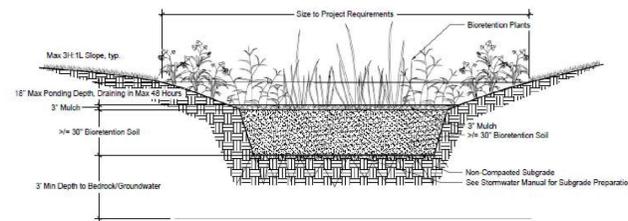


STORMWATER BEST MANAGEMENT PLAN (BMP) ALTERNATIVES

MORNINGSIDE A AND WHITE OAKS C NEIGHBORHOOD ROADWAY RECONSTRUCTION

RAIN GARDEN (PRIVATE OWNERSHIP)

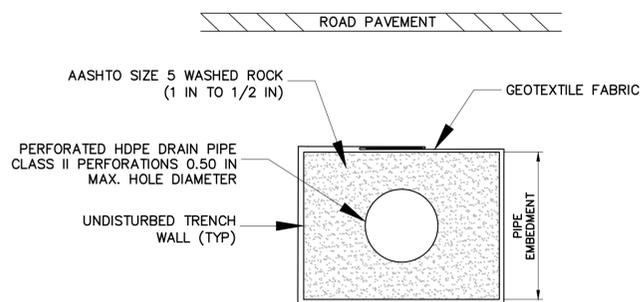
Small (150 square feet or larger) planted depressions that collect stormwater for infiltration. They do not have a permanent pool and can be retrofitted into existing parcels. Rain gardens are aesthetically pleasing additions to a home. Some maintenance required (removing debris, replacing dead plants).



BELOW GROUND PERFORATED PIPE

\$45,000 PER 1,000 CUBIC FEET WATER QUALITY

Storm sewer pipe sections with perforations to allow for infiltration of collected water. Can be placed in parallel with existing underground storm sewer pipes.

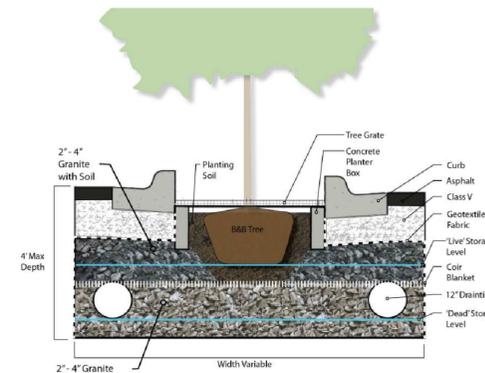


TREE BOX/TRENCH

\$21,500 PER 1,000 CUBIC FEET WATER QUALITY CREDIT



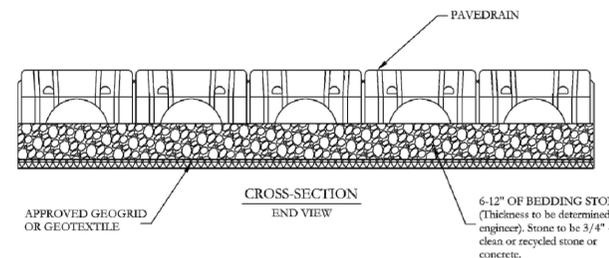
Trees in special soils and rock that capture runoff and store/treat it underground. Small footprint (5 feet wide by 15 feet long) is ideal for boulevard areas.



PERMEABLE PAVEMENT

\$14,000 PER 1,000 CUBIC FEET WATER QUALITY CREDIT

Paving bricks or a mix of asphalt or concrete that has pores for water to soak through. The PaveDrain® system uses arched articulated concrete blocks to provide additional storage and easy maintenance. Can be used in street parking areas.



OVERALL POTENTIAL PROJECT BMP COST/BENEFITS SUMMARY

(PRESENTED IN ORDER FROM HIGHEST POTENTIAL WATER QUALITY VOLUME CREDIT TO LEAST)

PERMEABLE PAVEMENT

Cost: \$30,000-\$85,000₁
 Benefits: Relatively large storage credit
 Can be installed within public roadway
 No need for traditional paving
 Aesthetically pleasing

TREE BOX/TRENCH

Cost: \$50,000-\$80,000₁
 Benefits: Moderate storage credit
 Aesthetically pleasing
 Healthy trees increase in value
 Canopies intercept water, and roots soak up water

RAIN GARDENS

Cost: N/A (privately owned and maintained)
 Benefits: Aesthetically pleasing
 Can be maintained by a private resident
 Small footprint

BELOW GROUND PERFORATED PIPE

Cost: \$30,000-\$60,000₁
 Benefits: Easy to maintain
 No above-ground construction required
 Can be fitted to existing manholes/catchbasins

Notes:

1. Approximate costs associated with the potential BMPs shown on the Morningside A & White Oaks C Neighborhood Roadway Improvements graphic

1,000 CUBIC FEET WATER QUALITY CREDIT = 20-foot box truck

