Brighton
COLORADO

# Sanitary Sewer Manhole Rehabilitation

Presenting: Curtis Bauers, Utilities Director

## Strategic Focus Area

Supportive and Sustainable Infrastructure

# Introduction

- Project Background
- Project Details
- Bid Process and Results
- Final Recommendation

# Project Background

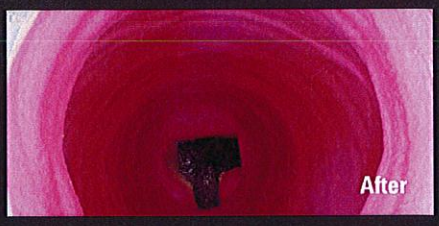
- Sanitary sewer manholes are an integral part of the infrastructure that continuously conveys wastewater to the plant to be treated
- Manholes are necessary for change in direction of gravity pipelines
- Also, like the name implies, manholes are access points for operational personnel to maintain, clean, and repair sanitary sewer pipelines to make certain that the wastewater system functions properly

# Project Background

- Manholes are typically constructed of concrete, with older manholes being built from brick and mortar
- Over time, manholes experience deterioration and corrosion from the constant off-gassing from wastewater that is being conveyed through them
- If nothing is done to stop or prevent further corrosion, the structural integrity of manholes can be compromised and they need to be removed and replaced which is costly and disruptive

# Project Details

- This project is to rehabilitate 91 manholes by using a multi-layered polymer lining method
- The 91 manholes were chosen based on assessment of condition, age, and the amount of flow seen in the manholes
- Some of the City's oldest manholes, located on the largest conveyance lines, are to be rehabilitated in this project

# Project Details

- Scope of Work
  - Manholes cleaned by water blasting
  - Apply moisture barrier and adhesion coat
  - Apply surfacer to fill all voids and restore the surface
  - Apply a top coat of hybrid-polyurea lining
- All 3 coats create a multi-layered polymer lining

Moisture barrier application

Surfacer application

Corrosion barrier application

# Project Details

- Benefits
  - Reduce O&M costs
  - Prevents corrosion
  - Eliminates infiltration
  - Restores wall surfaces
  - 100 year design life
  - 10 year warranty
  - Trenchless application

# Bid Process and Results

- The City of Brighton has chosen to use a bid that was developed for the City of Broomfield to perform this same type of sanitary sewer manhole rehabilitation
- The bid was based on manhole surface area to be lined, and therefore can be directly transferred to the City of Brighton project
- Concrete Conservation Inc. can perform this work for $200,000.00
- Spending authority for this project is derived from 2018 Water Activity Enterprise Fund

# Final Recommendation

Staff believes that accepting the bid from Concrete Conservation Inc. for the Sanitary Sewer Manhole Rehabilitation project would accomplish the following:

- Provide a long-term, cost effective solution to sanitary sewer manhole deterioration
- Extend the life of existing sanitary sewer manholes
- Prevent the high cost and disruption of removing and replacing manholes due to continued deterioration and eventual structural integrity issues

# Questions?