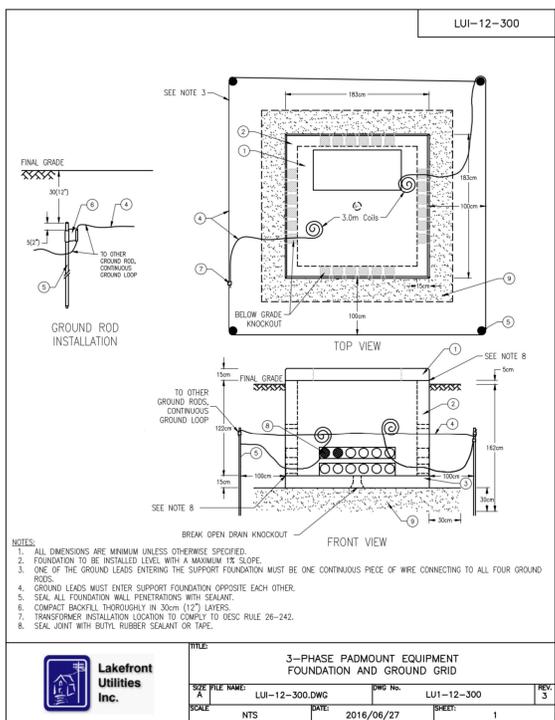




1. GENERAL NOTES

- 1.1. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK INDICATED WITH LAKEFRONT UTILITIES INC. THE CONTRACTOR SHALL ALLOW FOR A START-UP MEETING AND AT LEAST THREE (3) COORDINATION MEETINGS ON SITE WITH THE LOCAL UTILITY.
- 1.2. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT ROUTING PATH OF THE DUCT BANK WITH THE LOCAL UTILITY ON SITE. THE CONTRACTOR SHALL PROVIDE A DETAIL DRAWING SUBMITTED AS A SHOP DRAWING SHOWING THE FINAL ROUTING PATH OF THE DUCT BANK.
- 1.3. THE ELECTRICAL CONTRACTOR SHALL CONFORM WITH OTHER UTILITY REQUIREMENTS AS DETERMINED DURING THE COURSE OF CONSTRUCTION.
- 1.4. THE LOCAL UTILITY SHALL SUPPLY AND INSTALL THE NEW 150 KVA TRANSFORMER AND TERMINATE PRIMARY AND SECONDARY CABLES AT THE TRANSFORMER.
- 1.5. THE ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL CIVIL INFRASTRUCTURE INCLUDING TRANSFORMER BASE, DUCT AS PER LUI STANDARD.
- 1.6. THE ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL DUCT FROM EXISTING TRANSFORMER TO THE NEW TRANSFORMER BASE.
- 1.7. THE ELECTRICAL CONTRACTOR SHALL INSTALL (PULL) PRIMARY CABLE IN TRENCH. THE LOCAL UTILITY SHALL SUPPLY THE CABLE TO THE ELECTRICAL CONTRACTOR. ONE CABLE SHALL BE INSTALLED IN EACH OF THE THREE DUCTS.
- 1.8. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE METER INSTALLATION WITH THE LOCAL UTILITY.
- 1.9. THE ELECTRICAL CONTRACTOR SHALL RE-INSTATE ALL GRADING TO ITS ORIGINAL CONDITION AFTER THE TRENCH IS COVERED. FOR GRASSED AREAS, THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL SOD REQUIRED FOR NEW GRASS TO DEVELOP. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WATERING SERVICE AS REQUIRED TO ENSURE NEW SOD TAKES AND DOES NOT DIE. ALLOW FOR WATERING OF SOD FOR A MINIMUM OF ONE MONTH AT INTERVALS IN ACCORDANCE WITH SOD SUPPLIER RECOMMENDATIONS.
- 1.10. THE ELECTRICAL CONTRACTOR SHALL RE-INSTATE ALL PEDESTRIAN WALKWAYS DISTURBED BY TRENCHING.
- 1.11. THE ELECTRICAL CONTRACTOR SHALL RE-INSTATE PAVING TO ORIGINAL CONDITION WHERE REMOVED FOR TRENCHING.

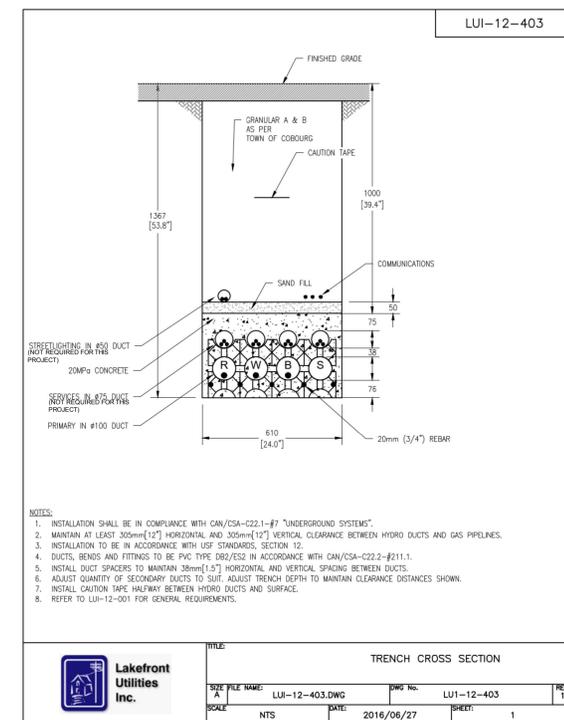


MATERIAL LIST LUI-12-300

ITEM #	DESCRIPTION	QTY	MANUFACTURER	PART#	STOCK #
1	PRECAST TOP, 72" x 72"	1	BROOKLIN	BCP1141*	VAUL-0002
				BCP1147MTHS**	VAUL-0009
2	PRECAST FOUNDATION, 72" x 72"	1	BROOKLIN	BCP1144*	VAUL-0001
				BCP1147HS**	VAUL-0010
3	PRECAST BASE, 72" x 72"	1	BROOKLIN	BCP1148	VAUL-0004
4	#2/0 Cu BARE	++			WIRE-0015
5	GROUND ROD, 10' x 3/4"	4	SLACAN	9340SF	RODS-0001
6	CONNECTOR, WEDGE, Cu, 2/0-350 or 2/0-3/4" GROUND ROD	++	TE CONNECTIVITY	4-276337-B	CONN-AM05
7	CONNECTOR, WEDGE, Cu, 2/0-2/0	++	TE CONNECTIVITY	1-275187-S	CONN-AM01
8	SEALANT, FOAM, DUCT	++			
9	GRANULAR 'A' 3/4" (20mm)	++			

++ QUANTITY/SIZE TO SUIT

* TO BE USED FOR TRANSFORMERS RATED 750KVA AND UNDER
** TO BE USED FOR TRANSFORMERS RATED OVER 750KVA



MATERIAL LIST LUI-12-403

ITEM #	DESCRIPTION	QTY	MANUFACTURER	PART#	STOCK #
1	DUCT, DR2/ES2	++			
2	DUCT SPACERS	++			
3	REBAR, 20mm (3/4")	++			
4	CONCRETE, 20MPa	++			
5	CAUTION TAPE	++			
6	SAND FILL	++			
7	GRANULAR A	++			
8	GRANULAR B	++			

++ QUANTITY/SIZE TO SUIT

1. GENERAL

- 1.1. THE CONTRACTOR SHALL OBTAIN LOCATES PRIOR TO EXCAVATING. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND/OR THE INSPECTOR.
- 1.2. CIVIL CONSTRUCTION FOR THE ELECTRICAL DISTRIBUTION SYSTEM SHALL NOT START UNTIL THE ROADWAY CURBS AND GUTTERS ARE COMPLETE AND THE ROAD ALLOWANCE IS WITHIN 150MM OF FINAL GRADE AND FREE OF OBSTRUCTIONS.
- 1.3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE RULES AND REGULATIONS, INCLUDING THE OCCUPATIONAL HEALTH & SAFETY ACT, CONSTRUCTION REGULATIONS AND THE REGULATIONS FOR INDUSTRIAL ESTABLISHMENTS.
- 1.4. TRENCHES SHALL BE STRAIGHT AND PROPERTY LINE OFFSETS SHALL BE MAINTAINED CONSISTENT WITH THE TOWN STANDARD. THE BOTTOM OF THE TRENCH SHALL BE MAINTAINED AS LEVEL AS POSSIBLE.

2. DUCTS

- 2.1. ALL DUCTS SHALL BE TYPE DR2/ES2 PVC SOLID WALL MANUFACTURED IN ACCORDANCE WITH CSA-C22.2-#211.1 LATEST REVISION.
- 2.2. DUCTS TO BE SUPPORTED WITH APPROVED SPACERS EVERY 1.5M (5').
- 2.3. JOINT BETWEEN DUCTS, BENDS AND FITTINGS SHALL BE MADE WITH AN APPROVED SOLVENT CEMENT AND LEFT TO SET FOR AT LEAST 30 MINUTES PRIOR TO BACKFILLING.
- 2.4. SPARE DUCTS SHALL BE EQUIPPED WITH A 10MM (3/8") POLYPROPYLENE PULLING ROPE.
- 2.5. ALL DUCTS ENDS TO BE SEALED WITH AN APPROVED DUCT PLUG IMMEDIATELY AFTER INSTALLATION TO PREVENT DEBRIS FROM ENTERING THE DUCT.
- 2.6. DUCTS TERMINATING AT A DUCT FACE SHALL BE EQUIPPED WITH BELL ENDS TO PROTECT CABLE.

3. CONCRETE ENCASED DUCTS

- 3.1. DUCTS TO BE SUPPORTED WITH APPROVED SPACERS EVERY 1.5M (5') AND MUST BE ANCHORED SO AS NOT TO FLOAT DURING POURING OF CONCRETE.
- 3.2. CONCRETE REINFORCING BARS SHALL BE NON-PRE-STRESSED 20MM (3/4") DEFORMED STEEL REINFORCING BARS, GRADE 400, PER CSA-G30.18-09, OVERLAPPED BY 600MM (24"). REBAR SHALL BE PLACED BELOW THE DUCTS AND SHALL EXTEND BEYOND THE END OF THE CONCRETE FOR FUTURE DUCT BANK EXTENSION.
- 3.3. END OF CONCRETE SHALL BE MARKED FOR FUTURE LOCATION WITH AN ELECTRONIC MARKER BALL.
- 3.4. CONCRETE SHALL BE 20MPa WITH 10MM (3/8") PEA STONE AGGREGATE.

4. BACKFILL

- 4.1. ANY EQUIPMENT FOUNDATIONS DAMAGED DURING CONSTRUCTION SHALL BE PROPERLY REPAIRED, AND SHALL BE INSPECTED PRIOR TO BACK-FILLING.
- 4.2. DIRECT BURIED DUCTS SHALL BE BEDDED IN AND COVERED WITH CLEAN SAND FILL AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS. SAND TO BE UNIFORMLY GRADED CLEAN SAND WITH MAXIMUM AGGREGATE SIZE OF 2.0MM, AND A MAXIMUM OF 8% PASSING THROUGH A NUMBER 200 SIEVE.
- 4.3. BACK FILL MATERIAL SHALL BE CLEAN AND FREE OF LARGE ROCKS, DEBRIS OR CHEMICAL AGENTS THAT MAY DAMAGE DUCTS OR CABLES, OR PREVENT FUTURE SETTLEMENT.
- 4.4. ROAD CROSSINGS SHALL BE BACK FILLED AND COMPACTED IN ACCORDANCE WITH THE TOWN'S REQUIREMENTS. CONCRETE ENCASEMENT OF DUCTS SHALL EXTEND PAST THE CURBS AS PER DRAWING LUI-12-405.
- 4.5. COMPACTION SHALL BE PERFORMED ON ALL TRENCHES TO PREVENT FUTURE SETTLEMENT.
- 4.6. WARNING TAPE TO BE INSTALLED APPROXIMATELY HALF WAY BETWEEN ELECTRICAL DUCTS AND THE SURFACE. TAPE TO BE 152MM (6") WIDE, RED PLASTIC WITH BLACK LETTERING, WITH THE WORDS "CAUTION" OR "WARNING", "BURIED ELECTRIC CABLES."
- 4.7. DRIVEWAY AREAS SHALL BE BACKFILLED WITH GRANULAR "A", COMPACTED IN LAYERS.

5. EQUIPMENT FOUNDATIONS

- 6.1. PRECAST CONCRETE EQUIPMENT FOUNDATIONS SHALL BE INSTALLED LEVEL AND SQUARE TO THE ROADWAY OR PROPERTY LINE, SUITED TO FINAL GRADE AS PER THE CONSTRUCTION STANDARDS.
- 6.2. FOUNDATIONS SHOULD BE INSTALLED ON A 300MM COMPACTED GRANULAR 'A' SUB-BASE AS PER THE CONSTRUCTION STANDARDS.
- 6.3. SOLID BASES ARE REQUIRED FOR ALL FOUNDATIONS. THE DRAIN OPENING SHOULD BE KNOCKED OUT TO PERMIT DRAINING OF GROUND WATER.
- 6.4. ALL DUCTS ENTERING A FOUNDATION SHALL BE EQUIPPED WITH A BELL END OR FLARED DUCT ENTRANCE FITTING TO PREVENT DAMAGE TO CABLES.
7. **CABLE INSTALLATION**
- 7.1. DUCTS SHALL BE CLEANED AND SWABBED, AND PROVEN WITH A TEST MANDREL 95% OF THE INSIDE DIAMETER OF THE DUCT, PRIOR TO THE INSTALLATION OF CABLE.
- 7.2. CABLE SHALL BE PULLED INTO THE DUCTS USING A SUITABLY RATED SYNTHETIC PULLING TAPE OR WIRE ROPE. TWISTED POLY ROPE IS NOT TO BE USED AS IT WILL DAMAGE THE DUCT BENDS.
- 7.3. ALL CABLE PULLS SHALL USE A SWIVEL EYE TO PREVENT TWISTING OF THE CABLE AND/OR ROPE.
- 7.4. FOLLOW THE DIRECTION OF CABLE PULL IDENTIFIED ON THE DESIGN DRAWINGS.
- 7.5. IF CABLE IS BEING INSTALLED DURING COLD WEATHER, THE CABLE SHOULD BE STORED INDOORS FOR 24 HOURS PRIOR TO PULLING TO IMPROVE FLEXIBILITY AND PREVENT DAMAGE

1 ELECTRICAL PRIMARY SERVICE SITE PLAN



2 LAKEFRONT UTILITIES SERVICES INC.

NOTE: THE ABOVE DETAILS ARE PROVIDED AT THE UTILITIES REQUEST. THE ELECTRICAL CONTRACTOR SHALL CONFORM TO ALL OF LAKEFRONT UTILITIES SERVICES INC. REQUIREMENTS, AS INDICATED IN DETAIL 2 ON THIS DRAWING, WHEN PROVIDING THE WORK ASSOCIATED WITH THE UTILITY ON THIS PROJECT.

No.	DATE	ISSUED FOR ADDENDUM E-1	C.M.S.
0	2021-04-05	ISSUED FOR ADDENDUM E-1	C.M.S.

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

	A	B	C
Detail No.			
No. du detail			
drawing no. - where detail required			
dessin no. - ou detail exigé			
drawing no. - where detailed			
dessin no. - ou détaillé			

project title
titre du dessin

COBOURG CITY

COBOURG SEARCH AND RESCUE STATION

drawing title
titre du dessin
**ELECTRICAL GENERAL
NEW POWER SITE PLAN LAYOUT
UTILITY PRIMARY SERVICE**

drawn by
dessiné par
C.SITKOWSKI

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approved by
approuvé par
C.SITKOWSKI

bid
offre
ELISABETH OHI

project manager
administrateur
de projets

project date
date du projet
20-03-2019

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