#### **Taunton River Crossing**

Use of HDD to Limit Environmental and Community Impacts Gary Munroe (Liberty Utilities) and Jason Gorman, PE (CHA Consulting)





## Agenda

- Existing Conditions
- Replacement Design
- Construction
- Permitting
- Questions

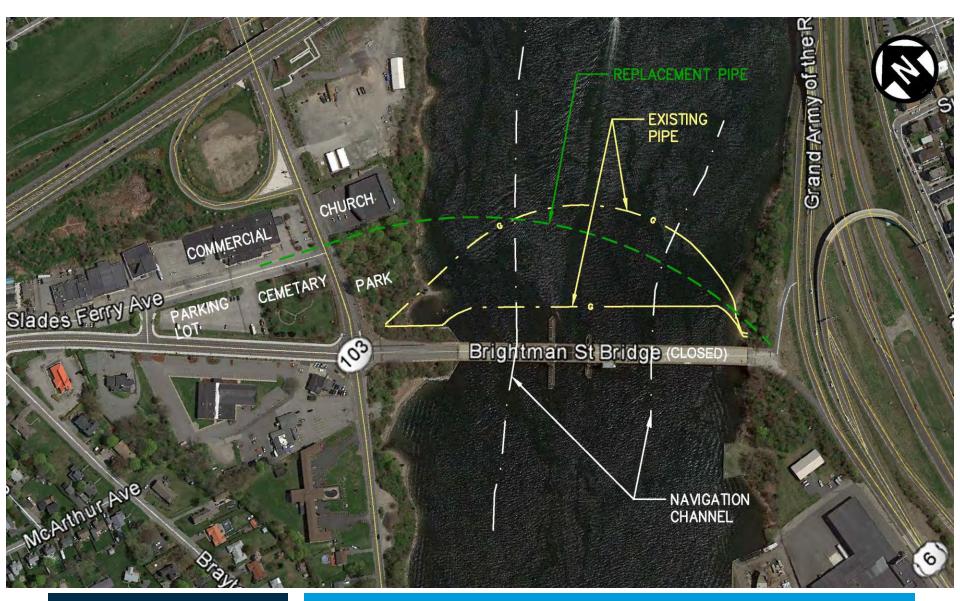


#### **Existing Conditions**

- NG Pipes for Distribution from Fall River to Somerset
  - 1 6 inch steel
  - 1 4 inch HDPE inside 6 inch steel
  - 1 6 inch abandoned cast-iron
- Existing System
- Land Use
  - Commercial
  - River
  - Highway



#### Site Plan



# Slades Ferry Ave (west looking east)



Fall River Express Way (east looking south)



#### Replacement Design

- Site Constraints
  - Environmental Resources
  - Community and Infrastructure
- Conceptual Alignment
  - System Tie-in
  - Coated Pipe API 51 X-52 12 inch diameter, 0.375 inch wall
  - Alignment
  - Subsurface Exploration



# Environmental Resources (west)



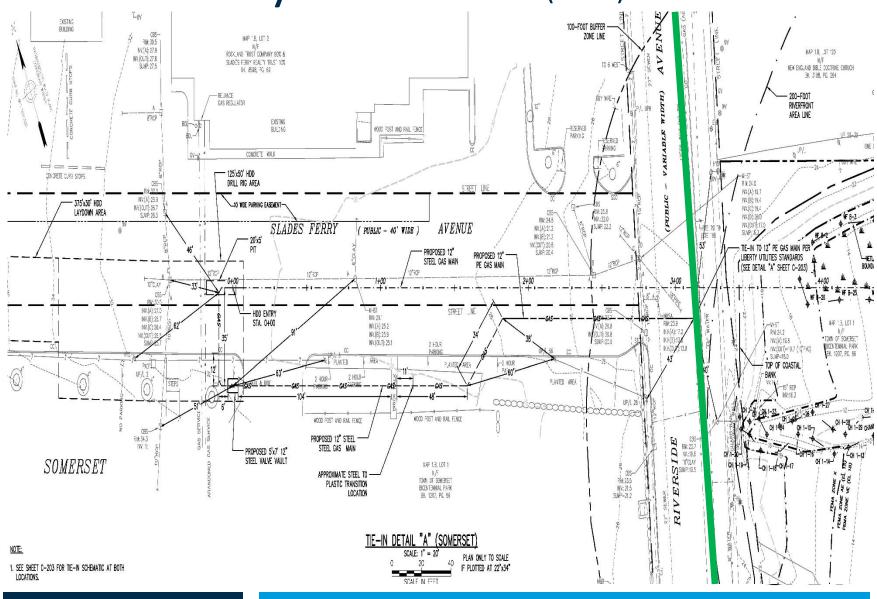
## Environmental Resources (east)



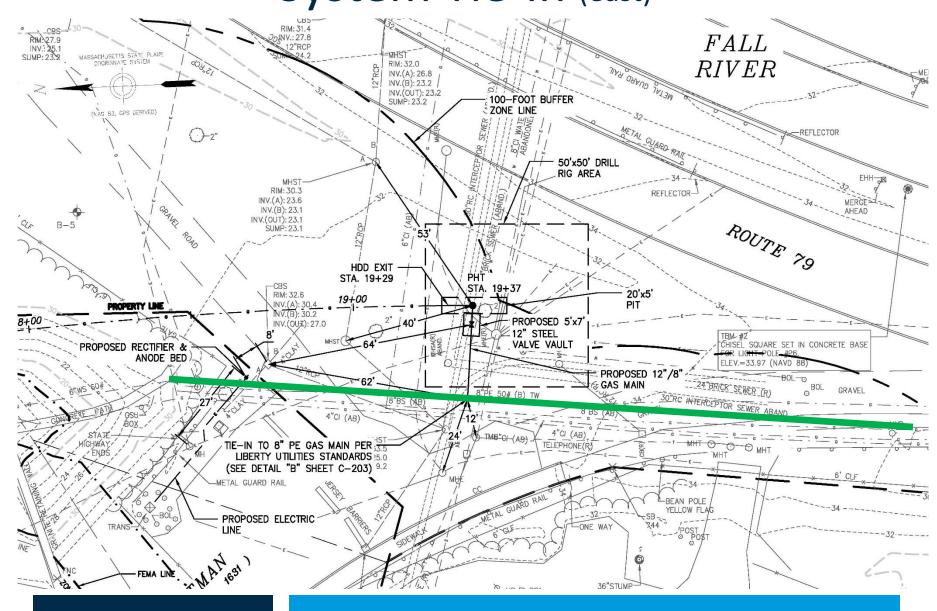
# Community and Infrastructure



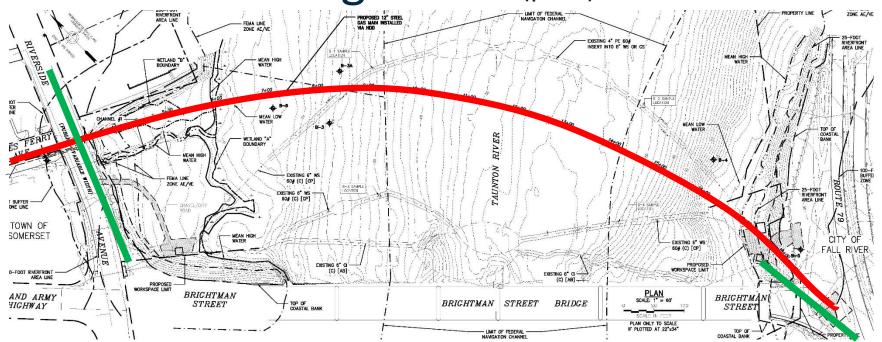
#### System Tie-In (west)



## System Tie-In (east)

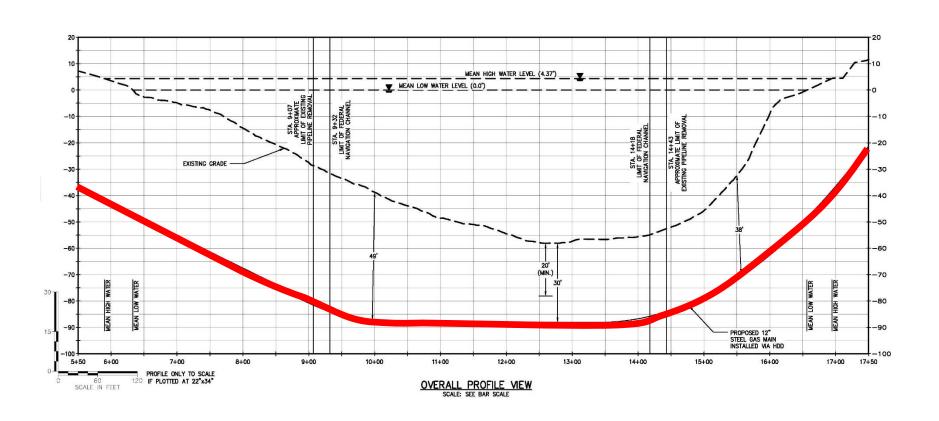


Alignment (plan)





## Alignment (profile)





## **Subsurface Exploration**



## **Subsurface Exploration**

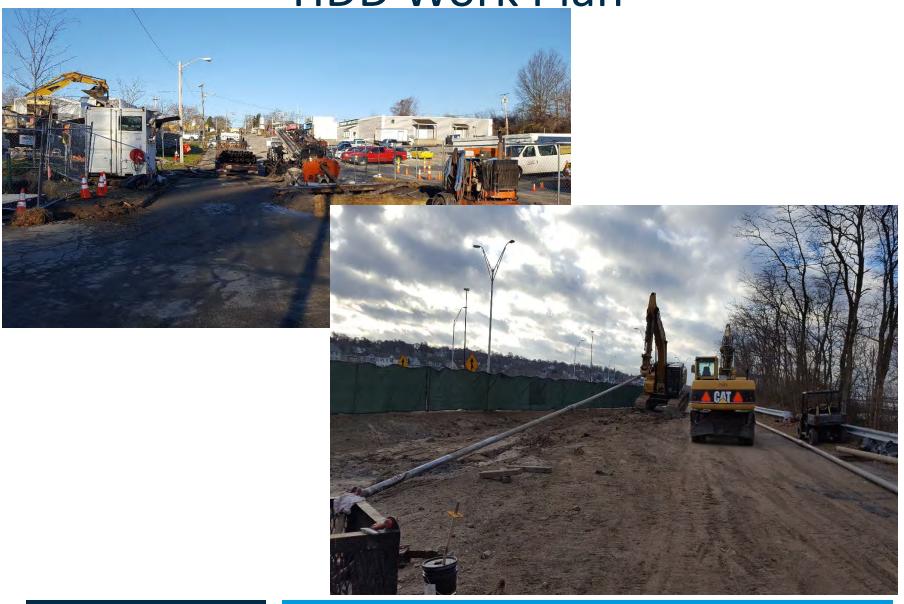


#### Construction

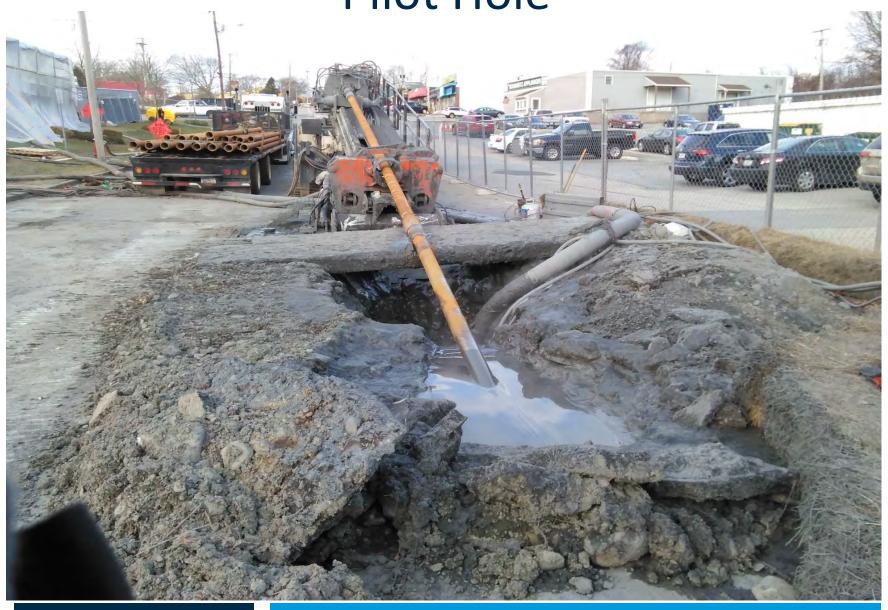
- HDD Work Plan
- Pilot Hole
- Reaming/Test String
- Pipe Pull-in
- Testing
- Commissioning



## HDD Work Plan

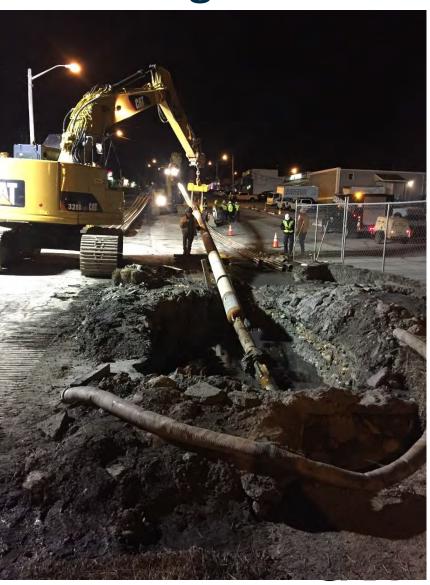


## Pilot Hole



# Reaming/Test String

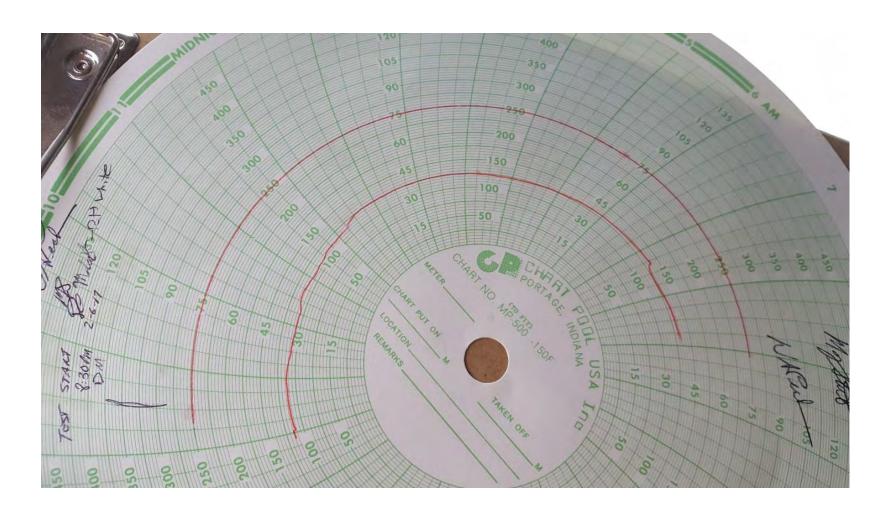




# Pipe Pull-In



## **Pressure Testing**





#### Commissioning

- Use of Nitrogen Eliminate Need to Purge
- Confirmed Tie-in at Operating Pressure
- Confirmed Integrity of Pipe with Rectifier



#### Permitting

- USACE Section 404/10
- USACE Section 408
- Mass DEP Chapter 91
- MassDEP Section 401
- Mass Environmental Notification Form
- Mass DOT State
  Highway Access

- Somerset Conservation
  Commission
- Fall River Conservation
  Commission
- Somerset StreetOpening
- USFW/ SHPO/SW
   Underwater Arch/
   Tribes/ NPS/ Fisheries



## Questions

