

**AUTO RITE SALES**

**STORM SEWER SYSTEM MAINTENANCE AGREEMENT**

**THIS STORM SEWER SYSTEM MAINTENANCE AGREEMENT** is made this 28 day of June, 2016 by and between the City of Rochester Hills, a Michigan municipal corporation (the "City"), whose address is 1000 Rochester Hills Drive, Rochester Hills, Michigan 48309, and Syed Ahmed and Saba Naaz, husband and wife ("Developer"), whose address is 1927 E Auburn Road, Rochester Hills, MI 48307.

**RECITALS:**

- A. Developer is the owner of certain real property located in the City of Rochester Hills, Oakland County, Michigan, which real property is more particularly described in Exhibit A attached hereto and incorporated herein (the "Property").
- B. Developer intends to develop the Property as commercial development to be known as Auto Rite Sales, a commercial development (hereinafter known as the "Development").
- C. The Development will alter the natural flow of surface and storm water drainage.
- D. Developer has proposed and the City has approved a storm water drainage and detention system (the "Storm Sewer System") as shown in Exhibit B attached hereto and incorporated herein (the "Approved Plan") and both the Developer and the City will benefit from the proper operation, use and maintenance of the Storm Sewer System and desire to enter into this binding contract relative to the use and governance of the areas described and fully delineated in the condominium Development site plan (the "Condominium Subdivision Plan").

**NOW, THEREFORE**, the parties hereto agree as follows:

1. **Use of the Storm Sewer System.** Components of the Storm Water System, including any and all water conveyance, detention and water quality treatment facilities and devices, storm sewer pipe, catch basins, manholes, end-sections, ditches, swales, open water courses and rip-rap, shall be used solely for the purpose of conveying and detaining storm and surface drainage in the Development until such time as: (i) the City determines and notifies the Developer or Developer's successors and assigns, including the Association (as defined below), in writing that it is no longer necessary to convey, or detain the storm and surface drainage; and (ii) an adequate alternative for conveying and detaining storm and surface drainage has been provided which is acceptable to the City and which includes the granting of any easements to the City or third parties as may be required or necessary for the alternative drainage system.

2. **Maintenance of Storm Sewer System.** The Developer shall be responsible for the proper maintenance, repair and replacement of the Storm Water System and all parts thereof as detailed in the Maintenance Plan attached hereto as Exhibit C (the "Maintenance Plan"). Proper maintenance of the Storm Water System shall include, but is not limited to, (i) keeping the bottom of the detention system and at inlet pipes free from silt and debris; (ii) removing harmful algae; (iii) managing deleterious vegetative growth; (iv) maintaining the Storm Water System structures, end-sections and safety features; (v) controlling the effects of erosion; (vi) inspection of inlet and outlet pipes for structural integrity; (vii) inspection and replacement of rip-rap at inlet pipes; (viii) inspection and cleaning of storm sewer and catch basins upstream from the detention basin; (ix) inspection and replacement of stone around the outlet pipe; and (x) any other maintenance that is reasonable and necessary to facilitate and continue the proper operation of the Storm Water System.

3. **Action by City.** In the event the Developer fails at any time to maintain the Storm Sewer System (including without limitation the detention basins) in reasonable order and condition, the City may notify developer or developer's successors, grantees or assigns. The notice shall be in writing and shall list and describe the deficiencies and demand that they be corrected within thirty (30) days thereof. The notice shall further state the date and place of a hearing thereon before the City Council or other such board, body or official to whom the City shall delegate such responsibility, which shall be held at least fourteen (14) days after the date of the notice. At such hearing, the City Council or other designated board, body or official may affirm or modify the list and description of maintenance deficiencies and, for good cause shown, may give an extension of the time within they shall be cured.

Thereafter, if the deficiencies set forth in the original notice, or in the modification thereof, shall not be cured within the time allowed, the City may maintain the same for a period of one (1) year. Such maintenance by the City shall not be construed as a trespass, constitute a taking of the Storm Sewer System, nor vest in the public any rights to use or enter the Storm Water System. Thereafter, if the developer does not properly maintain the Storm Water System, the City may, after providing similar written notice, schedule and hold another hearing to determine whether the City should maintain the Storm Water System for another year, and subject to a similar notice, hearing and determination in subsequent years.

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

**4. Charges.** The City shall charge to the current owner of the property the cost of maintenance of other corrective action undertaken by the City under this agreement, plus a ten percent (10%) administrative fee. If not timely paid, added to the tax rolls, which charges shall be a lien on the Storm Sewer System 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 the Developer:

Auto Rite LLC  
Mr. Syed Ahmed  
1927 E. Auburn Road  
Rochester Hills, MI 48307

To the City:

City Clerk  
City of Rochester Hills  
1000 Rochester Hills Drive  
Rochester Hills, MI 48309

7. **Successors and Assigns.** This Agreement shall bind and inure to the benefit of the parties and their respective successors, grantees, and assigns. The benefits, burdens, rights, obligations and responsibilities hereunder shall run with the land and shall bind all current and future owners of the property and any divisions thereof.

8. **Recording.** This Agreement shall be recorded at the Oakland County Register of Deeds.

[Signatures and Acknowledgements on Following Page]

IN WITNESS WHEREOF, the parties have executed this agreement on the date first written above.

By: [Signature]  
Syed Ahmed

By: Saba Naaz  
Saba Naaz

CITY OF ROCHESTER HILLS

By: \_\_\_\_\_  
Bryan K Barnett, Mayor

By: \_\_\_\_\_  
Tina Barton, City Clerk

STATE OF MICHIGAN

COUNTY OF Macomb

The foregoing instrument was acknowledged before me this 28 day of June, 2016, by Syed Ahmed and Saba Naaz, husband and wife.

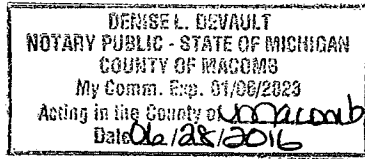
[Signature]

Denise L. Devault, Notary Public

State of Michigan, County of Macomb

My commission expires: 01-06-23

Acting in the County of Macomb



John Staran  
Approved 7/14/16

STATE OF MICHIGAN

COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2016, by Bryan Barnett, Mayor and Tina Barton, City Clerk, of the City of Rochester Hills, on behalf of and by authority of the City.

\_\_\_\_\_

, Notary Public

State of Michigan, County of \_\_\_\_\_

My commission expires: \_\_\_\_\_

Acting in the County of \_\_\_\_\_

Drafted by:

Syed Ahmed

1927 E. Auburn Road

Rochester Hills, MI 48307

When Recorded Return to:

City of Rochester Hills

1000 Rochester Hills Dr.

Rochester Hills, MI 48307

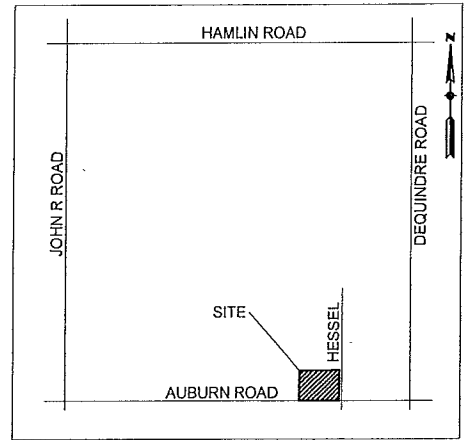
EXHIBIT A

PARCEL NO. 15-25-482-025

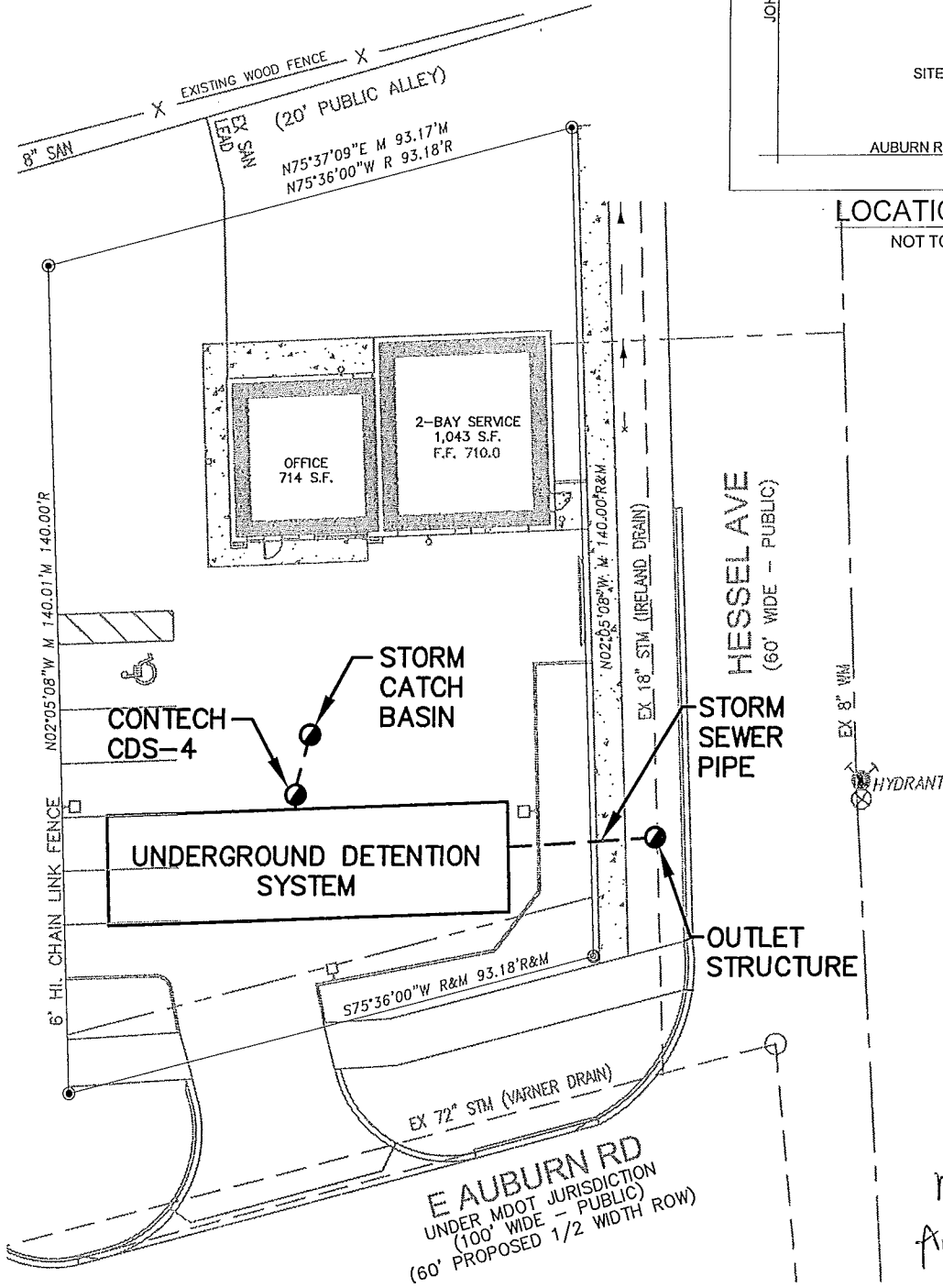
LOTS 1323 - 1328 OF "SUPERVISOR'S PLAT OF BROOKLANDS PARK NO.3" A SUBDIVISION OF PART OF THE EAST 1/2 OF SOUTHEAST 1/4 OF SECTION 25, T.3N., R.11E., CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN AS RECORDED IN LIBER 28 OF PLATS, PAGE 48, OAKLAND COUNTY RECORDS.

Mike Taunt Approved  
7/25/14

# EXHIBIT B



LOCATION MAP  
NOT TO SCALE



*Mike Taunt  
Approved 7/12/16*



8140 PACTON  
SHELBY TOWNSHIP, MI 48317  
PH: (586)737-7993  
FAX: (586)737-7994  
www.chippewaconsultingllc.com

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(3 WORKING DAYS)  
BEFORE YOU DIG  
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or 811  
CALL811.COM (TOLL FREE)

JOB NAME:	RH14026.EXC	JOB NO:	RH14-026
DRAWN BY:	M. O'CONNOR	DATE:	6/26/16
SCALE:	1" = 30'	SHEET:	1 OF 1
SECTION	25	TOWN	3 NORTH
		RANGE	11 EAST
CITY/TOWN:	ROCHESTER HILLS	OAKLAND COUNTY,	MI



EXIHIBIT 'C'

OPERATIONS AND MAINTENANCE MANUAL

AUTO RITE SALES  
STORMWATER MAINTENANCE PLAN  
ROCHESTER HILLS, MICHIGAN

FINAL COPY

PROPERTY OWNER:  
AUTO RITE LLC  
SYED AHMED  
1927 E AUBURN ROAD  
ROCHESTER HILLS, MI 48307  
Phone: (248) 875-3134

Prepared by:  
Chippewa Consulting LLC  
8140 Pacton Drive  
Shelby Township, Michigan 48317  
Phone: (586)737-7993  
Contact: Mitchell P. O'Connor, P.E.

June 26, 2016

## **OPERATION AND MAINTENANCE MANUAL**

### **INTRODUCTION:**

This manual identifies the ownership, operation and maintenance responsibilities for all storm water management systems including the sedimentation and detention basins, underground storm sewer system, mechanical pre-treatment devices and bioswales as incorporated into and detailed on the approved Construction Plans as prepared by Chippewa Consulting In order to comply with the local best management practices (BMP) and requirements, this manual should serve as a minimum performance standard. This manual should be retained intact and read in its entirety by all parties responsible for the operations and maintenance of the on-site BMP's.

### **OWNER:**

Auto Rite LLC  
Mr. Syed Ahmed  
1927 E. Auburn Road  
Rochester Hills, Michigan 48307  
Phone: (248) 875-3134

### **PROPERTY INFORMATION:**

This Operations and Maintenance Manual covers the storm water systems located at the following subject property:

Lot 1323 - 1328 of "Supervisor's Plat of Brooklands Park No.3" a subdivision of part of the east 1/2 of southeast 1/4 of section 25, T.3N., R.11E., City of Rochester Hills, Oakland County, Michigan as recorded in liber 28 of plats, page 48, Oakland County Records.

Commonly known as 1927 E Auburn Road (to lot 1327 & 1328)  
#15-25-482-021

Commonly known as 1923 E Auburn Road (to lot 1323 & 1326)  
#15-25-482-024

### **STORMWATER MAINTENANCE EXHIBIT:**

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

- Storm sewer pipes
- Storm sewer structures (manholes, inlets, catch basins etc.)
- Underground Detention System
- Pre-Treatment Device (CDS)

### **INSPECTIONS:**

The frequency of system inspections outlined in the manual and attached exhibits should be considered the minimum, if no events warrant additional inspections. The frequency of inspections should be fine-tuned over time as system specific conditions are better known and the rate at which certain maintenance operations need to be performed is better understood. Maintenance Inspection Checklists are provided for each of the BMP's in this system. Inspections should be performed by personnel responsible for maintenance and may need to be certified for confined space entry, depending on the component being inspected. Operation of the detention basin, sediment basin, outlet control structures and pre-treatment devices may need to be inspected by a practicing civil engineer, familiar with their operation.

Records of all routine inspections and any work performed on the system for maintenance, repair or replacement should be maintained by the owner and kept for a minimum often (10) years. A copy of all records should be provided to the City of Rochester Hills Engineering Division. The records should include this manual, all inspection sheets, approved construction plans and as-built documents, a maintenance log of work performed to the system(s) and contact information for the system inspector, civil engineer, landscape architect, geotechnical engineer and contractor involved with the system.

### **STORM WATER SYSTEMS MAINTENANCE:**

Regular inspection and maintenance of BMP's are necessary if these facilities are to consistently perform up to expectations. Storm water systems are expected to perform quality and quantity control functions as long as the land use they serve exists. Failure to maintain these systems can create the following adverse impacts:

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

Most of these impacts can be avoided through proper and timely inspection and maintenance. A major concern associated with these impacts is the general public's expectations related to the quality of life provided, in part, by construction of these systems. Inadequate maintenance means the general public may have a false sense of security. The most common cause of storm water

system failure is the lack of adequate and proper operation, inspection, maintenance and management.

Good design and construction can reduce subsequent maintenance needs and costs, but they cannot eliminate the need for maintenance altogether. Maintenance requires a long term commitment of time, money, personnel and equipment. Monitoring the overall performance of the storm water management system is a major aspect of any maintenance program.

The maintenance responsibilities for these systems lie with the current property owner 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 necessary work at the property owners' cost. Refer to the *Agreement for Storm Water System Maintenance* for additional details.

### **General Maintenance Items:**

#### **Parking Lot Sweeping:**

Routine sweeping of all paved surfaces provides a more attractive appearance and Remove accumulations of sediment and trash that tend to migrate into storm water management systems during rainfall events. Parking lot sweeping should be performed quarterly or as necessary to limit sediment and trash build-up.

#### **Grass Mowing and Maintenance:**

Mowing requirements at a facility should be designed to the specific site conditions, grass types and seasonal variations in climate. Grassed areas require periodic fertilizing, de-thatching and soil conditioning in order to maintain healthy growth. Provisions will need to be made to reseed and reestablish grass cover in areas damaged by sediment accumulation, storm water flow, erosion or other causes. Dead turf will need to be replaced after being discovered. Inspection of the grass areas and other landscaping features should be made annually.

#### **Trash and Debris Removal:**

Removal of trash and debris from all areas of the property should be performed monthly. Removal of these items will prevent damage to vegetated areas and eliminate their potential to inhibit the operation of any of the storm water management systems. Sediment, debris and trash that are removed and collected should be disposed of according to local, State and Federal regulations at suitable disposal and/or recycling centers.

#### **Storm Water System Maintenance Items:**

The following narratives give an overview of the maintenance requirements of the different components of the storm water system. The inspection checklists attached to this report offer a more complete listing of what should be inspected, when inspection should occur and the likely frequency of maintenance activities.

### Storm Sewer and Structures:

Catch basins, inlets, manholes and sewer pipes should be inspected to check for sediment accumulation and clogging, floatable debris, dead vegetation etc. The structures and sewers should also be observed during a wet weather event to ensure their proper operation. Accumulated sediment and debris should be removed on an annual basis or as needed based on observed conditions. Structural repairs or maintenance should occur as needed based on observed conditions such as cracks, spalling, joint failure, leakage, misalignment or settlement of structures. A civil engineer should be retained if problems are thought to exist.

### Stormwater Pre-Treatment Device (CDS):

Refer to the attached maintenance manual from the manufacturer for all inspection and maintenance requirements for the CDS structure.

### Underground Detention Systems:

A. Structural Elements - At a minimum, the structural elements of the underground detention should be thoroughly inspected once a year. Several of the structural elements may need more frequent inspections. Refer to the Maintenance Inspections Checklist. The inspections should include the following:

- The inside of the structure should be inspected for cracks, spalling, joint failure or leaks a minimum of once per year. If signs of cracks, leaks, misalignment, sagging or settlement of the structure or relay pipe are observed, a Civil Engineer or Geotechnical Engineer should be retained to determine the probable cause and recommended remediation.
- The orifice should be inspected and relay pipes should be inspected for debris or sediment accumulation after every major storm event. Any sediment or debris removal should be removed to prevent blockage.
- The outlet pipe and storage pipes should be visually inspected for sagging and alignment a minimum of once per year.

B. Ground Surface - The ground surface should be inspected a minimum of once per year. Visual inspection should be done in areas where any underground storage devices are located. If there are any signs of sink holes, a Civil Engineer should be retained to determine the probable cause and recommended remediation.

C. Sediment Removal - Sediment to be removed from all points of inlets and outlets of the detention field and detention pipes, by means of vacuum truck and power jetting when it is determined by inspection to have significant sediment deposits.

- The minimum criteria for sediment removal is:
  - when the sump of the restricted catch basin reaches 6 inches or
  - any other sump is 75% full, or

○ when the sediment in the pipes reaches 3 inches or  
As determined by the certified storm water operator.

The following pages include inspection checklists for the various devices and components listed above as well as the manufacturer's manual for the CDS storm water treatment structure.

MAINTENANCE INSPECTION CHECKLIST:  
 UNDERGROUND DETENTION SYSTEM - AUTO RITE SALES

Rochester Hills, Michigan

Date:

BMP Device #:

Time:

Weather Conditions:

Frequency (per year)	Items Inspected	Checked Yes/No	Maintenance Required Yes/No	Comments
Annually	Inspect inside of structures for cracks,			
Annually	Inspect inside of structures for debris			
Annually	Inspect orifice for debris or sediment			
Annually	Visually inspect storage pipe for alignment			
Annually	Inspect ground surface for sink holes			
Annually	Monitor maintenance accessibility			
Annually	Visually inspect outlet pipe for alignment			

# EXHIBIT "C"

## STORMWATER MANAGEMENT SYSTEM – PERMANENT MAINTANANCE

DATE/TIME OF INSPECTION: \_\_\_\_\_

INSPECTOR: \_\_\_\_\_

**STORMWATER MANAGEMENT SYSTEM  
MAINTENANCE TASKS AND SCHEDULE**

POST CONSTRUCTION

MAINTENANCE ACTIVITIES  
MONITORING/INSPECTION

SYSTEM COMPONENTS	SYSTEM COMPONENTS						FREQUENCY	COMMENTS
	Catch Basins, Inlets, Manholes, and Outlet Control Structures	Storm Sewer & Detention Chambers	Rip Rap	Bioswale Plantings	Buffer Strip			
INSPECT FOR SEDIMENT ACCUMULATION	X	X	NA	NA	NA	Annually		
INSPECT FOR FLOATABLES, DEAD VEGETATION AND DEBRIS	X	X	NA	NA	NA	Annually		
INSPECT FOR EROSION			NA	NA	NA	Annually		
INSPECT ALL COMPONENTS DURING WET WEATHER AND COMPARE TO AS-BUILT PLANS	X	X				Annually		
INSPECT INSIDE OF STRUCTURES AND PIPES FOR CRACKS, SPALLING, JOINT FAILURE, SETTLEMENT, SAGGING AND MISALIGNMENT.	X	X				Annually		
INSPECT FOR INVASIVE PLANT SPECIES				NA	NA	Annually		
<b>PREVENTATIVE MAINTENANCE</b>								
REMOVE ACCUMULATED SEDIMENT	X	X	NA	NA	NA	Annually or as needed		
REMOVE FLOATABLES, DEAD VEGETATION AND DEBRIS	X	X	NA	NA	NA	Annually or as needed		
PROFESSIONAL APPLICATION OF HERBICIDE FOR INVASIVE SPECIES THAT MAY BE PRESENT				NA	NA	Annually or as needed		
<b>REMEDIAL ACTIONS</b>								
REPAIR/STABILIZE AREAS OF EROSION			NA	NA	NA	As Needed		
STRUCTURAL REPAIRS	X	X				As Needed		
MAKE ADJUSTMENTS/REPAIRS TO ENSURE PROPER FUNCTIONING	X	X	NA	NA		As Needed		

**SUMMARY:**

INSPECTORS REMARKS: \_\_\_\_\_

OVERALL CONDITION OF FACILITY: \_\_\_\_\_

RECOMMENDED ACTIONS NEEDED: \_\_\_\_\_

DATES ANY MAINTENANCE MUST BE COMPLETED BY: \_\_\_\_\_



8140 PACTON  
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FAX: (586)737-7994  
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(3 WORKING DAYS)  
BEFORE YOU DIG  
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or 811  
CALL811.COM (TOLL FREE)

JOB NAME: RH14026.EXC	JOB NO: RH14-026
DRAWN BY: M. O'CONNOR	DATE: 6/26/16
SCALE: NONE	SHEET: 1 OF 1
SECTION 25 TOWN 3 NORTH RANGE 11 EAST	
CITY/TOWN: ROCHESTER HILLS OAKLAND COUNTY, MI	



**OPERATIONS AND MAINTENANCE GUIDELINES**  
**For the CDS Technologies Models PMSU, PSW & PSWC**  
**CONTINUOUS DEFLECTIVE SEPARATION UNIT**  
**Located at**

## **INTRODUCTION**

The CDS unit is an important and effective component of your storm water management program and proper operation and maintenance of the unit are essential to demonstrate your compliance with local, state and federal water pollution control requirements.

The CDS technology features a patented non-blocking, indirect screening technique developed in Australia to treat water runoff. The unit is highly effective in the capture of suspended solids, fine sands and larger particles. Because of its non-blocking screening capacity, the CDS unit is unmatched in its ability to capture and retain gross pollutants such as trash and debris. In short, CDS units capture a very wide range of organic and in-organic solids and pollutants that typically result in tons of captured solids each year such as: Total suspended solids (TSS) and other sedimentitious materials, oil and greases, trash, and other debris (including floatables, neutrally buoyant, and negatively buoyant debris). These pollutants will be captured even under very high flow rate conditions.

CDS units are equipped with conventional oil baffles to capture and retain oil and grease. Laboratory evaluations show that the CDS units are capable of capturing up to 70% of the free oil and grease from storm water. CDS units can also accommodate the addition of oil sorbents within their separation chambers. The addition of the oil sorbents can ensure the permanent removal of 80% to 90% of the free oil and grease from the storm water runoff.

## **OPERATIONS**

The CDS unit is a non-mechanical self-operating system and will function any time there is flow in the storm drainage system. The unit will continue to effectively capture pollutants in flows up to the design capacity even during extreme rainfall events when the design capacity may be exceeded. Pollutants captured in the CDS unit's separation chamber and sump will be retained even when the units design capacity is exceeded.

## **CDS UNIT CLEANOUT**

The frequency of cleaning the CDS unit will depend upon the generation of trash and debris and sediments in your application. Cleanout and preventive maintenance schedules will be determined based on operating experience unless precise pollutant loadings have been determined. The unit should be periodically inspected to determine the amount of accumulated pollutants and to ensure that the cleanout frequency is adequate to handle the predicted pollutant load being processed by the CDS unit. The recommended cleanout of solids within the CDS unit's sump should occur at 75% of the

sump capacity. However, the sump may be completely full with no impact to the CDS unit's performance.

Access to the CDS unit is typically achieved through two manhole access covers – one allows inspection and cleanout of the separation chamber (screen/cylinder) & sump and another allows inspection and cleanout of sediment captured and retained behind the screen. The PSW & PSWC off-line models have an additional access cover over the weir of the diversion vault. For units possessing a sizable depth below grade (depth to pipe), a single manhole access point would allow both sump cleanout and access behind the screen.

CDS Technologies Recommends The Following:

**NEW INSTALLATIONS** – Check the condition of the unit after every runoff event for the first 30 days. The visual inspection should ascertain that the unit is functioning properly (no blockages or obstructions to inlet and/or separation screen), measuring the amount of solid materials that have accumulated in the sump, the amount of fine sediment accumulated behind the screen, and determining the amount of floating trash and debris in the separation chamber. This can be done with a calibrated “dip stick” so that the depth of deposition can be tracked. Refer to the “Cleanout Schematic” (Appendix B) for allowable deposition depths and critical distances. Schedules for inspections and cleanout should be based on storm events and pollutant accumulation.

**ONGOING OPERATION** – During the rainfall season, the unit should be inspected at least once every 30 days. The floatables should be removed and the sump cleaned when the sump is 75-85% full. If floatables accumulate more rapidly than the settleable solids, the floatables should be removed using a vactor truck or dip net before the layer thickness exceeds one to two feet.

Cleanout of the CDS unit at the end of a rainfall season is recommended because of the nature of pollutants collected and the potential for odor generation from the decomposition of material collected and retained. This end of season cleanout will assist in preventing the discharge of pore water from the CDS® unit during summer months.

**USE OF SORBENTS** – It needs to be emphasized that the addition of sorbents is not a requirement for CDS units to effectively control oil and grease from storm water. The conventional oil baffle within a unit assures satisfactory oil and grease removal. However, the addition of sorbents is a unique enhancement capability special to CDS units, enabling increased oil and grease capture efficiencies beyond that obtainable by conventional oil baffle systems.

Under normal operations, CDS units will provide effluent concentrations of oil and grease that are less than 15 parts per million (ppm) for all dry weather spills where the volume is less than or equal to the spill capture volume of the CDS unit. During wet weather flows, the oil baffle system can be expected to remove between 40 and 70% of the free oil and grease from the storm water runoff.

CDS Technologies only recommends the addition of sorbents to the separation chamber if there are specific land use activities in the catchment watershed that

could produce exceptionally large concentrations of oil and grease in the runoff, concentration levels well above typical amounts. If site evaluations merit an increased control of free oil and grease then oil sorbents can be added to the CDS unit to thoroughly address these particular pollutants of concern.

### Recommended Oil Sorbents

Rubberizer® Particulate 8-4 mesh or OARS™ Particulate for Filtration, HPT4100 or equal. Rubberizer® is supplied by Haz-Mat Response Technologies, Inc. 4626 Santa Fe Street, San Diego, CA 92109 (800) 542-3036. OARS™ is supplied by AbTech Industries, 4110 N. Scottsdale Road, Suite 235, Scottsdale, AZ 85251 (800) 545-8999.

The amount of sorbent to be added to the CDS separation chamber can be determined if sufficient information is known about the concentration of oil and grease in the runoff. Frequently the actual concentrations of oil and grease are too variable and the amount to be added and frequency of cleaning will be determined by periodic observation of the sorbent. As an initial application, CDS recommends that approximately 4 to 8 pounds of sorbent material be added to the separation chamber of the CDS units per acre of parking lot or road surface per year. Typically this amount of sorbent results in a ½ inch to one (1") inch depth of sorbent material on the liquid surface of the separation chamber. The oil and grease loading of the sorbent material should be observed after major storm events. Oil Sorbent material may also be furnished in pillow or boom configurations.

The sorbent material should be replaced when it is fully discolored by skimming the sorbent from the surface. The sorbent may require disposal as a special or hazardous waste, but will depend on local and state regulatory requirements.

### CLEANOUT AND DISPOSAL

A vactor truck is recommended for cleanout of the CDS unit and can be easily accomplished in less than 30-40 minutes for most installations. Standard vactor operations should be employed in the cleanout of the CDS unit. Disposal of material from the CDS unit should be in accordance with the local municipality's requirements. Disposal of the decant material to a POTW is recommended. Field decanting to the storm drainage system is not recommended. Solids can be disposed of in a similar fashion as those materials collected from street sweeping operations and catch-basin cleanouts.

### MAINTENANCE

The CDS unit should be pumped down at least once a year and a thorough inspection of the separation chamber (inlet/cylinder and separation screen) and oil baffle performed. The unit's internal components should not show any signs of damage or any loosening of the bolts used to fasten the various components to the manhole

structure and to each other. Ideally, the screen should be power washed for the inspection. If any of the internal components is damaged or if any fasteners appear to be damaged or missing, please contact CDS Technologies to make arrangements to have the damaged items repaired or replaced:

CDS Technologies, Inc.  
16360 Monterey Road, Suite 250  
Morgan Hill, CA 95037-5406

Phone, Toll Free: (888) 535-7559  
Fax: (408) 782-0721

The screen assembly is fabricated from Type 316 stainless steel and fastened with Type 316 stainless steel fasteners that are easily removed and/or replaced with conventional hand tools. The damaged screen assembly should be replaced with the new screen assembly placed in the same orientation as the one that was removed.

### **CONFINED SPACE**

The CDS unit is a confined space environment and only properly trained personnel possessing the necessary safety equipment should enter the unit to perform particular maintenance and/or inspection activities beyond normal procedure. Inspections of the internal components can, in most cases, be accomplished by observations from the ground surface.

### **RECORDS OF OPERATION AND MAINTENANCE**

CDS Technologies recommends that the owner maintain annual records of the operation and maintenance of the CDS unit to document the effective maintenance of this important component of your storm water management program. The attached **Annual Record of Operations and Maintenance** form (see **Appendix A**) is suggested and should be retained for a minimum period of three years.

APPENDIX A  
ANNUAL RECORD OF  
OPERATIONS & MAINTENANCE

**CDS TECHNOLOGIES  
ANNUAL RECORD  
OF  
OPERATION AND MAINTENANCE**

OWNER \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 OWNER REPRESENTATIVE \_\_\_\_\_ PHONE \_\_\_\_\_

**CDS INSTALLATION:**  
 MODEL DESIGNATION \_\_\_\_\_ DATE \_\_\_\_\_  
 SITE LOCATION \_\_\_\_\_  
 DEPTH FROM COVER TO BOTTOM OF SUMP \_\_\_\_\_  
 VOLUME OF SUMP \_\_\_\_\_ CUYD VOLUME/INCH DEPTH \_\_\_\_\_ CUYD

**INSPECTIONS:**

DATE/INSPECTOR	SCREEN INTEGRITY	FLOATABLES DEPTH	SEDIMENT VOLUME	SORBENT DISCOLORATION

OBSERVATIONS OF FUNCTION: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**CLEANOUT:**

DATE	VOLUME FLOATABLES	VOLUME SEDIMENTS	METHOD OF DISPOSAL OF FLOATABLES, SEDIMENTS, DECANT AND SORBENTS

OBSERVATIONS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**SCREEN MAINTENANCE:**  
 DATE OF POWER WASHING, INSPECTION AND OBSERVATIONS: \_\_\_\_\_  
 \_\_\_\_\_

**CERTIFICATION:**  
 DATE: \_\_\_\_\_ TITLE: \_\_\_\_\_