

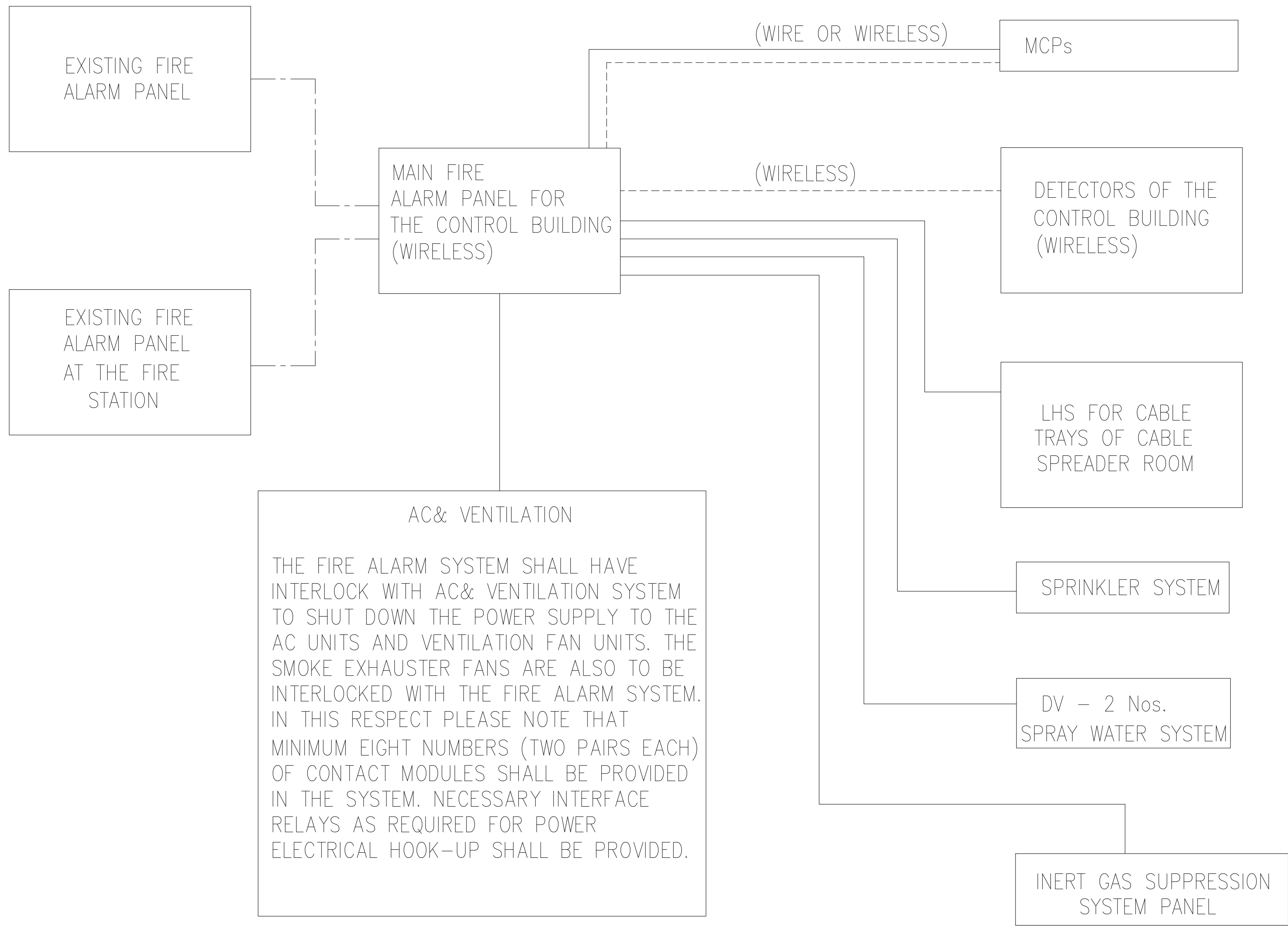
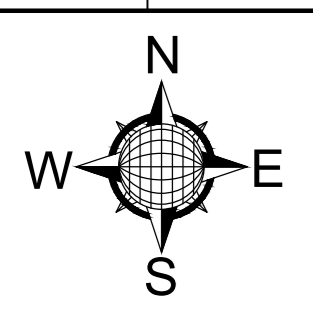
MECHANICAL DRAWING LIST

SL. NO.	DRAWING TITLE	DRAWING NUMBER	SHEET	REVISION
1.	FIRE DETECTION & ALARM SYSTEMS FOR THE CONTROL BUILDING	18A08-DWG-M-0001	1	0
2.	FIRE DETECTION ALARM PANEL AND DETECTION SYSTEM FOR THE CONTROL BUILDING	18A08-DWG-M-0002	1	0
3.	FIRE HYDRANT LAYOUT BOTH EXTERNAL AND INTERNAL FOR THE CONTROL BUILDING	18A08-DWG-M-0003	1	0
4.	SPRAY WATER PIPING LAYOUT FOR THE CONTROL BUILDING	18A08-DWG-M-0004	1	0
5.	SPRINKLER PIPING LAYOUT FOR THE CONTROL BUILDING	18A08-DWG-M-0005	1	0
6.	INERT GAS FIRE SUPPRESSION SYSTEM FOR DCS & INST CONTROL ROOMS FOR THE CONTROL BUILDING	18A08-DWG-M-0006	1	0
7.	FIRE EXTINGUISHERS LAYOUT FOR THE CONTROL BUILDING	18A08-DOC-M-0007	1	0
8.	HVAC LAYOUT OF THE CONTROL BUILDING	18A08-03-DWG-VA-001	1	0
9.	HVAC POWER DISTRIBUTION SCHEME OF THE CONTROL BUILDING	18A08-03-DWG-VA-002	1	0
10.	SCHEMATIC DIAGRAM OF WATER COOLED PRECISION AIR-CONDITIONER	18A08-03-DWG-VA-003	1	0

FILE LOCATION: C:\DWG-POWER_JOB_FILES\18A08_IFFCO Boiler Control Room\21. Fire & HVAC Layouts\1. Drawing List.dwg
PLOT DATE: 9/16/2019 3:13:21 PM

APPROV.	MECH.	INST.	ELEC.	STRL.	ARCH.	NATURE OF REVISION & DESCRIPTION	CHECKED	DRAWN	REV.	DATE	RELEASE STATUS	DATE	SIGNATURE
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											FOR TENDER ONLY		
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											ARCHITECTURAL		
											CIVIL & STRUCTURAL		
											ELECTRICAL		
											INSTRUMENTATION		
											MECHANICAL		

	OWNER: IFFCO PARADEEP
PROJECT:	IFFCO PARADEEP AFBC BOILER CONTROL ROOM
TITLE:	LIST OF DETAIL ENGINEERING DRAWINGS
	DEVELOPMENT CONSULTANTS PVT LTD. CONSULTING ENGINEERS KOLKATA • MUMBAI • CHENNAI • NEW DELHI
PREPARED: BG	JOB NO.: 18A08
CHECKED: RD	SCALE: 1:1
APPROVED: DS	DATE: 22.02.2019
DWG. NO.: 18A08-DWG-E-0000	REV: 1 SHEET 1 OF 1



AC & VENTILATION

THE FIRE ALARM SYSTEM SHALL HAVE INTERLOCK WITH AC & VENTILATION SYSTEM TO SHUT DOWN THE POWER SUPPLY TO THE AC UNITS AND VENTILATION FAN UNITS. THE SMOKE EXHAUSTER FANS ARE ALSO TO BE INTERLOCKED WITH THE FIRE ALARM SYSTEM. IN THIS RESPECT PLEASE NOTE THAT MINIMUM EIGHT NUMBERS (TWO PAIRS EACH) OF CONTACT MODULES SHALL BE PROVIDED IN THE SYSTEM. NECESSARY INTERFACE RELAYS AS REQUIRED FOR POWER ELECTRICAL HOOK-UP SHALL BE PROVIDED.

NOTES :

1. ALL THE DETECTORS SHALL BE WIRELESS TYPE AND SHALL HAVE BUILT - IN ESCAPE LIGHT.
2. INTEGRATION OF THE NEW MAIN FIRE ALARM PANEL OF THE CONTROL BUILDING WITH THE EXISTING FIRE ALARM PANELS SHALL BE DONE BY THE BIDDER.
3. THE PANEL SHALL BE UL LISTED.
4. REFER SPECIFICATION/ DATA SHEET PROVIDED

REF. DWGS :

1. 18A08-DWG-M-0001
2. 18A08-DWG-E-0401

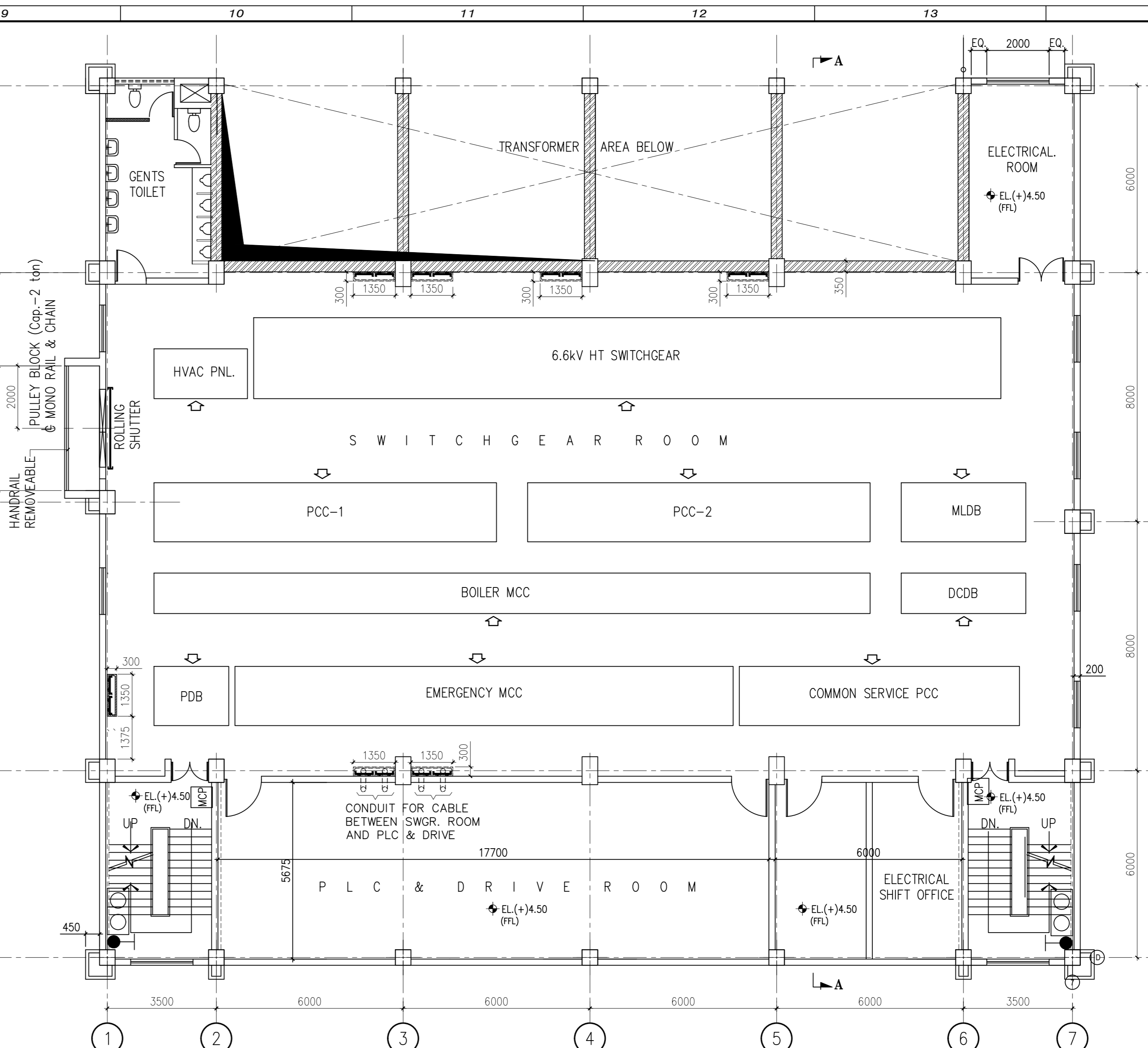
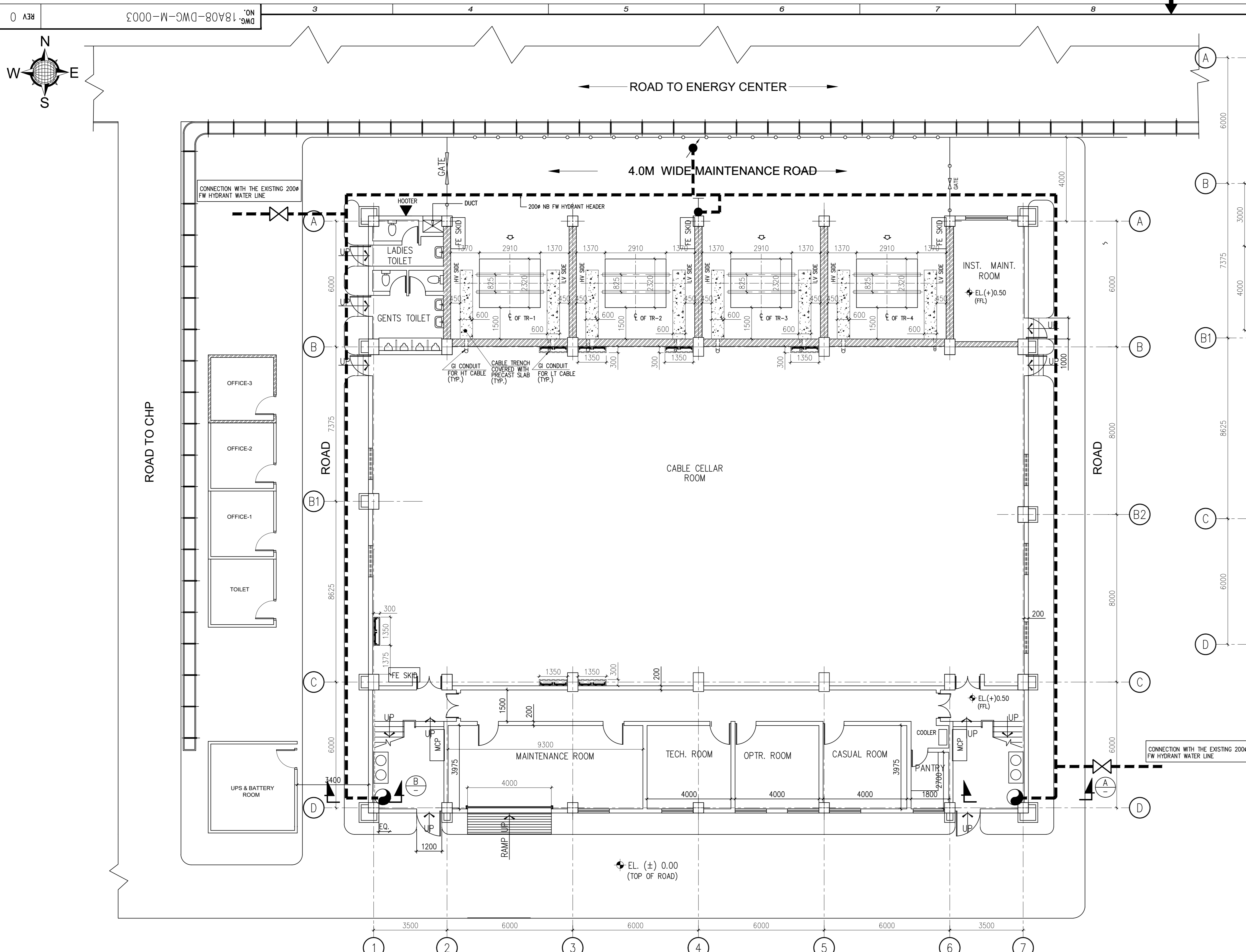
LEGEND :-

- WIRELESS
- INSTRUMENT/CONTROL CABLE
- SOFT COMMUNICATION LINK

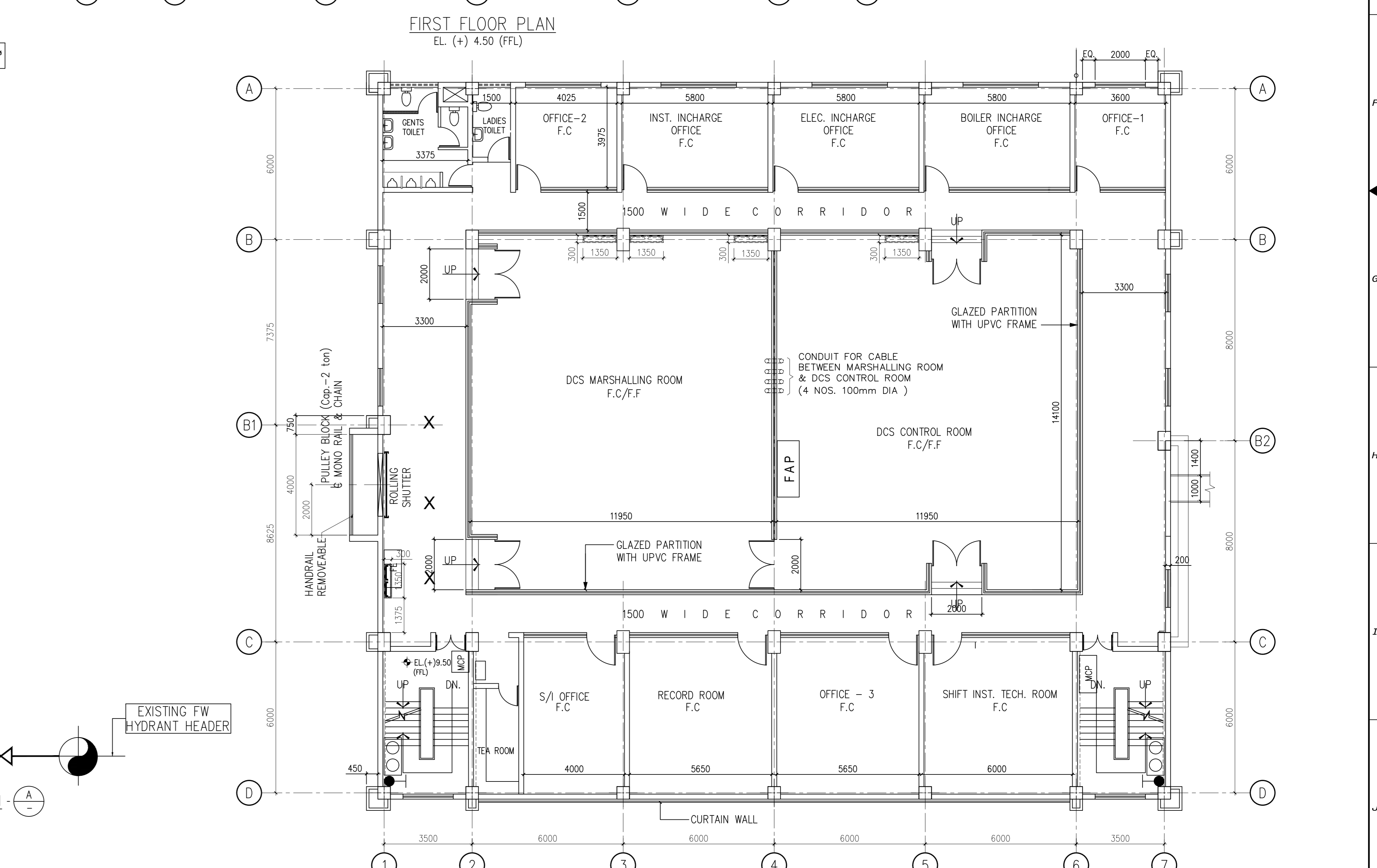
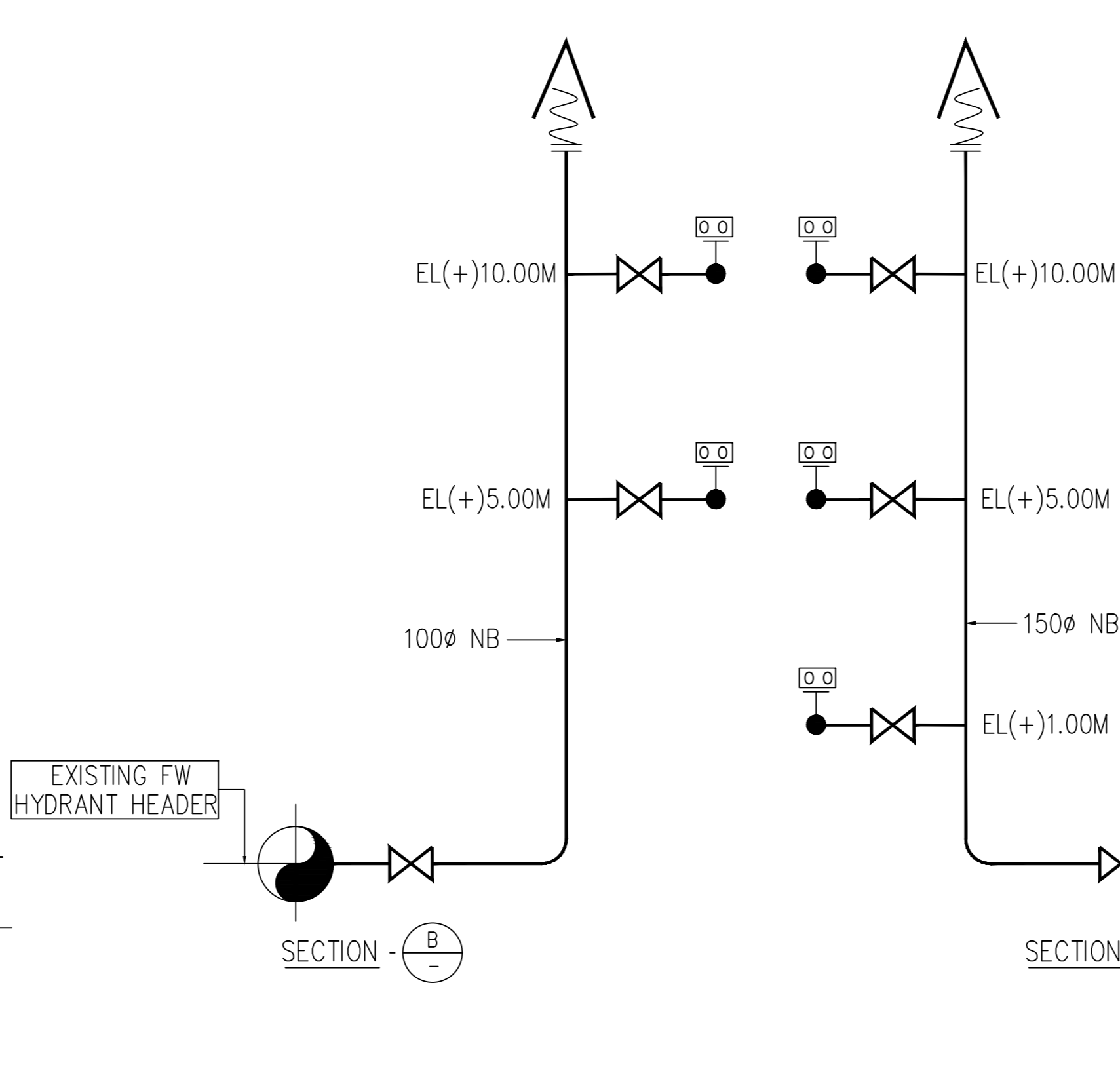
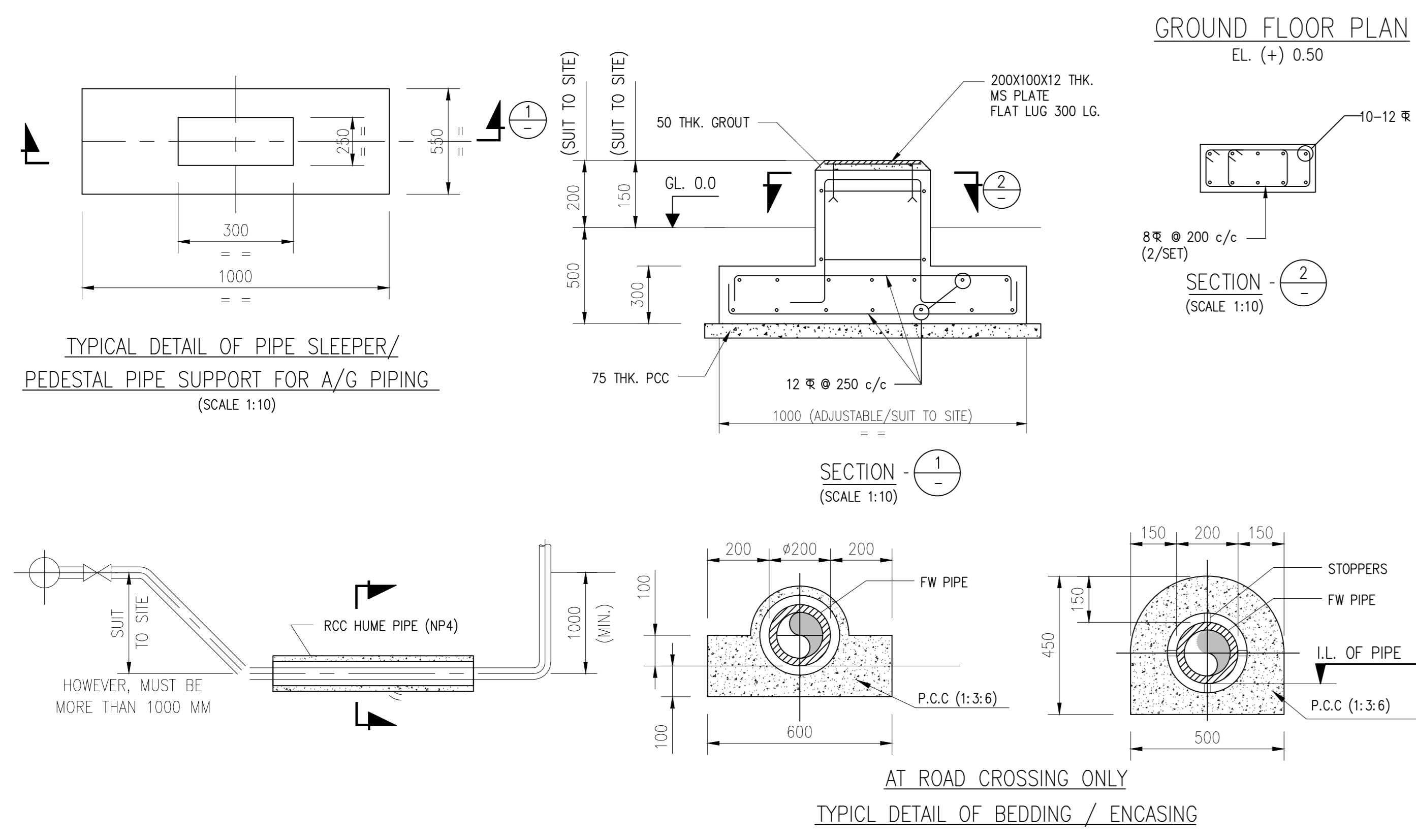
PROPOSED AFC SCHEME DRAWING

IFFCO PARADEEP		OWNER: IFFCO PARADEEP	
PROJECT: IFFCO PARADEEP AFBC BOILER CONTROL ROOM			
TITLE: FIRE DETECTION ALARM PANEL & DETECTION SCHEMATIC FOR THE CONTROL BUILDING			
DEVELOPMENT CONSULTANTS PVT LTD.		CONSULTING ENGINEERS	
KOLKATA • MUMBAI • CHENNAI • NEW DELHI		JOB NO. 18A08	
DATE: 19.02.2019		SCALE: 1:100	
DWG. NO. 18A08-DWG-M-0002		REV 0	

NO.	DATE	BY	CHKD.	APPV.	REVISION	NATURE OF REVISION & DESCRIPTION	CHECKED	DRAWN	REV.	DATE
1	19.02.2019	GKD	SD	0	12.09.2019	PROPOSED AFC DRAWING				



- NOTES :**
- ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
 - DIAMETER OF THE FIRE WATER LINE AS SHOWN HERE IS INDICATIVE ONLY.
 - VENDOR TO FINALIZE THE SIZE DURING DETAIL ENGINEERING BEST ON THE INPUT WATER PRESSURE AVAILABLE AT THE TERMINAL.
 - ANY INTERFERENCE SHALL BE AVOIDED WITH OTHER FACILITIES TO BE INSTALLED OR ALREADY INSTALLED.
 - 150MM DIAMETER FIRE WATER HYDRANT HEADER SHALL BE LAID AT THE PERIPHERY OF THE BUILDING. A RISER SHALL BE PROVIDED INSIDE THE BUILDING STAIR CASE.
 - 150MM OR MORE DIAMETER PIPE SHALL BE LAID SUITABLY IN BETWEEN THE EXISTING HYDRANT FW HEADER AND THE NEW FIRE HYDRANT LINE.
 - ONE ISOLATION GATE VALVE SHALL BE PROVIDED AT EACH OF THE TAPPING POINT OF EVERY NEW FW BRANCH LINE.
 - BODER SHOULD CHECK THE ADEQUACY OF THE WATER PRESSURE AT THE NEAREST TAPPING POINTS OF THE EXISTING FIRE WATER HEADER.
 - MINIMUM 1M LENGTH OF THE CABLE FROM BOTH SIDE OF THE PENETRATION HOLE SHALL BE PAINTED BY THE 2MM FIRE RETARDANT COATING. EVERY CABLE PENETRATION HOLE SHALL HAVE MINIMUM 130MM, 3 HOURS RATING FIRE SEALING COMPOUND.
 - THE MAKES OF EQUIPMENT / MATERIAL SHALL BE AS PER APPROVED VENDOR AND AS PER OTHER APPROVED DOCUMENTS.
 - THE DIMENSIONS ARE INDICATIVE. ALL MATERIAL REQUIRED AS PER APPROVED DRAWING AND DOCUMENTS SHALL BE PROVIDED.
 - GLOBE VALVE (ROOT VALVE FOR PI & PS) 1/2inch (NPT)(F), GATE VALVE 1/2 inch (NPT)(F) SHALL BE FOR DRAIN & VENT.
 - CIVIL/STRUCTURAL & ARCHITECTURAL DETAILS SHALL BE CONSIDERED FROM THE RESPECTIVE DRAWINGS.
 - FIRST AID HOSE REEL SHALL BE PROVIDED FOR EVERY FLOOR INCLUDING GROUND FLOOR.
 - LOCATION OF TAPPING, POINTS, HYDRANT POINTS, DIV STATION, DETECTORS, FIRE EXTINGUISHERS SHALL BE CHANGED SUITABLY TO SUIT THE SITE CONDITIONS AND EFFECTIVENESS OF THE SYSTEM.
- REF. DWGS :**
- 18A08-DWG-M-0001
 - 18A08-DWG-E-0401
- LEGEND :-**
- FW MONITOR --- 1 No.
 - HYDRANT --- 5 Nos.
 - HOSE REEL BOX WITH 2 HOSE-15M LONG - 5 BOXES.
 - FIRE WATER HYDRANT PIPE



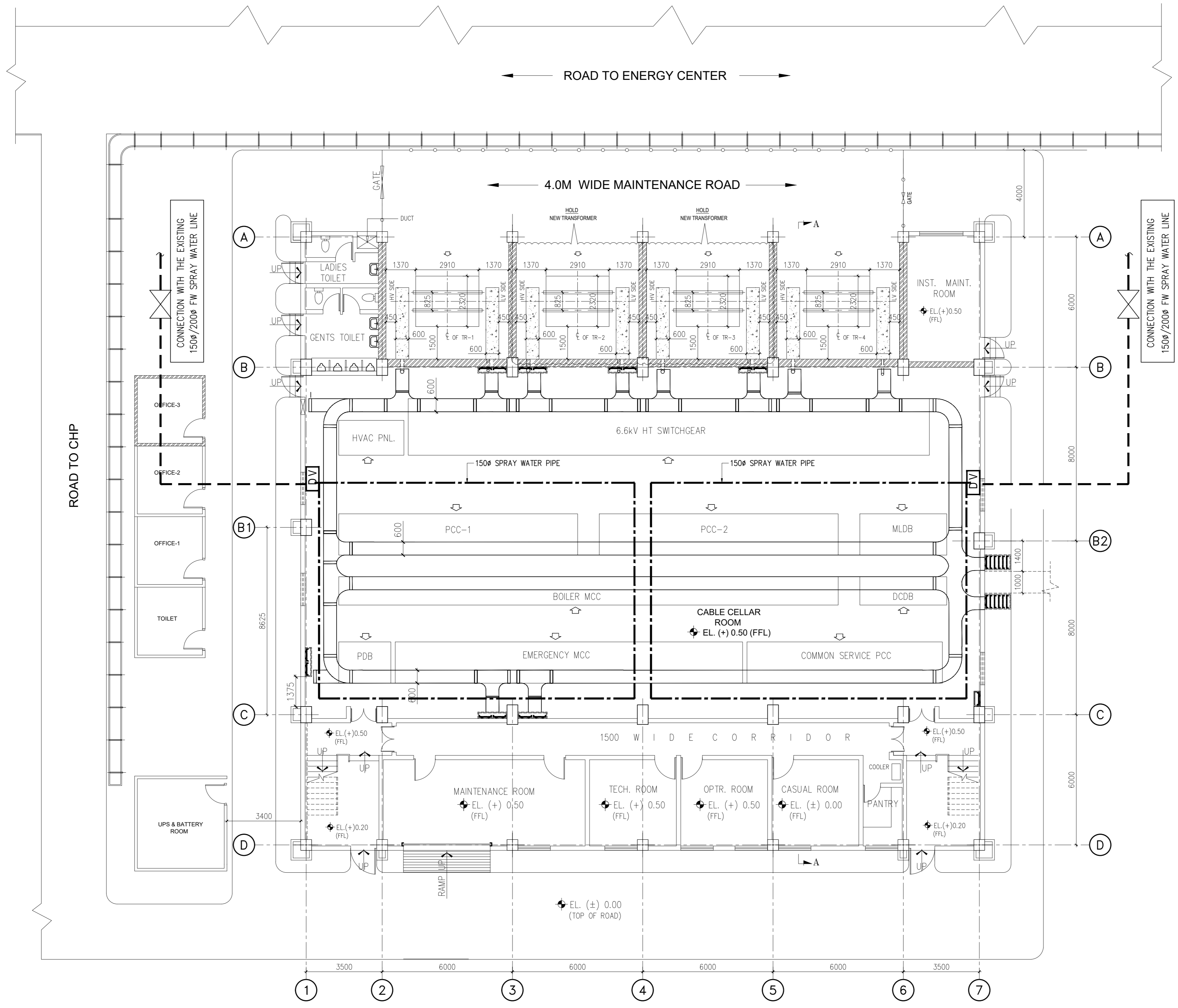
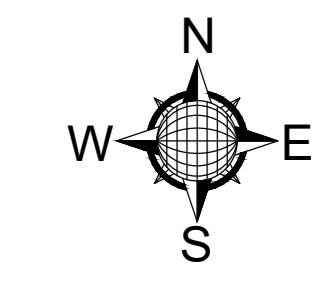
- MATERIAL DESCRIPTION :**
- PIPE, MS, ERW, IS-1239 (HEAVY GRADE 1) - 150 MM DIA SIZE SHALL BE DECIDED BASED ON THE WATER PRESSURE & FLOW AVAILABLE.
 - PIPE FITTINGS FOR PIPING SHALL BE A234 GR. WPB.
 - 6" GATE VALVES CI JS 210, FG 260, 150# WITH STEM - SS 410 1.3% Cr. St. (2 Nos).
 - OTHER VALVES CI, IS 210, FG 260, 150# WITH STEM SS 410 1.3% Cr. St.
 - FLANGES SHALL BE A105, 150#, RAISED FACE, WELDNCK, GALVANISED FLANGES SHALL BE THREADED.
 - HOSE BOXES SHALL BE MADE OF MS 16 SWG & 3 MM THICK GLASS PANEL IN FRONT DOOR WITH LOCK & TWO SS304 MADE KEYS.
 - BRANCH PIPE SHALL BE SS AISI 304 (IS 2871), NOZZLE SHALL BE MADE OF GUN METAL (IS-318, GR.2), DEFUSER SS 304 (IS 2871).
 - REINFORCED RUBBER HOSE (IS 884), CORRUGATED EXTERNAL SURFACE.
 - WATER MONITOR (IS 8442), 2700 LPM AT 7KG/CM² BASE FLANGE (IS 6392), REDUCER IS 1239, PART- II, WATER NOZZLE, GUN METAL CONFORMING TO IS-316, GR.2
 - HYDRANT VALVES (SS304), COLUMN PIPE (MS), HAND WHEEL (IS210 FG260) AS PER IS-5290 TYPE-A. ALL THE HOSES SHALL MATCH WITH THE HYDRANT OUTLET.

NO.	DATE	REVISION	DESCRIPTION
1	19.02.2019	0	PRELIMINARY
2	19.02.2019	1	FOR TENDER ONLY
3	19.02.2019	2	FOR CONSTRUCTION
4	19.02.2019	3	MECH. INST. ELEC. STRL. ARCH.
5	19.02.2019	4	MECHANICAL

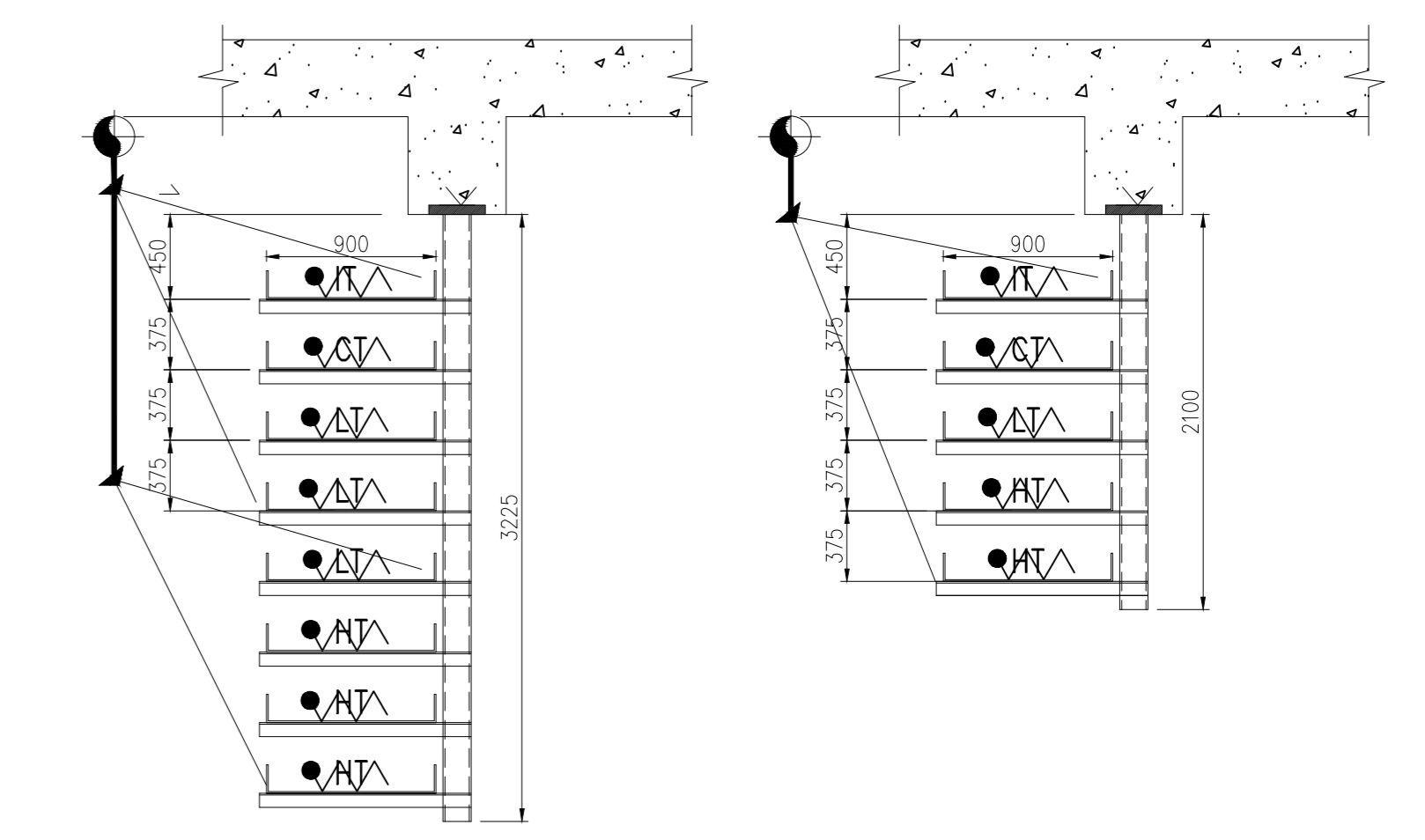
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RELEASE STATUS	DATE	SIGNATURE
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FOR TENDER ONLY		
FOR CONSTRUCTION		
ARCHITECTURAL	19.02.2019	PP
CIVIL & STRUCTURAL	19.02.2019	RD
ELECTRICAL	19.02.2019	RD
INSTRUMENTATION	19.02.2019	AT
MECHANICAL	19.02.2019	GKD

OWNER:	IFFCO PARADEEP
PROJECT:	IFFCO PARADEEP AFBC BOILER CONTROL ROOM
TITLE:	FIRE HYDRANT LAYOUT OF BOTH EXTERNAL INTERNAL FOR THE CONTROL BUILDING
DEVELOPMENT CONSULTANTS PVT LTD. CONSULTING ENGINEERS	KOLKATA - MUMBAI - CHENNAI - NEW DELHI
PREPARED BY	GKD
CHECKED BY	GKD
APPROVED BY	AT
DWG. NO.	18A08-DWG-M-0003
DATE	19.02.2019
SCALE	1:100
JOB NO.	18A08
DATE	19.02.2019
REV 0	
REV 1	



GROUND FLOOR PLAN
EL. (+) 0.50



TYPICAL SECTION OF THE SPRAY NOZZLE LOCATION & LHS

NOTES :-

1. ALL DIMENSIONS ARE IN MM & ALL LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED.
2. THE NUMBER OF DV STATIONS SHALL BE FINALISED BASED ON THE APPROVED CABLE TRAY LAYOUT.
3. LHS CABLE SHALL BE LAID IN ZIG-ZAC FASHION(45° ANGLE ON EVERY CABLE TRAY.
4. THE DIAMETER OF SPRAY WATER PIPING SHALL BE FINALISED BY THE VENDOR DURING DETAIL ENGINEERING BASED ON THE INPUT PRESSURE AT THE TERMINAL POINT.
5. ANY INTERFERENCE SHALL BE AVOIDED WITH OTHER FACILITIES TO BE INSTALLED OR ALREADY INSTALLED.
6. THE DELUGE VALVE SHALL HAVE WIRE CONNECTION WITH THE WIRELESS ALARM PANEL AS WELL AS WITH THE LINEAR HEAT SENSING CABLES.
7. THE ACTUAL REQUIRED QUANTITY NEED TO BE FINALISED BY THE VENDOR BASED ON THE AS BUILT DRAWING.
8. DELUGE VALVE HOUSING SHALL BE PROVIDED WITH BRICK WALL HOUSING ON THREE SIDES AND 4" THICK RCC ROOF.

REF. DWG. :-

1. CONTROL BUILDING ROOM LAYOUT : 18A08-DWG-E-0401
2. CABLE TRAY LAYOUT : 18A08-DWG-E-0402

LEGEND :-

- LHS CABLE (LENGTH) ----- QUANTITY AS PER CABLE TRAY LAYOUT.
- ▲ SPRAY NOZZLE (Nos.) ----- QUANTITY AS PER CABLE TRAY LAYOUT.
- SPRAY WATER HEADER --- AS PER WATER PRESSURE & FLOW AVAILABLE.
- SPRAY WATER PIPING CONNECTED WITH SPRAY NOZZLES - QUANTITY AS PER CABLE TRAY LAYOUT.
- DV DELUGE VALVE STATION ---- 2 Nos. (MINIMUM).

PROPOSED AFC DRAWING

MATERIAL DESCRIPTION :

1. PIPE , MS , ERW , IS-1239 (HEAVY GRADE 1) - 150 MM. DIA SIZE SHALL BE DECDED BASED ON THE WATER PRESSURE & FLOW AVAILABLE.
2. PIPE FITTINGS FOR PIPING SHALL BE A234 GR. WPB.
3. 6" GATE VALVES : CI JS 210 , FG 260 , 150# WITH STEM - SS 410 13% Cr. St. (2 Nos).
4. OTHER VALVES : CI JS 210 , FG 260 , 150# WITH STEM SS 410 13% Cr. St.
5. FLANGES SHALL BE A105, 150#, RAISED FACE, WELDNOK. GALVANIZED FLANGES SHALL BE THREADED.
6. PIPE AND PIPE FITTING FROM DELUGE VALVES (DV) TO SPRAY NOZZLES SHALL BE CS, THREADED GALVANIZED A234GRWPB/A105
7. DELUGE VALVES (SOUNDID TYPE), IS 210, OR FG-260/A216GRWCB WITH VALVE INTERNALS-BRASS/BRONZE/SS304, MINIMUM 100 DIA, HOWEVER SIZE SHALL CALCULATED BASED ON THE WATER PRESSURE AND FLOW AVAILABLE AT THE TAPPING POINT OF THE EXISTING FW HEADER (2 Nos.)
8. SPRAY NOZZLES , SS 304 (BOTH BODY & INSERT) , 60° - 150°
9. ALL THE STRAINERS SHALL BE SS316, 18 SWG, 30 MESH SUITABLY REINFORCED, BLOWING ARRANGEMENT SHALL BE PROVIDED.

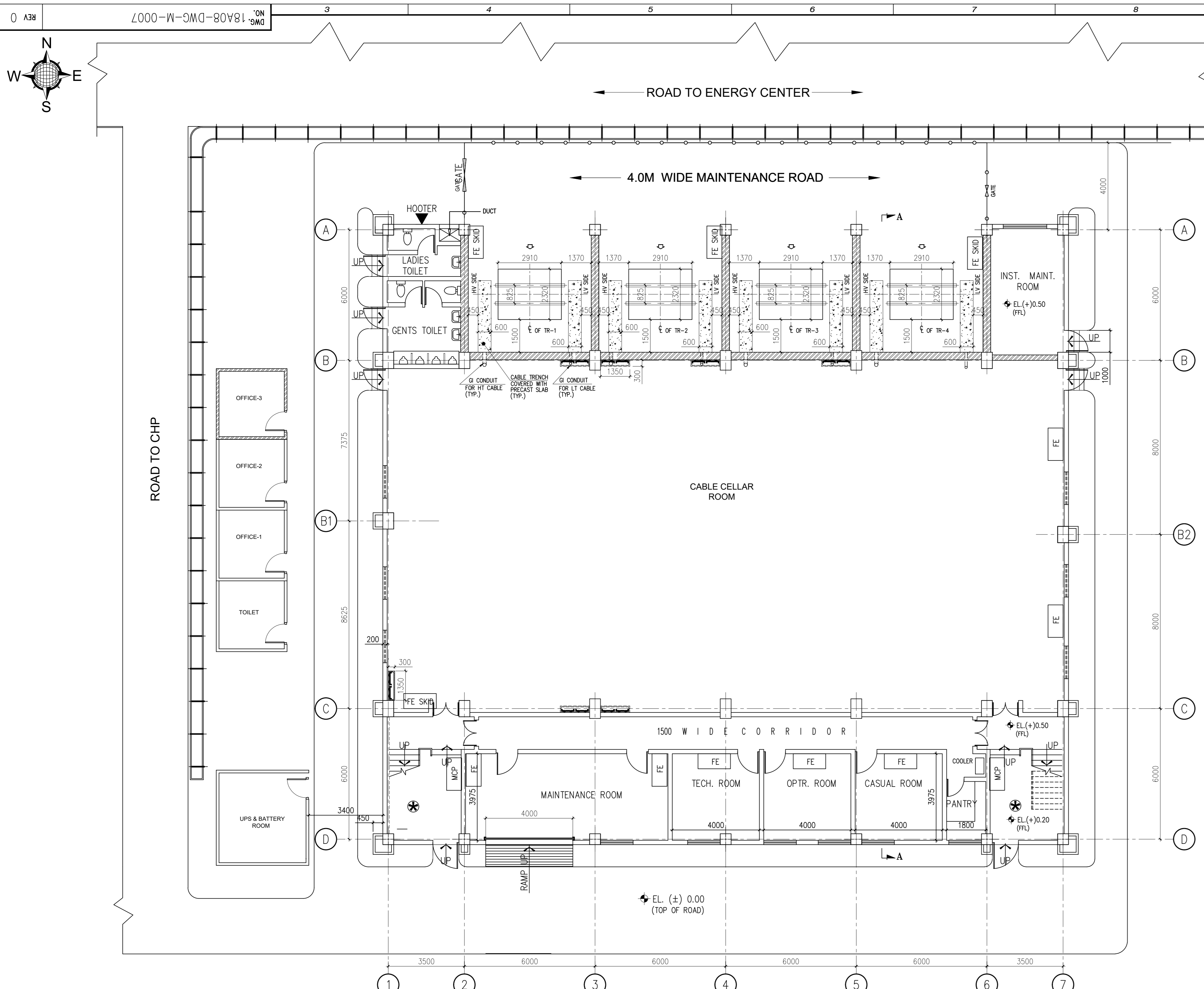
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							FOR CONSTRUCTION		
							ARCHITECTURAL	19.02.2019	PP
							CIVIL & STRUCTURAL	19.02.2019	AR
							ELECTRICAL	19.02.2019	RD
							INSTRUMENTATION	19.02.2019	AT
							MECHANICAL	19.02.2019	GKD

REVIEWED	DATE	SIGNATURE

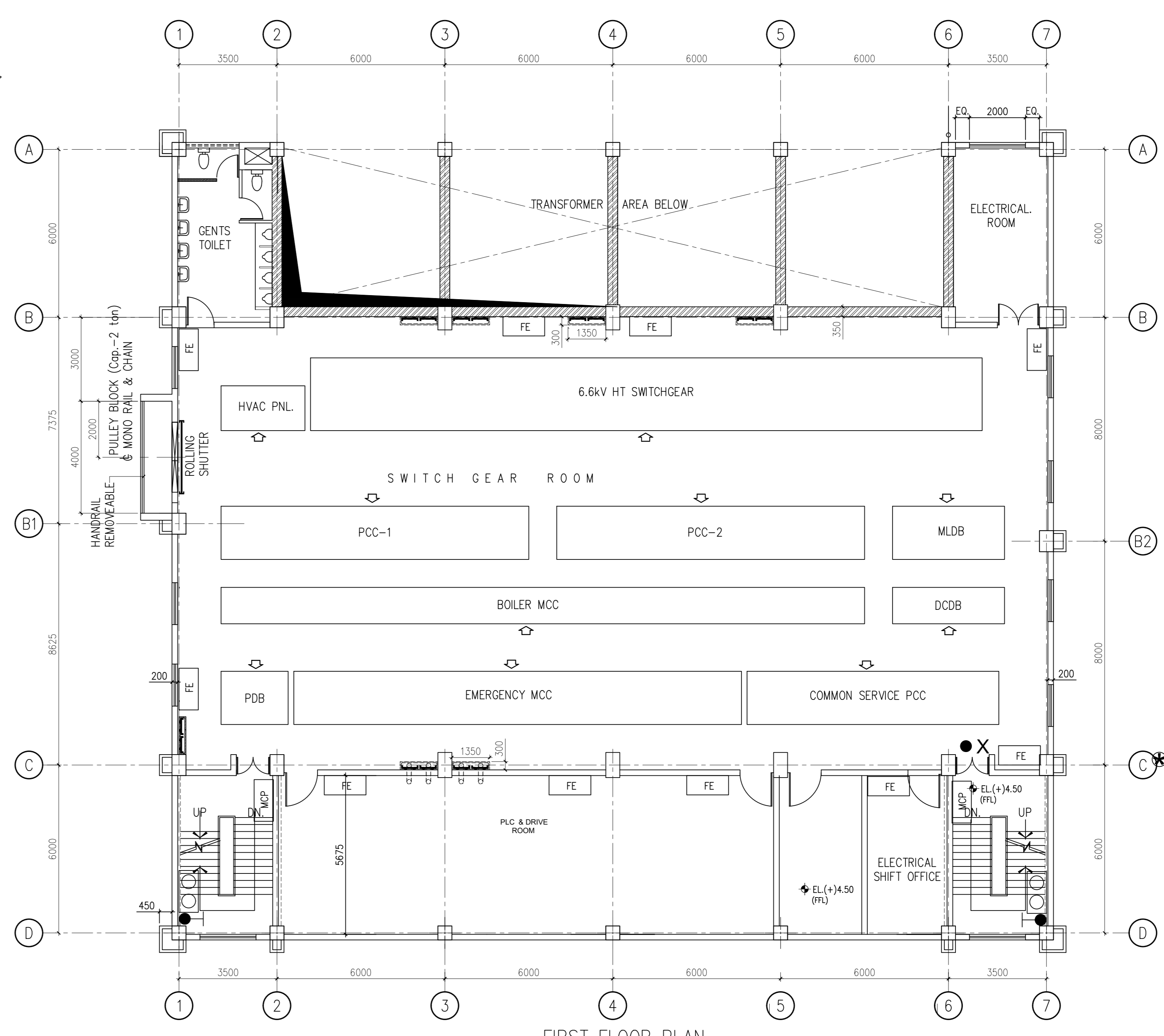
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	PROJECT:	IFFCO PARADEEP AFBC BOILER CONTROL ROOM
TITLE:	SPARY WATER PIPING LAYOUT FOR CONTROL BUILDING	
	DEVELOPMENT CONSULTANTS PVT LTD. CONSULTING ENGINEERS	
	KOLKATA • MUMBAI • CHENNAI • NEW DELHI	
PREPARED	BG	JOB NO. 18A08
CHECKED	RD	SCALE 1:150
APPROVED	DS	DATE 19.02.2019
DWG. NO.	18A08-DWG-M-0004	

APPROV.	MECH.	INST.	ELEC.	STR.	ARCH.	NATURE OF REVISION & DESCRIPTION	CHECKED	DRAWN	REV.	DATE

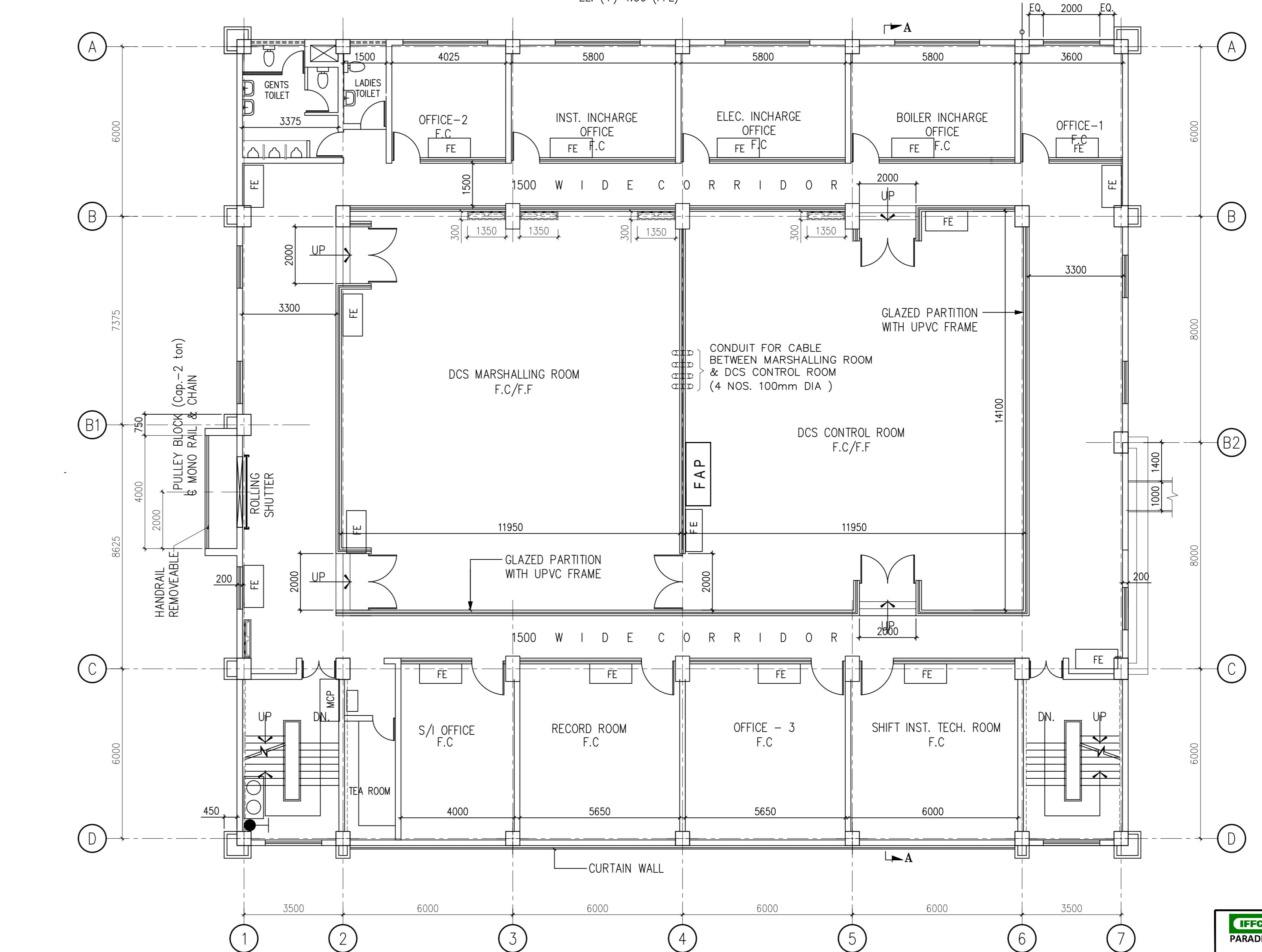
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PLOT DATE: 9/16/2019 3:10:00 PM



GROUND FLOOR PLAN
EL. (+) 0.50



FIRST FLOOR PLAN
EL. (+) 4.50 (F.F.L.)



SECOND FLOOR PLAN
EL. (+) 9.50 (F.F.L.)

- NOTES :-
- ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED.
 - THE PANEL DIMENSIONS IN THIS DRAWING ARE TENTATIVE. FINAL DIMENSION WILL BE AS PER APPROVED VENDOR DRAWING.
 - DCS CONTROL ROOM, INST. CONTROL ROOM, PLC & DRIVE ROOM WILL BE AIR-CONDITIONED AREA WITH FALSE CEILING & FALSE FLOORING.
 - MINIMUM 1M LENGTH OF THE CABLE FROM BOTH SIDE OF THE PENETRATION HOLE SHALL BE PAINTED BY THE 2MM FIRE RETARDANT COATING. EVERY CABLE PENETRATION HOLE SHALL HAVE MINIMUM 130MM, 3 HOURS RATING FIRE SEALING COMPOUND.
 - THE MAKES OF EQUIPMENT / MATERIAL SHALL BE AS PER APPROVED VENDOR AND AS PER OTHER APPROVED DOCUMENTS.
 - THE DIMENSIONS ARE INDICATIVE. ALL MATERIAL REQUIRED AS PER APPROVED DRAWING AND DOCUMENTS SHALL BE PROVIDED.
 - CIVIL/STRUCTURAL & ARCHITECTURAL DETAILS SHALL BE CONSIDERED FROM THE RESPECTIVE DRAWINGS.

- LEGEND :-
- FE HANGING FIRE EXTINGUISHERS ----- 33 Nos.
 - FE SKID FIRE EXTINGUISHERS SKID (50KG) ----- 4 Nos.

SCHEDULE OF THE FIRE EXTINGUISHERS FOR THE CONTROL BUILDING				
SL.NO.	ROOM DESCRIPTION	ROOM SIZE(mm x mm)	SqM	Qty(HOLD)
1	Technical Room	3975 X 4000	16	6 Kgs ABC
2	Operator Room	3975 X 4000	16	6 Kgs ABC
3	Casual Room	3975 X 4000	16	6 Kgs ABC
4	PLC Drive Room	5675 X 17700	100.44	6 Kgs ABC+ 6 Kgs DCP
5	Electrical Shift Office	6000 X 6000	36	6 Kgs ABC
6	Office 2	3975 X 4025	16	6 Kgs ABC
7	Instrumentation Incharge Office	5800 X 3975	23.055	6 Kgs ABC
8	Electrical Incharge Office	5800 X 3975	23.055	6 Kgs ABC
9	Boiler Incharge Office	5800 X 3975	23.055	6 Kgs ABC
10	Office 1	3975 X 4025	16	6 Kgs ABC
11	DCS Marshalling Room	11950 X 14100	168.495	6 Kgs DCP
12	DCS Control Room	11950 X 14100	168.495	6 Kgs DCP
13	S/I Office	4000 X 6000	24	6 Kgs ABC
14	Record Room	6000 X 5650	33.9	6 Kgs ABC
15	Office - 3	6000 X 5650	33.9	6 Kgs ABC
16	Shift Instrumentation Technical Room	6000 X 5650	33.9	6 Kgs ABC
17	Transformer Area	6000x24000	144	50 Kgs DCP Skid (Trolley)
18	Cable Celler Room	31000x16000	495	6 Kgs DCP
19	Switch Gear Room	31000x16000	495	6 Kgs DCP
20	Corridor	24000x1500x2	178	6 Kgs ABC
21	Any Other Area	as required	as required	bidder to consider the same

PROPOSED AFC DRAWING

	OWNER: IFFCO PARADEEP
PROJECT: IFFCO PARADEEP AFBC BOILER CONTROL ROOM	TITLE: FIRE EXTINGUISHER LAYOUT FOR THE CONTROL BUILDING
 DEVELOPMENT CONSULTANTS PVT LTD. KOLKATA - MUMBAI - CHENNAI - NEW DELHI	
ARCHITECTURAL: 19.02.2019 CIVIL & STRUCTURAL: 19.02.2019 ELECTRICAL: 19.02.2019 INSTRUMENTATION: 19.02.2019 MECHANICAL: 19.02.2019	PREPARED: 19.02.2019 CHECKED: 19.02.2019 APPROVED: 19.02.2019 DWG. NO. 18A08-DWG-M-0007

REV	DATE	DESCRIPTION	CHECKED	DRAWN	REV	DATE

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