

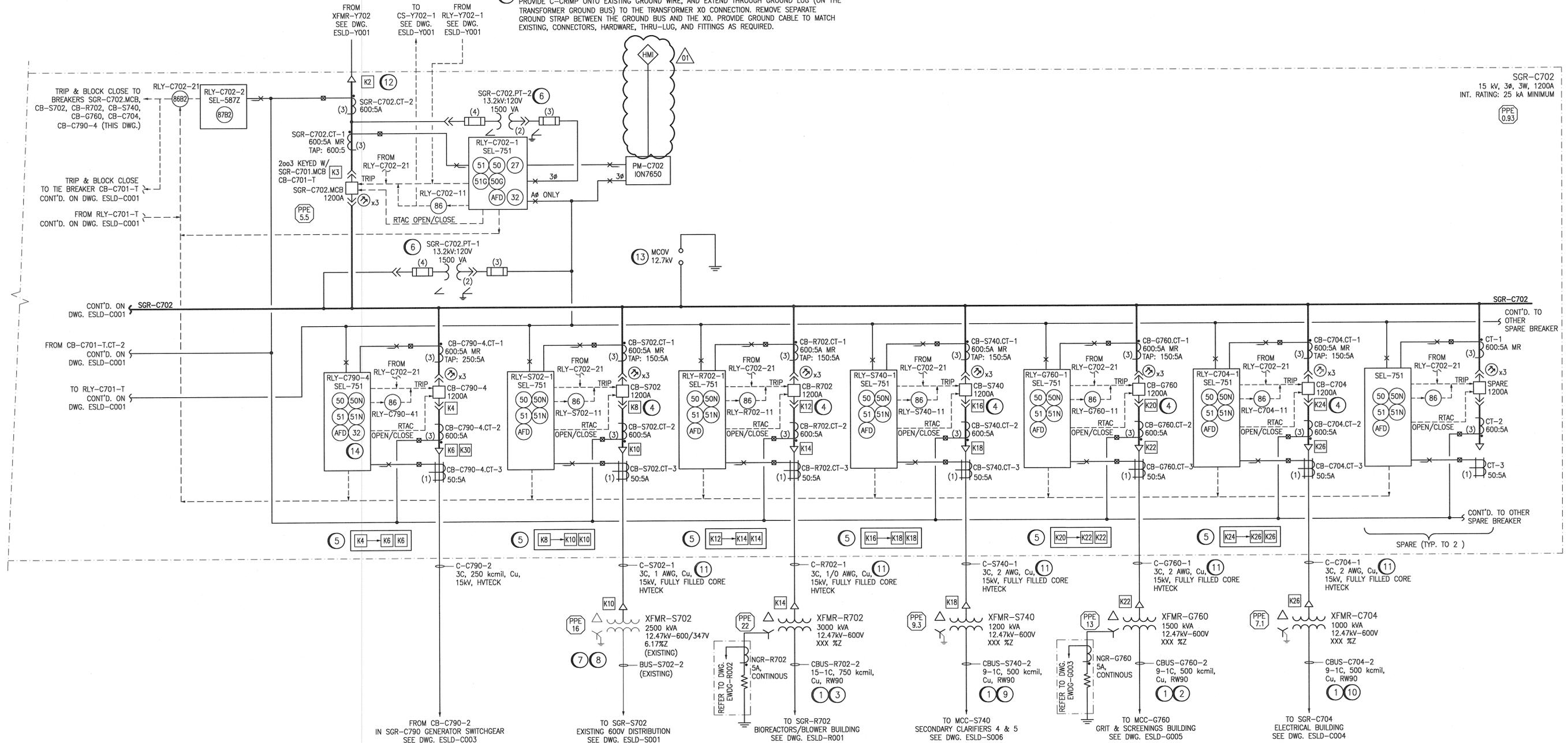
SPECIFIC NOTES

- 1 AS PER RULE 8-104 IN THE CANADIAN ELECTRICAL CODE, SUPPLY CABLE HAS BEEN SIZED WITH AN 85% DERATING FACTOR AS IT IS FEEDING A 100% RATED CIRCUIT BREAKER. CABLES SHALL BE FT-4 TRAY RATED AND SUITABLE FOR WET / OUTDOOR LOCATION.
- 2 CABLES ROUTED FROM XFMR-G760 TO MCC-G760 WILL UTILIZE CABLE BUS SYSTEM. SEE DRAWING 1-0102-ECRT-S002 FOR DETAILS.
- 3 CABLES ROUTED FROM XFMR-R702 TO SGR-R702 WILL UTILIZE CABLE BUS SYSTEM. SEE DRAWING 1-0102-ECRT-R001 FOR DETAILS.
- 4 KEYED INTERLOCK WITH DOWNSTREAM TRANSFORMER ACCESS COMPARTMENT DOOR. PROVIDE SUITABLE PADLOCK FOR ALL TRANSFORMERS.
- 5 INTERLOCK KEY TRANSFER BAR TO BE MOUNTED AT BREAKER COMPARTMENT FRONT DOOR RESPECTIVELY.
- 6 STANDARD RATIO OF 110:1 USED.
- 7 DISCONNECT AND REMOVE EXISTING MB HYDRO 12.47 kV PRIMARY SIDE CABLING, DISCONNECT AND REMOVE EXISTING THE CABLING BETWEEN TRANSFORMERS XFMR-S701 AND XFMR-S702. PROVIDE H.V CONNECTOR PLUG COVERS. RE-FEED TRANSFORMERS, WITH CABLE SIZE AS INDICATED HEREIN.
- 8 THE EXISTING GROUND CONNECTIONS DO NOT MEET CURRENT CEC REQUIREMENTS/STANDARDS. PROVIDE C-CRIMP ONTO EXISTING GROUND WIRE, AND EXTEND THROUGH GROUND LUG (ON THE TRANSFORMER GROUND BUS) TO THE TRANSFORMER XO CONNECTION. REMOVE SEPARATE GROUND STRAP BETWEEN THE GROUND BUS AND THE XO. PROVIDE GROUND CABLE TO MATCH EXISTING, CONNECTORS, HARDWARE, THRU-LUG, AND FITTINGS AS REQUIRED.

- 9 CABLES ROUTED FROM XFMR-S740 TO MCC-S740 WILL UTILIZE CABLE BUS SYSTEM. SEE DRAWING 1-0102-ECRT-S002 FOR DETAILS.
- 10 CABLES ROUTED FROM XFMR-C704 TO MCC-C704 WILL UTILIZE CABLE BUS SYSTEM. SEE DRAWING 1-0102-ECRT-C001 FOR DETAILS.
- 11 15 kV POWER CABLING SHALL BE HVTECK, HAVE 100% INSULATION LEVEL, FULLY FILLED CORE (FOR CABLE THAT CAN ACCOMMODATE A MINIMUM OF 2500LBS/FT PULL STRENGTH) AND 15% OVERLAP COPPER TAPE SHIELD. TYPICAL.
- 12 SWITCHGEAR MANUFACTURER TO COORDINATE KEY INTERLOCK WITH CIRCUIT SWITCHER MANUFACTURER.
- 13 SURGE ARRESTER TO BE STATION CLASS RATED.
- 14 ELEMENT 32 - REVERSE POWER FLOW - TRIP ON POWER FLOW FROM SGR-C702 TO SGR-C790.

LEGEND

- 27 UNDERVOLTAGE RELAY
- 50 PHASE INSTANTENOUS OVERCURRENT RELAY
- 51 PHASE TIME-OVERCURRENT RELAY
- 50N NEUTRAL INSTANTENOUS OVERCURRENT RELAY
- 51N NEUTRAL TIME-OVERCURRENT RELAY
- 50G GROUND FAULT PROTECTION INSTANTENOUS OVERCURRENT RELAY
- 51G GROUND FAULT PROTECTION AC TIME-OVERCURRENT RELAY
- 86 LOCKOUT RELAY
- 87 DIFFERENTIAL RELAY
- 87B1 BUS DIFFERENTIAL LOCKOUT RELAY
- AFD ARC FAULT DETECTOR RELAY
- 32 DIRECTIONAL POWER RELAY
- SEL-751 FEEDER PROTECTION RELAY
- SEL-587Z HIGH IMPEDANCE BUS DIFFERENTIAL RELAY
- ION7650 POWER MONITOR
- K21 KEYED INTERLOCK
- C.T. TEST BLOCK
- P.T. TEST BLOCK
- SHORTING TERMINAL BLOCK
- ARC (LIGHT) SENSOR



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REFERENCE DRAWINGS	DESCRIPTION
1-0102-EAAA-A001	ELECTRICAL, LEGEND AND DETAILS



NO.	REVISIONS	DATE	DESIGN	CHECK
01	ISSUED FOR ADDENDUM 1 - 976-2016	2017/05/26	SLJ	DEB
00	ISSUED FOR CONSTRUCTION - 976-2016	2017/04/05	SLJ	DEB

CH2MHILL.
SNC-LAVALIN

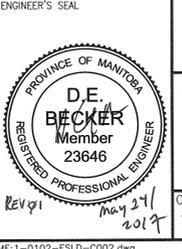
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DRAWN BY: S. JUGANAS
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SCALE: NTS
ISSUED FOR CONSTRUCTION BY: J. SHUMKA

DATE: 2014/10/10
DATE: 2017/04/05

CONSULTANT NO.: 474248



THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

SOUTH END WATER POLLUTION CONTROL CENTRE
SEWPCC UPGRADING/EXPANSION PROJECT
ELECTRICAL - SINGLE LINE DIAGRAM
ELECTRICAL BUILDING
12.47kV MAIN DISTRIBUTION - SGR-C702

CITY DRAWING NUMBER: 1-0102-ESLD-C002
SHEET: 001
REV: 01
SIZE: A1