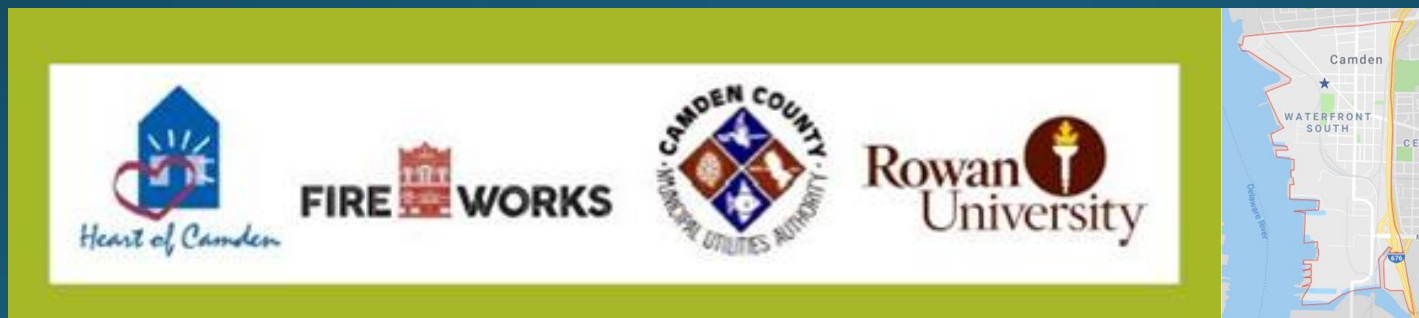




Community Presentation & Pop-up Collage Exhibit 9/9/2019



Project Team

Lead: Community Planning & Visualization Lab
planviz.org
Rowan University

Consultant: Cerulean, LLC

Sponsors: CCMUA, Rowan University

Partners: Heart of Camden
Camden FireWorks

The People doing the work...

Community Planning & Visualization Lab

Project Manager – Mahbubur Meenar

Asst Project Manager – Meghan Wren

Cerulean, LLC – Susan Harris

Oral histories/PhotoVoice – Megan Bucknum

Jennifer Kitson

Ted Howell

Student Researchers – Giavanni Rizzo

Devon Moulton

Cassandra Rodriguez

Dr . Meenar's Community Planning & Design Class

CCMUA – Andy Kricun

Tim Feeney

HOC – Donna Helmes

Holly Walker

FireWorks – Cassie MacDonald

Planning Process – GSI + Placemaking



Fall &
Winter
2018

- Document Review
- Interviews/Oral Histories

Spring
2019

- Existing Conditions Analysis
- Field Observations
- Student Research
- Focus Group - Professionals

Summer
2019

- PhotoVoice / Focus Groups
- More Interviews
- Draft Recommendations – Tonight!

Fall 2019

- Revise & Compile
- Final Plan

GSI + Placemaking requires Community Engagement



Types of Green Stormwater Infrastructure



Downspout planters



Tree trench



Rain garden



Parking lot retrofit



Naturalized areas



Green roof

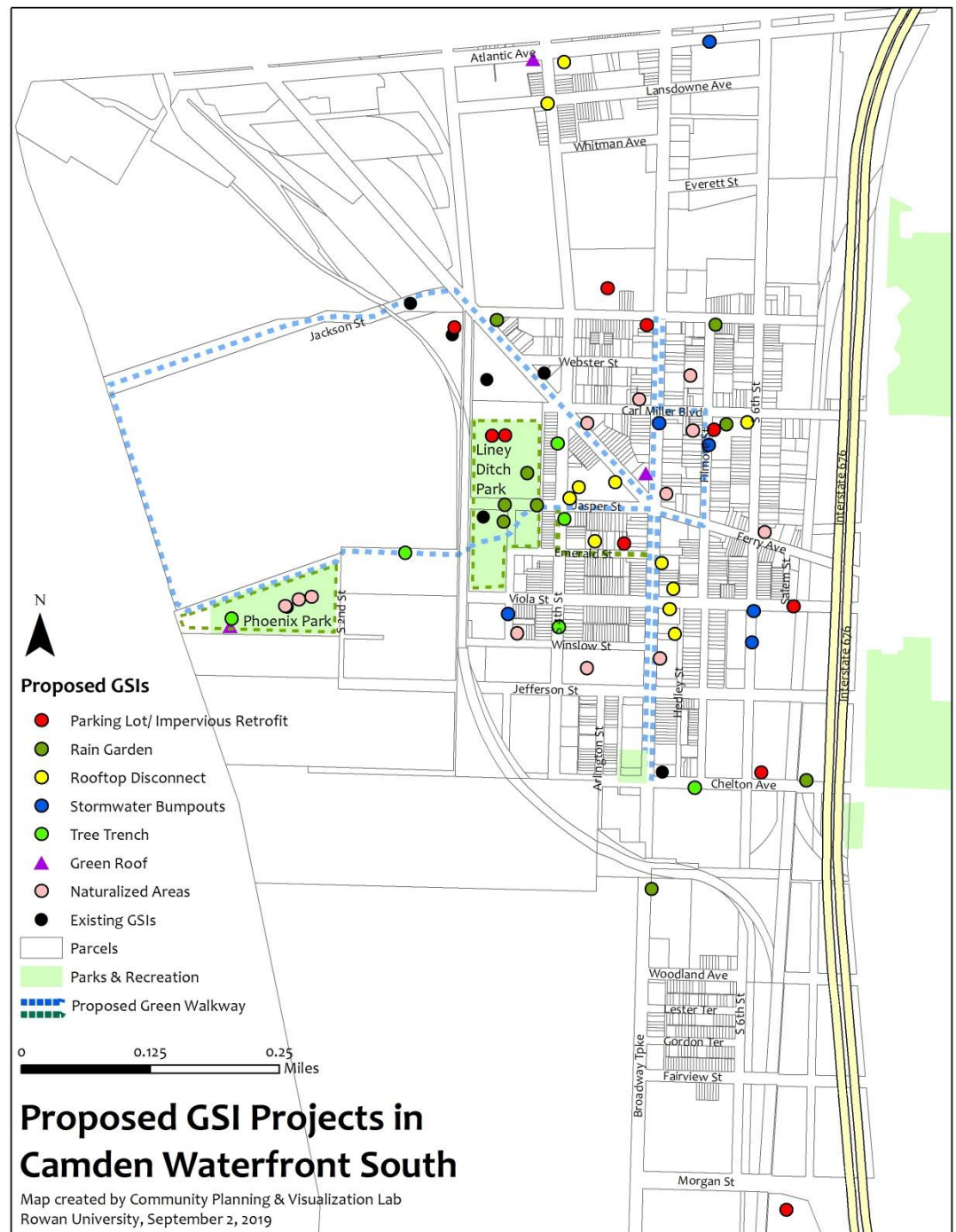
- Capture stormwater and use plants/soil/stone to clean it before it reaches the storm drain or river.
- Runoff from rooftops, parking lots and roadways can be stored to reduce flooding

Why should we care?

- 15 Million people rely on the Delaware River Watershed as a drinking water source.
- Increased recreational value
- Health and Safety
- Clean Communities
- Reduce Flooding and pollution



Map of Identified GSI Locations



Broadway Naturalization



Current
Condition



Rendering
of
Naturalized
area

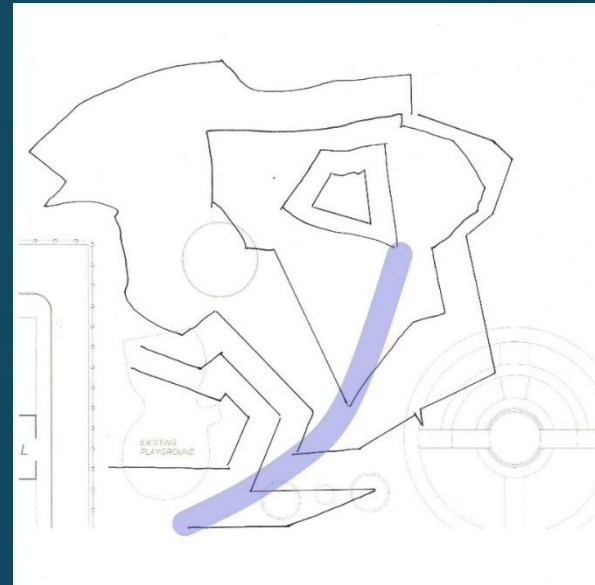
Parking lot retrofits

Subsurface storage features can provide up to 90% void space for stormwater management. This system is ideal for retrofitting impervious areas where land is not available for installation of surface features.



Bioswale

A bioswale will to filter runoff and promote groundwater recharge. Bioswales are planted deep rooted native flowers, grasses and shrubs.



Existing
grade of
conveyance
feature



Rooftop capture into rain garden



Recommendation: Extend existing downspouts to reach ground level. Will prevent splash erosion which increases velocity of rooftop drainage. The 5 foot wide area adjacent to building and sidewalk could be converted to bioretention feature to manage the runoff from rooftop.

Rain gardens can be installed where rainwater runoff naturally drains and can be collected – like near a building where downspouts capture roof runoff or where water from the roof, lawn and other impervious surfaces flows.



Stormwater Bumpout

Curb extension that allows drainage to be filtered through vegetated system before entering storm inlet



GSI Prioritization



- Triple Bottom Line approach -
Environmental, Economic, and Social Benefits

How much stormwater can be managed?

How is the land currently used?

Pollutant removal efficiency of proposed project

Ability to secure match and build partnerships

Ranking for Priority List

Each project was ranked for its environmental and economic benefits.

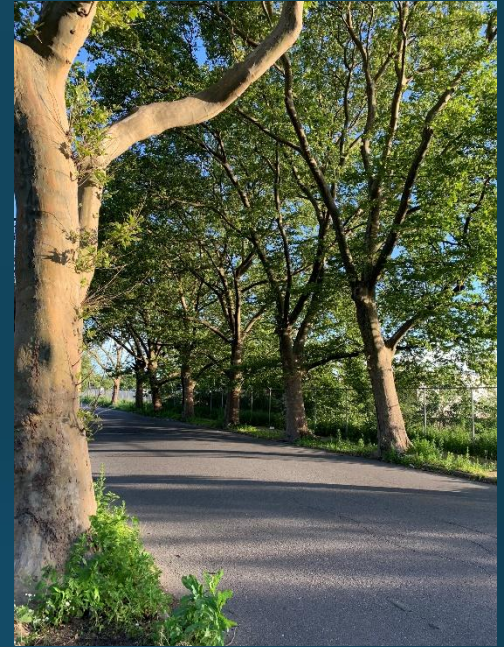
Site ID	Site Location	Landowner	GSI Measures	Gross Area (Acres)	Roofing Disconnect	Tree Trenches	Water Gardens	Parking Lot Retrofit	Stormwater Bumpouts	Water and Urban Green Roof
Large Park Projects										
1	Phoenix Park	CCMUA	multiple projects	2.45						x
2	Park linkage Trail	CCMUA	shade trees & exercise stations			x				
3	Liney Ditch Park	City/CCMUA	multiple projects	11.72			x	x		
Special CCMUA Projects & Demonstration Projects at NGOs										
40	Atlantic & 4th	NJ transit	bus shelter with green roof							x
41	Broadway & Ferry		bus shelter with green roof							x
26	Jackson Street	CCMUA	parking subsurface water storage; gateway to fishing pier	n/a				x		
27	Jackson and Ferry	CCMUA	rain garden with two new inlets	0.00579			x			
42	Carl Miller, Ferry, & 4th	Camden City	green traffic island & crosswalks							
35	FireWorks Backyard/Alley	Camden Fireworks	Porous pavement + GSI demonstration projects		x		x	x		x
12.1	1840 Broadway	HOC	downspout planters	0.032	x					
36.1	Carl Miller & 6th	Camden Board of Education	Rain garden around flagpole. Downspout planter & storage, Depave where possible	0.735	x		x			
30	400 Jasper Street	South Camden Theater	existing landscape beds elevated/expanded to provide	0.07	x	x				
19.1	1912 Broadway	Shipyard Museum	downspout planter	0.202	x					
			back corner downspout planter		x					
10.1	S. 4th St & Jasper St	Sacred Heart Church	cistern through drip irrigation	2.39	x					
			Downspout planter		x					
			Downspout planter		x					
11	415 Emerald Street	Camden Redev	infiltration trench foot of greenhouse	0.0872	x					
Prioritized/Ranked GSI Projects (high to lower priority; highlighted = recommended first phase action)										
15	600 Morgan Street	Covanta	remove impervious/make meadow	18.77				x		
12.2	1832 Broadway	HOC	parking lot retrofit - subsurface storage					x		
43	4th street Viola to Jefferson	Camden City	tree trenches along 4th St.			x				
34	433 Jackson Street	So Jersey Port Corp	parking lot retrofit/subsurface storage	2.80				x		
16	930 South 6th	Colonial Processing	reduce impervious on perimeter	1.69				x		
21	522 Chelton Ave	Camden City	Tree trenches multiple Chelton locations	n/a		x				
22	1700 Block S. 4th st	Camden City	multiple locations for tree trench	n/a		x				
25	400 Atlantic Ave	Jen-Cyn Enterprise	bioretention feature in right of way	0.385	x					
Stormwater bumpouts										
23	1710 Broadway +Carl Miller		Stormwater bumpout	n/a					x	x
24	400 Block Atlantic		stormwater bumpout	n/a					x	
37	Carl Miller & Filmore	Camden City	stormwater bumpouts						x	
32	Viola & 6th	Camden City?	refer to concept in folder	unknown		x			x	
38	along 6th street	Camden City?	Stormwater bumpout	unknown		x			x	
20	508 Atlantic Ave	Recovery Properties	Trees rather than tree trenches (no	1.26					x	
9	1800 Block Ancona		stormwater bumpout	0.062					x	
28	613 Chelton	NJDOT	linear rain garden - outlet to inlet on	n/a			x			
31	Salem & Viola	Camden City?	refer to concept in folder	0.04591				x		
39	Jackson & Filmore	Metro Investment	Rain Garden & Mural	0.04			x			
29	2210 Broadway	HCSC - Laundry	retentive slope grade - reduce	1.46			x			
4	1621 Broadway LLC		reduce impervious cover	0.208				x		
Naturalized Areas - Funding program for civic organizations to manage, installation & maintain										
Naturalized areas to have mowed front then low fence then taller meadows with uniform specifications throughout										
5	400 Carl Miller	Camden Redev	plantings behind stone circle	0.37						x
6	Broadway & Carl Miller	Camden City	plantings behind stone circle #2	0.049						x
7	331 Winslow	Camden City	More natural - plantings	0.0238						x
13	1914 Broadway/160 Viola	Camden City	additional plantings	0.45						x
14	630 Ferry Ave	Camden City	additional plantings	0.04						x
17	1736 Broadway	Camden City	plantings	0.0459						x
18	1707 Fillmore St	Camden City	natural plantings	0.021						x
38	Rescue Mission	Rescue Mission	Vegetable Garden (lots behind ?)	0.23						x
8	400 Block Winslow- old stack/tower	E-Zone Mgt	convert to factory site to meadow	1.7						x



Social (People) Factors Counted, too...

Social Outcomes	Anticipated willingness of landowner to participate?	High = 3 pts. Moderate = 2pts Low = 1 pts.
	Will the project make the community more attractive?	High = 3 pts. Moderate = 2pts Low = 1 pts.
	Does the project intend to engage in education and volunteer oriented activities and/or is it socially functional?	Yes, A lot = 3 pts. Some = 1-2pts No = 0 pts.
	Is the project forging new community partners?	Yes 2 No = 0 pts.
	Visibility of proposed project location?	High = 3 pts. Moderate = 2pts Low = 1 pts.
	Is the project publically accessible?	High = 3 pts. Moderate = 2pts Low = 1 pts.
	Was this area identified as a priority during community events, photos/interviews?	Yes, A lot = 3 pts. Some = 1-2pts No = 0 pts.
		Subtotal Social

You told us what you cared about...



We Listened...

More Placemaking Projects

Neighborhood Green Walkway

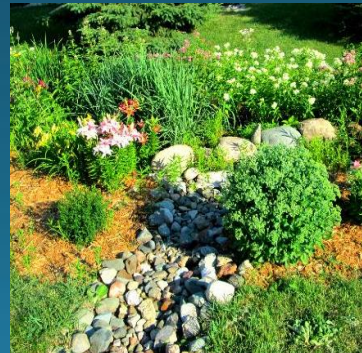
Interpretive panels at key community assets

- *Wayfinding signage throughout*
- *Storm drain stenciling at all inlets*
- *Maritime sculptures and public art interspersed at green spaces*
- *Periodic exercise stations*
- *Brick archways at gateways—Jackson & Chelton at Broadway Jackson St to Pier & both Park entrances*

Neighborhood

Engagement Projects

- ♦ **Block Captains & Teams for green space maintenance.**
- ♦ **Stormwater Inlet litter patrol**
- ♦ **Rain Barrel decorating workshops**
- ♦ **Rock painting parties to place throughout neighborhood**



Next Steps
Feedback/Survey

Implementation