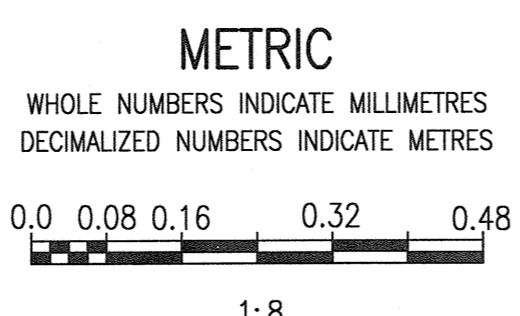


| EQUIPMENT ID:         |                 | VOLTAGE:                                  | RATING:     | PHASE:                | WIRE:      | MAIN BREAKER: | MAIN BREAKER SETTINGS |                                       |      |                    |        |                         |                               |
|-----------------------|-----------------|---|-------------|-----------------------|------------|---------------|-----------------------|---------------------------------------|------|--------------------|--------|-------------------------|-------------------------------|
| <b>MCC-M730E</b>      |                 | <b>600V</b>                               | <b>600A</b> | <b>3 P</b>            | <b>3 W</b> | <b>250A</b>   | LTPU:                 | INST:                                 |      |                    |        |                         |                               |
| DESCRIPTION:          |                 | LOCATION:                                 |             |                       |            |               | STPU:                 |                                       |      |                    |        |                         |                               |
| <b>ESSENTIAL MCC</b>  |                 | <b>MAIN BUILDING ELECTRICAL ROOM</b>      |             |                       |            |               | GFD:                  |                                       |      |                    |        |                         |                               |
| STP:                  |                 | STD:                                      |             |                       |            |               |                       |                                       |      |                    |        |                         |                               |
| UNIT LOC#N            | ID              | DESCRIPTION                               | MOTOR       |                       |            | NON-MOTOR     |                       | STARTER                               |      | CIRCUIT PROTECTION |        | NOTES                   |                               |
|                       |                 |   | HP          | KW                    | FLA        | KW            | KVA                   | NEMA SIZE                             | TYPE | OIL                | RATING |                         | TYPE                          |
| 1A                    | MCC-M730E.MCS-A | MAIN INCOMING SWITCH                      |             |                       |            |               |                       |                                       |      |                    | 250A   | MCS,3P                  |                               |
| 1K                    | MCC-M730E.PM    | POWER METER                               |             |                       |            |               |                       |                                       |      |                    | 60A    | TM,3P                   |                               |
| 1O                    | MCC-M730E.TVSS  | TVSS FEEDER BREAKER                       |             |                       |            |               |                       |                                       |      |                    |        |                         |                               |
| 1Q                    | MCC-M730E.TVSS  | TRANSIENT VOLTAGE SURGE PROTECTION DEVICE |             |                       |            |               |                       |                                       |      |                    |        |                         |                               |
| 1S                    | ESL-M7301       | VOLTAGE MONITORING RELAY                  |             |                       |            |               |                       |                                       |      |                    |        |                         |                               |
| 1W                    | SPACE           |   |             |                       |            |               |                       |                                       |      |                    |        |                         |                               |
| 2A                    | MCC-M730E.PS    | 24VDC POWER SUPPLY FOR ETHERNET SWITCH    |             |                       |            |               |                       |                                       |      |                    |        |                         |                               |
| 2E                    | MCC-M730E.NSW   | ETHERNET NETWORK SWITCH                   |             |                       |            |               |                       |                                       |      |                    |        |                         |                               |
| 2I                    | XFMR-M731E      | TRANSFORMER FOR PANEL LP-B                |             |                       |            |               | 30                    | -                                     | -    | -                  | 40A    | TM, 3P                  | CONNECTED LOAD ESTIMATED      |
| 2K                    | XFMR-M732E      | TRANSFORMER FOR PNL-M732E                 |             |                       |            |               | 5                     | -                                     | -    | -                  | 20A    | TM, 3P                  | FUTURE LOAD ESTIMATED         |
| 2M                    | XFMR-M21E       | XFMR-M21E FOR UPS-M1                      |             |                       |            |               | 10                    |                                       |      |                    | 30A    | TM, 3P                  | 15KVA 1-PHASE XFMR (120/240V) |
| 2N                    | SPACE           |   |             |                       |            |               |                       |                                       |      |                    |        |                         |                               |
| 2P                    | MCC-M730E.MCS-B | BACK-UP INCOMING SWITCH                   |             |                       |            |               |                       |                                       |      |                    | 250A   | MCS,3P                  |                               |
| 3A                    | AC1             | INSTRUMENT AIR COMPRESSOR                 | 7.5         | 5.60                  | 8.2        |               |                       | 1                                     | FVNR | OIL                | 30A    | MCP, 3P                 |                               |
| 3G                    | SPACE           |   |             |                       |            |               |                       |                                       |      |                    | 60A    | TM, 3P                  |                               |
| 3I                    | SPACE           |   |             |                       |            |               |                       |                                       |      |                    |        |                         |                               |
| 3K                    | SHV-1           | SUCTION HEADER VALVE                      | 3.9         | 2.91                  | 4.7        |               |                       |                                       |      |                    | 15A    | TM, 3P                  | FLA ASSUMED                   |
| 3M                    | SHV-4           | SUCTION HEADER VALVE                      | 3.9         | 2.91                  | 4.7        |               |                       |                                       |      |                    | 15A    | TM, 3P                  | FLA ASSUMED                   |
| 3O                    | DHV-1           | DISCHARGE HEADER VALVE                    | 2           | 1.49                  | 2.6        |               |                       |                                       |      |                    | 15A    | TM, 3P                  | FLA ASSUMED                   |
| 3Q                    | DHV-2           | DISCHARGE HEADER VALVE                    | 2           | 1.49                  | 2.6        |               |                       |                                       |      |                    | 15A    | TM, 3P                  | FLA ASSUMED                   |
| 3S                    | SPACE           |   |             |                       |            |               |                       |                                       |      |                    | 15A    | TM, 3P                  |                               |
| 3U                    | SPACE           |   |             |                       |            |               |                       |                                       |      |                    | 15A    | TM, 3P                  |                               |
| 3W                    | MCC-G766        | COLLECTIONS BUILDING GENERATOR ROOM       |             |                       |            |               |                       |                                       |      |                    | 30A    | TM, 3P                  |                               |
| 4A                    | FN1             | SUPPLY FAN                                | 15          | 11.19                 | 16         |               |                       |                                       | SS   |                    | 25A    | TM, 3P                  | FLA ASSUMED                   |
| 4K                    | SPACE           |   |             |                       |            |               |                       |                                       |      |                    |        |                         |                               |
| 4O                    | AC2             | INSTRUMENT AIR COMPRESSOR                 | 7.5         | 5.60                  | 7.4        |               |                       | 1                                     | FVNR | OIL                | 30A    | MCP, 3P                 |                               |
| 4U                    | MCC-C720E       | CHLORINE BUILDING ESSENTIAL MCC           |             |                       |            |               |                       |                                       |      |                    | 90A    | LSI, 3P                 |                               |
| 5A                    | FN2             | SUPPLY FAN                                | 15          | 11.19                 | 16         |               |                       |                                       | SS   |                    | 25A    | TM, 3P                  | FLA ASSUMED                   |
| 5K                    | SPACE           |   |             |                       |            |               |                       |                                       |      |                    |        |                         |                               |
| 5O                    | SP1             | SUMP PUMP                                 | 5.5         | 4.10                  | 6.2        |               |                       | 1                                     | FVNR | OIL                | 30A    | MCP, 3P                 | FLA ASSUMED                   |
| 5S                    | SP2             | SUMP PUMP                                 | 5.5         | 4.10                  | 6.2        |               |                       | 1                                     | FVNR | OIL                | 30A    | MCP, 3P                 | FLA ASSUMED                   |
| 5W                    | SPACE           |   |             |                       |            |               |                       |                                       |      |                    |        |                         |                               |
| TOTAL CONNECTED LOAD: |                 | DEMAND LOAD - SUMMER:                     |             | DEMAND LOAD - WINTER: |            | LEGEND:       |                       |                                       |      |                    |        |                         |                               |
| 157 KVA               |                 | 81 KVA                                    |             | 89 KVA                |            | FVNR          |                       | FULL VOLTAGE NON-REVERSING            |      | MCP                |        | MOTOR CIRCUIT PROTECTOR |                               |
|                       |                 |   |             |                       |            | TM            |                       | THERMAL MAGNETIC                      |      | 3P                 |        | 3 POLE                  |                               |
|                       |                 |   |             |                       |            | MMC           |                       | MOTOR MANAGEMENT CONTROLLER (TESYS T) |      | MCS                |        | MOLDED CASE SWITCH      |                               |
|                       |                 |   |             |                       |            |               |                       |                                       |      | SS                 |        | SOFT STARTER            |                               |
|                       |                 |   |             |                       |            |               |                       |                                       |      | LSI                |        | ADJUSTABLE BREAKER      |                               |

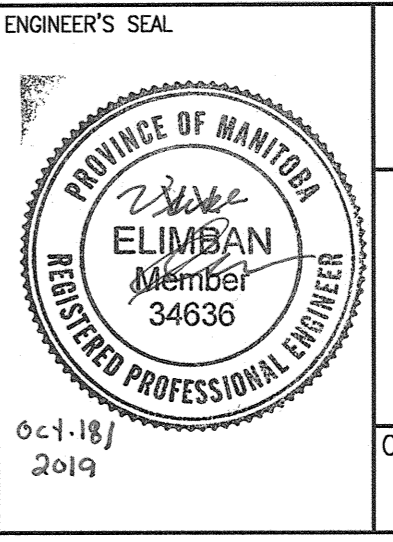
**MCC-M730E SCHEDULE**  
SCALE: NTS

|                |   |
|----------------|---|
| 1-0640M-A0079  | LOOP DIAGRAM, MCC-M730E VOLTAGE PRESENT   |
| 1-0640M-E0036  | ELECTRICAL SINGLE LINE DIAGRAM, MCC-M730E |
| DRAWING NUMBER | REFERENCE DRAWINGS                        |



|                 |                                    |                         |              |
|-----------------|------------------------------------|-------------------------|--------------|
| DESIGNED BY:    | S. BOGHOSIAN                       | CHECKED BY:             | K. SAPIAK    |
| DRAWN BY:       | S. BOGHOSIAN                       | APPROVED BY:            | J. BECKER    |
| SCALE:          | AS SHOWN                           | ISSUED FOR CONSTRUCTION | BY: A. WEISS |
| DATE:           | 2019/01/11                         | DATE:                   | 2019/10/18   |
| CONSULTANT NO.: |                                    |                         |              |
| NO.             | REVISIONS                          | DATE                    | DESIGN CHECK |
| 00              | ISSUED FOR TENDER AND CONSTRUCTION | 2019/10/18              | SB KS        |

**SNC-LAVALIN INC.**  
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**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

MCPHILLIPS PUMPING STATION  
ELECTRICAL AND HVAC UPGRADES, MCC REPLACEMENT  
ELECTRICAL PANEL LAYOUT  
PUMPHOUSE  
MCC-M730E LAYOUT AND SCHEDULE

CITY DRAWING NUMBER: 1-0640M-E0037  
SHEET: 001  
REV: 00  
SIZE: A1