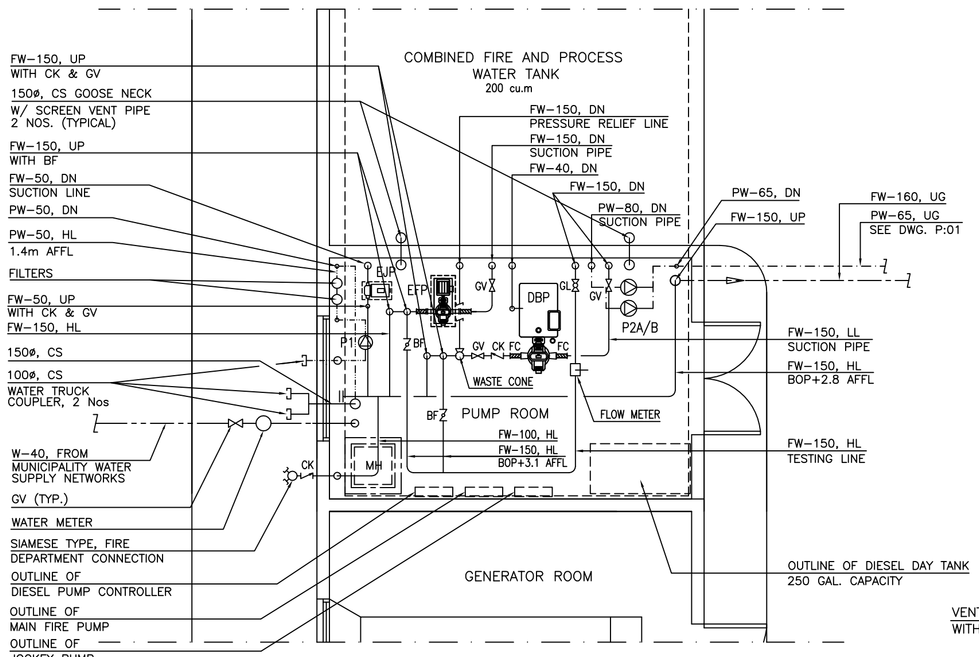
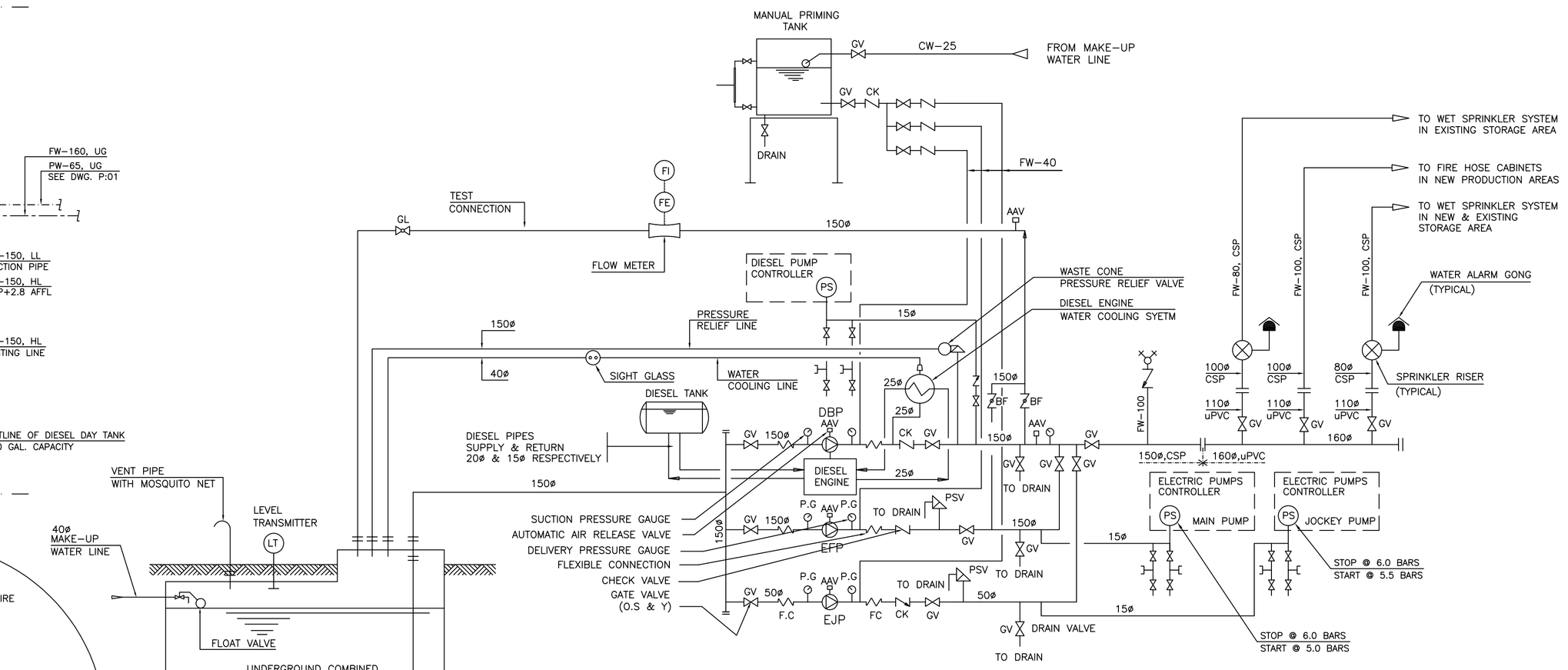
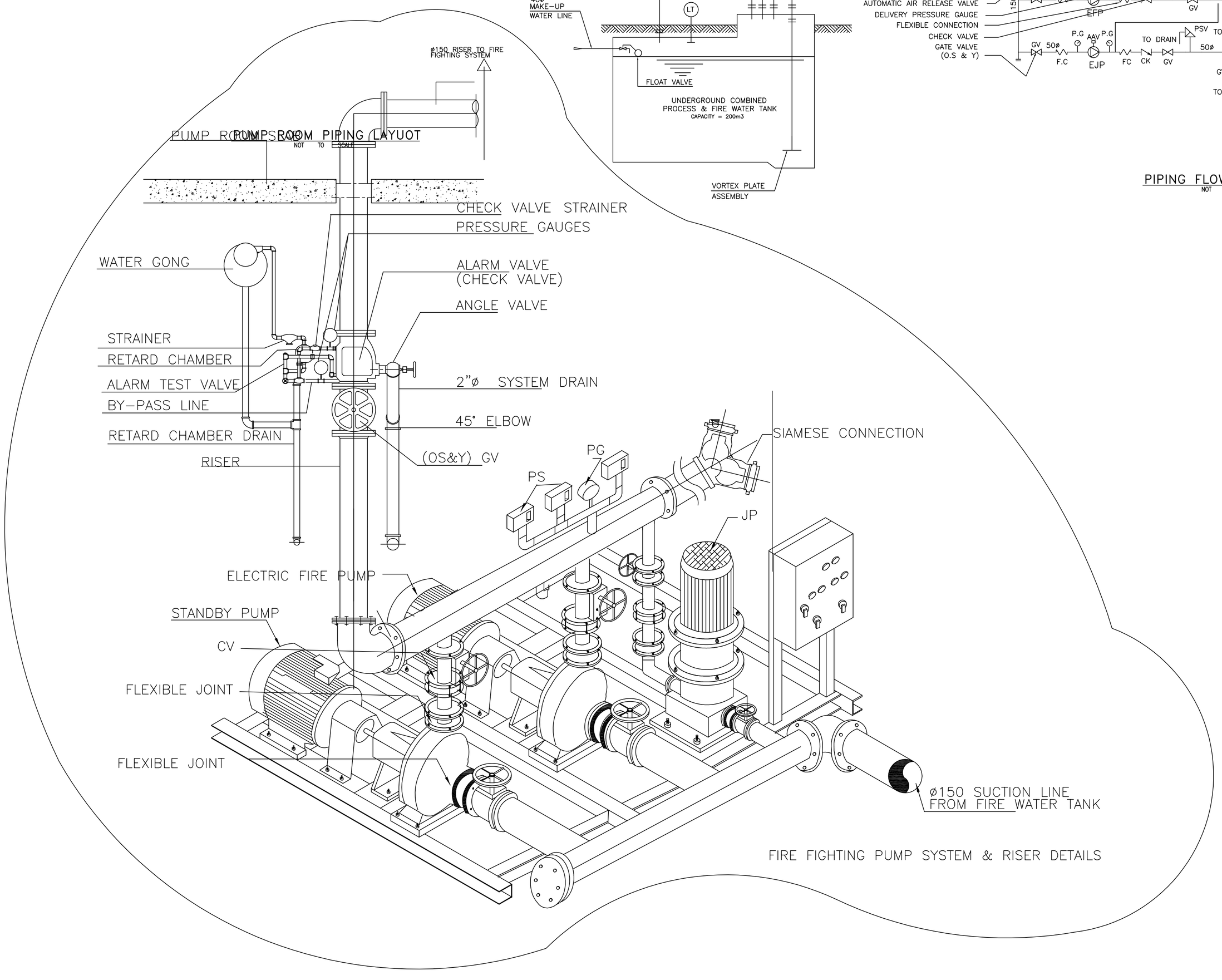




PIPING FLOW DIAGRAM (PFD)
NOT TO SCALE



FIRE FIGHTING PUMP SYSTEM & RISER DETAILS

NOTES:

1. INSTALLATION OF FIRE HOSE RACK AND REELS SHALL BE IN ACCORDANCE WITH NFPA 14 – 1986.
2. ALL INTERNAL PIPES ABOVE GROUND (INSIDE THE BUILDING AND PUMP ROOM) SEAMLESS BLACK STEEL PIPES, (ASTM A53) SCHEDULE 40.
3. ALL EXTERNAL AND UNDERGROUND PIPES SHALL BE uPVC CLASS 5 (1600 KPa) SOCKET SOLVENT WELD JOINTED TYPE.
4. ALL EQUIPMENT SHALL BE DESIGNED FOR AN AMBIENT TEMPERATURE OF 50° C.
5. INCOMING PIPES SHALL BE COORDINATED WITH THE EXTERNAL FIRE FIGHTING LAYOUT.
6. SCREWED UNIONS SHALL NOT BE USED ON PIPE LARGER THAN 50mm DIAMETER FLANGES MIGHT BE USED.
7. ALL THE VALVES INSTALLED ON THE PUMP LINES (SUCTION DISCHARGE TEST) SHALL BE OS & Y TYPE.
8. INSTALLATION OF SPRINKLERS SHALL BE IN ACCORDANCE WITH N.F.P.A. 13.
9. ALL THE SIZES OF THE PIPES SHOWN ARE THE INTERNAL DIAMETERS.

LEGEND:

FW	UNDERGROUND FIRE WATER PIPE, uPVC CLASS 5 (1600 KPa).
▶	THRUST BLOCK
PS	PRESSURE SWITCH
FI	FLOW METER INDICATOR
FC	FLEXIBLE CONNECTION
PG	PRESSURE GAUGE
CK	CHECK VALVE
PSV	PRESSURE SAFETY VALVE
GV	GATE VALVE
PE	PLUGGED END
FHC-40	FIRE HOSE RACK WITH CABINET, 40mm DIA.
WM	WATER METER
BOP	BOTTOM OF PIPE
AFFL	ABOVE FINISHED FLOOR LEVEL
CSP	CARBON STEEL PAINTED
uPVC	UNPLASTICIZED POLYVINYL CHLORIDE PIPE
AAV	AUTOMATIC AIR VALVE
FW	FIRE WATER PIPE
GL	GLOBE VALVE
BF	BUTTERFLY VALVE
EJP	RELOCATED EXISTING JOCKEY PUMP
EFP	RELOCATED EXISTING FIRE PUMP
DBP	NEW DIESEL BACKUP FIRE PUMP
	FIRE DEPARTMENT CONNECTION, SIAMESE TYPE
	WATER MOTOR GONG

ELECTRIC FIRE PUMP (EFP) SHALL BE MOTOR DRIVEN

CAPACITY	= 500 GPM
DESIGN HEAD	= 90 psi
POWER	= 29.3 hp = 22 kw

DEISEL BACK UP PUMP (DBP) A STANDBY FIRE PUMP, SHALL BE DEISEL MOTOR DRIVEN PUMP.

CAPACITY	= 500 GPM
DESIGN HEAD	= 90 psi
POWER	= 29.3 hp = 22 kw

JOCKEY PUMP (EJP) A PRESSURE MAINTENANCE PUMP CONNECTED TO ELECTRIC AND DEISEL PUMP.

CAPACITY	= 30 GPM
DESIGN HEAD	= 90 psi
POWER	= 2.5 hp = 2 kw

ENG.: WALID MEGAHED

00966546212048