



Agenda Item: 14.A  
Date of Meeting: August 12, 2024  
Department: Public Works

## STAFF REPORT

To: City Council  
From: Nora Gamino  
Subject: **Sewer Line Inspection System Replacement**  
Prepared On: August 2, 2024  
Attachments: Rovver X Brochure  
Bid Analysis  
Quote 2\_low bidder\_Final  
Quotes

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### Background/History:

Over the next 5 years, the Public Works Department's has a goal to get back on track with regular inspection and cleaning (preventative maintenance) of the sewer collection system. Two critical steps have already been taken to accomplish this goal. The first was the purchase of a new vacuum truck (expected delivery date is March 2025) and the second was the purchase of a new root cutter. This fiscal year, the step we are taking to accomplish our goal is an upgrade to our technology with the replacement of the sewer inspection system.

We currently own a sewer line inspection camera system and trailer jointly with the Eastern Sierra Community Services District (ESCSA). The existing unit was purchased in 2008 at a cost of \$144,511.05. The primary purpose of the camera system is to perform regular inspections of the city's sewer collection system. Additionally, the camera is used to identify locations of laterals, area of concern, and blockages. It also works in parallel with other equipment used for maintenance and cleaning, such as the root cutter and vacuum truck.

The average life expectancy of an inspection camera is 10 years. While the current setup has served the city for over 16 years, the system is failing. Not only is the technology and software out of date, but there have also been costly repairs to keep it operable. Major issues with the current system include:

- Video recording is intermittent, but mostly non-functional. When it does work, downloading videos to a thumb drive can take hours. There are also hours of recording saved, but they are not available for download or viewing.
- It frequently gets stuck due to worn mechanical components of the robot mixed with the poor condition of the pipe. As a result, a lot of sections of pipe do not get inspected because the risk of getting stuck is too great. The system is unable to navigate obstacles.

- Outdated software.
- The system is temperamental and difficult to operate.
- Setting the robot to go from smaller to larger diameter pipe is time consuming.
- Costly repairs include, but are not limited to, motor on robot not functioning, leaks in the shaft cover oil seal, old seals and O-rings, degraded connectors, replacement of old wiring, and no video feed from robot to monitor.

With these issues constantly on the rise, the system has become something to avoid using because it is increasingly frustrating, and the outcome is often wasted time and energy. As a result, problem sewers, such as those with roots, infiltration, and broken sections, do not get identified and fixed until they are causing significant problems. Consequently, the sewer maintenance program has become reactive rather than proactive due to the lack of a reliable, easy to use camera inspection system.

#### Analysis/Discussion:

New inspection systems were researched, and EnviroSight's Rovver X was identified as meeting the department's needs. EnviroSight is trusted brand in the sewer inspection market and they specialize in robotic crawlers and push cameras. The staff attended a Rovver X demonstration on one of the problem sewer lines in the City. Staff were impressed with the ease of use, the user interface, and functionality of the system.

The Rovver X package includes the necessary components we need for a new system, including the camera, robot crawler, control unit, cable reel and cabling, and pressurization kit. The quote also includes the elevator kit, which raises the camera lens above the water level, for better inspection of pipes that have high flow. There was an option to have an enclosure for the system, however this was removed from the final quote as our intention is to continue utilizing an enclosed trailer to operate the system from.

An analysis of the quotes is attached. The low bidder is Haaker Equipment Company at \$125,257.33. The lead time on the unit is 4 to 6 weeks. Once the new camera system is received, the old camera system will be auctioned and proceeds will be split evenly between the ESCSD and the City. ESCSD has already procured a new camera inspection system, which is ATV mounted, therefore they no longer need the existing system or trailer.

#### Economic Impacts:

None.

#### Budget Impacts:

This item is not included in the 2024-2025 Fiscal Year Budget. If this item is approved, Capital Equipment within the Sewer Fund, expense account 002-051-56028, will be increased by \$125,257.33.

The estimated starting cash balance for 24-25 within the Sewer Fund is roughly \$2.7 million, and including the above adjustment, total estimated spending would exceed total estimated revenues by about \$280,000. The estimated spending in excess of revenue is adequately sustained by the existing cash balance. There are no fund sustainability concerns with regard to approving this proposed expenditure.

#### Legal Review:

Not required.

Recommended Action:

Council consideration to approve a purchase order with Haaker Equipment Company for a new sewer line inspection system at a total cost of \$125,257.33 and authorize the Public Works Director to sign the purchase order.

Approved By: Ethan Aukee 8/2/2024

Approved By: Robin Picken 8/2/2024

Approved By: Deston Dishion 8/2/2024

Approved By: