

FEBRUARY 10, 2025

# SANITARY SEWER ASSET MANAGEMENT PLAN

Infrastructure Prioritization, Capital Planning  
and Operations & Maintenance

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**URBAN**  
SYSTEMS



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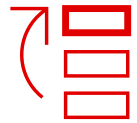
# AGENDA

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- What are the core objectives of an Asset Management Plan?
- What does it mean to take a risk-based approach?
- Sanitary sewer system overview & capital priorities
- Capital funding needs
- Priorities explained
- Funding considerations
- Operations and maintenance
- Summary

# WHAT ARE THE CORE OBJECTIVES OF AN ASSET MANAGEMENT PLAN?

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Identify and confirm existing and future **condition & capacity deficiencies**

- Establish scenarios based on population projections, OCP/future land use conditions to determine growth areas where servicing upgrades may be needed



Use a **risk-based approach** to prioritize system improvements over the next 20-years



Identify **resource gaps**, including operations and maintenance, and capital needs



# WHAT DOES IT MEAN TO TAKE A RISK-BASED APPROACH?

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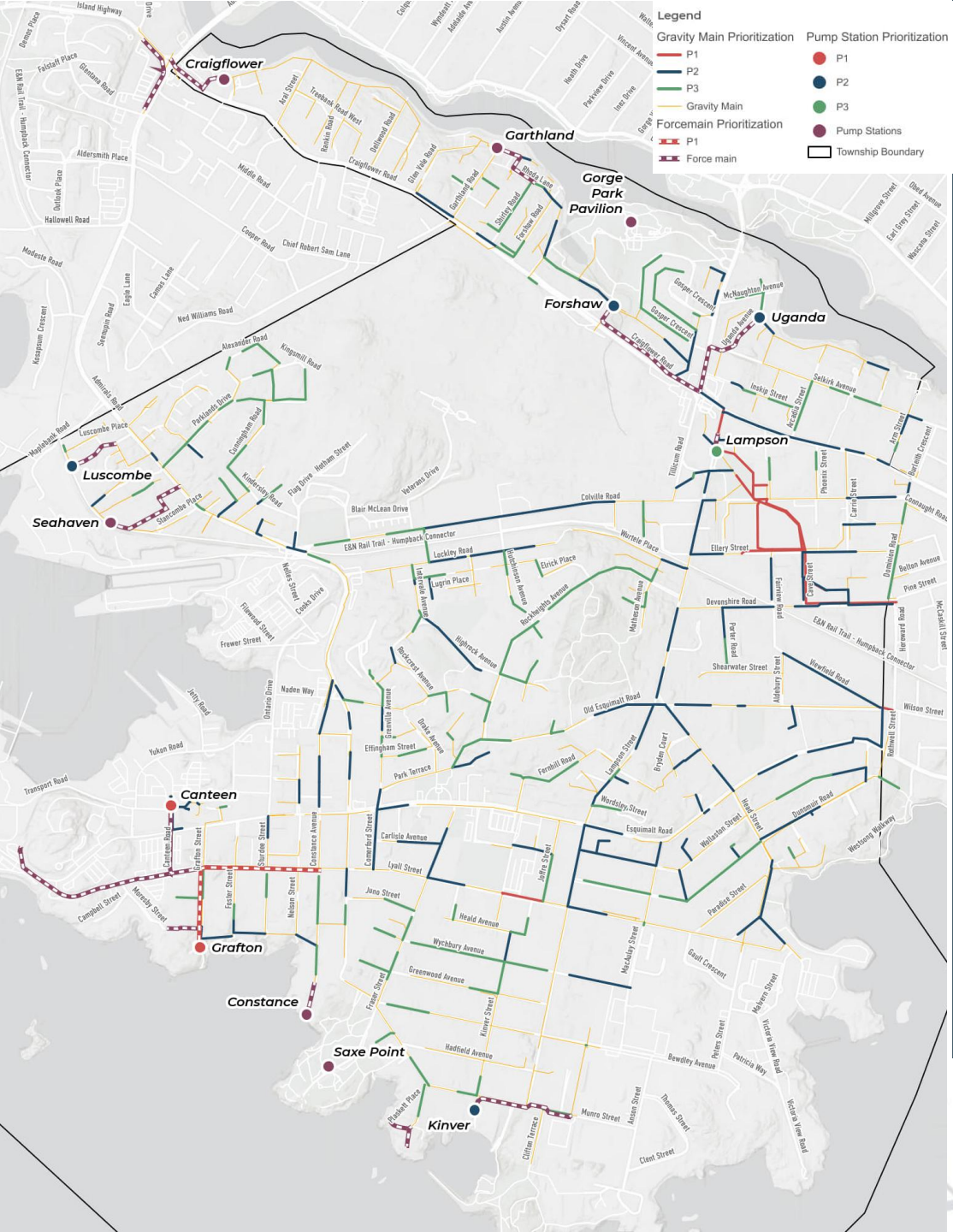
**Likelihood of Failure** x **Impact of Failure** = **Risk**

- Existing + Future Capacity
- Condition

- Social
- Financial
- Environmental



Prioritization  
Ranking



# SANITARY SEWER SYSTEM OVERVIEW & CAPITAL PRIORITIES

Asset Type	Existing Inventory	20-Year Priority Needs
Gravity Mains	57.3 km	26.3 km
Pressurized Mains	3.8 km	0.6 km
Lift Stations	13 Stations	8 Stations
Replacement Value (\$2024)	\$223.3M	\$110.3M

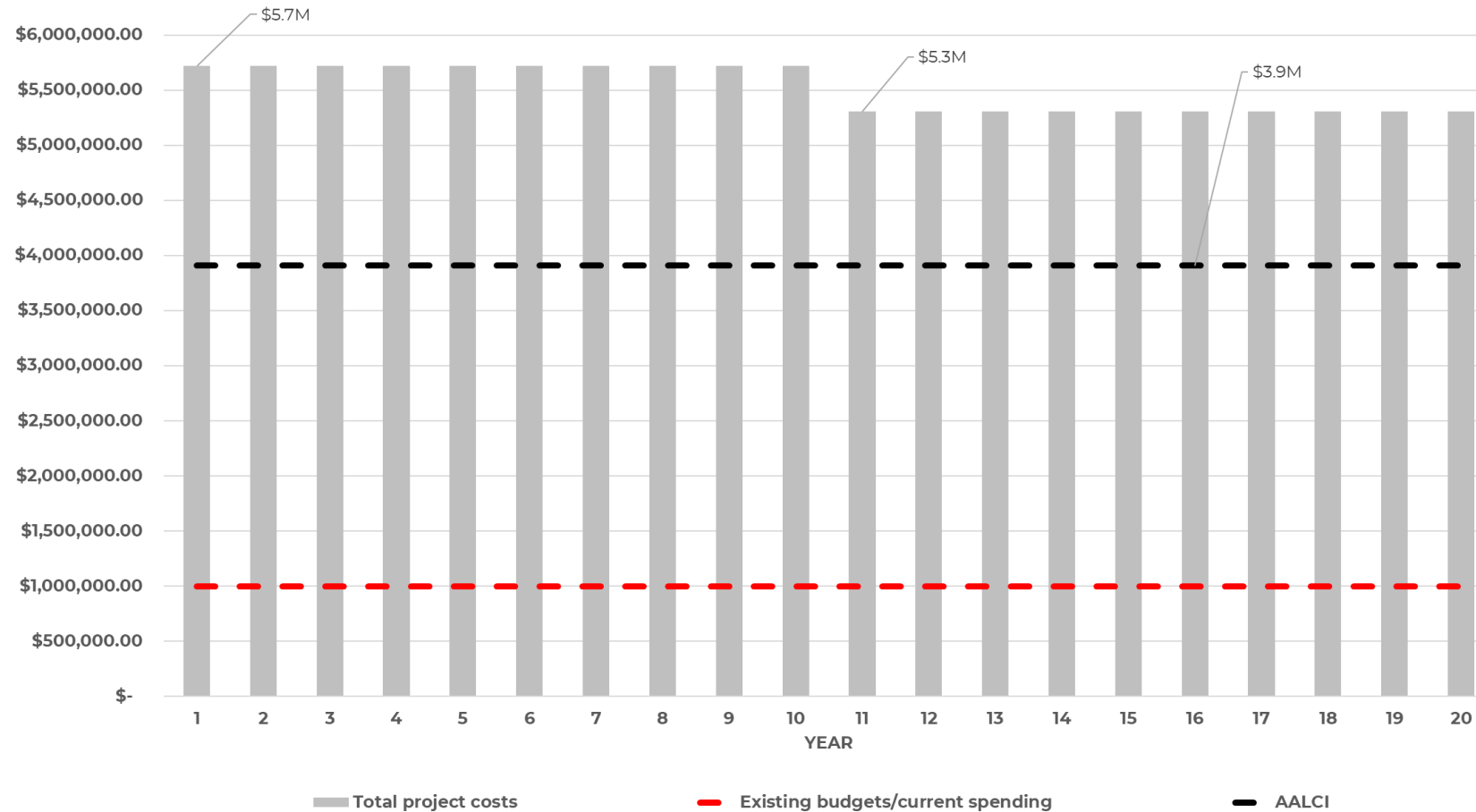
# PRIORITIES EXPLAINED

- ~23% of linear infrastructure has exceeded its design life (based on length)

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- The majority of prioritized linear assets are triggered by condition deficiencies, compared to capacity deficiencies
- In general, there is a high-level of confidence in the prioritization of condition-deficient assets as they are primarily informed by CCTV data, rather than asset age.
- ~63% of lift station priorities are based on condition inspections, the remaining are driven by capacity requirements

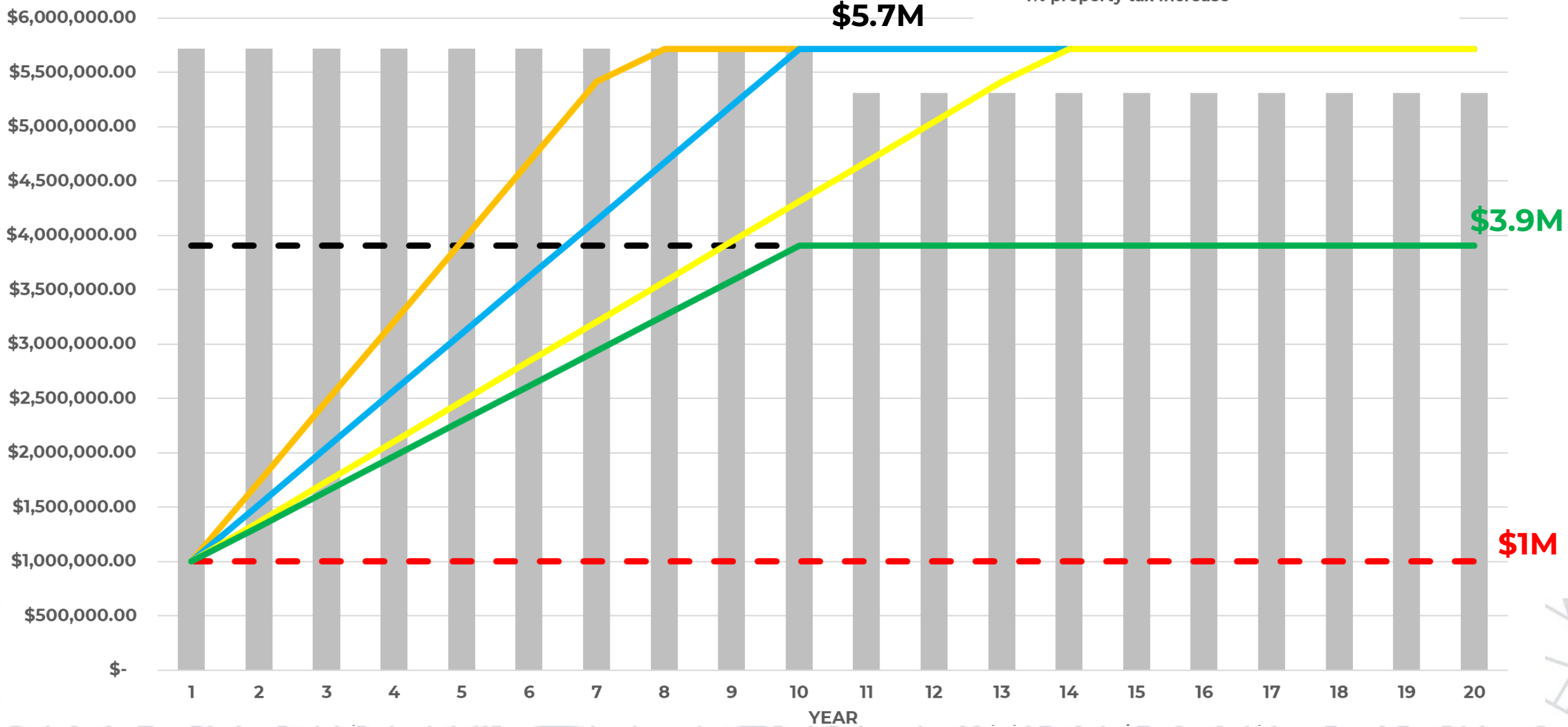
# CAPITAL FUNDING NEEDS



**Average Annual Life Cycle Investment (AALCI)**- evenly distributes capital investments over the lifetime of infrastructure to ensure adequate funding is invested and evenly distributed year over year.

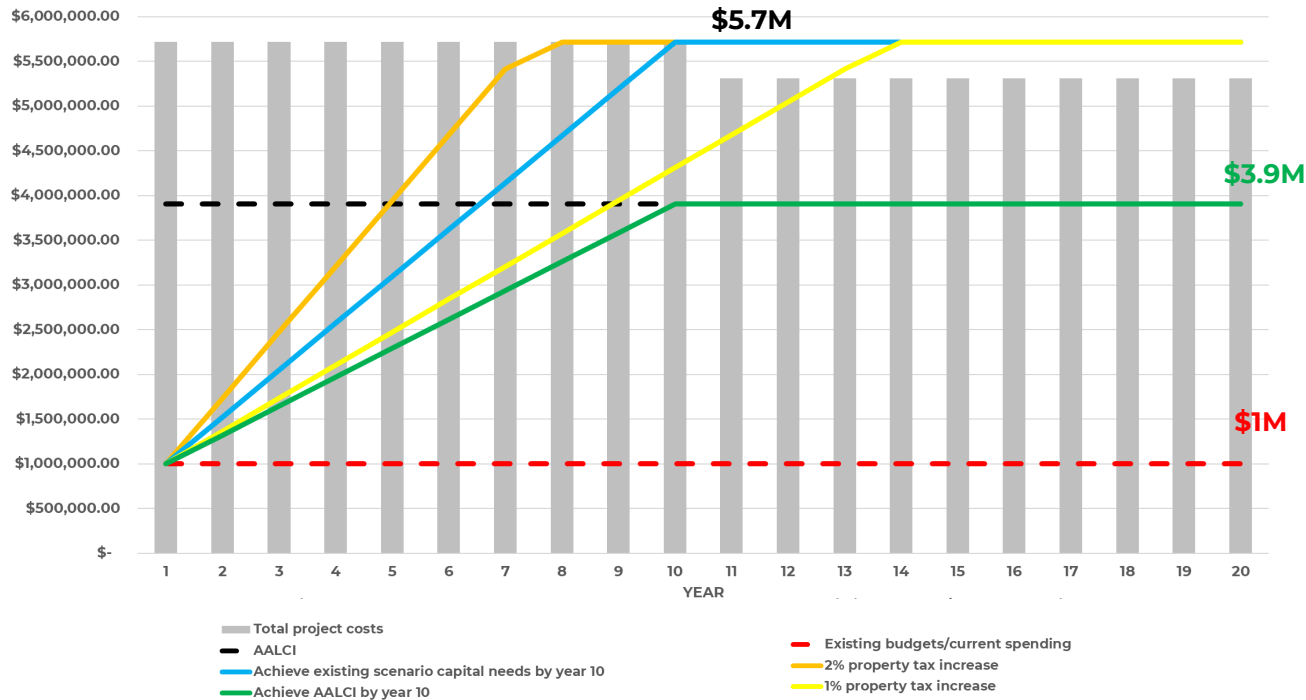
# FUNDING CONSIDERATIONS

- Total project costs
- AALCI
- Achieve existing scenario capital needs by year 10
- Achieve AALCI by year 10
- Existing budgets/current spending
- 2% property tax increase
- 1% property tax increase





# FUNDING CONSIDERATIONS



Scenario	Costs of Deferred Projects (Year 1 – 20)
\$5.7M by Year 10	\$19.51 M
\$3.9M by Year 10	\$46.7 M
1% Tax Increase	\$28.6 M
2% Tax Increase	\$13.5 M

# OPERATIONS AND MAINTENANCE (O&M)

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- Annual Budget: ~\$500,000
  - Existing practices are largely **reactive** – emergency repairs, responding to back-ups or new connections. There is a desire to shift toward more **proactive** maintenance practices (e.g., formal CCTV and flushing programs, digital/automated systems for record keeping etc.)
  - Although budgets are generally sufficient, there is a lack of staffing to manage additional work from recent development and utility repairs
- With existing resources, it will be difficult to increase the volume of capital project delivery, continue to react to system challenges and increase level of proactive O&M without additional resources

# SUMMARY

## CAPITAL PROGRAM

- Current spending levels have resulted in a backlog of infrastructure replacement needs
- Even with a 2% tax increase, and maximizing sewer capital upgrade contributions, it will take ~22 years to address capital priorities.

## O&M PRACTICES

- There is some work to be done to better understand the scope of more proactive maintenance practices. Once explored, there will be a clearer understanding of O&M resource gaps and needs.
- Based on existing practices, the need for more resources (i.e., human power) is likely.

A background map of a city street grid with a large red rectangle in the center. The map is rendered in light gray lines on a white background. The red rectangle is a solid, vibrant red color and is centered horizontally and vertically on the page. The text "THANK YOU" is written in white, bold, uppercase letters within the red rectangle.

**THANK YOU**