



City of Roswell, Georgia

SESWA 2018

Permeable Paver Success and Lessons Learned In Historic Roswell

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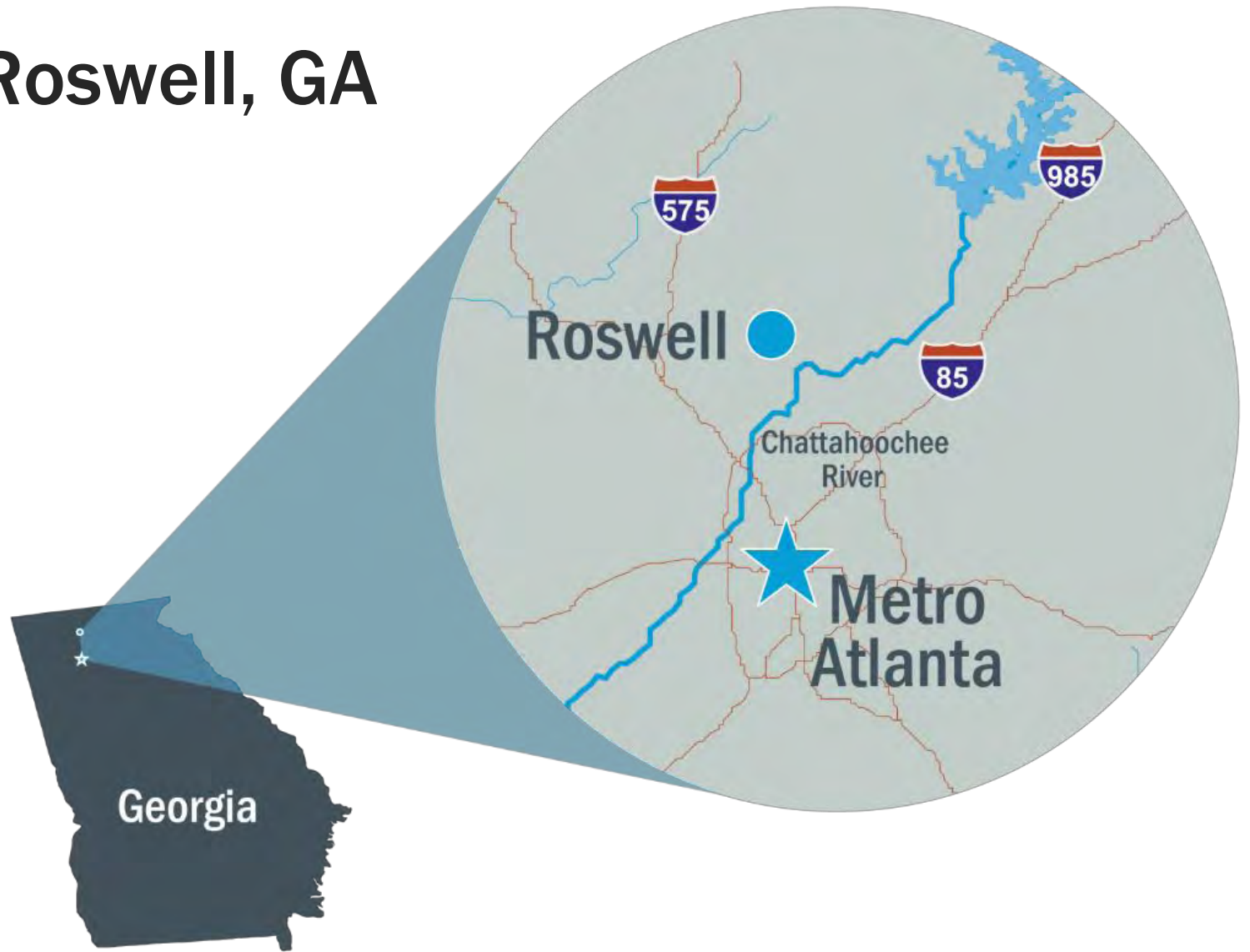


Today's Agenda >

1. Background
2. Permeable Paver Examples
 - Myrtle St./Zion Circle
 - Goulding Place
 - East Alley
3. Lessons Learned



City of Roswell, GA



Background – City of Roswell

- Founded in 1830's
- Northern Suburb of Atlanta, Population of ~90,000
- Historic Downtown Area with aging storm infrastructure
- Strong Development/Redevelopment
- Located near Chattahoochee River, “Premier Riverside Community”
- Quality of Life important



Stormwater Challenges – Impacts to River

- Stormwater, with associated pollutants, flow directly to Chattahoochee River through network of City storm pipes and streams
- Lack of stormwater infrastructure causing flooding in some locations
- Streams and River not meeting water quality standards

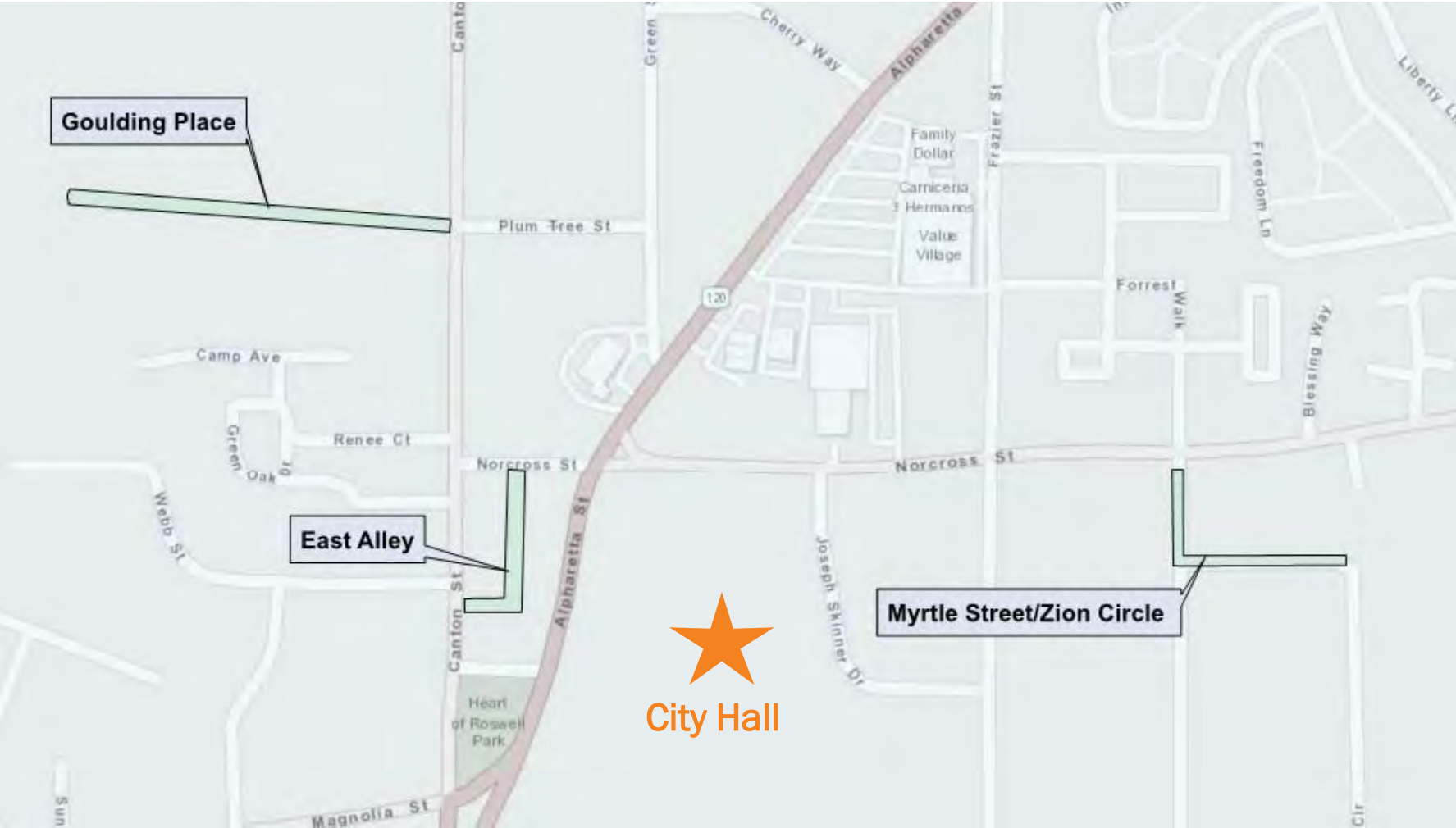


Stormwater Challenges – Development Pressure

- Strong Development/Redevelopment Demand esp. in Historic District
- Land is at a premium - stormwater ponds, BMPs take up valuable real estate
- Stormwater infrastructure lacking or aged
- Flooding in some areas



Permeable Paver Project Locations in Roswell

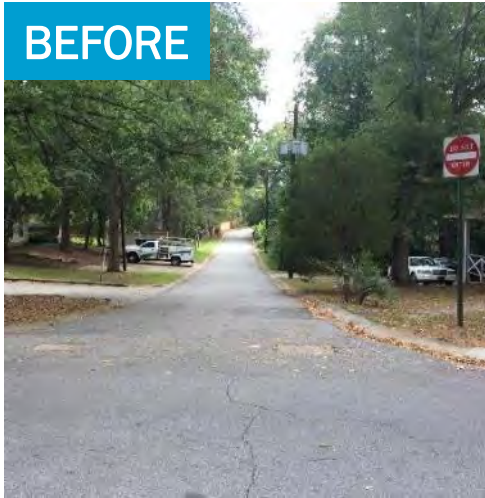
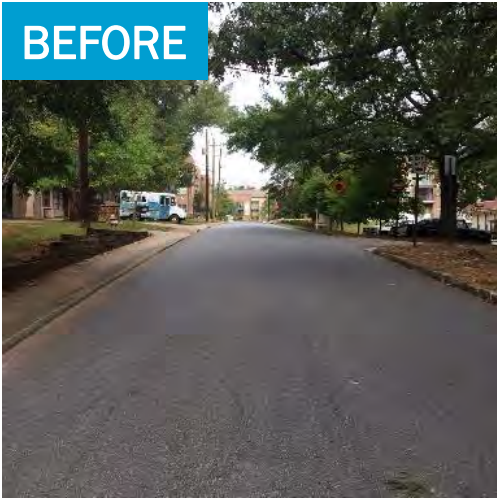
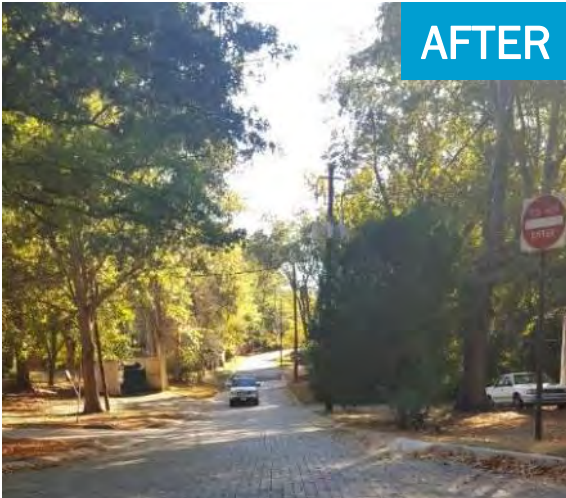


Myrtle Street and Zion Circle - 1st permeable paver project

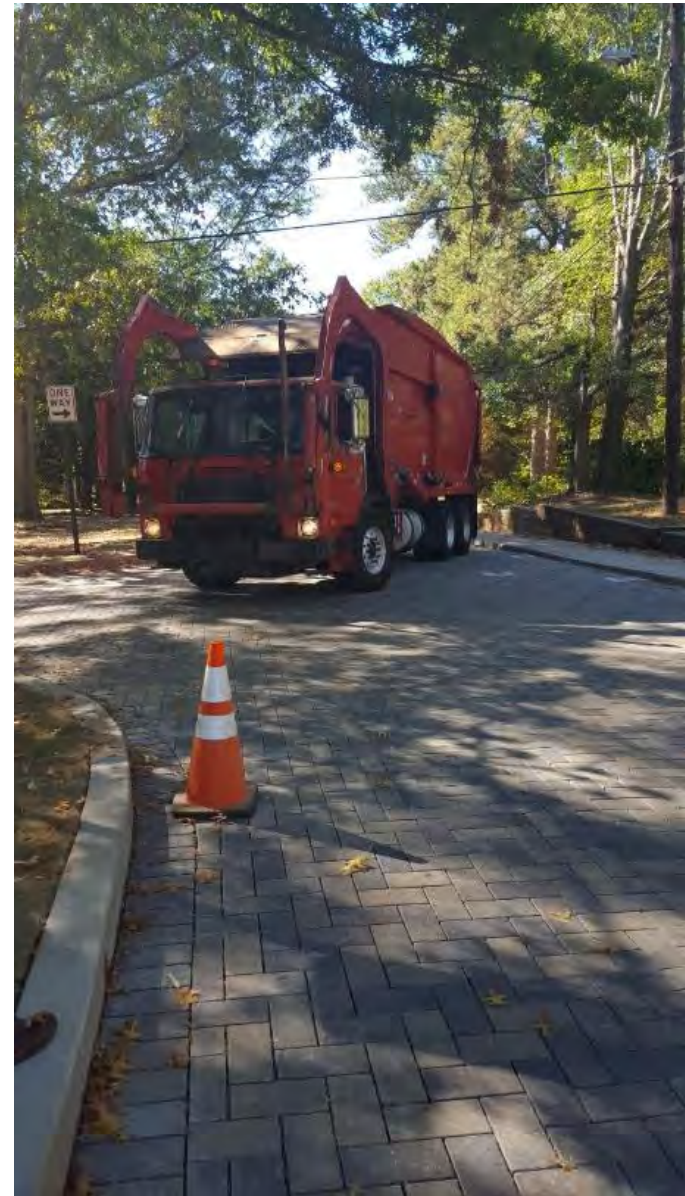
- Goal – demonstration project,
- Financing – City Stormwater funds, 319(h) grant, and new BMP credit policy
- Public Outreach – brochure, sign
- Unique – Established Shared Stormwater Policy
- Area 12,400 sf
- Cost \$325,984 (\$26/sf)



Myrtle Street/Zion Circle



Ribbon Cutting



Goulding Place - 2nd permeable paver project

- Goal – address flooding
- Financing – stormwater funds and public-private partnership
- Public Outreach – meetings with homeowners, ribbon cutting
- Unique – installation on historic street with no stormwater infrastructure
- Area 11,800 sf
- Cost \$290,128 (\$25/sf)



AFTER



BEFORE



AFTER



BEFORE



East Alley - 3rd permeable paver project

- Goal –treat urban water quality in headwater area
- Financing – multiple city departments and 319(h) grant
- Public Outreach – ribbon cutting, FAQ, coordination with Historic Preservation
- Unique – Creating pedestrian use area in historic alley, “Alive in Roswell”
- Area 4,230
- Cost \$150,301 (\$35/sf)



BEFORE



AFTER



BEFORE



AFTER



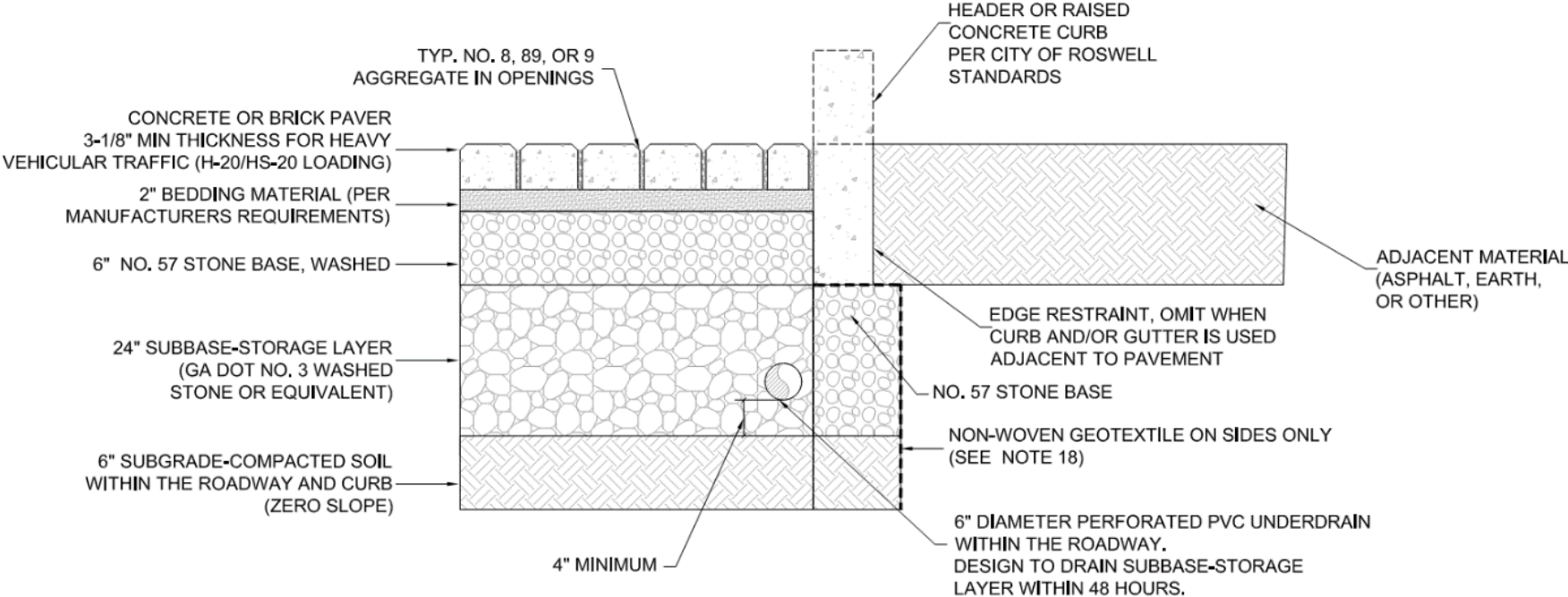
Ribbon Cutting



Construction Lessons and Photos



Pervious Paver Detail



PERMEABLE PAVEMENT CROSS-SECTION

DETAIL 5
C-3

Excavation



Underdrain Installation



Storage Stone Layer



Base Stone Layer and Compaction



Concrete Cut Off Wall



Homeowner Access?



System Outlet



Paver Installation



Set Curb and Final Aggregate Stone



Public Outreach – Site Tours



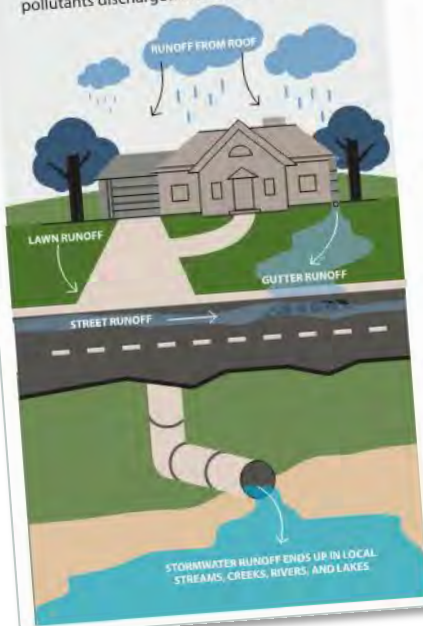
Public Outreach - Poster



Public Outreach - Brochure

Treating Stormwater to Protect Our Rivers and Lakes

Stormwater picks up pollutants from streets and lawns that, if not treated, can harm lakes, rivers, and streams. New development and re-development sites must meet stormwater treatment requirements as outlined in the Post-Development Stormwater Management Ordinance to minimize the amount of pollutants discharged into area waters.



A New Way to Meet Stormwater Management Requirements

Roswell's Shared Stormwater Facility Program offers property owners and developers the option to use City stormwater facilities to meet treatment requirements.

This voluntary program, partially supported by a USEPA 319(h) grant, was created to improve water quality in local streams and to offer an innovative option for developers to meet stormwater management requirements.

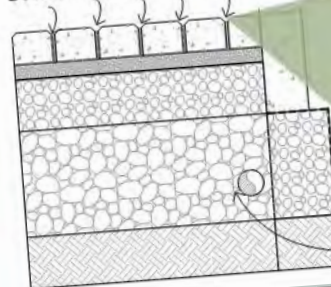
Eligible developments must drain directly to the stormwater facility or be located within a City-approved sub-basin. Funds collected from the program will be used to build new shared stormwater facilities and maintain existing facilities.

How Do the Credits Work?

Property owners and developers may purchase stormwater credits to meet some or all of their stormwater treatment requirements.

- A credit is a unit of stormwater treatment that can be purchased to partially or fully meet the treatment required for site development
- Credit units are sold by impervious acre treated
- Credit costs are determined by fair market value of similar onsite treatments or by the full project cost borne by the City
- Credit costs vary by location and stormwater facility
- Credits are available on a first-come, first-served basis
- The City tracks available credits per facility, what has sold, and what is available

Stormwater Runoff



Pervious pavers allow stormwater to flow to a gravel reservoir and infiltrate into the ground. This process removes pollutants from the water.

Lessons Learned

- Contractor needs utility experience
- Compaction of stone layers
- Shallow reservoir less expensive, avoids utilities, easier constructability
- Access to homes during construction may be blocked
- Check stone specs during installation
- Vertical restraining curb
- Transitions – one material to another
- Contingency plan for unsuitable soils



Lessons Learned

- City provides maintenance
- Good education opportunity
- More expensive than some options
- Public and elected officials **Love It**
- Stormwater treatment that fits in Historic Area





Thank you.

Questions?

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