

To: Carie Anne & Ross Hitchcock Date: 8/27/19

From: Mark Wesolowski, PE

Subject: Sanitary Sewer Backflow Prevention Program Project No. 13-077

Base on the discussion at the Committee of the Whole meeting on August 20th, the Village Board directed Staff to pursue the Sanitary Sewer Backflow Prevention Program and further research the recommended amount of reimbursement for the program. Through discussions with Staff, the previously provided draft program was refined from three options to two options. The check valve option was eliminated, as it provides the lease assurance of preventing backflow, and the installation costs are significantly less than the cost of an overhead sewer. The typical cost for the two proposed options range between \$6,000 to \$10,000 for an unfinished basement.

Research of many of Itasca's neighboring communities, including Bensenville, Roselle, Bloomingdale and Schaumburg, that have some form of sanitary sewer backflow prevention program, revealed reimbursement amounts from 50% to 75% up to \$5,000 for most overhead sewer programs.

Based on the above research, we recommend that the Village consider an incentive program of 50% up to \$5,000, which would provide reimbursement of approximately 50% of the cost of the overhead sewer installation, depending on the option selected.

As previously discussed, providing a vehicle to residents for improving their connection to the sanitary sewer will prevent sanitary sewer backups in homes throughout the Village. Based on the provided information gathered during the previous home flooding survey, approximately 18% of reported flooding came from sanitary sewer backup. When the Village is notified of a sanitary sewer backup by a resident, it is the obligation of the Village to report the backup as a sanitary sewer overflow (SSO) to the IEPA as a failure of the Village's system. The sanitary sewer backups are largely caused by inflow and infiltration (I & I) into the Village owned sanitary sewer, beyond the capacity of the sewer.

The Village continues to make significant strides to reduce the I & I into the sewer system via their annual manhole rehabilitation and sewer lining programs, which help to reduce the number of SSOs that occur; however, the incorporation of a sanitary sewer backflow prevention program is an economical way to further prevent SSOs from occurring and will help minimize the SSO reporting to the IEPA, as opposed to oversizing the sanitary sewer throughout the community to accommodate the excessive flows. Illinois law and NPDES permits prohibit overflows or bypasses, unless certain specified conditions are met. Sanitary sewer overflows and bypasses may be the subject of enforcement action by the IEPA. This program will also reduce the amount of property damage that residents experience and will minimize the health risks that may be associated with sanitary sewer backups that occur within resident's homes.



**VILLAGE OF ITASCA
SANITARY SEWER
BACKFLOW
PREVENTION
PROGRAM**

Approved _____, 2019

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PROGRAM INTRODUCTION

The Village of Itasca developed this cost share program to assist property owners that have experienced at least one backflow event, involving sewage from the sanitary sewer system, with the installation of a backflow prevention system.

The Village is served by separate sewer systems which carry sanitary sewage and storm water in separate piping systems. The Village's sanitary sewer system has adequate capacity to convey sanitary flow. However, during intense rains, storm water can enter the sanitary sewer system, receiving water through various sources such as private storm water sources, which may sometimes cause backflow through house laterals (also referred to as building drains) into basements when there is no backflow prevention. Many time a large percentage of this storm water originates from roof drainage/downspouts, foundation drains and sump pump systems connected to a private sewer lateral and/or Village's sanitary sewer system. **As a condition to participate in this cost share program, these sources of storm water must be disconnected from the Village's sanitary sewer system.** Village Code prohibits the discharge of storm water into sanitary sewers.

Participation in this program is based on a first come first serve basis and may be limited based on the amount of funding approved by the Village Board for this program.

PROGRAM DESCRIPTION

Eligible Properties

The following properties are eligible for participation in this Backflow Prevention Program:

- Single family residential and single family attached residential homes, located within the corporate limits of the Village of Itasca, that are connected to the Village's sanitary sewer system; and
- The property owner and all tenants must be in good standing with the Village of Itasca with regards to outstanding debt owed to the Village (utility billing, vehicle stickers, parking tickets, fines/fees owed to the Village, etc.); and
- Subject property must have experienced at least one backflow event from the sanitary sewer system involving sanitary sewage; and
- Only those otherwise eligible properties which install Backflow Prevention Systems after **The approval date of this policy**. This policy shall not be applied retroactively.

Eligible Subsidies

The Backflow Prevention Program provides financial assistance to homeowners who desire to protect their home from flooding during a heavy rain event. Eligible homeowners may qualify for the following subsidy.:

- A. 50% cost share of eligible improvements for Options 1 or 2 up to a maximum reimbursement amount of \$5,000.

Eligible Improvements

Option 1: External Flood Control System

External flood control systems, such as lift stations and backflow prevention valves (containing one or more valves with pumps), are typically installed outside the home in a vault/basin. Exhibit 1 generally depicts one type of an external flood control system. All of the sewage flowing through these systems typically flow or are pumped through one or more check valves (dual valves provide a higher level of protection) which close to prevent backflow. When the Village's sewers are full, the sewage is pumped into the sewer lateral under pressure. These systems provide a higher level of protection but require electric to be installed outside the home and the vaults/basins should be periodically cleaned. **An advantage to these systems is that house plumbing can be used during rain events when the valve is closed.**

Option 2: Overhead Sewer

Converting existing basement plumbing to an overhead sewer (Reference Exhibits 2 and 3) can protect the basement from backflows. This improvement results in the existing plumbing in the basement to be re-plumbed and directed to an ejector pit. The ejector pit lifts the sewage up and overhead, then down to about mid-height of the basement wall, where it exits the foundation wall to the outside of the building. Once outside, it is reconnected to the house lateral line and then to the Village's sanitary sewer. If the Village's sanitary sewer backs up, the homeowner is protected as the sewage is contained in the house lateral outside of the house. **This option provides the highest level of protection of all eligible options.**

In certain instances, a conversion of basement plumbing to an overhead sewer system is not practical. An alternative to the overhead sewer is a **modified overhead sewer** that connects all of the lower level plumbing fixtures to an ejector pit. However, instead of raising the outgoing sewer pipe through the foundation, the ejector pit pumps directly into the gravity pipe (soil stack). This also provides a high level of protection without penetrating the foundation wall or excavation outside the building.

Cautionary Note: *A modified overhead system will result in the main drain pipe (beneath the basement floor) becoming pressurized and can cause sewage to enter the basement through cracks and leaking joints in the pipe and basement floor.*

For both the overhead sewer and modified overhead sewer options, plumbing fixtures on the above grade levels can be used during a storm, however, the lower level (basement) fixtures should not be used during a power outage.

Disconnection of all Storm Water Sources

In order to qualify for this program, **ALL** sources of storm water (roof drainage/downspouts, foundation drains, sump pump systems, etc.) must be disconnected from the Village's sanitary sewer system. **The homeowner and their plumbing contractor must certify in writing that no such connections exist.** Although televising the house lateral is not mandated, the homeowner and plumbing contractor may determine that televising is necessary to make this determination. Televising of the house lateral is considered an eligible expense and a detailed and itemized invoice for all work is required to be submitted to the Village for review.

Eligible Costs

Eligible costs are as follows:

- Cost of location, excavation and exposure of the house lateral sewer line and connection of the new backflow prevention system to the existing lateral.
- Cost of valve(s), vaults, pumps, and associated electrical work for External Flood Control System (Option 1).
- Cost of a new ejector pit and pump and associated electrical and plumbing work needed to lift sanitary sewage from basement plumbing fixtures to an overhead sewer - including modified overhead sewer (Option 2).
- Cost of trenching and concrete floor repairs.
- Cost of grass seeding to restore disturbed grass/lawns.
- Televising of the house lateral.

Non-Eligible Costs include the following:

- In order to qualify for this Backflow Prevention Program: ALL sources of storm water (roof drainage/downspouts, foundation drains, sump pump systems, etc.) must be disconnected from the Village's sanitary sewer system. The disconnection of such connections are **NOT** eligible for the subsidy.
- Removal and Replacement of interior walls and finishes.
- Use of materials not meeting the requirements of Village Codes.
- Ancillary homeowner improvements not necessary to provide sanitary sewer back-up protection of the basement.
- Planting or replacement of new landscaping (bushes, trees, sod, fences, walls, etc.).
- New electrical panels and/or upgrading the house electrical supply.

General Requirements

1. All work performed under this program shall meet all applicable requirements of the Building Codes of the Village of Itasca including, but not limited to, the Illinois Plumbing Code, National Electric Code and the International Building Code, if applicable.
2. Any/all pumps associated with Options 1 and 2 must be connected to a dedicated electrical circuit.
3. All plumbing and electrical work must be performed by licensed and bonded contractors. Contractors will be required to provide a current copy of their State of Illinois license and be registered with the Village.
4. Reimbursement through this Program is limited to one time per address.

NO WARRANTY OR GUARANTEE

The Village's agreement to cost share as set forth in this policy is not and shall not constitute a warranty, promise or guarantee by the Village that the backflow systems described herein will stop the backflow of sanitary sewage. It is merely an agreement by the Village to cost share backflow prevention systems in an effort that those systems may provide sanitary sewage backflow relief to eligible homeowners. Each eligible homeowner, in conjunction with any advisor the homeowner trusts, must reach an independent judgment as whether or not to install backflow protection and not rely on the Village's cost sharing agreement as a basis for concluding that the chosen system will be effective.

**Village of Itasca
Backflow Prevention Program
Instructions on How to Apply**

1. Contact Community Development at (630) 773-5568 to schedule a preliminary inspection to ensure the property is eligible.
2. After being deemed eligible, solicit proposal(s) from plumbing contractor(s). Request that the selected plumber prepare detailed drawings of proposed improvements and provide a written proposal that provides a detailed description of the scope of work. Also, complete the following forms: a) General Information Form and b) Participation Agreement

Submit drawings, proposals and required forms to Community Development at:
550 W. Irving Park Road
Itasca, Illinois 60143

3. Drawings will be reviewed by the Village and will either be approved as noted or returned for revisions. When drawings receive approval, apply for applicable plumbing and electrical permits with the Village of Itasca Community Development Department. **Note: All permit fees and initial inspection fees for the work are waived as part this program. Reinspection fees are the responsibility of the Property Owner.**
4. Plumbing and electrical contractors will need to contact the Community Development Department to schedule normal inspections during the course of work and at completion for a final inspection.
5. After the work has been inspected and approved, the homeowner will need to pay the full amount to the contractor(s) and then submit the following to Community Development for reimbursement:
 - a. Completed "Request for Reimbursement Form"
 - b. Copy of a paid & itemized invoice from the contractors that performed the work.
 - c. Copy of the cancelled check (both sides), and/or credit card receipt, that the homeowner paid all contractor(s).
6. Homeowner will receive the Village's reimbursement check approximately four weeks after all of the required paperwork is submitted, and approved, by Community Development.
7. NO WARRANTY OR GUARANTEE: THE VILLAGE'S AGREEMENT TO COST SHARE AS SET FORTH IN THIS POLICY IS NOT AND SHALL NOT CONSTITUTE A WARRANTY, PROMISE OR GUARANTEE BY THE VILLAGE THAT THE BACKFLOW SYSTEMS DESCRIBED HEREIN WILL STOP THE BACKFLOW OF SANITARY SEWAGE. IT IS MERELY AN AGREEMENT BY THE VILLAGE TO COST SHARE BACKFLOW PREVENTION SYSTEMS IN THE HOPES THAT THOSE SYSTEM MAY PROVIDE SANITARY SEWAGE BACKFLOW RELIEF TO ELIGIBLE HOMEOWNERS. EACH ELIGIBLE HOMEOWNER, IN CONJUNCTION WITH ANY ADVISOR THE HOMEOWNER TRUSTS, MUST REACH AN INDEPENDENT JUDGMENT AS WHETHER OR NOT TO INSTALL BACKFLOW PROTECTION AND NOT RELY ON THE VILLAGE'S COST SHARING AGREEMENT AS A BASIS FOR CONCLUDING THAT THE CHOSEN SYSTEM WILL BE EFFECTIVE.



Village of Itasca Backflow Prevention Program General Information Form

Name: _____

Address: _____

Phone: (Home) _____ (Cell) _____

E-mail Address: _____

Date you moved into this home: Month _____ Year _____

1. Have you experienced backflow into the home of the subject property from the sanitary sewer system involving sanitary sewage? Yes No

Date of last backflow event: _____

2. Are your downspouts connected to the Village's sanitary sewer system? Yes No

3. Does your home have an outside catch basin? Yes No

4. Does your home have interior or exterior foundation perimeter drain tile?

Interior Yes No Exterior Yes No

5. Please check all the plumbing fixtures that are present in the basement of your home:

Floor Drain___ Shower or Tub___ Lavatory___ Ejector Pump___
Laundry Sink/Wash Basin___ Toilet___ Other_____

6. Sump pump: Does it discharge to front, rear, or side of home, or is it connected to the storm sewer in street or rear yard? _____

7. Are there are existing storm water sources/connections to your sanitary sewer lateral and/or the Village sanitary sewer main? _____

Please explain how this was verified and by whom: _____

Application Materials Required: Each of the following documents must be attached to this application in order for the application to proceed and for a permit to be issued:

1. Copy of detailed proposal and drawings from plumbing contractor performing the work.
2. Copy of the fully executed Participation Agreement.
3. Completed permit application form (Permit and initial inspection fees waived as part of this program)

Property Owner Certification

I, _____ am the homeowner of the subject property and I certify that all of the information contained on this General Information Form is true and accurate. Providing inaccurate information may result in a property being deemed ineligible for participation in this Program and subjects the owner to repayment of any subsidies received.

Signature _____

Date _____



Village of Itasca Sanitary Sewer Backflow Prevention Program Request for Reimbursement Form

Name: _____

Address: _____

Phone: (home) _____ (work) _____

Type of Improvement (circle one):

- 1. External Flood Control System 2. Overhead Sewer

Have all sources of storm water been disconnected from the sanitary sewer system? Yes No

Date plumbing work was completed: _____

Plumbing permit number issued: _____

Plumbing contractor who performed work: _____

Total cost of eligible expenses: \$ _____ Total reimbursement requested: \$ _____

Property Owner Certification

I, _____ am the homeowner of the subject property and I certify that all of the information contained on this Request for Reimbursement Form is true and accurate. Providing inaccurate information may result in a property being deemed ineligible for participation in this Program and subjects the owner to repayment of any subsidies received.

Signature _____ Date _____

Plumbing Contractor Certification

I, _____ of _____ certify that all work completed under this program has been performed in accordance with the Backflow Prevention Program and all applicable Village Codes.

Signature _____ Date _____

Village Certification

As an authorized agent of the Village of Itasca who administers the Backflow Prevention Program, I certify that I have reviewed all the necessary paperwork associated with above mentioned application and permit and found them in compliance with the provisions of the Backflow Prevention Program. Therefore, I recommend the reimbursement amount be paid.

Signature _____ Date _____



SANITARY SEWER BACKFLOW PREVENTION PROGRAM PARTICIPATION AGREEMENT

THIS AGREEMENT made on this _____ day of _____, _____, between the **VILLAGE OF ITASCA**, DuPage County, Illinois, 550 W. Irving Park Road, Itasca, Illinois (hereinafter referred to as "Village") and _____ (homeowner name) at _____ (address) in Itasca, Illinois (hereinafter referred to collectively as "Property Owner").

WITNESSETH:

WHEREAS, Property Owner is the owner of a building located at the address indicated above and such building has been the subject of occasional basement flooding, including backup from the Village's sanitary sewer system, in the past; and

WHEREAS, the Village has adopted a program to protect basements in the Village and such program provides for the reimbursement to Property Owner for certain basic costs of upgrading their plumbing in order to minimize sewage backflow, a copy of which program is available at the Village (hereinafter referred to as the "Program"); and

WHEREAS, the Property Owner desires to participate in such Program and the Village and the Property Owner desire to enter into this Agreement governing the installation of plumbing improvements in the Property Owner's building and the Village's reimbursement of certain expenses relating thereto in accordance with the Program.

NOW, THEREFORE, in consideration of the above and the terms and conditions set forth below and for other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

Section 1: The preamble paragraphs set forth above are hereby expressly made a part of and operative provisions of this Agreement as fully as if set forth at length in this Section 1.

Section 2: Definitions. The following terms shall have the following meaning when used in this Agreement unless the context clearly indicates a contrary meaning.

"Contractor" shall mean a contractor who has obtained the necessary licenses and permits from the Village to do work under the Program.

"Program" is the program for installation of Property Owner plumbing improvements to prevent sewage backup within the Village as established by the administrative program adopted by the Village.

"Proposal" shall mean a detailed bid for equipment, material and labor. Quantities shall be itemized.

"Specifications" are the specifications and requirements for the plumbing work developed by the Village.

"Permit" is the Village permit which Property Owner must obtain before any improvements can be installed by a Contractor.

Section 3: Village Approval. Prior to the installation of any plumbing facilities for which Property Owner expects reimbursement hereunder, the specific plans, including the Proposal, shall be submitted to the Village for approval. No work shall commence until such Village approval is obtained. If any such work has commenced without issuance of all applicable permits, Property Owner shall not be entitled to reimbursement until all permits are issued and appropriate final inspections completed and approved.

Section 4: Installation. Property Owner agrees to install the approved plumbing facilities in accordance with the Program. Installation shall be performed according to the Specifications. The time may be extended upon written request by Property Owner and written permission by the Village if the work is delayed because of weather, unavailability of a Contractor or other factor beyond Property Owner's control where Property Owner has exercised reasonable diligence to timely complete the installation of the facilities.

Section 5: Contract for Work. The contract for installation shall be signed based on the Proposal attached hereto and hereby made a part hereof. The contract for the installation shall be a contract between the Contractor and the Property Owner. The Village shall not be a party to such contract.

Section 6: Permit Required. The installation of the plumbing and electric facilities will require a permit issued by the Village.

Section 7: Inspections. The Village must be notified so that it can inspect the plumbing and electric work as required in the Program Procedures. Initial inspection fees shall be waived. Reinspection fees shall be the responsibility of the Property Owner.

Section 8: Reimbursement Items. The Village will reimburse the items listed in the reimbursement guidelines included in the summary for the Program. In no event shall the amount of reimbursement exceed the Program's designated reimbursement amounts.

Section 9: Payment of Reimbursement. Reimbursement of eligible items at approved amounts will be made when all work is completed, inspected and approved by the Village. To receive reimbursement, Property Owner must follow all requirements of this Participation Agreement and submit a claim on the Request for Reimbursement Form.

Section 10: Property Owner's Responsibility. Once the plumbing work is completed the following items will be the responsibility of the Property Owner:

- i. Restoration or replacement of shrubbery.
- ii. Correction of subsidence in the excavated area. Settling of excavated soils is common. The Property Owner will be responsible for any future filling and reseeding.
- iii. Replacement of interior walls and finishes
- iv. Future maintenance of ejector pump, backflow valve, overhead sewer, associated electrical equipment and all other related equipment and improvements. Like all equipment, this equipment and related items may require checking, service or repair in the future. The Property Owner is responsible for this future maintenance.

Section 11: Liability. The Village shall have no liability for any defective work or other damage, injury or loss on account of any act or omission of the Contractor in the performance of the work. The Property Owner must make any claim for such matters directly against the Contractor or Contractor's insurance carrier. Property Owner hereby agrees to indemnify and hold Village harmless against any and all claims and further covenants not to sue the Village for any and all claims.

Section 12: Disclaimer. The Program is designed to substantially reduce the risk of basement backups. However, there is always some risk of basement backup as a result of unexpected sewer collapse, obstruction, power failure, extreme environmental conditions or other unforeseen factors. Proper operation of foundation drains is necessary to prevent seepage of ground water through walls below grade. Existing foundation drains will not be tested for proper operation in the Program—the Property Owner has the responsibility for all testing, inspections and any corrective work that may become necessary.

In addition, reliable continuous functioning of Property Owner's sump/ejector pump(s) is necessary for overhead sewers, backflow prevention valves and foundation drains to function properly. The Property Owner has the responsibility to check the operation of the pumps regularly. The Property Owner has the responsibility for all testing, inspections and any corrective work that may become necessary.

Also, it is further recommended that the Property Owner install a battery backup system to provide protection in the event of power failure.

Section 13: Notices. Unless otherwise notified in writing, all notices, requests and demands shall be in writing and shall be personally delivered to or mailed by United States Certified mail, postage prepaid and return receipt requested, as follows:

For the Village: Community Development
 Village of Itasca
 550 W. Irving Park Road
 Itasca, Illinois 60143

For the Property Owner:

Name: _____

Address: _____

Phone: _____

or at such other addresses that any party hereto may designate in writing to the other parties pursuant to the provisions of this Section.

Section 14: Disconnection of Storm Water Sources. Property Owner must disconnect any/all storm water sources from the sanitary sewer system and must take all corrective action necessary to prevent the discharge of roof, sump pump, foundation, and other drainage into the sanitary sewer system. The Property Owner, by executing this Participation Agreement, certifies that there are no storm water connections to the sanitary sewer system.

Section 15: Breach. If the Property Owner fails to comply with all requirements of this Agreement or to complete installation as provided in this Agreement, the Village shall have no obligation to reimburse the Property Owner.

Section 16: Entire Agreement. This Agreement shall be binding on the parties, their assigns and successors. This Agreement and the documents referenced in this Agreement constitute the entire agreement between the parties and supersede any previous negotiations. This Agreement shall not be modified except in writing signed by the parties.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed as of the dates written below.

VILLAGE OF ITASCA, an Illinois Municipal Corporation

By: Mayor

ATTEST:

By: Village Clerk

SIGNATURE(S) OF PROPERTY OWNER(S)

ACKNOWLEDGEMENTS

STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that Jeff Pruyn, personally known to me to be the Mayor of the Village of Itasca, and Jody Conidi, personally known to me to be the Village Clerk of said municipal corporation, and personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that as such President and Village Clerk, they signed and delivered the said instrument and caused the corporate seal of said municipal corporation to be affixed thereto, pursuant to authority given by the Board of Trustees of said municipal corporation, as their free and voluntary act, and as the free and voluntary act and deed of said municipal corporation, for the uses and purposes therein set forth.

GIVEN under my hand and official seal, this _____ day of _____, _____.

Commission expires _____, _____.
_____ Notary Public

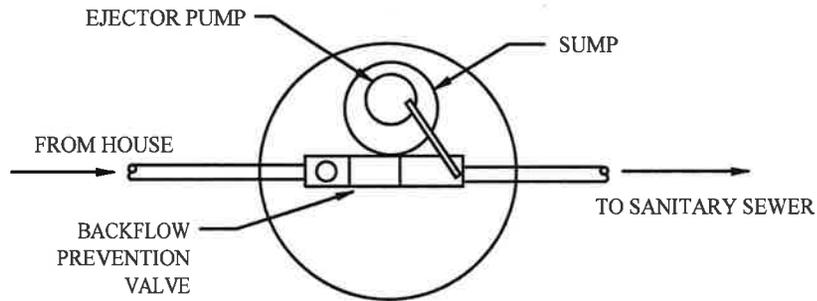
STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

I, the undersigned, a Notary Public, in and for the County and State aforesaid, DO HEREBY CERTIFY that the above-named _____, personally known to me to be the same persons whose name are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that they signed and delivered the said instrument as their own free and voluntary act for the uses and purposes therein set forth.

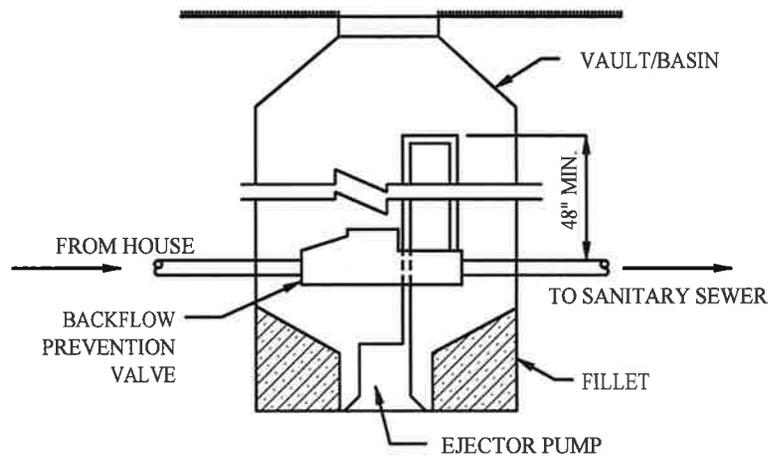
GIVEN under my hand and official seal, this _____ day of _____, _____.

Commission expires _____, _____.
_____ Notary Public

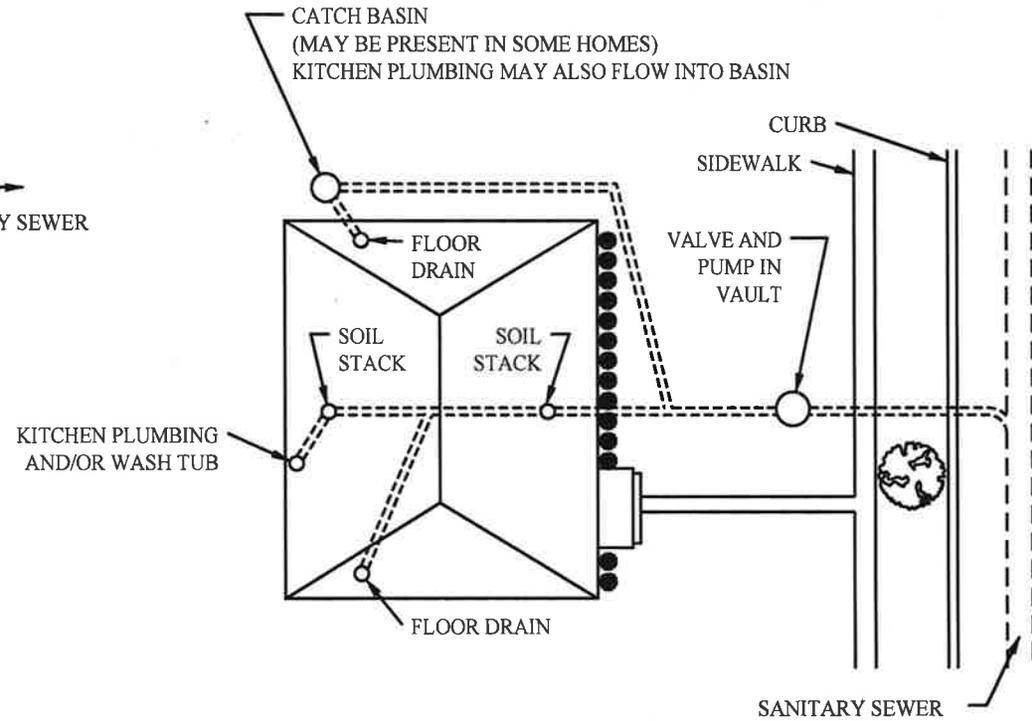
EXHIBIT - 1



TOP VIEW



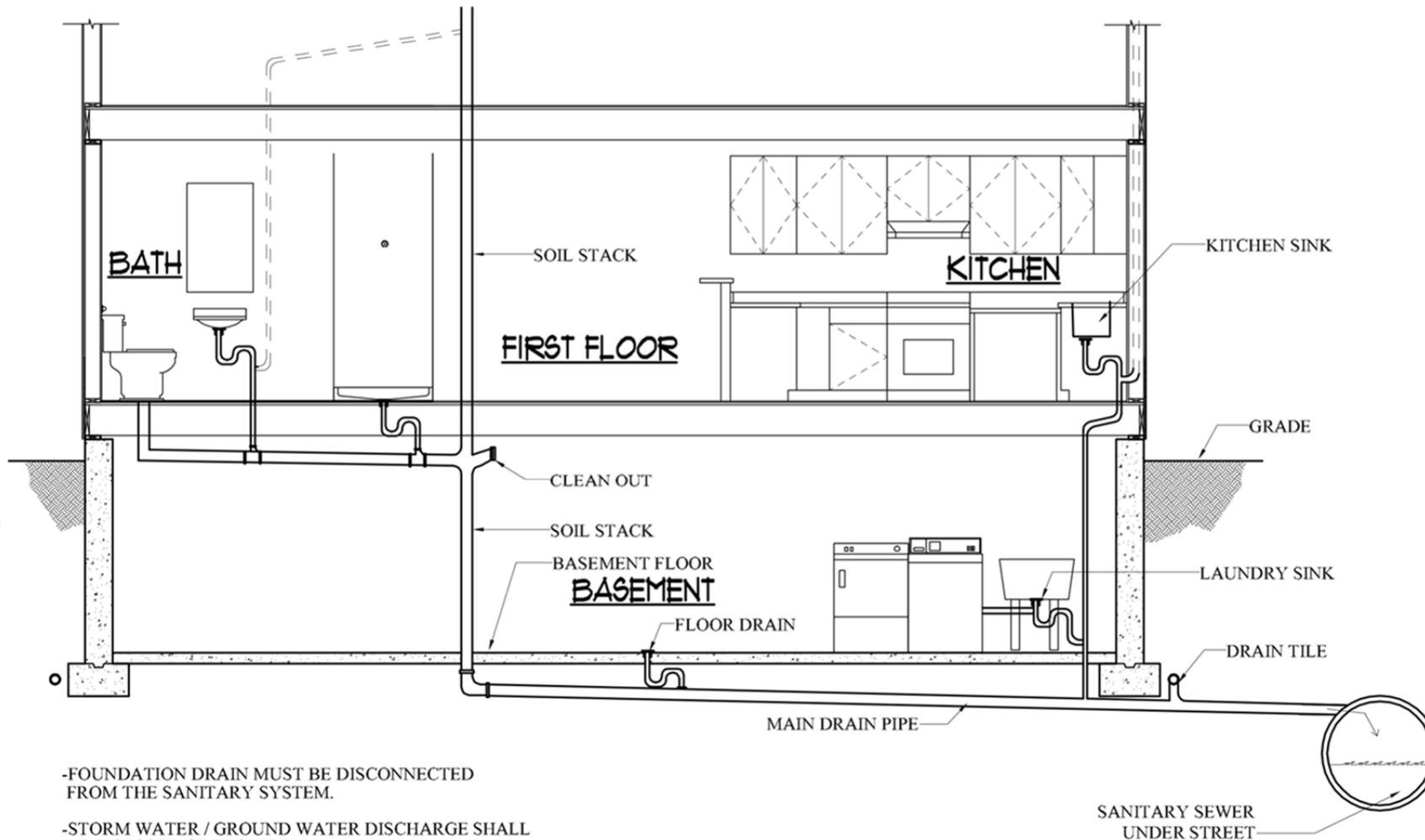
SIDE VIEW



PLAN VIEW

EXAMPLE OF EXTERNAL FLOOD CONTROL SYSTEM

EXHIBIT - 2



-FOUNDATION DRAIN MUST BE DISCONNECTED FROM THE SANITARY SYSTEM.

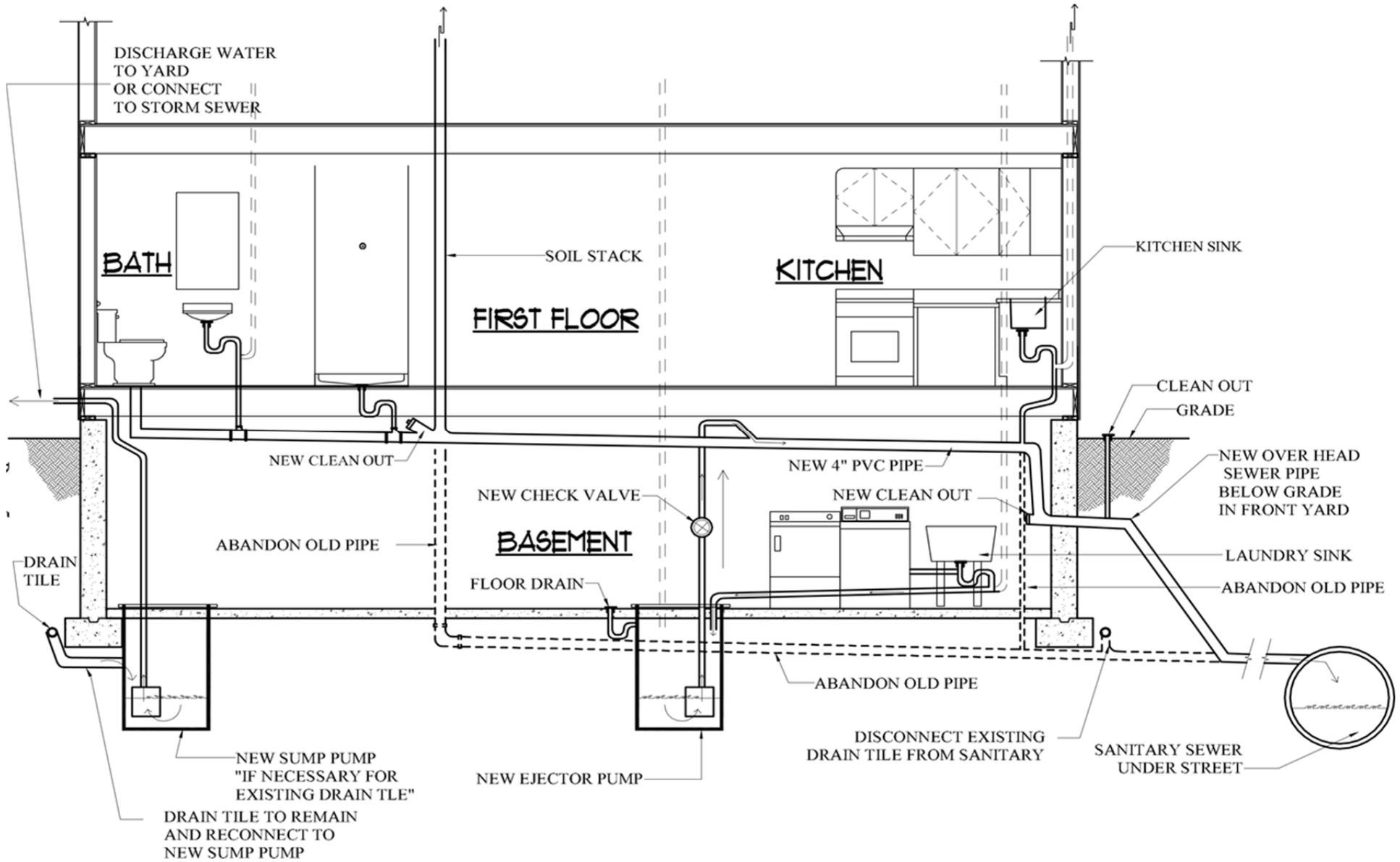
-STORM WATER / GROUND WATER DISCHARGE SHALL BE DISPOSED OF PROPERLY.

- IN SOME HOMES, THE BASEMENT WASH TUB, FLOOR DRAINS AND KITCHEN PLUMBING MAY DISCHARGE TO AN EXTERIOR CATCH BASIN LOCATED BEHIND OR ALONG SIDE THE BUILDING

- SOME HOME MAY ALSO HAVE A FOUNDATION DRAIN WITH A GRAVITY CONNECTION TO A SUMP PUMP IN THE BASEMENT

EXAMPLE OF TYPICAL GRAVITY SEWER SYSTEM (BEFORE IMPROVEMENT)

EXHIBIT - 3



EXAMPLE OF TYPICAL OVERHEAD SEWER SYSTEM
(AFTER IMPROVEMENT)