Sherman Street Combined Sewer Overflow Tank and Facilities

Community Meeting #2

Thursday, May 28, 6:00 pm

Virtual

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The Project Team

- **City of Cambridge**
  - John Nardone, Commissioner, DPW
  - Jim Wilcox, City Engineer, DPW
  - Lucica Hiller, Senior Project Manager, DPW
  - Kristen Kelleher, Director of Communications, DPW
- **Design Team – Kleinfelder & Stantec**
  - Geotechnical, environmental, structural, civil, process, electrical & controls, and traffic engineers
  - Licensed site professionals, hydraulic modelers, landscape architects, building architects, constructability experts, professional cost estimators

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CAMBRIDGE DEPARTMENT OF PUBLIC THE WORKS

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Agenda

- **Combined Sewer Overflows (CSO) Program**
  - Draft Updated CSO Control Plan
  - CAM401A – our most active CSO outfall
- **The Sherman Street CSO Tank**
  - Preliminary design concepts
  - Construction impacts
  - Next steps
- **Questions & Answers**

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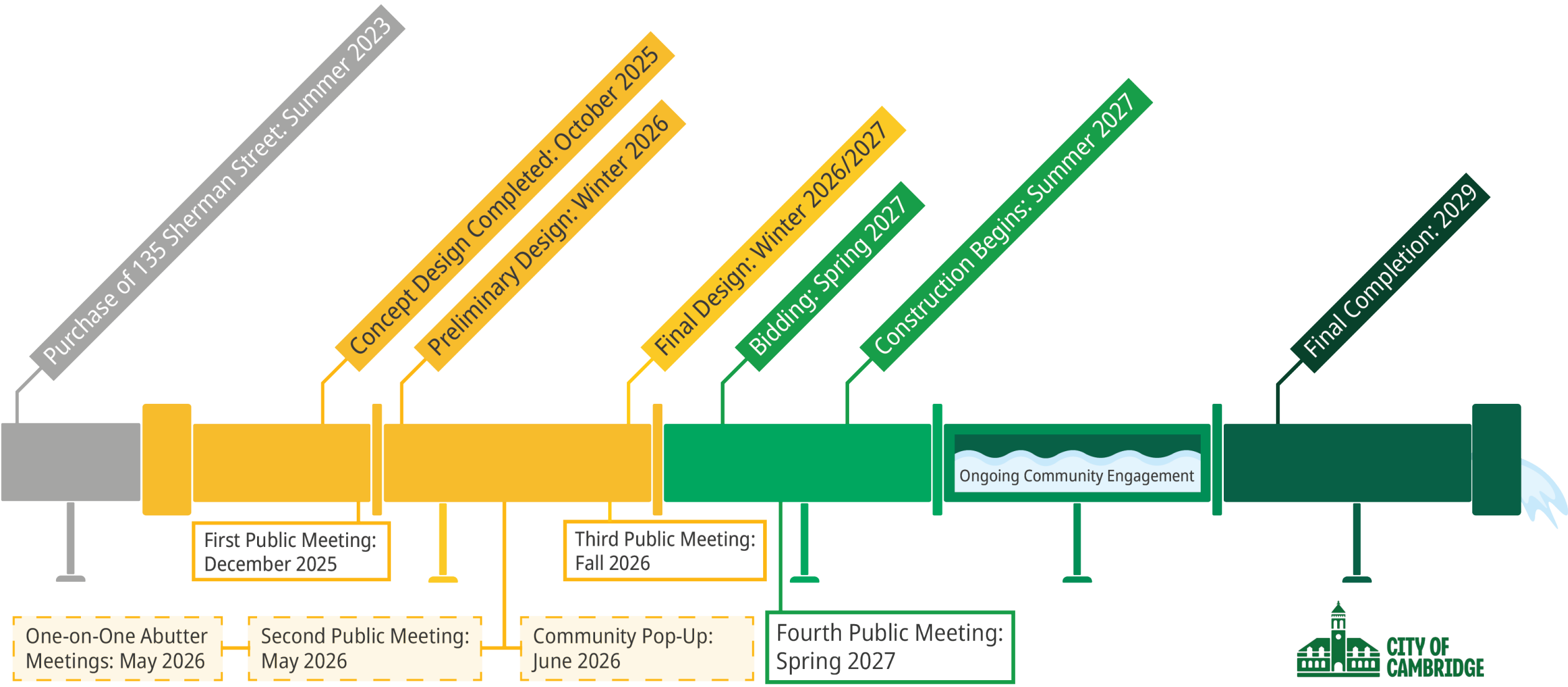
Tank Construction Schedule – More Engagement Opportunities Added



What's Happened Since We Last Met

December 2025: Public meeting

March 27 - April 2,2026: Soil testing

April 2026: Began survey work to locate underground utilities

April 30, 2026: Updated draft CSO Control Plan published for public comment

May 11 and 12, 2026: One-on-one meetings with immediate abutters

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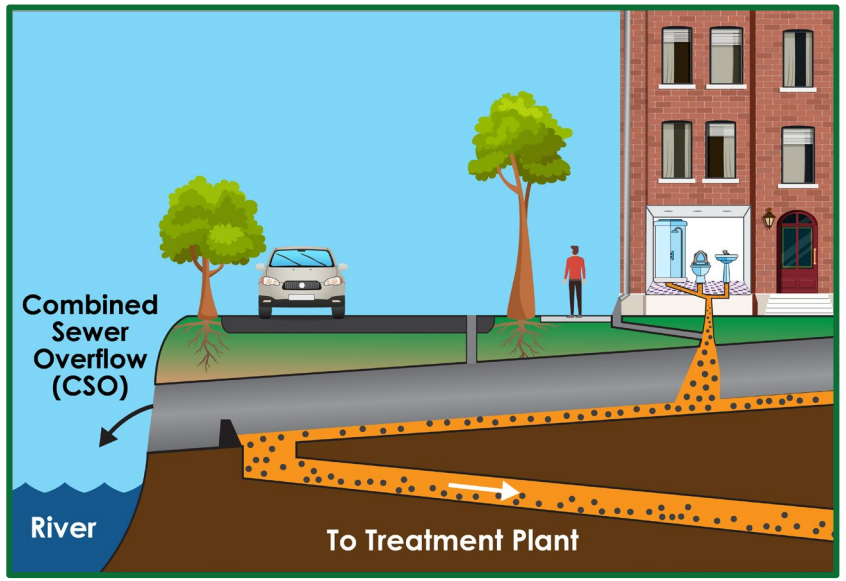
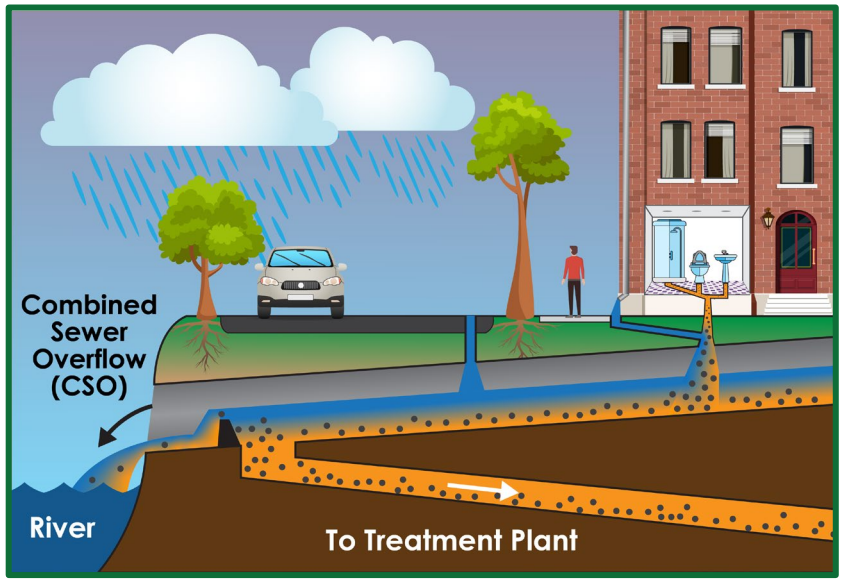
SOLVING COMBINED SEWER OVERFLOWS

The Problem We Are Continuing to Solve: Combined Sewer Overflows (CSOs)

- ~45% of Cambridge has a combined sewer system: sanitary sewage and stormwater travel through a single pipe network.
- We have been working for decades to build underground infrastructure to reduce CSOs.
- CSOs are a big problem and affect water quality, ecosystems, and the environment.



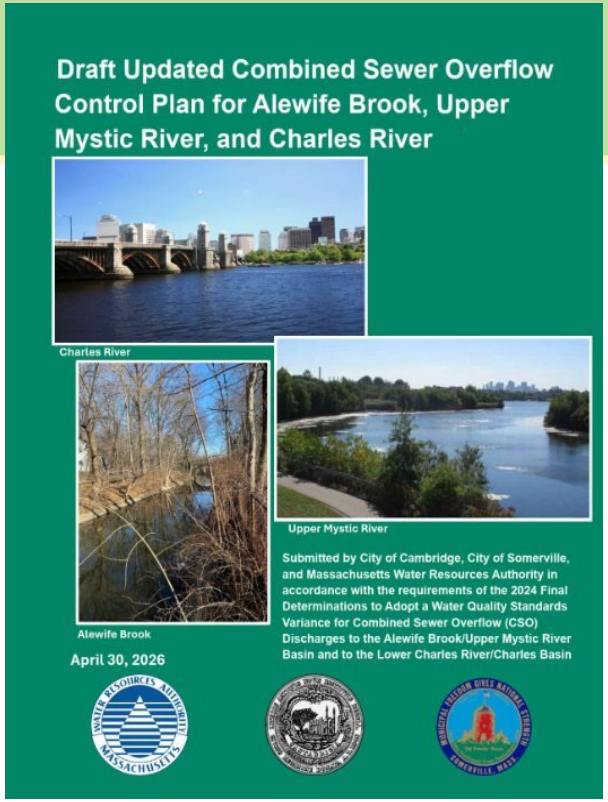
Combined System – No Rain



Combined System – Heavy and Intense Rain

Separated System – All Rain

Draft Updated CSO Control Plan is Published!



- Contribute to water quality improvement in the Alewife Brook and the Charles River
- Reduce or eliminate CSO discharges at all Cambridge CSO outfalls faster
- Improve aging infrastructure
- Reduce flooding
- Meet regulatory requirements

View plan and learn how you can provide comments by September 20, 2026:
voice.somervillema.gov/joint-cso-planning

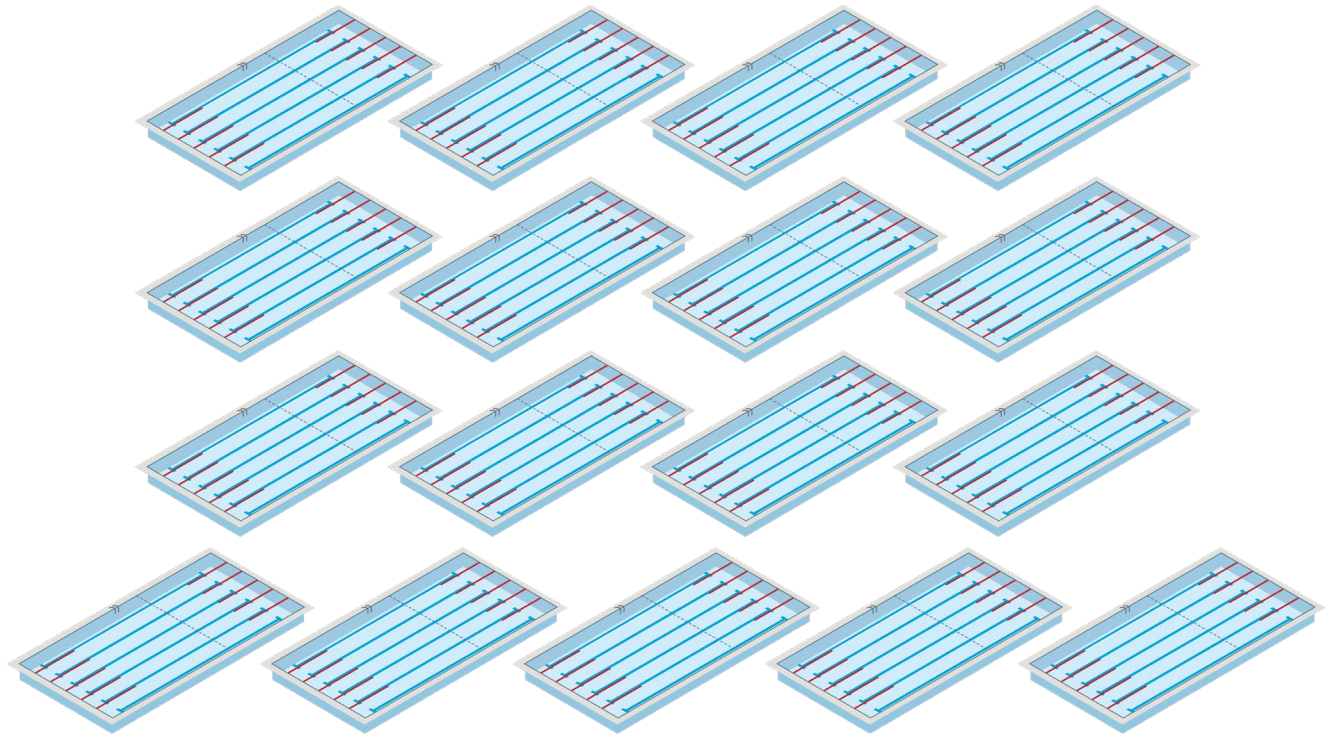
Scan QR code

CAM401A: Our Most Active CSO Outfall

Year	CSO Activations	CSO Volume (gallons)
2020	7	970,000
2021	18	21,700,000
2022	10	470,000
2023	20	20,510,000
2024	16	13,430,000
2025	17	10,150,000

Priority for the City to find a solution that can alleviate this problem faster.

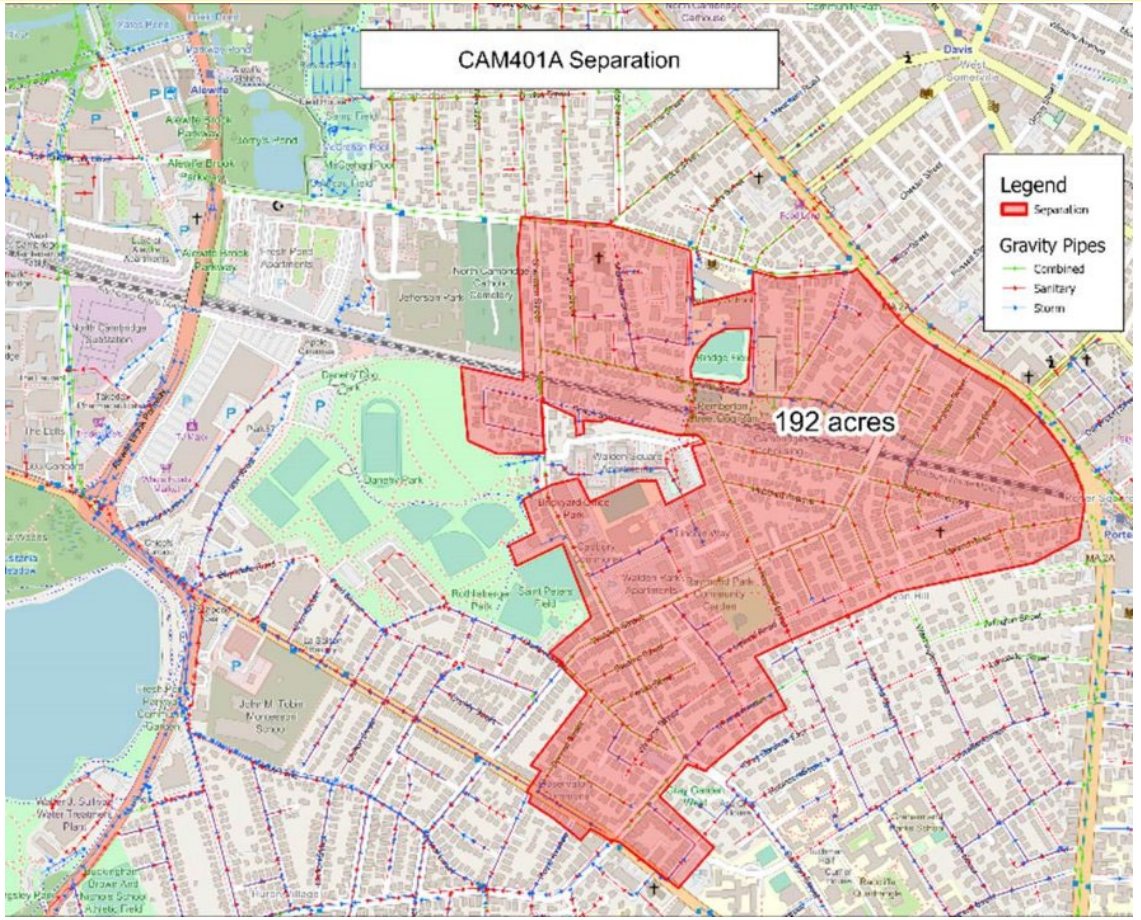
An average of 11,200,000 gallons discharged annually (2020-2025), which is the equivalent of 17 Olympic-sized pools



Why Not Sewer Separation Now for the CAM401A Outfall?

Need:

- 192 acres of sewer separation
- More stormwater storage tanks
- New stormwater outfall pipe to the Alewife Brook (approx. 4,400 LF)
- Locations for stormwater treatment and ways to send stormwater there
- Approx. 750,000-gallon* CSO tank because of interconnection with the CAM401B system (*2050 Typical Year)



Estimated cost approx. $400 Million

Design and construction approx. 20 years before any CSO reduction benefits

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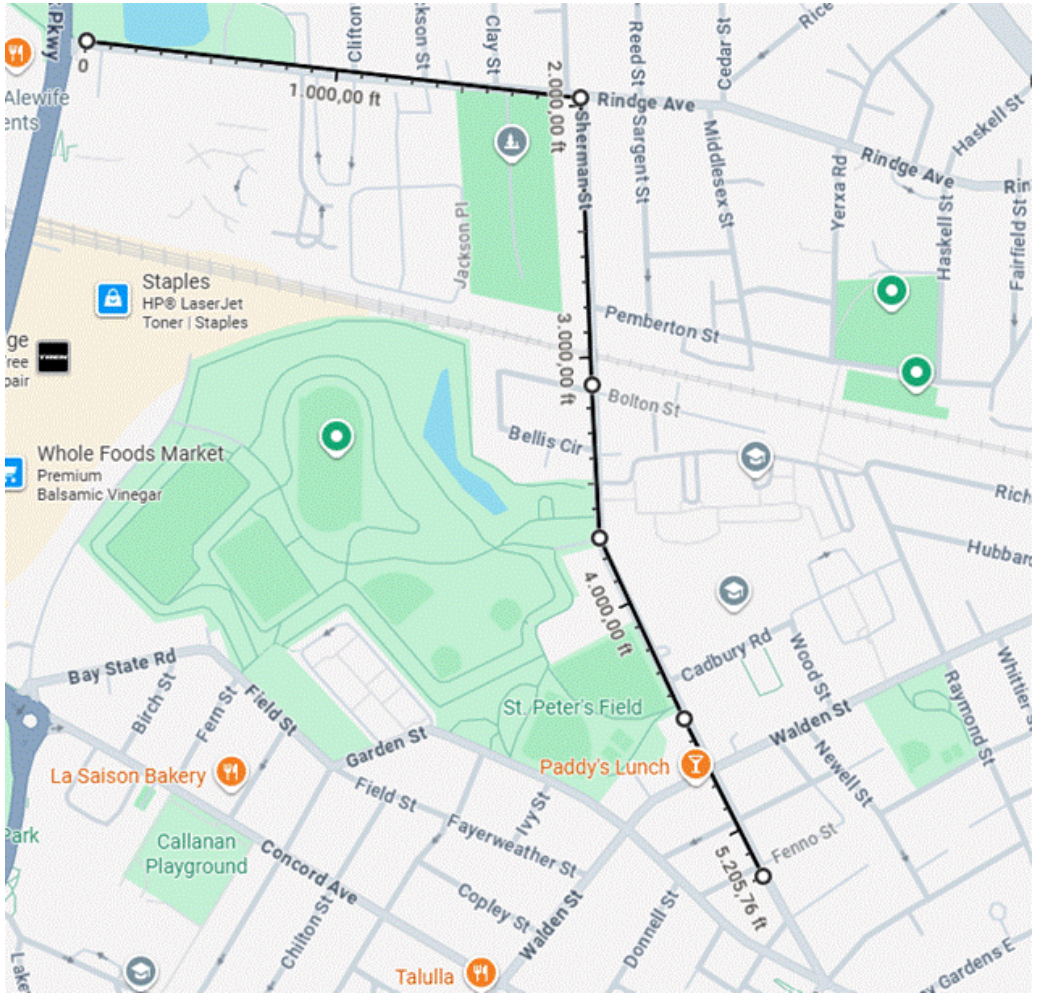
Why Not Elsewhere? Sherman St and Ringe Ave 2,100,000 Gallons Storage Idea



- A 9 feet by 6 feet underground box storage conduit
- **1 mile long**: Rindge Ave from Rt 16 to Sherman Street AND Sherman Street from Rindge Ave to almost Garden Street
- Design and construction timeline ~ 10 years
- Higher neighborhood impacts

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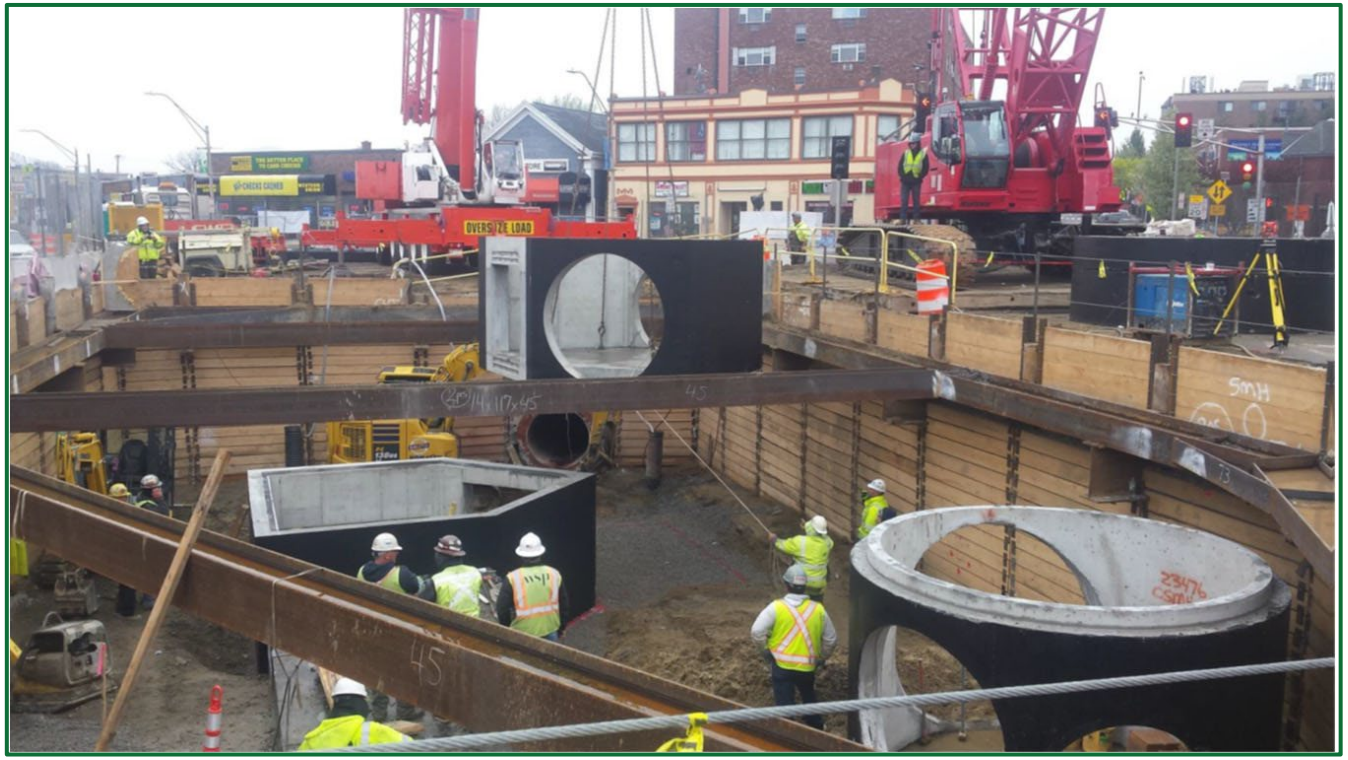
Example of Storage Conduit: Somerville Ave, Somerville



- 2,200 feet long
- 14 feet wide by 6 feet tall

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2004 Flood Alleviation Project

Map identifying flood alleviation work

- Stormwater tank and pump station: Danehy Park parking lot
- Force main work on Sherman Street
- Rebuilt CAM401A regulator
- Drainage channel behind Bellis Circle

Photo from flood alleviation work

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Commitment to Continuing Sewer Separation in Our City

- Cambridge will not stop working toward the CSO problem after this tank is constructed
- Sherman Street CSO Tank:
  - Is an immediate improvement for the people, the ecosystem, and the environment in our region
  - Less disruptive and less costly
  - Does not preclude future sewer separation, as the tank can be transitioned to be a stormwater tank

https://www.cambridgema.gov/Departments/publicworks/Initiatives/municipalfacilitiesimprovementplan

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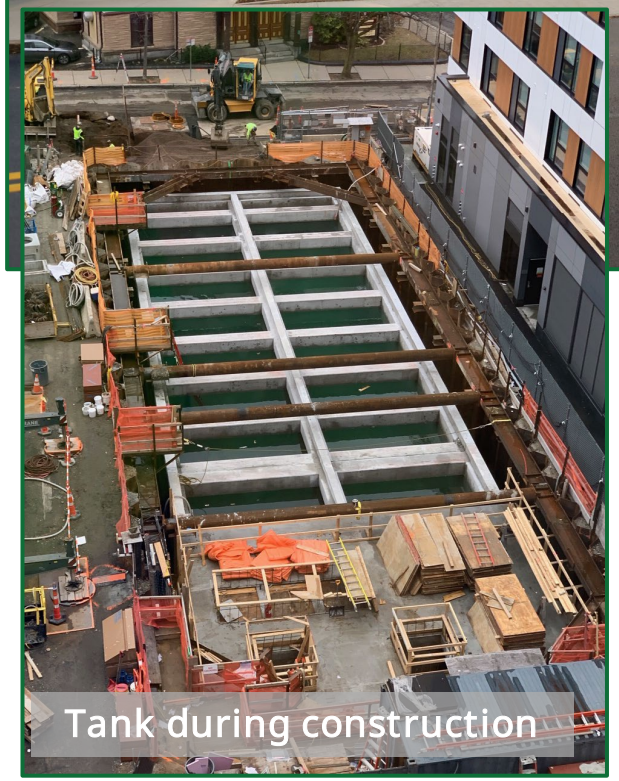
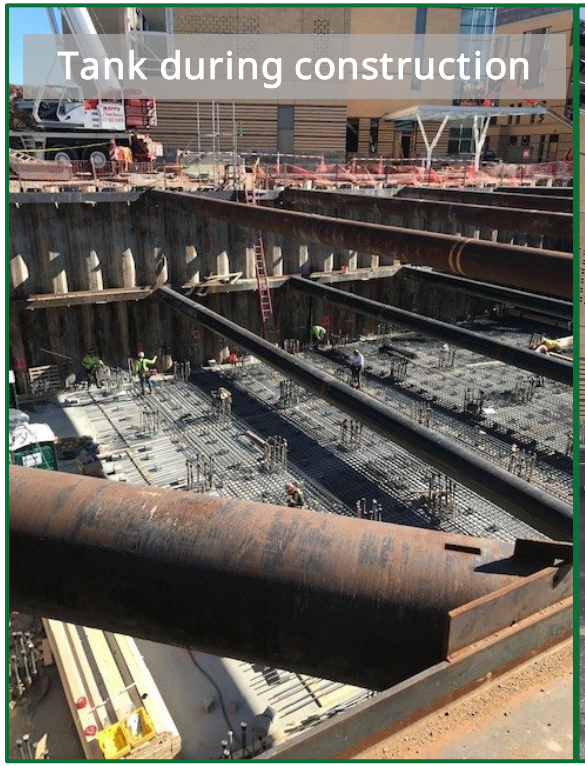
THE SHERMAN STREET TANK CONCEPTUAL DESIGN

Design Team in Cambridge



PL6 Tank, Cambridge



Tobin School Tank, Cambridge

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Design Team Experience in CSO Tanks

3,300,000 gallon CSO Tank
with Residential Community Center
Ottawa, Ontario, Canada

13,000,000 gallons CSO Tank
Lima, Ohio

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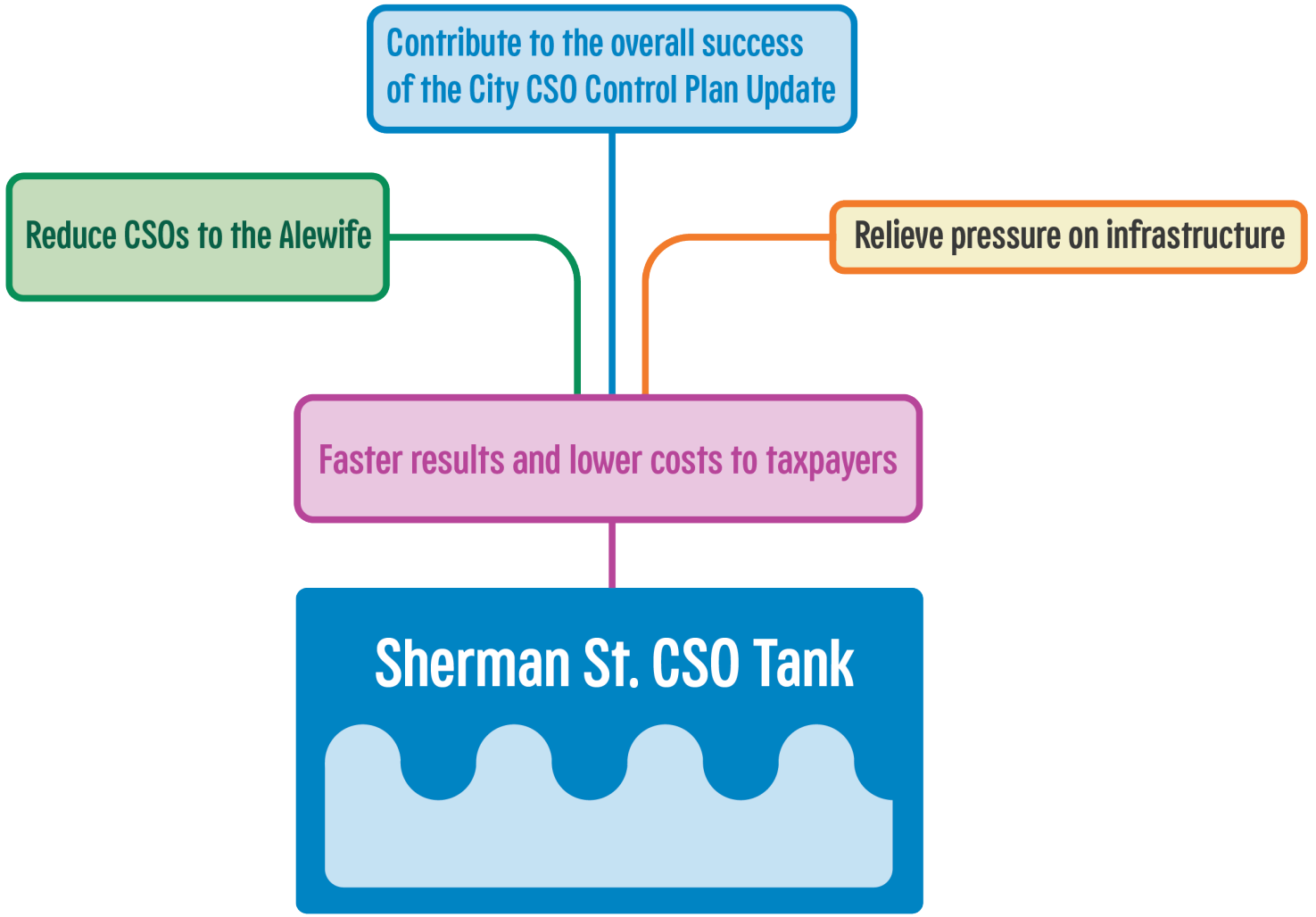
Sherman Street CSO Tank: Why here?

- City bought this space in 2023 for future municipal use.
- Understood the value of the location for its proximity to the CAM401A regulator.
- Since that time, the CSO plan evolved and we are prioritizing work for our most active outfall to make environmental improvements faster.

Sherman Street CSO Tank: What Will We Accomplish?



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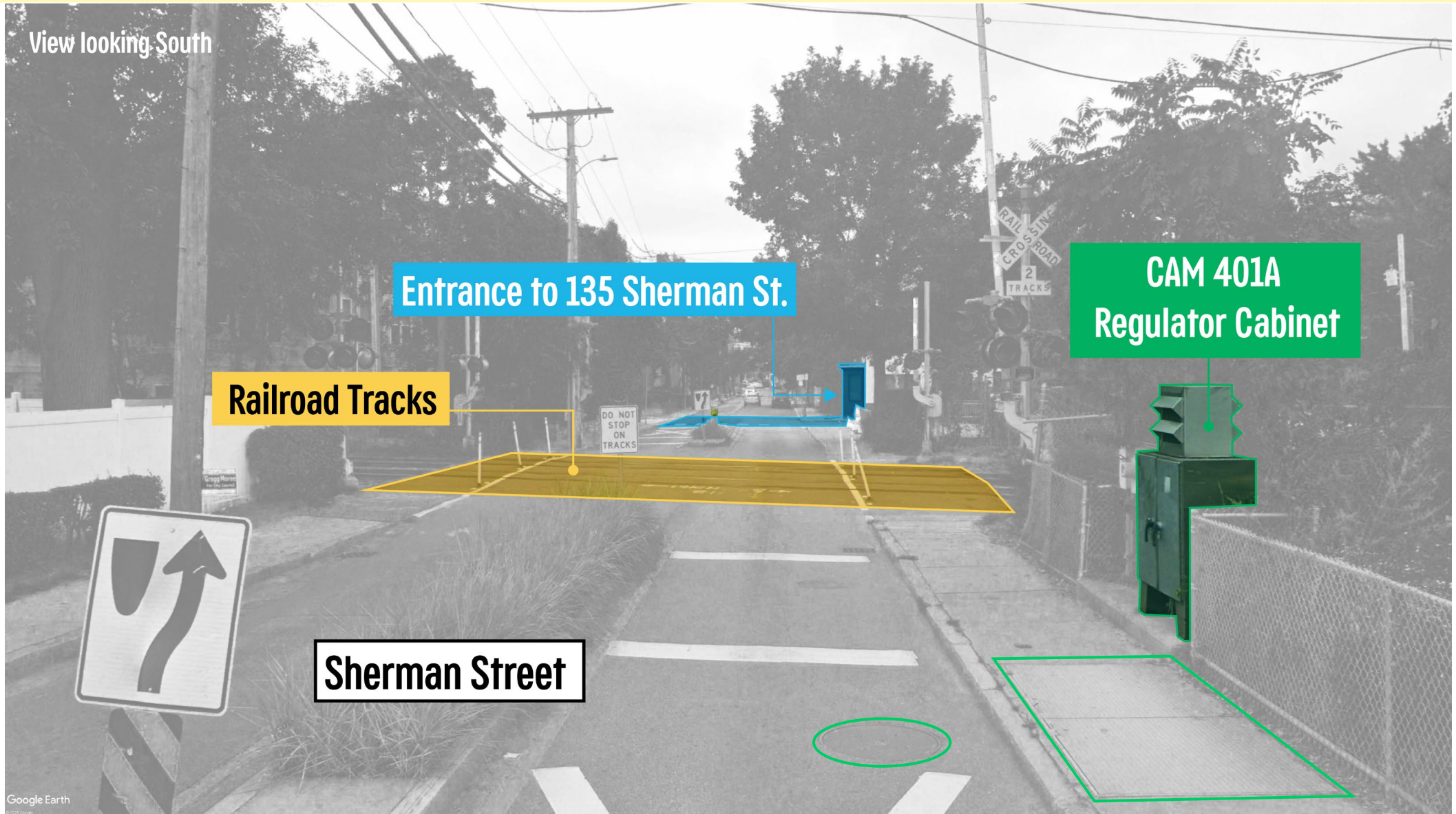
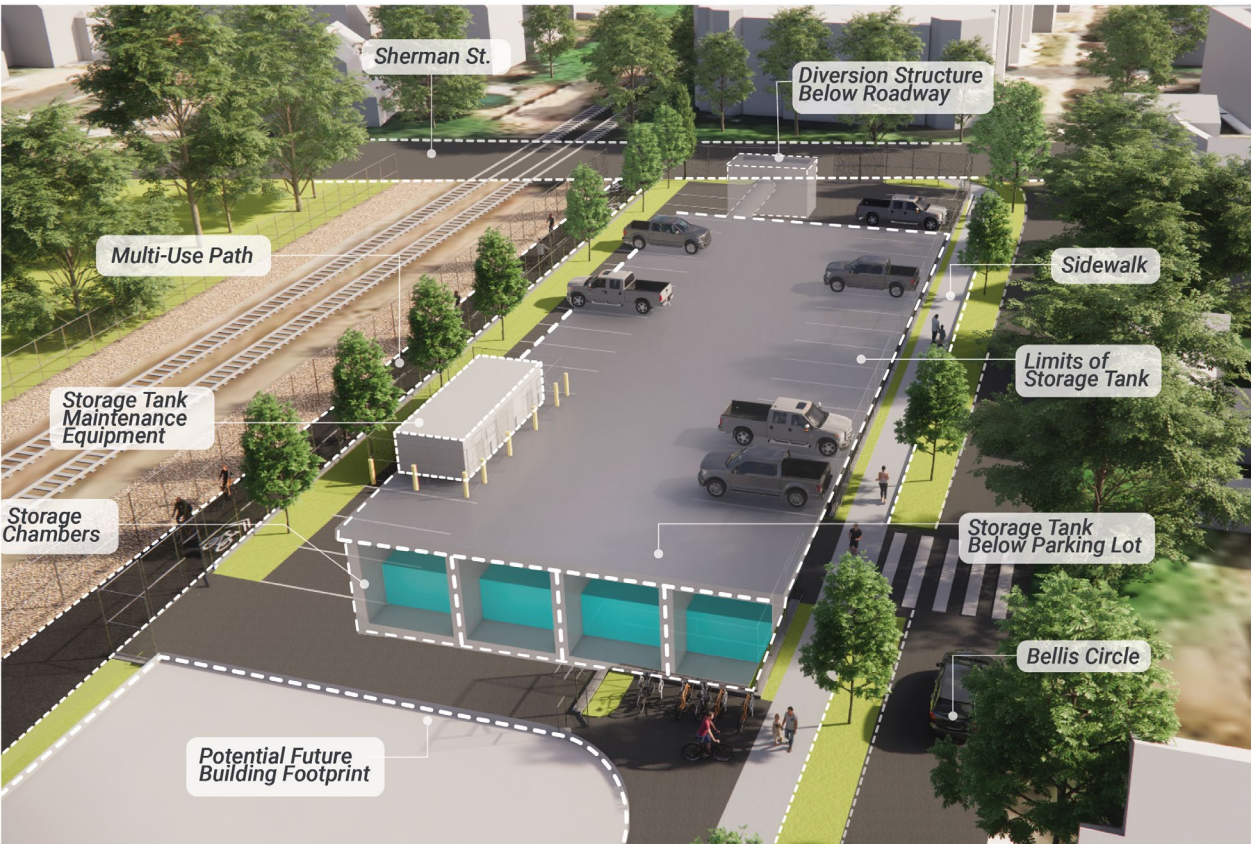
Orientation to 135 Sherman St.

Steet level view looking south toward 135 Sherman St.



Preliminary Design Underway – Tank Details

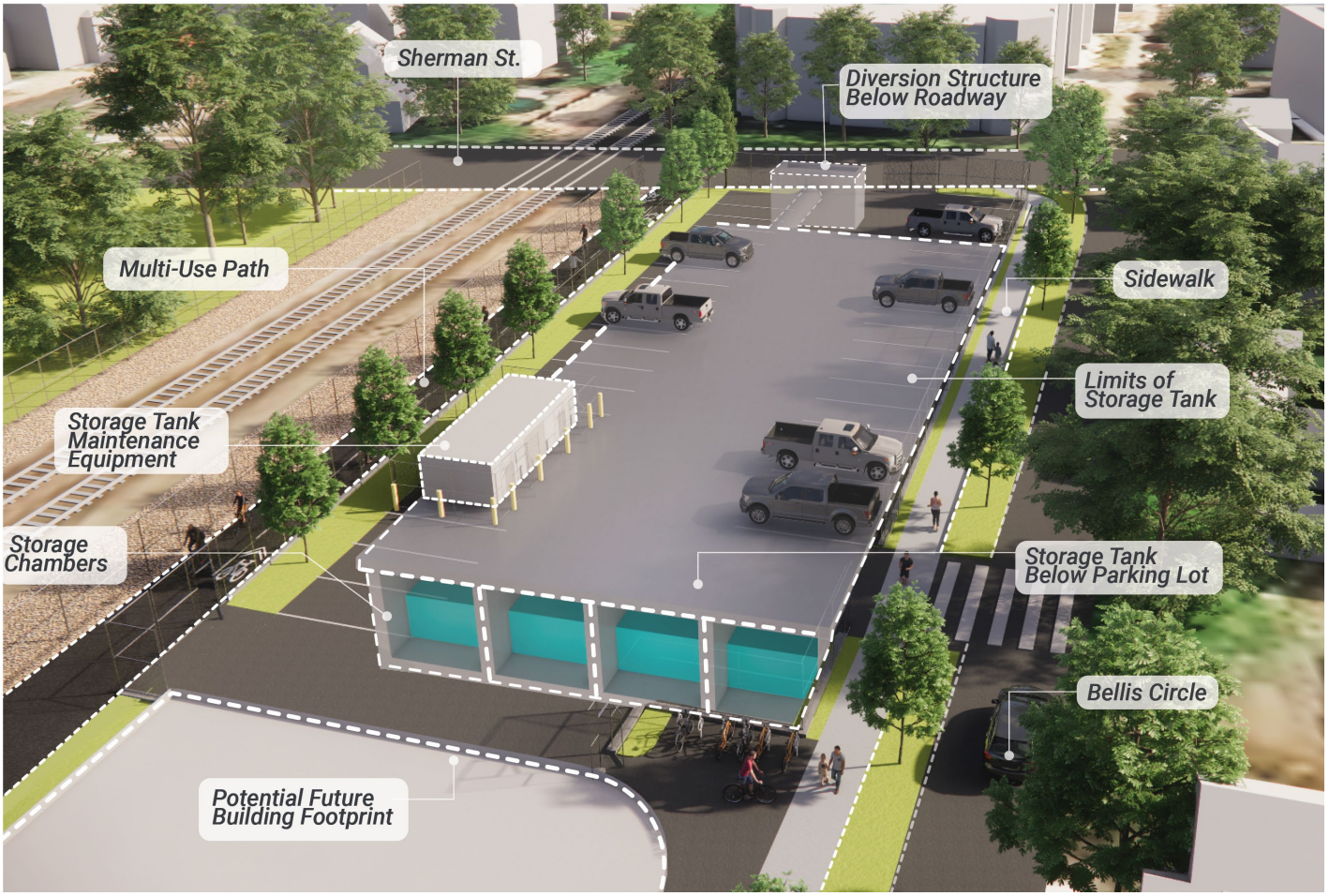


- Underground on the east side of the parcel
- Temporary storage for 2,100,000 gallons of CSO
- Concrete structure – various methods being considered
- 170’ long by 70’ wide concept footprint

- Site restored as a paved lot and new sidewalk on Bellis Circle
- Phased for future a building with parking lot
- Approximate cost ~ $36 Million

CONSTRUCTION

What We've Heard From You So Far



- Vibrations and potential damage to buildings
- Impacts from construction:
  - Noise
  - Dust
  - Air quality
- Heavy traffic on Sherman Street and Rindge Ave
- Odor control
- Construction methods

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Construction Impacts

- Construction hours: Monday-Friday, 7 a.m.-4 p.m. (6 p.m. per noise ordinance)
  - Potential for limited night and weekend work
- Parking restrictions
- Trucks entering and exiting the site
- Access maintained for emergencies and City services
- Three points of contact:
  - DPW Communications Manager
  - DPW Project Manager
  - Contractor's Project Manager

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Noise and Dust Quality: Monitoring protocols

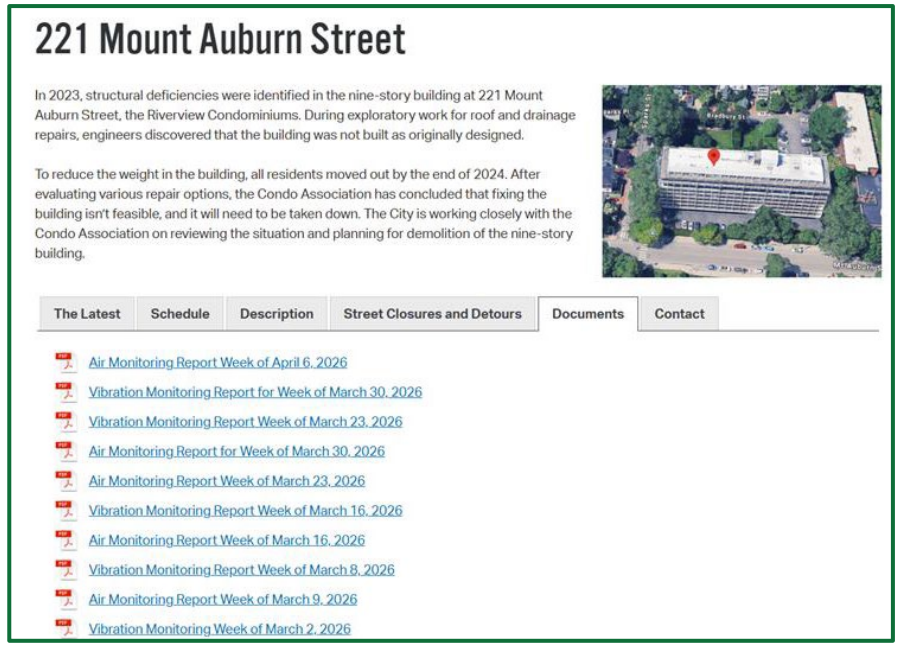
More details provided once contractor is brought on board. Generally speaking:

- **Noise:** General construction activities under noise ordinance
- **Dust monitoring:** No visible dust particles to be seen in air around site. Dust control part of construction plan.

Example of dust monitoring equipment.

Vibration Monitoring & Preconstruction Surveys

- **Design Phase:** Vibration thresholds are defined and finalized during the design process
- **Monitoring:** Continuous vibration monitoring system is implemented
- **Reporting:** Weekly monitoring reports are published on the website
- **Approaching Threshold:**
  - Automatic alerts sent to the project team
  - Increased monitoring and closer oversight of activities
- **Exceeding Threshold:**
  - Work is immediately stopped
  - Team assesses and adjusts methods to safely continue work



Example of vibration monitor (left) and vibration monitoring posts (above) for another City project

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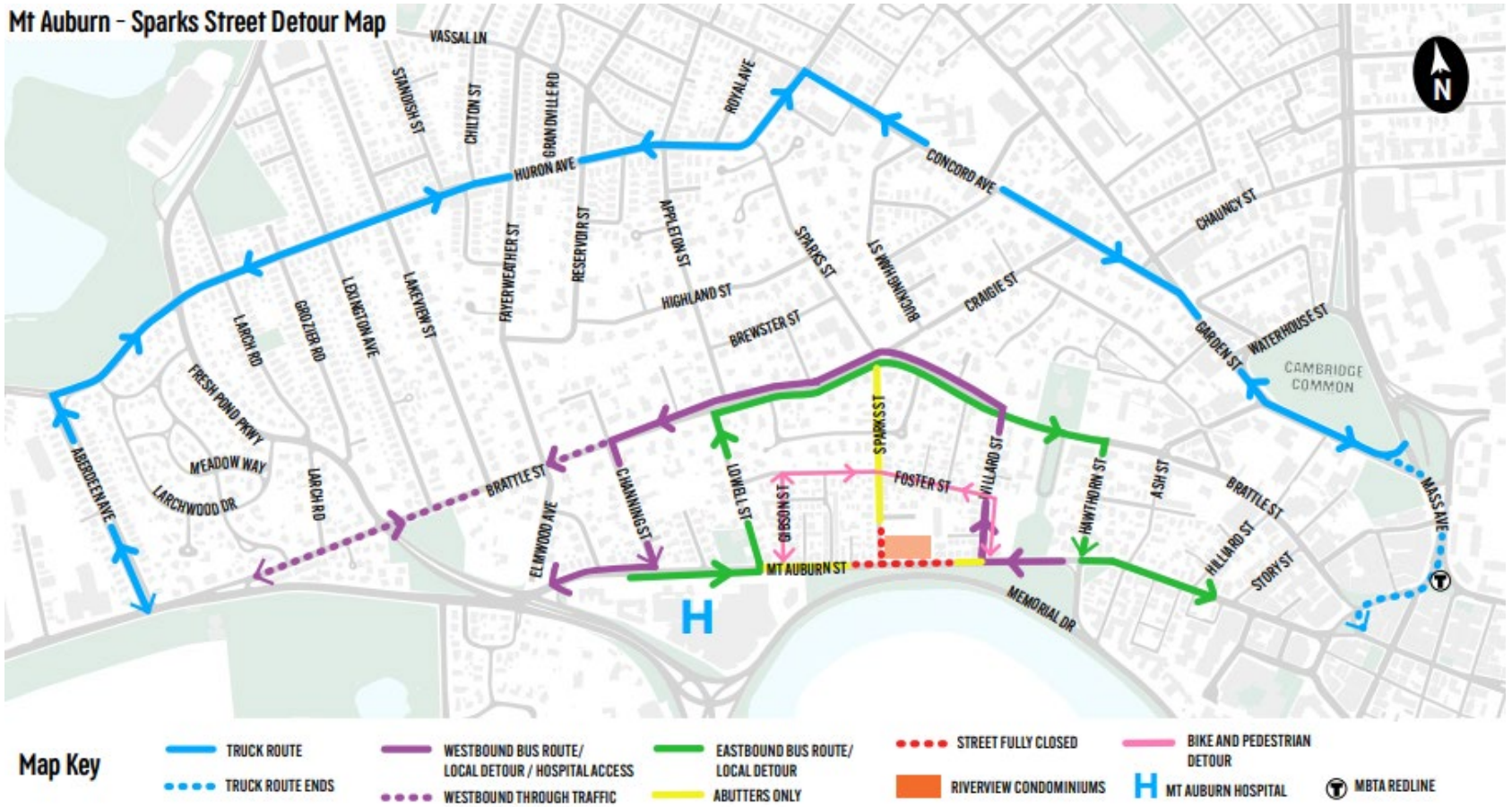
Traffic Management

- A Traffic Management Plan is required before construction
- The contractor will develop it; Cambridge DOT and DPW will review and approve



Example Traffic Management route updates from another City project

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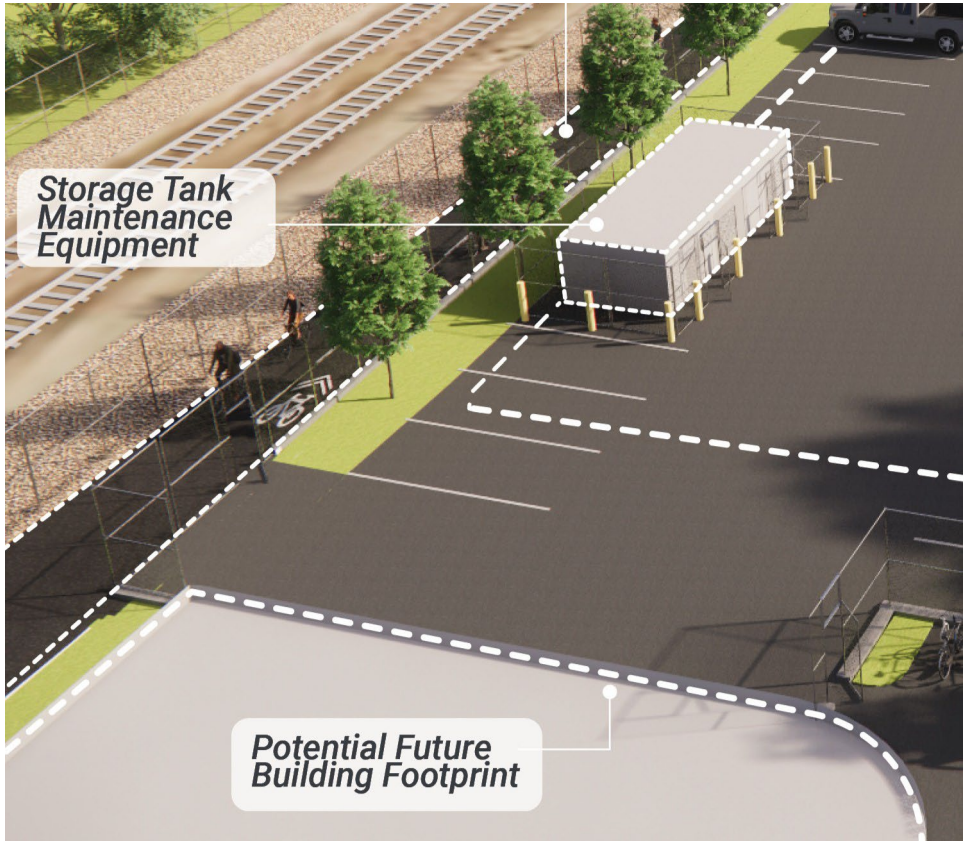
Odor Control

- A preventative measure that is proven to work at other CSO storage tanks
- Actively treats air exhausted from the tank using granular activated carbon
- Not active when the tank is not in use (no rain)
- City plans to sample and analyze odor at the CAM401A regulator to engineer this system



Concept rendering

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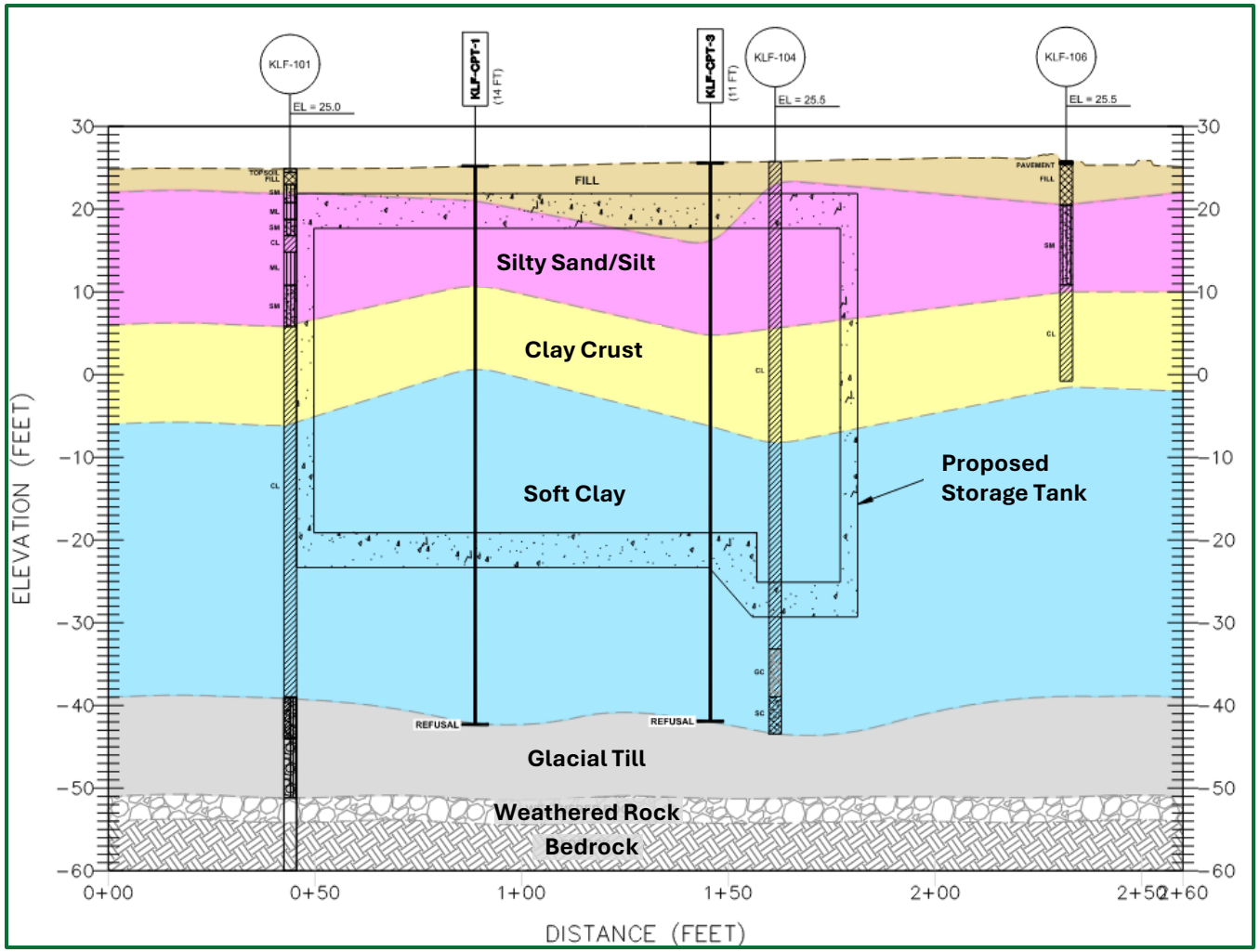
Soil Makeup

- Typical soil profile we see in Cambridge
- Fill material from ground surface to approximately 10 feet deep
- Silty sand below fill followed by Boston Blue Clay
- A thin layer of glacial till ~ 65 feet below ground surface
- Bedrock 70-75 feet deep



Soil Management Plan

What was found: Common historic fill contaminants detected; consistent with Cambridge fill; results were all below DEP reporting thresholds for residential.

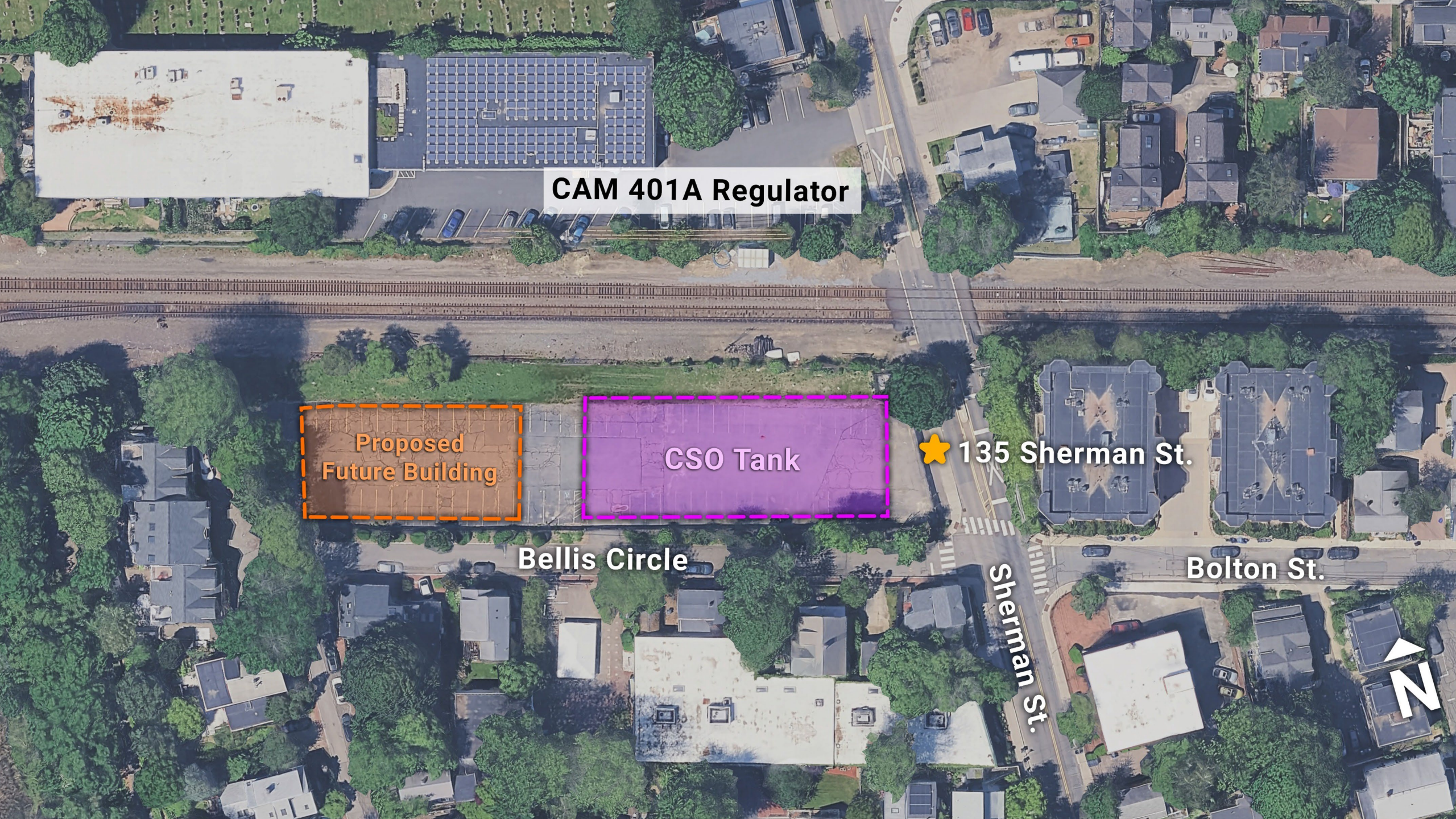
- In 2016, ~2,900 tons of contaminated soil on site was excavated
- Pockets of petroleum contamination remain between 7-11 feet deep
- Soil can be reused on-site or disposed/recycled off-site

Solution:

- Post Closure Release Abatement Measure Plan to be implemented
- Project Team will adhere to federal, state, and local regulations throughout the construction process
- Project Team will work with selected contractor's licensed site professional

Scan the QR code or visit:
http://bit.ly/3RpZyi6

DPW FACILITY – FUTURE PROJECT


CAM 401A Regulator
Proposed
Future Building
CSO Tank
135 Sherman St.
Bellis Circle
Sherman St.
Bolton St.
N

Above-Ground Features

*Concept, only. Not final design.

*Concept, only. Not final design.

A facility will be constructed

- Office space
- Equipment and vehicle storage
- Housing: 75-feet-height maximum

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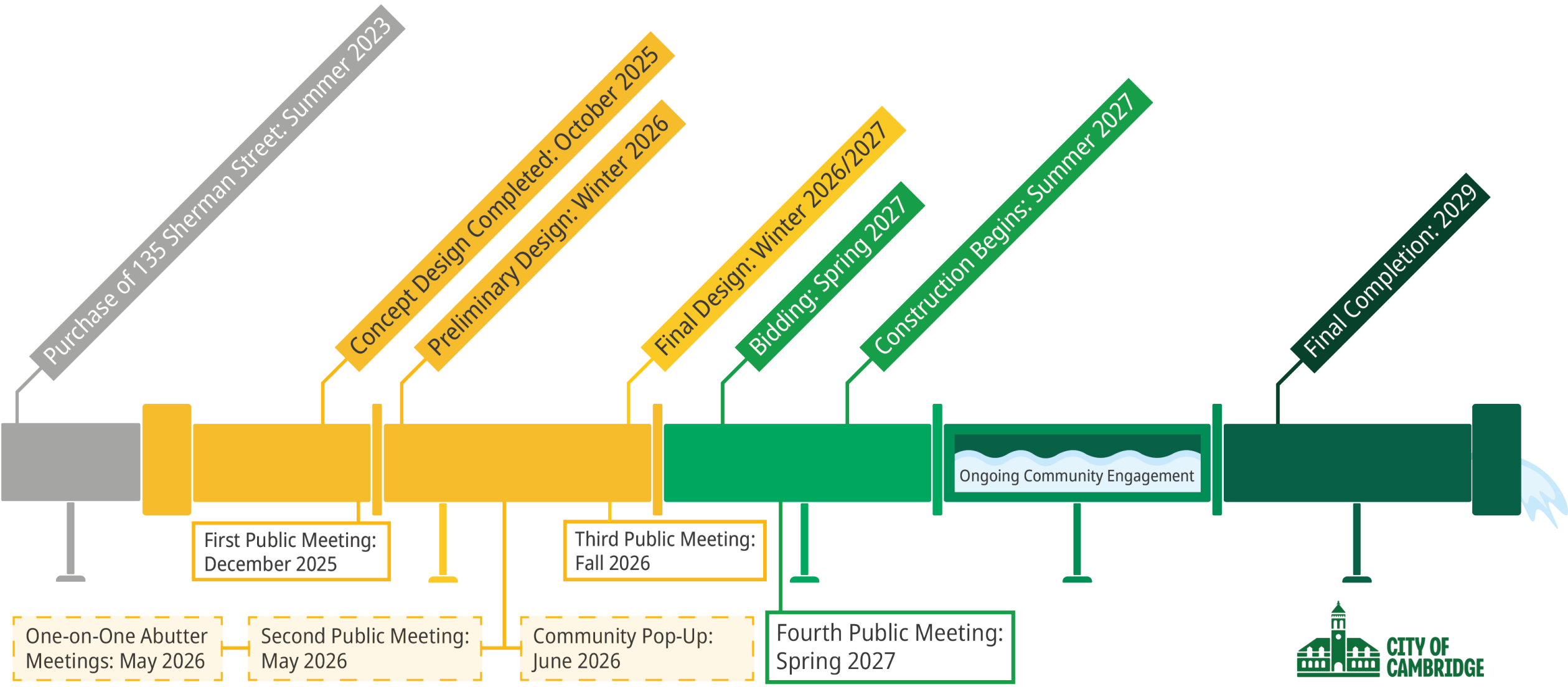
Tank Construction Schedule – More Engagement Opportunities Added



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Where you can find information

Project Page:
camb.ma/shermanstreetfacility

To sign up to receive updates, visit the project page and click the orange box that says “Sign Up Now,” or scan the QR code on the left.

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June 2nd Draft Updated CSO Plan Public Meeting

Join us virtually for a public meeting to hear about the recommendations on the CSO Control Plan Report for Alewife Brook, Upper Mystic River, and Charles River released on April 30, 2026.

More information: voice.somervillema.gov/joint-cso-planning

6PM

Tuesday

June 2, 2026

Register online for this Zoom meeting

tinyurl.com/CSOJune2026

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QUESTIONS & ANSWERS