



Exposed Sewer Pipe and Manholes

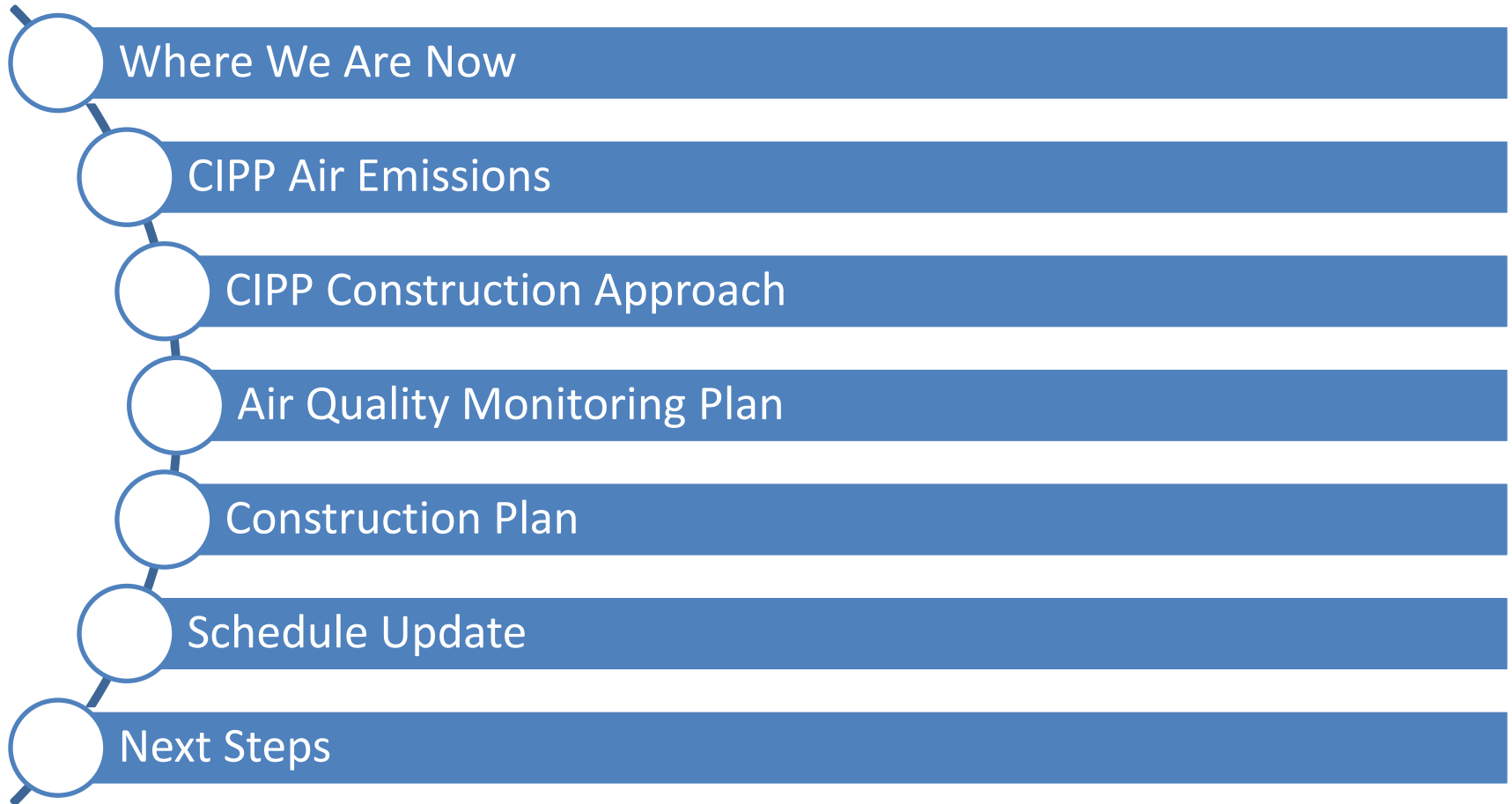
Creek Bed Sewer Repair and Rehabilitation Project

Soapstone Valley Park

April 19, 2022

Presentation to ANC 3F

Our Discussion



Where We Are Now

Project provides multiple benefits to community and environment

Water curing process with No-VOC, styrene-free resin

Third party air quality monitoring

Coordinating with DOEE

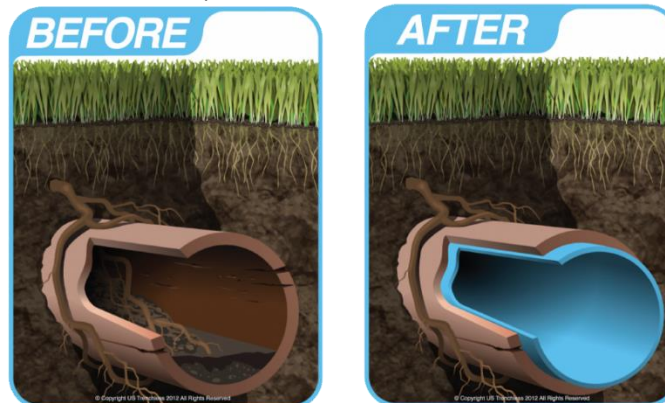
Project will generate data for DOEE to assess requirement for future CIPP work

Cured-in-Place-Pipe (CIPP) Rehabilitation

- CIPP installation involves the insertion of an uncured tube of resin into the existing, defective pipe
- Water and air are used to expand the tube
- Steam, water or ultraviolet light are used to harden (cure) the tube creating a liner that adheres to the wall of the “damaged” pipe
- CIPP has the potential to generate residual chemical releases / air emissions and odors during the installation process



Animation Courtesy of IPR Solutions

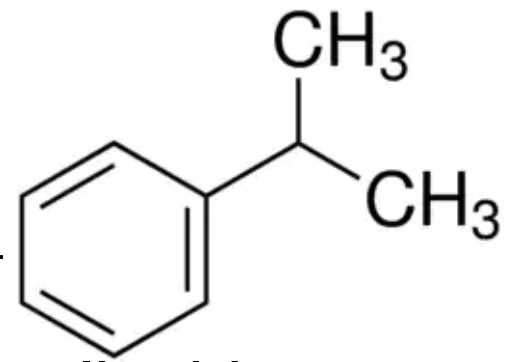


CIPP AIR EMISSIONS

Air Emissions

- Resin material contains no VOCs
- Curing agent contains up to 2.5% cumene, the majority (90-95%) will be consumed during curing process
- Cumene is the predominant compound anticipated to be present based on review of the resin and activator Safety Data Sheets
- Cumene likely to be present at the liner transport truck (after doors initially open) and at the terminal discharge manhole

What is Cumene?



- Cumene (isopropylbenzene) is colorless liquid at room temperature
- At certain thresholds, cumene is considered hazardous with inhalation health risks
- When exposed to air, cumene has a pungent odor
- Odor threshold (0.008-0.132 ppm) is much lower than OSHA and EPA thresholds (50 ppm over 8 hours)

Emissions Management Plan

- DC Water construction implementation measures to minimize impacts to workers, the public, and the environment.
- Air monitoring to verify compliance with OSHA and EPA thresholds.
- Community Outreach Plan
- Emergency Response Plan

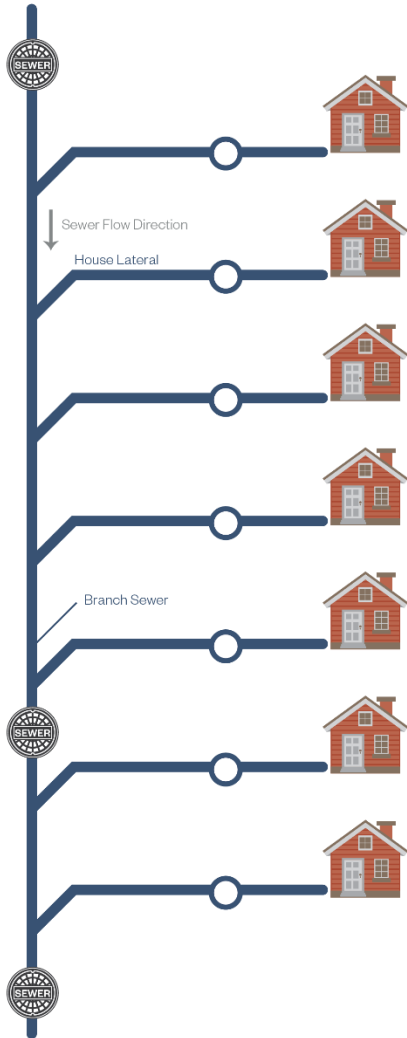
CIPP CONSTRUCTION APPROACH

Scenario 1

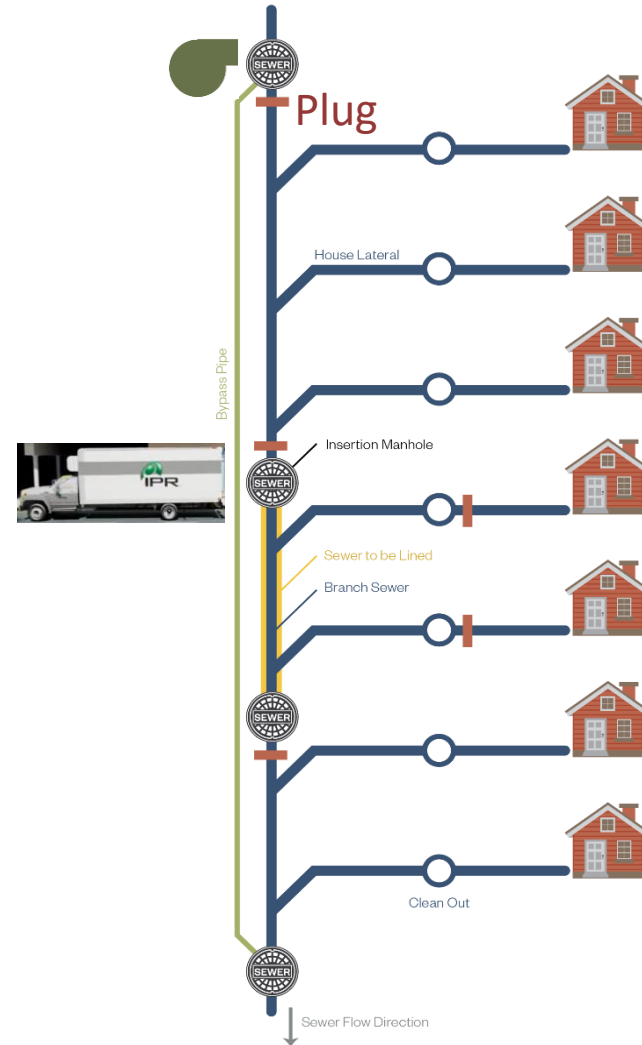
Existing Sewer System

CIPP Construction Approach

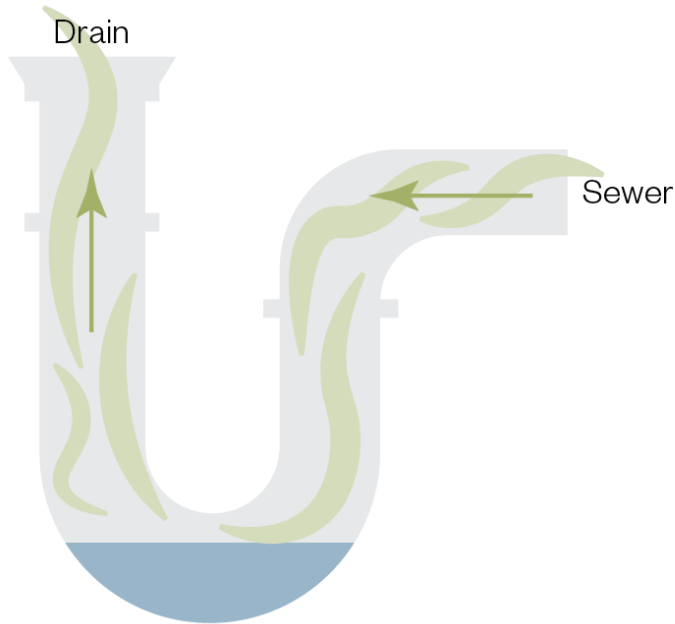
Branch Sewer with Direct House Lateral Connections



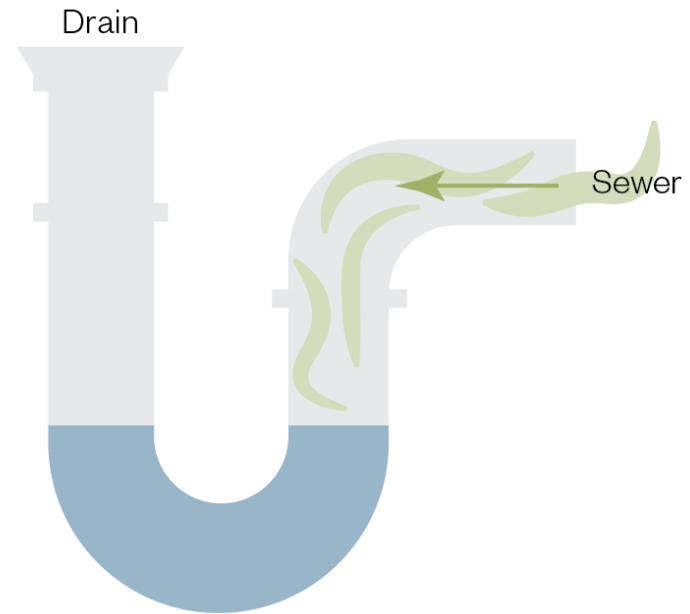
CIPP Branch Sewer with Direct House Lateral Connections



P-Traps Are Important Tools to Prevent Sewer Gases and Odors From Entering the Home



Dry or leaking drain/p-trap:
Sewer Gases are NOT contained



Working drain/p-trap:
Sewer Gases are contained

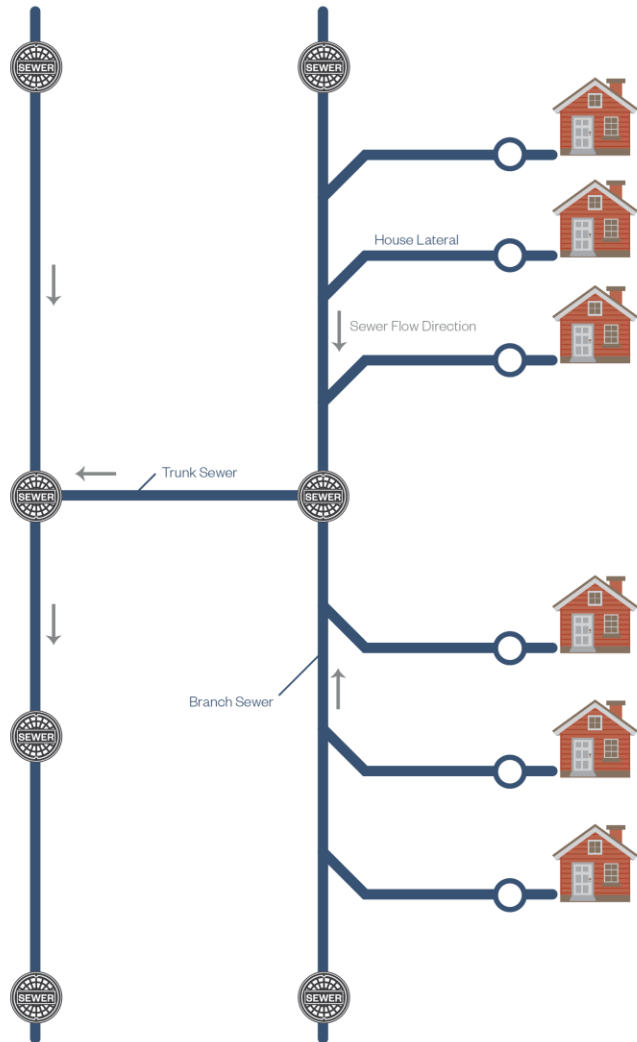
As an added precaution, during CIPP homeowners can plug and fill sinks and tubs with water.

Scenario 2

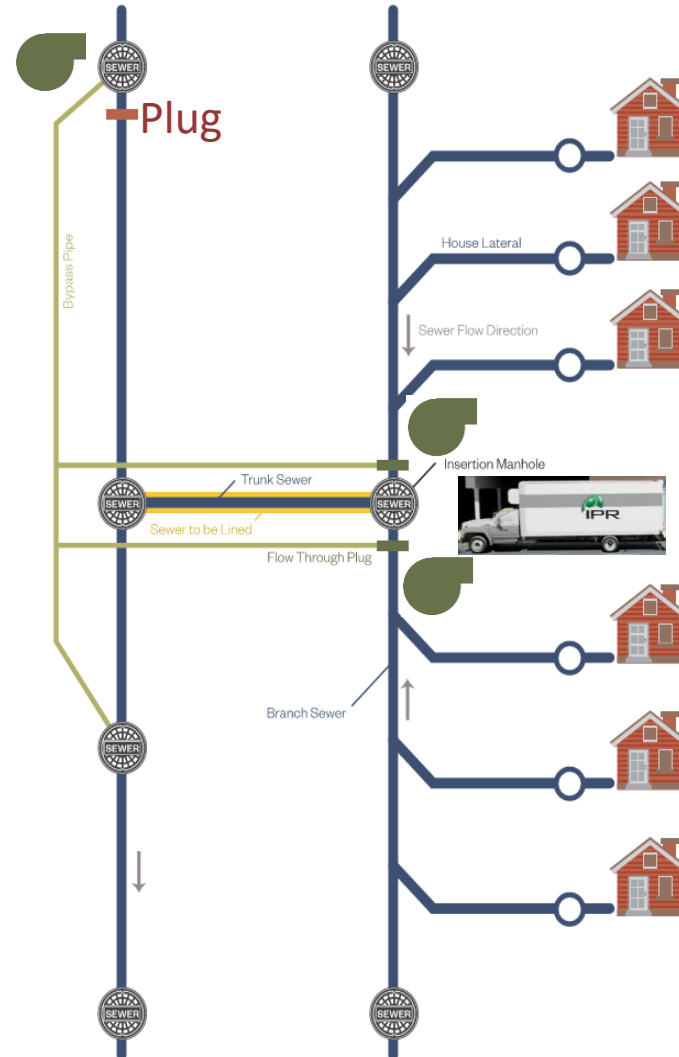
Existing Sewer System

CIPP Construction Approach

Branch Sewer with No Direct House Lateral Connections



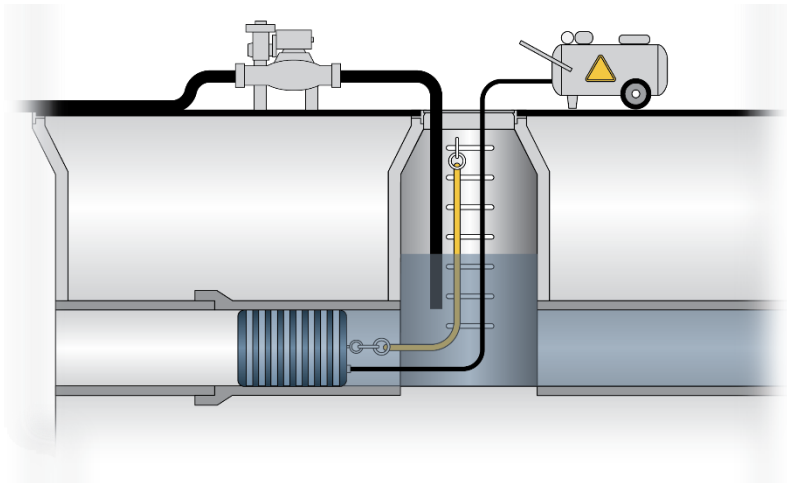
CIPP Branch Sewer with No Direct House Lateral Connections



Bypass Pumping Scenarios

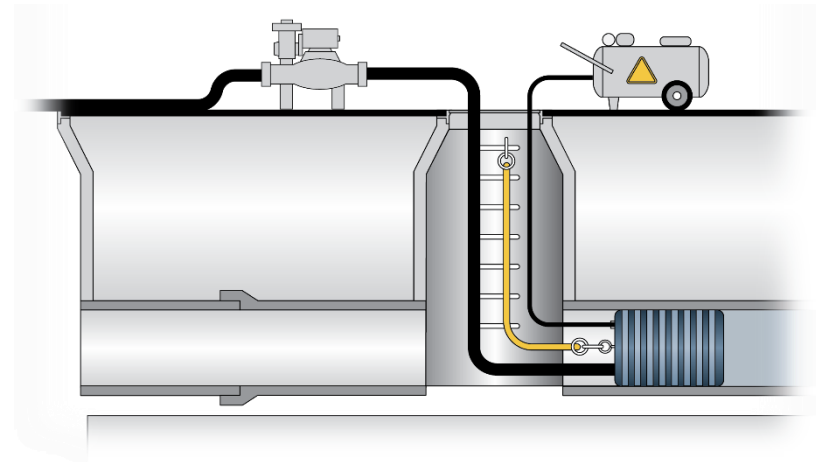
Scenario 1:

Manhole used as wet well



Scenario 2:

Flow-through plugs used for bypass pumping

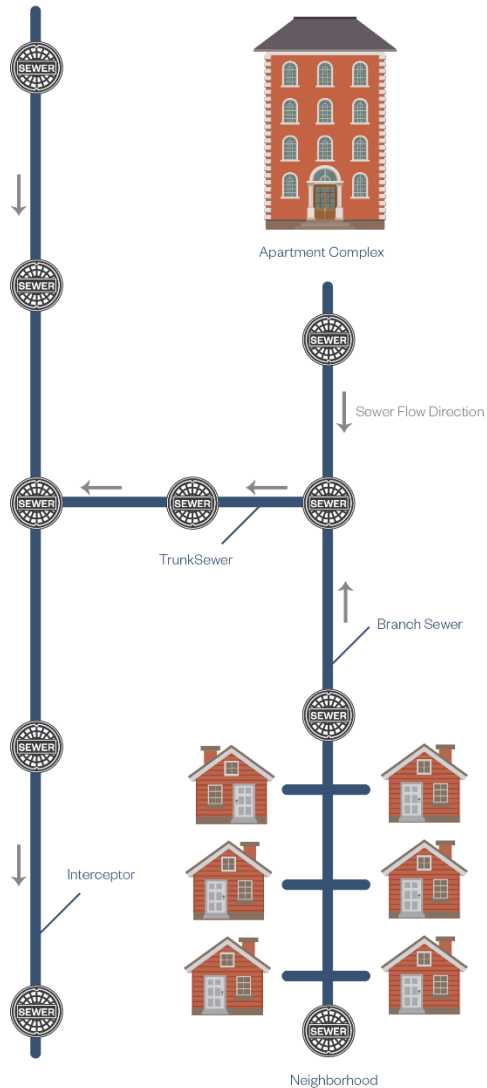


Scenario 3

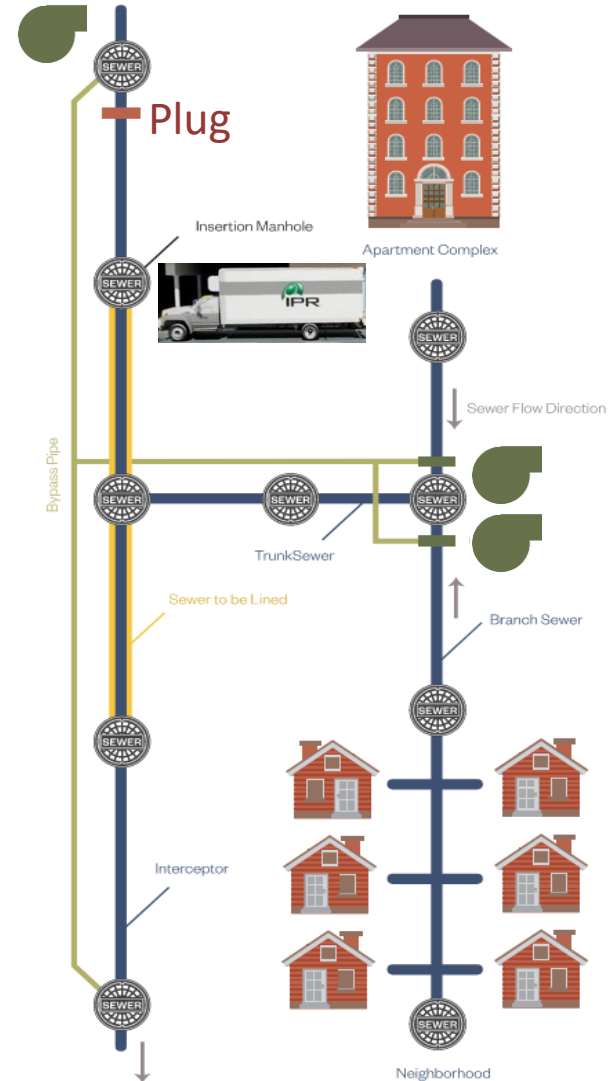
Existing Sewer System

CIPP Construction Approach

Branch Sewer with Trunk Sewer Connection



CIPP Branch Sewer with Trunk Sewer Connection



AIR QUALITY MONITORING PLAN

Air Quality Monitoring

Workers

- Closer to work – higher health-based risk
- OSHA Permissible Exposure Level (PEL)
- Measurements performed in the work zone
- Actionable threshold

Community

- Further from work - lower health-based risk
- EPA Acute Exposure Guideline Levels (AEGGL)
- Measurements performed at perimeter of work zone
- Actionable threshold

Environmental Release

- Quantify emission rates

Testing and Monitoring Approach



PID

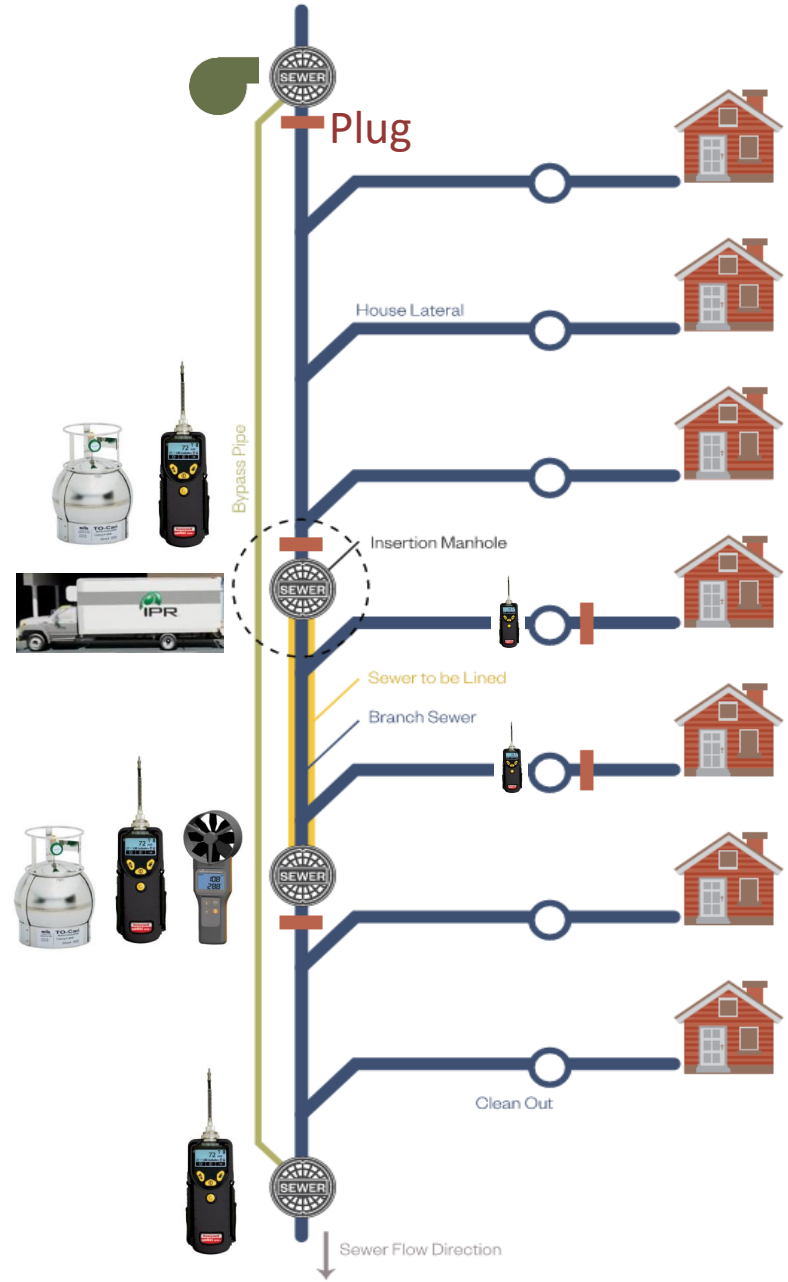


Canister



Anemometer

CIPP Branch Sewer with Direct House Lateral Connections



Air Quality Monitoring

What's Next?

- Submit Air Quality Monitoring Plans to DOEE
- DC Water will coordinate with DOEE to determine an actionable threshold below the OSHA and EPA regulatory threshold
- 3rd Party Contractor will implement Air Quality Monitoring Plan
- Results will be reported to DOEE and shared with the community
- Results of air quality monitoring will be used to inform future construction approach and data gathering efforts

CONSTRUCTION PLAN


Construction Implementation Measures Minimize Impacts to Workers, the Community and the Environment

Construction Implementation Measure	Workers	Community	Environment
Project Hotline	✓	✓	✓
Air Quality Monitoring	✓	✓	✓
Complete CIPP Prep Work at Remote Facility	✓	✓	✓
Water Cure with No-VOC, Styrene-Free Resin	✓	✓	✓
Install Wet Well Barrier	✓	✓	✓
Complete Work In Accordance with Permits and Approvals	✓	✓	✓
Keep CIPP Truck Door Closed When Possible	✓	✓	
Engage FEMS in Advance of Construction	✓	✓	
Maintain 15-foot Barrier Around Inversion Manhole	✓		
Distribute information about P-Traps		✓	
Phase CIPP Work from Downstream to Upstream			✓
Install Erosion and Sediment Controls			✓

Community Outreach Plan

- Monthly communications and updates on schedule
- At least 7 days prior to CIPP rehabilitation work, homeowners/businesses will receive a doorhanger
 - Provide an overview of work to be completed
 - Suggest methods for enhanced ventilation and P-trap maintenance
 - Remind homeowners and businesses of Project Hotline number
- On-site representative to respond and discuss concerns with the public
- Publish results of the air quality monitoring for the public
- Ensure Safety Data Sheets with complete lists of chemical information are readily available

Project Hotline Number: (724)-993-3219


DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY

**7 DAY NOTICE
WORKING IN YOUR NEIGHBORHOOD**

DC Water is rehabilitating the sewer line in your neighborhood. We will be performing work that will affect your property on the following date: _____

This work will temporarily interrupt water and sewer service at _____ AM / PM for approximately _____ hours. We suggest you collect a supply of water in advance for drinking and cooking purposes. This temporary interruption of your water supply and sewer service will permit rehabilitation of the sewer system and reopening of the individual house service connection. During the specified time period, we request that you do not perform the following:

- Do not wash clothes or dishes.
- Do not take showers or baths.
- Do not flush toilets.

We may be working in public space at the property line if we need to install a cleanout in your front yard.

If you have a sump pump located in your basement, you must contact the DC Water Construction Manager listed below to have this inspected prior to the start of work.

We expect there will be locations along your street where the contractor's equipment creates a temporary need to adjust driving or parking patterns.

DC Water's contractor will perform the work, and an inspector from the Authority will be present during the rehabilitation.

During certain phases of the work, you may detect an odor. Prior to the start of work, sources of the odor may come from an open door or window, HVAC units or a dry floor drain (also referred to as a P-trap). As a cautionary measure to prevent odors from entering your building from the sewer line, check the floor drain in your basement to see if water is present in the bottom of the drain. If water is not present, begin pouring water into the drain until it becomes visible.

For more information, please contact:
DC Water Contractor: _____
DC Water Construction Manager: _____
DC Water 24-Hour Emergency Hotline: 202-612-3400
DC Water Customer Service: 202-354-3600

DCWATER.COM

Emergency Response Plan

- If the actionable threshold is exceeded, immediate actions will be:
 - Assess the situation
 - Determine next steps and communicate with relevant parties (e.g., residents, workers, contractor, DC Water Safety Manager, DOEE)
 - If warranted, contact appropriate authorities
 - Submit air quality monitoring results to DOEE

Project Hotline Number: (724)-993-3219

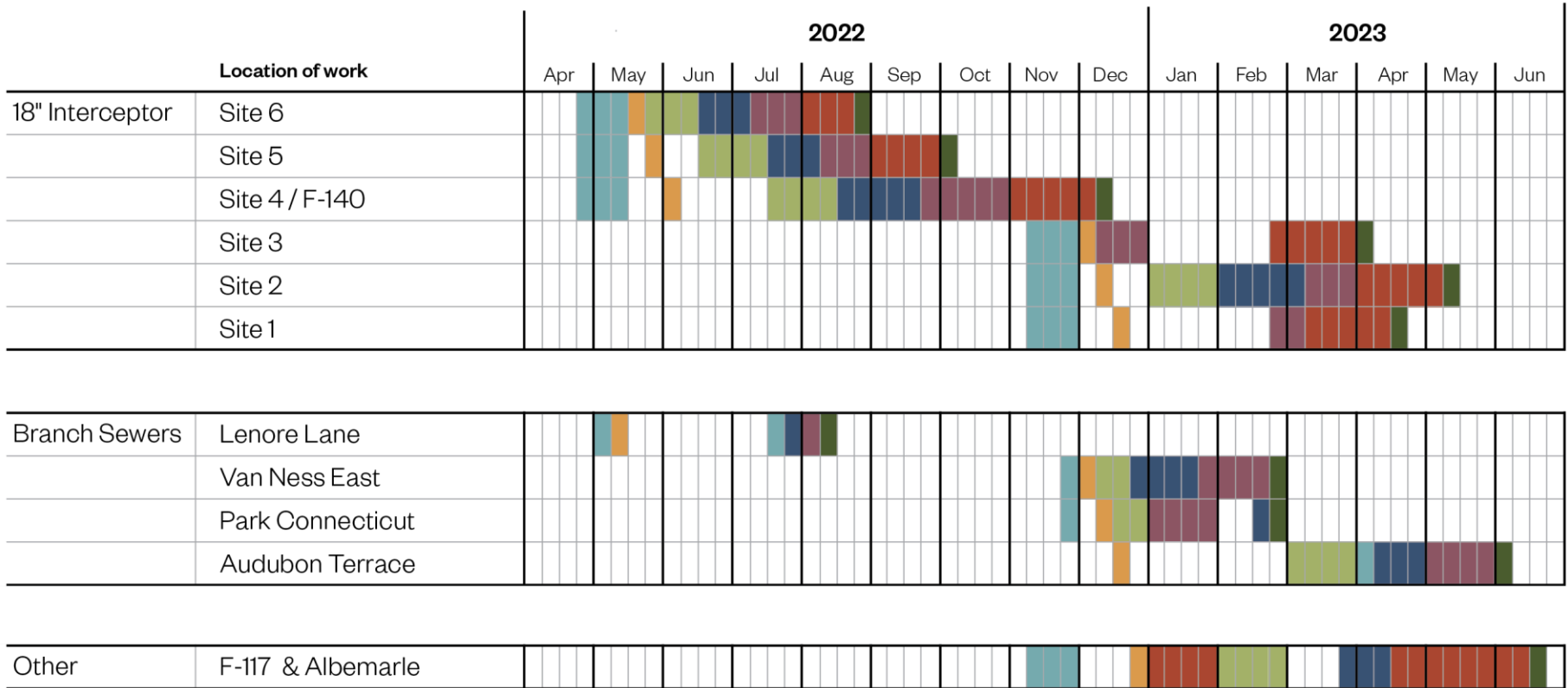
SCHEDULE UPDATE

Project Area



Schedule

Anticipated Overall Timeline of Activities



- KEY**
- Bypass
 - CCTV
 - Manufacture Liner
 - Manhole Rehab
 - CIPP
 - Asset Protection*
 - Restoration

*Asset Protection includes MS4 repair work

Subject to weather, site conditions and availability of product acquisition

* Timeline: Weather & Site Conditions dependent

Next Steps

- Submit Air Quality Monitoring Plans to DOEE
- Coordinate with DOEE to determine an actionable threshold below the OSHA and EPA regulatory threshold
- Finalize detailed SOP for our Emergency Response Plan
- Execute contract with Water Research Foundation to obtain 3rd Party Air Quality Monitoring Contractor
- Continued communication with ANC and community members



Q&A