RIPARIAN ROADWAY
McElderry Park's Green Street

ELENI JONES BES STUDIO SP. 2017

EXPERIENCES

Early evening from Jefferson Street entrance

Pedestrian walkway

Bioretention on a rainy day

RAIN GARDEN SECTION

This section is cut through the entire block of Lakewood Ave. to show the depths of bio-retention soil mix, and the structure.

PEDESTRIAN'S VIEW

This is a pedestrian's experience while walking between both sides of the planting areas, and over the raised walkways that cross the road.

RIPARIAN PLANTING ZONE PALETTES

ZONE 1
"Bank Stabilization"
Larger Trees and Shrubs

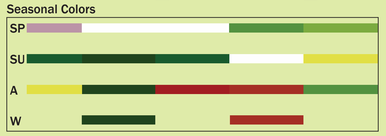
Trees

- *Cercis canadensis* Eastern redbud
- *Magnolia grandiflora* 'Little Gem' Little Gem large-flowered magnolia

Shrubs

- *Aronia melanocarpa* 'Morton' Morton black chokeberry
- *Cornus stolonifera* 'Arctic Fire' Arctic Fire red twig dogwood
- *Hypericum calycinum* St. John's wort

Seasonal Colors



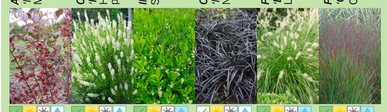
ZONE 2
"Mixed Forest Shrubland"
Shrubs and some Grasses

Shrubs

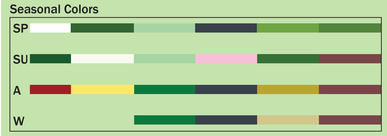
- *Aronia melanocarpa* 'Morton' Morton black chokeberry
- *Clethra alnifolia* 'Hummingbird' Hummingbird sweet pepper bush
- *Ilex glabra* 'Shamrock' Shamrock inkberry

Grasses

- *Ophiopogon planiscapus* 'Nigrescens' Nigrescens mondo grass
- *Pennisetum alopecuroides* 'Little Bunny' Little Bunny fountain grass
- *Panicum virgatum* 'Cheyenne Sky' Cheyenne Sky switch grass



Seasonal Colors



ZONE 3
"Grassland"
Grasses and Wildflowers

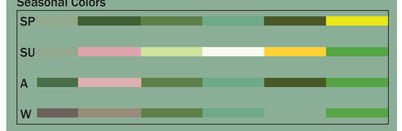
Grasses

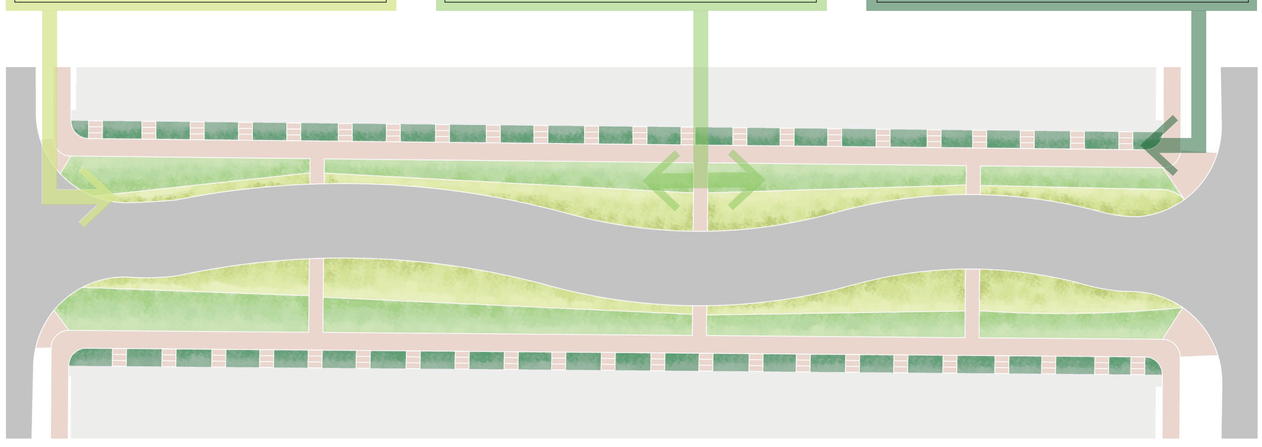
- *Elymus hystrix* Bottlebrush grass
- *Muhlenbergia reverchonii* 'Autumn Embers' Autumn Embers pink muhly grass
- *Acorus gramineus* 'Variegatus' Variegatus grassy-leaved sweet flag
- *Aegopodium podagraria* 'Variegatum' Variegatum bishop's weed

Herbaceous Perennial

- *Hemerocallis* 'Stella de Oro' Stella de Oro daylily
- *Pachera aurea* Golden Ragwort

Seasonal Colors



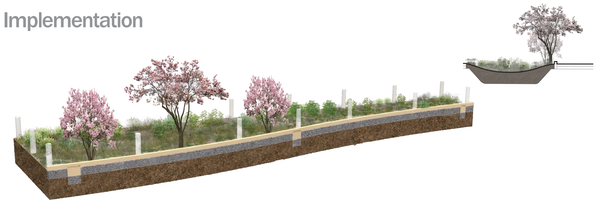


NTS

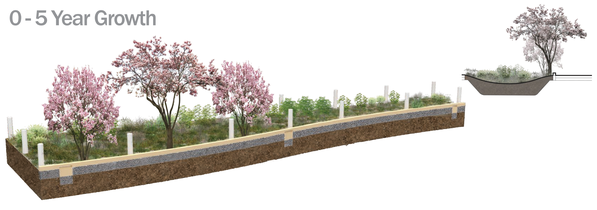
LANDSCAPE CHANGE OVER TIME

At the time of implementation, trees are small, many of the shrubs are planted from smaller pots, and the grasses are planted in a mix of bulbs and a general seed mix. Through time, the plants in all zones will grow steadily, and be maintained.

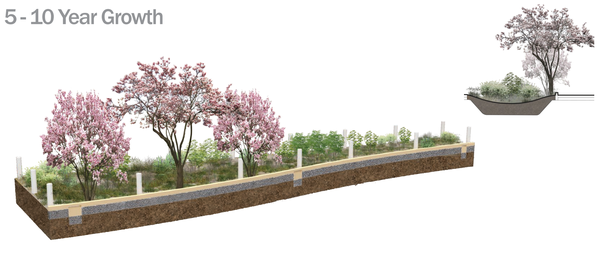
Implementation



0 - 5 Year Growth



5 - 10 Year Growth



Over 10 Year Growth

NTS

IMPLEMENTATION & MAINTENANCE

Tree Baltimore's goal is to increase the canopy coverage to 40% by 2037. This project can work with this current initiative to achieve Tree Baltimore's goals, while having this group help with this site specific project.

Blue Water Baltimore's goal is to restore the quality of Baltimore's streams, rivers and harbor. This proposal would contribute to this overall goal; Blue Water Baltimore could help with the implementation.

Clean Water Baltimore has a stormwater and clean water program. They complete their own stormwater projects while working with the city of government. This group can also help with implementation of this project because of its similarities to their own.

The Baltimore City Department of Public Works performs weekly mechanized street clean to the McElderry Park area. I propose that bi-weekly that maintenance crew also addresses the bioretention areas (cleaning out trash or caring for plants).

TreeBaltimore
Growing Baltimore's tree canopy one tree at a time.

BLUE WATER BALTIMORE

cleanwaterbaltimore

BALTIMORE CITY DPW DEPARTMENT OF PUBLIC WORKS

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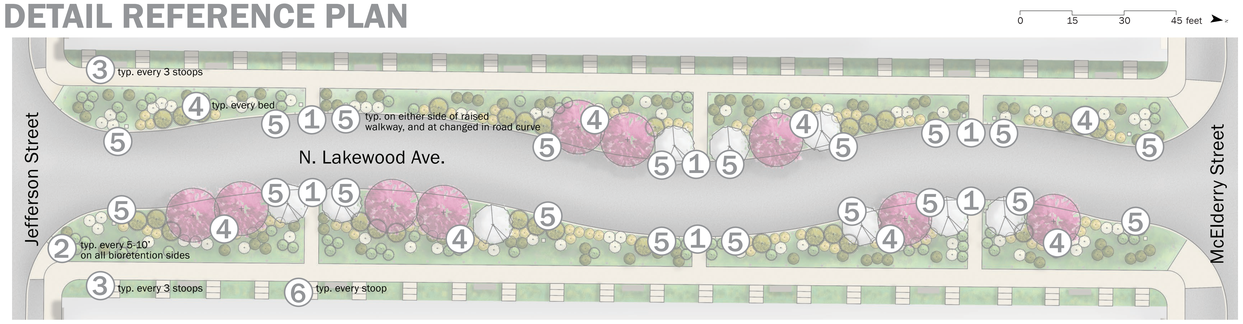
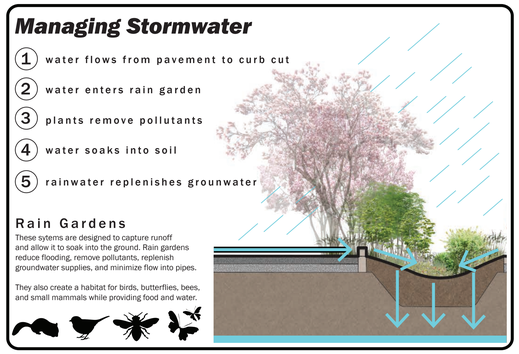
DETAIL REFERENCE PLAN



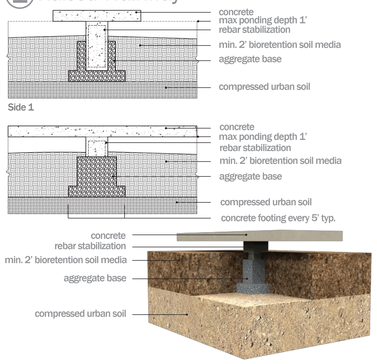


EDUCATIONAL SIGNAGE

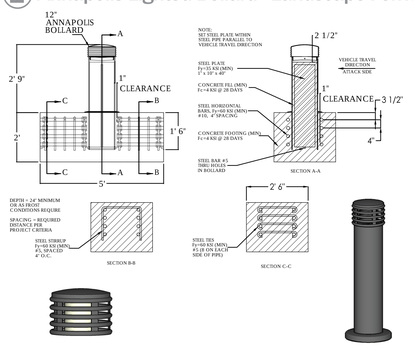
Educational signage will be created and place around the rain gardens. Example signs are located to the left. There will be plant identification signs for each of the species planted in the design. This way residents can learn about the ecology, but this also helps the people performing maintenance so they know what plants should not be removed. Signs explaining the stormwater process and why it is important ecologically are also needed. Simple signs labeling the rain garden systems will be placed around the site.

DETAILS

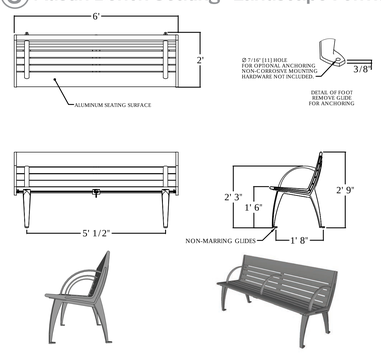
1 Raised Walkway



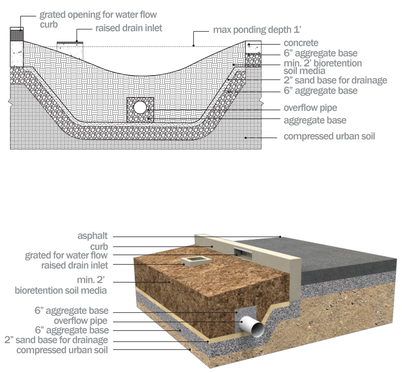
2 Annapolis Lighted Bollard - Landscape Forms



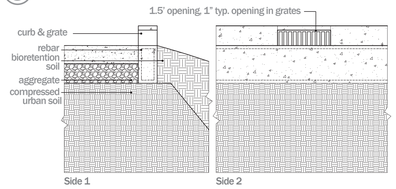
3 Austin Bench Seating - Landscape Forms



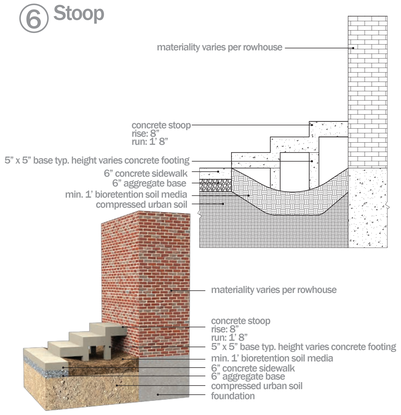
4 Bioretention

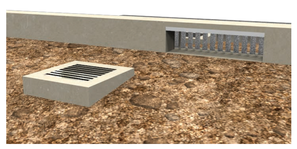


5 Curb Opening

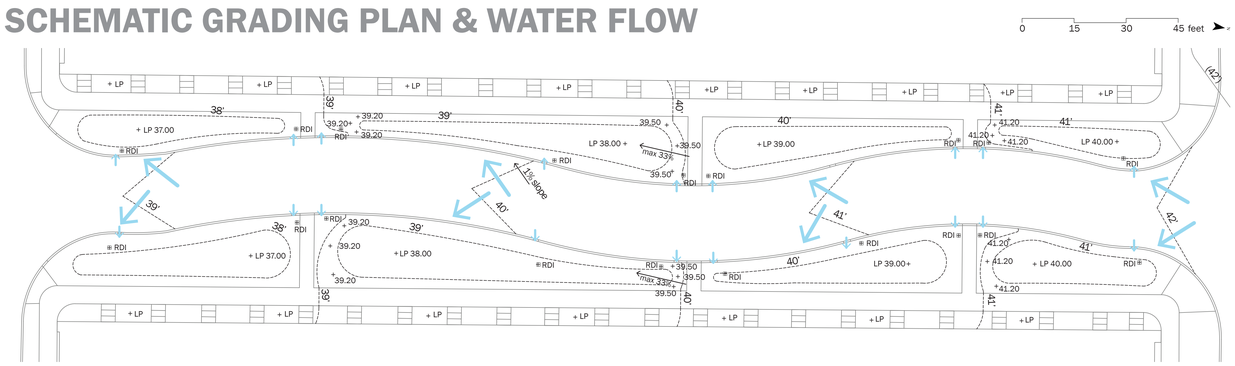


6 Stoop



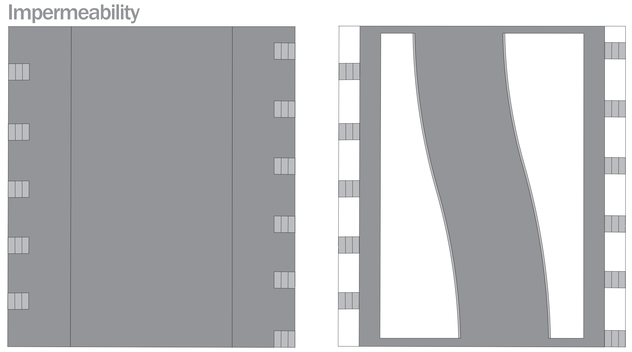


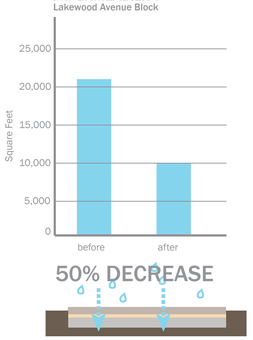
SCHEMATIC GRADING PLAN & WATER FLOW

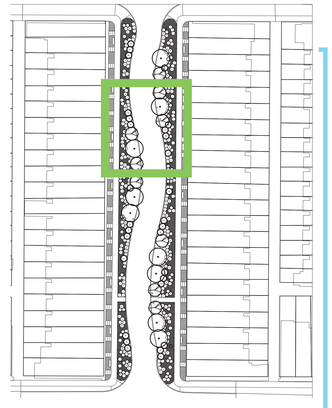


EXISTING AND PROPOSED PROJECT ANALYSIS

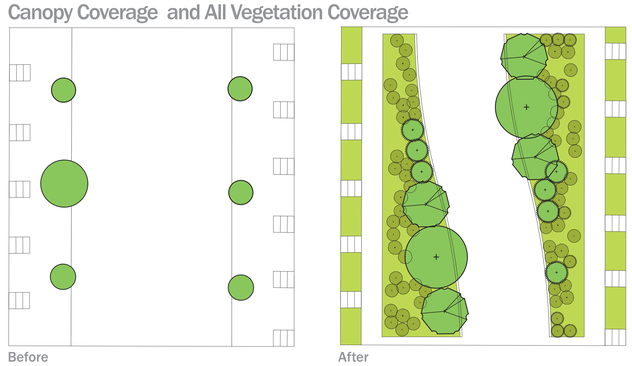
Impermeability

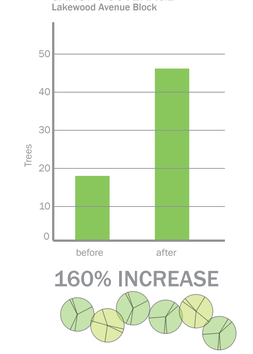


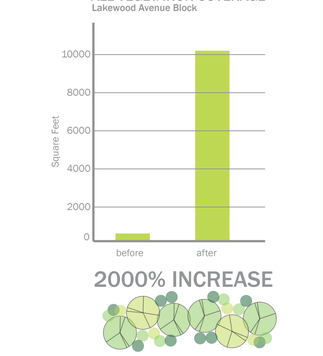




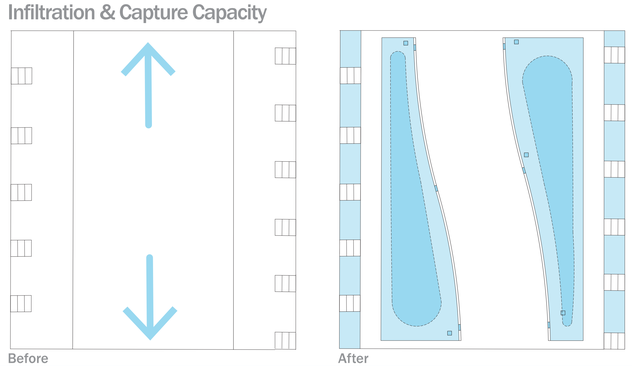
Canopy Coverage and All Vegetation Coverage

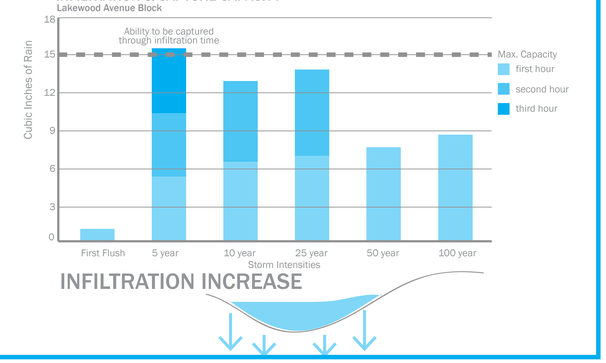






Infiltration & Capture Capacity





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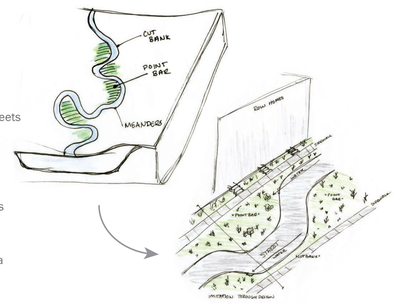
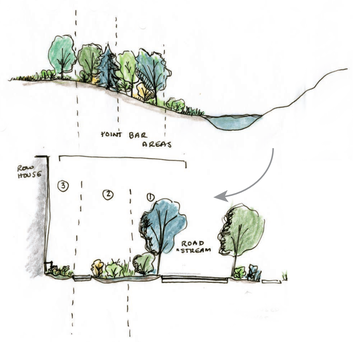
CONCEPT

The design concept highlights the historic stream that once flowed through McElderry Park Neighborhood through abstraction of form and representation. Because roads are made of impervious material, they facilitate water flow as streams do. The design implements curb extensions to create subtle meandering movements in the road to imitate that of a stream. There are many ways that this project's design correlates with a stream's functions. The streets meander with banks on either side. On either side of the street 'banks' are riparian buffer zones. These exhibit the structure and planting of a stream riparian buffer while acting as a bio-retention system as well. One side of the street has a larger vegetated area, imitating a point bar created from meandering, and the other side of the stream acts as the cut bank. These vegetated areas are planted in a riparian three zone pattern. Zone one contains trees and large shrubs that improve 'bank' stabilization. Zone two contains smaller shrubs and absorbs excess nutrients from runoff, and zone three contains grasses and wildflowers to facilitate infiltration. The street itself is a conduit of water flow from source to retention area and the design's retention basins improve groundwater discharge.

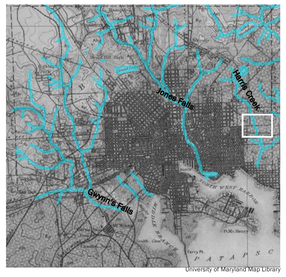




HISTORIC INSPIRATION

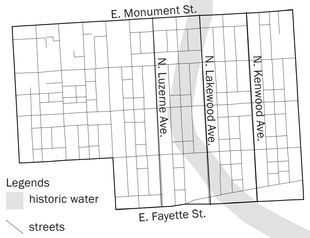
0 500 1000feet

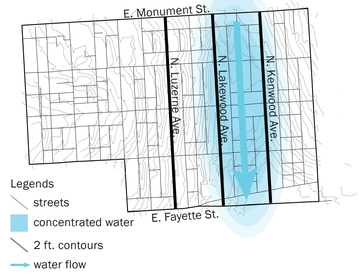
LArch 414 data sets
Projection: MD State Plane N



University of Maryland Map Library

Site analysis and historic maps of Baltimore inspired the Riparian Roadway design. In 1892, Baltimore has continued its expansion. At this point in time, Jones Falls continues to flow to the Harbor Dock and into the harbor. McElderry Park is located around the highlighted square. At this point in time a historic stream is running fully through the site area. Further water analysis was done on site, shown below.





PLANNING SCALE

Phase 1

The first phase will be the single N. Lakewood Ave. block between Mcelderry St. and Jefferson St.

Phase 2

The second phase will be an implementation of the entire N. Lakewood Ave. street within the Mcelderry Park neighborhood.

Phase 3

The third and longest phase will be to complete all three streets within the neighborhood: N. Lakewood Ave., N. Luzerne Ave., and N. Kenwood Ave.

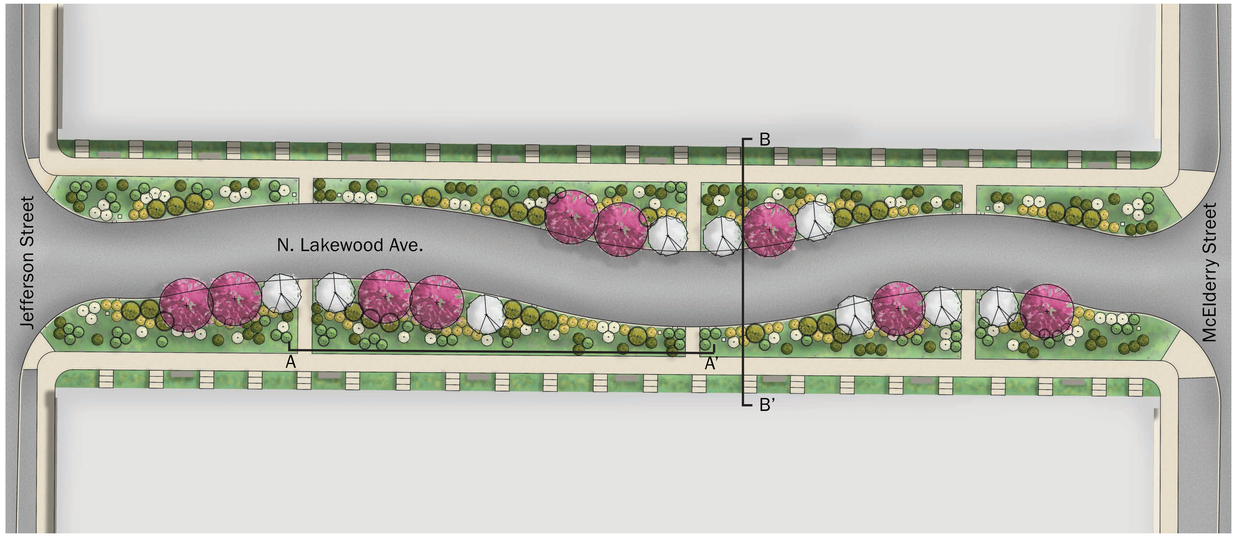
DRIVER'S VIEW

Rain gardens frame each side of the road, separate the cars from pedestrians, and while the road is meandering a clear view sight down the median of the road remains.

SITE SCALE

The block plan is located on N. Lakewood Avenue. This block will be used as a template for all other blocks in the three street planning implementation, and possibly in other neighborhoods.

0 15 30 45 feet



EXPERIENCES

Entrance from Jefferson Street

Driving along Lakewood Avenue

Bioretention on a rainy day

STREET SECTION

0 5 10 15 feet