AGREEMENT FOR MAINTENANCE OF STORM WATER DETENTION SYSTEM

This agreement is made on <u>December 21</u>, 2021, by Tienken Trail Lofts LLC, a Michigan limited liability company, whose address is 44840 Utica Road, Utica, Michigan 48317*("Developer"or "Owner")* and the CITY OF ROCHESTER HILLS (the City), whose address is 1000 Rochester Hills Drive, Rochester Hills, MI 48309.

RECITALS:

WHEREAS, Tienken Trail Lofts LLC owns and occupies the property described in attached **Exhibit A**; and

WHEREAS, Tienken Trail Lofts LLC has proposed, and the City has approved, a storm water drainage and detention system (the system) for the property as described and depicted in the attached **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. <u>Use of the System:</u> Components of the System, including any and all water conveyance, detention and water quality treatment facilities and devices, storm sewer pipe, catch basins, manholes, and swales, 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 Tienken Trail Lofts LLC, or Tienken Trail Lofts LLC's successors, grantees or assigns, in writing that it is no longer necessary to use the detention system 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. Tienken Trail Lofts LLC shall be responsible for the proper maintenance, repair and replacement of the System and any part thereof as detailed in the Maintenance Plan attached as **Exhibit C**.

- B. Proper maintenance of the System shall include, but not limited to: (i) Removing accumulated sediment, trash and debris from the detention system and at inlet pipes; (ii) Maintaining storm sewer and structures;
- (iii) Controlling the effects of erosion; (iv) Inspection and cleaning of the water quality treatment device;
- (v) Inspection of inlet and outlet pipes for structural integrity; (vi) Inspection and cleaning of the storm sewer and catch basins upstream from the detention system; and (vii) Any other maintenance that is reasonable and necessary to facilitate and continue the proper operation and use of the System.

3. Action by City: In the event Tienken Trail Lofts LLC or Tienken Trail Lofts LLC's successors, grantees, or assigns, neglects or fails at any time to properly maintain the System or any part thereof, the City may notify Tienken Trail Lofts LLC or Tienken Trail Lofts LLC'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 Tienken Trail Lofts LLC'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 Tienken Trail Lofts LLC: | Tienken Trail Lofts LLC | | |
|-----------------------------|--|--|--|
| | 44840 Utica Road | | |
| | Utica, Michigan 48317 | | |
| To the City: | Clerk City of Rochester Hills 1000 Rochester Hills Drive Rochester Hills, MI 48309 | | |

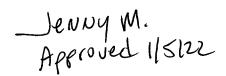
6. <u>Successors and Assigns</u>: This agreement shall bind and inure to the benefit of the parties and their respective successors, grantees and assigns. The rights, obligations and responsibilities hereunder shall run with the land and shall bind all current and future owners of the property.

| /. Recording of Agreement: | inis agreement | snall be | e recorded at the Oakland County | |
|--|-------------------|---------------|---|------------|
| Register of Deeds. | | | | |
| | | | Tienken Trail Lofts LLC | |
| | Print or type na | By: ame: | Brad Byrnes | |
| | | Title: | Managing Member | |
| | | | CITY OF ROCHESTER HILLS | |
| | Ву: | - | Bryan K. Barnett, Mayor | |
| STATE OF MICHIGAN COUNTY OF MACOMB | | | | |
| This agreement was acknowled | ged before me o | n <u>Dece</u> | ember 2 🖟, 2021, by <u>Brad Byrnes</u> who | |
| is the Managing Member of Tienke | n Trail Lofts LLC | , a Micl | nigan limited liability company, on behalf of | |
| the company. | - | | notary publi GCOMB County, Michigan mmission expires: 3-16-2027 | <u>den</u> |
| STATE OF MICHIGAN COUNTY OF OAKLAND | | | | |
| This agreement was acknowledged | before me on _ | | , 20 <u>22</u> , | |
| by Bryan K. Barnett, Mayor, of the | City of Rocheste | r Hills, o | on behalf of the City. | |
| Drafted By: Adele Swann City of Rochester Hills 1000 Rochester Hills Dr. Rochester Hills, MI 48309 | | | notary public County, Michigan | |
| | | Му со | mmission expires: | |
| When Recorded Return to: Clerks Dept. City of Rochester Hills 1000 Rochester Hills Drive Rochester Hills, MI 48309 | | | | |
| Revised 122221 | | | | |

John Staran Approved 1/3/22

PROPERTY DESCRIPTION - TAX I.D. 15-03-451-031

A PART OF THE SOUTHEAST 1/4 OF SECTION 3, TOWN 3 NORTH, RANGE 11 EAST CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT DISTANT S.87*23'30"E. 230.00 FEET, ALONG THE SOUTH LINE OF SAID SECTION 3 FROM THE SOUTH 1/4 CORNER OF SAID SECTION 3; THENCE N.02*34'30"E. 217.80 FEET; THENCE S.87*23'30"E. 157.00 FEET; THENCE S.02*34'30"W. 217.80 FEET; THENCE N.87*23'30"W. 157.00 FEET ALONG SAID SOUTH SECTION LINE TO THE POINT OF BEGINNING.



PREPARED FOR:

SUNBYRNES CONSTRUCTION, LLC 44840 UTICA ROAD UTICA, MICHIGAN 48317 PHONE: 586/997-8500

| | 2043 |
|---------|---------------|
| SCALE | 1"=40' |
| DATE | 12/09/21 |
| REVISIO | N 12/21/21 |
| SHEET_ | 1 of 3 |

JOB NO.

STORM WATER MANAGEMENT SYSTEM MAINTENANCE PLAN



ENVIRONMENTAL ENGINEERS, INC. 18620 WEST TEN MILE ROAD SOUTHFIELD, MICHIGAN 48075 PHONE: 248/424—9510

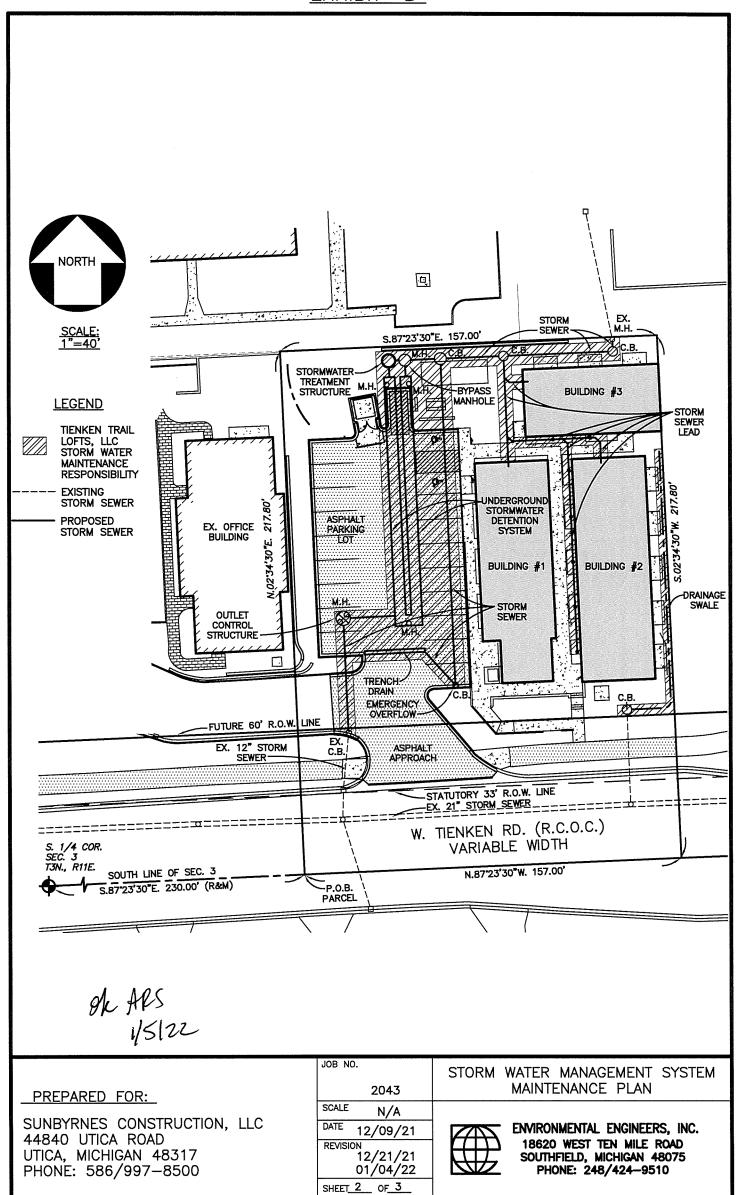


EXHIBIT "C"

OPERATIONS AND MAINTENANCE MANUAL

TIENKEN TRAIL LOFTS, LLC STORMWATER MAINTENANCE PLAN ROCHESTER HILLS, MICHIGAN

PROPERTY OWNER: SUNBYRNES CONSTRUCTION, LLC 44840 UTICA ROAD UTICA, MICHIGAN 48317 Phone: (586) 997-8500 Contact: Mr. Brad Byrnes

Prepared By: Environmental Engineers, Inc. 18620 West 10 Mile Road Southfield, Michigan 48075 Phone: (248) 424-9510 Contact: Paul J. Lewsley, P.E.

December 21, 2021

OR ARS 1/3/22

OPERATION AND MAINTENANCE MANUAL

INTRODUCTION:

This manual identifies the ownership, operation and maintenance responsibilities for all portions of the stormwater management system including the underground detention system, underground storm sewer system, outlet control structure, mechanical pre-treatment device and drainage swales as incorporated into and detailed on the approved Construction Plans as prepared by Environmental Engineers, Inc. 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:

Mr. Brad Byrnes, Managing Member Tienken Trail Lofts, LLC 44840 Utica Road Utica, Michigan 48317

Phone: 586/997-8500

PROPERTY INFORMATION:

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

A part of the Southeast 1/4 of Section 3, Town 3 North, Range 11 East, City of Rochester Hills, Oakland County, Michigan, described as follows: Beginning at a point distant S.87°23′30″E. 230.00 feet, along the south line of said Section 3 from the South 1/4 corner of said Section 3; thence N.02°34′30″E. 217.80 feet; thence S.87°23′30″E. 157.00 feet; thence S.02°34′30″W. 217.80 feet; thence N.87°23′30″W. 157.00 feet along said south section line to the Point of Beginning.

TAX ITEM NO. 15-03-451-031

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
- Stormwater detention system
- Storm sewer structures (manholes, inlets, catch basins, etc.)
- Outlet control structure
- Drainage swales
- Pre-treatment device (CDS Unit)

INSPECTIONS:

The frequency of system inspections outlined in the manual and attached exhibits should be considered the minimum, if events do not 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 system, outlet control structure and pretreatment device 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 of ten (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. 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 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 stormwater 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 can not eliminate the need for maintenance altogether. Maintenance requires a long term commitment of time, money, personnel and equipment. Monitoring the overall performance of the stormwater 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 removes accumulations of sediment and trash that lend to migrate into stormwater management systems during rainfall events. Parking lot sweeping should be performed quarterly or as necessary to limit sediment and trash build-up.

Grass Mowing 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, stormwater 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 stormwater 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.

Stormwater System Maintenance Items:

The following narratives give an overview of the maintenance requirements of the different components of the stormwater 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, Chambers and Structures:

The catch basins, inlets, manholes, outlet control structures, detention chambers and storm 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.

Drainage Swales:

The drainage swales should be kept free of dead leaves and vegetation, trash, debris or any other foreign matter that would inhibit movement of runoff. The swale outlet catch basin should be checked for structural integrity as mentioned above for the storm sewer structures, and any visible signs of erosion or flow bypassing the structure. The planted vegetation within the swale should conform to that shown on the Construction Plans, and any invasive species should be removed from the swale. Regular lawn fertilizing and mowing should occur within the swale. The operation of the swale and the outlet catch basin should be observed during a wet weather event to ensure the proper functioning of the swale. A civil engineer should be retained if problems are thought to exist.

Stormwater Pre-Treatment Device:

Refer to the attached maintenance manual from the manufacturer for all inspection and maintenance requirements for the pre-treatment structure.

The following pages include inspection checklists for the various devices and components listed above as well as the manufacturer's manual for the stormwater pre-treatment structure.

EXHIBIT "C"

| DATE / TIME OF INSPECTION : | | ************************************** | | · | | | | |
|---|--------------------------------|--|---|------------------------------|---------------------------------------|--|--|--|
| INSPECTOR: | | ···· | | | | | | |
| A. Physical Limits of the Storm Water Managem. The storm water management system (SWMS) subject to this I sewers, catch basins, manholes, inlets, treatment structure, un underground detention system to an existing combined sewer i and all of its components as shown in Exhibit B is referred to a | long-teindergroin the a | rm mainte und dete adjacent p | ntion s oublic a | system alley. | n, outlet For the | t contro purpos | ol structure and outlet pipe that conveys flow from the | |
| B. Time Frame for Long-Term Maintenance Responsible Frame Frame for Long-Term Maintenance Responsible For maintaining Tienken and sedimentation control program until Oakland County release commences when defined by the maintenance permit issued by | Trail Louises the | ofts, SWN e construc | ction p | ermit. | Long-te | erm ma | aintenance responsibility for Tienken Trail Lofts, LLC S | |
| C. Manner of Insuring Maintenance Responsibility The Property Owner has assumed responsibility for long-term maintenance activities required by this plan as outlined on Exh description (Exhibit A), the map of the physical limits of the sto the Oakland County Register of Deeds. Upon recording, a cop | m maint nibit C. orm wat | To ensure ter manag | e that ' gemen | Tienke nt syste | en Trail em (Exh | l Lofts, I hibit B) | LLC SWMS is maintained in perpetuity, the property and this maintenance plan (Exhibit C) will be recorded to | |
| D. Long-Term Maintenance Plan and Schedule Table 1 identifies the maintenance activities to be performed, or also identifies site-specific work needed to ensure that the store | | | | | | | | Table 1 |
| STORM WATER MANAG | EMEN | <u> </u> | IEM I | LON | G-TEF | RM M/ | AINTENANCE PLAN | |
| | TS | System Catch Basins, Manholes) | tructure | ystem | ? Outlet Pipe | | | |
| MAINTENANCE | YSTEM COMPONENTS | rm Collection 9 | Storm Water Treatment Structure | Underground Detention System | utlet Control Structure & Outlet Pipe | avement Areas, Others | Frequency | |
| MAINTENANCE ACTIVITIES Inspect For Sediment Accumulation* | _\}S | cs ss | X SS SS | Š | N X | Pa | Annually | |
| Inspect For Sediment Accumulation Inspect For Floatables, Dead Vegetation & Debris | | X | | \vdash | | | Annually & After Major Events | |
| Inspect For Erosion And Integrity of System | | Χ | X | X | X | X | Annually & After Major Events | |
| Inspect All Components During Wet weather Ensure Maintenance Access Remains Open/Clear | | X | X | X | X | X | Annually As needed | |
| Remove Accumulated sediments | | X | X | Ŷ | X | $\uparrow $ | As needed | |
| Remove Floatables, Invasive & Dead Vegetation & Debris | | X | X | | | † | As needed | |
| Sweep Paved Areas, Remove Oil Spills Immediately | | | | | | X | Quarterly & As needed | |
| Structural Repairs Make Adjustments/Repairs to Ensure Proper Functioning | | X | X | X | X | X | As needed | |
| Make Adjustments/Repairs to Ensure Proper Functioning NOTES: *Treatment Structure & Underground Detention S | System | to be clea | X aned v | xhene | X ver sed | X diments | As needed s accumulate to a depth of 6-12 inches, or if | |
| sediment resuspension is observed. SUMMARY: INSPECTOR REMARKS: | | | | | w | | | |
| | | | | | | | | |
| OVEDALL CONDITION OF FACULTY | | | *************************************** | | | | | |
| OVERALL CONDITION OF FACILITY: | | | | | | | | |
| RECOMMENDED ACTIONS NEEDED: | | | | | | | | |
| DATES ANY MAINTENANCE MUST BE COMPLETED BY: _ | | JOB NO. | | | | ļ | | 78 000000000000000000000000000000000000 |
| | • | JUD NÜ. | | 043 | | S. | TORM WATER MANAGEMENT S' MAINTENANCE PLAN | YSTI |
| EPARED FOR: | - | SCALE | | V/A | | | | |
| BYRNES CONSTRUCTION, LLC 40 UTICA ROAD A, MICHIGAN 48317 | L | REVISION | 12/0 | 09/2 | | 1 | ENVIRONMENTAL ENGINEERS, 18620 WEST TEN MILE ROA SOUTHFIELD, MICHIGAN 480 | AD |
| NE: 586/997-8500 | | SHEET 3 | | | | | PHONE: 248/424-9510 | . 🛩 |



CDS® Inspection and Maintenance Guide





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 | Dian | Diameter | | Water Surface diment Pile | Sediment Storage Capacity | |
|-----------|------|----------|------|------------------------------|---------------------------|----------------|
| | i it | m | ft | i di | y³ | m ³ |
| CDS1515 | 3 | 0.9 | 3.0 | 0.9 | 0.5 | 0.4 |
| CDS2015 | 4 | 1.2 | 3.0 | 0.9 | 0.9 | 0.7 |
| CDS2015 | 5 | 1.3 | 3.0 | 0.9 | 1.3 | 1.0 |
| CDS2020 | 5 | 1.3 | 3.5 | 1.1 | 1.3 | 1.0 |
| CDS2025 | 5 | 1.3 | 4.0 | 1.2 | 1.3 | 1.0 |
| CDS3020 | 6 | 1.8 | 4.0 | 1.2 | 2.1 | 1.6 |
| CDS3025 | 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 |
| CDS5640 | 10 | 3.0 | 6.3 | 1.9 | 8.7 | 6.7 |
| CDS5653 | 10 | 3.0 | 7.7 | 2.3 | 8.7 | 6.7 |
| CDS5668 | 10 | 3.0 | 9.3 | 2.8 | 8.7 | 6.7 |
| CDS5678 | 10 | 3.0 | 10.3 | 3.1 | 8.7 | 6.7 |

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

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Contech Engineered Solutions LLC provides site solutions for the civil engineering industry. Contech's portfolio includes bridges, drainage, sanitary sewer, stormwater, earth stabilization and wastewater treament products. For information, visit www.ContechES.com or call 800.338.1122

nothing in this calalog should be construed as an expressed warranty or an implied warranty of merchantability or fitness for any particular purpose. See the contect standard condition of sales (viewable at www.conteches.com/cos) for more information

The product(s) described may be protected by one or more of the following US patents: 5,322,629; 5,624,576; 5,707,527; 5,759,415; 5,788,848; 5,985,157; 6,027,639; 6,350,374; 6,406,218; 6,641,720; 6,511,595; 6,649,048; 6,991,114; 6,998,038; 7,186,058; 7,296,692; 7,297,266; 7,517,450 related foreign patents or other patents pending.



CDS Inspection & Maintenance Log

| CDS Model: | Location: |
|------------|-----------|
| CD3 Model. | LOCATION. |

| Date | Water depth to sediment ¹ | Floatable Layer Thickness ² | Describe Maintenance Performed | Maintenance Personnel | Comments |
|------|--|--|--------------------------------------|--------------------------|----------|
| | | | | | |
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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 the values listed in table 1 the system should be cleaned out. Note: to avoid underestimating the volume of sediment in the chamber, 1. the measuring device must be carefully lowered to the top of the sediment pile.

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. 2.

CDS Maintenance Guide - 7/18 (PDF)