Proprietary SCMs
Rev. 2: 8-12-2021

15A NCAC 02H .1003(6) allows Buncombe County to approve new stormwater technologies on a case-by-case basis if the applicant demonstrates that the project provides equal or better stormwater control and equal or better protection of waters of the State as other approved SCMs.

StormTech Isolator Rows

StormTech Isolator Rows are not an approved SCM in the NCDEQ Stormwater Design Manual; however, the Buncombe County Stormwater Administrator can approve them on a case-by-case basis to meet the 85% reduction in TSS treatment requirement for high density developments based on technical reports that have already been provided to the County by the manufacturer, provided the following required calculations and design criteria are incorporated into the stormwater plan and calculations.

Plan Elements:
1. Manufacturer's details showing isolator row features (e.g. filter fabric type and locations) for chambers used on project.
2. Overall layout view showing the configuration of the StormTech system and the connections between the isolator row, inlet structure, and header manifold(s).
3. Total number and type of chambers.
4. Details for headers, underdrains, section views, profile views, etc.
5. Dimensions/elevations on profile view and plan view that correspond to calculations.
6. Details for inlet and outlet structures with elevations that correspond to calculations, as applicable.
7. Locations and details for inspection ports. Inspection ports are required on all chamber rows, both isolator row and non-isolator rows.
8. Outlet orifice protection must be provided, unless there is not direct piped connection between the inlet and the outlet device (e.g. water must flow through stone to get from inlet to outlet orifice).
9. Bypass mechanism or description in narrative of how water will be conveyed from large storm events if bypass is not provided.
10. Construction bypass or other mechanism for keeping the StormTech system off-line during construction.

Calculation Requirements:

1. Stage/storage calculations or input to chamber wizard features of software package.
2. Calculations showing that the water quality volume will be treated by the isolator row before bypass occurs. If SCS method using the 1" storm is the calculation method used for this, runoff from directly connected built-upon area must be calculated separately from the remainder of the project and added together, per Section B of the NCDEQ Stormwater Design Manual. This also applies when hydrograph software is used to route the 1" storm through the SCM.
3. Demonstration of drawdown of the WQV within 5 days.
4. Calculations showing that the peak influent flow rate for the 1" rainfall event OR 1-year, 24-hour storm can be handled by the isolator row. Capacity of isolator rows using current standard design is 2.5 gpm/sf. *Note: Calculations for the 1-year, 24 hour storm required if flow above the water quality volume must pass through the isolator row to enter detention (e.g. no by-pass provided).*
5. Calculations demonstrating that the system can safely convey (via bypass or otherwise) the 25-year, 24-hour storm.