



CITY OF URBANA, ILLINOIS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

MEMORANDUM

TO: Mayor Laurel L. Prussing and Members of the City Council
FROM: William R. Gray, Public Works Director
Gale L. Jamison, Assistant City Engineer
Bradley M. Bennett, Civil Engineer
DATE: October 22, 2007
RE: Maintenance of Sanitary and Storm Sewer Service Laterals Discussion

Introduction

The purpose of this memo is to review the City's policy on sanitary and storm sewer service lateral ownership and maintenance. The memo will also examine potential alternatives to the City's existing policy on service laterals in an attempt to ease the financial burden and more equitably distribute the cost for property owners that have to repair their service laterals.

Recommended Action

The Public Works Department requests guidance from Council on whether to modify the existing City policy on sanitary and storm sewer service laterals and which alternative to pursue.

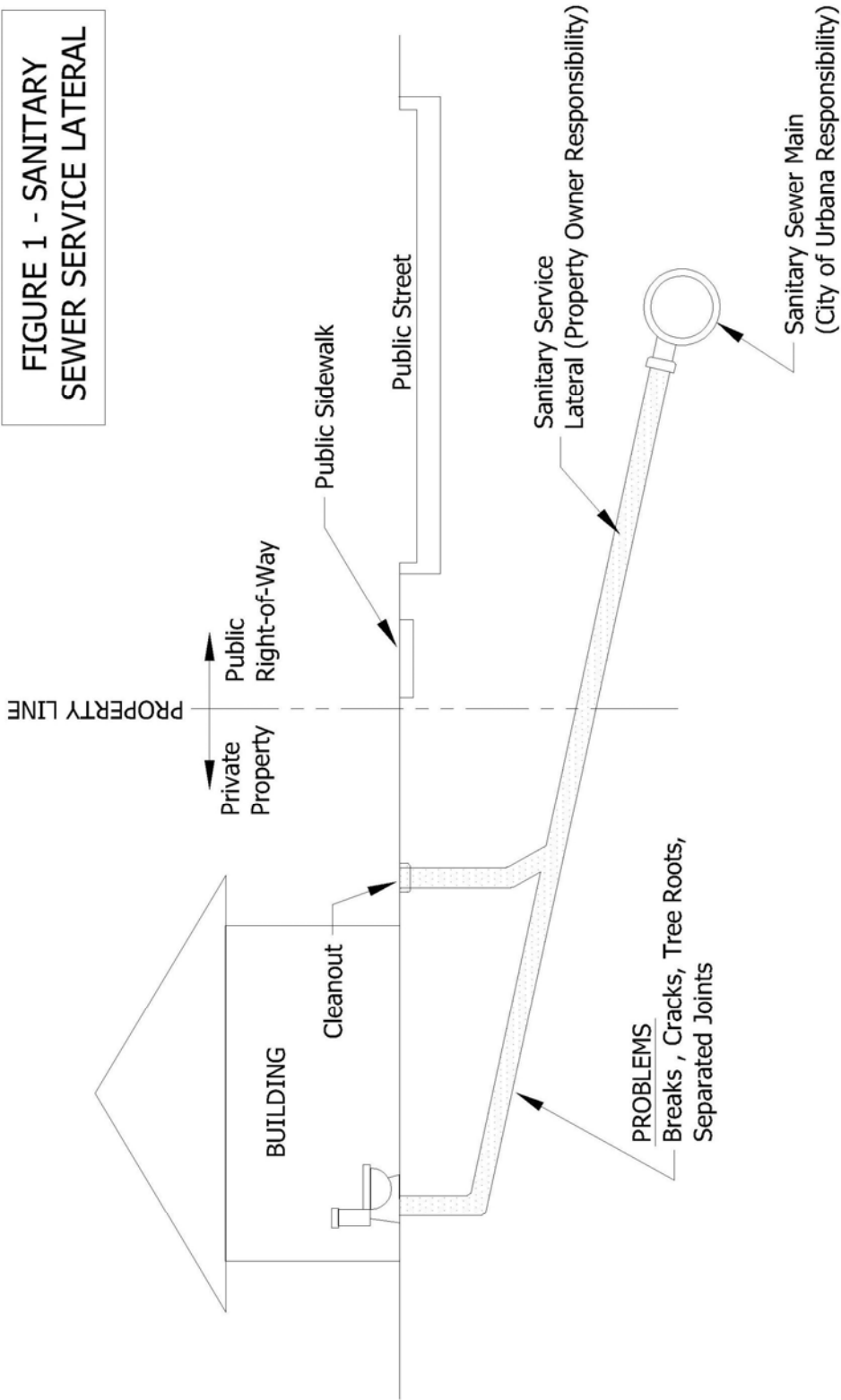
Background and Facts

A sanitary sewer service lateral is the pipe that connects a home's or business' plumbing to the City's sanitary sewer system as illustrated in Figure 1. All homes or businesses in the vicinity of a sanitary sewer have a sanitary sewer service lateral connection to it.

A storm sewer service lateral is the pipe that connects a home's or business's downspouts, foundation drains (footing tile), sump pump discharge, and/or yard area drains to the City's storm sewer system. There are fewer homes and businesses that have storm sewer service laterals than sanitary sewer service laterals. Generally, storm sewer service laterals are typically present at homes or businesses with basements.

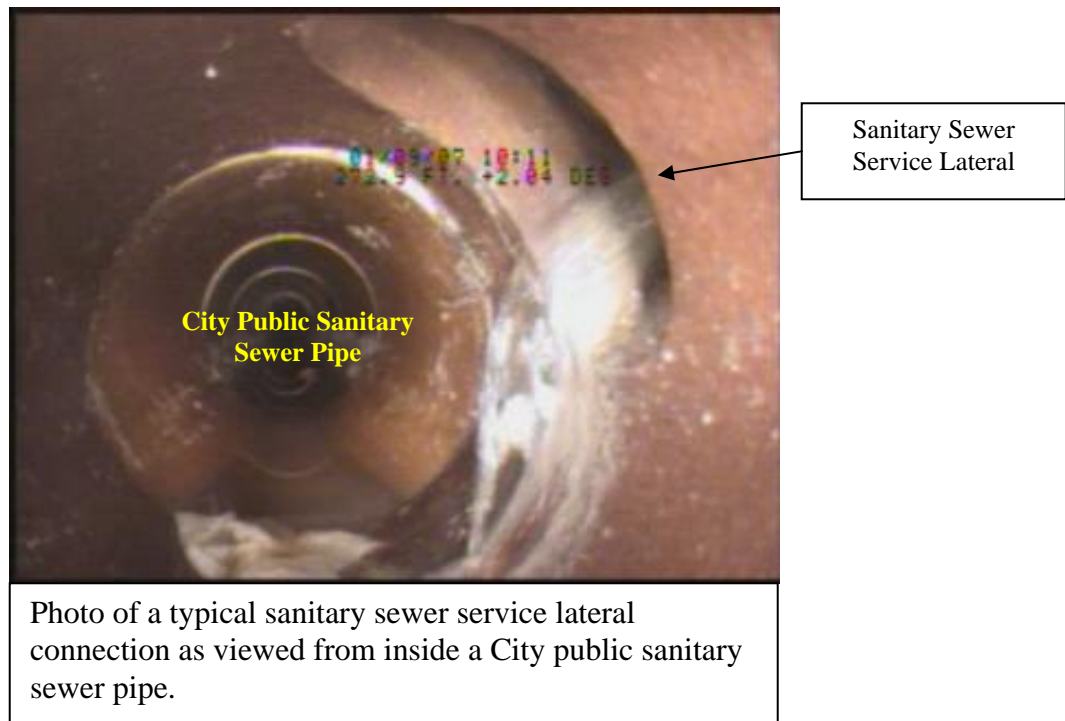
The City sanitary and storm sewer main can be located on private property (side yard, front yard or backyard in an easement) or in City right-of-way (R.O.W.) (within the parkway or under the street).

**FIGURE 1 - SANITARY
SEWER SERVICE LATERAL**



Many homes in the City were built before 1950 and often have not replaced their original sewer service laterals. Over time, these pipes, generally made of clay, can crack, break, collapse, become disjointed, experience displacement, and/or be subject to intrusion by roots, all of which can cause blockage or pipe failure. Homeowner's insurance programs do not typically cover the cost of repairing/replacing laterals since it is considered a normal part of home maintenance.

In Urbana the maintenance of the sanitary and storm sewer service lateral up to the connection to the City's sewer main is the responsibility of the property owner. Section 24-38 Paragraph (c) of the City Code for the City's policy on sewer service laterals states that "all costs and expenses incident to the installation, connection, repair, and maintenance of the building sewer shall be borne by the owner, and for such purposes, the owner is granted permission to excavate in the public right of way subject to the regulations of the director of public works". The connection to the main is typically a tee or wye which is considered part of the public sanitary sewer and thus the City's responsibility to maintain.



The City of Champaign, Village of Savoy, City of Danville, Village of Rantoul, City of Charleston, City of Mattoon, City of Decatur, City of Bloomington, and City of Normal all require property owners to maintain the sanitary and storm sewer service lateral to the point of connection to the City/Village sewer main. The Engineering Division did not find any Central-Illinois communities that had a sewer service lateral maintenance program.

The City of Champaign presently reimburses the property owner 50% of the cost of pavement replacement and backfill up to \$1,500 for the repair of a sanitary sewer service lateral or up to \$2,500 if the repair occurs under a brick street. Champaign's policy only covers sanitary sewer service laterals.

The reimbursement only covers the cost of the pavement removal, replacement and backfill for the repair of the service lateral under the pavement in a City street.

Normal maintenance of service laterals includes the removal of materials that are flushed or dropped/inserted down the service line (including leaves, dirt, toys, baby diapers, etc.) or tree roots that enter through joints or cracks in the pipe. Debris and materials are generally removed by rodding or jetting the sewer lateral. Rodding involves applying a torque to a steel rod that is passed through the lateral, rotating the cleaning device attached to the lead end of the rod. Jetting is a hydraulic method of cleaning laterals that directs high-velocity streams of water against the pipe walls at various angles.

A hydraulic root cutter is typically used to remove root obstructions in service laterals. This method uses the high-pressure water from the sewer jet truck to operate a hydraulic root cutter. The high-pressure water turns a hydraulic motor, which has a rotating root cutting blade attached to the motor shaft. As with the jet cleaning nozzles, there are rear-facing jets on the root cutter assembly, which propels the cutter up and down the sewer pipe. Mild herbicides may also be applied to sanitary sewer laterals to slow the growth of roots in the pipe without harming the tree. These herbicides cannot be used in storm sewer laterals. There are several sewer cleaning contractors in Urbana-Champaign area that maintain sewer service laterals.

If rodding, jetting, or a root cutting cannot remove the obstruction from the lateral, the lateral will have to be repaired or replaced. It may be possible for the sewer cleaning contractor to televise the sewer lateral using a small inspection camera to determine the exact location where the repair or replacement is required. Once the repair/replacement location is identified a sewer construction contractor will then excavate down to the pipe, remove the broken or obstructed section of pipe, install a new section of pipe, backfill the excavation, and restore the surface back to its original condition. The cost of a sewer lateral repair is dependant on the laterals depth, length, and surface type that the lateral is located under (asphalt street pavement, concrete sidewalk or driveway, grassed yard, etc.) Sewer lateral repairs located under street pavements are typically the most expensive with costs that can exceed \$5,000. There are several sewer construction contractors in Urbana-Champaign area that repair sewer service laterals.

Between 2001 and 2006 the City received an average of seven construction permits a year for storm and sanitary sewer repairs in right-of-way. The most sewer repairs occurred in 2001 with twelve permits received and the fewest in 2003 with one permit received. The construction permits may not adequately represent all the sewer repairs made in City right-of-way since contractors sometimes fail to obtain a permit when they perform repairs in the City right-of-way.



Photo of a typical sanitary sewer service lateral replacement.

Alternatives

1. Lateral Insurance Alternative

Property owners pay a monthly fee into an insurance fund pool to cover the cost of repairing their service lateral in the event of a blockage or failure.

2. Pavement Reimbursement Alternative

City would participate in fifty percent of the cost to the property owner for street pavement removal/replacement and backfill for the repair of the service lateral under the pavement in a City street. Property owner would still be responsible for replacing, repairing, and maintaining their sewer service lateral.

3. No Action Alternative

No modifications to current City policy on sanitary and storm sewer service laterals. Property owners are responsible for maintaining sewer service laterals.

Discussion of Alternatives

Alternative 1 would have property owners pay a fee into an insurance fund pool to cover the cost of maintaining their service lateral in the event of a blockage or failure. Illinois American Water Company offers the LineSaver program that covers repairs to both a property owner's water and sewer service lines. According to Illinois American approximately fifty-percent (50%) of property owners in Urbana have enrolled in the LineSaver program for their water services. The insurance program would benefit all property owners not just those with service laterals under streets. Information on the LineSaver Program is included in Appendix A.

a. Advantages

- Insurance program bears expense of maintaining sewer service laterals. Program covers up to \$4,000 for repairing or replacing a lateral under street pavement and up to an additional \$4,000 for repairs that are not under pavement.
- Insurance program covers cost of clearing blockages as well as repairs or replacement.
- Property owners voluntarily participate in program. However property owners must participate in program to receive maintenance services and benefits.
- No increase in Sewer Benefit Tax is necessary.
- No additional staff or equipment is required to maintain sewer service laterals.
- Insurance program is already established in Urbana and 50% of property owners already participate in program for their water services.

b. Disadvantages

- Property owners would have to pay \$9 each month to participate in the program.
- Property owners would have to pay a \$50 trip fee for plumber coming out to clear a blockage or repair/replace lateral. Similar to a co-payment fee when going to a doctor.
- Does not cover storm sewer service laterals.

Alternative 2 would reimburse property owners for the extraordinary cost of the pavement removal, replacement and backfill for the repair of the service lateral under the pavement in a City street. The reimbursement would cover actual expenses for work performed up to a maximum limit of \$6,000. An increase in the Sewer Benefit Tax levy would be required to fund the pavement replacement

reimbursement program. Alternative 2 would require a revision to current City ordinance and policy on sanitary and storm sewer lateral ownership.

a. Advantages

- Property owners with sewer service laterals located under street pavement or sidewalks would not have to pay for replacing the pavement or sidewalk.

b. Disadvantages

- City bears the extraordinary expense of removing and replacement pavement for laterals located under street pavement or sidewalk.
- Sewer Benefit Tax would have to be increased by \$2.00 a year to cover the expense of the reimbursement program for sanitary sewer laterals. It is estimated that the expense on average for removal and replacement of street pavement is \$6,000. The average number of these type of repairs annually is ten. The budget impact is estimated to be \$60,000 per year.
- No funding mechanism exists for recovering costs on pavement reimbursement for storm sewer laterals. Please see Appendix B for pavement reimbursement program expenses.
- Equity issue for property owners with back lot or side lot sanitary sewers. They would receive no benefit since their laterals are not under pavement. If pavement replacement program were to be funded by Sewer Benefit Tax they would be taxed for a benefit they would not receive.
- Requires additional staff time for Engineering Division to manage pavement reimbursement program.
- Property owner/contractor must track pavement removal/replacement and backfill costs and submit bills to the City for reimbursement.

Alternative 3 would not require a modification current City policy on sanitary and storm sewer service lateral ownership. The property owner would continue to be responsible for maintaining their lateral to its point of connection into the City's sewer system.

a. Advantages

- No increase in Sewer Benefit Tax is necessary and no impact to the Sewer Benefit Fund.
- No additional staff time is required to administer sewer service laterals reimbursements.

b. Disadvantages

- Property owners bear extraordinary expense of maintaining sewer service laterals beneath City pavements.

**APPENDIX A
ALTERNATIVE #1 – LATERAL INSURANCE**

Homeowner Benefits

Peace of mind for your customers

Aging pipes, invasive tree roots, soil conditions, and seasonal changes are just a few examples of how normal wear and tear can cause a water line to leak or break and a sewer line to clog or block.

Homeowners should be informed that they are responsible for the service lines that run through their property between the street and their home, not the municipality.

Partner with American Water, and we'll educate your customers for you!

How Does LineSaver™ Benefit Homeowners?

- ALL homeowners are eligible for LineSaver™
- No pre-enrollment inspections are required
- Covers up to \$5,000* in repair costs that could result from leaks or breaks in the customer-owned portion of the water line
- Covers up to \$8,000* in repair costs that could result from clogs or blockages in the customer-owned portion of the sewer line
- Enrollment in the LineSaver™ program is optional
- Payment terms are easy and affordable
- Eliminates the hassle of searching for a qualified repair contractor
- Contractor network is accessible 24 hours a day, 7 days a week
- No claims forms are required

*Total coverage amount may vary by area.