



NYC Parks



**Environmental  
Protection**

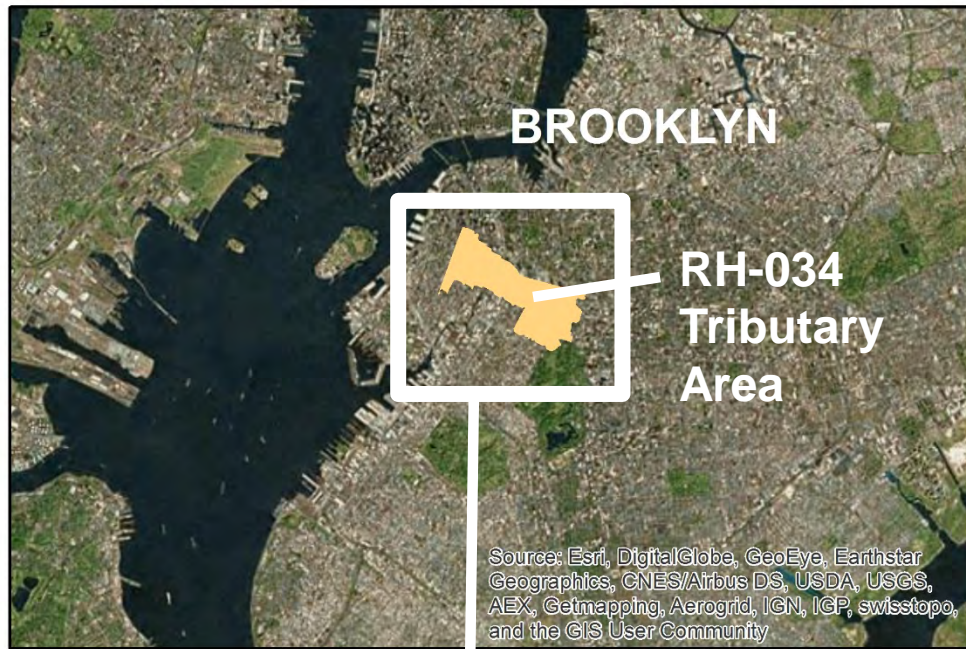
# BOERUM PARK

Located between Smith Street, Warren Street, Hoyt Street and Baltic Street  
Borough of Brooklyn

DEP Schematic Green  
Infrastructure Submission

- **Project Site:** Boerum Park/Cobble Hill School of American Studies (JOP)
- **Project Goal:** Install green infrastructure to manage impervious areas within Boreum Park to improve water quality in the Gowanus Canal by reducing combined sewer overflows
- **Project Scope:**
  - Subsurface retention under the basketball court near Warren Street, shared with Cobble Hill School of American Studies
    - Excavated area will be restored to DPR standards
    - Managing a portion of the public right of way as well as the basketball court
  - Bioretention practice similar in size to a right-of-way bioswale located within existing planting bed
    - No permanent impact to play areas
- **Project Cost:** \$250,000
- **Construction Duration:** 2 months total
- **Annual Volume Managed:** 1,029,440 gals
- **Impervious Area Managed:** 25,700 sf
- **Lot Size:** 40,000 sf
- **BBL:** 3003970018





**CITY**

0 2 Miles



**NEIGHBORHOOD**

0 1,000 Feet




**SITE**


0 60 Feet



**BOERUM PARK | Project Location**

# FLOOD HAZARD ZONES

 **ZONE AE** – 1% annual-chance flood event. BFE exists.

 **ZONE X** – Moderate risk areas within the 0.2% annual-chance floodplain.



**BOERUM PARK | Flood Risk**



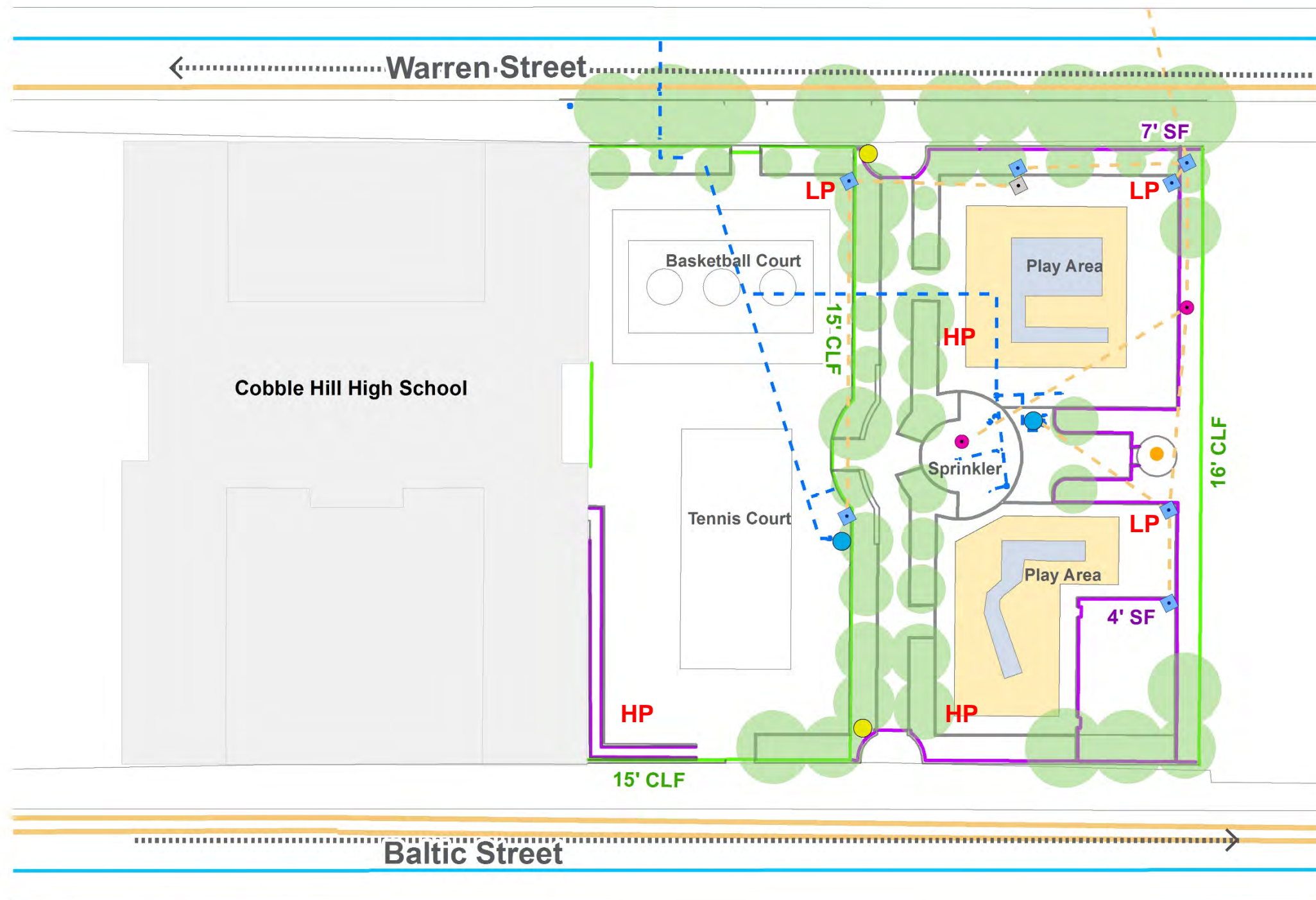
### LAND USE CATEGORIES

- 1 AND 2 FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- MIXED USE
- COMMERCIAL
- INDUSTRIAL
- TRANSPORTATION/ UTILITIES
- INSTITUTIONAL
- OPEN SPACE AND OUTDOOR RECREATION
- PARKING
- VACANT LOTS

Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



## BOERUM PARK | Surrounding Land Use



**LEGEND**

- Sewer Main
  - - - Storm Sewer
  - Existing Drainage Structure**
  - Manhole
  - Sealed Catchbasin
  - Catchbasin
  - Water Main
  - - - Water Service
  - Flag Pole
  - Light Pole
  - Drinking Fountain
  - Vehicle Traffic
  - Chain Link Fence
  - Steel Fence
  - Existing Building
  - Play Equipment
  - Play Surface
  - Tree Canopy
  - HP** High Point
  - LP** Low Point
- 0 20 40 Feet



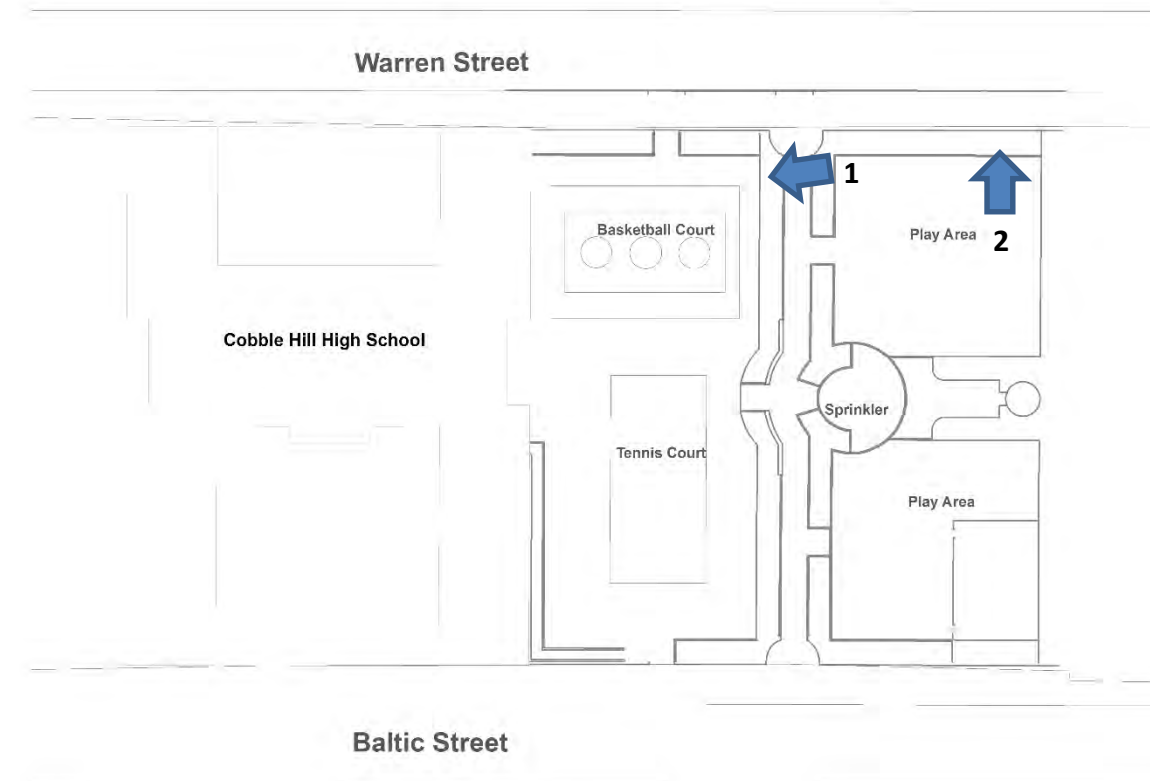
**BOERUM PARK | Existing Conditions**



Photo 1: Vicinity of Proposed Underground Storage Practice



Photo 2: Location of Proposed Bioretention Practice








## BOERUM PARK | Existing Site Photographs

Warren Street




Cobble Hill High School

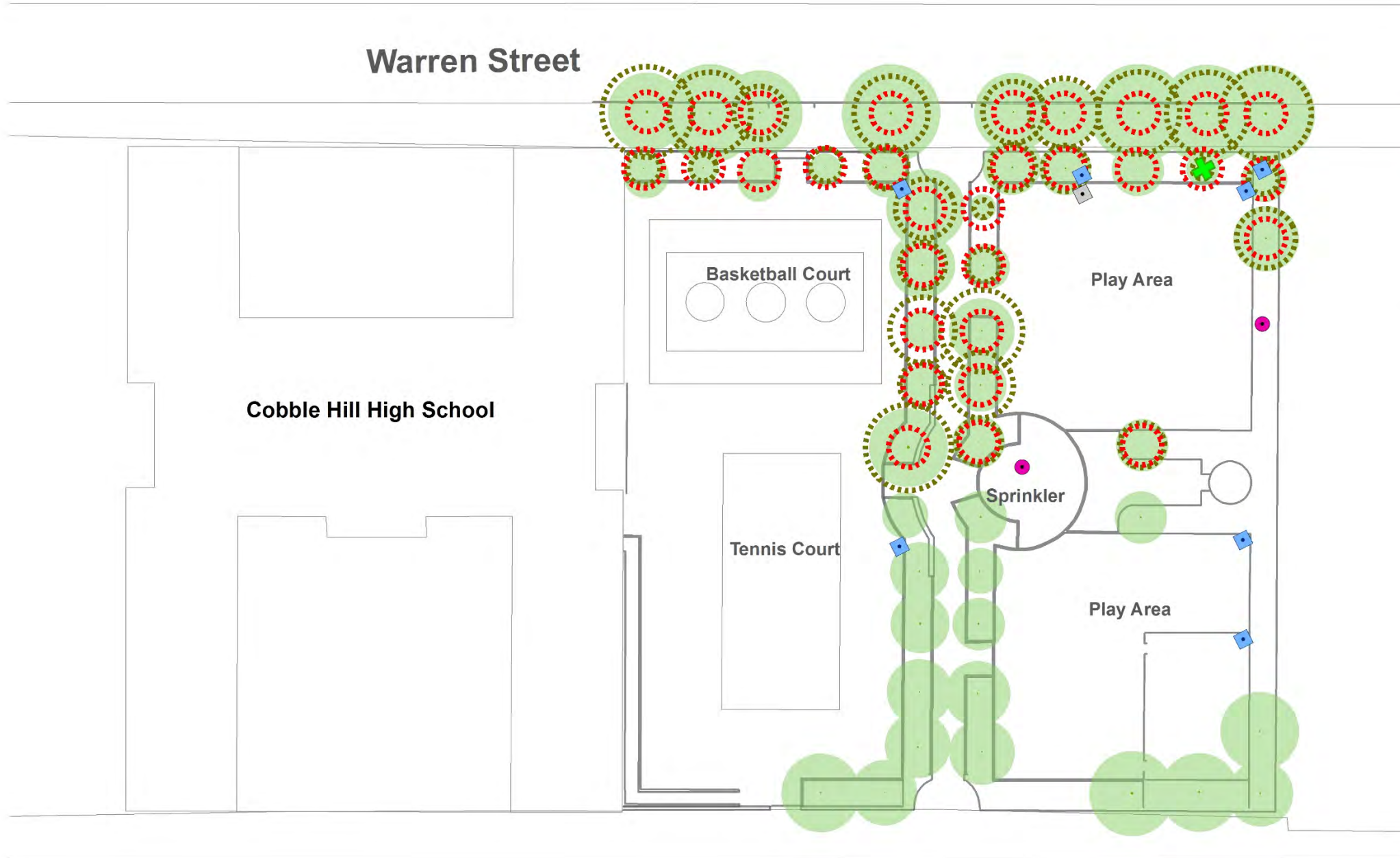
Baltic Street

### LEGEND

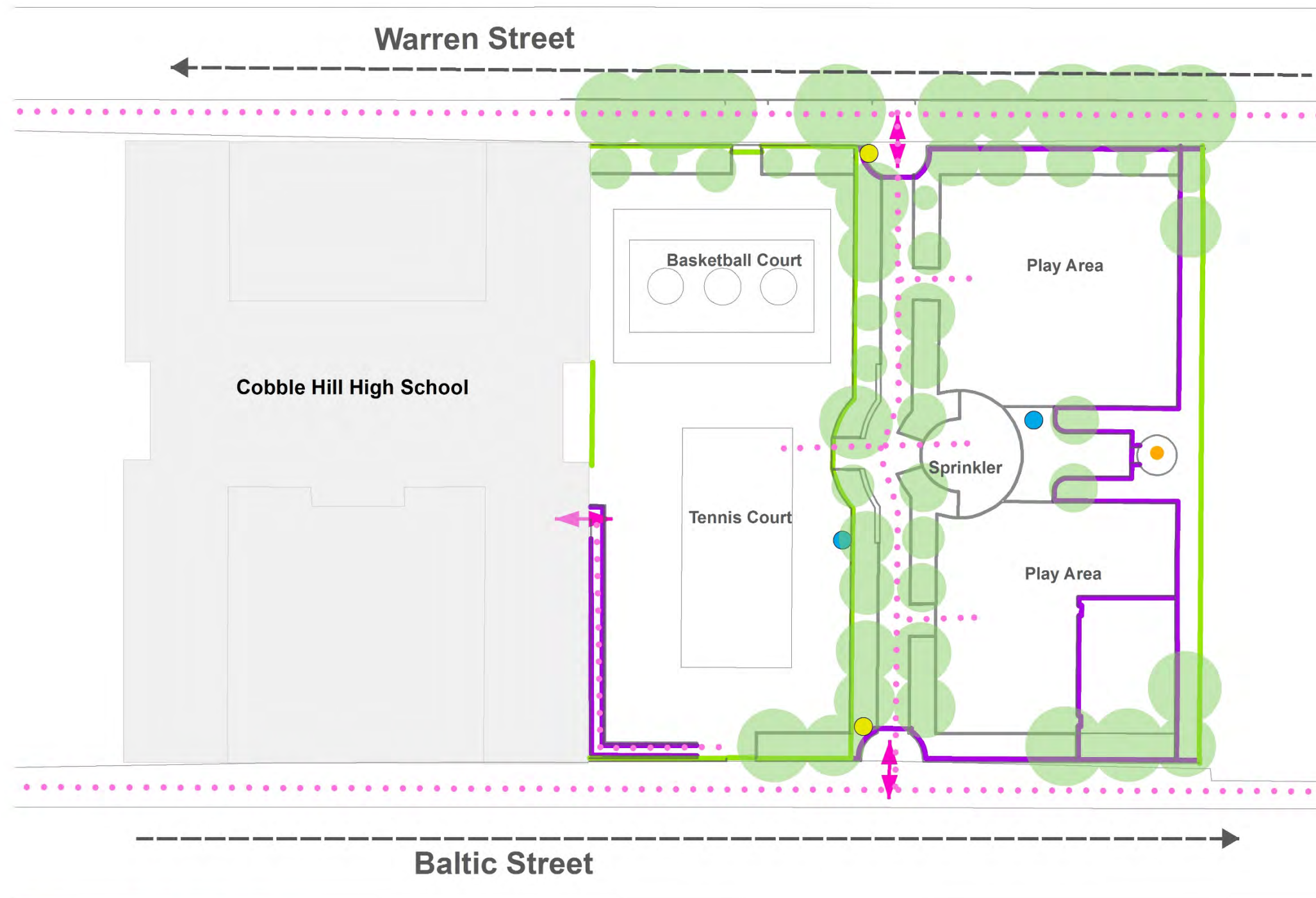
-  Tree Canopy
-  Trunk DBH
-  Absolute Critical Root Zone
-  ISA Critical Root Zone
-  Proposed Tree Transplant

### Existing Drainage Structure







-  Manhole
-  Sealed Catchbasin
-  Catchbasin

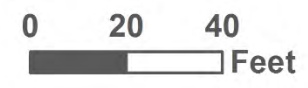






### LEGEND

-  Park Circulation
-  Pedestrian Traffic
-  Vehicle Traffic
-  Existing Building
-  Tree Canopy
-  Flag Pole
-  Drinking Fountain
-  Light Pole
-  Steel Fence
-  Chain Link Fence



## BOERUM PARK | Site Analysis

Warren Street

**LEGEND**

 Direction of Surface Flow

 Existing Sewer Main

 Storm Sewer

*Existing Drainage Structure*

 Manhole

 Sealed Catchbasin

 Catchbasin

Cobble Hill High School

Basketball Court

Play Area

Sprinkler

Tennis Court

Play Area

24

23

22

21

20

18

19

17

16

15

14

Baltic Street

0 20 40 Feet



**BOERUM PARK | Existing Drainage Plan**

Warren Street

Drainage Area:  
10,608 Sq. Ft.

Cobble Hill High School

Basketball Court

Drainage Area:  
9,080 Sq. Ft.

Play Area

Drainage Area:  
6,015 Sq. Ft.

Sprinkler

Tennis Court

Play Area

Baltic Street

LEGEND

- Subsurface Detention
- Bioretention
- Bioretention - Additional Planting
- Drainage Area to Bioretention
- Drainage Area to Underground Storage

*Proposed Drainage Structure Modifications*

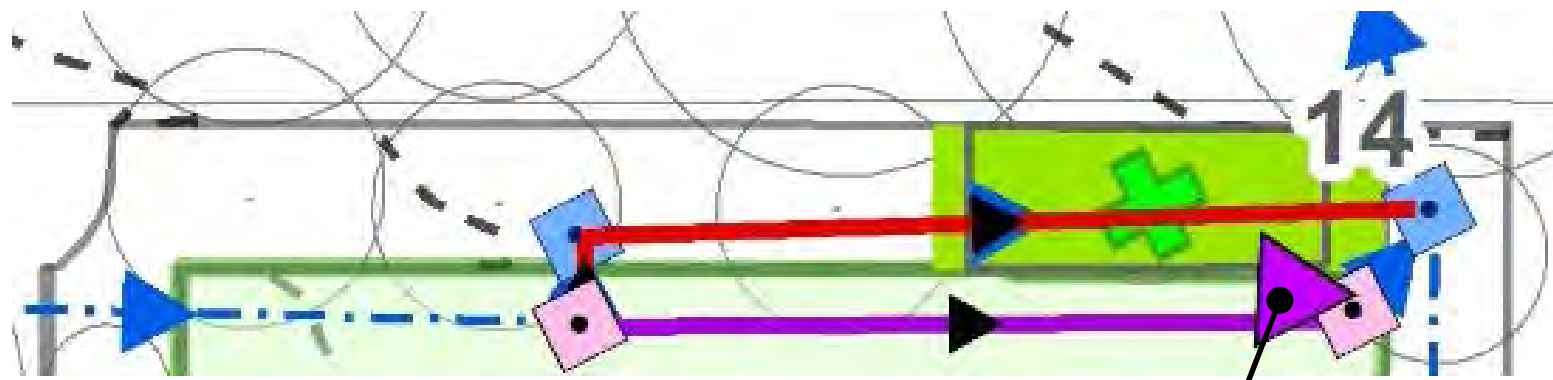
- New Stormwater Inlet
- New Open Top Shallow Manhole
- Capped Catchbasin
- Proposed Curb Cut
- Proposed Drainage Piping
- Abandon Drainage Piping
- Proposed Tree Transplant
- Direction of Surface Flow

*Existing Drainage Structure*

- Manhole
- Sealed Catchbasin
- Catchbasin
- Storm Drain
- Tree Canopy



BOERUM PARK | Schematic Green Infrastructure

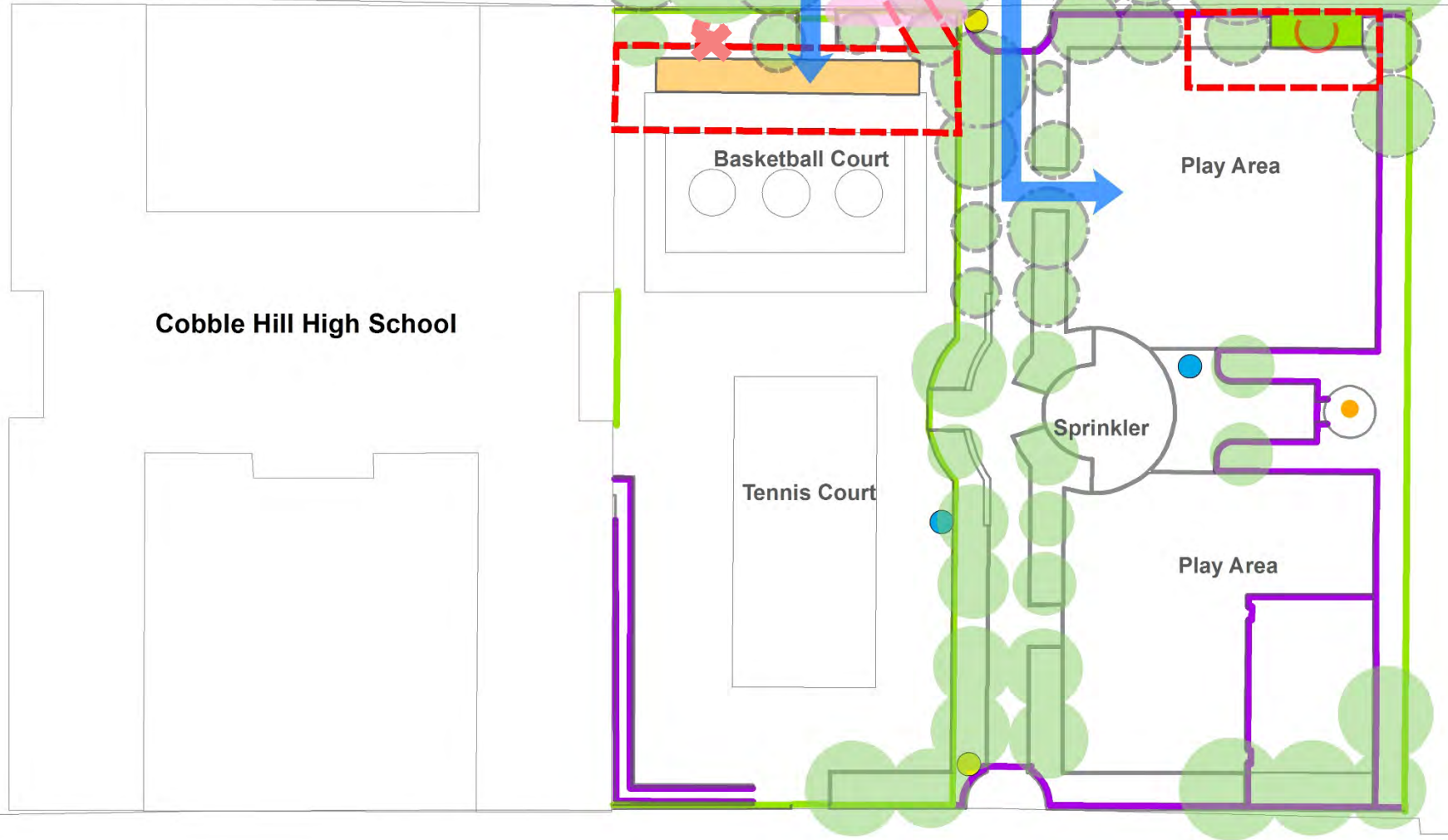


Bioretention #1



















- Bioretention footprint selected to stay within existing tree pit/granite paver area
- Inlet would be gap in the curb
- Existing tree would be transplanted into Bioretention to maintain tree line

Warren Street



Baltic Street

### LEGEND

-  Construction Entrance
-  Limit of Work
-  Vehicle Traffic
-  Tree Canopy
-  Protection
-  Protection and Pruning
-  Arborist Recommended Removal
-  Transplant
-  Flag Pole
-  Drinking Fountain
-  Light Pole
-  Temporary Fence Removal
-  Steel Fence
-  Chain Link Fence
-  Subsurface Detention
-  Bioretention

Please note that the tree does not need to be removed for construction of the green infrastructure. During the tree survey, the arborist recommended that this tree be removed.



## BOERUM PARK | Construction Access and Tree Protection Plan

## Planting



HERBACEOUS / Coreopsis  
'Redshift'



SHRUB / Ilex Glabra  
'Shamrock'



HERBACEOUS / Liriope  
Spicata

## Materials



24" Steel Picket Fence



Manhole



DEP Standard Catch Basin



Subsurface Chambers



Full Depth Asphalt



NYC Parks



- **Project Goal**
  - Install rain garden and subsurface storage to manage impervious areas within Boreum Park to reduce combined sewer overflows.
- **Limited Construction Impacts**
  - Active play areas maintained, minimal impacts to open portion of play areas
- **Project Benefits**
  - **Aesthetics:** Rain garden planting design will incorporate native plants, will complement the traditional design of the park, and will provide floral plantings in tree pit area.
  - **Educational Opportunity:** Bioretention area will be adjacent to the playground and visible to the public.
  - **Community Engagement:** Chance to engage children and the community with green infrastructure and sustainable design



Warren Street

Baltic Street

Cobble Hill High School

Basketball Court

Tennis Court

Play Area

Sprinkler














Play Area

HP

HP

HP

LEGEND

-  Subsurface Detention
-  Bioretention
-  Bioretention - Additional Planting
- Proposed Drainage Structure Modifications*
-  New Stormwater Inlet
-  New Open Top Shallow Manhole
-  Capped Catchbasin
-  Proposed Drainage Piping
-  Abandon Drainage Piping
- Existing Drainage Structure*
-  Manhole
-  Sealed Catchbasin
-  Catchbasin
-  Storm Drain
-  Tree Canopy

