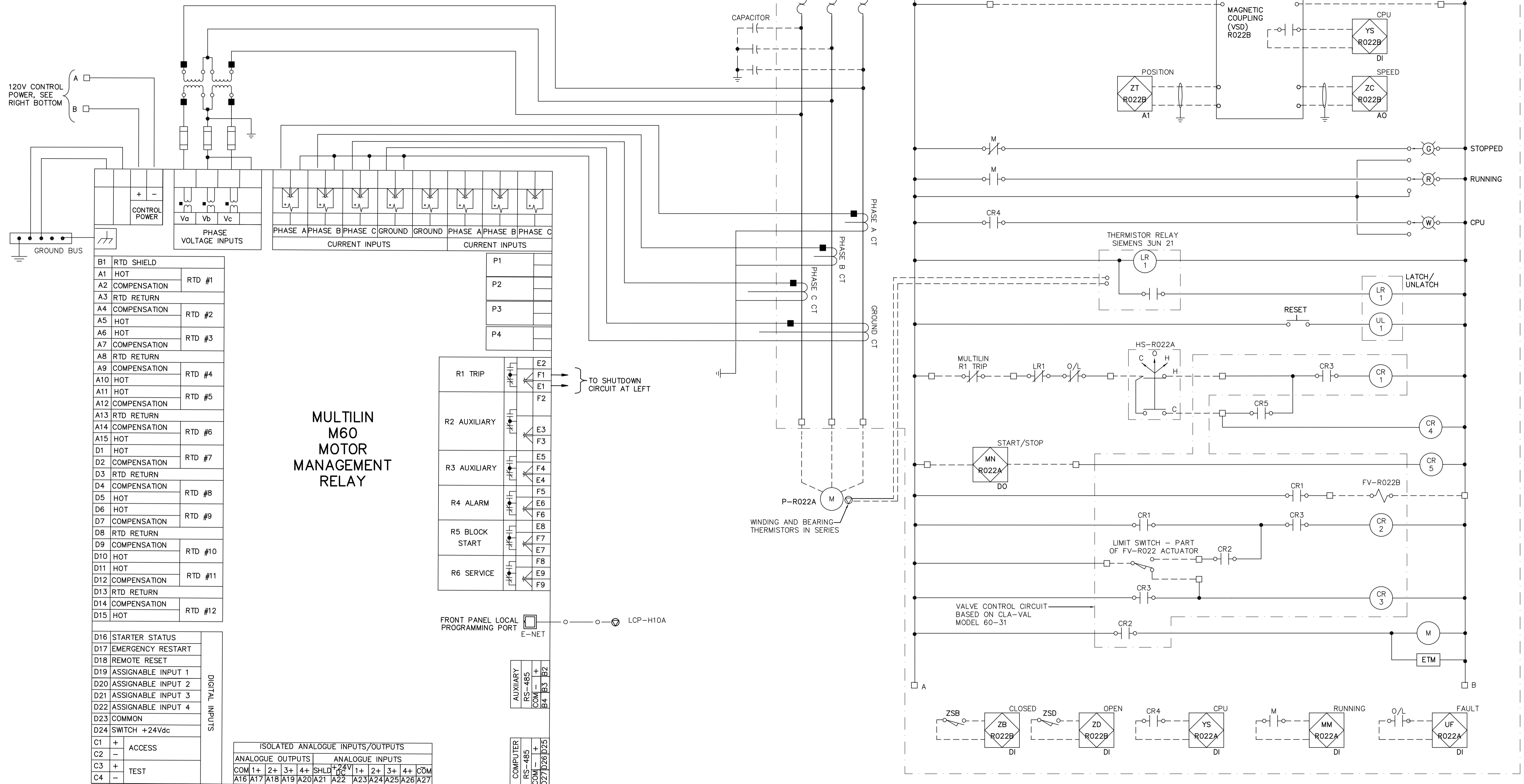


NOTES:
 1. ALLOW 350A VA ADDITIONAL CAPACITY FOR MAGNETIC COUPLING (VSD).
 2. PUMP OPERATION:
 PUMP STARTS AGAINST A CLOSED VALVE. WHEN THE PUMP IS STARTED, THE SOLENOID CONTROL IS ENERGIZED AND THE VALVE BEGINS TO OPEN SLOWLY, GRADUALLY INCREASING LINE PRESSURE TO FULL PUMPING HEAD. WHEN THE PUMP IS SIGNALLED TO SHUT-OFF, THE SOLENOID CONTROL IS DE-ENERGIZED AND THE VALVE BEGINS TO CLOSE SLOWLY, GRADUALLY REDUCING FLOW WHILE PUMP CONTINUES TO RUN. WHEN THE VALVE IS CLOSED THE LIMIT SWITCH RELEASES THE STARTER AND THE PUMP STOPS.



SUPERNATANT PUMP 1 (P-R022A)

120V CONTROL POWER, SEE RIGHT BOTTOM	
GROUND BUS	
CONTROL POWER	
PHASE VOLTAGE INPUTS	
CURRENT INPUTS	
CURRENT INPUTS	
GROUND BUS	
B1	RTD SHIELD
A1	HOT RTD #1
A2	COMPENSATION
A3	RTD RETURN
A4	COMPENSATION RTD #2
A5	HOT
A6	HOT RTD #3
A7	COMPENSATION
A8	RTD RETURN
A9	COMPENSATION RTD #4
A10	HOT
A11	HOT RTD #5
A12	COMPENSATION
A13	RTD RETURN
A14	COMPENSATION RTD #6
A15	HOT
D1	HOT RTD #7
D2	COMPENSATION
D3	RTD RETURN
D4	COMPENSATION RTD #8
D5	HOT
D6	HOT RTD #9
D7	COMPENSATION
D8	RTD RETURN
D9	COMPENSATION RTD #10
D10	HOT
D11	HOT RTD #11
D12	COMPENSATION
D13	RTD RETURN
D14	COMPENSATION RTD #12
D15	HOT
DIGITAL INPUTS	
D16	STARTER STATUS
D17	EMERGENCY RESTART
D18	REMOTE RESET
D19	ASSIGNABLE INPUT 1
D20	ASSIGNABLE INPUT 2
D21	ASSIGNABLE INPUT 3
D22	ASSIGNABLE INPUT 4
D23	COMMON
D24	SWITCH +24Vdc
C1	+ ACCESS
C2	-
C3	+ TEST
C4	-

ISOLATED ANALOGUE INPUTS/OUTPUTS	
ANALOGUE OUTPUTS	ANALOGUE INPUTS
COM 1+ 2+ 3+ 4+ SHLD +24V	1+ 2+ 3+ 4+ COM
A16 A17 A18 A19 A20 A21 A22	A23 A24 A25 A26 A27

P1	
P2	
P3	
P4	
R1 TRIP	E2 F1 E1 F2
R2 AUXILIARY	E3 F3
R3 AUXILIARY	E5 F4
R4 ALARM	E6 F5 F6
R5 BLOCK START	E8 F7
R6 SERVICE	E9 F8 F9

FRONT PANEL LOCAL PROGRAMMING PORT E-NET LCP-H10A

AUXILIARY	RS-485	B1
COM	-	B2
COM	+	B3
COM	-	B4
COM	+	B5
COM	-	B6
COM	+	B7
COM	-	B8
COM	+	B9
COM	-	B10
COM	+	B11
COM	-	B12



B.M. ELEV.	
DESIGNED BY	JT
CHECKED BY	ND
DRAWN BY	KJ
APPROVED BY	AHL
SCALE:	NTS
RELEASED FOR CONSTRUCTION BY:	R. SOROKOWSKI
DATE	2005/11/08
DATE	2006/05/05

CH2MHILL
 Frederickson Cooper ARCHITECTS

EarthTech
 A Yeo International Ltd. Company

DESIGNED BY: JT
 CHECKED BY: ND
 DRAWN BY: KJ
 APPROVED BY: AHL
 SCALE: NTS
 RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI
 DATE: 2005/11/08
 DATE: 2006/05/05

ENGINEER'S SEAL
 ORIGINAL SIGNED BY
 L.D. LLEWELLYN
 2006/05/05
 CONSULTANT DRAWING NO.
 WB-E0555

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT
 ENGINEERING DIVISION

WATER TREATMENT PLANT
 MAIN BUILDING
 MECHANICAL AND ELECTRICAL

ELECTRICAL
 CONTROL DIAGRAM

CITY FILE NUMBER
 SHEET OF
 CITY DRAWING NUMBER
 1-0601B-H-E0555-001-000