

## **Making Your Vision a Reality: Moakley Park's Adaptive, Iterative Process to Inform Adaptive, Resilient Design**

Alison Perlman (City of Boston, Boston, MA, USA)

Chris Reed (Stoss, Boston, MA, USA)

**Cheri Ruane** ([ruanec@wseinc.com](mailto:ruanec@wseinc.com)) (Weston & Sampson, Boston, MA, USA)

Julie Eaton Ernst ([eatonernst.julie@wseinc.com](mailto:eatonernst.julie@wseinc.com))

**Background/Objectives.** The redesign of Moakley Park is an important part of the City of Boston's commitment to advancing climate readiness along Boston's shoreline. Moakley Park is a 64-acre waterfront park located at the start of a major food pathway into four neighborhoods. The redesign efforts, from visioning through preparing construction documents, serve as a national model for integrating nature-based solutions and climate resilience planning/phasing into waterfront open space design. The multi-pronged approach to climate resilience at Moakley Park includes innovative design strategies informed by complex site conditions, thoughtful community outreach, and robust engagement with area stakeholders—including utility owners with infrastructure and easements through the site.

**Approach/Activities.** Subsurface explorations following the 2019 Vision Plan identified shallow groundwater, poor hydraulic conductivity (drainage), areas of soil contamination, and soft, compressible soils up to 200 ft below ground surface. These findings and associated site-specific modeling (coastal, stormwater, settlement, seepage, etc.) identified significant challenges to reach up to 8 ft of flood protection and manage stormwater. The design and engineering teams used charettes and sprints to target complex conditions and strategize options. This process of identifying challenges, finding solutions, and iteratively re-assessing through inter-disciplinary collaboration resulted in exciting, innovative strategies that push the boundary of traditional open space and parks. Additionally, combining this iterative process with community engagement resulted in creating spaces that explicitly address issues of inclusion and access to the harbor. The engagement process included expanding climate hazards and action education while working with local non-profit and community groups to plan new programs to attract and diversify park users.

**Results/Lessons Learned.** The 2019 Vision Plan has been refined through extensive, iterative technical assessments and design updates, collective awareness of below ground and off-site constraints, and inclusion of community voices. The schematic design of Moakley Park includes climate resilient design strategies that augment open space, such as coastal landscapes and a flood barrier; green and sustainable stormwater management systems to manage current and adapt to future rainfall; more than doubling the tree canopy; using light-colored, reflective surface materials; incorporating shade shelters, water play, and cooling stations; and a more ecologically diverse and sustainable landscape. Phase I of the park improvements are currently being advanced with anticipated construction starting in 2024. This first phase of construction will serve to mitigate a near term flood pathway. It is the start of a sequence of future park phases that improve the public realm, enhance the environment, and adapt to climate change.