

# June 25-26, 2021 Storm Event Analysis Project Summary

## Purpose of Project

A large rain event occurred on the evening of June 25, 2021 into the early morning hours of June 26, 2021 resulting in numerous reports of flooding and basement backups in Washtenaw and Wayne Counties, including portions of the City of Ann Arbor. The Pittsfield Village neighborhood and surrounding streets were the most impacted areas in the City of Ann Arbor, although scattered flooding and backups were reported throughout the City. The City of Ann Arbor requested OHM Advisors to perform an engineering analysis to better understand the cause of the basement backups and flooding issues in the City and provide recommendations on what could be done to minimize the potential for similar occurrences in the future. The full technical memorandum detailing the various analyses performed as well as the findings and recommendations can be found at [www.a2gov.org/JuneStorm](http://www.a2gov.org/JuneStorm).

## Tasks Performed

- Rainfall data analysis
- Public engagement
  - Two public meetings
  - Resident survey
  - Site visit and staff interview
  - Resident interviews
- Stormwater hydraulic modeling
- Sanitary sewer hydraulic modeling

## Findings

- The project area received about 4.8 inches of rain, equating to a storm with a 1% chance of occurring in any given year (100-year storm).
- A storm of this magnitude exceeds the City's design standards for sizing both the stormwater and sanitary sewer systems.
- The stormwater system performed as expected during the June rain event for a storm of this magnitude.
- The greenspace area between Pittsfield and Whitewood, south of Norwood, may have been intended to provide some level of surface storage during rain events.
- Connected footing drains appear to have contributed a large amount of flow into the sanitary sewer system resulting in basement backups.



## **Recommendations and Next Steps**

- City of Ann Arbor
  - Near-Term:
    - Extend curb drains within Pittsfield Village to facilitate sump pump discharge connections in support of the City's Developer Offset Mitigation (DOM) Program. Schedule TBD.
    - Parkwood/Pittsfield Village Stormwater Improvements Project (UT-ST-18-06) will identify locations for pipe upsizing and stormwater detention in the northern part of Pittsfield Village. Planning/Design to begin late 2022/early 2023; Construction 2024/25 (tentatively)
    - Utilities Improvements Evaluation Project (UT-ST-22-02; UT-SN-18-07) will involve public sewer investigation and rehabilitation to identify and eliminate sources of stormwater into the sanitary sewer system. Planning/Design to begin late 2022/early 2023; Construction 2024/25 (tentatively)
  - Long-Term:
    - Perform a Swift Run Drain Study with the Washtenaw County Water Resources Commissioner's Office to identify stormwater detention opportunities throughout the creekshed
    - Upsize stormwater infrastructure between Pinecrest and Darrow
    - Reevaluate the design storm to account for climate change when sizing improvements to the stormwater and sanitary sewer systems
- Pittsfield Village Condominium Association
  - Continue adding gutters to residential units to facilitate stormwater drainage
  - Clean and televise sanitary sewer leads to ensure the full pipe capacities are available to be utilized during rain events
  - Perform a capacity analysis on the private stormwater infrastructure to ensure it is adequately sized for the desired level of service
  - Assist residents with DOM Program efforts
- Homeowners
  - Participate in the City's DOM Program to disconnect footing drains
    - Visit <https://a2gov.org/DOM> for more information
  - Implement best practices to reduce the risk for basement backups and flooding
    - Ensure soil is sloped away from the house
    - Extend downspouts away from the house
    - Install a check valve on the sanitary sewer lead
    - Visit <https://a2gov.org/JuneStorm> for a complete list of best practices