



City of Cambridge

Executive Department

YI-AN HUANG
City Manager

August 7, 2023

To the Honorable, the City Council:

In response to Awaiting Report #23-42 from June 5, 2023 regarding irrigation systems at Danehy Park, the Department of Public Works and the Department of Human Service Programs provide the following update:

Capital Planning for Danehy Park

There is a need for a fresh look at Danehy as a facility, as the original construction, including the irrigation system, is 30-years old. The City has contracted with a landscape consultant team for planning services to develop a Capital Improvement Plan for Danehy Park to guide the future of the park in the next 10-20 years.

Capital Plan Goals

The goal of the Capital Improvement Plan is for Danehy Park to be an exceptional public park that the citizens of Cambridge will continue to be proud of and cherish. It will be planned and designed with the intent of making an extraordinary contribution to the improved quality of life, health and wellness of its surrounding neighborhoods and the entire City. The Capital Improvement Plan will:

- Complement the essential natural, historic, and visual character of the site.
- Be based on a strong inclusive public engagement process that prioritizes outreach to traditionally underrepresented groups and informs the park design and creates long-term support of the community.
- Integrate ecological design and natural resource management that protects the site's natural systems while offering visitor experiences in these environments for enrichment, education, health and wellness outcomes.
- Incorporate measures from the City's recent resilience focused planning efforts to protect from, and mitigate, future flooding and heat impacts due to climate change.
- Offer a variety of choices for people of all ages, backgrounds and interests who will want to come to the park for relaxation, respite, play, exercise or to connect with other people.
- Evaluate the condition and quality of the parks' features and systems and propose a series of distinct projects / phased improvements (with cost estimates) to inform future capital planning. This includes, but is not limited to, the following:



- Landscape and Ecology
- Utilities: drainage, water, electrical, irrigation, etc.
- Bicycle and pedestrian access into and through the park
- Accessibility (park was constructed prior to ADA / MMAAB regulations)
- Play: opportunities for multi-generational play as well as traditional fields and tot lots

The plan will be developed with the context of Danehy Park being a former landfill and where additional environmental control measures may need to be incorporated within the facility.

Schedule

The Capital Planning process will begin in the winter of 2023 and take approximately 12 months to complete.

Current Status of Irrigation System and Short-to Medium Term Improvements

Due to the overall age of the irrigation system, the operation and maintenance of the system is a challenge and requires both short-term and longer-term improvements.

- In response to the serious irrigation challenges in 2022, immediate repairs were made. Several lines, irrigation heads and the pump that failed last year contributing to the loss of 12 trees have been replaced and are functioning. 120 trees are currently planned for planting once DEP approves excavation in the park. Fifty-five trees were also added during the construction of the Louis DePasquale Playground.
- The Spring 2023 system turn on went reasonably well, but there were some additional repairs identified that are being addressed. The park is currently being irrigated by four systems and supplemental hand watering in some limited areas. See below for the list of completed and on-going improvements.
- As part of the Capital Planning process, we are prioritizing the evaluation of the condition of the irrigation system. Staff anticipate coming to City Council for a fall appropriation to fund the Capital Improvement Plan, irrigation system improvements (including redundancy between zones and/or system back up measures), Field Turf 4, and the Track & Throwing Area. Additional capital funding requests are expected in future years to implement other recommendations from the Capital Improvement Plan.

Completed Improvements to the Irrigation System

In addition to the routine repair of heads and lines associated with the typical spring startup, irrigation specialists have been deployed to assess and address the following issues:

- **St. Peter's Fields (System 1):**
Several heads, valves and lines were repaired this spring and the system is serving the needs of our baseball and softball field. Our irrigation specialists are working to restore a line in Roethlisberger Park behind the Softball Field on Garden Street. Staff monitor this area and provide surface irrigation as needed.
- **Pump System Near Sherman St. Entrance (System 2):**
The pump that was installed in 2022 was removed for storage over the winter and DHSP worked with the Water Department to reinstall in Spring 2023. A line break was

discovered recently along the main path by the Miyawaki Forest which is being repaired by an outside contractor. The pump and system are functioning and keeping the Miyawaki Forest irrigated.

- **Irrigation System Near New Street Entrance (System 3):**

In Spring 2023, we experienced wiring issues in System 3. The Cambridge Electrical Department identified and replaced several defective parts and staff are able to operate the system manually and run it for the designated times. The irrigation specialists on site are identifying solutions to address the wiring in this system, which would eliminate the need for staff to operate the system manually.

The irrigation main that was cut during construction work on New St has been assessed. This area will be included in the scope of our larger evaluation, but the contractor we currently have deployed is also trouble shooting interim solutions. Surface irrigation is available presently, and park staff are monitoring and watering this area as needed.

- **Louis D. Pasquale Universal Design Playground (System 4):**

A leak was discovered after the system start-up in the spring of 2023. This has impacted the waterplay and a portion of the irrigation system. The leak was able to be isolated, and the waterplay is currently in use and all irrigation has been restored. Danehy Staff watered portions of this park as needed, while the contractor worked to increase the functionality of the system. The contractor is currently working to fix the isolated leak and the manufacturer will be replacing several sensors.

Irrigation systems have engineering complexities and underground failures that must be managed; in addition to cross-departmental efforts made to ensure the best possible response to the needs of all of the City's parks, there are dedicated maintenance funds and resources for professional and technical services that are used for on call repair services and seasonal openings and closures that the city contracts for to ensure the care for our parks. In addition to these operating funds, staff anticipate coming to City Council for a fall appropriation to fund the Capital Improvement Plan, irrigation system improvements (including redundancy between zones and/or system back up measures), Field Turf 4, and the Track & Throwing Area. Additional capital funding requests are expected in future years to implement other recommendations from the Capital Improvement Plan.

Very truly yours,



Yi-An Huang
City Manager