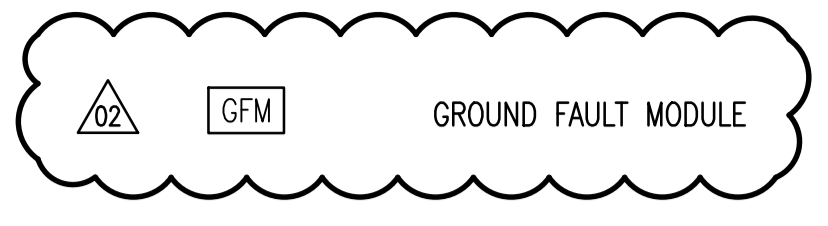


- 2 TIME DELAY RELAY
- 27 UNDERVOLTAGE RELAY
- 32 DIRECTIONAL POWER RELAY
- 38 BEARING PROTECTIVE DEVICE
- 39 MECHANICAL CONDITION MONITOR (VIBRATION, ETC.)
- 43 MANUAL TRANSFER OR SELECTOR DEVICE
- 46 REVERSE PHASE OR PHASE-BALANCE CURRENT RELAY
- 49 MACHINE OR TRANSFORMER THERMAL RELAY
- 50 INSTANTANEOUS OVERCURRENT RELAY
- 51 AC TIME OVERCURRENT RELAY
- 50/51 COMBINATION INSTANTANEOUS / TIME OVERCURRENT RELAY
- 50G/51G COMBINATION INSTANTANEOUS / TIME GROUND OVERCURRENT RELAY
- 50G INSTANTANEOUS GROUND OVERCURRENT RELAY
- 51G AC TIME GROUND OVERCURRENT RELAY
- 50/51/50N/51N COMBINATION INSTANTANEOUS / TIME OVERCURRENT WITH TIME GROUND OVERCURRENT RELAY
- 50/51N GROUND FAULT COMBINATION INSTANTANEOUS / TIME OVERCURRENT RELAY CONNECTED IN A RESIDUAL CT CIRCUIT
- 59 OVERVOLTAGE RELAY
- 66 MOTOR START LIMITER RELAY
- 74 ALARM RELAY
- 83 AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY
- 86 LOCKOUT RELAY
- 86X AUXILIARY LOCKOUT RELAY
- A AMMETER

- AS AMMETER SELECTOR SWITCH
- CS CONTROL SWITCH
- CTD CAPACITIVE TRIP DEVICE
- K KEY INTERLOCK
- KW KILOWATT METER
- I INTERLOCK
- MF MULTIFUNCTION METER
- PF POWER FACTOR METER
- PLC PLC I/O POINT
- PM POWER METER
- RM REVENUE METER
- V VOLTMETER
- VS VOLTMETER SELECTOR SWITCH
- Σ SUMMATION DEVICE
- TD TIME DELAY
- PLC I/O POINT
- PM POWER METER
- RM REVENUE METER
- V VOLTMETER
- VS VOLTMETER SELECTOR SWITCH
- Σ SUMMATION DEVICE
- TD TIME DELAY
- PILOT LIGHT
- N.C. NORMALLY CLOSED
- N.O. NORMALLY OPEN
- PPE: 4 - ARC FLASH HAZARD/RISK CATEGORY
29 CAL/CM² - INCIDENT ENERGY

- CONTACTOR
- GENERATOR
- TRANSFER SWITCH
- X:5A (3) CURRENT TRANSFORMER QTY. RATIO
- X:5A (3) GROUND FAULT CURRENT TRANSFORMER
- ○ SURGE ARRESTOR
- ○ CIRCUIT BREAKER
- ○ C.L. CURRENT LIMITING CIRCUIT BREAKER
- >> DISCONNECTING DEVICE / STAB
- 15A (3) FUUSE QTY.
- GROUND CONNECTION
- MOTOR OVERLOAD
- CAPACITOR
- 52 AC CIRCUIT BREAKER
- LOCAL DISCONNECT SWITCH
- RECEPTACLE/PLUG
- 600/120V (2) POTENTIAL TRANSFORMER - VERTICAL QTY.
- F-1 100A DISCONNECT SWITCH
- TRANSFORMER
- M MOTOR
- UNIT HEATER
- C.L. CURRENT LIMITING MODULE



DRAWING NUMBER	REFERENCE DRAWINGS
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APECM
 Certificate of Authorization
 SNC-Lavalin Inc.
 No. 4489

NO.	REVISIONS	DATE	DESIGN	CHECK
02	ADDED GROUND FAULT MODULE	2011/04/01	TMC	CJR
01	UPDATED DRAWING	2010/07/30	TMC	CJR
00	ISSUED FOR CITY USE	2010/05/18	BK	CJR

SNC-LAVALIN INC.
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DESIGNED BY: B. KING
 CHECKED BY: C. REIMER
 DRAWN BY: D. RAMJEET
 APPROVED BY: C. REIMER
 SCALE: NTS
 RELEASED FOR CONSTRUCTION BY: R. ADEDAPO
 DATE: 2009/10/05
 DATE: 2011/04/11
 CONSULTANT NO.:

ENGINEER'S SEAL
 ORIGINAL DRAWING
 SEALED BY:
 T. M. CHURCH
 SNC-LAVALIN
 MEMBER #32682
 2011/04/11
 REV. 02
 CHANGES ONLY

THE CITY OF WINNIPEG
 WATER AND WASTE DEPARTMENT

SHOAL LAKE INTAKE FACILITY
 ARC FLASH STUDY
 ELECTRICAL SINGLE LINE DIAGRAM
 LEGEND & DETAILS

CITY DRAWING NUMBER: 1-0600M-E0003
 SHEET: 001
 REV: 02
 SIZE: A1