

Casey's General Stormwater Detention Case Study



The Midwest's Most Trusted Site Solutions Provider

Project: Underground Stormwater Detention at 2 new Casey's General Stores

Location: Joplin & Duquesne, Missouri

Application/Solution: Underground detention using Atlantis Double D Raintanks

Market Sector: Commercial

Development

Salesperson: John Warren

Owner: Casey's General Stores

Engineer: Archer – Elgin, Rolla, MO

Contractor: Williams Construction, Springfield, MO

Installed: March 2013

case study

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Challenge

Installation of an Underground Stormwater Detention System below the parking lot of 2 new Casey's General Stores in the area that was destroyed by tornadoes in 2011. The underground detention allows the owner to expand their parking area and do away with a standard detention basin.



1 Joplin Missouri after tornadoes in 2011.

Solutions

Atlantis Double D Raintanks wrapped in Mirafi 180N geotextile and encased in a 45 mil Firestone EPDM Geomembrane with a Mirafi BXG 110 Geogrid reinforcement grid above the detention cells.



2 Joplin project start up.

Results

This system was successfully installed at 2 brand new Casey's General Stores in a matter of only a few days. The underground detention allows for more parking, cleaner stormwater and less maintenance as well as satisfying all Stormwater runoff volume reduction requirements.



3 Duquesne project using preassembled Raintanks.



Products

Manufacturers included in solutions and product:

Product: Atlantis Double D Raintanks
 Manufacturer: Atlantis Water Management

Product: Mirafi 180N Geotextile and BXG 110 Geogrid
 Manufacturer: Mirafi

Product: Firestone 45 mil EPDM Geomembrane Liner
 Manufacturer: Firestone



4 Atlantis tanks can be configured into unusual shapes.



5 Connecting inflow pipe from the water quality unit.



7 Completed detention system preparing for pavement.



6 Backfilling and compacting the aggregate.

Company Information

ASP Enterprises, Inc. and Quick Supply Co. For more than three decades, A.S.P. Enterprises and Quick Supply Co. has served the erosion control industry with integrity and expertise. We provide engineers and landscape contractors the exceptional value for their money and have grown to become the Midwest's full-line distributor of erosion-control, geosynthetics, storm water management products, wall block, landscape pavers, and drainage products.

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