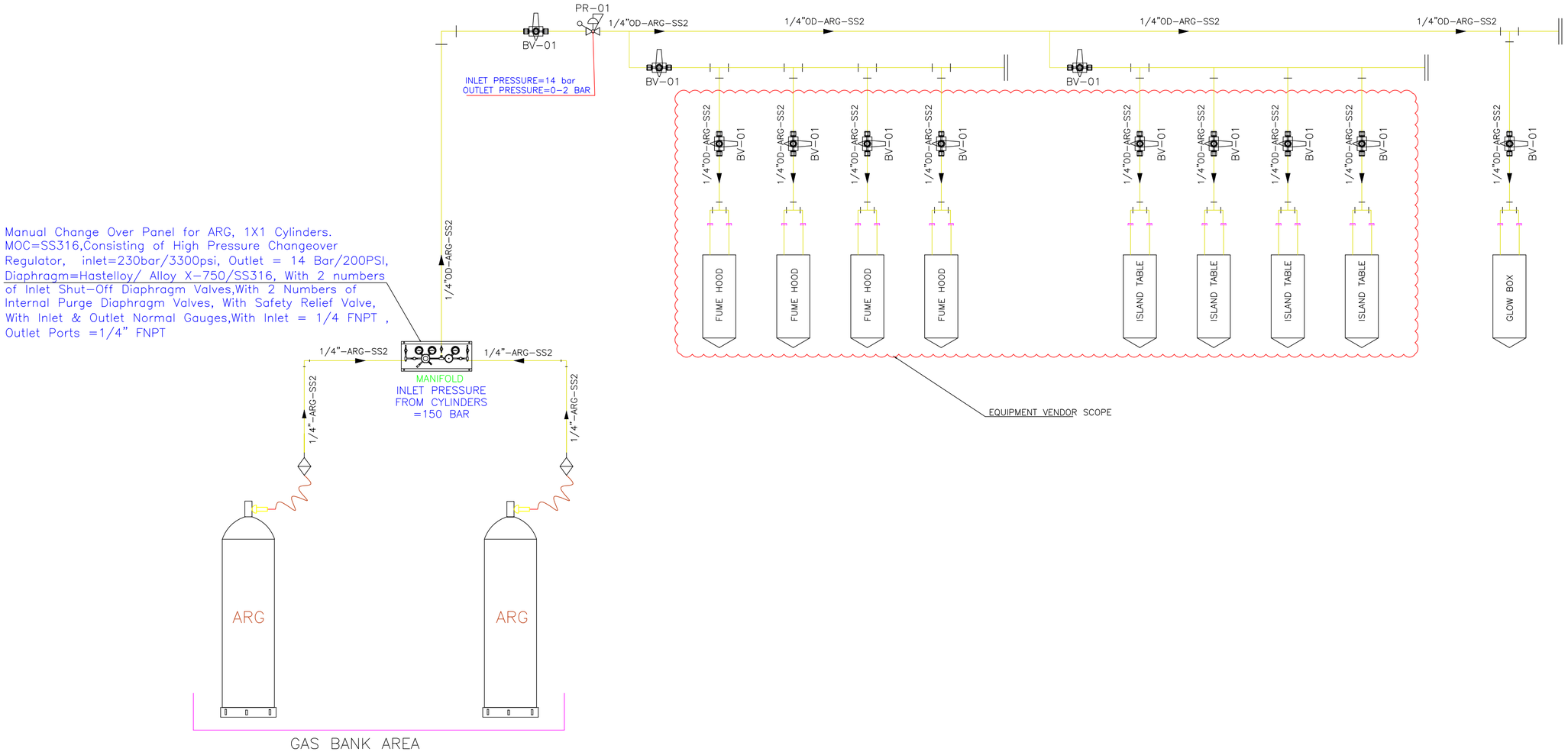
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4815 (o)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR ARGON+HYDROGEN FOR SSCU-4

DRAWING STATUS : TENDER DRAWING



CLIENT:

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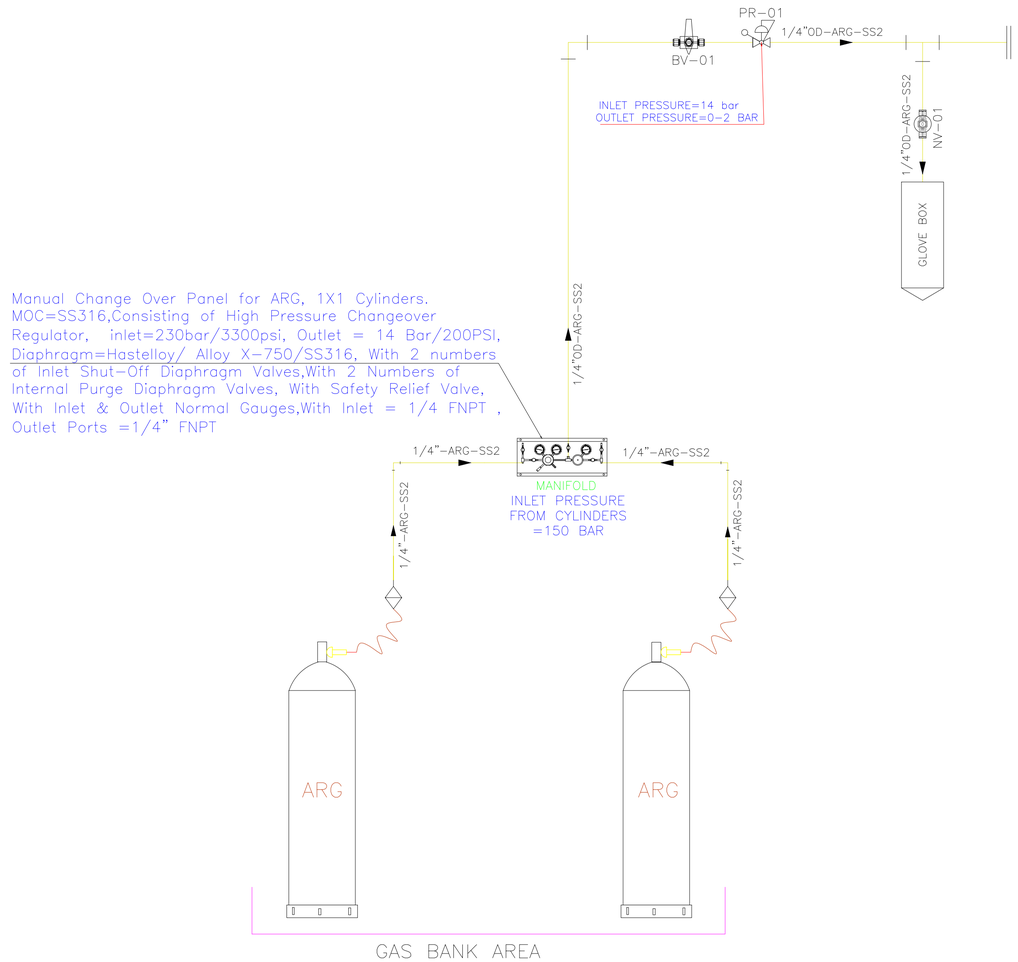
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4812 (k)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR ARGON FOR IPC-5

DRAWING STATUS : TENDER DRAWING



CLIENT:

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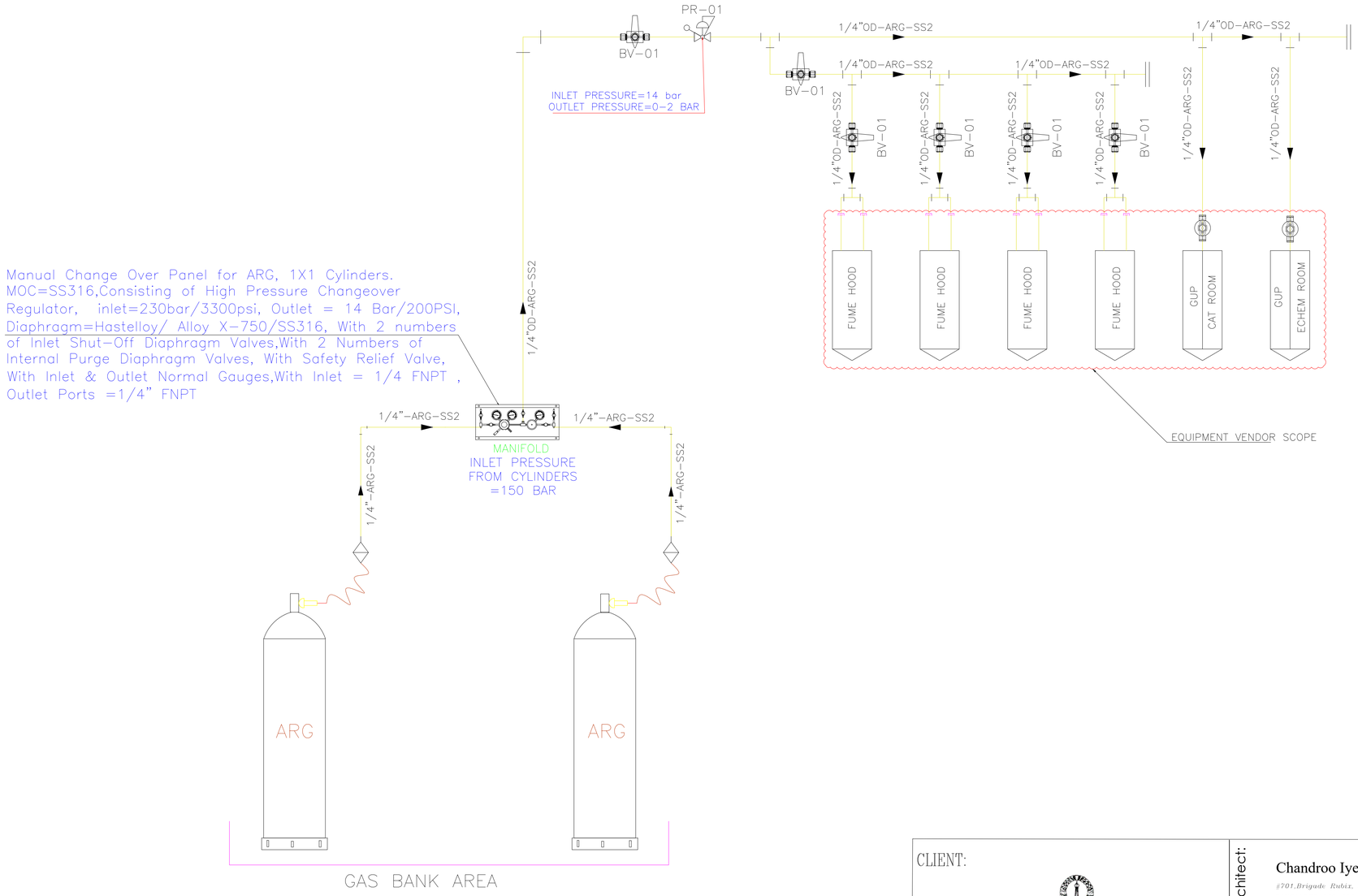
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4817(k)
SCALE	NTS
REVISION	R0

PROJECT:

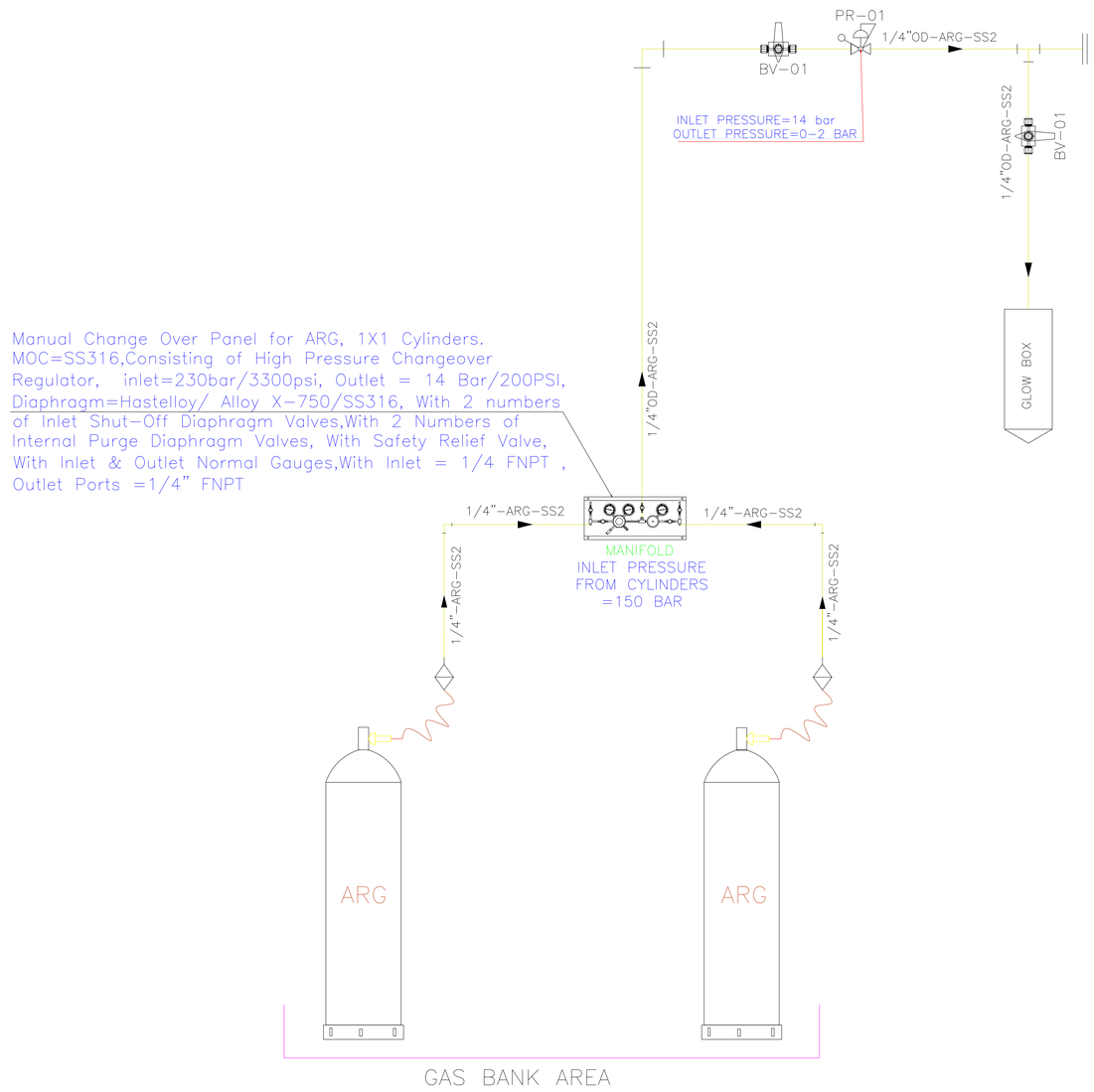
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR ARGON FOR IPC-09

DRAWING STATUS : TENDER DRAWING



CLIENT: Indian Institute of Science Bangalore — INDIAN INSTITUTE OF SCIENCE, BANGALORE.	Architect: Chandroo Iyer Associates, #701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013. TEL - 080- 43728155	DRAWN	ABHI
		CHECKED	BGK
		APPROVED	SJ
		DATE	22.10.2018
	Consultant: M J ASSOCIATES, PROJECT ENGINEERING CONSULTANTS, #45,1st Floor,8th Main road, Vasanth nagar,Bangalore-560 052, Tele:-22284583,22204636, E-mail:-projects@mjassociates.in/www.mjassociates.in	JOB NO	MJ - 324
		DWG NO:	4811 (i)
		SCALE	NTS
		REVISION	R0
PROJECT: LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.		DRAWING TITLE : P&ID FOR ARGON FOR IPC-7	
		DRAWING STATUS : TENDER DRAWING	



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD,
BANGALORE 560 013.
TEL - 080- 43728155

Consultant:

M J ASSOCIATES
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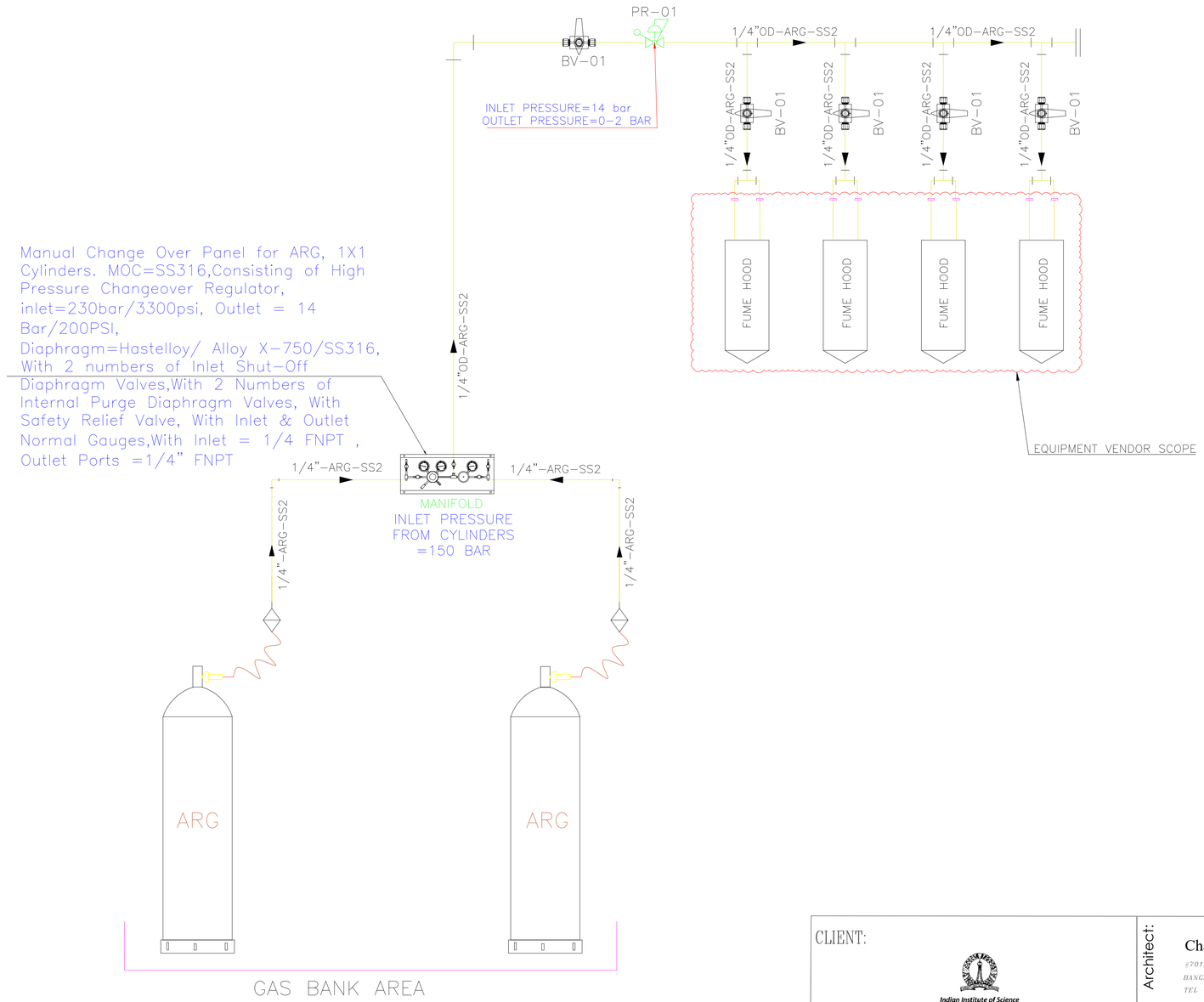
#45,1st Floor,8th Main road,
Vasanth nagar,Bangalore-560 052
Tele:-22284583,22204636
E-mail:-projects@mjassociates.in/www.mjassociates.in

DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4818(I)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR ARGON (OC-9)

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
TEL – 080– 43728155

Consultant:

M J ASSOCIATES
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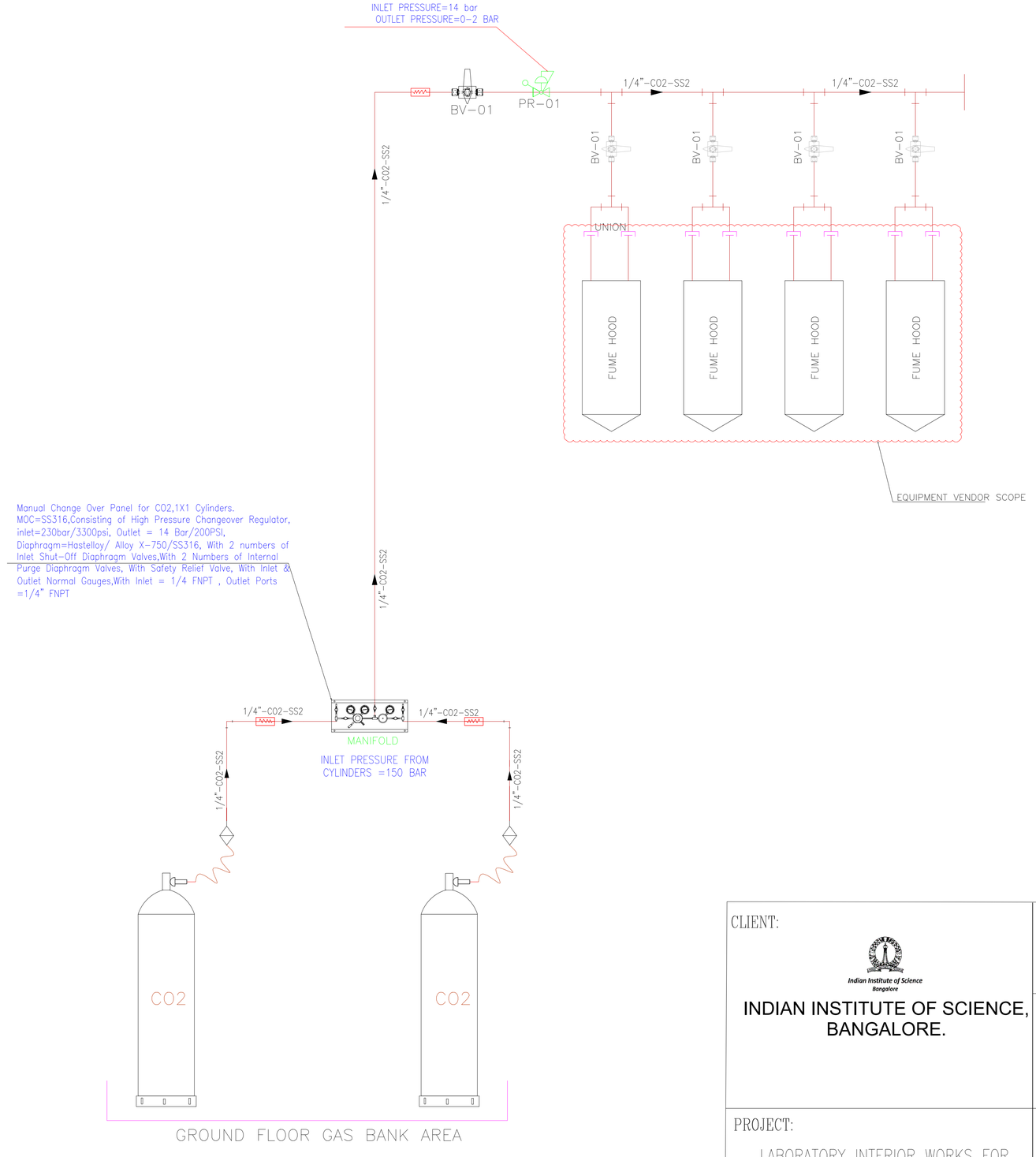
E-mail:-projects@mjassociates.in\www.mjassociates.in

DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4815 (m)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR ARGON FOR SSCU-4

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
TEL - 080- 43728155

Consultant:

M J ASSOCIATES
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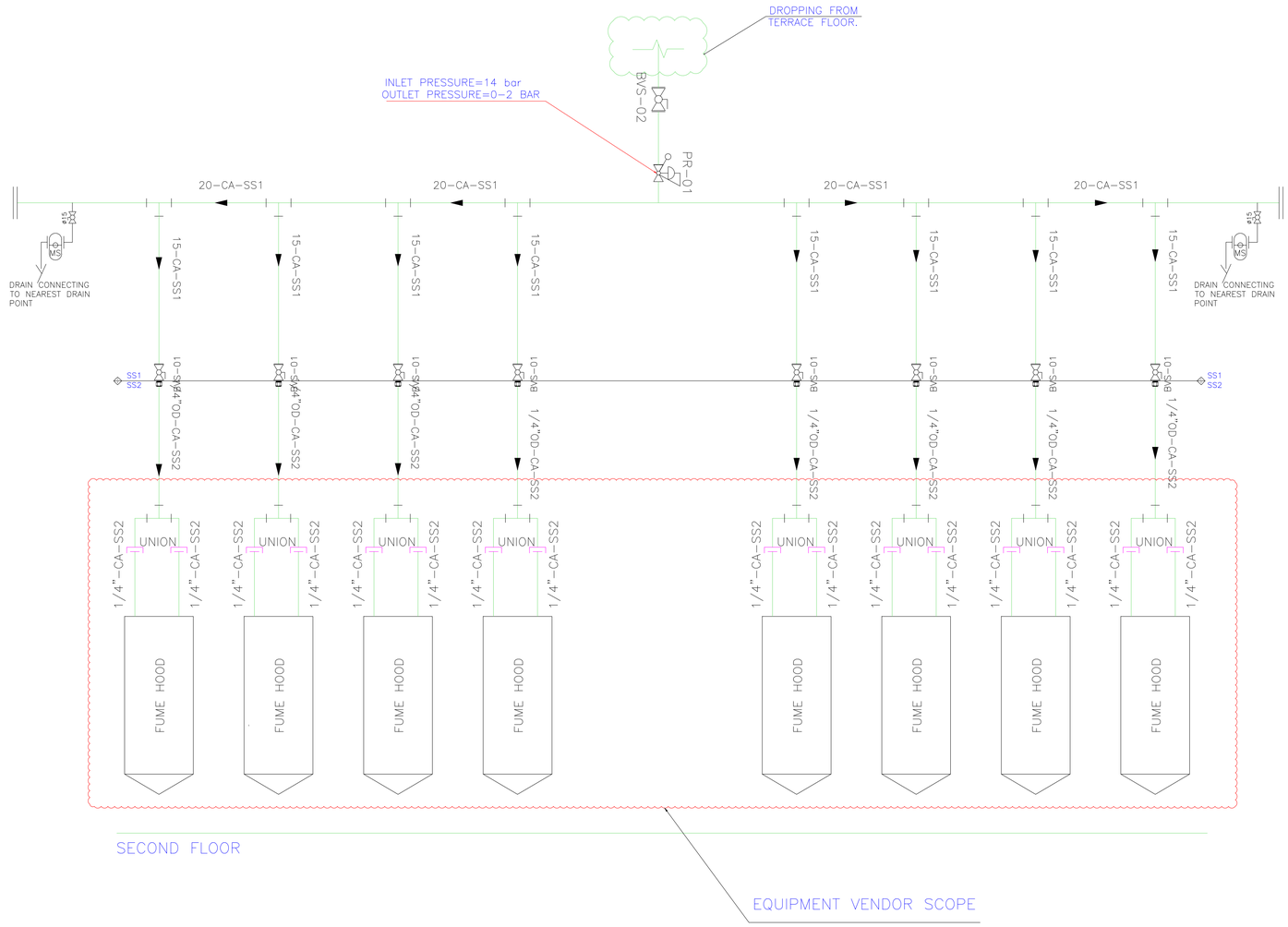
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4815 (i)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR CARBON DIOXIDE FOR SSCU-3

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
TEL – 080- 43728155

Consultant:

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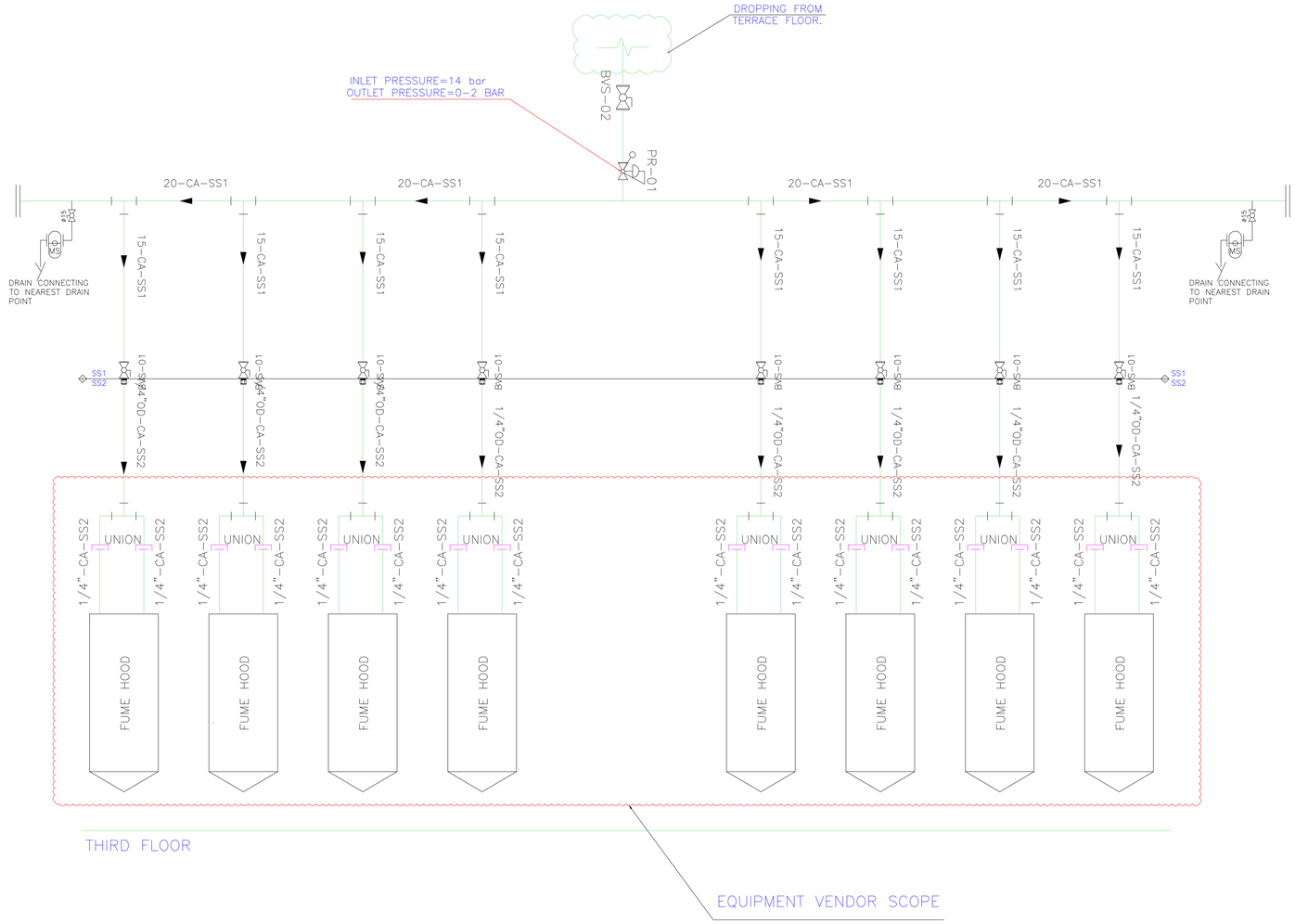
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4813 (c)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR IPC-3

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
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Consultant:

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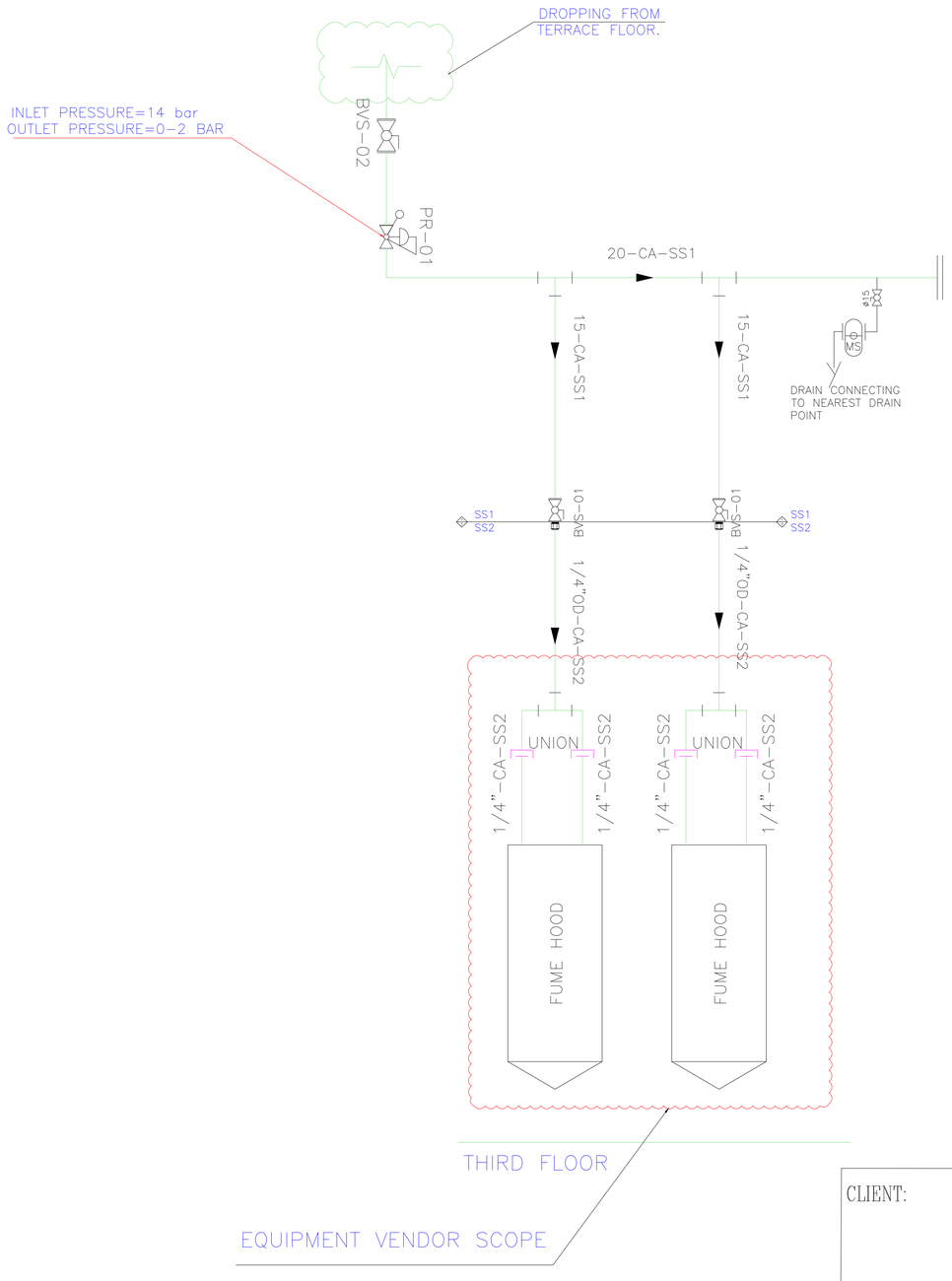
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4814 (c)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR IPC-1

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD,
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Consultant:

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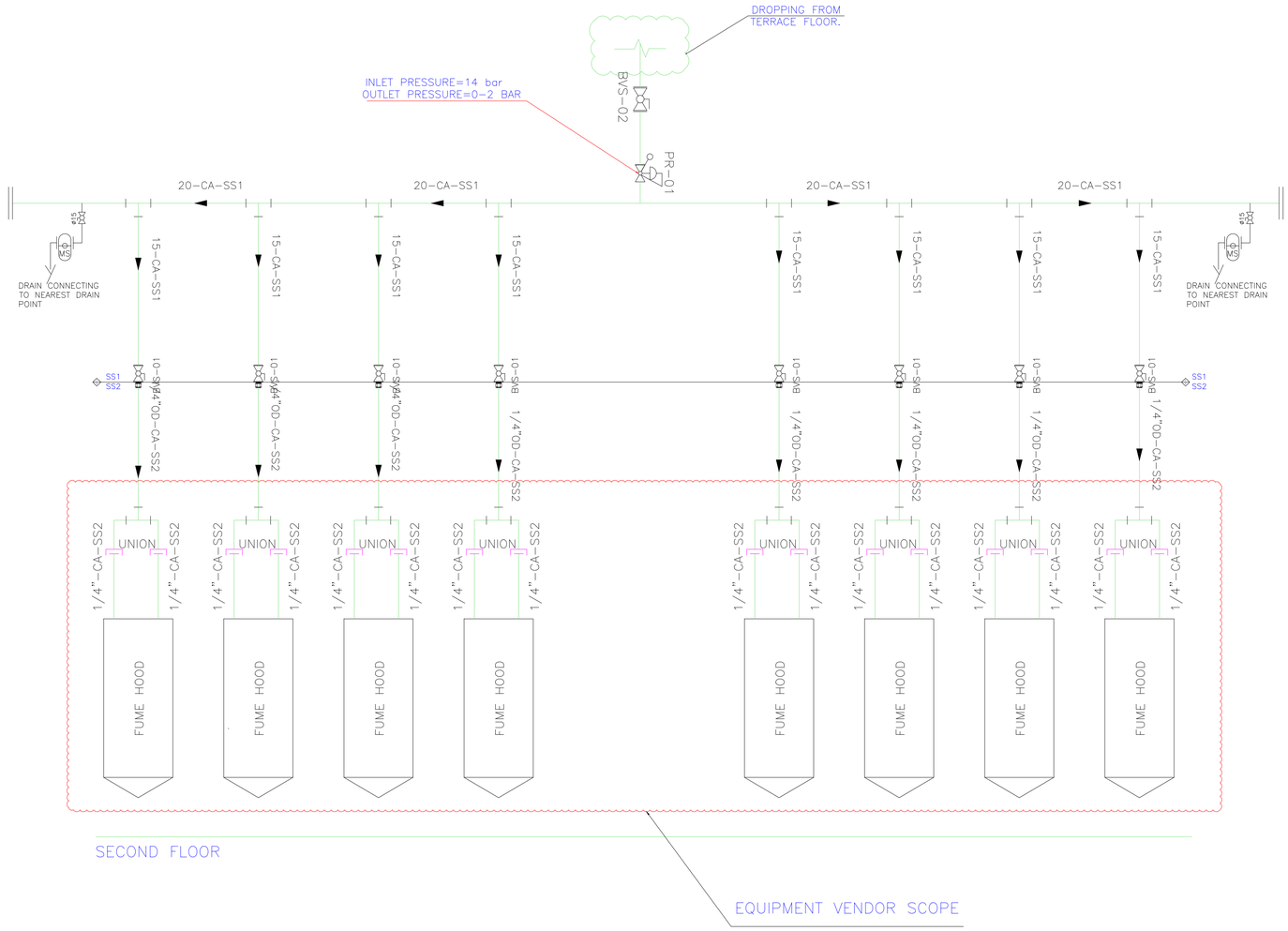
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4814 (d)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR
CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR IPC-2

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
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TEL – 080- 43728155

Consultant:

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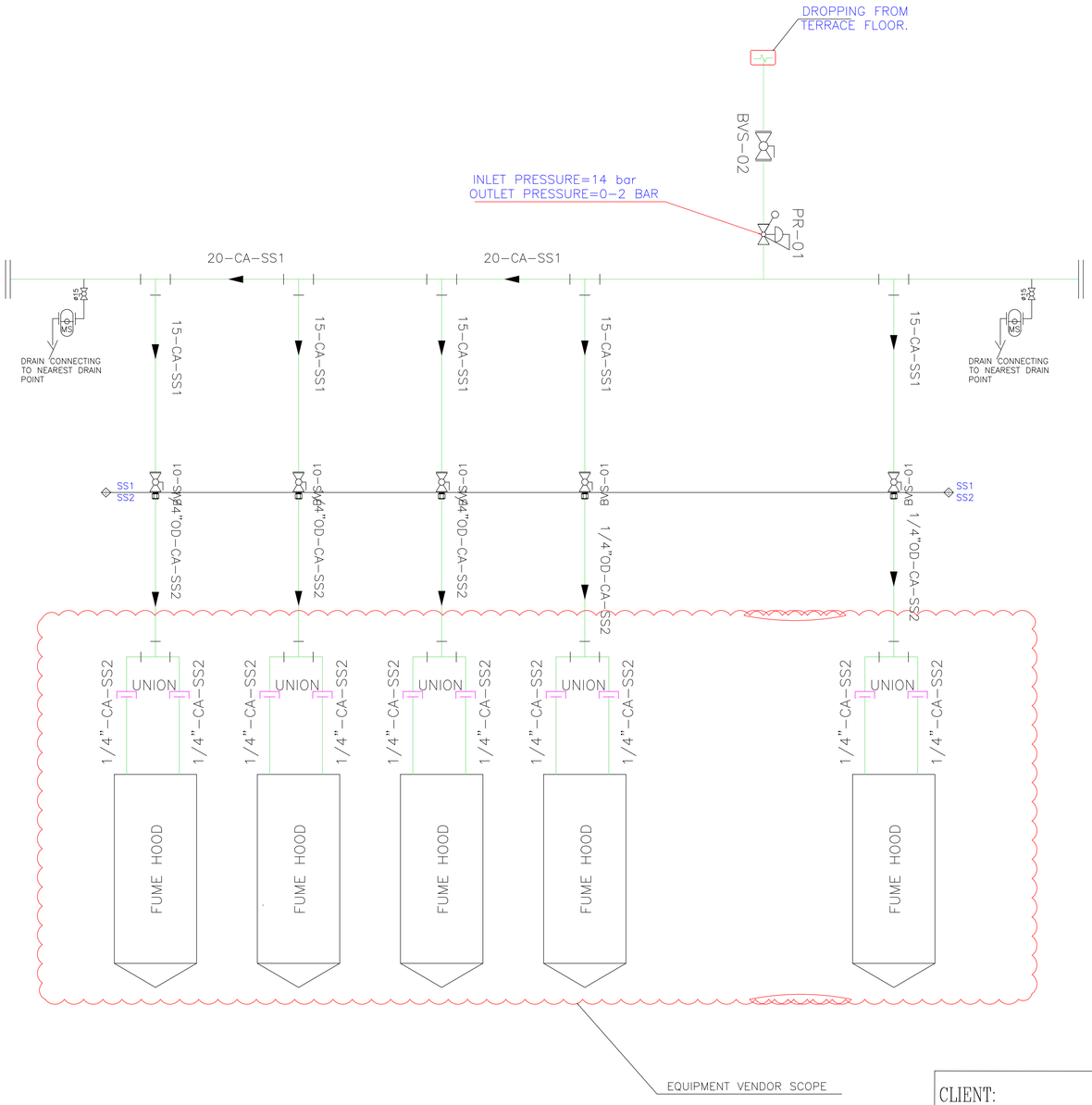
E-mail:-projects@mjassociates.in/www.mjassociates.in

DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4813 (d)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR IPC-4

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
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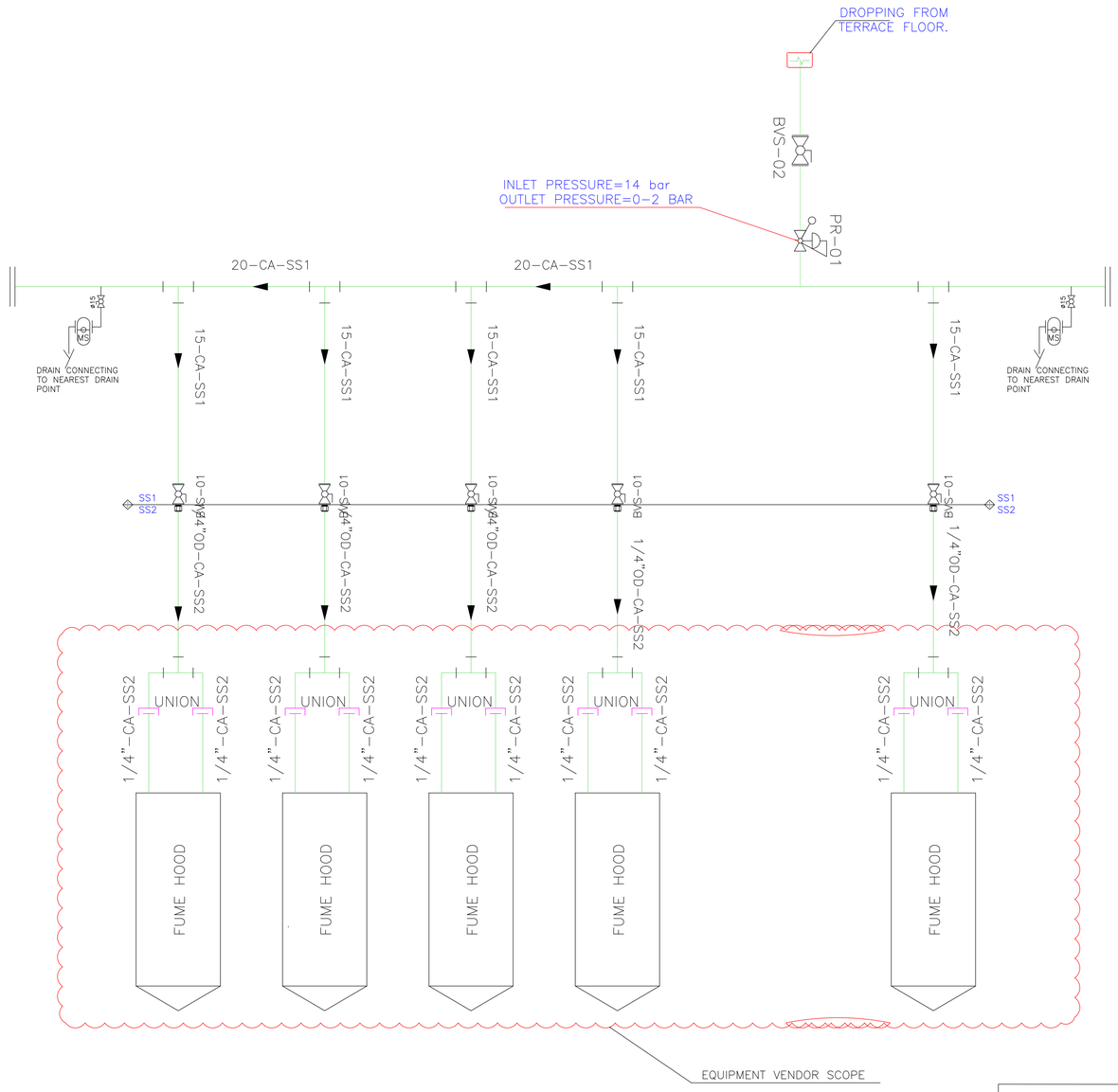
Tele:-22284583,22204636
E-mail:-projects@mjassociates.in/www.mjassociates.in

DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4812 (c)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR IPC-5

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates

#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
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Consultant:

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Vasanth nagar,Bangalore-560 052
Tele:-22284583,22204636
E-mail:-projects@mjassociates.in/www.mjassociates.in

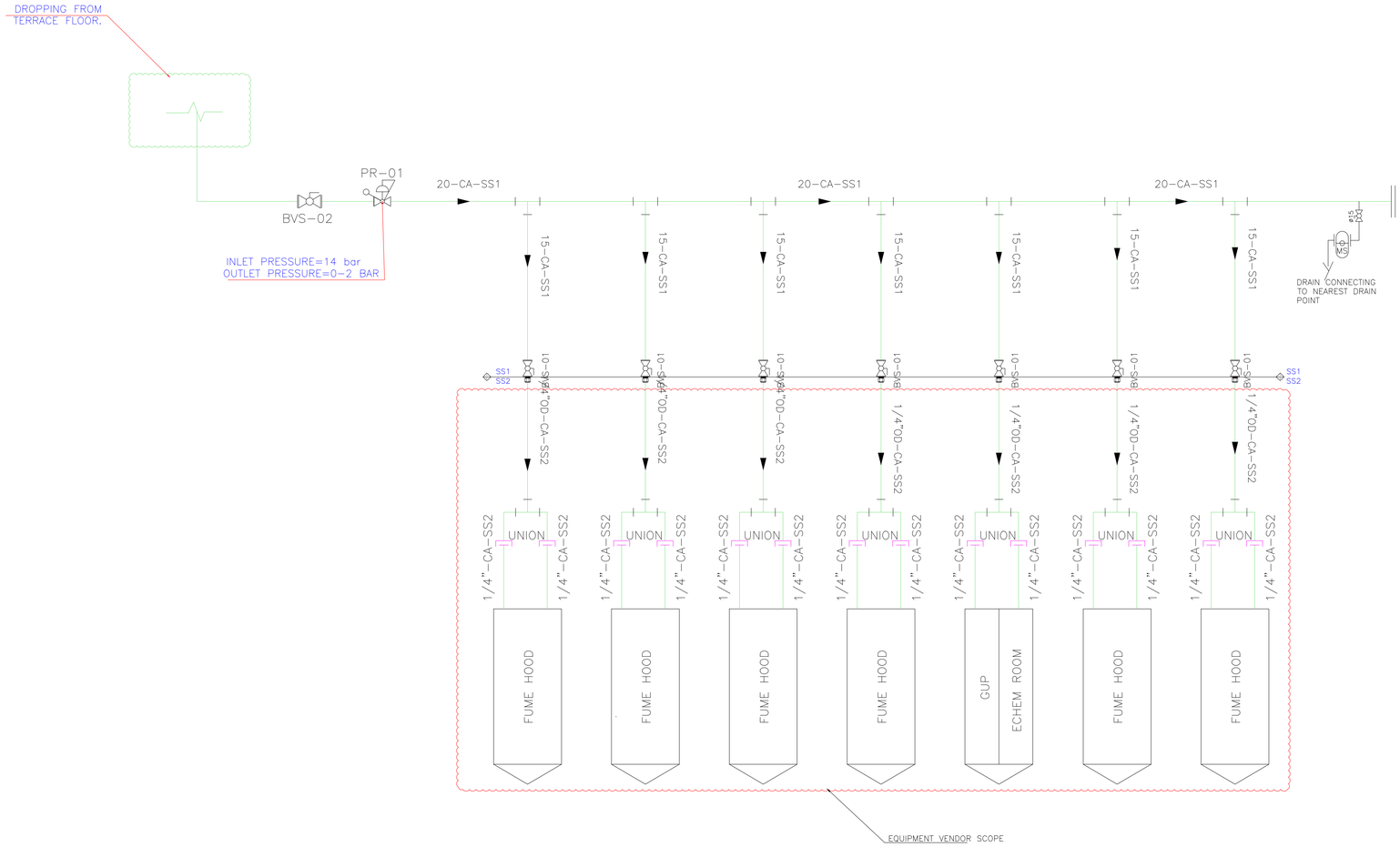
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4812 (d)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR IPC-6

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
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Consultant:

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#45,1st Floor,8th Main road,
Vasanth nagar,Bangalore-560 052
Tele:-22284583,22204636
E-mail:-projects@mjassociates.in/www.mjassociates.in

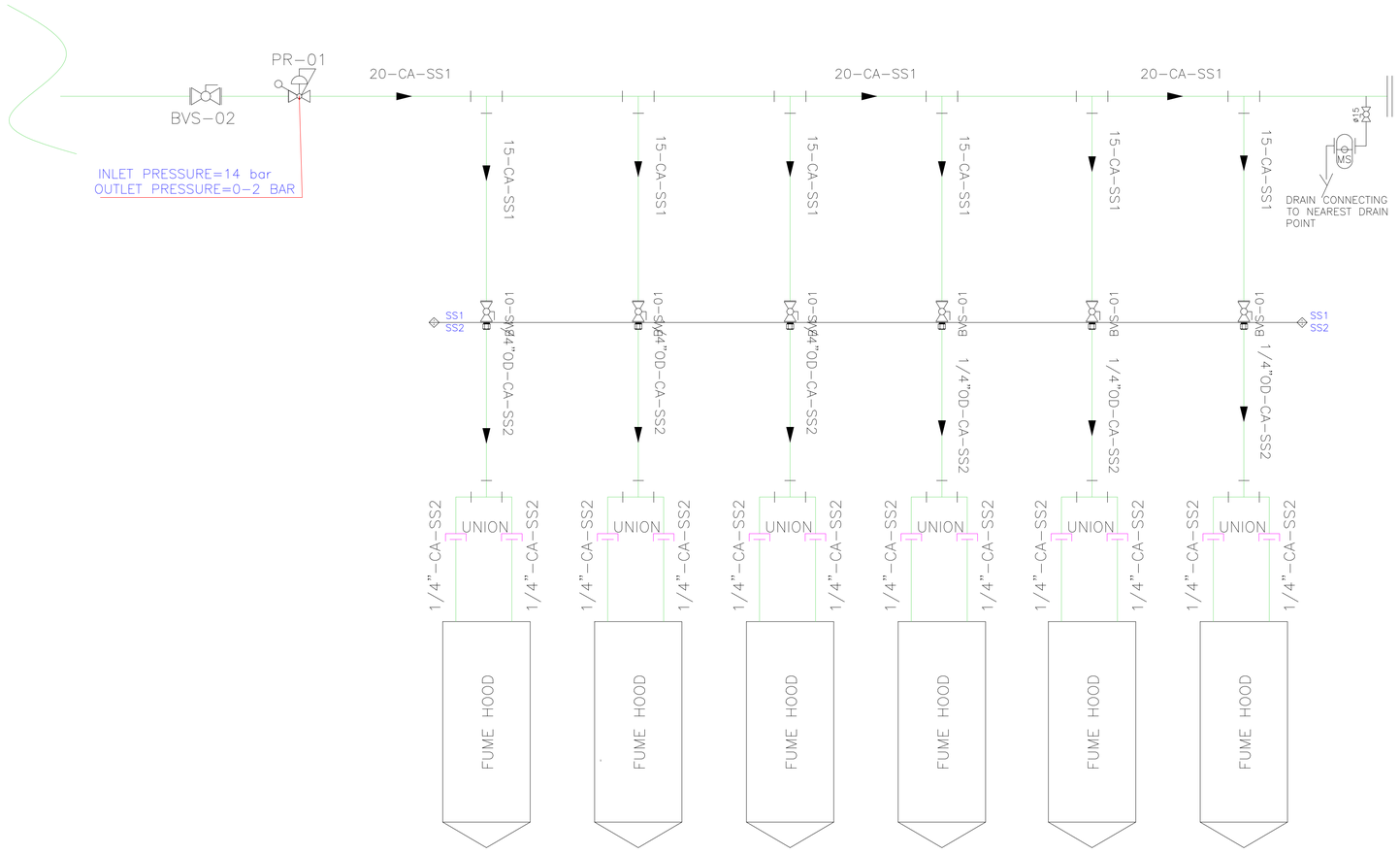
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4811 (b)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR IPC-7

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
TEL – 080- 43728155

Consultant:

M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
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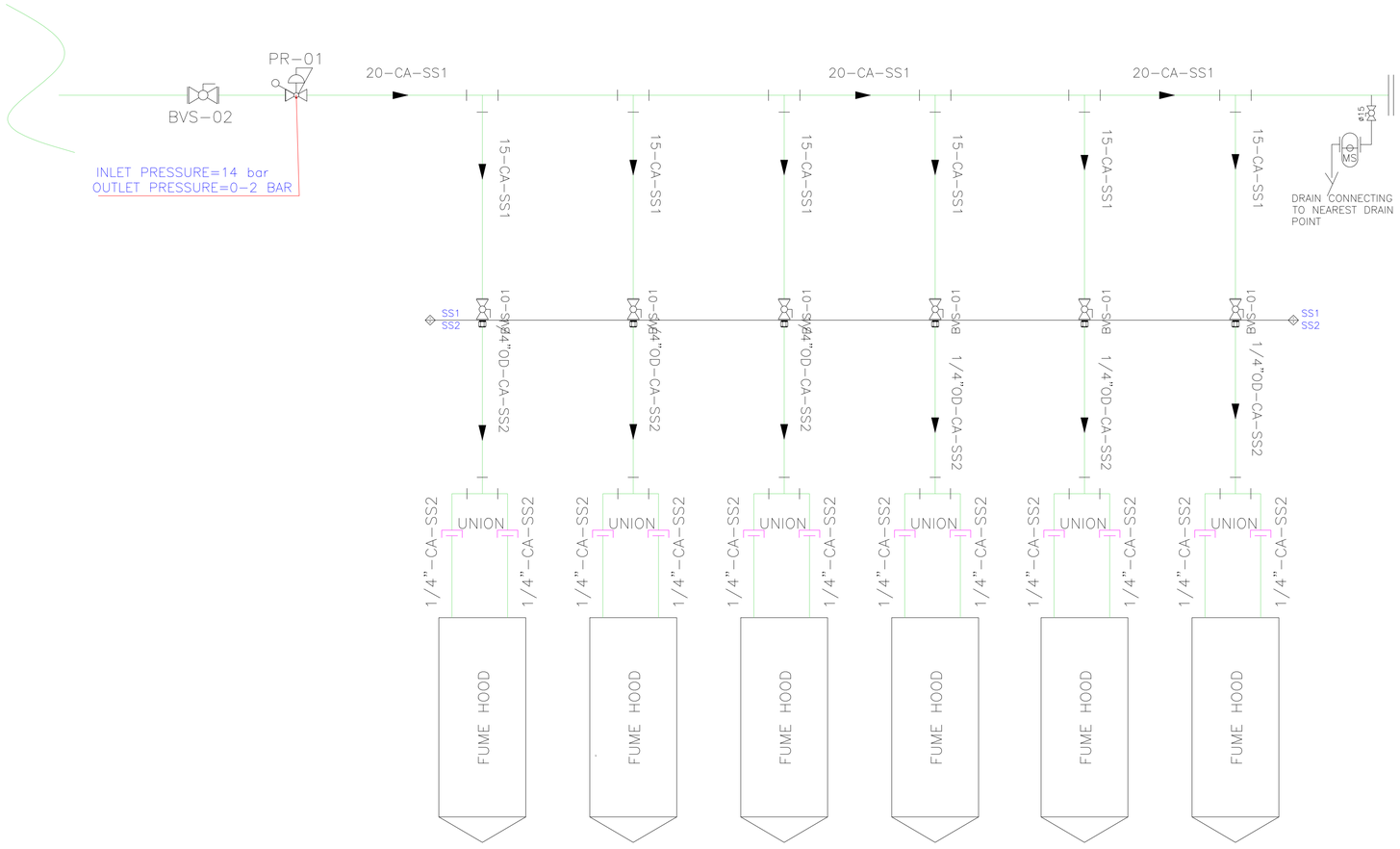
Vasanth nagar,Bangalore-560 052
Tele:-22284583,22204636
E-mail:-projects@mjassociates.in\www.mjassociates.in

DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4817(c)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR IPC-9

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
TEL - 080- 43728155

Consultant:

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PROJECT ENGINEERING CONSULTANTS
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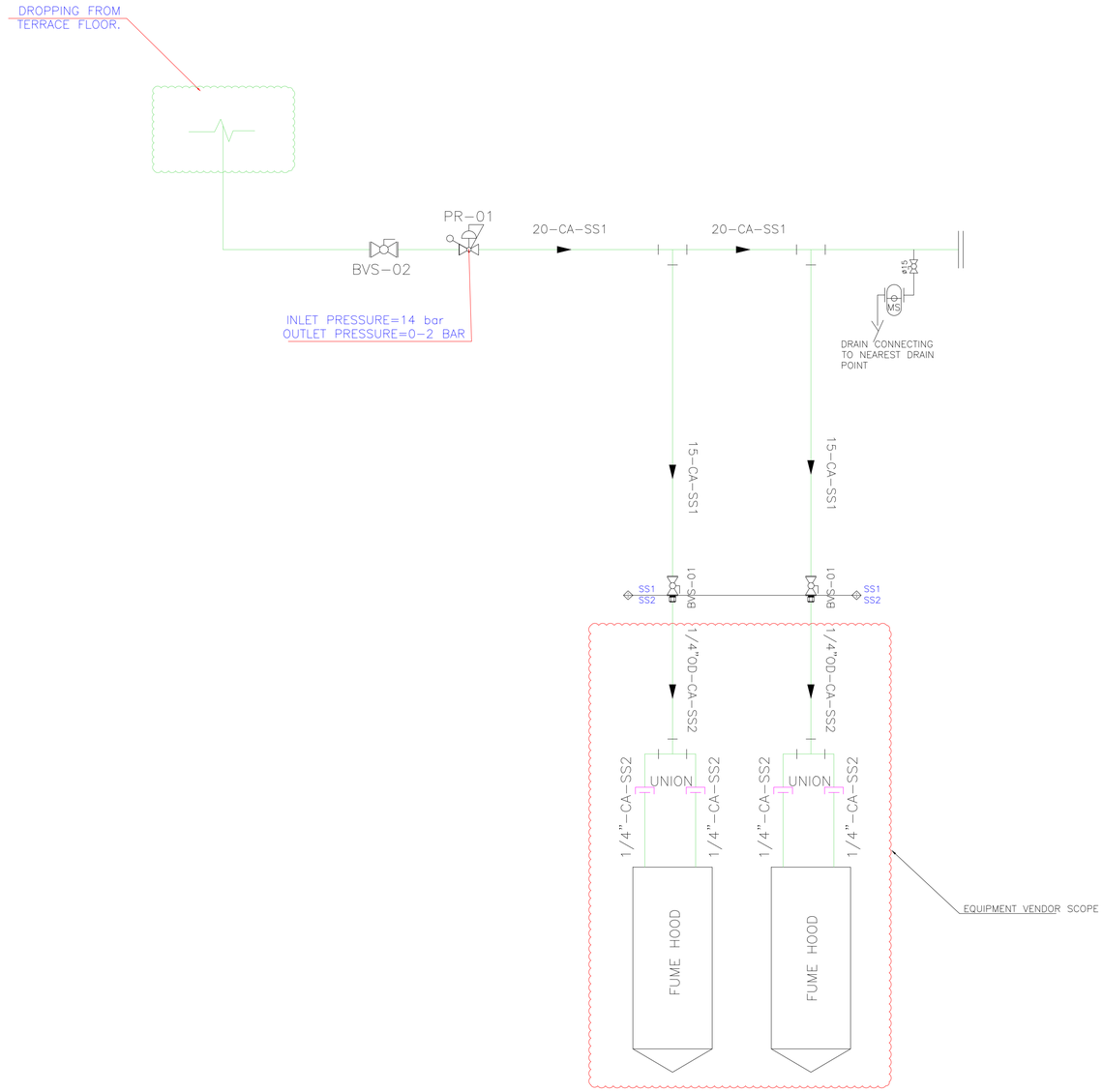
Tele:-22284583,22204636
E-mail:-projects@mjassociates.in/www.mjassociates.in

DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4817(d)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR IPC-10

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
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TEL - 080- 43728155

Consultant:

M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
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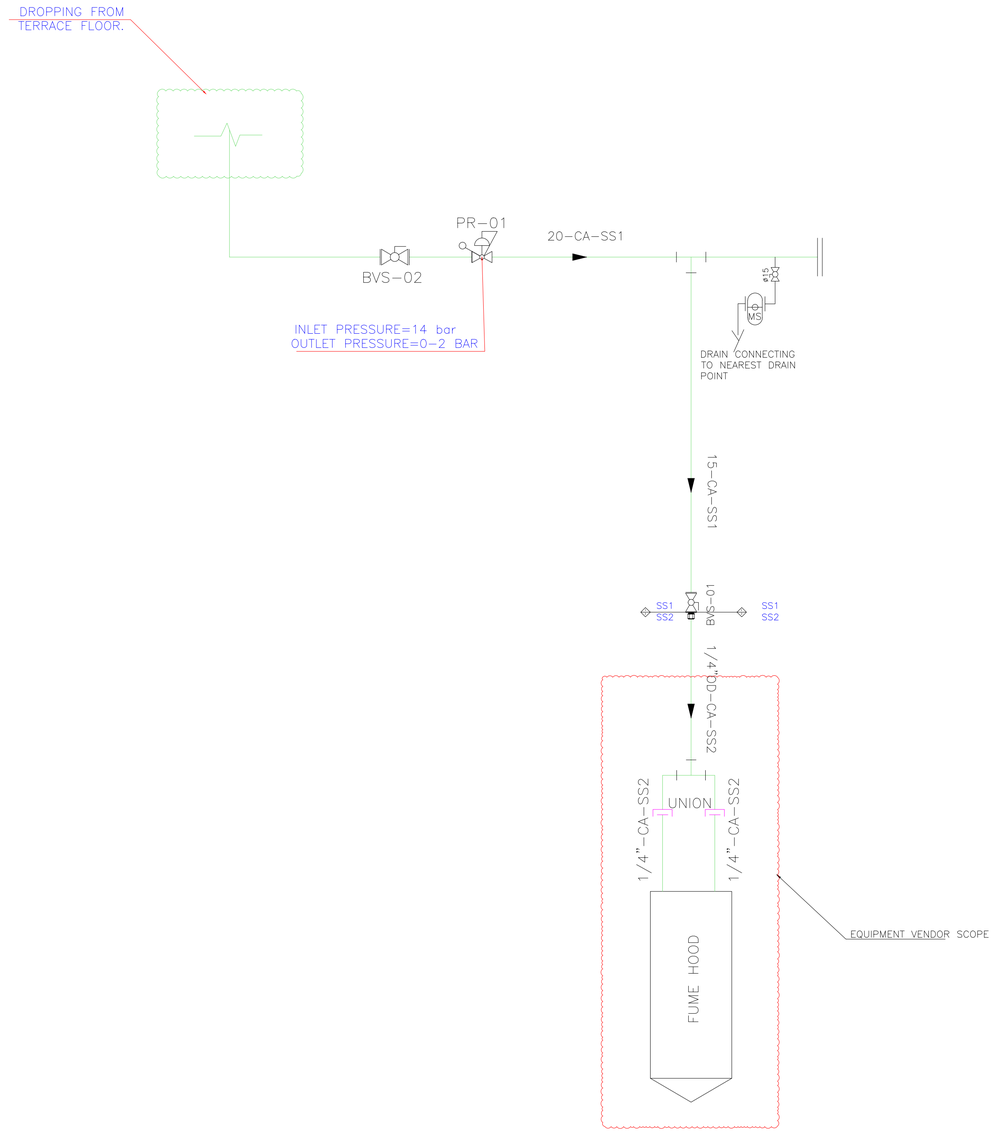
Vasanth nagar,Bangalore-560 052
Tele:-22284583,22204636
E-mail:-projects@mjassociates.inWww.mjassociates.in

DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4816(c)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR IPC-11

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE,
BANGALORE.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD,
BANGALORE 560 013.
TEL – 080- 43728155

Consultant:

M J ASSOCIATES
PROJECT ENGINEERING CONSULTANTS
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Tele:-22284583,22204636
E-mail:-projects@mjassociates.in/www.mjassociates.in

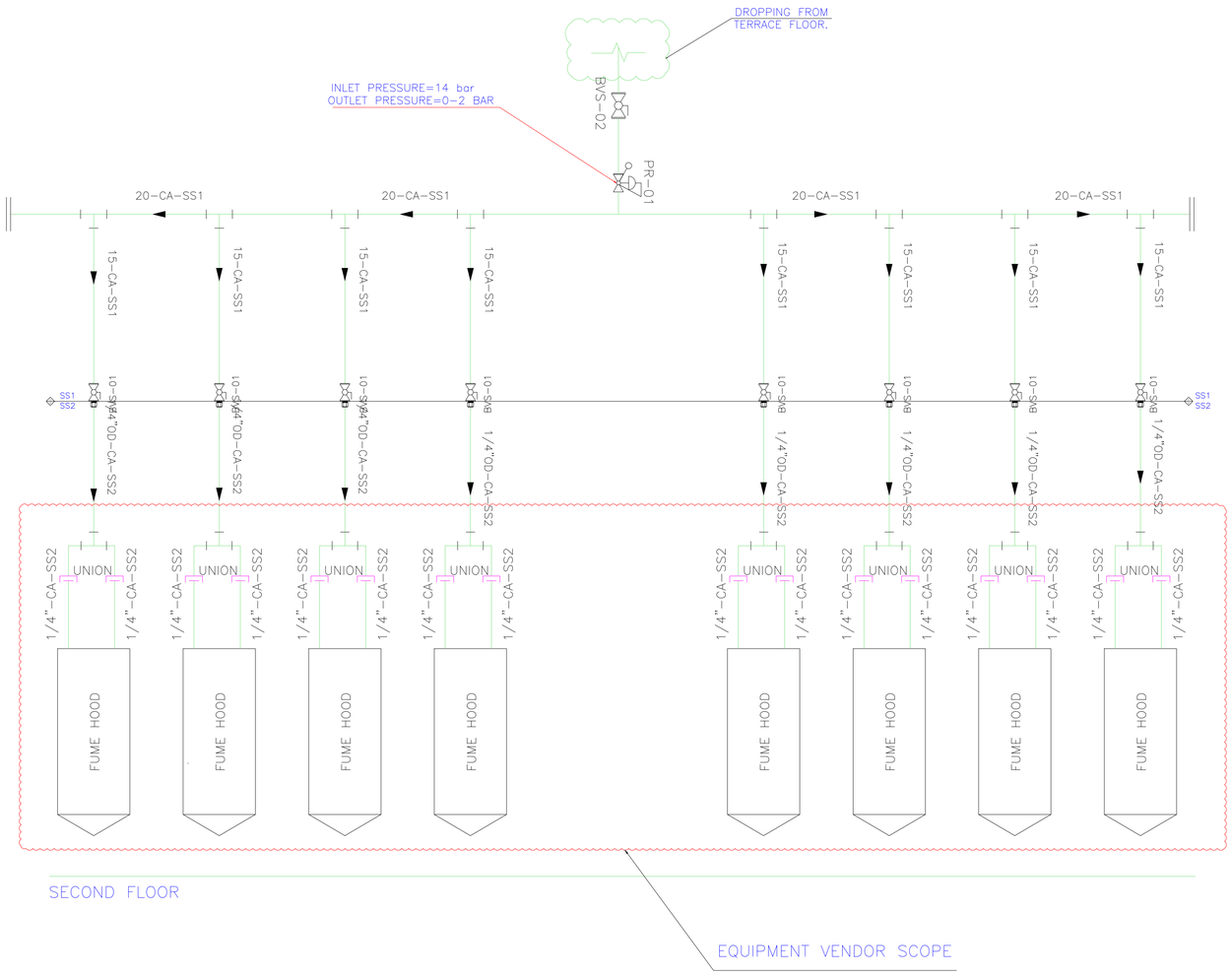
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4816(d)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR
CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR IPC-12

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
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Consultant:

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E-mail:-projects@mjassociates.in/www.mjassociates.in

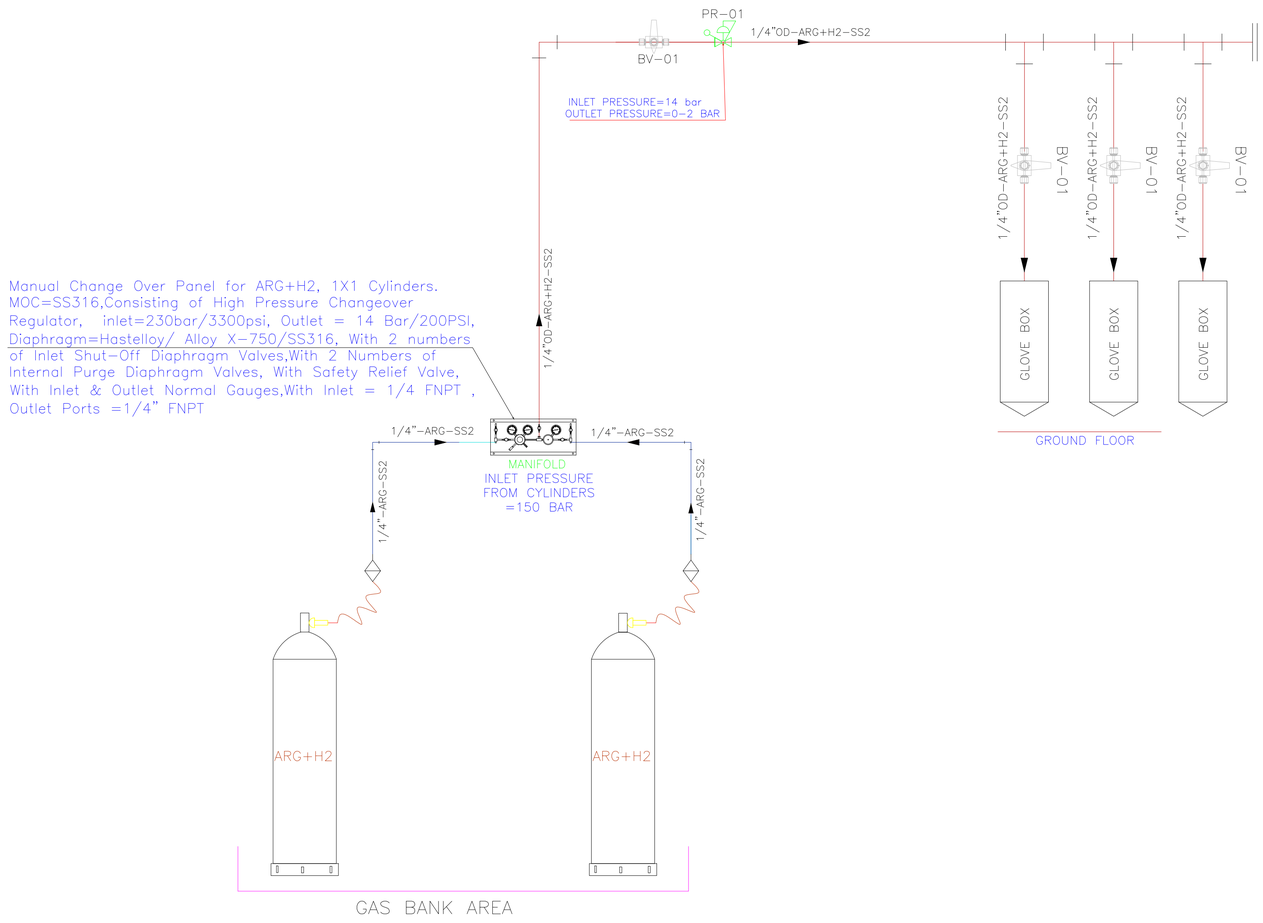
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4823(c)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COMPRESSED AIR (OC-1)

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
TEL - 080- 43728155

Consultant:

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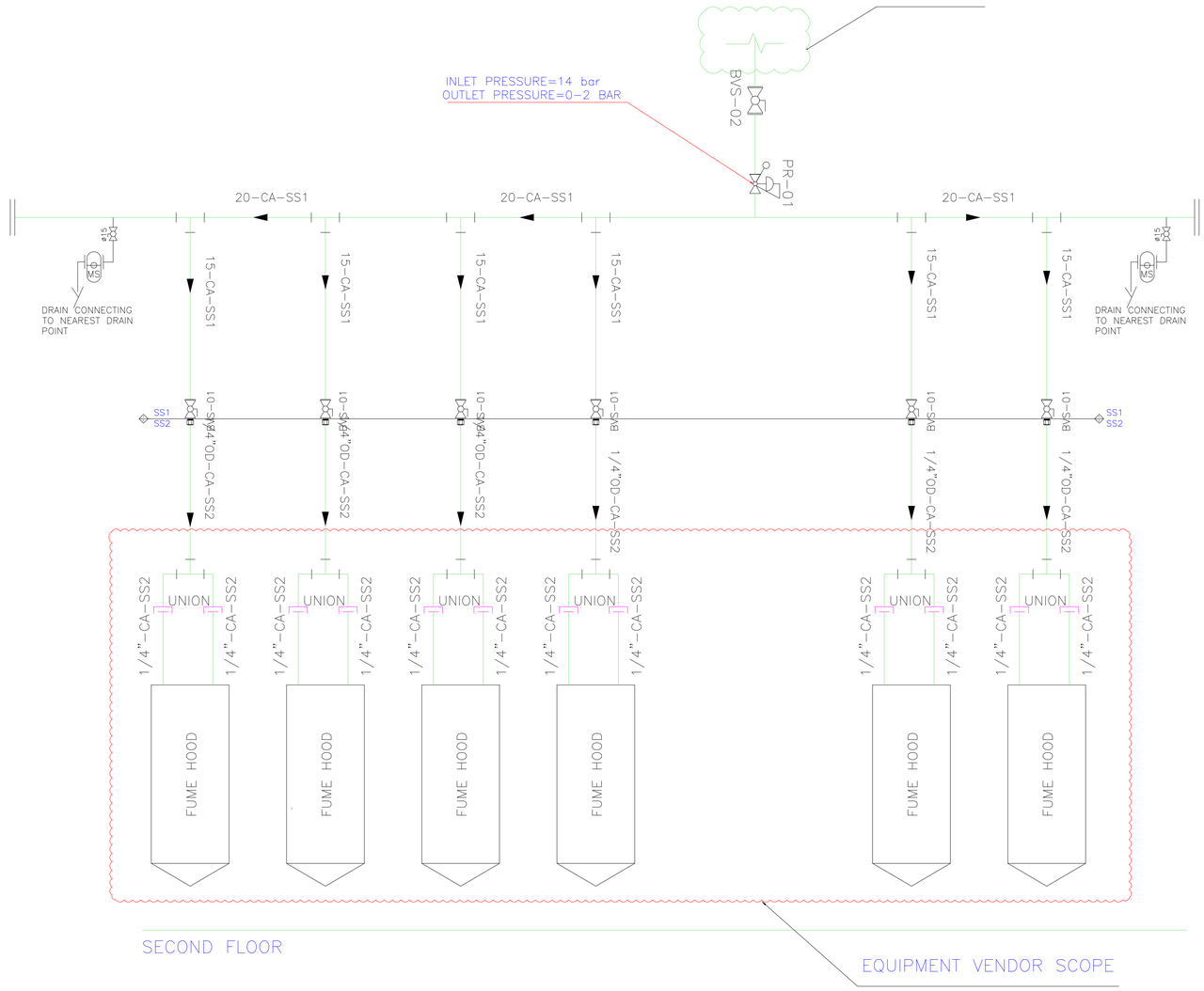
Tele:-22284583,22204636
E-mail:-projects@mjassociates.in/www.mjassociates.in

DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4824 (k)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR ARGON & HYDROGEN(MIXED AIR) FOR SSCU - 7

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
TEL - 080- 43728155

Consultant:

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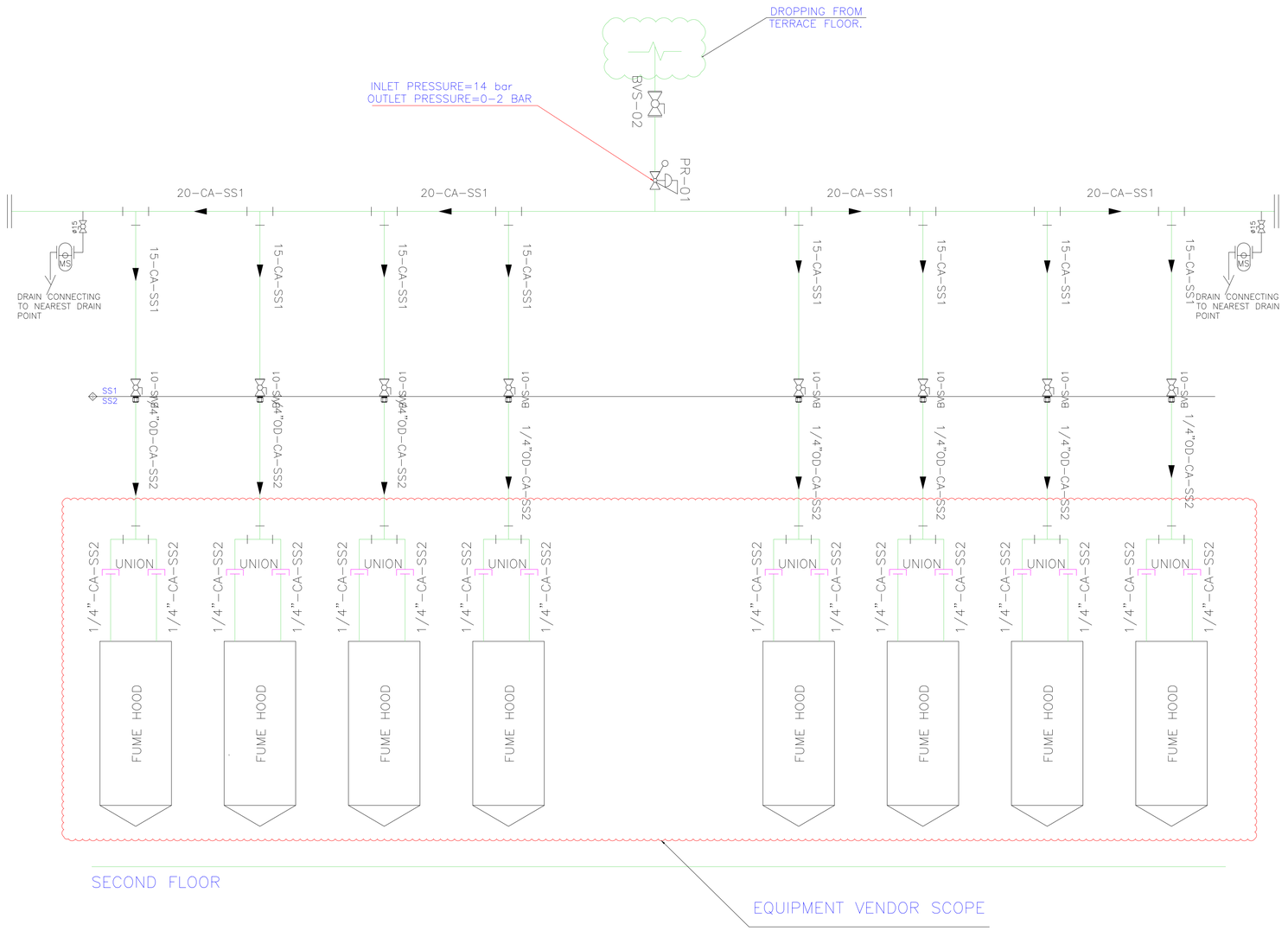
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4824 (c)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR SSCU - 6

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
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TEL – 080- 43728155

Consultant:

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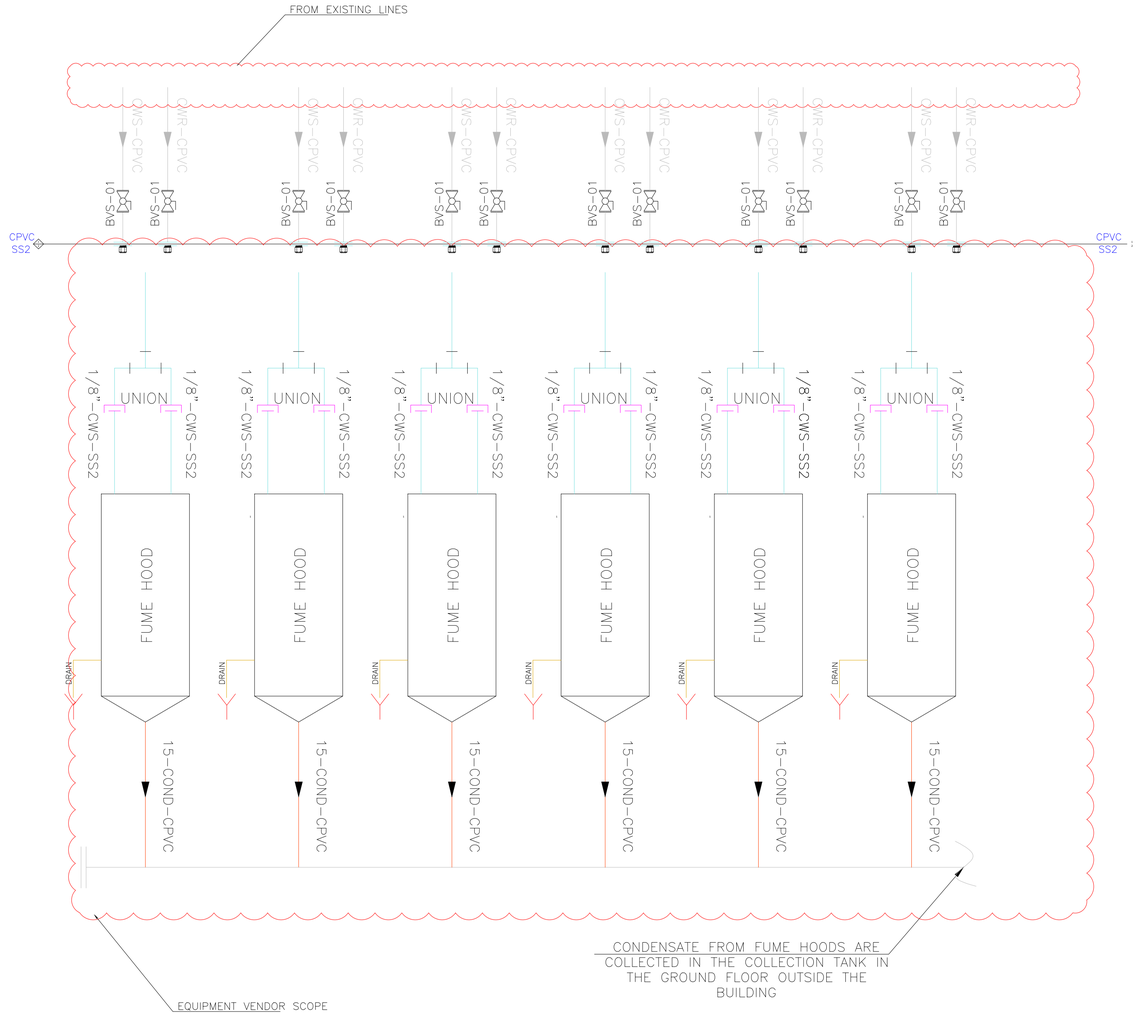
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4824 (d)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR SSCU - 7

DRAWING STATUS : TENDER DRAWING



CLIENT:

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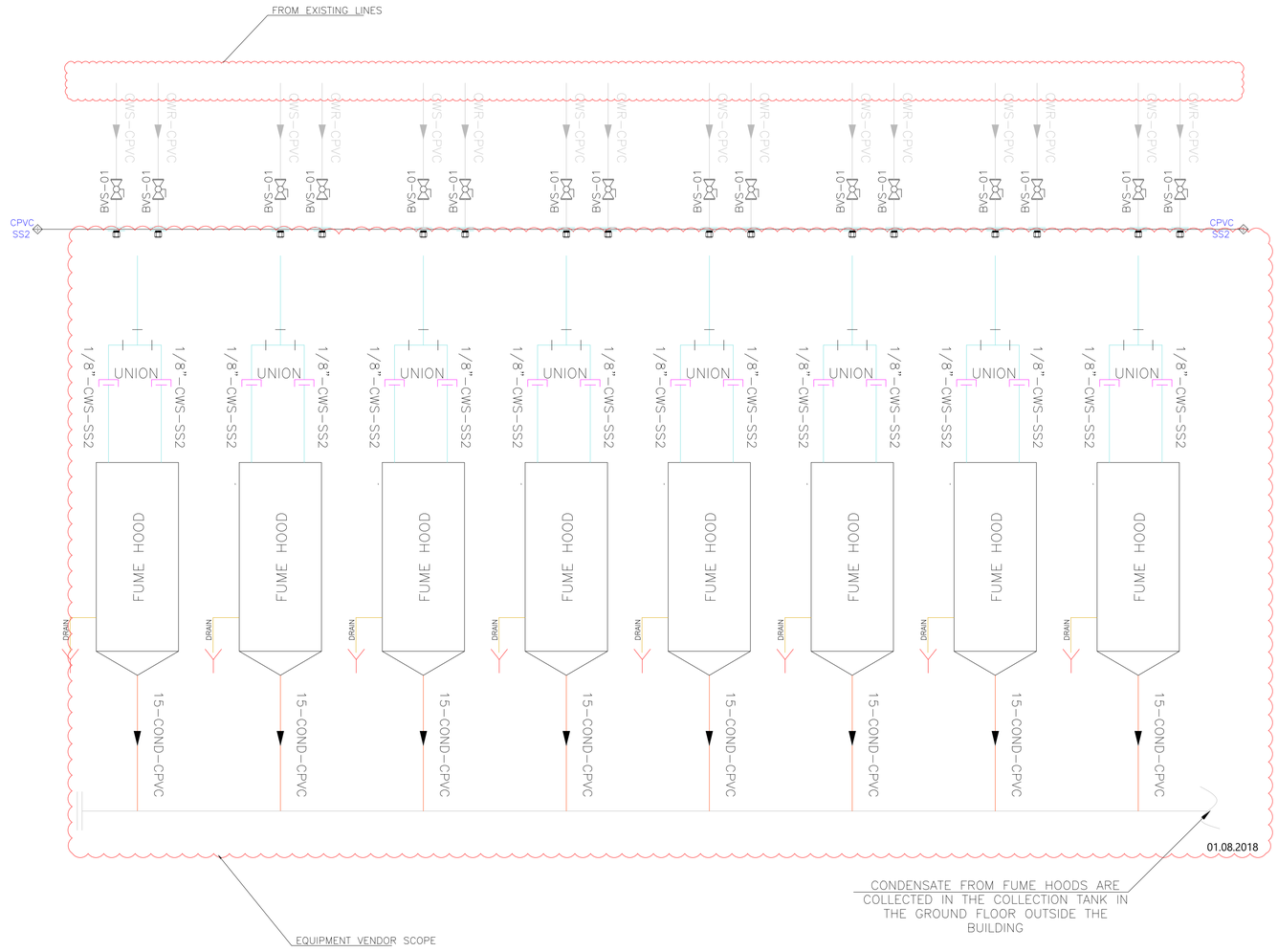
DWG NO:	4824 (g)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COOLING WATER FOR SSCU - 6

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science Bangalore

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PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

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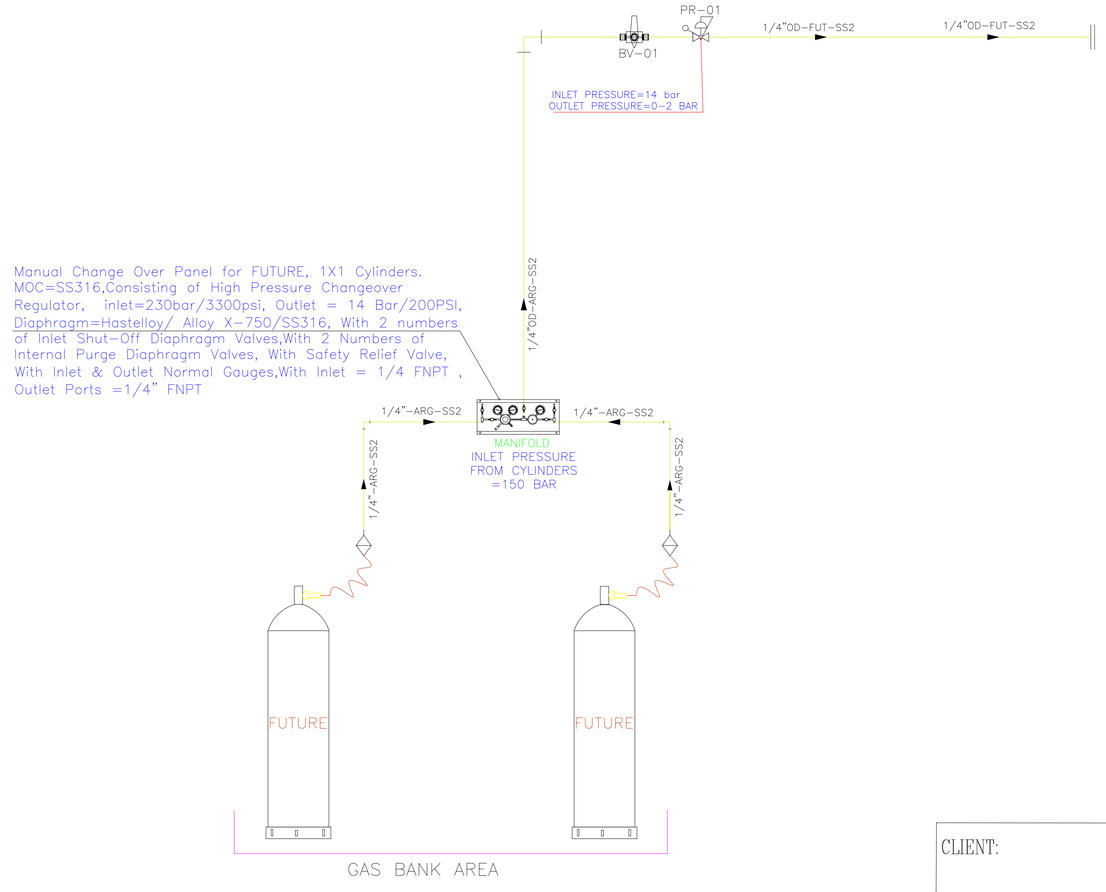
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4824 (h)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COOLING WATER FOR SSCU - 7

DRAWING STATUS : TENDER DRAWING



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DATE	22.10.2018
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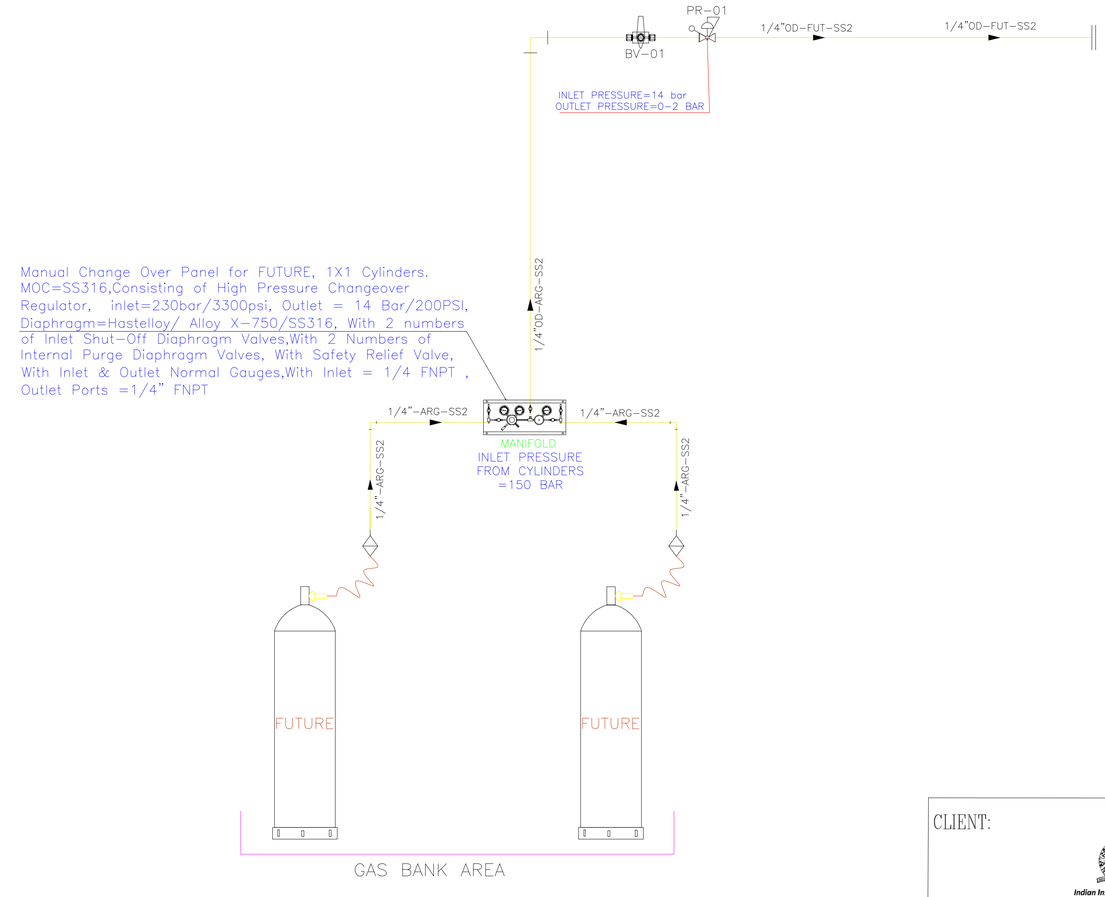
DWG NO:	4824 (i)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR FUTURE GAS FOR SSCU - 6

DRAWING STATUS : TENDER DRAWING



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PROJECT:

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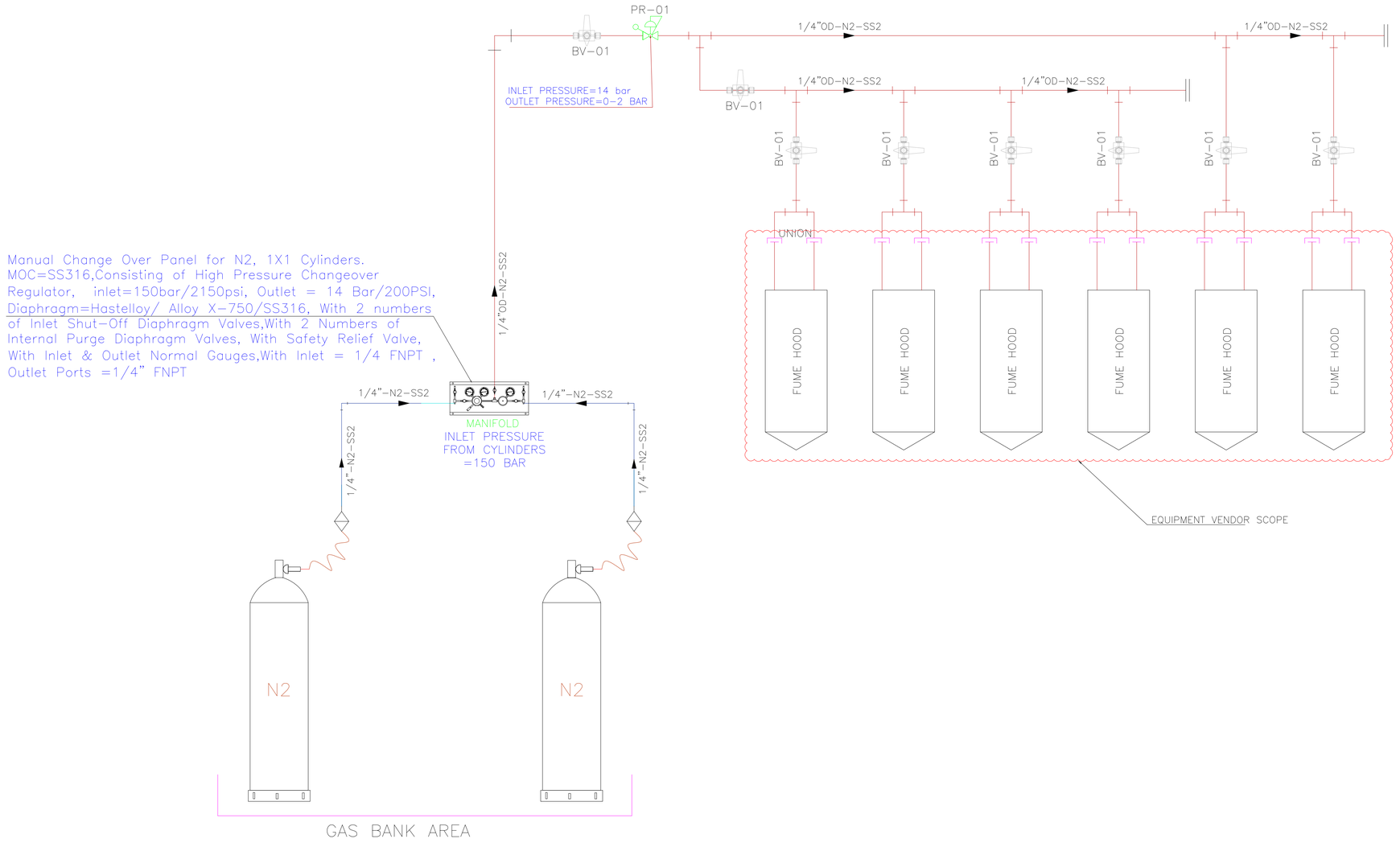
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4824 (j)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR FUTURE GAS FOR SSCU - 7

DRAWING STATUS : TENDER DRAWING



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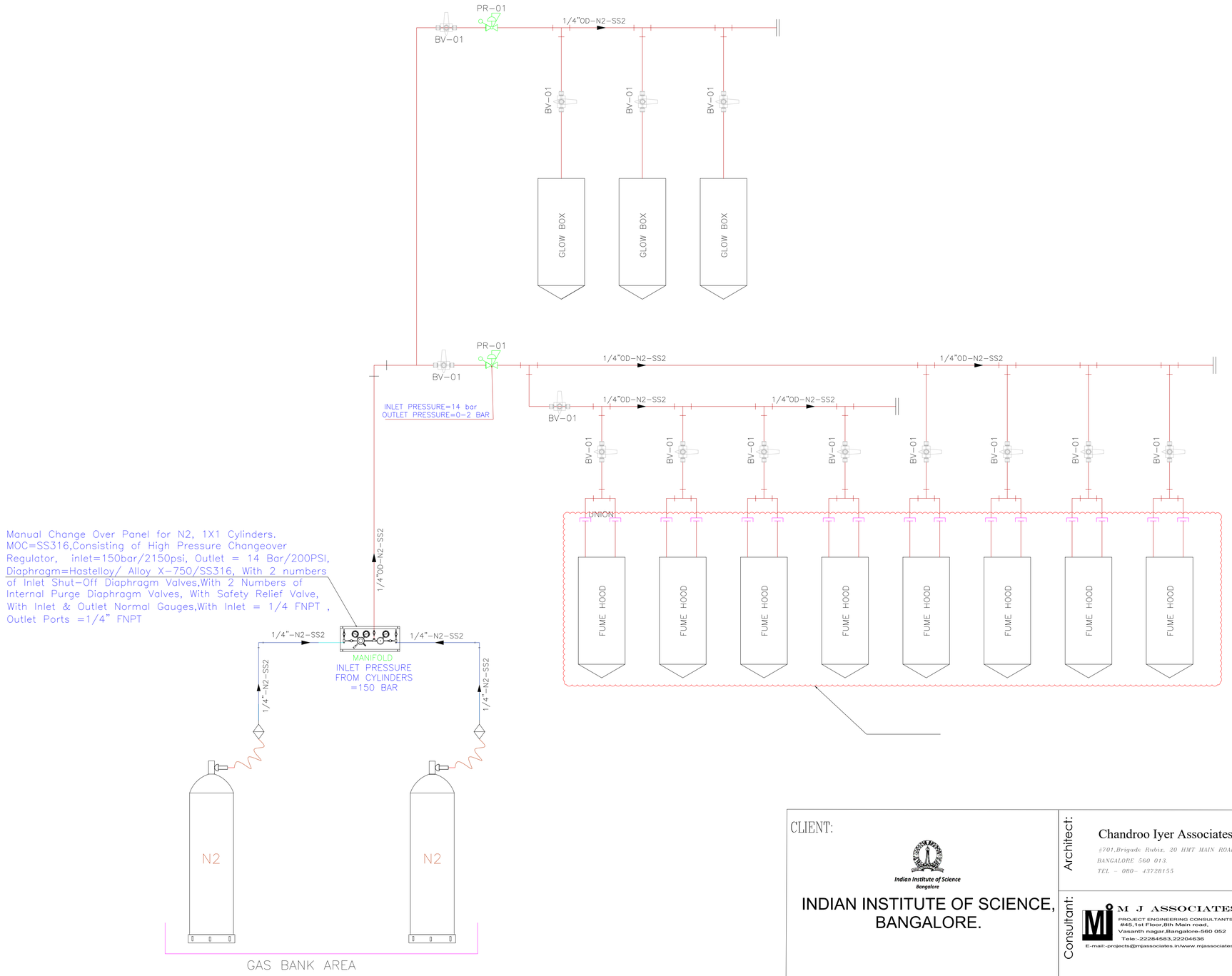
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4824 (a)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR NITROGEN FOR SSCU - 6

DRAWING STATUS : TENDER DRAWING



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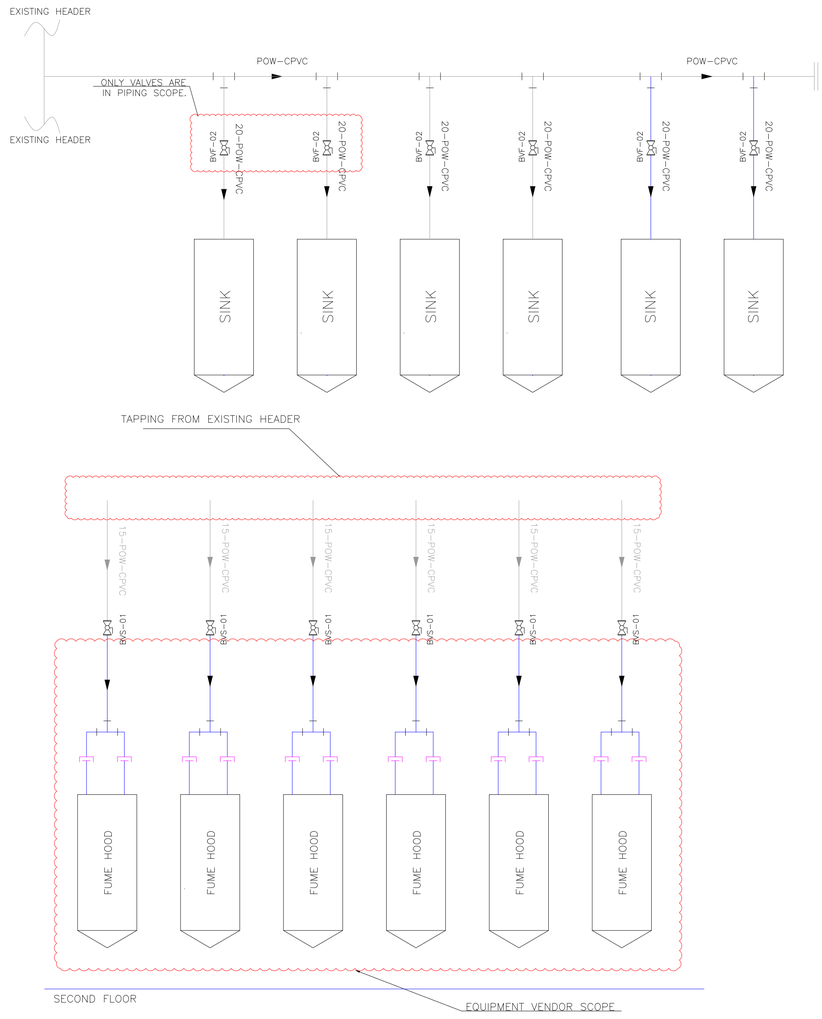
JOB NO	MJ - 324
DWG NO:	4824 (b)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR NITROGEN FOR SSCU - 7

DRAWING STATUS : TENDER DRAWING



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DRAWN	ABHI
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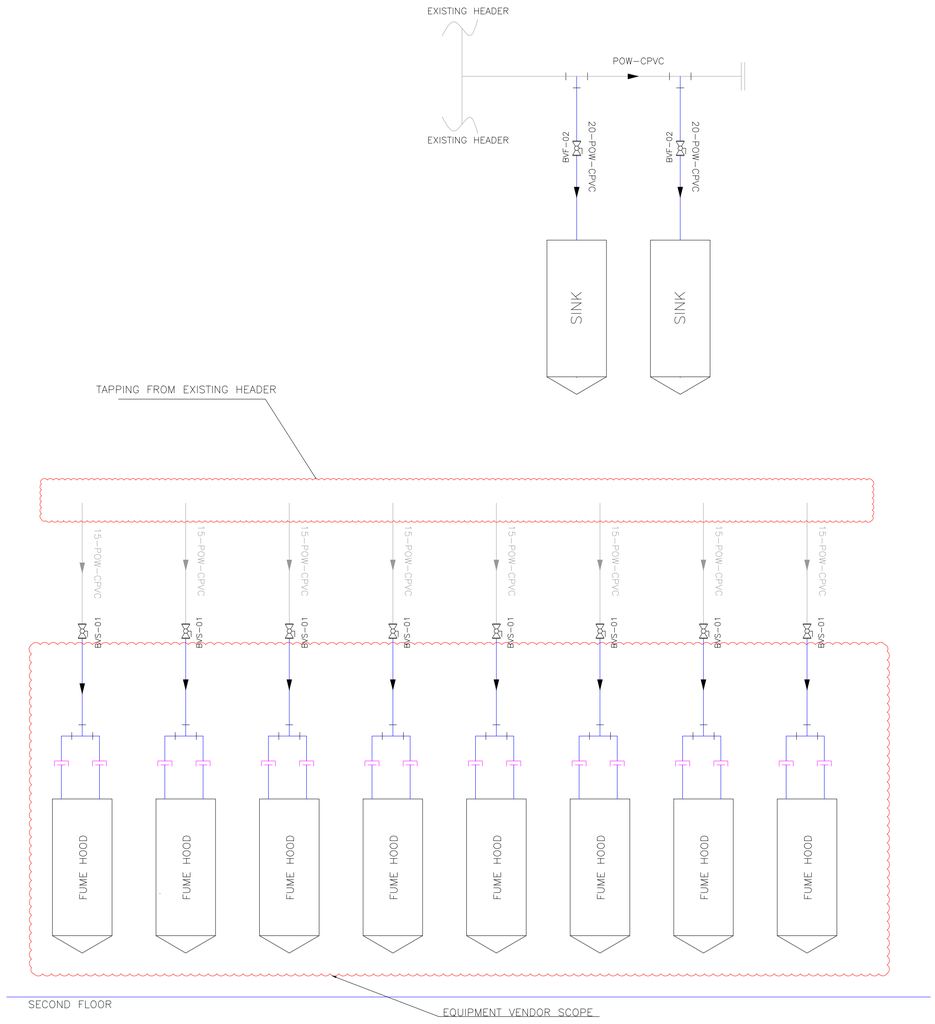
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4824 (e)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR POTABLE WATER FOR SSCU - 6

DRAWING STATUS : TENDER DRAWING



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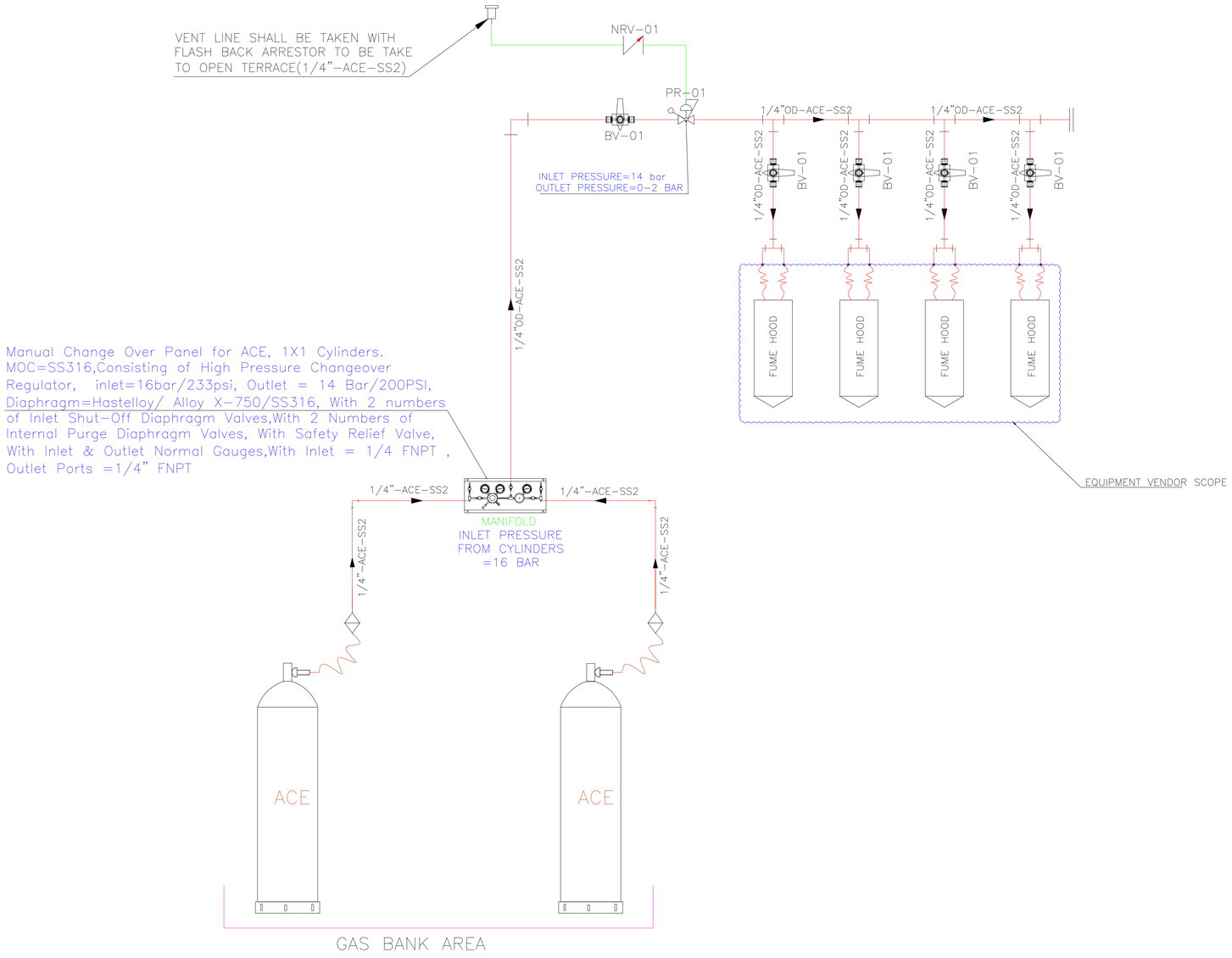
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4824 (f)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR POTABLE WATER FOR SSCU - 7

DRAWING STATUS : TENDER DRAWING



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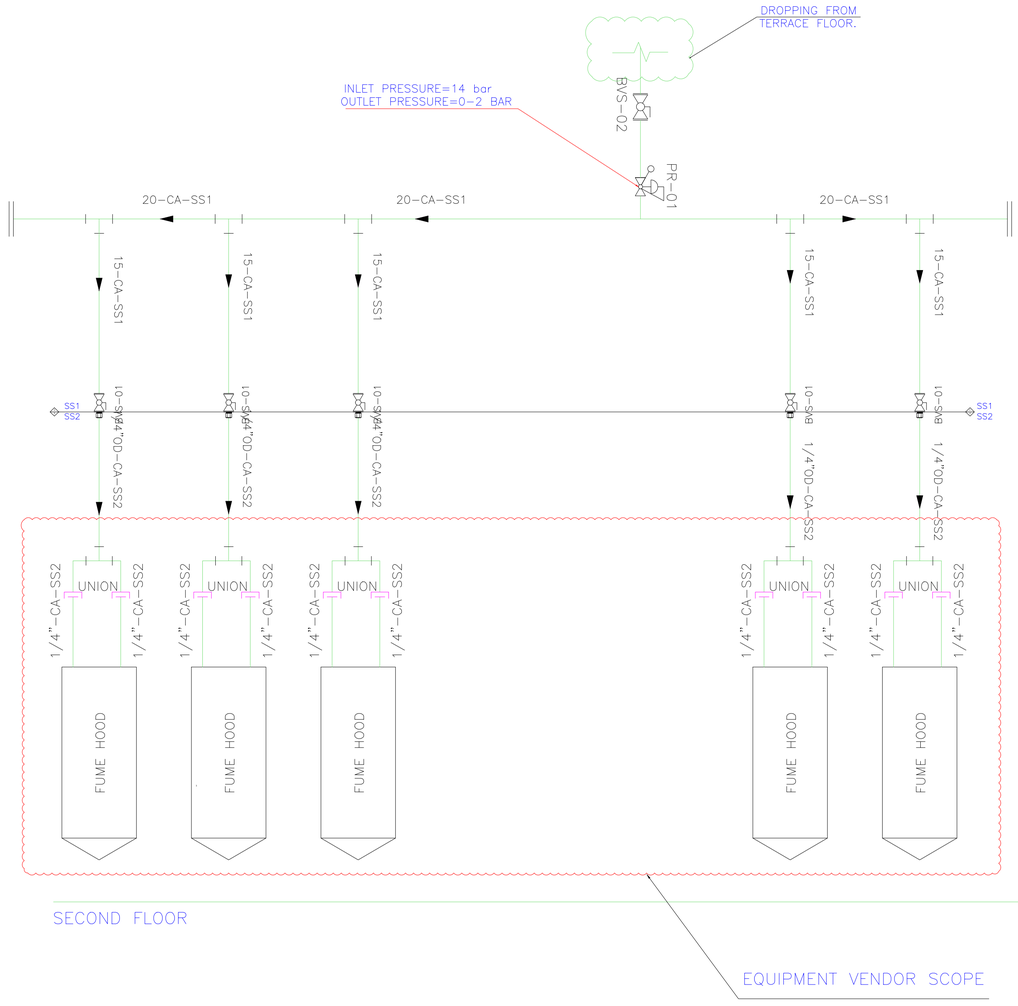
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4825 (k)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR ACETYLENE - SSCU-8

DRAWING STATUS : TENDER DRAWING



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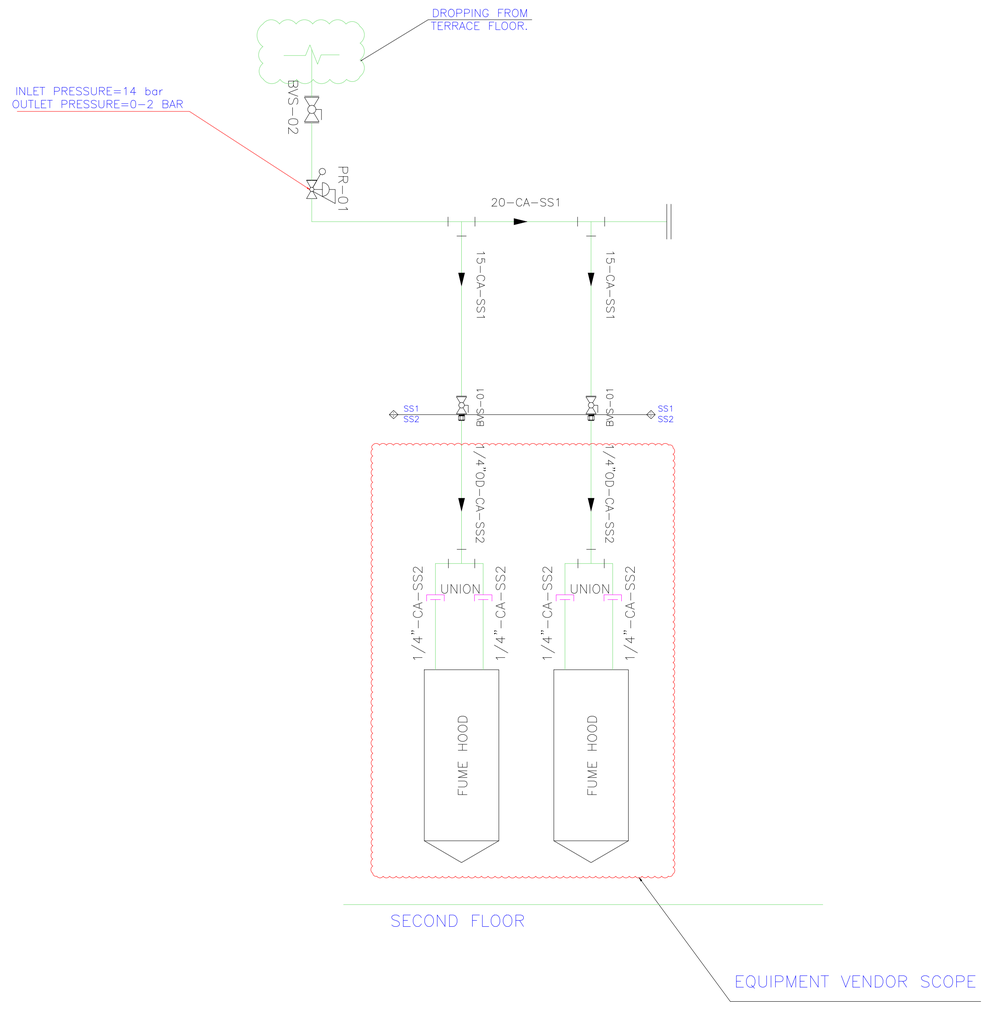
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4825 (c)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR SSCU - 8

DRAWING STATUS : TENDER DRAWING



CLIENT:

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INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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DRAWN	ABHI
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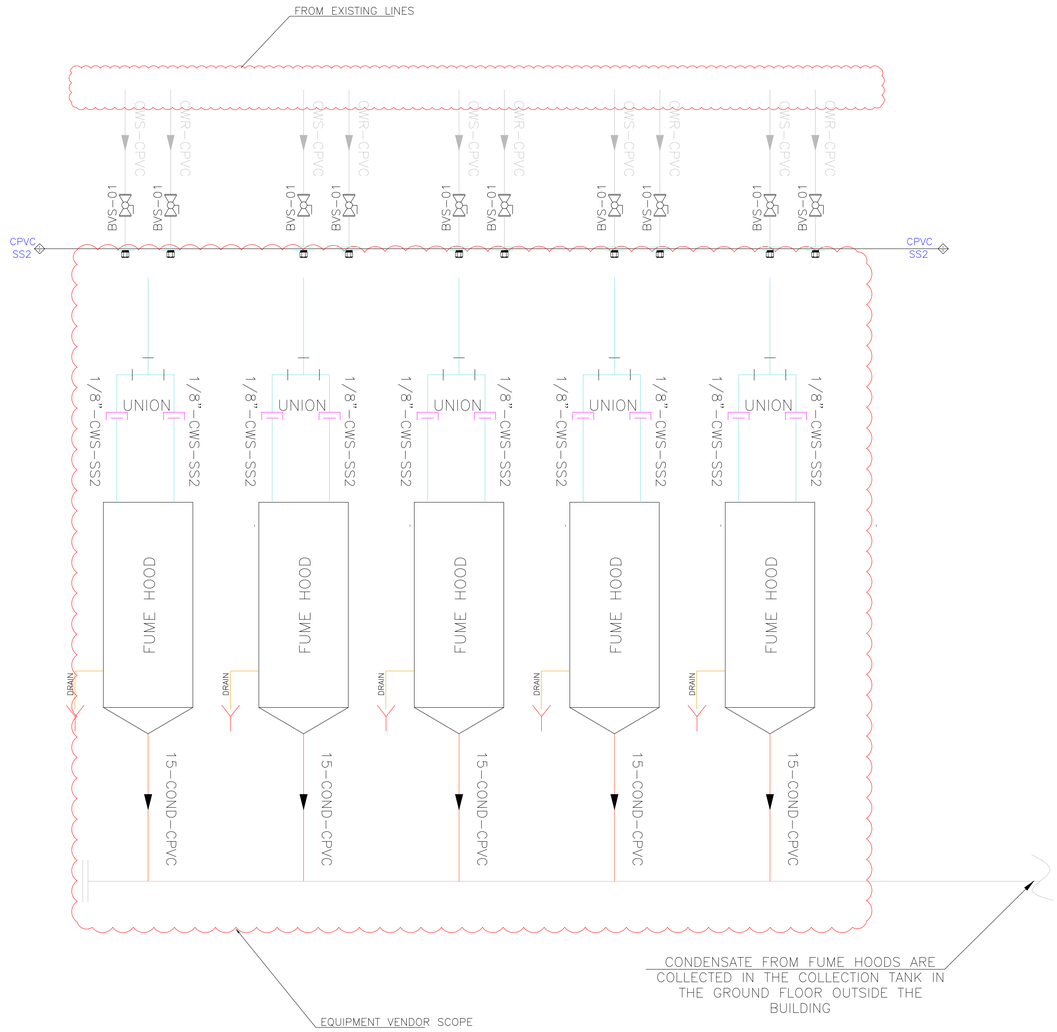
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4825 (d)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR SSCU - 9

DRAWING STATUS : TENDER DRAWING



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CHECKED	BGK
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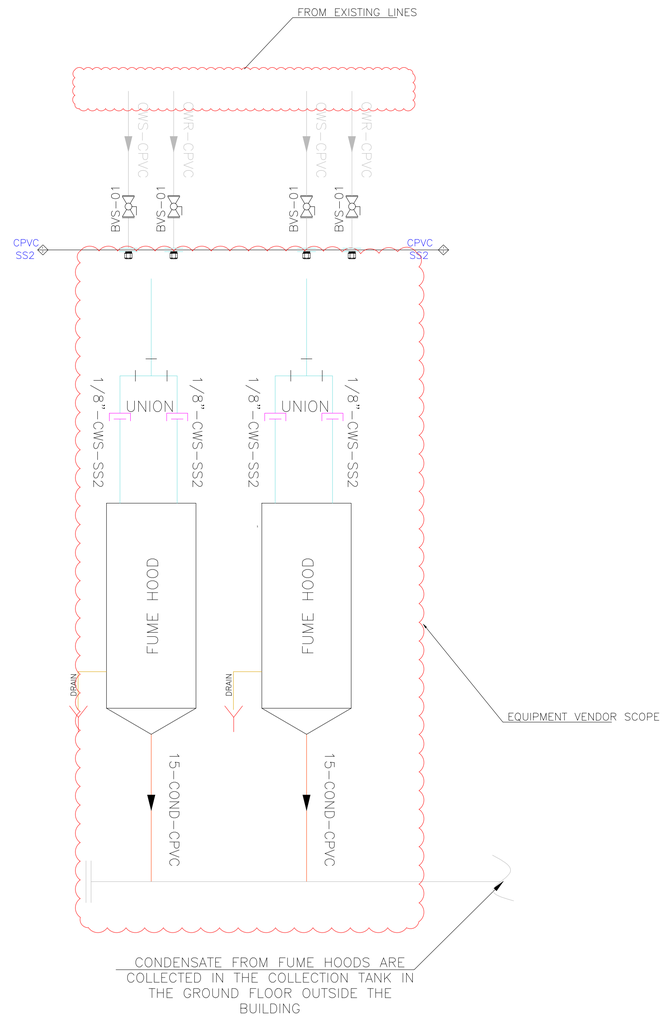
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE :

DRAWING STATUS : TENDER DRAWING



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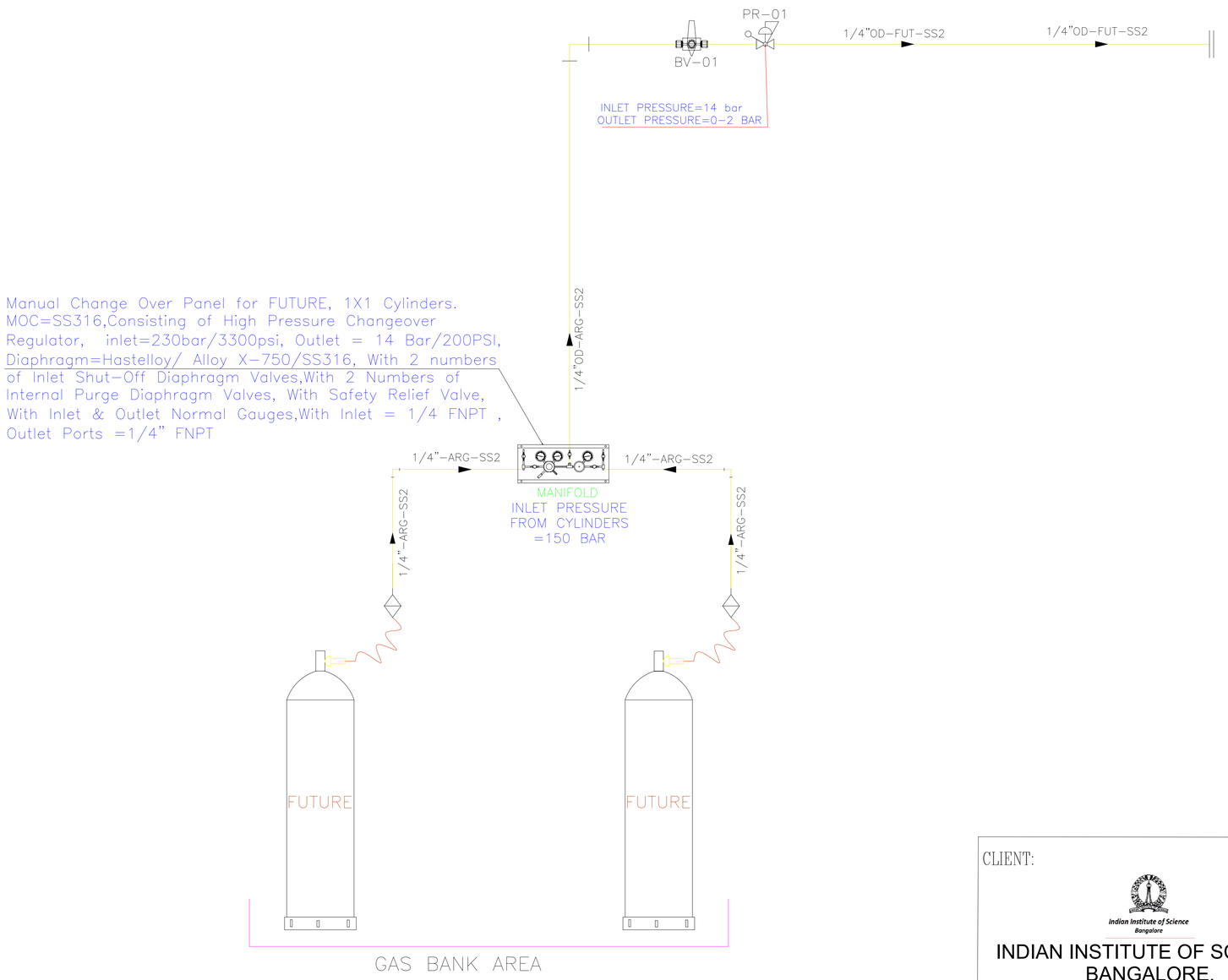
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4825 (g)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COOLING TOWER WATER FOR SSCU - 8

DRAWING STATUS : TENDER DRAWING



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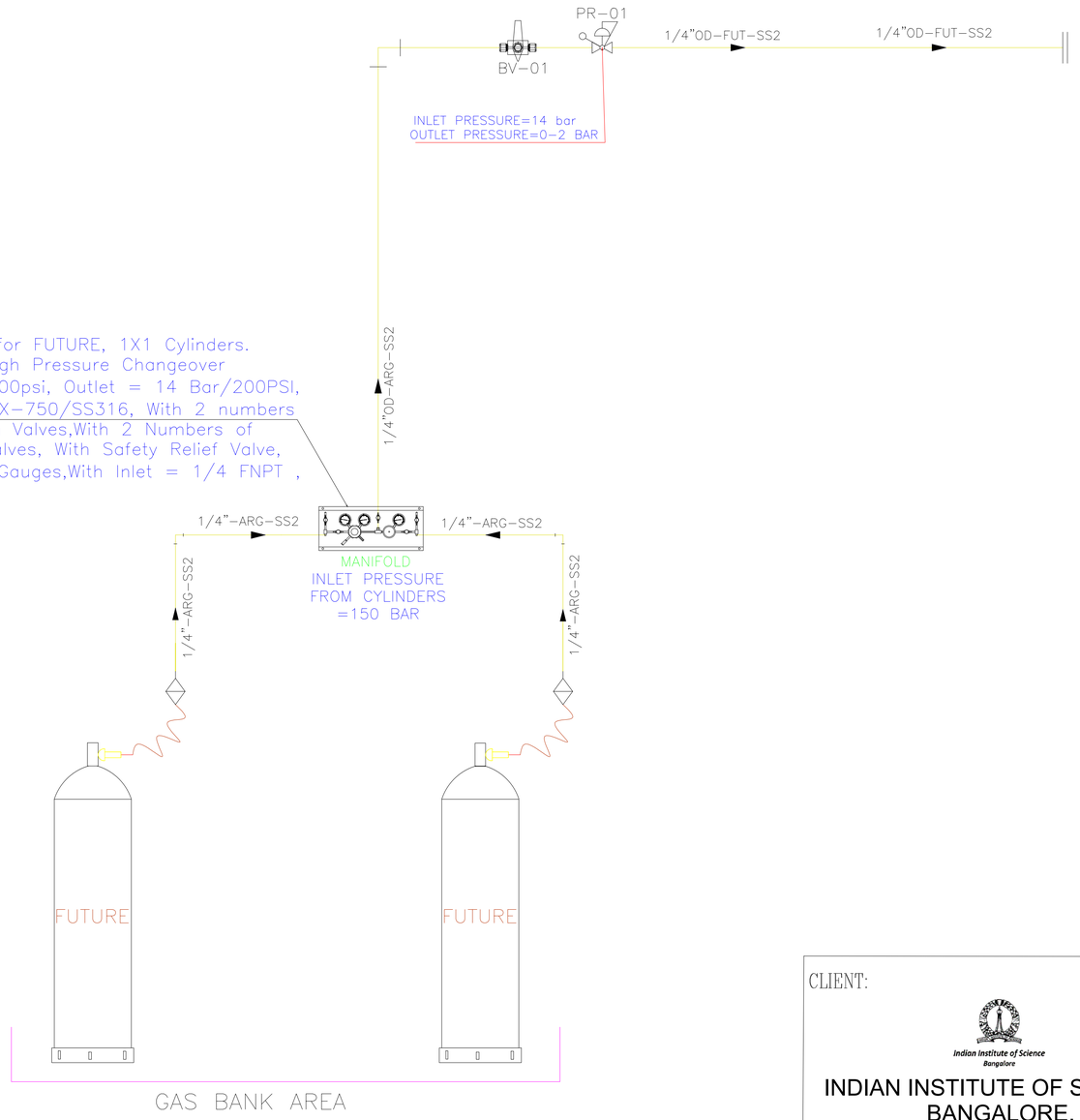
DWG NO:	4825(i)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR FUTURE GAS SSCU-8

DRAWING STATUS : TENDER DRAWING



Manual Change Over Panel for FUTURE, 1X1 Cylinders. MOC=SS316,Consisting of High Pressure Changeover Regulator, inlet=230bar/3300psi, Outlet = 14 Bar/200PSI, Diaphragm=Hastelloy/ Alloy X-750/SS316, With 2 numbers of Inlet Shut-Off Diaphragm Valves,With 2 Numbers of Internal Purge Diaphragm Valves, With Safety Relief Valve, With Inlet & Outlet Normal Gauges,With Inlet = 1/4 FNPT , Outlet Ports =1/4" FNPT

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JOB NO	MJ - 324
DWG NO:	4825(j)
SCALE	NTS
REVISION	R0

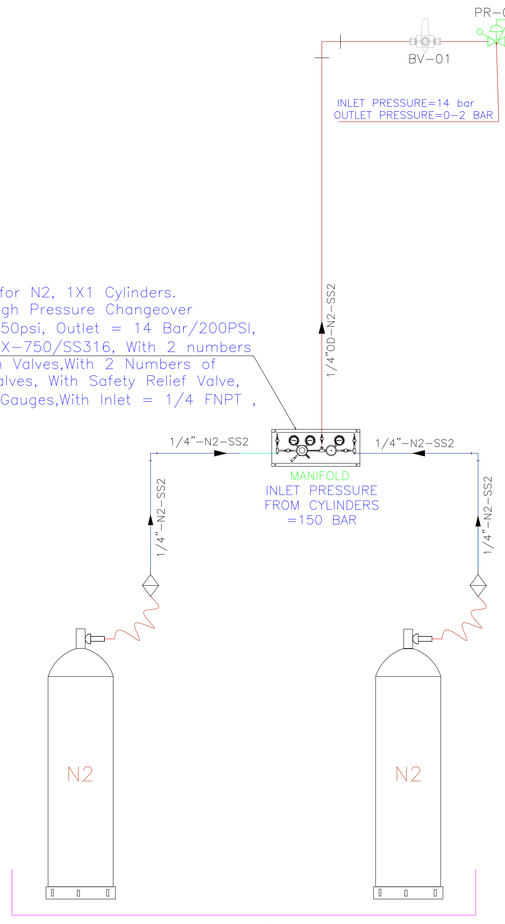
PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

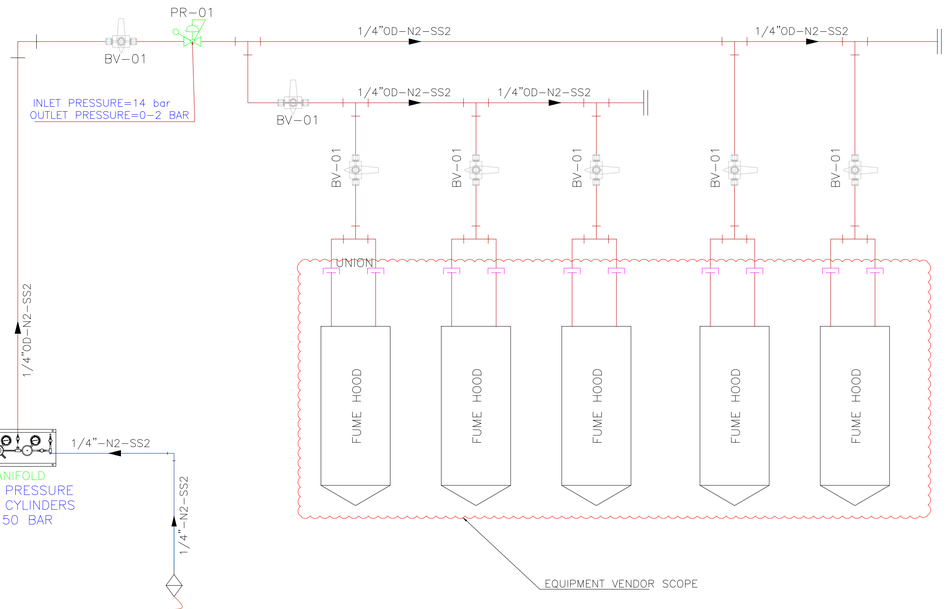
DRAWING TITLE : P&ID FOR FUTURE GAS SSCU-9

DRAWING STATUS : TENDER DRAWING

Manual Change Over Panel for N2, 1X1 Cylinders. MOC=SS316,Consisting of High Pressure Changeover Regulator, inlet=150bar/2150psi, Outlet = 14 Bar/200PSI, Diaphragm=Hastelloy/ Alloy X-750/SS316, With 2 numbers of Inlet Shut-Off Diaphragm Valves,With 2 Numbers of Internal Purge Diaphragm Valves, With Safety Relief Valve, With Inlet & Outlet Normal Gauges,With Inlet = 1/4 FNPT , Outlet Ports =1/4" FNPT



GAS BANK AREA



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27.08.2018

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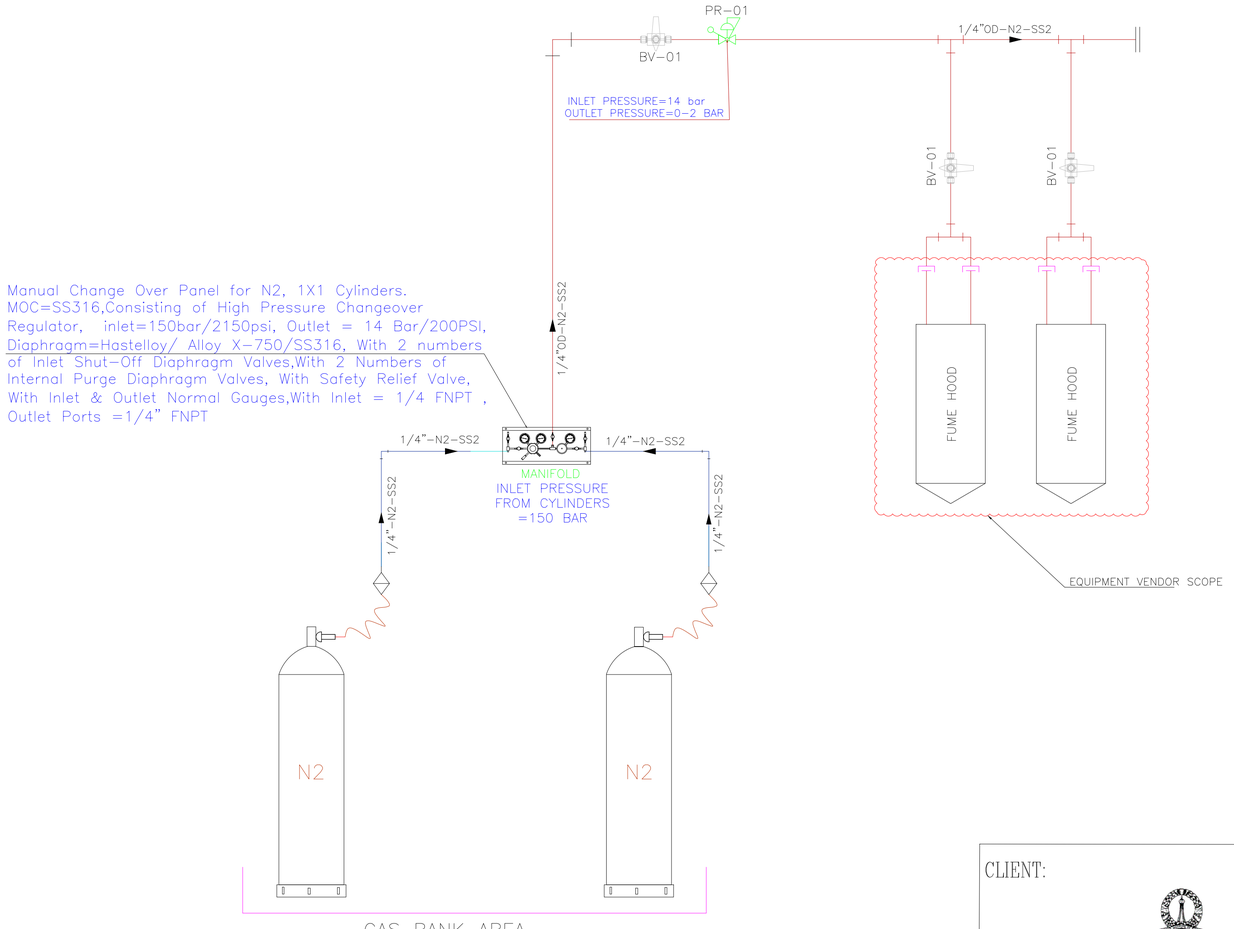
DWG NO:	4825(a)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR NITROGEN SSCU-8

DRAWING STATUS : TENDER DRAWING



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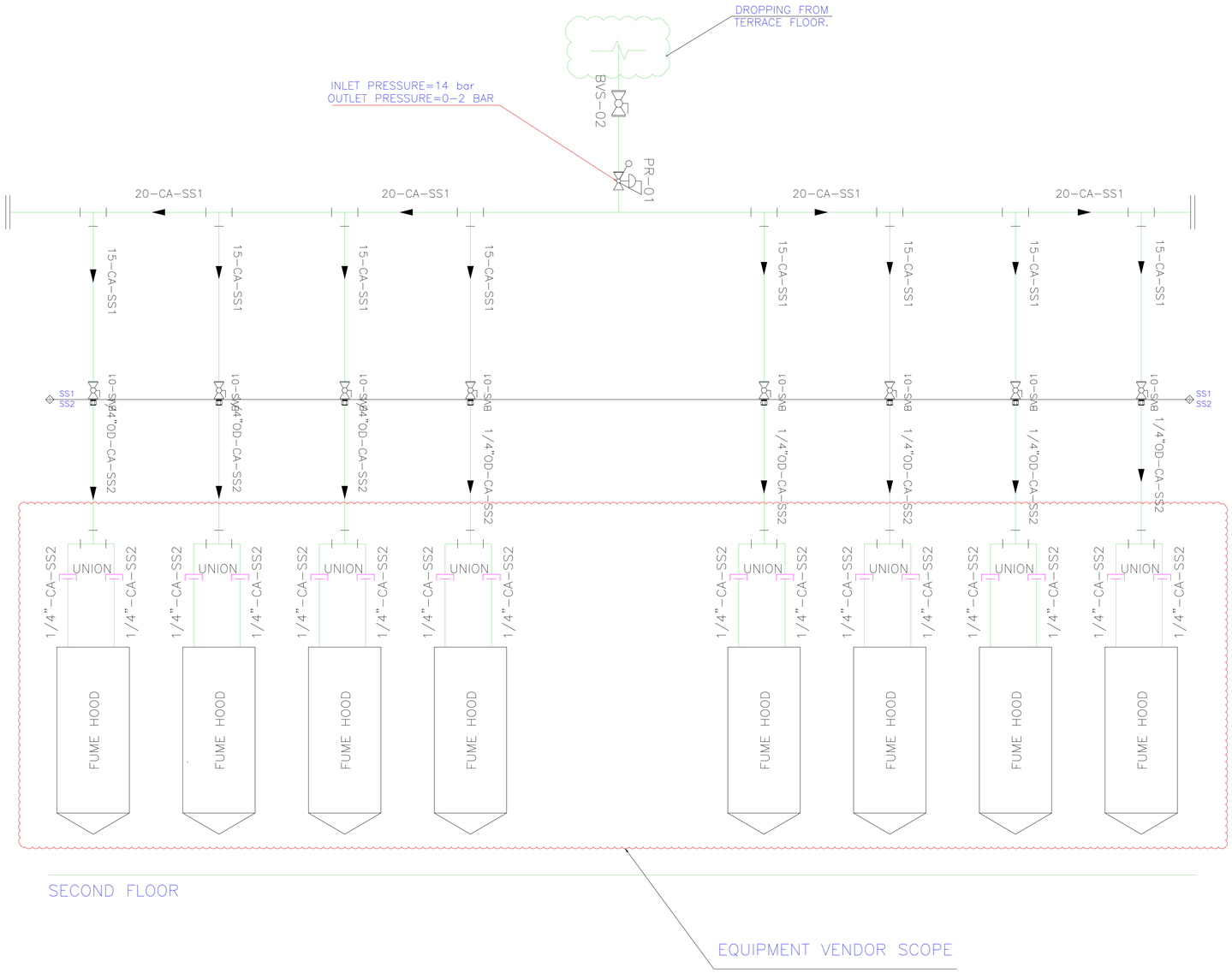
DWG NO:	4825(b)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR NITROGEN SSCU-9

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates

#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
TEL - 080- 43728155

Consultant:

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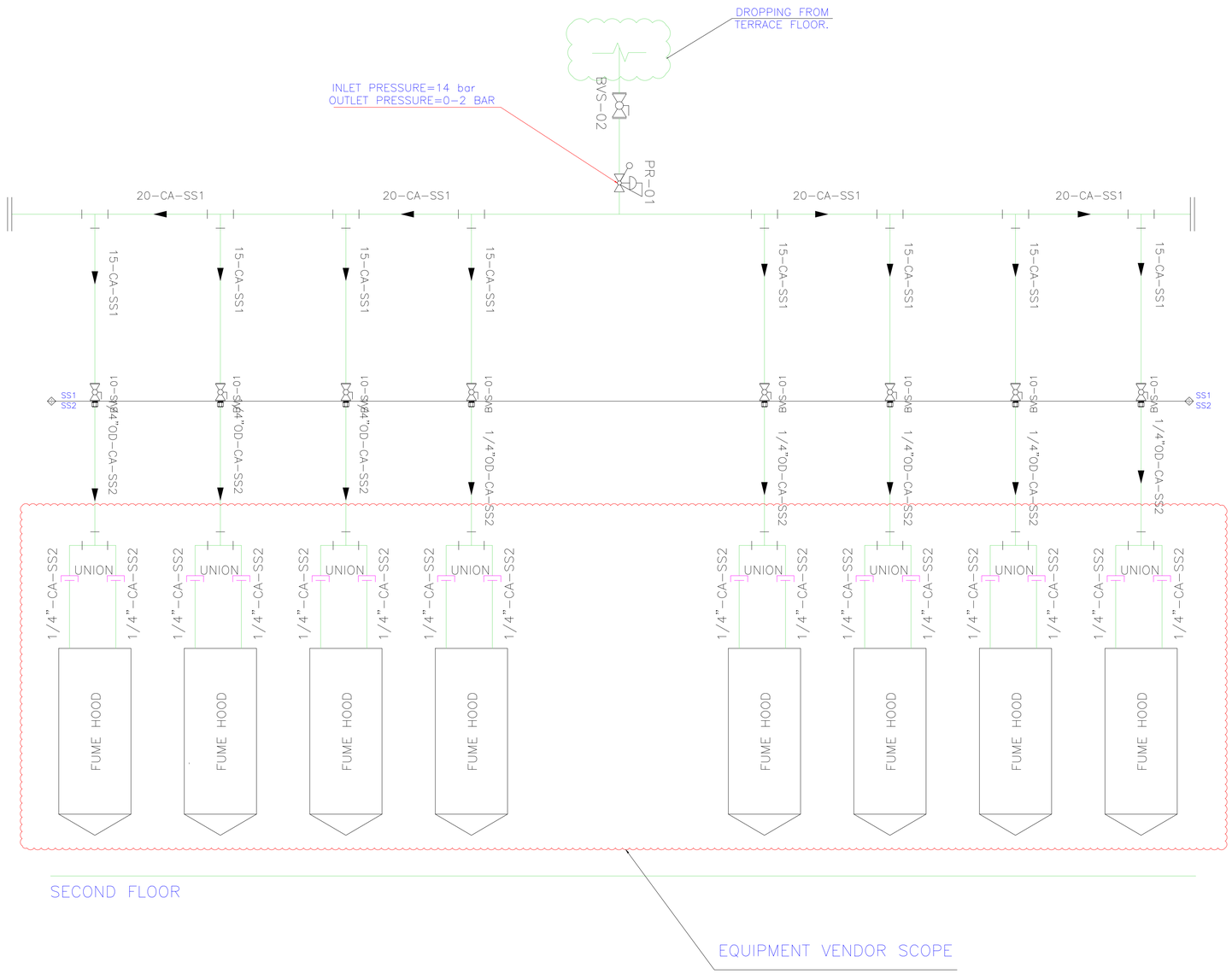
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4821 (c)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR OC-5

DRAWING STATUS : TENDER DRAWING



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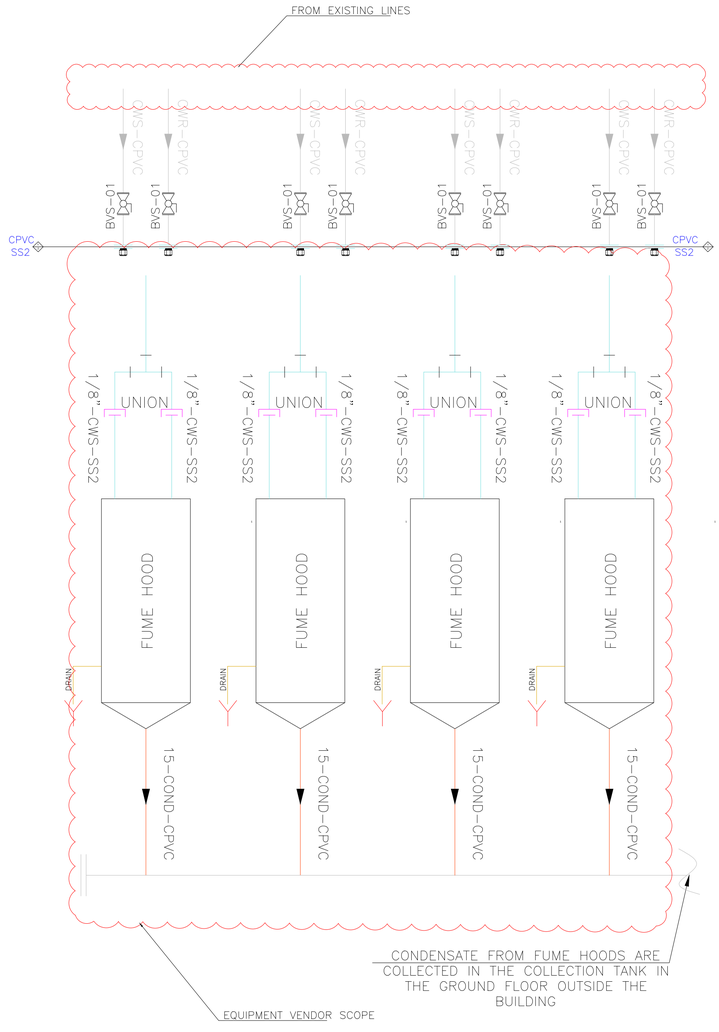
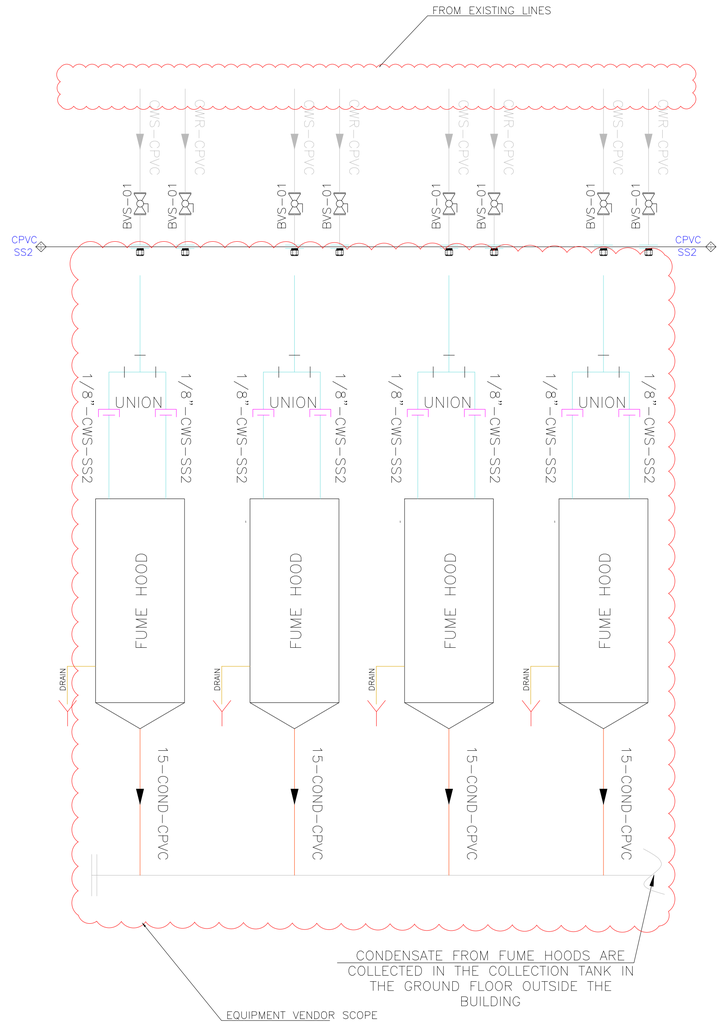
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR OC-6

DRAWING STATUS : TENDER DRAWING





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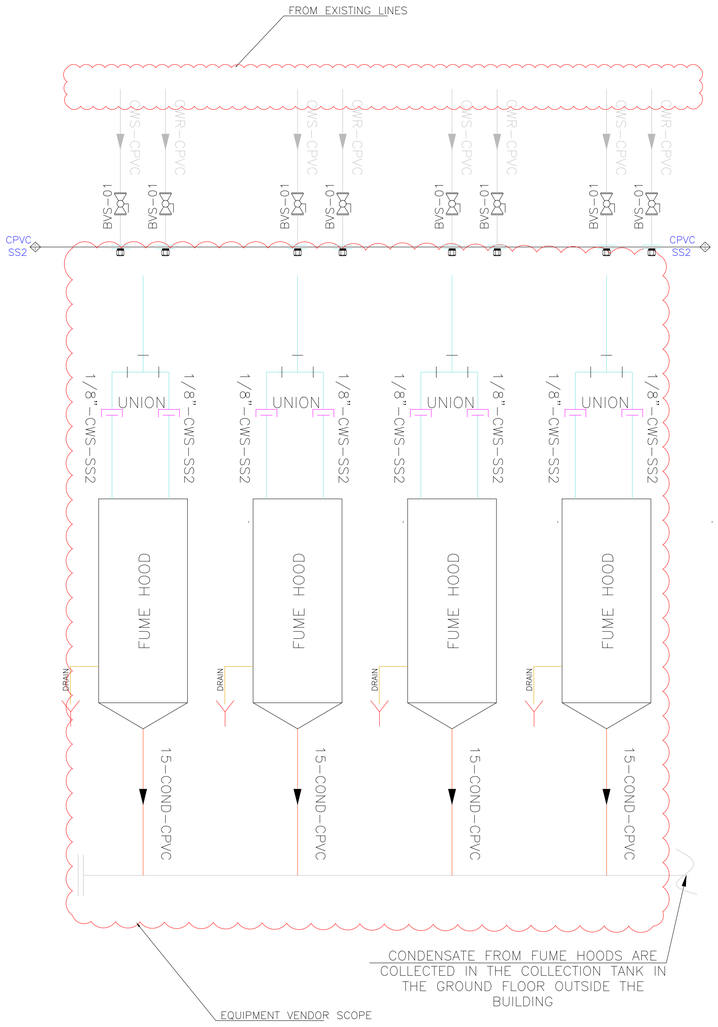
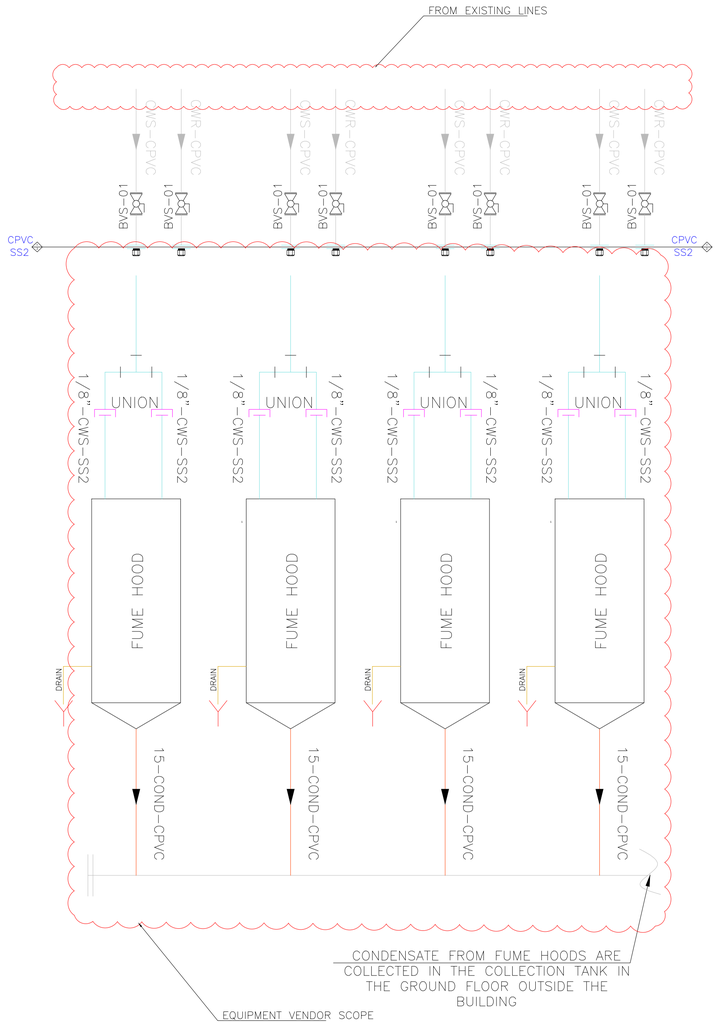
DWG NO:	4821 (g)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COOLING TOWER WATER FOR OC-5

DRAWING STATUS : TENDER DRAWING





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REVISION	R0

PROJECT:

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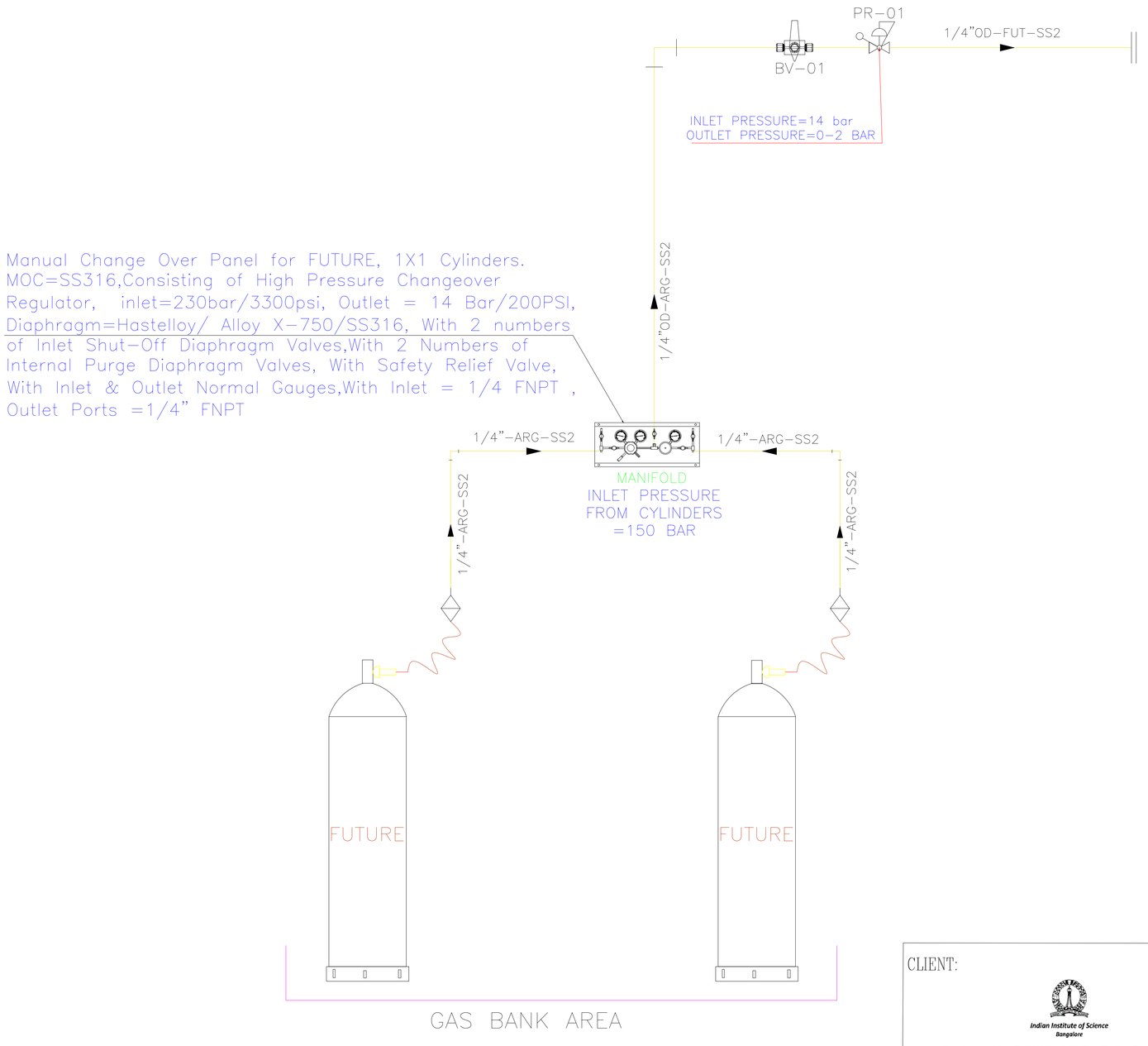
DRAWING TITLE : P&ID FOR COOLING TOWER WATER FOR OC-6

DRAWING STATUS : TENDER DRAWING



Manual Change Over Panel for FUTURE, 1X1 Cylinders. MOC=SS316,Consisting of High Pressure Changeover Regulator, inlet=230bar/3300psi, Outlet = 14 Bar/200PSI, Diaphragm=Hastelloy/ Alloy X-750/SS316, With 2 numbers of Inlet Shut-Off Diaphragm Valves,With 2 Numbers of Internal Purge Diaphragm Valves, With Safety Relief Valve, With Inlet & Outlet Normal Gauges,With Inlet = 1/4 FNPT , Outlet Ports =1/4" FNPT

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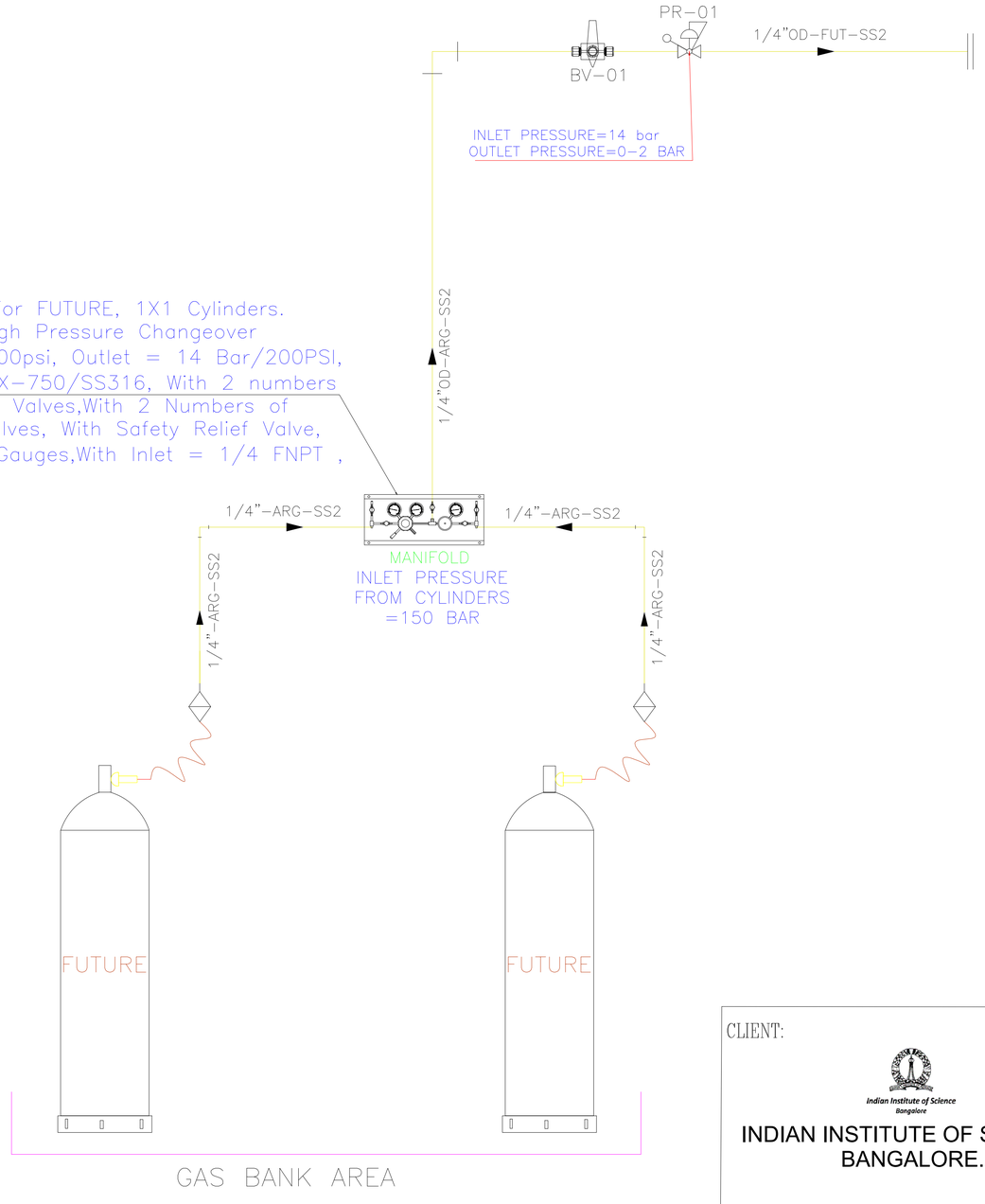
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR FUTURE GAS FOR OC-5

DRAWING STATUS : TENDER DRAWING



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REVISION	R0

PROJECT:

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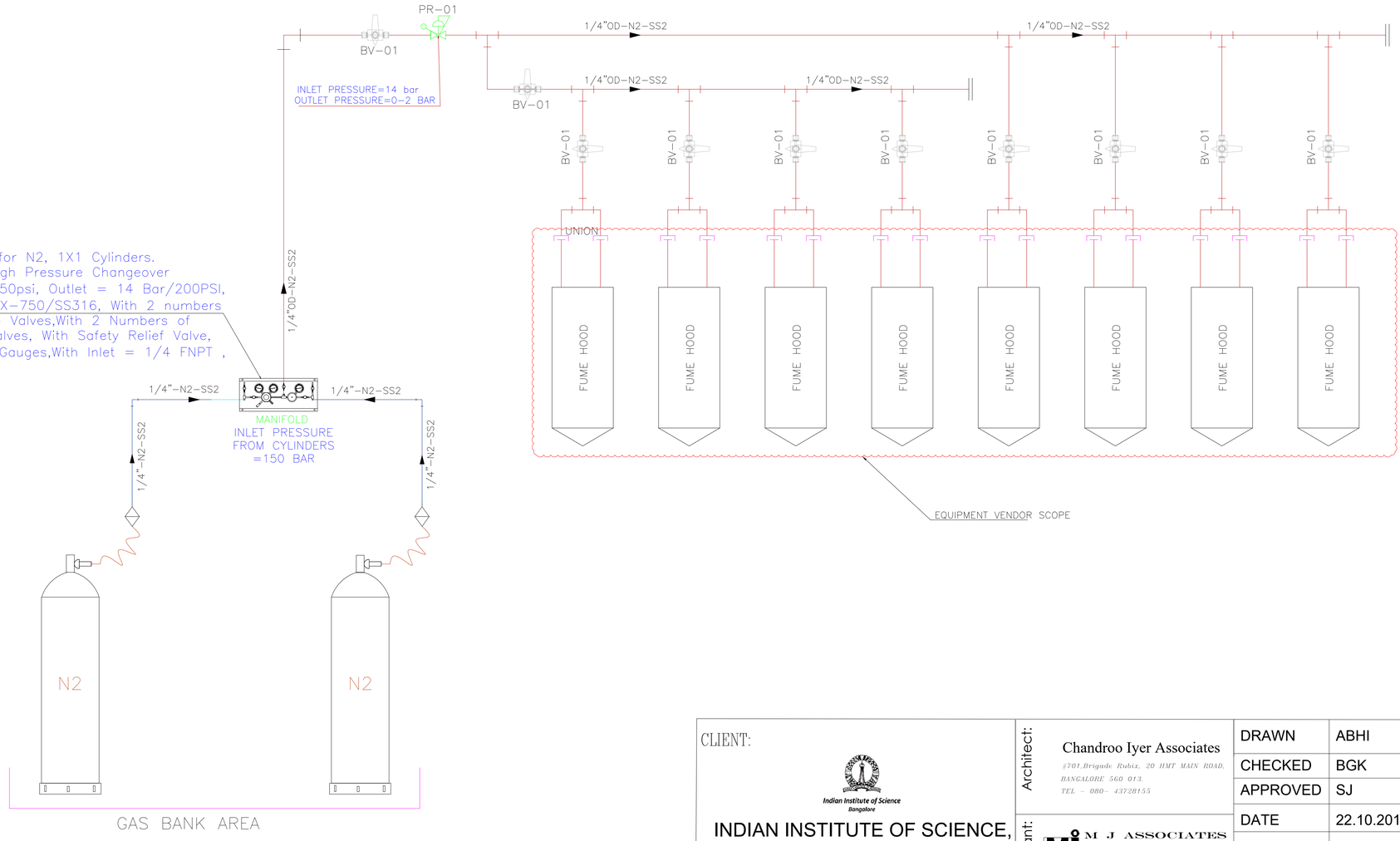
DRAWING TITLE : P&ID FOR FUTURE GAS FOR OC-6

DRAWING STATUS : TENDER DRAWING



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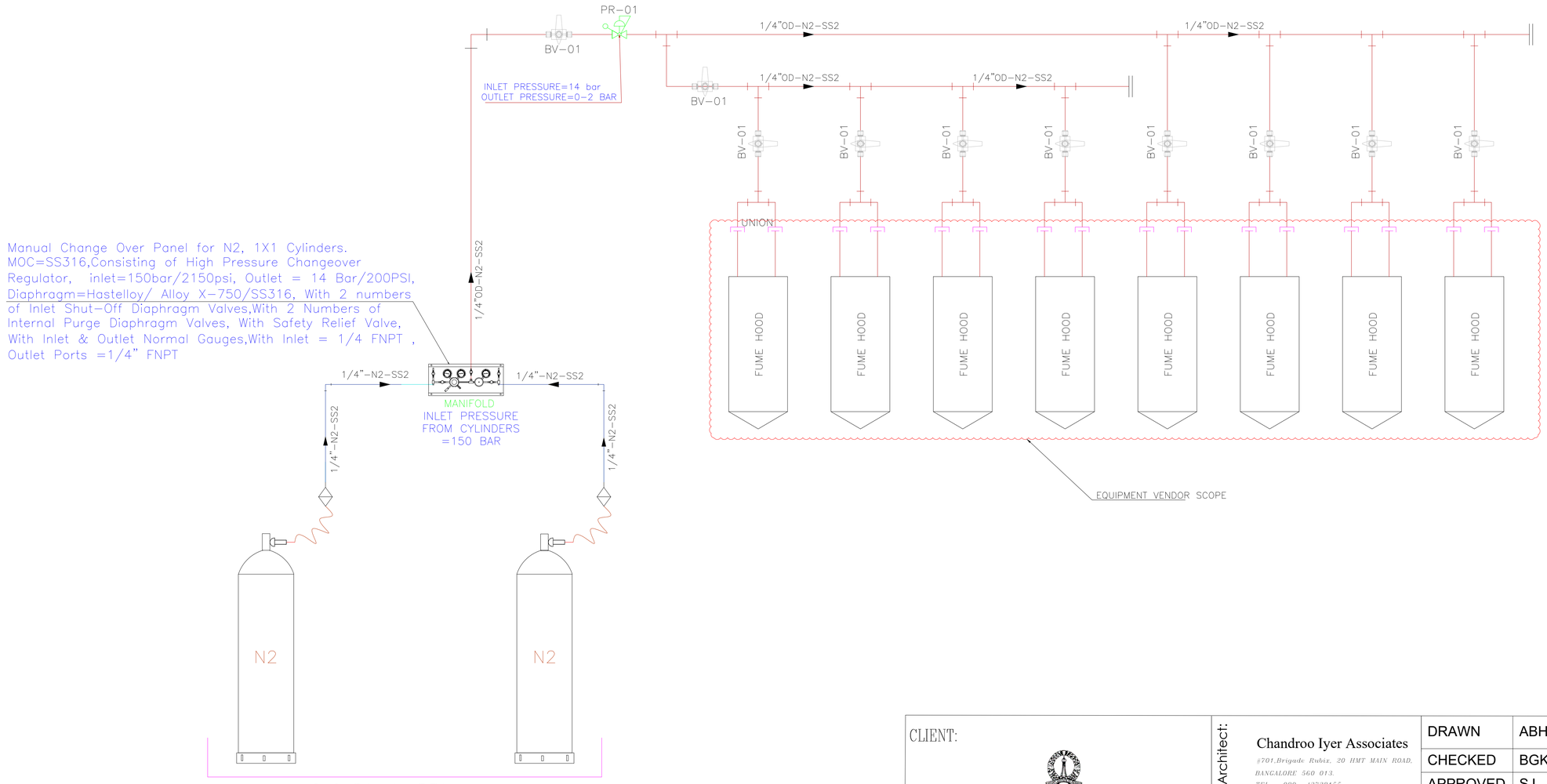
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR NITROGEN FOR OC-5

DRAWING STATUS : TENDER DRAWING



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DWG NO:	4821 (a)
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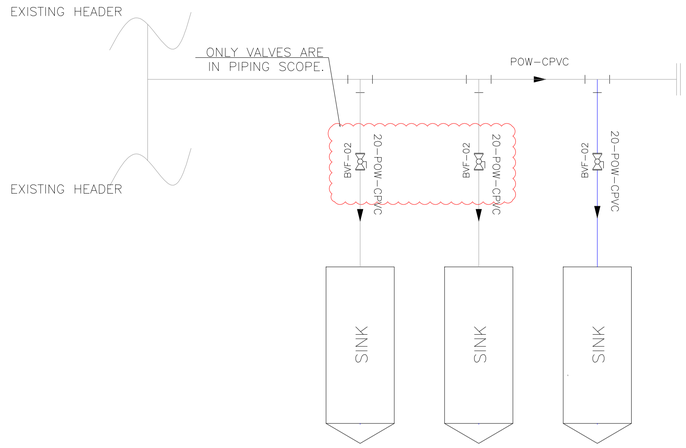
REVISION	R0

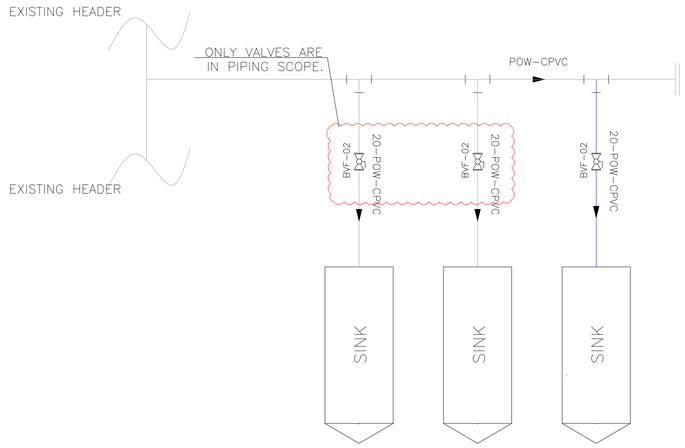
PROJECT:

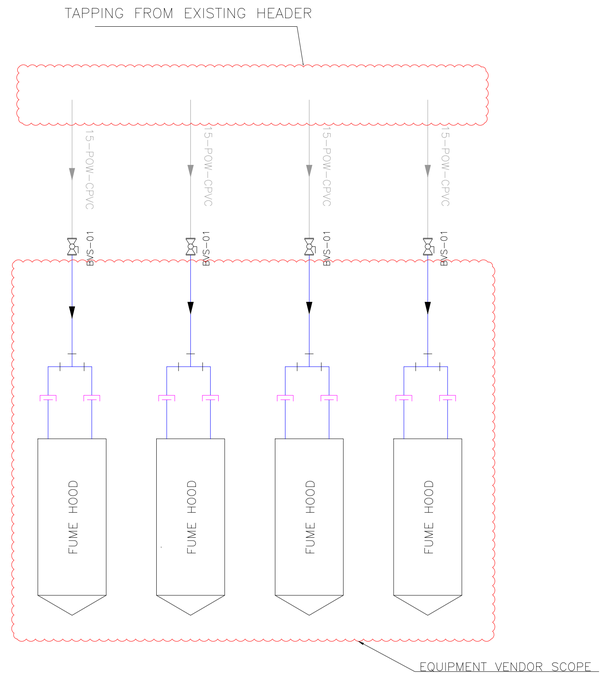
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

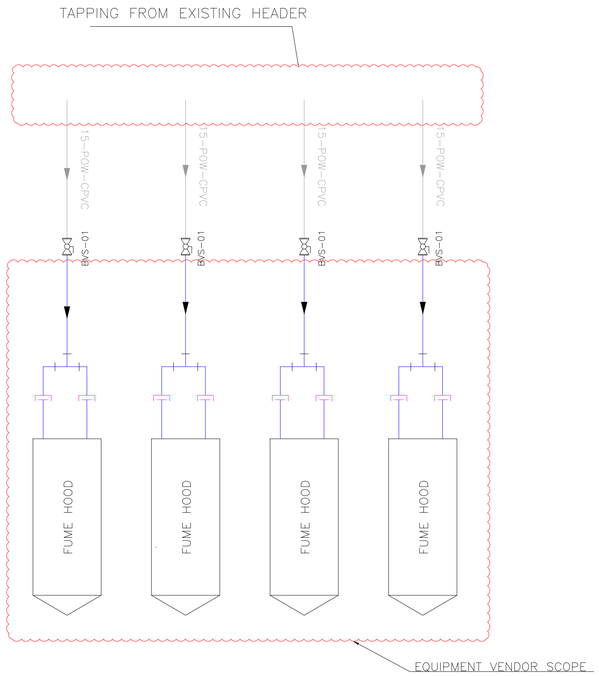
DRAWING TITLE : P&ID FOR NITROGEN FOR OC-5

DRAWING STATUS : TENDER DRAWING









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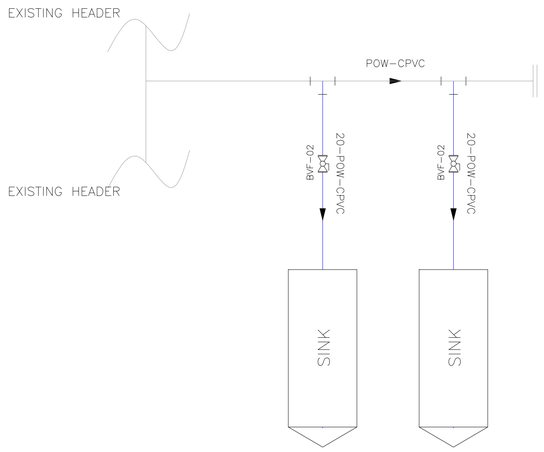
JOB NO	MJ - 324
DWG NO:	4821 (e)
SCALE	NTS
REVISION	R0

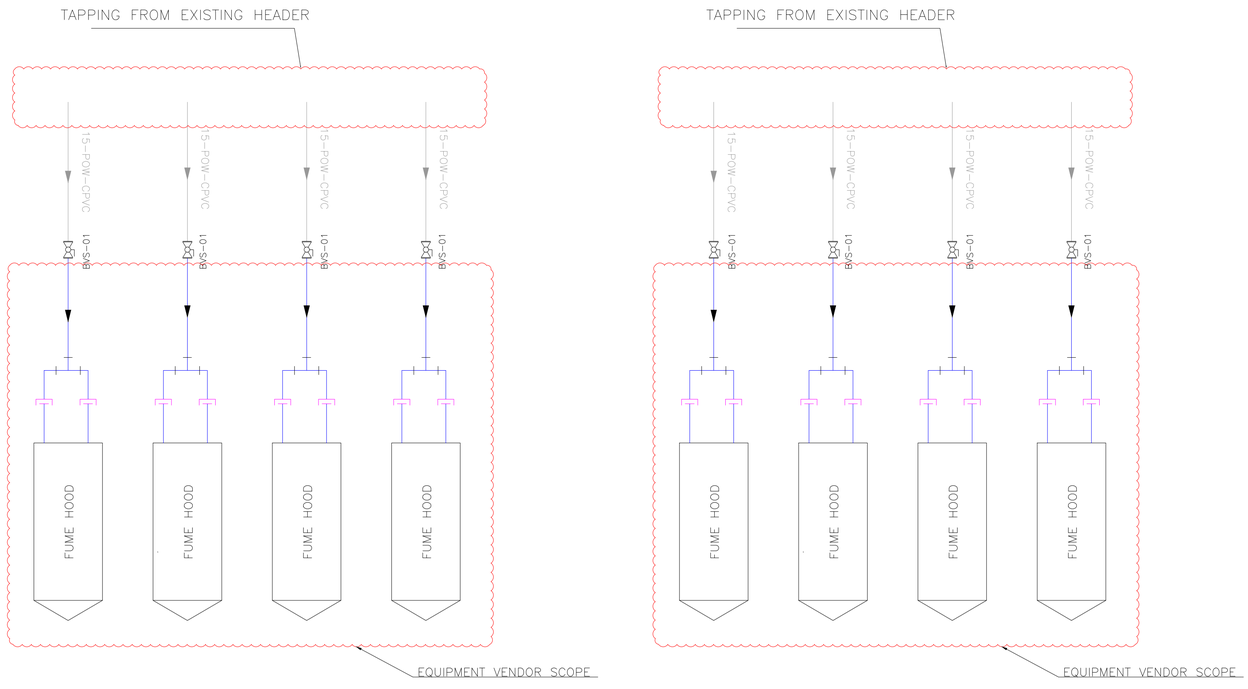
PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR POTABLE WATER FOR OC-5

DRAWING STATUS : TENDER DRAWING





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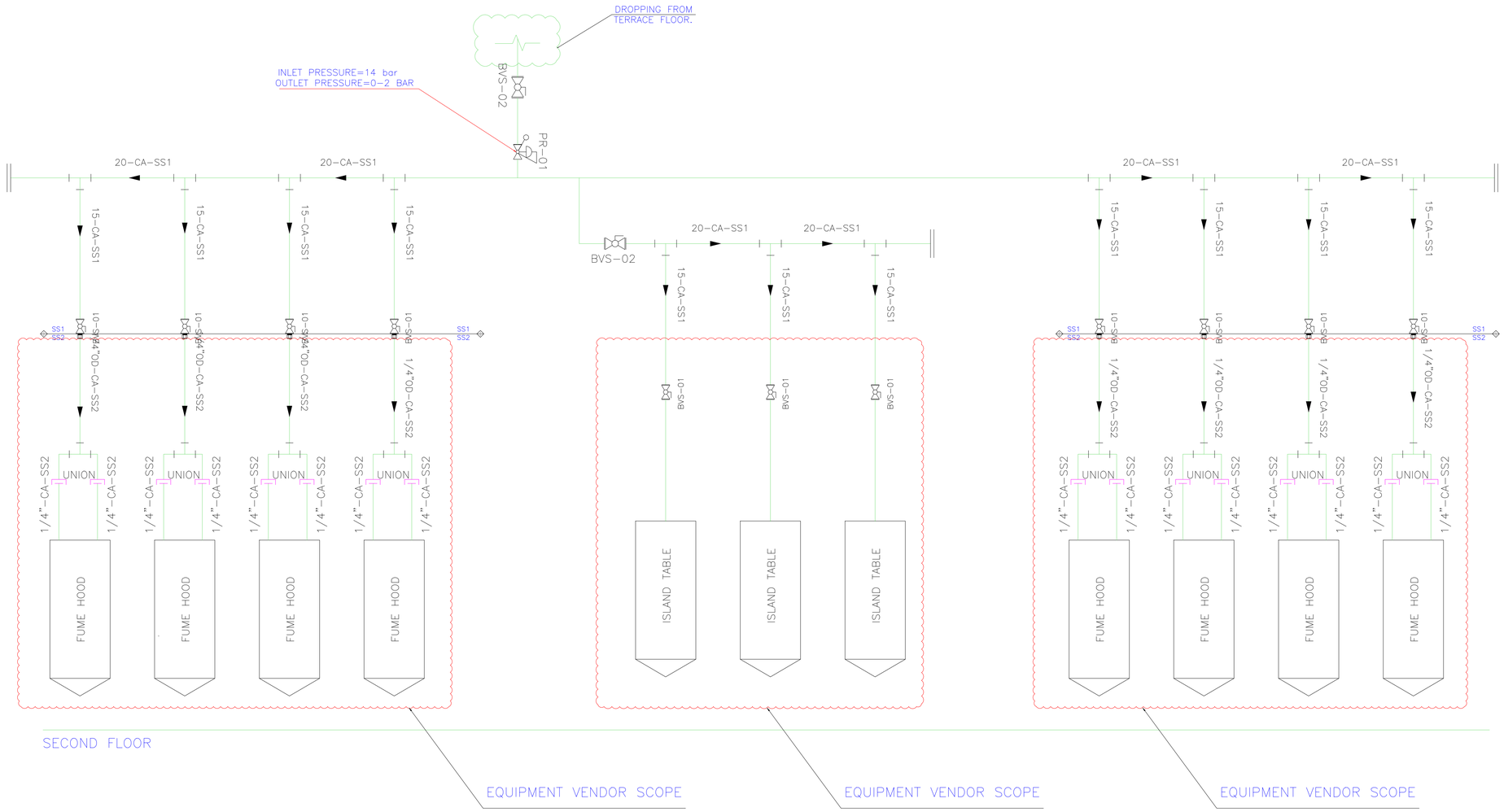
DWG NO:	4821 (f)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR POTABLE WATER FOR OC-6

DRAWING STATUS : TENDER DRAWING



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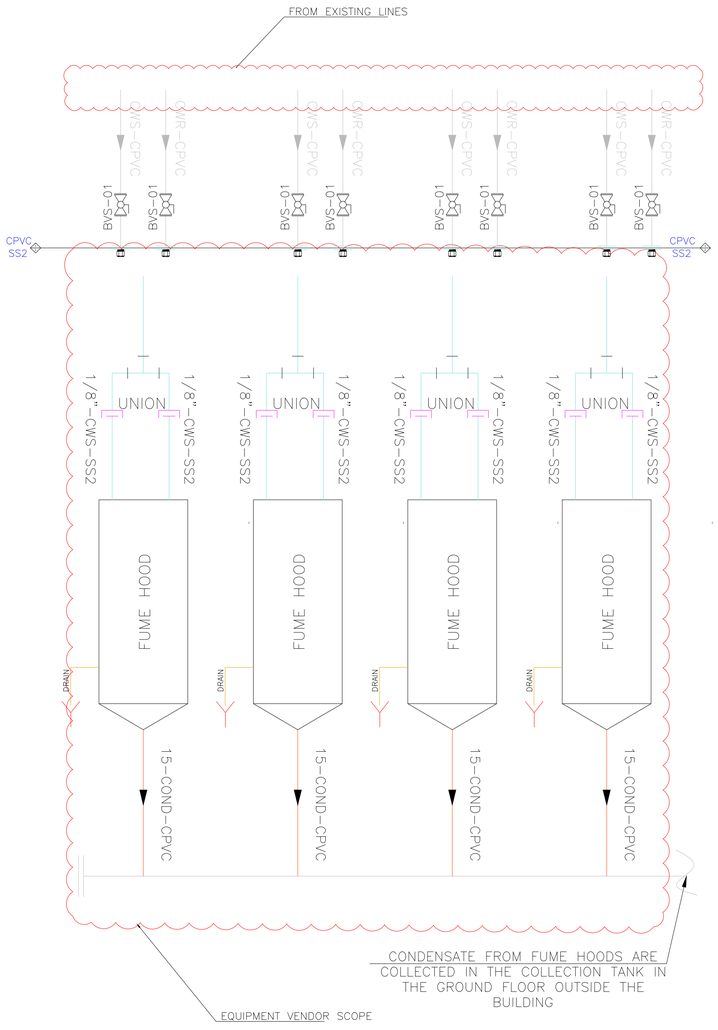
DWG NO:	4820 (b)
SCALE	NTS
REVISION	R0

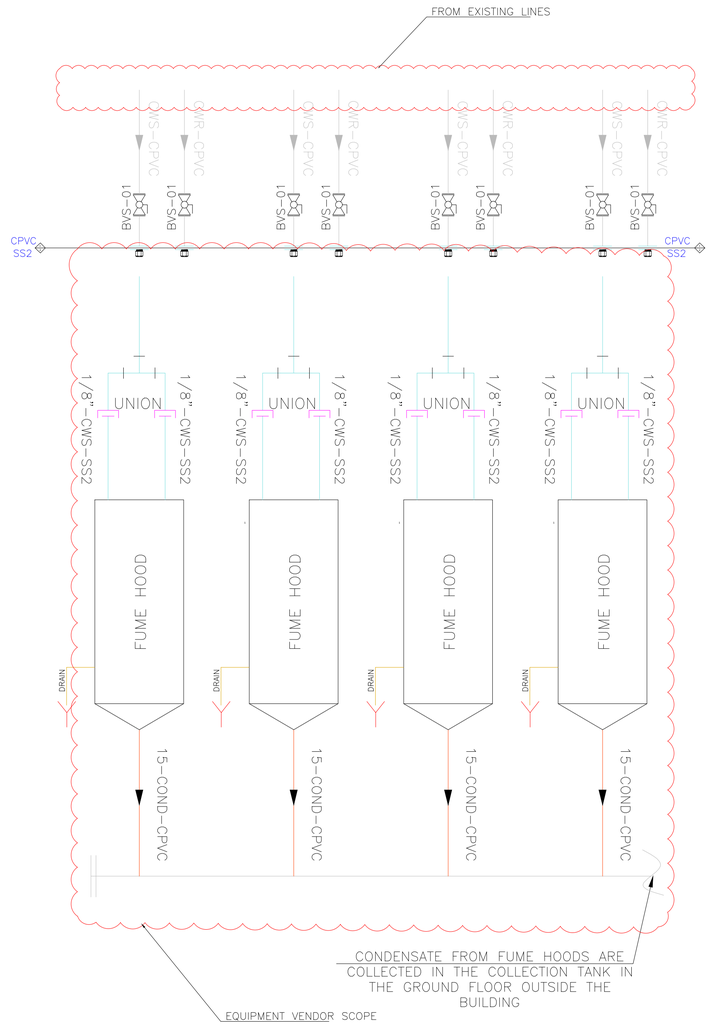
PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR OC-11

DRAWING STATUS : TENDER DRAWING





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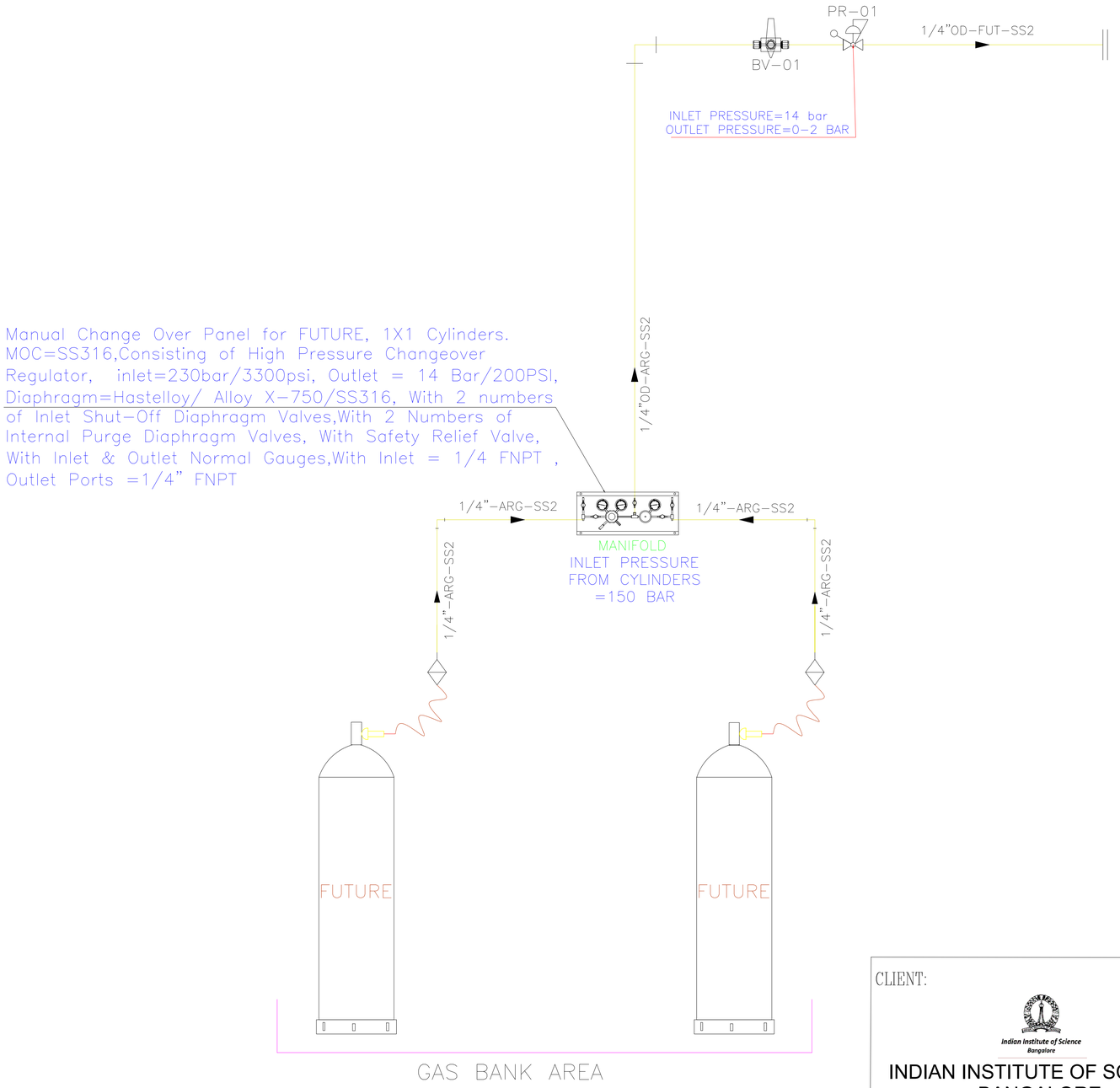
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COOLING TOWER WATER FOR OC-11

DRAWING STATUS : TENDER DRAWING



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PROJECT:

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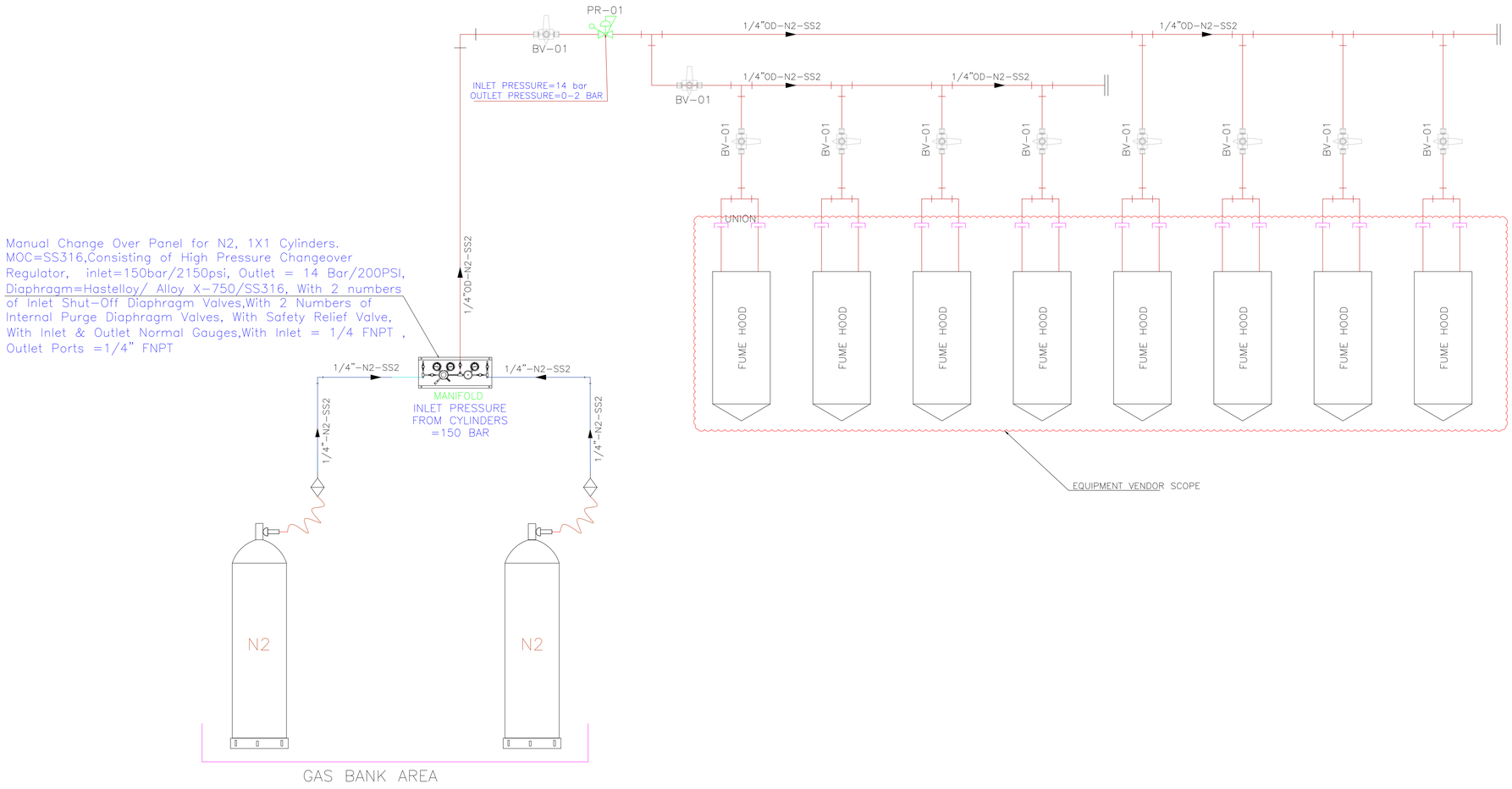
DRAWING TITLE : P&ID FOR FUTURE GAS (OC-11)

DRAWING STATUS : TENDER DRAWING



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PROJECT:

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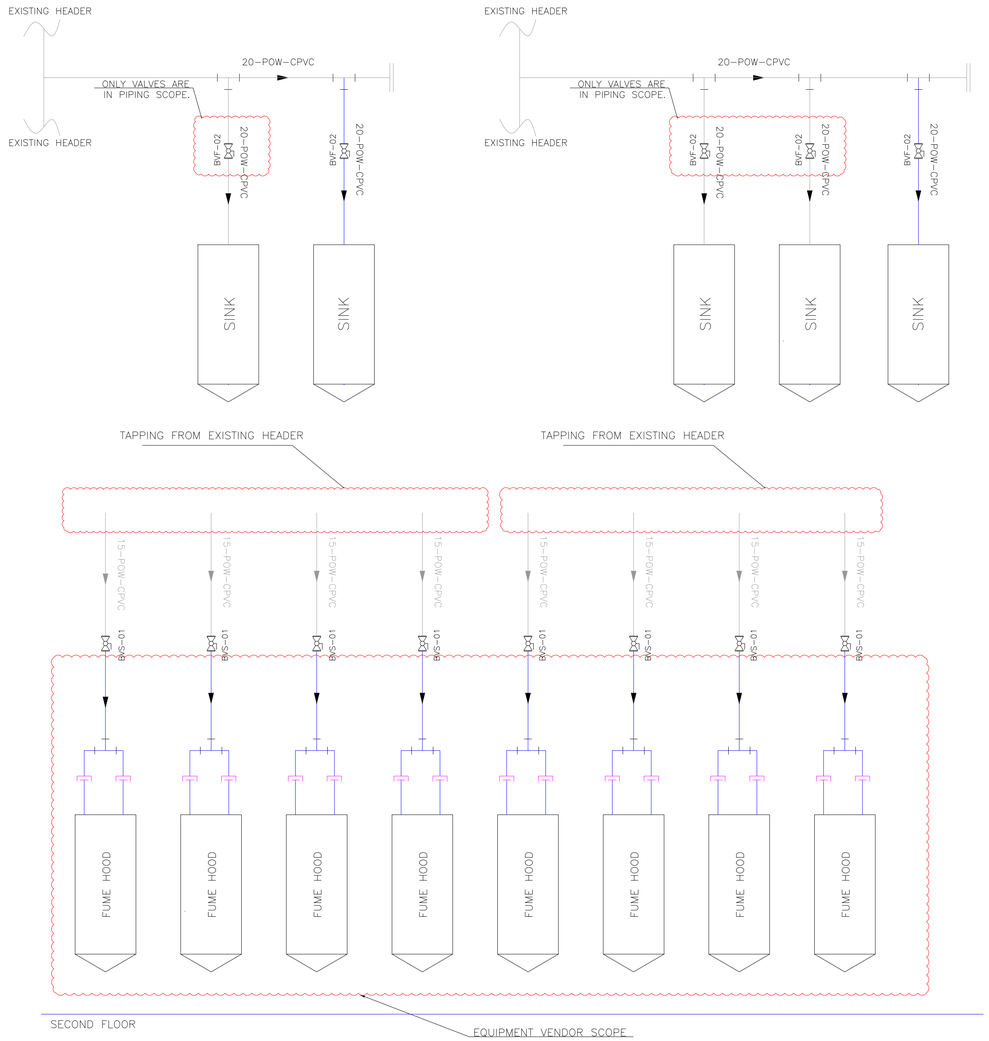
DRAWING TITLE : P&ID FOR NITROGEN FOR OC-11

DRAWING STATUS : TENDER DRAWING



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PROJECT:

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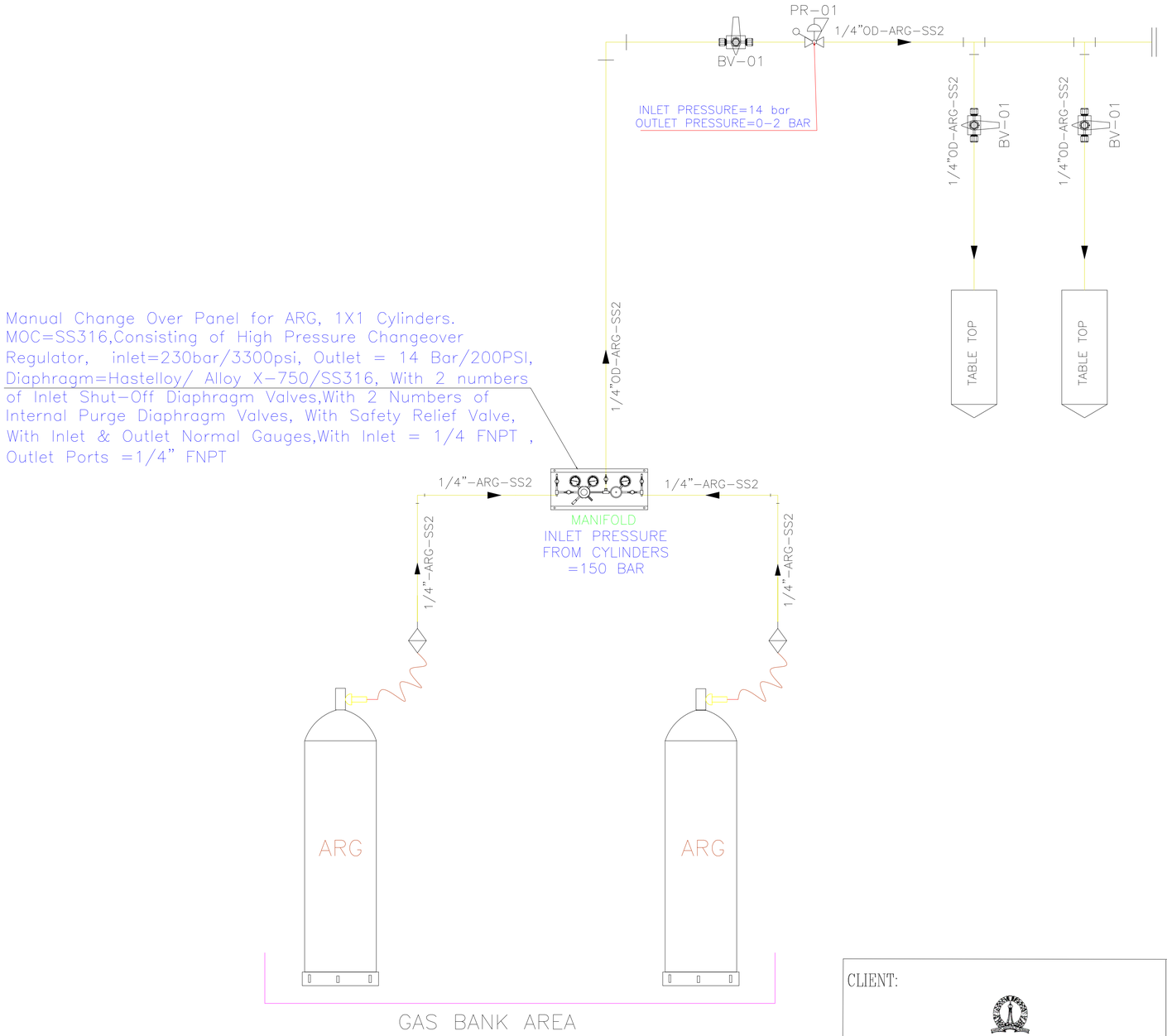
DRAWING TITLE : P&ID FOR POTABLE WATER (OC-11)

DRAWING STATUS : TENDER DRAWING



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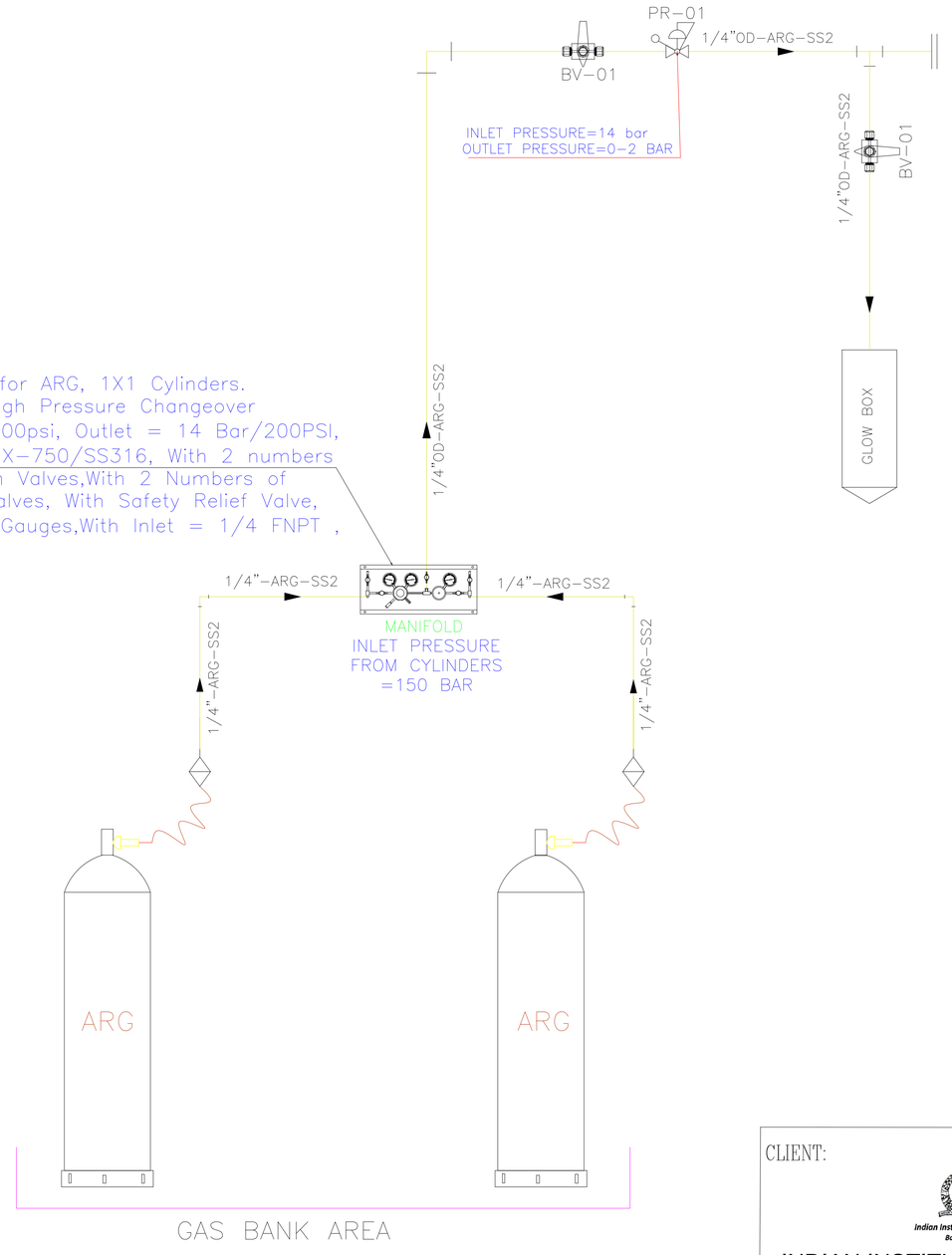
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4822(k)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR ARGON (OC-3)

DRAWING STATUS : TENDER DRAWING



Manual Change Over Panel for ARG, 1X1 Cylinders. MOC=SS316,Consisting of High Pressure Changeover Regulator, inlet=230bar/3300psi, Outlet = 14 Bar/200PSI, Diaphragm=Hastelloy/ Alloy X-750/SS316, With 2 numbers of Inlet Shut-Off Diaphragm Valves,With 2 Numbers of Internal Purge Diaphragm Valves, With Safety Relief Valve, With Inlet & Outlet Normal Gauges,With Inlet = 1/4 FNPT , Outlet Ports =1/4" FNPT

CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
TEL - 080- 43728155

Consultant:

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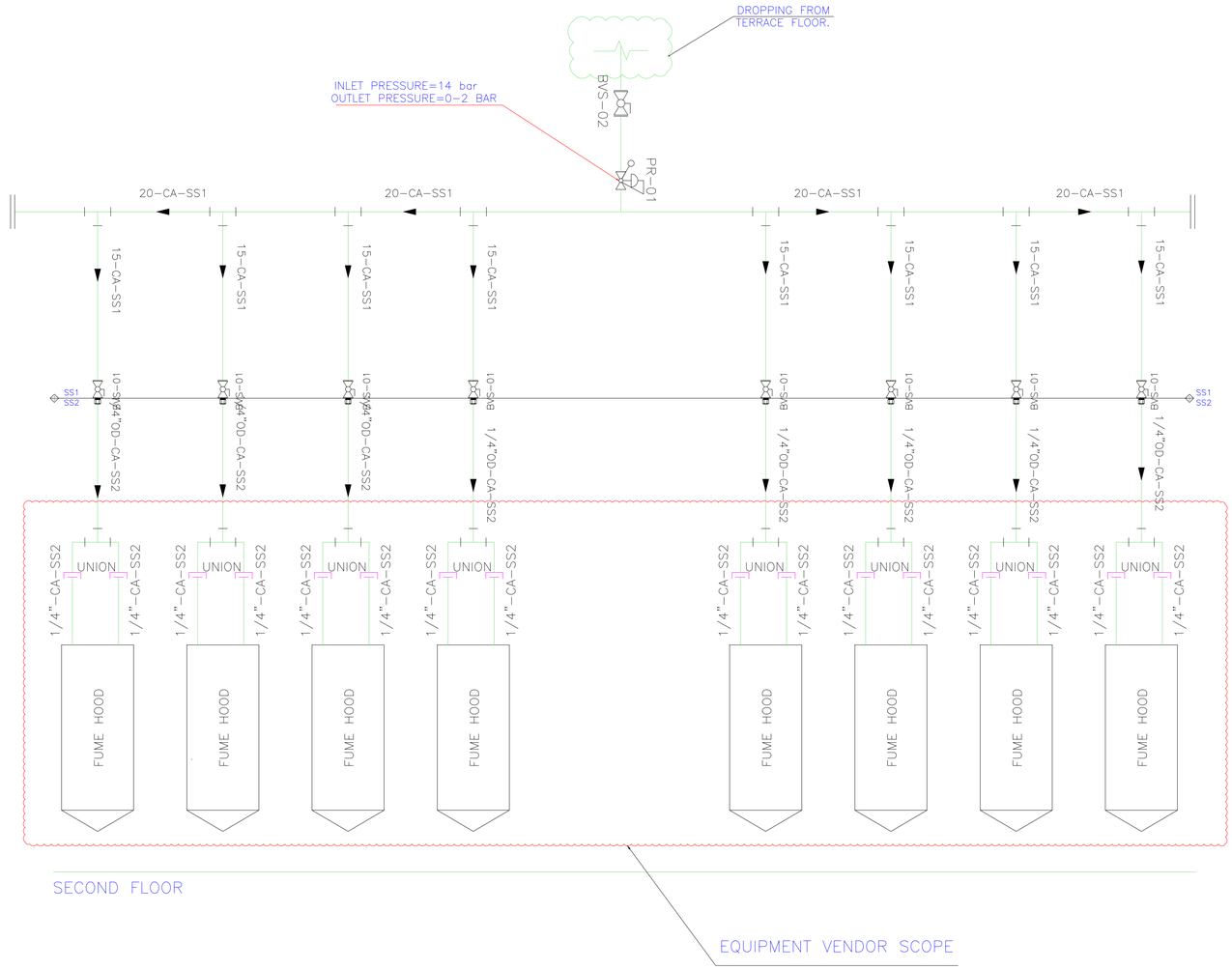
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4822(I)
SCALE	NTS
REVISION	R0

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR ARGON (OC-4)

DRAWING STATUS : TENDER DRAWING



CLIENT:

Indian Institute of Science Bangalore

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PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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DRAWN	ABHI
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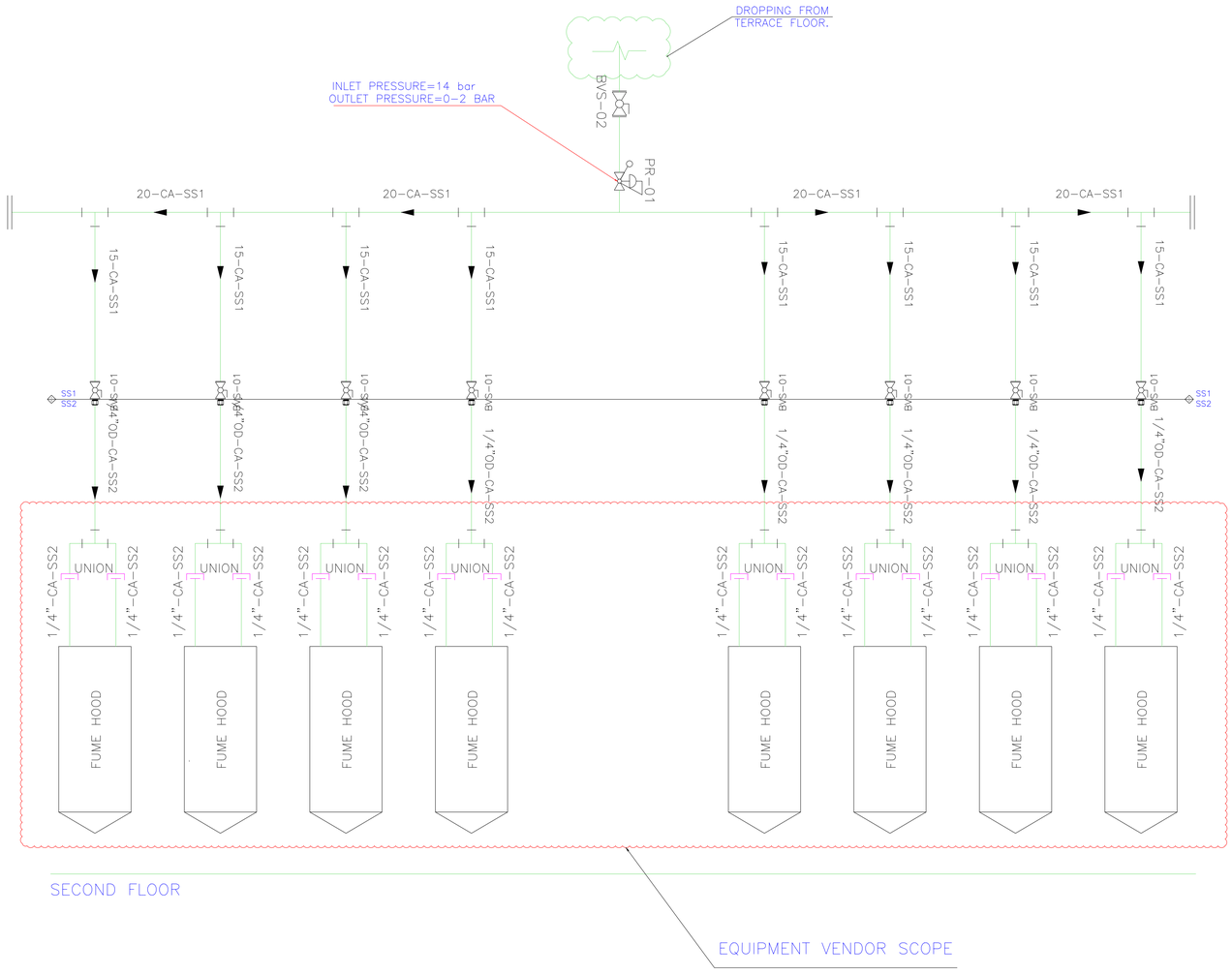
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4822(c)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR OC-3

DRAWING STATUS : TENDER DRAWING



CLIENT:

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PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

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DRAWN	ABHI
CHECKED	BGK
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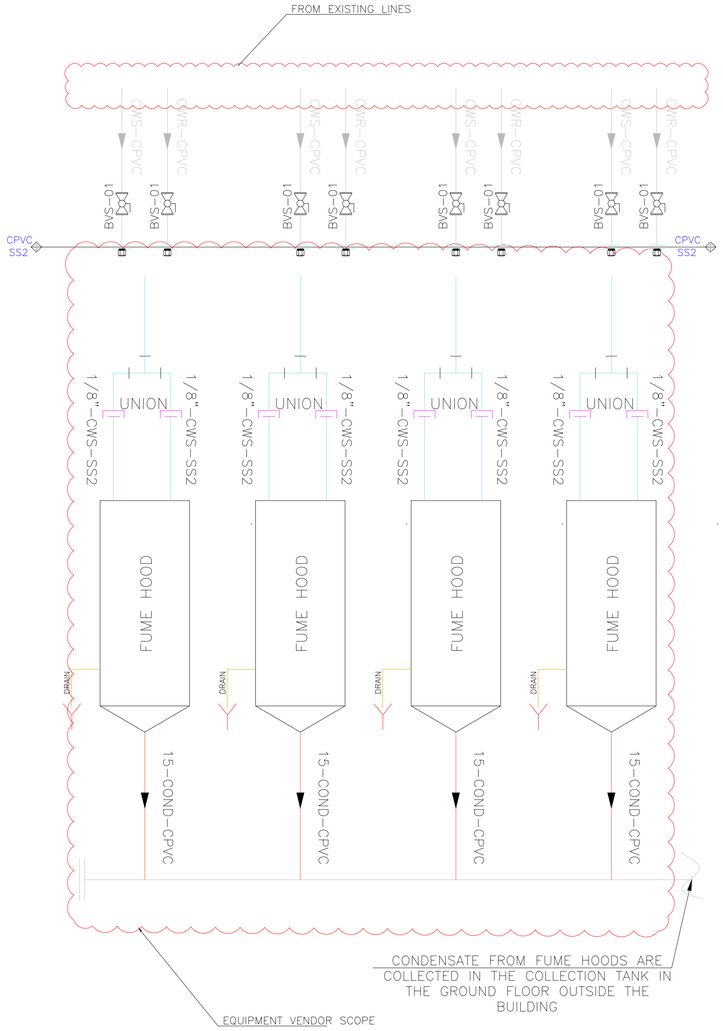
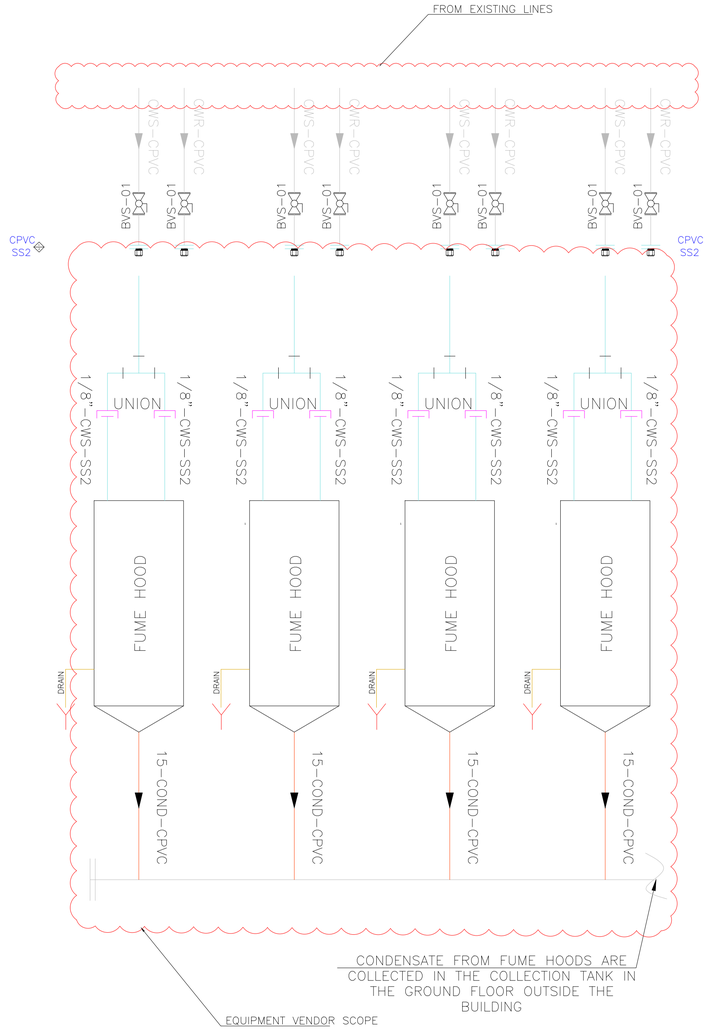
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4822(d)
SCALE	NTS
REVISION	R0

DRAWING TITLE : P&ID FOR COMPRESSED AIR FOR OC-4

DRAWING STATUS : TENDER DRAWING





CLIENT:

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DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4822(g)
SCALE	NTS
REVISION	R0

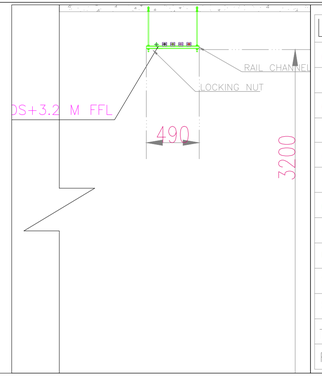
PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : P&ID FOR COOLING TOWER WATER FOR OC-3

DRAWING STATUS : TENDER DRAWING





LEGEND:

HELIUM GAS	
ARGON GAS	
HYDROGEN	
COOLING WATER	
OXYGEN	
ACETYLENE	
COMPRESSED AIR	
CARBON DI OXIDE	
NITROGEN	
METHANE	
FUTURE GAS	
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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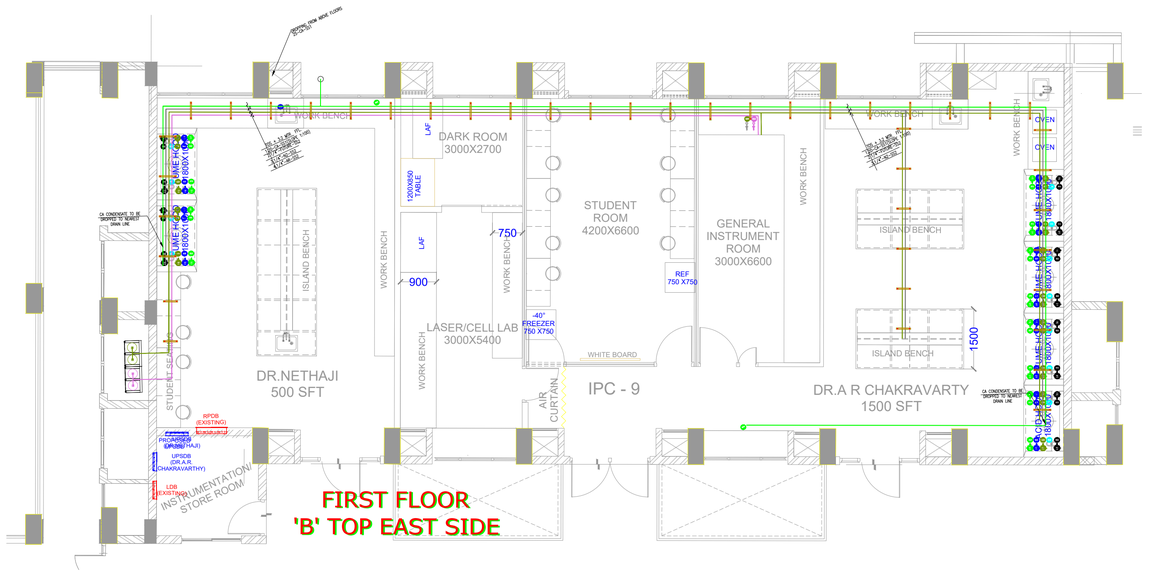
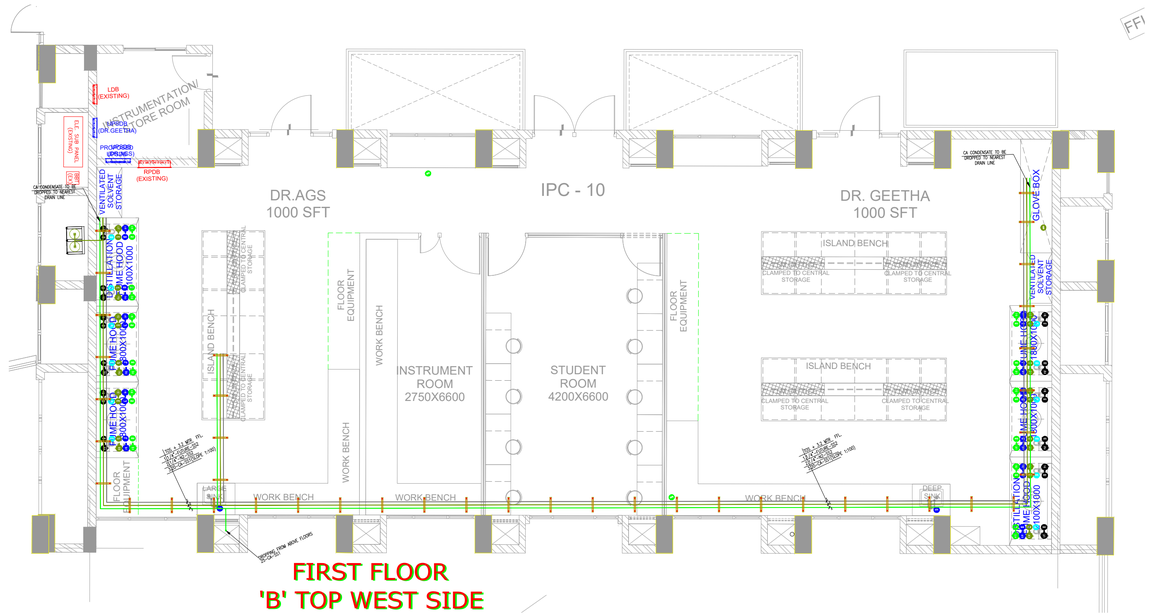
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4802
SCALE	NTS
REVISION	R0

DRAWING TITLE : FIRST FLOOR GAS PIPING LAYOUT

DRAWING STATUS : TENDER DRAWING





LEGEND:	
HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FG	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
Indian Institute of Science Bangalore
INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

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DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4802(c)
SCALE	NTS
REVISION	R0

DRAWING TITLE : GAS PIPING LAYOUT FOR IPC - 9
@B TOP - FIRST FLOOR - EAST SIDE

DRAWING STATUS : TENDER DRAWING

LEGEND:	
HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FG	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
Indian Institute of Science Bangalore
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PROJECT:
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:
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DRAWN	ABHI
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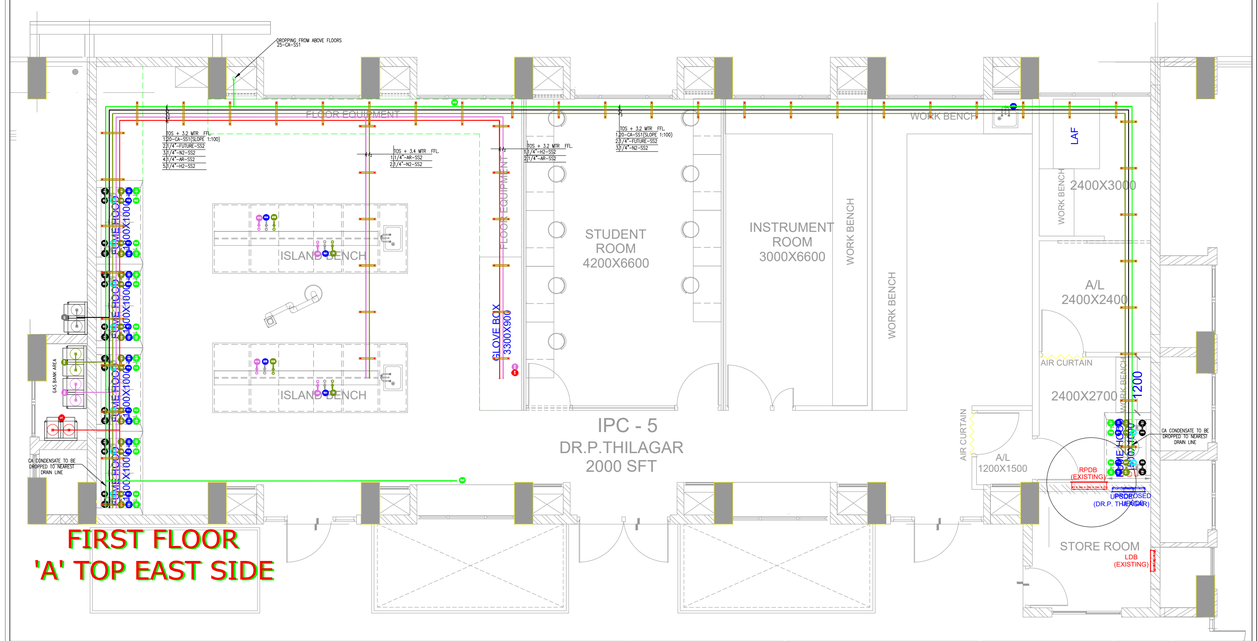
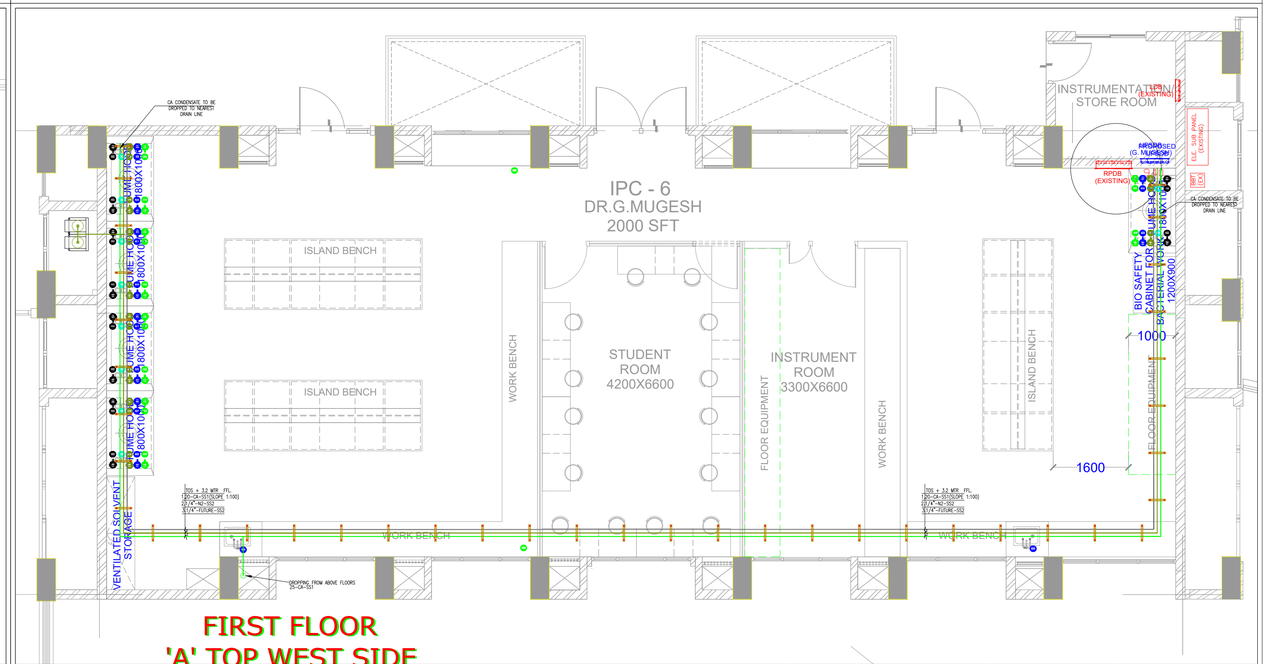
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4802(d)
SCALE	NTS
REVISION	R0

DRAWING TITLE : GAS PIPING LAYOUT FOR IPC-10
@ B TOP - FIRST FLOOR WEST SIDE

DRAWING STATUS : TENDER DRAWING





LEGEND:	
HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FG	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
Indian Institute of Science Bangalore
INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:
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DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4802(c)
SCALE	NTS
REVISION	R0

DRAWING TITLE : GAS PIPING LAYOUT FOR IPC - 5
@A TOP - FIRST FLOOR - EAST SIDE

DRAWING STATUS : TENDER DRAWING

LEGEND:	
HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FG	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
Indian Institute of Science Bangalore
INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:
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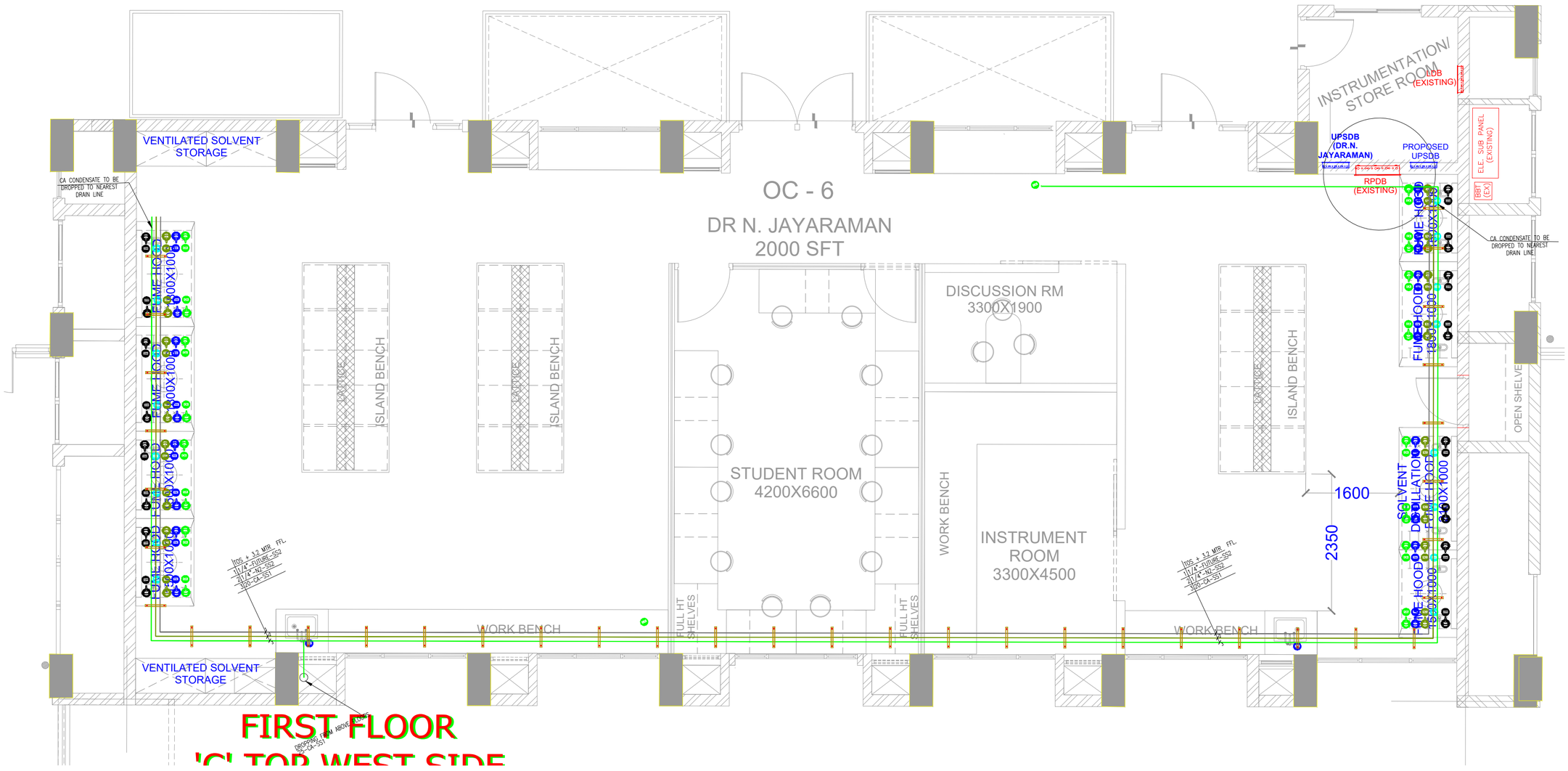
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4802(d)
SCALE	NTS
REVISION	R0

DRAWING TITLE : GAS PIPING LAYOUT FOR IPC - 6
@A TOP - FIRST FLOOR - WEST SIDE

DRAWING STATUS : TENDER DRAWING



LEGEND:	
HEL	HELIUM GAS
ARG	ARGON GAS
HYD	HYDROGEN
CW	COOLING WATER
OXY	OXYGEN
ACE	ACETYLENE
CA	COMPRESSED AIR
CO2	CARBON DI OXIDE
NIT	NITROGEN
CH4	METHANE
FUTR	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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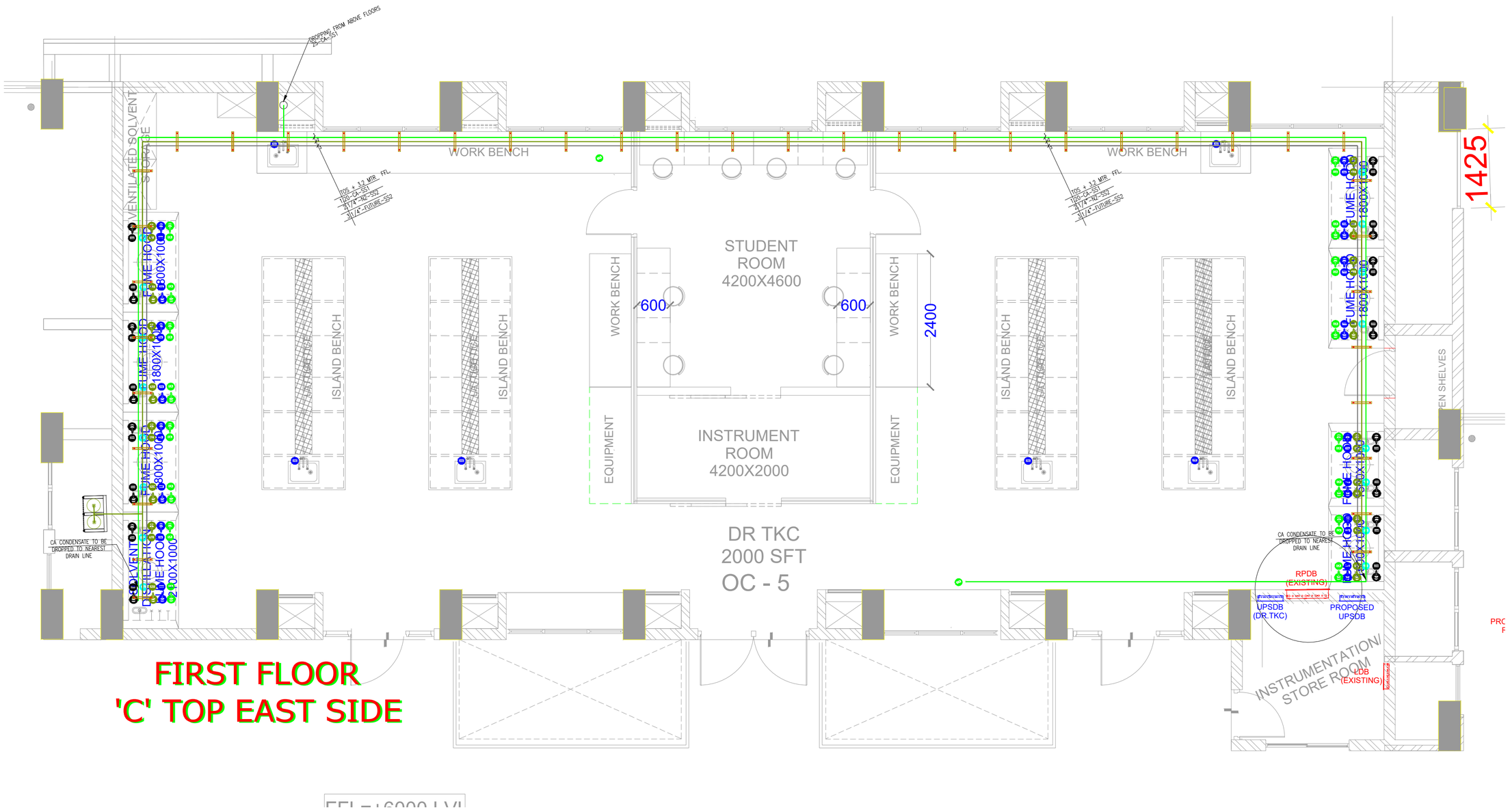
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4802(f)
SCALE	NTS
REVISION	R0

DRAWING TITLE : GAS PIPING LAYOUT FOR OC - 6
@C TOP - FIRST FLOOR - WEST SIDE

DRAWING STATUS : TENDER DRAWING



LEGEND:	
HEL	HELIUM GAS
ARG	ARGON GAS
HYD	HYDROGEN
CW	COOLING WATER
OXY	OXYGEN
ACE	ACETYLENE
CA	COMPRESSED AIR
CO2	CARBON DI OXIDE
NIT	NITROGEN
CH4	METHANE
FUTR	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:

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PROJECT:

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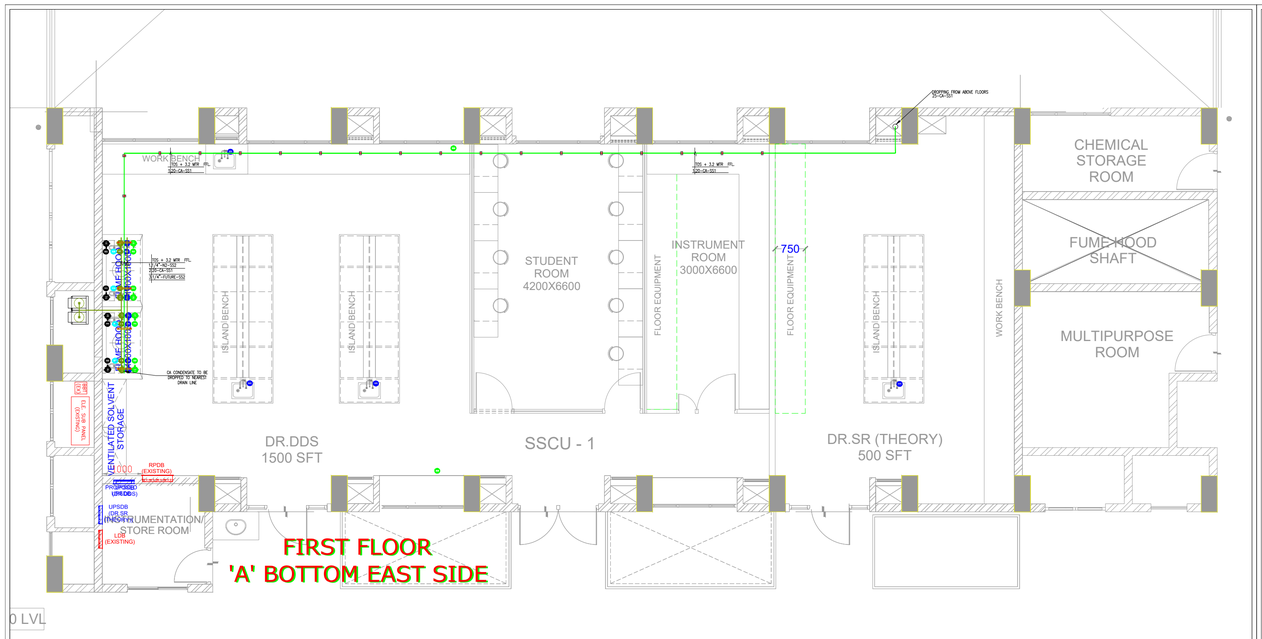
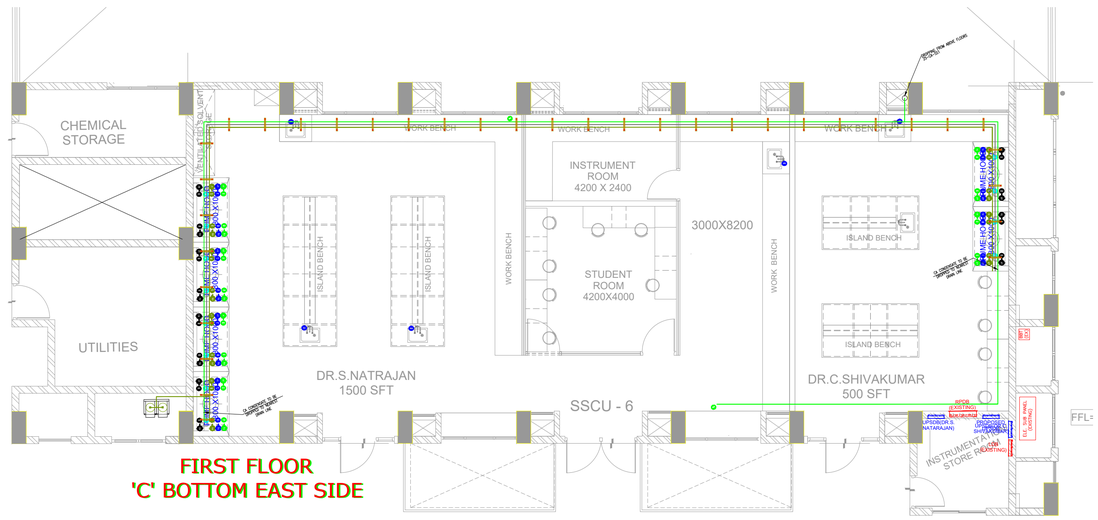
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4802(e)
SCALE	NTS
REVISION	R0

DRAWING TITLE : GAS PIPING LAYOUT FOR OC - 5
@C TOP - FIRST FLOOR - EAST SIDE

DRAWING STATUS : TENDER DRAWING





LEGEND:	
HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FG	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
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PROJECT:
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Architect: Chandroo Iyer Associates
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E-mail:-projects@mjassociates.in/new mjassociates.in

DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4802(g)
SCALE	NTS
REVISION	R0

DRAWING TITLE : GAS PIPING LAYOUT FOR SSCU - 1 @A BOTTOM - FIRST FLOOR - EAST SIDE

DRAWING STATUS : TENDER DRAWING

LEGEND:	
HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FG	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
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INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
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DRAWN	ABHI
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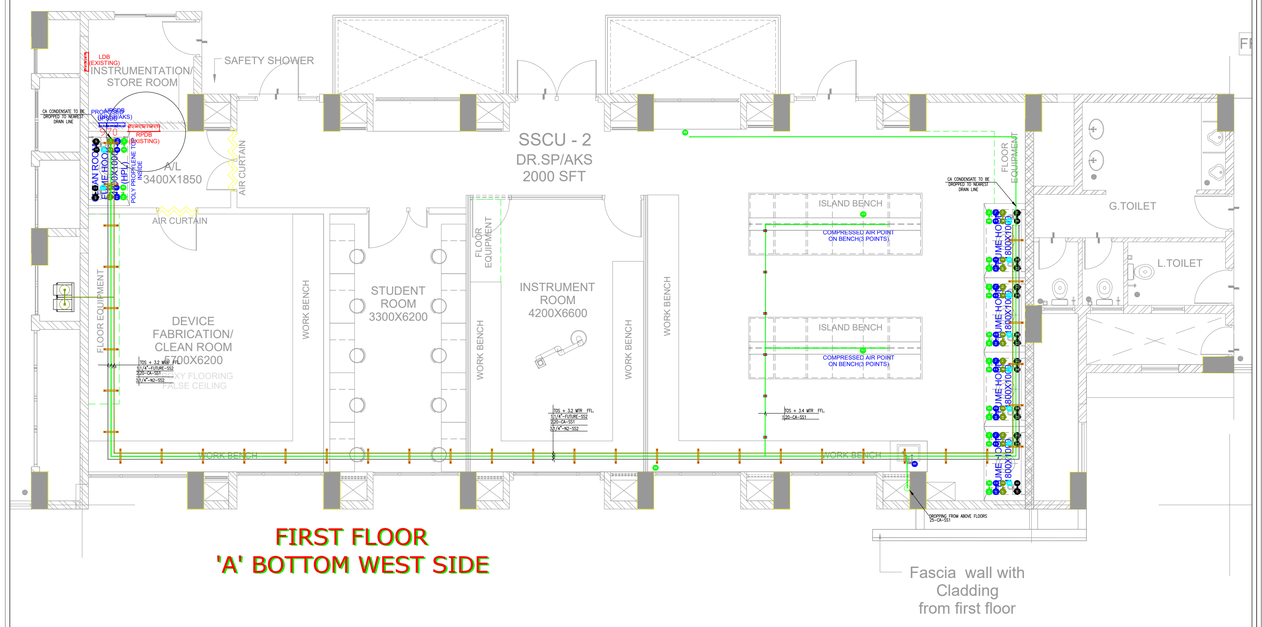
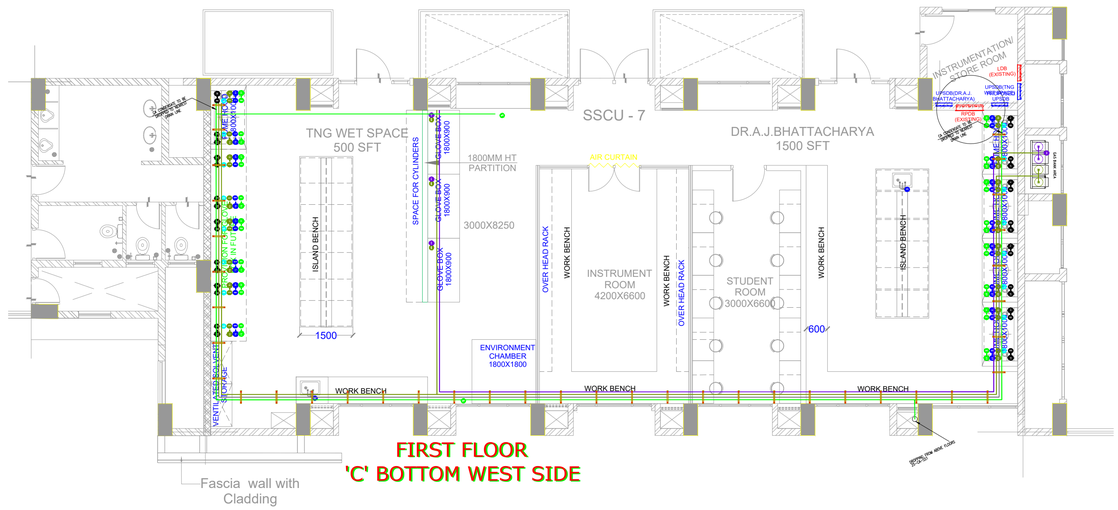
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4802(i)
SCALE	NTS
REVISION	R0

DRAWING TITLE : GAS PIPING LAYOUT FOR SSCU - 6 @C BOTTOM - FIRST FLOOR - EAST SIDE

DRAWING STATUS : TENDER DRAWING





LEGEND:	
HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FG	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
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DRAWN	ABHI
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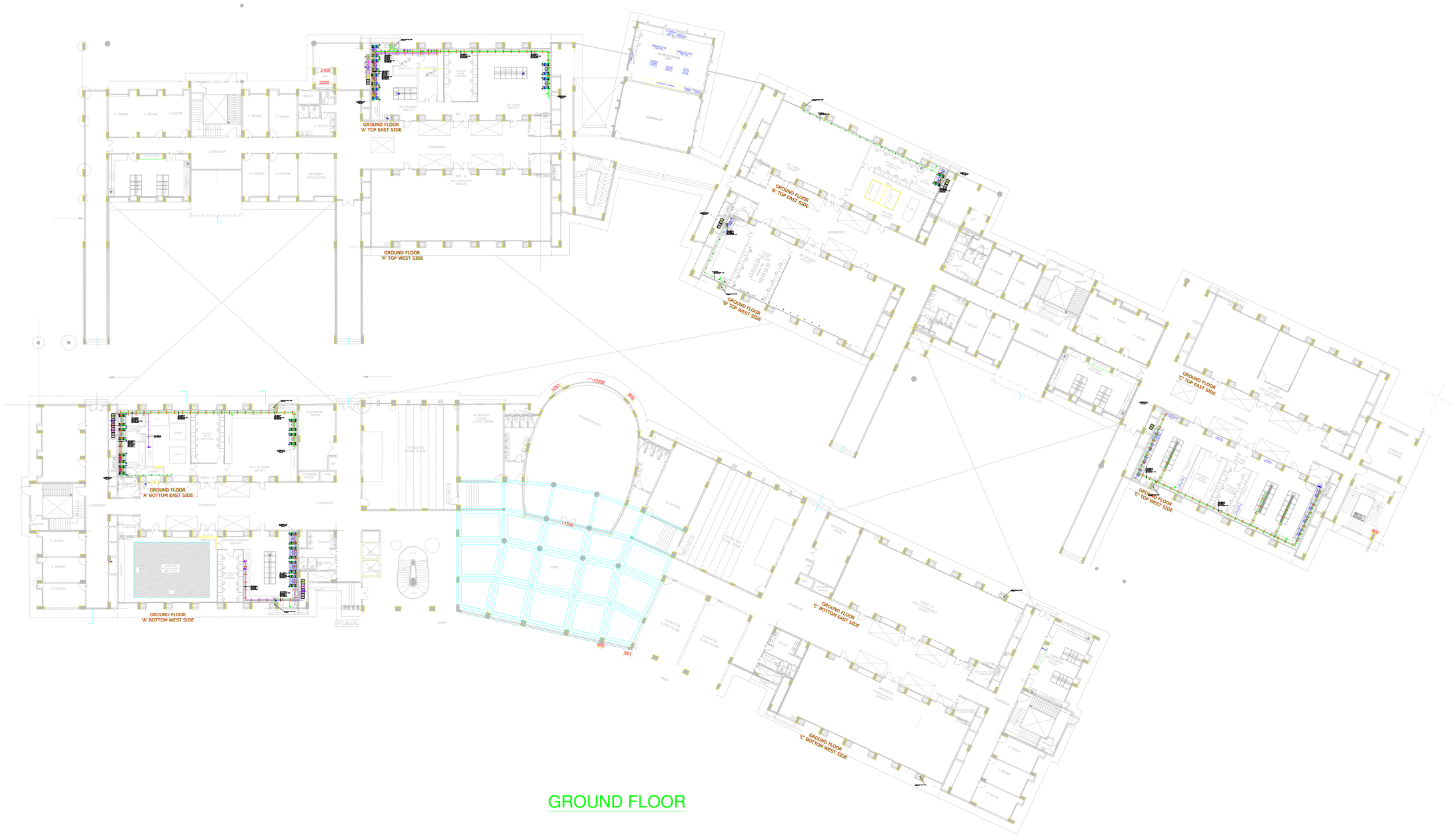
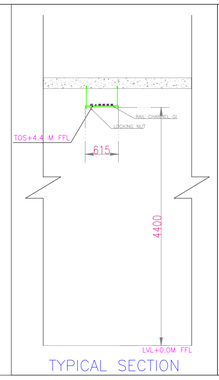
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4802(j)
SCALE	NTS
REVISION	R0

DRAWING TITLE : GAS PIPING LAYOUT FOR SSCU - 7 @C BOTTOM - FIRST FLOOR - WEST SIDE

DRAWING STATUS : TENDER DRAWING



GROUND FLOOR



TYPICAL SECTION

LEGEND:

HELIUM GAS	
ARGON GAS	
HYDROGEN	
COOLING WATER	
OXYGEN	
ACETYLENE	
COMPRESSED AIR	
CARBON DI OXIDE	
NITROGEN	
METHANE	
FUTURE GAS	
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
TEL – 080– 43728155

Consultant:

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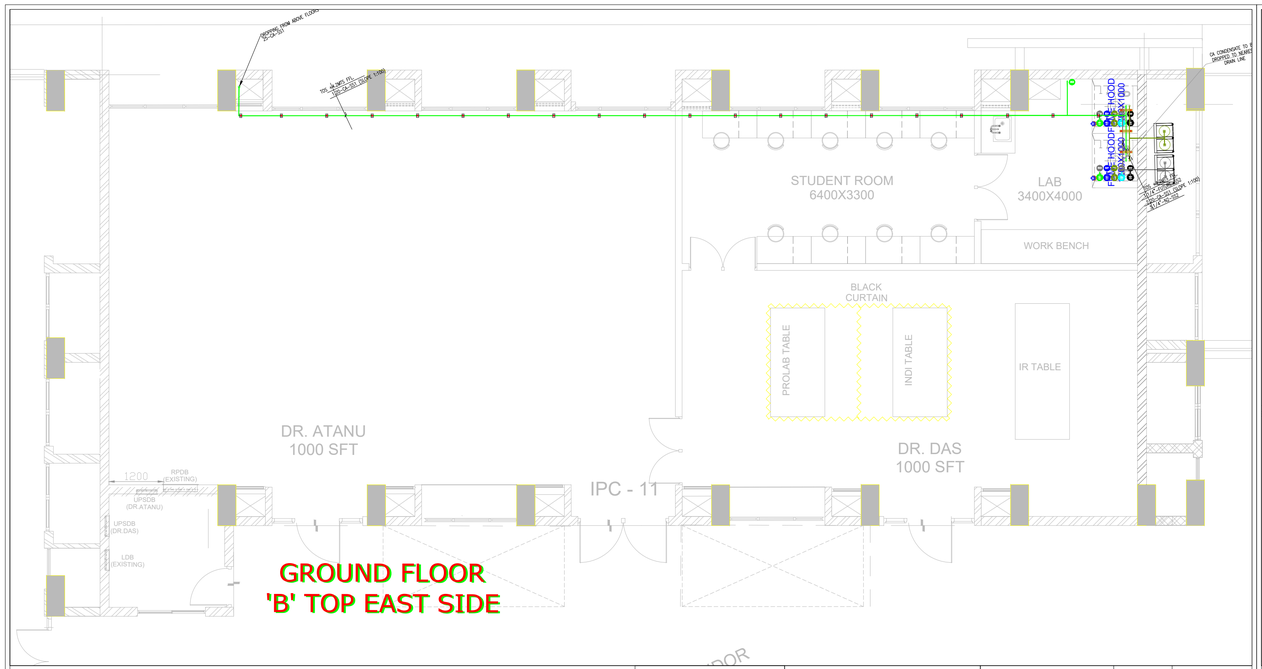
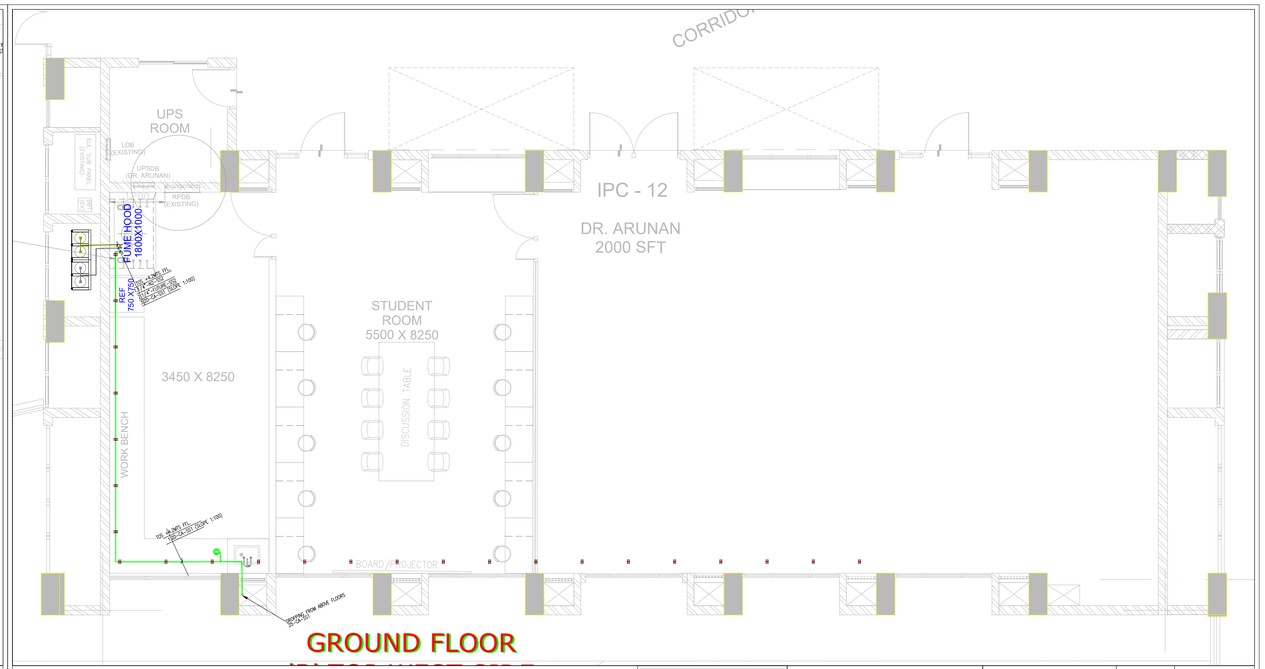
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4801
SCALE	NTS
REVISION	R0

DRAWING TITLE : GROUND FLOOR GAS PIPING LAYOUT

DRAWING STATUS : TENDER DRAWING





LEGEND:	
HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FG	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
Indian Institute of Science Bangalore
INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:
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E-mail:-projects@mjassociates.in/mail.mjassociates.in

DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4801(c)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR IPC - 11
@B TOP - GROUND FLOOR - EAST SIDE

DRAWING STATUS : TENDER DRAWING

LEGEND:	
HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FG	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
Indian Institute of Science Bangalore
INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
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Architect:
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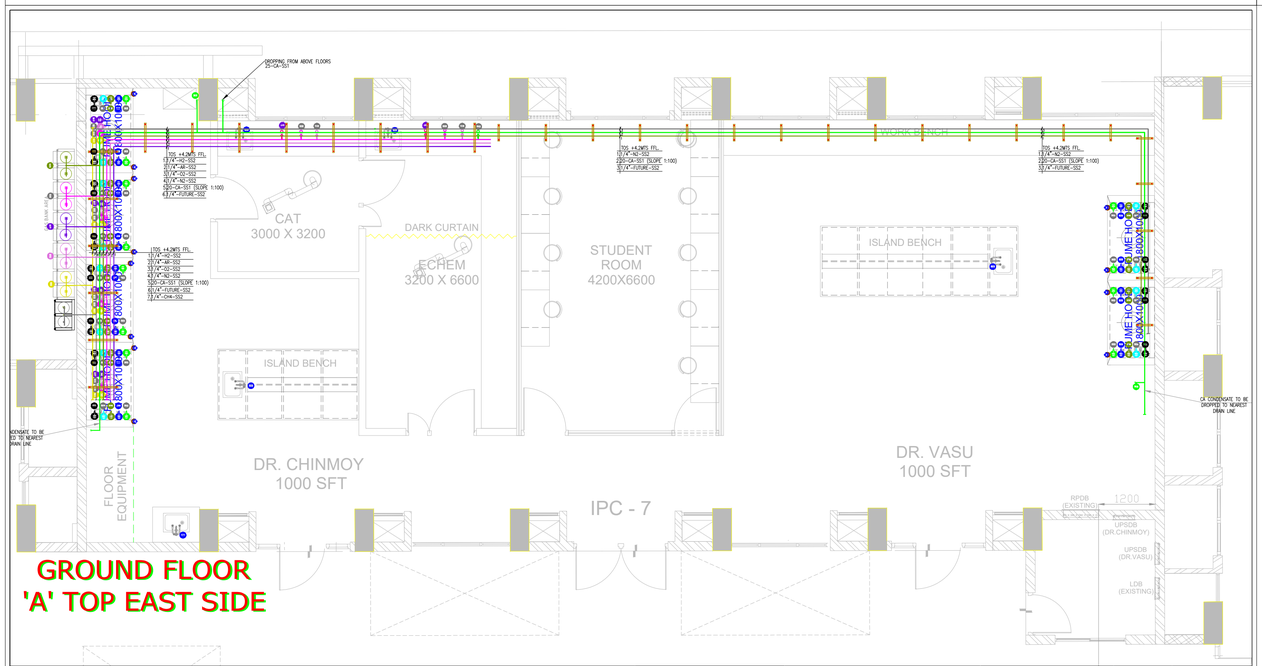
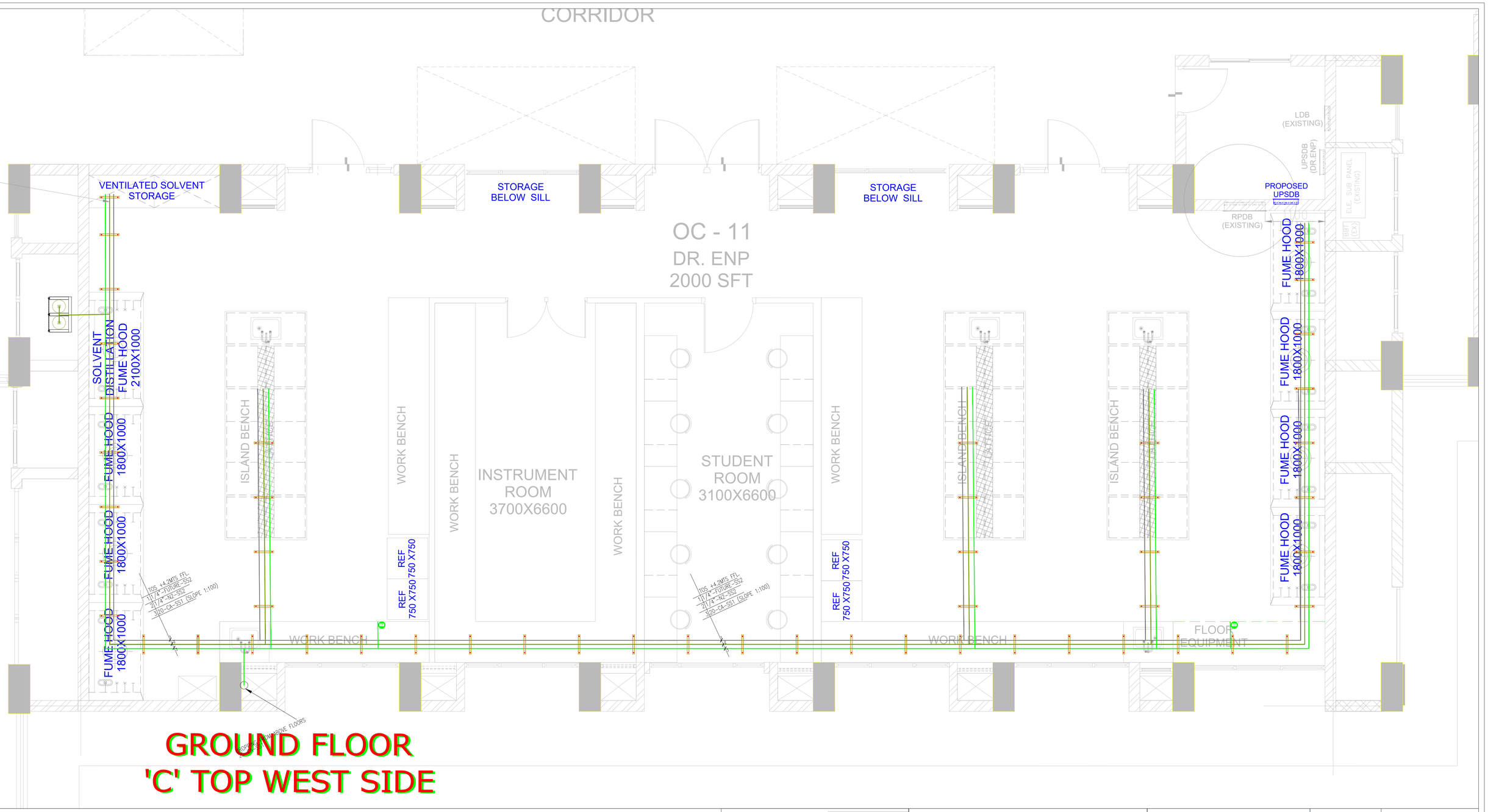
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4801(b)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR IPC - 12
@B TOP - GROUND FLOOR - WEST SIDE

DRAWING STATUS : TENDER DRAWING


DROPPING FROM ABOVE FLOORS 25+DA-SST
TOS +4.2MTS FTL
63.5"A"-AG-SS2
33"A"-AR-SS2
33"A"-O2-SS2
43"A"-N2-SS2
63.5"A"-N2-SS2
200+DA-SST [SLOPE 1:100]
63.5"A"-FUTURE-SS2
73"A"-CW4-SS2
CAT 3000 X 3200
DARK CURTAIN
ECHEM 3200 X 6600
STUDENT ROOM 4200X6600
WORK BENCH
ISLAND BENCH
FUME HOOD 1800X1000
FUME HOOD 1800X1000
FUME HOOD 1800X1000



LEGEND:

HELIUM GA	
ARGON GA	
HYDROGEN	
COOLING W	
OXYGEN	
ACETYLENE	
COMPRESSED	
CARBON DI	
NITROGEN	
METHANE	
FUTURE GA	
TOS	TOP OF ST
FFL	FINISHED F

CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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Consultant:

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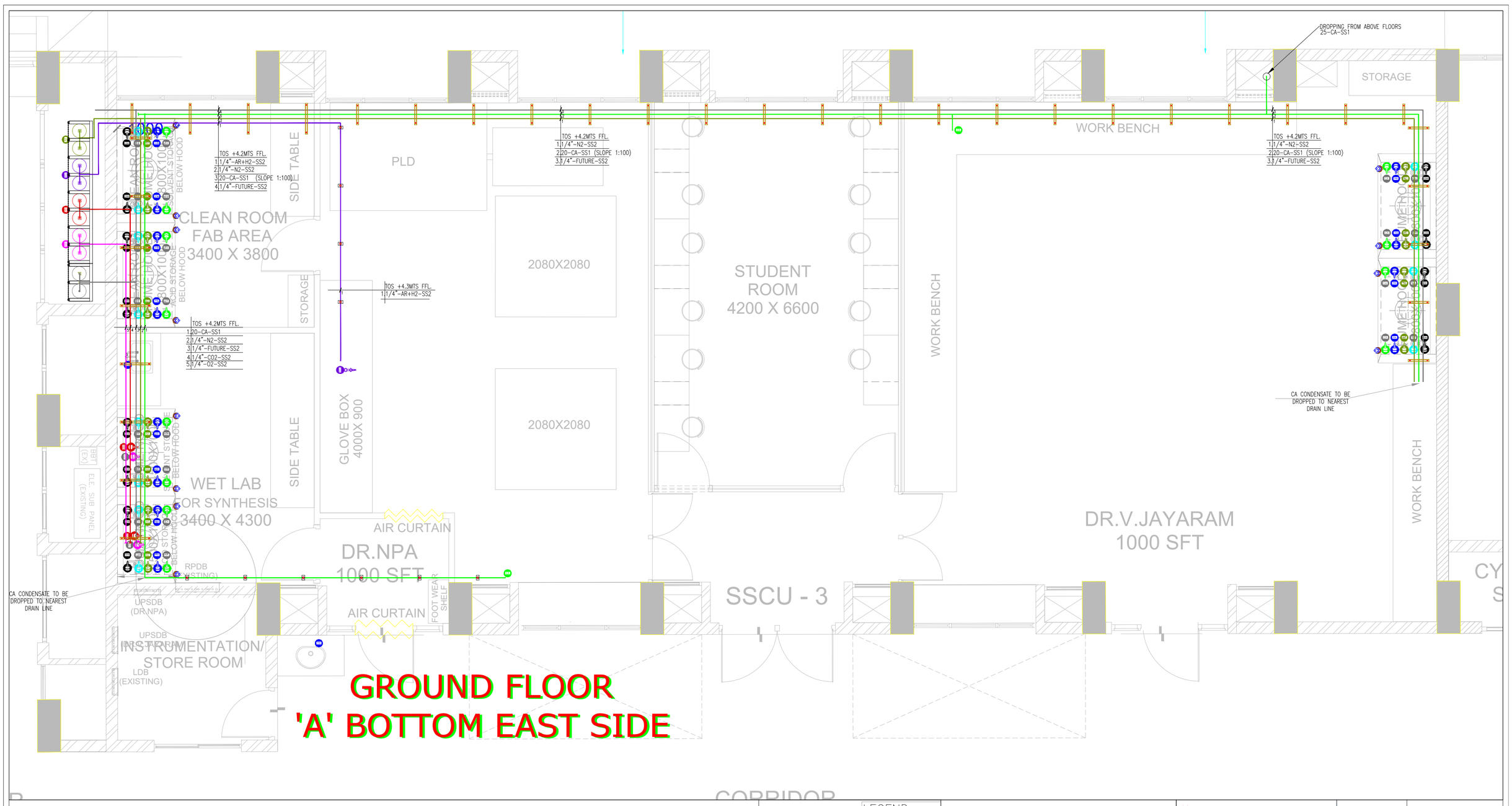
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4801(d)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR OC - 11
C TOP - GROUND FLOOR- WEST SIDE

DRAWING STATUS : TENDER DRAWING



GROUND FLOOR
'A' BOTTOM EAST SIDE

LEGEND:

HELIUM	GA
ARGON	GA
HYDROGEN	
COOLING	W
OXYGEN	
ACETYLENE	
COMPRESSED	
CARBON	D
NITROGEN	
METHANE	
FUTURE	GA
TOS	TOP OF S
FFL	FINISHED

CLIENT:

Indian Institute of Science Bangalore

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PROJECT:

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Architect:

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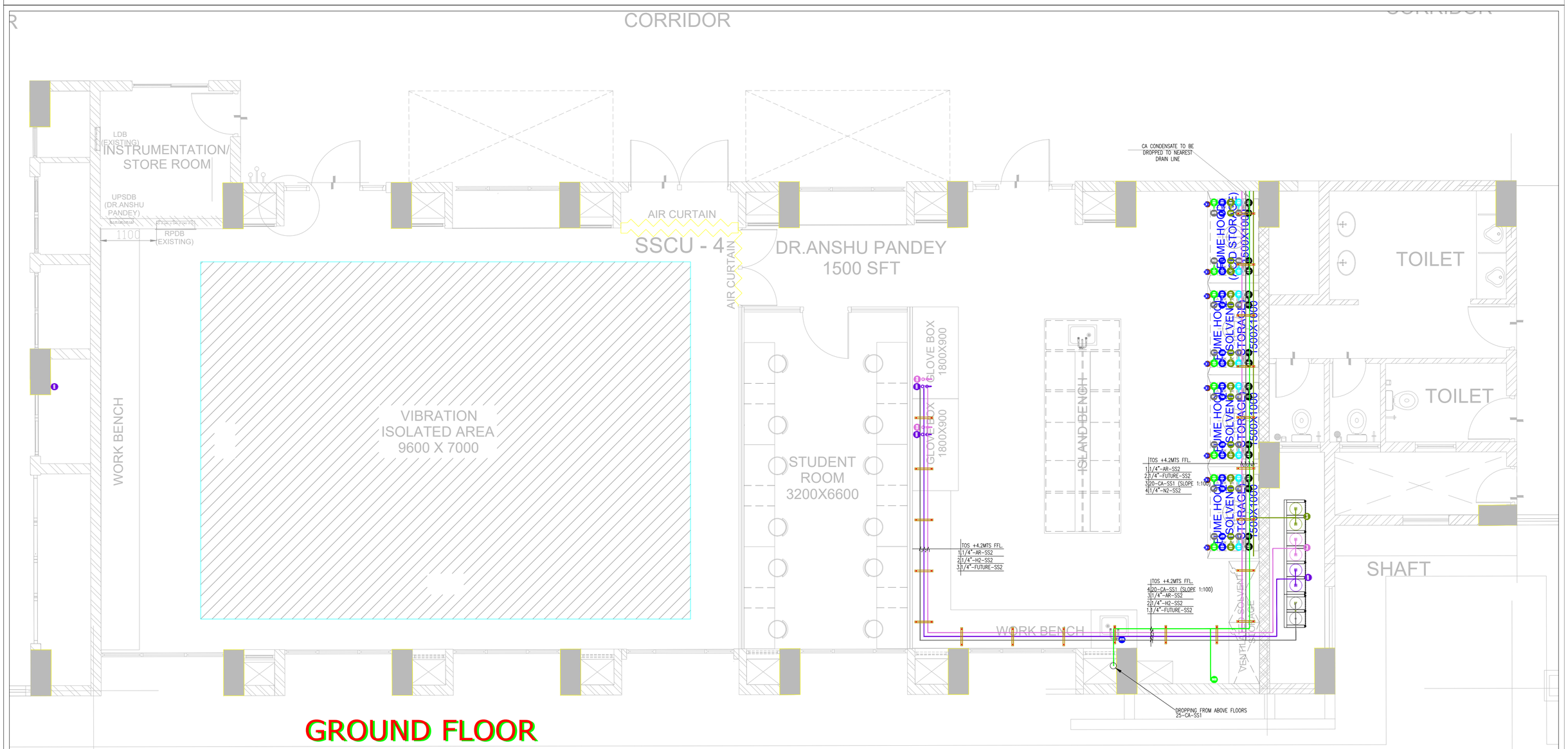
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4801(e)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR SSCU- 03
@A BOTTOM - GROUND FLOOR - EAST SIDE

DRAWING STATUS : TENDER DRAWING



GROUND FLOOR
'A' BOTTOM WEST SIDE

LEGEND:

HELIUM	GA
ARGON	GA
HYDROGEN	
COOLING	W
OXYGEN	
ACETYLENE	
COMPRESSED	
CARBON	D
NITROGEN	
METHANE	
FUTURE	GA
TOS	TOP OF S
FFL	FINISHED

CLIENT:

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Architect:

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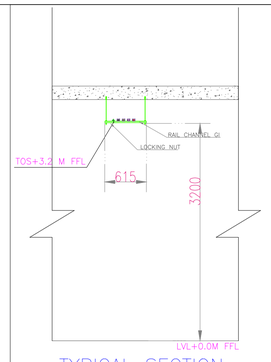
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4801(f)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR SSCU- 03
@A BOTTOM - GROUND FLOOR - WEST SIDE

DRAWING STATUS : TENDER DRAWING





TYPICAL SECTION

LEGEND:

HELIUM GAS	
ARGON GAS	
HYDROGEN	
COOLING WATER	
OXYGEN	
ACETYLENE	
COMPRESSED AIR	
CARBON DI OXIDE	
NITROGEN	
METHANE	
FUTURE GAS	
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:

Indian Institute of Science
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INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

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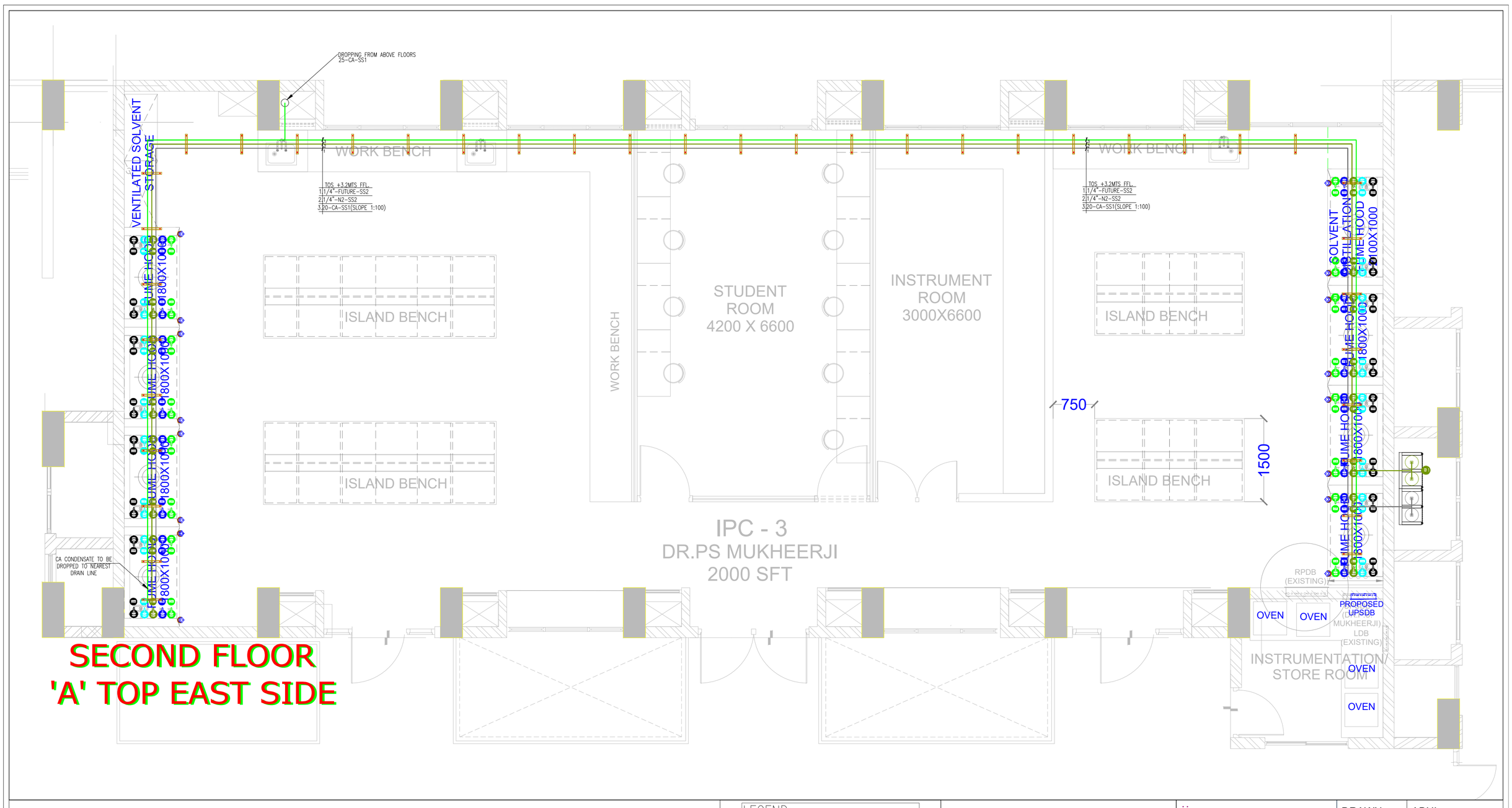
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4803
SCALE	NTS
REVISION	R0

DRAWING TITLE : SECOND FLOOR GAS PIPING LAYOUT

DRAWING STATUS : TENDER DRAWING



LEGEND:	
HEL	HELIUM GAS
ARG	ARGON GAS
HYD	HYDROGEN
CW	COOLING WATER
OXY	OXYGEN
ACE	ACETYLENE
AIR	COMPRESSED AIR
CO2	CARBON DI OXIDE
NIT	NITROGEN
METH	METHANE
FUT	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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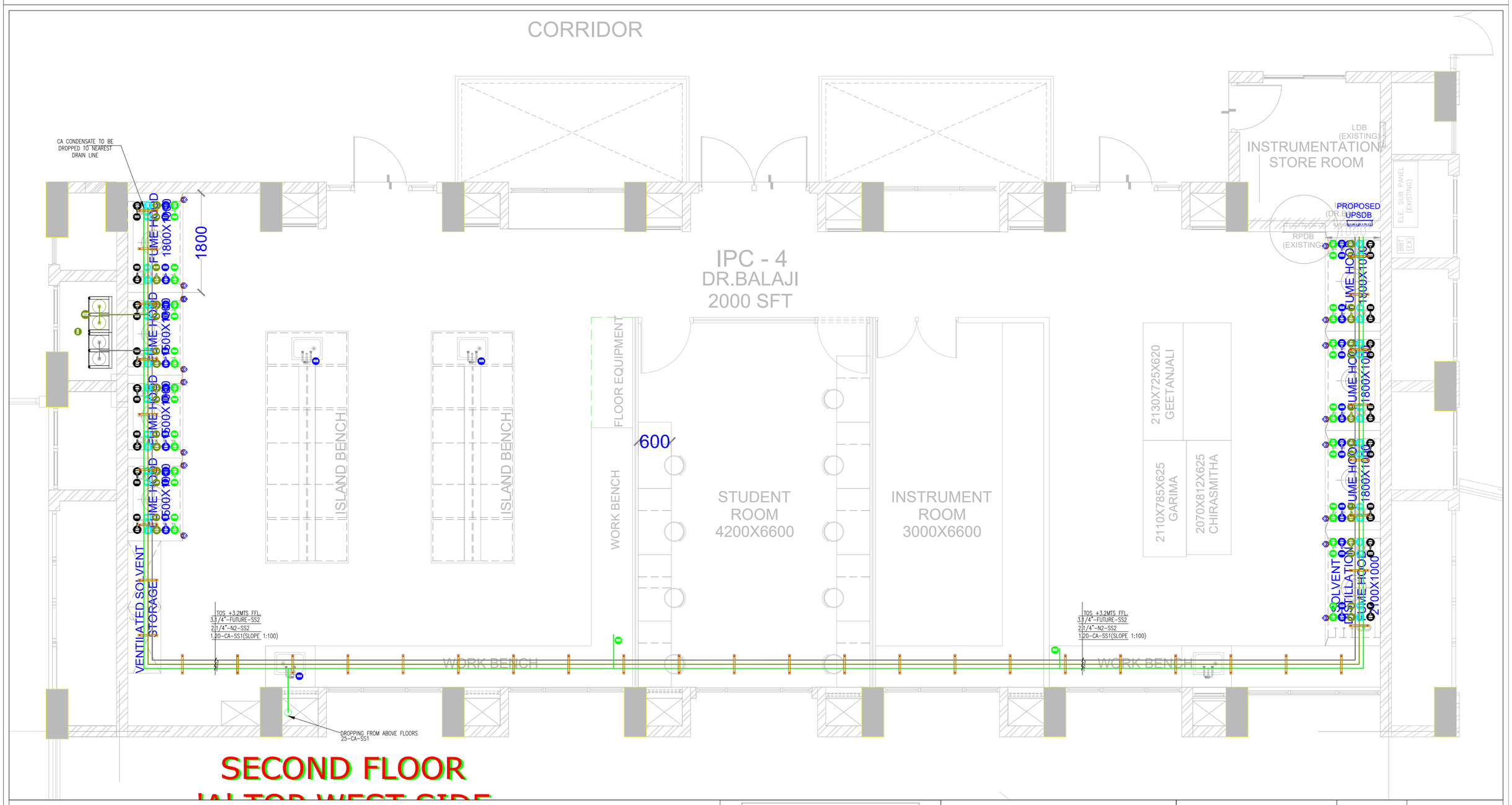
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4803(a)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR IPC - 3
@A TOP - SECOND FLOOR - EAST SIDE

DRAWING STATUS : TENDER DRAWING



LEGEND:	
HEL	HELIUM GAS
ARG	ARGON GAS
HYD	HYDROGEN
CW	COOLING WATER
OXY	OXYGEN
ACE	ACETYLENE
AIR	COMPRESSED AIR
CO2	CARBON DI OXIDE
NIT	NITROGEN
METH	METHANE
FUT	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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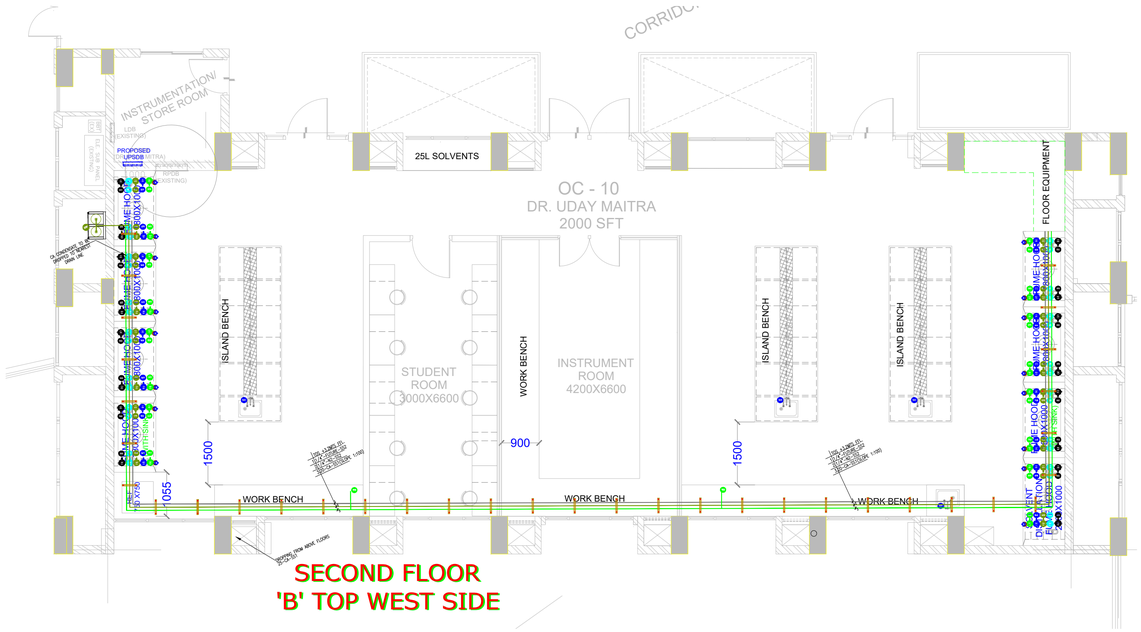
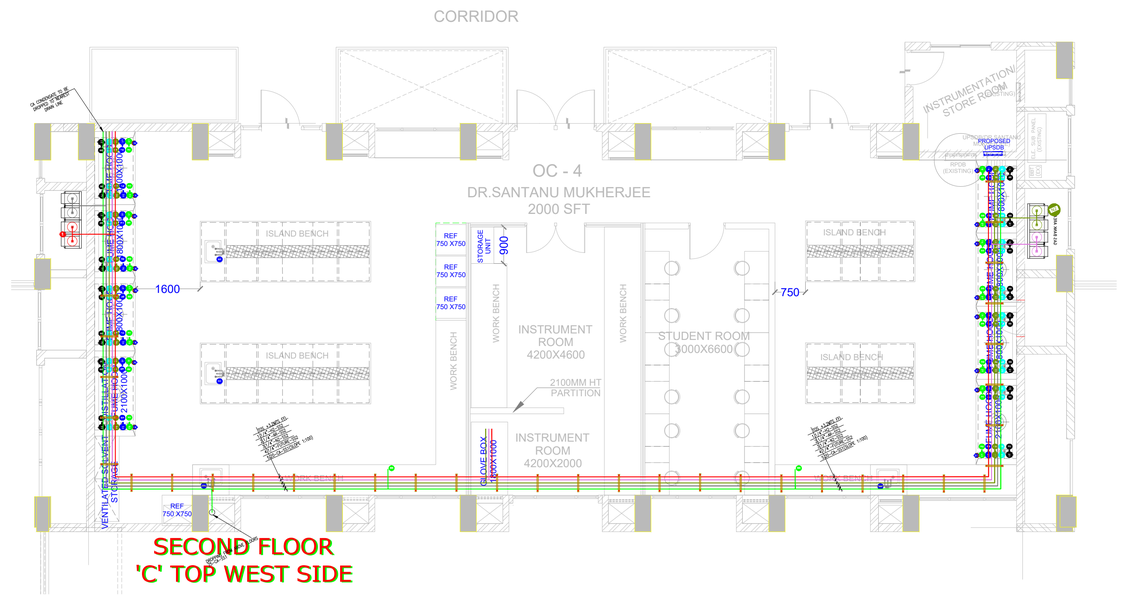
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4803(b)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR IPC - 4
@A TOP - SECOND FLOOR - WEST SIDE

DRAWING STATUS : TENDER DRAWING



SECOND FLOOR
'B' TOP WEST SIDE



SECOND FLOOR
'C' TOP WEST SIDE

LEGEND:	
HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FG	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL

CLIENT:
Indian Institute of Science Bangalore
INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect: Chandroo Iyer Associates
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DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4803(f)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR OC - 10
@B TOP - SECOND FLOOR - WEST SIDE

DRAWING STATUS : TENDER DRAWING

LEGEND:	
HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FG	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL

CLIENT:
Indian Institute of Science Bangalore
INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect: Chandroo Iyer Associates
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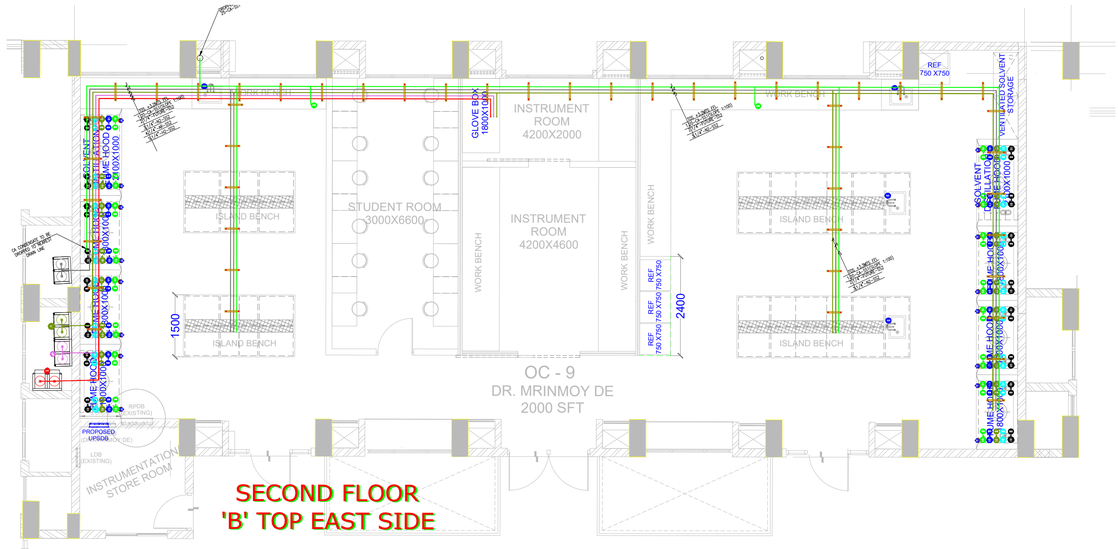
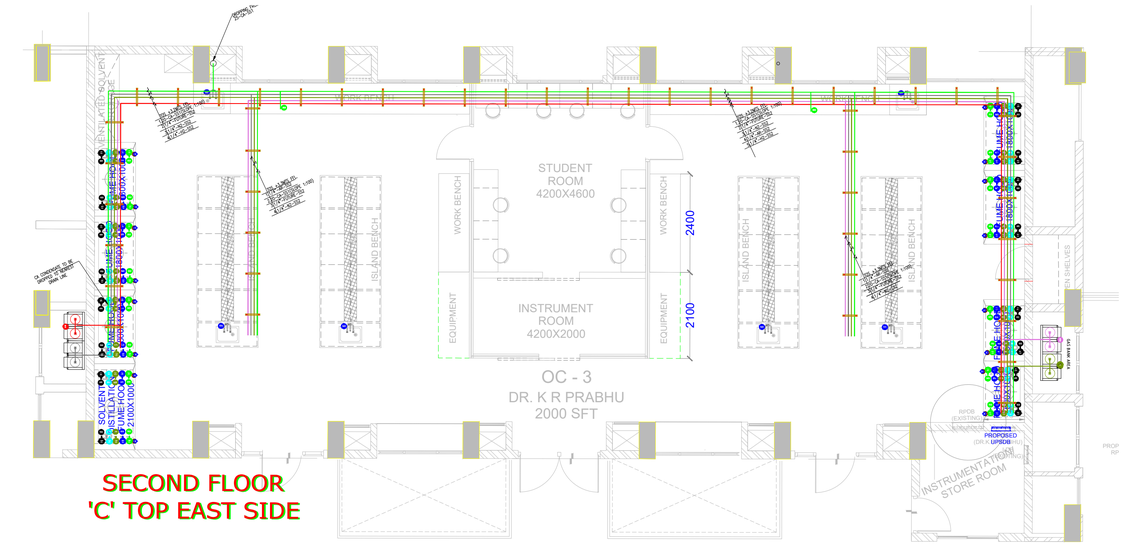
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4803(d)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR OC - 04
@C TOP - SECOND FLOOR - WEST SIDE

DRAWING STATUS : TENDER DRAWING



SECOND FLOOR
'B' TOP EAST SIDE



SECOND FLOOR
'C' TOP EAST SIDE

LEGEND:	
HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FG	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL

CLIENT:
Indian Institute of Science Bangalore
INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect: Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
TEL :- 080- 43728155

Consultant: M J ASSOCIATES
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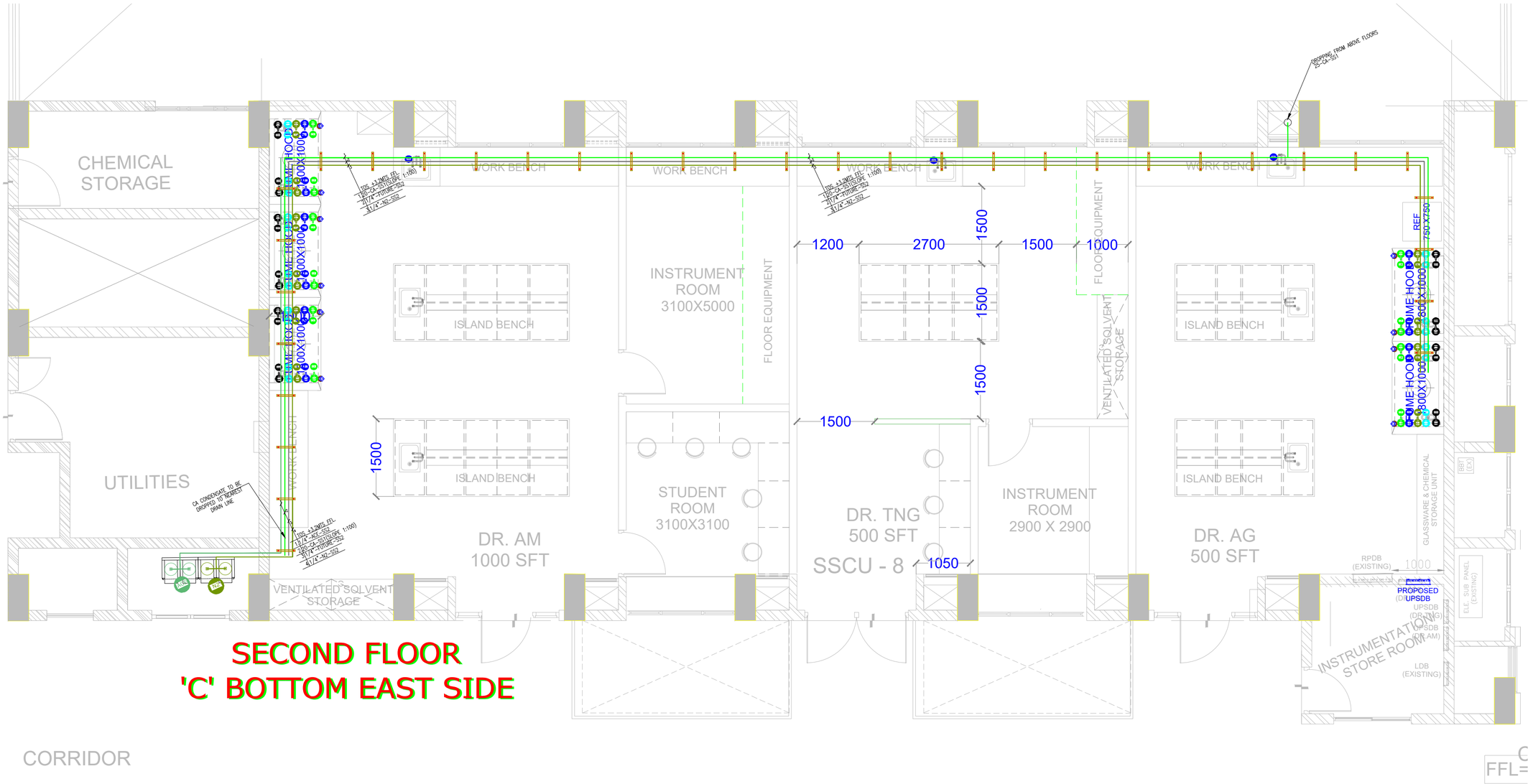
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4803(c)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR OC - 03
@C TOP - SECOND FLOOR - EAST SIDE

DRAWING STATUS : TENDER DRAWING



SECOND FLOOR
'C' BOTTOM EAST SIDE

LEGEND:	
HELIUM GAS	
ARGON GAS	
HYDROGEN	
COOLING WATER	
OXYGEN	
ACETYLENE	
COMPRESSED AIR	
CARBON DI OXIDE	
NITROGEN	
METHANE	
FUTURE GAS	
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
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INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
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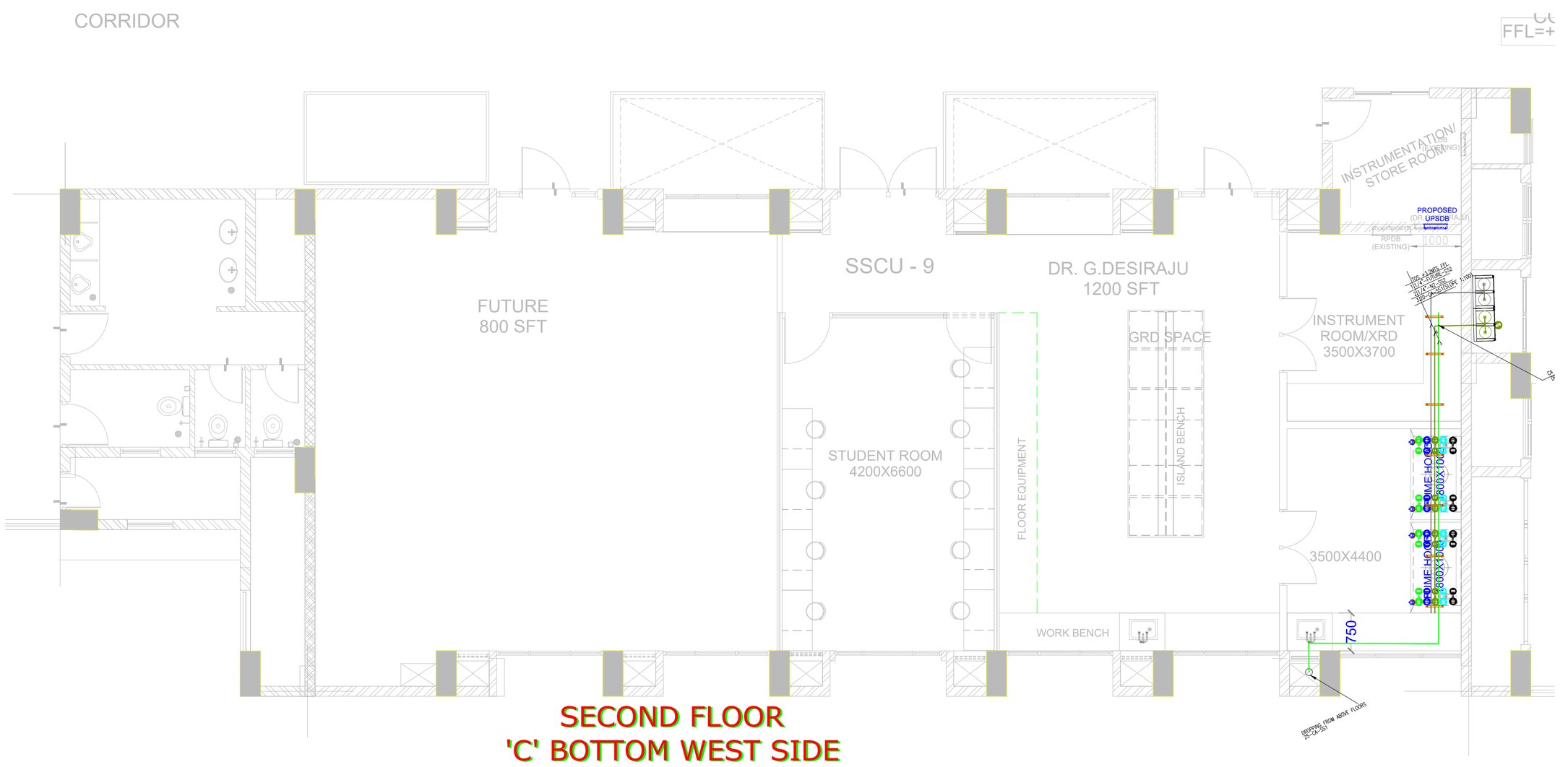
E-mail:-projects@mjassociates.in/www.mjassociates.in

DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4803(g)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR SSCU - 08
@C BOTTOM -SECOND FLOOR - EAST SIDE

DRAWING STATUS : TENDER DRAWING



SECOND FLOOR
'C' BOTTOM WEST SIDE

LEGEND:	
HELIUM GAS	
ARGON GAS	
HYDROGEN	
COOLING WATER	
OXYGEN	
ACETYLENE	
COMPRESSED AIR	
CARBON DI OXIDE	
NITROGEN	
METHANE	
FUTURE GAS	
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
Indian Institute of Science Bangalore
INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:
Chandroo Iyer Associates
#701,Brigade Rubix, 20 HMT MAIN ROAD, BANGALORE 560 013.
TEL – 080– 43728155

Consultant:
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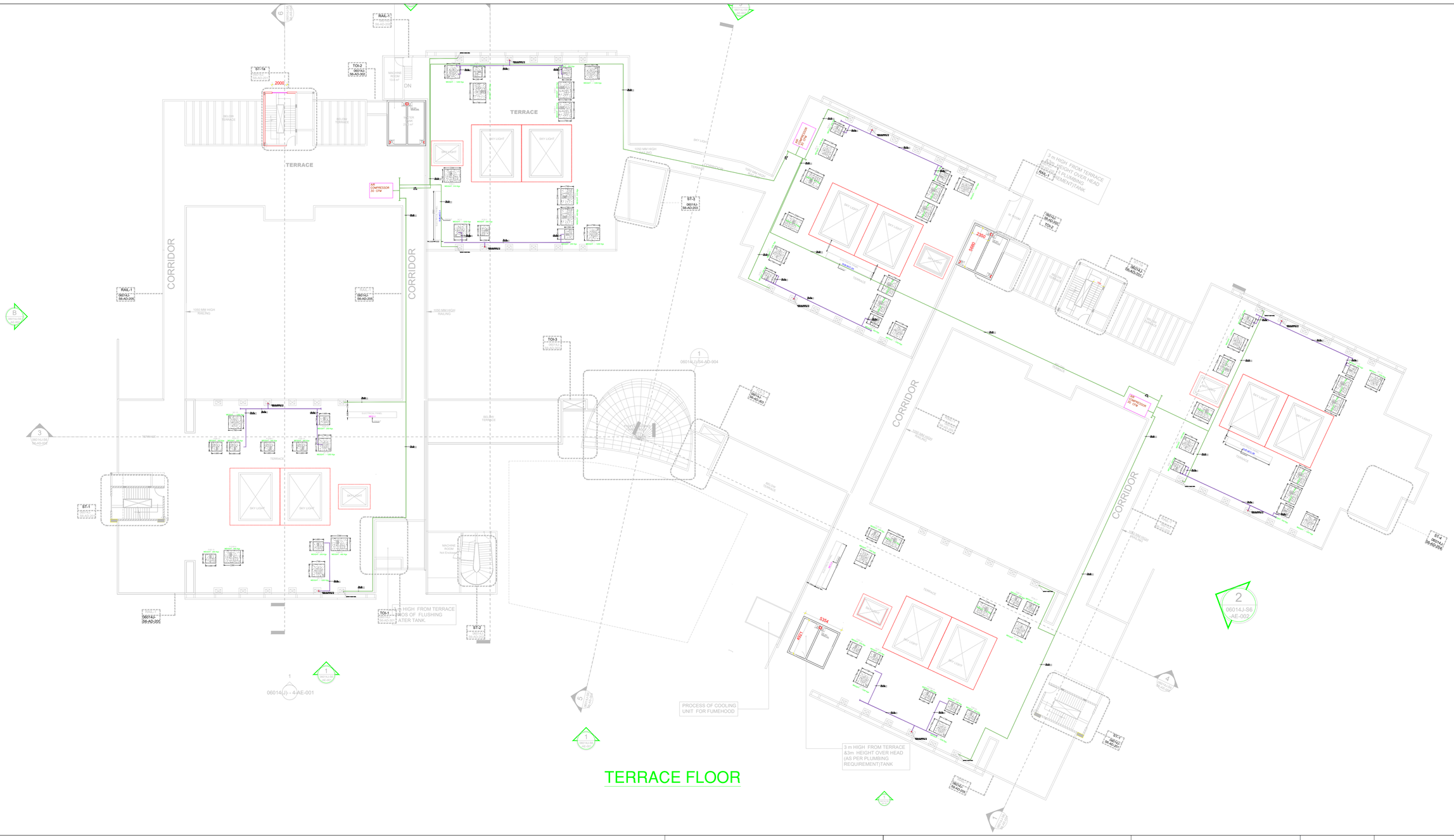
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4803(h)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR SSCU - 09
@C BOTTOM -SECOND FLOOR - WEST SIDE

DRAWING STATUS : TENDER DRAWING



LEGEND:

- COMPRESSED AIR
- DRAIN LINE

CLIENT:

Indian Institute of Science
Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

Architect:

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DRAWN	ABHI
CHECKED	BGK
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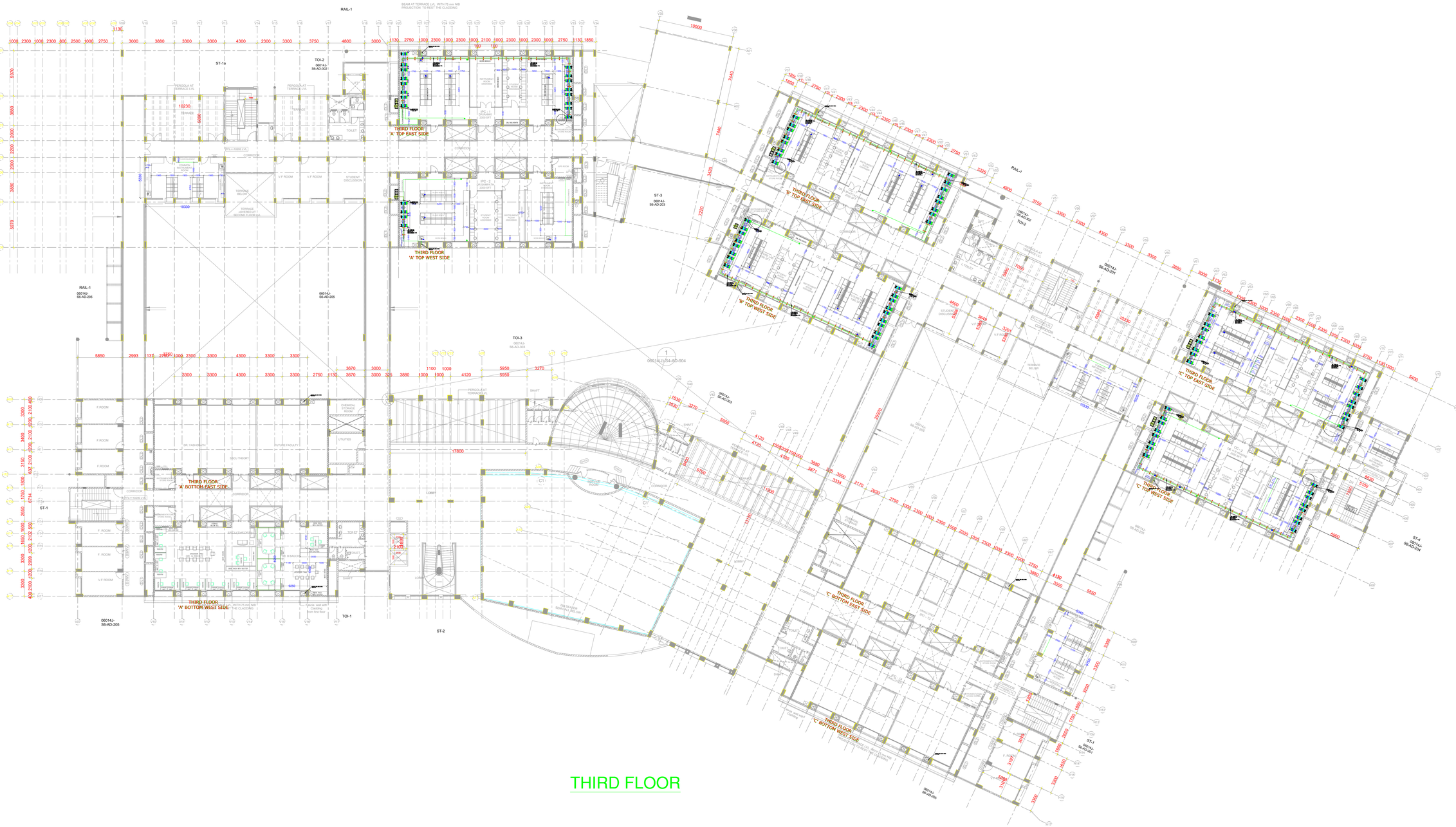
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4805
SCALE	NTS
REVISION	R0

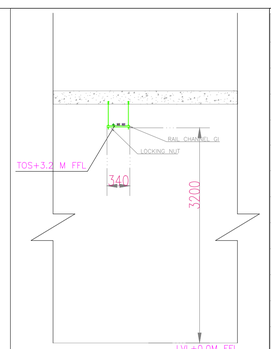
PROJECT:
LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

DRAWING TITLE : TERRACE FLOOR COMPRESSED AIR & DRAIN LAYOUT PIPING LAYOUT

DRAWING STATUS : TENDER DRAWING



THIRD FLOOR



TYPICAL SECTION

LEGEND:

HELIUM GAS	
ARGON GAS	
HYDROGEN	
COOLING WATER	
OXYGEN	
ACETYLENE	
COMPRESSED AIR	
CARBON DI OXIDE	
NITROGEN	
METHANE	
FUTURE GAS	
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:

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INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

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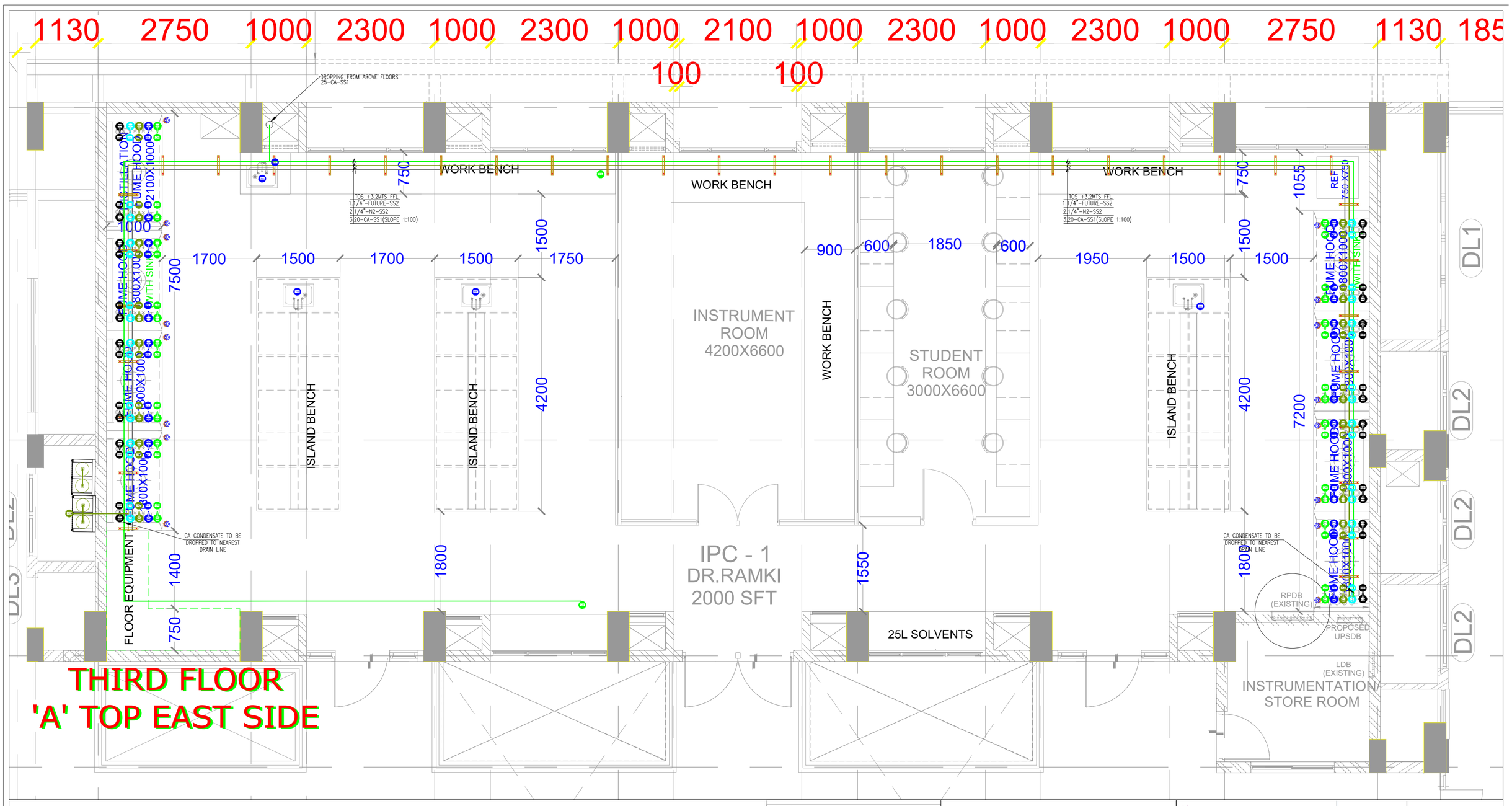
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	4804
SCALE	NTS
REVISION	R0

DRAWING TITLE : THIRD FLOOR GAS PIPING LAYOUT

DRAWING STATUS : TENDER DRAWING



LEGEND:	
HEL	HELIUM GAS
ARG	ARGON GAS
HYD	HYDROGEN
CW	COOLING WATER
OXY	OXYGEN
ACE	ACETYLENE
CA	COMPRESSED AIR
CAR	CARBON DI OXIDE
NIT	NITROGEN
METH	METHANE
FUT	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:

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PROJECT:

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Architect:

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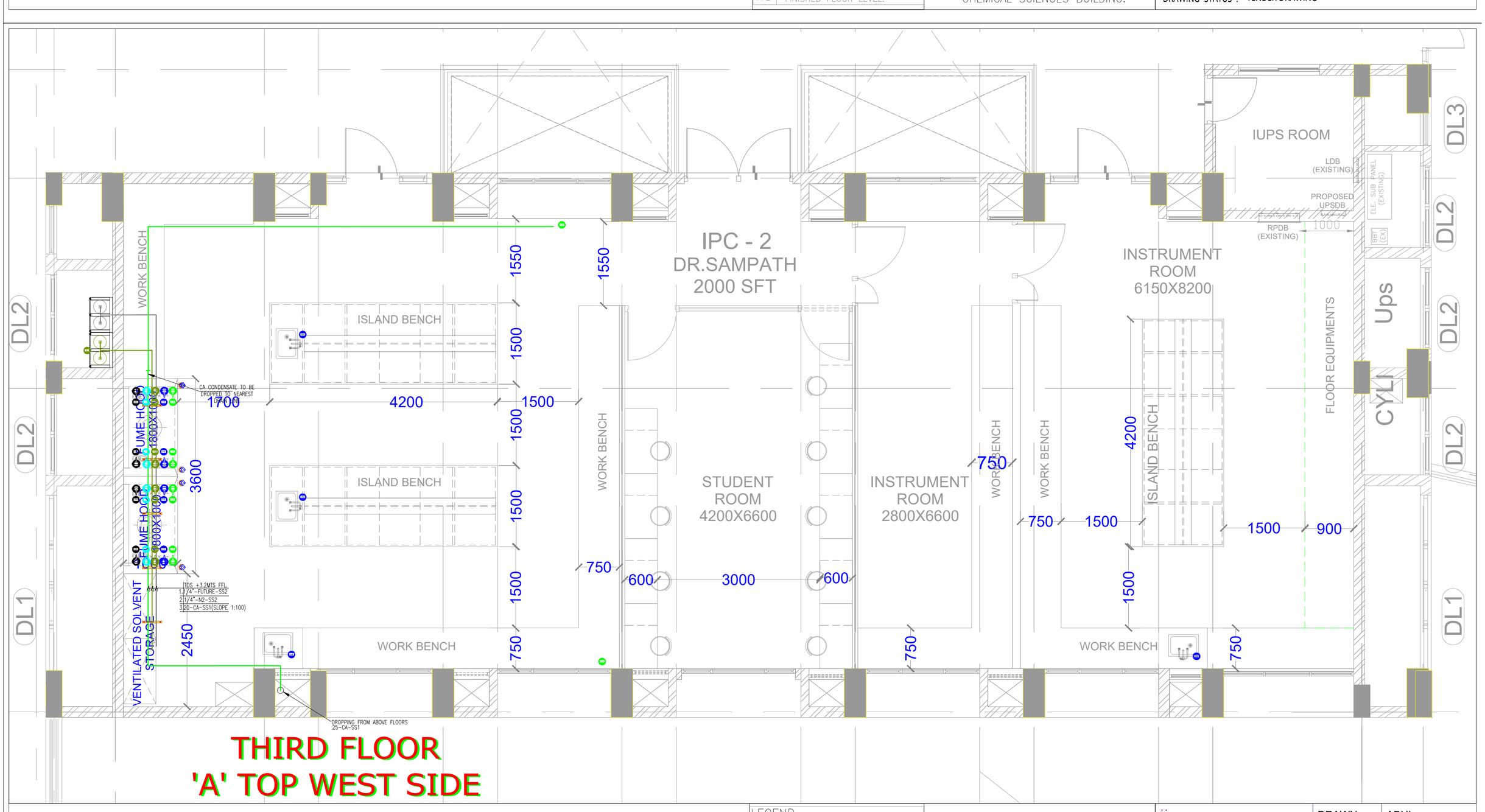
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4804(a)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR IPC - 01
@A TOP - THIRD FLOOR - EAST SIDE

DRAWING STATUS : TENDER DRAWING



LEGEND:	
HEL	HELIUM GAS
ARG	ARGON GAS
HYD	HYDROGEN
CW	COOLING WATER
OXY	OXYGEN
ACE	ACETYLENE
CA	COMPRESSED AIR
CAR	CARBON DI OXIDE
NIT	NITROGEN
METH	METHANE
FUT	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:

Indian Institute of Science Bangalore

INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:

LABORATORY INTERIOR WORKS FOR CHEMICAL SCIENCES BUILDING.

Architect:

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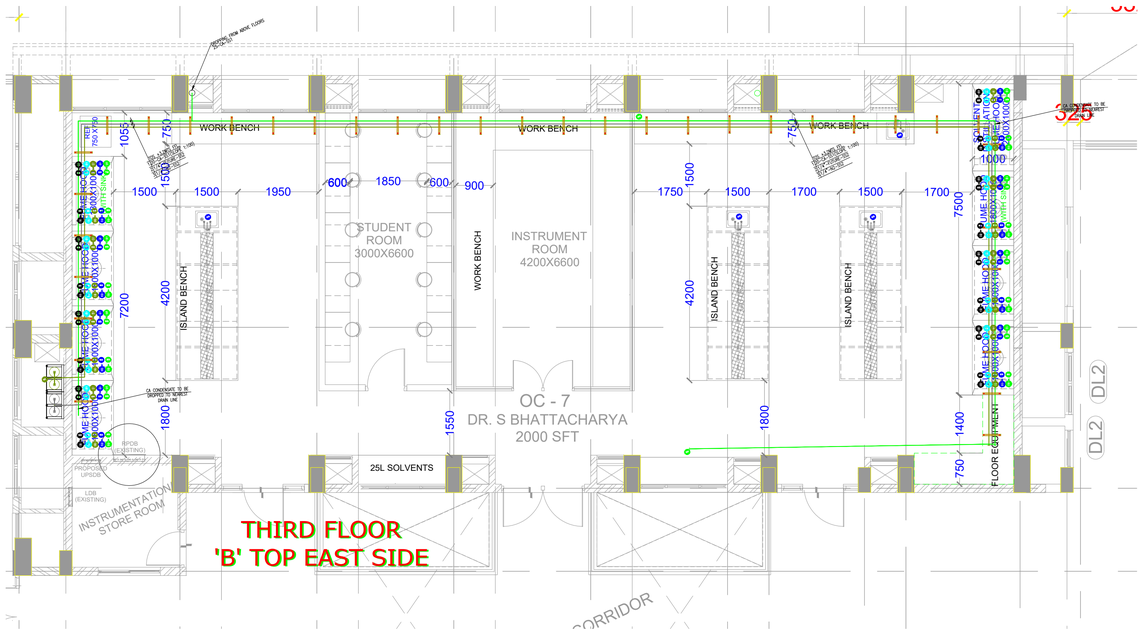
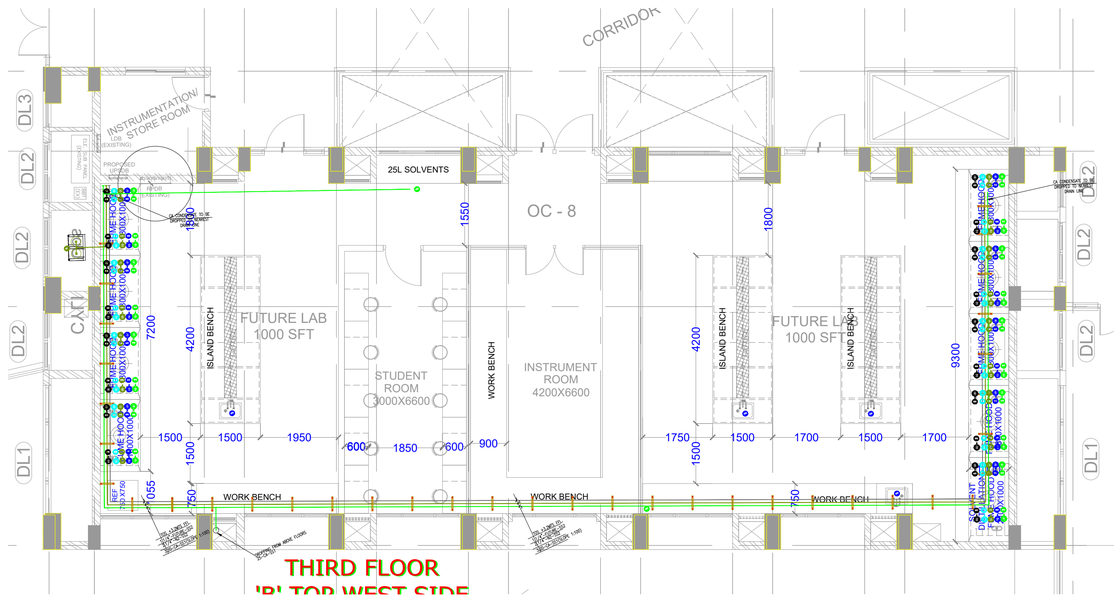
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4804(b)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR IPC - 02
@A TOP - THIRD FLOOR - WEST SIDE

DRAWING STATUS : TENDER DRAWING



THIRD FLOOR
'B' TOP EAST SIDE



THIRD FLOOR
'B' TOP WEST SIDE

LEGEND:

HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FU	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
Indian Institute of Science Bangalore
INDIAN INSTITUTE OF SCIENCE, BANGALORE.

PROJECT:
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Architect:
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DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4804(e)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR OC - 7 @B TOP - THIRD FLOOR - EAST SIDE

DRAWING STATUS : TENDER DRAWING

LEGEND:

HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FU	FUTURE GAS
TOS	TOP OF STEEL
FFL	FINISHED FLOOR LEVEL.

CLIENT:
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PROJECT:
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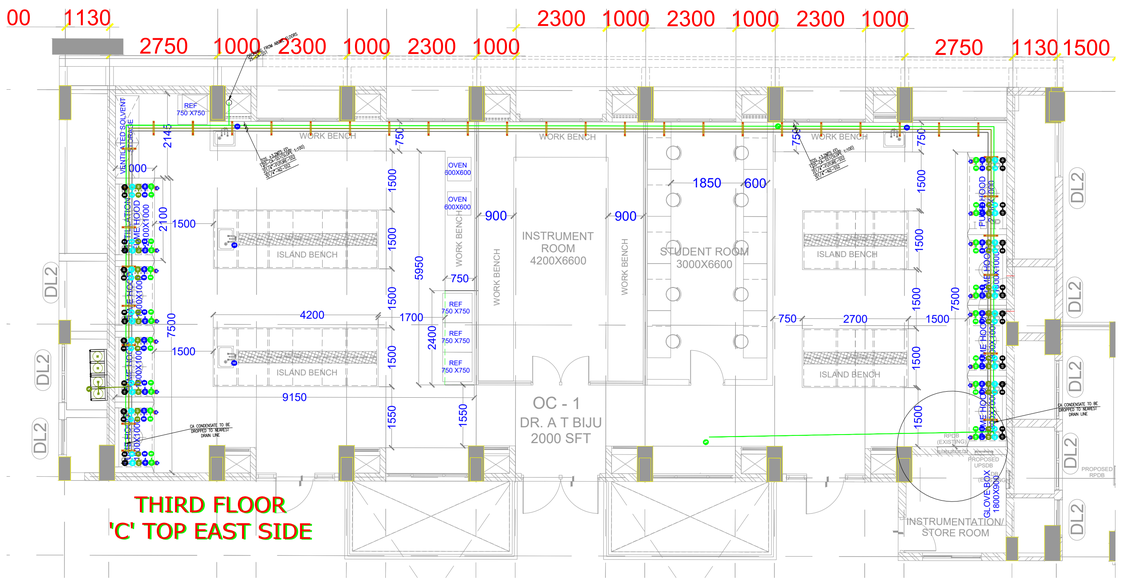
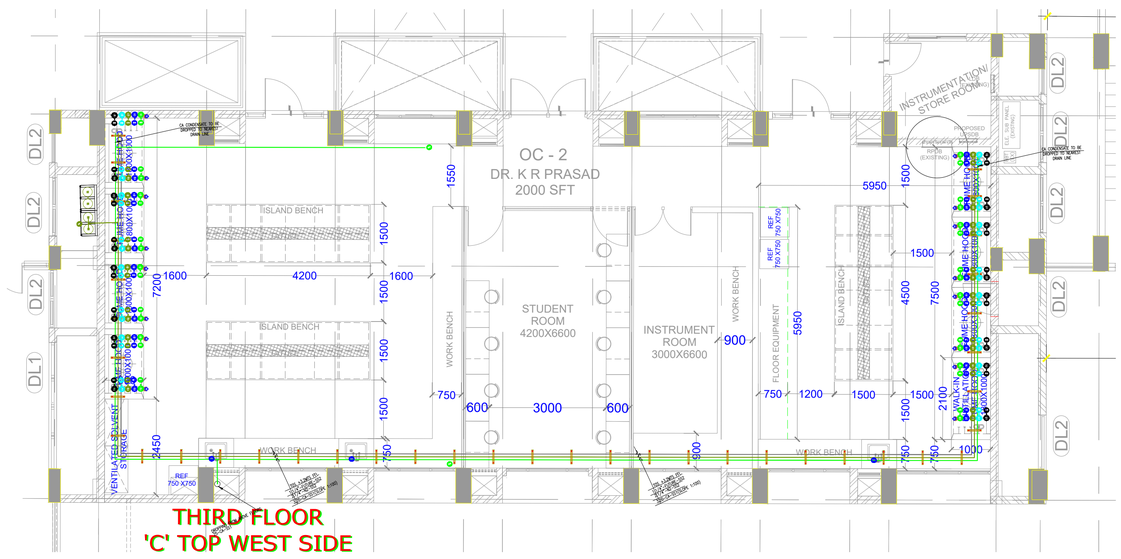
DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR OC - 8 @B TOP - THIRD FLOOR - WEST SIDE

DRAWING STATUS : TENDER DRAWING



THIRD FLOOR
'C' TOP EAST SIDE



THIRD FLOOR
'C' TOP WEST SIDE

LEGEND:

HE	HELIUM GAS
AR	ARGON GAS
HY	HYDROGEN
CW	COOLING WATER
OX	OXYGEN
AC	ACETYLENE
CA	COMPRESSED AIR
CD	CARBON DI OXIDE
NI	NITROGEN
ME	METHANE
FU	FUTURE GAS
TOS	TOP OF STEEL
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CLIENT:
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DRAWN	ABHI
CHECKED	BGK
APPROVED	SJ
DATE	22.10.2018
JOB NO	MJ - 324
DWG NO:	PIPE-DR-4804(b)
SCALE	NTS
REVISION	R0

DRAWING TITLE : PIPING LAYOUT FOR OC - 2 @C TOP - THIRD FLOOR - WEST SIDE

DRAWING STATUS : TENDER DRAWING