

# Welcome!

## This Meeting will Begin Soon

### Technology Overview – Things to Know

- Attendee video cameras are disabled (we can't see you)
- Attendee screen share is disabled
- All attendees are muted (instructions to unmute will be covered)
- You can leave and rejoin the meeting at any time (unless the meeting is at capacity or you are removed for inappropriate behavior)
- Multiple opportunities for questions will be provided throughout the presentation
- Presentation and additional materials are available:  
[www.a2gov.org/LynAnne-ArbanaSewer](http://www.a2gov.org/LynAnne-ArbanaSewer)

***Please use this time to complete an optional, anonymous demographic questionnaire available on the project website.***





City of Ann Arbor  
Thursday, June 11, 2020

# Lyn Anne – Arbana Sanitary Sewer



# Technology Overview – Ask a Question/Share a Comment


## Introduction

**Note:** When you raise your hand, the host will enable your microphone. The host will disable your microphone after your question.

### Computer

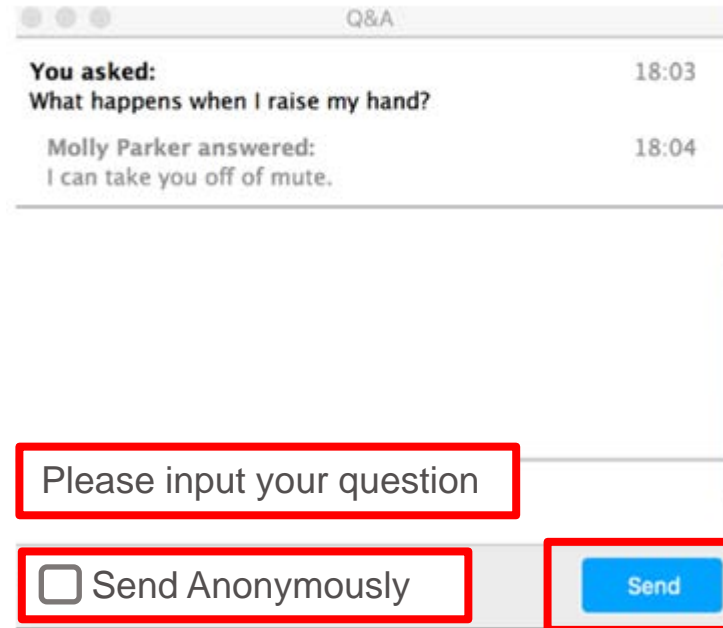
### Phone

#### • Raise Hand

- You will be identified by the name provided when you entered the meeting
- **Lower Hand**  if needed

#### • Q&A

- Type your question
- Check **Send Anonymously** if you do not want your name to be publicly visible with your Question
- Click **Send**



- Select \*9 to raise your hand
- You will be identified by the last 3 digits of your phone number



# Zoom Meeting Norms

- Start on time . . . end on time.
- Raise your hand to be recognized to talk; there will be one speaker at a time
- Move to a quiet area and silence any background sounds when speaking
- Speak loud and clear so everyone can hear
- Everyone will be provided a chance to speak before a repeat speaker
- Be respectful of other ideas and perspectives – no finger pointing!
- Try to differentiate between I know (facts) and I think (opinions).
- Inappropriate written and/or verbal comment or language, including personal attacks and accusations, will result in the attendee being removed from the meeting

## Follow-up Expectations

- Meeting summaries provided to participants no more than two weeks after meeting.
- Project team to submit deliverables in timely manner, as promised.
- Public engagement on this project is not a decision-making process.





# Agenda

1. Introduction
2. What is this Project?
3. Project Background
4. Sewer Route
5. Going Forward
6. Questions & Answers



# Project Team



Kayla Coleman  
City of Ann Arbor  
Public Engagement Specialist



Brian Slizewski  
City of Ann Arbor  
Project Manager

# Project Team



Chris Elenbaas  
Stantec  
Project Manager



Mackenzie Johnson  
OHM Advisors  
Project Engineer



Charlie Fleetham  
Project Innovations  
Public Engagement



West Erie Realty Solutions  
Easement Acquisition



What is this Project?

What is this Project?

# Lyn Anne – Arbana Sanitary Sewer

Replacement of 4,300 Feet of Existing Sanitary Sewer from the Maple Ridge Apartments to Arbana Drive

## Why is this necessary?

- Address surcharging and maintenance issues
- Continuation of past sewer projects from West Park to Arbana Drive
- Maintain a key natural corridor
- Funded through the Development Offset Mitigation Program (DOM)

## What has already been done?

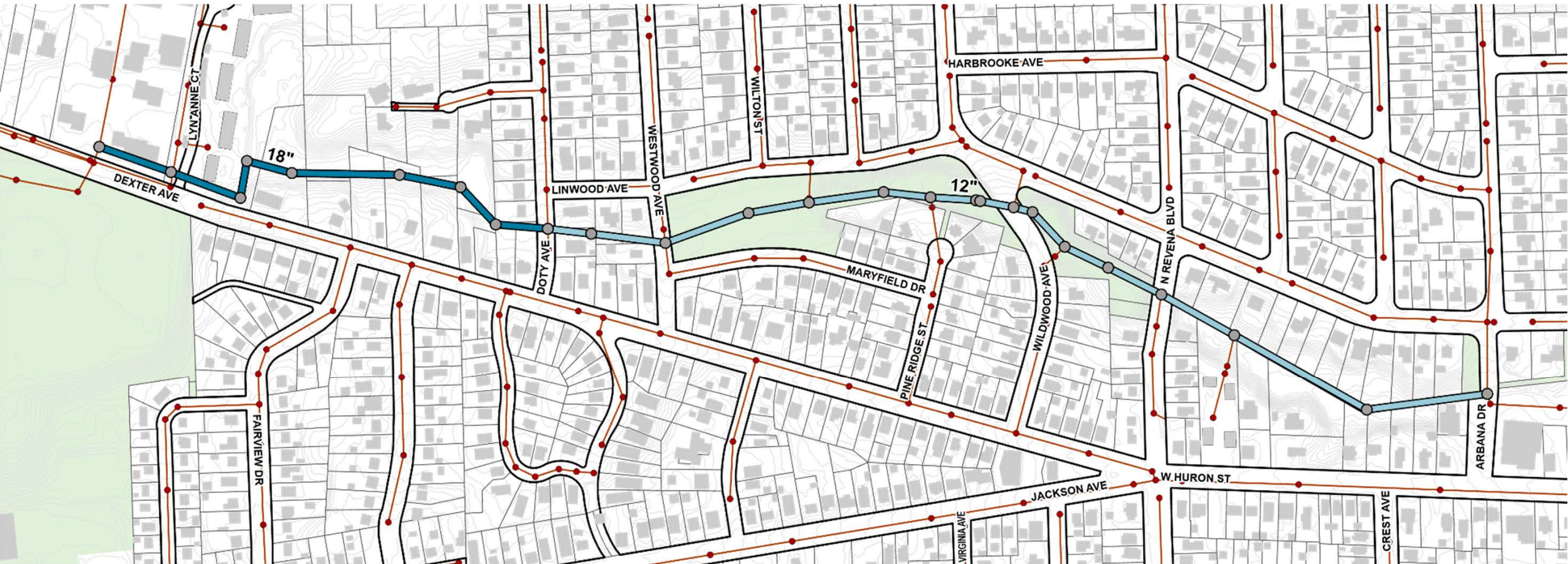
- Site Survey – Topo, Trees & Wetlands
- Geotechnical Investigation including Soil Borings
- Preliminary Design Report
- Initial Plan Development





What is this Project?

# Existing Sewer Location



# Questionnaire

- Were you aware there was an existing sanitary sewer through the ravine?
  - If Yes – Raise Hand
- Do you live adjacent to the route of the existing sewer?
  - If Yes – Raise Hand






# Questions

What is this Project?

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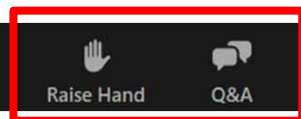
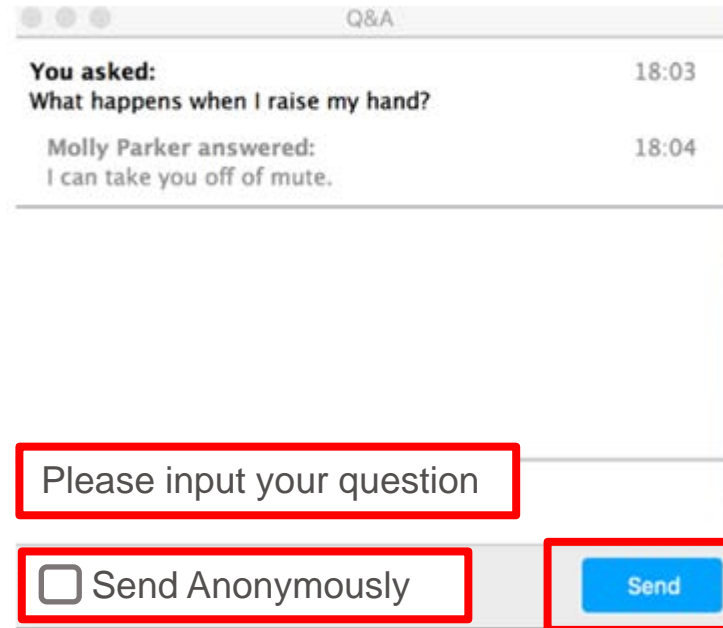
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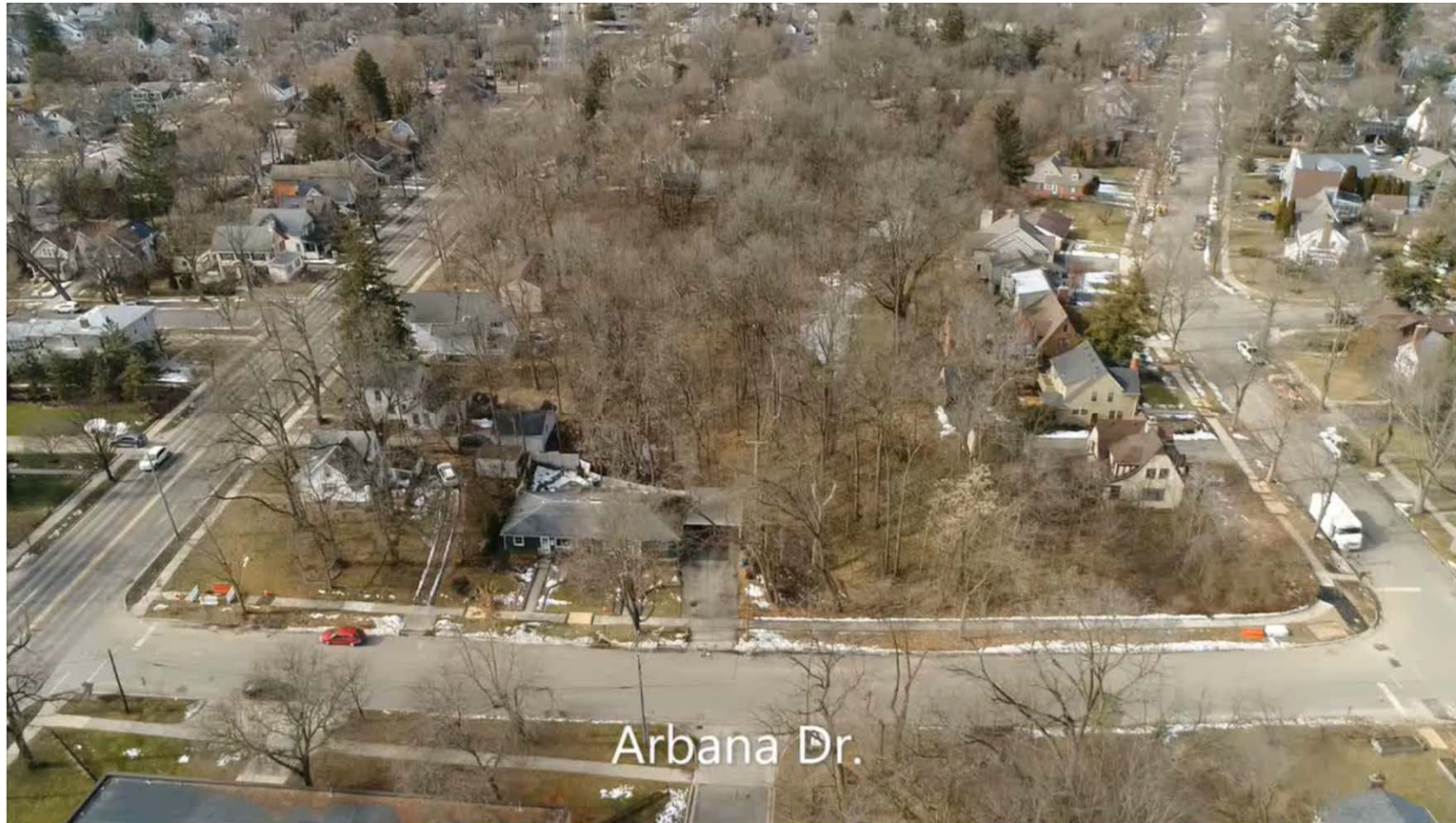
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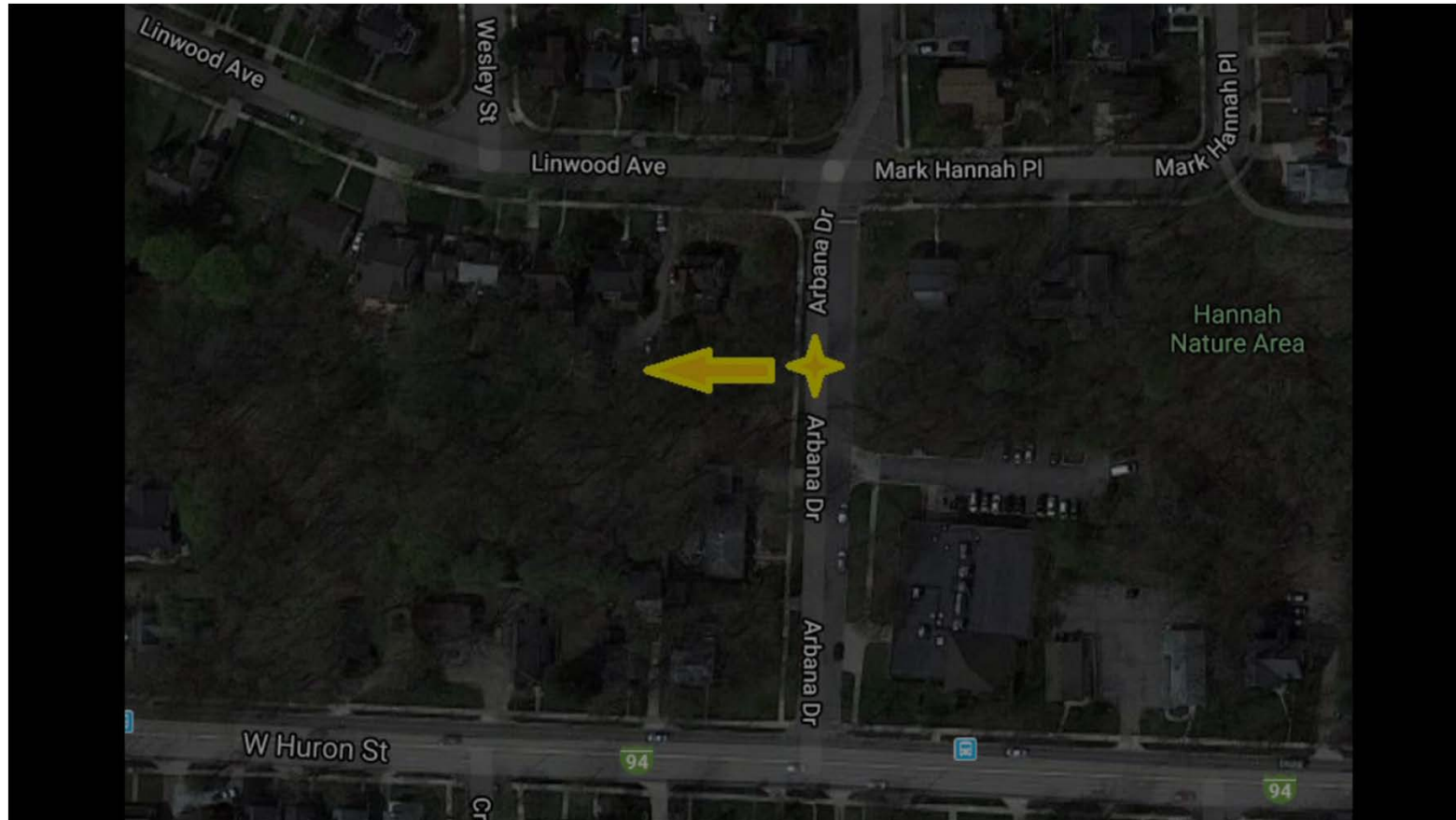
Project Background



# Existing Sewer Location

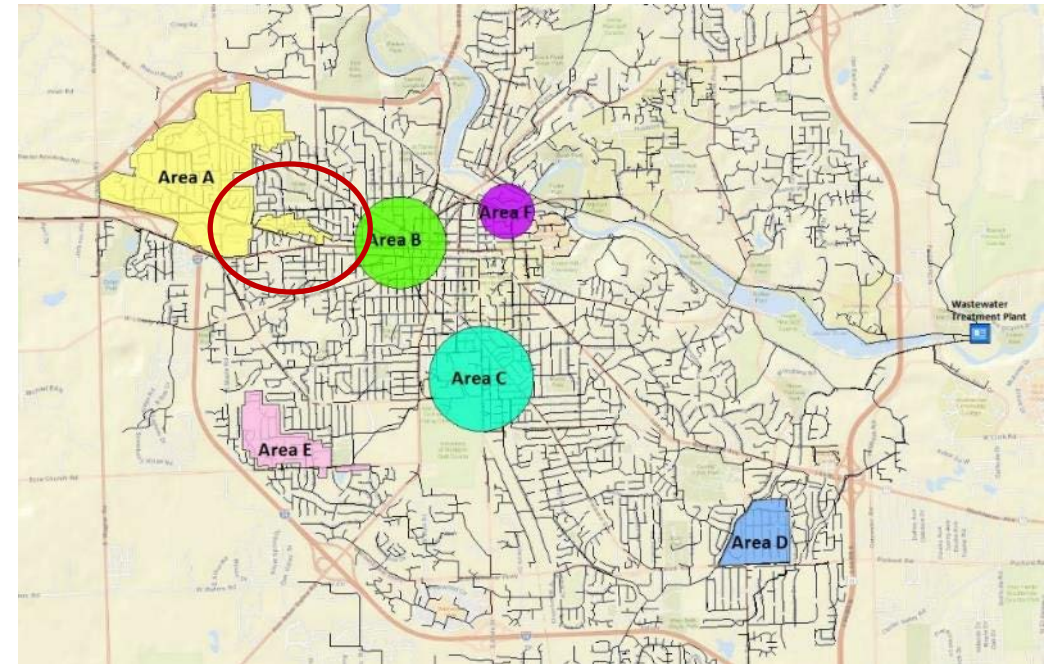


# Existing Vegetation



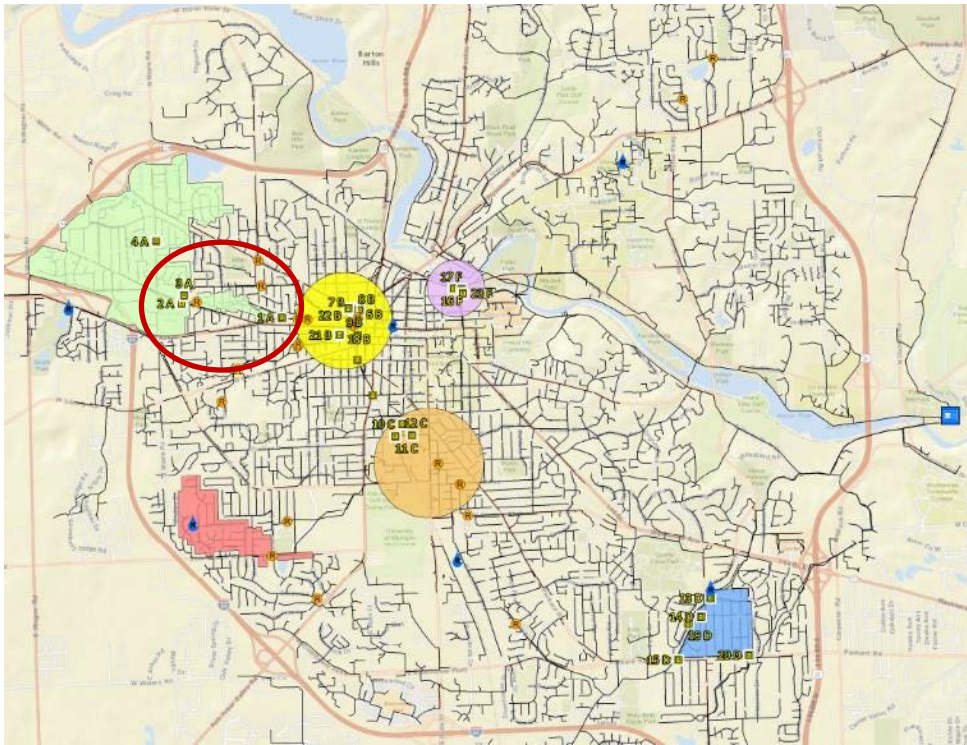
# Previous Studies

- 2013 Sanitary Sewer Wet Weather Evaluation Project (SSWWE)
- Evaluated system wide sewer capacity
- Identified 5 priority areas for additional investigation
- Included the Lyn Anne–Arbana area





## Previous Studies



- 2018 Sanitary Sewer Improvements and Preliminary Engineering Project (SSIPE)
- Performed more in-depth flow metering and modeling in these 5 areas
- Developed preliminary engineering & cost estimates for the City's Capital Improvement Plan

## Stormwater in Sanitary Sewers

- The previous studies identified areas where stormwater was getting into the sanitary sewer system.
  - Included the Lyn Anne – Arbana area
- Sanitary sewer pipes are designed for expected sanitary sewer flow, not stormwater flow.
- Excessive stormwater entering the sanitary sewer system can cause basement backups and sewer overflows.

# Stormwater in Sanitary Sewers

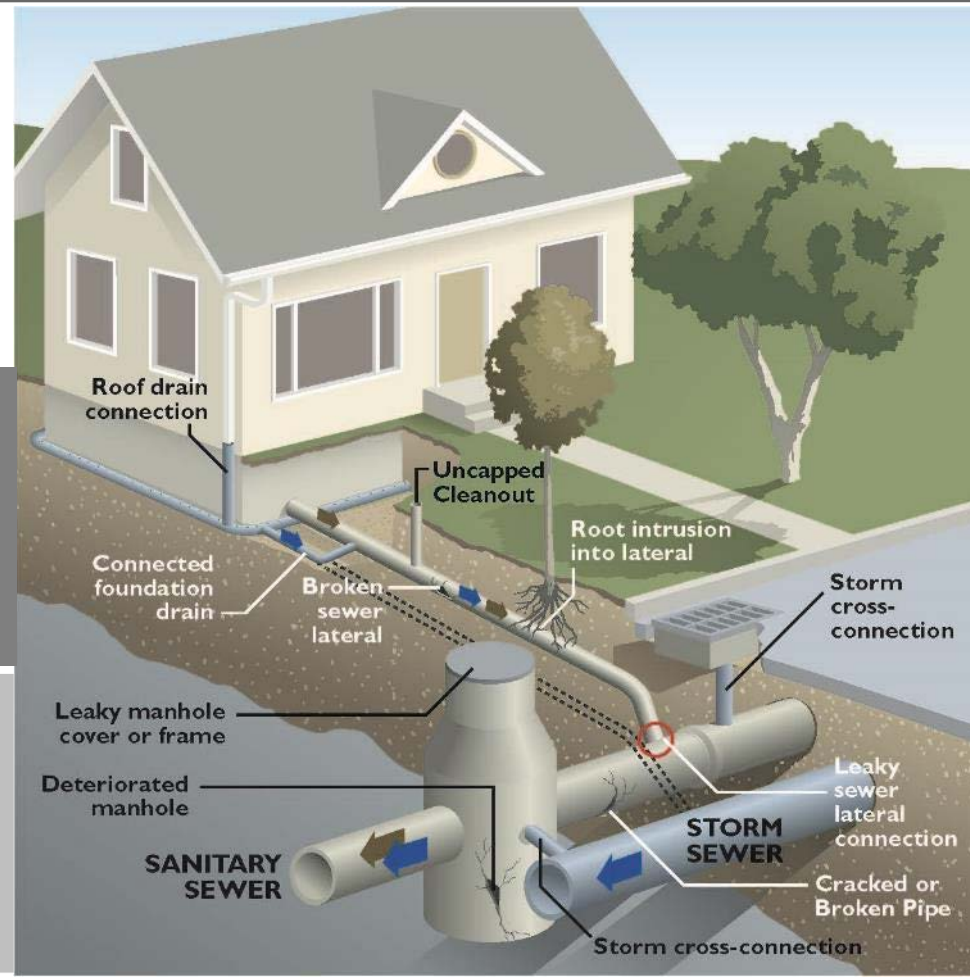
How stormwater gets into the sanitary sewer system

## Infiltration:

- Connected footing drain
- Broken sewer lateral
- Root intrusion into lateral
- Cracked or broken pipe

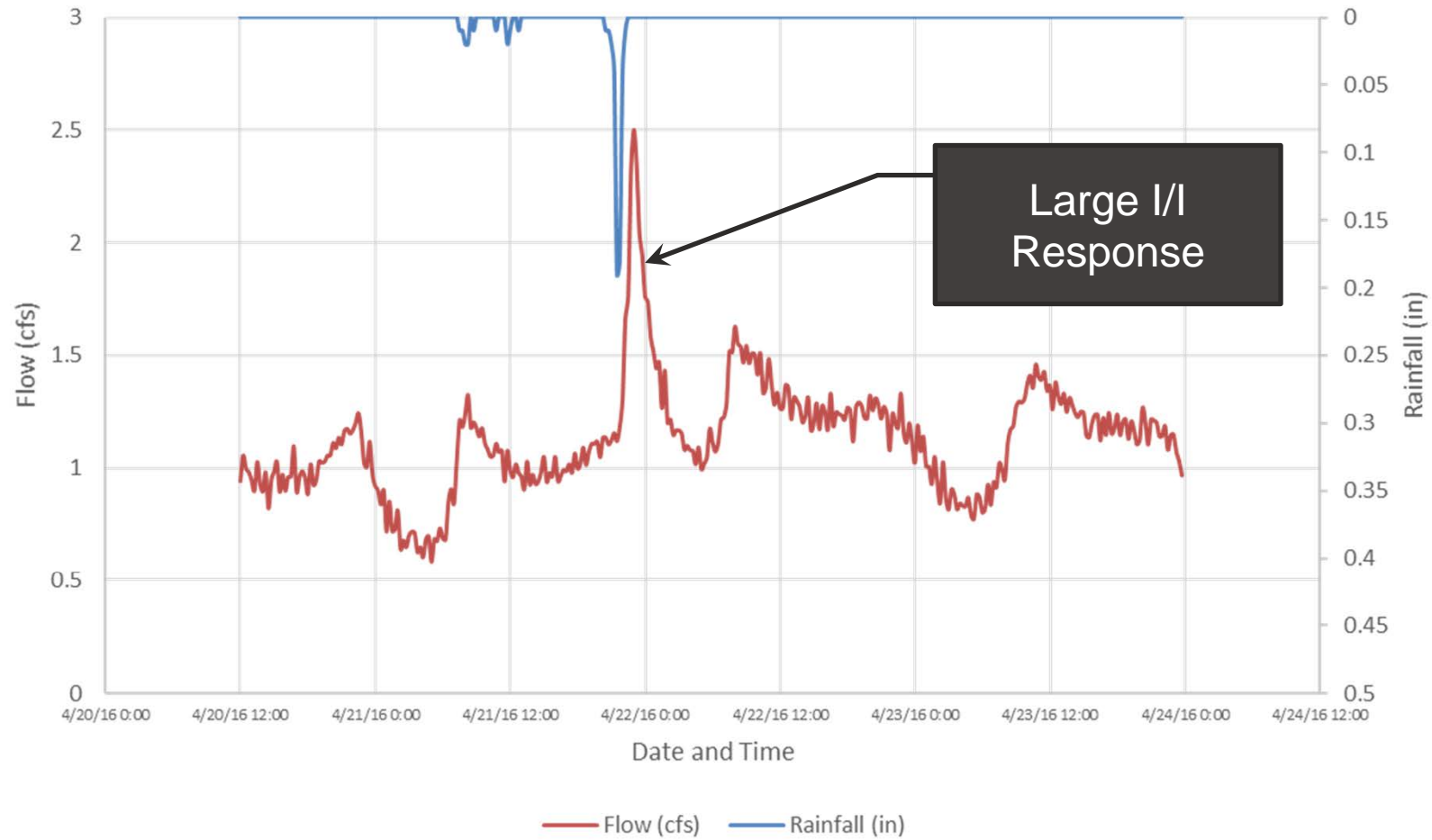
## Inflow:

- Roof drain connection
- Uncapped cleanout
- Storm cross-connection
- Deteriorated manhole

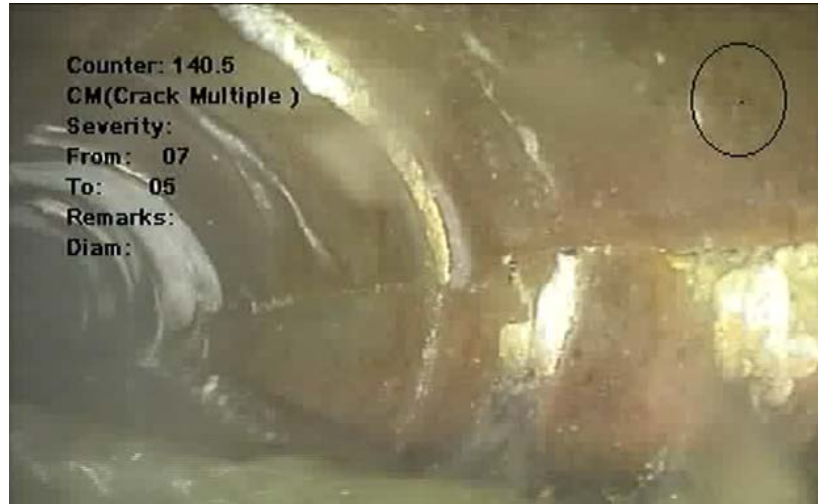




# Hydrograph



# Sewer Condition



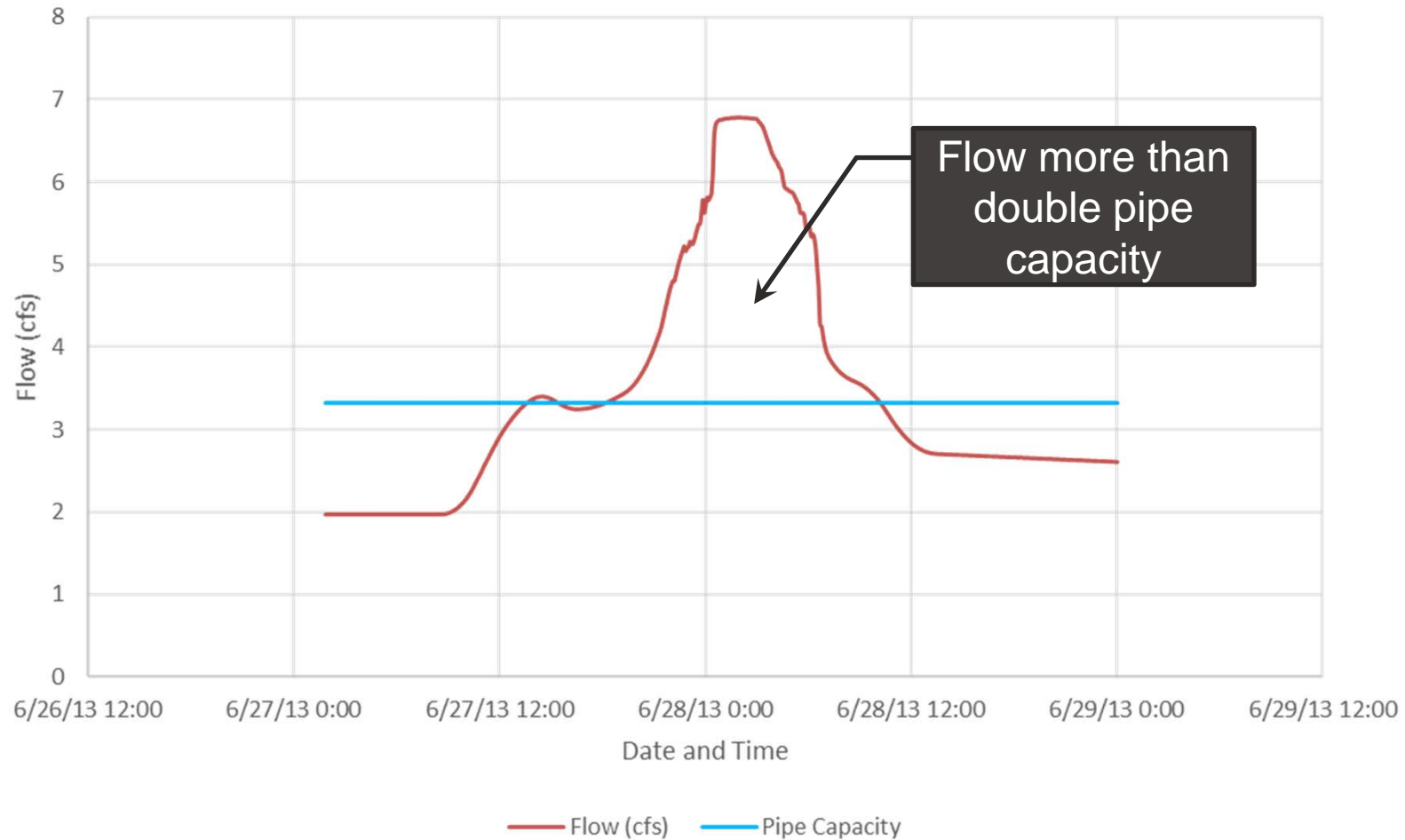
# Sewer Modeling

- Modeling is used to understand how the sanitary sewer system performs during large rains
- Based on real world data collected from the sewers and rain gauges
- A large rain event is used to identify any sewer capacity constraints

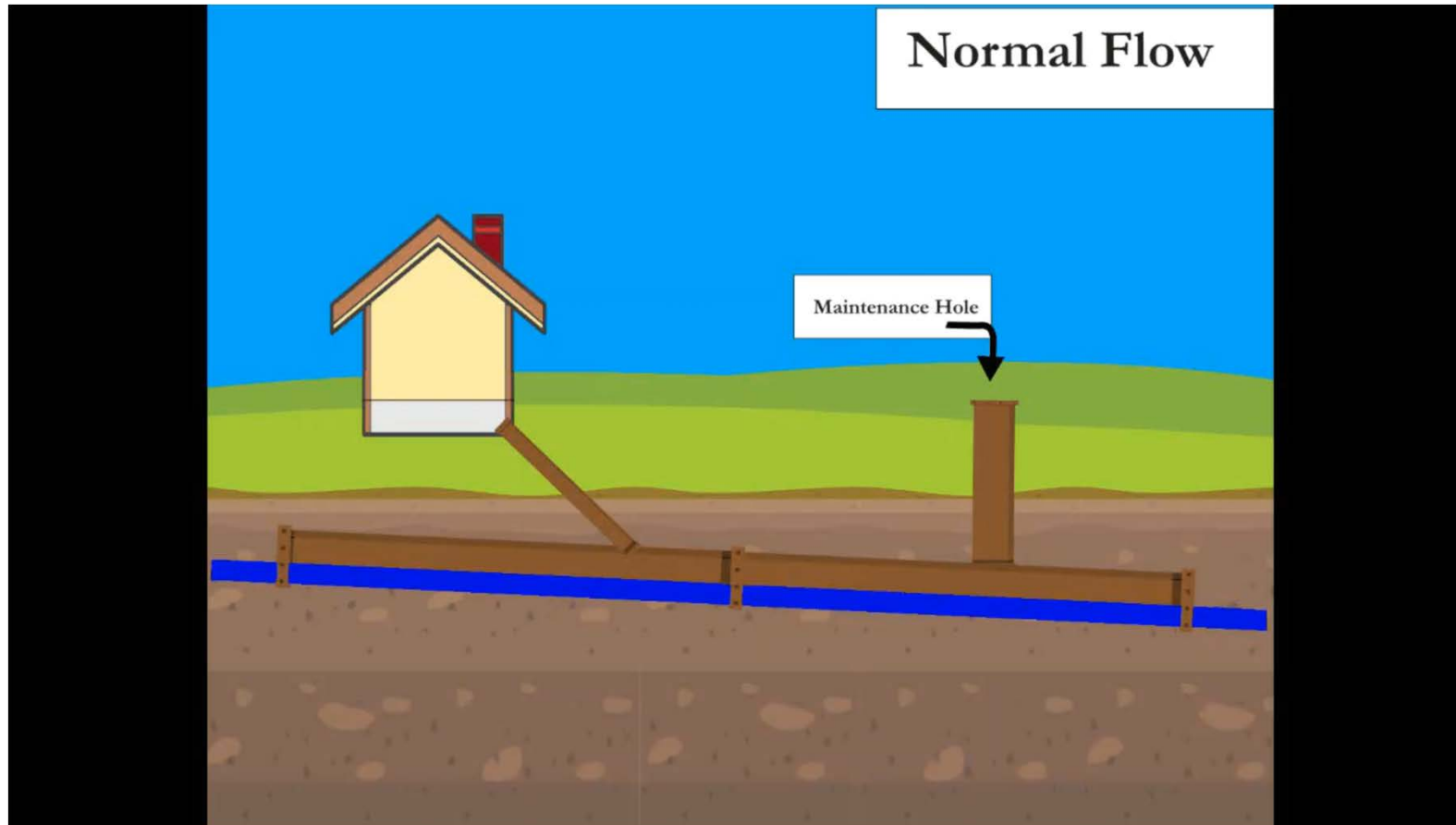




# Hydrograph of Existing Sewer



# What Can Happen

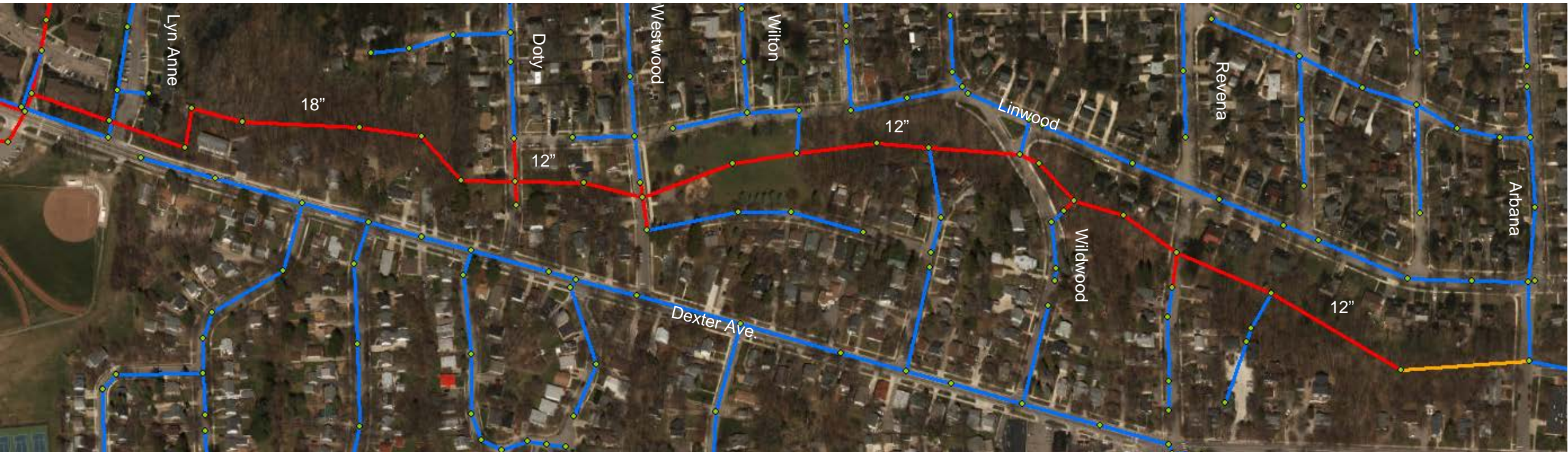


## Modeling Results

- The sewer between Lyn Anne Ct. and Arbana Dr. is overloaded during large storms
- This could cause flooding of basements and overflow at maintenance covers into the ravine or backyards



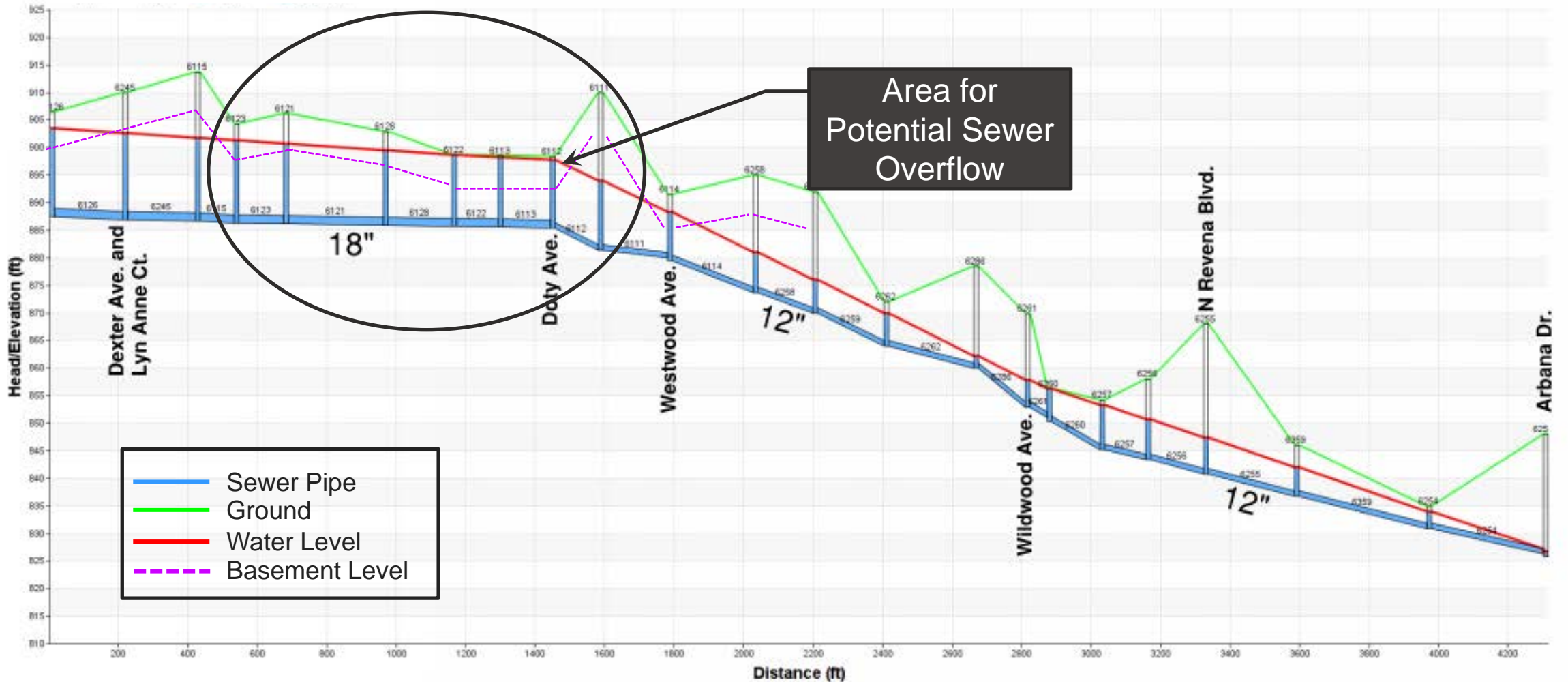
# Existing Sewer Capacity During Large Rain Event



**Pipe Capacity**

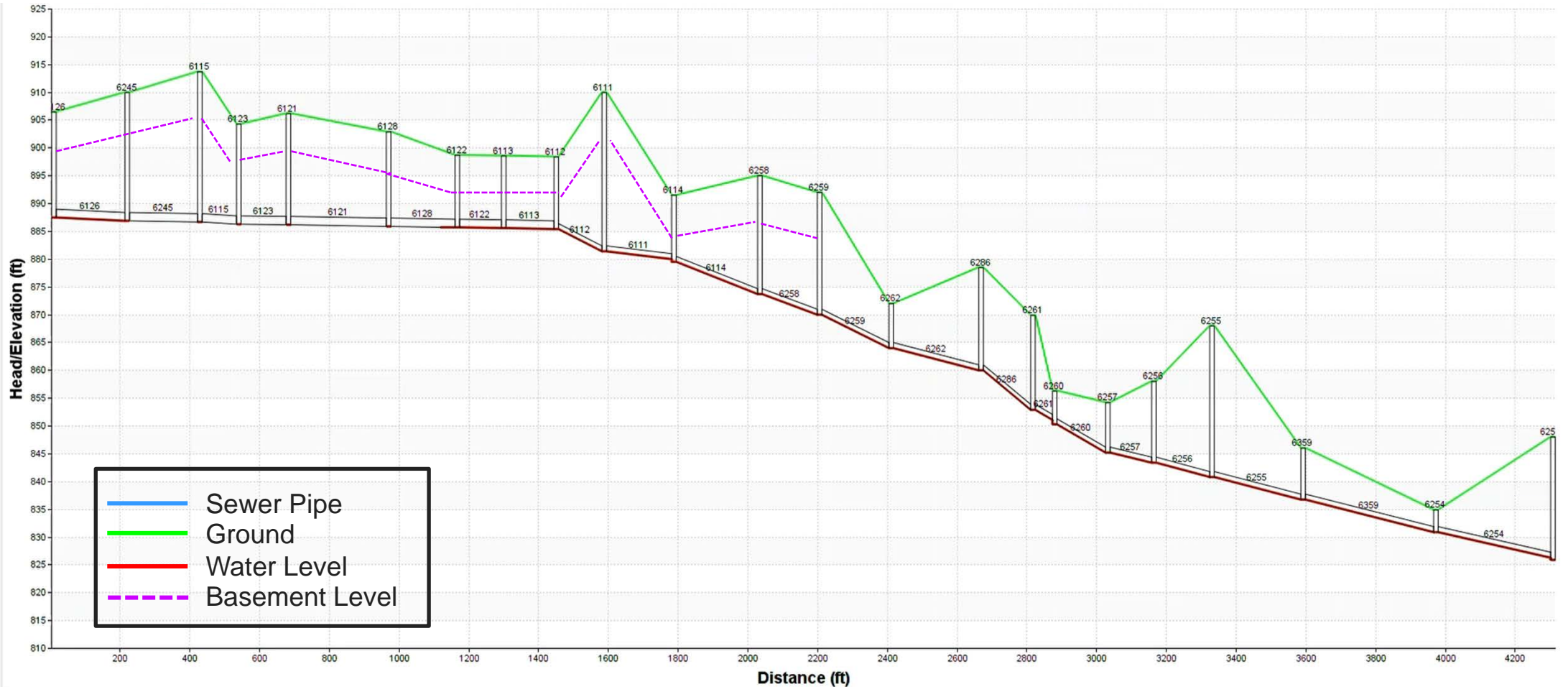
- 100% Full
- 80% to 99% Full
- Less than 80% Full

# Existing Sewer Capacity During Large Rain Event



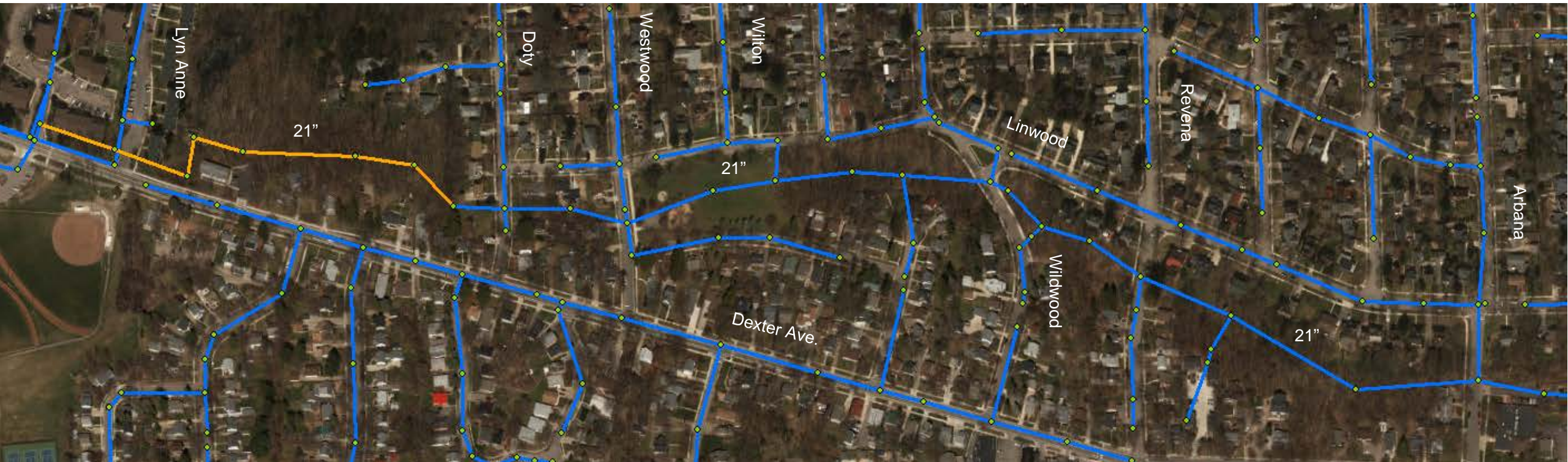


# Existing Sewer Capacity During Large Rain Event








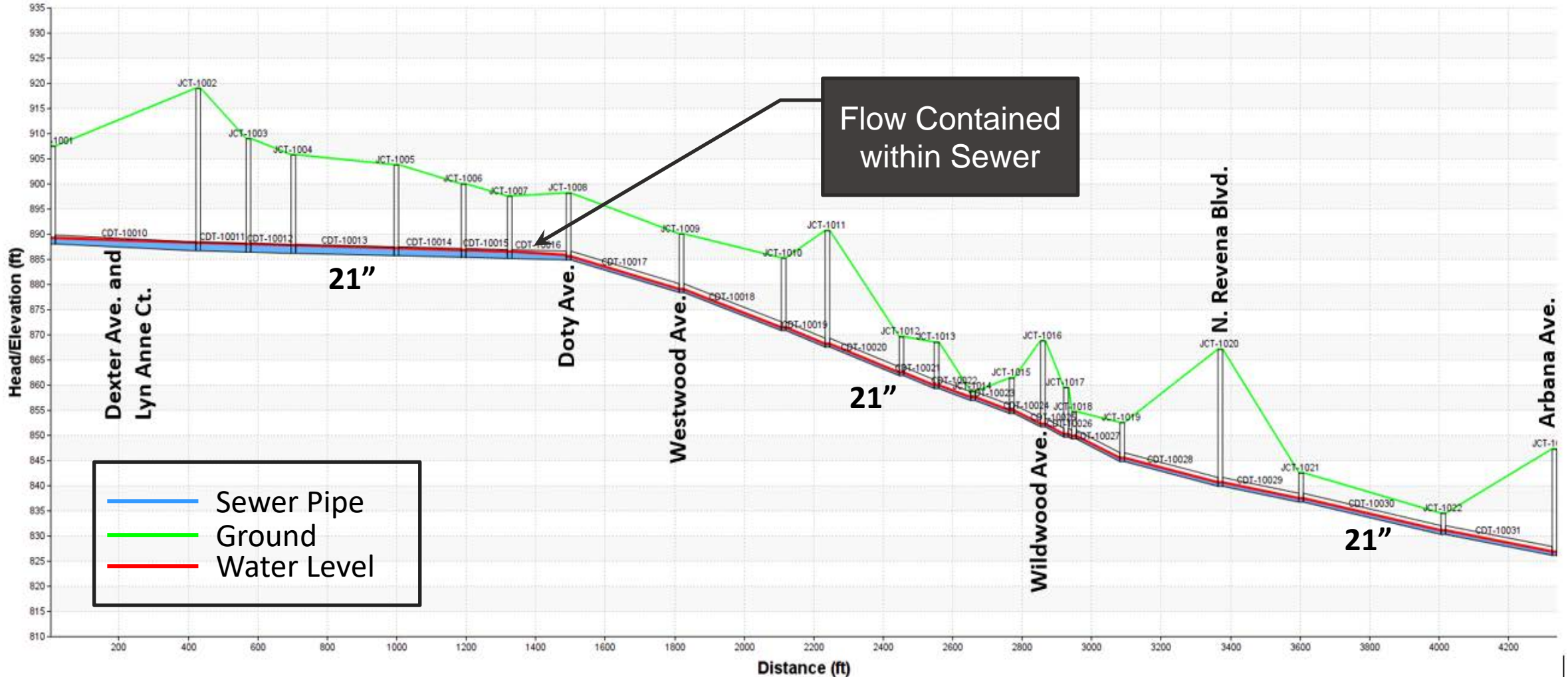
# Post Project Capacity During Large Rain Event



**Pipe Capacity**

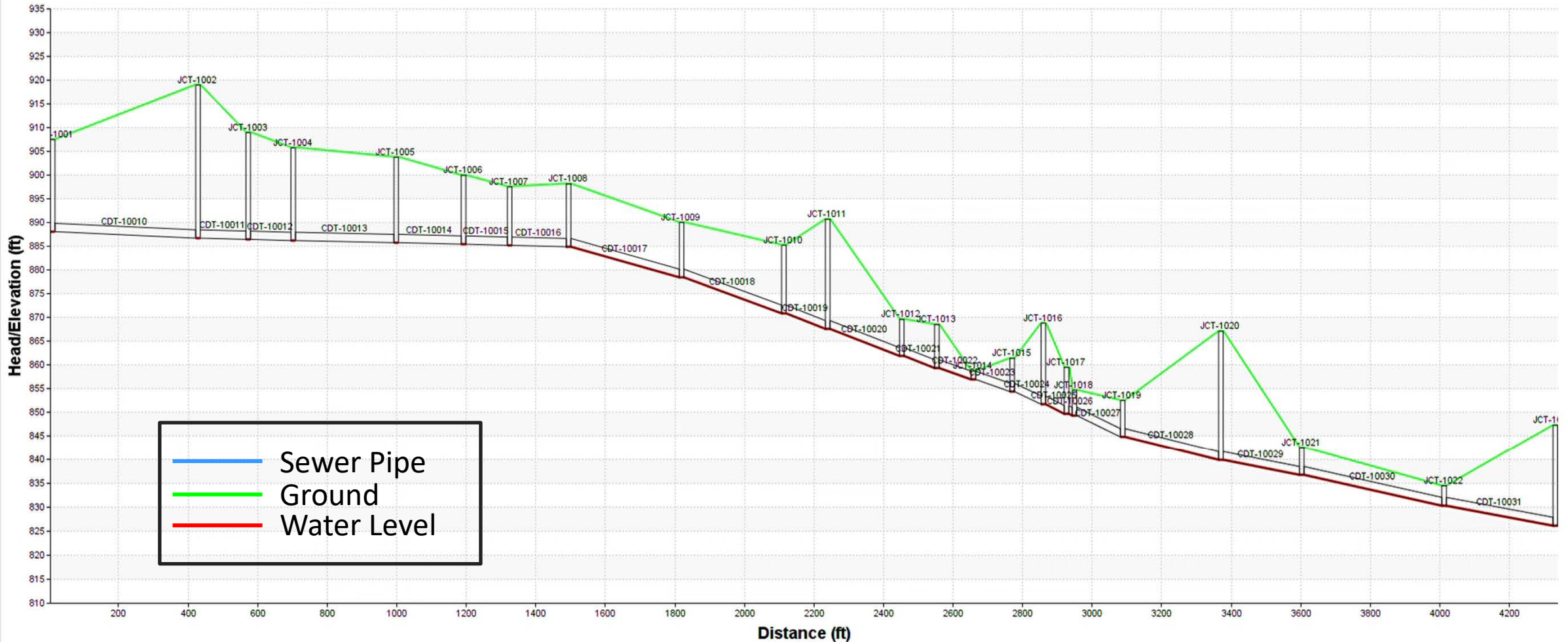
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# Post Project Capacity During Large Rain Event





# Post Project Capacity During Large Rain Event





Proposed Sewer Route

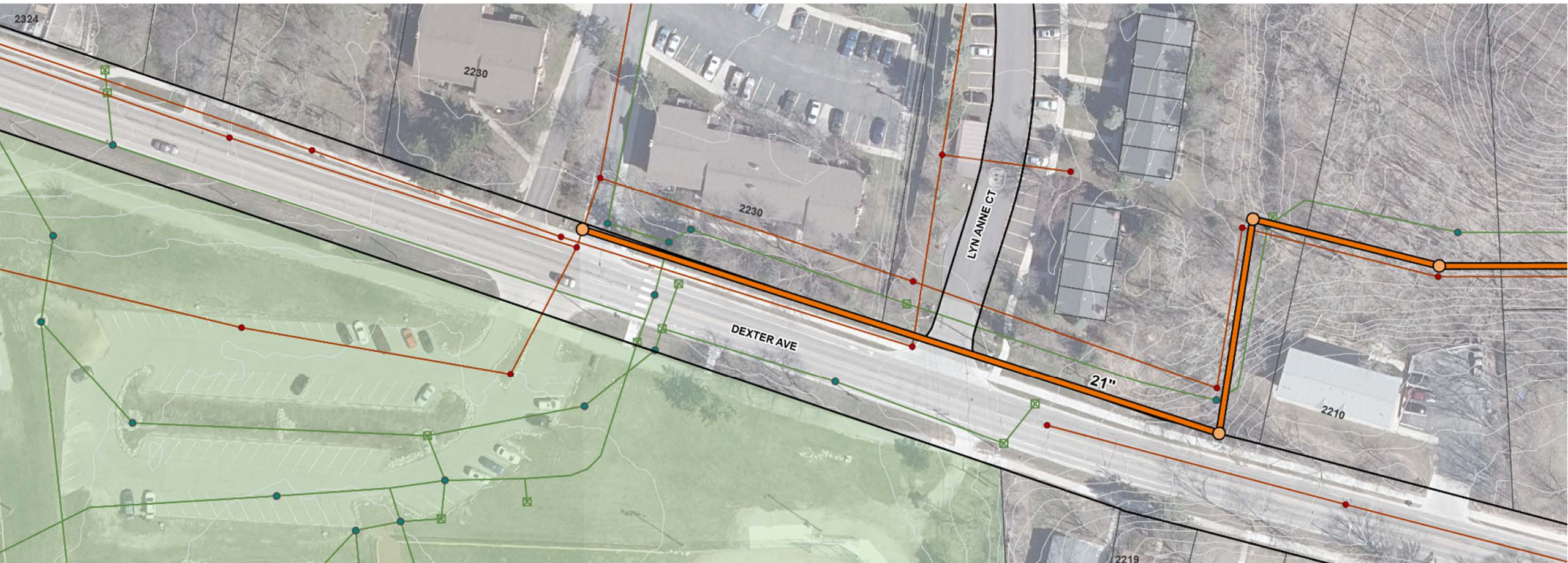
# Proposed Sewer Route

- Proposed sewer generally follows existing sewer
- Evaluated Alternate Routes along Dexter and Linwood



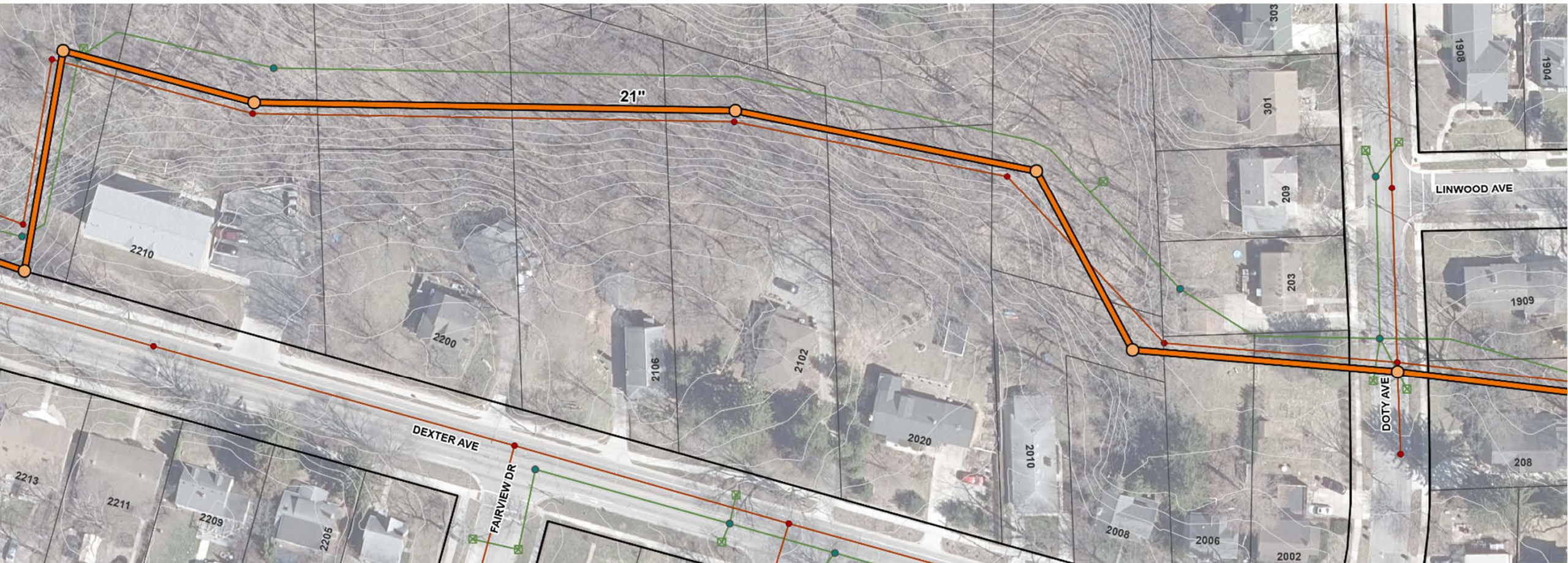


# Section 1 – Dexter Ave



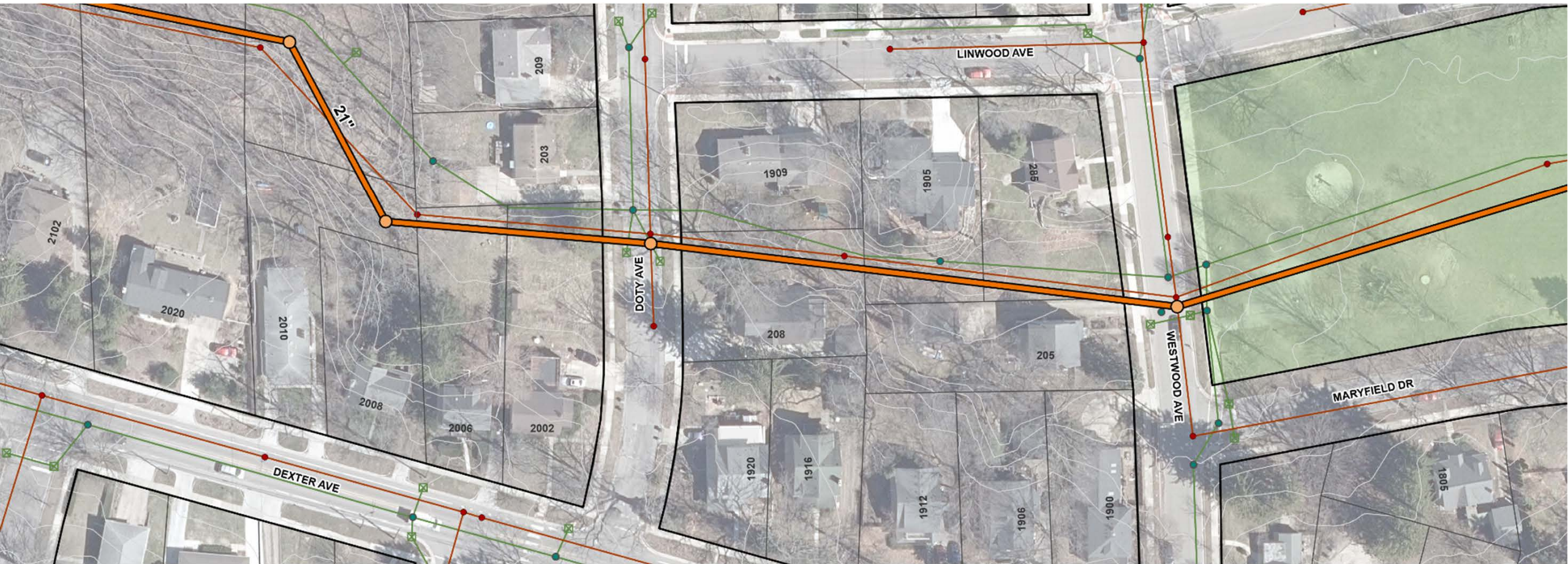


# Section 2 – Dexter to Doty



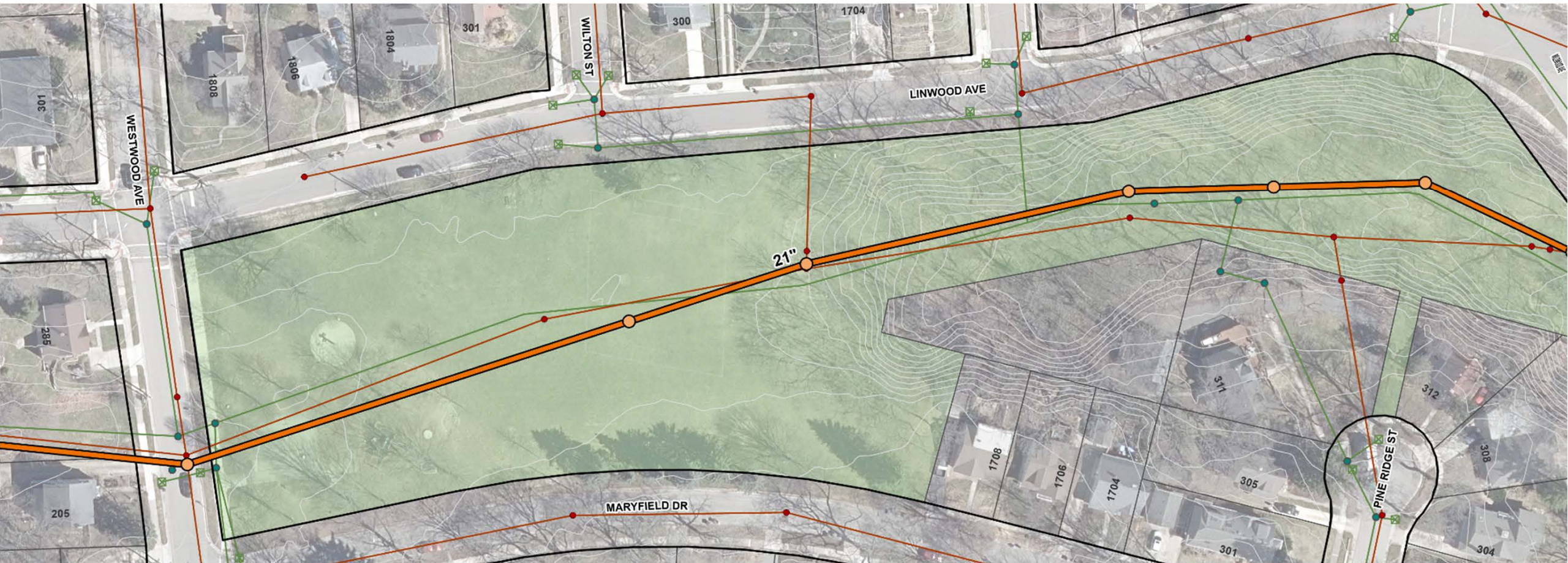


# Section 3 – Doty to Westwood



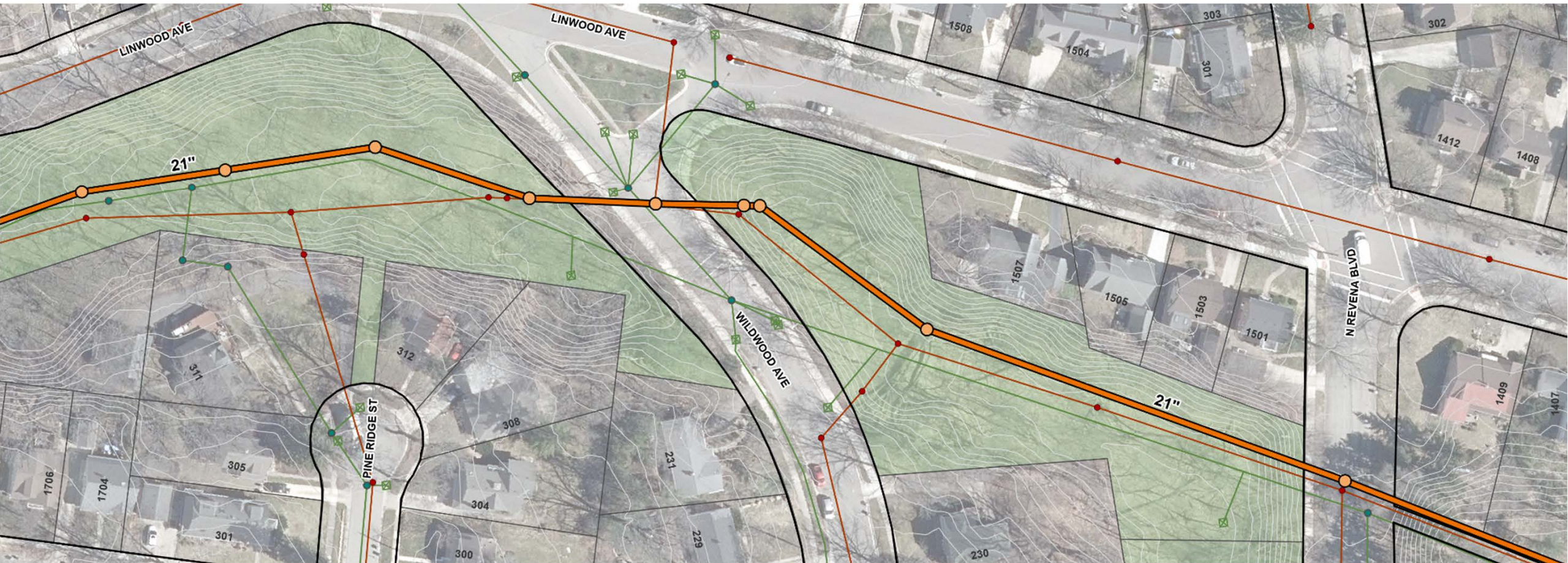


# Section 4 – Maryfield Wildwood Park





# Section 5 – Wildwood to Revena





# Section 6 – Revena to Arbana



# Project Challenges

- Environmental Impacts
  - Limit Natural Area Disturbance
- Access
  - Construction & Future Maintenance
- Park Impacts
- Road Impacts
- Easements



# Construction Impacts

- Local road closures, access to residences will be maintained
- Brief lane closures along Dexter Avenue
- Tree removal
- Construction noise, including generators for bypass pumping
- Dust and debris
- Maryfield Wildwood Park Closures

# Construction Mitigation Strategies

- Limiting construction operations to minimize tree removal.
- Trenchless sewer installation where feasible to reduce surface impacts.
- Monitoring the Contractor's operations to keep noise and dust levels within allowable limits.
- Limiting the number of local roads closed at one time.
- Coordination with Parks and Recreation for potential amenity improvements within the Maryfield Wildwood Park.

# Easement Acquisition

- **Approximately 45 Permanent Easements Required**
  - Some areas have existing easements, some do not
  - None are adequately sized to allow for proper maintenance
  - Generally 40 to 50 feet wide, varies with sewer depth
  - Most along rear property lines
- **Additional Temporary Construction Easements**
  - Added width to allow large equipment access for construction.
- **City is coordinating the process through West Erie**
  - Contact Property Owners Individually
  - In person or Remote Meetings



Going Forward

## Expected Project Schedule

- Project Design – Completed by November 2020
- Easement Acquisition – Starts July 2020
- Bidding – December 2020
- Begin Construction – Spring 2021
- Construction Complete – Fall 2021

## Public Engagement Purpose

- The City desires a robust community engagement process as part of the design of Lyn Anne-Arbana sewer.
- It is vital to obtain resident and stakeholder input into the design process and eventual construction of a new sewer.
- Community engagement during the design will optimize the design and construction plan.



# Opportunities for Public Engagement

- Three Public Meetings:
  - Meeting #1: June 11, 2020
  - Meeting #2: Late Summer 2020
  - Meeting #3: Fall 2020
- Individual Meetings
  - As appropriate, focused on easements

## Next Steps

- Preparation of Detailed Design Documents
  - Refine through Public Feedback
- Contact Regarding Easements
- Provide Follow-up Information
  - E-mail Updates
  - Meeting Minutes and Project Updates on the Website

[www.a2gov.org/LynAnne-ArbanaSewer](http://www.a2gov.org/LynAnne-ArbanaSewer)


Brian Slizewski, PE  
City of Ann Arbor – Public Services – Engineering  
[BSlizewski@a2gov.org](mailto:BSlizewski@a2gov.org)  
(734) 794-6410 x43607

# Questions and Answers

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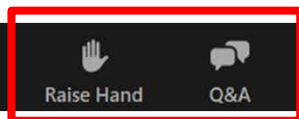
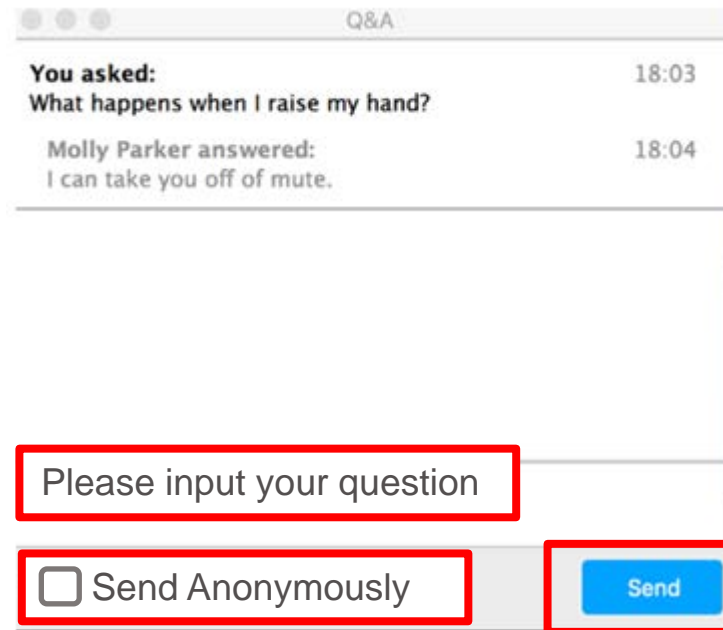
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