

CONSTRUCTION NOTES:

- ① PROVIDE NEW LOCAL DISCONNECT SWITCH.
- ② REPLACE PANEL INTERIOR FOR LP-A. PROVIDE NEW LAMACOD
- ③ PROVIDE NEW CABLING AND CONNECT NEW/EXISTING EQUIPMENT TO THE NEW MCC-M710.
- ④ PROVIDE KIRK KEY INTERLOCK BETWEEN MCC MAIN BREAKER MCC-M710.MCB AND TIE BREAKER TO PREVENT THE SYSTEM FROM BEING FED FROM 2 SEPARATE SOURCES AT THE SAME TIME.
- ⑤ REPLACE EXISTING FUSIBLE DISCONNECT WITH A NON-FUSIBLE DISCONNECT SWITCH DS-CRANE.
- ⑥ RETAIN EXISTING CABLE FROM JUNCTION BOX TO MCC-R1 IN RESERVOIR VALVE HOUSE.
- ⑦ PROVIDE SHORTING TERMINAL BLOCK FOR CURRENT CONNECTION TO POWER FACTOR CORRECTION PFC-M713.
- ⑧ PROVIDE NEW POWER CABLING FOR NEW POWER METER PM8000 FROM PNL-M22U, CCT.22. SEE 1-0640M-E0042-002.
- ⑨ PROVIDE NEW 300 kVA AUTO-TRANSFORMER XFMR-M640. TRANSFORMER IS LOCATED OUTSIDE AND SHALL BE NEMA 4X RATED.
- ⑩ PROVIDE NEW 480V, 400A PANELBOARD, DP-M640.
- ⑪ PROVIDE NEW FEEDS TO NEW CHILLER CHLR-M640. CHLR-M640 TO BE PROVIDED BY MECHANICAL CONTRACTOR.
- ⑫ PROVIDE NEW FEEDS TO NEW CONDENSER CDR-M640. CDR-M640 TO BE PROVIDED BY MECHANICAL CONTRACTOR.
- ⑬ PROVIDE NEW FEEDS TO NEW CHILLED WATER PUMPS, P-M641 AND P-M642. P-M641 AND P-M642 TO BE PROVIDED BY MECHANICAL CONTRACTOR.
- ⑭ PROVIDE NEW POWER FACTOR CORRECTION UNIT, PFC-M713.

GENERAL NOTES:

- 1. ALL EQUIPMENT AND CABLES ARE NEW UNLESS SPECIFICALLY NOTED OTHERWISE.
- 2. NO DE-RATING HAS BEEN APPLIED. THE ELECTRICAL CONTRACTOR SHALL UPSIZE CABLES AND CONDUITS IN ACCORDANCE WITH CEC REQUIREMENTS.
- 3. ALL BREAKERS AND STARTERS TO HAVE AN INTERRUPTING RATING OF 25KAIC OR HIGHER (SERIES RATED EQUIPMENT IS NOT ACCEPTABLE).
- 4. THIS DRAWING SUPERSEDES PART OF DRAWING 1-0640M-E0004.
- 5. CHLR-M640, CDR-M640, P-M641 AND P-M642 TO BE OPERATIONAL PER THE INDICATED CRITICAL DATE IN THE SUPPLEMENTAL CONDITIONS.
- 6. SET MOTOR CIRCUIT PROTECTORS ACCORDING TO THE CORRESPONDING FLA OF THE FEEDER LOAD.

LEGEND:

- EXISTING
- NEW WORK
- - - FUTURE

BREAKER PROTECTION SETTINGS								
CIRCUIT BREAKER	MODEL	FRAME	SENSOR/TRIP UNIT	LTPU (lr)	LTD (tr)	STPU (lsd)	STD (tsd)	INST (ti)
MCC-M710.MCB	SQUARE D POWERPACT L SERIES, 5.3A/E & 6.3A/E SERIES, LSI TYPE	600	600	1 (600A)	8	3.5 (2100A)	0.2	6 (3600A)
CB-M640	SQUARE D POWERPACT L SERIES, 3.3 SERIES, LI TYPE	400	350	1 (350A)	8	-	-	3 (1200A)

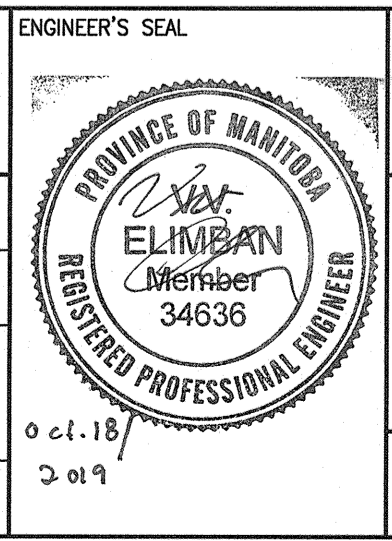
1-0640M-A0077	LOOP DIAGRAM, MCC-M710 VOLTAGE PRESENT
1-0640M-E0078	MOTOR STARTER SCHEMATIC, P-M641, CHILLED WATER PUMP
1-0640M-E0077	MOTOR STARTER SCHEMATIC, P-M641 CHILLED WATER PUMP
1-0640M-E0040	ELECTRICAL EQUIPMENT PLAN, MEZZANINE LEVEL
1-0640M-E0039	PLAN, ELECTRICAL & CONTROL ROOMS - FINAL CONFIGURATION
1-0640M-E0034	ELECTRICAL SINGLE LINE DIAGRAM, PUMPHOUSE MCC-M720
1-0640M-E0033	MCC-M710 LAYOUT AND SCHEDULE
1-0640M-E0030	ELECTRICAL SINGLE LINE DIAGRAM, OVERVIEW
1-0640M-E0002	ELECTRICAL SINGLE LINE DIAGRAM, 4160V DISTRIBUTION
DRAWING NUMBER	REFERENCE DRAWINGS



DESIGNED BY: S. BOGHOSIAN	CHECKED BY: K. SAPIAK
DRAWN BY: S. BOGHOSIAN	APPROVED BY: D. BECKER
SCALE: NTS	ISSUED FOR CONSTRUCTION BY: A. WEISS
DATE: 2018/12/21	DATE: 2019/10/18
ISSUED FOR TENDER AND CONSTRUCTION	2019/10/18
NO. REVISIONS	DATE DESIGN CHECK

**SNC-LAVALIN INC.**  
148 Nature Park Way  
Winnipeg, MB, Canada R3P 0X7  
204-786-8360

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

MCPHILLIPS PUMPING STATION  
ELECTRICAL AND HVAC UPGRADES, MCC REPLACEMENT  
ELECTRICAL SINGLE LINE DIAGRAM  
PUMPHOUSE  
MCC-M710

CITY DRAWING NUMBER: 1-0640M-E0032  
SHEET: 001  
REV: 00  
SIZE: A1