



Maryland Avenue Stormwater Project

Project Update & Construction Schedule

Howe Street & Shadyside Community

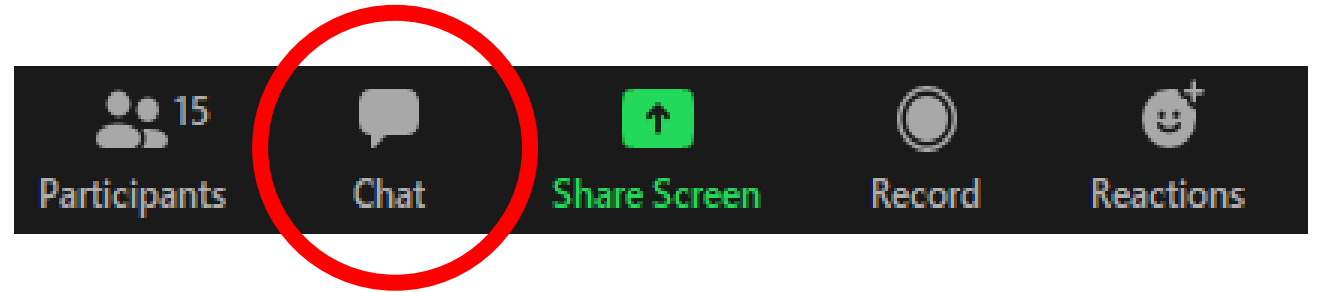
February 7, 2022

Agenda

- Welcome and Introductions
- Stormwater Overview
- Project Description
- Pause for Questions
- Construction: What to Expect
- Question and Answer



Zoom Overview



- **During Presentation**

- Participants will be muted
- To ask a question use the chat box below

- **How to Use Chat in Zoom**

- Click on the chat icon that looks like a cartoon bubble at the bottom of screen
- Type question in dialogue box then press enter to send
- All attendees will receive your question

- **When Presentation Pauses or Ends**

- We will respond to questions individually
- We will allow attendees to unmute microphones (press *6 on phone) to enable verbal Q&A

Project Team

Project Owner: PWSA

- **Construction Project Manager:** Marco Sciulli
- **Design Project Manager:** Ryan Quinn
- **Education and Outreach Associate:** Elaine Hinrichs


Project Designer: Bucharthorn, Inc.

- **Project Manager:** Ron Zagrocki

Construction Firm: Frank J. Zottola Construction

- **Construction Manager:** TJ Johnson
- **Assistant Construction Manager:** Ryan Huber

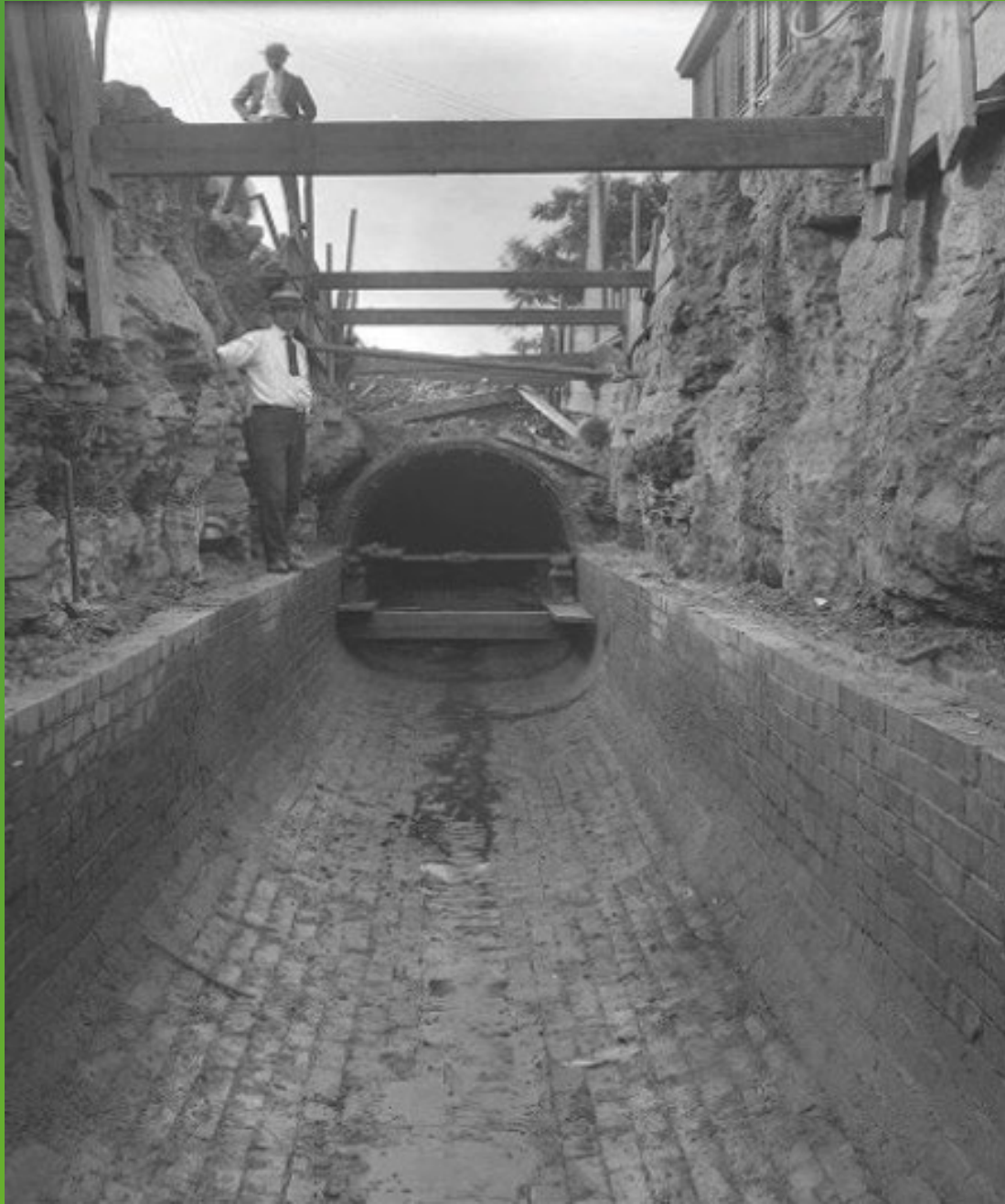
Construction Management Firm: Anser Advisory

- **Project Manager:** Bryan Martucci
 - **Project Manager:** Nick Armstrong
 - **Construction Inspector:** Nick Droz
- 



Stormwater Overview

*Pittsburgh has a stormwater
management problem.*



At Turn of 20th Century

Pittsburgh embarked on its biggest infrastructure improvement campaign, building sewers, water lines, roads, and power lines that created the city we know today.



We Have a Stormwater Management Problem

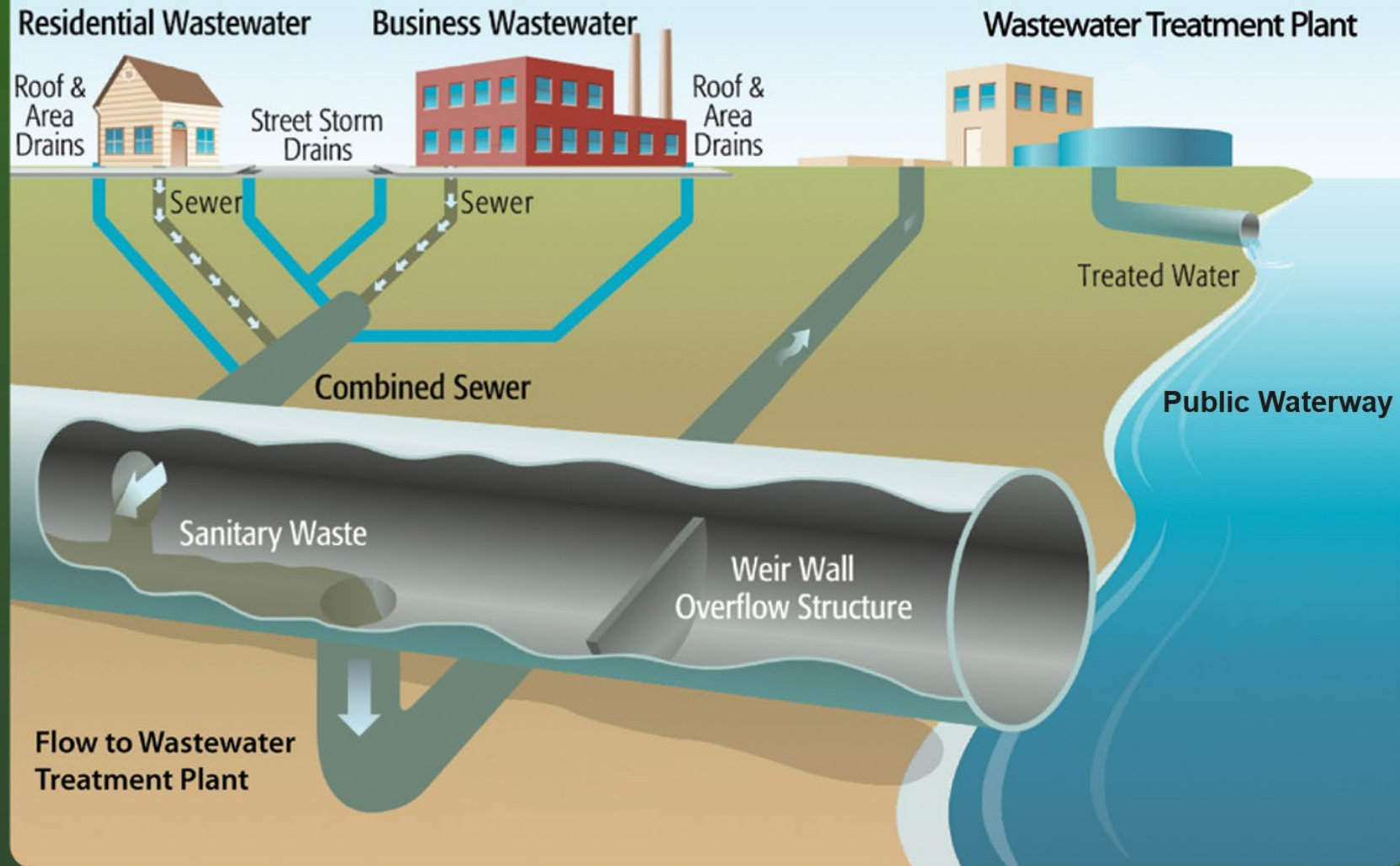
- Sewers that are 80 – 100+ years old
- Increasing severe and intense rainfall
- Poor water quality
- Combined Sewer Overflows (CSOs) and Sanitary Sewer Overflows (SSOs)
- Illicit discharges – sewage in storm sewers
- Surface flooding
- Basement sewage flooding

Stormwater Problems

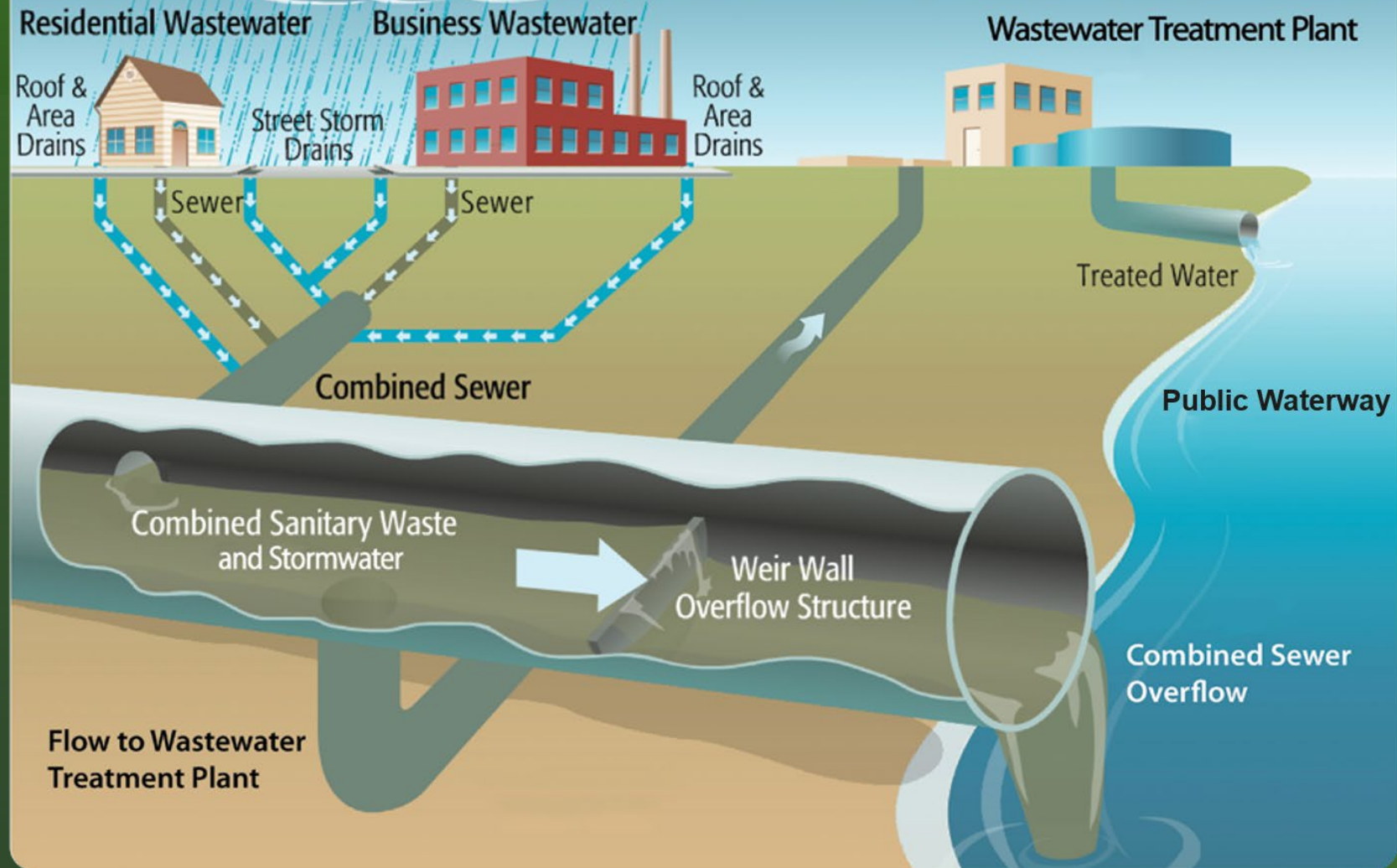


COMBINED SEWER SYSTEM

Dry Weather



COMBINED SEWER SYSTEM Wet Weather



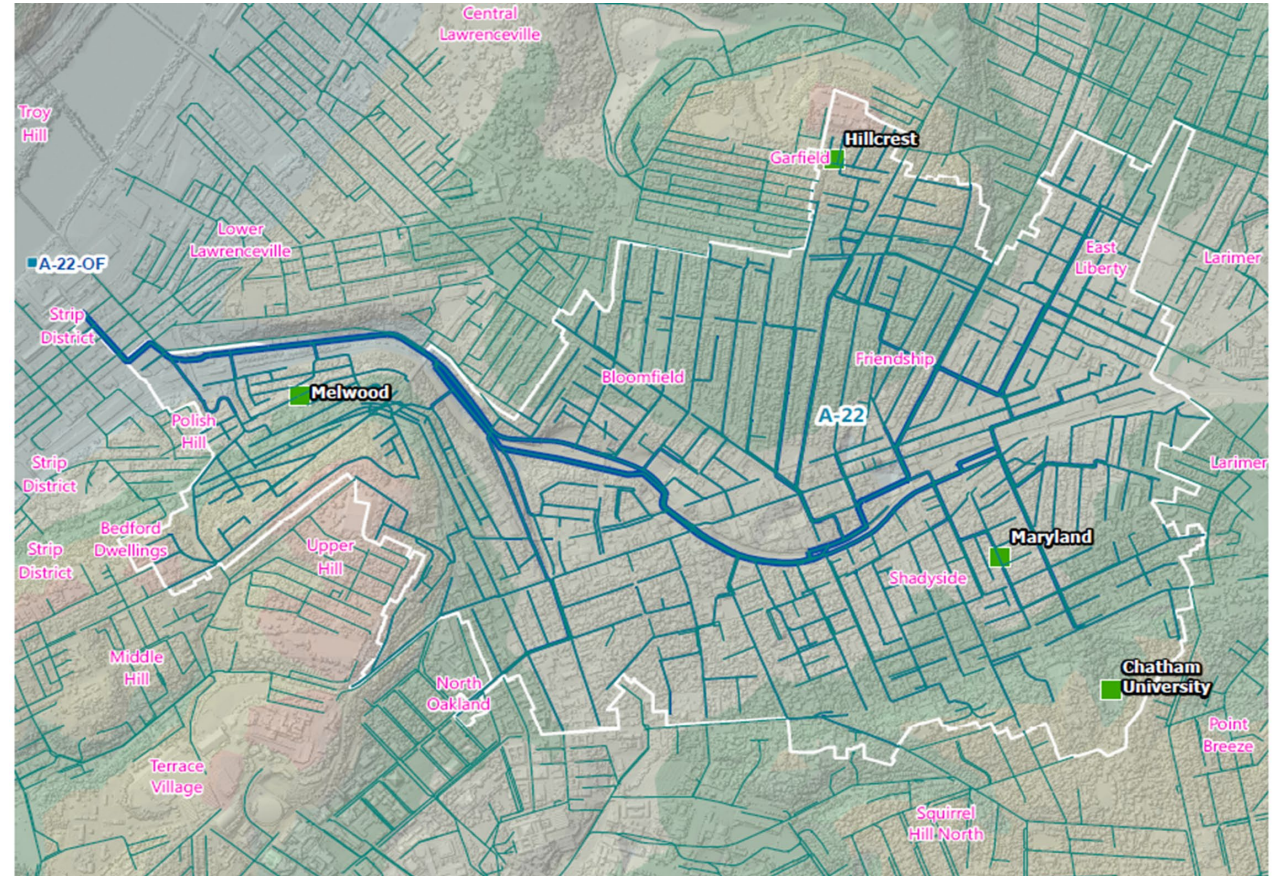


Allegheny-22 Sewershed

**Typical Year (TY) Overflow
volume, existing conditions**

**Approximately 580 million
gallons (MG)**

**3rd largest combined sewer
overflows (CSO) in PWSA
system (63% capture)**



Flooding

August 31, 2014 – Extensive flooding due to 1” rain in 15 minutes

Resulted in large number of basement complaints along Maryland Ave and adjoining streets

October 2014 – 14 basement inspections and CCTV


Maryland Ave, S Negley Ave, Maryland Ave, Walnut St

January 2015 – Homeowner Letters and Survey

PWSA sent over 1,800 letters to gather information from residents. Survey included questions on home structure, age of home, location of sanitary lateral, occurrence of basement flooding, and source of water, backflow preventer location.

February 2015 – Maryland Ave. Flooding Investigation Report

Included capacity profiles for four significant rain events between 2009 – 2014 to assess system performance

**Shadyside Basement Flooding Investigation**

8. Have you ever had sewage in your basement?

☐ Yes

☐ No

9. Have you reported all basement flooding occurrences to PWSA?
**If not, please notify PWSA of any future occurrences (412-255-2423). This helps PWSA identify areas that may have sewer problems.*

☐ Yes

☐ No

10. If yes, when did backups begin?

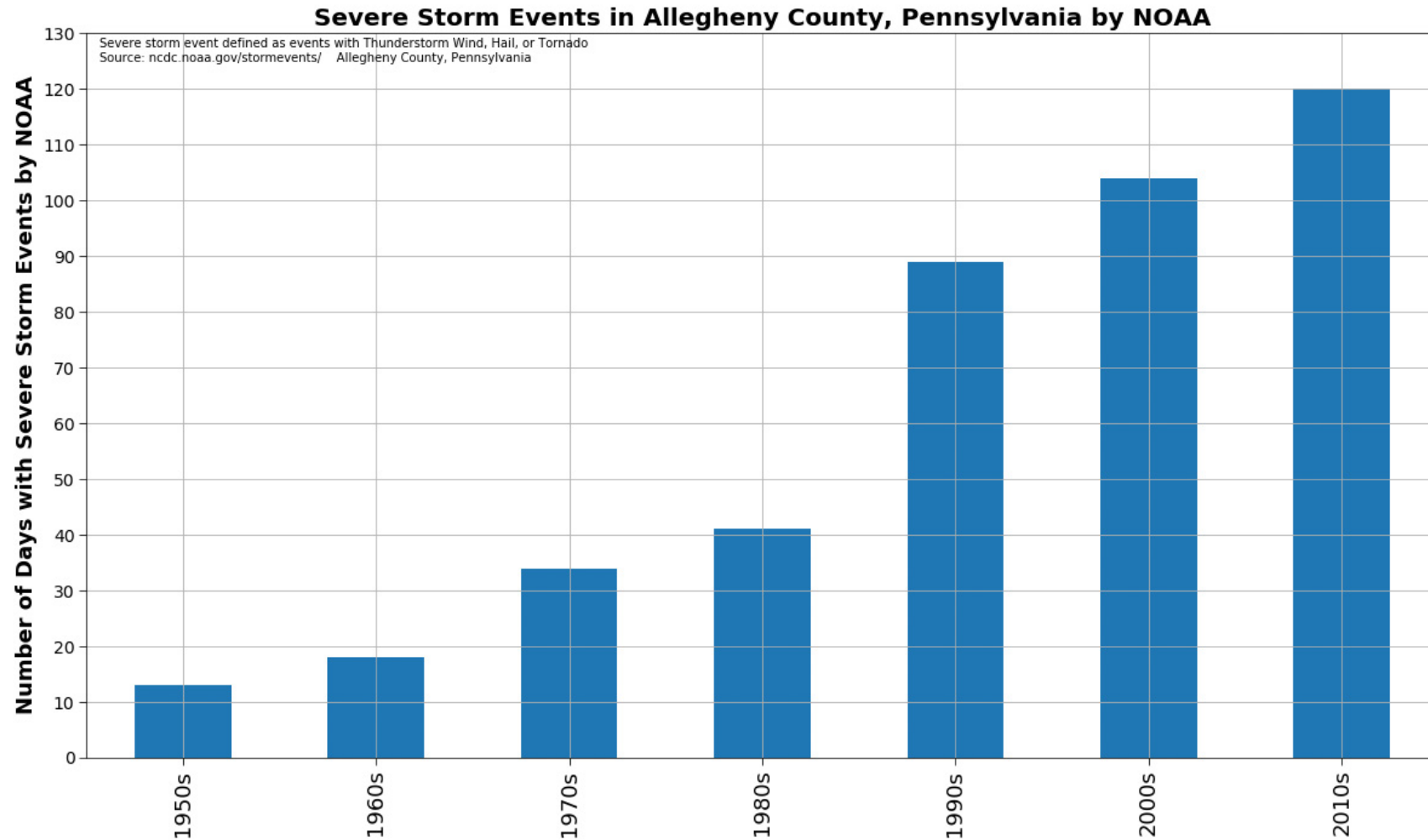
11. How often do they occur?

12. Source of water (i.e. windows, walls, floor drain, etc.)?

Prev

Next

Climate Change Historic Data



Project Planning

Project Goal #1

Maximize stormwater capture across the larger planning area, with a target of 6.5 to 13 acres cost effectively managed.

Project Goal #2

Use green stormwater infrastructure (GSI) technologies that will reliably manage intense rainfall, defined as 1.0 inch in 15 minutes, to positively impact flooding conditions at key sewer locations.

Project Goal #3

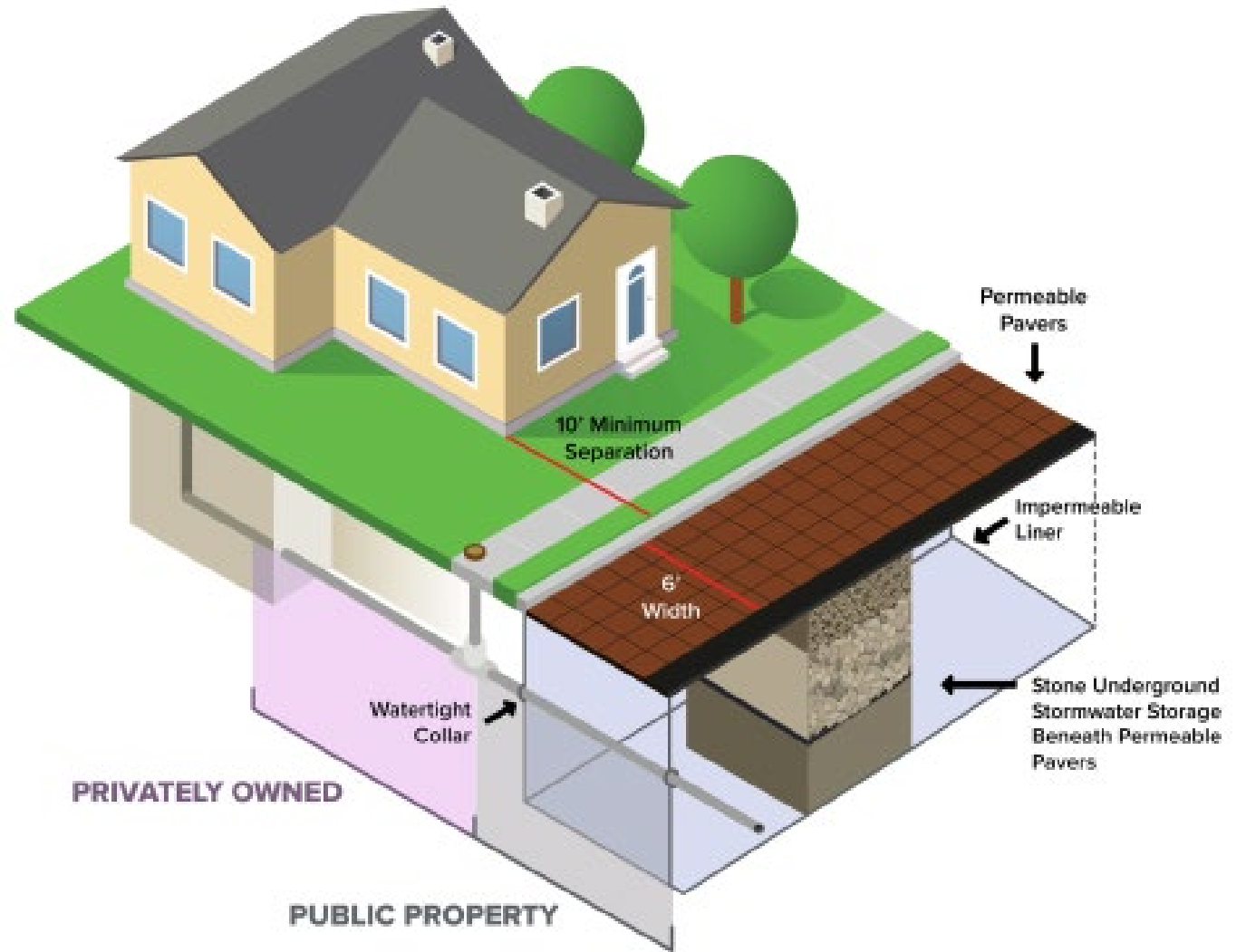
Engage residents on stormwater improvements that can be made on private property.



Maryland Ave. GI Community Meeting – July 27, 2017

Project Description

The Maryland Avenue Stormwater Project uses cost-effective green stormwater solutions throughout Shadyside to reduce runoff entering the combined sewer system.



Project Location

2021 Construction – Substantially Complete

- Kentucky Ave. West (5700 Block)
- Kentucky Ave. East (5800 Block)

2022 Construction – Upcoming

- Howe St. West (5700 Block)
- Howe St. East (5800 Block)

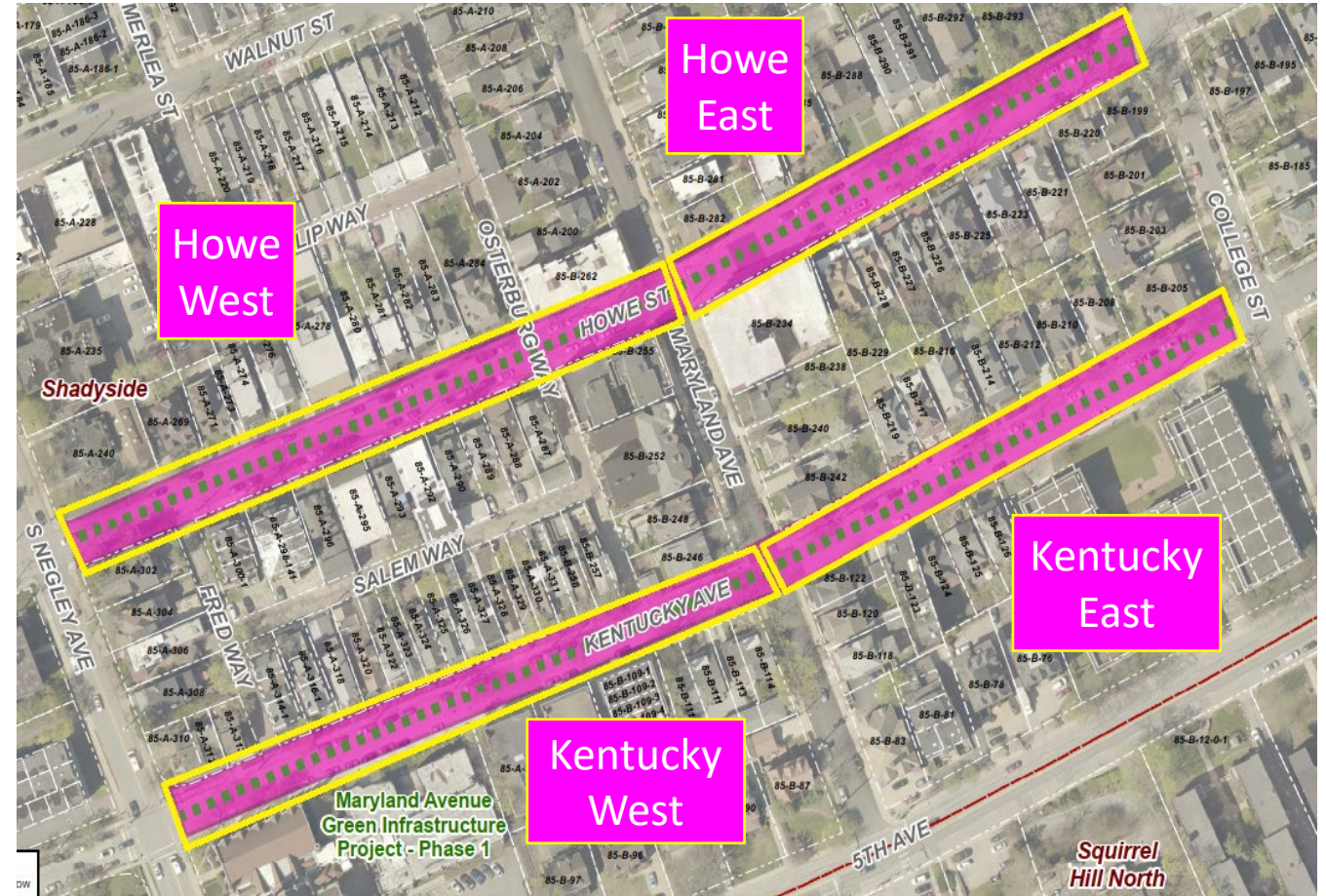
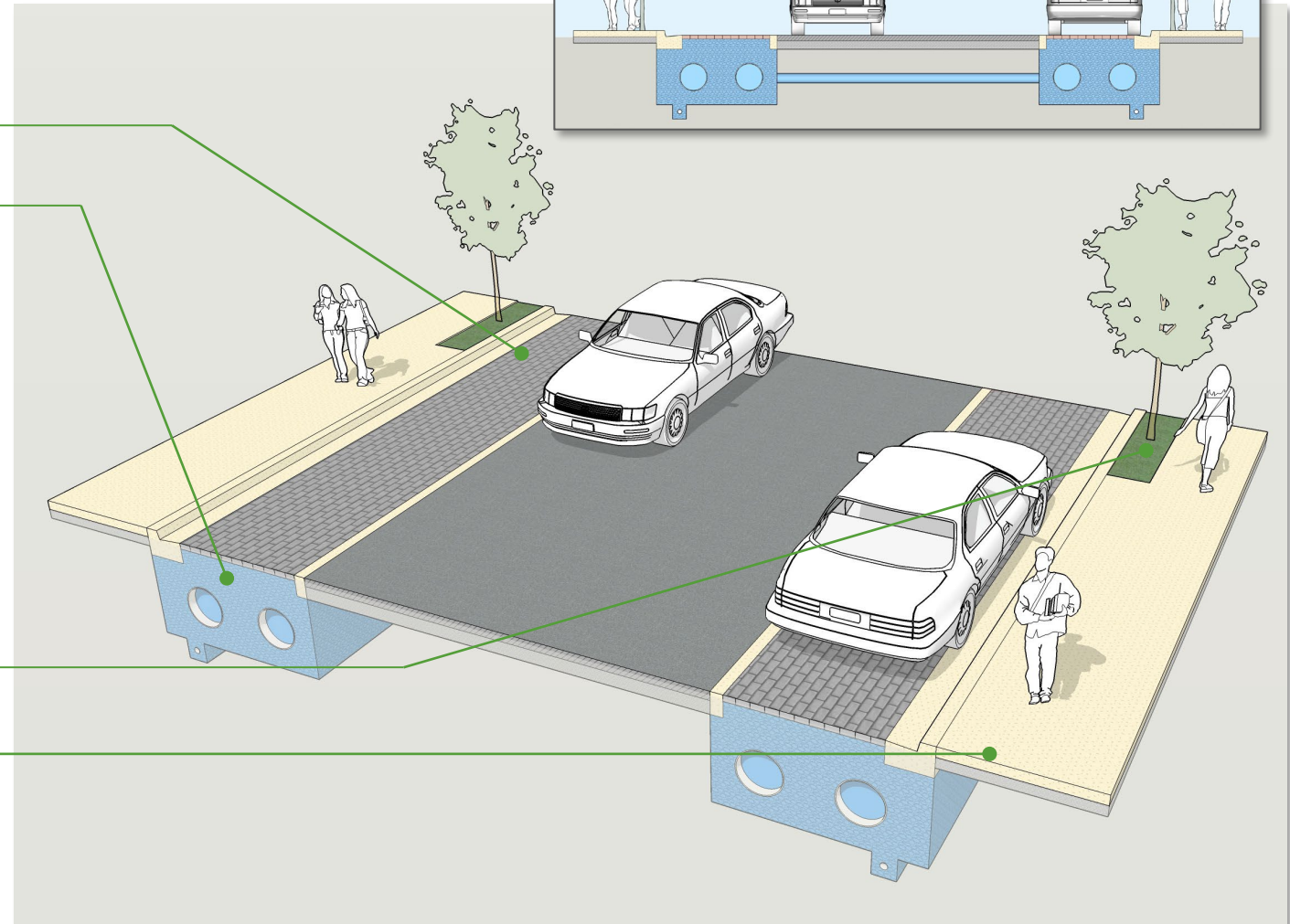


Figure: General Project Areas Location

Project Components

Project Parts

- Permeable Pavers
- Storage
 - Storage layers (#57 and Pipe)
 - Impermeable Liner
 - Underdrain Piping
 - Catch Basins/Manholes
- Tree Protection and Replacement
- Final Sidewalk and Street Restoration



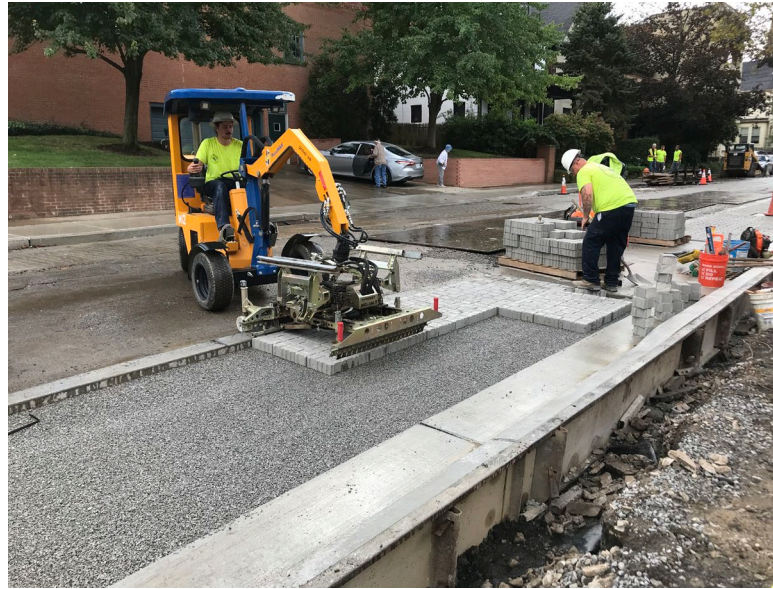
Typical Section

2021 Construction

Example Photos from Kentucky Avenue



Construction Progress – Stormwater Storage



Construction Progress – Paver Installation



Construction Progress – Completed Pavers Close Up






Pavers and Street Tree Plan

2022 Construction - Upcoming

- **Howe St. West (5700 Block)**
- Howe St. East

Note: Final extent of sidewalk and roadway restoration may change and will also depend on final direction and acceptance from City of Pittsburgh staff.

Legend

-  Permeable pavers
-  New concrete sidewalk
-  Protect existing tree
-  Tree removal
-  Tree replacement



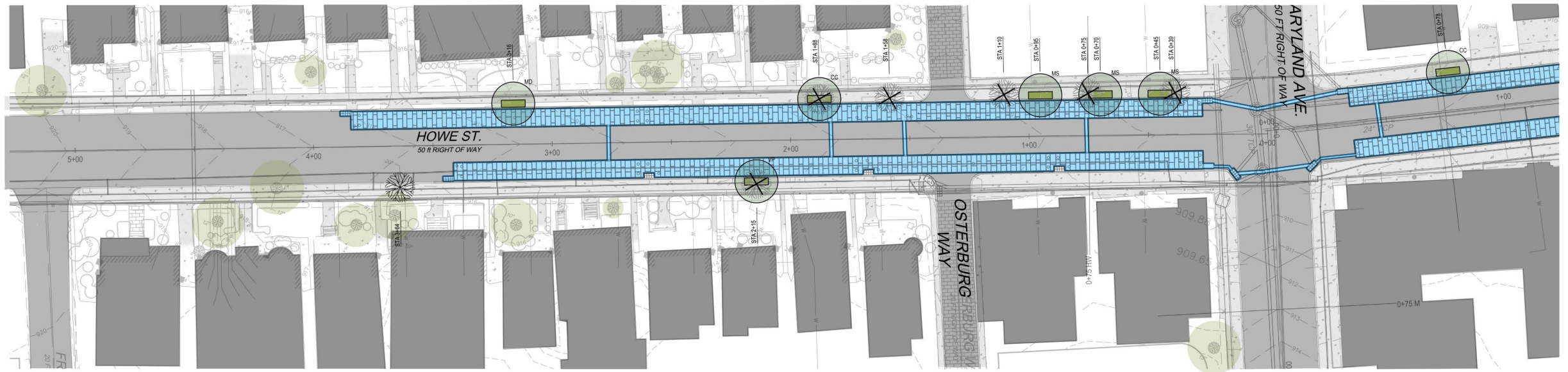
Stormwater Storage Systems

2022 Construction - Upcoming

- **Howe St. West (5700 Block)**
- Howe St. East

Project Part

- Storage
 - Storage layers (#57 and Pipe)
 - Impermeable Liner
 - Underdrain Piping
 - Catch Basins/Manholes



1 HOWE STREET WEST PLAN
SCALE: 1" = 20'








Pavers and Street Tree Plan

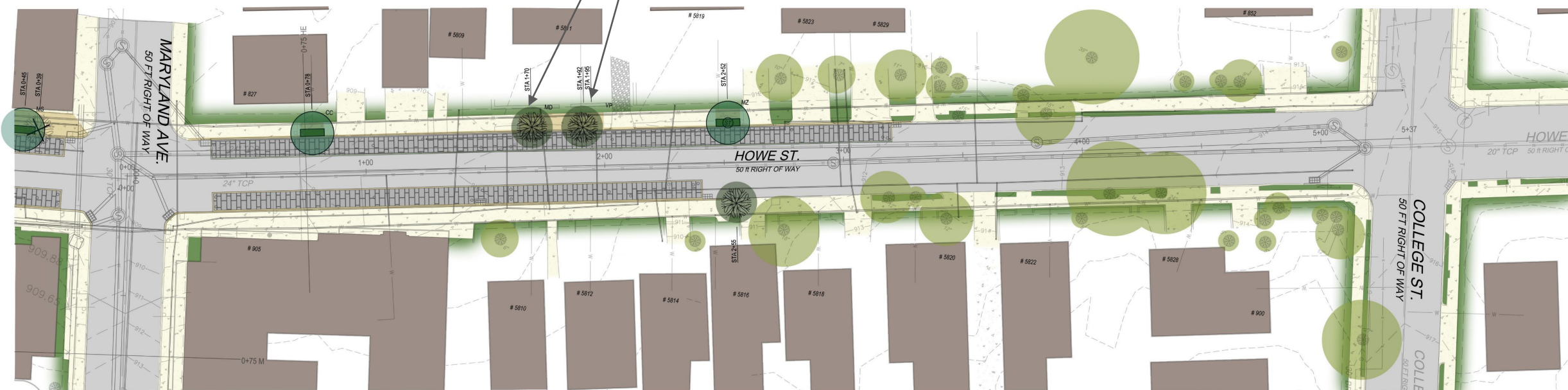
Four Project Areas

- Howe St. West
- **Howe St. East (5800 Block)**

Protect existing trees pending inspection of roots by City Forestry during construction. Remove and replace if instructed to do so by City Forestry.

Legend

-  Permeable pavers
-  New concrete sidewalk
-  Protect existing tree
-  Tree removal
-  Tree replacement



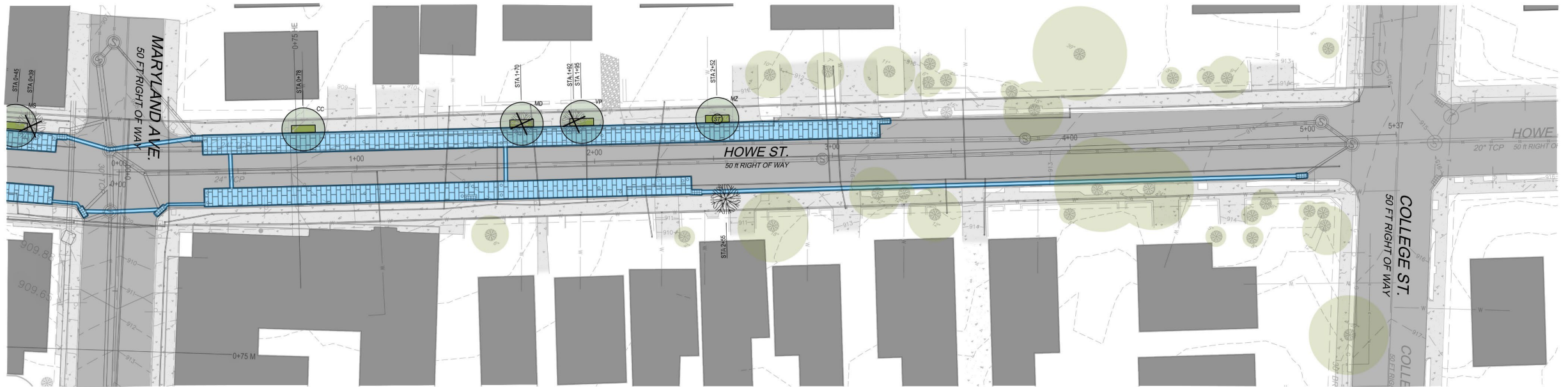
Stormwater Storage Systems

2022 Construction - Upcoming

- Howe St. West
- **Howe St. East (5800 Block)**

Project Part

- Storage
 - Storage layers (#57 and Pipe)
 - Impermeable Liner
 - Underdrain Piping
 - Catch Basins/Manholes



2 HOWE STREET EAST PLAN
SCALE: 1" = 20'



Project Impact

Four Project Areas

- Kentucky Ave. West
- Kentucky Ave. East
- Howe St. West
- Howe St. East

Total Drainage Area in Street: 5.5 acres








Figure: Drainage Area Map

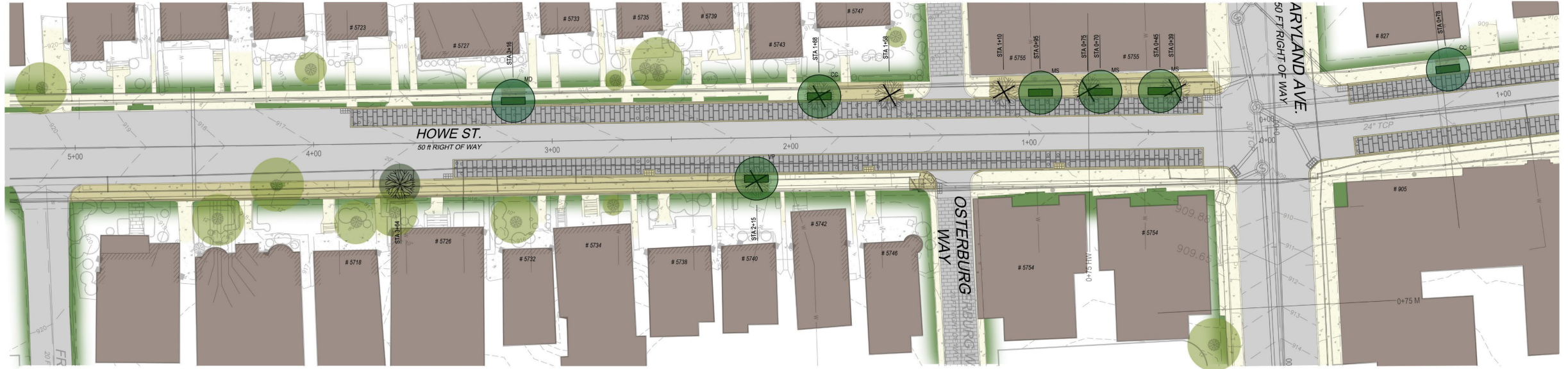
Downspout Disconnection

Howe St. West – Pilot Project Area

- Voluntary participation
- PWSA will pay the cost and construct improvements to manage a limited number of downspouts from private property and direct into the stormwater system as part of project
- Requires signed agreement with a temporary easement

Legend

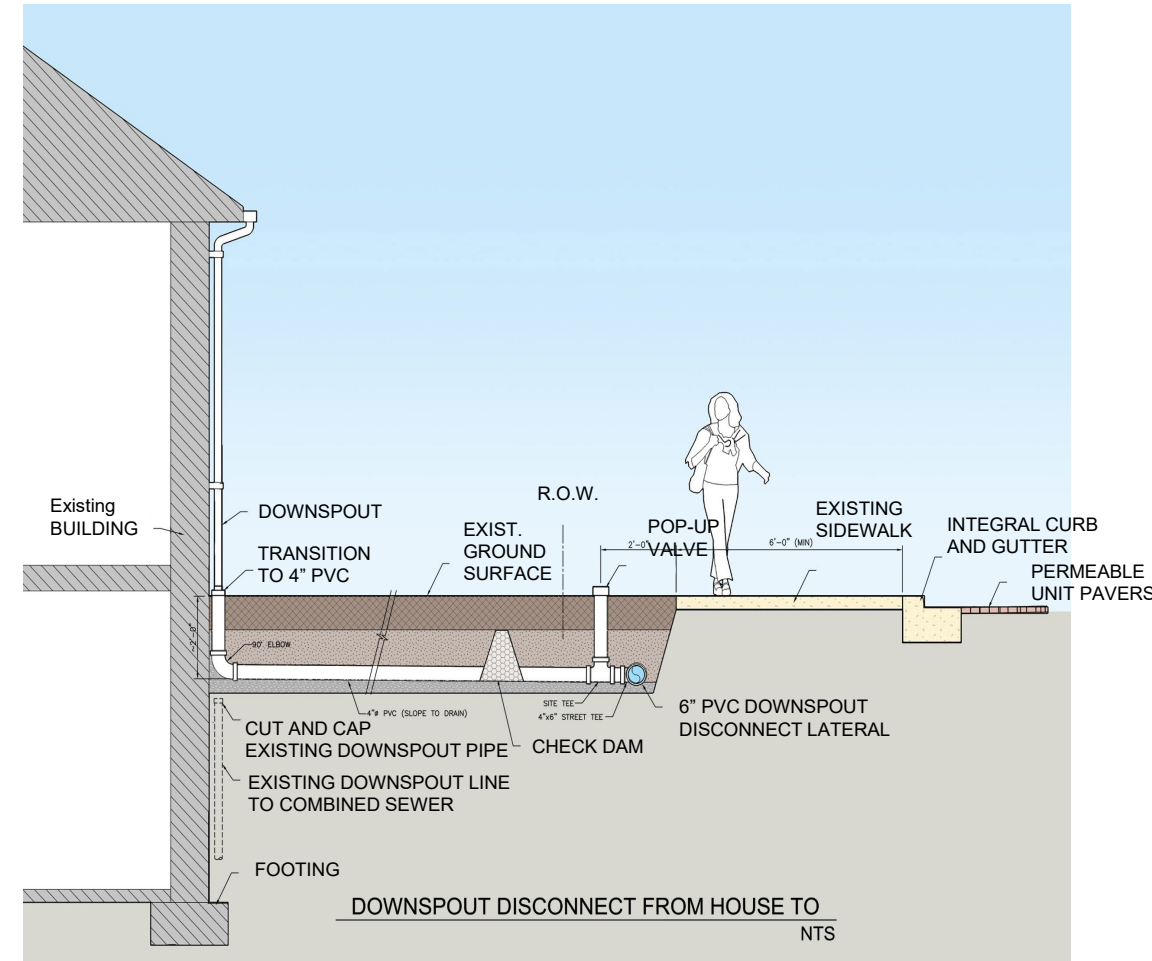
-  Permeable pavers
-  New concrete sidewalk
-  Protect existing tree
-  Tree removal
-  Tree replacement



Downspout Disconnection

Project Parts

- Downspout Disconnection (Private Property)
 - Cut and Cap Existing Downspout Pipe
 - 4" PVC Disconnection Pipe
 - Bentonite Check Dam
- Downspout Disconnection (Public Property)
 - Pop-up Valve
 - 6" PVC Disconnection Lateral Collection Pipe

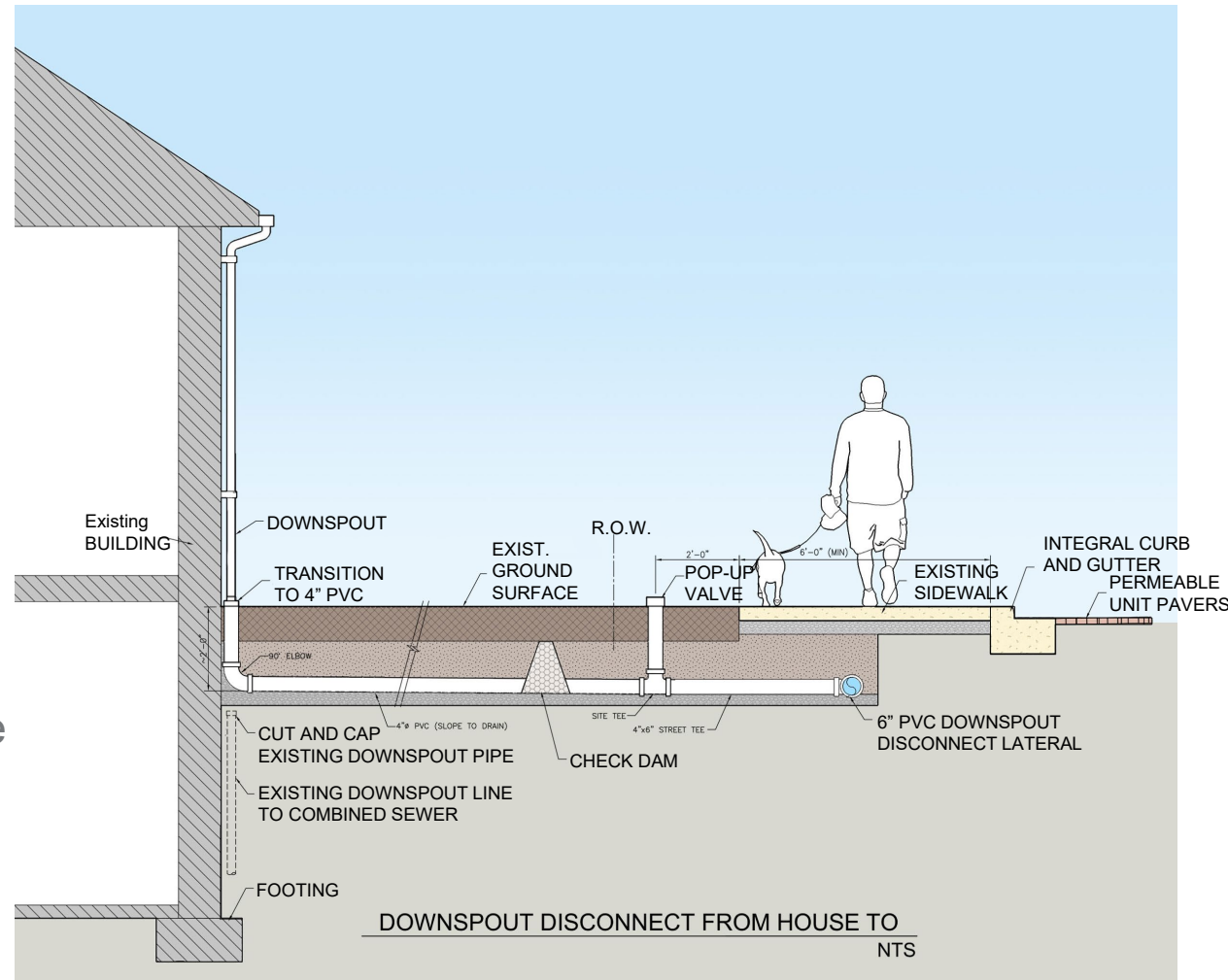


Typical Section – 6" Collection Pipe in Right-Of-Way under lawn

Downspout Disconnection

Project Parts

- Downspout Disconnection (Private Property)
 - Cut and Cap Existing Downspout Pipe
 - 4" PVC Disconnection Pipe
 - Bentonite Check Dam
- Downspout Disconnection (Public Property)
 - Pop-up Valve
 - 6" PVC Disconnection Lateral Collection Pipe

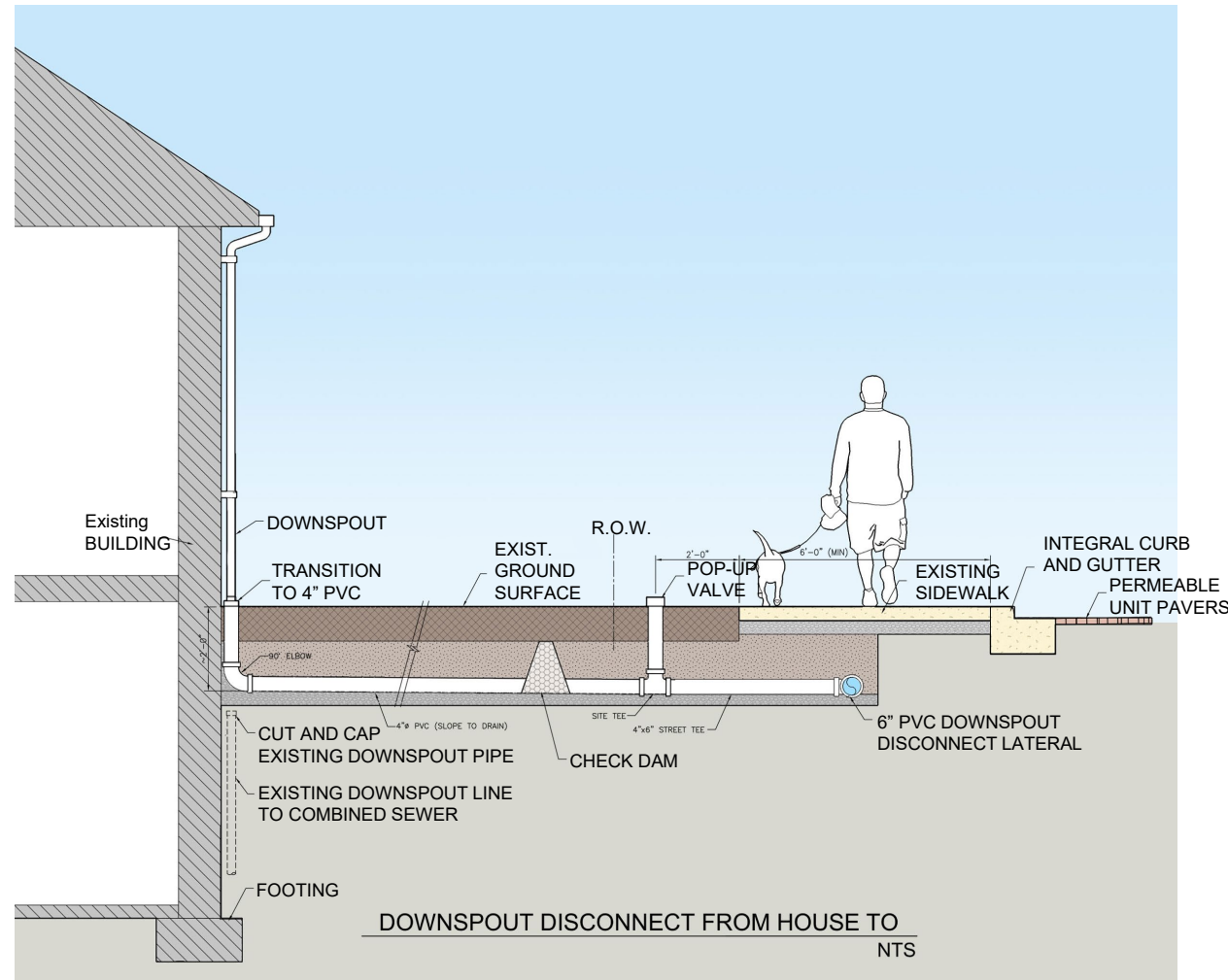


Typical Section – 6" Collection Pipe in Right-of-Way under sidewalk

Downspout Disconnection

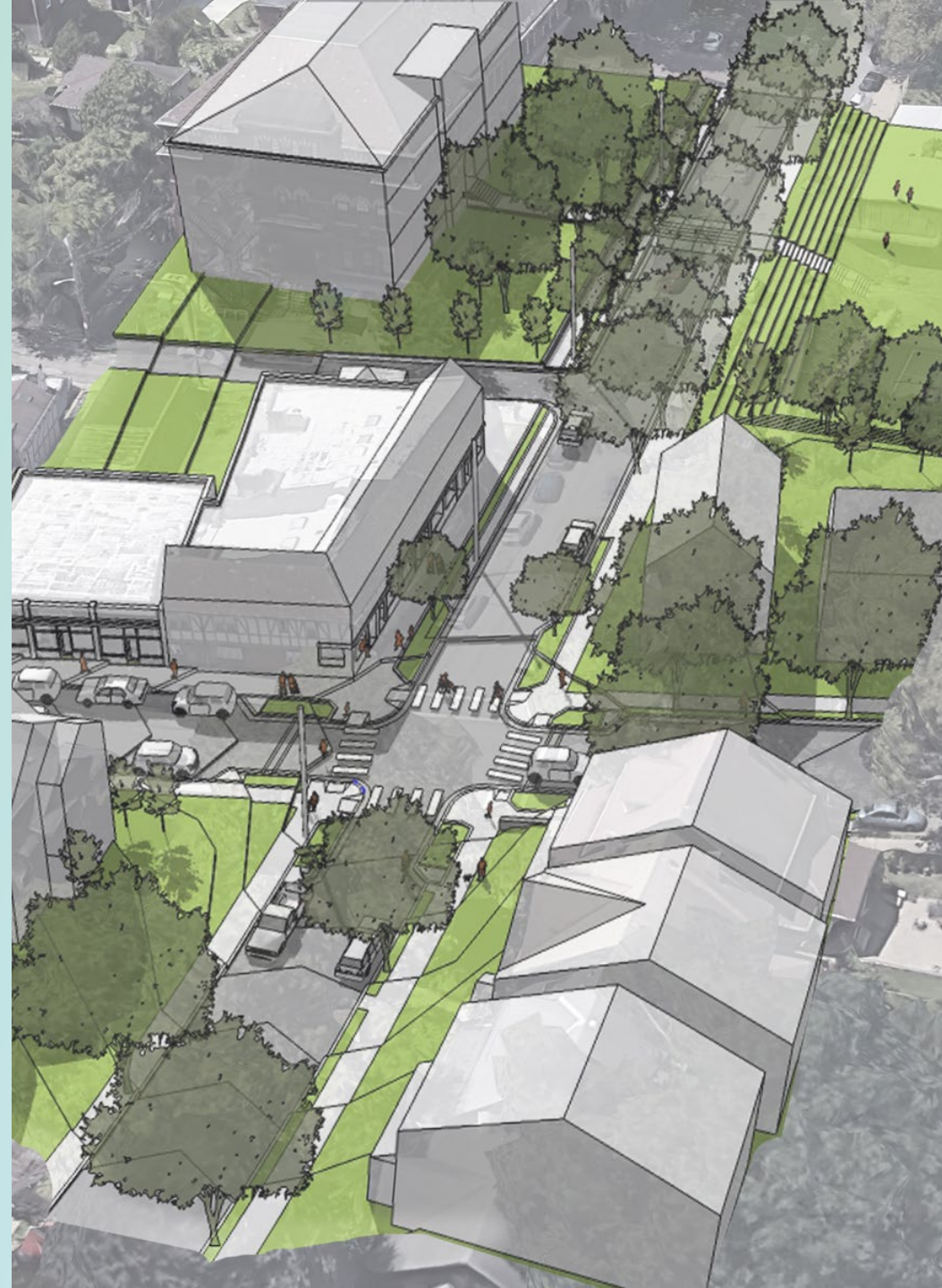
Sign-up Steps

- Review Mailing sent to 16 properties on 5700 Block of Howe
- Sign and return Consent Form and Temporary Easement by March 15, 2022.
- Contact PWSA with any questions including the Consent Form and Temporary Easement material
- Contact PWSA to schedule and attend on-site meeting as well to review any property specific coordination



Typical Section – 6" Collection Pipe in Right-of-Way under sidewalk

Questions





Construction: What to expect

Our job is to efficiently construct the project with the least amount of disruption and keep you informed.

Project Timeline

Upcoming Construction Schedule

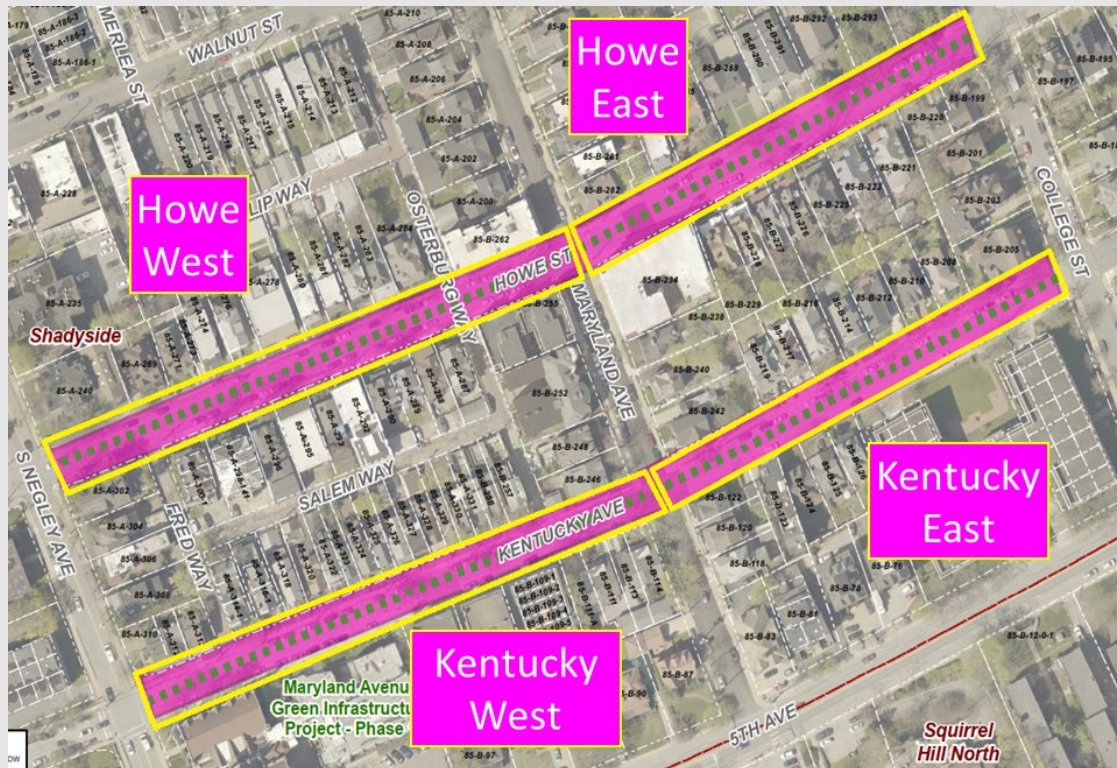
- **Anticipated Start:** March 2022
- **Anticipated End:** July 2022

Upcoming Phases

- Howe Street: Final 2 phases for this project
- Final restoration of Howe Street projected Summer of 2022



Upcoming Schedule and Phasing



- **November 1 to March 1:** Winter Hiatus
- **Spring 2022:** Howe Street work begins, weather dependent
- **May/June 2022:** Downspout Disconnection work to be coordinated with property owners
- **Summer 2022:** Final restoration Howe Street East and West
- **Tree Planting:** Coordinated with City Forestry on planting of trees for Kentucky and Howe Street.

Schedule could change due to weather, unforeseen site conditions, and other factors causing delays.

Process Steps

- Construction is expected to begin at Howe Street East (between College St and Maryland Ave). Howe Street West (between Maryland Ave and S Negley Ave) is expected to be the final phase of construction.
- Crews will work through each phase installing rock storage materials, check dams, PVC liner, underdrain, pipe, constructing new concrete sidewalks/curbs in some locations, and performing downspout disconnections on portion of Howe West.
- Work will take place in public right-of-way (streets and sidewalks). Stormwater improvements will reduce runoff entering the combined sewer system.
- **Timing of phasing:** Will take approximately 6 - 8 weeks to complete each phase.
- **Utility Coordination:** Relocating utility poles, gas line valves, water line valves and hydrants (if needed)
- **Tree Replacement:** Trees will be planted as part of final restoration at a time that promotes tree health on Howe Street and Kentucky Avenue.
- **Restoration:** Final restoration of Howe Street will take place during the 2022 construction season.

Daily Impacts

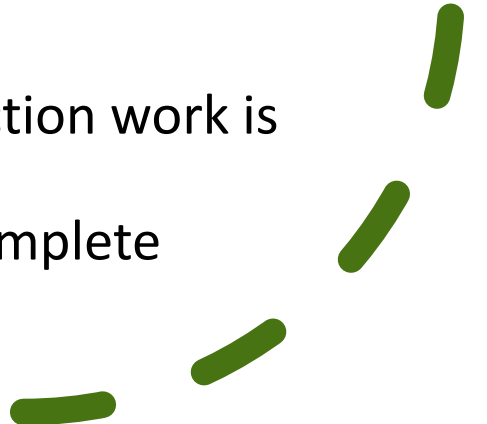
Typical Work Schedule

- Monday through Friday (Saturdays are possible)
- **Hours:** 7:00 AM to 5:00 PM

Traffic

- Traffic signs and detours will be posted
- Flaggers on site during active construction work
- Will not close streets during morning and afternoon commutes

Parking

- Signs posted 48-hours in advance
 - Posted in areas where active construction work is taking place
 - Minimal parking loss when project complete
- 

Construction Communication

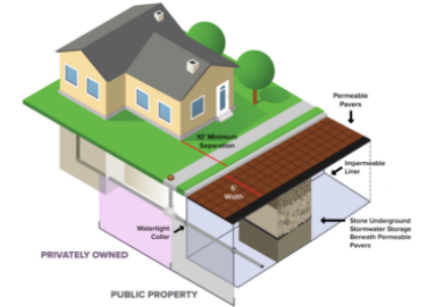
- **Bi-weekly Construction Updates**
 - Posted to webpage
 - www.pgh2o.com/maryland-ave
- **Project Yard Signs Available**
 - Opportunity for community members to host a sign to share information with neighbors
 - Includes project and contact information

Maryland Avenue Stormwater Improvement Project

In Construction

Stormwater

The Maryland Avenue Stormwater Improvement Project will use cost-effective green stormwater solutions throughout Shadyside to reduce runoff entering the combined sewer system. These stormwater solutions will be constructed within the public right of way (public streets and sidewalks).



Progress & Status

February 7, 2022 Community Meeting

- We are hosting an online community meeting on Monday, February 7, 2022 from 6:30 PM to 8:00 PM to review construction plans for Howe Street.
- To learn more and register for the meeting, please visit the [event webpage](#).

Project Goals

- Capture and store stormwater runoff before it reaches our overwhelmed combined sewer system
- Reduce combined sewer overflows in the A-22 sewershed
- Reduce basement backups and neighborhood flooding

Phase One: Howe Street and Kentucky Avenue



Construction Complete

Project Team Contacts

Education & Outreach Associate

Elaine Hinrichs, PWSA

412-738-1887

ehinrichs@pgh2o.com

Project Manager

Marco Sciulli, PWSA

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Construction Manager

Nick Armstrong, Anser Advisory

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www.pgh2o.com/maryland-ave



Thank you

For more information, please visit
www.pgh2o.com/maryland-ave

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