

CASE STUDY

StormTech® Detains Stormwater at East Birmingham VA Clinic

Irondale, AL

OWNER

Department of Veterans Affairs,
Washington, D.C.

ENGINEER

Sain Associates, Birmingham, AL

CONTRACTOR

T.E. Stevens Excavating, Birmingham, AL

INSTALLATION DATE

August 2020

PRODUCTS

74 MC-4500 StormTech Chambers
200' (61 m) of 15" (375 mm) N-12® Pipe

CHALLENGE

The Birmingham East Veterans Administration Clinic, a standalone facility in Irondale, constructed a new parking lot. Due to the extent of impervious surface area associated with the project, an underground stormwater detention system was required to manage runoff.

SOLUTION

Sain Associates, the project's engineer, selected StormTech MC-4500 chambers for the detention system. The chambers provide the design longevity, water quality and strength required to be installed under the clinic's parking lot.

After the stormwater enters the system, it is retained until it can be slowly released, using 15" (375 mm) N-12 as conveyance, into the municipal storm system.



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As part of the StormTech system, an Isolator® Row was incorporated to capture total suspended solids (TSS). Isolator Row traps sediment and debris within the chamber system to allow pollutants to be contained until routine maintenance can be performed to remove the debris.

The City of Birmingham visited the site and observed Isolator Row's effectiveness. This resulted in Birmingham announcing it would accept Isolator Row's suspended solids and pollutant removal as credit for water quality on future projects.

ADS personnel were available throughout the installation as requested by the project's general contractor. The site contractor, T.E. Stevens Excavating, had used StormTech chambers previously, so the system was installed efficiently and without complications.

PRODUCT DESCRIPTIONS

StormTech chambers are designed to save valuable land, reduce flooding risks and protect water resources. The chambers provide a durable structural system and are designed in accordance with AASHTO LRFD Bridge Design specification for HS-20 live loads. StormTech chambers are available in a variety of sizes to meet any project need and are injection molded for uniform wall thickness. The StormTech Isolator Row utilizes a layer of ADS Plus fabric in a designated inlet row to provide enhanced suspended solids and pollutant removal. Isolator Row is a NJCAT-tested and NJDEP-approved practice for stormwater pre-treatment.

N-12 Dual Wall Pipe has a corrugated exterior and smooth interior wall that provide exceptional hydraulics, strength and corrosion resistance. N-12 is available in 100-1500 mm (4"-60") diameters and in 6 m (20') lengths to provide faster installation and lower installation costs. The integrated inline bell design allows for easy installation and eliminates chipping and cracking that is common to concrete bells. N-12 addresses subsurface and stormwater gravity-flow drainage needs.



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