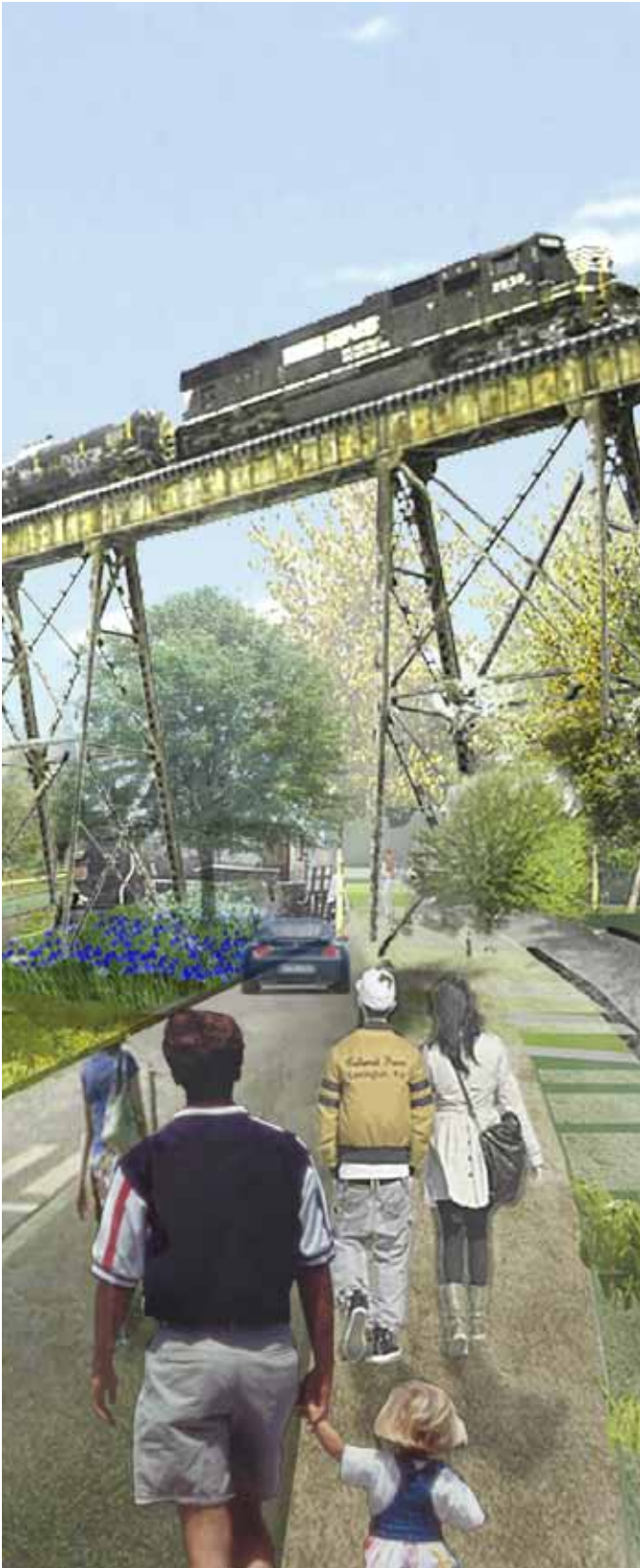




**MADDOX PARK, BOONE BLVD & THE PROCTOR**



## CREEK WATERSHED

### INTRODUCTION

The BeltLine Subarea 10 site lies within the 16 square mile Proctor Creek Watershed nested near the headwaters of the sub-continental Chattahoochee-Flint-Apalachicola Watershed extending to the Gulf of Mexico. Proctor Creek is nine miles long, with headwaters near Interstate 10 and its confluence with the Chattahoochee near Interstate 285.

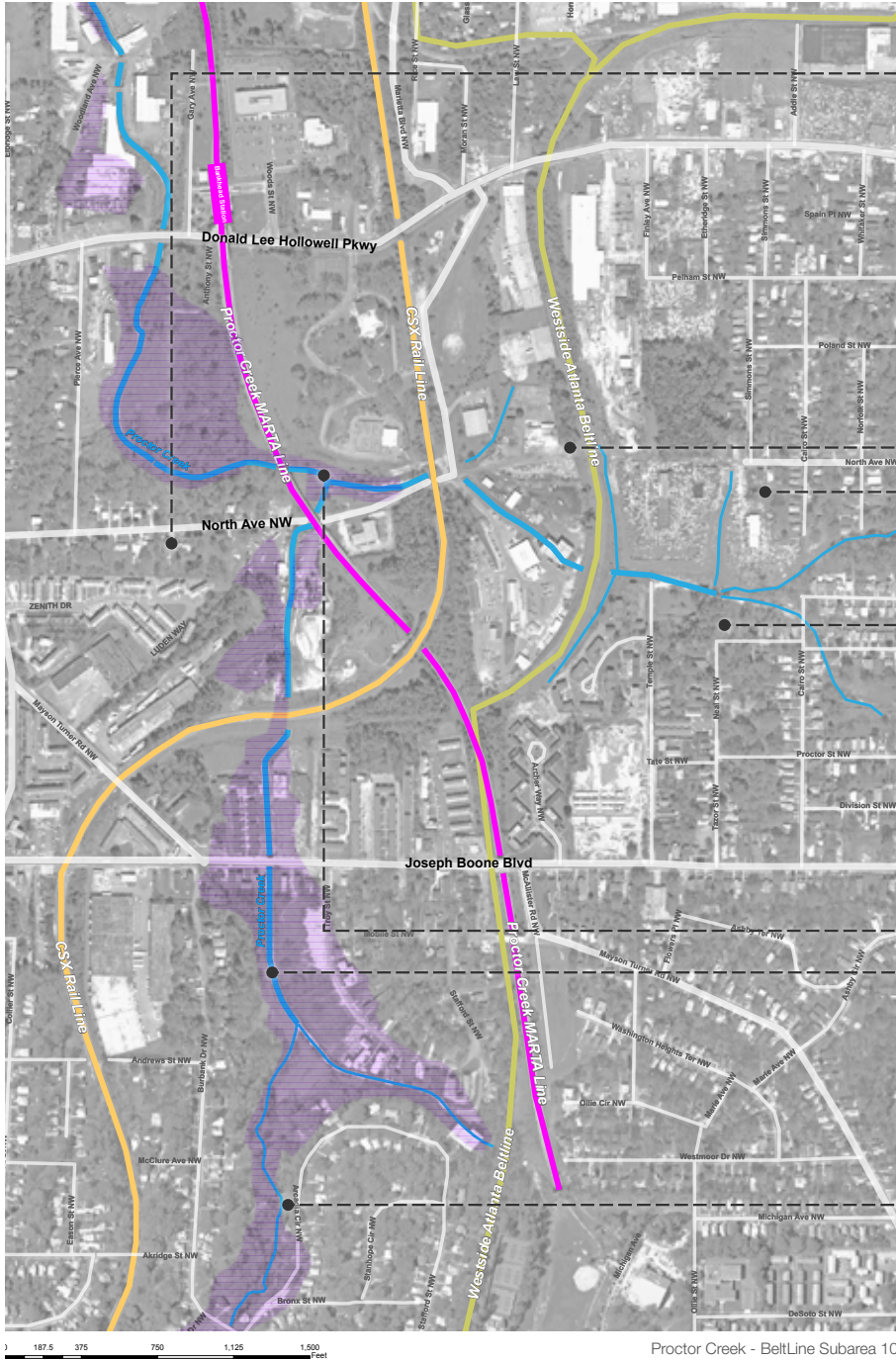
Significantly, BeltLine Subarea 10 sits at the confluence of the three drainage basins at the headwaters of the watershed. This is the most troubled part of the watershed, with combined sanitary and storm sewers, two combined sewer overflows (CFOs), frequent (although declining) sewage overflow events, a very high percentage of impermeable surfaces due to its location near downtown Atlanta, seriously compromised water quality, and a long history of neglected maintenance.

These problems will be slowly corrected as Atlanta conforms to Environmental Protection Agency (EPA) regulations and as the new City of Atlanta post-development stormwater ordinance is implemented. Flooding, which has steadily increased (and expanded flood plain boundaries) will decline. Water quality will improve to allow safe public access for the first time in more than 50 years. Multiple efforts are targeting Proctor Creek, including long range plans for creating a publicly accessible greenway along its entire length.

However, those improvements will take a generation or more to accomplish. Although Subarea 10 will continue to experience the negative problems from upstream for many years, the area can more effectively manage its stormwater quantity and quality, create opportunities for new development, and begin the implementation of the Proctor Creek greenway.

This proposal for BeltLine Subarea 10 begins with an understanding of the site's position in the Proctor Creek Watershed, the hydrology and its changing characteristics for the next generation, and the relationship of site conditions, stormwater management, and public spaces.

# Existing Conditions



## Terrain Problems



## Urban Problems

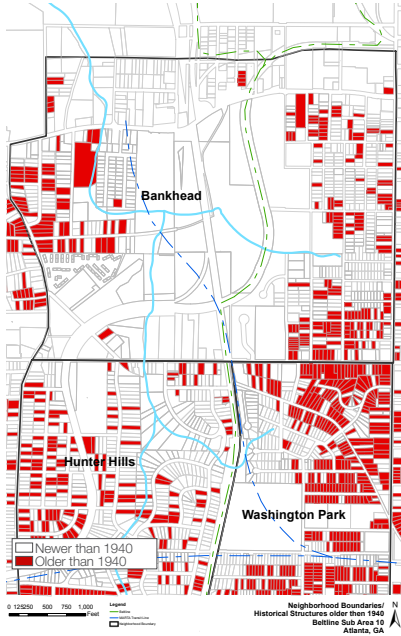


## Water Problems

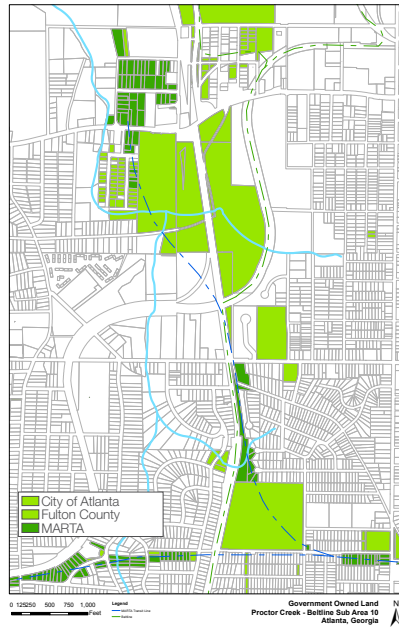


Proctor Creek - BeltLine Subarea 10

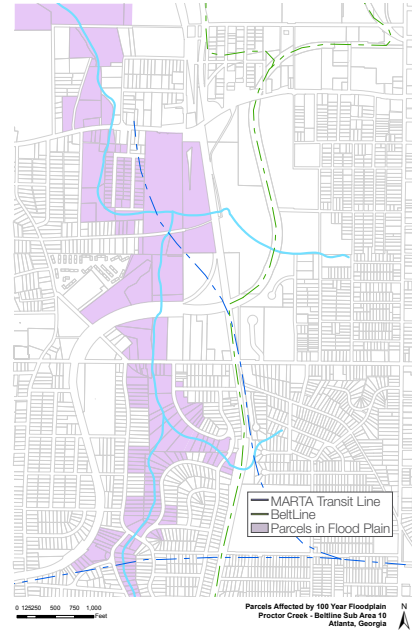
# Susceptibility to Change



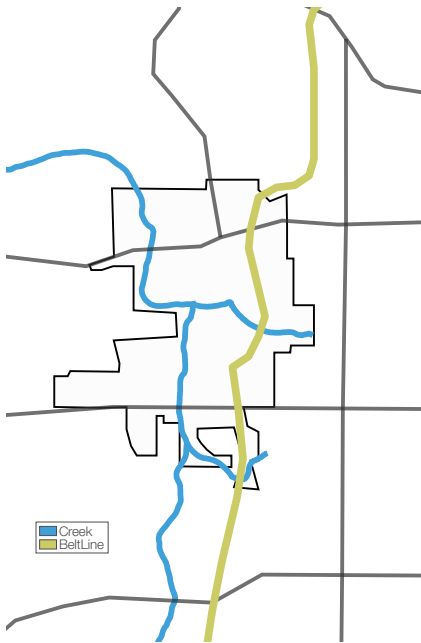
Historic Structures (older than 1940)



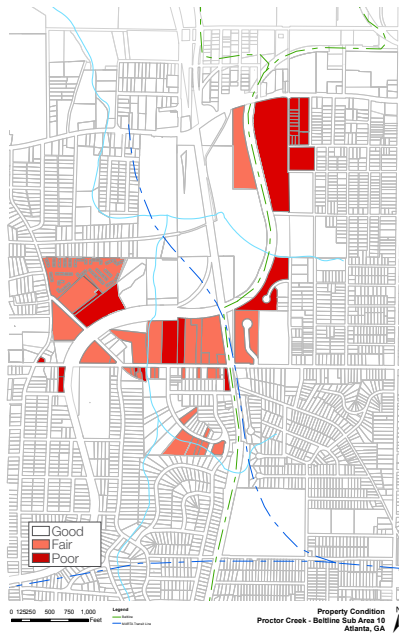
Existing Publicly Owned Parcels



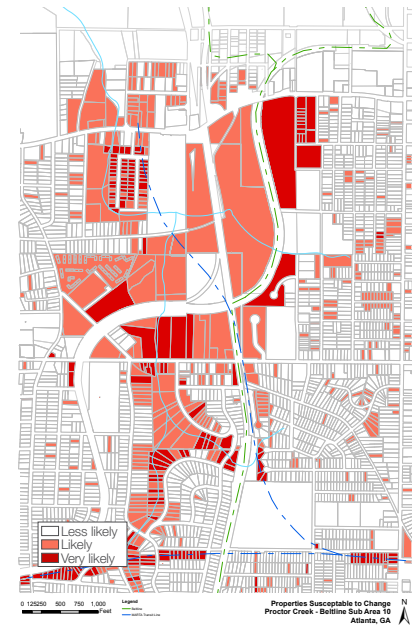
Parcels Affected by Flood Plain



Site Boundary

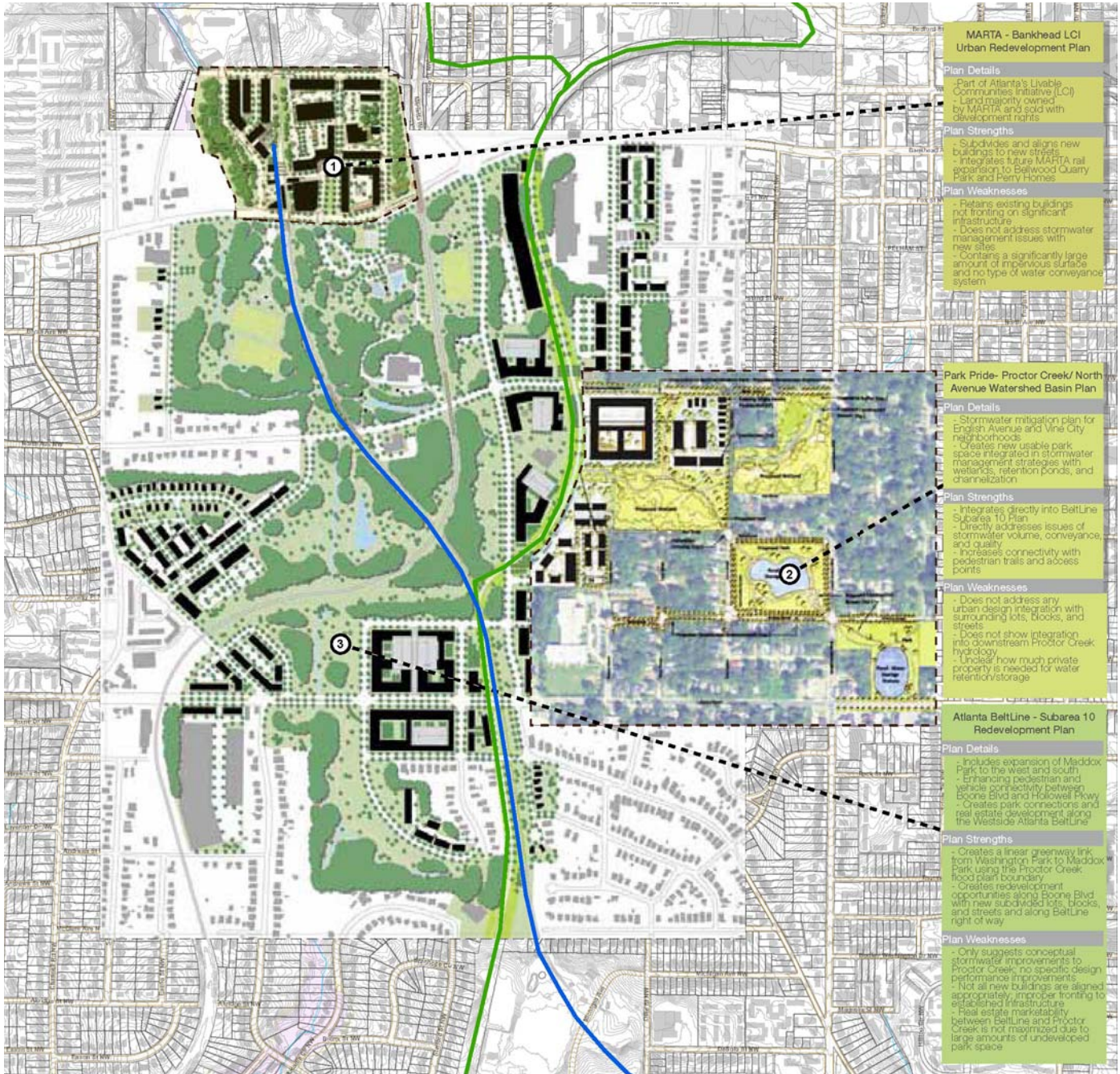


Property Conditions



Parcels Most Susceptible to Change

# Existing Site Plans



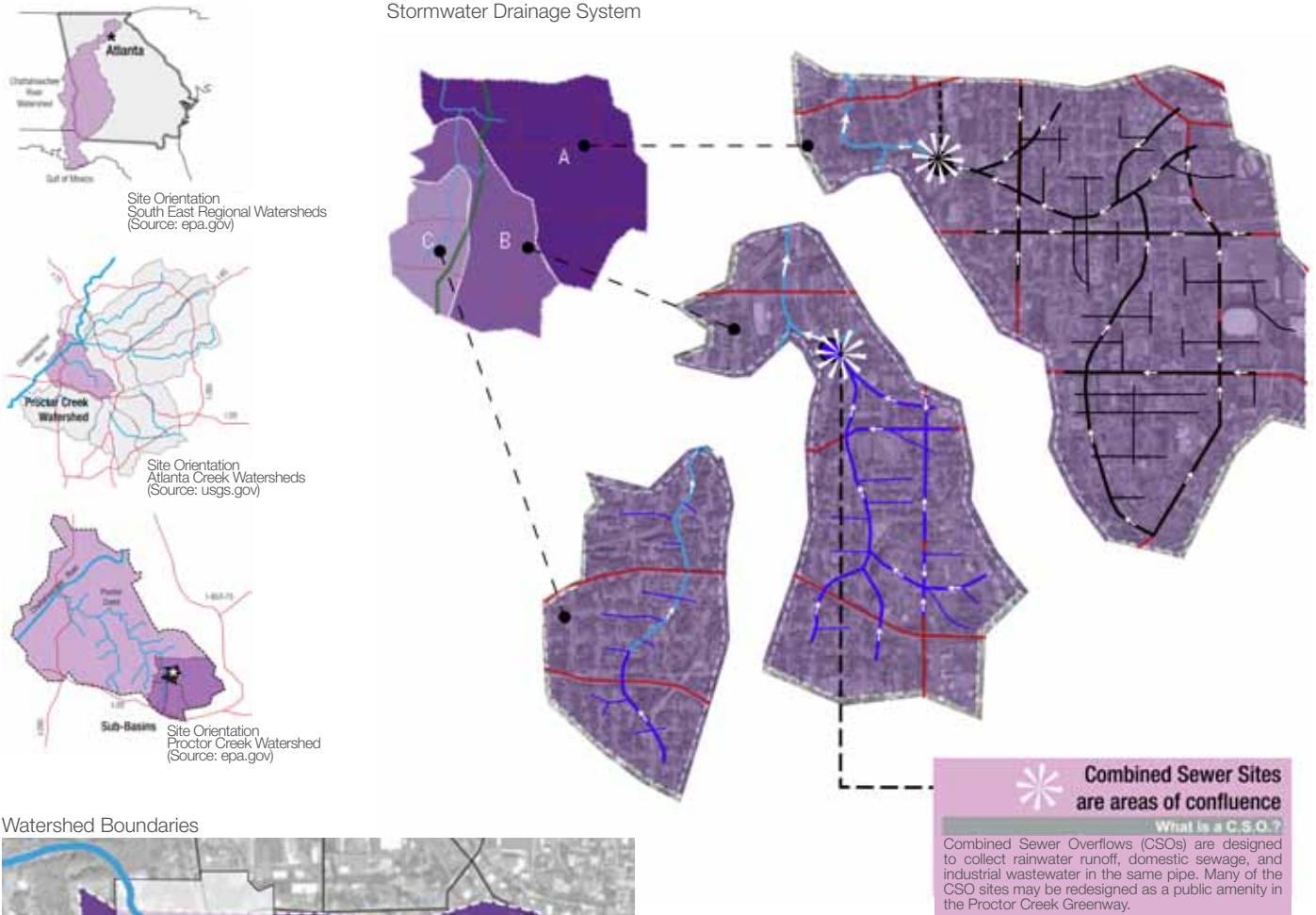
BeltLine Subarea 10 Redevelopment Plan + Marta - Bankhead LCI + Park Pride - Proctor Creek/North Avenue Watershed Basin Plan

# Existing Conditions

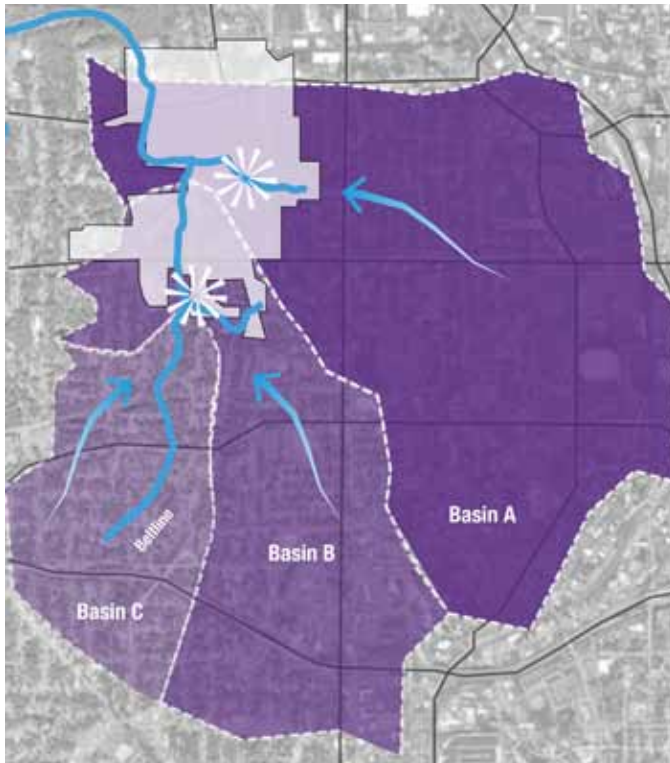


# Hydrology

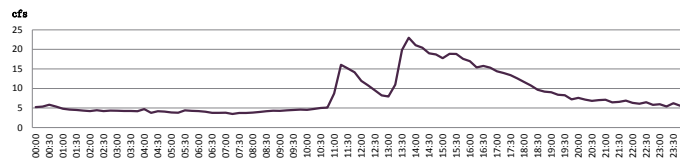
Stormwater Drainage System



Watershed Boundaries



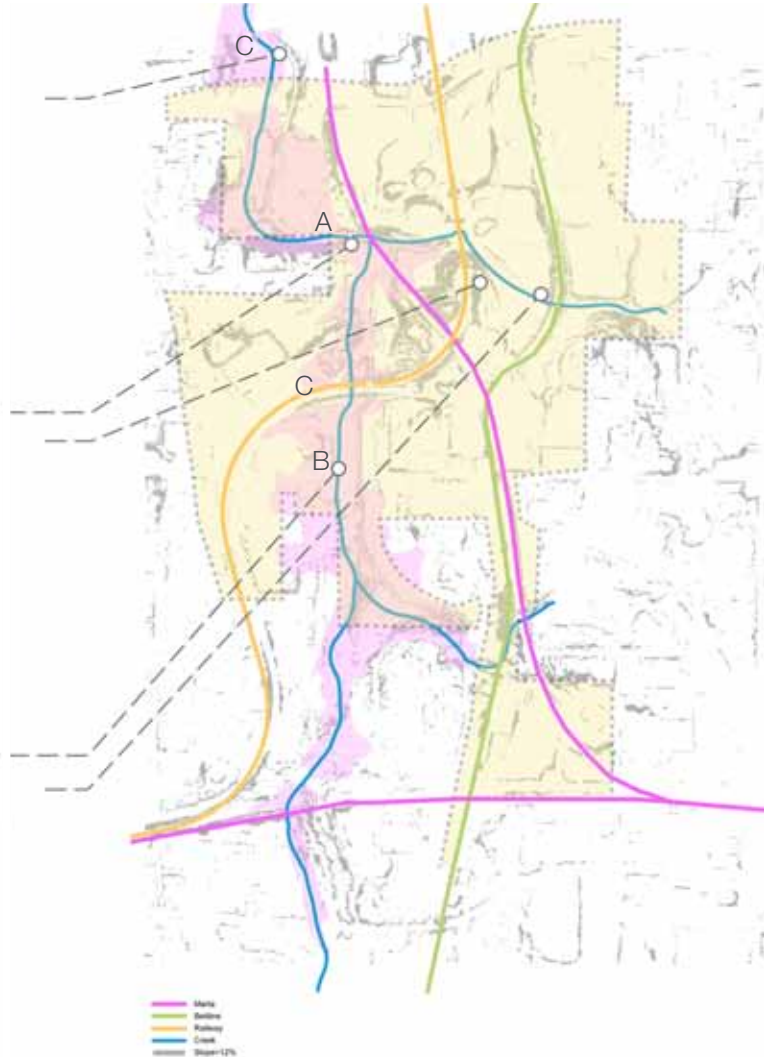
Daily Flow Rate  
(cubic feet per second)



# Historic Flow Rates and Current Flood Plain Boundaries

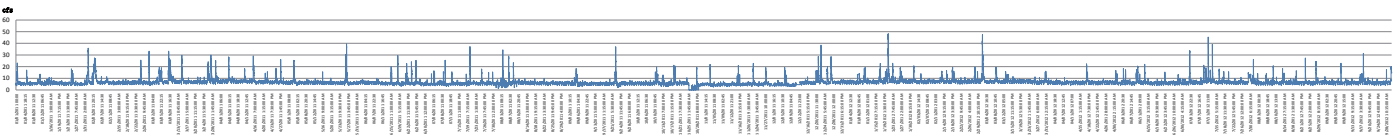


Topography



Existing Transportation Routes

Flow Rate Data (2011 to 2012)  
(cubic feet per second)





# Performance Strategies: Advantages

## 1. Reclaim Flood Plain Land

Contains stormwater volume inside flood plain boundaries, guides stormwater conveyance, and improves water quality with wetland development; enhances real estate value of surrounding development with new linear park amenity; maintains water flow performance within the flood plain without endangering surrounding private property.

## 2. City Stormwater Ordinance

Currently requires all new urban development in the City of Atlanta to retain the first 1.2 inches of rainfall from any given rain event on site; significant redevelopment will make a difference in the short-term, while the remaining built environment will phase in over time with continuing redevelopment; alleviates strains on city stormwater and sewer capacity.

## 3. Land Ownership Shifting

Creates a new Maddox Park within a connecting linear park from the Bellwood Quarry/Grove Park area to Washington Park in the low-lying flood lands as a natural part amenity; utilizes higher elevated lands in the current Maddox Park area for prime real estate development; within close proximity to the BeltLine and MARTA stations.

## 4. Land Subdivision

Provides an urban framework with stormwater mitigation as a subdividing driver; integrates a sustainable, easy maintenance stormwater system; establishes a model set of rules for future subdivision developments to integrate green stormwater practices and promote them as valued amenities.

## 5. Bioengineering

Increases water flow efficiency and capacity of Proctor Creek; keeps the flood plain defined boundaries from increasing in size with more uncontrolled development; creates multiple real estate enhancement opportunities for developing park leisure space within the flood plain, once water is re-channeled.

## 6. Infiltrate

Retains small quantities of water locally, alleviating large storm runoff flows into the city stormwater system and Proctor Creek; integrates green stormwater infrastructure in established street right-of-ways for easy construction and maintenance; slows down water velocity with ground absorption.

## 7. Retention

Retention ponds delay water flow velocity, slowing down large amounts of water flowing downstream, releasing only a portion of input flow; re-directed conveyance channels increase distance of flow and therefore slow down timing of water flow downstream and increase volume capacity over more land coverage.

## 8. Collection

Retains small to large quantities of water domestically and limits storm water runoff flow into the city storm water system and Proctor Creek; water infiltrated and collected on individual sites can be reused for local work functions by private landowners and public entities; uses include - irrigation, park land maintenance, indoor 'grey water' plumbing, and servicing amenity water features.

## 9. Street Redesign

Integrating green streets collects, re-conveys, and improves the quality of stormwater right off the street and property before it pours into creeks; less dependence on underground stormwater piping; allows for some water to be infiltrated into the ground.

## 10. Bridge Redesign

Updated bridges with pedestrian railings increases safety from above; enhances creek as an amenity with scenic pathway under bridge and over creek water flow; creates a monumental amenity with bridge's conceptual design and nature framing view.

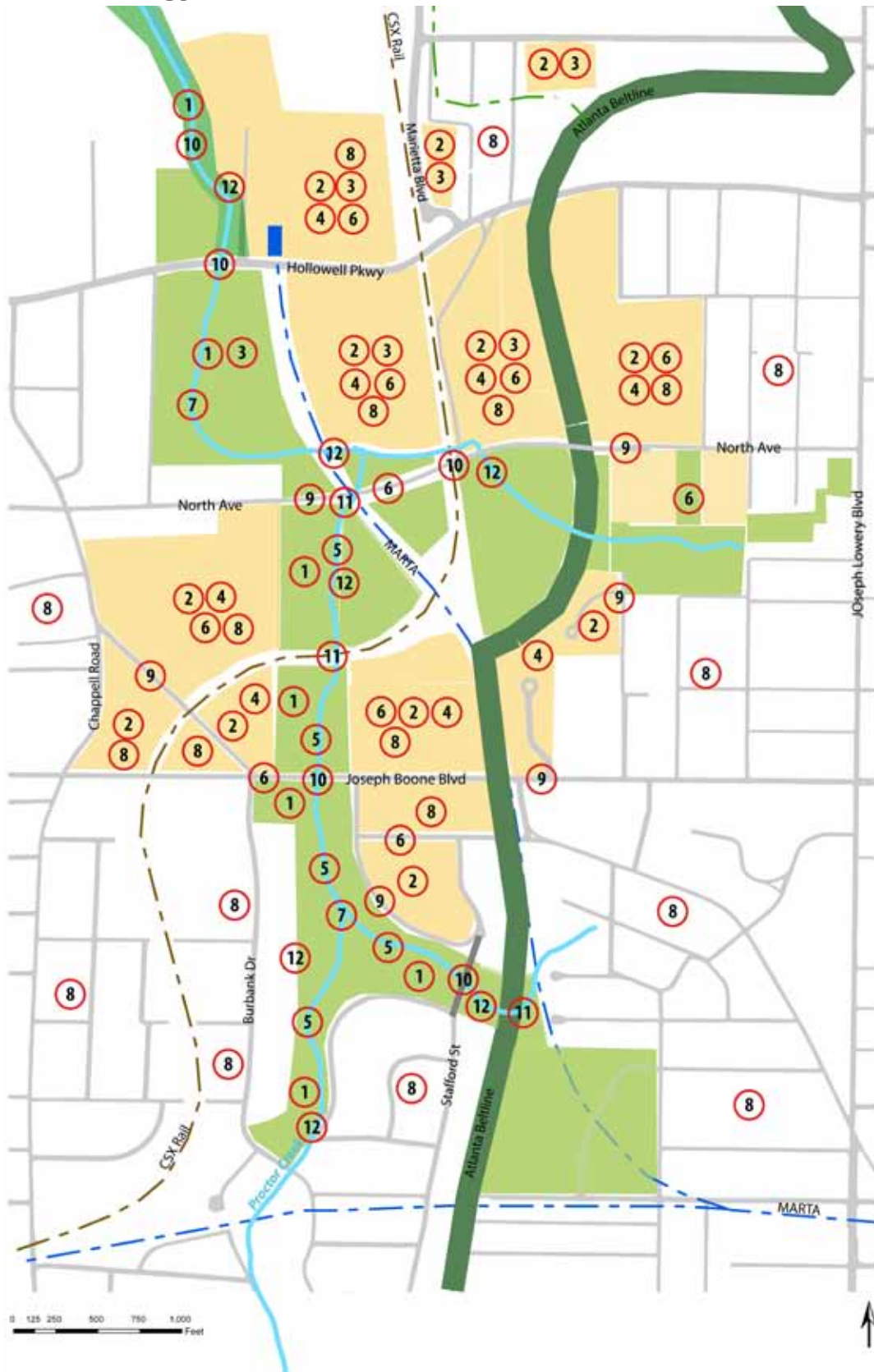
## 11. Culvert Redesign

Converting current culvert to larger culvert or bridge allows for increased water flow; increases daylighting inside tunnel/bridge; creates pedestrian access along creek to maintain full connectivity in the linear greenway park.

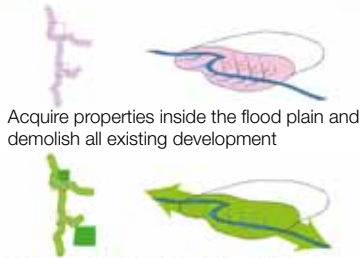
## 12. Pipe-End Redesign

Terminating the pipe before the creek allows water to infiltrate in the ground, decreasing velocity; thick grass wetlands can improve water quality by filtering impurities before it is poured into the creek; enhances real estate value as a park amenity.

# Performance Strategy Locations



**1 Reclaim Flood Plain Land** ●●



Acquire properties inside the flood plain and demolish all existing development

Designate the entire flood plain as a new continuous linear park



Build new development fronting the flood plain fringes as new park amenity and manage new stormwater runoff generated with new development

**5 Bioengineering** ●●

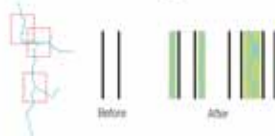


Deepen concrete channel to efficiently increase volume capacity and enhance conveyance



Utilize new design of deepened concrete channel to create new greenway development opportunities adjacent to Proctor Creek

**9 Street Redesign** ●●

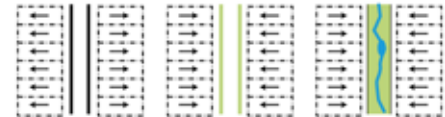
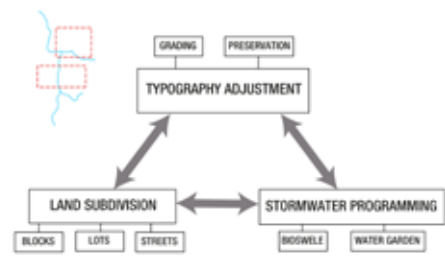


Before



After

**4 Land Subdivision** ●●●



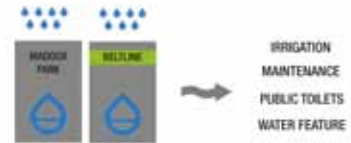
Rail Road/MARTA BeltLine Tributary/Green Street

Lot/Parcel Frontage Alignment

**8 Collection** ●●

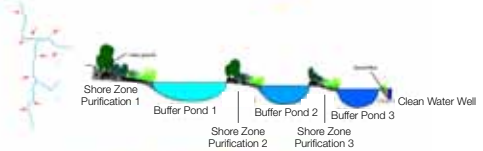


Water Collection and Reuse Opportunities on Private Property



Water Collection and Reuse Opportunities

**12 Pipe-End Redesign** ●●●



Before



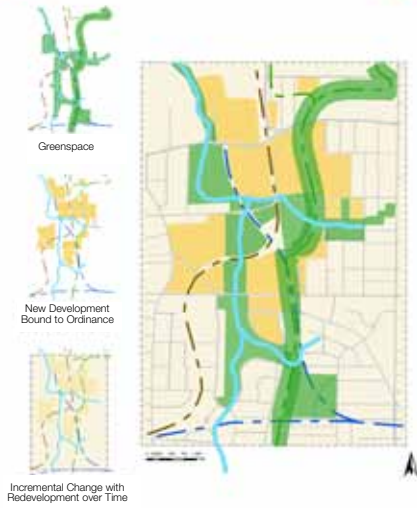
After

Performance Strategies

● Water Performance

● Land Performance

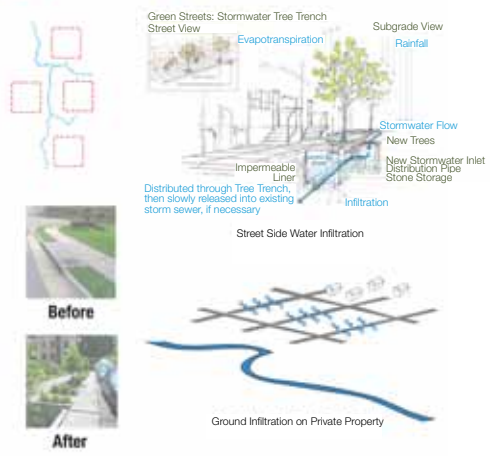
**2 City Stormwater Ordinance**



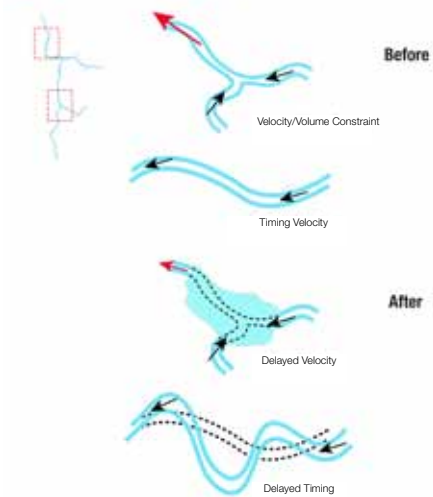
**3 Land Ownership Shifting**



**6 Infiltrate**



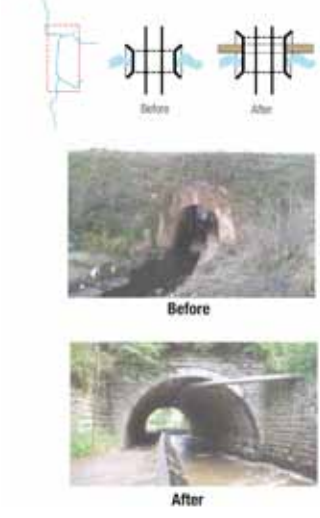
**7 Retention**



**10 Bridge Redesign**



**11 Culvert Redesign**



**Urban Performance**

# Illustrative Plan



# Greenway and Subdivision Plan

