



WATER STREET INTERCEPTOR REPLACEMENT PROJECT

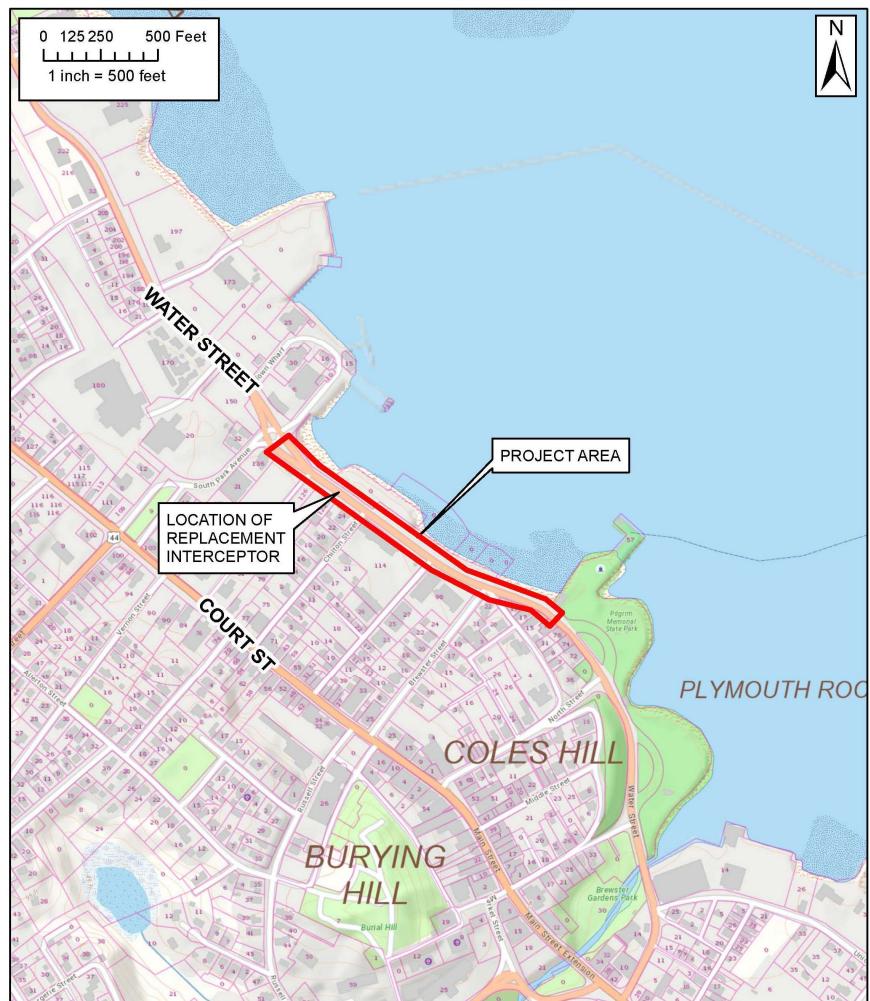
Public Outreach Meeting

Plymouth, MA

November 10, 2022

ENVIRONMENTAL
 PARTNERS
— An Apex Company —

PROJECT AREA MAP



Water Street
Sewer Interceptor Replacement
USGS Locus Map
Plymouth, Massachusetts



ENVIRONMENTAL
PARTNERS
An Apex Company

PROJECT BACKGROUND/OVERVIEW

- Original Sewer Interceptor built in 1969
- Because of (2) 45 degree bends, CCTV pipe assessment is impossible
- condition of pipe in harbor is unknown
- **Goal:** To replace the 30-inch, gravity sewer interceptor from the harbor to within Water Street
- Abandon pipe and manholes in the harbor
- 2014 design and construction halted due to construction difficulties
- Project suspended
- Emergency repairs completed in 2015

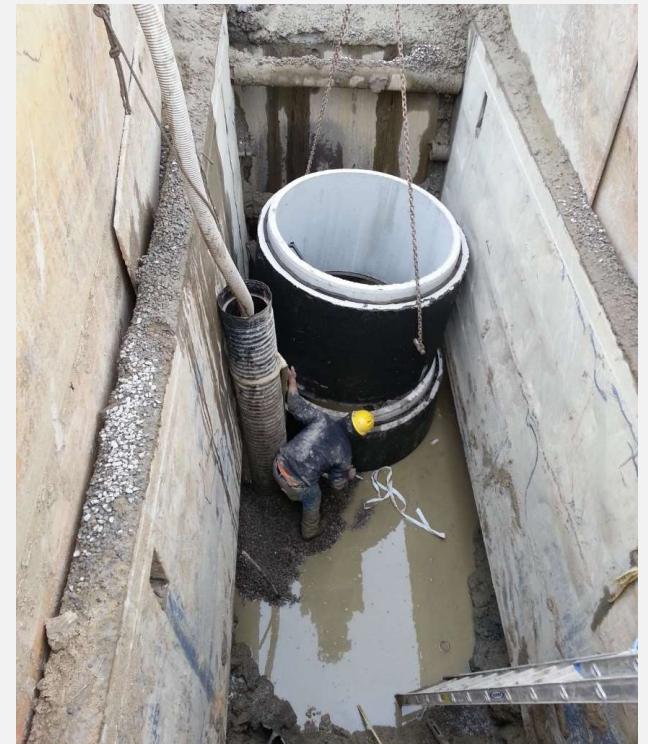


2014 INITIAL INSTALLATION

- Grove Construction was the hired contractor
- Higher groundwater levels than anticipated and tidal influence
- Lack of meaningful dewatering
- Construction fatigue
- Sewer manhole #581 settled more than 18 inches
- Project suspended in 2014



2014 Installation: Pumped Water and Sediment from Construction Activities into Harbor



2014 Installation: Groundwater Rising to Surface During Manhole Installation

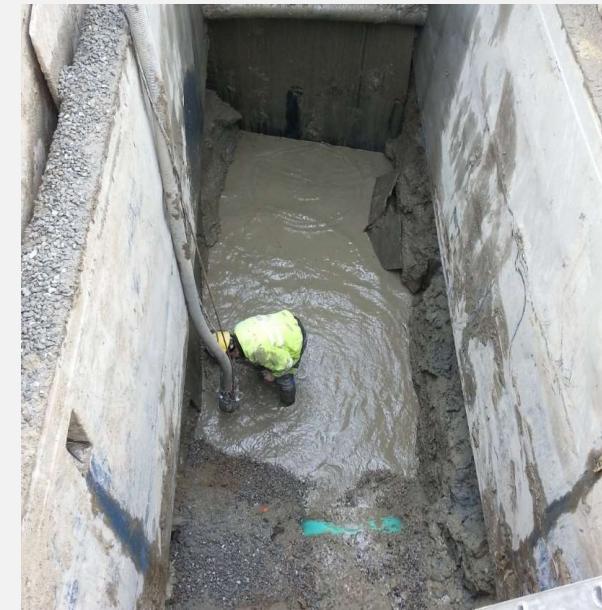


PROJECT HURDLES AND COMPLICATIONS

- Combination of high groundwater levels and high pressure due to groundwater confined between layers of clay and tidal influence
- This causes a surge of water to the surface when digging within groundwater elevations
- Dewatering is difficult, requires specialty contractor
- Potential settling of structures over time
- Construction fatigue can occur



Groundwater seeping up through pavement

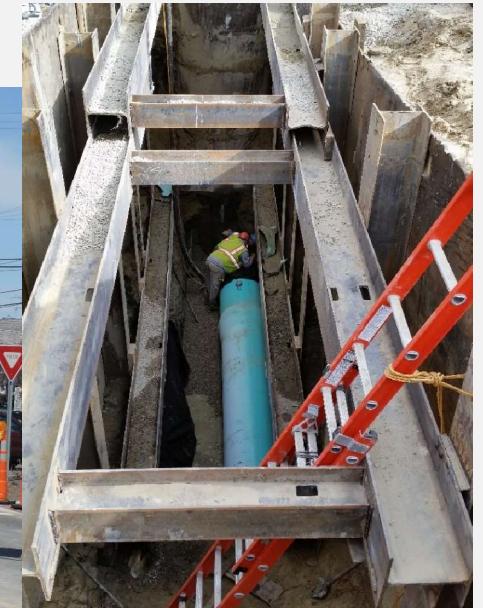


2014 Manhole #581 Install



2015 REPAIRS

- EP performed a high-level assessment of groundwater levels and subsurface conditions
- Installed vibrating water pizometers
- Removed manhole that had settled >18 inches since installation
- Replaced with deep sewer manhole
- Project incomplete (lack of funding and construction fatigue)



Proper Installation
of Interceptor and
Sewer Manhole



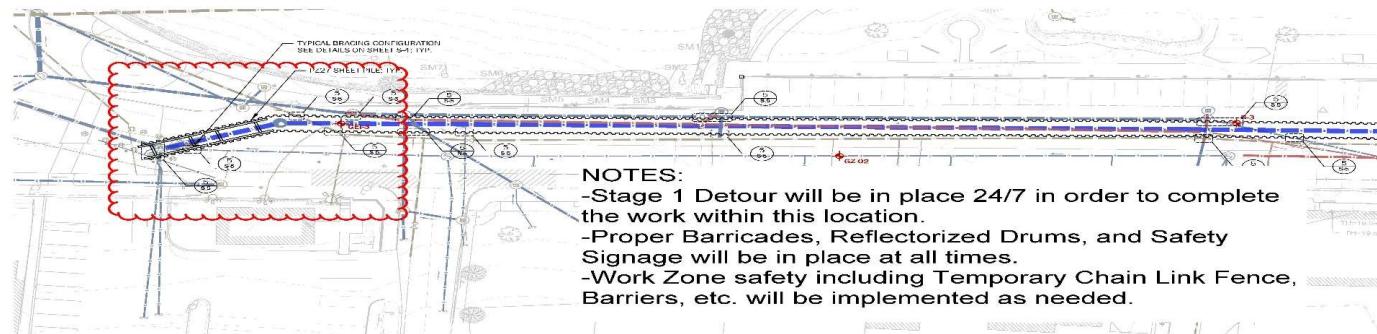
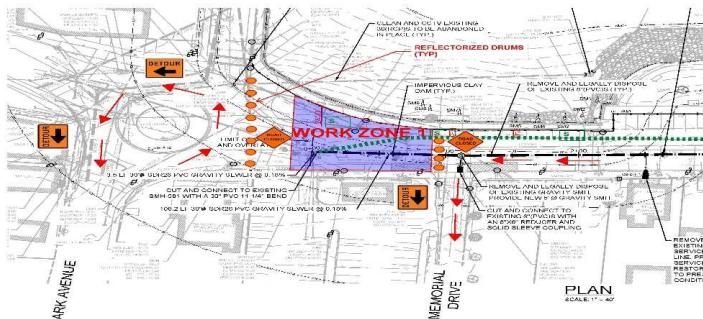
TRAFFIC MANAGEMENT PLANS

ZONE I



NCS 2215 _Plymouth Water Street Sewer Interceptor Replacement PROPOSED LAYOUT PLANS STA.0+00 to 0+95

WORK ZONE NO. 1



NOTES:

- Stage 1 Detour will be in place 24/7 in order to complete the work within this location.
- Proper Barricades, Reflectorized Drums, and Safety Signage will be in place at all times.
- Work Zone safety including Temporary Chain Link Fence, Barriers, etc. will be implemented as needed.

PLAN VIEW
GRAPHIC SCALE IN FEET



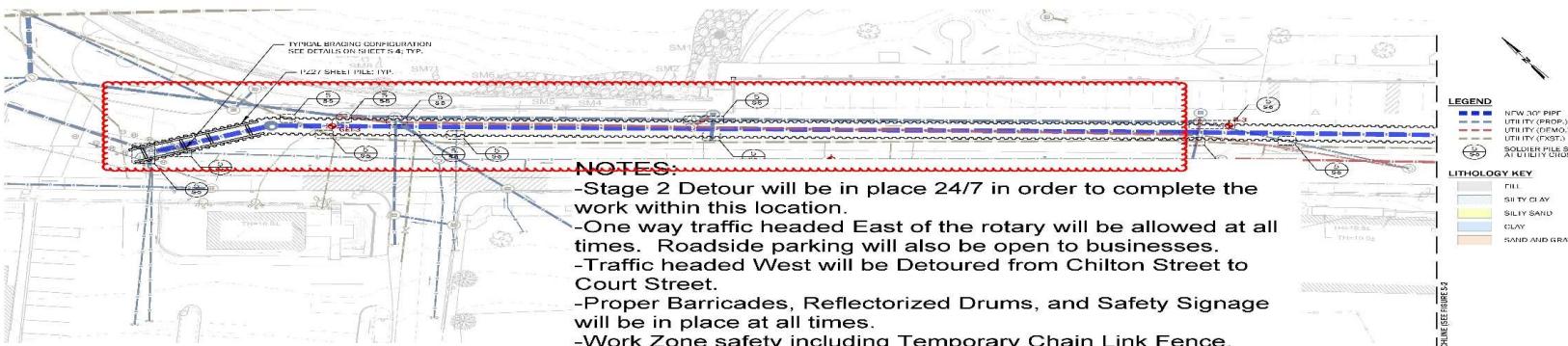
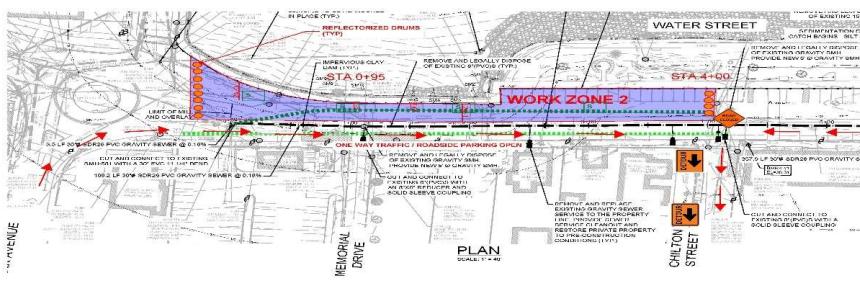
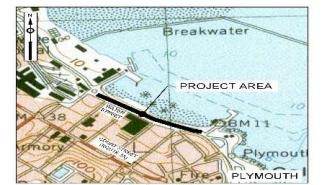
ZONE 2



NCS 2215 _Plymouth Water Street Sewer Interceptor Replacement

PROPOSED LAYOUT PLANS STA.0+95 to 4+00

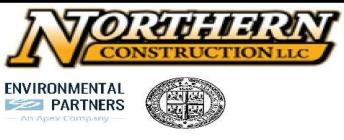
WORK ZONE NO. 2



NOTES

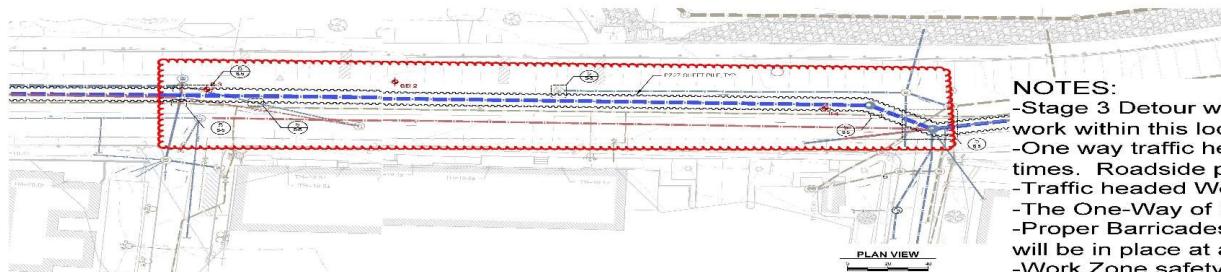
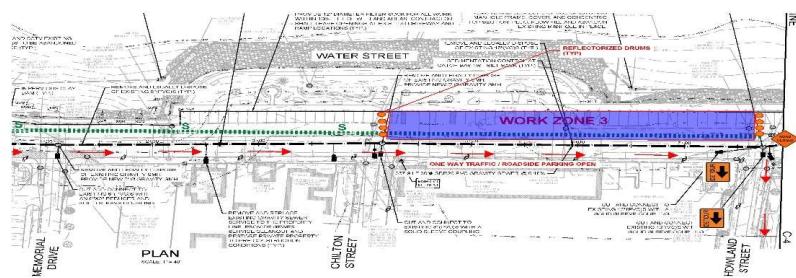
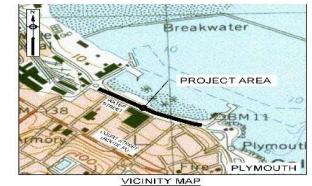
- Stage 2 Detour will be in place 24/7 in order to complete the work within this location.
- One way traffic headed East of the rotary will be allowed at all times. Roadside parking will also be open to businesses.
- Traffic headed West will be Detoured from Chilton Street to Court Street.
- Proper Barricades, Reflectorized Drums, and Safety Signage will be in place at all times.
- Work Zone safety including Temporary Chain Link Fence, Barriers, etc. will be implemented as needed.

ZONE 3



NCS 2215 _Plymouth Water Street Sewer Interceptor Replacement PROPOSED LAYOUT PLANS STA 4+00 to 7+50

WORK ZONE NO. 3

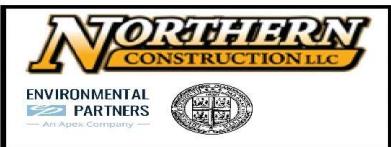


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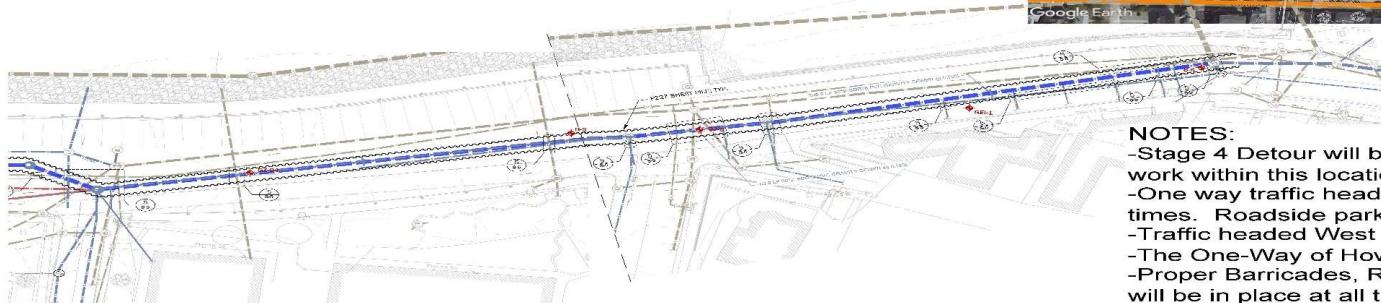
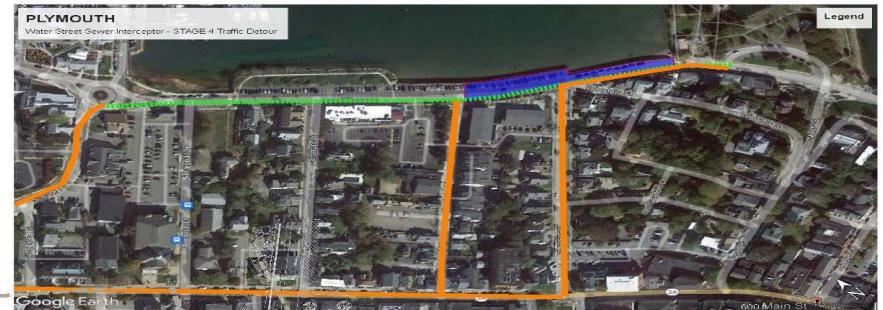
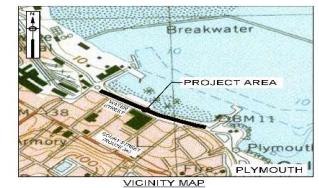
- Stage 3 Detour will be in place 24/7 in order to complete the work within this location.
- One way traffic headed East of the rotary will be allowed at all times. Roadside parking will also be open to businesses.
- Traffic headed West will be Detoured.
- The One-Way of Howland Street will be temporarily reversed.
- Proper Barricades, Reflectorized Drums, and Safety Signage will be in place at all times.
- Work Zone safety including Temporary Chain Link Fence, Barriers, etc. will be implemented as needed.



ZONE 4



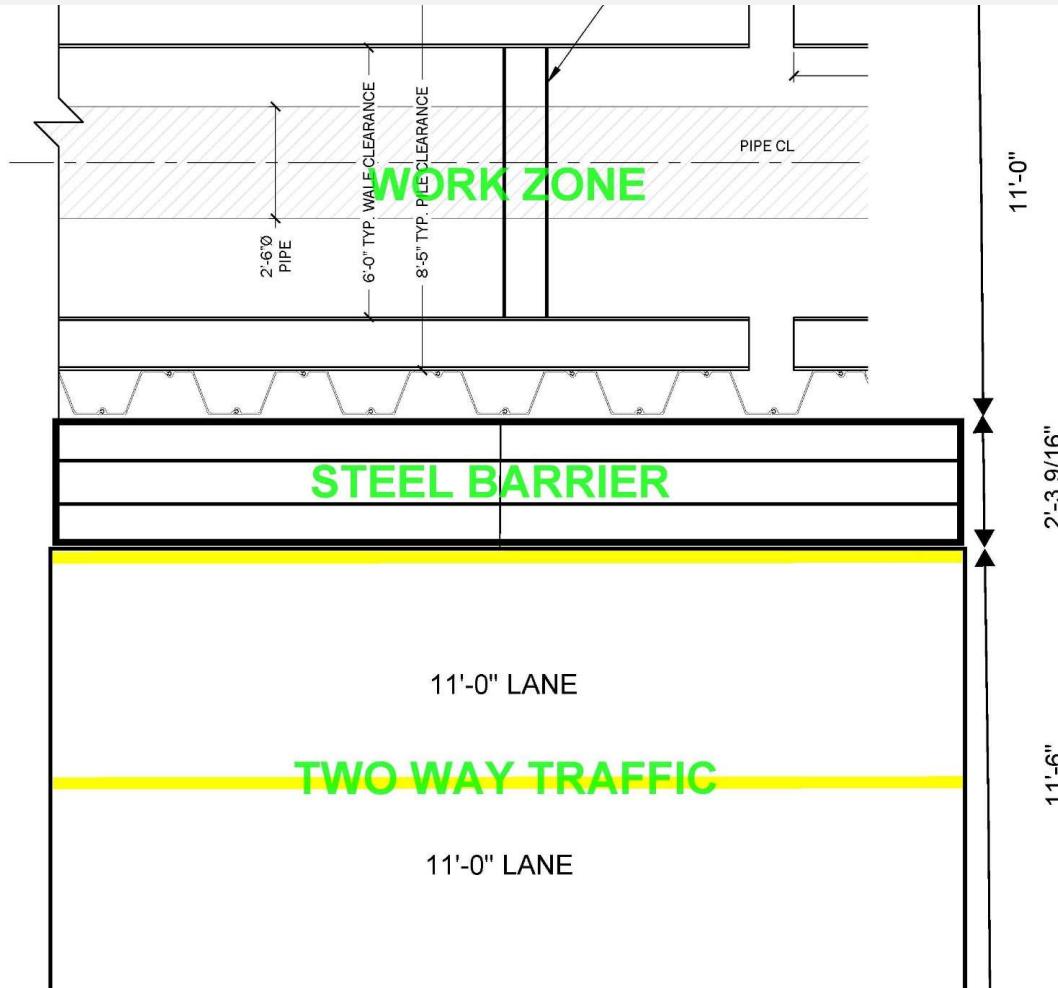
NCS 2215 _Plymouth Water Street Sewer Interceptor Replacement PROPOSED LAYOUT PLANS STA 7+50 to WORK ZONE NO. 4



NOTES:

- Stage 4 Detour will be in place 24/7 in order to complete the work within this location.
- One way traffic headed East of the rotary will be allowed at all times. Roadside parking will also be open to businesses.
- Traffic headed West will be Detoured.
- The One-Way of Howland Street will be temporarily reversed.
- Proper Barricades, Reflectorized Drums, and Safety Signage will be in place at all times.
- Work Zone safety including Temporary Chain Link Fence, Barriers, etc. will be implemented as needed.

TYP. TRENCH DETAIL



SCHEDULE

Anticipated Project Schedule

Task	Date
Mobilize/Begin Construction	December 2022
Completion of Pipe Installation & Commissioning	5/27/2023 (Friday before Memorial Day)
Completion of Permanent Trench Paving & Final Mill/Overlay	11/15/2023



THANK YOU

ENVIRONMENTAL
 PARTNERS