

The Downs Mixed-Use Development

Scarborough, ME



PROJECT OVERVIEW

CUSTOMER:

The Downs
Mixed-Use Development

PRODUCTS:

FocalPoint Biofiltration Systems,
Rain Guardian Turret and Foxhole
Pre-Treatment Devices, Cultec
Subsurface Storage Chambers

LOCATION:

Scarborough, ME

CHALLENGE:

Provide a green infrastructure solution along a roadway to supply water quality treatment and reduce the amount of traditional gray infrastructure for stormwater management. The challenge was also high ground water as the development is surrounded by wetlands.

SOLUTION:

The design engineer created FocalPoint Biofilters, incorporating curb line pre-treatment devices flowing to FocalPoint Biofilter beds and ultimately detaining water in subsurface storage chambers.

PRODUCT ADVANTAGES:

- Biofilter utilizes a high-flow media (conveyance rate of 100 in/hr) to provide rapid treatment of runoff pollutants and reduce the size of traditional bioretention by 80%.
- Versatile footprint design—mulch bed can be designed in any shape with native plantings to match the natural aesthetic.
- **Rain Guardian**—pre-treatment device collecting sediment and protecting the FocalPoint system
- **Cultec**—Expanded subsurface storage capacity and slower discharge of treated stormwater

“The FocalPoint Biofilter systems were effectively and seamlessly incorporated into the natural landscape of The Downs development project. The design engineer created functional and aesthetically pleasing FocalPoint systems, efficiently treating and storing runoff. It’s a design the engineer and developers should be proud of!”

– Loren Joyce, Ferguson Waterworks

BACKGROUND

The Downs project, a 525-acre mixed-use development site in Scarborough, Maine, was first proposed by a small group of local developers with the vision of creating a community that would become the new “downtown” center of the town. Like many other communities in the area affected by rapid growth and urban sprawl, the character and feel of a town center had been lost. The developers of The Downs project pursued a sophisticated approach to solving the housing shortage in Southern Maine, all while keeping the character and small town feel intact. While much of the development completed thus far includes residential and commercial space, future proposed work involves construction of grocery stores, parks and recreational facilities, an innovation district, and more.

PROJECT SCOPE

The Downs development project followed an aggressive construction schedule. Installation and work sequencing efficiency was a critical aspect to the success of the project. A project of this scale required multiple site contractors working on portions of the site simultaneously. The design engineer’s main requirement was to provide localized filtration and storage methods for stormwater runoff to this large-scale, newly developed land and to do so with space efficiency in mind.

METHOD

The design engineer utilized the FocalPoint Biofiltration System with subsurface chamber storage to treat and detain the stormwater runoff. The key advantage of the FocalPoint system is its high-flow filtration rate and small footprint, which allows for design flexibility. A majority of the FocalPoints were designed within narrow esplanades along the roadway, providing localized filtration and thus preventing large-scale detention basins, which take up much-needed development space. The FocalPoint System is a functioning underground biofilter, but at the surface the FocalPoint appears to be a natural-looking vegetated mulch bed that matches the landscaping plan set forth by the designers.

There were also wetlands surrounding the property that needed to be protected. Sixteen FocalPoints were used to reduce phosphorus and total suspended solids (TSS), allowing treatment of stormwater at the source. FocalPoints were the ideal solution as only 7'-wide areas were available, making traditional bioswales and raingardens unusable.

THE SOLUTION: FERGUSON WATERWORKS

Ferguson not only values high-quality products, but also high-quality service. Ferguson provided product support from start to finish for this project. From preliminary stormwater design assistance to project completion, Ferguson proved to be a valuable asset throughout the entire process. The FocalPoint system was chosen for its design flexibility and effectiveness at treating runoff close to the source.

For more information, speak with an expert:

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