Stormwater Management Report
1913-1925-1949 Devonshire Crt.
24-Unit Residential Development

Prepared for

Agbaba Holdings

Windsor, ON

Prepared by

GS ENGINEERING

Milena Stevanov, P.Eng.

September 15, 2025

Project E251172

Rev.	Date	Description
0	25/09/15	Initial Issue
A	25/06/05	Client Review

This engineering report has been prepared for **Agbaba Holdings**, **Windsor, ON**, for their purposes.

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Appendices

1 INTRODUCTION

GS Engineering Inc. (GSE) was retained by Agbaba Holdings to prepare a stormwater management report for the proposed development at 1913-1925-1949 Devonshire Court in Windsor ON. The property is located on the southeast corner of Kildare Rd. and Devonshire Court in the area known as Walkerville in Windsor, Ontario. The existing site is three separate parcels, totalling approximately 2,146 m2 (0.53 acres) in area, with a total frontage of 52.4 m (172 ft) along Devonshire Court, and an exterior side lot line length of 41.1 m (135 ft) along Kildare Road. The existing site is currently vacant land. City of Windsor areal photos show building previously on the property demolished sometime between 2017 and 2019. See Image 1 for an aerial map of the subject property. The proposed development will consist of 8 rowhome residential units, with each two accessory dwelling units on each rowhome property. The total building footprint is 1,195 m2 (12,859 ft2) and associated parking and landscaping. See Appendix B for the proposed site plan.

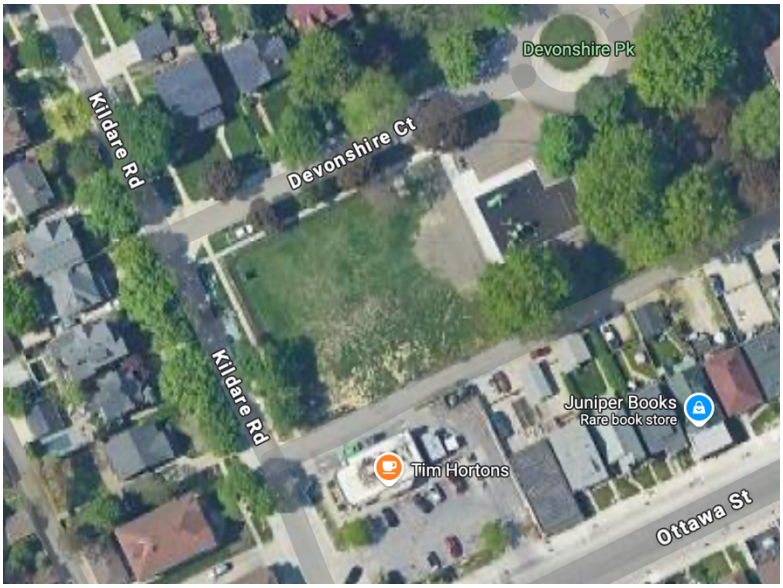


Image 1: Aerial Map of Subject Property - 1913-1925-1949 Devonshire Crt .

The stormwater outflow from the proposed development is assumed to outlet to the Combined Sewer: 2C143_2C453 in the alley between Devonshire Crt. and Ottawa St. Municipal records indicate this sewer is a 375 mm x 500 mm egg shaped brick pipe, currently in service. This sewer is a part of the Windsor Area Drainage and leads to the 2RO916 Storm Outlet. See Image 2 for the municipal storm sewers surrounding the subject property.

Image 2: Municipal storm sewers servicing 1913-1925-1949 Devonshire Crt.

2 SCOPE OF WORK

This report will establish the allowable release rate for the site, the stormwater storage quantity requirements and the quality requirements to be submitted as part of the site plan control application for this development and determine the feasibility of a stormwater management system on this site.

3 DESIGN CRITERIA

The design criteria for the stormwater management system on this site are based on the City of Windsor Development Manual (2015), the Ministry of Environment (MOE) Stormwater Management Planning and Design Manual (2003) and the Windsor-Essex Region Stormwater Management Standards Manual (2018) (WERSMSM).

3.1 Quantity Control

The rational method is used to evaluate the flow of stormwater onto the site due to a storm event. Since the property is under 2 ha in area, the rational method is appropriate for use per the WERSMSM 2018. Since this proper is services by a combined sewer, the allowable release rate is to be established to not exceed the pre-development outflow for a 2-year storm. The storage requirements are determined by evaluating the difference between

inflow of stormwater onto the site, less the outflow of water off the site. The inflow is calculated using the modified rational method with the use of a 100-year runoff coefficient (C-Value) as defined by the WERSMSM 2018, the 100-year storm event. The outflow is set as the allowable release rate.

No backwater conditions have been considered for this site yet as site grade and pipe elevations have not been established. The final stormwater management system design will take into consideration backwater conditions once site elevations are available and established.

3.1.1 Site Pre-Development Conditions

The existing site is vacant land. City of Windsor areal photos show building previously on the property demolished sometime between 2017 and 2019. The system design will consider a pre-development coefficient of 0.2, the run-off coefficient of undeveloped grass on clay soil.

3.1.2 Time of Concentration

The time of concentration for the site is calculated using the formula:

$$T_c = t_{sheet} + t_{shallow} + t\_concentrated$$

The time of concentration for the site is calculated as 19.6 minutes. See Appendix B for the detailed calculation. The time of concentration of the site is less than two times the maximum inlet time for this site, which allows for the rational method to be used. The maximum inlet time is 15 minutes per WERSMSM 2018 graph 3.2.2.6.

3.1.3 Rainfall Intensity

The rainfall intensity-duration-frequency curve used with the rational method is as defined in the WERSMSM 2018 section 3.2.1:

$$I = \frac{a}{(T + b)^c}$$

Where I is the rainfall intensity in mm/hr, and T is the time of concentration in minutes, a, b, and c are as defined in Table 1.

Table 1: IDF Curve Parameters per WERSWMSM 2018

Return Period (Years)	2	100
a	854	2375
b	7	11.0
c	0.818	0.861

3.2 Quality Control

Stormwater runoff to be treated on site will be treated to a "Normal" protection level. Suspended solids removal will be implemented via settling and hydrodynamic separation to a "Normal" protection level. A minimum of 90% of the total runoff volume will be captured and treated to a minimum overall removal efficiency of 70% suspended solids removal based on the MOE 1994 Typical Particle Size Distribution.

4 MODELLING

4.1 Allowable Release Rate

The proposed site is to outlet to the storm sewer on Clairview Ave. The allowable release rate is calculated using the rational formula where;

$$Q = C * I * A,$$

C is the pre-development runoff coefficient, 0.2, I is the rainfall intensity for a 1:5-year design storm based on the ERCA rainfall intensity chat from City of Windsor Airport Data, at a time of concentration of 10.5 minutes, and a site area of A.

The allowable release rate of stormwater is established to be 6.95 L/s [0.25 cfs].

4.2 Stormwater Storage Requirements

The quantity of stormwater required to be stored on site is established by calculating the difference between inflow and outflow from the site. The inflow rate is calculated using the modified rational method 100-year runoff coefficient as defined by the WERSMSM 2018, and the 100-year rainfall intensity. The 100-year runoff coefficient is 0.94. The outflow is held constant as the allowable release rate. The quantity of stormwater to be stored is evaluated for each step during the storm event until the storage volume required is zero. The size of the storage system is taken as the largest value. See Appendix B for the detailed calculation. The site stormwater management system must have a minimum storage

volume of 97,518 L [3444 ft^3]. Of this volume, 5,615 L is contributed from the first 32mm of rainfall and must be stored underground.

This does not consider the backwater conditions. The final detailed design will consider the HGL at the municipal receiver. Should backwater conditions exist and reduce the outflow to less than the allowable release rate, the storage volume will need to increase.

The proposed method of storage for the stormwater on site is surface ponding in the parking area, with underground stormwater storage under the parking area.

There will be coordination with the building designed to ensure the lowest building opening is at least 300mm above the 100-yr storage elevation.

4.3 Outflow Restriction

The outflow of water from the site will be controlled with an orifice with a minimum diameter of 4 in. Should the orifice not restrict the flow adequately, a flow restrictor device, such as the Tempest Inlet Control device, will be used. In the situation where the detention system must be lower to allow for adequate ground cover, a manhole with a pump will be implemented. The pump will restrict the outflow.

4.4 Stormwater Quality Treatment

Proposed on the site is the use of the Canadian Infrastructure Products (CIP) Hydrostrom hydrodynamic sparator. A sizing has been done for this system to remove at least 80% of TSS at a flow rate of 6.95 L/s [0.25 cfs]. The proposed unit is the HS 4. The removal efficiency summary report is in Appendix D.

4.5 Site Elevation

The spot elevations in the vicinty of the parcels are 183.43m, 183.48m, 183.58m, 183.94m. These elevations are from the City of Windsor Mapp My City sewer maps. They have not been measured by a topographic survey. The combined sewer has an elevation of 180.3m to 179.80m. Therefore, there is about 3m of elevation available for the site system which is feasible for an underground storage system.

5 RECOMMENDATIONS

This study has established design criteria for the stormwater management system at 1913-1925-1949 Devonshire Court. Based on the analysis performed, the following are the design requirements of the system:

- An allowable release rate of 6.95 L/s [0.25 cfs]
- A storage volume of 97,518 L [3444 ft^3] with 5,615 L stored not by ponding in parking area
- Stormwater quality treatment to 70% TSS removed with 90% of total runoff volume captured

The final detailed design of the stormwater management system will take into consideration the elevation of the site and pipes, and backwater conditions to establish the HGL of the system. The building lowest opening will be coordinated with the stormwater design to maintain 300mm freeboard to the 100-year water elevation. The storm drain connection shall be connected to the sanitary drain connection by way of a wye connection within the right-of-way.

6 CONCLUSION

Based on the design criteria established, stormwater management system components have been preliminarily selected for the design. To maintain the allowable release rate, an orifice, flow restrictor device, or pump will be used. Adequate volume for storage is provided by ponding on the parking surface at a maximum depth of 150mm and underground storage in the parking area. Water quality treatment to remove at least 70% TSS from total runoff will be done with the CIP Hydrostrom hydrodynamic sparator.

Based on the above assessment and design strategy, it is established that the proposed development at 1913-1925-1949 Devonshire Court is feasible from a stormwater management perspective. As a result, the site development will not have a negative impact on the municipal system.

Should you have any questions, please contact the office.

Respectfully Submitted,

GS Engineering Inc.

Milena Stevanov, P.Eng.
Principal Engineer

Limitations and Disclaimer

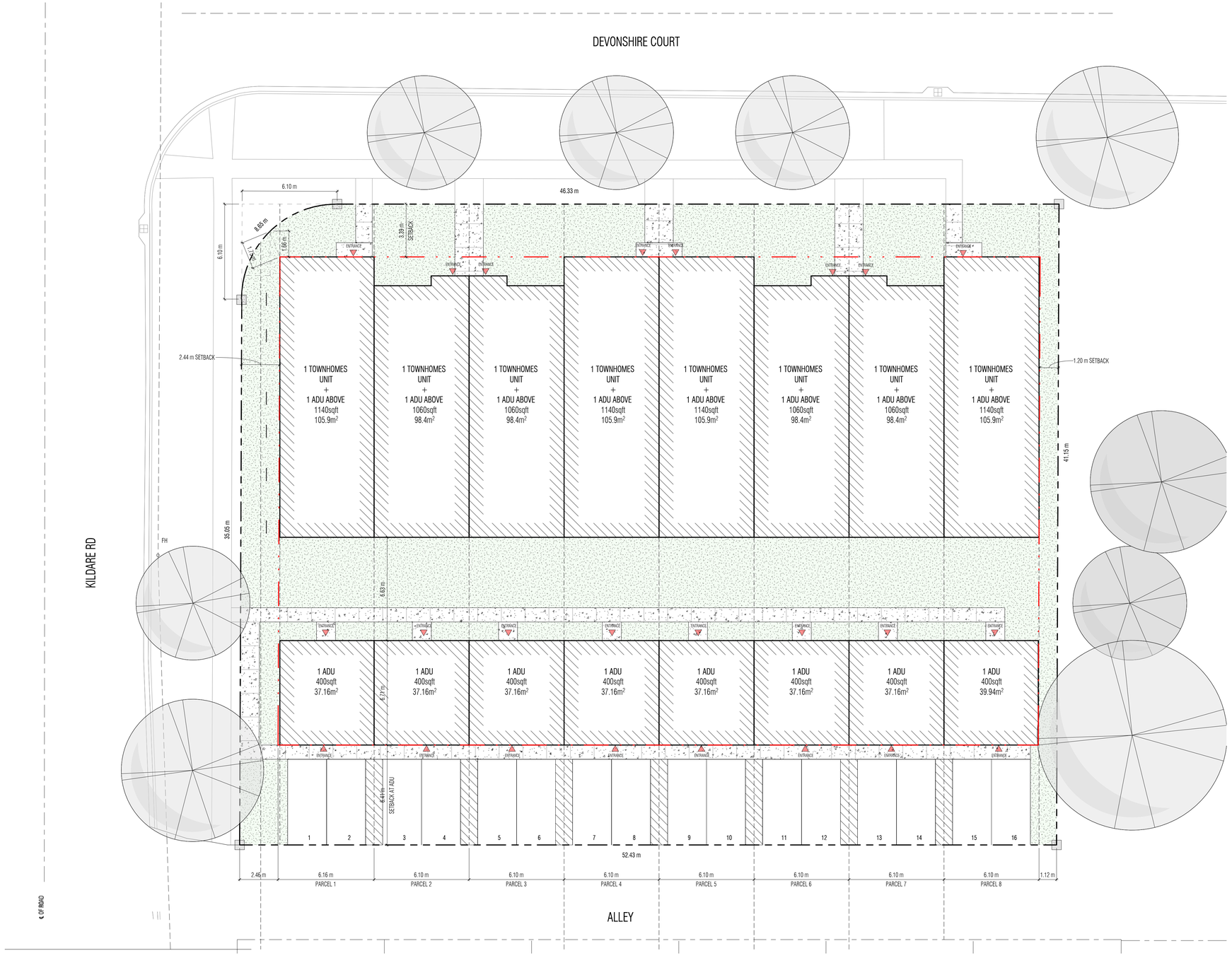
This report reflects the judgment of the author based on the facts and information available at the time this report was prepared.

This report has been prepared for the use of our client only. Use of this report by a third party is only permitted with the written permission of GSE. Any damages suffered by third parties as a result of decision or action taken based on this report are the sole responsibility of the third party taking such decisions or actions.

The fees charged for the preparation of this report are for the work prepared to date including the conclusion and opinion rendered. There is no allowance for further investigation or consultation.

Appendix A

Proposed Site Plan



1 SP01 **SITE PLAN**
3/32" = 1'-0"

SITE DATA MATRIX

PROJECT DESCRIPTION:

2 STOREY TOWNHOME BUILDING WITH ADU UNITS AT REAR AND SECOND FLOOR

☒ NEW ☐ ADDITION
☐ ALTERATION ☐ CHANGE OF USE

OBC REFERENCE

☒ PART 3 ☒ PART 9 ☐ PART 11

ARCHITECT SEAL

ZONING DESIGNATION:		RD1.1			
MAJOR OCCUPANCY:		RESIDENTAL			
BUILDING CLASSIFICATION:		GROUP C			
SITE AREA		**BUILDING AREA**		**GROSS AREA**	
EXISTING:	2149.67m²	EXISTING:	0m²	EXISTING:	0m²
PROPOSED:	2149.67m²	PROPOSED:	SEE SITE PLAN	PROPOSED:	SEE SITE PLAN
TOTAL:	2149.67m²	TOTAL:	SEE SITE PLAN	TOTAL:	SEE SITE PLAN
LOT COVERAGE		**LOT FRONTAGE**		**BUILDING HEIGHT**	
MAX:	45%	MIN:	24m	MAXIMUM:	9m
PROVIDED:	52%	PROVIDED:	46.33m	PROVIDED:	9m
MINIMUM FRONT YARD DEPTH		**MINIMUM REAR YARD DEPTH**		**MINIMUM SIDE YARD DEPTH**	
MAXIMUM:	6m	REQUIRED:	7.5m	MIN:	1.20m
PROVIDED:	3.39m	PROVIDED:	7.5m	PROVIDED:	1.20m
PARKING		**BICYCLE SPACES**		**LOADING SPACES**	
USE CLASSIFICATION		EXISTING:	0	EXISTING:	0
EXISTING:	0	PROPOSED:	0	PROPOSED:	0
REQUIRED:	**TOWNHOME** 1/ UNIT	REQUIRED:	0	REQUIRED:	0
		TOTAL:	0	TOTAL:	0
PROPOSED:	**TOWNHOME** 1/ UNIT 8 UNITS X 1 8= PARKING SPOTS				
TOTAL:	**TOWNHOME** 1/ UNIT 8 UNITS X 1 =16 PARKING SPOTS PROVIDED				
LANDSCAPE AREA		**AMENITY SPACE**		**SCREENING FENCE LENGTH**	
EXISTING:	N/A	REQUIRED:	N/A	EXISTING:	AS SHOWN
PROPOSED:	N/A	PROPOSED:	N/A	PROPOSED:	N/A
TOTAL:	N/A	TOTAL:	N/A	TOTAL:	N/A

NOTE:

1. ALL EXTERIOR PATHS OF TRAVEL SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 80.23 OF ONTARIO REGULATIO 191/11 TO THE ACCESSIBILITY FOR ONTARIONS WITH DISABILITIES ACT AND SECTIONS 3.8.1.3 AND 3.8.3.2 OF THE ONTARIO BUILDING CODE

2. ALL CURB RAMPS SHALL BE CONSTRUCTURED IN ACCORDANCE WITH SECTION 80.26(1) OF THE ONTARIO REGULATION 191/11 TO THE ACCESSIBILITY FOR ONTARIOANS WITH DSIABILITIES ACT AND SECTION 3.8.3.18 OF THE ONTARIO BUILDING CODE..

3. ALL BARRIER FREE/ ACCESSIBLE PARKING SPOTS TO HAVE SIGNAGE AS PER ONTARIO ACCESSIBLE PARKING WITH PERSONS WITH DISABILITIES

UNIT 1
TYPE A
1140 SQFT

UNIT 2
TYPE B
1100 SQFT

UNIT 3
TYPE B
1100 SQFT

UNIT 4
TYPE C
1140 SQFT

UNIT 5
TYPE C
1140 SQFT

UNIT 6
TYPE B
1100 SQFT

UNIT 7
TYPE B
1100 SQFT

UNIT 8
TYPE A
1140 SQFT

1 FP01 **FIRST FLOOR PLAN**
1/8" = 1'-0"

ADU
429sqft
37.16m²

ADU
429sqft
37.16m²

ADU
429sqft
37.16m²

ADU
429sqft
37.16m²

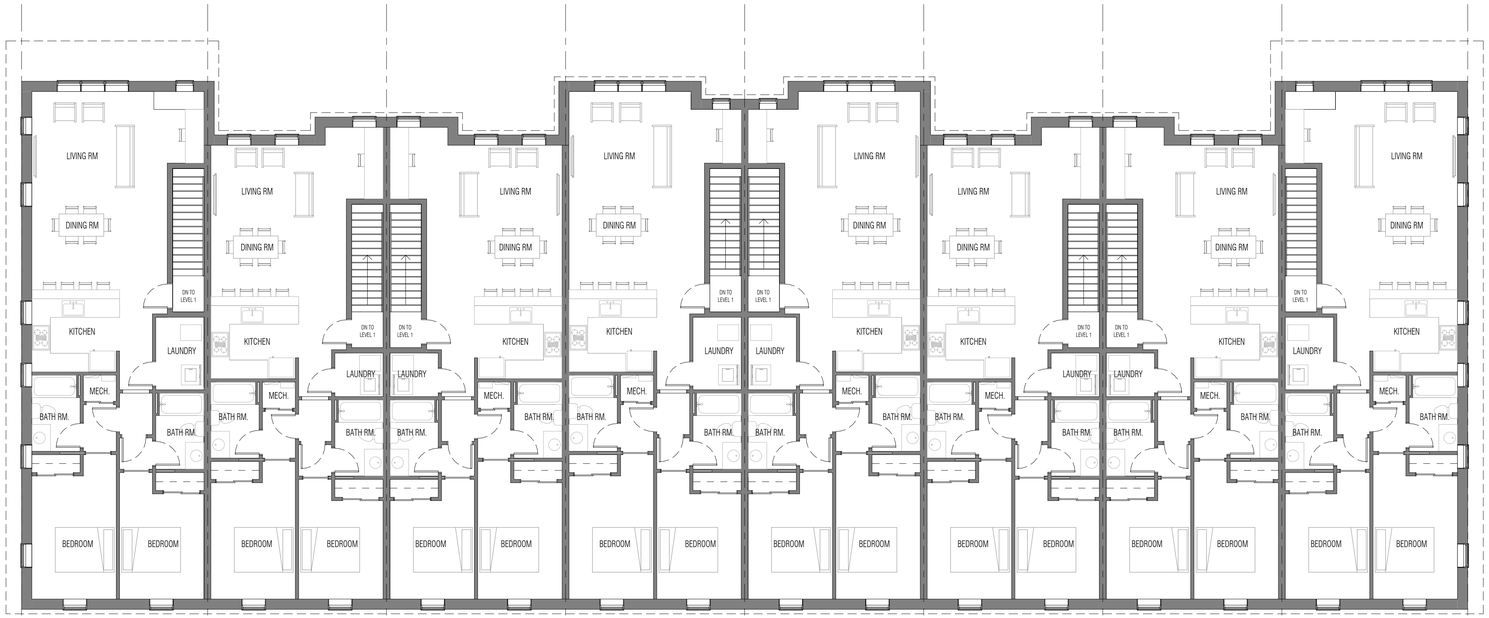
ADU
429sqft
37.16m²

ADU
429sqft
37.16m²

ADU
429sqft
37.16m²

ADU
400sqft
37.16m²

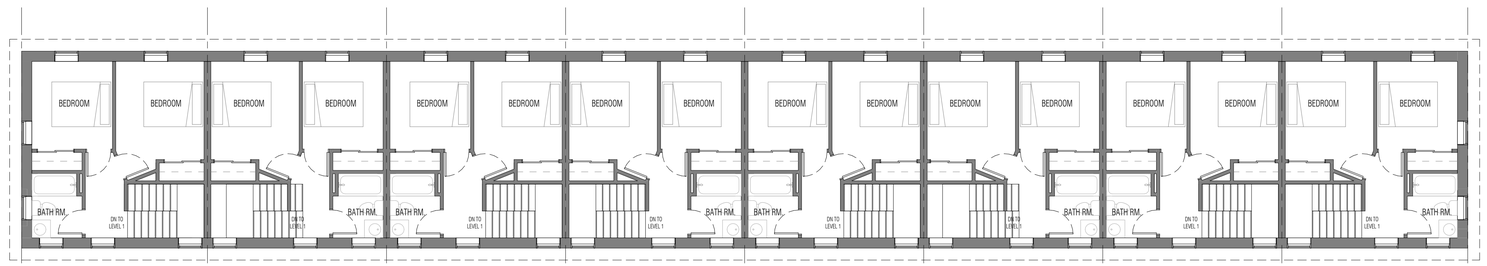
2 FP01 **FIRST FLOOR PLAN - ADU**
1/8" = 1'-0"



ADU UNIT TYPE D 1275 SQFT | ADU UNIT TYPE E 1100 SQFT | ADU UNIT TYPE E 1100 SQFT | ADU UNIT TYPE F 1100 SQFT | ADU UNIT TYPE F 1100 SQFT | ADU UNIT TYPE E 1100 SQFT | ADU UNIT TYPE E 1100 SQFT | ADU UNIT TYPE D 1275 SQFT

1 FP02 SECOND FLOOR PLAN

1/8" = 1'-0"



ADU 429sqft 39.94m² | ADU 429sqft 37.16m² | ADU 429sqft 37.16m² | ADU 429sqft 37.16m² | ADU 429sqft 37.16m² | ADU 429sqft 37.16m² | ADU 429sqft 37.16m² | ADU 400sqft 39.94m²

2 FP02 SECOND FLOOR PLAN ADU

1/8" = 1'-0"

mas meloche architecture studio

AGBABA

DEVONSHIRE DEVELOPMENT

SECOND FLOOR PLAN

FP02

Appendix B

Preliminary Stormwater Management Calculations

Preliminary Stormwater Management

- Calculation -

Project Name: **1913-1925-1949 Devonshire Crt.** Project Number: **E25172**

Sheet ID: **A** Rev: **1** Designer: **M. Stevanov** Date: **25/05/29** Page: **1/5**

Inputs

Site Conditions

Site area and development conditions

0.530 acre (2146 m^2) Total Site Area (include area units acres, ft^2, m^2, etc.)

2 Pre-development storm event (2 or 5) for outflow restriction

100 Post development storm event

Pre-development Run-off Coefficient

Calculation of C based on existing site areas.

Select the area type		Area			C
Roof	0	0 m^2	###		0.95
Concrete	0	0 m^2	###		0.95
Grass - clay soil	23098 ft^2	2145.9 m^2	100%		0.20
Check Sum	0 sf		100%		0.20

C based on receiving sewer design. Used for the site design

Grass - clay soil 0.2 C_{pre} *Runoff Coefficient*

Time of Concentration

0.01 Average slope of the ground from the furthest point to the outlet

52.4 m (171.916 ft) Sheet flow Length

0 m (0 ft) shallow flow length

0 m (0 ft) Concentrated flow length

0.497 m/s Concentrated flow velocity, Pipe Size 10 in , Flow Rate 25.2 L/s

$Tc = t_{sheet} + t_{shallow} + t_{concentrated} = 19.624$ Time of concentration.

$$t_{sheet} = \frac{6.92 * \left(\frac{Site_{length1}}{1\ m}\right)^{0.6} * 0.17^{0.6}}{\left(\left(\frac{RainfallIntensity.I\left(T_{t,sheet,trial}, Y_{pre}\right) * 1\ hr}{1\ mm}\right)^{0.4} * Site_{slope1}^{0.3}\right)} = 19.62$$

T_t_sheet_trial = 17.65

$$t_{shallow} = \frac{\frac{Site_{shallow}}{1\ m}}{60 * 0.619 * 0.02^{0.5}} = 0$$

$$t_{concentrated} = \frac{\frac{Site_{concentrated}}{V_{concentrated}}}{1\ min} = 0$$

19.6 Time of Concentration in minutes

Flow (Q)

Flow is based on the rational formula of C*I*A

$Q(C, T, A, y) = C * \left(RainfallIntensity.I(T, y)\right) * A$

Pre Development Peak Flow Rate

$Q_{pre} = Q\left(C_{pre}, T_{cr}, Area_{site}, Y_{pre}\right) = Q(0.2, 19.6, 0.530\ acre, 2)$

0.2454 cfs 6.9489 L/s 2-year storm

Post Development Conditions

Enter the area and runoff coefficient for the various areas into the table below. Check sum subtracts the areas entered from the total site area. Adjust the area entries for the four areas till check sum to equal zero.

Select the area type	Area			C	C_mod
Roof	12859 ft^2	1194.7 m^2	55.7%	0.95	0.95
Concrete	4486 ft^2	416.8 m^2	19.4%	0.95	0.95

Grass - clay soil	5750 ft^2	534.2 m^2	24.9%	0.20	0.90
Check Sum	2.33 sf		100%	0.76	0.94

0.76	Post development site average runoff coefficient
0.94	Post development modified site average runoff coefficient
	(See WE SWM Standards Manual 3.3.2.2)

Saturated Soil Run-off Coefficient (WE SWM Standards Manual 3.3.2.1)

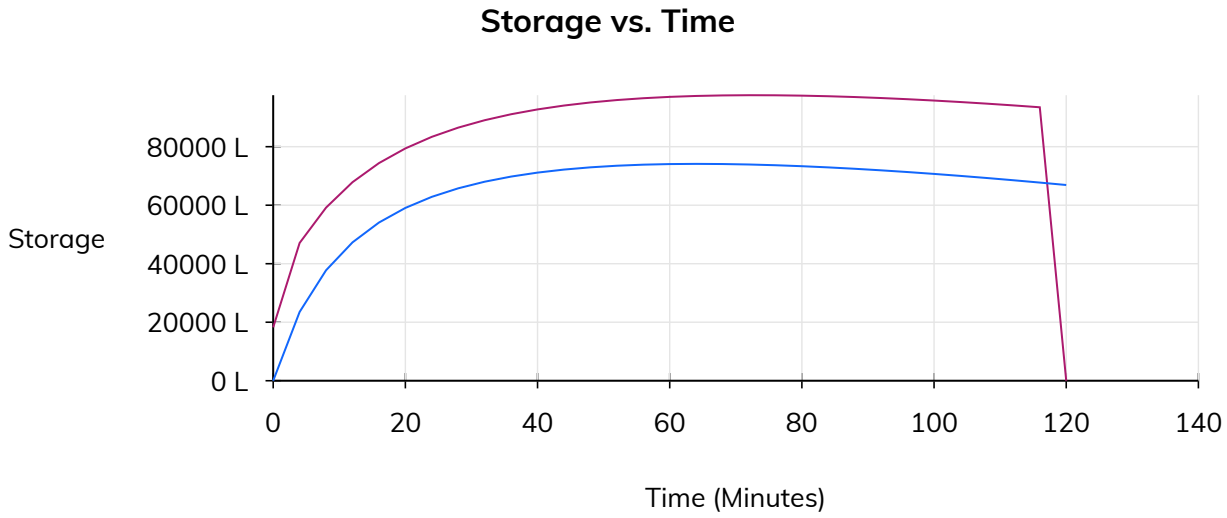
Group D	Select the Soil group for the area. - Brookstone Clay
75	Enter Number to represent the soil imperviousness

$$\text{SatStorageDepth} = \begin{cases} 11 + 0.95 * \text{Soil}_{imp} & \text{if Soil}_{Group} == \text{"Group A"} \\ 12 + 0.94 * \text{Soil}_{imp} & \text{if Soil}_{Group} == \text{"Group B"} \\ 50 + 0.56 * \text{Soil}_{imp} & \text{if Soil}_{Group} == \text{"Group C"} * 1\ \text{mm} = 96.781\ \text{mm} \\ 72 + 0.33 * \text{Soil}_{imp} & \text{if Soil}_{Group} == \text{"Group D"} \\ \text{"Enter Data"} & \text{otherwise} \end{cases}$$

$$C_{GrassSat} = \frac{\text{SatStorageDepth}}{108\ \text{mm}} = 0.896$$

Required Storage

Volume of storage required is calculated as Qin-Qout for each time step.



Return Period	Required Storage		Required Storage
100sat	97528 L	97.52825 m^3	3444 ft^3

Volume required to be stored underground

$$V_{out,parking} = \left(\frac{32\ mm}{4\ hr}\right) * T_{cr} * 1\ min * Area_{site} = 5615\ L$$

Stress Test Run off

$$V_{StressTest} = 1.75\ \frac{mm}{hr} * T_{cr} * 1\ min * Area_{site} = 1228.247\ L$$

Post Development Storage Requirements

4 Time Step

100 year storm with C_100 (saturated soil)

Time Step (minutes)	Intensity 5 Year Storm	Qin	Volumn In	Volumn Out	Volume to be Stored
0			0 L	0 L	
4	149 mm/hr	82.99 L/s	19918 L	1668 L	18250 L
8	118 mm/hr	105.08 L/s	50437 L	3335 L	47101 L
12	99 mm/hr	89.14 L/s	64180 L	5003 L	59177 L
16	85 mm/hr	77.64 L/s	74539 L	6671 L	67868 L
20	75 mm/hr	68.94 L/s	82724 L	8339 L	74386 L
24	68 mm/hr	62.10 L/s	89420 L	10006 L	79413 L
28	61 mm/hr	56.57 L/s	95042 L	11674 L	83368 L
32	56 mm/hr	52.01 L/s	99862 L	13342 L	86520 L
36	52 mm/hr	48.18 L/s	104062 L	15010 L	89052 L
40	48 mm/hr	44.91 L/s	107772 L	16677 L	91095 L
44	45 mm/hr	42.08 L/s	111088 L	18345 L	92743 L
48	43 mm/hr	39.61 L/s	114078 L	20013 L	94066 L
52	40 mm/hr	37.44 L/s	116798 L	21680 L	95118 L
56	38 mm/hr	35.50 L/s	119290 L	23348 L	95941 L
60	36 mm/hr	33.77 L/s	121586 L	25016 L	96570 L
64	35 mm/hr	32.22 L/s	123714 L	26684 L	97030 L
68	33 mm/hr	30.81 L/s	125695 L	28351 L	97343 L
72	32 mm/hr	29.52 L/s	127547 L	30019 L	97528 L
76	30 mm/hr	28.35 L/s	129286 L	31687 L	97600 L
80	29 mm/hr	27.28 L/s	130924 L	33355 L	97570 L
84	28 mm/hr	26.28 L/s	132472 L	35022 L	97450 L
88	27 mm/hr	25.37 L/s	133939 L	36690 L	97249 L
92	26 mm/hr	24.52 L/s	135332 L	38358 L	96974 L
96	26 mm/hr	23.73 L/s	136659 L	40025 L	96633 L
100	25 mm/hr	22.99 L/s	137925 L	41693 L	96232 L
104	24 mm/hr	22.30 L/s	139135 L	43361 L	95775 L
108	23 mm/hr	21.65 L/s	140295 L	45029 L	95267 L
112	23 mm/hr	21.04 L/s	141408 L	46696 L	94712 L
116	22 mm/hr	20.47 L/s	142478 L	48364 L	94114 L
120	21 mm/hr	19.93 L/s	143508 L	50032 L	93476 L
MAX				**3444 cf**	**97,528 L**

x5 yIN5 yOUT yIN100 ySTORE5 ySTORE100

Preliminary Stormwater Management

- Rainfall Intensity -

Rainfall Intensity (I)

Rainfall intensity chart (*Idata*) based on City of Windsor Airport data (*Table 3.2.1.1*).

year	2	5	10	25	50	100
A	854	1259	1511	1851	2114	2375
B	7	8.8	9.5	10.2	10.6	11
C	0.818	0.838	0.845	0.852	0.858	0.861

Rainfall intensity formula based on the A, B, and C values extracted from the chart and T is in minutes with the results forced to mm/hr.

$$I(T, y) := \left(\frac{A(y)}{(T + B(y))^{C(y)}} \right) * \left(1 \frac{mm}{hr} \right)$$

$A(y)$ = Hlookup(y, Idata.B1 : G4, 2) Extract the A value from the chart

$B(y)$ = Hlookup(y, Idata.B1 : G4, 3) Extract the B value from the chart

$C(y)$ = Hlookup(y, Idata.A1 : G4, 4) Extract the C value from the chart

MTO Intensity (I_{mto})

An alternate method using the MTO data and the Gumbel method. The following data is from the MTO information for the Windsor Airport

year	2	5	10	25	50	100
A	24.1	31.8	36.9	43.2	48	52.7
B	-0.699	-0.699	-0.699	-0.699	-0.699	-0.699

In the Gumbel formula the time T is in hours and AA and BB are extracted from the MTO table above

$$I_{mto}(T, y) = AA(y) * \left(\frac{T}{60} \right)^{BB(y)} * 1 \frac{mm}{hr}$$

$AA(y)$ = Hlookup(y, MTOIDF.A1 : G3, 2) Extract of A value from MTO IDF table

$BB(y)$ = Hlookup(y, MTOIDF.A1 : G3, 3) Extract of B value from MTO IDF table

Curves for other areas in Ontario may be found on the MTO website [MTO IDF Website]

Appendix C

Proposed Stormwater Management System Layout

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	

Advanced Drainage Systems, Inc.

SiteAssist™
FOR STORMTECH
INSTALLATION INSTRUCTIONS
VISIT OUR APP

1913-1925-1949 DEVONSHIRE CRT.

WINDSOR, ONTARIO, USA

SC-800 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-800.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 750 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
10. MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
11. ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-800 SYSTEM

1. STORMTECH SC-800 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 3" (75 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #3, 357, 4, 467, 5, 56, OR 57.
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-800 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-800 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/SC-800/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT

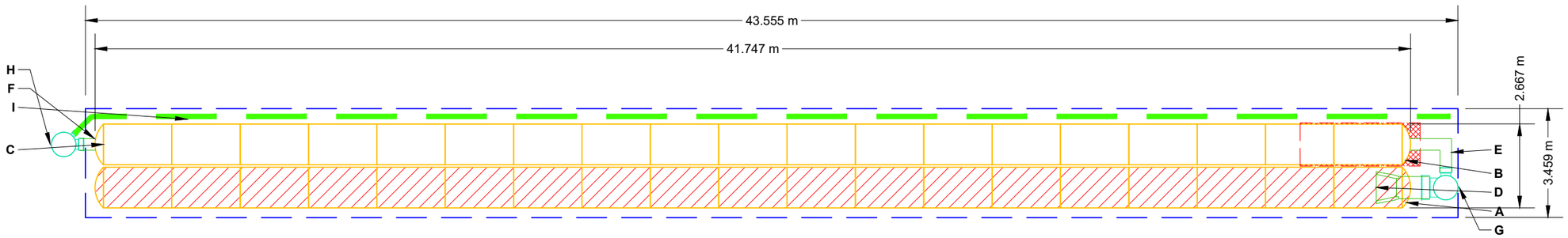
38	STORMTECH SC-800 CHAMBERS
4	STORMTECH SC-800 END CAPS
152	STONE ABOVE (mm)
152	STONE BELOW (mm)
40	STONE VOID
101.8	INSTALLED SYSTEM VOLUME (m^3) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)
150.7	SYSTEM AREA (m^2)
94.0	SYSTEM PERIMETER (m)

CONCEPTUAL ELEVATIONS

MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	3.429
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	1.524
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	1.372
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	1.372
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	1.372
TOP OF STONE:	1.143
TOP OF SC-800 CHAMBER:	0.991
300 mm x 300 mm TOP MANIFOLD INVERT:	0.518
600 mm ISOLATOR ROW PLUS INVERT:	0.211
300 mm BOTTOM CONNECTION INVERT:	0.193
BOTTOM OF SC-800 CHAMBER:	0.152
UNDERDRAIN INVERT:	0.000
BOTTOM OF STONE:	0.000

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED EZ END CAP	A	600 mm BOTTOM PREFABRICATED EZ END CAP, PART#: SC800ECEZ / TYP OF ALL 600 mm BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	58 mm	
PRE-CORED END CAP	B	300 mm TOP PRE-CORED END CAP, PART#: SC800EPE12TPC / TYP OF ALL 300 mm TOP CONNECTIONS	366 mm	
PRE-CORED END CAP	C	300 mm BOTTOM PRE-CORED END CAP, PART#: SC800EPE12BPC / TYP OF ALL 300 mm BOTTOM CONNECTIONS	41 mm	
FLAMP	D	INSTALL FLAMP ON 600 mm ACCESS PIPE / PART#: SC80024RAMP		
MANIFOLD	E	300 mm x 300 mm TOP MANIFOLD, ADS N-12	366 mm	
PIPE CONNECTION	F	300 mm BOTTOM CONNECTION	41 mm	
NYLOPLAST (INLET W/ ISO PLUS ROW)	G	750 mm DIAMETER (610 mm SUMP MIN)		65 L/s IN
NYLOPLAST (OUTLET)	H	750 mm DIAMETER (DESIGN BY ENGINEER)		57 L/s OUT
UNDERDRAIN	I	150 mm ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		



ISOLATOR ROW PLUS
(SEE DETAIL)

PLACE MINIMUM 3.810 m OF ADSPLUS625 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES

- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- **NOT FOR CONSTRUCTION**: THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

1913-1925-1949 DEVONSHIRE CRT.
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StormTech®
Chamber System

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HILLIARD, OH 43026
1-800-733-7473

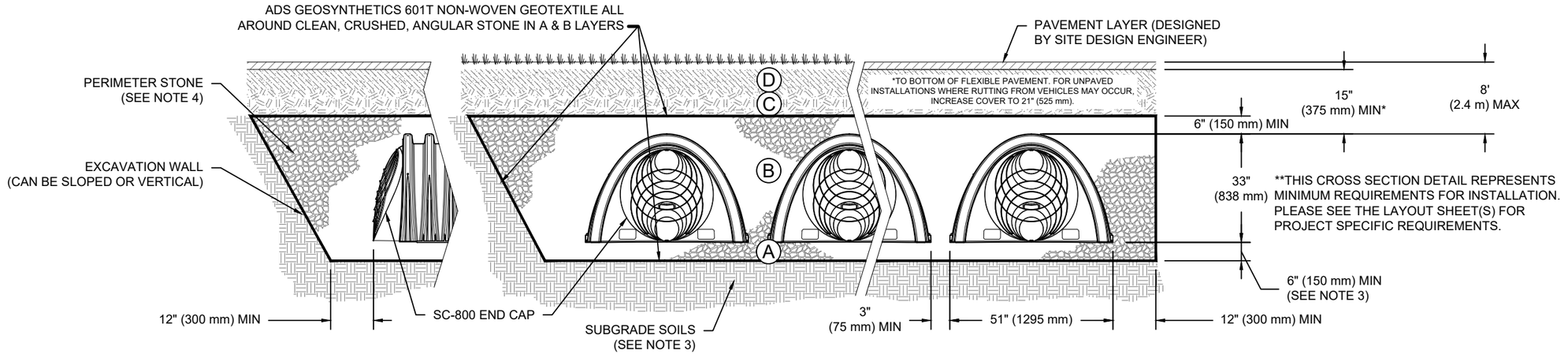
SCALE = 1 : 150

SHEET
2 OF 6

ACCEPTABLE FILL MATERIALS: STORMTECH SC-800 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 15" (375 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[5]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-800 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 750 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

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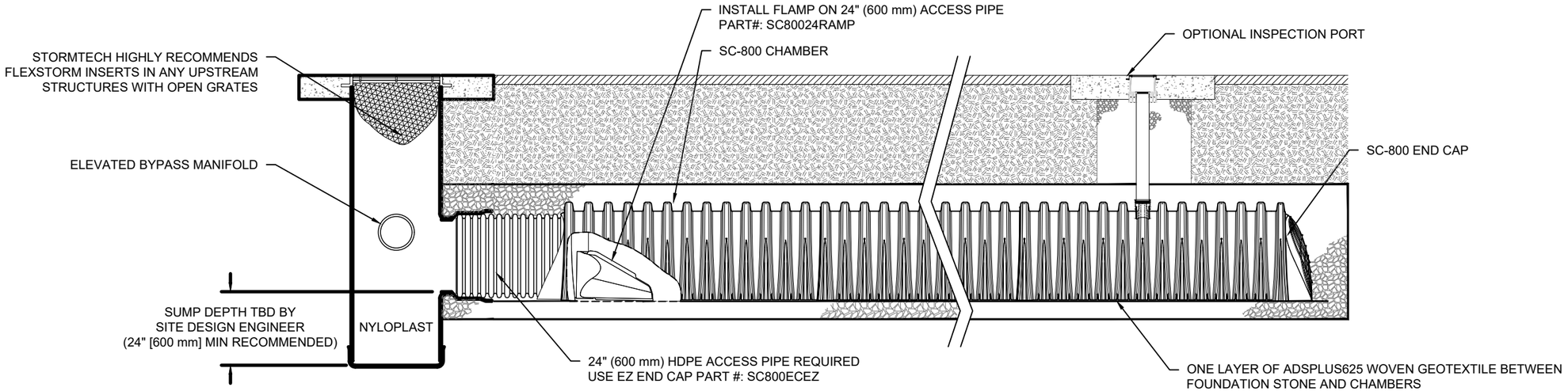

SC-800 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.

2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

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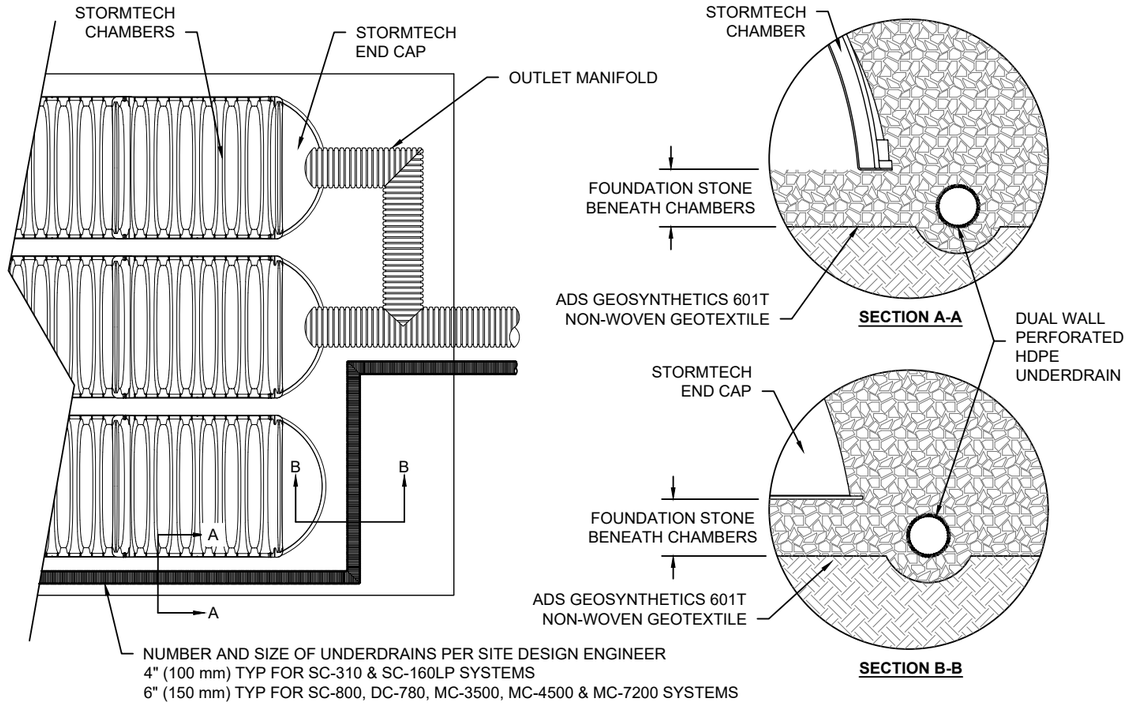
UNDERDRAIN DETAIL

NTS



SC-800 TECHNICAL SPECIFICATION

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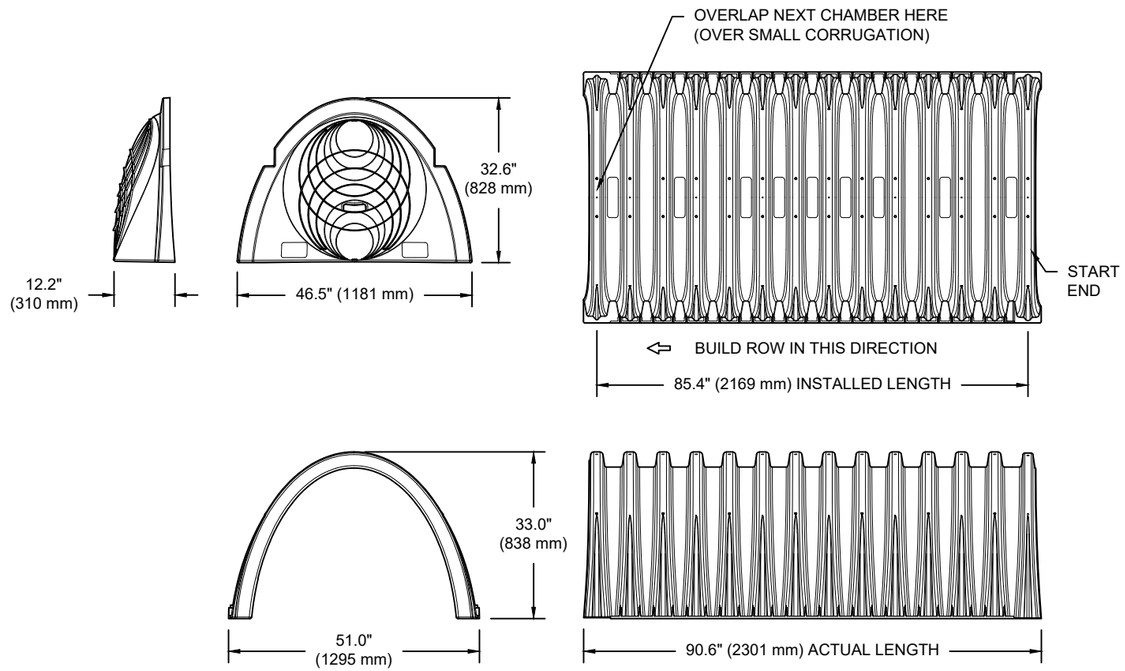


NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	51.0" X 33.0" X 85.4"	(1295 mm X 838 mm X 2169 mm)
CHAMBER STORAGE	50.6 CUBIC FEET	(1.43 m³)
MINIMUM INSTALLED STORAGE*	78.4 CUBIC FEET	(2.22 m³)
WEIGHT	81.8 lbs.	(37.1 kg)

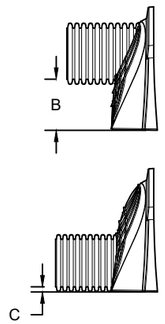
NOMINAL END CAP SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	46.5" X 32.6" X 10.5"	(1181 mm X 828 mm X 267 mm)
END CAP STORAGE	3.4 CUBIC FEET	(0.09 m³)
MINIMUM INSTALLED STORAGE**	14.7 CUBIC FEET	(0.42 m³)
WEIGHT	15.7 lbs.	(7.1 kg)

* ASSUMES 6" (150 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS, 3" (75 mm) BETWEEN CHAMBERS
**ASSUMES 6" (150 mm) STONE ABOVE AND BELOW END CAPS, 3" (150 mm) BETWEEN ROWS, 12" (300 mm) BEYOND END CAPS

PRE-CORED HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "BPC"
PRE-CORED HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "TPC"

PART #	STUB	B	C
SC800EPE06TPC	6" (150 mm)	21.4" (544 mm)	---
SC800EPE06BPC		---	0.9" (23 mm)
SC800EPE08TPC	8" (200 mm)	19.2" (488 mm)	---
SC800EPE08BPC		---	1.0" (25 mm)
SC800EPE10TPC	10" (250 mm)	17.0" (432 mm)	---
SC800EPE10BPC		---	1.2" (30 mm)
SC800EPE12TPC	12" (300 mm)	14.4" (366 mm)	---
SC800EPE12BPC		---	1.6" (41 mm)
SC800EPE15TPC	15" (375 mm)	11.3" (287 mm)	---
SC800EPE15BPC		---	1.7" (43 mm)
SC800EPE18TPC	18" (450 mm)	8.0" (203 mm)	---
SC800EPE18BPC		---	2.0" (51 mm)
SC800EPE24BPC	24" (600 mm)	---	2.3" (58 mm)
SC800EPE	NONE	SOLID END CAP	



NOTE: ALL DIMENSIONS ARE NOMINAL

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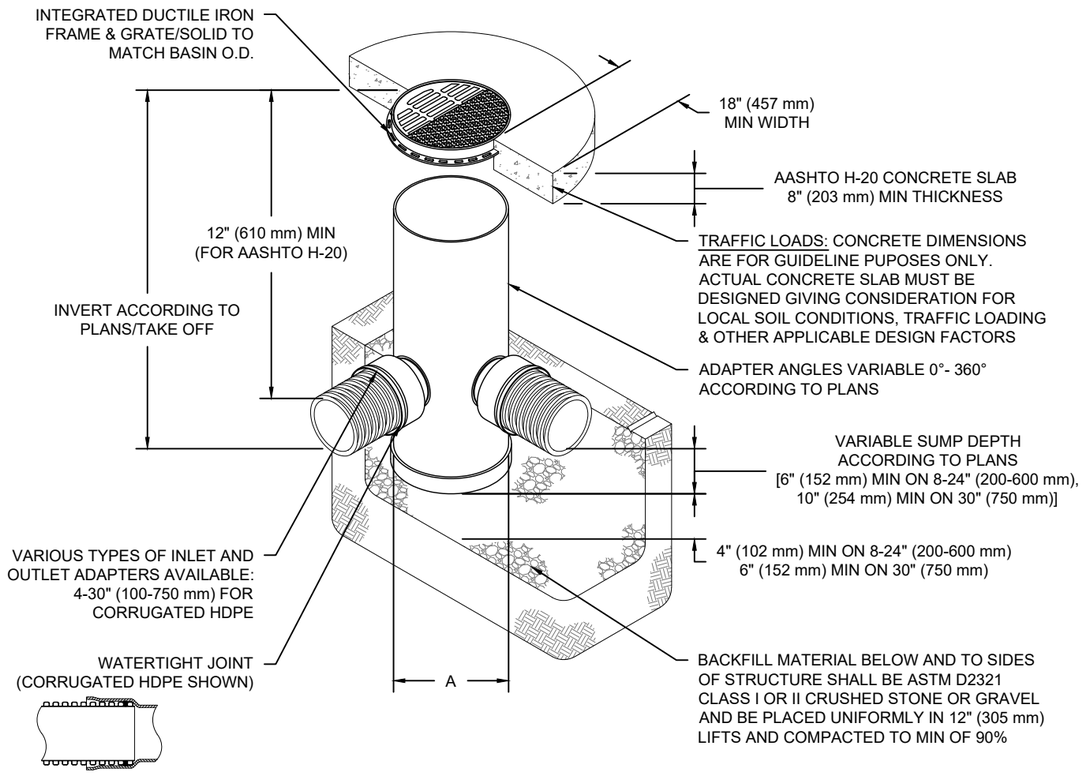
NYLOPLAST DRAIN BASIN

NTS



NOTES

1. 8-30" (200-750 mm) GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
2. 12-30" (300-750 mm) FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS
4. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC
5. FOR COMPLETE DESIGN AND PRODUCT INFORMATION: **WWW.NYLOPLAST-US.COM**
6. TO ORDER CALL: **800-821-6710**

A	PART #	GRATE/SOLID COVER OPTIONS		
8" (200 mm)	2808AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
10" (250 mm)	2810AG	PEDESTRIAN LIGHT DUTY	STANDARD LIGHT DUTY	SOLID LIGHT DUTY
12" (300 mm)	2812AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
15" (375 mm)	2815AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
18" (450 mm)	2818AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
24" (600 mm)	2824AG	PEDESTRIAN AASHTO H-10	STANDARD AASHTO H-20	SOLID AASHTO H-20
30" (750 mm)	2830AG	PEDESTRIAN AASHTO H-20	STANDARD AASHTO H-20	SOLID AASHTO H-20

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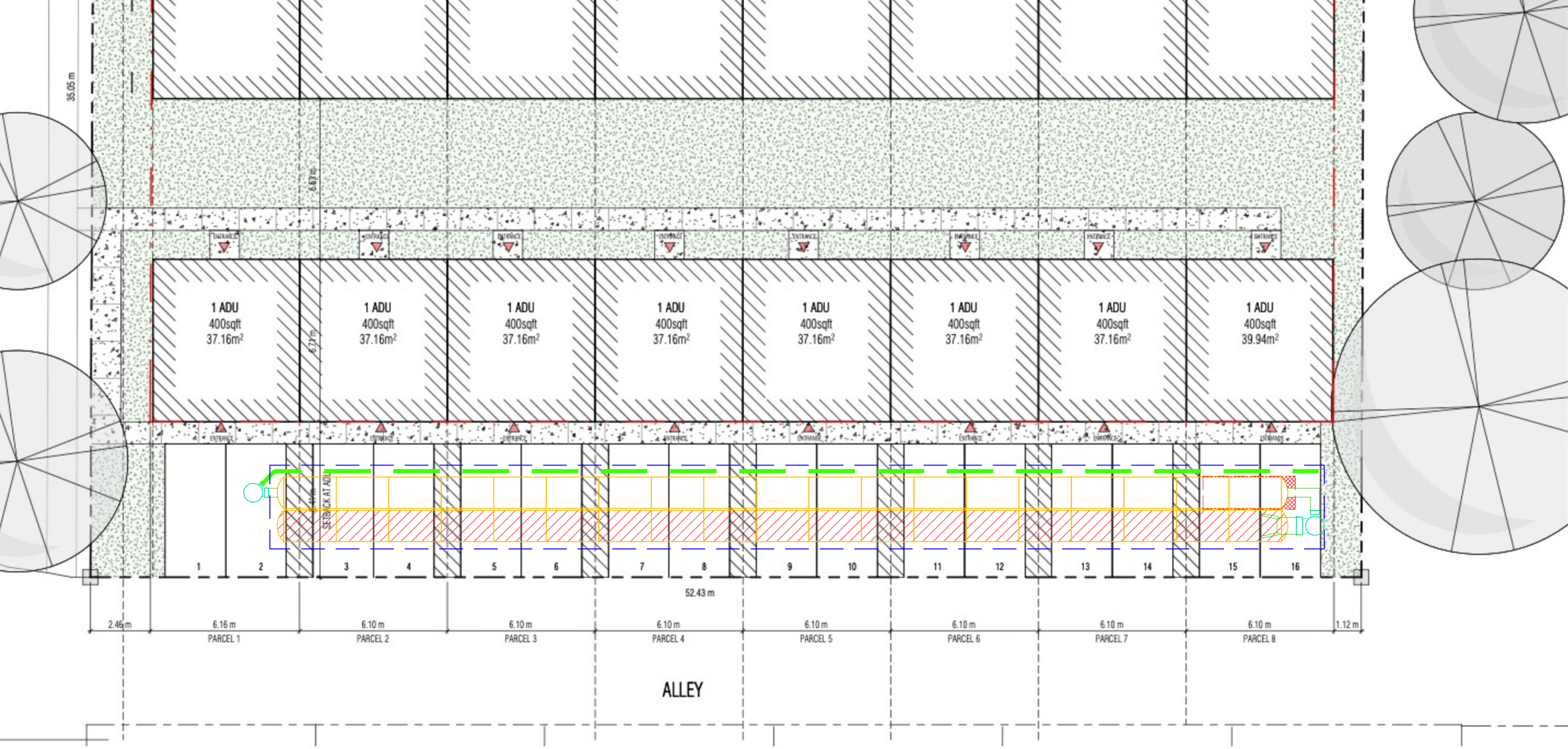
DATE	DWN	CHK

Nyloplast®

4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473



1 SP01 **SITE PLAN**
3/32" = 1'-0"

BABA

Appendix D

TSS Removal Efficiency Report