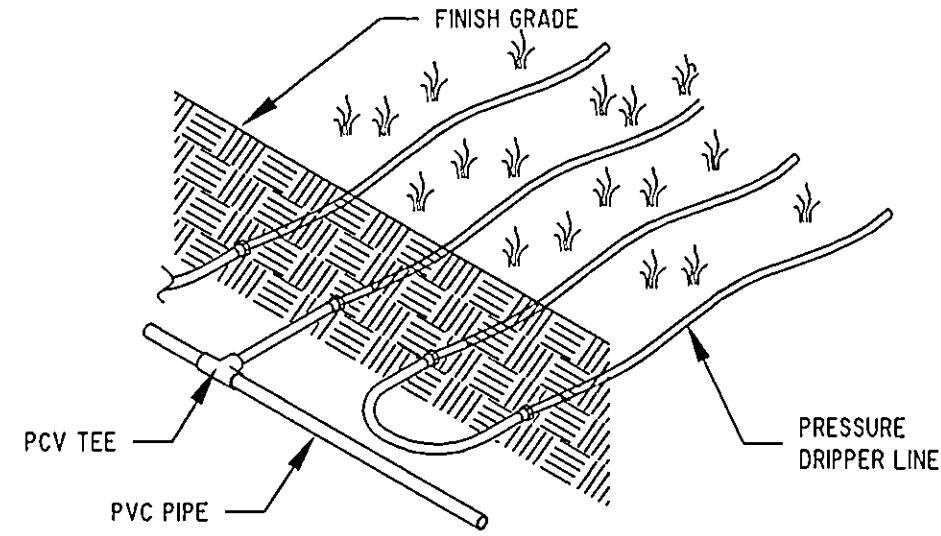


SEPTIC DRIP CALCULATION SHEET

1	417	GALLONS PER DAY	4	BEDROOMS
2	0.23	GPD/L.F. TUBING INFILTRATIVE SOIL LOADING RATE		
3	150	FT. (Length)	26	FT. (Width) AREA FOR DISPOSAL LAYOUT
4	0.12	GPD/FT ² AREA SOIL LOADING RATE PROVIDED	3900	FT. SQ.
5	2	ZONES		
6	1800	TOTAL DRIPPER LINE PROVIDED		
7	2000	SEPTIC TANK SIZE		
8	2000	DOSING TANK SIZE		
9	33	GALLONS PER INCH IN DOSING TANK (Recommended Minimum)		
10		ZONE ONE		
11	1950	TOTAL ABSORPTION AREA		
12	900	LINEAR FEET OF DRIP TUBING		
13	300	LONGEST LATERAL LENGTH		
14	4.58	DOSING FLOW RATE		
15	3	NO. RETURN FIELD FLUSH CONNECTIONS		
16	4.80	FIELD FLUSH FLOW RATE		
17	9.38	TOTAL FLOW REQUIRED		
18		ZONE TWO		
19	1950	TOTAL ABSORPTION AREA		
20	880	LINEAR FEET OF DRIP TUBING		
21	900	LONGEST LATERAL LENGTH		
22	4.58	DOSING FLOW RATE		
23	3	NO. RETURN FIELD FLUSH CONNECTIONS		
24	4.80	FIELD FLUSH FLOW RATE		
25	9.38	TOTAL FLOW REQUIRED		
26	10	MAXIMUM DESIGN FLUSHING FLOW		
27	8	FEET OF HEAD LOSS FROM HYDRAULIC UNIT (Based on #26)		

28	HYDRAULIC UNIT SUPPLY LINE				
29	1.5	PIPE DIAMETER			
30	15	LENGTH SUPPLY PIPE			
31	7.1	FEET OF STATIC LIFT			
32	9	TOTAL FEET HEAD LOSS IN LINE (Dynamic Head Loss + #31)			
33	FORCE MAIN SUPPLY LINE PIPE SIZE & LENGTH:				
34	1"	ZONE 1 SIZE	150	ZONE 1 LENGHT	9 FT. HEAD LOSS
35	1"	ZONE 2 SIZE	150	ZONE 2 LENGTH	9 FT. HEAD LOSS
36	RETURN FLUSH LINE SIZE & RETURN:				
37	1"	ZONE 1 SIZE	150	ZONE 1 LENGHT	5 FT. HEAD LOSS
38	1"	ZONE 2 SIZE	150	ZONE 2 LENGTH	5 FT. HEAD LOSS
39	10	FEET OF TOTAL STATIC HEAD LOSS (Vertical Lift)			
40	TOTAL PRESSURE LOSS (Add Items 27, 32, 34/35, 37/38, 39 + Flushing):				
41	76	ZONE 1 HEAD LOSS, INCLUDES	35	FEET FLUSHING	
42	76	ZONE 2 HEAD LOSS, INCLUDES	35	FEET FLUSHING	
43	PUMP SIZING:				
44	76	MAXIMUM TOTAL PRESSURE LOSS (Highest 41 or 42)			
45	124	DISC FILTER BACKFLUSH (#32 + #51L # 15 GPM)			
46	15	GPM #	124	FEET,	115 VOLTS, 1 PHASE, 0.5 HP
47	TIMED DOSING PER ZONE:				
48	ZONE ONE:				
49	4.58	Dosing GPM	6.84	MIN./DOSE	31.3 GALLONS PER DOSE
50	4	AVE. CYCLES	6.67	PEAK CYCLES	
51	ZONE TWO:				
52	4.58	Dosing GPM	6.84	MIN./DOSE	31.3 GALLONS PER DOSE
53	4	AVE. CYCLES	6.67	PEAK CYCLES	
54	4	INCHES DRAWDOWN FLOAT SWITCH SETTING (Minimum 4")			
55	Landscape Linear Loading Rate (LLLR):				
56	Soil Loading Rate (SLR):				SLR = 0.11



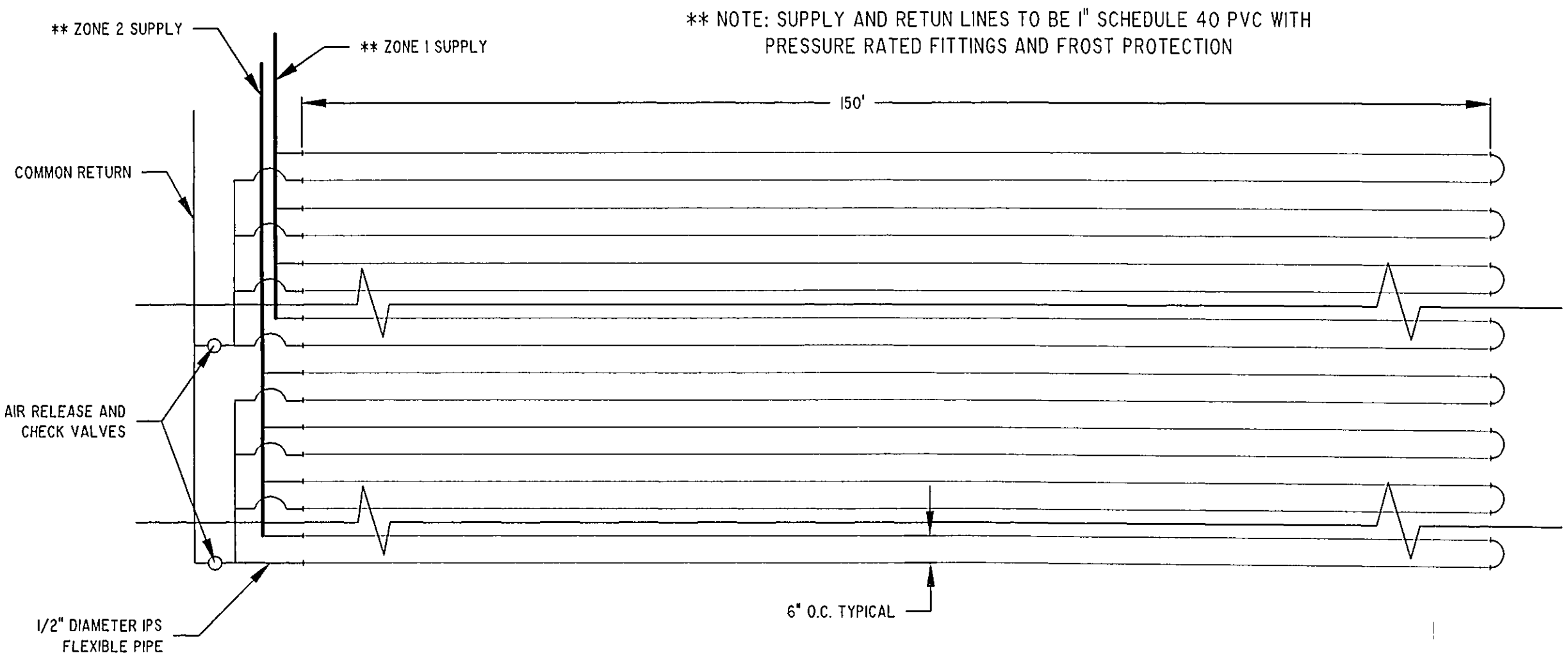
SUBSURFACE DISTRIBUTION SYSTEM

SCOPE: DOMESTIC SEWAGE WILL FLOW BY GRAVITY THROUGH THE SEPTIC TANK THEN INTO A FINAL DOSING TANK. THE CENTRAL UNIT WILL DISPOSE OF THE EFFLUENT BY ALTERNATELY DOSING MULTIPLE ZONES IN THE ABSORPTION AREA.

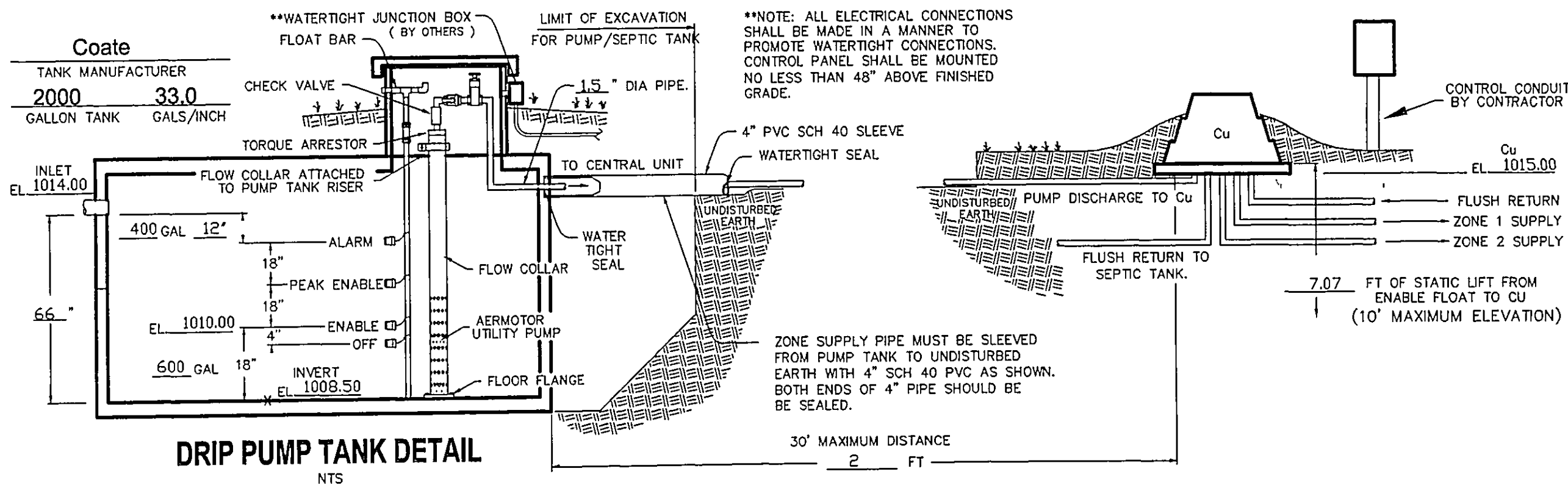
THE CENTRAL UNIT COMPRISES BOTH THE CONTROLS AND THE HYDRAULIC UNIT.

DRIPPER LINE TO FOLLOW CONTOURS WITH PVC MANIFOLD PERPENDICULAR TO GRADE. PVC MANIFOLD TO BE FREEZE PROTECTED.

DRIP DETAIL SCHEMATICS

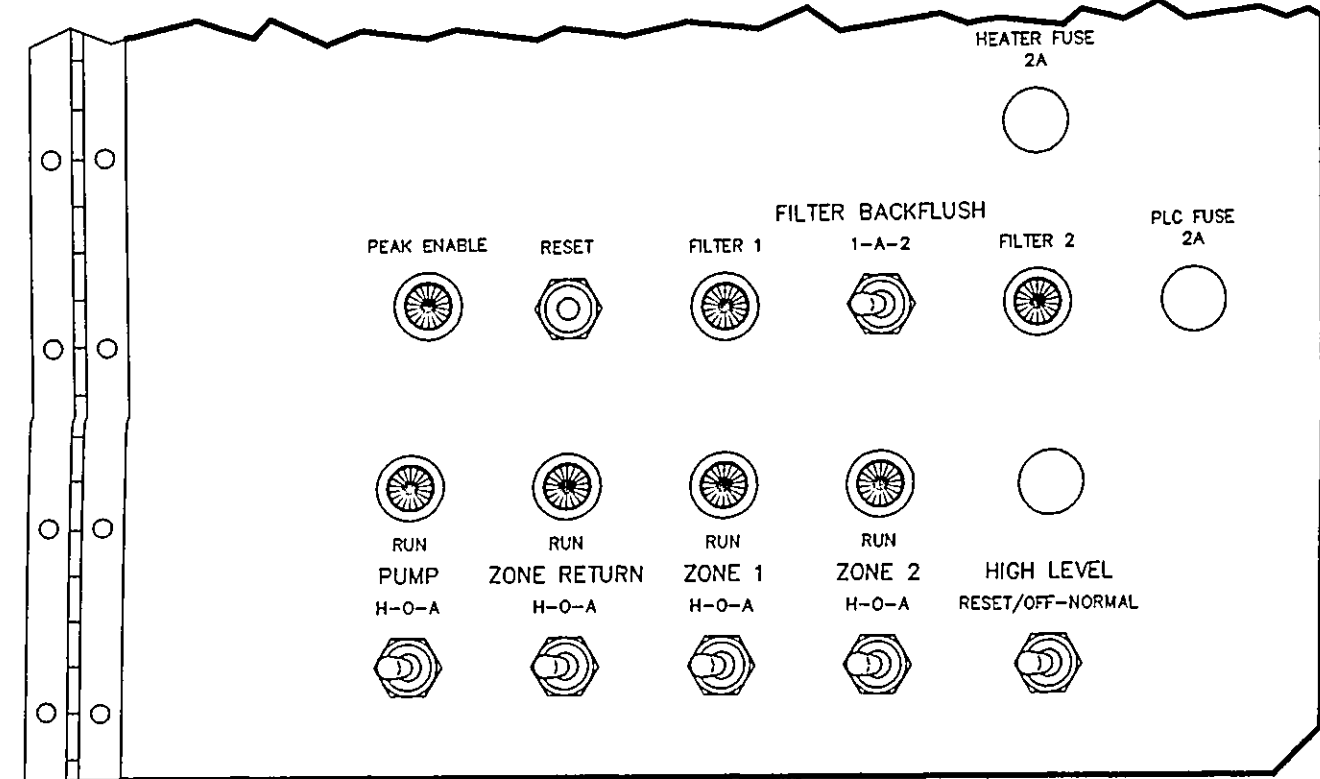


MANIFOLD DETAIL AND ZONE LAYOUT



DRIP PUMP TANK DETAIL

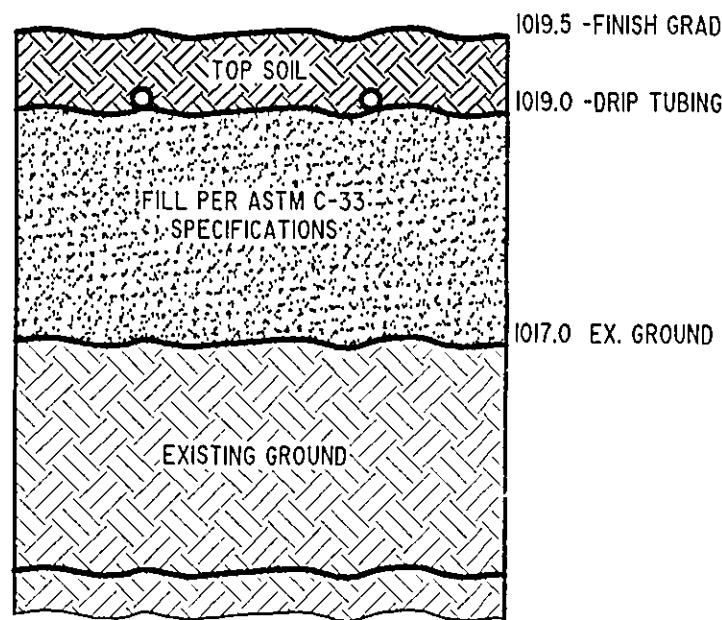
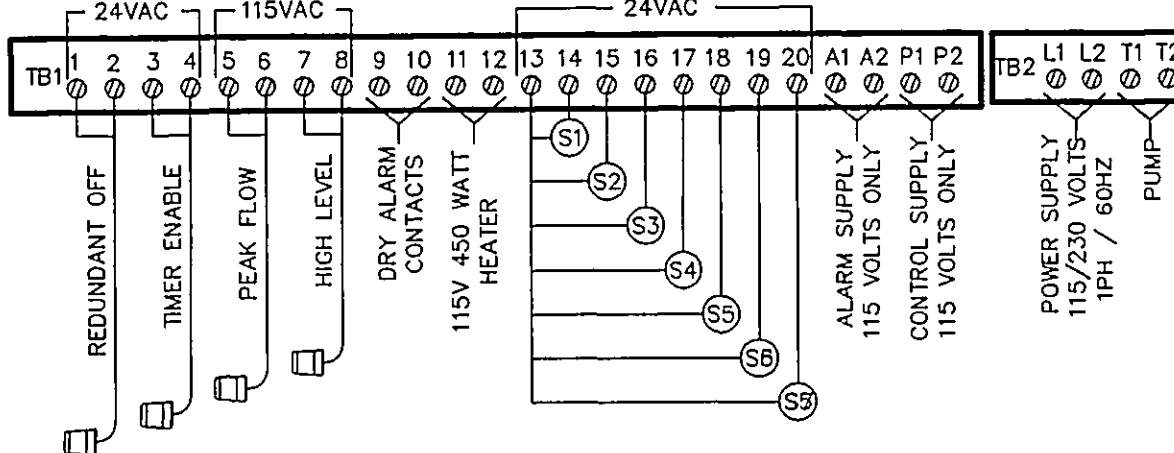
NTS



INNER DOOR LAYOUT

NTS

PUMP & CONTROL DETAIL



TYPICAL SECTION

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BRUNO FRATE
38395 BRIGHTON PATH
WILLOUGHBY, OHIO 44094

DETAILS
S/L 3 GIRDLED ROAD, CONCORD, OHIO 44077
P.P. No. 08A002000340
MODEL

DRAWN
CHECKED
DATE
JUNE 15, 2004
SCALE
NONE
JOB NO.
04052
SHEET
2/2
OF SHEETS