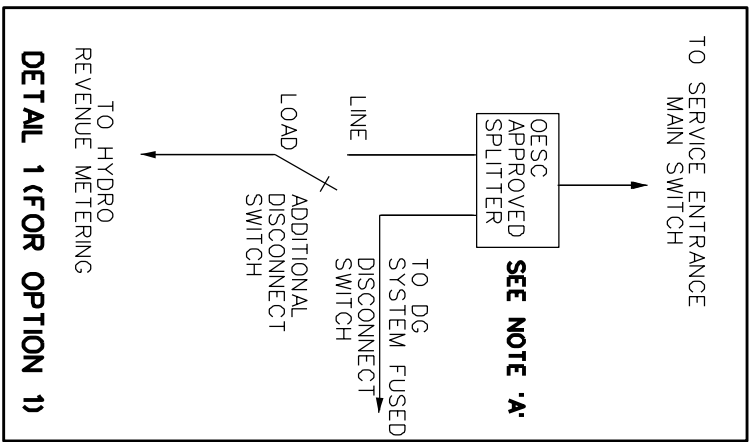
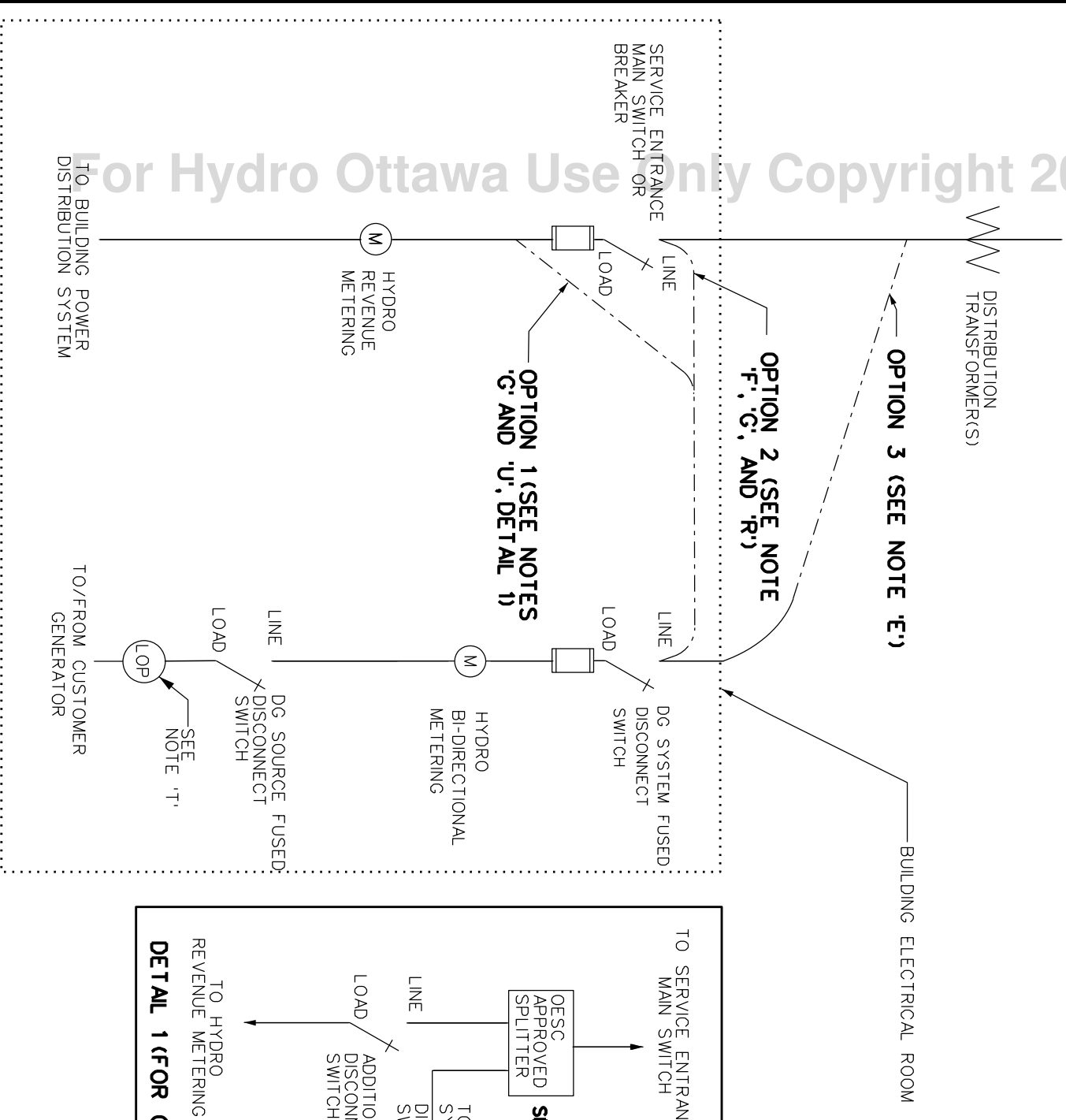


SEE APPENDIX 'E' OF THE OEB DISTRIBUTION SYSTEM CODE FOR GENERATION, FACILITY & CUSTOMER TYPES.



NOTES:

- A. THE PROPOSED INSTALLATION SHALL COMPLY WITH HYDRO OTTAWA ENGINEERING STANDARDS AND THE ONTARIO ELECTRICAL SAFETY CODE. EXISTING SERVICES SHALL MEET CURRENT HYDRO OTTAWA STANDARDS.
- B. SUBMIT THE PROPOSED DESIGN TO HYDRO OTTAWA FOR COMMENT PRIOR TO ESA PLAN APPROVAL SUBMISSION. THE PROPOSED DESIGN SUBMISSION SHALL INCLUDE:
 - i. ELECTRICAL SINGLE LINE DIAGRAM TO SHOW PROPOSED CHANGES PLUS COMMON AND AFFECTED EXISTING BUILDING DISTRIBUTION SYSTEM.
 - ii. ELECTRICAL ROOM FLOOR PLAN LAYOUT.
 - iii. SCALED ELEVATED DETAIL OF THE ELECTRICAL ROOM IF DIFFERENT FROM HYDRO OTTAWA DOCUMENT MCS0058, OTHERWISE NOTE COMPLIANCE WITH HYDRO OTTAWA DOCUMENT MCS0058.
- C. FEASIBILITY OF EACH OPTION DEPENDS ON THE TYPE, CONDITION, PHYSICAL LAYOUT AND/OR CONFIGURATION OF THE EXISTING ELECTRICAL EQUIPMENT MAJOR CHANGES TO THE BUILDING SERVICE ENTRANCE MAY BE REQUIRED TO ACCOMMODATE THE CONNECTION.
- D. HYDRO OTTAWA SHALL NOT ACCEPT DIRECT OR INDIRECT RESPONSIBILITY FOR CHANGES TO THE EXISTING UTILITY OWNED EQUIPMENT AND/OR BUILDING DISTRIBUTION EQUIPMENT DUE TO THE PROPOSED DESIGN.
- E. FOR OPTION 3, WHERE DEDICATED PADMOUNT OR VAULT DISTRIBUTION TRANSFORMER(S) EXIST ON PRIVATE PROPERTY, CONSULT WITH HYDRO OTTAWA FOR FEASIBILITY OF UP TO TWO SERVICE CONNECTIONS TO THE HYDRO OTTAWA TRANSFORMER SECONDARY SPADES.
- F. FOR OPTION 2, CONNECTION TO AN EXISTING HOT SPLITTER TROUGH OR THE ADDITION OF A HOT SPLITTER TROUGH IS NOT PERMITTED.
- G. FOR OPTIONS 1 & 2, HYDRO OTTAWA REQUIRES A DISTINCT AND DEDICATED DISCONNECT SWITCH FOR ALL EXISTING AND NEW REVENUE METERING POINTS.
- H. A PROPERTY WITH MULTIPLE HYDRO OTTAWA SUPPLY POINTS AS PER HYDRO OTTAWA'S CONDITIONS OF SERVICE, ECS0012, REQUIRE THE DG PROJECT TO AMALGAMATE ALL SUPPLY POINTS.
- I. FOR THREE-PHASE GENERATORS, PHASE CURRENTS SHALL BE BALANCED WITHIN 15% OF EACH OTHER.
- J. DG INSTALLATIONS ON THREE-PHASE SUPPLY POINTS SHALL BE THREE-PHASE GENERATORS. IF ANY PHASE(S) ON THE DISTRIBUTION GRID OR FROM THE DG SOURCE IS OUT OF ELECTRICAL TOLERANCE SPECIFICATION, ALL THREE DG PHASES SHALL BE ISOLATED FROM GENERATING INTO THE DISTRIBUTION GRID.
- K. WHEN HYDRO OTTAWA SPECIFIES THE NEED FOR LOSS-OF-PHASE (LOP) PROTECTIVE DEVICES, THE DEVICE SHALL BE INSTALLED CLOSEST TO THE DISTRIBUTED GENERATION SOURCE DISCONNECT SWITCH ON THE SAME SIDE AS THE DISTRIBUTED GENERATION EQUIPMENT.
- L. GENERATORS TO MEET HYDRO OTTAWA'S POWER QUALITY SPECIFICATION, ECG0008, INCLUDING THE REQUIREMENTS OF UL-1741 AND IEEE-1547.
- M. METERING EQUIPMENT WILL BE SIZED TO THE FUSED DISCONNECT SWITCH RATING AND, NOT THE FUSE SIZE.
- N. HYDRO OTTAWA LIMITS THE NUMBER OF GANGED SINGLE PHASE METER BASE SOCKETS TO A MAX OF 6, GREATER THAN 6 METERS THAT ARE TO BE GANGED, REQUIRE A METERING CENTER WITH A DISTINCT MAIN SWITCH/BREAKER AS PER HYDRO OTTAWA'S CONDITIONS OF SERVICE, ECS0012, AND HYDRO OTTAWA DOCUMENT GCS0008.
- O. EXISTING PRIMARY METERED SERVICES MAY OPT TO CONVERT TO SECONDARY METERING FOR LOAD AND GENERATION OR INSTALL ADDITIONAL PARALLEL PRIMARY METERING FOR THE GENERATOR.
- P. REFER TO HYDRO OTTAWA SPECIFICATION MCS0058 FOR CONSTRUCTION DETAIL AND MCS0057 FOR WIRING DETAIL.
- Q. ENGINEERING SINGLE LINE DRAWING SHALL BE SIGNED, DATED, AND SEALED BY A PROFESSIONAL ENGINEER FOR:
 - i. MULTI-RESIDENTIAL (2+ UNITS) PREMISES.
 - ii. ALL COMMERCIAL PREMISES.
 - iii. SINGLE RESIDENTIAL PREMISE WITH > 10kW DG.
- R. FOR OPTION 2, HYDRO OTTAWA WILL ACCEPT THE ADDITION OF MULTI-BARREL MECHANICAL LUGS WHERE PRACTICABLE (PREFERRED METHOD) AND POSSIBLE. TERMINATION OF TWO CONDUCTORS IN THE SAME LUG BARREL SHALL NOT BE PERMITTED.
- S. MINIMUM OF 1500 [5'] OF CLEARANCE REQUIRED IN FRONT OF ALL METERING EQUIPMENT.
- T. LOSS OF PHASE (LOP) PROTECTIVE DEVICES, IF REQUIRED, SHALL BE CONNECTED BESIDE THE DG SOURCE DISCONNECT SWITCH.
- U. THE PARALLEL CONNECTION SHALL NOT BE TERMINATED IN THE REVENUE METERING CELL FOR THE CUSTOMER OWNED EQUIPMENT, IF SWITCHGEAR IS USED.
- V. BOTH DG SYSTEM FUSED DISCONNECT AND DG SOURCE DISCONNECT TO HAVE FACTORY INSTALLED OVER-CURRENT PROTECTION AS PER HYDRO OTTAWA SPECIFICATION GCS0008.

REV#	DATE	DESCRIPTION	PREP	CHKD	APPD	TITLE	NO.	REV#
4	2013-04-29	ADDED NOTE 'R'	RW	RW	CSM	ENGINEERING SPECIFICATION ERF/COM 1PH OR 3PH SECONDARY COMMERCIAL SERVICE ≤ 500kW 1PH OR >10kW 3PH CONSTRUCTION DETAIL ECCG0015	1	
5	2014-09-03	REVISED SINGLE LINE AND NOTES A, K, AND T	RW	RW	CSM		1	
6	2016-01-13	ADDED NOTE 'U'	JD	SMC	CSM		1	
CHG	DATE	DESCRIPTION	PREP	CHKD	APPD			
5	2014-09-03	REVISED SINGLE LINE AND NOTES A, K, AND T	RW	RW	CSM			
6	2016-01-13	ADDED NOTE 'U'	JD	SMC	CSM			



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 DATE: 2010-10-20
 SCALE: N.T.S. @ ANSIB