

## **Guidelines on the use of anchor tees for new watermain replacement construction projects**

### ***Fire Hydrants – Short side of street***

1. Install anchor tee and attach hydrant isolation valve (105 mm valve box) to anchor tee.

**Note 1:** Fire hydrant lead will be pressure tested and chlorinated only. Not considered a branch connection, therefore no blow-off required for sampling.

### ***Fire Hydrants – Long side of street***

1. Install anchor tee and attach hydrant isolation valve (105 mm valve box) to anchor tee.

**Note 1:** Fire hydrant lead will be pressure tested and chlorinated only. Not considered a branch connection, therefore no blow-off required for sampling.

**Note 2:** Long side fire hydrant leads should only be used in situations where no other options prevail.

**Note 3:** An additional hydrant lead secondary valve is not required, regardless of lead length.

**Note 4:** Long side fire hydrant lead to be used in situations where no other options prevail.

## ***Large diameter water services – Short side of street***

1. Install anchor tee and valve at watermain and install secondary valve at street line. Do not bury open valve at anchor tee. Install 105 mm valve box at anchor tee and 105 mm valve box at street line.

If length of services is less than 3.5 m then attach isolation valve to anchor tee at watermain. For example, in the former city of Toronto, where faces of buildings are at street line with little or no set back, it may not be possible to install street line valves, therefore anchor tee and valve would be a better option.

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**Note:** The rationale for this rule is to be consistent with Note 1 on drawing T-1105.02-1 and T-1105.02-2. Note 1 reads as follows: “For service connections 100 mm diameter or larger, the service line valve may be located at the watermain location on the street if the length of the service connection is less than 3.5 m.”

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**Note 1:** Large diameter water services are larger than 50 mm in diameter.

**Note 2:** The short side water service is considered a branch connection and is part of the public watermain system to street line. The short side water service line is pressure tested and chlorinated at the same time as the main line. A blow will be installed and serve as a sampling point requiring two consecutive passing samples.

**Note 3:** Regardless of the installed location of the secondary valve, the water service shall be connected at street line to the private side water service with an approved coupling. Connection to the private water system will be completed after the public system successfully passes the disinfection test.

**Note 4:** At locations where there are physical obstacles at street line, the secondary valve shall have sufficient above ground clearances to allow valve operation. A one-half metre valve turning radius should be adhered to, to allow the opening and closing of the valve.

## ***Large diameter water services – Long side of street***

1. Install anchor tee and isolation valve at watermain, install secondary valve at street line. Valve at street line restrained two pipe lengths only. Do not bury open valve at anchor tee. Install 105 mm valve box at anchor tee and 105 mm valve box at street line.

**Note 1:** Large diameter water services are larger than 50 mm in diameter.

**Note 2:** The long side water service is considered a branch connection and is part of the public watermain system to street line. The water service line is pressure tested and chlorinated at the same time as the mainline. A blow will be installed and serve as a sampling point requiring two consecutive passing samples.

**Note 3:** It may not be possible to install a valve at street line and then make a connection to an existing service due to a requirement for bends, couplings and filler pieces. It may be possible for new water service installations. Connection to the private water system will be completed after the public system successfully passes the disinfection test.

**Note 4:** At locations where there are physical obstacles at street line, the secondary valve shall have sufficient above ground clearances to allow valve operation. A one-half metre valve turning radius should be adhered to, to allow the opening and closing of the valve.

### ***Side street w/m connections – Short side of street***

1. Install anchor tee and valve at watermain (130 mm valve box). Do not bury open valve at anchor tee.
2. Install valve (130 mm valve box) at a location before the existing street line valve or at street line.
3. In areas with heavily congested utilities, designer to provide valid reasons to Toronto Water, District Operations why both valves cannot be installed. Designer to confirm that the overall length of pipe is less than 6.1m if street line valve is omitted.

### ***Side street w/m connections – Long side of street***

1. Install anchor tee and valve at watermain (130 mm valve box). Do not bury open valve at anchor tee.
2. Install valve (130 mm valve box) at a location before the existing street line valve or at street line.

### ***Common Note for fire hydrant valves, large diameter water services and side street connections***

Isolation valves attached to anchor tees on fire hydrants and secondary valves for large diameter water services will use a 105 mm diameter valve box with 149 mm diameter cover as opposed to line valve boxes which are 130 mm in diameter with a 184 mm diameter cover.