

FOR SHEET 2 OF THIS DRAWING SEE DU-03-209.1-0501
 FOR SHEET 3 OF THIS DRAWING SEE DU-03-209.1-0502

ALL DIMENSIONS IN MILLIMETRES
 UNLESS OTHERWISE STATED

Rev No.	Date	Revision Particulars	dwn	ckd	des	app
04	AUG 2019	REMOVED 2" OPTION, UNIVERSAL SIZE. MODIFIED PARTS 1, 2 & 8. MODIFIED NOTES 1, 2 & 4. ADDED NEW NOTES 12, 13 & 14. REMOVED PREVIOUS PART 9 (STRAPS). INTRODUCED GENERIC SUPPORT STRUCTURE FOR CUSTOMER INSTALLATION.	PC/LS	SJ	SJ	MM
03	SEP 2018	GENERAL UPDATES. CHANGED TO NEW DWG. & NUMBERING FORMAT. FOR PREVIOUS REVISIONS REFER TO DU-03-209.1-R2.	SO	PC	AS	PS

Drawn By: L.SEQUEIRA	Checked By:	Designed By:	Design Approved By:
Scale: N.T.S.	Date: (yyyy/mm/dd) 2012/08/30	Pole ID:	



Title:
TRENCH DETAIL – SECONDARY SERVICE CABLE FROM DIP POLE TO METER BASE

© Copyright Hydro One Networks Inc. All rights reserved. This drawing may not be reproduced or copied, in whole or in part, in any printed, mechanical, electronic, film, or other distribution and storage media or used in any information storage or retrieval system outside of Hydro One Networks Inc., without the written consent of Hydro One Networks Inc.
 Information contained in this drawing is considered to be confidential. Recipients shall only use the drawing for its intended purpose and shall take necessary measures to prevent disclosure or transmittal to outside parties.

Drawing No. DU-03-209.1-0500	Rev. No. 04
---------------------------------	----------------

TITLE BLOCK REV 02 – AUGUST 2014

NOTES:

1. BACKFILL: ENSURE DB2 CONDUIT IS ENVELOPED WITH MASONRY SAND UPON INSTALLATION (75mm MINIMUM BELOW AND 150mm MINIMUM ABOVE). REMAINDER OF BACKFILL MUST BE CLEAN AND FREE OF DEBRIS TO PREVENT DAMAGE TO THE DUCT. BACKFILL SHALL BE WELL TAMPED.
2. STRAIGHT DUCT SHALL BE EMPLOYED IN THE TRENCH TO HOUSE THE CABLE. IT SHALL BE 100mm (4") DIAMETER PVC TYPE DB2 CONDUIT. THE ENDS OF THE DUCT SHALL BE CAPPED OR BAGGED TO PREVENT DEBRIS AND MOISTURE FROM ENTERING THE DUCT PRIOR TO CABLE INSTALLATION. IF OPEN TRENCH ENDS MUST BE LEFT UNATTENDED AFTER CABLE INSTALLATION, SEE DU-03-209.1-0500 OPTION 1, WITH A LENGTH OF FLEXIBLE CONDUIT TO MAKE 90° TRANSITION.
SEE OPTION 2 FOR ALTERNATE METHODS.
3. PULL TAPE: A 1/2" WIDE POLYESTER PULLING TAPE MUST BE INSTALLED THROUGH THE ENTIRE LENGTH OF THE DUCT.
4. INSERT 3" FLEXIBLE CONDUIT 600mm IN THE DB2 CONDUIT.
5. RADIUS MUST BE GREATER THAN THE SPECIFIED CABLE MINIMUM BENDING RADIUS.
6. INSTALL METER COMPARTMENT AS PER ONTARIO ELECTRICAL SAFETY CODE (OESC), USE ONLY HYDRO ONE APPROVED METER BASES LISTED IN THE HYDRO ONE 'METER SOCKET BASE' LIST. METER BASE TO MAINTAIN 1M MINIMUM CLEARANCE FROM DISCHARGE OF ANY COMBUSTIBLE GAS RELIEF DEVICE OR VENT.
7. TELECOMMUNICATION PLANT MAY SHARE SERVICE TRENCH BUT MUST BE INSTALLED IN ITS OWN CONDUIT.
8. PREFERRED ROUTING FOR GAS SERVICE SHALL BE ON OPPOSITE SIDE OF THE BUILDING THAN THAT OF THE ELECTRICAL SERVICE. IF COMMON TRENCHING IS UNAVOIDABLE, 300mm MINIMUM CLEAR SEPARATION SHALL BE MAINTAINED IN ALL DIRECTIONS BETWEEN GAS SERVICE AND ELECTRICAL SUPPLY CABLE.
9. CLEARANCES, DEPTHS, SEPARATIONS AND FORMS OF MECHANICAL PROTECTION OF THE CABLE ARE MINIMUM REQUIREMENTS. INCREASED CLEARANCES AND OR ADDITIONAL FORMS OF MECHANICAL PROTECTION ARE CONSIDERED POSITIVE DEVIATIONS AND ARE ALLOWED.
10. IF FURTHER TRENCHING ALONG ROAD ALLOWANCE IS REQUIRED, IT SHALL BE CONSTRUCTED PER HYDRO ONE STANDARD TRENCH PROFILES.
11. RISER CONDUIT TO BE EASILY REMOVED BY HYDRO ONE FOR CABLE INSTALLATION PURPOSES.
12. FINAL METER BASE HEIGHT IN REFERENCE TO FINISHED GRADE.
13. CUSTOMER SUPPLIED AND INSTALLED CONDUIT, METER BASE, CLAMPS AND ASSOCIATED HARDWARE INSTALLED PER ONTARIO ELECTRICAL SAFETY CODE (OESC).
14. THE METER BASE AND DIP POLE CONDUITS WILL VARY IN SIZE DEPENDING ON CONDUCTOR SIZE (i.e. 2" DIAMETER FOR 3/0, 3" FOR 250Kcmil OR 500Kcmil CONDUCTOR). FLEXIBLE CONDUIT WILL BE 3" FOR ALL CONDUCTOR SIZES FOR TEMPORARY PROTECTION OF TRENCH ENDS PER OPTION 1 AND 4" FOR ALL CONDUCTOR SIZES IF USED AS MAIN CONDUIT PER OPTION 2. APPROPRIATELY SIZE COUPLERS (SHOWN AND LISTED IN THE PARTS LIST) SHALL BE USED TO CONNECT THE SCHEDULE 40 PVC TO THE FLEXIBLE CONDUIT.

FOR SHEET 1 OF THIS DRAWING SEE DU-03-209.1-0500
FOR SHEET 3 OF THIS DRAWING SEE DU-03-209.1-0502
ALL DIMENSIONS IN MILLIMETRES
UNLESS OTHERWISE STATED

PARTS LIST			
PART No.	MM No.	DESCRIPTION	QTY.
1	30031161	COUPLER KIT, 3" FLEX TO 2" RIGID	A/R
	30030236	COUPLER KIT, 3" FLEX TO 3" RIGID	
	30031918	COUPLER KIT, 4" FLEX TO 4" RIGID	
2	30030235	CONDUIT, FLEX, 3"	A/R
	30031917	CONDUIT, FLEX, 4"	
3	30005908	SERVICE CABLE, 3/0 AWG, 3-COND., AL.	A/R
	30005915	SERVICE CABLE, 250Kcmil, 3-COND., AL.	
	30005959	SERVICE CABLE, 500Kcmil, 3-COND., AL.	
4	30007710	CONDUIT, PVC, 4", DB2	A/R
5	20002181	CAUTION TAPE, BURIED ELECTRIC LINE	A/R
6	30007687	SWEEP, 4" x 16" RADIUS, SCHEDULE 40, PVC	A/R
7	30007583	CONDUIT, 4", SCHEDULE 40, PVC	A/R
8	30031602	CAP, 4", SCHEDULE 40, PVC	A/R
9	20000007	TAPE, PULLING, 1/2" WIDE, POLYESTER	A/R
MM# = REFER TO SECTION 16 ONLY		A/R = AS REQUIRED	
* = SUPPLIED BY CUSTOMER			

04	AUG 2019	REMOVED 2" OPTION, UNIVERSAL SIZE. MODIFIED PARTS 1, 2 & 8. MODIFIED NOTES 1, 2 & 4. ADDED NEW NOTES 12, 13 & 14. REMOVED PREVIOUS PART 9 (STRAPS). INTRODUCED GENERIC SUPPORT STRUCTURE FOR CUSTOMER INSTALLATION.	PC/LS	SJ	SJ	MM
03	SEP 2018	GENERAL UPDATES. CHANGED TO NEW DWG. & NUMBERING FORMAT. FOR PREVIOUS REVISIONS REFER TO DU-03-209.1-R2.	SO	PC	AS	PS
Rev No.	Date	Revision Particulars	dwn	ckd	des	app

Drawn By: L.SEQUEIRA	Checked By:	Designed By:	Design Approved By:
Scale: N.T.S.	Date: (yyyy/mm/dd) 2012/08/30	Pole ID:	

hydro one **Hydro One Networks Inc.**

© Copyright Hydro One Networks Inc. All rights reserved. This drawing may not be reproduced or copied, in whole or in part, in any printed, mechanical, electronic, film, or other distribution and storage media or used in any information storage or retrieval system outside of Hydro One Networks Inc., without the written consent of Hydro One Networks Inc.
Information contained in this drawing is considered to be confidential. Recipients shall only use the drawing for its intended purpose and shall take necessary measures to prevent disclosure or transmittal to outside parties.

Title: TRENCH DETAIL – SECONDARY SERVICE CABLE FROM DIP POLE TO METER BASE	Drawing No. DU-03-209.1-0501	Rev. No. 04
---	---------------------------------	----------------

TITLE BLOCK REV 02 – AUGUST 2014

Hydro One trenching guidelines:
Secondary service trench with supply taken from dip pole
per Hydro One Networks Inc. standard drawing DU-03-209.1-0500

The installation options listed below explain Hydro One Networks' Standard (DU-03-209.1-0500) for the installation of Hydro One owned single-phase secondary underground cables. Regardless of who installs the cable, the trench **must** be constructed per DU-03-209.1-0500/0501. **Note: Options described below will allow the cable installer crew to perform their work without a coordinated site visit with the trench installer.**

For most installations, either Option 1 or Option 2 can be selected by the customer (Option 2 calls for increased mechanical protection via more rigorous conduit); however, Option 2 must be selected for installations where a minimum cover of 600mm is not possible.

Option 1 (requires minimum cover of 600mm): Direct buried cable encapsulated in masonry sand at trench ends as shown in DU-03-209.1-0500

- The trench can be backfilled, excluding open pit area, at either end of trench prior to cable installation.
- The trench must be backfilled with clean masonry sand in areas indicated in DU-03-209.1-0500 and clean native backfill to finished grade immediately after installation of cable.

If the trench end(s) is(are) temporarily left open (i.e. if backfilling cannot occur immediately after cable installation), a length of flexible conduit (specified by Hydro One and listed in DU-03-209.1-0500) shall be applied between the horizontal DB2 conduit and the vertical Schedule 40 PVC at both the meter base and the source pole to provide temporary protection of the cable. See 'D1' in DU-03-209.1-0500. The flexible conduit shall be inserted inside the 100mm DB2 duct a minimum of 600mm.

Option 2 (reduced cover): Schedule 40 PVC / flexible conduit, and sweeps

- In areas of poor soil conditions (e.g. rocky) and where installing straight lengths of Schedule 40 PVC is impossible, flexible conduit can be installed at the sole discretion of Hydro One. This flexible conduit, as listed in DU-03-209.1-0500, shall be 100mm diameter electrical grade corrugated flexible conduit. Flexible drainage pipe or thin wall conduit is **NOT** acceptable.
- In a case where 600mm of cover is not possible, the secondary cable may be installed in Schedule 40 PVC or in a continuous length of flexible conduit (see above for details on flexible conduit) at a minimum cover of 300mm.
- In a case where 300mm of cover is not possible, such as on bald rock, Schedule 40 PVC (or alternatively the flexible conduit as mentioned above) will be covered in a minimum thickness of 3" (75mm) of concrete wherever reduced cover is encountered. The concrete shall cover the conduit at all points until the vertical component of the sweep is reached. If flexible conduit is employed, it shall not permanently extend beyond the concrete and be left exposed.
- Schedule 40 PVC sweeps shall be used at the trench ends to make the transition to the meter base and dip pole conduits. See 'D2' in DU-03-209.1-0500.


NOTE: If any discrepancies between this document and the referenced standard are found, the standard shall prevail. It is **the customer's responsibility to ensure compliance** to the standard. Not complying with the standard will result in Hydro One not completing their work and an "extra trip charge" being applied.

FOR SHEET 1 OF THIS DRAWING SEE DU-03-209.1-0500
 FOR SHEET 2 OF THIS DRAWING SEE DU-03-209.1-0501

ALL DIMENSIONS IN MILLIMETRES
 UNLESS OTHERWISE STATED

04	AUG 2019	REMOVED 2" OPTION, UNIVERSAL SIZE. MODIFIED PARTS 1, 2 & 8. MODIFIED NOTES 1, 2 & 4. ADDED NEW NOTES 12, 13 & 14. REMOVED PREVIOUS PART 9 (STRAPS). INTRODUCED GENERIC SUPPORT STRUCTURE FOR CUSTOMER INSTALLATION.	PC/LS	SJ	SJ	MM
03	SEP 2018	GENERAL UPDATES. CHANGED TO NEW DWG. & NUMBERING FORMAT. FOR PREVIOUS REVISIONS REFER TO DU-03-209.1-R2.	SO	PC	AS	PS
Rev No.	Date	Revision Particulars	dwn	ckd	des	app

Drawn By: L.SEQUEIRA	Checked By:	Designed By:	Design Approved By:
Scale: N.T.S.	Date: (yyyy/mm/dd) 2012/08/30	Pole ID:	



Hydro One Networks Inc.

© Copyright Hydro One Networks Inc. All rights reserved. This drawing may not be reproduced or copied, in whole or in part, in any printed, mechanical, electronic, film, or other distribution and storage media or used in any information storage or retrieval system outside of Hydro One Networks Inc., without the written consent of Hydro One Networks Inc.
 Information contained in this drawing is considered to be confidential. Recipients shall only use the drawing for its intended purpose and shall take necessary measures to prevent disclosure or transmittal to outside parties.

Title:
TRENCH DETAIL – SECONDARY SERVICE CABLE FROM DIP POLE TO METER BASE

Drawing No. DU-03-209.1-0502	Rev. No. 04
--	-----------------------

TITLE BLOCK REV 02 – AUGUST 2014