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RICHARD T. MAUGHAN
DAVIS COUNTY, UTAH RECORDER
11/10/2024 4:23 PM
FEE 0.00 Pgs: 38
DEP MEC REC'D FOR LAYTON
CITY CORP

When recorded, mail to:
Layton City Recorder
437 N. Wasatch Dr.
Layton, Utah 84041

11-061-0260 knA 15-144 -0001, 0002, 0003

Affects Parcel No(s): Lots 1, 2 and 3 of Layton Station Phase 1 Subdivision

LAYTON CITY
LONG-TERM STORM WATER
MAINTENANCE AGREEMENT

This Long Term Storm Water Facilities Maintenance Agreement ("Agreement") is made and entered into this 3RD day of NOVEMBER, 2023, by and between Layton City, a Utah municipal corporation ("City"), and WINKEL ROCK, LLC, a LIMITED LIABILITY COMPANY ("Owner").

RECITALS

WHEREAS, the City is authorized and required to regulate and control the disposition of storm and surface waters within the City, as set forth in the Layton City Storm Water Ordinance, as amended ("Ordinance"), adopted pursuant to the Utah Water Quality Act, as set forth in *Utah Code Ann. §§ 19-5-101, et seq.*, as amended ("Act"); and

WHEREAS, the Owner hereby represents and acknowledges that it is the owner in fee simple of certain real property more particularly described in Exhibit "A," attached hereto and incorporated herein by this reference ("Property"); and

WHEREAS, the Owner desires to build or develop the Property and/or to conduct certain regulated construction activities on the Property which will alter existing storm and surface water conditions on the Property and/or adjacent lands; and

WHEREAS, in order to accommodate and regulate these anticipated changes in existing storm and surface water flow conditions, the Owner desires to build and maintain at Owner's expense a storm and surface water management facility or improvements ("Storm Water Facilities"); and

WHEREAS, the Storm Water Facilities are more particularly described and shown in the final site plan or subdivision approved for the Property and related engineering drawings, and any amendments thereto, which plans and drawings are on file with the City and are hereby incorporated herein by this reference ("Development Plan"); and

WHEREAS, summary description of all Storm Water Facilities, details and all appurtenance draining to and affecting the Storm Water Facilities and establishing the standard operation and routine maintenance procedures for the Storm Water Facilities, and control measures installed on the Property, (Long Term Storm Water Management Plan") more particularly shown in Exhibit "B" on file with the City Recorder and

WHEREAS, as a condition of Development Plan approval, and as required as part of the City's Small MS4 UPDES General Permit from the State of Utah, Owner is required to enter into this Agreement establishing a means of documenting the execution of the Long Term Storm Water Management Plan and

NOW, THEREFORE, in consideration of the benefits received and to be received by the Owner, its successors and assigns, as a result of the City's approval of the Development Plan, and the mutual covenants contained herein, the parties agree as follows:

1. Construction of Storm Water Facilities. The Owner shall, at its sole cost and expense, construct the Storm Water Facilities in strict accordance with the plans and specifications identified in the Development Plan, and any amendments thereto which have been approved by the City.
2. Maintenance of Storm Water Facilities. The Owner shall, at its sole cost and expense, adequately maintain the Storm Water Facilities. Owner's maintenance obligations shall include all pipes and channel built to convey storm water, as well as all structures, improvements, and vegetation provided to control the quantity and quality of the storm water. Adequate maintenance, for purposes of this Agreement, is defined as good working condition so that the Storm Water Facilities are performing their design functions. The Owner shall, at its sole cost and expense, perform all work necessary to keep the Storm Water Facilities in good working condition. In the event that a maintenance schedule is set forth in the Long Term Storm Water Management Plan, such maintenance schedule shall be followed.
3. Annual Inspection of Storm Water Facilities. The Owner shall, at its sole cost and expense, inspect the Storm Water Facilities and submit an inspection report and certification to the City annually. The purpose of the inspection and certification is to assure safe and proper functioning of the Storm Water Facilities. The annual inspection shall cover all aspects of the Storm Water Facilities, including, but not limited to, the parking lots, the structural improvements, berms, channels, outlet structure, pond areas, access roads, vegetation, landscaping, etc. Deficiencies shall be noted in the inspection report. The report shall also contain a certification as to whether adequate maintenance has been performed and whether the structural controls are operating as designed to protect water quality. The annual inspection report and certification shall be due by June 30th of each year and shall be on forms acceptable to the City.
4. City Oversight Inspection Authority. The Owner hereby grants permission to the City, its authorized agents and employees, to enter upon the Property and to inspect the Storm Water Facilities whenever deemed necessary by the City. Such inspections shall be conducted in a reasonable manner and at reasonable times, as determined appropriate by the City. The purpose of the inspection shall be to determine and ensure that the Storm Water Facilities are being adequately maintained, are continuing to perform in an adequate manner, and are in compliance with the Act, the Ordinance, and the Storm Water Facilities Maintenance Plan.
5. Notice of Deficiencies. If the City finds that the Storm Water Facilities contain any defects or

are not being maintained adequately, the City shall send Owner written notice of the defects or deficiencies and provide Owner with a reasonable time to cure such defects or deficiencies. Such notice shall be hand-delivered to the Owner or sent certified mail to the Owner at the Property address.

6. Owner to Make Repairs. The Owner shall, at its sole cost and expense, make such repairs, changes or modifications to the Storm Water Facilities as may be determined as reasonably necessary by the City within the required cure period to ensure that the Storm Water Facilities are adequately maintained and continue to operate as designed and approved.
7. City's Corrective Action Authority. In the event the Owner fails to adequately maintain the Storm Water Facilities in good working condition acceptable to the City, after due notice of deficiencies as provided in Section 5, the City may enter upon the Property and take whatever steps necessary to correct deficiencies and to charge the costs of such repairs to the Owner. It is expressly understood and agreed that the City is under no obligation to maintain or repair the Storm Water Facilities, and in no event shall this Agreement be construed to impose any such obligation on the City. The actions described in this Section are in addition to and not in lieu of any and all legal remedies available to the City as provided by law for Owner's failure to remedy deficiencies or any other failure to perform under the terms and conditions of this Agreement.
8. Reimbursement of Costs. In the event the City, pursuant to this Agreement, performs work of any nature, or expends any funds in performance of said work for labor, use of equipment, supplies, materials, and the like, the Owner shall reimburse the City upon demand, within thirty (30) days of receipt thereof for all actual costs incurred by the City. After said thirty (30) days, such amount shall be deemed delinquent and shall be subject to interest at the rate of ten percent (10%) per annum. Owner shall also be liable for any collection costs, including attorneys' fees and court costs, incurred by the City in collection of delinquent payments.
9. Successors and Assigns. This Agreement shall be recorded in the Davis County Recorder's Office and the covenants and agreements contained herein shall run with the land and whenever the Property shall be held, sold, conveyed or otherwise transferred, it shall be subject to the covenants, stipulations, agreements and provisions of this Agreement which shall apply to, bind and be obligatory upon the Owner hereto, its successors and assigns, and shall bind all present and subsequent owners of the Property described herein.
10. Severability Clause. The provisions of this Agreement shall be severable and if any phrase, clause, sentence or provision is declared unconstitutional, or the applicability thereof to the Owner, its successors and assigns, is held invalid, the remainder of this Covenant shall not be affected thereby.
11. Utah Law and Venue. This Agreement shall be interpreted under the laws of the State of Utah. Any and all suits for any claims or for any and every breach or dispute arising out of this Agreement shall be maintained in the appropriate court of competent jurisdiction in Davis County, Utah.
12. Indemnification. This Agreement imposes no liability of any kind whatsoever on the City, and the Owner agrees to hold the City harmless from any liability in the event the Storm Water Facilities fail to operate properly. The Owner shall indemnify and hold the City harmless for any

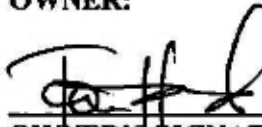
and all damages, accidents, casualties, occurrences, or claims which might arise or be asserted against the City from the construction, presence, existence, or maintenance of the Storm Water Facilities.

13. Amendments. This Agreement shall not be modified except by written instrument executed by the City and the Owner of the Property at the time of modification, and no modification shall be effective until recorded in the Davis County Recorder's Office.
14. Subordination Requirement. If there is a lien, trust deed or other property interest recorded against the Property, the trustee, lien holder, etc., shall be required to execute a subordination agreement or other acceptable recorded document agreeing to subordinate their interest to the Agreement.
15. Exhibit B. The Long Term Storm Water Management Plan (LTSWMP) must adapt to change in good judgement when site conditions and operations change and when existing programs are ineffective. Exhibit B will not be filed with the agreement at County Recorder but is included by reference and kept on file with the City Recorder. Revision applications must be filed with the City ENGINEERING and amended into the LTSWMP on file with the Layton City Recorder.

[Signature and Notary pages to follow]

IN WITNESS WHEREOF, the OWNER has executed this Storm Water Facilities Maintenance Agreement
this 30 day of NOVEMBER 2023

OWNER:



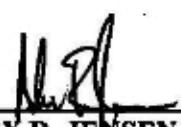
OWNER'S SIGNATURE

(Signature must be notarized on following pages)

TOM HENDROP, MGK

OWNER'S NAME & TITLE

LAYTON CITY ACCEPTANCE:



ALEX R. JENSEN, City Manager


SWT

ATTEST:

Kimberly S Read

KIMBERLY S READ, City Recorder

Approved as to Form:

By: 

Date: 11/6/2023

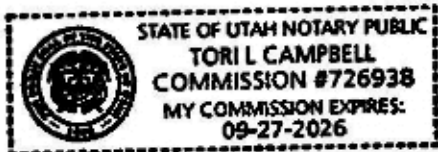
CITY ACKNOWLEDGMENT

STATE OF UTAH

:ss.

COUNTY OF DAVIS

On this 4th day of December, 2023, personally appeared before me Alex R. Jensen, who being duly sworn, did say that he/she is the City Manager of LAYTON CITY, a municipal corporation of the State of Utah, and that the foregoing Storm Water Facilities Maintenance Agreement was signed in his/her capacity as land use authority on behalf of the City for approval of Storm Water Facilities Maintenance Agreements.



Tori L Campbell
Notary Public

OWNER NOTARY

(Complete only if signing as an individual)

STATE OF _____

:ss.

COUNTY OF _____

On this _____ day of _____, 20____, personally appeared before me _____, who being duly sworn, did say that he/she is the legal property owner of record of the property subject to this Storm Water Facilities Maintenance Agreement and that he/she has executed this Agreement with full authority to do so.

Notary Public

(See Following Page for Corporation/Partnership and Limited Liability Company Notaries)

(Complete only if signing on behalf of a Corporation/Partnership)

STATE OF _____
:ss.
COUNTY OF _____

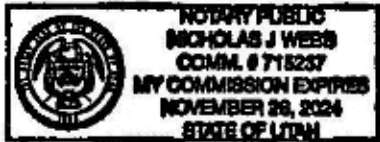
On this _____ day of _____, 20____, personally appeared before me _____ who being by me duly sworn did say that he/she is the _____ of _____ a _____ corporation/partnership, and that _____ is the legal property owner of record of the property subject to this Storm Water Facilities Maintenance Agreement and that the foregoing Storm Water Facilities Maintenance Agreement was signed in behalf of said corporation/partnership by authority of its Board of Directors/by-laws, and he/she acknowledged to me that said corporation/partnership executed the same.

NOTARY PUBLIC

(Complete only if signing on behalf of a Limited Liability Company)

STATE OF Utah
:ss.
COUNTY OF SALT LAKE

On this 3 day of NOVEMBER, 2023, personally appeared before me TOM HENRIOD who being by me duly sworn did say that he/she is the MANAGER of WINKEL BOUG LLC, a limited liability company, and that the foregoing Storm Water Facilities Maintenance Agreement was signed in behalf of said company by authority, and he/she acknowledged to me that said company executed the same.



Nicholas J Webb
NOTARY PUBLIC

****IF ADDITIONAL SIGNERS AND/OR NOTORIAL WORDING ARE NECESSARY, PLEASE NOTATE ANY ADDITIONS ON THIS NOTARY PAGE AND ATTACH A STATE APPROVED NOTARIAL CERTIFICATE, WHICH IDENTIFIES THE DOCUMENT THE ATTACHED NOTARIAL CERTIFICATE RELATES TO, AS WELL AS, THE NUMBER OF PAGES IN THE DOCUMENT****

EXHIBIT A

Lots 1, 2 and 3 of Layton Station Subdivision Phase 1

A PARCEL OF LAND LYING WITHIN THE NORTHWEST QUARTER OF SECTION 28, TOWNSHIP 4 NORTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE CENTERLINE OF KAYS CREEK, SAID POINT ALSO BEING ON THE WESTERLY RIGHT OF WAY AND NON ACCESS LINE OF INTERSTATE 15, SAID POINT ALSO BEING LOCATED NORTH 89°28'04" WEST ALONG SECTION LINE 1270.98 FEET (NORTH 89°27'20" WEST 1271.00 FEET BY DEED) AND SOUTH 84.50 FEET AND NORTH 77°14'00" WEST 108.64 FEET (NORTH 77°13'31" WEST BY DEED) FROM A FOUND BRASS CAP MONUMENT MARKING THE NORTH QUARTER CORNER OF SAID SECTION 28; RUNNING THENCE ALONG SAID RIGHT OF WAY LINE THE FOLLOWING THREE (3) COURSES: 1) SOUTH 77°14'00" EAST 146.12 FEET, 2) SOUTH 42°21'05" EAST 210.65 FEET TO A POINT ON THE ARC OF A 1759.90 FOOT RADIUS CURVE TO THE RIGHT, 3) THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 6°53'35" A DISTANCE OF 211.73 FEET (CHORD BEARS SOUTH 40°41'49" EAST 211.60 FEET); THENCE SOUTH 47°38'55" WEST 386.32 FEET; THENCE SOUTH 64°35'28" WEST 81.55 FEET; THENCE SOUTH 25°24'32" EAST 205.85 FEET; THENCE SOUTH 1°35'03" EAST 46.21 FEET TO THE NORTHERLY LINE OF THE UTAH DEPARTMENT OF TRANSPORTATION PARCEL, AS CONVEYED BY WARRANTY DEED RECORDED MARCH 13, 2014 AS ENTRY NO. 2794125 IN BOOK 5974 AT PAGE 644 IN THE OFFICE OF THE DAVIS COUNTY RECORDER; THENCE SOUTH 88°25'02" WEST 146.85 FEET ALONG SAID NORTHERLY LINE TO A POINT ON THE EASTERLY RIGHT OF WAY LINE OF MAIN STREET; THENCE ALONG SAID RIGHT OF WAY LINE NORTH 25°24'32" WEST 515.66 FEET TO THE CENTER LINE OF SAID KAY'S CREEK; THENCE ALONG SAID CREEK THE FOLLOWING FOUR (4) COURSES; 1) NORTH 62°43'40" EAST 98.30 FEET TO A POINT ON A 70.0 FOOT TANGENT RADIUS CURVE TO THE LEFT, 2) NORTHEASTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 47°32'16" A DISTANCE OF 58.08 FEET (CHORD BEARS NORTH 38°57'32" EAST 56.43 FEET), 3) NORTH 15°11'24" EAST 159.73 FEET, 4) NORTH 16°27'33" EAST 178.28 FEET TO THE POINT OF BEGINNING.

PARCEL CONTAINS 272,658 SQUARE FEET OR 6.259 ACRES (3 LOTS)

EXHIBIT B

Long-Term Stormwater Management Plan

for:

Layton Station Phase 1 Subdivision
105 South, 135 South and 155 South Main Street
Layton, UT 84041

Owner:
Winkel Rock LLC
4655 South 2300 East, Suite 205
Holladay, UT 84117

Site Manager:
Rockworth Companies
4655 South 2300 East, Suite 205
Holladay, UT 84117
Phone Number: (801) 501-0727
Email: nfotheringham@rockworthco.com

PURPOSE AND RESPONSIBILITY

As required by the Clean Water Act and resultant local regulations, including Layton City Municipal Separate Storm Sewer Systems (MS4) Permit, those who develop land are required to build and maintain systems to minimize litter and contaminants in stormwater runoff that pollute waters of the State.

This Long-Term Stormwater Management Plan (LTSWMP) describes the systems, operations and the minimum standard operating procedures (SOPs) necessary to manage pollutants originating from or generated on this property. Any activities or site operations at this property that contaminate water entering the City's stormwater system, groundwater and generate loose litter must be prohibited.

Kays Creek is impaired. The LTSWMP is aimed at addressing these impairments in addition to all other pollutants that can be generated by this property.

CONTENTS

- SECTION 1: SITE DESCRIPTION, USE AND IMPACT
- SECTION 2: TRAINING
- SECTION 3: RECORDKEEPING
- SECTION 4 APPENDICES

SECTION 1: SITE DESCRIPTION, USE AND IMPACT

Our site infrastructure is limited at controlling and containing pollutants. If our property and operations are managed improperly we will contaminate our water resources. This LTSWMP includes standard operations procedures (SOP)s intended to compensate for the limitations of our site infrastructure and direct our maintenance operations to responsibly manage our grounds. SOPs are filed in appendix B.

Parking, Sidewalk and flatwork

Any sediment, leaves, debris, spilt fluids or other waste that collects on parking lots and sidewalks will be carried by runoff to our storm drain inlets. This waste material will settle in storm drain system increasing maintenance cost and solid and dissolved waste in our runoff can pass through our system ultimately polluting Kays Creek.

Maintenance involves regular sweeping, but it can also involve pavement washing to remove stains, slick spots and improve appearance when necessary. Use Pavement Maintenance and the Pavement Washing SOPs to manage pollutants that collect on pavements.

Landscaping

Landscape operations can result in grass clippings, sticks, branches, dirt, mulch, fertilizers, pesticides and other pollutants to fall or be left on paved areas. This waste material will settle in storm drain system increasing maintenance cost and solid and dissolved waste in runoff can pass through our storm drain system ultimately polluting the Kays Creek. A primary pollutant impairing Kays Creek is organic material, so it is vital that paved areas with direct connection to the City storm drain systems remain clean of landscape debris.

Use Landscape Maintenance SOP to prevent this potential pollution source from affecting Kays Creek.

Flood and Water Quality Control System

Our system includes underground detention storage and oil/sediment/trash traps. Infiltrating some of our runoff helps keep streams and rivers clean but if we are not careful can contaminate groundwater. Anything we put or allow to be left on our pavements will eventually be carried to our oil/sediment/trash traps and underground infiltration system filling it with sediment and debris increasing maintenance cost. Very intense storm events can scour debris and silt from our system and spill to Kays Creek. It is important our flood control volume and water quality system is adequately maintained to function properly.

Waste Management

Dumpsters and trash receptacles with lids are intended to prevent precipitation exposure minimizing liquids that can leak to pavements and from haul trucks. Lids will also prevent the light weight trash carried off by wind. Good waste management systems, if managed improperly, can become the source of the very pollution that they were intended

to control. Use Waste Management SOP to control and manage the solid waste we generate.

Utility System

Roof top utility system is exposed to our roof drains which drain to storm drain system. This heating and air conditioner unit contains oils and other chemicals that can harm Kays Creek if allowed to drain off project site. Liquids and other waste generated by maintenance of this system can be appropriately managed by Spill Containment and Cleanup SOP.

Snow and Ice Removal Management

Salt is a necessary pollutant and is vital to ensuring a safe parking and pedestrian walkways. However, the snow removal operations if improperly managed will increase our salt impact to our own vegetation and local water resources. Use Snow and Ice Removal SOP to minimize our salt impact.

SECTION 2: TRAINING

Ensure that all employees and maintenance contractors know and understand the SOPs specifically written to manage and maintain the property. Maintenance contractors must use the stronger of their Company and the LTSWMP SOPs. File all training records in Appendix C.

SECTION 3: RECORDKEEPING

Maintain records of operation and maintenance activities in accordance with SOPs. Mail a copy of the record to Layton City Stormwater Division annually.

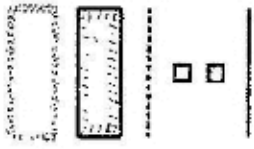
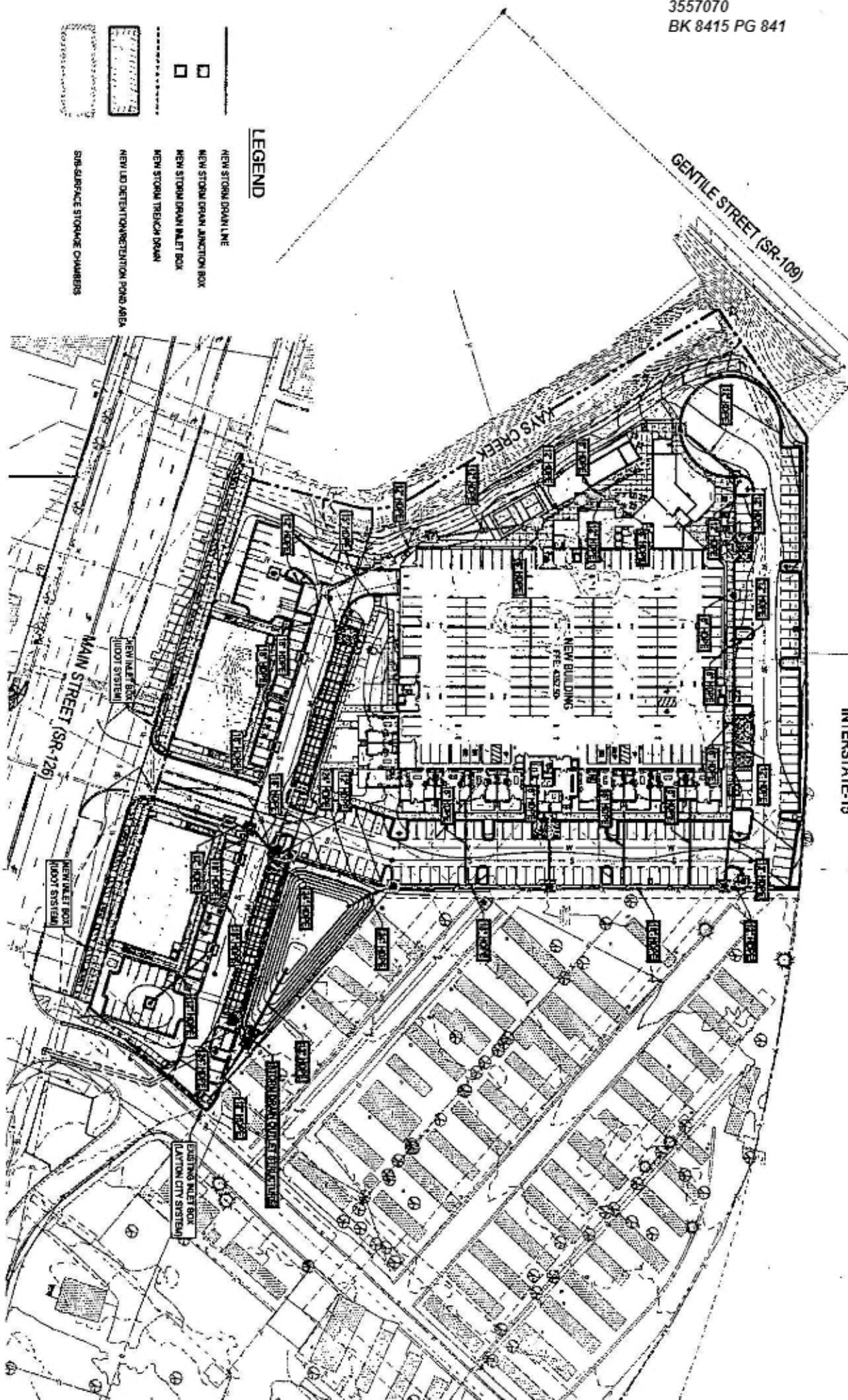
SECTION 4: APPENDICES

- Appendix A- Site Drawings and Details
- Appendix B- SOPs
- Appendix C- Recordkeeping Documents

APPENDIX A – SITE DRAWINGS AND DETAILS

LAYTON MIXED-USE STORM DRAINAGE EXHIBIT

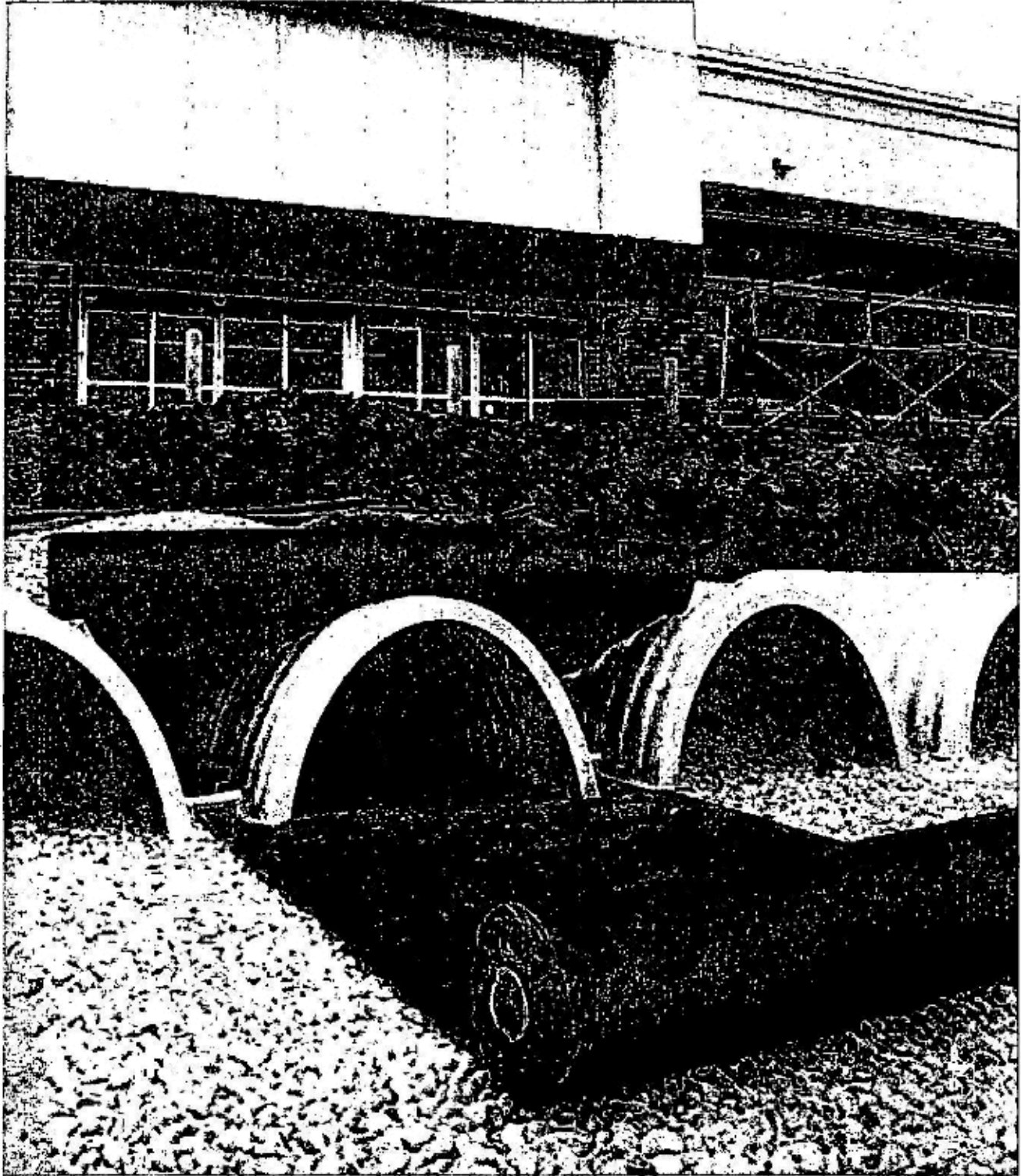
INTERSTATE-15



LEGEND

- NEW STORM DRAIN LINE
- NEW STORM DRAIN JUNCTION BOX
- NEW STORM DRAIN MANHOLE BOX
- NEW STORM TRENCH DRAIN
- NEW LID DIRECTION/INVESTIGATION POND AREA
- SUB-SURFACE STORAGE CHAMBERS

**Save Valuable Land and
Protect Water Resources**

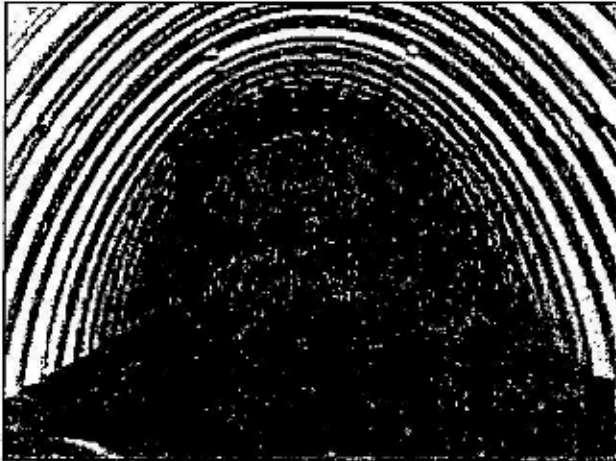


Isolator[®] Row O&M Manual
StormTech[®] Chamber System for Stormwater Management

1.0 The Isolator[®] Row

1.1 INTRODUCTION

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row is a patented technique to inexpensively enhance Total Suspended Solids (TSS) removal and provide easy access for inspection and maintenance.



Looking down the Isolator Row from the manhole opening, woven geotextile is shown between the chamber and stone base.

1.2 THE ISOLATOR ROW

The Isolator Row is a row of StormTech chambers, either SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-4500 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as storm water rises in the Isolator-Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC-310-3 and SC-740 models) allow storm water to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

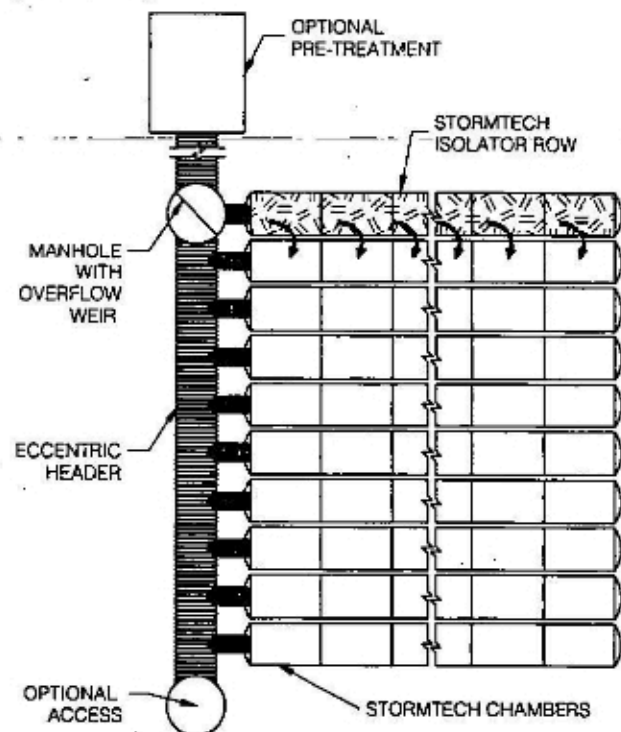
Two different fabrics are used for the Isolator Row. A woven geotextile fabric is placed between the stone and the Isolator Row chambers. The tough geotextile provides a media for storm water filtration and provides a durable surface for maintenance operations. It is also designed to prevent scour of the underlying stone and remain intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the perforations in the sidewall of the chamber. The non-woven fabric is not required over the DC-780, MC-3500 or MC-4500 models as these chambers do not have perforated side walls.

The Isolator Row is typically designed to capture the "first flush" and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but typically includes a high flow weir such that storm water flowrates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other chambers.

The Isolator Row may also be part of a treatment train. By treating storm water prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured. Pre-treatment best management practices can be as simple as deep sump catch basins, oil-water separators or can be innovative storm water treatment devices. The design of the treatment train and selection of pretreatment devices by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, the Isolator Row is recommended by StormTech as an effective means to minimize maintenance requirements and maintenance costs.

Note: See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row.

StormTech Isolator Row with Overflow Spillway (not to scale)



2.0 Isolator Row Inspection/Maintenance



2.1 INSPECTION

The frequency of Inspection and Maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

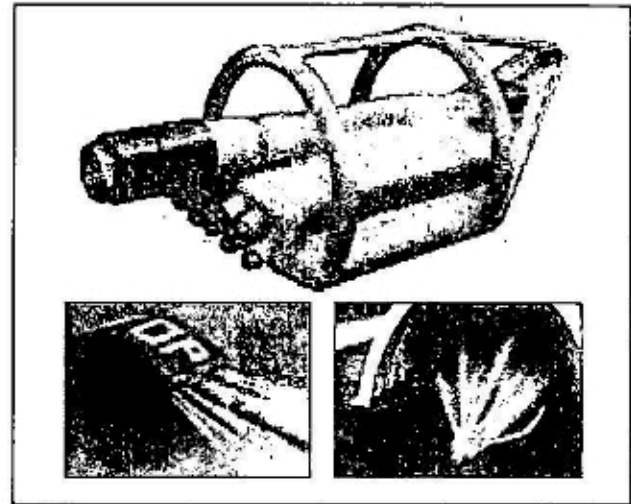
At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

The Isolator Row incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row, clean-out should be performed.

2.2 MAINTENANCE

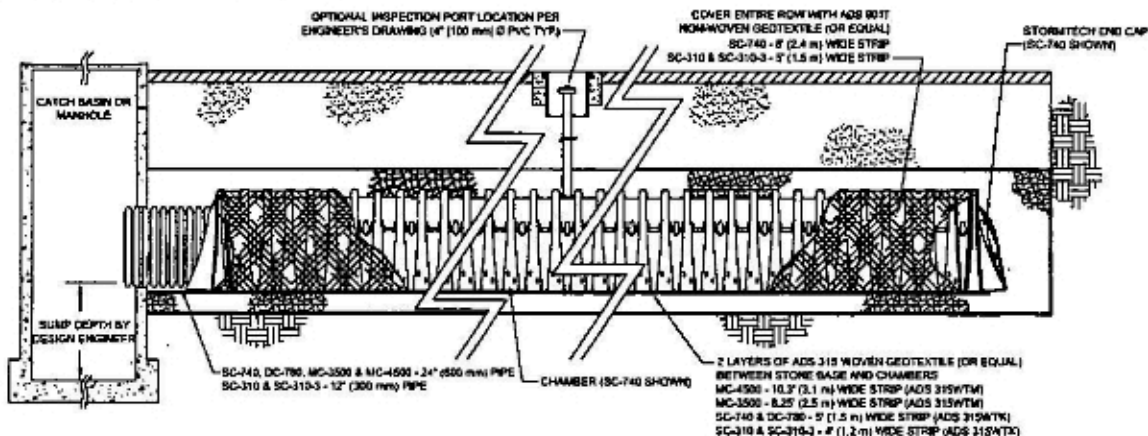
The Isolator Row was designed to reduce the cost of periodic maintenance. By "isolating" sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.



Examples of culvert cleaning nozzles appropriate for Isolator Row maintenance. (These are not StormTech products.)

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45° are best. Most JetVac reels have 400 feet of hose allowing maintenance of an Isolator Row up to 50 chambers long. **The JetVac process shall only be performed on StormTech Isolator Rows that have AASHTO class 1 woven geotextile (as specified by StormTech) over their angular base stone.**

StormTech Isolator Row (not to scale)



NOTE: NON-WOVEN FABRIC IS ONLY REQUIRED OVER THE INLET PIPE CONNECTION INTO THE END CAP FOR DC-780, MC-3500 AND MC-4500 CHAMBER MODELS AND IS NOT REQUIRED OVER THE ENTIRE ISOLATOR ROW.

3.0 Isolator Row Step By Step Maintenance Procedures

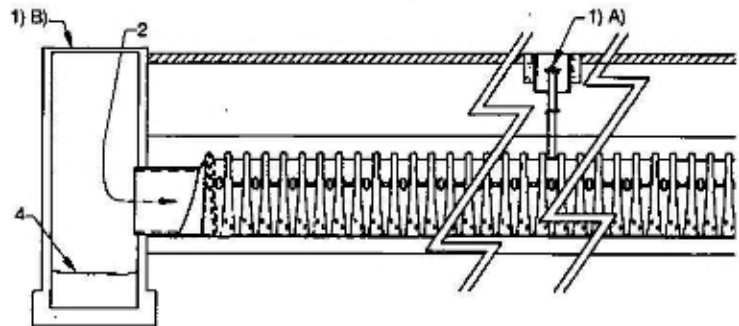
Step 1) Inspect Isolator Row for sediment

- A) Inspection ports (if present)
- Remove lid from floor box frame
 - Remove cap from inspection riser
 - Using a flashlight and stadia rod, measure depth of sediment and record results on maintenance log.
 - If sediment is at, or above, 3 inch depth proceed to Step 2. If not proceed to step 3.

B) All Isolator Rows

- Remove cover from manhole at upstream end of Isolator Row
- Using a flashlight, inspect down Isolator Row through outlet pipe
 - Mirrors on poles or cameras may be used to avoid a confined space entry
 - Follow OSHA regulations for confined space entry if entering manhole
- If sediment is at or above the lower row of sidewall holes (approximately 3 inches) proceed to Step 2. If not proceed to Step 3.

StormTech Isolator Row (not to scale)



Step 2) Clean out Isolator Row using the JetVac process

- A fixed culvert cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
- Apply multiple passes of JetVac until backflush water is clean
- Vacuum manhole sump as required

Step 3) Replace all caps, lids and covers, record observations and actions

Step 4) Inspect & clean catch basins and manholes upstream of the StormTech system

Sample Maintenance Log

Date	Stadia Rod Readings		Sediment Depth (1) - (2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/01	6.3 ft.	none		New Installation. Fixed point is CI frame at grade	djm
9/24/01		6.2	0.1 ft.	Some grit felt	em
6/20/03		5.8	0.5 ft.	Mucky feel, debris visible in manhole and in Isolator row. maintenance due	rv
7/7/03	6.3 ft.		0	System jetted and vacuumed	djm



70 Inwood Road, Suite 3 | Rocky Hill | Connecticut | 06067
860.529.8188 | 888.892.2694 | fax 866.328.8401 | www.stormtech.com

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APPENDIX B – SOPs

Pavement Sweeping

General:

These SOPs are not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in these SOPs.

1. Purpose:

- a) One of the primary contaminates in Kays Creek is organic material.
- b) Any sediment, leaves, debris, spilt fluids or other waste that collects on our parking areas and sidewalks will fill in our landscaping swales, oil/sediment/trash traps and our underground infiltration system increasing our maintenance cost.

2. Regular Procedure:

- a) Remain aware of minor sediment/debris and hand sweep or remove material by other means as needed. Significant deposits will likely collect in autumn with leaf fall and early spring after winter thaw. Usually sweeping machinery is the best tool for this application.
- b) Regularly manage outside activities that spread fugitive debris on our pavements. This involves outside functions including but not limited to: Yard sales, yard storage, fund raisers, etc.
- c) Do not allow car wash fund raiser or other related activities. Detergents will damage water resources and washed pollutants will fill our storm drain system and drain into the ground which we are responsible.

4. Disposal Procedure:

- a) Dispose of hand collected material in dumpster
- b) Use licensed facilities when haul off is necessary

5. Training:

- a) Annually and at hire
- b) Inform staff and service contractors when incorrect SOP implementation is observed.

Landscape Maintenance

General:

This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

1. Purpose:

- a) One of the primary contaminants in Kays Creek is organic material.
- b) Grass clippings, sticks, branches, dirt, mulch, fertilizers, pesticides and other pollutants will fill our landscaping swales, sediment/trash traps and underground infiltration system requiring future dredging and cleaning increasing our maintenance cost. Removing these debris after they have washed to our flood and water quality system will in very expensive.

2. Maintenance Procedure:

- a) Maintain healthy vegetation root systems. Healthy root systems will help improve permeable soils maintaining more desirable infiltration rates of our landscape areas receiving runoff from our pavements.
- b) Grooming
 - Lawn Mowing – Immediately following operation sweep or blow clippings onto vegetated ground.
 - Fertilizer Operation – Prevent overspray. Sweep or blow granular fertilizer onto vegetated ground immediately following operation.
 - Herbicide Operation – Prevent overspray. Sweep or blow granular herbicide onto vegetated ground immediately following operation.
- c) Remove or contain all erodible or loose material prior forecast wind and precipitation events, before any non-stormwater will pass through the property and at end of work period. Light weight debris and landscape materials can require immediately attention when wind or rain is expected.
- d) Landscape project materials and waste can usually be contained or controlled by operational best management practices.
 - Operational; including but not limited to:
 - Strategic staging of materials eliminating exposure, such as not staging on pavement
 - Avoiding multiple day staging of landscaping backfill and spoil on pavements
 - Haul off spoil as generated and daily
 - Scheduling work when weather forecast are clear.

e) Cleanup:

- Use dry cleanup methods, e.g. square nose shovel and broom. Conditions are usually sufficient when no more material can be swept onto the square nosed shovel.
- Power blowing tools

3. Waste Disposal:

- a) Dispose of waste according to General Waste Management SOP, unless superseded by specific SOPs for the operation.

4. Equipment:

- a) Tools sufficient for proper containment of pollutants and removal.

5. Training:

- a) Annually and at hire
- b) Inform staff and service contractors when incorrect SOP implementation is observed.
- c) Landscape Service Contractors must use equal or better SOPs.

Waste Management

General:

This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

1. Purpose:

- a) Trash can easily blow out of our dumpster and trash receptacles.
- b) Liquids can leak from our dumpster polluting waterways, subsurface soils, stain our pavement and cause smell.

2. Procedure:

- a) Remain aware of the lids and keep them closed.
- b) Remain aware of leaking and fix. Minimize allowing disposal of liquids in our receptacles and dumpster. Also liquids can leak from the waste haul trucks.
- c) Beware of dumpster capacity. Solve capacity issues. Leaving bags outside of dumpster is not acceptable.

3. Waste Disposal Restrictions for all waste Scheduled for the Davis Landfill:

- a) Generally most waste generated at this property, and waste from spill and clean up operations can be disposed in our dumpsters under the conditions listed in this SOP. Unless specific disposal requirements are identified by the product SDS or otherwise specified in other SOPs.
- b) Know the facility disposal requirements and restrictions. It should not be assumed that all waste disposed in collection devices will be disposed at the Davis Landfill.
- c) Review Davis Landfill regulations for additional restrictions and understand what waste is prohibited. Ensure the SDS and Davis Landfill regulations are not contradictory.

4. Training:

- a) Annually and at hire
- b) Inform staff and service contractors when incorrect SOP implementation is observed.

Flood and Water Quality System

General:

These SOPs are not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in these SOPs.

1. Purpose:

- a) Our storm drain system will collect anything we leave in the way of runoff which will fill our oil/sediment/trash traps and underground infiltration system increasing maintenance cost.
- b) Any liquids or dissolved pollutants can increase the risk for contaminating groundwater for which we are responsible.
- c) During very intense storm events pollutants in excess runoff can by-pass our system increasing risk of contaminating groundwater and Kays Creek.

2. Inspections:

- a) Inspect oil/sediment/trash trap. Remove any floating trash at each inspection interval with rake or other means. Remove sediments accumulations when 2" and more. Removed oil accumulations with the heavy sediment unless oil amounts are excessive. Oil can also be removed with absorbent materials but sediments will require vacuum operated machinery.
- b) Inspect oil/sediment/trash trap for mosquito larvae. Contact the Davis Mosquito Abatement District when necessary.
- c) Inspect underground infiltration system for water. Water should not remain for more than 48 hours. Contact an engineer or equal industry with adequate knowledge when water is not draining.
- d) Inspect underground infiltration system for sediment accumulations. Remove sediment and debris accumulation when volume capacities drop below 90%. Removal will require hydro-vacuum machinery.
- e) Inspect for sediment accumulations in above ground detention and retention infrastructure. Remove sediment and debris accumulation when volume capacities drop below 90%.
- f) Inspect low impact flood control swale and landscape area infrastructure for sediment accumulation. Remove sediment accumulation when volume capacities drop below 90%.
- g) Inspect low impact flood control swale and landscape area for adequate drainage and vegetation coverage. Poor drainage can be improved by maintaining healthy plant root systems.

- h) Regularly remove trash and debris from above ground detention/retention and low impact flood control swale and landscape infrastructure. Remove accumulations with regular grooming operations.

2. Disposal Procedure:

- a) Remove and dispose sediment and debris at licensed facilities. Also dry waste can be disposed in your dumpster as permitted by the local landfill facility.
- b) Disposal of hazardous waste
 - 1. Dispose of hazardous waste at regulated disposal facilities. Follow SDS Sheets. Also see Waste Management and Spill Control SOP

3. Training:

- a) Annually and at hire
- b) Inform staff and service contractors when incorrect SOP implementation is observed.

Pavement Washing

General:

These SOPs are not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in these SOPs.

1. Purpose:

- a) Pavement washing involving detergents can potentially contaminate groundwater with phosphates and with whatever we are washing.
- b) Pavement washing can fill our low impact flood control swale and landscape area, oil/sediment/trash traps and infiltration system with detergents, including sediment and debris increasing our maintenance cost.

2. Procedure:

- a) Prevent waste fluids and any detergents if used from entering storm drain system. The following methods are acceptable for this operation.
 - Dam the inlet using a boom material that seals itself to the pavement and pick up the wastewater with shop-vacuum or absorbent materials.
 - Collect wastewater with shop-vacuum simultaneous with the washing operation.
 - Collect wastewater with vacuum truck or trailer simultaneous with the washing operation.
- b) This procedure must not used to clean the initial spills. First apply the Spill Containment and cleanup SOP following by pavement washing when desired or necessary.

3. Disposal Procedure:

- a) Small volumes of diluted washing waste can usually be drained to the local sanitary sewer. Contact North Davis Improvement District.
- b) Large volumes must be disposed at regulated facilities.

4. Pavement Cleaning Frequency:

- a) There is no regular pavement washing regimen. Pavement washing is determined by conditions that warrant it, including but not limited to: prevention of slick or other hazardous conditions or restore acceptable appearance of pavements.

5. Training:

- a) Annually and at hire

- b) Inform staff and service contractors when incorrect SOP implementation is observed.

Snow and Ice Removal Management

General:

This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

1. Purpose:

- a) Salt and other ice management chemicals if improperly managed will unnecessarily increase our salt impact to our own vegetation and local water resources.
- b) We need to maintain healthy root systems to help maintain optimum infiltration rates.

2. De-Icing Procedure:

- a) Do not store or allow salt or equivalent to be stored on outside paved surfaces.
- b) Minimize salt use by varying salt amounts relative to hazard potential.
- c) Sweep excessive piles left by the spreader.
- d) Watch forecast and adjust salt amounts when warm ups are expected the same day.

3. Training:

- a) Annually and at hire.
- b) Require snow and ice service contractors to follow the stronger this SOP and their company SOPs.

General Construction Maintenance

General:

This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

1. Purpose:

- a) Any sediment, debris, or construction waste will fill in our landscaping swales, sediment/trash traps and our underground infiltration system increasing our maintenance cost.

2. Construction Procedure:

- a) Remove or contain all erodible or loose material prior forecast wind and precipitation events or before non-stormwater will pass through the project site. For light weight debris maintenance can require immediately attention for wind and runoff events. Many times daily maintenance is necessary or as needed per random, precipitation or non-stormwater events.
- b) Project materials and waste can be contained or controlled by operational or structural best management practices.
 - Operational; including but not limited to:
 - Strategic staging of materials eliminating exposure, such as not staging on pavement
 - Avoiding multiple day staging of backfill and spoil
 - Haul off spoil as generated or daily
 - Schedule work during clear forecast
 - Structural; including but not limited to:
 - Inlet protection, e.g. wattles, filter fabric, drop inlet bags, boards, planks
 - Gutter dams, e.g. wattles, sandbags, dirt dams
 - Boundary containment, e.g. wattles, silt fence
 - Dust control, e.g. water hose,
 - Waste control, e.g. construction solid or liquid waste containment, dumpster, receptacles
- c) Inspection often to insure the structural best management practices are in good operating condition and at least prior to the workday end. Promptly repair damaged best management practices achieving effective containment.
- d) Cleanup:
 - Use dry cleanup methods, e.g. square nose shovel and broom.

- Wet methods are allowed if wastewater is prevented from entering the stormwater system, e.g. wet/dry vacuum, disposal to our landscaped areas.
- e) Cleanup Standard:
 - When a broom and a square nosed shovel cannot pick any appreciable amount of material.

3. Waste Disposal:

- a) Dispose of waste according to General Waste Management SOP, unless superseded by specific SOPs for the operation.
- b) Never discharge waste material to storm drains

4. Equipment:

- a) Tools sufficient for proper containment of pollutants and cleanup.
- b) Push broom and square blade shovel should be a minimum.

5. Training:

- c) Annually and at hire.
- d) Require snow and ice service contractors to follow the stronger this SOP and their company SOPs.

Spill Control

General:

This SOP is not expected to cover all necessary procedure actions. Operators are allowed to adapt SOPs to unique site conditions in good judgment when it is necessary for safety, and the proper, and effective containment of pollutants. However, any changes of routine operations must be amended in this SOP.

1. Purpose:

- a) Spilt liquids and solids will reach our low impact flood control landscaping areas, oil/sediment/trash traps and infiltration system potentially contaminating groundwater which we are responsible.
- b) It is vital we contain all spills on the surface. Spills reaching our underground flood control storage system can result in expensive spill mitigation, including potential tear out and replacement.

2. Containment Procedure:

- a) Priority is to dam and contain flowing spills.
- b) Use spill kits booms if available or any material available to stop flowing liquids; including but not limited to, nearby sand, dirt, landscaping materials, etc.
- c) Hazardous or unknown waste material spills
 1. Critical Emergency constitutes large quantities of flowing uncontained liquid that people at risk or reach storm drain systems. Generally burst or tipped tanks and containment is still critical. Call HAZMAT, DWQ, Davis County Health department, Layton City.
Also report spills to DWQ of quantities of 25 gallons and more and when the spill of lesser quantity causes a sheen on downstream water bodies
 2. Minor Emergency constitutes a spill that is no longer flowing but has reached a storm drain and adequate cleanup is still critical. Call Davis Health Department, Laytons City
 3. Spills that are contained on the surface, typically do not meet the criteria for Critical and Minor Emergencies and may be managed by the responsible implementation of this SOP.
 4. Contact Numbers:
HAZMAT - 911
DWQ – 801-231-1769, 801-536-4123, 801-536-4300
Davis County Health Department – 801-525-5000
Layton City – 801-336-3700

3. Cleanup Procedure:

- a) NEVER WASH SPILLS TO THE STORM DRAIN SYSTEMS.

- b) Clean per SDS requirements but generally most spills can be cleaned up according to the following:
- Absorb liquid spills with spill kit absorbent material, sand or dirt until liquid is sufficiently converted to solid material.
 - Remove immediately using dry cleanup methods, e.g. broom and shovel, or vacuum operations.
 - Cleanup with water and detergents may also be necessary depending on the spilled material. However, the waste from this operation must be vacuumed or effectively picked up by dry methods or vacuum machinery. See Pavement Washing SOP.
 - Repeat process when residue material remains.

4. DISPOSAL:

- a) Follow SDS requirements but usually most spills can be disposed per the following b. & c.
- b) Generally most spills absorbed into solid forms can be disposed to the dumpster and receptacles. Follow Waste Management SOP.
- c) Generally liquid waste from surface cleansing processes may be disposed to the sanitary sewer system after the following conditions have been met:
- Dry cleanup methods have been used to remove the bulk of the spill and disposed per the Waste Management SOP.
 - The liquid waste amounts are small and diluted with water. This is intended for spill cleanup waste only and never for the disposal of unused or spent liquids.

5. Documentation:

- a) Document all spills in Appendix C.

6. SDS sheets:

- a) SDS Manual is filed in break room.

7. Materials:

- a) Generally sand or dirt will work for most cleanup operations and for containment. However, it is the responsibility of the owner to select the absorbent materials and cleanup methods required by the SDS Manuals for chemicals used by the company.

8. Training:

- a) Annually and at hire.
- b) Require snow and ice service contractors to follow the stronger this SOP and their company SOPs.

APPENDIX C – PLAN RECORDKEEPING DOCUMENTS

MAINTENANCE/INSPECTION SCHEDULE

Frequency	Site Infrastructure
B & S	Review condition of Storm Drain Detention Basin for possible erosion or sedimentation. Remove debris or sediment and repair any areas of erosion damage.
Q & S	Review Storm Drain Inlet Boxes for debris. Remove debris and ensure pipes are clear and unobstructed. Flush pipes when sediment has extended into pipes.
B & S	Review StormTech Chamber cleanout ports for debris. Flush and vacuum debris when accumulation is noticed.
Q & S	Review Storm Drain Outlet Control Box for debris, esp. at the orifice. Remove debris and ensure orifice is clear and unobstructed.

Inspection Frequency Key: A=annual, B = biannual, Q=Quarterly, M=monthly, W=weekly, S=following appreciable storm event, U=Unique infrastructure specific (specify)

RECORD INSPECTIONS IN THE MAINTENANCE LOG

Inspection Means: Either; Traditional walk through, Awareness/Observation, and during regular maintenance operations while noting efficiencies/inefficiencies/concerns found, etc.

MAINTENANCE LOG

Date	Maintenance Performed/Spill Events. Perform Maintenance per SOPs	Observation Notes, including but not limited to; Inspection results, Observations, System Performance (effectiveness/inefficiencies), SOP Usefulness, Concerns, Necessary Changes...	Initials

Annual Summary of LTSWMP effectiveness, inefficiencies, problems, necessary changes etc.

*You may create your own form that provides this same information or request a word copy of this document.

Annual SOP Training Log per Section 2

SOP	Trainer	Employee Name / Maintenance Contractor Co	Date

*You may create your own form that provides this same information or request a word copy of this document.