



NOTES:

- ALL DIMENSIONS ARE IN mm UNLESS STATED OTHERWISE.
- BACKFILL: ENSURE DB2 IS ENVELOPED WITH MASONRY SAND UPON INSTALLATION (75mm MIN. BELOW AND 150mm MIN. ABOVE). REMAINDER OF BACKFILL MUST BE CLEAN AND FREE OF DEBRIS TO PREVENT DAMAGE TO THE DUCT. BACKFILL SHALL BE WELL TAMPED.
- THE TRENCH SHOULD BE AS STRAIGHT AS POSSIBLE. HOWEVER, IF CURVE IS NECESSARY, THE BEND SHOULD BE NO MORE THAN 45° OVER A 3m RADIUS.
-STRAIGHT DUCT SHALL BE EMPLOYED IN THE TRENCH TO HOUSE THE CABLE. IT SHALL BE 100mm (4") DIAMETER PVC TYPE DB2. 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 OPTION 1 SHT 2 OF 2, WITH A LENGTH OF FLEXIBLE CONDUIT TO MAKE 90° TRANSITION.
-SEE OPTION 2 FOR ALTERNATE METHODS.
- PULL ROPE: A 7mm DIAMETER POLYPROPYLENE ROPE MUST BE INSTALLED THROUGH THE ENTIRE LENGTH OF THE DUCT. IF FLEXIBLE MECHANICAL PROTECTION IS USED, THE PULL TAPE IS SUPPLIED WITH THE PRODUCT. THIS ROPE/TAPE IS USED TO INSTALL THE PULLING ROPE THROUGH THE DUCT.
- INSERT FLEXIBLE CONDUIT 600mm MIN. INTO THE DB2/SCHEDULE 40 PVC CONDUIT.
- RADIUS MUST BE GREATER THAN THE SPECIFIED CABLE MINIMUM BENDING RADIUS.
- INSTALL METER COMPARTMENT AS PER ELECTRICAL SAFETY CODE RULES, USE ONLY HYDRO ONE APPROVED 200A JUMBO SIZED METER COMPARTMENT CENTRE MOUNT WITH TUNNEL TYPE CONNECTORS AND HAVING THE MINIMUM DIMENSIONS OF 17"x12"x4-3/4" (432x305x121mm) CONTAINING 3" KNOCKOUTS. METER BASE TO MAINTAIN 1 METER MIN. CLEARANCE FROM DISCHARGE OF ANY COMBUSTIBLE GAS RELIEF DEVICE OR VENT.
- TELECOMMUNICATION PLANT MAY SHARE SERVICE TRENCH BUT MUST BE INSTALLED IN ITS OWN CONDUIT.
- 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 MIN. CLEAR SEPARATION SHALL BE MAINTAINED IN ALL DIRECTIONS BETWEEN GAS SERVICE AND ELECTRIC SUPPLY CABLE.
- 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.
- IF FURTHER TRENCHING ALONG ROAD ALLOWANCE IS REQUIRED, IT SHALL BE CONSTRUCTED PER HYDRO ONE STANDARD TRENCH PROFILES.

PARTS LIST

PART No.	MM No.	DESCRIPTION	QTY.
1	30030348 30031161 30030236	COUPLER KIT, 2" FLEX TO 2" RIGID COUPLER KIT, 3" FLEX TO 2" RIGID COUPLER KIT, 3" FLEX TO 3" RIGID	A/R
2	30030235 30030366	CONDUIT, FLEX, 2" CONDUIT, FLEX, 3"	A/R
3	30005908 30005915 30005959	SERVICE CABLE, 3/0AWG, 3 COND, AL SERVICE CABLE, 250KCMIL, 3 COND, AL SERVICE CABLE, 500KCMIL, 3 COND, AL	A/R
4	30007710	CONDUIT, PVC, 4", DB2	A/R
5	20002181	CAUTION TAPE, BURIED ELECTRIC LINE	A/R
6	TBD	SWEEP, 4" x 16" RADIUS, RIGID PVC	A/R
7	30007542 30007544 30007583	CONDUIT, 2" RIGID PVC CONDUIT, 3" RIGID PVC CONDUIT, 4" RIGID PVC	A/R
8	TBD	CAP, 4" SCHEDULE 40 PVC	A/R
9	30000744 30000746 30000923	STRAP, CABLE, 60mm, AL OR GALVANIZED STEEL STRAP, CABLE, 80mm, AL OR GALVANIZED STEEL STRAP, CABLE, 100mm, AL OR GALVANIZED STEEL	A/R

A/R = AS REQUIRED
REFERENCES:
SECTION 1 - DEFINITIONS
SECTION 3C - CONSTRUCTION GUIDE
SECTION 16 - MATERIALS
O/H STANDARDS MANUAL

02	AUG 2013	D2 UPDATED WITH SWEEP, ALTERNATE METHODS ADDED	GJ	PC
01	NOV 2012	TRENCH COVER RANGE. GAS SERVICE SEPARATIONS	PC	*
Rev. No.	Issue Date	Revision	Dwn	Approved By
			Chk	Date

Hydro One Networks Inc.

Drawn: L.SEQUEIRA Approved: * Date: AUG.30,2012

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TRENCH DETAIL - SECONDARY SERVICE CABLE - FROM DIP POLE

Dwg. No. **DU-03-209.1 SHT.1 OF 2** Rev. **02**

Hydro One Trenching Guidelines

Secondary Service Trench with Supply taken from a Dip Pole Per Hydro One Networks Inc. Standard Drawing DU-03-209.1 SHT. 1 OF 2

The installation options listed below explain Hydro One Networks' Standard (DU-03-209.1 SHT. 1 OF 2) for the installation of Hydro One owned single phase secondary underground cables. Regardless of who installs the cable, DU-03-209.1 **must** be consulted prior to construction of the trench. **Note: Options described below will allow the cable installer crew to perform their work without a coordinated site visit with the trench installer.**

Option 1 (minimum cover of 600mm): Direct buried cable encapsulated in masonry sand at trench ends (as shown in DU-03-209.1 SHT. 1 OF 2)

- 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 SHT. 1 OF 2 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 shall be applied between the horizontal DB2 duct and the vertical rigid conduits at both the meter base and the source pole to provide temporary protection of the cable. See detail D1 and Part #2 in DU-03-209.1 SHT. 1 OF 2. The flexible conduit shall be inserted inside the 100mm DB2 duct a minimum of 600mm. The meter base and dip pole conduits will vary in size depending on conductor size (i.e. 2" diameter for 3/0AWG and 3" diameter for 250KCMIL or 500KCMIL cable) as will the associated flexible conduit. Appropriately sized couplers (shown and listed in the parts list) shall be used to connect the rigid conduits to the flexible conduits.

For Option 2 listed below, in areas of poor soil conditions and where installing straight lengths of rigid PVC (Schedule 40) conduit is impossible, flexible conduit can be installed at the sole discretion of Hydro One. This flexible conduit shall be 100mm diameter electrical grade corrugated flexible conduit. Flexible drainage pipe or thin wall conduit is NOT acceptable.

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

- In a case where 600mm of cover is not possible, the secondary cable may be installed in rigid conduit (Schedule 40 PVC) or in a continuous length of flexible conduit at a minimum cover of 300mm.
- In a case where 300mm of cover is not possible, such as on bald rock, the rigid PVC conduit (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.
- Rigid PVC (Schedule 40) sweeps shall be used at the trench ends to make the transition to the meter base and dip pole conduits. See detail D2 in DU-03-209.1 SHT. 2 OF 2.

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.

02	AUG 2013	D2 UPDATED WITH SWEEP, ALTERNATE METHODS ADDED	GJ	PC		Hydro One Networks Inc.		
01	NOV 2012	TRENCH COVER RANGE. GAS SERVICE SEPARATIONS	PC	*		Drawn: L.SEQUEIRA	Approved: *	Date: AUG.30,2012
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					Dwg. No. DU-03-209.1 SHT.2 OF 2	Rev. 02		