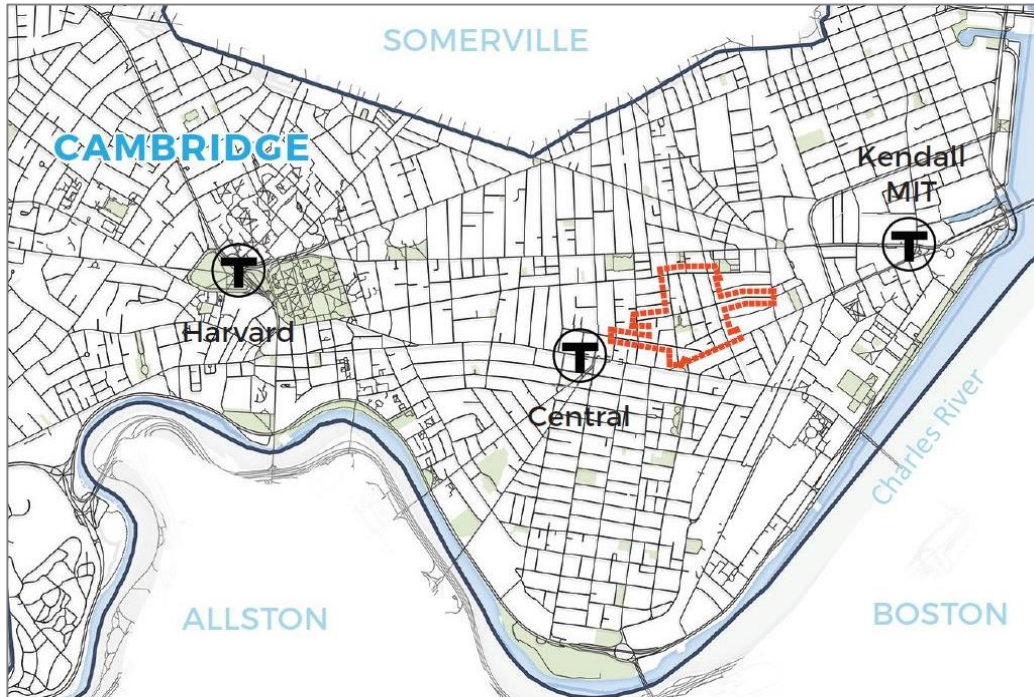


# THE PORT PROJECT

Update



Bishop Allen Drive at School Street looking East - July 2010

Central Square Advisory Committee | January 29, 2020

[www.cambridgema.gov/theworks/theport](http://www.cambridgema.gov/theworks/theport)

**THE WORKS**  
CAMBRIDGE  
DEPARTMENT  
OF PUBLIC

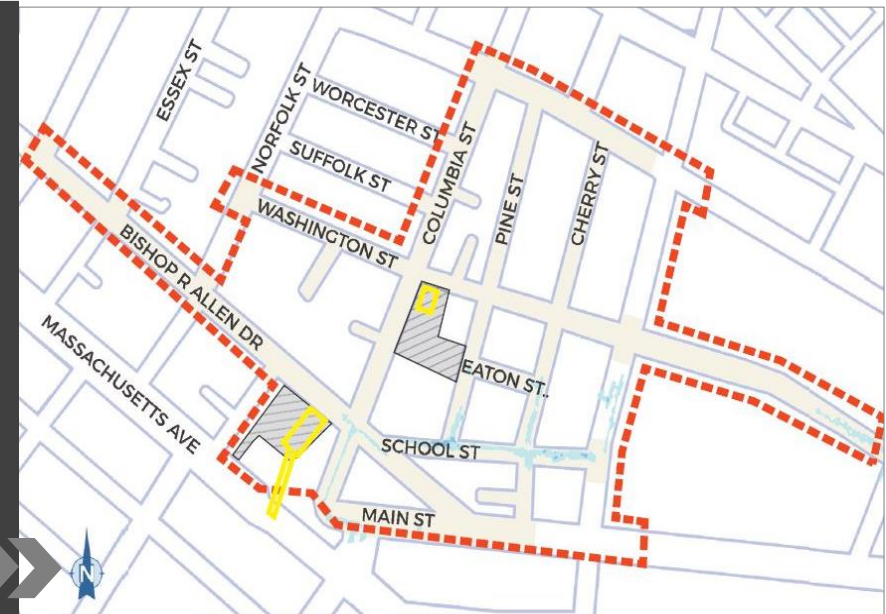
# Benefits – Flood Reduction

**Existing Conditions**  
Frequent / Smaller Storms



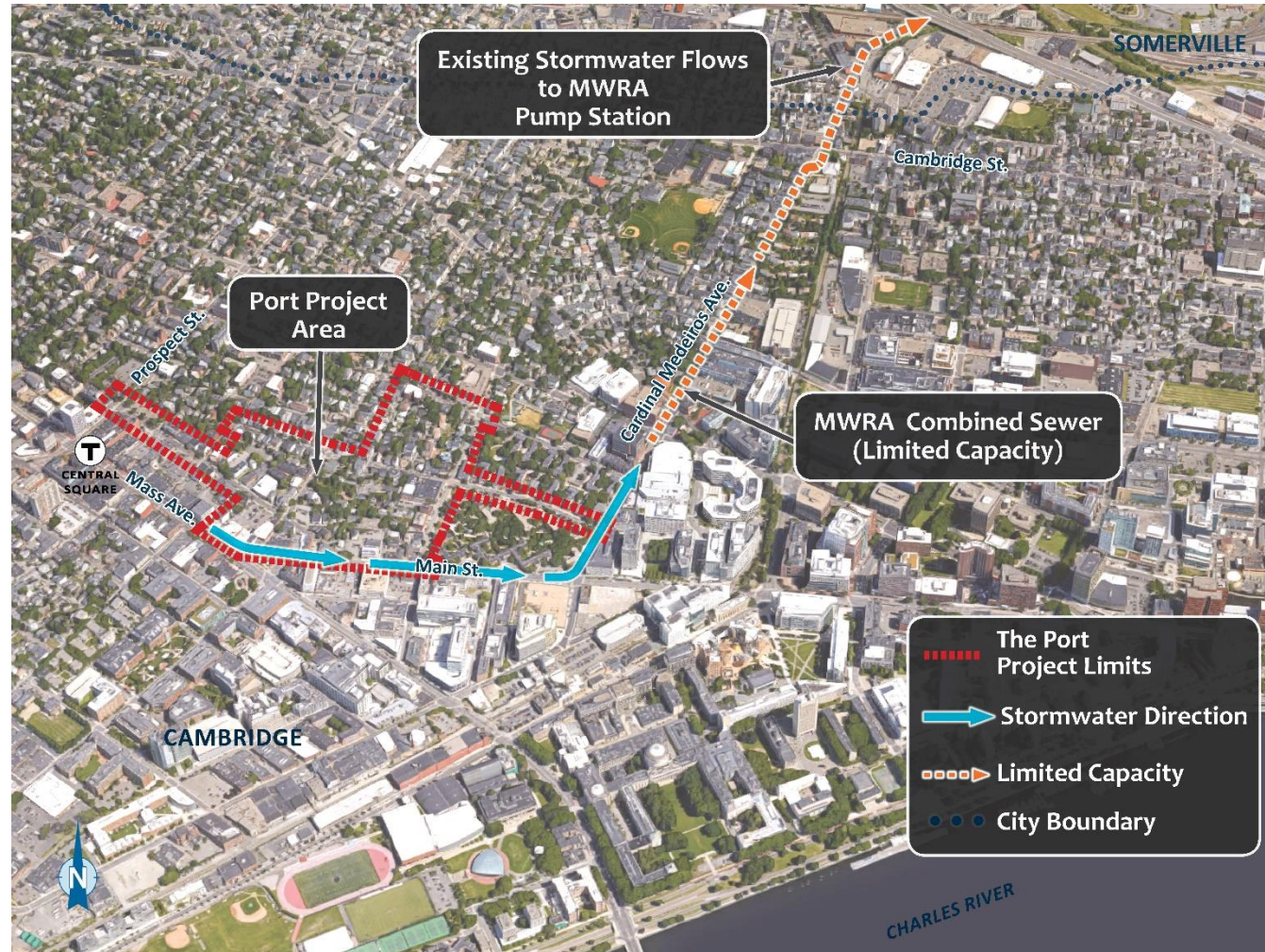
Decrease in  
surface  
flooding for  
frequent/  
smaller storms

**Storage Tanks Installed**  
Frequent / Smaller Storms



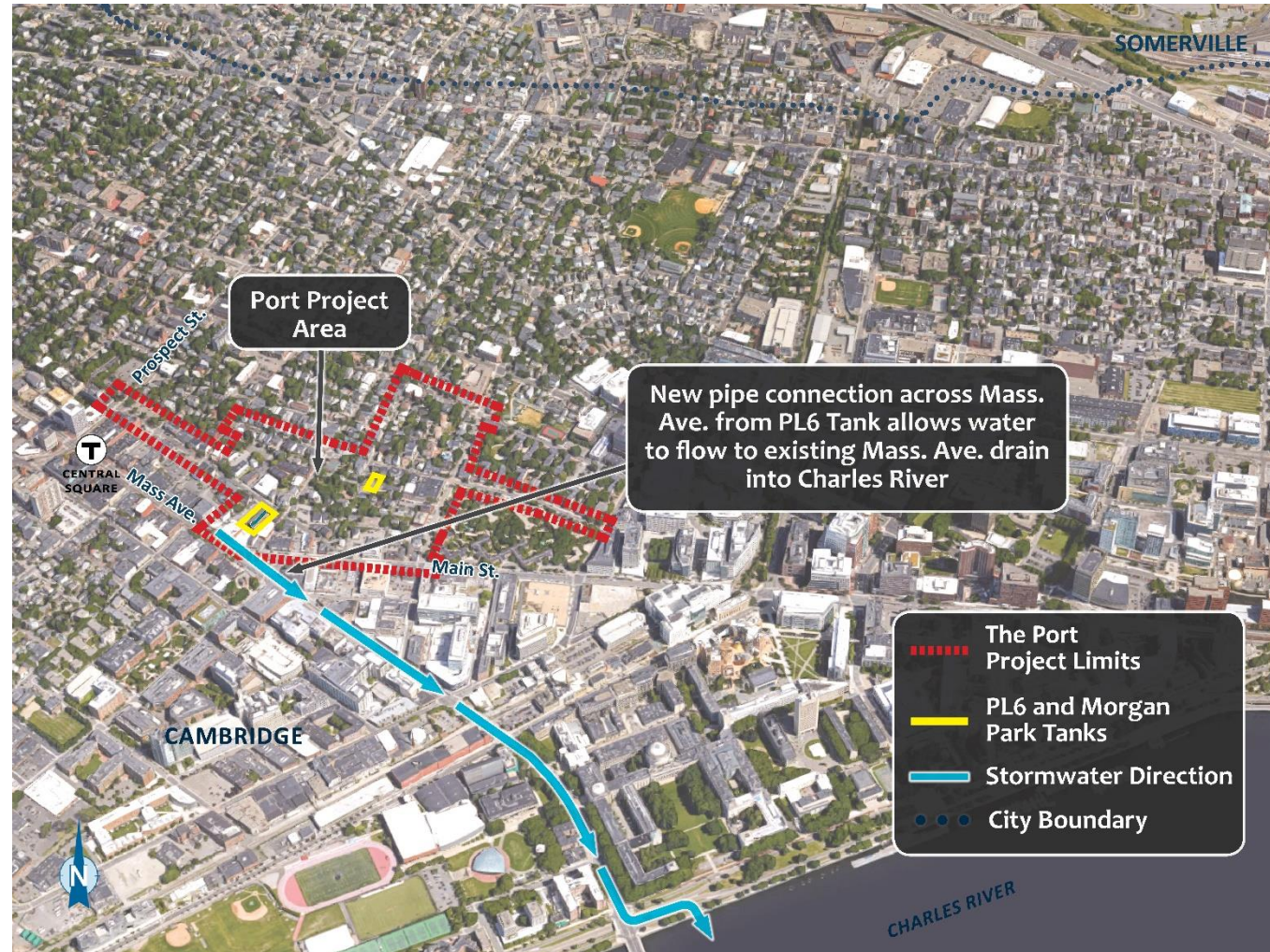
Anticipated flooding for a 2030, 10 year / 24 hour storm

# Project Scope



Existing Port Stormwater Flow

# Project Scope



Stormwater Flow After Storage Tanks Installed

DESIGN OPTIONS

# Mass. Ave. Crossing



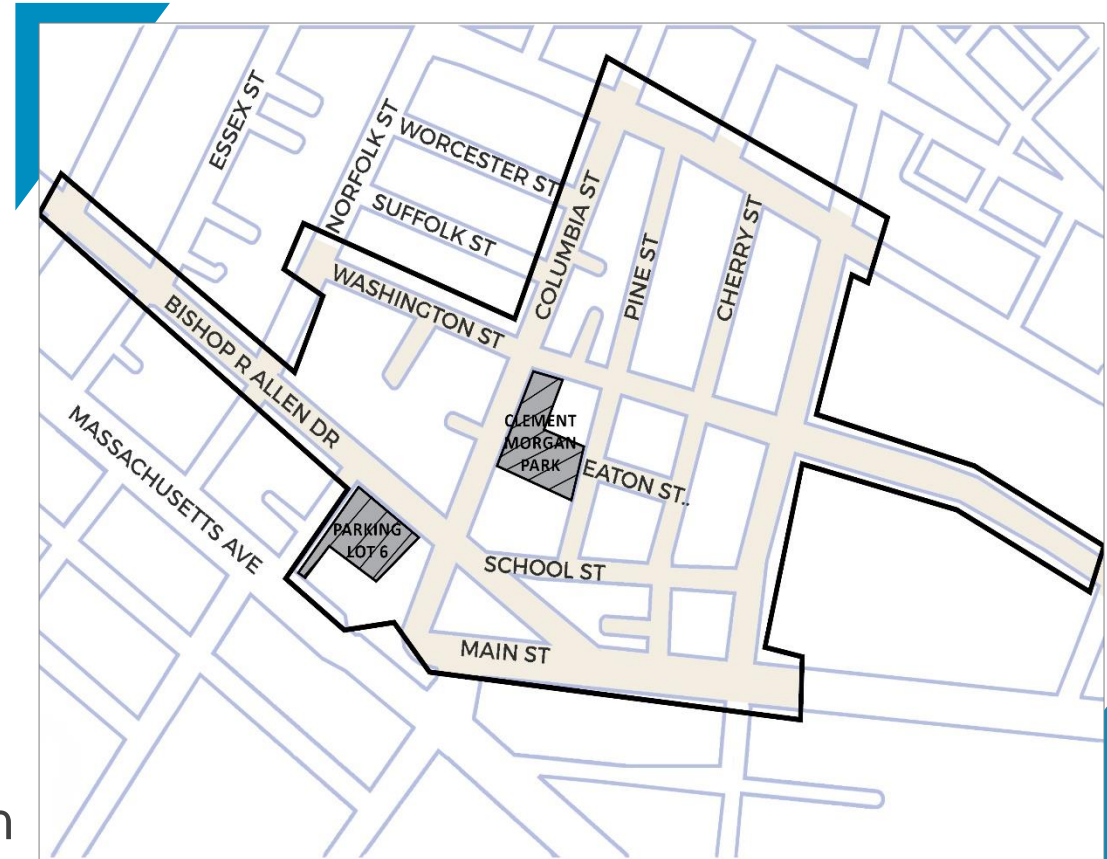
# Project Scope

## Phase 1: PL6

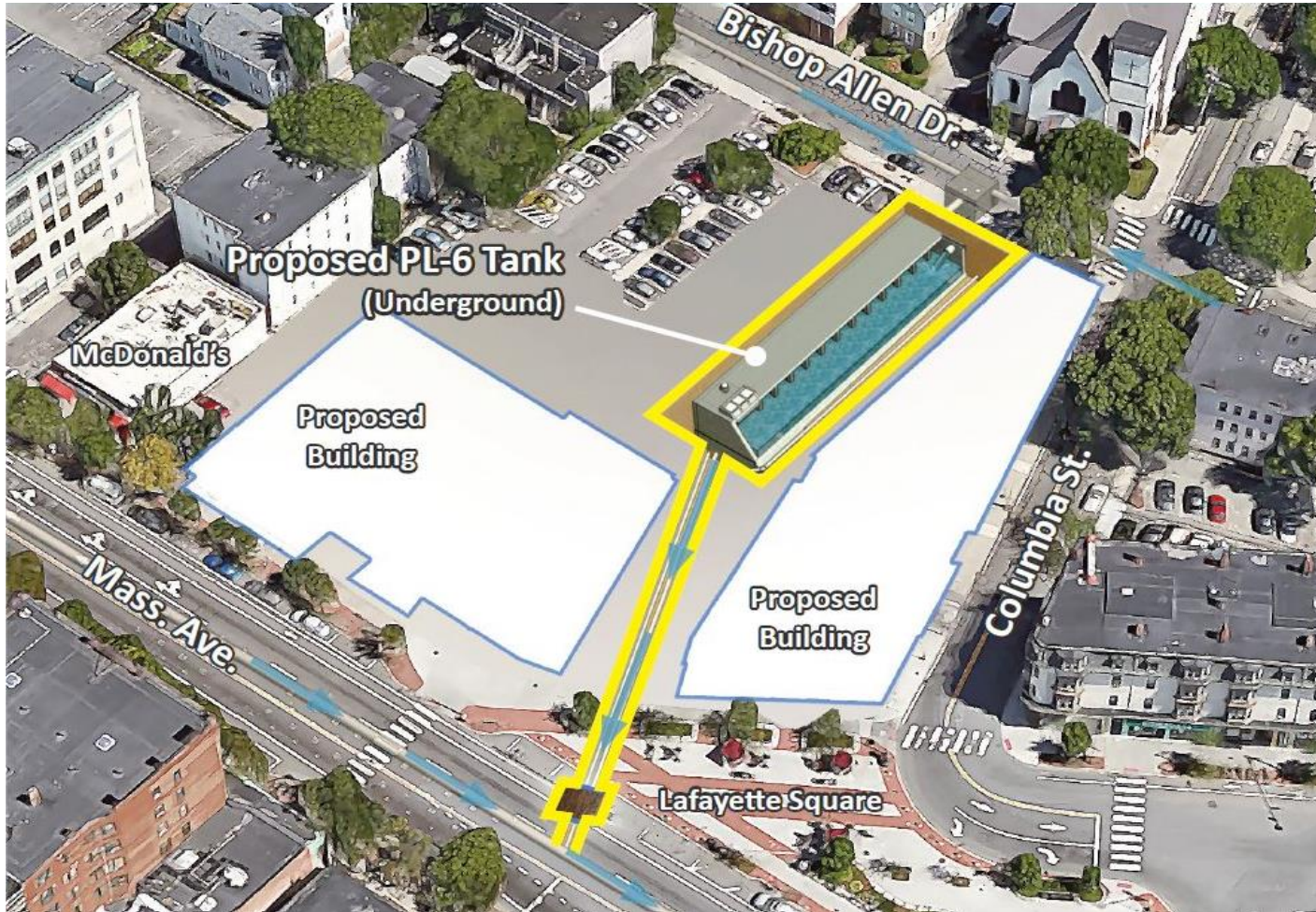
- Underground storage tank
- Connection to Mass. Ave. drain

## Phase 2:

- Underground storage tanks
- Roadway & sidewalk reconstruction



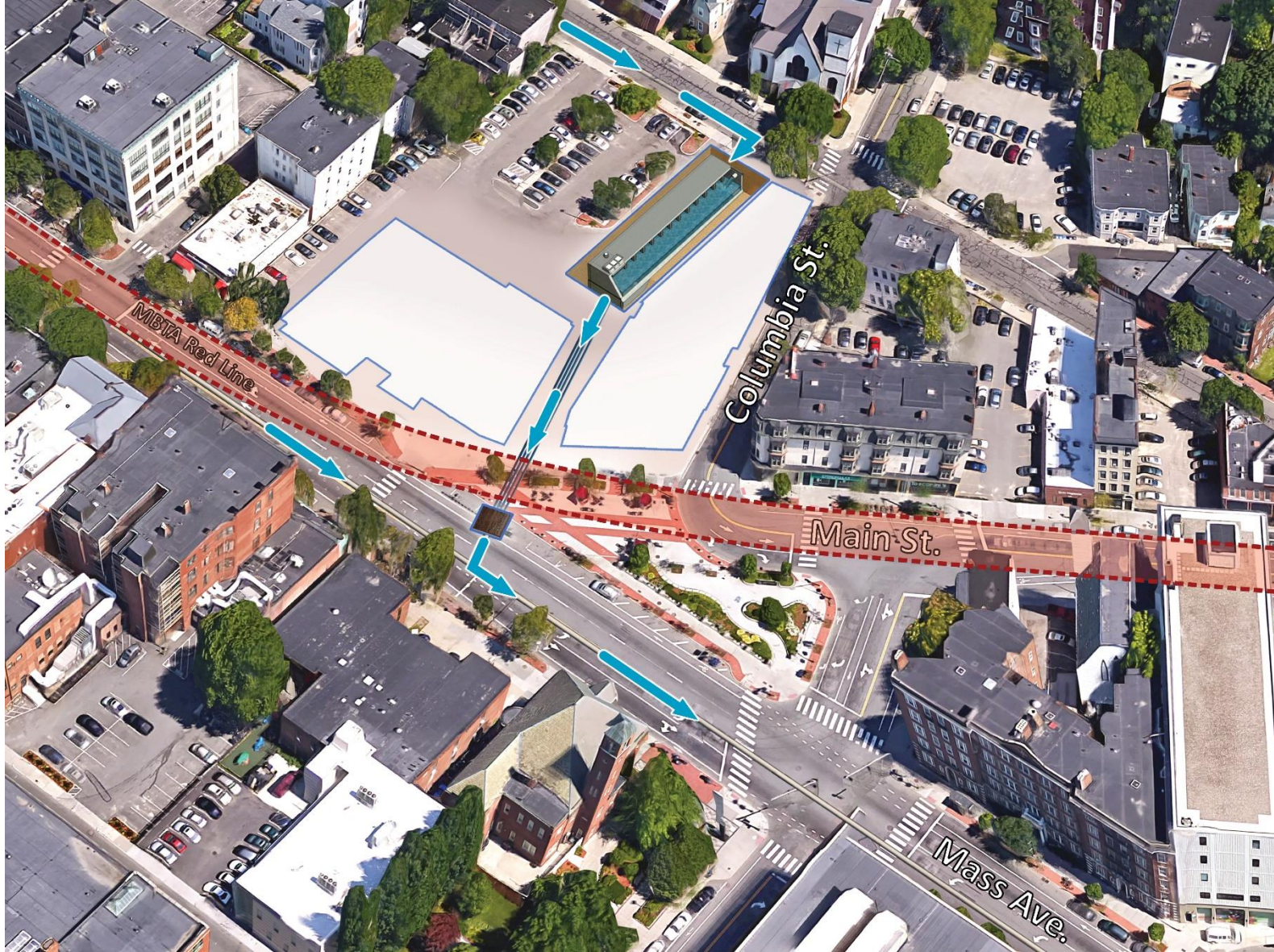
# Phase 1: PL6



Tank constructed under City-owned Parking Lot 6.

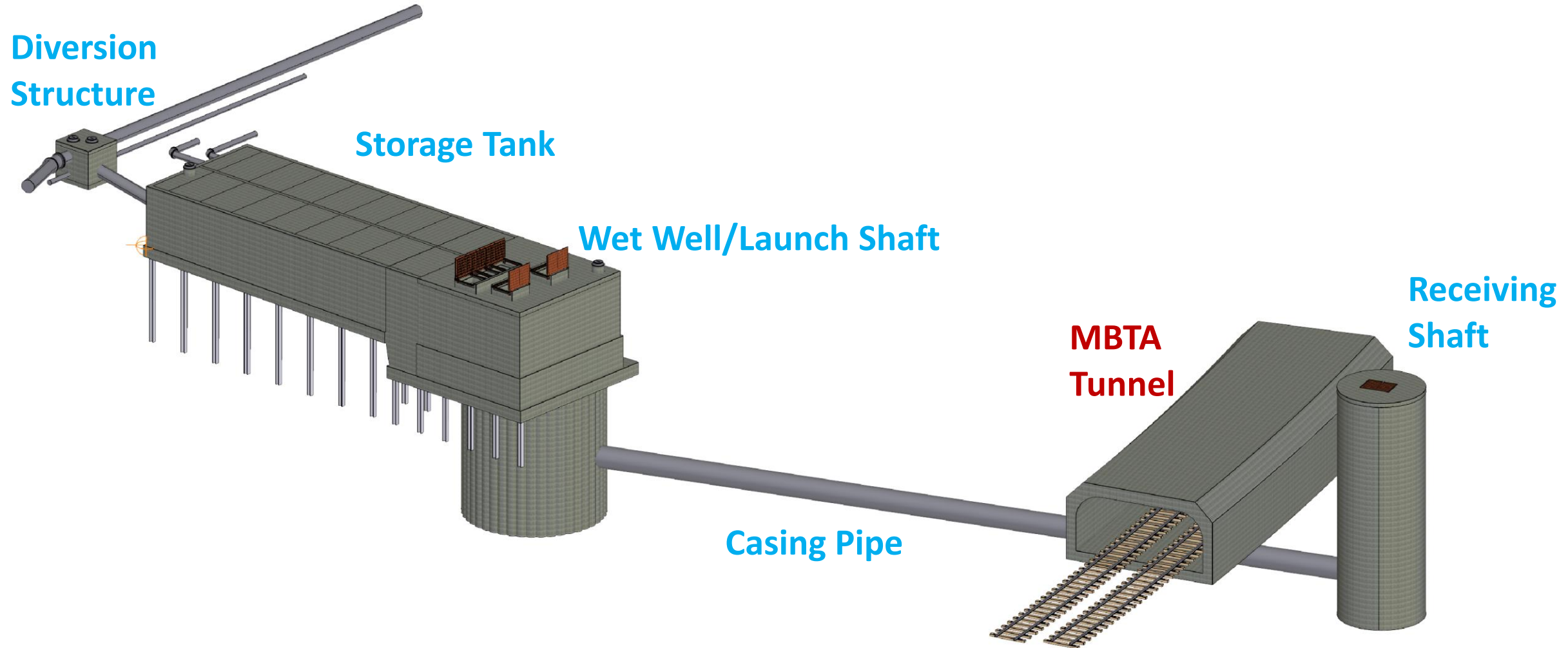
Four 16"-18" pipes constructed from the tank, between Mass + Main proposed buildings, beneath the Red Line, and into Mass Ave.

# Pipe Tunnel Beneath MBTA Tunnel





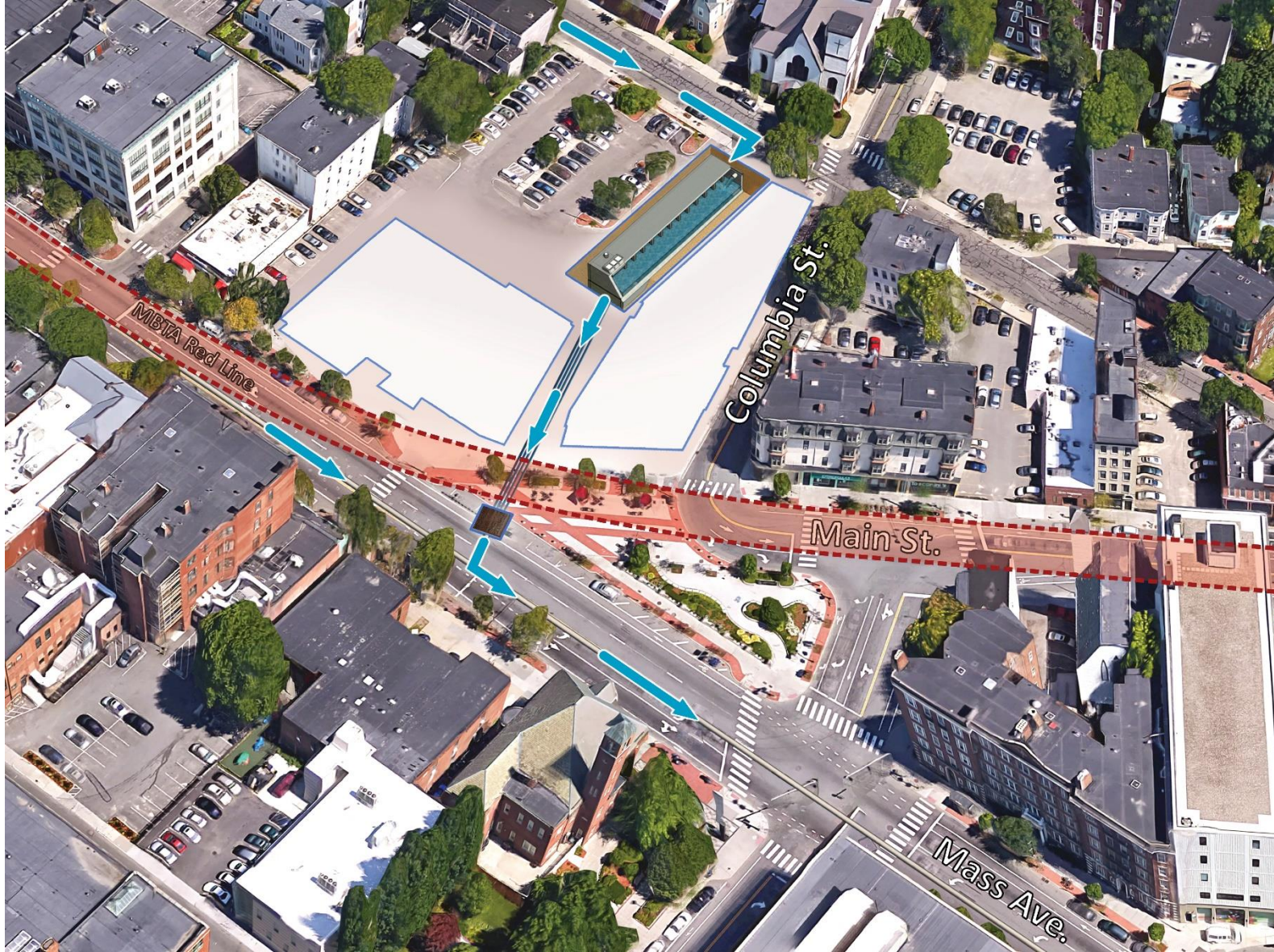
# PL6 Storage Tank and MBTA Tunnel Crossing





- Pipe tunnel launching pit
- Approx. 40 deep
- Ultimately incorporated into the overall tank and pump station

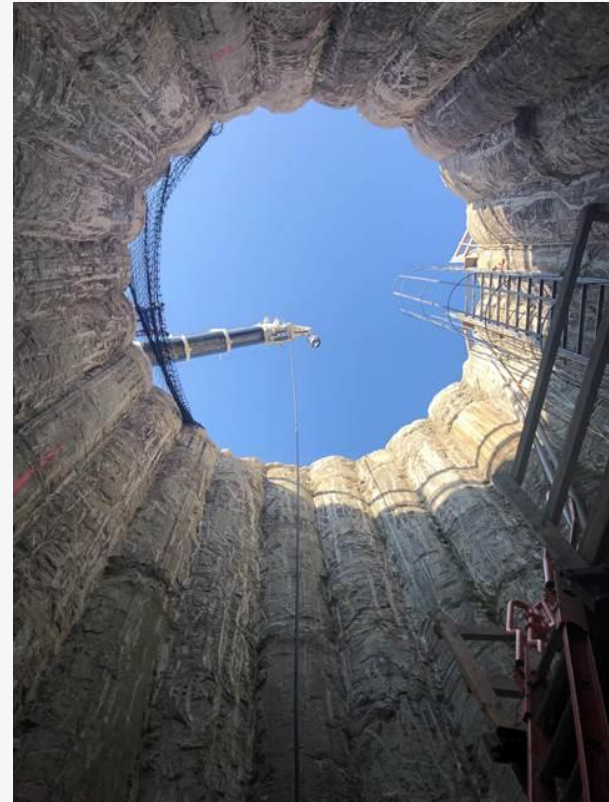
# Pipe Tunnel Beneath MBTA Tunnel







- Pipe tunnel receiving pit
- Approx. 40 deep
- Diameter approx. 15 feet





- Tunnel Boring Machine (TBM)
- Pictured a bottom of launch shaft
- Approx. 6' diameter



- Hydraulic jacks pushing pipe, which is in turn pushing TBM
- Pictured a bottom of launch shaft



- TBM operator control panel
- Located in a trailer at ground level





- TBM breaking through into the receiving shaft
- Length of tunneling was approx. 200 feet
- Actual tunneling time was about 3 weeks (about 20 feet per day)



- Another view of TBM in the receiving shaft
- TBM then removed and reconditioned for other projects



- Looking through the completed 72" steel pipe tunnel



- 16"-18" iron pipes which will actually carry stormwater and sewage
- Shown being inserted into the 72" pipe tunnel at the launch shaft



- Tunneling now complete, work proceeds on the storage tank itself



- Tank excavation
- “Boston Blue Clay” – very typical for the region
- Steel piles in middle will ultimately help support the concrete tank



- Tank construction
- Concrete floor being placed
- Parts of the concrete walls are in place







Square



- Tank leak test
- Concrete roof panels will be placed in February
- Parking Lot will be restored this spring
- Tank capacity is approx. 400,000 gallons
- Top of tank is 1 ½' - 2' below parking lot
- Bottom of tank is about 18' below surface

