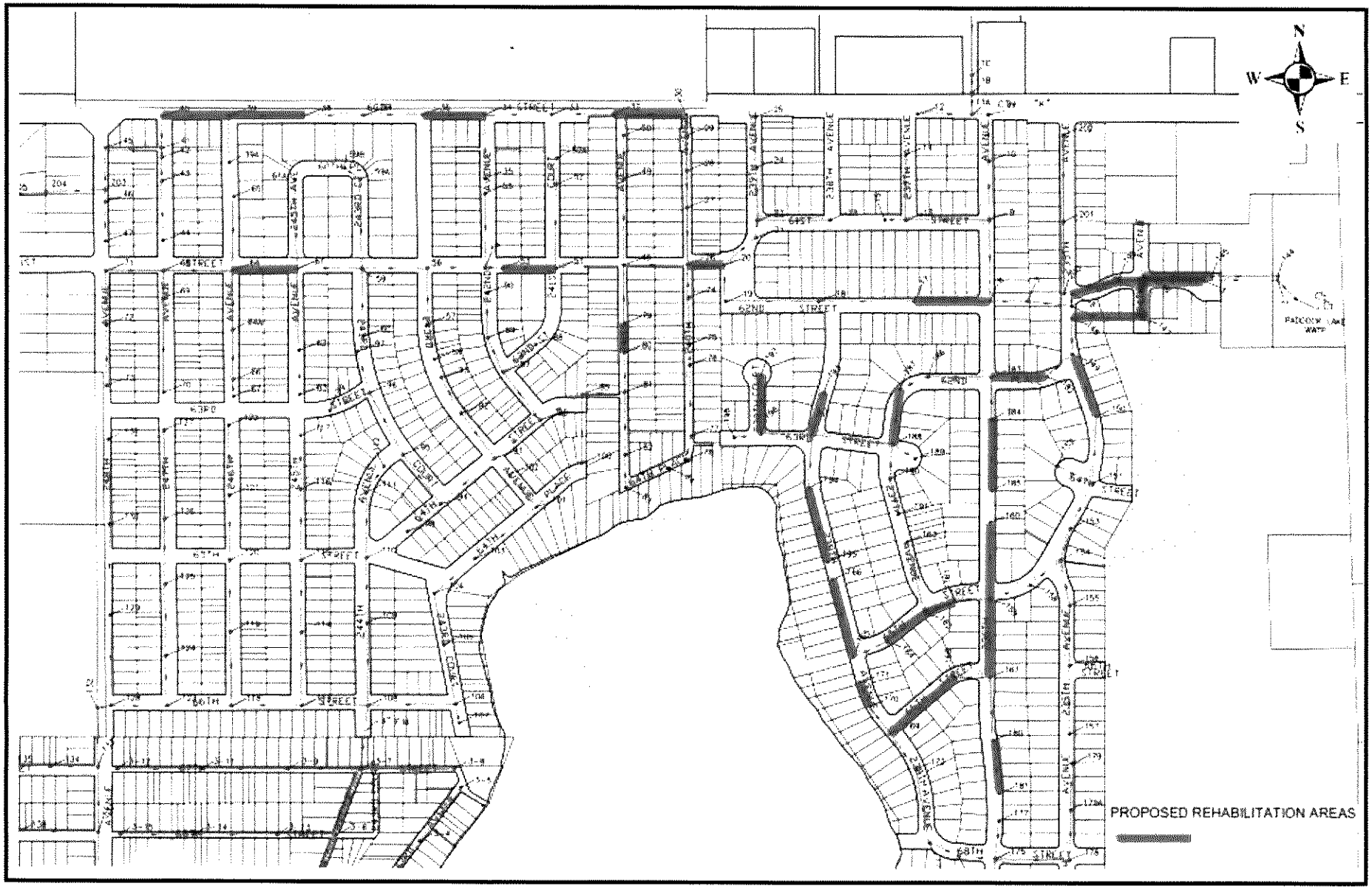

Exhibit 1

Village of Paddock Lake, Wisconsin

2018 Sanitary Sewer Rehabilitation

BAXTER & WOODMAN

Project: 170964.40
Date: August 30, 2017

STAFF REPORT 18-3-20

March 8, 2018

To: Village Board of Trustees

From: Tim Popanda, Village Administrator

Subject: 2018 Sanitary Sewer Rehabilitation Project

Objective: Review and approve the lowest qualified bid for sanitary sewer rehabilitation, also review and approve the Baxter Woodman's work order No. 170964.60 for the oversight of the project.

Background: In September of 2017, staff reported to the Village Board that the Village sanitary sewer collection system has been experiencing an increase in Infiltration and Influx (I&I) of clear ground water. The Board authorized staff and the consulting engineer to prepare bid specifications and solicit qualified sewer rehabilitation contractors for bids.

Advantage: By engaging the lowest bidder, Visu-Sewer, Inc for the lining of the collection system and the grouting of various manhole structures, the Village will begin the process of reducing the I&I entering the sewer collection system and WWTP.

Disadvantage: Costly

Budget Impacts: The current cash balance in the Sanitary Sewer Replacement Fund is sufficient to cover the anticipated cost associated with 2018 Sanitary Sewer Rehabilitation Project. The Replacement Fund end of year (2017) total is $1,503,656.

Baxter and Woodman work order No.17964.40	$ 18,350
Visu-Sewer Bid	$142,980
Baxter and Woodman work order No. 170964.60	$ 13,450
	$174,780

Action Requested: Authorize the Village President to sign the 2018 Sanitary Sewer Rehabilitation contract with Visu-Sewer, Inc. in the amount of **$142,980** and also sign the Baxter and Woodman work order No. 170964.60 in the amount of **$13,450** for the projects oversight and inspection.

Attachments:

* Sanitary sewer rehab bid results
* Baxter and Woodman work order No. 170964.60
* Village staff report No. 17-9-56

STAFF REPORT 17-9-56

September 6, 2017

To: Village Board

From: Tim Popanda, Village Administrator

SUBJECT:

Infiltration and Inflow (I&I) of clean water and groundwater entering into the Village sanitary sewer collection system.

OBJECTIVE:

To seek Village Boards approval to engage Baxter and Woodman with a work order to engineer, seek bids and oversee the lining and repair of failing joints and pipes of the sewer collection system.

PRESENT SITUATION:

The Village owns, maintains and manages 16.33 miles of sanitary sewer collection system piping. These 16.33 miles of collection system piping were installed between 1966 and 1969, the majority of the collection system is Vitrified Clay Piping (VCP) with bell and spigot joints. These 51 yr. old sewer pipes have begun to show signs of distress at the joints, causing groundwater to seep into the collection system. Over the past four (4) years the WWTP staff has observed an increase in the amount of I/I entering the treatment facility.

BACKGROUND AND DISCRIPTION:

Infiltration and Inflow (I/I) is clear water entering the sewer collection system through a variety of sources. Infiltration, is groundwater that enters the collection system through physical defects such as cracked pipe, deteriorated joints, improperly installed private laterals and manholes. The majority of the collection system is below the surrounding groundwater table, this introduces leaks from groundwater into the sewer collection, infiltration is a problem that is difficult and expensive to identify and correct.

Inflow is the flow of clear water entering the system through point source connections. Inflow may be directly related to storm water runoff, roof drains, sump pumps, area drains, manhole covers and failing private sewer laterals.

High levels of I/I reduce pipeline capacity that would otherwise be available for convening sanitary sewer. The results of I/I during high groundwater levels (saturated soils) or during extreme storm events are surcharging and backups of sewage into homes and onto the ground. In addition to the possibility of Sanitary Sewer Overflows (SSO's) and backups, the increase of I/I within the collection system also has an adverse effect on treatment and pumping equipment.

REGULATORY AGENCIES:

The US EPA and the Wisconsin Department of Natural Recourses (WDNR) are the agencies responsible for oversite and implementing the federal clean water act, this act provides control over all point source discharge into waters of the US and State of Wisconsin. The I/I making its way into our collection system is considered to be illegal by the regulatory control agencies that issue our National Pollution Discharge Elimination System (NPDES) permit.

The EPA and WDNR includes reduction of I/I requirements with all NPDES permits. In addition, the WDNR views all Sanitary Sewer Overflows (SSO) as illegal and an environmental hazard.

ADVANTAGES:

By authorizing the consulting engineers to seek bids from trenchless sewer lining contractors and also authorizing repairs to be made to the collection system that demonstrate the most significant leaks, the Village collection system will realize a significant reduction in I/I and safe guard the capacity of the system and lead to the prevention of future SSO's and backups.

DISADVANTAGES:

The rehab and repair project is costly.

BUDGET IMPACTS:

The current cash balance of the sanitary sewer replacement fund is sufficient to cover the costs of engineering and repairs up to $200,000. After the system has been cleaned and televised in years 2018 and 2019 this topic will be revisited again.

ADMINISTRATORS RECOMMENDATION:

Backups of wastewater into homes causes serious public health treats and loss of property. Eliminating the risk of these backups or future possibilities of backups is recommended as the highest priority of the Village Board. Wastewater overflows from the collection system is a separate but equally important concern to prevent environmental hazards and future enforcements by the WDNR.

Staff recommends and requests that the Village Board authorize Baxter and Woodman to proceed with work described within work order 170964.40.

ATTACHEMENTS:

Findings of facts

Baxter and Woodman's work order No. 170964.40

WWTP staffs scoring of I/I

2016-2020 cleaning and televising map

WDNR 2017 recommendations for repairs of system.

FINDING OF FACTS

The following are facts and statistics pertaining to the Village collection system and WWTP plant as they relate to Infiltration and Inflow of groundwater and storm water:

- The Village owns and maintains 16.33 miles of sanitary sewer collection system. Of the collection system the following is an accounting of the system:
    - .51 miles of 15 inch concrete pipe
    - .63 miles of 10 inch clay and concrete pipe
    - 14.92 miles of 8 inch clay pipe
    - 338 manholes
    - 5 lift stations
- The estimated annual influx of I/I is 63.3 million gallons.
- The average annual flow of sanitary sewer water that requires treatment is 243 million gallons
- The flow for Jan. 1, 2017 through July 31, 2017 is 144.9 million gallons, while the flow for the same period in 2016 was 113.3 million gallons an increase of 21%.
- Estimated cost to pump and treat the 63.3 million gallons of clear I/I water is $33,000
- With the village processing and pumping 26% more water than discharged from homes and businesses, the village can expect to see a 15 to 20 % reduction in pump and equipment life expectancy. This reduction in pump and equipment life expectancy can equate to an estimated cost of $155,000