

CITY OF *Beachwood*

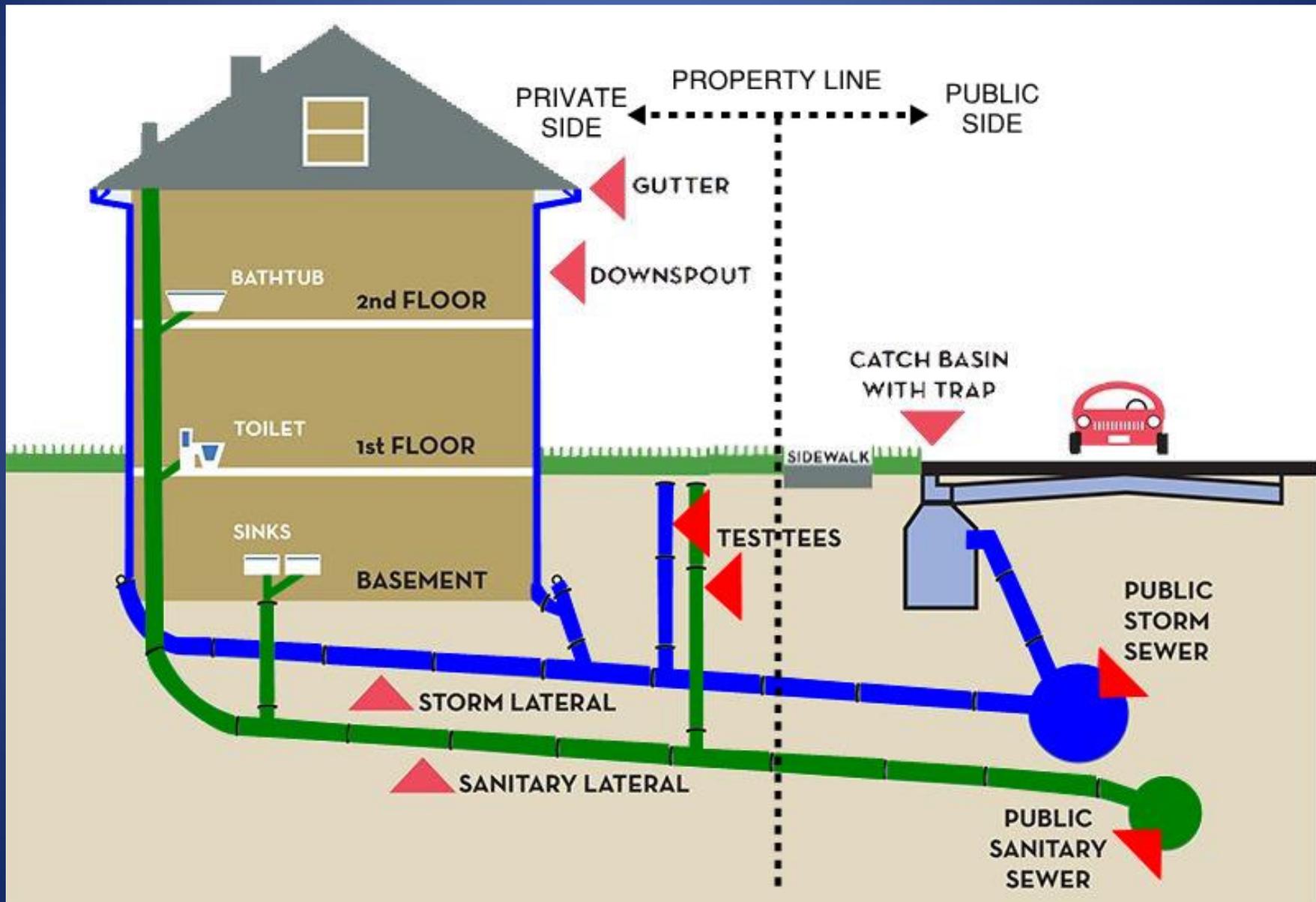


Agenda

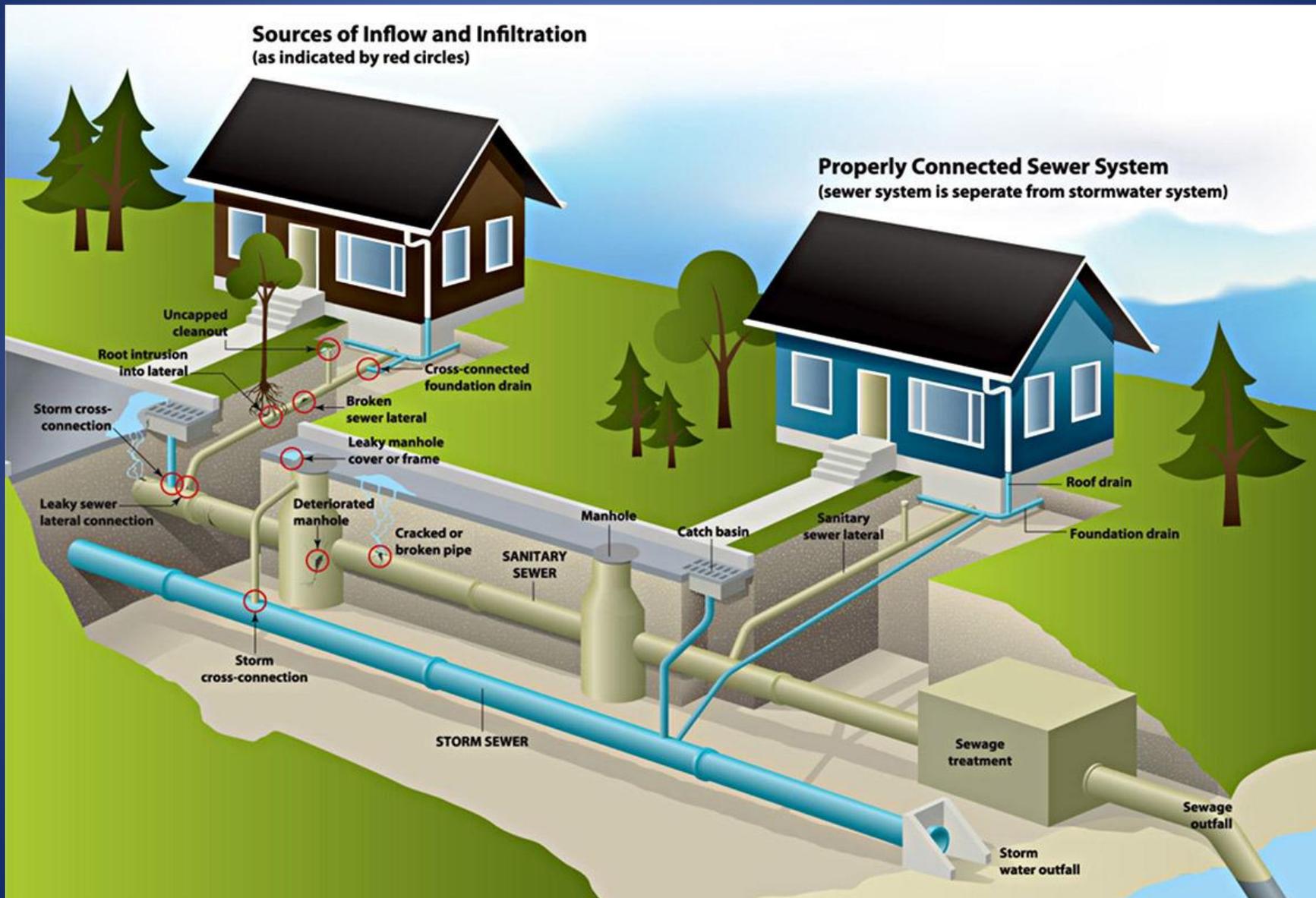
- Introductions
- Sewers 101
- Historical Work
 - City
 - County
 - NEORSD
- Planned Work
 - 5 Year Capital Improvement Plan
- Q&A Session



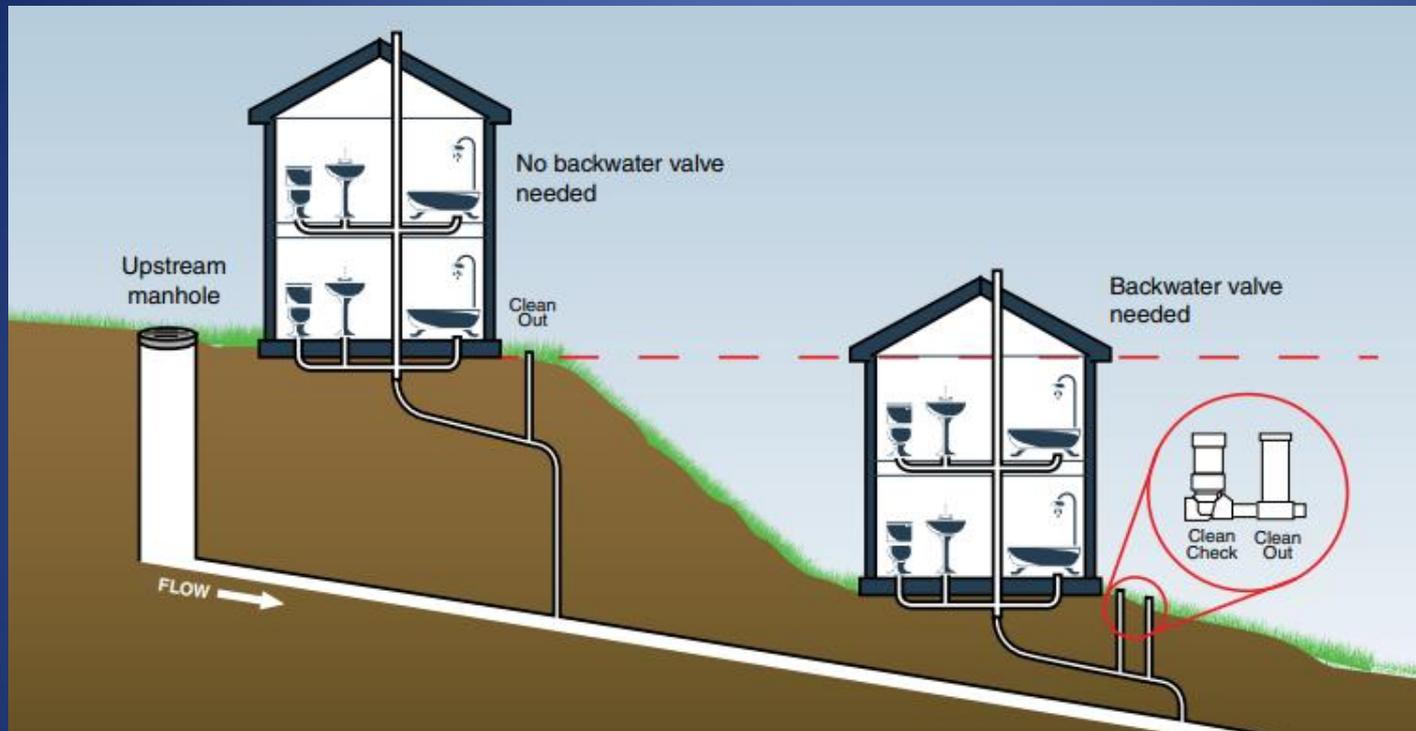
Sewers 101



Sewers 101



Sewers 101



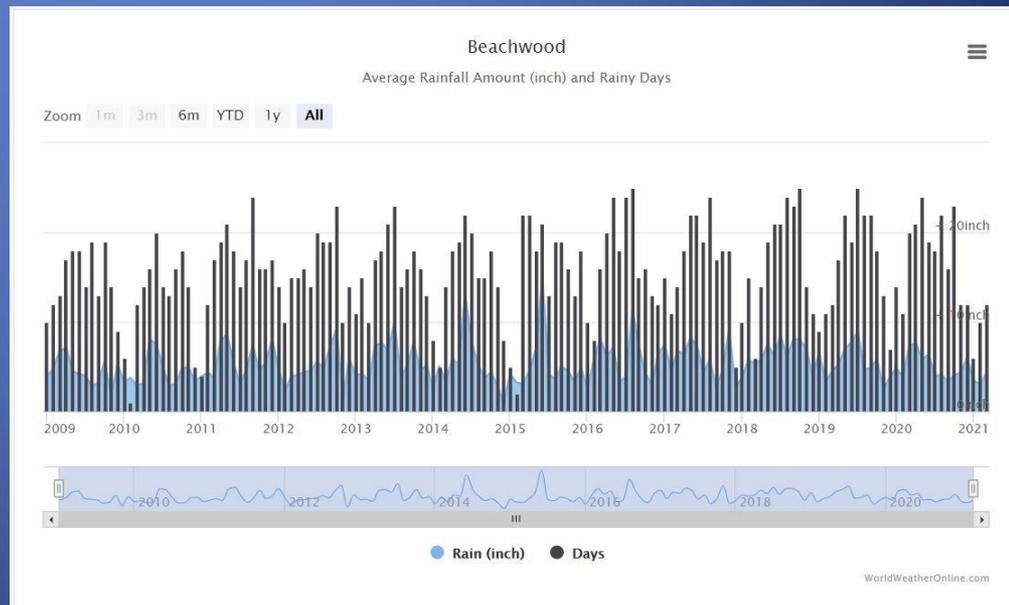
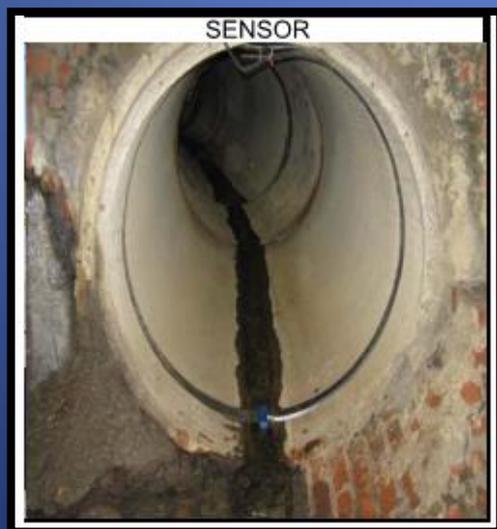
- Backflow Preventers
 - County installed 38 over the last 5 years
 - City installed 49 last year

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Sewers 101

– 2020 had increase in high intensity rain events

- 3/29/20: 5+ year event – 1.48 inch / 1 hour
- 7/11/20: 10+ year event – 2.79 inch / 6 hour
- 8/3/20: 2+ year event – 1.33 inch / 1 hour
- 9/7/20: 25+ year event – 3.78 inch / 6 hour
- 58.75 total inches of rain in Beachwood
 - Second highest rain gauge total in NEORSD network

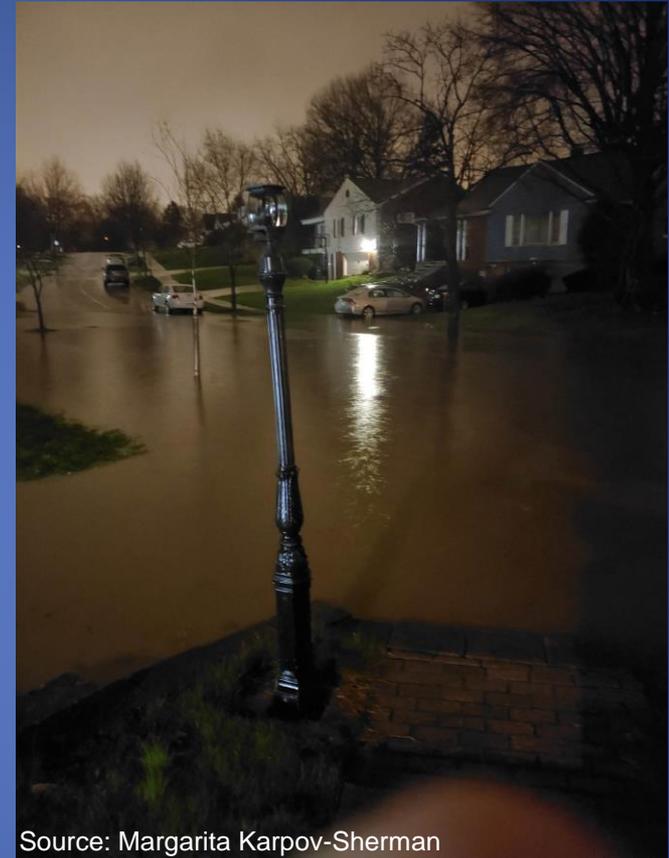


Sewers 101

- [YouTube Bryden Flooded 8-3-2020](#)

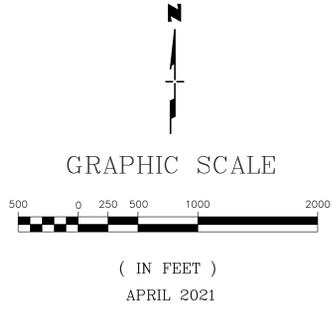


Source: Margarita Karpov-Sherman



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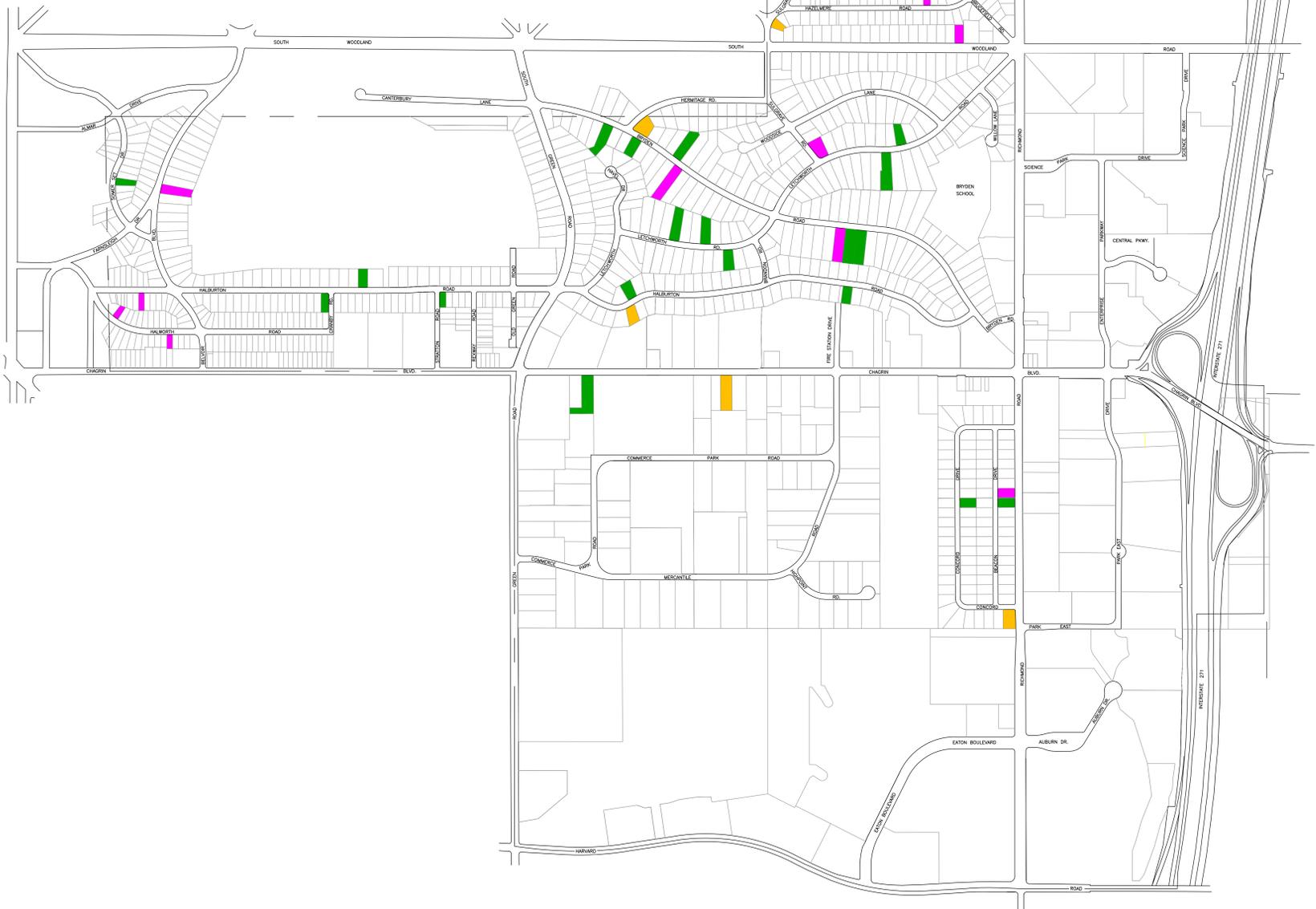
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MARTIN S. HORWITZ, MAYOR

RESIDENTIAL FLOODING MAP - LABOR DAY 2020

LEGEND

- BACKUP CAUSED BY SEWER MAIN CAPACITY (94)
- BACKUP CAUSED BY PRIVATE LATERAL (56)
- UNKNOWN OR OTHER ISSUE NOT RELATED TO SEWER OR LATERAL (15)



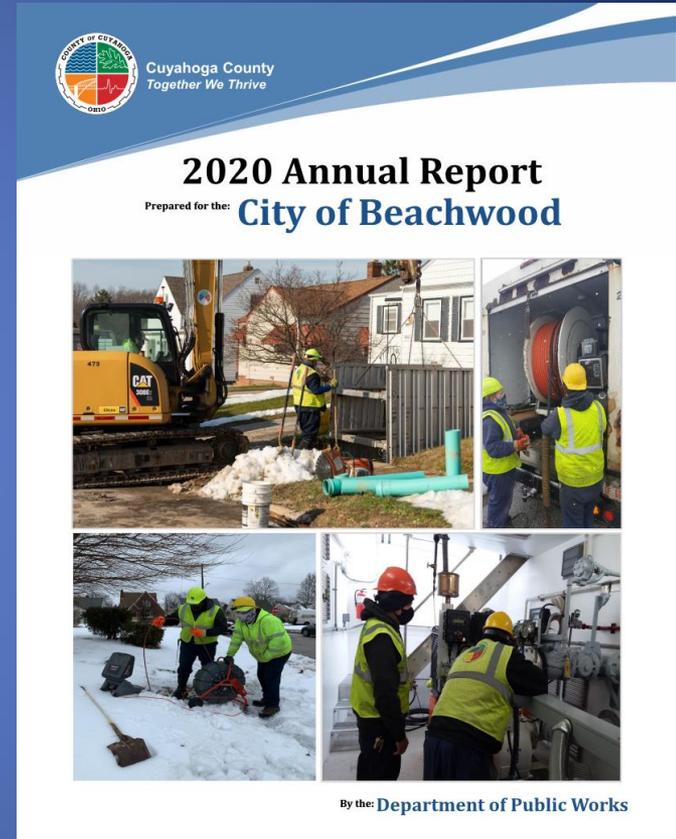
PREPARED BY:



Historical Work

– In 2020, County Work In Beachwood

- 170,597 feet sewer cleaning
- 159,462 feet sewer inspection
- 25 house calls
- 158 construction jobs
- 31 dye tests
- 454 catch basins cleaned



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Historical Work

– In 2020, County expenses in Beachwood

○ Maintenance of sanitary sewer system:	\$844,410
○ Pump station operation and maintenance:	\$31,115
○ Engineering and/or Inspection:	\$56,103
○ Capital expenses:	\$84,827
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	\$1,016,455

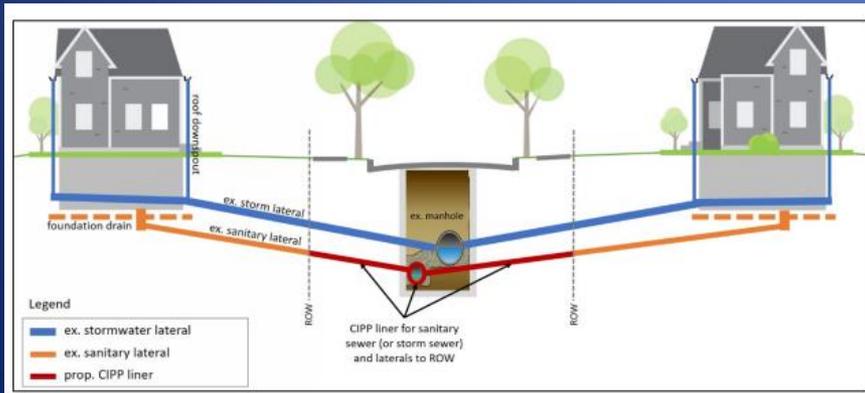
– In 2020, City of Beachwood Department of Public Works logged over 2,000 hours addressing sewer related issues

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Historical Work

*Streets with sewer rehabilitation performed by the County

- Annesley
- Beacon
- Bernwood
- Brentwood
- Chagrin Blvd.
- Commerce Park
- Community
- Concord
- Duffield
- East Baintree
- East Groveland
- East Silsby
- Edgewood
- Glenhill
- Greenlawn
- Greenwich
- Halburton
- Halcyon
- Hawthorne
- North Woodland
- Shaker Blvd. Eastbound
- South Woodland
- Sulgrave
- Woodside
- Woodway

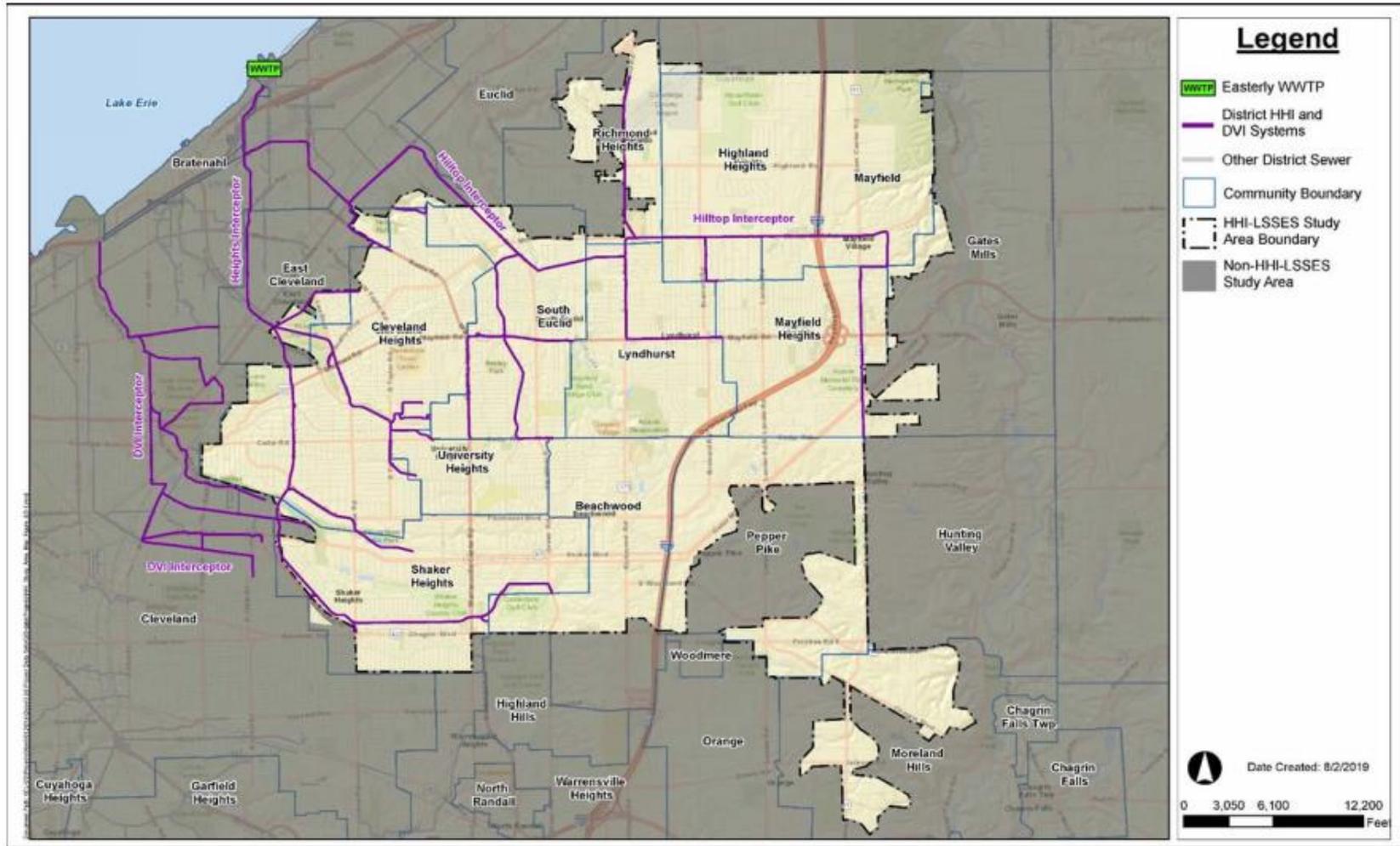


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Historical Work

- Northeast Ohio Regional Sewer District (NEORSD)
Heights Hilltop Interceptor Local Sewer System Evaluation Study (HHI-LSSES)

Figure ES-1. HHI-LSSES Area



Historical Work

– NEORS D HHI-LSES

Figure ES-8. Beachwood Overall Potential Solutions Summary Map (5-year, 1-hour rainfall)



Figure 5-1. Improvements to Solve Sewer System Problems Prioritized into Three Tiers

Feasible Solutions - Prioritized into Three Tiers

1

- Known problems**
- Community reported problems (generally BBUs)
 - Known SSOs active during 5-year rainfall

2

- Areas of excessive I/I**
- Separate over/under common trench systems
 - Sewage/stormwater cross-flow pollution
 - Difficult O&M

3

- Projected problems**
- Model predicted BBUs, flooded MHs
 - Sewage/stormwater cross-flow pollution
 - Aging infrastructure

Planned Work

5 Year Capital Improvement Plan

– 2021

- Glenhill Storm Sewer
 - Construction low bid \$131,900
 - Completed April 2021
- Beachwood Boulevard Storm Sewer
 - Design in progress, contracted fee \$125,000
 - Estimated construction cost \$1,237,000
- Community Union Phase 2 Storm Sewer
 - Design in progress, contracted fee \$55,000
 - Estimated construction cost \$1,150,000
- Green-Bryden Culvert Improvement
 - Design in progress, contracted fee \$75,000
 - Estimated construction cost \$1,287,000
- Timberlane/Green Sanitary Relief Sewer
 - Estimated design fee of \$325,000

Planned Work

5 Year Capital Improvement Plan

– 2022

- Timberlane/Green Sanitary Relief Sewer
 - Estimated construction cost \$12,893,500
- Bryden Road Sanitary and Storm Sewer
 - Estimated design fee \$567,600

– 2023

- Bryden Road Sanitary and Storm Sewer
 - Estimated construction cost \$5,676,000
- Halcyon Road Sanitary Sewer
 - Estimated design fee \$341,400

– 2024

- Halcyon Road Sanitary Sewer
 - Estimated construction cost \$3,357,100

– 2025

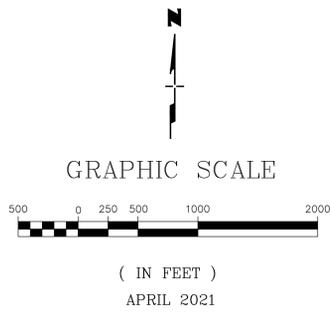
- To be determined

Glenhill and Beachwood Boulevard Storm Sewers

Timberlane/Green Sanitary Relief Sewer

Community Union Phase 2 Storm Sewer

Halcyon Road Sanitary Sewer



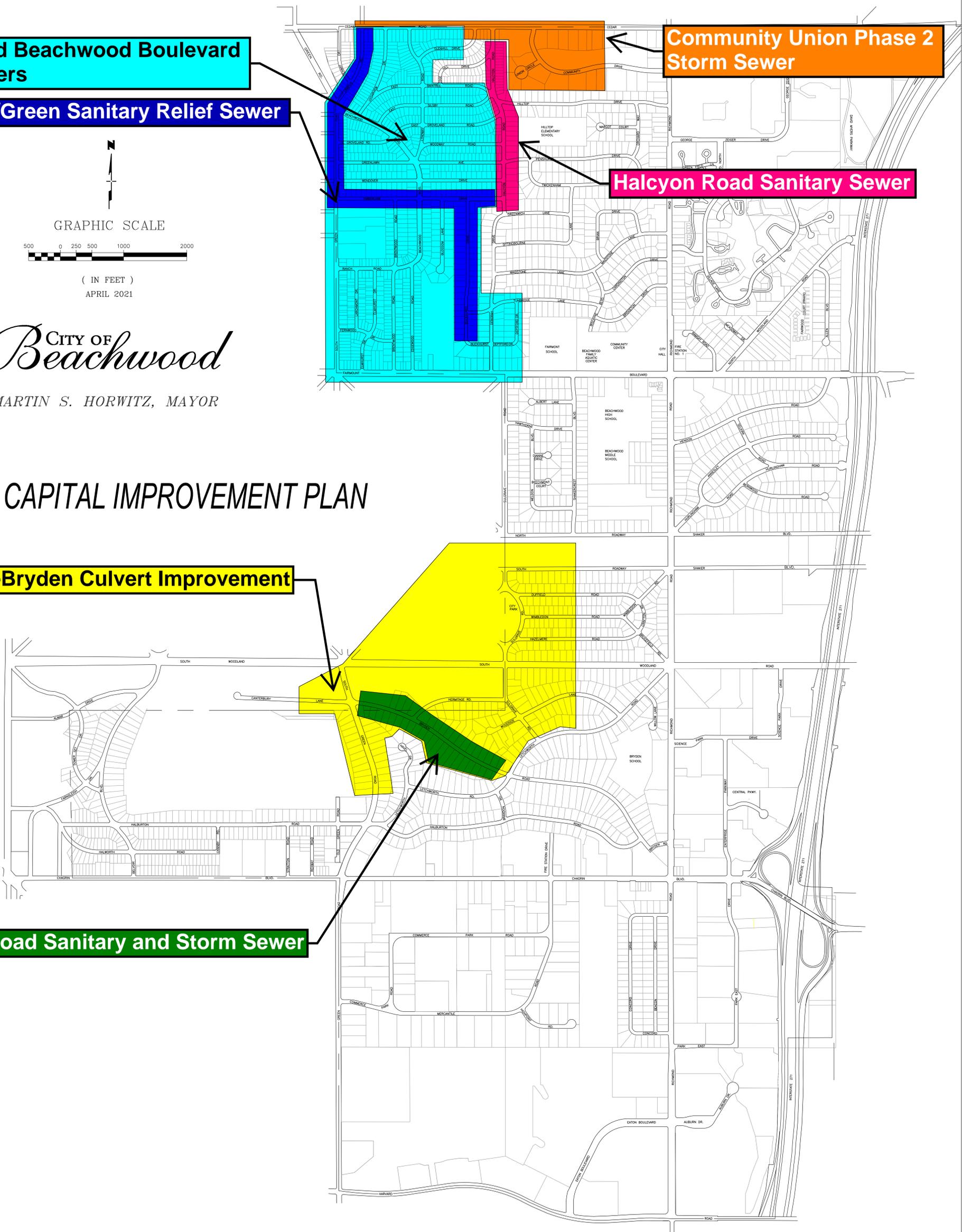
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MARTIN S. HORWITZ, MAYOR

5 YEAR CAPITAL IMPROVEMENT PLAN

Green-Bryden Culvert Improvement

Bryden Road Sanitary and Storm Sewer



Q&A Session

- Contact Information

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