

November 25th, 2024

Arcadis Ref: 145258

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Re: Zoning By-Law Amendment Application (SWM Amendment)
Owner: 1672735 Ontario Inc
Location: 2620 Chalkwell Close

Arcadis Professional Services (Canada) Inc. (Arcadis) is submitting this Addendum letter in support of the Re-Zoning Application for the property located at 2620 Chalkwell Close, L5J 2B9, in the City of Mississauga (City) to amend the previously submitted **Functional Servicing Report (FSR) dated December 22, 2023**.

This letter outlines the revisions made to the Stormwater Management (SWM) concept from the previously reported SWM calculations in the FSR (December 2023) previously issued for ZBA. This Addendum Letter (November 2024) is to amend the previous proposed 12-4 storey townhouse blocks with internal parking within each block, as well as guest vehicle parking along private roads fronting all townhouse blocks, and 2 amenity areas with 10-4 storey townhouse blocks with internal parking within each block, as well as guest vehicle parking along private roads fronting all townhouse blocks, and similarly 2 amenity areas.

The amended calculations were carried to review if the proposed changes impact the allocated SWM capacities. The following summarizes the comparison between the proposed SWM measures from the previously submitted FSR (December 2023) and the proposed SWM measures from the amended SWM design (November 2024).

Stormwater Management

Proposed Drainage Pattern

Table 1-1 below summarizes the proposed conditions drainage parameters under previous FSR and the amended site plan conditions. As can be seen, proposed drainage conditions remain unchanged. Please refer to **Appendix A** for calculations and **Figures DAP-01 & DAP-02** for existing and proposed drainage areas.

Table 1-1 Proposed Condition Drainage Parameters

CATCHMENT	DRAINAGE AREA (HA)	C	TC (MIN)
A1Post (Prev)	1.91	0.76	15
A1Post (Amended)	1.91	0.76	15
A2Post (Controlled to Karenza-Prev)	0.07	0.25	15
A2Post (Controlled to Karenza -Amended)	0.07	0.25	15

Stormwater Quantity Control

SWM measures for A2Post remains identical under previous FSR and the amended site plan conditions and therefore is not included in the remainder of this document. **Table 1-2** below summarizes the proposed SWM measures for A1Post under previous FSR and the amended site plan conditions.

December 2023 SWM Design: The maximum storage required was 435.4m³ and was to be provided through a combination of storage pipe, storage within maintenance structures, and storage chambers. A 200mm orifice pipe was utilized to control 100-year post-development flows from A1Post to such that the total flow from the site meets the allowable flow.

November 2024 Amended SWM Design: The maximum storage required is 338.8m³ and will be achieved via a combination of roof-top storage, underground storage chambers at the east amenity area, storage within maintenance structures and pipes. A 250mm orifice pipe will be utilized to control 100-year post-development flows from A1Post to such that the total flow from the site meets the allowable flow. The SWM tank consisting of underground storage chambers within the amenity area will be protected using root barrier and will be installed below the soil volume requirements for the trees. The SWM design will be further detailed during the SPA stage. Please refer to **Appendix A** for detailed 2-100 year design flow and orifice sizing calculations.

Table 1-2 Post Development Quantity Control (100-Year)

DESIGN	REQUIRED ROOF STORAGE VOLUME (M ³)	PROVIDED ROOF STORAGE VOLUME (m ³)	REQUIRED SITE STORAGE VOLUME (m ³)	PROVIDED SITE STORAGE VOLUME (M ³)	TARGET FLOW (L/S)	FLOW LEAVING SITE (L/S)
December 2023	-	-	435.4	435.4	188.0	125.7
November 2024	168.9	199.1	338.8	374.4	188.0	187.8

The storage volume breakdown under the amended site plan conditions (100-year) is given below in **Table 1.3**. Please refer to **Appendix A** for detailed storage calculations.

Table 1-3 November 2024 Storage Volumes (100-Year)

TYPE OF STORAGE	VOLUME PROVIDED
Roof	199.1 m ³
Pipes	127.1 m ³
Manholes	20.7 m ³
Chambers	226.6 m ³
Total Volume Provided	374.4 m³
Total Volume Required	338.8 m³

Stormwater Quality

Same as the 2023 December submission, 80% TSS removal will be achieved for the site. For area A1Post, quality control will be provided by a combination of JellyFish filtration and inherent treatment from rooftop/patios and landscaping. The JellyFish unit will be installed at the downstream end of the storm sewer, prior to outletting to the municipal control maintenance hole. Please refer to **Appendix A** for detailed calculations and **Drawing SS-01** in **Appendix B** for the location of the JellyFish filter unit and proposed storm network.

Proposed Storm Connection

The site will have a gravity network within the property to collect surface runoff from the amenity spaces and private roadways, as well as connections at each block to collect roof drainage. The sites municipal service connection will be made from the control maintenance hole to an existing maintenance hole at the terminating end of a 375 mm storm sewer within Chalkwell Close. Please refer to **Drawing SS-01 & XS-01** in **Appendix B** for the layout and cross-sections of the storm service connection respectively.

Arcadis Professional Services (Canada) Inc.
2620 Chalkwell Close, City of Mississauga
Prepared For 1672735 Ontario Inc.

Summary

In summary, the site can be adequately serviced in respect to stormwater drainage under the revised post-development conditions.

Yours sincerely,

ARCADIS PROFESSIONAL SERVICES (CANADA) INC.

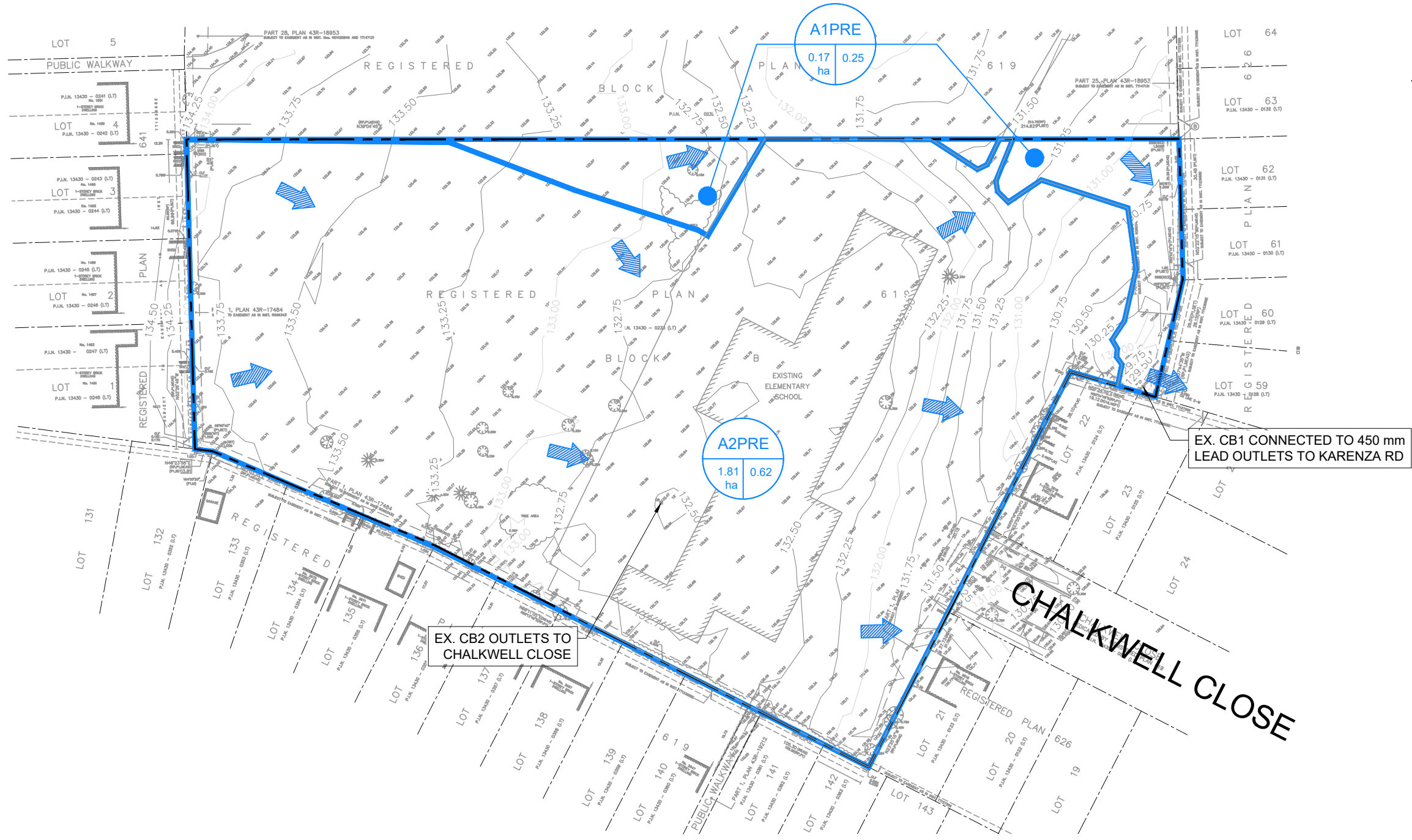
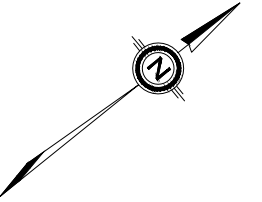


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Appendix A

SANDGATE PARK



EX. CB2 OUTLETS TO CHALKWELL CLOSE

EX. CB1 CONNECTED TO 450 mm LEAD OUTLETS TO KARENZA RD



LEGEND

	PROPERTY BOUNDARY
	DRAINAGE AREA BOUNDARY
	MAJOR SYSTEM DIRECTION

	STORM DRAINAGE AREA NUMBER
	RUNOFF COEFFICIENT
	DRAINAGE AREA IN HECTARES

PRE-DEVELOPMENT DRAINAGE AREA PLAN			
2620 CHALKWELL CLOSE MISSISSAUGA, ON.			
DATE:	NOVEMBER 2023	PROJECT No.:	145258
SCALE:	1: 1000	FIGURE No.:	DAP-01



Prepared By: SN

Pre-Development Composite Runoff

Coefficient

2620 Chalkwell Close

145258

November 2024

Drainage Area A1 Pre

	(ha)		
Total Area:	0.17		
Impervious:	0.00	Coefficient:	0.90
Landscaping:	0.17	Coefficient:	0.25
Composite C:	0.25		
Percent Impervious	0%		

Drainage Area A2 Pre

	(ha)		
Total Area:	1.81		
Impervious:	1.04	Coefficient:	0.90
Landscaping:	0.77	Coefficient:	0.25
Composite C:	0.62		
Percent Impervious	58%		



**Rational Method
Pre-Development Flow Calculation**

2620 Chalkwell Close
145258
November 2024

Prepared By: SN

Input Parameters

Area Number	Area (ha)	C	Tc (min.)
A1 Pre	0.17	0.25	15.00
A2 Pre	1.81	0.62	15.00

Formula:	$I = a/(T+b)^c$
a,b,c	Constants
T	Time of concentration
I	Rainfall intensity

Rational Method Calculations

Event 2-Yr IDF Data Set: City of Mississauga

a = 610.0
b = 0.780
c = 4.6

Area Number	A (ha)	C*	AC	Tc (min.)	I (mm/h)	Q (m ³ /s)	Q (L/s)
A1 Pre	0.17	0.25	0.04	15	59.9	0.007	7.1
A2 Pre	1.81	0.62	1.13	15	59.9	0.188	187.96

*Adjustment Factor Incl 1.0

Event 5-Yr IDF Data Set: City of Mississauga

a = 820.0
b = 0.780
c = 4.6

Area Number	A (ha)	C*	AC	Tc (min.)	I (mm/h)	Q (m ³ /s)	Q (L/s)
A1 Pre	0.17	0.25	0.04	15	80.5	0.010	9.6
A2 Pre	1.81	0.62	1.13	15	80.5	0.253	252.7

*Adjustment Factor Incl 1.0

Event 10-Yr IDF Data Set: City of Mississauga

a = 1010.0
b = 0.780
c = 4.60

Area Number	A (ha)	C*	AC	Tc (min.)	I (mm/h)	Q (m ³ /s)	Q (L/s)
A1 Pre	0.17	0.25	0.04	15	99.2	0.012	11.8
A2 Pre	1.81	0.62	1.13	15	99.2	0.311	311.2

*Adjustment Factor Incl 1.0

Event 25-Yr IDF Data Set: City of Mississauga

a = 1160.0
b = 0.780
c = 4.60

Area Number	A (ha)	C*	AC	Tc (min.)	I (mm/h)	Q (m ³ /s)	Q (L/s)
A1 Pre	0.17	0.28	0.05	15	113.9	0.015	14.9
A2 Pre	1.81	0.69	1.24	15	113.9	0.393	393.2

*Adjustment Factor Incl 1.1

Event 50-Yr IDF Data Set: City of Mississauga

a = 1300.0
b = 0.780
c = 4.70

Area Number	A (ha)	C*	AC	Tc (min.)	I (mm/h)	Q (m ³ /s)	Q (L/s)
A1 Pre	0.17	0.30	0.05	15	127.1	0.018	18.1
A2 Pre	1.81	0.75	1.36	15	127.1	0.479	478.8

*Adjustment Factor Incl 1.2

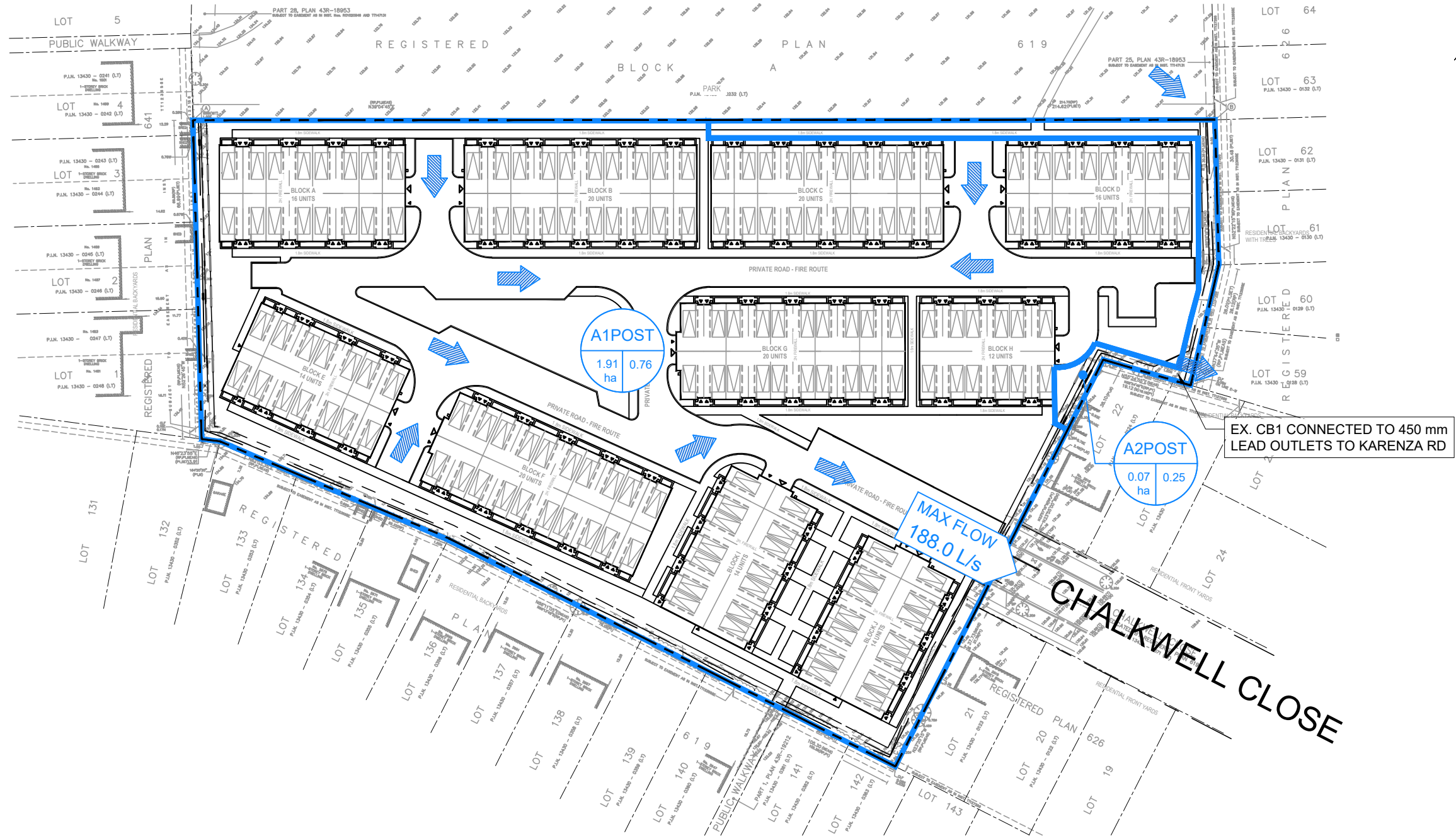
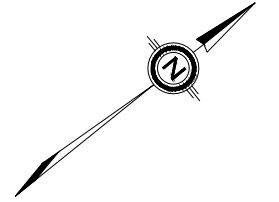
Event 100-Yr IDF Data Set: City of Mississauga

a = 1450.0
b = 0.780
c = 4.90

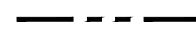


Area Number	A (ha)	C*	AC	Tc (min.)	I (mm/h)	Q (m ³ /s)	Q (L/s)
A1 Pre	0.17	0.31	0.05	15	140.7	0.021	20.9
A2 Pre	1.81	0.78	1.41	15	140.7	0.552	551.9

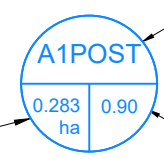
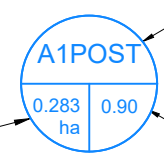
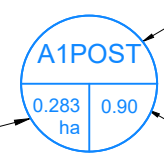
*Adjustment Factor Incl 1.25

SANDGATE PARK



LEGEND

-  PROPERTY BOUNDARY
-  DRAINAGE AREA BOUNDARY
-  MAJOR SYSTEM DIRECTION

-  STORM DRAINAGE AREA NUMBER
-  DRAINAGE AREA IN HECTARES
-  RUNOFF COEFFICIENT

POST-DEVELOPMENT DRAINAGE AREA PLAN

2620 CHALKWELL CLOSE
MISSISSAUGA, ON.

DATE:	NOVEMBER 2024	PROJECT No.:	145258
SCALE:	1: 1000	FIGURE No.:	DAP-02



**Post-Development Composite Runoff
Coefficient**
2620 Chalkwell Close
145258
November 2024

Prepared By: SN

A1.1Post (Non-Roof Areas)

	(ha)		
Total Area:	1.51		
Roof:	0.00	Coefficient:	0.90
Landscaping:	0.40	Coefficient:	0.25
Paved:	1.11	Coefficient:	0.9
Composite C:	0.73		
Percent Impervious	73%		

A1.2Post (Roof Areas)

	(ha)		
Total Area:	0.40		
Roof:	0.40	Coefficient:	0.90
Landscaping:	0.00	Coefficient:	0.25
Paved:	0.00	Coefficient:	0.9
Composite C:	0.90		
Percent Impervious	100%		

A1Post (A1.1&A1.2 - Combined)

	(ha)		
Total Area:	1.91		
Roof:	0.40	Coefficient:	0.90
Landscaping:	0.40	Coefficient:	0.25
Paved:	1.11	Coefficient:	0.9
Composite C:	0.76		
Percent Impervious	79%		

A2Post (Controlled to Karenza)

	(ha)		
Total Area:	0.07		
Roof:	0.00	Coefficient:	0.90
Landscaping:	0.07	Coefficient:	0.25
Paved:	0.00	Coefficient:	0.9
Composite C:	0.25		
Percent Impervious	0%		



**Modified Rational Method - 2 Year Storm
Site Flow and Storage Summary**

2620 Chalkwell Close
145258

Prepared By: SN

November 2024

2 Yr Design Storm		A1.1 Post (Non-Roof Areas)				A1.2 Post (Roof Areas)				Flow Summary	
a=	610.00	Area=	1.51	ha		Area=	0.40	ha		Target Flow = 187.96 L/s Orifice Ctrl'd Flow = 139.25 L/s Total Design Flow = 139.25 L/s	
b=	0.78	"C" =	0.73			"C" =	0.90				
c=	4.60	AC1=	1.10			AC1=	0.36				
I=	A/(T+c)^b	Tc =	15.0	min		Tc =	15.0	min			
		Time Increment =	5.0	min		Time Increment =	5.0	min			
		Orifice Ctrl'd Flow =	139.25	L/s		Roof Release Rate =	2	L/s/Roof			
						No. of Roofs =	10				
						Roof Discharge =	20.00	L/s			

Time (min)	Rainfall Intensity (mm/hr)	Storm Runoff + Roof Runoff (m³/s)	Runoff Volume (m³)	Target Release Volume (m³)	Total Req'd Storage Volume (m³)	Storm Runoff (m³/s)	Runoff Volume (m³)	Target Release Volume (m³)	Total Req'd Roof Storage (m³)
0.0	185.5	0.586	0.00	0.00	0.00	0.1847	0.00	0.00	0.00
5.0	104.5	0.339	101.58	41.78	59.81	0.1041	31.22	3.00	28.22
10.0	75.4	0.250	149.85	83.55	66.30	0.0750	45.02	6.00	39.02
15.0	59.9	0.203	182.33	125.33	57.01	0.0596	53.67	9.00	44.67
20.0	50.2	0.173	207.52	167.10	40.42	0.0500	59.94	12.00	47.94
25.0	43.4	0.152	228.57	208.88	19.70	0.0432	64.86	15.00	49.86
30.0	38.4	0.137	246.98	250.65	0.00	0.0383	68.91	18.00	50.91
35.0	34.6	0.125	263.54	292.43	0.00	0.0345	72.36	21.00	51.36
40.0	31.5	0.116	278.76	334.20	0.00	0.0314	75.37	24.00	51.37
45.0	29.0	0.109	292.96	375.98	0.00	0.0289	78.05	27.00	51.05
50.0	26.9	0.102	306.35	417.75	0.00	0.0268	80.46	30.00	50.46
55.0	25.2	0.097	319.08	459.53	0.00	0.0250	82.66	33.00	49.66
60.0	23.6	0.092	331.27	501.30	0.00	0.0235	84.68	36.00	48.68
65.0	22.3	0.088	343.01	543.08	0.00	0.0222	86.56	39.00	47.56
70.0	21.1	0.084	354.37	584.85	0.00	0.0210	88.31	42.00	46.31
75.0	20.1	0.081	365.38	626.63	0.00	0.0200	89.95	45.00	44.95
80.0	19.1	0.078	376.11	668.40	0.00	0.0191	91.49	48.00	43.49
85.0	18.3	0.076	386.58	710.18	0.00	0.0182	92.95	51.00	41.95
90.0	17.5	0.073	396.83	751.96	0.00	0.0175	94.34	54.00	40.34
95.0	16.9	0.071	406.87	793.73	0.00	0.0168	95.66	57.00	38.66
100.0	16.2	0.069	416.73	835.51	0.00	0.0162	96.92	60.00	36.92
105.0	15.6	0.068	426.42	877.28	0.00	0.0156	98.12	63.00	35.12
110.0	15.1	0.066	435.96	919.06	0.00	0.0150	99.28	66.00	33.28
115.0	14.6	0.065	445.37	960.83	0.00	0.0145	100.39	69.00	31.39
120.0	14.2	0.063	454.65	1002.61	0.00	0.0141	101.46	72.00	29.46
125.0	13.7	0.062	463.81	1044.38	0.00	0.0137	102.50	75.00	27.50
130.0	13.3	0.061	472.87	1086.16	0.00	0.0133	103.50	78.00	25.50
135.0	13.0	0.059	481.83	1127.93	0.00	0.0129	104.46	81.00	23.46
140.0	12.6	0.058	490.69	1169.71	0.00	0.0125	105.40	84.00	21.40
145.0	12.3	0.057	499.47	1211.48	0.00	0.0122	106.31	87.00	19.31
150.0	12.0	0.056	508.17	1253.26	0.00	0.0119	107.19	90.00	17.19
155.0	11.7	0.056	516.79	1295.03	0.00	0.0116	108.04	93.00	15.04
160.0	11.4	0.055	525.35	1336.81	0.00	0.0113	108.88	96.00	12.88
165.0	11.1	0.054	533.83	1378.58	0.00	0.0111	109.69	99.00	10.69
170.0	10.9	0.053	542.26	1420.36	0.00	0.0108	110.48	102.00	8.48
175.0	10.6	0.052	550.62	1462.13	0.00	0.0106	111.25	105.00	6.25
180.0	10.4	0.052	558.93	1503.91	0.00	0.0104	112.01	108.00	4.01
185.0	10.2	0.051	567.18	1545.69	0.00	0.0102	112.74	111.00	1.74

Orifice Diameter (mm) =	250	Roof Storage Depth (m) =	0.15
HGL Depth (m) =	0.6	Total Roof Area (sq.m) =	3983
Storage Volume Required (cu.m) =	66.3	Storage Volume Required (cu.m) =	51.4
Storage Volume Provided (cu.m) =	205.5	Storage Volume Provided (cu.m) =	199.1



**Modified Rational Method - 5 Year Storm
Site Flow and Storage Summary**

2620 Chalkwell Close
145258

Prepared By: SN

November 2024

5 Yr Design Storm	A1.1 Post (Non-Roof Areas)	A1.2 Post (Roof Areas)	Flow Summary
a= 820.00	Area= 1.51 ha	Area= 0.40 ha	Target Flow = 187.96 L/s Orifice Ctrl'd Flow = 150.23 L/s Total Design Flow = 150.23 L/s
b= 0.78	"C" = 0.73	"C" = 0.90	
c= 4.60	AC1= 1.10	AC1= 0.36	
I= A/(T+c)^b	Tc = 15.0 min	Tc = 15.0 min	
	Time Increment = 5.0 min	Time Increment = 5.0 min	
	Orifice Ctrl'd Flow = 150.23 L/s	Roof Release Rate = 2 L/s/Roof No. of Roofs = 10 Roof Discharge = 20.00 L/s	

Time (min)	Rainfall Intensity (mm/hr)	Storm Runoff + Roof Runoff (m³/s)	Runoff Volume (m³)	Target Release Volume (m³)	Total Req'd Storage Volume (m³)	Storm Runoff (m³/s)	Runoff Volume (m³)	Target Release Volume (m³)	Total Req'd Roof Storage (m³)
0.0	249.4	0.780	0.00	0.00	0.00	0.2483	0.00	0.00	0.00
5.0	140.5	0.448	134.49	45.07	89.42	0.1399	41.97	3.00	38.97
10.0	101.3	0.329	197.30	90.14	107.16	0.1009	60.52	6.00	54.52
15.0	80.5	0.265	238.91	135.21	103.70	0.0802	72.15	9.00	63.15
20.0	67.4	0.226	270.70	180.28	90.43	0.0671	80.58	12.00	68.58
25.0	58.4	0.198	296.94	225.35	71.59	0.0581	87.19	15.00	72.19
30.0	51.7	0.178	319.61	270.42	49.19	0.0515	92.63	18.00	74.63
35.0	46.5	0.162	339.81	315.49	24.32	0.0463	97.27	21.00	76.27
40.0	42.4	0.149	358.21	360.56	0.00	0.0422	101.32	24.00	77.32
45.0	39.0	0.139	375.23	405.63	0.00	0.0389	104.92	27.00	77.92
50.0	36.2	0.130	391.16	450.70	0.00	0.0361	108.16	30.00	78.16
55.0	33.8	0.123	406.21	495.77	0.00	0.0337	111.12	33.00	78.12
60.0	31.8	0.117	420.53	540.84	0.00	0.0316	113.84	36.00	77.84
65.0	30.0	0.111	434.25	585.90	0.00	0.0298	116.36	39.00	77.36
70.0	28.4	0.107	447.44	630.97	0.00	0.0283	118.71	42.00	76.71
75.0	27.0	0.102	460.19	676.04	0.00	0.0269	120.91	45.00	75.91
80.0	25.7	0.098	472.54	721.11	0.00	0.0256	122.99	48.00	74.99
85.0	24.6	0.095	484.55	766.18	0.00	0.0245	124.95	51.00	73.95
90.0	23.6	0.092	496.26	811.25	0.00	0.0235	126.81	54.00	72.81
95.0	22.7	0.089	507.69	856.32	0.00	0.0226	128.59	57.00	71.59
100.0	21.8	0.086	518.88	901.39	0.00	0.0217	130.28	60.00	70.28
105.0	21.0	0.084	529.84	946.46	0.00	0.0209	131.90	63.00	68.90
110.0	20.3	0.082	540.60	991.53	0.00	0.0202	133.46	66.00	67.46
115.0	19.6	0.080	551.18	1036.60	0.00	0.0196	134.95	69.00	65.95
120.0	19.0	0.078	561.59	1081.67	0.00	0.0189	136.39	72.00	64.39
125.0	18.4	0.076	571.84	1126.74	0.00	0.0184	137.78	75.00	62.78
130.0	17.9	0.075	581.95	1171.81	0.00	0.0178	139.13	78.00	61.13
135.0	17.4	0.073	591.93	1216.88	0.00	0.0173	140.42	81.00	59.42
140.0	16.9	0.072	601.78	1261.95	0.00	0.0169	141.68	84.00	57.68
145.0	16.5	0.070	611.52	1307.02	0.00	0.0164	142.90	87.00	55.90
150.0	16.1	0.069	621.15	1352.09	0.00	0.0160	144.09	90.00	54.09
155.0	15.7	0.068	630.67	1397.16	0.00	0.0156	145.24	93.00	52.24
160.0	15.3	0.067	640.10	1442.23	0.00	0.0152	146.36	96.00	50.36
165.0	15.0	0.066	649.45	1487.30	0.00	0.0149	147.45	99.00	48.45
170.0	14.6	0.065	658.70	1532.37	0.00	0.0146	148.52	102.00	46.52
175.0	14.3	0.064	667.88	1577.44	0.00	0.0142	149.55	105.00	44.55
180.0	14.0	0.063	676.98	1622.51	0.00	0.0139	150.57	108.00	42.57
185.0	13.7	0.062	686.02	1667.58	0.00	0.0137	151.56	111.00	40.56

Orifice Diameter (mm) =	250	Roof Storage Depth (m) =	0.15
HGL Depth (m) =	0.7	Total Roof Area (sq.m) =	3983
Storage Volume Required (cu.m) =	107.2	Storage Volume Required (cu.m) =	78.2
Storage Volume Provided (cu.m) =	239.2	Storage Volume Provided (cu.m) =	199.1



**Modified Rational Method - 10 Year Storm
Site Flow and Storage Summary**

2620 Chalkwell Close
145258

Prepared By: SN

November 2024

10 Yr Design Storm		A1.1 Post (Non-Roof Areas)				A1.2 Post (Roof Areas)				Flow Summary	
a=	1010.00	Area=	1.51	ha		Area=	0.40	ha			
b=	0.78	"C" =	0.73			"C" =	0.90				
c=	4.60	AC1=	1.10			AC1=	0.36				Target Flow = 187.96 L/s
I=	A/(T+c)*b	Tc =	15.0	min		Tc =	15.0	min			Orifice Ctrl'd Flow = 160.46 L/s
		Time Increment =	5.0	min		Time Increment =	5.0	min			Total Design Flow = 160.46 L/s
		Orifice Ctl'd Flow =	160.46	L/s		Roof Release Rate =	2	L/s/Roof			
						No. of Roofs =	10				
						Roof Discharge =	20.00	L/s			

Time (min)	Rainfall Intensity (mm/hr)	Storm Runoff + Roof Runoff (m³/s)	Runoff Volume (m³)	Target Release Volume (m³)	Total Req'd Storage Volume (m³)	Storm Runoff (m³/s)	Runoff Volume (m³)	Target Release Volume (m³)	Total Req'd Roof Storage (m³)
0.0	307.2	0.946	0.00	0.00	0.00	0.3059	0.00	0.00	0.00
5.0	173.0	0.528	158.26	48.14	110.12	0.1723	51.69	3.00	48.69
10.0	124.8	0.380	228.24	96.28	131.96	0.1242	74.55	6.00	68.55
15.0	99.2	0.302	272.09	144.42	127.67	0.0987	88.87	9.00	79.87
20.0	83.1	0.253	303.87	192.56	111.31	0.0827	99.25	12.00	87.25
25.0	71.9	0.219	328.79	240.69	88.09	0.0716	107.39	15.00	92.39
30.0	63.7	0.194	349.32	288.83	60.49	0.0634	114.10	18.00	96.10
35.0	57.3	0.175	366.82	336.97	29.84	0.0571	119.81	21.00	98.81
40.0	52.2	0.159	382.09	385.11	0.00	0.0520	124.80	24.00	100.80
45.0	48.1	0.147	395.66	433.25	0.00	0.0479	129.23	27.00	102.23
50.0	44.6	0.136	407.89	481.39	0.00	0.0444	133.23	30.00	103.23
55.0	41.7	0.127	419.04	529.53	0.00	0.0415	136.87	33.00	103.87
60.0	39.1	0.119	429.29	577.67	0.00	0.0389	140.22	36.00	104.22
65.0	36.9	0.113	438.79	625.81	0.00	0.0367	143.32	39.00	104.32
70.0	35.0	0.107	447.66	673.95	0.00	0.0348	146.21	42.00	104.21
75.0	33.2	0.101	455.96	722.08	0.00	0.0331	148.93	45.00	103.93
80.0	31.7	0.097	463.79	770.22	0.00	0.0316	151.48	48.00	103.48
85.0	30.3	0.092	471.20	818.36	0.00	0.0302	153.90	51.00	102.90
90.0	29.0	0.089	478.22	866.50	0.00	0.0289	156.20	54.00	102.20
95.0	27.9	0.085	484.91	914.64	0.00	0.0278	158.38	57.00	101.38
100.0	26.9	0.082	491.30	962.78	0.00	0.0267	160.47	60.00	100.47
105.0	25.9	0.079	497.42	1010.92	0.00	0.0258	162.47	63.00	99.47
110.0	25.0	0.076	503.28	1059.06	0.00	0.0249	164.38	66.00	98.38
115.0	24.2	0.074	508.92	1107.20	0.00	0.0241	166.22	69.00	97.22
120.0	23.4	0.071	514.35	1155.34	0.00	0.0233	168.00	72.00	96.00
125.0	22.7	0.069	519.59	1203.47	0.00	0.0226	169.71	75.00	94.71
130.0	22.1	0.067	524.65	1251.61	0.00	0.0220	171.36	78.00	93.36
135.0	21.4	0.065	529.55	1299.75	0.00	0.0214	172.96	81.00	91.96
140.0	20.9	0.064	534.29	1347.89	0.00	0.0208	174.51	84.00	90.51
145.0	20.3	0.062	538.89	1396.03	0.00	0.0202	176.01	87.00	89.01
150.0	19.8	0.060	543.36	1444.17	0.00	0.0197	177.47	90.00	87.47
155.0	19.3	0.059	547.71	1492.31	0.00	0.0192	178.89	93.00	85.89
160.0	18.9	0.057	551.93	1540.45	0.00	0.0188	180.27	96.00	84.27
165.0	18.4	0.056	556.05	1588.59	0.00	0.0183	181.62	99.00	82.62
170.0	18.0	0.055	560.06	1636.73	0.00	0.0179	182.93	102.00	80.93
175.0	17.6	0.054	563.98	1684.86	0.00	0.0175	184.21	105.00	79.21
180.0	17.2	0.053	567.80	1733.00	0.00	0.0172	185.46	108.00	77.46
185.0	16.9	0.051	571.53	1781.14	0.00	0.0168	186.67	111.00	75.67

Orifice Diameter (mm) =	250	Roof Storage Depth (m) =	0.15
HGL Depth (m) =	0.8	Total Roof Area (sq.m) =	3983
Storage Volume Required (cu.m) =	132.0	Storage Volume Required (cu.m) =	104.3
Storage Volume Provided (cu.m) =	272.9	Storage Volume Provided (cu.m) =	199.1



**Modified Rational Method - 25 Year Storm
Site Flow and Storage Summary**

2620 Chalkwell Close
145258

Prepared By: SN

November 2024

25 Yr Design Storm	A1.1 Post (Non-Roof Areas)	A1.2 Post (Roof Areas)	Flow Summary
a= 1160.00	Area= 1.51 ha	Area= 0.40 ha	Target Flow = 187.96 L/s Orifice Ctrl'd Flow = 170.08 L/s Total Design Flow = 170.08 L/s
b= 0.78	"C" = 0.73	"C" = 0.90	
c= 4.60	Adjusted "C" = 0.80 (Factor = 1.1)	Adjusted "C" = 0.99 (Factor = 1.1)	
I= A/(T+c)^b	AC1= 1.21	AC1= 0.39	
	Tc = 15.0 min Time Increment = 5.0 min	Tc = 15.0 min Time Increment = 5.0 min	
	Orifice Ctrl'd Flow = 170.08 L/s	Roof Release Rate = 2 L/s/Roof No. of Roofs = 10 Roof Discharge = 20.00 L/s	

Time	Rainfall Intensity	Storm Runoff + Roof Runoff	Runoff Volume	Target Release Volume	Total Req'd Storage Volume	Storm Runoff	Runoff Volume	Target Release Volume	Total Req'd Roof Storage
(min)	(mm/hr)	(m³/s)	(m³)	(m³)	(m³)	(m³/s)	(m³)	(m³)	(m³)
0.0	352.8	1.193	0.00	0.00	0.00	0.3864	0.00	0.00	0.00
5.0	198.7	0.666	199.94	51.02	148.92	0.2177	65.31	6.00	59.31
10.0	143.3	0.481	288.35	102.05	186.30	0.1570	94.18	12.00	82.18
15.0	113.9	0.382	343.75	153.07	190.68	0.1248	112.28	18.00	94.28
20.0	95.4	0.320	383.89	204.10	179.80	0.1045	125.39	24.00	101.39
25.0	82.6	0.277	415.38	255.12	160.26	0.0904	135.67	30.00	105.67
30.0	73.1	0.245	441.32	306.14	135.18	0.0801	144.14	36.00	108.14
35.0	65.8	0.221	463.42	357.17	106.25	0.0721	151.36	42.00	109.36
40.0	60.0	0.201	482.71	408.19	74.52	0.0657	157.66	48.00	109.66
45.0	55.2	0.185	499.86	459.22	40.64	0.0605	163.26	54.00	109.26
50.0	51.2	0.172	515.31	510.24	5.07	0.0561	168.31	60.00	108.31
55.0	47.8	0.160	529.40	561.26	0.00	0.0524	172.91	66.00	106.91
60.0	44.9	0.151	542.35	612.29	0.00	0.0492	177.14	72.00	105.14
65.0	42.4	0.142	554.36	663.31	0.00	0.0464	181.06	78.00	103.06
70.0	40.2	0.135	565.55	714.34	0.00	0.0440	184.72	84.00	100.72
75.0	38.2	0.128	576.05	765.36	0.00	0.0418	188.15	90.00	98.15
80.0	36.4	0.122	585.94	816.39	0.00	0.0399	191.38	96.00	95.38
85.0	34.8	0.117	595.29	867.41	0.00	0.0381	194.44	102.00	92.44
90.0	33.4	0.112	604.17	918.43	0.00	0.0365	197.33	108.00	89.33
95.0	32.0	0.107	612.62	969.46	0.00	0.0351	200.10	114.00	86.10
100.0	30.8	0.103	620.69	1020.48	0.00	0.0338	202.73	120.00	82.73
105.0	29.7	0.100	628.42	1071.51	0.00	0.0326	205.25	126.00	79.25
110.0	28.7	0.096	635.83	1122.53	0.00	0.0315	207.68	132.00	75.68
115.0	27.8	0.093	642.95	1173.55	0.00	0.0304	210.00	138.00	72.00
120.0	26.9	0.090	649.81	1224.58	0.00	0.0295	212.24	144.00	68.24
125.0	26.1	0.088	656.43	1275.60	0.00	0.0286	214.40	150.00	64.40
130.0	25.3	0.085	662.83	1326.63	0.00	0.0278	216.49	156.00	60.49
135.0	24.6	0.083	669.01	1377.65	0.00	0.0270	218.51	162.00	56.51
140.0	24.0	0.080	675.01	1428.67	0.00	0.0262	220.47	168.00	52.47
145.0	23.3	0.078	680.82	1479.70	0.00	0.0256	222.37	174.00	48.37
150.0	22.7	0.076	686.47	1530.72	0.00	0.0249	224.21	180.00	44.21
155.0	22.2	0.074	691.95	1581.75	0.00	0.0243	226.01	186.00	40.01
160.0	21.7	0.073	697.29	1632.77	0.00	0.0237	227.75	192.00	35.75
165.0	21.2	0.071	702.49	1683.79	0.00	0.0232	229.45	198.00	31.45
170.0	20.7	0.069	707.56	1734.82	0.00	0.0227	231.11	204.00	27.11
175.0	20.2	0.068	712.51	1785.84	0.00	0.0222	232.72	210.00	22.72
180.0	19.8	0.066	717.34	1836.87	0.00	0.0217	234.30	216.00	18.30
185.0	19.4	0.065	722.05	1887.89	0.00	0.0212	235.84	222.00	13.84

Orifice Diameter (mm) =	250	Roof Storage Depth (m) =	0.15
HGL Depth (m) =	0.9	Total Roof Area (sq.m) =	3983
Storage Volume Required (cu.m) =	190.7	Storage Volume Required (cu.m) =	109.7
Storage Volume Provided (cu.m) =	306.6	Storage Volume Provided (cu.m) =	199.1



**Modified Rational Method - 50 Year Storm
Site Flow and Storage Summary**

2620 Chalkwell Close
145258

Prepared By: SN

November 2024

50 Yr Design Storm	A1.1 Post (Non-Roof Areas)	A1.2 Post (Roof Areas)	Flow Summary
a= 1300.00	Area= 1.51 ha	Area= 0.40 ha	Target Flow = 187.96 L/s Orifice Ctrl'd Flow = 179.18 L/s Total Design Flow = 179.18 L/s
b= 0.78	"C" = 0.73	"C" = 0.90	
c= 4.70	Adjusted "C" = 0.87 (Factor = 1.20)	Adjusted "C" = 1.08 (Factor = 1.25)	
I= A/(T+c)^b	AC1= 1.32	AC1= 0.43	
	Tc = 15.0 min Time Increment = 5.0 min	Tc = 15.0 min Time Increment = 5.0 min	
	Orifice Ctrl'd Flow = 179.18 L/s	Roof Release Rate = 2 L/s/Roof No. of Roofs = 10 Roof Discharge = 20.00 L/s	

Time (min)	Rainfall Intensity (mm/hr)	Storm Runoff + Roof Runoff (m³/s)	Runoff Volume (m³)	Target Release Volume (m³)	Total Req'd Storage Volume (m³)	Storm Runoff (m³/s)	Runoff Volume (m³)	Target Release Volume (m³)	Total Req'd Roof Storage (m³)
0.0	388.8	1.442	0.00	0.00	0.00	0.4646	0.00	0.00	0.00
5.0	220.9	0.808	242.48	53.75	188.72	0.2640	79.20	6.00	73.20
10.0	159.7	0.584	350.65	107.51	243.14	0.1909	114.53	12.00	102.53
15.0	127.1	0.465	418.59	161.26	257.33	0.1519	136.72	18.00	118.72
20.0	106.6	0.390	467.86	215.02	252.84	0.1273	152.81	24.00	128.81
25.0	92.3	0.338	506.50	268.77	237.72	0.1103	165.43	30.00	135.43
30.0	81.7	0.299	538.33	322.53	215.80	0.0977	175.83	36.00	139.83
35.0	73.6	0.269	565.45	376.28	189.17	0.0879	184.69	42.00	142.69
40.0	67.1	0.245	589.12	430.04	159.09	0.0802	192.42	48.00	144.42
45.0	61.8	0.226	610.15	483.79	126.36	0.0738	199.29	54.00	145.29
50.0	57.3	0.210	629.11	537.55	91.56	0.0685	205.48	60.00	145.48
55.0	53.5	0.196	646.38	591.30	55.08	0.0640	211.12	66.00	145.12
60.0	50.3	0.184	662.26	645.05	17.21	0.0601	216.31	72.00	144.31
65.0	47.4	0.174	676.98	698.81	0.00	0.0567	221.12	78.00	143.12
70.0	45.0	0.164	690.71	752.56	0.00	0.0537	225.60	84.00	141.60
75.0	42.7	0.156	703.57	806.32	0.00	0.0511	229.80	90.00	139.80
80.0	40.8	0.149	715.69	860.07	0.00	0.0487	233.76	96.00	137.76
85.0	39.0	0.143	727.15	913.83	0.00	0.0466	237.50	102.00	135.50
90.0	37.4	0.137	738.03	967.58	0.00	0.0446	241.06	108.00	133.06
95.0	35.9	0.131	748.39	1021.34	0.00	0.0429	244.44	114.00	130.44
100.0	34.5	0.126	758.28	1075.09	0.00	0.0413	247.67	120.00	127.67
105.0	33.3	0.122	767.74	1128.85	0.00	0.0398	250.76	126.00	124.76
110.0	32.2	0.118	776.82	1182.60	0.00	0.0384	253.73	132.00	121.73
115.0	31.1	0.114	785.54	1236.35	0.00	0.0372	256.58	138.00	118.58
120.0	30.1	0.110	793.95	1290.11	0.00	0.0360	259.32	144.00	115.32
125.0	29.2	0.107	802.05	1343.86	0.00	0.0349	261.97	150.00	111.97
130.0	28.4	0.104	809.88	1397.62	0.00	0.0339	264.53	156.00	108.53
135.0	27.6	0.101	817.46	1451.37	0.00	0.0330	267.00	162.00	105.00
140.0	26.8	0.098	824.80	1505.13	0.00	0.0321	269.40	168.00	101.40
145.0	26.1	0.096	831.92	1558.88	0.00	0.0312	271.72	174.00	97.72
150.0	25.5	0.093	838.83	1612.64	0.00	0.0304	273.98	180.00	93.98
155.0	24.9	0.091	845.55	1666.39	0.00	0.0297	276.17	186.00	90.17
160.0	24.3	0.089	852.09	1720.15	0.00	0.0290	278.31	192.00	86.31
165.0	23.7	0.087	858.45	1773.90	0.00	0.0283	280.39	198.00	82.39
170.0	23.2	0.085	864.66	1827.65	0.00	0.0277	282.42	204.00	78.42
175.0	22.7	0.083	870.71	1881.41	0.00	0.0271	284.39	210.00	74.39
180.0	22.2	0.081	876.62	1935.16	0.00	0.0265	286.32	216.00	70.32
185.0	21.7	0.079	882.40	1988.92	0.00	0.0260	288.21	222.00	66.21

Orifice Diameter (mm) =	250	Roof Storage Depth (m) =	0.15
HGL Depth (m) =	1.0	Total Roof Area (sq.m) =	3983
Storage Volume Required (cu.m) =	257.3	Storage Volume Required (cu.m) =	145.5
Storage Volume Provided (cu.m) =	340.3	Storage Volume Provided (cu.m) =	199.1



**Modified Rational Method - 100 Year Storm
Site Flow and Storage Summary**

2620 Chalkwell Close
145258

Prepared By: SN

November 2024

100 Yr Design Storm	A1.1 Post (Non-Roof Areas)	A1.2 Post (Roof Areas)	Flow Summary
a= 1450.00	Area= 1.51 ha	Area= 0.40 ha	Target Flow = 187.96 L/s Orifice Ctrl'd Flow = 187.84 L/s Total Design Flow = 187.84 L/s
b= 0.78	"C" = 0.73	"C" = 0.90	
c= 4.90	Adjusted "C" = 0.91 (Factor = 1.25)	Adjusted "C" = 1.08 (Factor = 1.25)	
I= A/(T+c)^b	AC1= 1.37	AC1= 0.43	
	Tc = 15.0 min Time Increment = 5.0 min	Tc = 15.0 min Time Increment = 5.0 min	
	Orifice Ctrl'd Flow = 187.84 L/s	Roof Release Rate = 2 L/s/Roof No. of Roofs = 10 Roof Discharge = 20.00 L/s	

Time	Rainfall Intensity	Surface Runoff + Roof Runoff	Runoff Volume	Target Release Volume	Total Req'd Storage Volume	Storm Runoff	Runoff Volume	Target Release Volume	Total Req'd Roof Storage
(min)	(mm/hr)	(m ³ /s)	(m ³)	(m ³)	(m ³)	(m ³ /s)	(m ³)	(m ³)	(m ³)
0.0	419.8	1.620	0.00	0.00	0.00	0.5016	0.00	0.00	0.00
5.0	242.5	0.944	283.28	56.35	226.92	0.2898	86.94	6.00	80.94
10.0	176.3	0.692	415.14	112.71	302.43	0.2107	126.41	12.00	114.41
15.0	140.7	0.556	500.53	169.06	331.47	0.1681	151.30	18.00	133.30
20.0	118.1	0.470	564.17	225.41	338.76	0.1411	169.37	24.00	145.37
25.0	102.4	0.410	615.40	281.76	333.64	0.1224	183.56	30.00	153.56
30.0	90.8	0.366	658.67	338.12	320.55	0.1085	195.24	36.00	159.24
35.0	81.8	0.332	696.41	394.47	301.94	0.0977	205.19	42.00	163.19
40.0	74.6	0.304	730.10	450.82	279.27	0.0891	213.88	48.00	165.88
45.0	68.7	0.282	760.70	507.18	253.52	0.0821	221.59	54.00	167.59
50.0	63.8	0.263	788.86	563.53	225.33	0.0762	228.54	60.00	168.54
55.0	59.6	0.247	815.05	619.88	195.16	0.0712	234.87	66.00	168.87
60.0	56.0	0.233	839.61	676.23	163.37	0.0669	240.69	72.00	168.69
65.0	52.8	0.221	862.80	732.59	130.21	0.0631	246.08	78.00	168.08
70.0	50.0	0.211	884.83	788.94	95.89	0.0598	251.11	84.00	167.11
75.0	47.6	0.201	905.86	845.29	60.56	0.0568	255.82	90.00	165.82
80.0	45.4	0.193	926.00	901.65	24.36	0.0542	260.25	96.00	164.25
85.0	43.4	0.185	945.38	958.00	0.00	0.0519	264.45	102.00	162.45
90.0	41.6	0.179	964.08	1014.35	0.00	0.0497	268.43	108.00	160.43
95.0	40.0	0.172	982.16	1070.70	0.00	0.0478	272.22	114.00	158.22
100.0	38.5	0.167	999.70	1127.06	0.00	0.0460	275.84	120.00	155.84
105.0	37.1	0.161	1016.74	1183.41	0.00	0.0443	279.30	126.00	153.30
110.0	35.8	0.157	1033.33	1239.76	0.00	0.0428	282.62	132.00	150.62
115.0	34.7	0.152	1049.50	1296.12	0.00	0.0414	285.81	138.00	147.81
120.0	33.6	0.148	1065.30	1352.47	0.00	0.0401	288.88	144.00	144.88
125.0	32.6	0.144	1080.75	1408.82	0.00	0.0389	291.84	150.00	141.84
130.0	31.6	0.140	1095.88	1465.17	0.00	0.0378	294.71	156.00	138.71
135.0	30.7	0.137	1110.71	1521.53	0.00	0.0367	297.48	162.00	135.48
140.0	29.9	0.134	1125.27	1577.88	0.00	0.0357	300.16	168.00	132.16
145.0	29.1	0.131	1139.56	1634.23	0.00	0.0348	302.76	174.00	128.76
150.0	28.4	0.128	1153.62	1690.59	0.00	0.0339	305.29	180.00	125.29
155.0	27.7	0.126	1167.45	1746.94	0.00	0.0331	307.74	186.00	121.74
160.0	27.0	0.123	1181.07	1803.29	0.00	0.0323	310.13	192.00	118.13
165.0	26.4	0.121	1194.49	1859.64	0.00	0.0316	312.46	198.00	114.46
170.0	25.8	0.118	1207.72	1916.00	0.00	0.0309	314.72	204.00	110.72
175.0	25.3	0.116	1220.77	1972.35	0.00	0.0302	316.93	210.00	106.93
180.0	24.7	0.114	1233.65	2028.70	0.00	0.0295	319.09	216.00	103.09
185.0	24.2	0.112	1246.38	2085.06	0.00	0.0289	321.20	222.00	99.20

Orifice Diameter (mm) =	250	Roof Storage Depth (m) =	0.15
HGL Depth (m) =	1.1	Total Roof Area (sq.m) =	3983
Storage Volume Required (cu.m) =	338.8	Storage Volume Required (cu.m) =	168.9
Storage Volume Provided (cu.m) =	374.0	Storage Volume Provided (cu.m) =	199.1



Prepared By: SN

Orifice Control

2620 Chalkwell Close

145258

November-2024

ORIFICE PIPE

$$Q = C \times A \times \sqrt{2 \times g \times h}$$

Storm Event	Orifice Coefficient	Diameter of Orifice	Orifice Invert	Headwater Elevation	Total Head	Area of Orifice	Release Rate
		(mm)	(m)	(m)	(m)	(m ²)	(L/s)
2-Year	0.82	250	129.72	130.46	0.61	0.049	139.25
5-Year	0.82	250	129.72	130.56	0.71	0.049	150.23
10-Year	0.82	250	129.72	130.66	0.81	0.049	160.46
25-Year	0.82	250	129.72	130.76	0.91	0.049	170.08
50-Year	0.82	250	129.72	130.86	1.01	0.049	179.18
100-Year	0.82	250	129.72	130.96	1.11	0.049	187.84



Pipe and Manhole Storage Calculations

2620 Chalkwell Close

145258

November-2024

Prepared By: SN

CB/CBMH/MH

ID	Diameter/Width (m)	Length/Width (m)	Lowest Invert Elev. (m)	HWL Height of Water (m)	Volume (m ³)
CB3	0.600	0.600	130.46	0.50	0.18
CB5	0.600	0.600	130.56	0.40	0.14
MH10	1.200		130.28	0.68	0.76
CB4	0.600	0.600	130.76	0.20	0.07
MH12	1.200		130.44	0.52	0.58
MH11	1.200		130.28	0.68	0.76
MH9	1.800		130.02	0.94	2.38
CB2	0.600	0.600	130.47	0.49	0.17
MH13	1.200		130.39	0.57	0.00
MH8	1.800		130.00	0.96	2.43
MH7	2.300		129.93	1.03	4.26
MH5	1.800		129.87	1.09	2.76
MH4	1.800		129.90	1.06	2.68
MH3	1.800		129.75	1.21	3.07
TOTAL					20.25

PIPES

FROM MH	TO MH	Length (m)	Diameter (mm)	Volume (m ³)
CB3	MH10	29.8	300	2.11
CB5	MH10	20.7	450	2.91
MH10	MH9	45.8	450	7.09
CB4	MH12	24.8	300	1.35
MH12	MH11	44.6	375	4.19
MH11	MH9	44.6	525	9.65
MH9	MH7	38.1	825	19.50
CB2	MH13	5.2	300	0.37
MH13	MH8	24.8	450	3.94
MH8	MH7	45.7	900	29.07
MH7	MH5	24.2	900	15.40
MH5	MH4	14.5	900	9.22
MH4	SC800	10.5	525	2.27
SC800	MH3	10.5	525	2.27
MH4	MH3	27.9	900	17.75
TOTAL				127.10

Total Available Pipe&Manhole Storage Volume (m³)

147.35



Prepared By: SN

Storage Calculations

2620 Chalkwell Close

145258

November 2024

Gravity SWM Tank

Model	Bottom of Tank	Top of Tank	Outlet Invert	Base Area (m ²)	Available Head (m)
SC-800	129.69	130.96	129.85	384.39	1.11

2-year	Water Level	130.46
Tank Active Depth used for Storage (m)	Chamber Volume Provided (m³)	Volume Required (m³)
0.61	124.54	66.30

5-year	Water Level	130.56
Tank Active Depth used for Storage (m)	Chamber Volume Provided (m³)	Volume Required (m³)
0.71	144.96	107.16

10-year	Water Level	130.66
Tank Active Depth used for Storage (m)	Chamber Volume Provided (m³)	Volume Required (m³)
0.81	165.37	131.96

25-year	Water Level	130.76
Tank Active Depth used for Storage (m)	Chamber Volume Provided (m³)	Volume Required (m³)
0.91	185.79	190.68

50-year	Water Level	130.86
Tank Active Depth used for Storage (m)	Chamber Volume Provided (m³)	Volume Required (m³)
1.01	206.21	257.33

100-year	Water Level	130.96
Tank Active Depth used for Storage (m)	Chamber Volume Provided (m³)	Volume Required (m³)
1.11	226.62	338.76

100-yr Pipe and Manhole Storage Volume (Refer to Pipe-Manhole Storage Sheets)	147.35
Total Provided 100-yr Storage Volume [Chambers + Pipes + Manholes]	373.98
Volume Required (m³)	338.76



Prepared By: SN

Water Quality Calculations

2620 Chalkwell Close

145258

November-2024

Surface	Method	Effective TSS Removal	Area (ha)	% Area of Site	Overall TSS Removal
Conventional Roof	Inherent	80%	0.40	21%	17%
Landscaped	Inherent	80%	0.40	21%	17%
Paved Controlled	OGS	80%	1.11	58%	46%
Total			1.91	100%	80%

Appendix B

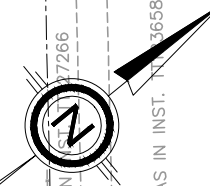
SUBJECT TO EASEMENT AS IN INST. No. R01020646 AND T147131

REGISTERED

SANDGATE PARK PLAN

BLOCK A

619



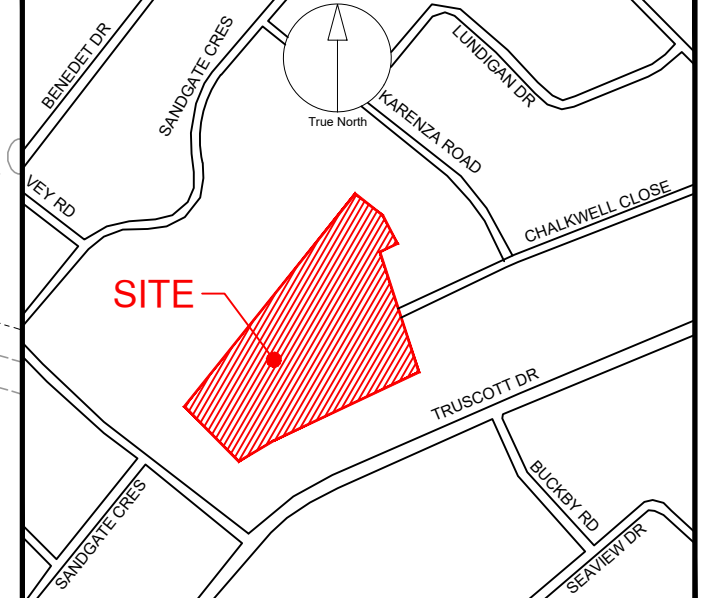
CLIENT
DUNPAR DEVELOPMENTS INC.
105 SIX POINT RD
ETOBICOKE ON. M8Z 2X3
PHONE: (416) 236-9080

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	2.	ISSUE FOR OPA/ZBA SUBMISSION	NOV. 25, 2024

LEGEND

PROPERTY LINE	---
OUTLINE OF BUILDING AT GROUND LEVEL	▬
PROP. MAIN ENTRANCE / DOOR / OH DOOR	▽
PROP. OVERLAND FLOW ROUTE	→
EX. OVERLAND FLOW ROUTE	→
PROP. STORM MANHOLE	●
PROP. SANITARY MANHOLE	○
PROP. CATCH BASIN	□
EX. STORM MANHOLE	○
EX. SANITARY MANHOLE	○
PROP. WATER CHAMBER	⊕
PROP. RETAINING WALL	—
PROP. FIRE HYDRANT	⊙
PROP. STORM SEWER	---
PROP. SANITARY SEWER	---
PROP. WATERMAIN	---
PROP. JOINT UTILITY TRENCH	---



KEY PLAN



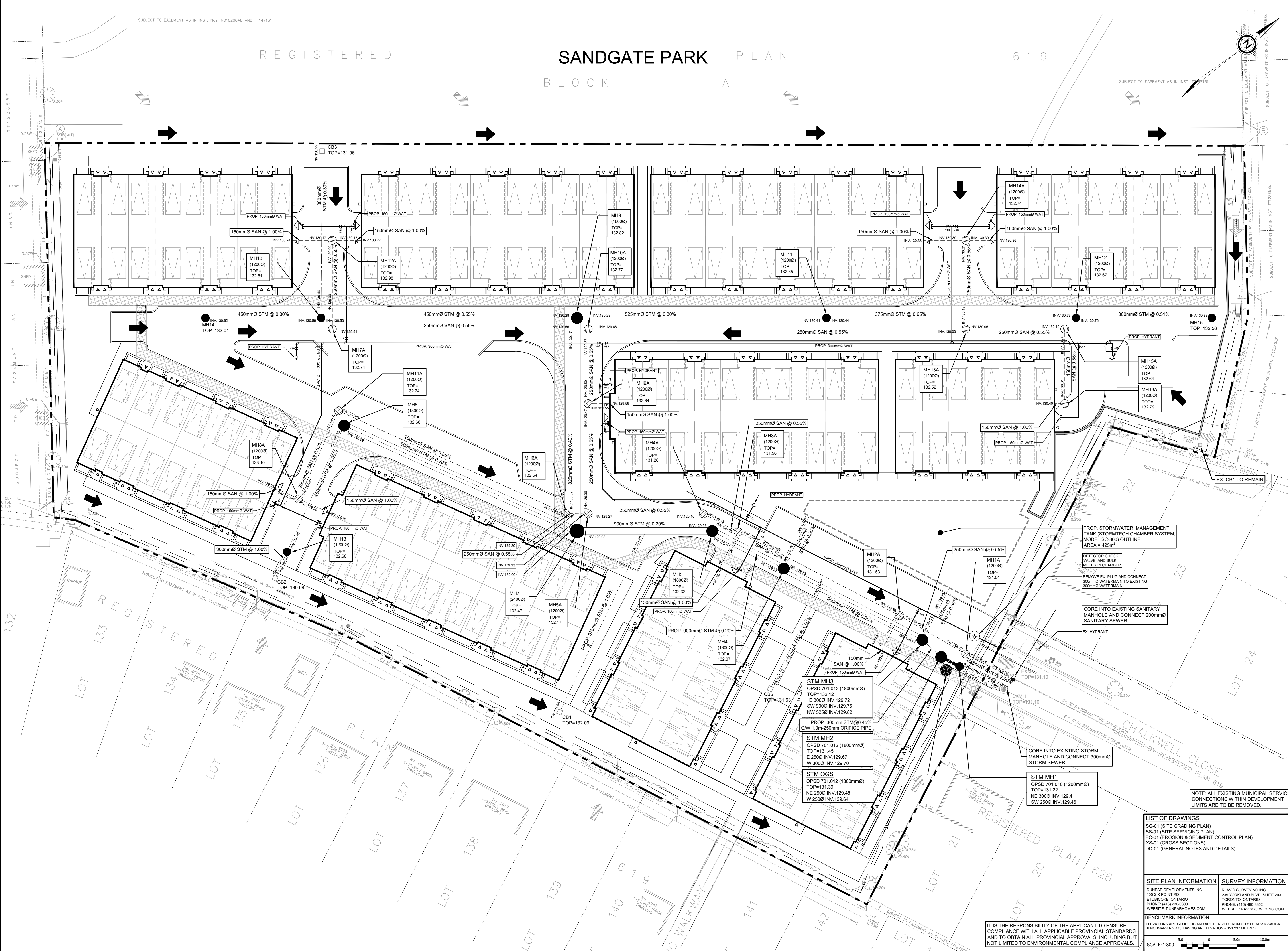
PROJECT
2620 CHALKWELL CLOSE
CITY OF MISSISSAUGA

PROJECT NO:
145258
DRAWN BY:
DL
PROJECT MGR:
NG

CHECKED BY:
NG
APPROVED BY:
NS

SHEET TITLE
SITE SERVICING PLAN

SHEET NUMBER
SS-01 ISSUE
02



LIST OF DRAWINGS

SG-01 (SITE GRADING PLAN)
SS-01 (SITE SERVICING PLAN)
EC-01 (EROSION & SEDIMENT CONTROL PLAN)
XS-01 (CROSS SECTIONS)
DD-01 (GENERAL NOTES AND DETAILS)

SITE PLAN INFORMATION

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235 YORKLAND BLVD. SUITE 203
TORONTO, ONTARIO
PHONE: (416) 490-8352
WEBSITE: RAVISSURVEYING.COM

BENCHMARK INFORMATION:
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IT IS THE RESPONSIBILITY OF THE APPLICANT TO ENSURE COMPLIANCE WITH ALL APPLICABLE PROVINCIAL STANDARDS AND TO OBTAIN ALL PROVINCIAL APPROVALS, INCLUDING BUT NOT LIMITED TO ENVIRONMENTAL COMPLIANCE APPROVALS.

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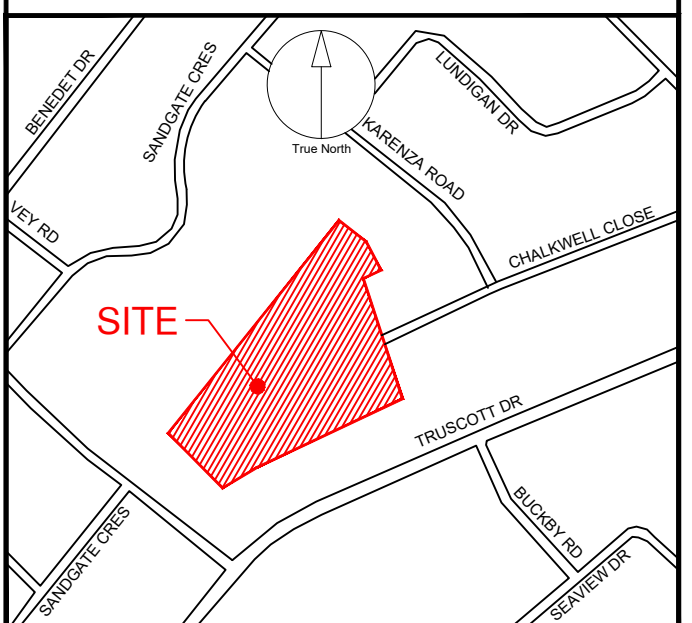
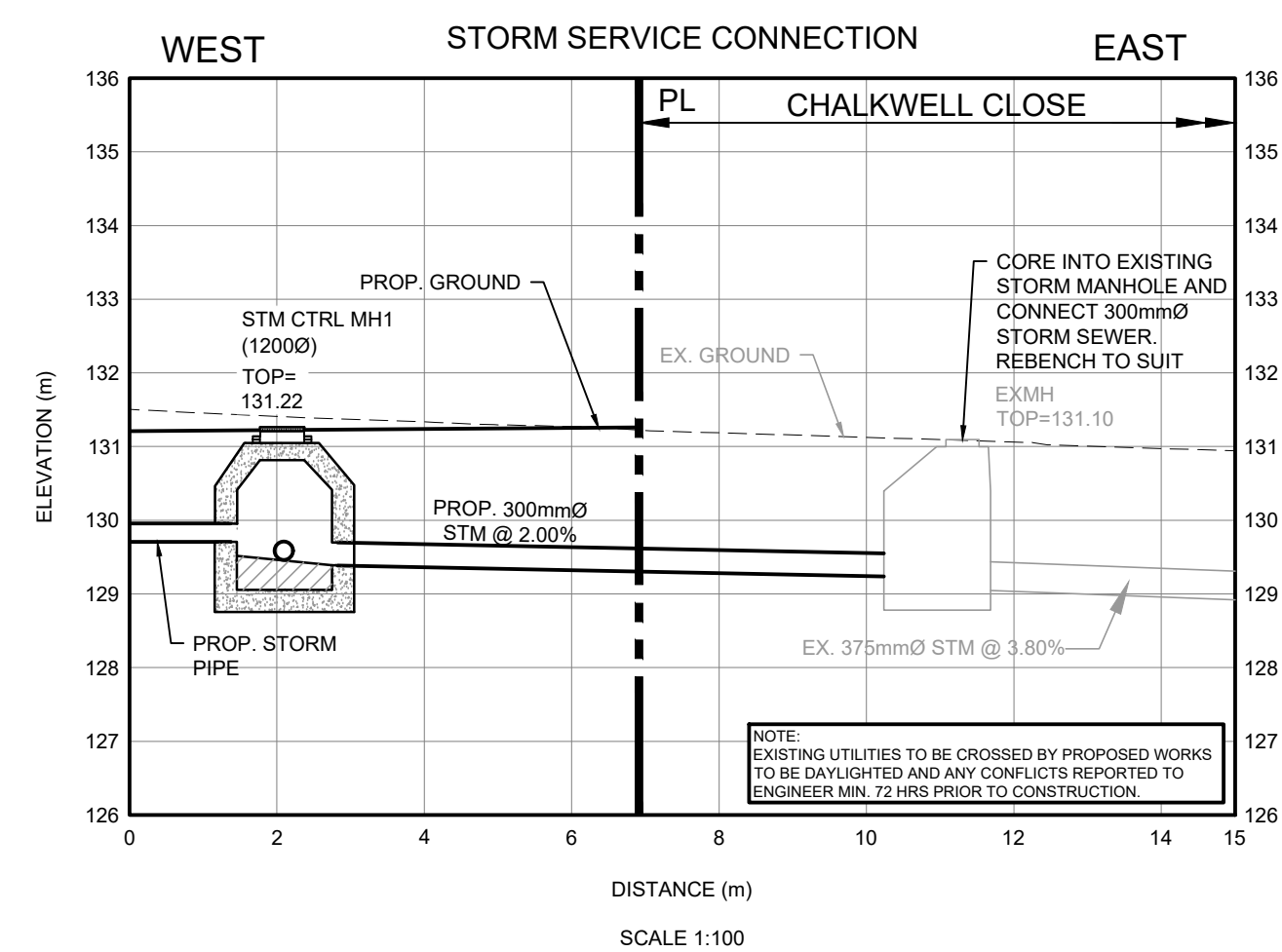
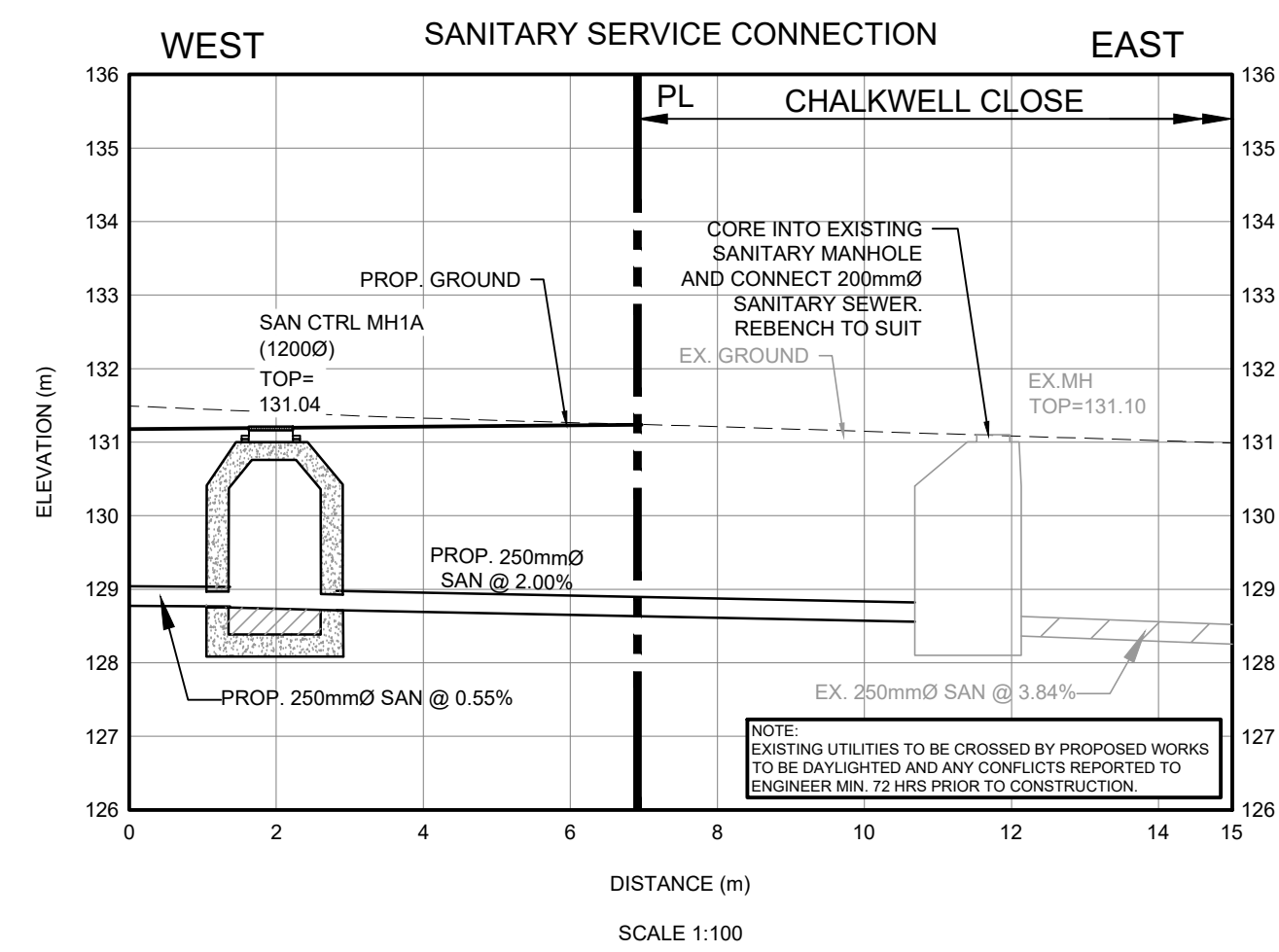
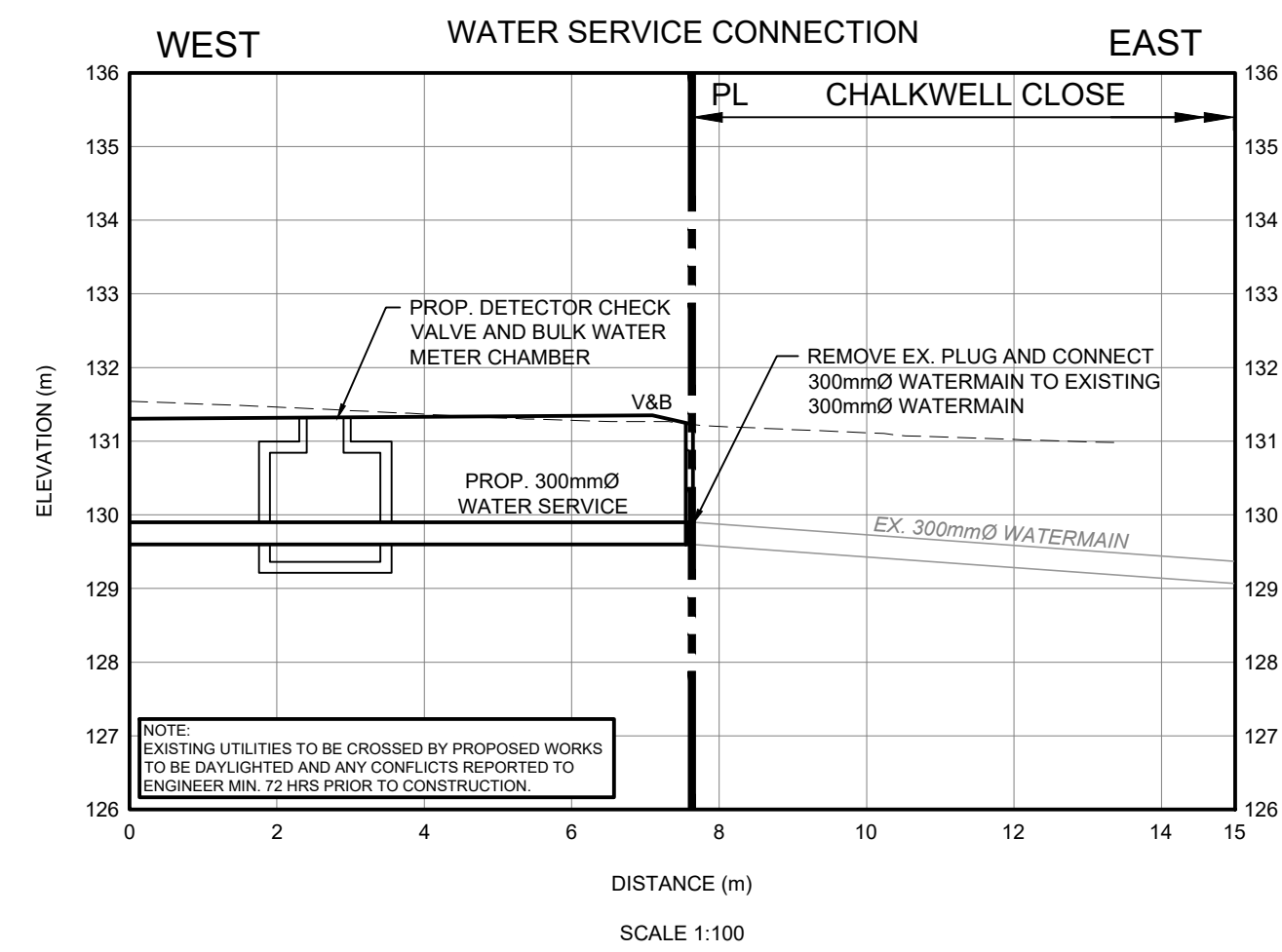
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2.	ISSUE FOR OPAZBA SUBMISSION	NOV. 25, 2024

LEGEND



KEY PLAN



PROJECT
2620 CHALKWELL CLOSE
 CITY OF MISSISSAUGA

PROJECT NO: 145258
DRAWN BY: DL
CHECKED BY: NG
PROJECT MGR: NG
APPROVED BY: NS

SHEET TITLE
CROSS SECTIONS

SHEET NUMBER XS-01 **ISSUE** 02

LIST OF DRAWINGS

SG-01 (SITE GRADING PLAN)
SS-01 (SITE SERVICING PLAN)
EC-01 (EROSION & SEDIMENT CONTROL PLAN)
XS-01 (CROSS SECTIONS)
DD-01 (GENERAL NOTES AND DETAILS)

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SCALE: 1:100

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