



Public Facilities Committee Agenda

City of Newton In City Council

Wednesday, March 6, 2024

The Public Facilities Committee will hold this meeting as a hybrid meeting on Wednesday, March 6, 2024, at 7:00 PM in Room 204. To view this meeting using Zoom use this link: <https://newtonma.gov.zoom.us/j/89617934663> or call 1-646-558-8656 and use the following Meeting ID: 896 1793 4663

Item Scheduled for Discussion:

#32-24 Updates on Border Street

COUNCILORS MALAKIE, KELLEY, AND WRIGHT requesting regular updates from DPW on status of Border Street culvert, MWRA easement, potential engineering solutions and other measures to mitigate risk of flooding, and knowledge gained from stormwater studies.

#122-24 Update on plans and projects for the Stormwater System in Newton

Councilor Albright on behalf of the Public Facilities Committee requesting an update from DPW on plans and projects to improve the stormwater system in Newton.

#47-24 Requesting a discussion with the Department of Public Works, Parks, Recreation & Culture, and the Conservation Commission regarding the condition of Edmands Park
COUNCILORS LUCAS, LAREDO, MALAKIE, WRIGHT, GETZ, DOWNS, MICLEY and LOBOVITZ Requesting a discussion with the Department of Public Works, the Department of Parks, Recreation & Culture and the Conservation Commission regarding the condition of, and potential improvements to the stormwater infrastructure in Edmands Park. This discussion should also include (a) which city department(s) are responsible for the Park; (b) flooding issues from the Park to neighboring properties; (c) the condition of the Parks infrastructure, including the liner that was installed in the pond in the 1970s; and (d) how improvements to the Park could be part of the city's phosphorus reduction plan.

Respectfully submitted,

Susan Albright, Chair

The location of this meeting is accessible and reasonable accommodations will be provided to persons with disabilities who require assistance. If you need a reasonable accommodation, please contact the city of Newton's ADA Coordinator, Jini Fairley, at least two business days in advance of the meeting: jfairley@newtonma.gov or (617) 796-1253. The city's TTY/TDD direct line is: 617-796-1089. For the Telecommunications Relay Service (TRS), please dial 711.



CITY OF NEWTON, MASSACHUSETTS

DEPARTMENT OF PUBLIC WORKS, ENGINEERING DIVISION

Ruthanne Fuller, Mayor
James McGonagle
Commissioner of Public Works

Telephone (617) 796-1020
E-mail: Ltaverna@newtonma.gov

Date: March 1, 2024

To: Shawna Sullivan, Deputy Commissioner

From: Louis M, Taverna, P.E., City Engineer *Louis M. Taverna*

Subject: Cheesecake Brook Culvert at Border Street and Elm Street

Cheesecake Brook flows from west to east in a stone culvert below Border Street. The culvert crosses under the intersection of Elm Street, and it continues to the east under the Cherry Street parking lot, then crosses under the intersection of Cherry Street and under the Police Station parking lot. Catch basins capture stormwater on Border Street, and discharge into drain manholes, which discharge directly through drainage pipes into the culvert. The Cheesecake Brook drainage basin extends to the southwest to Waban, and to the west to Auburndale. Cheesecake Brook flows easterly, then northerly to the Charles River at Albemarle Road. During major rain events, flooding has been reported and observed on Border Street.

DPW Engineering Division and Utilities Division have been performing ongoing investigations of Border Street since this flooding was reported. Utilities Division has cleaned out the catch basins, drain manholes and drainage pipes in Border Street. Border Street was repaved last year. During that process the crown of the road was adjusted, curbing was added and adjusted, and driveway opening widths were shortened, which has resulted in better drainage of Border Street. During recent storm events in January 2024, flooding was not observed. This could be a result of the cleaning of the catch basins, drain manholes and drainage pipes, improvements to the street construction, and the intensity of the storm event.

Original plans of the Cheesecake Brook culvert have been reviewed. Weston & Sampson Engineers were retained by the city to perform further investigation and analyses. Upon review, it was discovered that an MWRA water service transmission main (Weston Area Service Main, WASM 3) is located within Elm Street, and is positioned within the Cheesecake Brook culvert, partially obstructing flow within the culvert. This 60-inch diameter water service transmission main (installed in the 1950's) runs west to east down Webster Street, then north to south down Elm Street, then west to east down Washington Street, and serves Newton and Boston. Engineering Division, Utilities Division and Weston & Sampson Engineers met with representatives of the MWRA, and we discussed the possibility of removing and relocating the MWRA water main, so it no longer obstructs the flow in the culvert. MWRA representatives, being data driven, requested a hydraulic model analysis of the culvert, and the impact of the MWRA water main on culvert flow.

Weston and Sampson have prepared technical memos on this issue. The latest memo, dated January 18, 2024, describes hydraulic modeling performed by Weston & Sampson, under contract with Charles River Watershed Association, for the Charles River, as well as Cheesecake Brook. The hydraulic model was prepared without the knowledge of the MWRA water main obstruction in Elm Street. The model implies that if no hydraulic restriction is imposed by the MWRA water main, no flooding is predicted to occur in the Border Street-Elm Street area. Weston & Sampson recommend that the hydraulic model be recalibrated and rerun with the inclusion of the MWRA water main obstruction, to more accurately portray the observed flooding conditions in the hydraulic model. The upcoming results will inform us and the MWRA of the impact of the MWRA water main on culvert flow.

Further meetings with MWRA representatives are upcoming. They have conveyed to us that they are looking at some alternatives to removing and replacing the water main, but they are awaiting further hydraulic analysis by Weston & Sampson. This would be a major undertaking by MWRA, as it includes engineering, construction and funding for the project, and they want to ensure that it is absolutely necessary. Weston & Sampson also is concerned about potential flooding downstream of Elm Street, should the MWRA water main obstruction be removed.