

**LEGEND**

- WIRE NODE SYMBOL MAY HAVE TERMINAL BLOCK
- POWER TERMINAL
- CUSTOMER TERMINAL
- BENSHAW TERMINAL
- DEVICE TERMINAL
- ELAPSED TIME METER
- PC BOARD TERMINALS
- TWISTED PAIR
- FIELD WIRING
- PANEL WIRING
- CONNECTOR
- SHIELDED WIRE
- CR-X CONTROL RELAYS

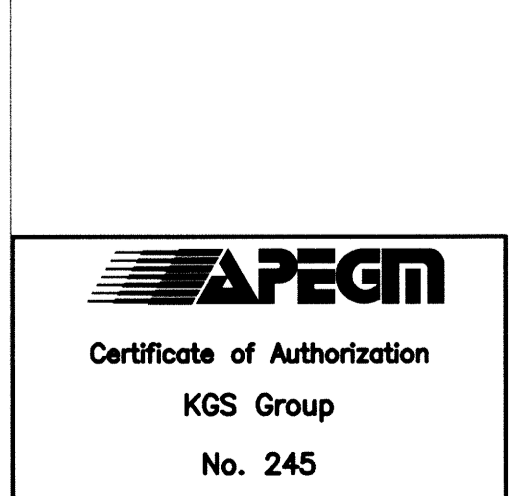
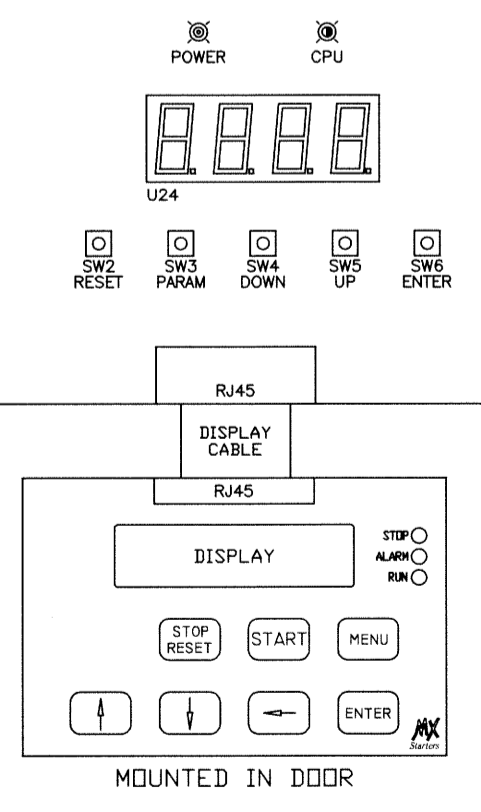
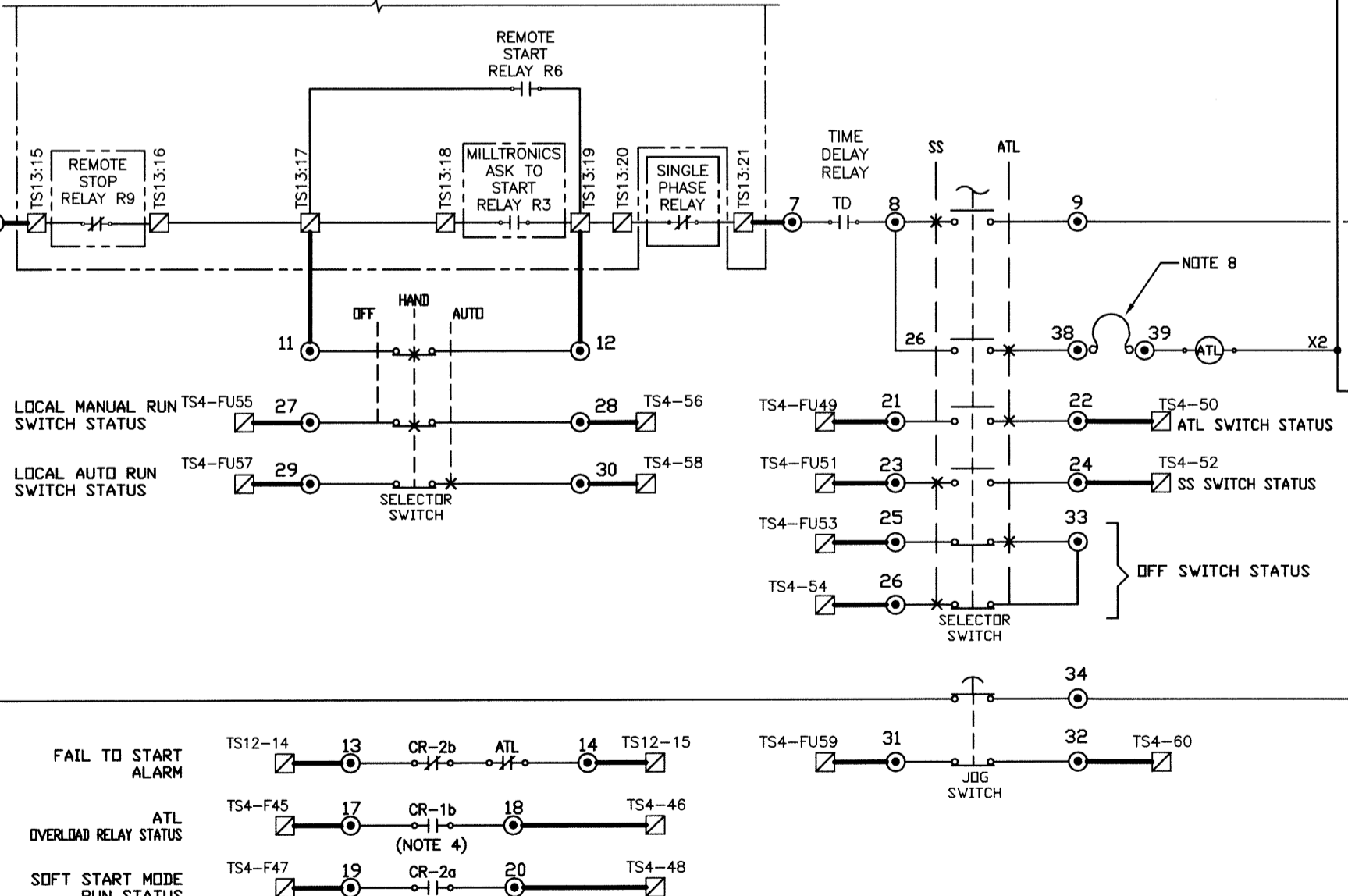
**\*\*\* IMPORTANT \*\*\***

PASSCODE # - - - -

**CUSTOMER TERMINALS**

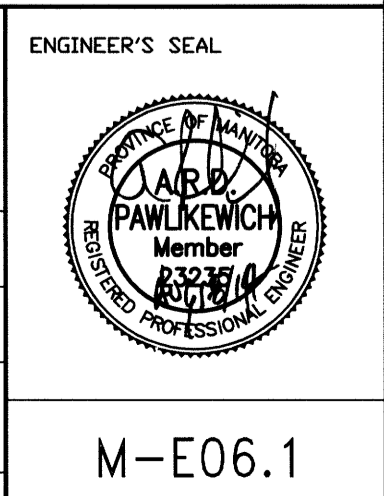
L1  L2  L3  
 T1  T2  T3

- NOTES:**
- INCOMING POWER THROUGH CT'S. SEE CT FASTENING DIAGRAM IN INSTRUCTION MANUAL FOR DETAILS.
  - SOLID-STATE TIMER WITH PROGRAMMABLE ON-DELAY TIME RANGE SETABLE FROM 0.05 sec TO 300 HOURS.
  - MAXIMUM RAMP DOWN TIME SHALL BE 10 SECONDS AND THE VOLTAGE SHALL NOT BE ALLOWED TO RAMP BELOW 60% OF FULL VOLTAGE BEFORE SOFT START IS DEACTIVATED TO ALLOW PUMP MOTOR TO COME TO A COMPLETE STOP. VERIFY DECELERATION SETTINGS WITH PUMP MANUFACTURER.
  - THIS CONTACT IS NORMALLY OPEN AND CLOSING ON AN ACROSS THE LINE OVERLOAD FAULT WHEN THE STARTER IS IN ACROSS THE LINE MODE.
  - PROGRAMMABLE RELAY R1 IS ENERGIZED WHEN SOFT START IS FUNCTIONING AND DE-ENERGIZED WHEN SOFT START HAS A FAULT.
  - PROGRAMMABLE RELAY R2 & R3 IS ENERGIZED WHEN PUMP IS ON AND DE-ENERGIZED WHEN PUMP IS OFF. CONTACTS CLOSE TO INDICATE PUMP RUNNING.
  - ANALOG OUTPUT TO BE PROGRAMMED TO PROVIDE A 4-20mA SIGNAL FOR LOAD CURRENT DRAW TO THE CITY SCADA PANEL.
  - PROVIDE JUMPER CABLE TO ENABLE ATL MODE.



FIELD BOOK #	
POSTED TO LBIS	
ISSUED FOR CONSTRUCTION	14/08/18 AP
REVISIONS	DATE BY

		DESIGNED BY	DDW/MAM	CHECKED BY	
		DRAWN BY	GCN	APPROVED BY	
HDR. SCALE VERTICAL N.T.S.		RELEASED FOR CONSTRUCTION DATE 2014 01 13		M-E06.1	



**THE CITY OF WINNIPEG**  
 WATER AND WASTE DEPARTMENT

FLOOD PUMPING STATION UPGRADES  
 MARION STATION  
**ELECTRICAL**  
 FLOOD PUMP P-F03  
 SCHEMATIC/WIRING DIAGRAM

SHEET 1 OF 2  
 CITY DRAWING NUMBER  
 1-0159F-E0008-001