



Low Impact Development Construction & Maintenance

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Bioswales





What Does Stormwater Management Look Like in North Texas?





Greenville Ave – Dallas, TX





Highland Village – Doubletree Ranch Park







Elm Street – Deep Ellum





BIORETENTION

Design • Construction • Maintenance





Design: Plant Selection







Design: Mulch





Design: Clogging





100"/hr



< 5"/hr







CAUTION: BIOFILTRATION SYSTEM

DO NOT REMOVE GEOTEXTILE COVER

No quite la cubierta geotextil

DO NOT PLACE SOIL ON TOP OF ENGINEERED MEDIA OR COVER

No coloque tierra en la parte superior de la cubierta protectora

DO NOT STOCKPILE DIRT OR HAZARDOUS MATERIAL UPSTREAM

No acumular tierra o materiales peligrosos en el canal de drenaje

CAUTION: This FocalPoint Biofiltration System is an engineered stormwater treatment system. It must not be compromised prior to activation by Construction EcoServices. Do not remove the protective geotextile.

PRECAUCION: FocalPoint Biofiltration System es un sistema de tratamiento de agua de lluvias. La cubierta protectora no debe ser removida o abierta, antes de ser activado solamente por Construction EcoServices

ACTIVATION PREREQUISITES

Requisitos de activación

70% OF THE DRAINAGE AREA

MUST BE STABILIZED

El 70% del área que rodea el drenaje debe ser estabilizado

STREET/PARKING MUST BE SWEEPED

La calle / estacionamiento debe ser barrido

90% OF THE SWALE MUST BE

VEGETATED OR MULCHED

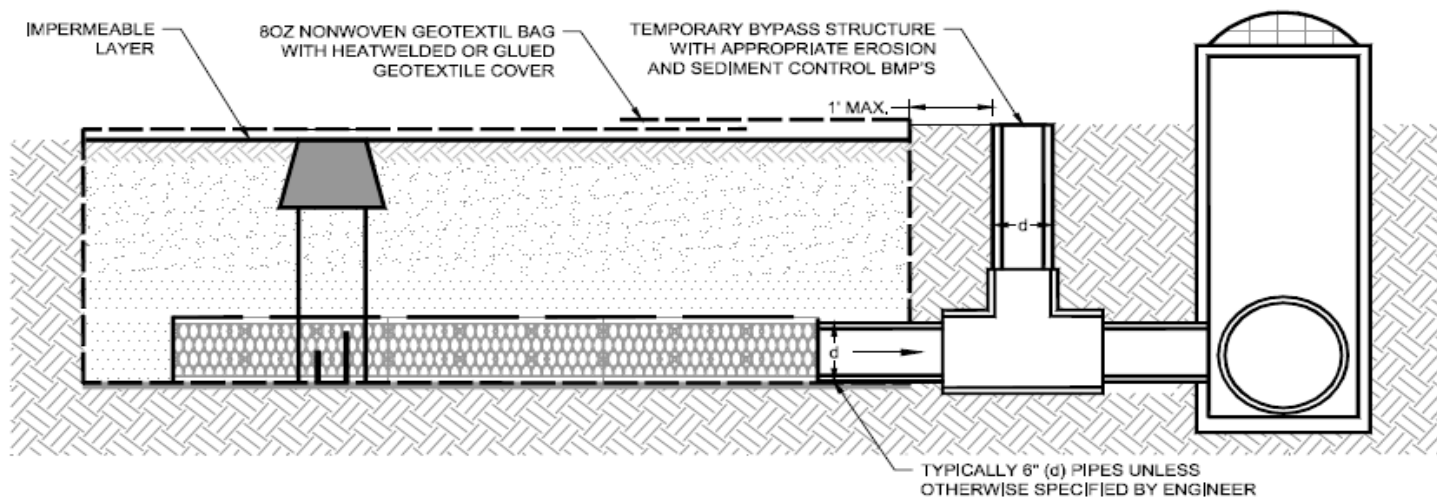
El 90% del canal de drenaje debe tener por obligación vegetación o mulch

CONTACT CONSTRUCTION ECOSERVICES FOR ACTIVATION

Comuníquese con Construction EcoServices para su activación

832.456.1000





NOTE: IN ORDER TO PROTECT THE FOCALPOINT BIOFILTRATION SYSTEM FROM INUNDATION OF SEDIMENT DURING CONSTRUCTION ACTIVITIES, USE AN 80Z NONWOVEN GEOTEXTILE CAP WITH IMPERMEABLE LINER TO PROTECT THE SYSTEM. IN ORDER TO DO THIS, LAY IMPERMEABLE LINER OVER MULCH BED, THEN OVERLAP THE GEOTEXTILE AND EITHER USE A GEOTEXTILE ADHESIVE OR A TORCH TO WELD THE FABRIC TOGETHER CREATING A SEAL. THIS PROTECTIVE BARRIER MUST NOT BE REMOVED UNTIL THE SITE IS 70% STABILIZED AND THE SWALE DRAINING INTO THE FOCALPOINT IS AT LEAST 90% STABILIZED. ONCE THE SITE IS STABILIZED, CONTACT YOUR CONVERGENT VALUE ADDED RESELLER SALES REPRESENTATIVE TO HAVE THE SYSTEM ACTIVATED. ONCE ACTIVATED, TEMPORARY BYPASS STRUCTURE IS TO BE PERMANENTLY CAPPED OR REMOVED.
DO NOT ACTIVATE THE SYSTEM WITHOUT A REPRESENTATIVE THERE TO INSPECT THE SITE OR THE WARRANTY WILL BE VOID.

FOCALPOINT PROTECTION PROCEDURES

CONSTRUCTION
ECO
 SERVICES

TO FIND A VALUE ADDED RESELLER IN YOUR AREA VISIT
WWW.CONVERGENTWATER.COM/STORMWATER-PRODUCTS OR CONTACT
 CONVERGENT WATER TECHNOLOGIES AT 800.771.5428

FocalPoint
 BIOFILTRATION SYSTEMS













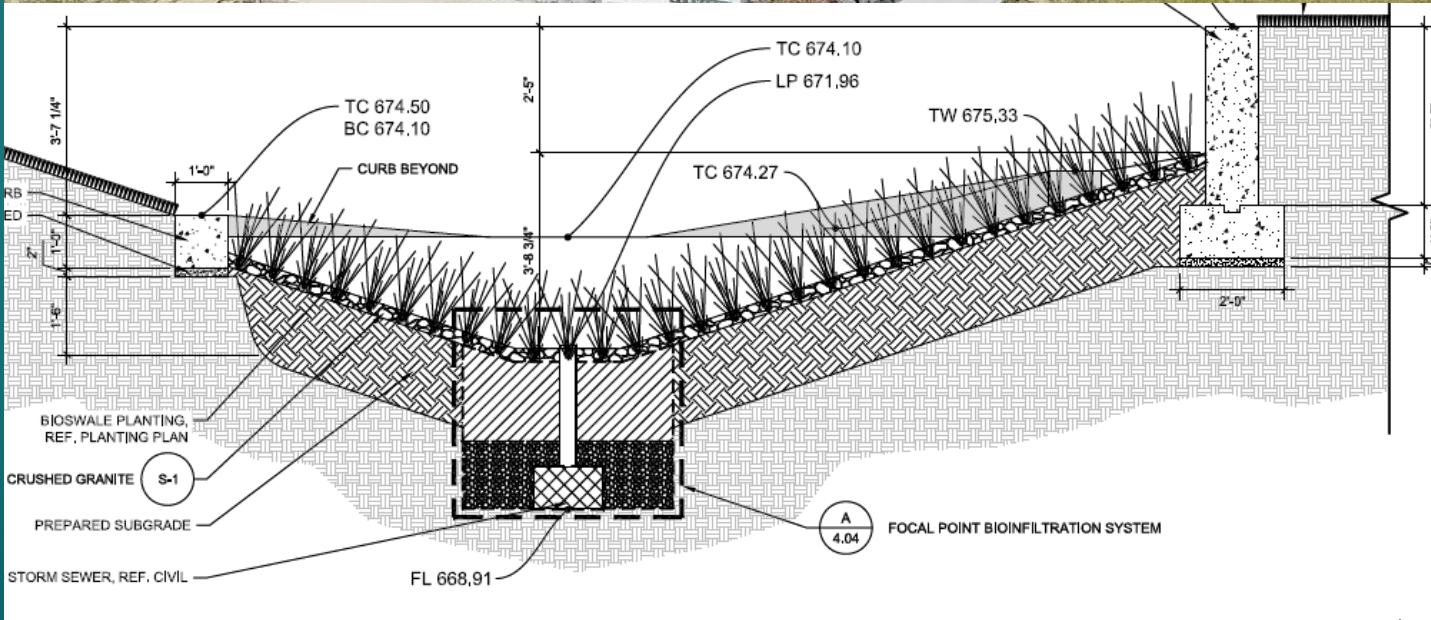
Maintenance Issues: Plants & Mulch











Bioswale - Focal Point Bioinfiltration System Section













Permeable Pavements

Design • Construction • Maintenance

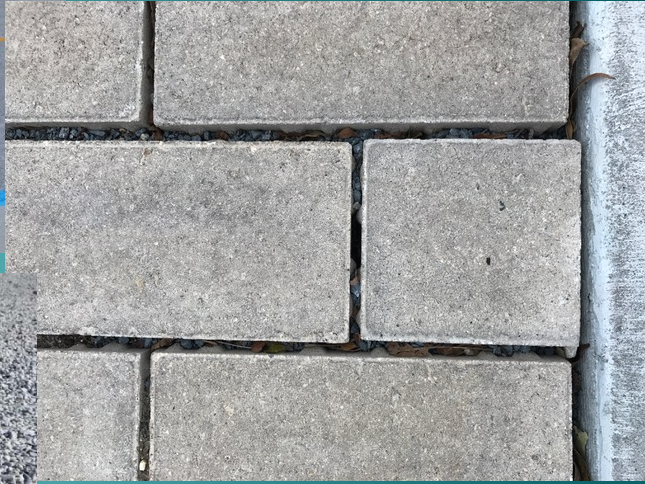


Categories

Porous Pavements



Interlocking Pavers



Gravel Pavers



Open Joint Pavers





Hickory Street – Interlocking Pavers





Hickory Street – Interlocking Pavers





Hickory Street – Interlocking Pavers





Hickory Street – Interlocking Pavers











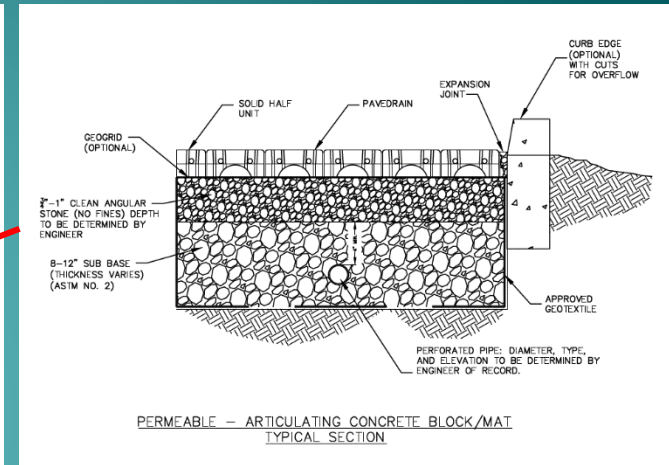
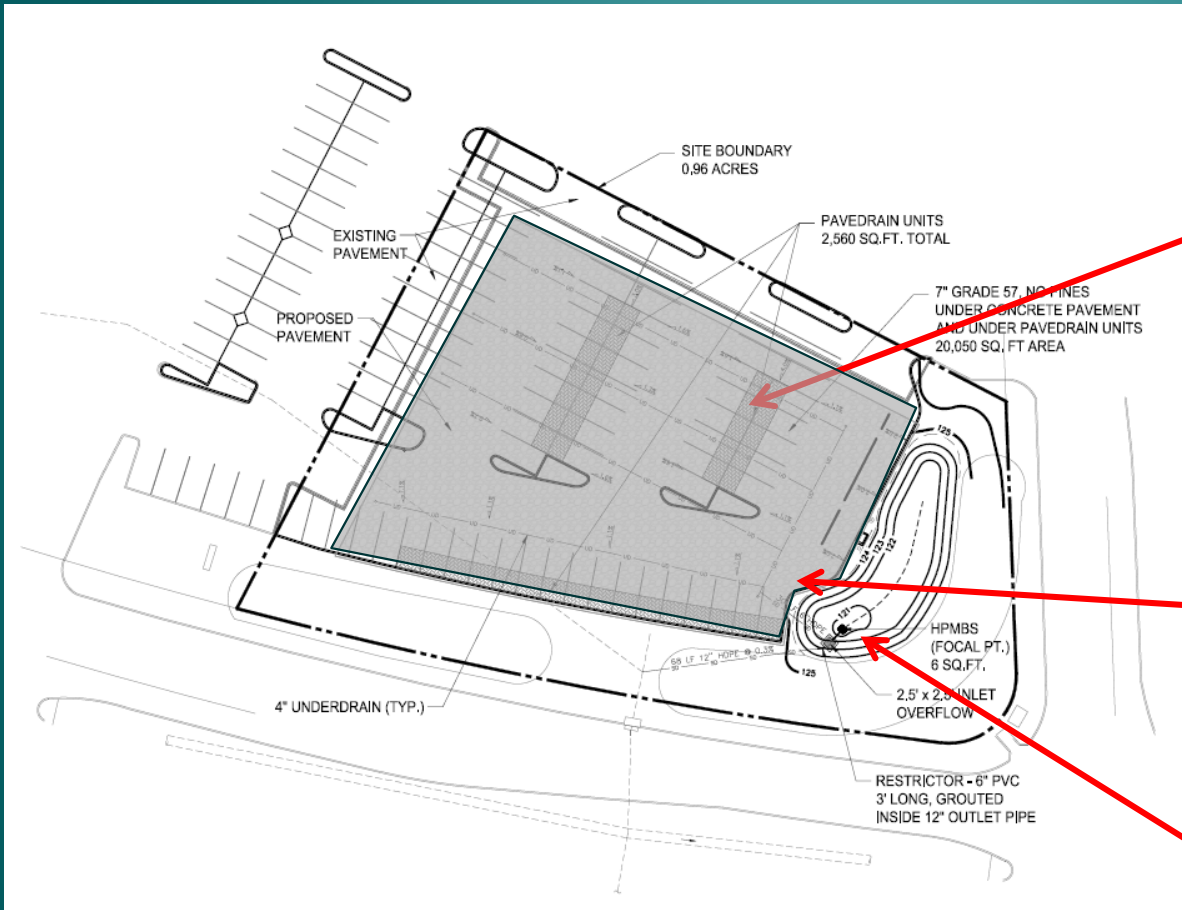
Figure 21. A regenerative air machine cleaning a PICP parking lot.



Figure 22. A true vacuum machine cleaning neglected PICP.



Eastern Commons Houston, TX



7" Stone Subgrade

Overflow =
Bioretention

Drainage Area Ratio = 10:1









Overflow into
bioretention basin

20 SF - High Flow
Biofiltration System
with overflow



Underground Detention:

Required Storage - 27,950 CF

Cost Per CF - \$9.50 to \$12.00 CF

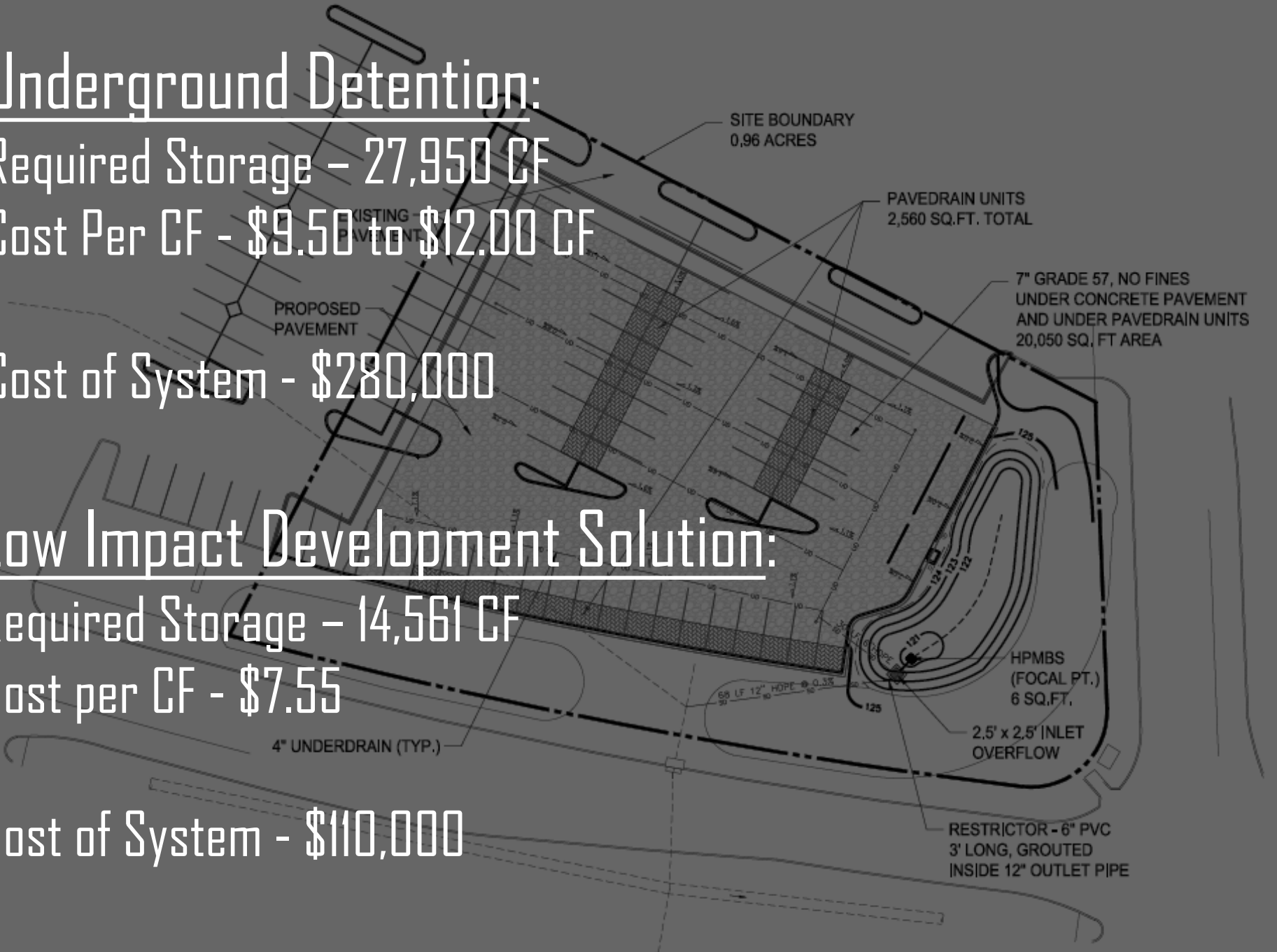
Cost of System - \$280,000

Low Impact Development Solution:

Required Storage - 14,561 CF

Cost per CF - \$7.55

Cost of System - \$110,000





Keys to Success

- Verify Maintainability
- Design with Emergency Bypass
- Protect System During Construction
- Provide Turn-Key Installation
- Verify Performance in Specification
- Provide Maintenance in Specification



The Future is Multifunctional

- Pavements
- Landscapes
- Rooftops
- Drainage

THE WATER TREATED



Dallas Street – Ennis, TX



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What's Coming Down the Pipeline?





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QUESTIONS?

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