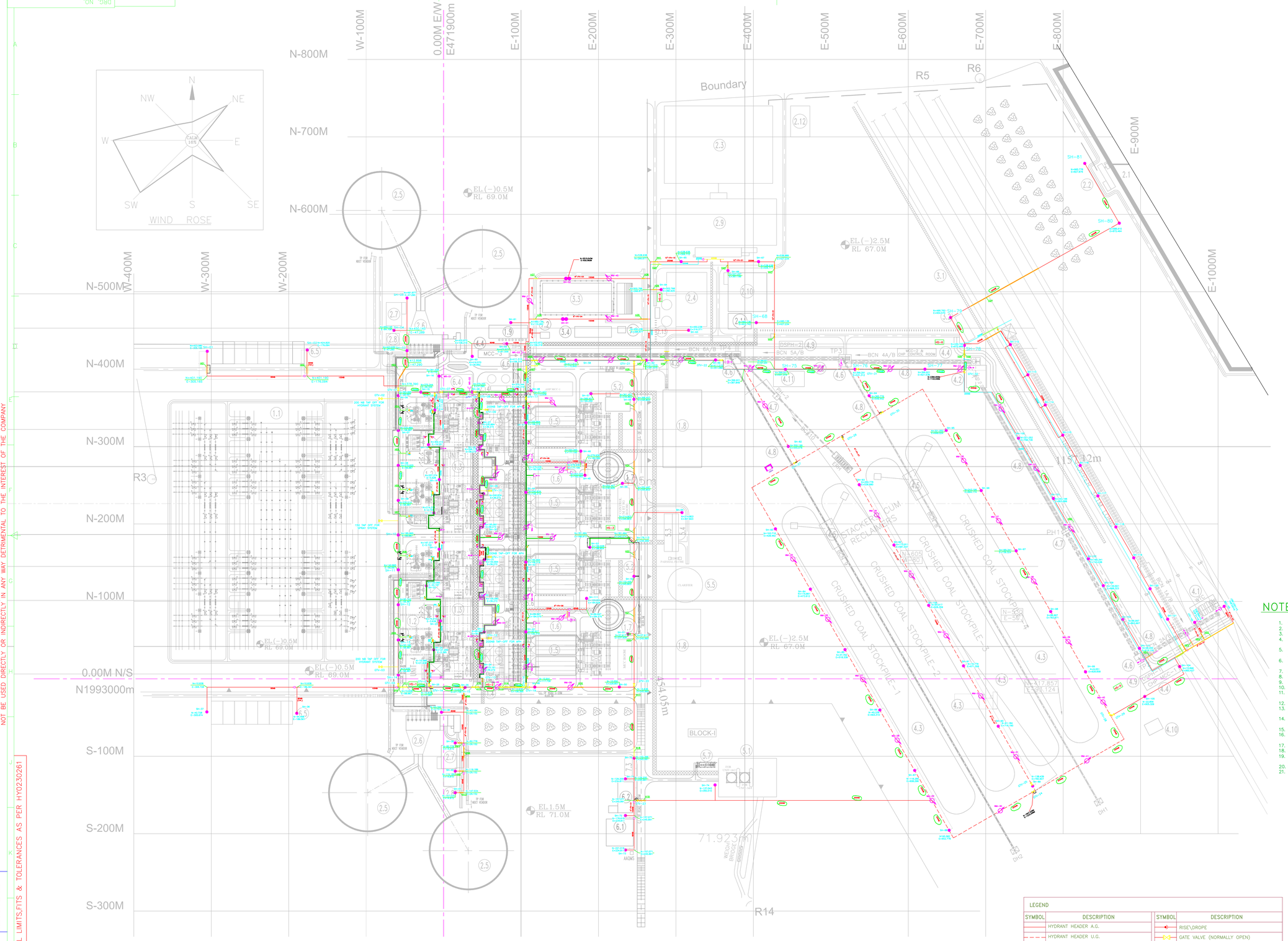
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DRG. NO.



TABLE

FACILITY	DESCRIPTION OF FACILITIES
1.0	MAIN PLANT AREA
1.1	SWITCH YARD
1.2	TRANSFORMER YARD
1.3	TURBINE BUILDING
1.4	BOILER
1.5	ESP
1.6	ESP CONTROL ROOM
1.7	CHIMNEY
1.8	SPACE FOR FGD
1.9	IA & SA COMPRESSOR HOUSE
1.10	DG SET
2.0	WATER SYSTEM
2.1	RAW WATER RESERVOIR
2.2	RAW WATER PUMP HOUSE
2.3	PT PLANT
2.4	DM PLANT
2.5	NDCT
2.6	CW PUMP HOUSE
2.7	CW CHLORINATION PLANT FOR CW SYSTEM
2.8	CW TREATMENT PLANT FOR CW SYSTEM
2.9	CLARIFIED WATER STORAGE TANK & PUMP HOUSE
2.10	EFFLUENT TREATMENT PLANT
2.11	CHEMICAL LAB
2.12	SEWAGE TREATMENT PLANT
2.13	DM TANKS & DM TRANSFER PUMPS
2.14	CONDENSATE STORAGE TANKS AND CONDENSER MAKE UP & BOILER FILL PUMPS
3.0	FUEL OIL SYSTEM
3.1	FUEL OIL UNLOADING TRENCH
3.2	FUEL OIL UNLOADING AND PRESSURISING PUMP HOUSE
3.3	FUEL OIL STORAGE TANK AREA
3.4	FUEL OIL FORWARDING PUMP HOUSE
4.0	COAL HANDLING PLANT
4.1	WAGON TIPPLER
4.2	CRUSHER HOUSE
4.3	CRUSHED COAL STOCKPILE
4.4	CHP CONTROL ROOM
4.5	STACKER RECLAIMER
4.6	TRANSFER POINT (TP)
4.7	PENT HOUSE (PH)
4.8	COAL BELT CONVEYOR
4.9	DUST SUPPRESSION PUMP HOUSE
4.10	COAL PILE RUN OFF POND
4.11	BULL DOZER SHED
5.0	ASH HANDLING PLANT
5.1	FLY ASH SILOS
5.2	ASH SLURRY PIMP HOUSE
5.3	ASH WATER TANK
5.4	ASH WATER PUMP HOUSE
5.5	AHP CLARIFIER
5.6	AHP VACUUM CUM COMPRESSOR HOUSE
5.7	SILO UTILITY BUILDING
6.0	NON – PLANT BUILDING
6.1	ADMN. BUILDING
6.2	CANTEEN
6.3	MAIN GATE
6.4	SERVICE BUILDING
6.5	STORAGE SHEDS
7.0	FIRE FIGHTING SYSTEM
7.1	FOAM PUMP HOUSE
7.2	BOOSTER PUMP HOUSE
7.3	FIRE STATION

NOTES:–

1. ALL DIMENSIONS ARE IN MM AND CO-ORDINATES ARE IN METER UNLESS SPECIFIED.
2. SUITABLE SUPPORT SHALL BE PROVIDED FOR A/G PIPES FROM THE NEAREST COLUMNS/STRUCTURE.
3. ALL HYDRANTS AND MONITORS SHALL BE INSTALLED 1.0M ABOVE THE FGL.
4. COATING & WRAPPING FOR U/G PIPE & PAINTING FOR A/G PIPE SHALL BE PROVIDED AS PER TECHNICAL SPECIFICATION.
5. MINOR MODIFICATIONS MAY BE CARRIED OUT AT SITE DURING ERECTION TO CLEAR INTERFERENCES WITH EXISTING PIPES/STRUCTURAL MEMBERS/EQUIPMENTS.
6. THE LOCATION OF DELUGE VALVE AND ITS HOUSING MAY BE SUITABLY MODIFIED AT SITE AS PER SITE CONDITION IF REQUIRED.
7. PIPE SHOULD BE LAID THROUGH HUME PIPE (NP3) AT ROAD AND (NP4) AT RAIL CROSSING.
8. ALL PIPE LINES UPTO DELUGE VALVES, HYDRANTS, MONITORS SHALL BE HYDRAULICALLY TESTED.
9. THE SYSTEM IS DESIGNED AS PER TAC RECOMMENDATION/TECHINIAL SPECIFICATION.
10. ISOLATION GATE VALVE IS PROVIDED ON RISER AT EL. OF APPROX. 1.2M.
11. EXACT DETAIL OF RISE AND LOCATION OF INTERNAL HYDRANTS AND ITS ROUTING IS AS PER RESPECTIVE.
12. RADIOGRAPHY, HYDROTEST/HOLIDAY TEST WILL BE AS PER APPROVED FQP.
13. LOCATION OF DV, HYDRANTS AND WATER MONITORS AS INDICATED MAY CHANGE AS PER SITE CONDITION.
14. WATER MONITORS & HYDRANT VALVES AND ITS LOCATION AND SPACING ARE AS PER TAC RECOMMENDATION/SPECIFICATION.
15. ALL WATER MONITORS ARE PROVIDED WITH ISOLATION GATE VALVES.
16. INTERNAL HYDRANT LOCATION & RISER DETAIL SHALL BE FURNISHED AFTER RECEIPT OF INPUT OF RESPECTIVE BUILDING/STRUCTURE FROM CLIENT.
17. FOR DETAIL OF HOSE HOUSE AND ITS ACCESSORIES, REFER SHEET NO 02 OF THIS DRAWING.
18. ERECTION OF FIRE WATER PIPING SHALL BE DONE ONLY AFTER THE ERECTION OF ACW PIPING.
19. THE FINISHED FLOOR LEVEL (FFL) OF POWER HOUSE BUILDING GROUND FLOOR IS EL. 0.00M WHICH CORRESPONDS TO RL 69.5M i.e. 0.5M ABOVE FGL.
20. BOILER AREA FINISHED FLOOR LEVEL IS 200MM BELOW 0.0M i.e. RL 69.3M.
21. TRANSFORMER YARD FINISHED FLOOR LEVEL IS 100MM BELOW 0.0M i.e. RL 69.4M.

S.No.	AREA DESCRIPTION	PERIMETER (Mts)	HYDRANTS REQUIRED	PROTECTION PROVIDED				TOTAL PROTECTION
				SH	DH	WM		
1.	MAIN PLANT AREA							
1.2	TRANSFORMER YARD AREA	691.744	16	16			16	16
1.3	TURBINE BUILDING	777.680	17	19			19	19
1.4	BOILER AREA	730.496	17	13		09	22	22
1.5	ESP	671.36	22	16		09	25	25
1.6	ESP CONTROL ROOM	262.212	6	04		02	06	06
1.7	IA & COMPRESSOR HOUSE	134	03	03			03	03
1.8	DG SET	147.680	06	06			06	06
2.	FUEL OIL SYSTEM							
2.1	FUEL OIL UNLOADING PUMP HS	92.000	02	03			03	03
2.2	FUEL OIL STORAGE AREA	127.000	03		04	03	02	02
2.3	FUEL OIL FORWARDING PUMP HS	123	03	01	01	02		
3.	COAL HANDLING PLANT							
3.1	WAGON TIPPLER AREA	80	2	2			2	2
3.2	CRUSHER HOUSE	1064.03	20	12		11	23	23
3.3	CHP CONTROL ROOM	119.996	03	3			3	3
3.4	CONVEYOR BC- 3A/B	415.597	9	6		3	9	9
3.5	CONVEYOR BC- 4A/B	164.246	4	2		2	4	4
3.6	CONVEYOR BC- 5A/B	136.326	3	1		2	3	3

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	HYDRANT HEADER A.G.		RISE\DROPE
	HYDRANT HEADER U.G.		GATE VALVE (NORMALLY OPEN)
	SPRAY SYSTEM HEADER A.G.		HUME PIPE
	SPRAY SYSTEM HEADER U.G.		REDUCER
	SINGLE HEADED HYDRANT VALVE (SH)	FC	FIRE ESCAPE HYDRANT
	DOUBLE HEADED HYDRANT VALVE (DH)	HS	HOSE BOX
	WATER MONITOR 75ø		FIRE TRENCH
	DELUGE VALVE WITH DELUGE VALVE HOUSING		

CUSTOMER: TELANGANA STATE POWER GENERATION CO. LTD.

CUSTOMER'S CONSULTANT: DESEIN PRIVATE LIMITED

PROJECT: BHADRADRI TPS, UNITS # 1 TO 4 (4X270 MW), MANUGURU, KHAMMAM DISTRICT — JOB No. 411

BHARAT HEAVY ELECTRICALS LTD. HYDERABAD — PROJECT ENGG & SYSTEMS DIVISION

	NAME	SIGN.	DATE	NO.OF VAR.
DRN.	AVIRAL	–SD–	27.08.15	
CHD.	AMIT	–SD–	28.08.15	
APPD.	K GUNJAN	–SD–	29.08.15	

DEPT.	UNTOL. DIMS.	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.	NO.OF ITEMS
PED	OR g/m/f			–NA–	–NA–	–NA–
CODE 450						

TITLE: COMPOSITE LAYOUT OF HYDRANT & SPRAY SYSTEM

CARD CODE: NA — BHEL. DRG. NO. 0–38316–00028 — REV. 03P — CUST. DRG. NO. –NA– — SHT. No 01 — NO. OF SHT. 02

REV.	DATE	ALTERED	
02	22.01.16	CHD/APPD	K GUNJAN
		REVISED AS PER DESEIN COMMENTS DATED 29.10.15	
01	17.11.15	CHD/APPD	K GUNJAN
		REVISED AS PER DESEIN COMMENTS DATED 29.10.15	

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GENERAL DIMENSIONAL LIMITS,FITS & TOLERANCES AS PER HY023261

COMPUTER FILE NAME | REF. DRG. NO. | SIGN. AND DATE | INVENTORY NO