



**Rhode Island Department of Environmental Management**  
**Office of Water Resources – Stormwater Technology Review Committee**  
**235 Promenade St. Providence, RI 02908 Ph: 401-222-4700**

**Alternative Stormwater Technology Certification**

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**Technology Name:**

StormTech® Isolator® Row PLUS

**Approval Type:**

Pretreatment/Retrofits

**Certification Dates:**

Issued: April 9, 2024

Expires: April 9, 2029

**CERTIFICATION:**

The Rhode Island Stormwater Technology Review Committee which consists of members from the Department of Environmental Management (DEM), Department of Transportation (DOT) and the Coastal Resources Management Council (CRMC) have reviewed the **StormTech® Isolator® Row PLUS** application for certification of its Technology Approval and accepted use for Stormwater Treatment in the State of Rhode Island.

In accordance with Stormwater Rule 250-RICR-150-10-8.9B, **Advanced Drainage Systems (ADS®), Inc.** has petitioned the permitting agencies to certify the **StormTech® Isolator® Row PLUS** as an acceptable structural stormwater control described in Stormwater Rule 250-RICR-150-10-8.31. They have submitted monitoring results and supporting information developed in accordance with the provisions of the Technology Assessment Protocol (TAP) for Innovative and Emerging Technologies as described in Stormwater Rule 250-RICR-150-10 Sections 8.39 and 8.40.

The **StormTech® Isolator® Row PLUS** is granted reciprocity in Rhode Island as a proprietary stormwater treatment technology, given that it has been issued a New Jersey Corporation for Advanced Technology (NJCAT) Technology Verification in July 2020 as a result of the January 2020 “Isolator® Row PLUS StormTech, LLC” laboratory study that took place at the BaySaver Laboratory in Mount Airy, Maryland and was conducted in accordance with the 2013 New Jersey Department of Environmental Protection Laboratory Protocol to Assess Total Suspended Solids (TSS) Removal by a Filtration Manufactured Treatment Device (MTD) with third-party verification provided by Boggs Environmental Consultants. While MTD’s that have received a technology verification from NJCAT also typically gain MTD certification from the New Jersey Department of Environmental Protection, this technology technically fits under the definition of an infiltration basin BMP in the New Jersey Stormwater BMP Manual and is therefore not eligible for NJDEP MTD certification. However, given that the study demonstrated adequate TSS removal in accordance with NJDEP laboratory protocol, RIDEM considers this to be sufficient for reciprocity consideration in this particular instance. Furthermore, the Massachusetts Department of Environmental Protection (DEP) allows the Isolator Row PLUS to be utilized to meet TSS removal requirements. Additionally, the RIDEM has historically allowed the use of this device for the purpose of pre-treatment. The NJCAT Technology Verification recognizes the **StormTech® Isolator® Row PLUS** as a stormwater treatment technology which provides at least 25% removal of total suspended solids when operating at the maximum treatment flow rate for each device specified in the attached **Table 1: StormTech® Isolator® Row PLUS Sizing Table**. The States of Massachusetts and New Jersey are both members of the Technology Acceptance Reciprocity Partnership (TARP). As per Stormwater Rule 250-RICR-150-10-8.39, both TAPE and TARP approved devices are allowed reciprocity consideration in Rhode Island.

The **StormTech® Isolator® Row PLUS** is a pre-treatment or retrofit device that captures TSS from stormwater runoff as described in Stormwater Rule 250-RICR-150-10-8.31. It is a row of plastic arch-shaped open bottom chambers underlain by a woven geotextile filter fabric. The **StormTech® Isolator® Row PLUS** is designed to remove trash and sediment from stormwater. This product was developed by **Advanced Drainage Systems (ADS®), Inc.** The **StormTech® Isolator® Row PLUS** is approved only for off-line use.

The manufacturer has demonstrated that this product meets the minimum water quality standards for pretreatment as described in Stormwater Rule 250-RICR-150-10-8.31. The **StormTech® Isolator® Row PLUS** is approved for at least **25%** removal of total suspended solids (TSS) when designed using flow rates specified in the attached **Table 1: StormTech® Isolator® Row PLUS Sizing Table** which is based on a maximum loading rate of 4.1 gallons per minute per square foot of bottom chamber area. The **StormTech® Isolator® Row PLUS** is NOT recognized for removal of Pathogens, Total Phosphorus or Nitrogen. This device may be used as pretreatment or retrofit device provided that the design, installation, and maintenance are conducted in accordance with the following terms and conditions:

## I. GENERAL CERTIFICATION REQUIREMENTS

1. The system must adhere to the manufacturer's specification for the **StormTech® Isolator® Row PLUS**, which can be found on at: <https://www.adspipe.com/water-management-solutions/detention-infiltration/isolator-row>
2. The system must be installed in accordance with the manufacturer's installation manual for the **StormTech® Isolator® Row PLUS**, which can be found at: [https://assets.adspipe.com/m/292e4d80b2391a8a/original/Isolator-Row-Plus-O-M-Manual.pdf?\\_gl=1\\*1fttaqk\\*\\_ga\\*MjEwNzE2MTU4Mi4xNjk4MDc2Mzgk\\*\\_ga\\_1TPLC9D3R7\\*MTcwNzc1NDU4Mi4xMi4xLjE3MDc3NTQ4OTguNTguMC4w\\*\\_gcl\\_au\\*MTA2MDU0MDI2OC4xNzA2MTkzNjI4](https://assets.adspipe.com/m/292e4d80b2391a8a/original/Isolator-Row-Plus-O-M-Manual.pdf?_gl=1*1fttaqk*_ga*MjEwNzE2MTU4Mi4xNjk4MDc2Mzgk*_ga_1TPLC9D3R7*MTcwNzc1NDU4Mi4xMi4xLjE3MDc3NTQ4OTguNTguMC4w*_gcl_au*MTA2MDU0MDI2OC4xNzA2MTkzNjI4)
3. The **StormTech® Isolator® Row PLUS** is **certified as a pretreatment** device in accordance with Stormwater Rule 250-RICR-150-10-8.31, provided the device treats the flow of the first inch of runoff from the capture area, unless waived by the state permitting agency. The system's design must utilize flow rates listed in the attached **Table 1: StormTech® Isolator® Row PLUS Sizing Table**.
4. The system must be designed to meet the following requirements:
  - a. The device must be attached to an upstream flow-splitter diversion manhole with either a weir or an elevated bypass manifold designed to ensure that the first inch of runoff is routed to the device prior to bypass. The weir or elevated bypass manifold's invert must be located at least 9" above the bottom invert of the **StormTech® Isolator® Row PLUS** chamber elevation.
  - b. If the upstream flow-splitter diversion manhole is designed with a weir, then the manhole must be at least 30" wide. The manhole must be at least 48" wide if its rim is more than 4' above the invert of the device.
  - c. The upstream flow-splitter diversion manhole must also provide a 2' sump.
  - d. Each individual row of **StormTech® Isolator® Row PLUS** chambers must be directly connected to a maintenance access manhole.
  - e. The inlet pipe connecting the diversion manhole to the device must be the maximum allowable diameter per chamber as specified on the vendor's construction details.
  - f. The inlet must be the only pipe connected to the **StormTech® Isolator® Row PLUS**. No outlet pipes shall be directly connected to the pre-treatment chambers.
  - g. Each device must provide an inspection port at the point located furthest from the inlet.
  - h. The maximum distance between maintenance access manholes connected to each individual row of **StormTech® Isolator® Row PLUS** chambers shall not exceed 200' to ensure that the JetVac hose is sufficiently long.

5. This device is **certified as a retrofit device** in accordance with Stormwater Rule 250-RICR-150-10-8.6A. Retrofits are allowed flexibility with regards to the eleven minimum standards described in Sections 8.6 through 8.17 of Stormwater Rule 250-RICR-150-10, but in general they are considered effective if they capture at least 50% of the catchment and meet the target water quality treatment of at least the first 0.5 inches of the water quality volume.
6. The approved devices shall be located such that they are accessible for maintenance and/or emergency removal of oil or chemical spills.
7. The device cannot be used in series with another Hydrodynamic separator to achieve enhanced removal rates for TSS.

## II. MAINTENANCE REQUIREMENTS

1. Standard permitting conditions for inclusion of this technology will, at a minimum include the following:
  - a. Each individual owner must ensure that any and all of their proprietary stormwater treatment devices are maintained in accordance with the manufacturer's specifications, which are provided in the **StormTech® Isolator® Row PLUS** Operation & Maintenance Manual: [https://assets.adspipe.com/m/292e4d80b2391a8a/original/Isolator-Row-Plus-O-M-Manual.pdf?\\_gl=1\\*1iuar2x\\*\\_ga\\*MjEwNzE2MTU4Mi4xNjk4MDc2Mzgx\\*\\_ga\\_1TPLC9D3R7\\*MTY5OTM3NzYxNS43LjEuMTY5OTM3NzczNC4yMi4wLjA.\\*\\_gcl\\_au\\*MjQ3MDc3NzMxLjE2OTgwNzYzODE](https://assets.adspipe.com/m/292e4d80b2391a8a/original/Isolator-Row-Plus-O-M-Manual.pdf?_gl=1*1iuar2x*_ga*MjEwNzE2MTU4Mi4xNjk4MDc2Mzgx*_ga_1TPLC9D3R7*MTY5OTM3NzYxNS43LjEuMTY5OTM3NzczNC4yMi4wLjA.*_gcl_au*MjQ3MDc3NzMxLjE2OTgwNzYzODE).
  - b. Each individual owner must ensure that any and all of their proprietary stormwater pre-treatment devices are maintained in accordance with the requirements stated in Stormwater Rule 250-RICR-150-10-8.31-C, which requires the device to be inspected a minimum of 2 times per year. Additionally, the device must be cleaned out with a JetVac when either pollutant removal capacity is reduced by 50% or more, or when average sediment depth is 3" or greater.
  - c. All material removed from the unit must be properly disposed of and is the responsibility of the owner.
  - d. The applicant must include a copy of the **StormTech® Isolator® Row PLUS** Inspection and Maintenance Guide in their project specific long-term operation and maintenance plan.
2. The applicant must provide evidence of a maintenance contract which extends for a minimum of two years. The contracted maintenance provider must receive training by **Advanced Drainage Systems (ADS®), Inc.** on how to properly maintain **StormTech® Isolator® Row PLUS** devices. This requirement excludes maintenance providers recognized by the RIDEM to be qualified in maintenance of **StormTech® Isolator® Row PLUS** devices.

## III. REPORTING REQUIREMENTS

1. Upon request from the owner of any **StormTech® Isolator® Row PLUS** system installed in the State of Rhode Island, the vendor shall provide the owner with a recommended maintenance schedule after the first year of the device's operation. If a recommended maintenance schedule is requested by the owner after the first year of the device's operation, then the owner is responsible for notifying the vendor of any additional pollutant loading sites where contributing drainage areas may be subject to further development (i.e., strip malls).

2. The Vendor shall immediately notify the RIDEM Office of Water Resources if and when any changes are made to the model name or number of any **StormTech® Isolator® Row PLUS** device for all models applicable to this certification.
3. The Vendor shall immediately notify the RIDEM Office of Water Resources if and when any revisions are made to the design, installation operation and maintenance manuals for all models applicable to this certification. Revisions deemed by the RIDEM to be substantial, may require re-application to the Alternative Stormwater Technology Program.
4. The Vendor shall notify the RIDEM at least thirty (30) days following any proposed transfer of ownership of the Component technology. Notification shall include the name and address of the new owner and a written agreement between the existing and new owner specifying a date for transfer of ownership, responsibility, and liability for the Component. All provisions of this Certification shall be applicable to any new owners.

#### IV. RIGHTS OF THE RIDEM AND CRMC

1. The RIDEM may suspend, modify, or revoke this approval for cause, including but not limited to non-compliance with any of the conditions or provisions of this approval, misrepresentation, or failure to fully disclose all relevant data, or receipt of new information indicating that the use of the **StormTech® Isolator® Row PLUS** system is contrary to the public interest, public health, or the environment.
2. This approval does not represent an endorsement of the **StormTech® Isolator® Row PLUS** system by the RIDEM, RIDOT or CRMC. This letter of approval may be reproduced only in its entirety.
3. The **StormTech® Isolator® Row PLUS** General Specification and **StormTech® Isolator® Row PLUS** Operation and Maintenance Guide referenced herein are approved upon the date of approval of this Certification.
4. The RIDEM reserves the right to suspend or revoke this Certification if updated design, installation, and O&M manuals are not provided to the RIDEM within thirty (30) days of RIDEM request or one hundred and eighty (180) days prior to the expiration date of this Certification. All revisions must be reviewed and approved by the RIDEM prior to re-certification.

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Eric A. Beck, P.E.  
Administrator of Groundwater and Freshwater Wetlands Protection

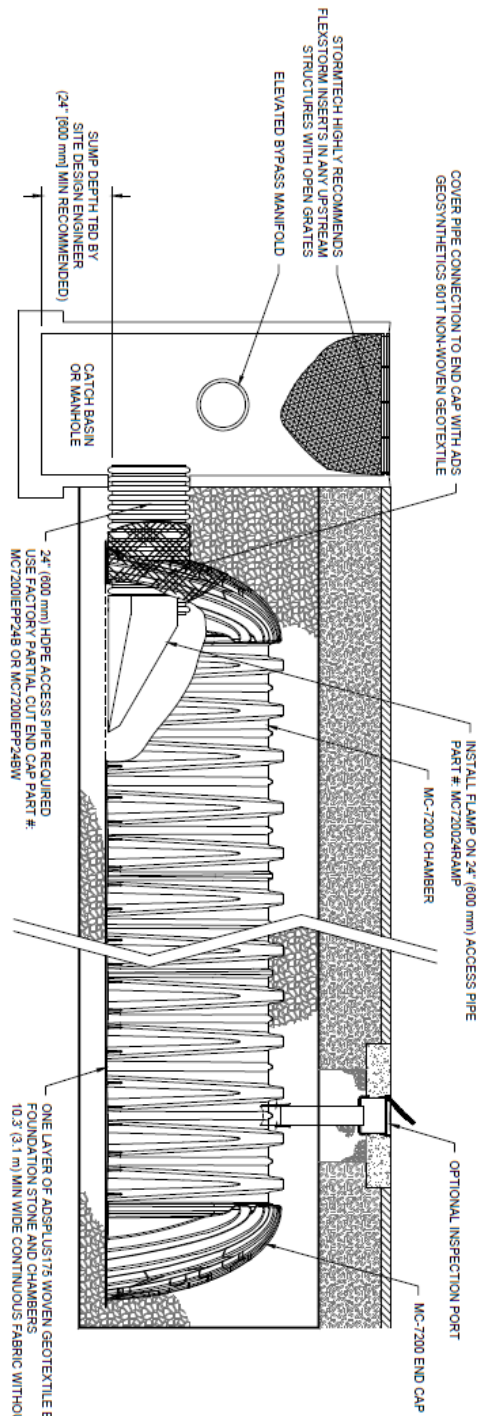
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**SEE ATTACHMENTS ON NEXT PAGE:**

**Table 1: StormTech® Isolator® Row PLUS Sizing Table**

<b>Model #</b>	<b>Chamber Dimensions (H x W x L)</b>	<b>Chamber Bottom Surface Area (ft<sup>2</sup>)</b>	<b>Maximum Treatment Flow Rate per Chamber (cfs)</b>	<b>Approximate Maximum Impervious Treatment Area (acres)</b>
SC-160LP	12" x 25" x 90.7"	11.45	0.11	0.100
SC-310	16" x 34" x 90.7"	17.7	0.16	0.150
SC-740	30" x 51" x 90.7"	27.8	0.25	0.240
SC-800	33" x 51" x 85.4"	27.3	0.25	0.231
DC-780	30" x 51" x 90.7"	27.8	0.25	0.240
MC-3500	45" x 77" x 90"	42.9	0.40	0.369
MC-4500	60" x 100" x 52"	30.1	0.28	0.257
MC-7200	60" x 120" x 83"	50.0	0.46	0.410

**TYPICAL STANDARD DETAIL FOR StormTech® Isolator® Row Plus MC-7200 ON NEXT PAGE**



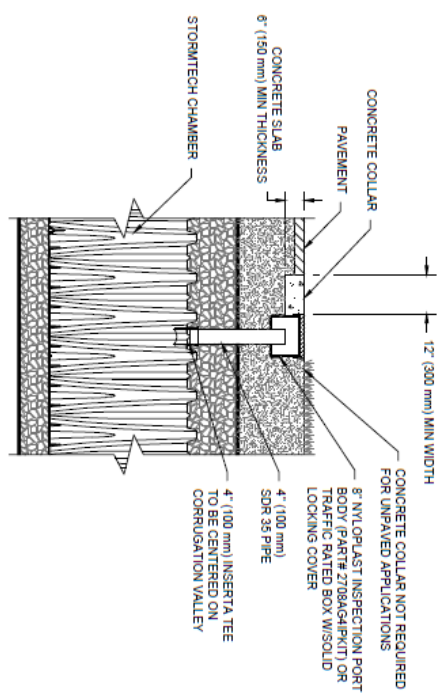
**MC-7200 ISOLATOR ROW PLUS DETAIL**  
NTS

### INSPECTION & MAINTENANCE

- STEP 1)** INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECT FOR SEDIMENT
  - A.1. REMOVE SEDIMENT IF ON TOP OF INSOLATOR ROW PLUS
  - A.2. REMOVE AND CLEAN FLEXISTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
  - B. ALL ISOLATOR ROW PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2)** CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FRIED OILY/VEGETATIVE NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
  - B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
  - C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3)** REPLACE ALL COVERS, GRATES, FILTERS, AND UDS, RECORD OBSERVATIONS AND ACTIONS.
- STEP 4)** INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

### NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION, ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACUUMING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.



**4" PVC INSPECTION PORT DETAIL**  
[MC SERIES CHAMBER]  
NTS