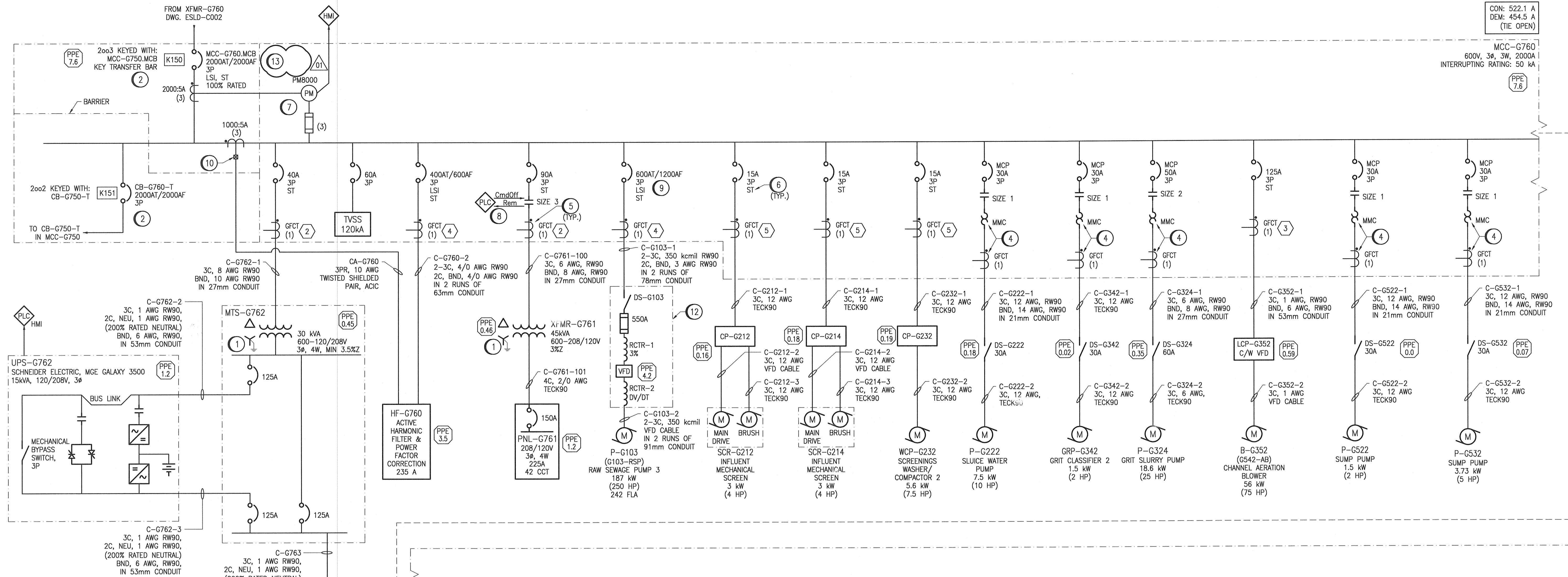


AI SIZE - 594mm x 841mm

CON: 522.1 A
DEM: 454.5 A
(TIE OPEN)

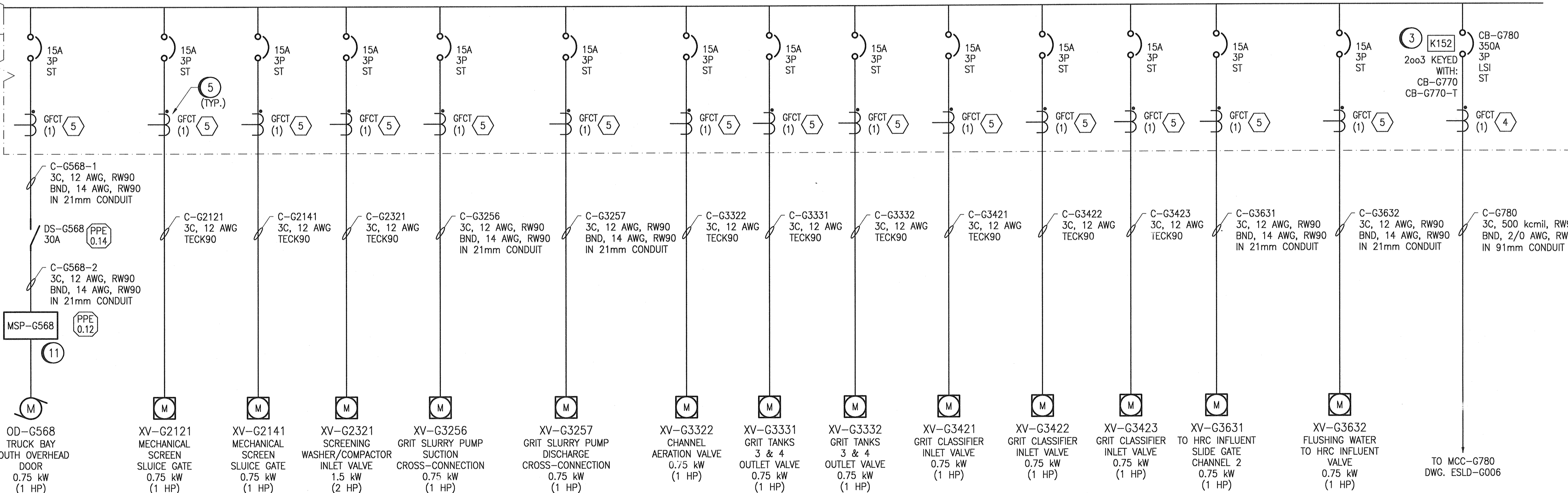


GENERAL NOTES:

- 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 IN CONDUIT 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 X0 TERMINAL TO THE EQUIPMENT GROUNDING SYSTEM CONDUCTOR. REFER TO DWG. EG0D-G001 FOR DETAILS.
- PROVIDE KIRK KEY INTERLOCKS BETWEEN MCC MAIN BREAKER AND THE 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 GFCT'S TO GROUND FAULT MONITOR IN EDP-G765. REFER TO DWG. EWGD-G003 AND G004 FOR DETAILS. THE NUMBER ASSOCIATED WITH THE GROUND FAULT C.T'S REFERS TO MODEL TYPE ON CURRENT TRANSFORMER SCHEDULE ON DWG. EWGD-G002-G004.
- 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. EWGD-G004. PROVIDE CONNECTION VIA WIRING IN CONDUIT.
- PROVIDE POWER TO PM5500 POWER METERS FROM PNL-G763U, CCT. 7.
- PROVIDE NORMALLY OPEN SERIES CONTACTOR FOR PLC CONTROL OF 208/120V PANELBOARD. REFER TO DWG. EMCL-G901 FOR SCHEMATIC AND WIRING DIAGRAM.
- BREAKER SIZED FOR FUTURE UPGRADE TO 500HP PUMP.
- PROVIDE SHORTING TERMINAL BLOCKS FOR CURRENT TRANSFORMER CONNECTION TO ACTIVE HARMONIC FILTER.
- WIRE AND CONNECT SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. REVIEW REQUIREMENTS ON SHOP DRAWING.
- EXISTING VFD RELOCATED FROM PUMP & SCREEN BUILDING ELECTRICAL ROOM.



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

MAXIMUM LOAD ESTIMATE			
	CONNECTED LOAD (A)	DEMAND FACTOR	DEMAND LOAD (A)
LIGHTING	0	1	0
HVAC	127.3	0.8	101.84
MISC.	13.2	0.7	9.24
PROCESS	381.6	0.9	343.4
TOTAL	522.1		454.5

DISCLAIMER NOTES:

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



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

CH2MHILL.
KCS GROUP

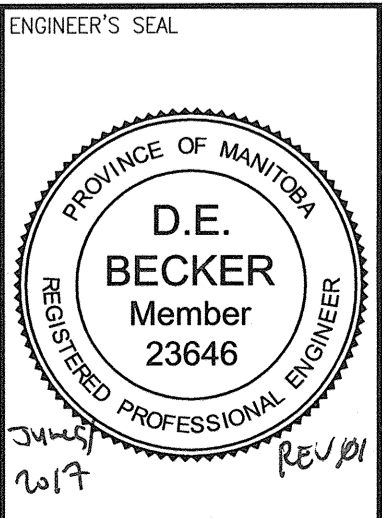
DESIGNED BY: V. ELIMBAN
CHECKED BY: E. RYCKOWSKI

DRAWN BY: M.J. PERSSON
APPROVED BY: D. BECKER

SCALE: NTS
ISSUED FOR CONSTRUCTION BY: J. SHUMKA

DATE: 2015/09/14
DATE: 2017/04/05

CONSULTANT NO.: 474248



THE CITY OF WINNIPEG
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-G760

CITY DRAWING NUMBER: 1-0102-ESLD-G005
SHEET: 001
REV: 01
SIZE: A1

LAST SAVE: 2017/06/06 - 3:18pm
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