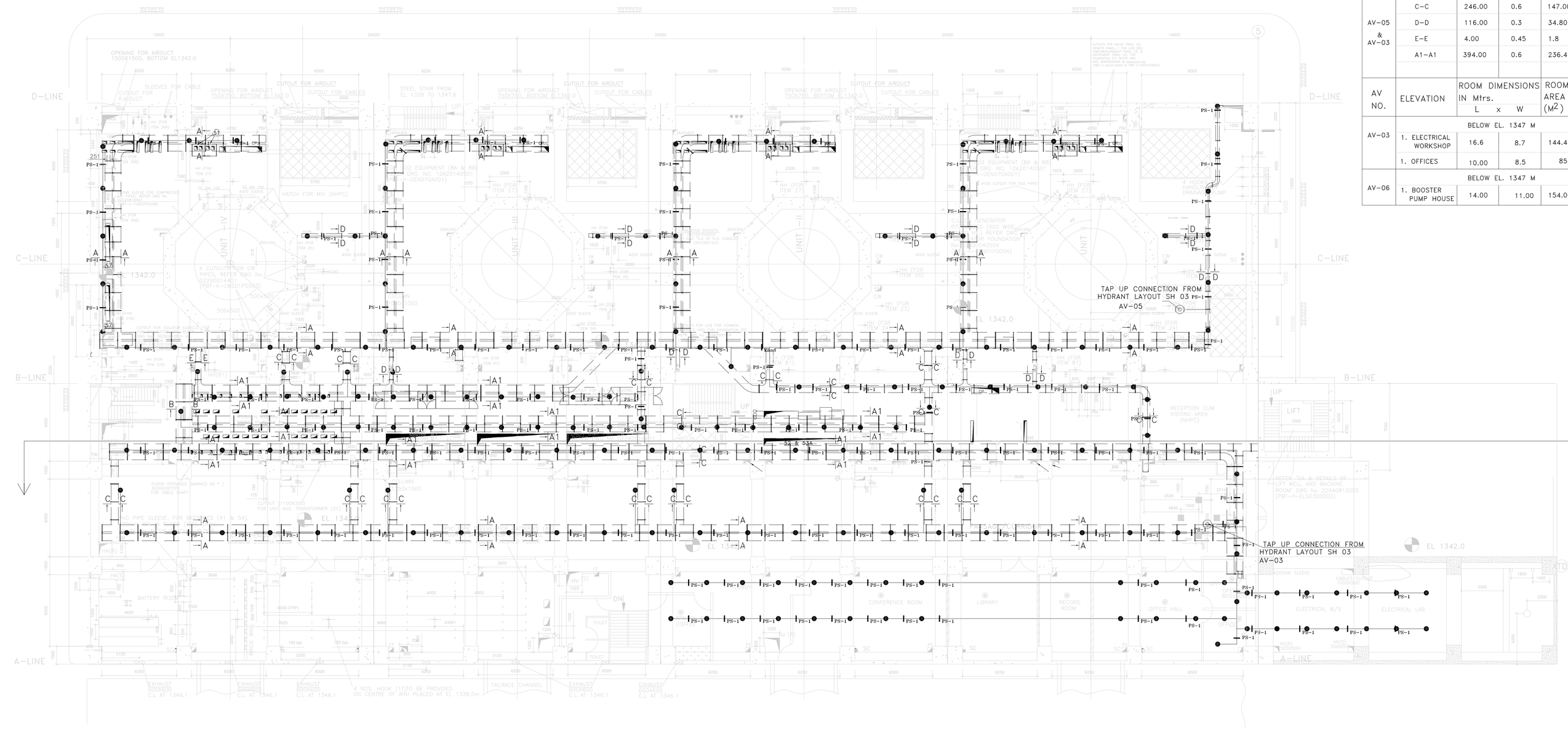
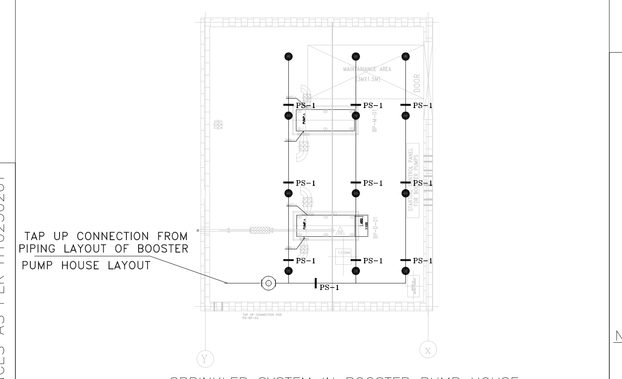
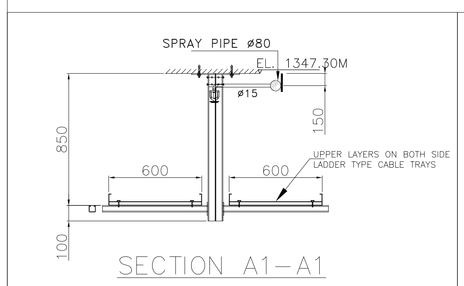
THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY



BELOW EL 1347.60 M

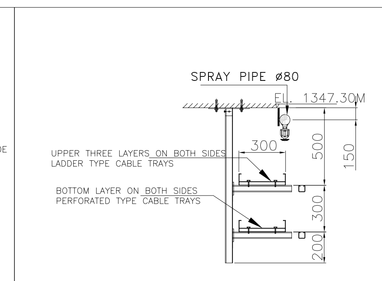


SPRINKLER SYSTEM IN BOOSTER PUMP HOUSE

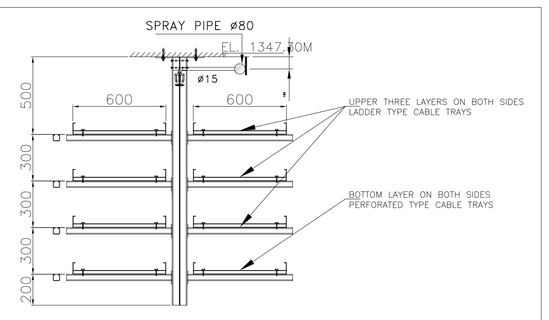


SECTION A1-A1

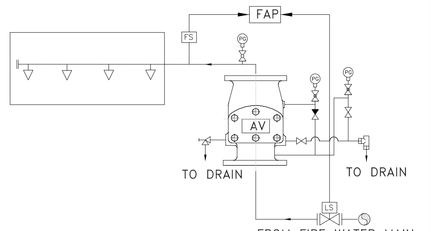
NOTE – TO AVOID THE FOULING WITH BUS DUCT THE DISTANCE 850mm SHALL BE 400mm BETWEEN THE BEAMS.



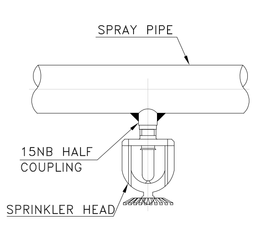
SECTION D-D



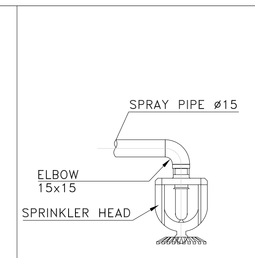
SECTION B-B



SCHEMATIC OF ALARM VALVE FOR AUTOMATIC SPRINKLER SYSTEM

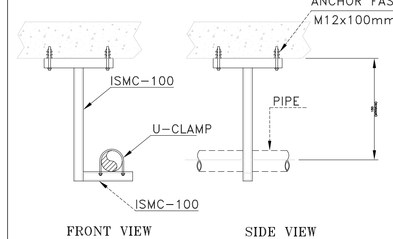


DETAIL:-'A'

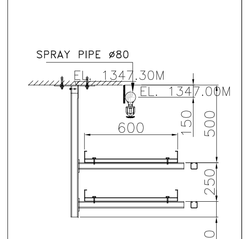


DETAIL:-'B'

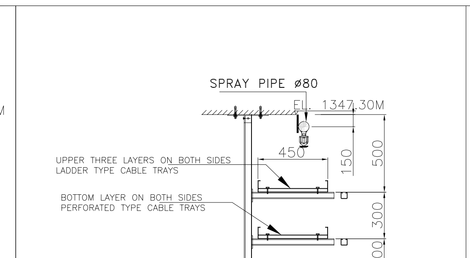
TYPICAL MOUNTING ARRANGEMENT OF SPRINKLER HEAD



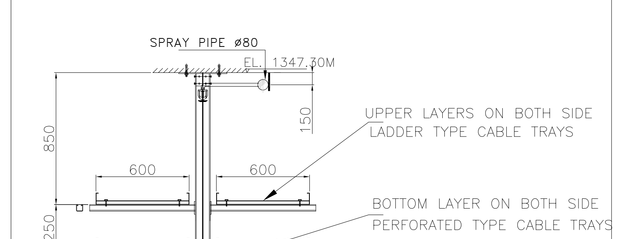
PIPE SUPPORT (PS-1)
(QTY.-123 NOS.) (SCALE : NTS)



SECTION C-C



SECTION E-E



SECTION A-A

DESIGN PARAMETER:- TABLE-2

AV NO.	SECTION	TRAY DIMENSIONS IN Mtrs. L x W		TRAY AREA (M^2)	TOTAL TRAY AREA (M^2)	DESIGN DENSITY AS PER TAC (LPM/M^2)	TOTAL WATER PROVIDED (LPM)
AV-05 & AV-03	BELOW EL. 1347 M				1184.00	2.25	2664
	A-A	1228.00	0.6	736.00			
	B-B	48.00	0.6	28.80			
	C-C	246.00	0.6	147.00			
	D-D	116.00	0.3	34.80			
	E-E	4.00	0.45	1.8			
	A1-A1	394.00	0.6	236.4			

AV NO.	ELEVATION	ROOM DIMENSIONS IN Mtrs. L x W		ROOM AREA (M^2)	TOTAL AREA (M^2)	DESIGN DENSITY AS PER TAC (LPM/M^2)	TOTAL WATER PROVIDED (LPM)
AV-03	BELOW EL. 1347 M				230	2.25	517.5
	1. ELECTRICAL WORKSHOP	16.6	8.7	144.42			
	1. OFFICES	10.00	8.5	85			
AV-06	BELOW EL. 1347 M				154.00	2.25	346.5
	1. BOOSTER PUMP HOUSE	14.00	11.00	154.00			

NOTES :

1. ALL DIMENSIONS ARE IN MM.& ELEVATIONS ARE IN MTRS UNLESS OTHERWISE SPECIFED.
2. DISTANCE BETWEEN TWO SPRINKLER SHALL NOT BE MORE THAN 4.5 Mtrs (AS PER TAC CLAUSE NO 11.2.1.2)
3. LOCATION FOR PIPE SUPPORT (PS) SHOWN IS TENTATIVE AND THE SAME SHALL BE DONE AS PER SITE CONDITION.
4. DISTANCE BETWEEN PIPE SUPPORTS SHALL NOT BE MORE THAN 3.5M. 05
5. HALF COUPLING SHALL BE WELDED DIRECTLY ON THE RING MAINS FOR FIXING PIPE & SPRINKLER HEADS.
6. SUITABLE SUPPORTS AS PER SITE CONDITION SHALL BE CONSIDERED.
7. MINOR MODIFICATIONS IN PIPE ROUTING, IF ANY, SHALL BE DONE AT SITE.
8. LOCATION OF ALARM VALVE MAY CHANGE TO SUIT SITE CONDITION.
9. THE DISCHARGE OF EACH SPRINKLER HEAD IS OF 56 LPM.

LEGEND :

SR. NO.	SYMBOL	DESCRIPTION
1.		MAIN HEADER
2.		SPRAY PIPE
3.		SPRINKLER
4.		CABLE
5.		ALARM VALVE (AV)
6.		GATE VALVE (GV)
7.		PIPE SUPPORT
8.		FLANGE
9.	FAP	FIRE ALARM PANEL (FAP)
10.	FS	FLOW SWITCH (FS)

REFERENCE :

1. HYDRANT LAYOUT: 0-38316-00005
2. Layout Plan at El. 1331.0 M : 0-200-00-144-02
3. Layout Plan at El. 1332.72 M : 0-200-00-144-03
4. Layout Plan at El. 1335.0 M : 0-200-00-144-03
5. Layout Plan at El. 1338.0 M : 0-200-00-144-04
6. Layout Plan at El. 1342.0 M : 0-200-00-144-05
7. Layout Plan at El. 1347.6 M : 0-200-00-144-06
8. Layout Plan at El. 1351.8 & 1355.55 M : 0-200-00-144-10
9. Cross Section of Power House : 0-200-00-144-01

BILL OF QUANTITY:

SR.No.	DESCRIPTION	UNIT	QTY.
1)	MS PIPE		
	80 NB	MTRS.	793
	15 NB	MTRS.	60
2)	ALARM VALVE ASSEMBLY		
	80 NB	NOs.	03
3)	GATE VALVE		
	80 NB	NOs.	03
4)	SPRINKLER HEAD	NOs.	226
5)	PRESSURE GAUGE	NOs.	09
6)	FLOW SWITCH	NOs.	03
7)	LIMIT SWITCH	NOs.	03

05

DESIGN PARAMETER:- TABLE-1:

Sr.No.	DESCRIPTION	
1	HAZARD	LIGHT
2	CODE / STANDARD	TAC
3	PRESSURE REQ. IN HYDRALICALLY REMOSTEST SPRINKLER	MIN 1.0Kg/Cm^2
4	DESIGN DENSITY	AS PER TABLE-2
5	SPRINKLER 'K' FACTOR	80
6	SPRINKLER HEAD	79° C
7	NOS. OF SPRINKLER HEAD(AV-03)	96 NOS.
8	NOS. OF SPRINKLER HEAD(AV-05)	118 NOS.
8	NOS. OF SPRINKLER HEAD(AV-06)	12 NOS.
9	ALARM VALVE (AV) SIZE & QTY.	80NB & 3 NOS.

PROJECT: PARBATI HEP STAGE – II (4 X 200 MW), HIMACHAL PRADESH, INDIA.

CUSTOMER: NHPC / NHPC Limited

BHARAT HEAVY ELECTRICALS LTD. HYDERABAD

	NAME	SIGN.	DATE
DRN.	RAVITEJA J	-sd-	04/06/2014
CHD.	KUMAR AMIT	-sd-	05/06/2014
APPD.	KUMAR GUNJAN	-sd-	05/06/2014

NO.OF VAR. N.A. NO.OF ITEMS -N.A.-

DEPT. I.T.D. CODE 415 | UNTOL. DIMS. OR +/-M/F | SCALE 1:150 | WEIGHT (KG) -N.A.- | REF. TO ASSY. DRG. -N.A.- | ITEM NO. -N.A.-

TITLE: LAYOUT OF SPRINKLER SYSTEM (BELOW 1347.3M)

CARD CODE N.A. | DRAWING NO. 0-38316-00007 | CUSTOMER DRG NO. FRH-FPS01-00-003 | REV. 05 | SHT. No 01 NO. OF SHT. 03

REV.	DATE	ALTERED	ZONE
05	01.06.16	CHD/APPD AMIT/GUNJAN	MODIFIED AS PER CUSTOMER COMMENTS AND MARKED AS 05
04	14.08.15	CHD/APPD AMIT/GUNJAN	REVISED INLINE WITH THE MEETING DATED 16.07.2015 AT NHPC.
03	23.06.15	CHD/APPD AMIT/GUNJAN	MODIFIED AS PER CUSTOMER COMMENTS
02	02.06.15	CHD/APPD AMIT/GUNJAN	MODIFIED AS PER CUSTOMER COMMENTS
01	25.02.15	CHD/APPD AMIT/GUNJAN	MODIFIED AS PER CUSTOMER COMMENTS

INVENTORY NO | SIGN. AND DATE | REF. DRG. NO. (38316000007-201-R05.dwg) | COMPUTER FILE NAME