

RATING: 480/277 VOLT 3 PHASE, 4 WIRE 600 AMP																		
MOTOR CONTROL CENTER SCHEDULES																		
UNIT NO.	NAMEPLATE	LOAD HP OR KVA	FULL LOAD AMPS	STARTER		CIRCUIT BREAKER			CONDUCTORS				CONDUIT		CONTROL DEVICES		REMARKS	
				NEMA SIZE	TYPE	NO. POLES	FRAME	TRIP	POWER		GROUND		NO.	SIZE	H-O-A SW	PB		PILOT LIGHT
1A	INCOMING LINE			---	---	---	---	---										
1B	PANEL HA FEED			---	---	3	400	225	2 NEUT.	500KCM	2	1	2	4"				
1C	VOLTAGE MONITOR RELAY			---	---	3	---	---	4	4/O	1	4	1	2 1/2"				
1D	SPACE (SEWAGE PUMP #1)													2"				INSTALL CONDUIT (NOTE 1)
1E	SEWAGE PUMP #3	60	77	4	FVNR	3	225	125	3	2	1	6	1	2"	HOA		2	
2A	WATER SEAL PUMP #1	1 1/2	2.6	1	FVNR	3	30	15	3	12	1	12	1	3/4"	HOA		2	
2B	WATER SEAL PUMP #2	1 1/2	2.6	1	FVNR	3	30	15	3	12	1	12	1	3/4"	HOA		2	
2C	SPACE																	
2D	SEWAGE PUMP #2	60	77	4	FVNR	3	225	125	3	2	1	6	1	2"	HOA		2	NOTE 1
2E	SEWAGE PUMP #4	60	77	4	FVNR	3	225	125	3	2	1	6	1	2"	HOA		2	NOTE 1
3A	PROGRAMMABLE CONTROLLER			---	---	2	30	15										W/CONTROL XFMR
3B	SPACE																	
3C	SPACE																	
3D	SPACE																	
3E	SPACE																	

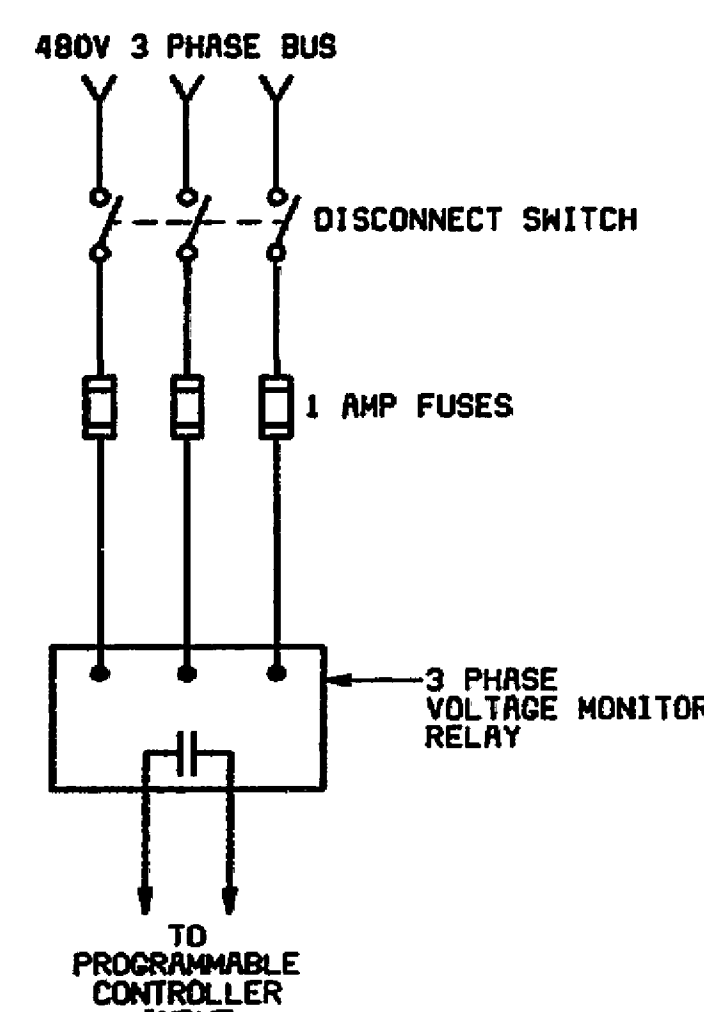
PANEL LA																	
VOLTAGE 240/120 1 PHASE - 3 WIRE SURFACE MOUNTED BUS AMPS 100 MAIN BREAKER AMPS 60																	
CIR	BREAKER		WIRE	CIRCUIT		LOAD -	KVA		CIR	BREAKER		WIRE	CIRCUIT		LOAD -	KVA	
NO	P	AMPS	SIZE	DESCRIPTION	A	B	C	3PH	NO	P	AMPS	SIZE	DESCRIPTION	A	B	C	
01	1	20	2	12 RECEPT MOTOR RM-N	0.5				02	1	20	2	12 ALARM PANEL	0.1			
03	1	20	2	12 RECEPT MOTOR RM-S	0.5				04	1	20	2	12 LEVEL CONTROLLER	0.1	0.1		
05	1	20	2	12 RECEPT DRY WELL	0.4				06	1	20	2	12 BATTERY CHARGER	0.1			
07	1	20	2	12 MTRZD DAMPER					08	1	20	2	12 FLOWMETER	0.2			
09	1	20		12 SPARE					10	1	20	2	12 DAY TANK PUMP	0.9		0.9	
11	2	20		10 SPARE					12	2	20	2	12 JACKET HEATER	0.5	0.5		
15	2	15	2	10 WELL PMP	1.2	1.2			16	2			12 SPACE ONLY				
TOTAL LEFT SIDE PHASE A					2.1				TOTAL RIGHT SIDE PHASE A					0.7			
TOTAL LEFT SIDE PHASE B					0.2				TOTAL RIGHT SIDE PHASE B					0.2			
TOTAL LEFT SIDE PHASE C					0.2				TOTAL RIGHT SIDE PHASE C					0.2			
TOTAL LEFT SIDE 3PH					0.3				TOTAL RIGHT SIDE 3PH					0.3			
TOTAL CONNECTED LOAD															6.2		

PANEL HA														
VOLTAGE 480Y/277 3 PHASE - 4 WIRE SURFACE MOUNTED BUS AMPS 225 MAIN BREAKER AMPS NONE														
CIR	BREAKER	WIRE	CIRCUIT	LOAD	- KVA	CIR	BREAKER	WIRE	CIRCUIT	LOAD	- KVA			
NO	P	NO	DESCRIPTION	A	B	NO	P	NO	DESCRIPTION	A	B	C	3PH	
01	1	20	2 12 EXTERNAL LTS	0.2		02	1	20	SPARE					
03	1	20	2 12 LTS MOTOR RM		0.8	04	1	20	SPARE ONLY					
05	1	20	2 12 LTS DRY HELL		0.7	06	1	20	SPARE ONLY					
07	1	20	2 12 SPARE											
09	2	30	2 8 PANEL LA	3.2	3.2	10	3	20	3 12 UNIT HEATER -1				5.0	
15	3	15	3 12 SUMP PUMP			16	3	15	3 12 AIR COMPRESSORS				1.0	
21	3	20	3 12 UNIT HEATER-2			30	22	3	15 12 EXHAUST FAN-1				2.0	
27	3	20	3 12 UNIT HEATER-3			30	28	3	15 12 EXHAUST FAN-2				0.5	
33	3					34	3		12 SPACE ONLY					
TOTAL LEFT SIDE PHASE A				0.2		TOTAL RIGHT SIDE PHASE A				0.2				
TOTAL LEFT SIDE PHASE B				0.2		TOTAL RIGHT SIDE PHASE B				0.2				
TOTAL LEFT SIDE PHASE C				0.2		TOTAL RIGHT SIDE PHASE C				0.2				
TOTAL LEFT SIDE 3PH				0.6		TOTAL RIGHT SIDE 3PH				0.6				
TOTAL CONNECTED LOAD				23.8										

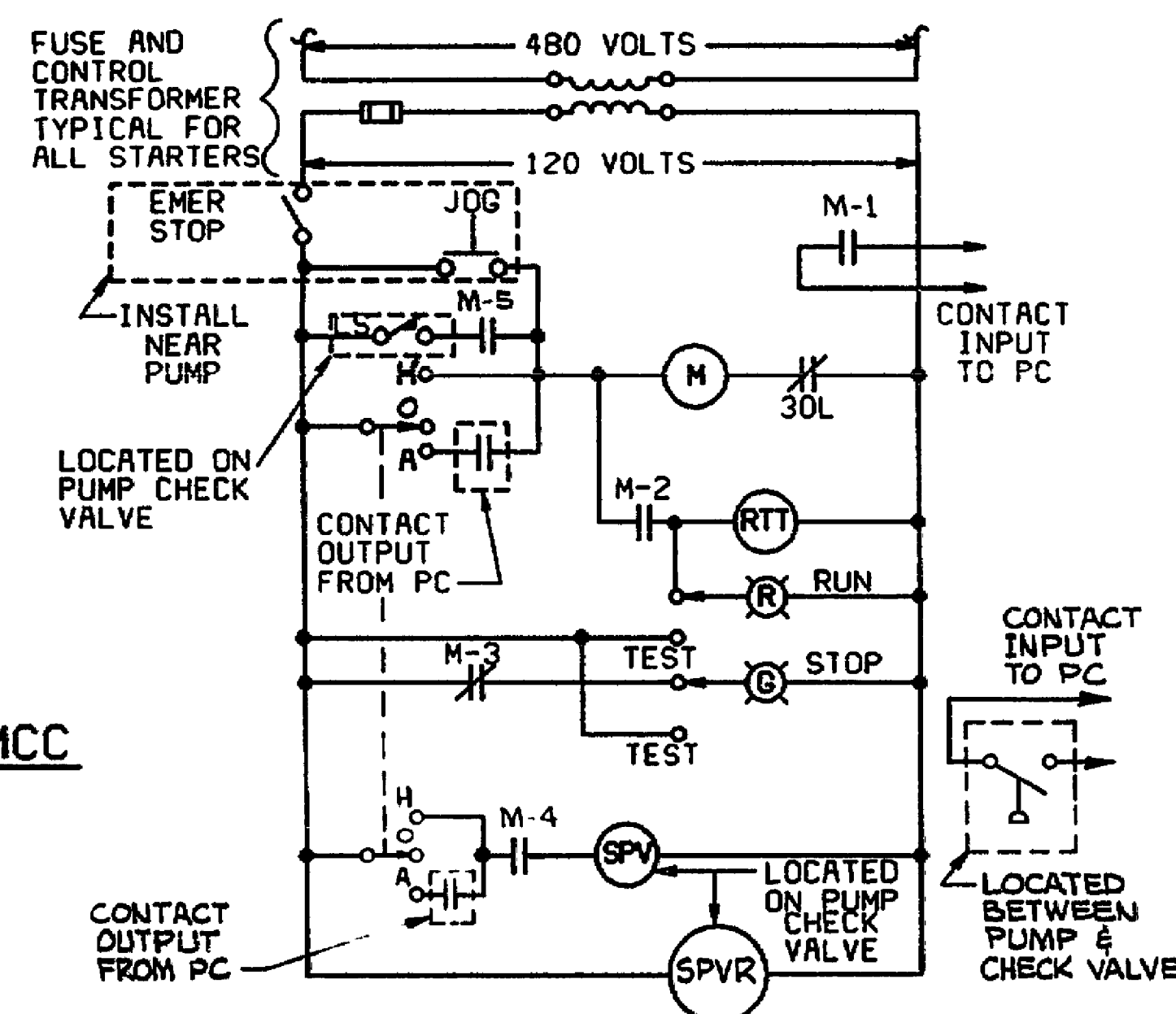
1A	2A	3A
1B	2B	
1C	2C	
1D	2D	3B
		3C
1E	2E	3D
		3E

MOTOR CONTROL CENTER - MCC

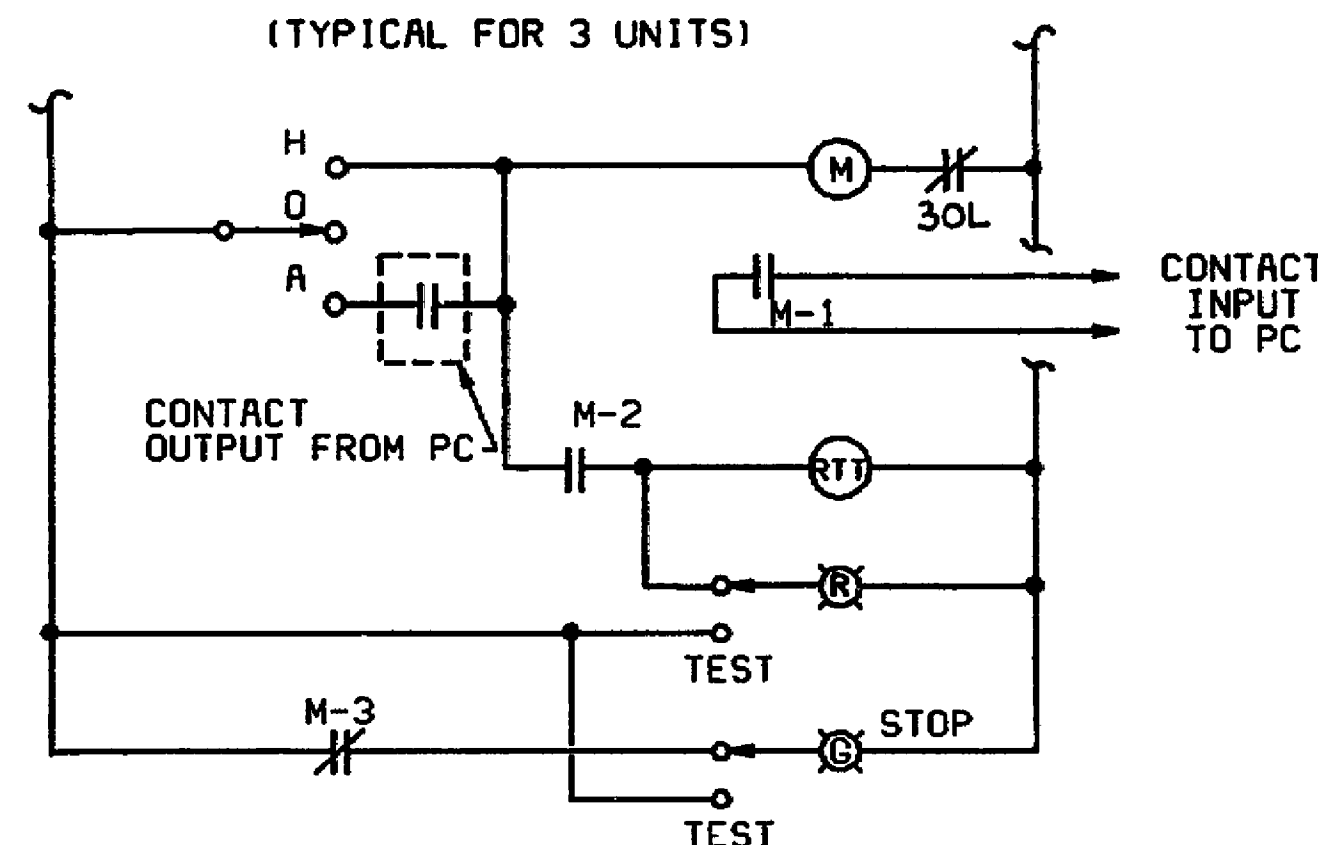
ELEVATION
NO SCALE



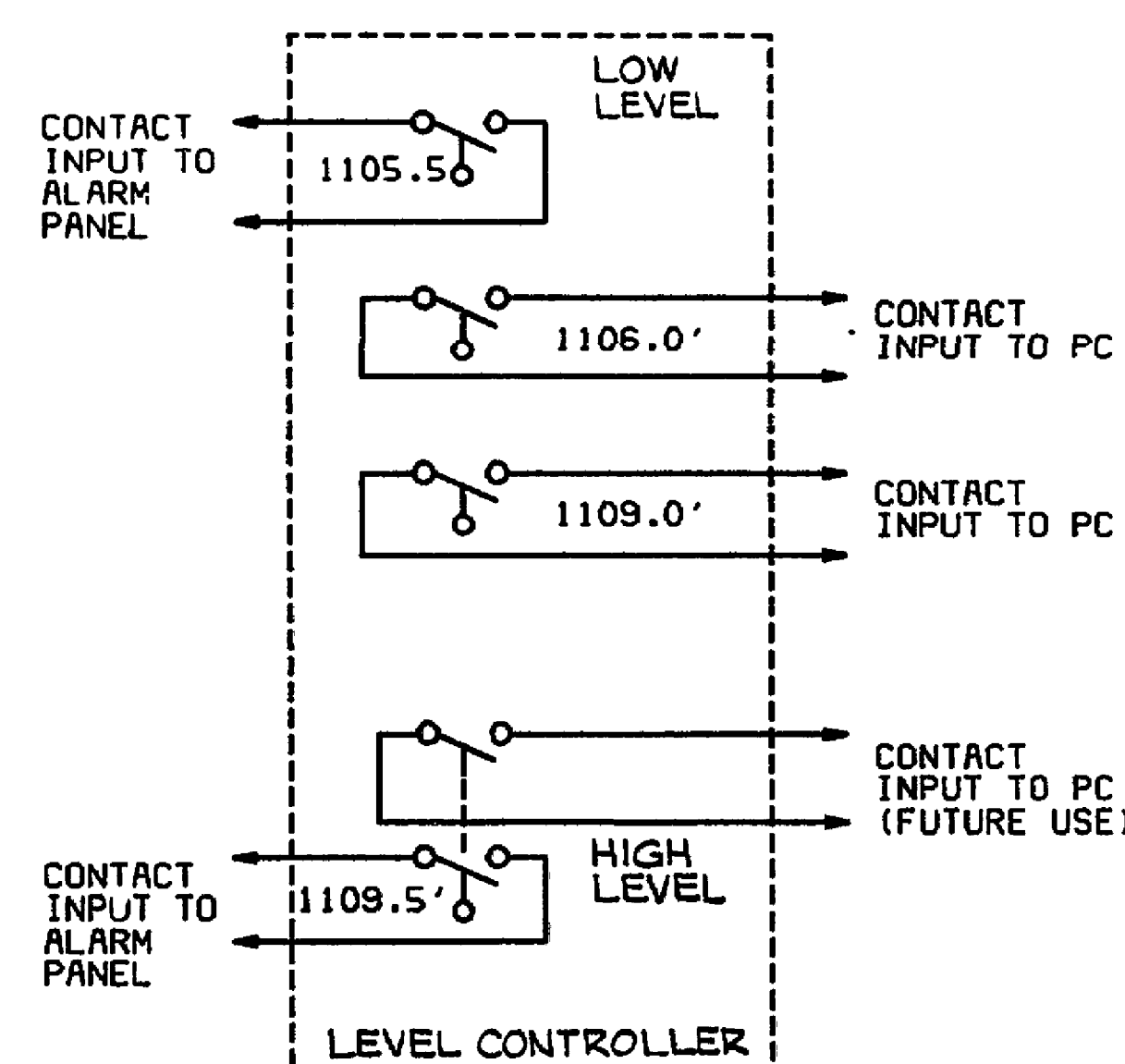
VOLTAGE MONITOR RELAY
CONTROL DIAGRAM



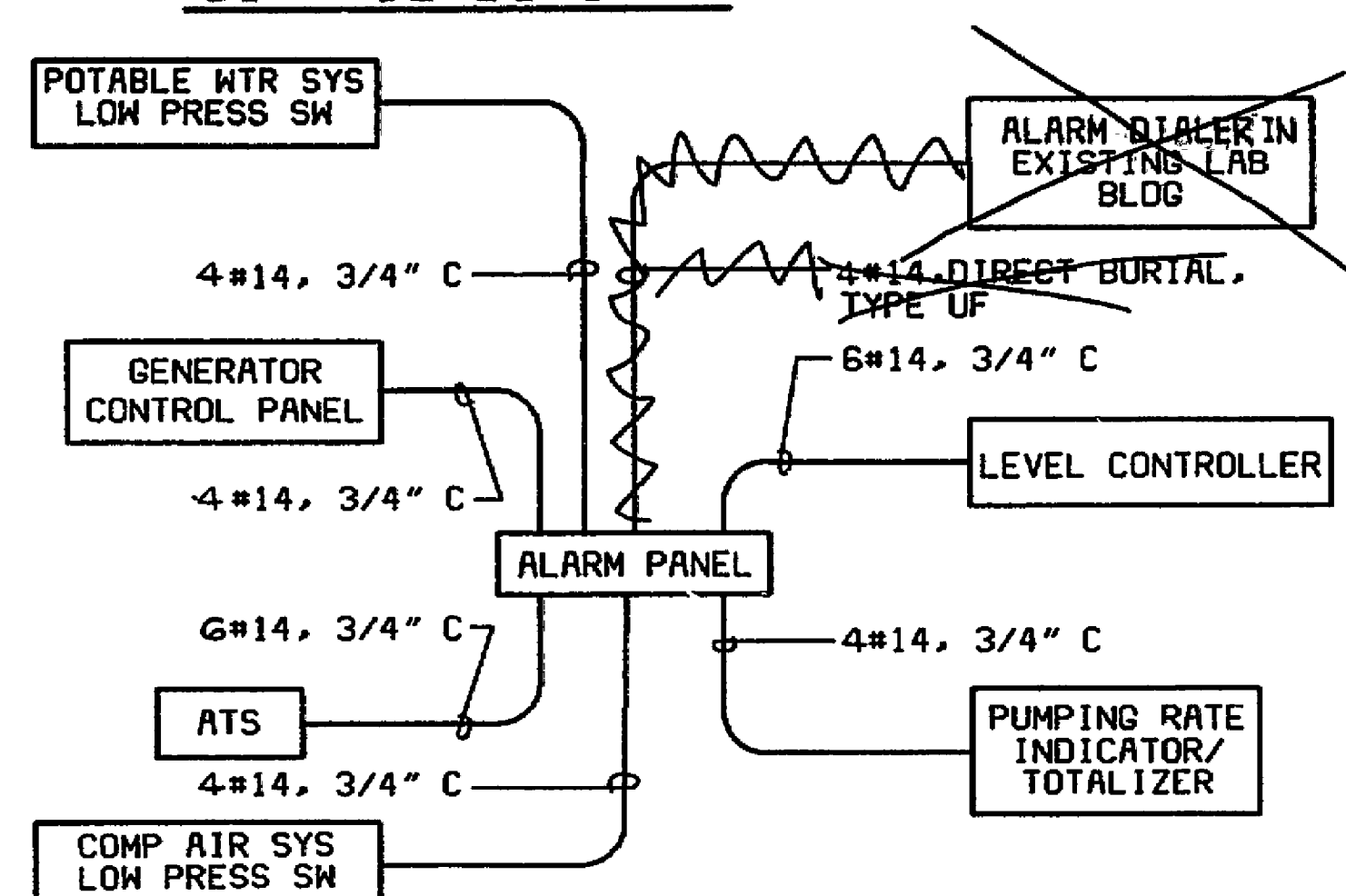
SEWAGE PUMP MOTOR & CHECK VALVE
CONTROL DIAGRAM
(TYPICAL FOR 3 UNITS)



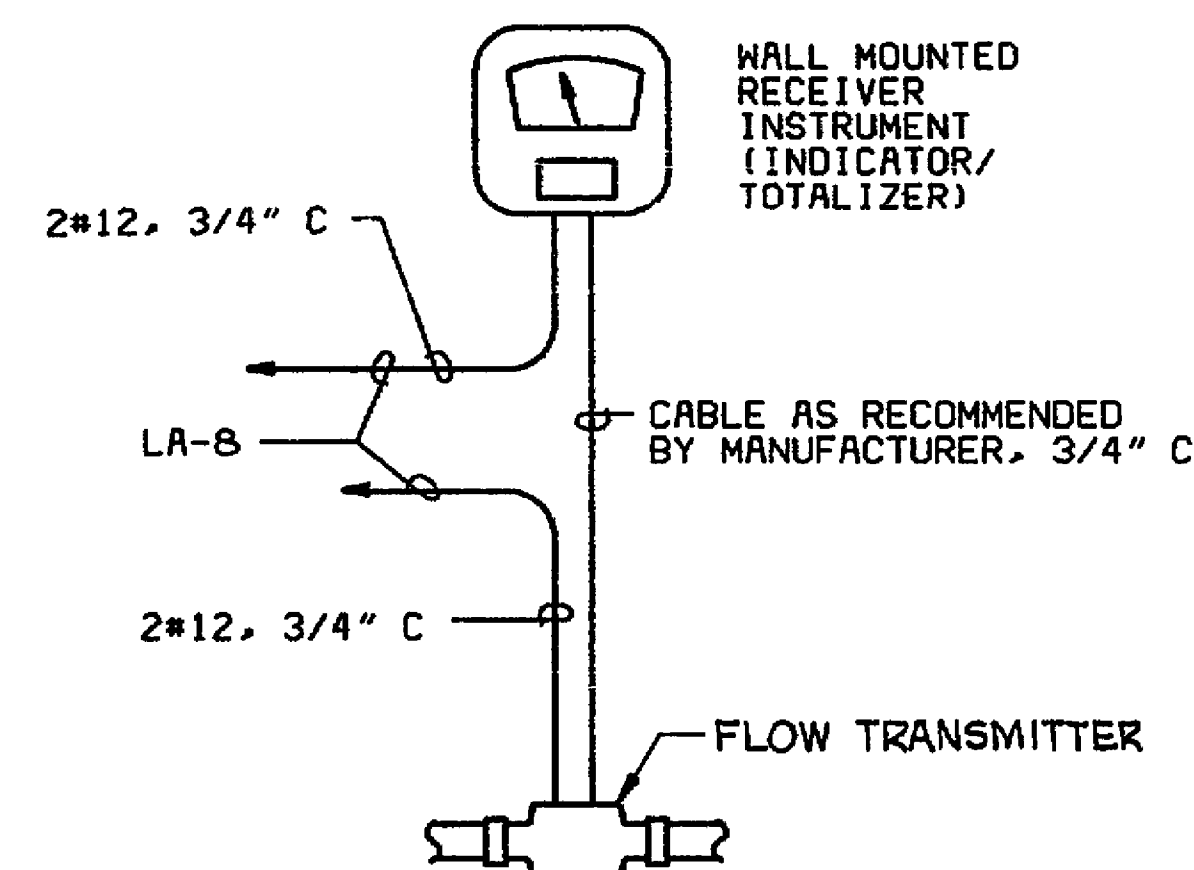
WATER SEAL PUMP MOTOR
CONTROL DIAGRAM
(TYPICAL FOR 2 UNITS)



LEVEL CONTROLLER
CONTROL DIAGRAM



ALARM SYSTEM DIAGRAM



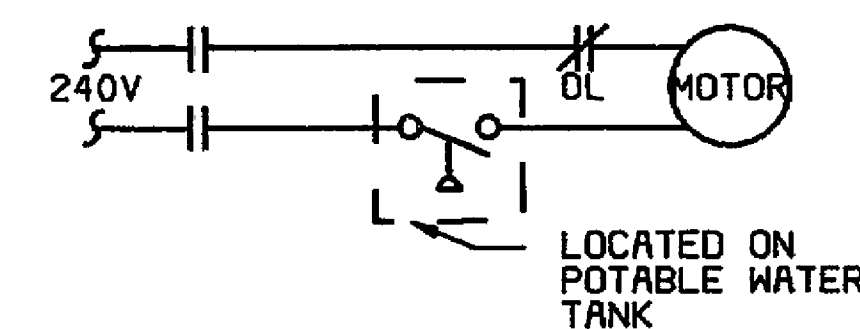
PUMPING RATE FLOWMETERING
SYSTEM DIAGRAM

NOTES:

1. PROVIDE MAXIMUM SPACING BETWEEN CONDUITS EMBEDDED IN FLOOR SLABS.

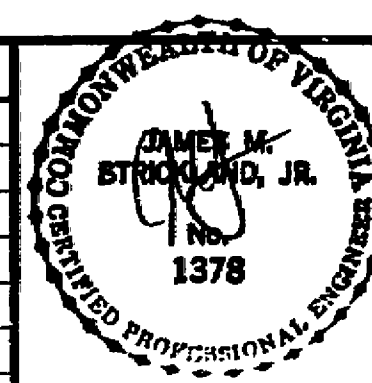
CONTROL DIAGRAM LEGEND

- (M) MOTOR STARTING COIL
- (RTI) RUNNING TIME TOTALIZER
- (SPV) SOLENOID PILOT VALVE
- (SPVR) SOLENOID PILOT VALVE-RAPID CLOSE
- (P) PILOT LIGHT-PUSH TO TEST
R=RED, G=GREEN, A=AMBER
- (NO) NORMALLY OPEN CONTACTS
- (NC) NORMALLY CLOSED CONTACTS
- (OL) MOTOR OVERLOADS
- (LS) LIMIT SWITCH-OPENS WHEN VALVE IS FULLY CLOSED
- (H-O-A) HAND-OFF-AUTOMATIC SWITCH
- (L) LEVEL SWITCH
- (PS) PRESSURE SWITCH
- (SPST) SPST SWITCH
- (PB) PUSHBUTTON, MOMENTARY CONTACT NORMALLY OPEN



WELL PUMP CONTROL DIAGRAM

DESIGNED	TWP	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN	CADD	5/15/85					
CHECKED	RFB	5/15/85					
APPROVED	RFB	5/15/85					



STARKEY SEWAGE PUMP STATION, FORCE MAIN AND GRAVITY SEWER
COUNTY OF ROANOKE, VIRGINIA
11 JANUARY 1985
HAYES, SEAY, MATTERN AND MATTERN
ARCHITECTS - ENGINEERS - PLANNERS

PUMP STATION ELECTRICAL		
SCALE:	COMM. NO.	DRAWING NO.
AS NOTED	4185	8

SI-0254