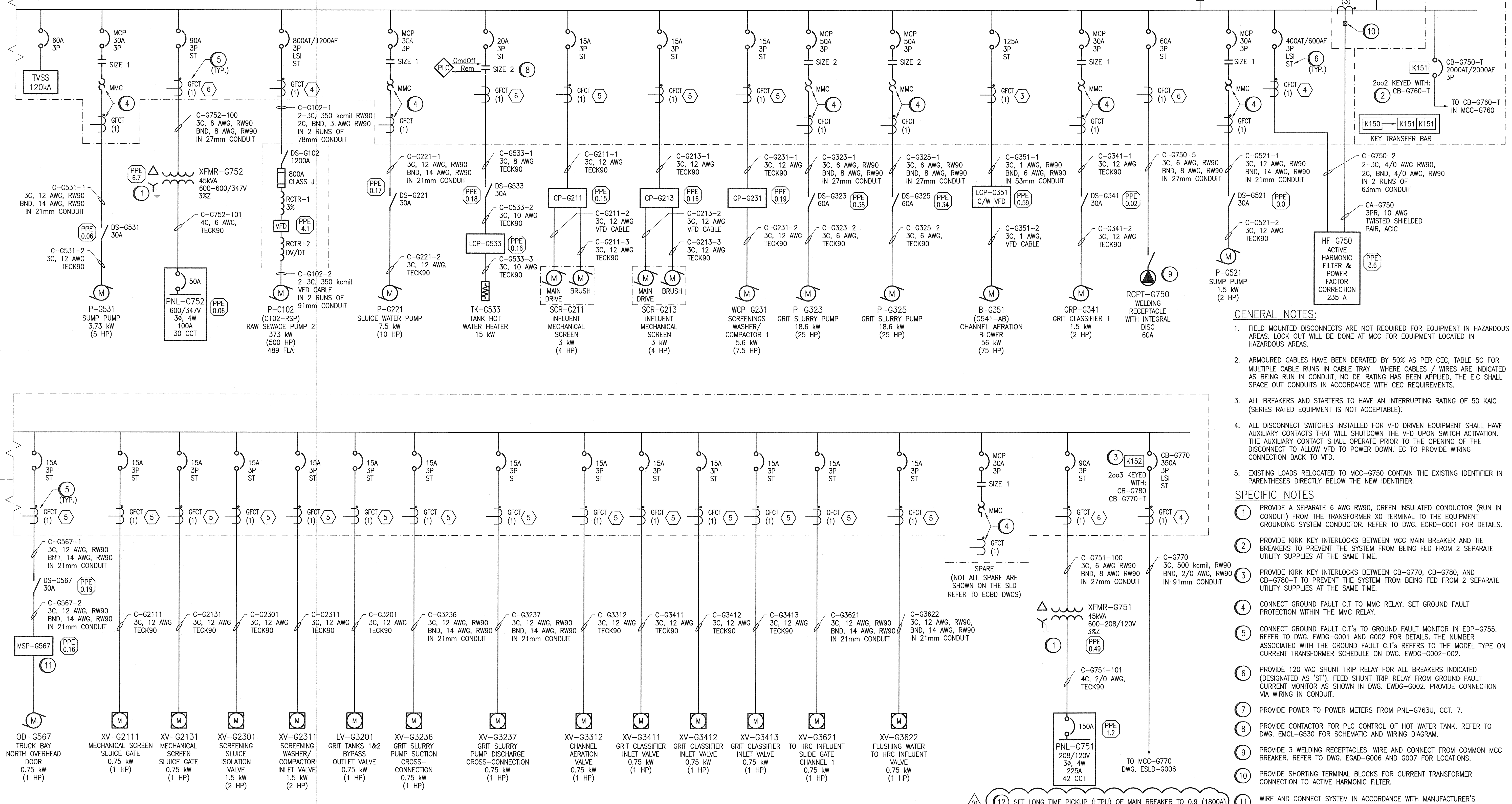


A1 SIZE - 594mm x 841mm

CON: 810 A
DEM: 717 A
(TIE OPEN)

MCC-G750
600V, 3Ø, 3W, 2000A
INTERRUPTING RATING: 50 kA

DISCLAIMER NOTES:
1. ARC FLASH VALUES ARE PRELIMINARY AND WILL BE FINALIZED AT A LATER DATE.
2. IMPEDANCE %Z FOR TRANSFORMER ARE ESTIMATED AND WILL BE CORRECTED WITH ACTUAL VALUES SUBMITTED BY THE CONTRACTOR FROM SHOP DRAWING SUBMITTALS.



- GENERAL NOTES:**
- FIELD MOUNTED DISCONNECTS ARE NOT REQUIRED FOR EQUIPMENT IN HAZARDOUS AREAS. LOCK-OUT WILL BE DONE AT MCC FOR EQUIPMENT LOCATED IN HAZARDOUS AREAS.
 - ARMoured CABLES HAVE BEEN DERATED BY 50% AS PER CEC, TABLE 5C FOR MULTIPLE CABLE RUNS IN CABLE TRAY. WHERE CABLES / WIRES ARE INDICATED AS BEING RUN IN CONDUIT, NO DE-RATING HAS BEEN APPLIED, THE E.C SHALL SPACE OUT CONDUITS IN ACCORDANCE WITH CEC REQUIREMENTS.
 - ALL BREAKERS AND STARTERS TO HAVE AN INTERRUPTING RATING OF 50 kAIC (SERIES RATED EQUIPMENT IS NOT ACCEPTABLE).
 - ALL DISCONNECT SWITCHES INSTALLED FOR VFD DRIVEN EQUIPMENT SHALL HAVE AUXILIARY CONTACTS THAT WILL SHUTDOWN THE VFD UPON SWITCH ACTIVATION. THE AUXILIARY CONTACT SHALL OPERATE PRIOR TO THE OPENING OF THE DISCONNECT TO ALLOW VFD TO POWER DOWN. EC TO PROVIDE WIRING CONNECTION BACK TO VFD.
 - EXISTING LOADS RELOCATED TO MCC-G750 CONTAIN THE EXISTING IDENTIFIER IN PARENTHESES DIRECTLY BELOW THE NEW IDENTIFIER.

- SPECIFIC NOTES:**
- PROVIDE A SEPARATE 6 AWG RW90, GREEN INSULATED CONDUCTOR (RUN IN CONDUIT) FROM THE TRANSFORMER XO TERMINAL TO THE EQUIPMENT GROUNDING SYSTEM CONDUCTOR. REFER TO DWG. EGD0-G001 FOR DETAILS.
 - PROVIDE KIRK KEY INTERLOCKS BETWEEN MCC MAIN BREAKER AND TIE BREAKERS TO PREVENT THE SYSTEM FROM BEING FED FROM 2 SEPARATE UTILITY SUPPLIES AT THE SAME TIME.
 - PROVIDE KIRK KEY INTERLOCKS BETWEEN CB-G770, CB-G780, AND CB-G780-T TO PREVENT THE SYSTEM FROM BEING FED FROM 2 SEPARATE UTILITY SUPPLIES AT THE SAME TIME.
 - CONNECT GROUND FAULT C.T TO MMC RELAY. SET GROUND FAULT PROTECTION WITHIN THE MMC RELAY.
 - CONNECT GROUND FAULT C.T's TO GROUND FAULT MONITOR IN EDP-G755. REFER TO DWG. EWDG-G001 AND G002 FOR DETAILS. THE NUMBER ASSOCIATED WITH THE GROUND FAULT C.T's REFERS TO THE MODEL TYPE ON CURRENT TRANSFORMER SCHEDULE ON DWG. EWDG-G002-002.
 - PROVIDE 120 VAC SHUNT TRIP RELAY FOR ALL BREAKERS INDICATED (DESIGNATED AS 'ST'). FEED SHUNT TRIP RELAY FROM GROUND FAULT CURRENT MONITOR AS SHOWN IN DWG. EWDG-G002. PROVIDE CONNECTION VIA WIRING IN CONDUIT.
 - PROVIDE POWER TO POWER METERS FROM PNL-G763U, C.CT. 7.
 - PROVIDE CONTACTOR FOR PLC CONTROL OF HOT WATER TANK. REFER TO DWG. EMCL-G530 FOR SCHEMATIC AND WIRING DIAGRAM.
 - PROVIDE 3 WELDING RECEPTACLES. WIRE AND CONNECT FROM COMMON MCC BREAKER. REFER TO DWG. EGDG-G006 AND G007 FOR LOCATIONS.
 - PROVIDE SHORTING TERMINAL BLOCKS FOR CURRENT TRANSFORMER CONNECTION TO ACTIVE HARMONIC FILTER.
 - WIRE AND CONNECT SYSTEM IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. REVIEW REQUIREMENTS ON SHOPDRAWINGS.

12 SET LONG TIME PICKUP (LTPU) OF MAIN BREAKER TO 0.9 (1800A)

1-0102-ECBD-G001	MCC-G750 LAYOUT AND SCHEDULE
1-0102-EAAA-A001	ELECTRICAL, LEGEND AND DETAILS
REFERENCE DRAWINGS	DESCRIPTION

MAXIMUM LOAD ESTIMATE			
	CONNECTED LOAD (A)	DEMAND FACTOR	DEMAND LOAD (A)
LIGHTING	6.3	1	6.3
HVAC	122.1	0.8	98.0
MISC.	2.5	0.7	1.75
PROCESS	679	0.9	611
TOTAL	810		717.1



01	ISSUED FOR ADDENDUM 2 - 976-2016	2017/06/09	VVE	DEB
00	ISSUED FOR CONSTRUCTION - 976-2016	2017/04/05	VVE	DEB
NO.	REVISIONS	DATE	DESIGN	CHECK

CH2MHILL
SNC-Lavalin
DESIGNED BY: V. ELIMBAN
DRAWN BY: M.J. PERSSON
SCALE: NTS
DATE: 2014/12/09
ISSUED FOR CONSTRUCTION BY: J. SHUMKA
DATE: 2017/04/05
CONSULTANT NO.: 474248

KGS GROUP
ENGINEER'S SEAL
D.E. BECKER
Member
23646

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
SOUTH END WATER POLLUTION CONTROL CENTRE
SEWPPC UPGRADING/EXPANSION PROJECT
ELECTRICAL - SINGLE LINE DIAGRAM
HEADWORKS AREA - GRIT AND SCREENINGS BUILDING
MOTOR CONTROL CENTRE MCC-G750
CITY DRAWING NUMBER: 1-0102-ESLD-G004
SHEET: 001
REV: 01
SIZE: A1

LAST SAVE: 2017/06/06 3:17pm
PATH: C:\pwworking\ch2mhill\wg\ve061971\0102-ESLD-G004.dwg