

T. 416.477.3392 cfcrozier.ca

#### SITE SERVICING AND STORMWATER MANAGEMENT MEMO

DATE	January 22, 2025	PROJECT NO.	1651-5095
TO FROM CC	Jay Menary, C.E.T. James Boyd, P.Eng. Jay Heming & Patrick Pearson		TOWN OF CALEDON PLANNING RECEIVED Feb 20, 2025

#### 1.0 INTRODUCTION

C.F. Crozier & Associates Inc. (Crozier) was retained by Lions Group to prepare a Servicing & Stormwater Management Memo to support the Official Plan and Zoning By-law Amendment for 10795 Highway 9, in the Town of Caledon and Region of Peel.

The purpose of this memo is to outline the existing site conditions and operations and justify the feasibility of the proposed Official Plan and Zoning By-law Amendment from an engineering perspective. We will demonstrate that the site's existing servicing and stormwater conditions adequately support the proposed Official Plan and Zoning By-law Amendment. Further discussion and justification concerning the proposed use of the existing buildings and site are provided in the Planning Justification Report prepared by Glen Schnarr & Associates Inc.

The following documents and design standards were used in the preparation of this memo:

- Existing Conditions Plan prepared by Glen Schnarr & Associates Inc. (GSAI), January 21, 2025
- Topographic survey prepared by Avanti Surveying Inc., February 5, 2020
- Region of Peel Public Works Design, Specifications & Procedures Manual for Linear Infrastructure, Sanitary Sewer Design Criteria, March 2017
- Region of Peel Public Works Design, Specifications & Procedures Manual for Linear Infrastructure, Watermain Design Criteria, June 2010
- Town of Caledon Development Standards Manual, Version 5, 2019
- Nottawasaga Valley Conservation Authority Stormwater Technical Guide, December 2013

The material in this memo reflects best judgment in light of the information available at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. C.F. Crozier & Associates Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

#### 2.0 GENERAL SITE DESCRIPTION

The subject property is approximately 3.95 ha and is located in a mixed residential, commercial, agricultural, and industrial use neighbourhood in the Town of Caledon. The site is currently occupied by Lions Demolition, a demolition and abatement business that provides demolition services in the Greater Toronto Area (GTA) (673 m<sup>2</sup>) and business office building (579 m<sup>2</sup>), along with associated open storage, parking, and landscaped areas. We note that the subject property is identified as regulated by the Nottawasaga Valley Conservation Authority (NVCA). The property is currently zoned as A2-ORM, Rural - Oak Ridges Moraine.

The property is bounded by:

- Highway 9 to the north
- Commercial/residential properties to the east
- Forest to the south
- Aggregates facility to the west

#### 3.0 WATER SERVICING

#### 3.1 Existing Water Servicing

Under existing conditions and background review, our understanding of the water services available to the subject property are:

- There is currently no municipal watermain within Highway 9 Right-of-Way
- There is currently no watermain within Tottenham Road Right-of-Way
- The subject property is currently serviced by a private well within the property limits

According to the Region of Peel 2013 Water and Wastewater Master Plan for the Lake Based Systems, March 31, 2014, there are no future proposed water distribution plans extending nearby the subject property. The subject property lies within a rural area with no existing public water services, no future water services are proposed, and the existing facility is serviced by a private well.

Since no Site Plan changes are being proposed in terms of redevelopment, a change in land use permissions will not affect the site water demands, as the site has historically been in use as a demolition and abatement business. Additionally, there are no connections to municipal infrastructure and as such, no municipal water servicing impacts from the existing use.

#### 4.0 SANITARY SERVICING

#### 4.1 Existing Sanitary Servicing

Under existing conditions and background review, our understanding of the sanitary services available to the subject property are:

- There is currently no municipal sanitary sewer within Highway 9 Right-of-Way
- There is currently no municipal sanitary sewer within Tottenham Road Right-of-Way
- The subject property is currently serviced by a private septic system within the property limits

According to the Region of Peel 2013 Water and Wastewater Master Plan for the Lake Based Systems, March 31, 2014, there are no future proposed sanitary sewer plans extending nearby the subject property. The subject property lies within a rural area with no existing public sanitary sewers, no future sanitary sewers are proposed, and the existing conditions are serviced by a private septic system.

Since no Site Plan changes are being proposed in terms of redevelopment, a change in site zoning will not affect the site septic flows, which have historically been supported by the existing septic system. Additionally, there are no connections to municipal infrastructure and no municipal sanitary servicing impacts from the existing use.

#### 5.0 SITE GRADING AND STORMWATER

#### 5.1 Site Drainage and Storm Servicing

The subject property currently consists of an open storage area, accessory to the motor vehicle repair facility, grass and treed area, and two buildings used in the operation of the demolition business. Per the existing survey included within this memo, the subject property generally drains overland from south to north. Also included within this memo is an Existing Site Servicing and Grading Plan (C 01) which shows the external storm sewer network, including the outlet beneath Highway 9. Stormwater for the subject property ultimately outlets to headwaters of the Nottawasaga River.

The subject property has been in operation in a historical capacity without site modifications, however, if approved, minor grading changes could be pursued. Minor grading changes are proposed to capture stormwater from this area. Please refer to the Proposed Grading Plan (C 03) for details. This area is proposed to be captured by a new double catchbasin placed at a low point and treated by an Oil and Grit Separator before being discharged to an infiltration gallery on site. The infiltration galley has been sized to accommodate 225.3 m<sup>3</sup> of dead storage with a drawdown time of 42 hours. Please refer to attachments for further details.

Sincerely,

#### C.F. CROZIER & ASSOCIATES INC.

M. Findlay

Margaret Findlay, E.I.T. Land Development

#### C.F. CROZIER & ASSOCIATES INC.

James Boyd, P.Eng. Project Engineer, Land Development

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# Enclosures

Item #1: Existing Conditions Plan, GSAI, January 21, 2025 Item #2: Sketch of Existing Municipal Storm Service Location, Provided by Lions Group Item #3: Topographic Survey, Avanti Surveying Inc., February 5, 2020 Item #4: Well Records for 10795 Highway 9







# EXISTING CONDITIONS PLAN

## 10795 HIGHWAY 9

PART OF LOT 26, CONCESSION 10 GEOGRAPHIC TOWNSHIP OF ALBION TOWN OF CALEDON REGIONAL MUNICIPALITY OF PEEL

# **Site Statistics**

Subject Lands:3.95ha (9.76ac)Total Building GFA:1,252m² (13,476ft²)Open Storage Area:1.33ha (3.29ac)

# **Parking Statistics**

Parking Spaces Provided:32Barrier Free Space Provided:1Loading Space Provided:1Delivery Space Provided:1

SCALE1:750 JANUARY 21, 2025



## Notes:

Typical Perpendicular Parking Space: 2.75m x 6.0m Typical Barrier Free Space: 3.4m x 6.0m + 1.5m Aisle Typical Loading Space: 3.5m x 14.0m Typical Delivery Space: 3.5m x 9.0m





JB. on X 43030 JTM | GAOI.CODED  $\mathbf{N}$ **Ontario Water Resources Commission Act** The lev. R ECORD `asin .Township, Village, Town or City.... County Lot 26 Date completed Con..... olles **Pumping Test Casing and Screen Record** 67 Inside diameter of casing...... Static level ..... G.P.M. Total length of casing Test-pumping rate s Pumping level. Type of screen Duration of test pumping 41 Length of screen Water clear or cloudy at end of test Depth to top of screen Diameter of finished hole with pump setting of \_\_\_\_\_\_ feet below ground surface Water Record Well Log Depth(s) at Kind of water To ft. From ft. (fresh, salty, sulphur) which water(s) Overburden and Bedrock Record found Ċ Ø 50 0 5 100 105 and and COCHNTY RD #10 For what purpose(s) is the water to be used? **D** Location of Well NORTL TECUMSETH In diagram below show distances of well from Indicate north road and lot line y arrow. Is well on upland, in valley, or on hillside? Uplana 400 Drilling or Boring Firm. 36 BUENA VISTA Address. ORANGEVILLE 941-2783 Phone Licence Number 28 Name of Driller or Boren Address 36 4 Date. Signature of Licensed Drilling or Boring Contractor) Form 7 15M-60-4138 OWRC COPY 095.59 31



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Province:	Ontario		Project Name:	10795 Hwy 9		
City:	Caledon		Project Number:	-		
Nearest Rainfall Station:	BARRIE WPCC		Designer Name:	Brandon O'Leary		
NCDC Rainfall Station Id:	0557		Designer Company:	Forterra		
ears of Rainfall Data:	36		Designer Email:	brandon.oleary@fe	orterrabp.com	
			Designer Phone:	905-630-0359		
site Name:	10795 Hwy 9		EOR Name:	James Boyd		
Drainage Area (ha):	2.4		EOR Company:	C.F. Crozier & Asso	ciates Inc.	
Runoff Coefficient 'c':	0.90		EOR Email:			
arget TSS Removal (%): Required Water Quality Rund	80. off Volume Capture (%): 90.	.0		(155) Load Sizing Si	ummary	
Dil / Fuel Spill Risk Site?		Yes		Stormceptor Model	TSS Removal Provided (%)	
Jpstream Flow Control?		No		EFO4	52	
look Convoyance (maximum				EFO6	67	
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				EFO10	80	
				EFO12	83	
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#### THIRD-PARTY TESTING AND VERIFICATION

**Stormceptor® EF and Stormceptor® EFO** are the latest evolutions in the Stormceptor® oil-grit separator (OGS) technology series, and are designed to remove a wide variety of pollutants from stormwater and snowmelt runoff. These technologies have been third-party tested in accordance with the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators** and performance has been third-party verified in accordance with the **ISO 14034 Environmental Technology Verification (ETV)** protocol.

#### PERFORMANCE

► Stormceptor® EF and EFO remove stormwater pollutants through gravity separation and floatation, and feature a patentpending design that generates positive removal of total suspended solids (TSS) throughout each storm event, including highintensity storms. Captured pollutants include sediment, free oils, and sediment-bound pollutants such as nutrients, heavy metals, and petroleum hydrocarbons. Stormceptor is sized to remove a high level of TSS from the frequent rainfall events that contribute the vast majority of annual runoff volume and pollutant load. The technology incorporates an internal bypass to convey excessive stormwater flows from high-intensity storms through the device without resuspension and washout (scour) of previously captured pollutants. Proper routine maintenance ensures high pollutant removal performance and protection of downstream waterways.

#### PARTICLE SIZE DISTRIBUTION (PSD)

► The **Canadian ETV PSD** shown in the table below was used, or in part, for this sizing. This is the identical PSD that is referenced in the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators** for both sediment removal testing and scour testing. The Canadian ETV PSD contains a wide range of particle sizes in the sand and silt fractions, and is considered reasonably representative of the particle size fractions found in typical urban stormwater runoff.

Particle	Percent Less	Particle Size	Demonst
Size (µm)	Than	Fraction (µm)	Percent
1000	100	500-1000	5
500	95	250-500	5
250	90	150-250	15
150	75	100-150	15
100	60	75-100	10
75	50	50-75	5
50	45	20-50	10
20	35	8-20	15
8	20	5-8	10
5	10	2-5	5
2	5	<2	5



info@imbriumsystems.com

## Stormceptor\*



## Stormceptor\* EF Sizing Report

Rainfall Intensity (mm / hr)	Percent Rainfall Volume (%)	Cumulative Rainfall Volume (%)	Flow Rate (L/s)	Flow Rate (L/min)	Surface Loading Rate (L/min/m²)	Removal Efficiency (%)	Incremental Removal (%)	Cumulative Removal (%)
1	49.5	49.5	6.00	360.0	49.0	92	45.5	45.5
2	9.7	59.2	12.01	721.0	99.0	88	8.5	54.1
3	6.5	65.7	18.01	1081.0	148.0	83	5.4	59.4
4	5.4	71.1	24.02	1441.0	197.0	77	4.2	63.6
5	4.0	75.1	30.02	1801.0	247.0	72	2.9	66.5
6	3.3	78.4	36.03	2162.0	296.0	68	2.2	68.7
7	2.7	81.1	42.03	2522.0	345.0	63	1.7	70.4
8	2.1	83.2	48.04	2882.0	395.0	59	1.2	71.7
9	2.3	85.5	54.04	3243.0	444.0	57	1.3	73.0
10	1.8	87.3	60.05	3603.0	494.0	55	1.0	74.0
11	1.2	88.5	66.05	3963.0	543.0	54	0.6	74.6
12	1.0	89.5	72.06	4323.0	592.0	52	0.5	75.1
13	1.1	90.6	78.06	4684.0	642.0	52	0.6	75.7
14	1.1	91.7	84.07	5044.0	691.0	52	0.6	76.3
15	0.7	92.4	90.07	5404.0	740.0	51	0.4	76.6
16	0.7	93.1	96.08	5765.0	790.0	51	0.4	77.0
17	0.8	93.9	102.08	6125.0	839.0	51	0.4	77.4
18	0.5	94.4	108.09	6485.0	888.0	51	0.3	77.7
19	0.4	94.8	114.09	6845.0	938.0	50	0.2	77.9
20	0.3	95.1	120.10	7206.0	987.0	50	0.2	78.0
21	0.2	95.3	126.10	7566.0	1036.0	50	0.1	78.1
22	0.5	95.8	132.11	7926.0	1086.0	49	0.2	78.4
23	0.5	96.3	138.11	8287.0	1135.0	49	0.2	78.6
24	0.4	96.7	144.12	8647.0	1185.0	48	0.2	78.8
25	0.3	97.0	150.12	9007.0	1234.0	48	0.1	78.9



## Stormceptor\*



## Stormceptor\* EF Sizing Report

Rainfall Intensity (mm / hr)	Percent Rainfall Volume (%)	Cumulative Rainfall Volume (%)	Flow Rate (L/s) (L/min)		Surface Loading Rate (L/min/m²)	Removal Efficiency (%)	Incremental Removal (%)	Cumulative Removal (%)
26	0.2	97.2	156.12	9367.0	1283.0	47	0.1	79.0
27	0.3	97.5	162.13	9728.0	1333.0	47	0.1	79.2
28	0.5	98.0	168.13	10088.0	1382.0	46	0.2	79.4
29	0.1	98.1	174.14	10448.0	1431.0	45	0.0	79.4
30	0.0	98.1	180.14	10809.0	1481.0	44	0.0	79.4
31	0.0	98.1	186.15	11169.0	1530.0	42	0.0	79.4
32	0.2	98.3	192.15	11529.0	1579.0	41	0.1	79.5
33	0.2	98.5	198.16	11890.0	1629.0	40	0.1	79.6
34	0.0	98.5	204.16	12250.0	1678.0	39	0.0	79.6
35	0.2	98.7	210.17	12610.0	1727.0	37	0.1	79.7
36	0.1	98.8	216.17	12970.0	1777.0	36	0.0	79.7
37	0.1	98.9	222.18	13331.0	1826.0	35	0.0	79.8
38	0.1	99.0	228.18	13691.0	1875.0	34	0.0	79.8
39	0.0	99.0	234.19	14051.0	1925.0	34	0.0	79.8
40	0.1	99.1	240.19	14412.0	1974.0	33	0.0	79.8
41	0.0	99.1	246.20	14772.0	2024.0	32	0.0	79.8
42	0.1	99.2	252.20	15132.0	2073.0	31	0.0	79.9
43	0.0	99.2	258.21	15492.0	2122.0	30	0.0	79.9
44	0.0	99.2	264.21	15853.0	2172.0	30	0.0	79.9
45	0.0	99.2	270.22	16213.0	2221.0	29	0.0	79.9
46	0.1	99.3	276.22	16573.0	2270.0	28	0.0	79.9
47	0.0	99.3	282.23	16934.0	2320.0	28	0.0	79.9
48	0.0	99.3	288.23	17294.0	2369.0	27	0.0	79.9
49	0.0	99.3	294.24	17654.0	2418.0	27	0.0	79.9
50	0.0	99.3	300.24	18014.0	2468.0	26	0.0	79.9
Estimated Net Annual Sediment (TSS) Load Reduction =								









#### RAINFALL DATA FROM BARRIE WPCC RAINFALL STATION

#### INCREMENTAL AND CUMULATIVE TSS REMOVAL FOR THE RECOMMENDED STORMCEPTOR® MODEL









Stormceptor EF / EFO	Model Diameter		Min Angle Inlet / Outlet Pipes	Max Inle Diam	Max Inlet Pipe Diameter		Max Outlet Pipe Diameter		Peak Conveyance Flow Rate	
	(m)	(ft)		(mm)	(in)	(mm)	(in)	(L/s)	(cfs)	
EF4 / EFO4	1.2	4	90	609	24	609	24	425	15	
EF6 / EFO6	1.8	6	90	914	36	914	36	990	35	
EF8 / EFO8	2.4	8	90	1219	48	1219	48	1700	60	
EF10 / EFO10	3.0	10	90	1828	72	1828	72	2830	100	
EF12 / EF012	3.6	12	90	1828	72	1828	72	2830	100	

#### Maximum Pipe Diameter / Peak Conveyance

#### SCOUR PREVENTION AND ONLINE CONFIGURATION

Stormceptor® EF and EFO feature an internal bypass and superior scour prevention technology that have been demonstrated in third-party testing according to the scour testing provisions of the Canadian ETV Procedure for Laboratory Testing of Oil-Grit Separators, and the exceptional scour test performance has been third-party verified in accordance with the ISO 14034 ETV protocol. As a result, Stormceptor EF and EFO are approved for online installation, eliminating the need for costly additional bypass structures, piping, and installation expense.

#### **DESIGN FLEXIBILITY**

► Stormceptor<sup>®</sup> EF and EFO offers design flexibility in one simplified platform, accepting stormwater flow from a single inlet pipe or multiple inlet pipes, and/or surface runoff through an inlet grate. The device can also serve as a junction structure, accommodate a 90-degree inlet-to-outlet bend angle, and can be modified to ensure performance in submerged conditions.

#### **OIL CAPTURE AND RETENTION**

► While Stormceptor® EF will capture and retain oil from dry weather spills and low intensity runoff, **Stormceptor® EFO** has demonstrated superior oil capture and greater than 99% oil retention in third-party testing according to the light liquid reentrainment testing provisions of the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators**. Stormceptor EFO is recommended for sites where oil capture and retention is a requirement.







info@imbriumsystems.com

## Stormceptor\*





### Stormceptor\* EF Sizing Report

#### **INLET-TO-OUTLET DROP**

Elevation differential between inlet and outlet pipe inverts is dictated by the angle at which the inlet pipe(s) enters the unit.

0° - 45° : The inlet pipe is 1-inch (25mm) higher than the outlet pipe.

45° - 90° : The inlet pipe is 2-inches (50mm) higher than the outlet pipe.

#### HEAD LOSS

The head loss through Stormceptor EF is similar to that of a 60-degree bend structure. The applicable K value for calculating minor losses through the unit is 1.1. For submerged conditions the applicable K value is 3.0.

#### Pollutant Capacity

Stormceptor EF / EFO	Mo Diam	del eter (ft)	Depth Pipe In Sump	(Outlet vert to Floor) (ft)	Oil Vo	olume	Recom Sedi Maintenar	mended ment nce Depth * (in)	Maxi Sediment	mum Volume * (ft³)	Maxin Sediment	num Mass **
	(m)	(11)	(m)	(11)	(L)	(Gal)	(mm)	(111)	(L)	(11)	(Kg)	(ui)
EF4 / EFO4	1.2	4	1.52	5.0	265	70	203	8	1190	42	1904	5250
EF6 / EFO6	1.8	6	1.93	6.3	610	160	305	12	3470	123	5552	15375
EF8 / EFO8	2.4	8	2.59	8.5	1070	280	610	24	8780	310	14048	38750
EF10 / EFO10	3.0	10	3.25	10.7	1670	440	610	24	17790	628	28464	78500
EF12 / EF012	3.6	12	3.89	12.8	2475	655	610	24	31220	1103	49952	137875

\*Increased sump depth may be added to increase sediment storage capacity

\*\* Average density of wet packed sediment in sump =  $1.6 \text{ kg/L} (100 \text{ lb/ft}^3)$ 

Feature	Benefit	Feature Appeals To
Patent-pending enhanced flow treatment and scour prevention technology	Superior, verified third-party performance	Regulator, Specifying & Design Engineer
Third-party verified light liquid capture	Proven performance for fuel/oil hotspot	Regulator, Specifying & Design Engineer,
and retention for EFO version	locations	Site Owner
Functions as bend, junction or inlet structure	Design flexibility	Specifying & Design Engineer
Minimal drop between inlet and outlet	Site installation ease	Contractor
Large diameter outlet riser for inspection and maintenance	Easy maintenance access from grade	Maintenance Contractor & Site Owner

#### STANDARD STORMCEPTOR EF/EFO DRAWINGS

For standard details, please visit http://www.imbriumsystems.com/stormwater-treatment-solutions/stormceptor-ef

#### STANDARD STORMCEPTOR EF/EFO SPECIFICATION

For specifications, please visit http://www.imbriumsystems.com/stormwater-treatment-solutions/stormceptor-ef



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#### STANDARD PERFORMANCE SPECIFICATION FOR "OIL GRIT SEPARATOR" (OGS) STORMWATER QUALITY TREATMENT DEVICE

#### PART 1 - GENERAL

#### 1.1 WORK INCLUDED

This section specifies requirements for selecting, sizing, and designing an underground Oil Grit Separator (OGS) device for stormwater quality treatment, with third-party testing results and a Statement of Verification in accordance with ISO 14034 Environmental Management – Environmental Technology Verification (ETV).

#### 1.2 REFERENCE STANDARDS & PROCEDURES

ISO 14034:2016 Environmental management – Environmental technology verification (ETV)

Canadian Environmental Technology Verification (ETV) Program's **Procedure for Laboratory Testing of Oil-Grit Separators** 

#### 1.3 SUBMITTALS

1.3.1 All submittals, including sizing reports & shop drawings, shall be submitted upon request with each order to the contractor then forwarded to the Engineer of Record for review and acceptance. Shop drawings shall detail all OGS components, elevations, and sequence of construction.

1.3.2 Alternative devices shall have features identical to or greater than the specified device, including: treatment chamber diameter, treatment chamber wet volume, sediment storage volume, and oil storage volume.

1.3.3 Unless directed otherwise by the Engineer of Record, OGS stormwater quality treatment product substitutions or alternatives submitted within ten days prior to project bid shall not be accepted. All alternatives or substitutions submitted shall be signed and sealed by a local registered Professional Engineer, based on the exact same criteria detailed in Section 3, in entirety, subject to review and approval by the Engineer of Record.

#### PART 2 – PRODUCTS

#### 2.1 OGS POLLUTANT STORAGE

The OGS device shall include a sump for sediment storage, and a protected volume for the capture and storage of petroleum hydrocarbons and buoyant gross pollutants. The minimum sediment & petroleum hydrocarbon storage capacity shall be as follows:

2.1.1 4 ft (1219 mm) Diameter OGS Units:
6 ft (1829 mm) Diameter OGS Units:
8 ft (2438 mm) Diameter OGS Units:
10 ft (3048 mm) Diameter OGS Units:
12 ft (3657 mm) Diameter OGS Units:

 $\begin{array}{l} 1.19 \ m^{3} \ sediment \ / \ 265 \ L \ oil \\ 3.48 \ m^{3} \ sediment \ / \ 609 \ L \ oil \\ 8.78 \ m^{3} \ sediment \ / \ 1,071 \ L \ oil \\ 17.78 \ m^{3} \ sediment \ / \ 1,673 \ L \ oil \\ 31.23 \ m^{3} \ sediment \ / \ 2,476 \ L \ oil \\ \end{array}$ 



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#### PART 3 – PERFORMANCE & DESIGN

#### 3.1 GENERAL

The OGS stormwater quality treatment device shall be verified in accordance with ISO 14034:2016 Environmental management – Environmental technology verification (ETV). The OGS stormwater quality treatment device shall remove oil, sediment and gross pollutants from stormwater runoff during frequent wet weather events, and retain these pollutants during less frequent high flow wet weather events below the insert within the OGS for later removal during maintenance. The Manufacturer shall have at least ten (10) years of local experience, history and success in engineering design, manufacturing and production and supply of OGS stormwater quality treatment device systems, acceptable to the Engineer of Record.

#### 3.2 SIZING METHODOLOGY

The OGS device shall be engineered, designed and sized to provide stormwater quality treatment based on treating a minimum of 90 percent of the average annual runoff volume and a minimum removal of an annual average 60% of the sediment (TSS) load based on the Particle Size Distribution (PSD) specified in the sizing report for the specified device. Sizing shall be determined using historical rainfall data and a sediment removal performance curve derived from the actual third-party verified laboratory testing data. The OGS device shall also have sufficient annual sediment storage capacity as specified and calculated in Section 2.1.

#### 3.3 CANADIAN ETV or ISO 14034 ETV VERIFICATION OF SCOUR TESTING

The OGS device shall have Canadian ETV or ISO 14034 ETV Verification of third-party scour testing conducted in accordance with the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators.** 

3.3.1 To be acceptable for on-line installation, the OGS device must demonstrate an average scour test effluent concentration less than 10 mg/L at each surface loading rate tested, up to and including 2600 L/min/m<sup>2</sup>.

#### 3.4 LIGHT LIQUID RE-ENTRAINMENT SIMULATION TESTING

The OGS device shall have Canadian ETV or ISO 14034 ETV Verification of completed third-party Light Liquid Re-entrainment Simulation Testing in accordance with the Canadian ETV **Program's Procedure for Laboratory Testing of Oil-Grit Separators,** with results reported within the Canadian ETV or ISO 14034 ETV verification. This reentrainment testing is conducted with the device pre-loaded with low density polyethylene (LDPE) plastic beads as a surrogate for light liquids such as oil and fuel. Testing is conducted on the same OGS unit tested for sediment removal to assess whether light liquids captured after a spill are effectively retained at high flow rates.

3.4.1 For an OGS device to be an acceptable stormwater treatment device on a site where vehicular traffic occurs and the potential for an oil or fuel spill exists, the OGS device must have reported verified performance results of greater than 99% cumulative retention of LDPE plastic beads for the five specified surface loading rates (ranging 200 L/min/m2 to 2600 L/min/m2) in accordance with the Light Liquid Re-entrainment Simulation Testing within the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators.** However, an OGS device shall not be allowed if the Light Liquid Re-entrainment Simulation Testing was performed with screening components within the OGS device that are effective at retaining the LDPE plastic beads, but would not be expected to retain light liquids such as oil and fuel.



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#### STANDARD PERFORMANCE SPECIFICATION FOR "OIL GRIT SEPARATOR" (OGS) STORMWATER QUALITY TREAMENT DEVICE

#### PART 1 – GENERAL

#### 1.1 WORK INCLUDED

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#### 1.2 REFERENCE STANDARDS & PROCEDURES

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	10ft (3048mm) Diameter OGS Units:	17.78m <sup>3</sup> sediment / 1,673L oil
	12ft (3657mm) Diameter OGS Units:	31.23m <sup>3</sup> sediment / 2,476L oil

#### PART 3 – PERFORMANCE & DESIGN

#### 3.1 <u>GENERAL</u>

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## We've got you covered!

### Forterra Stormceptor<sup>®</sup> Products now include a 5 year Quality Assurance Program.

Maintenance costs for Forterra's industry leading line of Stormceptor<sup>®</sup> products are already much lower than competitive stormwater quality devices. Now we've sweetened the deal by introducing a new Quality Assurance Program that covers maintenance for up to 5 years.

#### Improving products, improving service.

We've recently expanded our already impressive line of Stormceptor® products with the addition of the Stormceptor® EF series – *simply the most cost competitive stormwater quality device on the market*. Now we're improving our service by taking care of the maintenance on our entire Stormceptor product line for 5 years after installation.

At Forterra, we understand that maintaining a high standard of water quality is crucial to the environment and to our lives. That's why, for the past 10 years, we've included a 2 year maintenance plan with every Stormceptor unit sold. As maintenance becomes more of a focus for many municipalities, we felt it was time to strengthen the program even further. We are now offering a complimentary 5 year maintenance program with every Stormceptor unit to ensure water quality continues to be at its best.

#### Stormceptor® Quality Assurance Program

Based on initial inspection results, there are two ways to ensure Stormceptor® performance:

#### First way (5 years, no cleaning)

- Six inspections over a 5 year period, with no cleaning required
- First inspection at 6 months, inspections every 12 months thereafter for 5 years
- Oil and sediment levels are documented along with maintenance recommendations, if necessary

#### Second way (2.5 years, with cleaning)

- Initial inspection and one post construction sediment cleaning at 6 months
- Two additional annual inspections, resulting in the unit being maintained for the first 30 months (2.5 years)

## We're taking care of your maintenance needs so you can focus on your next project. Trust Forterra to help you weather the storm.





