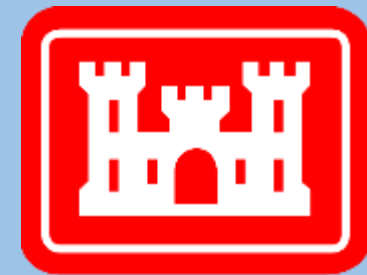


# Upper Ferry Creek Neighborhood Meeting

## Raymark Industries, Inc. Superfund Site Stratford, CT

Jim DiLorenzo, EPA  
Mike Looney, USACE  
Dave Heislein, USACE  
Alivia Coleman, Stratford Health Dept

March 23, 2023



**US Army Corps  
of Engineers®**

To download presentation slides visit:

**[Stratfordct.gov/Raymark](http://Stratfordct.gov/Raymark)**

# Hybrid Meeting Guidelines

## Virtual Attendees:

- Everyone will be muted throughout the presentations - please stay muted to eliminate background noise.
- Hold questions until the end of the meeting.
  - Use the chat box.
  - Mute yourself after speaking

## Everyone:

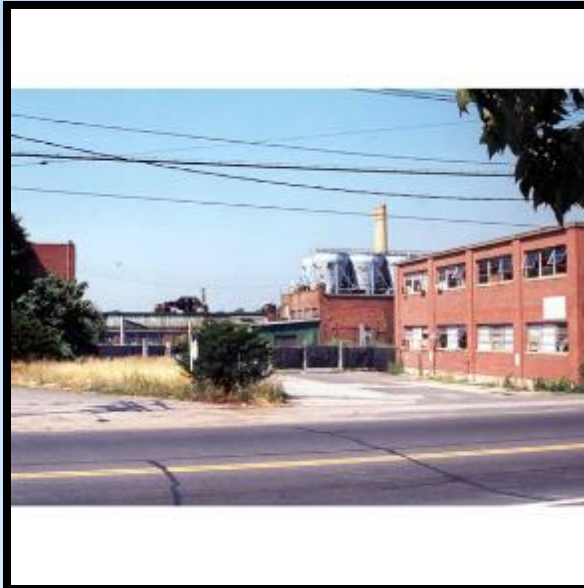
- Ask questions related to the presentation topic
- Please be respectful of time, so everyone has a chance to speak
- Be respectful and patient!
- Talk one at a time.
- **This meeting will be recorded.**

# AGENDA

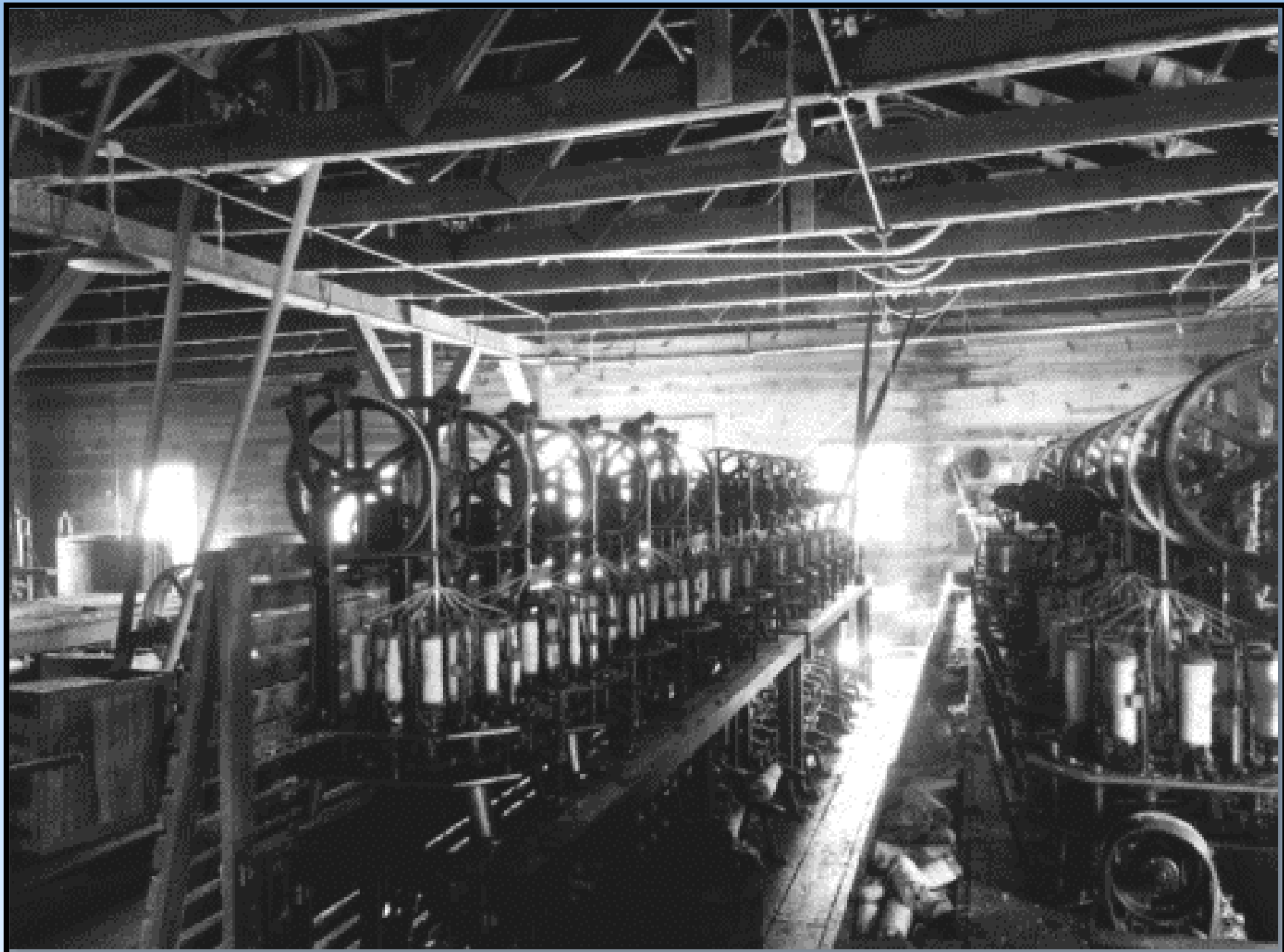
- I. CALL TO ORDER
- II. WELCOME, INTRODUCTIONS, VIRTUAL MEETING GUIDELINES
- III. BRIEF HISTORY OF RAYMARK
- IV. NATURE AND EXTENT OF CONTAMINATION LOCATED AT FERRY CREEK AREA
- V. SUMMARY OF THE CLEANUP DECISION (Sept 2016 Record of Decision or ROD)
- VI. OVERVIEW OF FERRY CREEK CLEANUP
- VII. SCHEDULE
- VIII. Q&A

# BRIEF HISTORY OF RAYMARK

# Raybestos - Manhattan Company



- Former 33-acre manufacturing facility
- Operated for 70 years (1919 to 1989)
- Made brake pads and clutch plates
- Liquid wastes discharged to unlined lagoons
- Lagoon sludge/spent solids used as fill material
- Fill material known as “Raymark Waste”
- Current location of Stratford Crossing













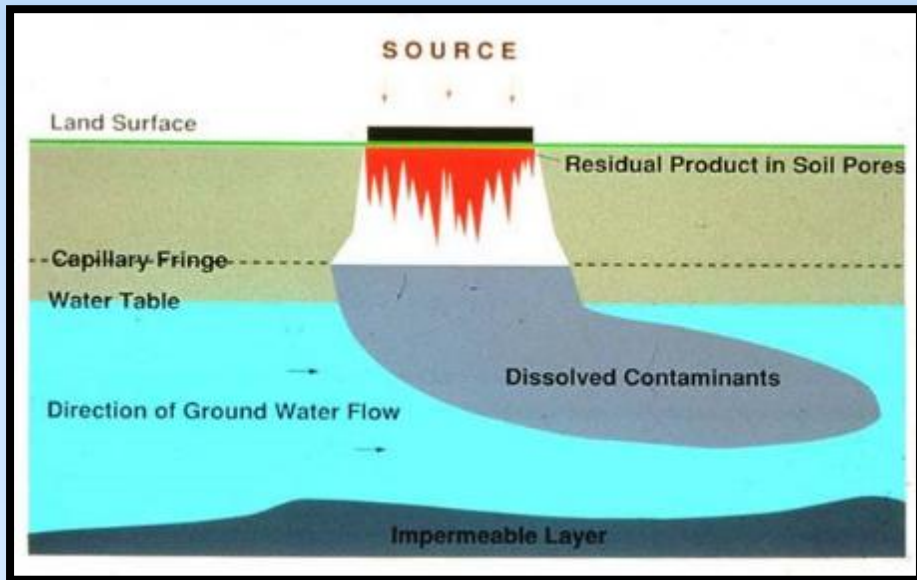




# How Was Contamination Spread?

## 1. Former Waste Lagoons

- Chemicals in lagoons released to surface water and groundwater



## 2. Fill Material

- Chemicals in dredged soils used as fill material



# EPA Definition of Raymark Waste?

*“**Raymark Waste** in soil is defined as a single soil sample containing **lead** above 400 parts per million (ppm) [or mg/Kg], **and asbestos** (chrysotile, only) greater than 1 percent, **and either copper** above 288 ppm **or polychlorinated biphenyls (PCBs)** (Aroclor 1268, only) above 1 ppm.”*



Often no visible evidence

**Raymark Waste Exposed at the Raybestos Memorial Ballfield**



Soil/Sediment Contaminants of Concern (OUs 3, 4 and 6)
Benzo(a)anthracene
Benzo(a)pyrene
Benzo(b)fluoranthene
Bis(2-ethylhexyl)phthalate
Dibenz(a,h)anthracene
Indeno(1,2,3-cd)pyrene
N-Nitroso-di-n-propylamine
Dieldrin
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor 1262
★ Aroclor 1268
Dioxin
Arsenic
Chromium
★ Copper
Thallium
★ Lead
★ Asbestos

# EPA's Response History

- **1993 Removal Action:** 500 sampled. Cleaned 46 props and Wooster Sch
- **1995:** Raymark added to Superfund List. 1<sup>st</sup> ROD to cap former facility
- **2011:** 2nd ROD issued to cap 576/600 East Broadway (Morgan Francis)
- **2016:** 3<sup>rd</sup> ROD issued OU2, OU3, OU4 and OU6 (consolidation remedy)
  - Excavate about 105,000 cubic yards of soil and sediment from OU3 and OU6.
  - Transport most waste to OU4 for consolidation and capping.
  - Began in Sept 2020. 20 properties completed.
- **Remaining Operable Units – OU5, OU7, OU8 and OU9**



OU1 – former facility	OU4 – former ballfield	OU7 – lower Ferry Creek
OU2 - groundwater	OU5 – Boat Club	OU8 - wetlands
OU3 – Upper Ferry Creek	OU6 – various properties	OU9 – Short Beach Park/landfill



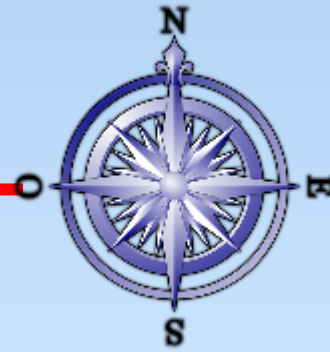
# NATURE AND EXTENT OF CONTAMINATION AT FERRY CREEK

# FERRY CREEK RELOCATED

1960



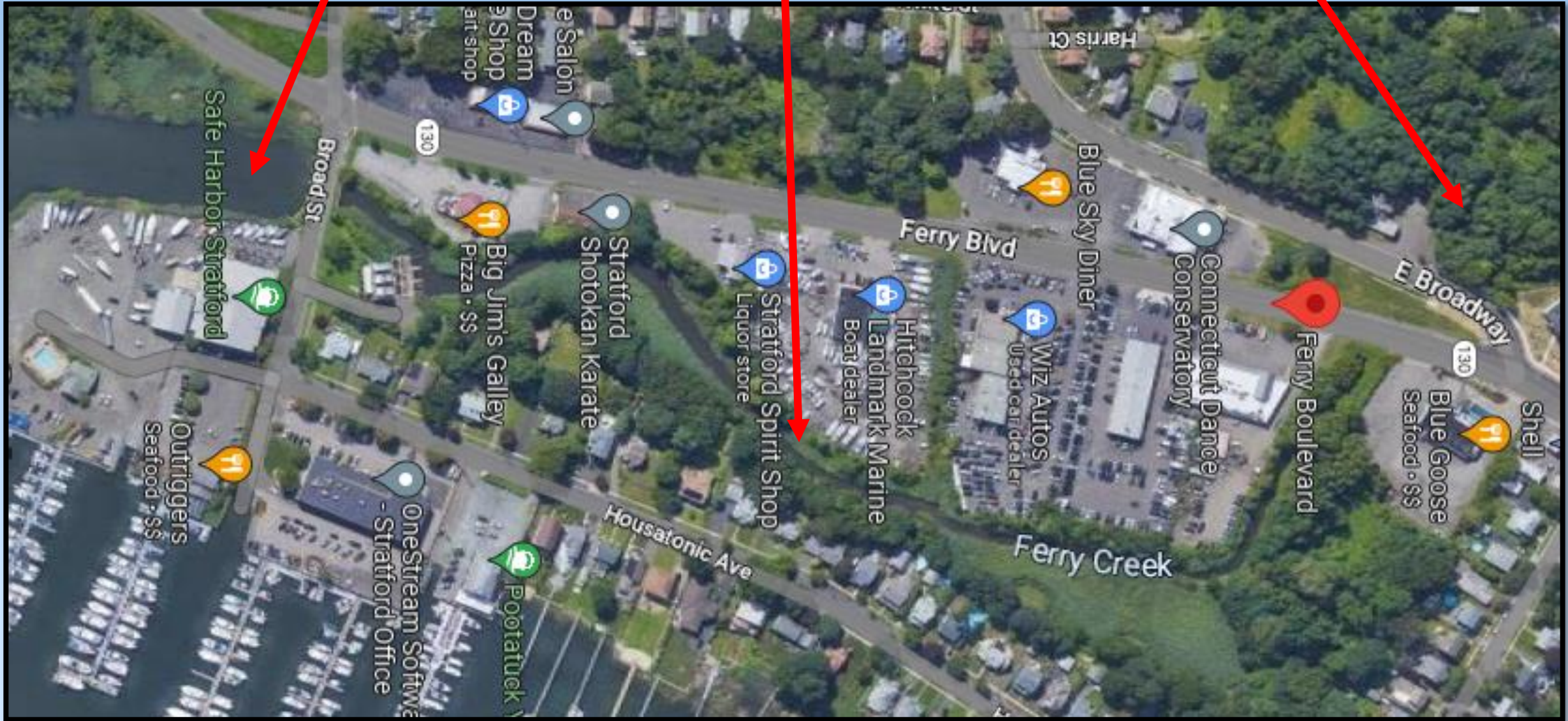
1985



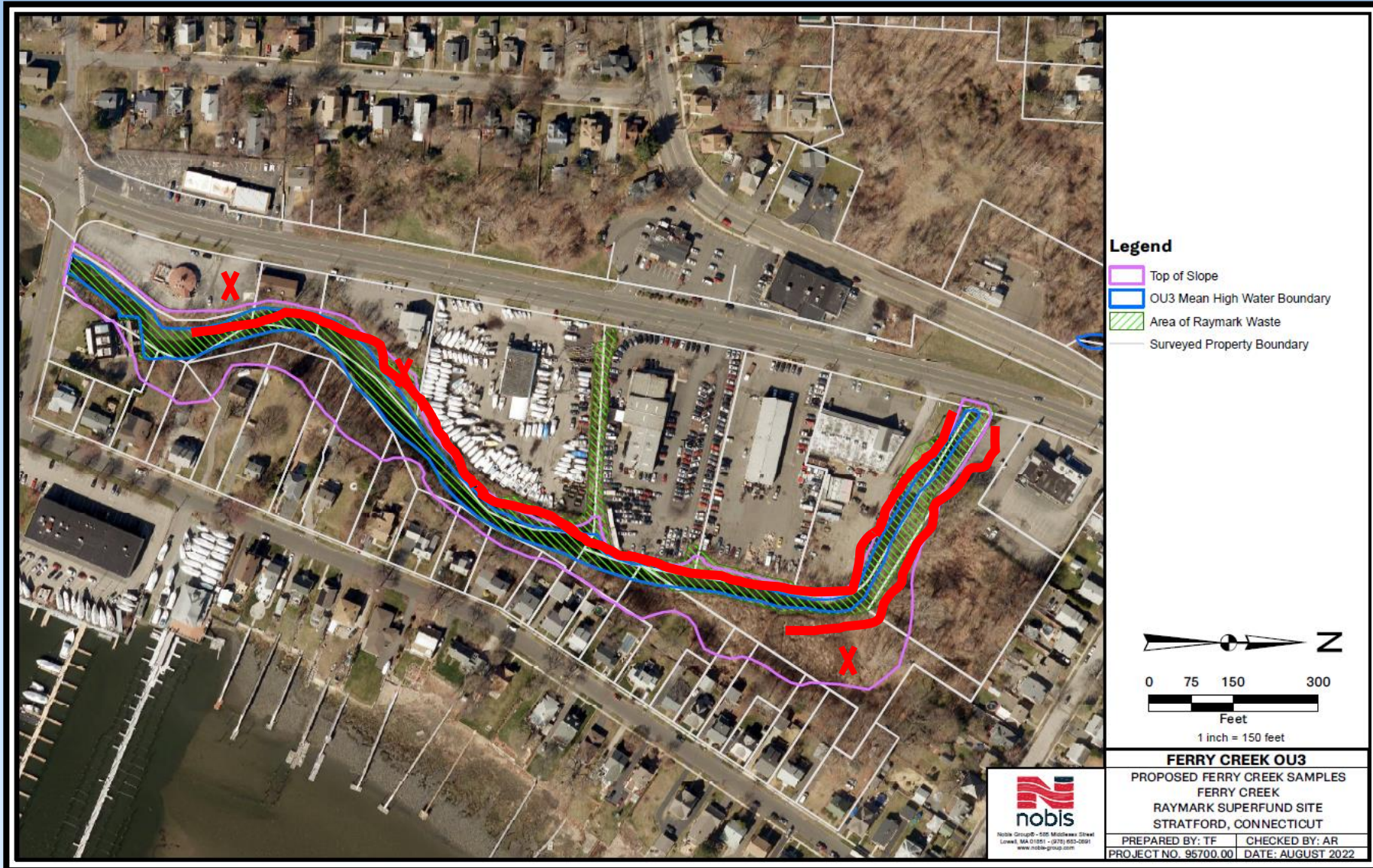
Lower Ferry Creek (OU7)

Upper Ferry Creek (OU3)

Upper Upper Ferry Creek (OU6)



# Ferry Creek Remediation (2023)



- Ferry Blvd to Broad Street
- About ½ mile
- Channel: 2ft of sediment
- Portions of banks (red): 4ft
- Upland portions X
- Total volume estimate:
  - Approx. 12,000 CY





# SUMMARY OF THE CLEANUP DECISION

# 2016 ROD for OU3/OU4/OU6

- Excavate about 100,000 cubic yards of soil and sediment
  - OU3 Ferry Creek channel sediment to 2 feet
  - OU6 properties, Ferry Creek banks, and wetland soil to 4 feet
- Truck most waste to OU4 for consolidation area
- Truck PHC waste (worst) to out of state facility (~ 10%)
- Backfill excavations and restore properties
- Estimated cost is \$95 million



# Ferry Creek Area Community Impacts

- Air quality
- Construction noise / vibration



- Truck traffic



1,000 trucks trips (2-3/hour)

- Mitigating Impacts

- Wetting
- Air monitoring



# TRUCKS/CONTAINERS



- 1.) Tight Cover
- 2.) Full Gasket



# Why is Cleanup Necessary?

- Buried waste near the surface
- Erosion will continue to expose more waste
- Future workers/anyone digging
- Safe and effectively manage the consolidated area






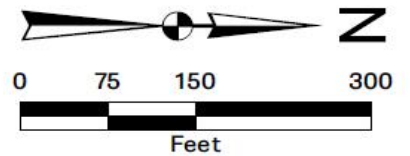
- 
- “Actionable” exposure risks
  - EPA required to mitigate risks

# Ferry Creek (OU3) Remediation



**Legend**

-  OU3 Mean High Water Boundary
-  Area of Raymark Waste
-  Surveyed Property Boundary



1 inch = 150 feet

**FERRY CREEK OU3**

PROPOSED FERRY CREEK SAMPLES

FERRY CREEK

RAYMARK SUPERFUND SITE

STRATFORD, CONNECTICUT

PREPARED BY: TF

CHECKED BY: AR

PROJECT NO. 95700.00

DATE: MARCH 2023



# Ferry Creek (OU3) Cleanup Approach

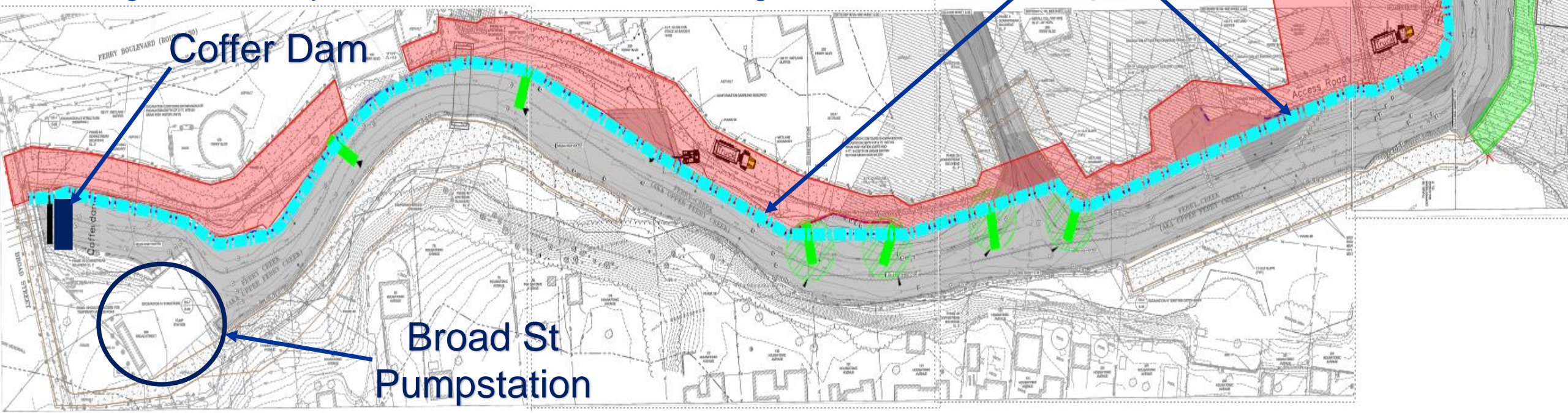
- Start early May - site preparation, clear for access along commercial side
- Bypass creek flow for the entire stretch of the remediation
- Install Ferry Creek bypass pipe (twin 24" HDPE) along the creek banks
- Cofferd Dams will be installed upstream and downstream
- Install pumps for creek bypass: 2, 9K GPM pumps (1 operational, 1 for backup)
- Intake upstream, discharge downstream
- Remediate the creek starting upstream, work downstream in sections of 50'-100'
- All excavations will be backfilled each day – Approximately 12K CY
- Remediation for Ferry Creek is expected to be 8-10 months
- Engineered safety controls and robust air monitoring at all times

Pump Intake

Coffer Dam

Earthen Dam

Creek Bypass  
Pipe



Coffer Dam

Broad St  
Pumpstation



Typical HDPE Pipe Sections



Waste transport to OU4 consolidation area



# OU4 consolidation area



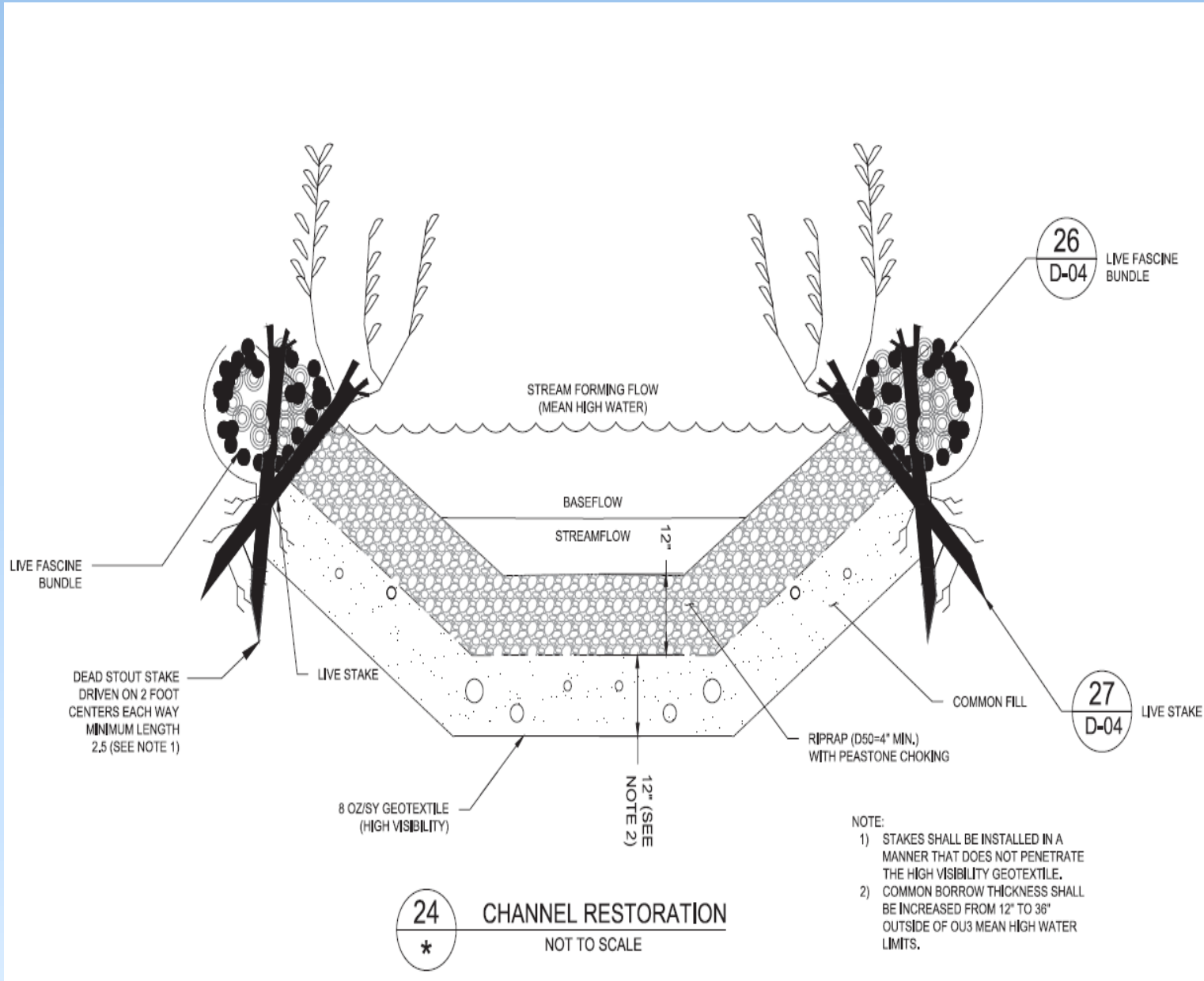
- Former Raybestos Memorial Ballfield
- Historically a low-lying area that was filled with approximately 100K CY of Raymark Waste
- Consolidation remedy entails placing 100K CY on top of existing waste
- Covering with impermeable engineered cap
- Design to support post closure use

# Ferry Creek (OU3) Restoration

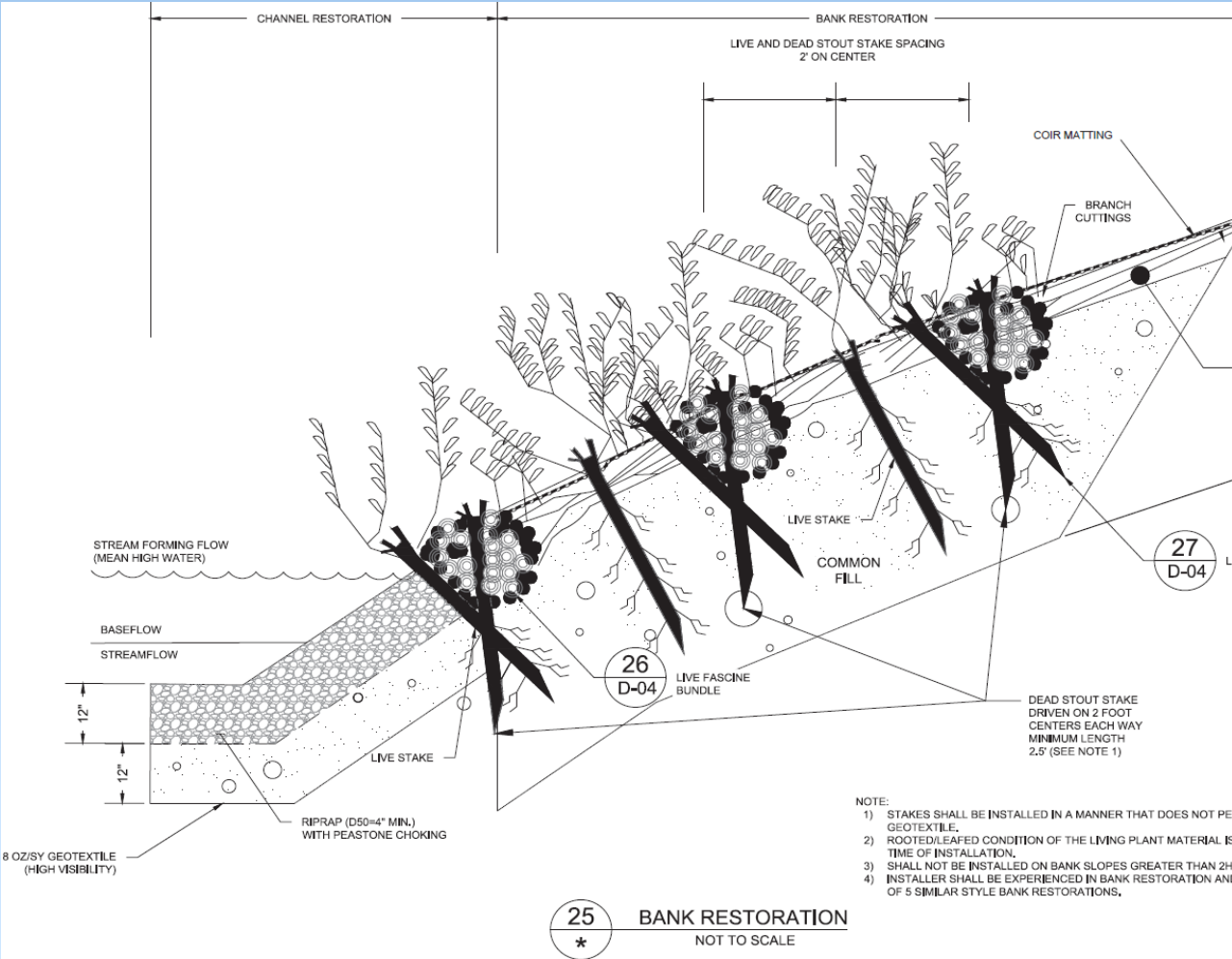
- Excavations will be backfilled daily – excavation is expected complete by this winter
- The creek bed will be restored with clean fill and rip rap bottom
- Vegetated / protective stream bank restoration
- Robust tree and shrub plantings along top of bank on the commercial side of creek
- Top of bank planting / landscape design in development
- Planting restoration Fall 2023; Follow up Spring 2024 (if necessary)



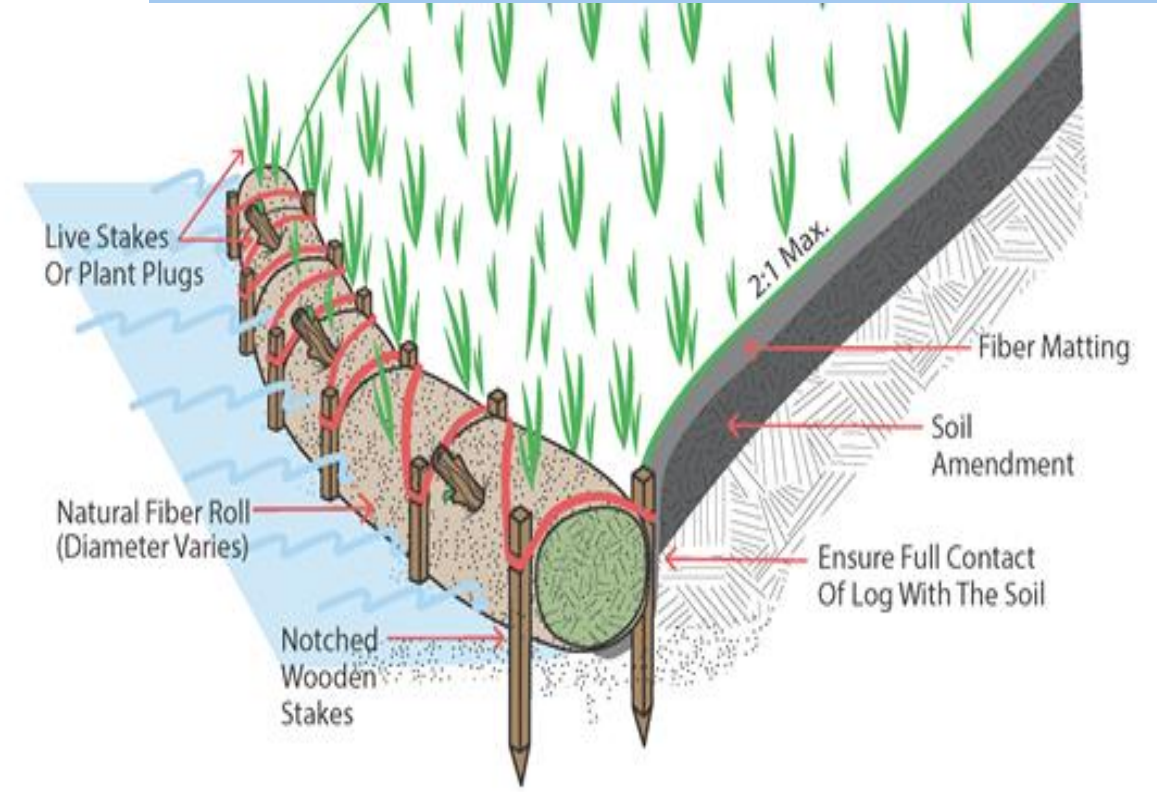
# Ferry Creek (OU3) Channel Restoration



# Ferry Creek (OU3) Bank Restoration



- NOTE:
- 1) STAKES SHALL BE INSTALLED IN A MANNER THAT DOES NOT PENETRATE THE HIGH VISIBILITY GEOTEXTILE.
  - 2) ROOTED/LEAFED CONDITION OF THE LIVING PLANT MATERIAL IS NOT REPRESENTATIVE AT THE TIME OF INSTALLATION.
  - 3) SHALL NOT BE INSTALLED ON BANK SLOPES GREATER THAN 2H:1V.
  - 4) INSTALLER SHALL BE EXPERIENCED IN BANK RESTORATION AND HAVE INSTALLED A MINIMUM OF 5 SIMILAR STYLE BANK RESTORATIONS.



# AIR MONITORING

# Raymark Air Monitoring Program

- Dust monitoring protects workers and abutting community
  - Dust Action Levels based on property and type of work
  - Action Levels = 0.014 (OU4) and 0.019 mg/m<sup>3</sup> (OU6) when Raymark Waste handled.
  - Action Level = 0.150 mg/m<sup>3</sup> when only clean soil handled
- Chemical samples collected for lab analysis when Raymark Waste is handled
  - Personnel and Perimeter Monitoring
- Vibration monitoring conducted
  - STOP Work = 0.5 inches/second

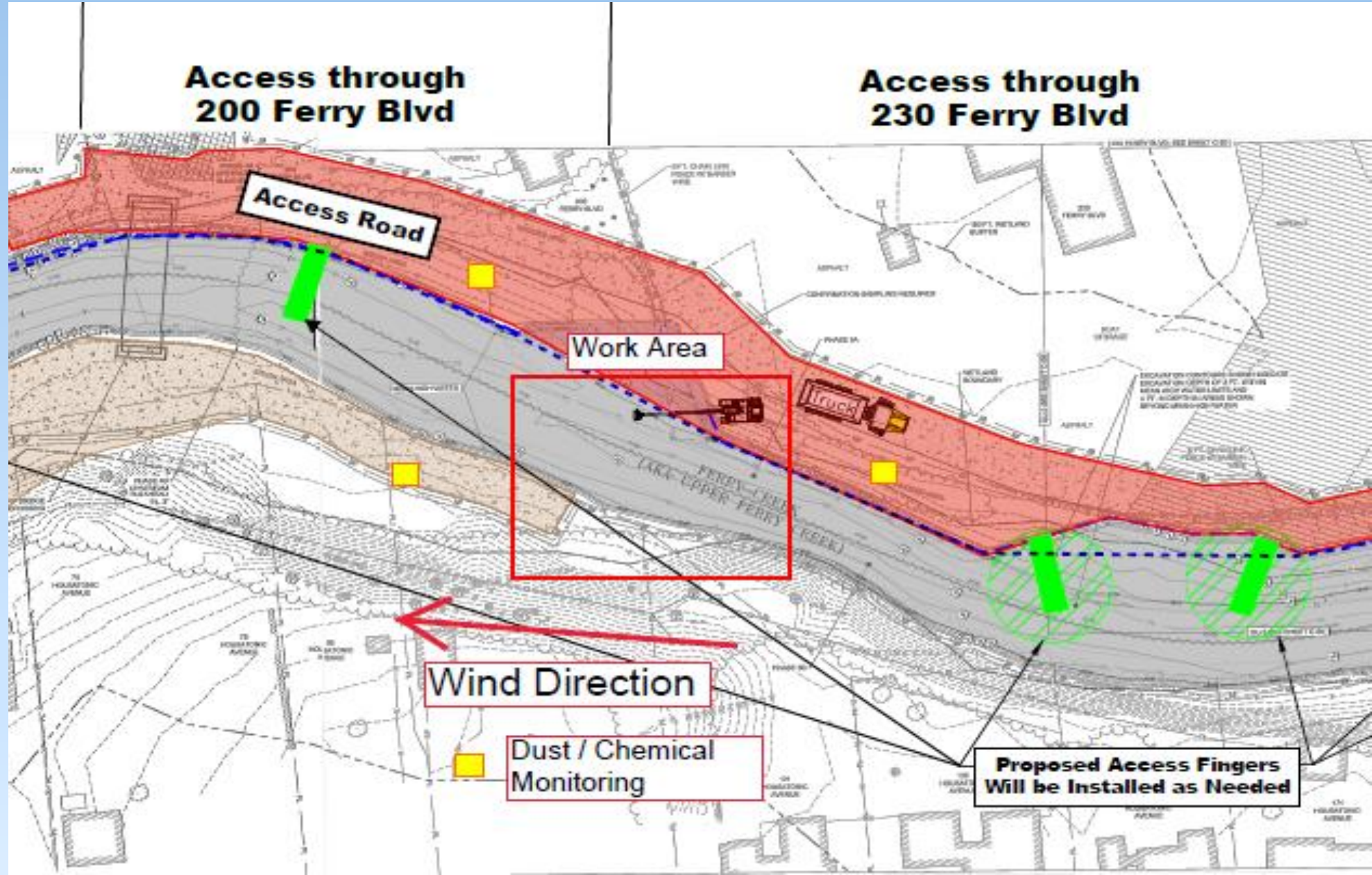


Dust and Vibration Monitoring Stations



Personnel Monitoring

# Raymark Air Monitoring Program



# ENGINEERING CONTROLS

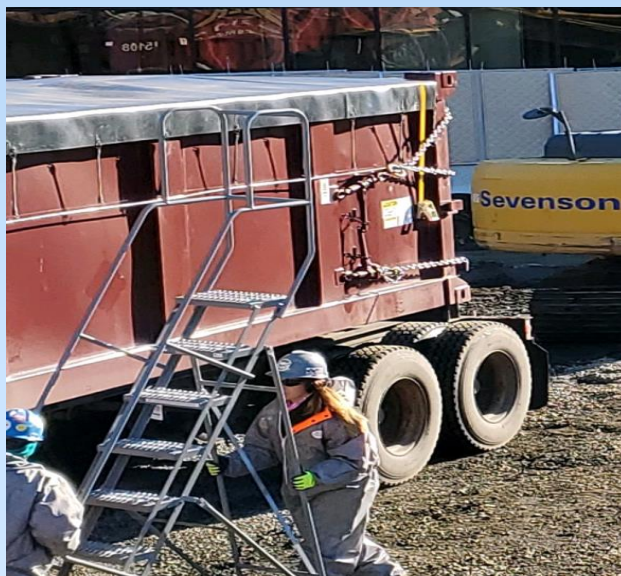
- Apply water, material always wet



- Perimeter concrete barrier, steel fence, heavy duty sound blanket



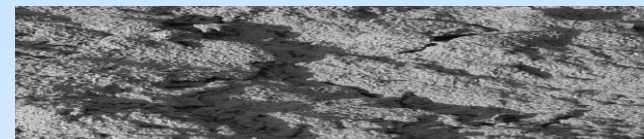
- Erosion Control



- Tightly sealed trucks / containers with gasketed gates



- Real time air monitoring

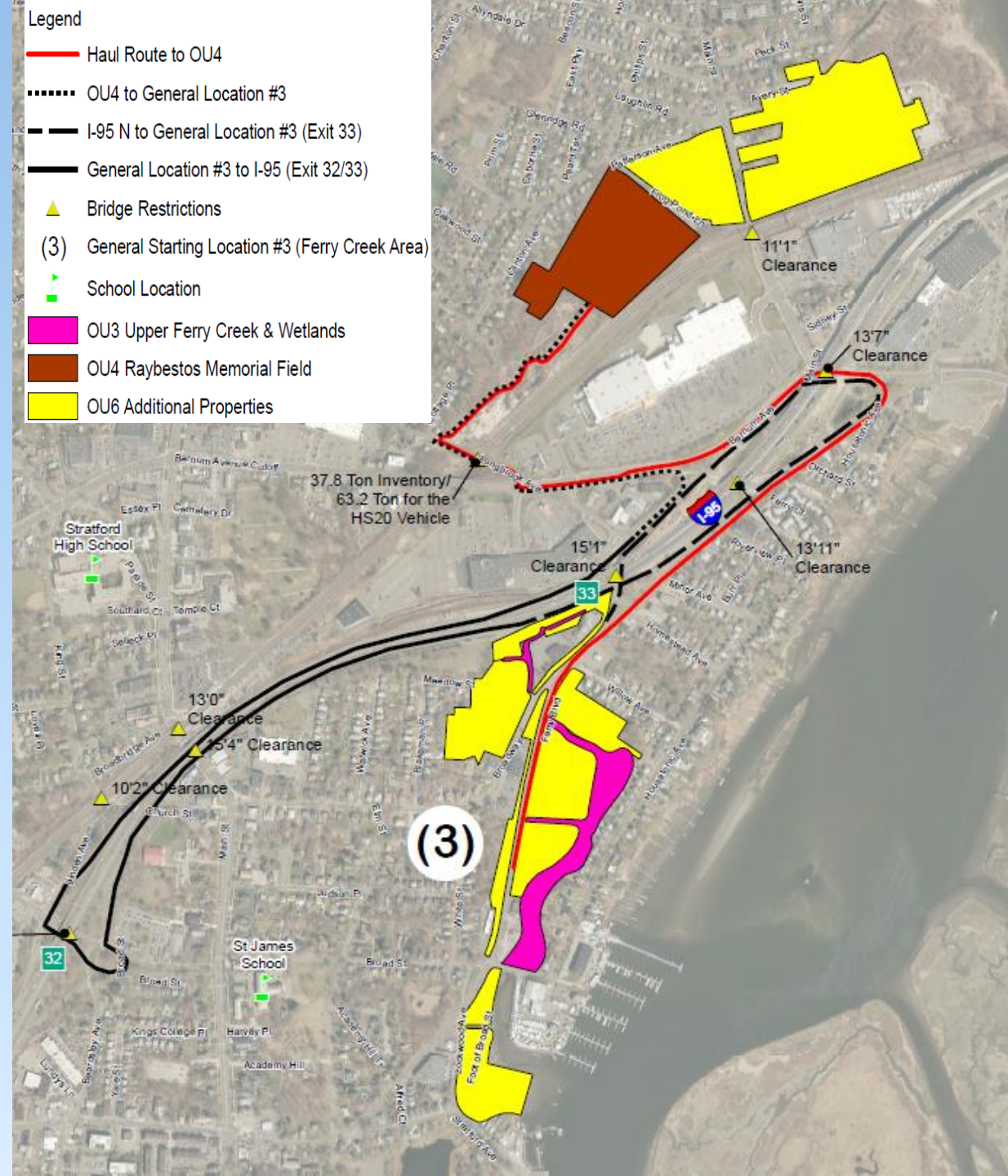


- Posi shell cover system



# HAUL ROUTE

- Incorporated lessons learned
- Trucks sealed, washed, and labeled
- Coordination with other construction projects
- Route:
  - Ferry Blvd
  - Barnum Ave cutoff
  - Longbrook Ave



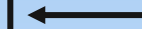
# OVERALL PROJECT SCHEDULE

# Consolidation Remedy Schedule

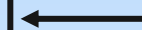


- **OU6**
  - Cleanup Ongoing - Beacon Point
  - 2023 Summer – Lockwood Ave
  - 2023 Fall – Blasius Dealership
  - 2023-2024 Winter/last: EPA Office/Former Ski Shop
  - TO BE SCHEDULED: 3<sup>rd</sup> Ave ROW and 635 East Broadway
- **OU3**
  - 2023 April to Dec : Ferry Creek (East Broadway to Broad St)
- **OU4**
  - 2024: Construct cap

Construct Stormwater And Pump Station



Morgan Francis Design



# Next CAG Meeting March 29<sup>th</sup> at 6:30pm

For more information about the Raymark Superfund Site, including copies of presentation slides, documents and meeting minutes, please visit: [stratfordct.gov/raymark](http://stratfordct.gov/raymark)

# Thank you for joining!

- Visit [stratfordct.gov/Raymark](http://stratfordct.gov/Raymark) for updates, contact information, air monitoring results, meeting dates, meeting recordings and Powerpoint slides
- Email Alivia at: [acoleman@townofstratford.com](mailto:acoleman@townofstratford.com) with further questions, concerns, feedback or to sign up for email distribution list.