AGREEMENT FOR MAINTENANCE OF STORM WATER DETENTION SYSTEM

This agreement is made on April 21, 2014, by JA Avon, LLC, whose address is 400 Park Street, Troy, Michigan 48083 ("Developer"); and the CITY OF ROCHESTER HILLS (the City), whose address is 1000 Rochester Hills Drive, Rochester Hills, MI 48309.

RECITALS:

WHEREAS, Developer owns and occupies the property described in attached Exhibit A; and

WHEREAS, the Developer has proposed, and the City has approved, a storm water drainage and detention system (the system), which includes a detention basin, for the property as described and depicted in Exhibit B; and

WHEREAS, the parties will benefit from the proper use and maintenance of the System and desire to enter into this agreement to provide for the same.

THEREFORE, the parties agree:

1. **Use of the System:** Components of the System, including the detention basin, shall be used solely for the purpose of detaining storm and surface water on the property until such time as: (i) The City may determine and advise Developer, or Developer's successors, grantees or assigns, in writing that it is no longer necessary to use the detention basin to detain storm or surface water; and (ii) An adequate alternative for draining storm and surface water has been provided which is acceptable to the City and which includes the granting of such easements to the City or third parties for the alternative drainage system as may be necessary.

2. **Maintenance:**

A. Developer shall be responsible for the proper maintenance, repair and replacement of the System and any part thereof, including the detention basin, as detailed in the Maintenance Plan attached as Exhibit C.

B. Proper maintenance of the System shall include, but not limited to: (i) Keeping the bottom of the detention basin free from silt and debris; (ii) Removing harmful algae; (iii) Maintaining steel grating across the basin's inlets; (iv) Controlling the effects of erosion; and (v) Any other maintenance that is reasonable and necessary in order to facilitate or accomplish the intended function and purpose of the System.

3. **Action by City:** In the event Developer or Developer's successors, grantees, or assigns, neglects or fails at any time to properly maintain the System or any part thereof, the City may notify Developer or Developer's successors, grantees or assigns, in writing, and the notice shall include a listing and description of maintenance deficiencies and a demand that they must be corrected within thirty (30) days. The notice shall further specify the date and place for a hearing to be held at least fourteen (14) days after the date of the notice before the City Council, or such other board or official to whom the City Council may delegate responsibility. At the hearing, the City Council (or other board or official) may endorse or modify the listing and description of deficiencies to be corrected and, for good cause, may extend the time within which the deficiencies must be corrected.

Thereafter, if the maintenance deficiencies are not corrected within the time allowed, the City may undertake and make the necessary corrections, and may maintain the System for a period not to exceed one (1) year. Such maintenance of the System by the City shall not be deemed a taking of the property, nor shall the City's actions be deemed to vest in the public any right to use the property. If the City determines maintenance of the system by the City should continue beyond one year, the City shall hold, and provide advance written notice of, a further hearing at which Developer or Developer's successors, grantees or assigns, will not or cannot properly maintain the System, the City may continue to maintain the System for another year, and subject to a similar hearing and determination, in subsequent years.

In the event the City determines an emergency condition caused by or relating to the System threatens the public health, safety or general welfare, the City shall have the right to immediately and without notice enter the property and undertake appropriate corrective action.

4. **Charges:** The City shall charge to the current owner of the property the cost of maintenance or other corrective action undertaken by the City in accordance with this agreement, plus a ten percent (10%) administrative fee. If not timely paid, the City may assess the charges on the City's tax roll, which charges shall be a lien on the real property and shall be collectable and enforceable in the same manner general property taxes are collected and enforced.

5. **Notice:** Any notices required under this agreement shall be sent by certified mail to the address for each party set forth below, or to such other addresses as such party may notify the other parties in writing:

To JA Avon, LLC:	P.O. Box 081606 Rochester, Michigan 48308 Attention: James Allen
To the City:	Clerk City of Rochester Hills 1000 Rochester Hills Drive Rochester Hills, MI 48309

6. **Successors and Assigns:** This agreement shall bind and inure to the benefit of the parties and their respective successors, grantees and assigns. The rights, obligations and responsibilities hereunder shall run with the land and shall bind all current and future owners of the property.

7. **Recording of Agreement:** This agreement shall be recorded at the Oakland County Register of Deeds.

JA Avon LLC

By: _____

Print or type name: Jeffrey S Allen

Title: Member

CITY OF ROCHESTER HILLS

By: _____
Bryan K. Barnett, Mayor

By: _____
Tina Barton, City Clerk

:

STATE OF MICHIGAN
COUNTY OF Oakland

This agreement was acknowledged before me on 21, 2014, April by Jeffrey S. Allen, who is the Member of JA Avon, LLC, a Michigan limited liability corporation, on behalf of the corporation.

NICOLE RAO
Notary Public, State of Michigan
County of Oakland
My Commission Expires 10-05-2020
Acting in the County of Oakland

_____, notary public
Oakland County, Michigan
My commission expires: 10/5/2020

STATE OF MICHIGAN
COUNTY OF OAKLAND

This agreement was acknowledged before me on _____, _____, by Bryan K. Barnett, Mayor, and Tina Barton, Clerk, of the City of Rochester Hills, on behalf of the City.

Drafted By:

Shawn Blaszczyk
Zeimet Wozniak & Assoc.
55800 Grand River, Ste. 100
New Hudson, MI 48165

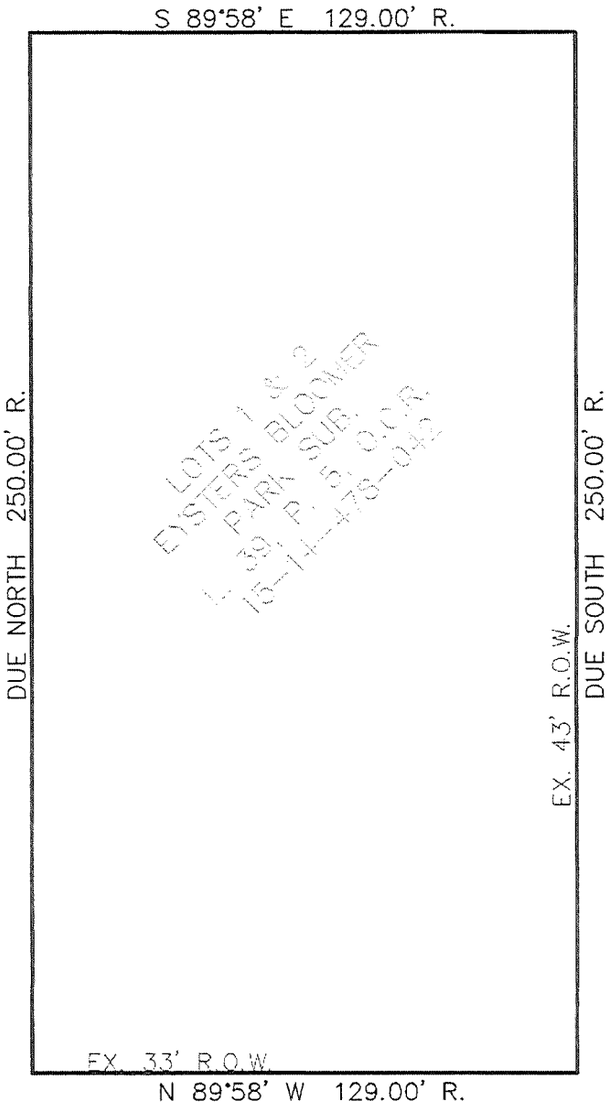
_____, notary public
_____ County, Michigan
My commission expires:

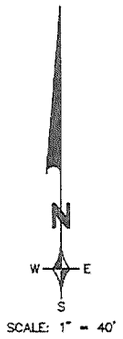
When Recorded Return to:
Clerks Dept.
City of Rochester Hills
1000 Rochester Hills Drive
Rochester Hills, MI 48309

I:\Eng\PRIV\ENG FORMS ONLY (MUST DO 'SAVE AS')\All Easements\STORM WATER DET SYSTEM MAINT AGREEM Revised 100311.doc

John Staran
Approved 4-23-14

EXHIBIT 'A'





JOHN R ROAD
(86 FT. WIDE)
CITY R.O.W.

E. AVON ROAD
(VARIABLE WIDTH)
ROAD COMMISSION FOR OAKLAND COUNTY R.O.W.

PARCEL DESCRIPTION

LOTS 1 & 2 OF "EYSTER'S BLOOMER PARK SUBDIVISION" BEING A SUBDIVISION OF PART OF THE SOUTHEAST 1/4 OF SECTION 14, T. 3 N., R. 11 E., CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN AS RECORDED IN LIBER 39, PAGE 5 OF PLATS, OAKLAND COUNTY RECORDS OTHERWISE KNOWN AS PARCEL 15-14-478-042.

mike Taunt
Approved 4/23/14

REVISIONS		
ITEM	DATE	BY

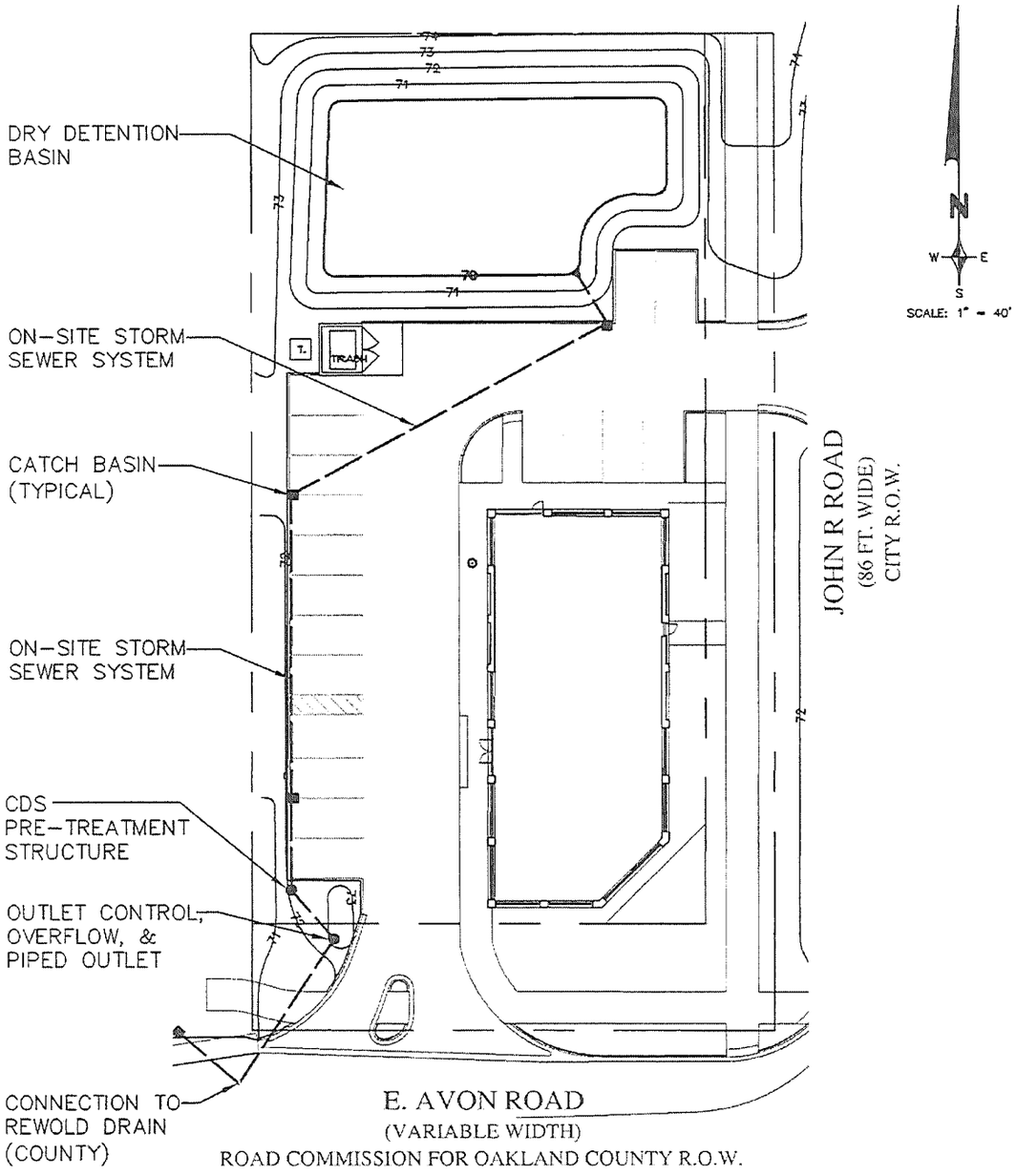
PARCEL DESCRIPTION
PROPOSED RETAIL
ROCHESTER HILLS, MI

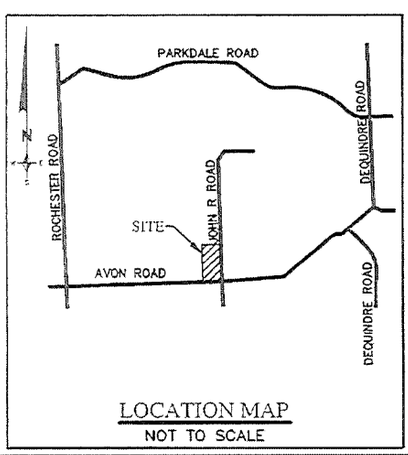
ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE. SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

DATE	SCALE HOR: 1" = 40'
4/11/14	FIELD BOOK NO.
DESIGNED BY SRB	JOB NO. 13125
DRAWN BY SRB	SHEET NO. 1/1

Z:\Projects\13125\Dwg\13125 ENG.dwg, stormwater exhibit A, 4/11/2014 2:58:58 PM, sblaszczyk

EXHIBIT 'B'





LOCATION MAP
NOT TO SCALE

PROPOSED RETAIL STORM WATER SYSTEM MAINTENANCE RESPONSIBILITY

Mike Taunt
Approved 4/23/14

REVISIONS		
ITEM	DATE	BY

STORM WATER SYSTEM PLAN
PROPOSED RETAIL
ROCHESTER HILLS, MI

ZEIMET WOZNIAK & ASSOCIATES
Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE. SUITE 100
NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

DATE 4/11/14	SCALE HOR: 1" = 40'
	FIELD BOOK NO.
DESIGNED BY SRB	JOB NO. 13125
DRAWN BY SRB	SHEET NO. 1/1

Z:\Projects\13125\Dwg\13125 ENG.dwg, stormwater exhibit b, 4/11/2014 2:58:50 PM, sblaszczyk

EXHIBIT 'C'

OPERATIONS AND MAINTENANCE MANUAL

PROPOSED RETAIL BUILDING
STORMWATER MAINTENANCE PLAN
ROCHESTER HILLS, MI

PROPERTY OWNER:

JA AVON, LLC
P.O. Box 081606
Rochester, MI 48308
PHONE: 248.583.0030
CONTACT: JEFFERY ALLEN

PREPARED BY:

Zeimet Wozniak and Associates, Inc.
55800 Grand River, Suite 100
New Hudson, MI 48165-9318
Phone: 248.437.5099
Contact: Shawn Blaszczyk, PE

April 11, 2014

OPERATIONS AND MAINTENANCE MANUAL

INTRODUCTION:

This manual identifies the ownership, operation and maintenance responsibilities for all of the stormwater management systems including the detention pond, mechanical pre-treatment devices, and outlet control structure as incorporated into and detailed on the approved construction documents as prepared by Zeimet Wozniak and Associates, Inc. In order to comply with the City of Rochester Hills best management practices (BMP) and requirements, this manual should serve only as a minimum performance standard. This manual should remain intact and read in its entirety by all parties responsible for the operation and maintenance of the on-site BMP's.

OWNER:

Mr. Jeffery Allen
JA Avon, LLC
P.O. Box 081606
Rochester, MI 48308
Phone: 248.583.0030

PROPERTY INFORMATION:

This Operations and Maintenance Manual is for the stormwater systems (BMP's) located within the following described subject property:

LEGAL DESCRIPTION: See attached Exhibit 'A'

STORMWATER MAINTENANCE EXHIBIT:

Exhibit 'B' of the Stormwater Maintenance Agreement is the Storm Water System Plan which provides a clear representation of all components of the stormwater system. This system is subject to the long-term operation and maintenance responsibilities as detailed in this manual. The system includes the following:

- Storm Sewer Pipes
- Storm Sewer Structures (manholes, inlets and catch basins)
- Mechanical Treatment Device (CDS)
- Detention Basin
- Outlet Control Structure

INSPECTIONS:

The frequency of stormwater system component inspections as outlined in this manual and the attached Exhibit 'C' of the Stormwater Maintenance Agreement shall be considered the minimum, if no events warrant additional inspections. The frequency of the inspections shall be adjusted over time as the system specific conditions become better known and the rate in which certain maintenance operations need to be performed and are better understood. Maintenance inspections checklists are provided for each BMP of this system. The inspections shall be performed by personnel responsible for the maintenance and may need to be certified for confined space entry, depending on the component being inspected. The outlet control structure and pre-treatment device may need to be inspected by a practicing civil engineer familiar with the operation of these components.

Records of all routine inspections and any maintenance performed on the system, including repairs and replacement, shall be maintained by the owner and kept for a

minimum of ten (10) years. A copy of all records shall be provided to the City of Rochester Hills Engineering Department. The records shall include this manual, all inspection sheets, approved construction plans and as-built documents, the maintenance log of work performed on the system(s) and contact information of the system inspector, civil engineer, landscape architect, geotechnical engineer and contractor involved with the system.

STORMWATER SYSTEMS MAINTENANCE OVERVIEW:

If the system is to perform up to expectations, regular inspection and maintenance is required. Stormwater systems are expected to perform quality and quantity control functions as long as the land use they serve exists. Failure to maintain these systems create adverse impacts such as the following:

- Increase in pollutants to the surrounding surface water features
- Potential loss of property or life resulting from catastrophic failure of the facility
- Aesthetic or nuisance conditions, such as mosquitoes or reduction of property values due to a degraded facility appearance.

Many of these impacts can be avoided or eliminated through proper and timely inspection and maintenance of the system. These impacts can cause a major concern with the general public's expectations related to the quality of life by construction of these systems. The general public may have a false sense on security should inadequate maintenance of the system occur. The most common cause of stormwater system failure is lack of adequate and proper operation, inspection, maintenance and management of the system.

Proper design and construction of the system can reduce subsequent maintenance needs and costs, but does not eliminate the need for maintenance altogether. Maintenance requires a long term commitment of time, money, personnel and equipment to monitor the overall performance of the stormwater management system and is a major aspect of the maintenance program.

The maintenance responsibilities for these systems shall lie with the current owner of the property and transfer with the property in perpetuity. If maintenance of the system is not performed, the City of Rochester Hills reserves the right to enter the property and perform all required work at the owner's cost. Refer to the Agreement for Stormwater System Maintenance for additional details.

GENERAL MAINTENANCE ITEMS:

Parking Lot Sweeping:

Routine sweeping of all paved surfaces provides an attractive appearance and removes accumulated sediment and trash that tend to migrate into the stormwater management systems during rain events. Parking lot sweeping should be performed at a minimum quarterly or as necessary to limit build-up of sediment and trash.

Grass Mowing and Maintenance:

Mowing requirements shall be designed to the specific site conditions, grass types and climatic changes due to seasons. Grass areas require periodic fertilizing, de-thatching and soil conditioning in order to maintain healthy growth and desirable appearance. A provision to reseed and re-establish grass cover for areas damaged by sediment accumulation, stormwater flow, erosion or other causes shall be made by the owner. Dead turf shall be replaced after being discovered. The inspection of grass areas and landscaping features shall be made annually.

Trash and Debris Removal:
Removal of trash and debris from all areas of the property shall be performed weekly. Removal of these items prevents damage to the vegetated areas, provides an aesthetically pleasing appearance and eliminates their potential to enter into the stormwater management systems. Sediment, debris and trash collected shall be disposed of according to local, State, and Federal regulations at a suitable disposal and/or recycling center.

STORMWATER SYSTEM MAINTENANCE ITEMS:

The following descriptions provide an overview of the maintenance requirements of the different components of the stormwater system. The attached inspection lists offer a more complete listing of the inspection and maintenance activities required by each component.

Storm Sewer Pipes and Structures:

Catch basins and storm sewer pipes shall be inspected for sediment accumulation and clogging, floating debris, dead vegetation, etc. The structures and sewers shall also be observed during a rain event to ensure they are properly functioning. Accumulated sediment and debris shall be removed on an annual basis or as required per observed conditions. Structural repairs or maintenance for such conditions as cracks, spalling, joint failure, leakage, misalignment, or structure settlement shall be made on an annual basis or as required per observation. A licensed civil engineer shall be retained if problems are thought to exist.

Mechanical Treatment Device (CDS):

The maintenance manual from the manufacturer for all inspections and maintenance requirements for the specified CDS unit is attached to this manual.

Detention Pond:

The inlet/outlet pipe to the pond should be inspected for structural integrity (pipes crackes, broken, spalled) and that the grates are free from debris. The area around and immediately downstream of the inlet/outlet pipe should be inspected for sediment build-up and erosion. The rip-rap should be inspected for integrity and sedimentation. Maintenance of the inlet/outlet pipe would include removal of any sediment build-up and debris, repair or replacement of any component in need of attention, and restoring any areas that have eroded.

The pond should be inspected for healthy grass growth, side slope erosion, swale erosion and excessive sedimentation. The pond should be inspected during a wet weather event to ensure that all aspects of the pond are functioning properly. A civil engineer should be retained if problems are thought to exist or if the inspection personnel are not familiar with the operation of the pond.

The planted vegetation should conform to the approved plating schemes and any invasive plants should be removed immediately. The vegetation should be inspected by a landscape architect if the inspection personnel are not familiar with the specific plantings in the pond.

Any complaints from the residents or adjoining homeowners regarding the operation or aesthetics of the pond should be investigated during inspections and during wet weather operations.

Outlet Control Structure:

The outlet control structure shall be inspected for sediment accumulation, floating debris, trash or any other foreign object that may impede the flow or restrict discharge from the structure. The outlet control structure shall be inspected during a rain event to ensure all components are properly functioning. A licensed civil engineer shall be retained if problems are thought to exist.

Maintenance should include removal of any debris, trash or sediment from the structure.

The following pages include the reference exhibits, inspection checklists for the various components previously described, and the CDS manufacturers' maintenance manual.

PROPOSED RETAIL BUILDING, ROCHESTER HILLS

INSPECTION CHECKLIST

Maintenance Activities	System Component				Frequency
	Storm Sewer Pipes and Structures	Mechanical Treatment Devices	Detention Pond	Flow Restrictors, Overflow Structure & Outlet Pipes	
Monitoring/Inspection					
• Inspect for sediment accumulation*	X	X	X	X	Annually
• Inspect for floatables, dead vegetation and debris	X	X	X	X	Annually and after major events
• Inspect all components during wet weather and compare to as-built plans	X	X	X	X	Annually
• Ensure means of access for maintenance remain clear/open	X	X	X	X	Annually
Preventative Maintenance					
• Remove accumulated sediment	X	X	X	X	As needed *
• Remove floatables, dead vegetation and debris	X	X	X	X	As needed
Remedial Actions					
• Structural repairs	X	X	X	X	As needed
• Make adjustments/repairs to ensure proper functioning	X	X	X	X	As needed

* Mechanical Treatment Devices to be cleaned whenever sediment accumulates to a depth of less than 4' from the water surface in the structure or sediment resuspension is observed.
* Detention pond is to be cleaned whenever sediment accumulates to a depth of 2 inches or more.

SUMMARY

Date: _____

Weather: _____

Inspector: _____

Comments: _____

Condition of System and Components: _____

Remedial Actions Required: _____

Date Remedial Actions Completed: _____

By: _____

J:13125.storm maintenance inspection report

CONTECH®
CONSTRUCTION PRODUCTS INC.

CDS® Inspection and Maintenance Guide

CDS
TECHNOLOGIES

Maintenance

The CDS system should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on site activities than the size of the unit. For example, unstable soils or heavy winter sanding will cause the grit chamber to fill more quickly but regular sweeping of paved surfaces will slow accumulation.

Inspection

Inspection is the key to effective maintenance and is easily performed. Pollutant transport and deposition may vary from year to year and regular inspections will help ensure that the system is cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (e.g. spring and fall) however more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment washdown areas. Installations should also be inspected more frequently where excessive amounts of trash are expected.

The visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions in the inlet and separation screen. The inspection should also quantify the accumulation of hydrocarbons, trash, and sediment in the system. Measuring pollutant accumulation can be done with a calibrated dipstick, tape measure or other measuring instrument. If absorbent material is used for enhanced removal of hydrocarbons, the level of discoloration of the sorbent material should also be identified during inspection. It is useful and often required as part of an operating permit to keep a record of each inspection. A simple form for doing so is provided.

Access to the CDS unit is typically achieved through two manhole access covers. One opening allows for inspection and cleanout of the separation chamber (cylinder and screen) and isolated sump. The other allows for inspection and cleanout of sediment captured and retained outside the screen. For deep units, a single manhole access point would allows both sump cleanout and access outside the screen.

The CDS system should be cleaned when the level of sediment has reached 75% of capacity in the isolated sump or when an appreciable level of hydrocarbons and trash has accumulated. If absorbent material is used, it should be replaced when significant discoloration has occurred. Performance will not be impacted until 100% of the sump capacity is exceeded however it is recommended that the system be cleaned prior to that for easier removal of sediment. The level of sediment is easily determined by measuring from finished grade down to the top of the sediment pile. To avoid underestimating the level of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Particles at the top of the pile typically offer less resistance to the end of the rod than consolidated particles toward the bottom of the pile. Once this measurement is recorded, it should be compared to the as-built drawing for the unit to determine weather the height of the sediment pile off the bottom of the sump floor exceeds 75% of the total height of isolated sump.

Cleaning

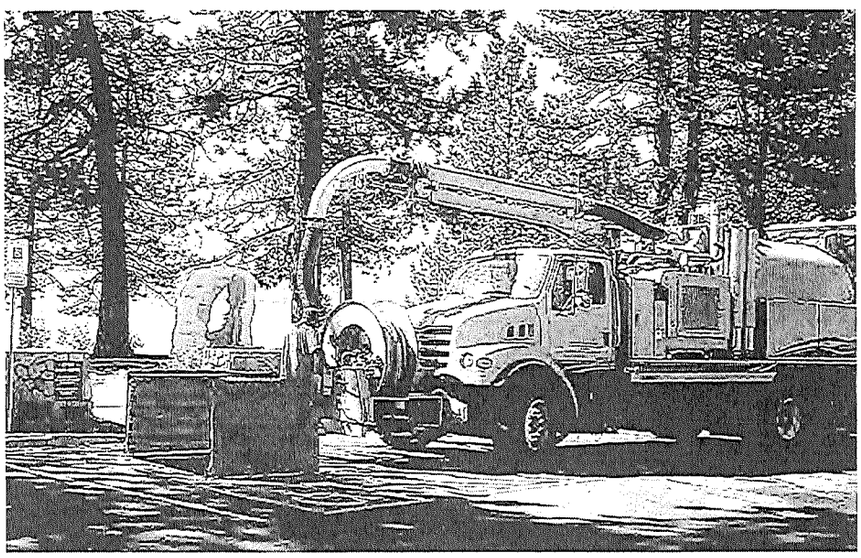
Cleaning of a CDS systems should be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method of removing pollutants from the system. Simply remove the manhole covers and insert the vacuum hose into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The area outside the screen should also be cleaned out if pollutant build-up exists in this area.

In installations where the risk of petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, the system should be cleaned out immediately in the event of an oil or gasoline spill should be cleaned out immediately. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use absorbent pads since they are usually less expensive to dispose than the oil/water emulsion that may be created by vacuuming the oily layer. Trash and debris can be netted out to separate it from the other pollutants. The screen should be power washed to ensure it is free of trash and debris.

Manhole covers should be securely seated following cleaning activities to prevent leakage of runoff into the system from above and also to ensure that proper safety precautions have been followed. Confined space entry procedures need to be followed if physical access is required. Disposal of all material removed from the CDS system should be done in accordance with local regulations. In many jurisdictions, disposal of the sediments may be handled in the same manner as the disposal of sediments removed from catch basins or deep sump manholes.

CDS Model	Diameter		Distance from Water Surface to Top of Sediment Pile		Sediment Storage Capacity	
	ft	m	ft	m	yd3	m3
CDS2015-4	4	1.2	3.0	0.9	0.5	0.4
CDS2015	5	1.5	3.0	0.9	1.3	1.0
CDS2020	5	1.5	3.5	1.1	1.3	1.0
CDS2025	5	1.5	4.0	1.2	1.3	1.0
CDS3020	6	1.8	4.0	1.2	2.1	1.6
CDS3030	6	1.8	4.6	1.4	2.1	1.6
CDS3035	6	1.8	5.0	1.5	2.1	1.6
CDS4030	8	2.4	4.6	1.4	5.6	4.3
CDS4040	8	2.4	5.7	1.7	5.6	4.3
CDS4045	8	2.4	6.2	1.9	5.6	4.3

Table 1: CDS Maintenance Indicators and Sediment Storage Capacities



Support

- Drawings and specifications are available at www.contechstormwater.com.
- Site-specific design support is available from our engineers.

CONTECH CONSTRUCTION PRODUCTS INC.
800.925.5240
contechstormwater.com

CDS Inspection & Maintenance Log

CDS Model: _____ Location: _____

Date	Water depth to sediment[1]	Floatable Layer Thickness[2]	Describe Maintenance Performed	Maintenance Personnel	Comments

1. The water depth to sediment is determined by taking two measurements with a stadia rod: one measurement from the manhole opening to the top of the sediment pile and the other from the manhole opening to the water surface. If the difference between these measurements is less than eighteen inches the system should be cleaned out. Note: To avoid underestimating the volume of sediment in the chamber, the measuring device must be carefully lowered to the top of the sediment pile.

2. For optimum performance, the system should be cleaned out when the floating hydrocarbon layer accumulates to an appreciable thickness. In the event of an oil spill, the system should be cleaned immediately.