Public Information Meeting
Mechanic St. Pump Station Replacement
November 9, 2026

AECOM Underwood Engineers terra firma landscape architecture

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Agenda

1. Introductions
2. Summary of September 21, 2026 Public Meeting
3. Expand on Questions and Answers
4. Review Costs
5. Staff Recommendation

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Summary of September 21, 2026 Presentation

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Background

- Largest Wastewater Pump Station in System
- Conveys Flows to the Peirce Island WWTF
- Located at 113 Mechanic Street in the Historic South End
- Constructed in 1963 and Past its Useful Life
- Recent Pump Failures





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Project Need and Goals

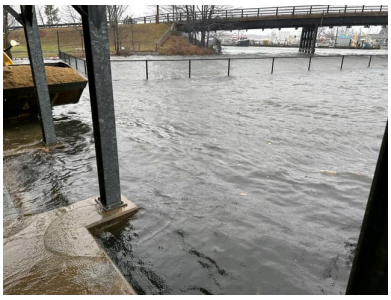
- Replace Pump Station for Improved Reliability
- Meet Current Design and Operation Standards
- Integrate the Station into its Surroundings
- Protect and Plan for Sea Level Rise and Flooding Protection





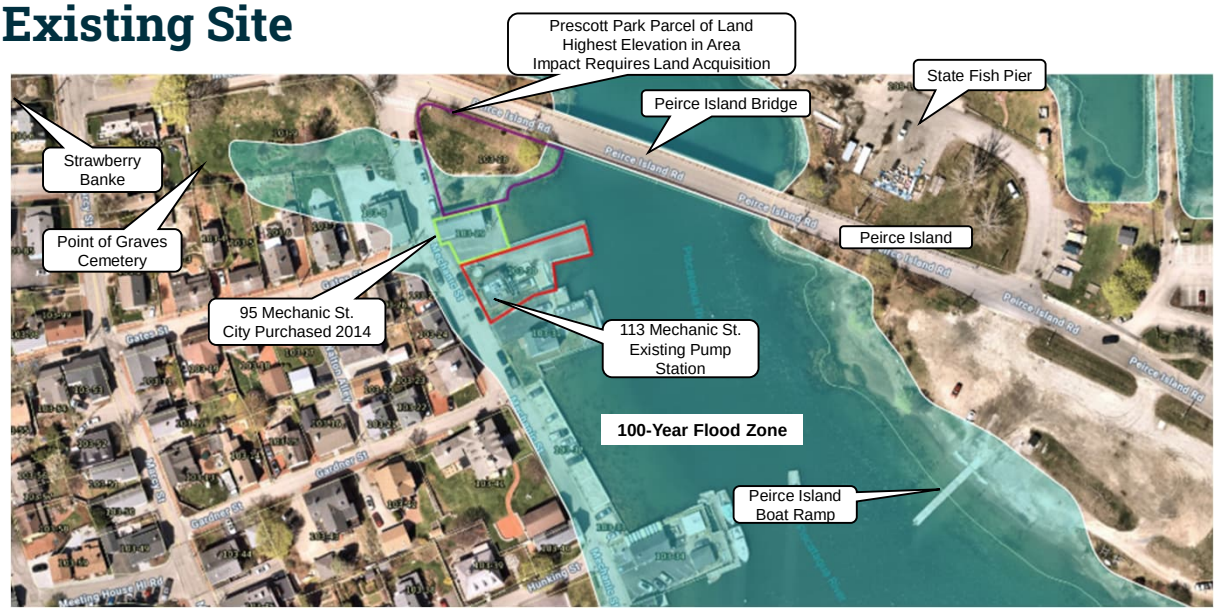






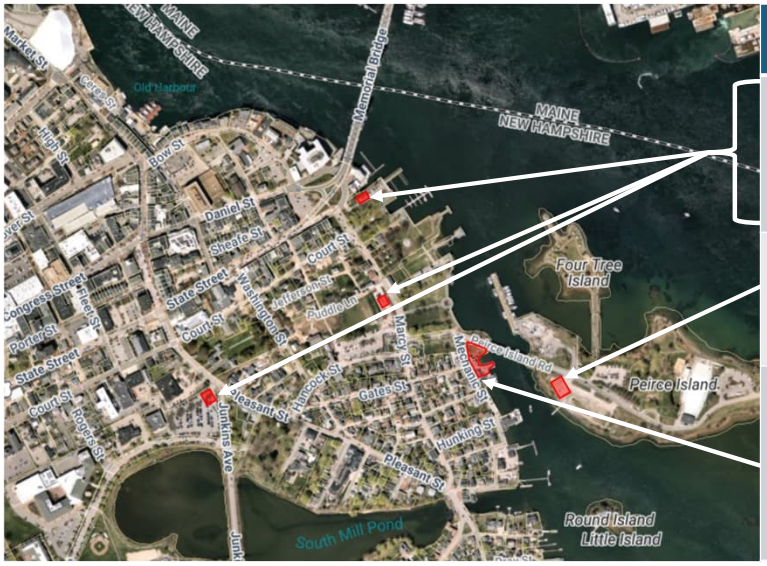
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Existing Site



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Alternatives Evaluated: Overall Summary



Alternative	Proposed Locations	Options Considered
Relocation towards Downtown	One of 3 Parking Lots (Puddle Dock, Memorial Bridge, or Parrott Ave)	• 3 sub-options
Relocate Pump Station to Peirce Island	New station on Peirce Island via Underwater Pipe Tunnel	• 2 sub-options
New Pump Station at Existing Site	113 Mechanic St. & 95 Mechanic St. & Prescott Park parcel	• 3 sub-options to reuse existing infrastructure • 4 sub-options for new pump station

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Proposed Concept

- Connection to Prescott Park and Point of Graves Cemetery
- Improved Intersection Safety
- New Pump Station Control Building
- New Pump Station (Below Grade)
- Public Greenspace and Amenities



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Proposed Concept Rendering

Prescott Park toward Mechanic St



Preliminary – for Illustrative Purposes Only. Full Mature Plantings Depicted.

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Proposed Concept Rendering

Mechanic St toward Peirce Island Rd



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Expand on Questions and Answer

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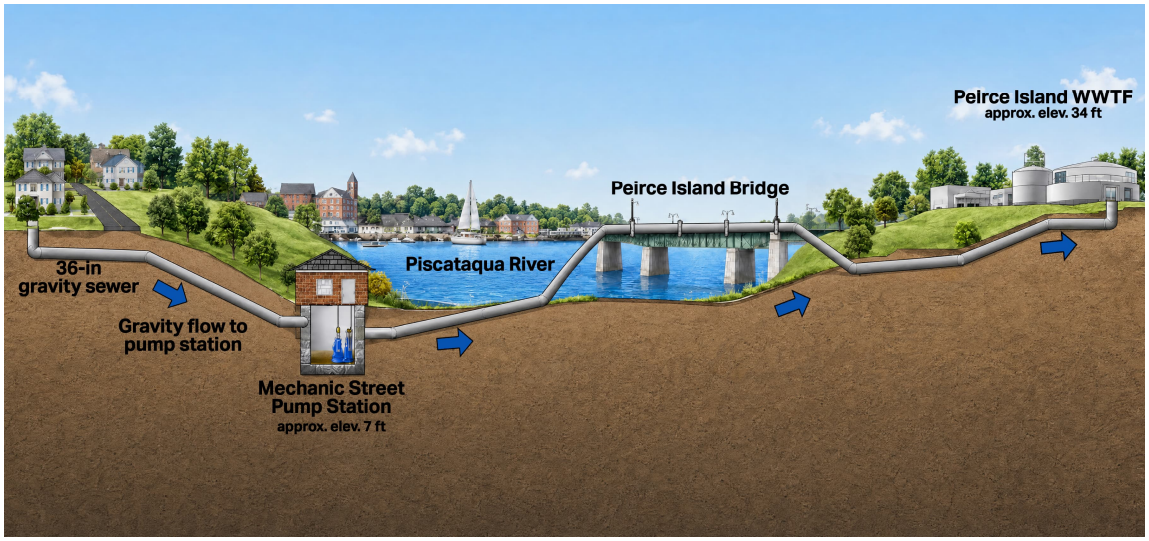
September 21, 2026 Public Comment Summary

- In Support Of Proposed Concept
  - Necessary due to aging infrastructure
  - Public use of new green space
  - Better than what is there today
  - Demolition of 95 Mechanic St
  - More waterfront space available for public
- Concerns Expressed About Proposed Concept
  - Impacts to Prescott Park
  - Appearance of new pump station Control Building
  - Proposed green space unusable due to proximity to pump station
  - Not clear why it is hard to move the station to Peirce Island
  - Noise and smell of proposed station may be no different than existing

September 21, 2026 Public Comment Summary

- Discussion Items Requiring Further Explanation
  - Can the Mechanic Street Pump Station be relocated to Peirce Island?
  - How does wastewater get to Peirce Island now?
  - Can wastewater flow by gravity to Peirce Island?
  - Will traditional excavation across the river work?
  - What is the estimated cost of the recommended project?
  - How will the project be funded?
  - Has micro-tunnelling been done before?
  - Will the below grade equipment fail during flooding?

How does wastewater flow to Peirce Island now?



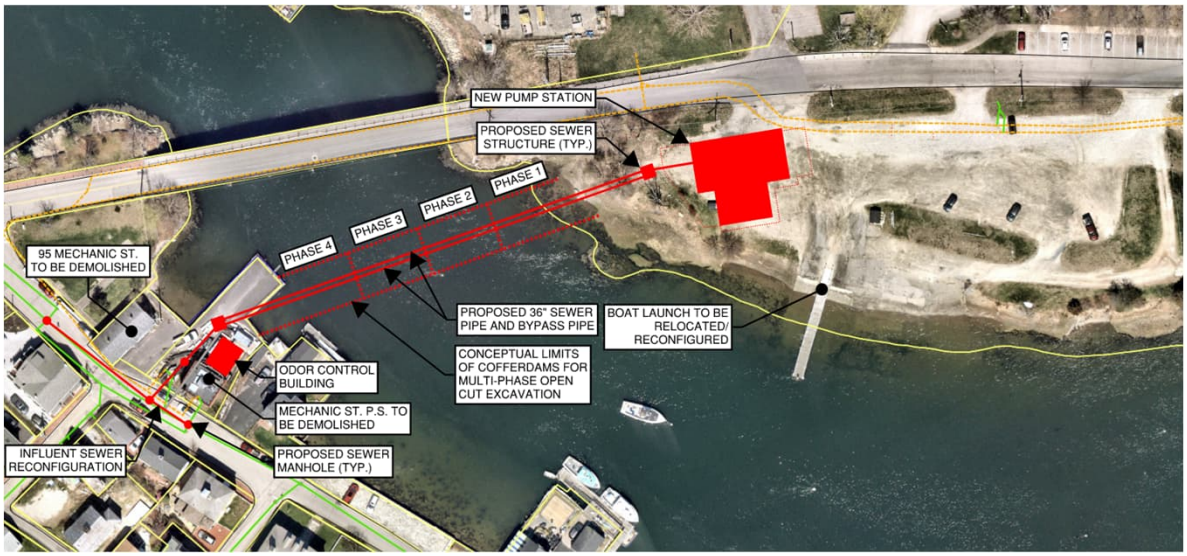
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Can the Mechanic Street Pump Station be relocated to Peirce Island?

- Yes, but buried piping is needed to convey wastewater by gravity from the City to Peirce Island
  - Three potential options were evaluated:
    - Traditional Excavation
    - Inverted Siphon
      - Directional Drilling
      - Microtunneling

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Traditional Excavation



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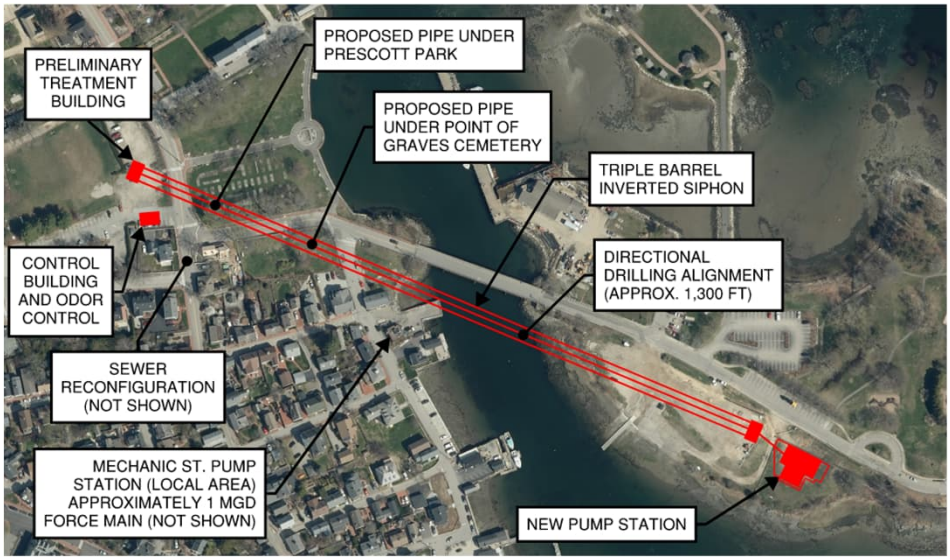
Traditional Excavation





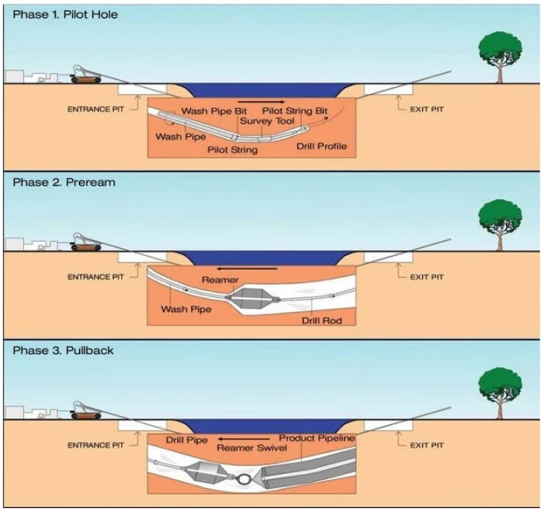
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Horizontal Directional Drill



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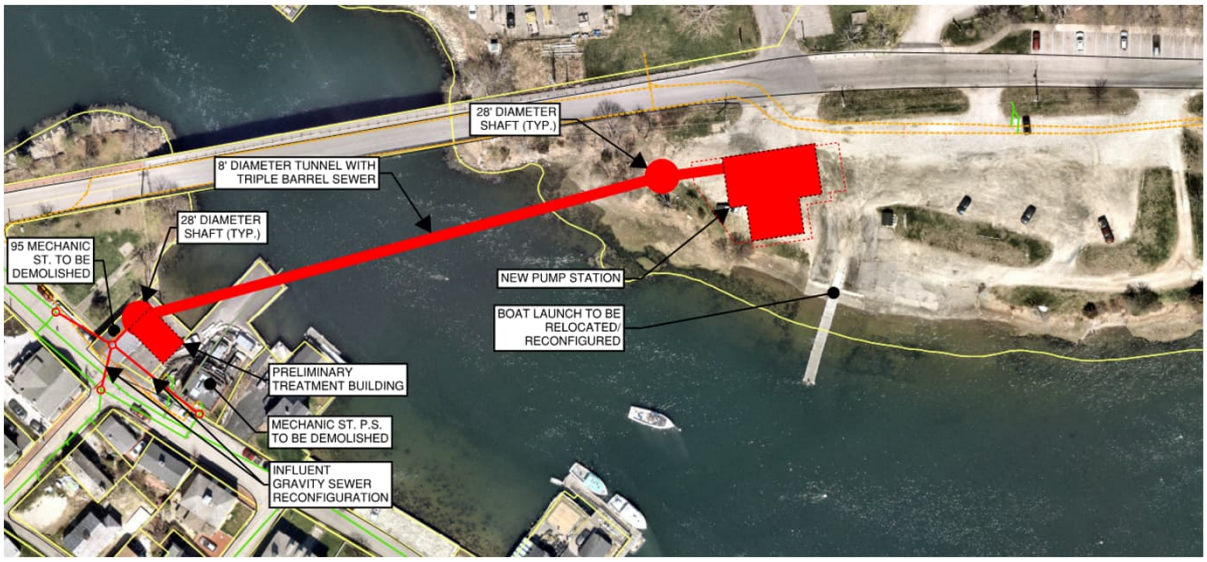
Horizontal Directional Drill





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Microtunnel



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Microtunnel

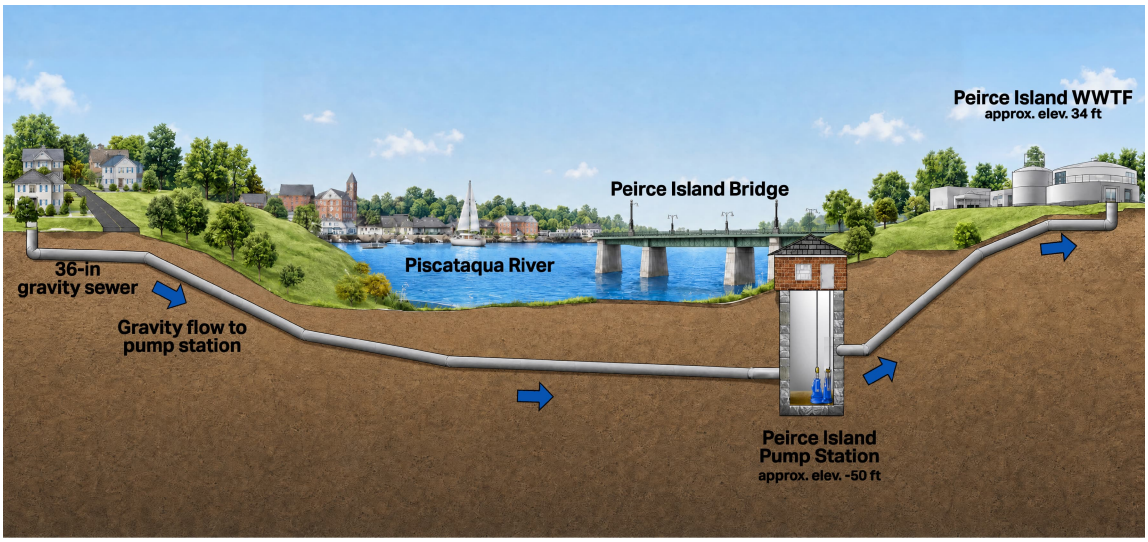




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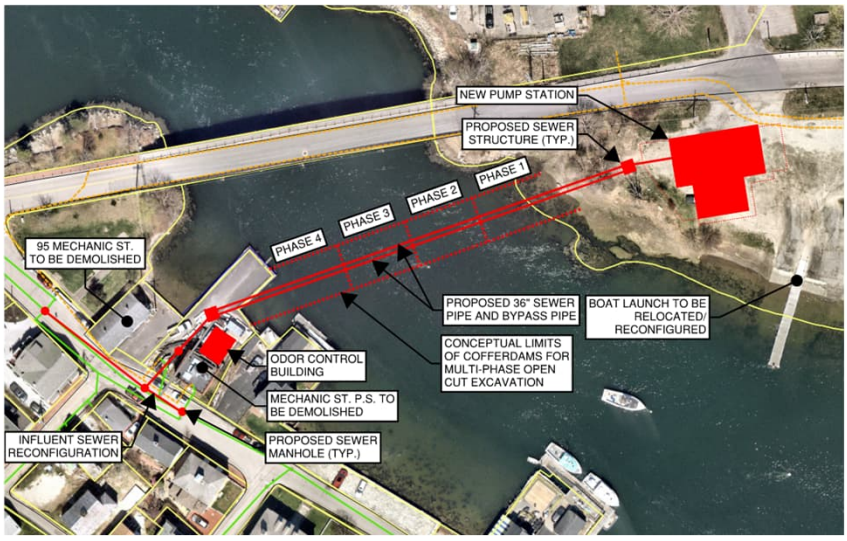
Traditional Excavation

Traditional Excavation Schematic Flow Path



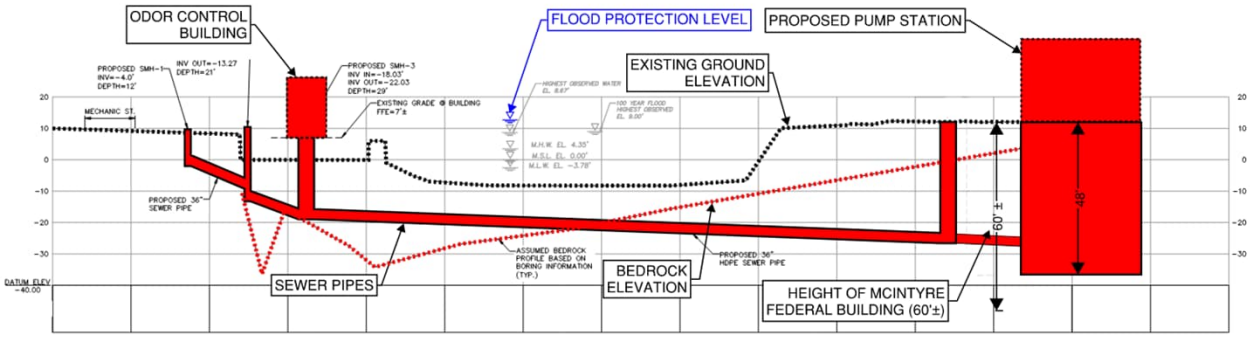
Traditional Excavation- Permitting Challenges

- Series of cofferdams across river
- May close channel temporarily during construction
- Permitting agencies will require proof of no feasible alternatives with less environmental disturbance
- Microtunnel option would be less environmental impact
- Adds significant capital costs
- Odor Control Building remains on Mechanic St.
- Reconfigure boat launch



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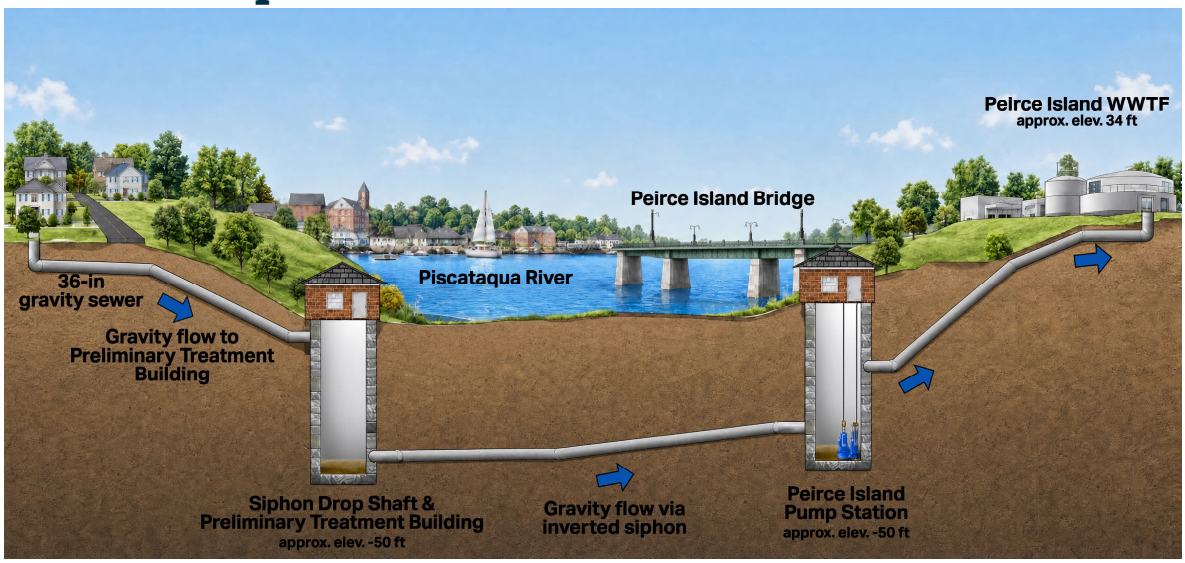
Traditional Excavation Cross Section



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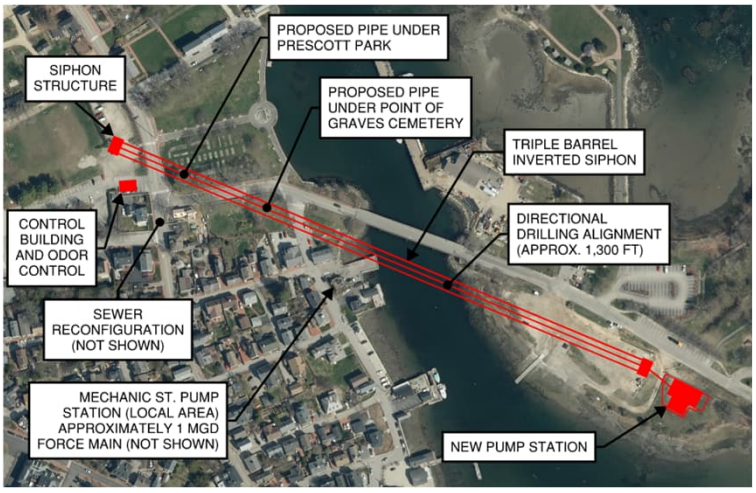
Inverted Siphon

Inverted Siphon Schematic Flow Path



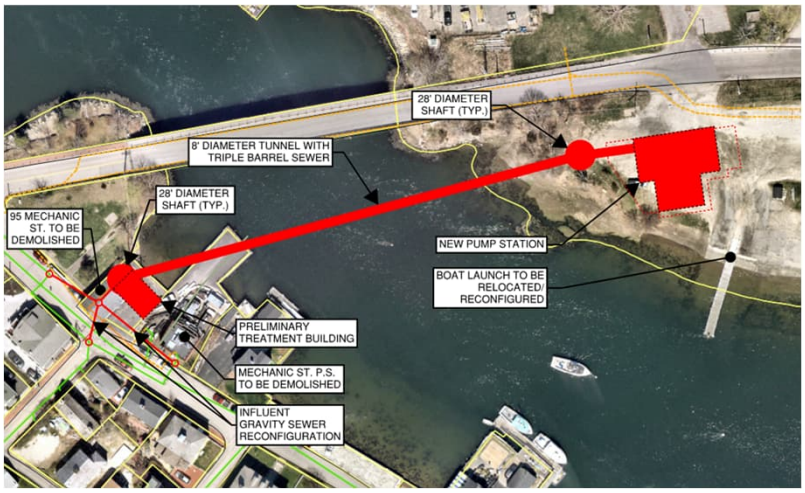
Inverted Siphon: Directional Drilling - Not Technically Feasible

- Drilling contractors not willing to accept job
- Challenging soil and rock conditions
- Still requires new, smaller pump station at existing Mechanic St. station location
- Requires reconfiguration of collection system to new siphon structure
- Requires construction under sensitive areas

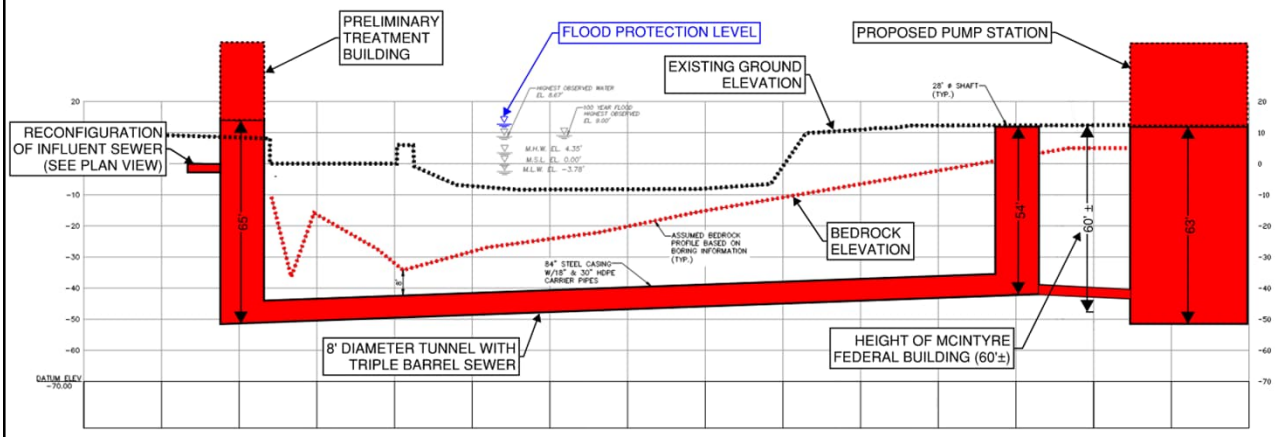


Inverted Siphon: Microtunnel – Significant Additional Cost

- Deep drop shafts (~60-ft)
- Increases depth of pump station
- Elevated Preliminary Treatment Building for screens, grit removal, and odor control on Mechanic St.
- Adds significant capital costs
- More complex O&M
- Challenging and risky construction
- Reconfigure boat launch



Inverted Siphon: Microtunnel Cross Section



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Microtunnel Preliminary Treatment Rendering

Gate Street Toward Peirce Island



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Microtunnel Preliminary Treatment Rendering

Gate Street Toward Peirce Island



Preliminary – for Illustrative Purposes Only. Full Mature Plantings Depicted.

Summary of Conveyance Options to Peirce Island

- Traditional Excavation – Permitting Challenges
  - Permitting will require less environmentally impactful option
- Inverted Siphon
  - Directional Drilling – Not Technically Feasible
  - Microtunnel – Feasible

Alternative Comparison

- Preferred Concept
  - Lower capital and O&M costs
  - Impact on Prescott Park parcel
  - Provides green space with waterfront view
  - Potentially improves pedestrian safety
- Relocate to Peirce Island
  - More expensive to build and maintain
  - Higher construction and operations risks
  - Does not eliminate permanent building on Mechanic St.
  - Less impact on Prescott Park parcel
  - Reconfiguration of boat launch
  - Potential to add public amenities at boat launch

Estimated Project Costs

Alternative	Estimated Project Cost Range
Proposed Concept	$23 – $43 million*
Relocate To Peirce Island	$33 – $58 million ($7 - $10 million for tunnel alone)**

*FY28 CIP placeholder $25M & FY26 $3M SRF Design Phase Loan Agreement

**Additional costs for the Preliminary Treatment Building and additional rock excavation for Peirce Island Pump Station not included

Staff Recommendation

- Staff recommends advancing the proposed design concept due to ongoing reliability concerns at the existing pump station and the significant added cost and complexity that would be needed to relocate the pump station to Peirce Island.



Discussion