

Moorestown Township Town Hall & Library

111 West Second Street, Moorestown, NJ 08057



Before



After



Green roof after

Moorestown Township municipal offices experienced a fire in 2007 which destroyed much of the structure, and the remaining building was subsequently demolished. Through a detailed public process over a period of years, Ragan Design Group worked with Township government not only to update the design of the Town Hall and new library, but to incorporate green infrastructure and other sustainable features. The construction of the green infrastructure features was made possible through a \$100,000 grant from the Rutgers University Cooperative Extension Program as part of a regional stormwater drainage enhancement program. The complex was completed in May 2014.

General:

Type of development (residential, mixed use, commercial): Municipal complex with library

Project partners: Sambe Construction, Ragan Design Group Architects and Landscape Architects, Alaimo Group Civil Engineers, Elton & Thompson Structural Engineers, BD Engineering MEP Engineers, and Greyhawk Construction Managers

Types of green infrastructure used on site: 600 sq ft green roof, rain garden bioretention basin with native plantings, cistern to collect rainwater for watering lawns



Costs and Benefits:

Actual cost: \$150,000 for the green infrastructure features

Cost of green infrastructure installation vs. anticipated cost of gray: Cost of 100% gray estimated at \$300,000 and above

Competitive advantage (How did your project design beat out the competition?): Responsible planning. Decisions were made to pay keen attention to stormwater management upon the inception of the project's planning and design rather than as an add on.

Financing strategy: The project was publically financed and coordinated with debt reduction so as not to result in higher taxes. The Rutgers grant allowed for the environmentally friendly features to be included without increasing the costs borne by the taxpayers.

Design Details:

What design storm was used to size the green infrastructure practice? 100-year storm

How many cubic feet of runoff will the practice manage per storm? 34,474 cubic feet or 257,883 gallons

Gallons of runoff captured for reuse per storm? Cisterns capture 3,400 gallons

Takeaways:

Benefits to/impacts on the end user and larger community: The rain garden bioretention basin allows for sheet flow stormwater from the adjacent parking lot and from roof leaders off of Town Hall to be purified and filtered on-site prior to reaching groundwater, thereby keeping more stormwater out of drains. The green roof feature not only provides insulation to the Town Hall but captures stormwater and retains it, thus reducing and regulating flow into the rain garden. The cistern captures stormwater which then can be used to irrigate the plantings around Town Hall, thus reducing costs and further reducing stormwater leaving the property.

Challenges: Maintenance of the green infrastructure features requires volunteer effort as GI concepts and use of native plantings, rather than mowed lawn, presented challenges to Township maintenance workers. The township is fortunate to have many passionate, knowledgeable, and environmentally conscious residents, including some who are Master Gardeners. One member of Save The Environment of Moorestown (STEM) who is educated in native plantings and rain gardens took the responsibility of monitoring the plantings and teaching the Public Works department how to maintain the rain garden.

Lessons Learned (could be painful lessons or key things that contributed to success): Successful green infrastructure facilities require ongoing maintenance and care. They also, however, offer opportunities for educating the public about sustainable lawn care and the value of incorporating low-tech stormwater management features in construction projects.

For more information about this case study, please contact:

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This case study is a product of **Mainstreaming Green Infrastructure**, a program of New Jersey Future.

Making green infrastructure the first choice for stormwater management in New Jersey.

Last updated: 08/15/16

