OVER-HEAD SEWER ASSISTANCE GRANT

The Village of North Aurora has a vested interest in the proper operation of the North Aurora sanitary system. Understanding that some residential users of the sanitary system have experienced sewage back-up into their homes, and understanding that an Over-Head Sewer System may prevent the reoccurrence of the same, the Village of North Aurora will offer an Over-Head Sewer Assistance Grant to North Aurora sanitary sewer users that qualify to install over-head sewer in their home. This assistance will be funded by the Village of North Aurora from the Sewer Capital Construction fund for a contribution in the form of a non-repayable grant.

Those users that qualify for the Sewer Assistance Grant will receive a grant in the amount up to $4,000.00, not to exceed 50% percent of the project, per residential unit. As such, all costs in excess of $4,000.00 will be fully covered by the participant.

To qualify for the $4,000.00 assistance grant, the users must meet the following qualifications established by the Village of North Aurora:

1. Property Owner/Participant must show proof of sewer back-up;

2. Basement Inspection Performed by Village Plumbing Inspector, or designated representative of the Village of North Aurora, to determine if the home qualifies for the program. If qualified, the homeowner will receive written notice of qualification; (and)

3. Homeowner must also have passed the Village of North Aurora Inflow and Infiltration Inspection, or must submit to and pass the Inflow and Infiltration Inspection at the time of the Plumbing Inspection. If violations exist, the resident must correct the sources of the inflow and infiltration at their OWN expense prior to qualifying for this program.

4. Submit three quotes from licensed plumbers/contractors showing the projected cost of the work to be performed.

The Village of North Aurora will cover all costs derived through administrative time of the Village Staff and inspections performed by the Village Staff.

After the work is completed by an independent, licensed plumber/contractor in the participant's home, the resident must notify and submit to the Village a detailed invoice of the work prior to scheduling the final inspection. The Village Plumbing Inspector, or a designated representative of the Village of North Aurora, will then perform a final inspection of the Over-Head Sewer. The Village of North Aurora will not participate in the cost associated with paint, wallpaper, carpet, tile, drywall, etc.

Mere the Inspection, a check for the work in an amount of $4,000.00, and not to exceed 50 percent of the project, will be issued from the Village of North Aurora as a joint check to the Participant's contractor.

This program is on a first come, first serve basis. The Village President and the Board of Trustees reserve the right to budget more or less for this program each budget year, or to terminate the program.

C. OVERHEAD SEWER

The term "overhead sewer' means that there are no direct openings to the sanitary sewer in the basement. All of the wastewater that is collected in the basement is discharged into a separate sump pit and pumped into the sanitary service line so the basement drainage is dependant on a pump and a continuous electric power supply. Generally, the plumbing from the fod.ures on the main floor is installed just below the basement ceiling (hence, the term "overhead, and is routed to the outside service line through an opening high up on the basement wall. Converting the plumbing to an overhead sewer is one of the most expensive ways to prevent basement back-ups. Nevertheless, it is generally considered to be the best method available.

RECOMMENDATIONS

The Engineer recommends that the Village of North Aurora begin a cost sharing program to assist the Village residents in protecting their basements from sanitary sewer back-ups. The advantages of a cost sharing program are:

1. Only the residents who have experienced sewer back-ups and are concerned with taking an active role in resolving the problem will use the cost sharing program.

2. This program will have the greatest success in preventing sewage back-ups during all rain events and other sewer blockages.

3. This program can be offered on a Village-wide basis and therefore has the potential of helping the largest number of residents.

The Engineer has included sample Overhead Sewer Grant forms. The average cost to install the injector pit in a basement is $5,000.00 and $8,000.00. The Engineer recommends a grant program 50% of the cost and a maximum of $4,000.00 per household.

SANITARY SERVICE ALTERNATIVES
OVERHEAD SEWER GRANT

GENERAL

The Village of North Aurora has been very proactive in reducing storm water Infiltration and Inflow into the sanitary sewer system. The Village has undertaken Sanitary Sewer Replacement Projects, Sanitary Sewer Lining Projects, Sanitary Manhole Sealing Projects, Illegal Sump Pump Hook-Up Disconnections and Smoke Testing Projects. Even though these Projects have had success in keeping rain water out of the sanitary sewer system, the rain events of last September and December overwhelmed the downstream interceptor sewers and caused sanitary sewer back-ups into some residents homes. To assure that the sewer surcharging causes no basement back-ups under all conditions and in all areas of town, even during the two 100-year rainfalls the Village has experienced in the last year. The Village should work with the homeowners on preventing the back-up at the individual houses.

Sanitary sewer back-ups have three main causes: a blockage located in the private sewer lateral {service line) from the house to the public sewer, a blockage in the public sewer main, or an overloading of the public sewer main during rainstorms.

TYPES OF SEWER BACK-UPS

If the homeowner experiences a back-up during a rainstorm, it is probably caused by:

A. A faulty private service pipe; or,
B. An overload local sanitary sewer main in the street

A. FAULTY PRIVATE SERVICE PIPE

The service line between the resident's house and the sanitary sewer may be broken or partially plugged with roots. During dry weather, the service has enough capacity for the wastewater, but during a heavy rainstorm, some storm water may be getting into the service. The extra water may exceed the sanitary service's restricted capacity which would cause the water to back-up into the basement if the resident experienced a back-up, but the resident's neighbors with a similar basement and plumbing did not, this situation may be caused by a blockage in the service line.

As the maintenance and repair of an individual building service is the responsibility of the building owner, the correction of a back-up problem caused by roots or defective service pipes will be the homeowner's responsibility. If the problem is caused by root blockage, it can be relatively easy and inexpensive to correct depending on which alternative action is chosen. First, the sewer must be cleaned with an electric rodding machine cutting the roots that have grown into the pipe. Following that, the homeowner may elect to do the following:

1. Periodic Rodding: Have the sewer rodded on a regular schedule to cut out all root growth will often be sufficient to keep them under control and reduce the likelihood of sewer back-up. No rules can be given on how often this must be done because it depends on how active the roots are and how thorough job the Contractor is able to perform. Some homeowners have found it necessary to have the sewer rodded as often as every six months, and others have found that once every few years is enough.

2. Use of Root Removal Products: A number of root removal products are available commercially. Although these products may not completely eliminate the growth, they may increase the interval between rodding the line.

3. Sewer Pipe Replacement The surest method of permanently correcting the problem is to have the sewer pipe dug up and replaced at the location where the roots are getting in. The new pipe used for replacement has a new type of joint that is tightly sealed to completely eliminate future entrance of roots. This is not, however, an inexpensive solution.

4. Any ground water or storm water which enters the sanitary sewer, such as foundation drains, roof downspouts, or sump pumps must be removed from the sanitary sewer; These types of connections are in violation of Village Ordinances and contribute significantly to the overloading of the sanitary sewer system. Blockage of house sewers is also occasionally caused by broken or separated pipe. This is usually the result of soil settlement under the pipe or poor installation of the pipe. In these cases, there is little alternative than to dig up the pipe at the damaged location and make repairs.

8. OVERLOAD SANITARY SEWER MAIN

The sanitary sewer main in the street maybe over1oaded during wet weather periods because the sewer system cannot handle the extra storm water which enters the system from various sources. The Village has been active in identifying and eliminating various public sector Infiltration/Inflow (1/1) sources. The following private sector sources have been identified in the house-to-house inspections. Plumbing connections that were made when the houses were first constructed, particularly the houses that were built pri'?r to 1960. Prior to 1960, it was common practice to connect the foundation drain to the sanitary sewer service. If the resident has a basement but not sump pump or other direct outlet for the foundation drain, it is likely that the house drains are directly connected to the sanitary sewers. Some houses have direct connections between the sanitary sewer service, the sump pump, and the roof downspouts and/or an area drain. Each of these connections will contribute large amounts of storm water to the sanitary sewer system. These connections are violations of Village Ordinances and must be disconnected. If an overloaded sanitary sewer main is the cause of the sewer back-up, most residents in the neighborhood probably experienced similar problems. If the resident's basement has flooded due to the sanitary sewer backup, the Village can either:

1. Install larger sanitary interceptor sewers throughout the Village and increase the size of neighborhood storm sewers, or:

2. Prevent backups in the individual houses.

ALTERNATIVE PROCEDURES

The following are various methods to prevent the sanitary sewer from backing-up into the individual houses.

A. PLUGS OR STANDPIPES

Since the basement floor drain is the lowest opening to the sewer in the house, it is the first place of entry for the sanitary sewer back-up. The floor drain can be closed with a rubber plug or with a standpipe during heavy rainstorms. Some drains are specifically threaded for a screw-in plug or a standpipe. This is the simplest and least

expensive way to stop back-ups through the drain, but it is effective only until the sewage level rises up to the level of the next opening, probably a shower, toilet, or sink. At that level, the sewage will overflow into the basement.

If a plug or a standpipe is used, there is the possibility of uplift pressure on the basement floor. To be effective, a plug or standpipe confines the sewage to the pipes under the basement. If these pipes are watertight, the sewage won't leak out, so no uplift pressure will develop. If the pipes are not watertight, the sewage will leak out of the pipes and saturate the ground beneath the floor. This sewage will then push up on the floor, and if the pressure is large enough, the floor may buckle, which would cause more damage to a house than a basement back-up. Since it is difficult to determine the condition of the pipes beneath a basement floor, plugs or tall standpipes should be used with caution. A "rule of thumb" which may be used as a guide is that a water level six inches higher than the basement floor level will not exert significant uplift pressure on the floor so, under normal conditions, a six-inch standpipe may reduce minor flooding without damage to the floor.

B. VALVE

Since the sewer back-up comes through the service line, an obvious solution is to install a valve on the service and to close that valve when flooding is imminent the valve is normally installed in a manhole that is located outside the house where it is easier to install and maintain. Some valves are manual and other operate automatically such as a "check valve". The manual valves are not effective unless someone is available to close them. The automatic valves sometimes fail to close completely because sewage solids get jammed in the valve. In those cases, the valves may not prevent the backup.

When the valve is tighUy closed, the sewage back-up into the house is cut off, but the sewage flow from the house to the sewer is also cut off. Thus, the household plumbing cannot be used unless a pumped bypass is provided. Also, all storm water sources such as the foundation drain and roof downspout must be disconnected from the sanitary service, otherwise the storm water will back-up into the basement through the floor drain.

APPLICATION FOR OVER-HEAD SEWER ASSISTANCE GRANT

Date: _____

Name: _____

Utility Billing Account Number: _____

Address: _____

Phone Number: _____

Business Phone Number: _____

Do you own this home? _____

Is this your permanent residence (more than 9 months of the year)? _____

How many times within the past twelve (12) months have you experienced sanitary back-up from the sanitary system into your home? _____

Where is the point of entry of the sanitary back-up into your home?

_____

_____

If known, estimate the volume of sewage that surcharged into your home (i.e., flooded the basement approximately few inches/feet deep)?

_____

_____

_____

If known, when the sanitary system back-up occurred in your home, what were the weather conditions at the time?

_____

_____

_____

Do you recall the date of the sanitary system back-up in your home? _____

If known, how many times within the past three (3) years have you experienced sanitary back-up form the sanitary system into your home? _____

Where is the point of entry of the sanitary back-up into your home?

_____

_____

The Village of North Aurora requires that a licensed plumber perform all work related to the installation of the over-head sewer system in your home.

What is the name of the licensed plumber performing the work in your home?

Name: _____

Phone Number: _____

Address: _____

If applicable, what is the name of the contracting company of the licensed plumber performing the work in your home?

Name: _____

Phone Number: _____

Address: _____

- Attach a copy of the Plumber's license.

Please attach as much evidence of previous back-up(s) as possible such as receipts from cleaning services, insurance claims, and photographs. If no such evidence exists, please indicate below.