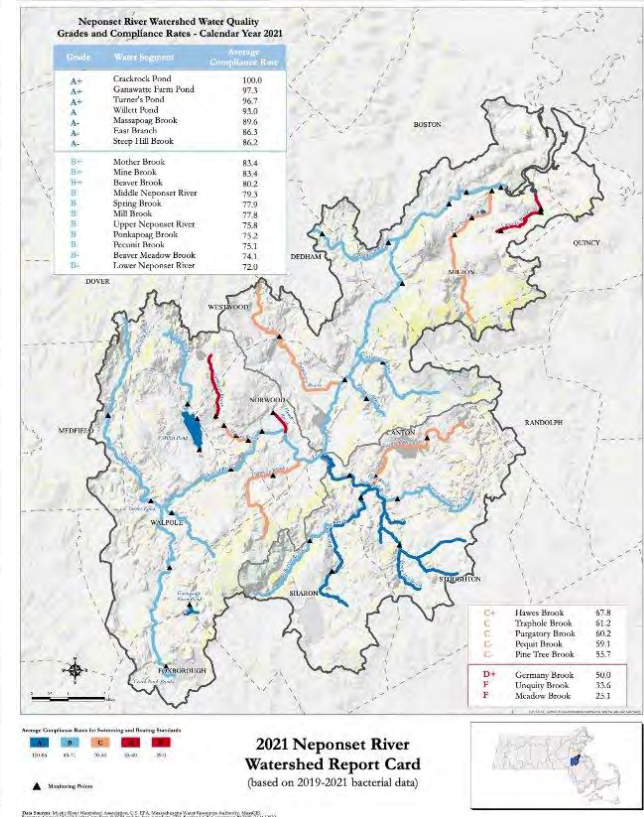
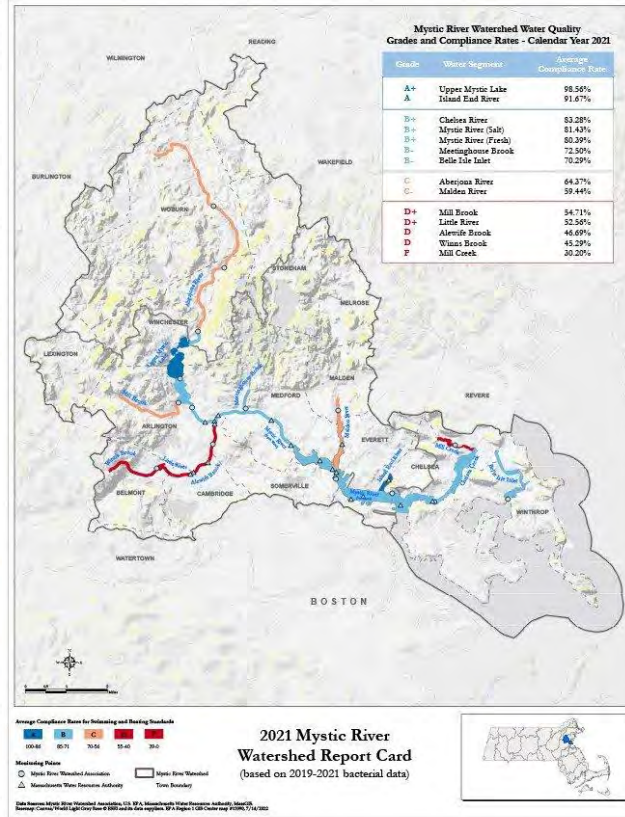
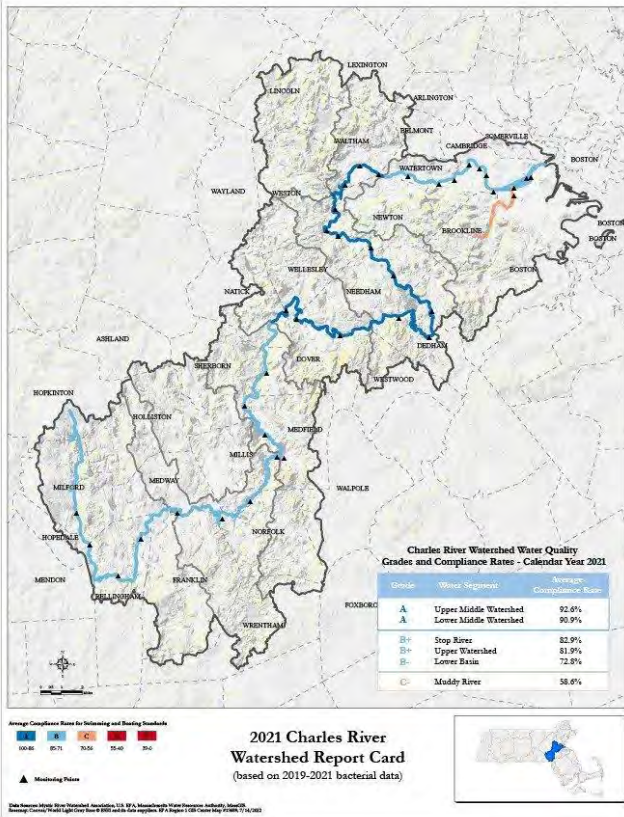




# Three Rivers Report Card





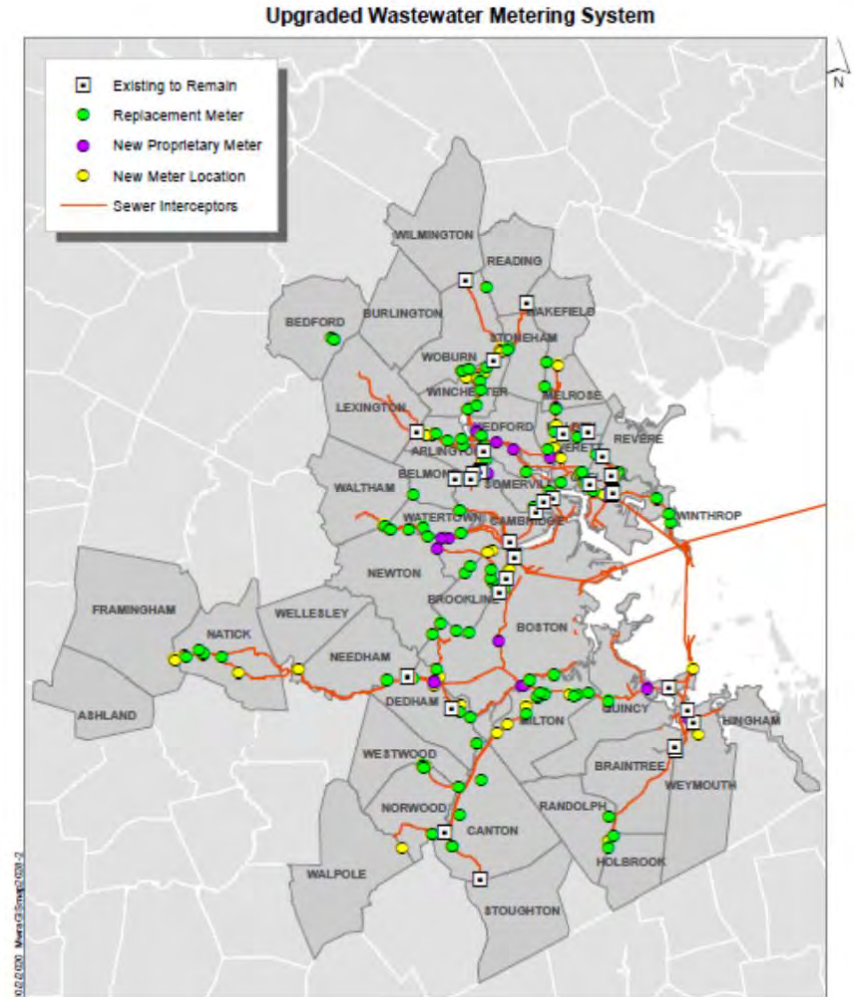
*Update of the New Wastewater  
Metering System*

July 20, 2022



# Wastewater Meter Contract

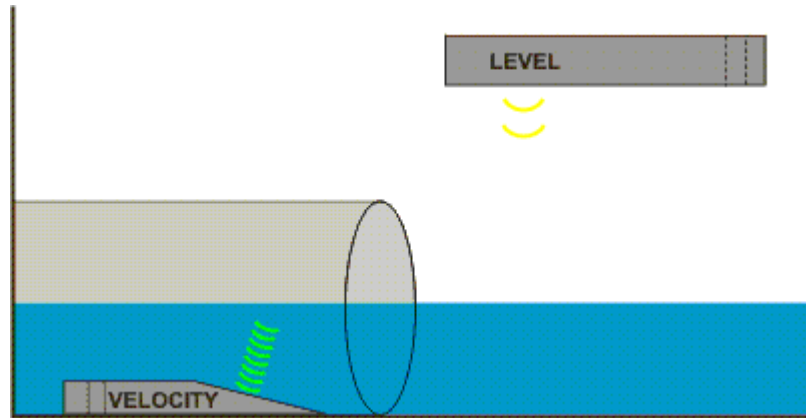
- 173 meters installed in 2021
- New meters used for billing starting Jan 1, 2022
- Most communities registering flow similar to historical flows
- Communities that are significantly higher and lower have been contacted (>20% flow change)





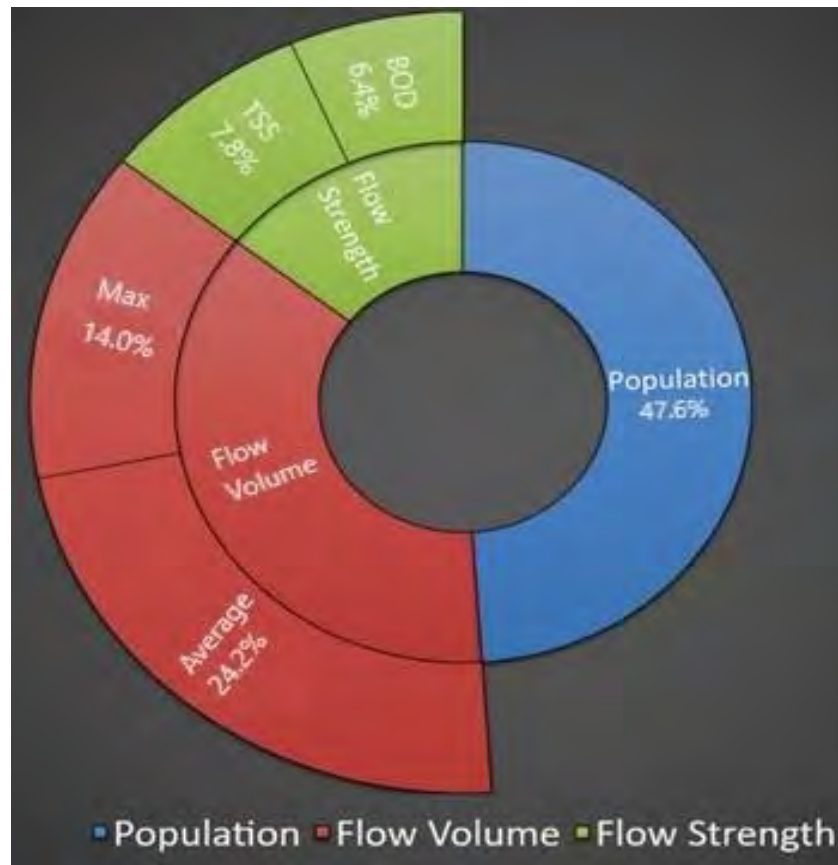
# How Area Velocity Meters work

- Measure depth and velocity, then calculate flow
- Depth measurement very accurate, velocity more challenging





# Flow Assessment - How it works

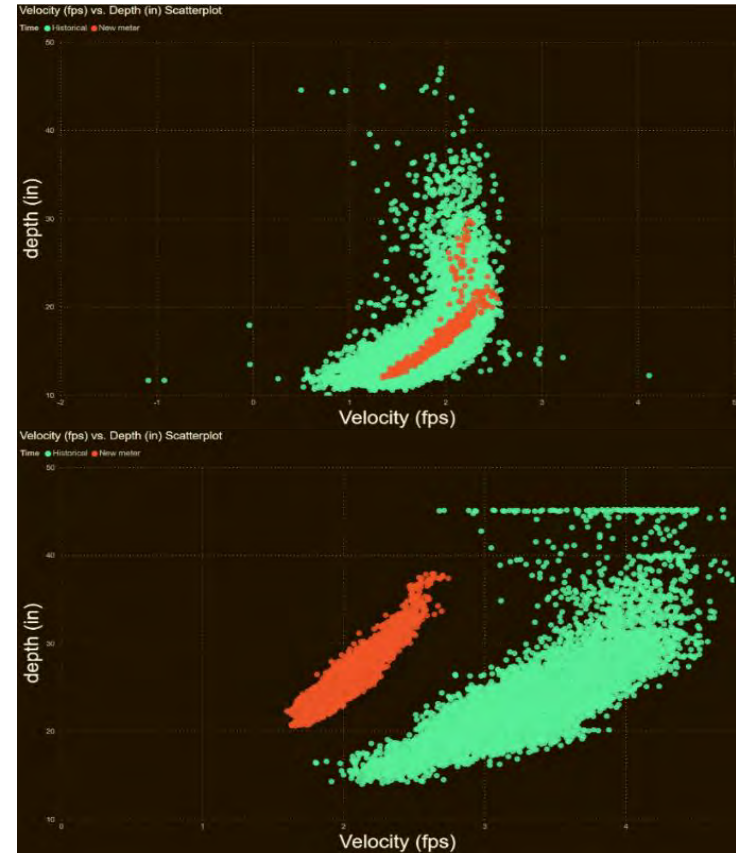


Total Wastewater Flow Assessment (FY23)



# Continuous Improvement

- Improved Analytical Techniques
- Improved Technology
- Continual Verification



Scatterplot analysis of 2 meters. Consistent data (above), and meter showing a velocity discrepancy (below)



*City of Cambridge Partial Sewer  
Separation Connections*

July 20, 2022



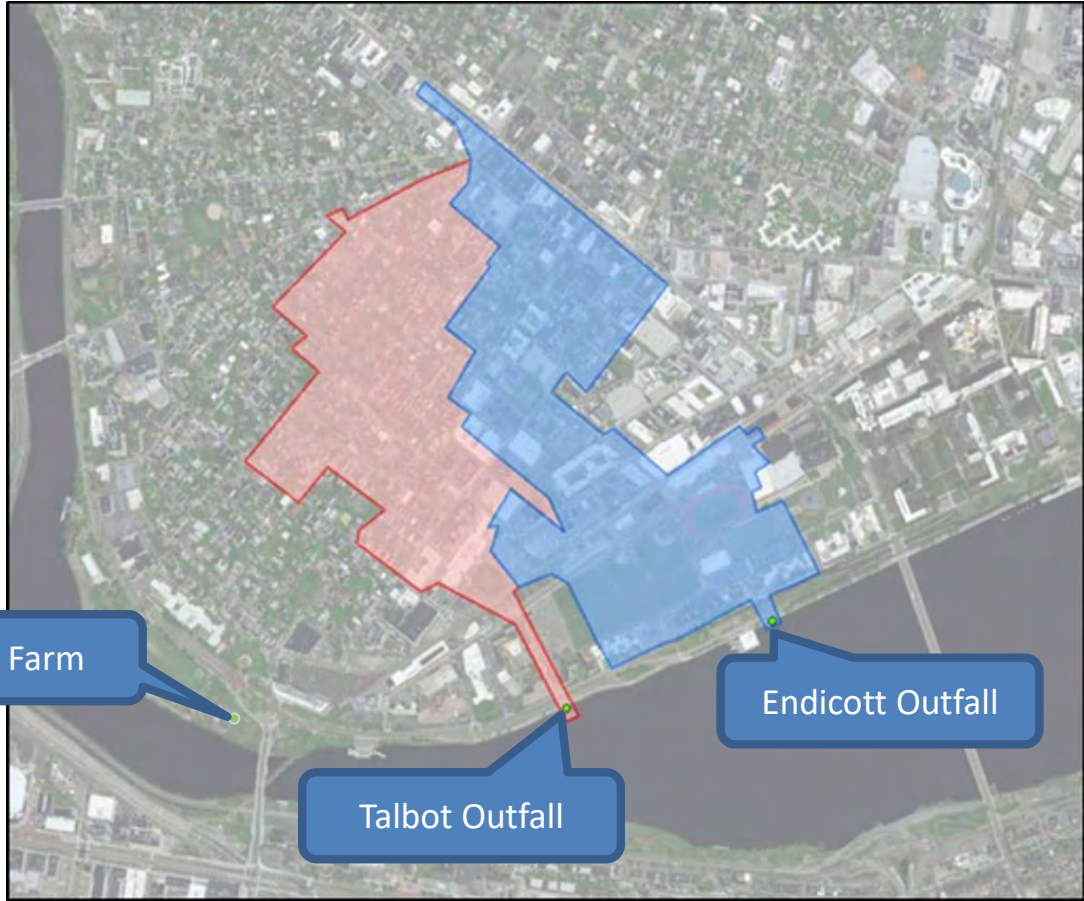
# Cambridge Partial Sewer Separation

- Trial approved by Board in October 2019
- Anticipated benefit of reducing CSO overflows at Cottage Farm
- Cambridge completed work and began trial in August 2020
- Provided quarterly reports
  - Flow to MWRA system
  - Flow to Charles River
  - Modeled impacts to downstream CSOs
- EPA & DEP support given expected water quality benefit





# Partial Sewer Separation Areas





# Typical Year CSO Reduction Benefits of Partial Sewer Separation



Backflow preventer installed at Waverly and Talbot Connection

- 4.7 MG CSO reduction at Cottage Farm\*
- Additional reduction of only 0.2 MG if fully separated
- All flows into MWRA system metered
- In larger storms, stormwater flow to sewer limited by connection size:
  - Peak stormwater flow goes to Charles River outfalls
  - This reduces or prevents overflows a Cottage Farm

\* per Cambridge modeling. MWRA estimate was 3.7 MG reduction

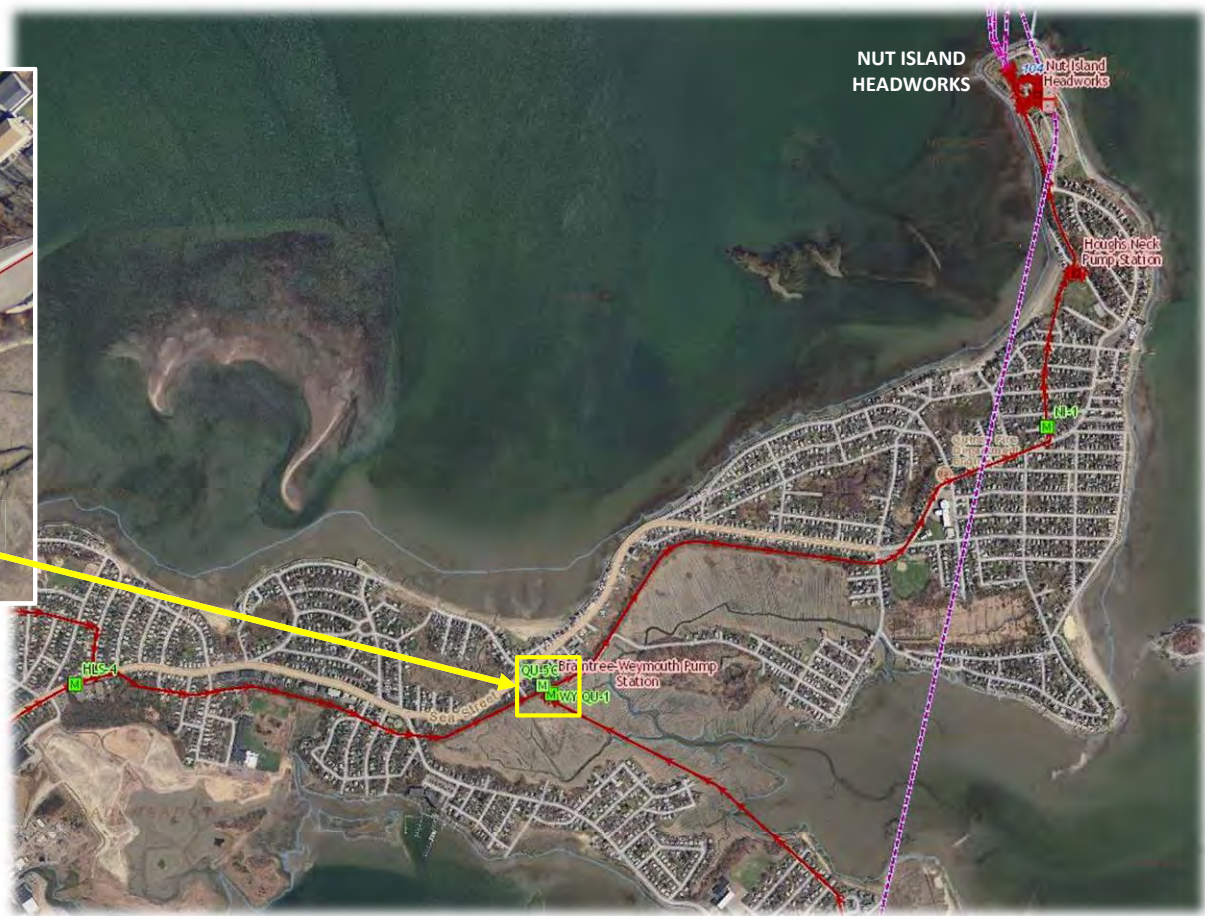


*Braintree-Weymouth Pump Station Improvements  
Contract 7366 Award*

July 20, 2022



# Project Location





# Screening Operational and Maintenance Issues



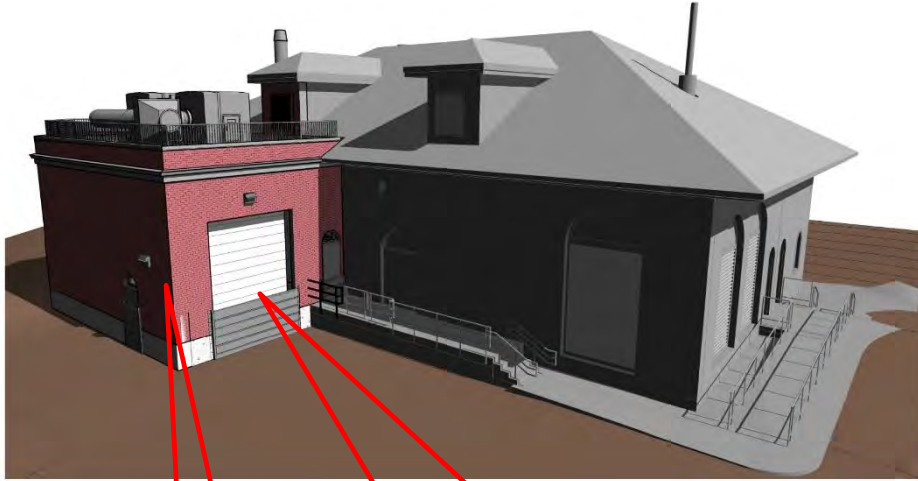


# Pump Removal Issues





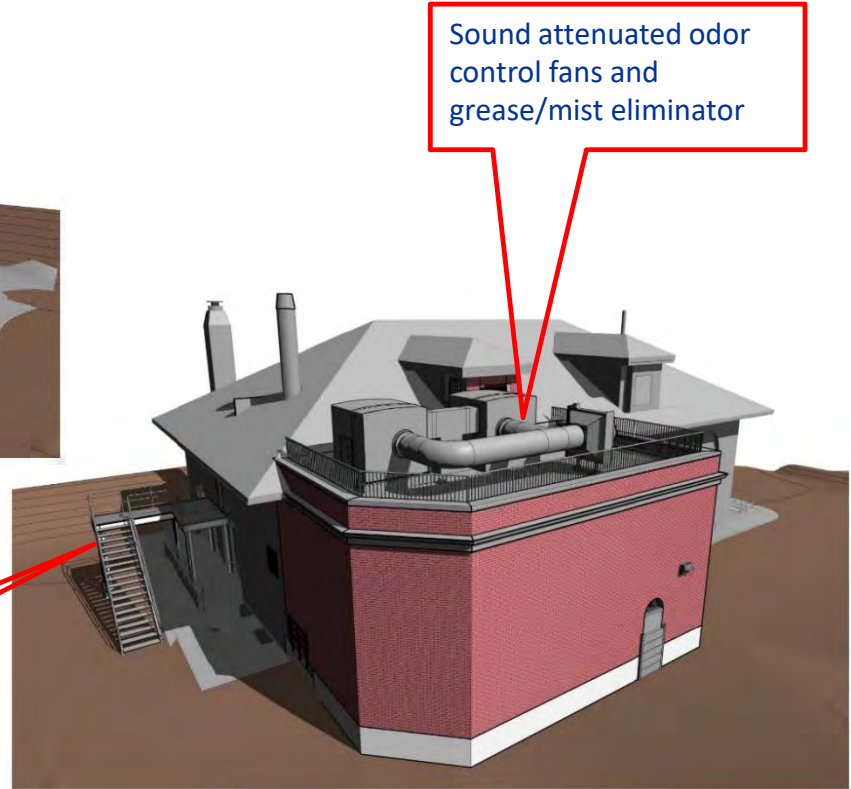
# Building Addition – Odor Control/Screenings Collection



New 24'x42'  
Building Addition

Vehicle Access for carbon  
replacement and screenings  
removal

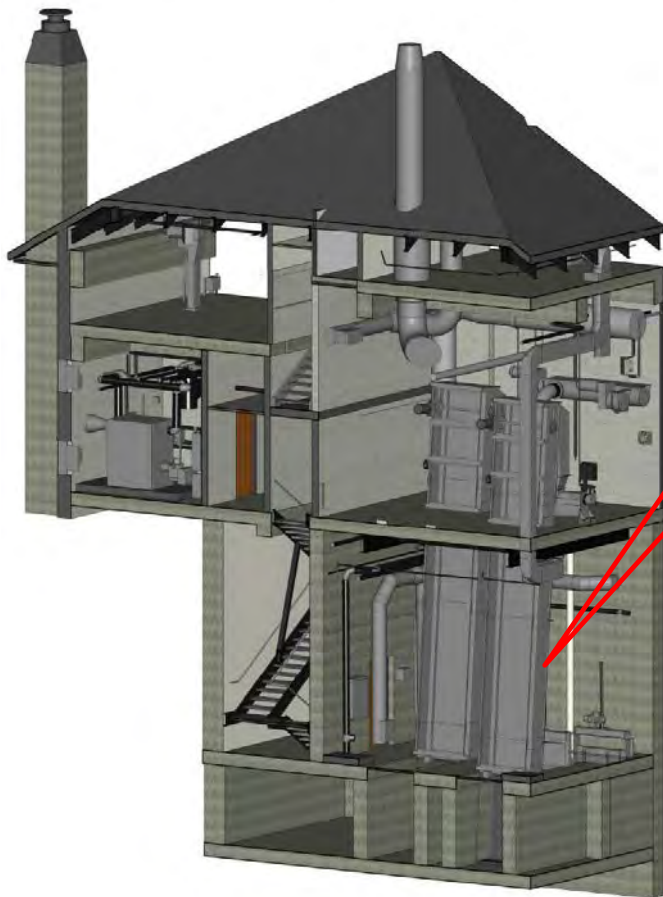
New second  
floor egress



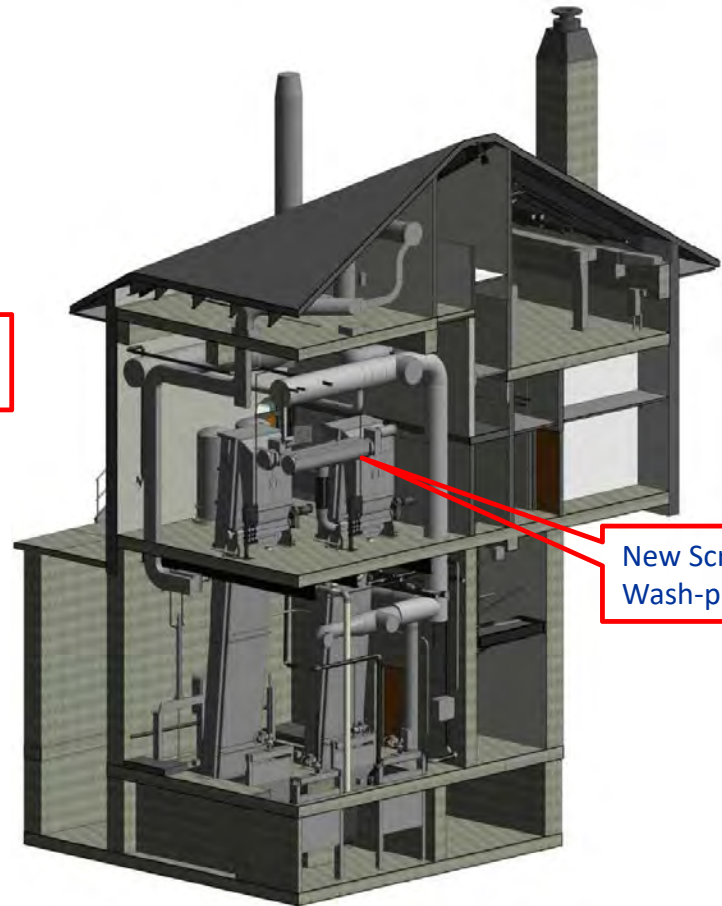
Sound attenuated odor  
control fans and  
grease/mist eliminator



# New Screens/Washpress



New Screens  
to grade



New Screen  
Wash-press





# Procurement Results

Contractor	Bid Amount
<i>Engineer's Estimate</i>	<i>\$9,950,000</i>
<b>Walsh Construction Co. II, LLC</b>	<b>\$13,473,075</b>
Daniel O'Connell's Sons	\$13,650,000



*Memorandum of Agreement between MWRA and  
the Town of Ludlow*

July 20, 2022



# MWRA 35-foot Tower at Nash Hill, Ludlow

- MWRA SCADA equipment
- South Hadley Water Department communications
- Town of Ludlow life safety communications





## New Tower Proposed by Town of Ludlow

- Town of Ludlow upgrading its communications equipment
- Request to build new 71-foot tower on the Nash Hill site
  - No cost to MWRA
  - Higher tower provides benefit
  - MWRA to own and maintain

