

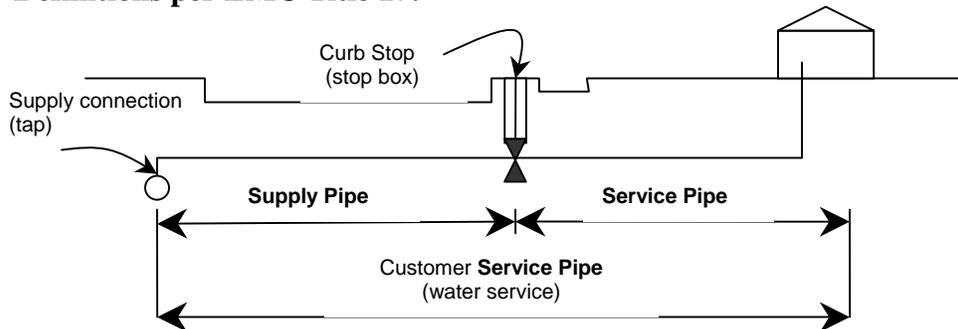
Water Service Reconstruction

Purpose: To provide design and construction engineering practices so that all water services are properly identified for reconstruction, deteriorated water **supply pipe** materials are replaced entirely, property owners are sufficiently notified to consider replacement of defective water services, and to eliminate non-abutting services whenever possible.

1. General:

- 1.1. References: City of Lincoln Standard Specifications for Municipal Construction (LSSMC), Chapter 23.10 and Lincoln Municipal Code (LMC) 17.18.030
- 1.2. Water services are privately owned from, and including, the connection to the City's water main (tap) into the home or business.
 - 1.2.1. Municipal projects can cause conflicts with water services and conflicts should be identified and addressed during the design process when possible.
 - 1.2.2. Failure to identify water services can cause disruption of service, disruption of fire protection, damage to public and private property if ruptured during construction and affect general health and safety of customers.
- 1.3. Designers and construction observers should be aware that water services may have to be partially replaced and reconnected to the water main causing outages to customers.
 - 1.3.1. Some "critical" customers may be adversely affected by the outage prompting special work conditions that must be imposed on the contractor.
 - 1.3.2. Critical customers may include health care and medical facilities, schools and daycares, food establishments, lodging establishments, beauty and hair care businesses and various industries.

2. Definitions per LMC Title 17:



3. General Design Issues

- 3.1. All water services requiring reconstruction on water main replacement projects, storm sewer projects (looping), or other projects where conflicts with water services occur shall be identified on the plans as a build note table complete with address, material type and length. A sample water service reconstruction build note can be seen in the figure below.

○ RECONSTRUCT/LOOP WATER SERVICE WATER SERVICE PIPE 23.0685 - 23.0715						
NO.	ADDRESS	EXIST.	RECON.	LOOP	SIZE	LF
7	4811 SUMNER ST.	COPPER	1 EA.		0.75"	5
8	4825 SUMNER ST.	COPPER	1 EA.		0.75"	10
9	4905 SUMNER ST.	COPPER	1 EA.		0.75"	20

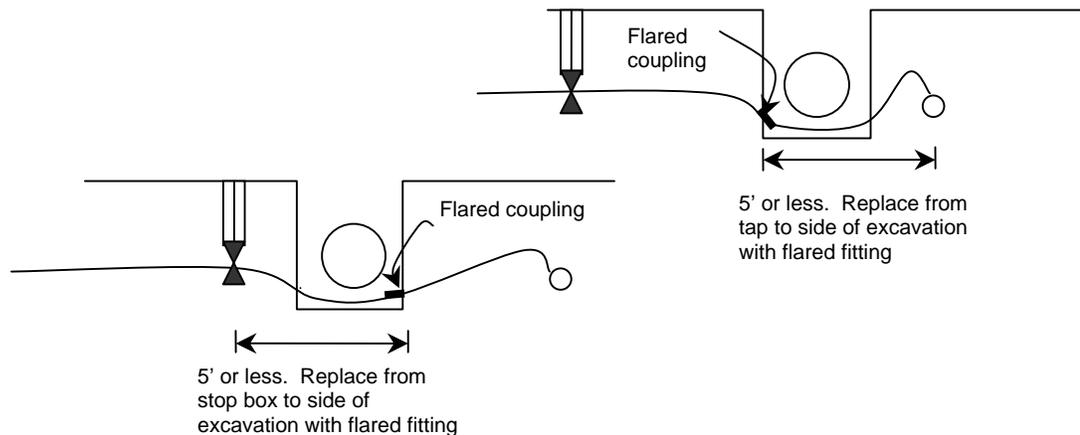
- 3.2. All existing water **supply pipes** using unacceptable materials such as; galvanized steel, lead, pitted copper or other material deemed unacceptable, shall be completely replaced from the stop box to the tap. Cost shall be paid by the project.
- 3.3. For large water services, 3" and above, LWS shall be contacted to assist in evaluating the replacement and how appropriate fittings and pipe materials shall be specified.
- 3.4. Meter pits that conflict with the project need to be identified early in the design phase as relocation and reconstruction may represent significant design details, property and easement issues and cost depending on the size of the meter pit.
 - 3.4.1. Small meter pits (3/4 – 1" services) may exist in any area, but are normally associated with sprinkler systems. In rare occasions they may serve residential or commercial customers.
 - 3.4.2. Large meter pits (1 1/2" – 10" services) may exist in industrial, commercial and business areas. They are normally shown on the tap records.
 - 3.4.3. LWS staff can assist in identifying potential conflicts. Contact Bill Fish or Bill Holton for assistance.
 - 3.4.4. LWS will evaluate each location to determine if the meter pit can be eliminated, replaced as an above ground installation, or rebuilt as a pit. These options are listed in the order of preference.
 - 3.4.5. Depending on the situation, the work may be performed separately by LWS or it may become part of the project plans and specifications.

4. Water Main Reconstruction Projects

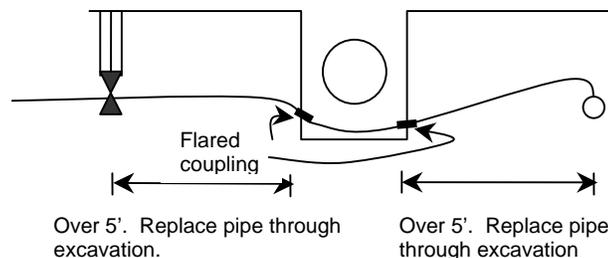
- 4.1. All water services crossing or paralleling a new water main shall be transferred if the main is 16 inches or smaller.
- 4.2. Lengthening of copper water **supply pipes** that are in good condition using a flared type coupling shall be acceptable.
- 4.3. It may be desirable to encourage customers to consider replacing their water **service pipe** at the same time the project is constructed if the **service pipe** is galvanized or some other unacceptable material.
 - 4.3.1. Each project should be evaluated with LWS to decide if this should be a condition of the project.
 - 4.3.2. If so, the procedure should be described in the Special Provisions so the Contractor is aware of his responsibilities in reconstructing the customer's water **service pipe**.

5. Storm Sewer or Other Conflicting Utility Construction – Water Service Looping

- 5.1. When the break in the **supply pipe** for the conflicting utility is within five (5) feet of the tap or stop box the Contractor shall loop the **supply pipe** from the tap or curb stop to the opposite side of the excavation resulting in only one joint. Reference LSSMC 23.10.



- 5.2. When the break in the water **supply pipe** is beyond 5 feet from the tap or curb stop, the Contractor shall loop only that portion of service within the excavation resulting in two (2) joints. Reference LSSMC 23.10.



6. Water Districts

- 6.1. Water Districts shall be considered as an opportunity to eliminate non-abutting water services for **all** properties abutting the proposed water main.
- 6.2. All properties abutting the proposed water main shall be investigated and their existing service alignments shown on the plans.
- 6.3. All non-abutting services shall be reconnected to the new water main and costs associated with the tap, **supply pipe** and stop box shall be paid for by the project.
- 6.4. **Supply pipe** reconstruction shall be shown on the plans and all materials associated with reconstruction included in the bid quantities.
- 6.5. All non-abutting water customers that will abut the new main as well as the petitioner shall be required by the water district authorization to reconstruct their **service pipe**, at their cost, and connect to the stop box and new supply pipe provided by the project.
- 6.6. Customers shall be required to pay applicable impact fees when connecting to the new water main.