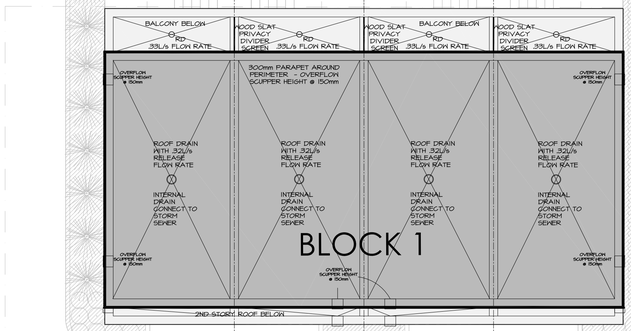
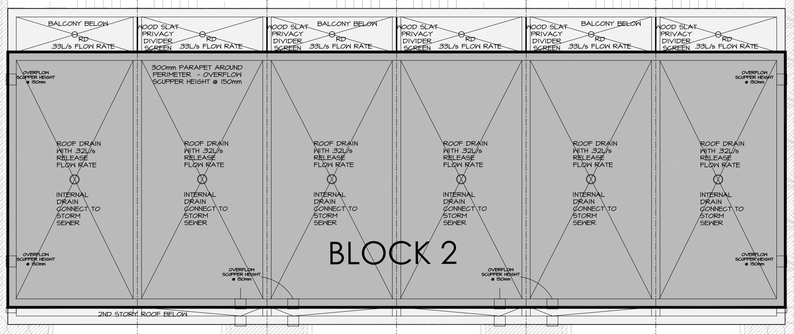
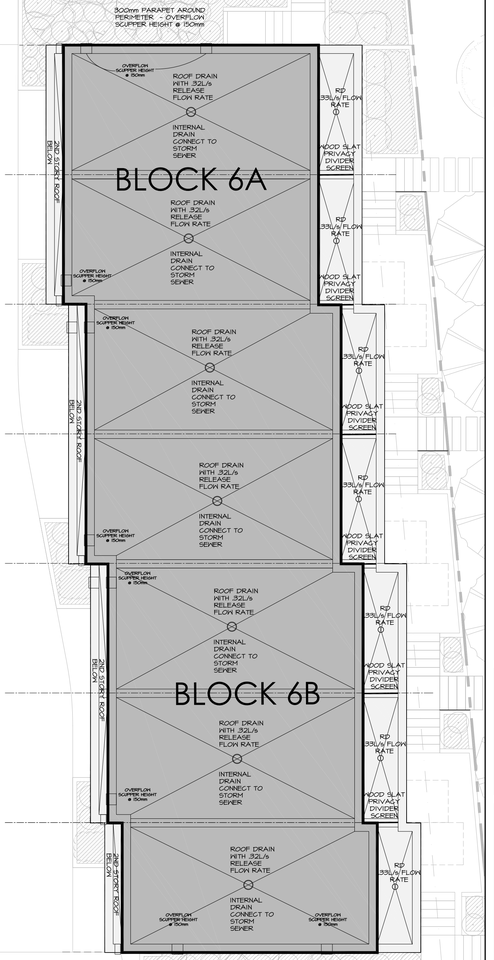
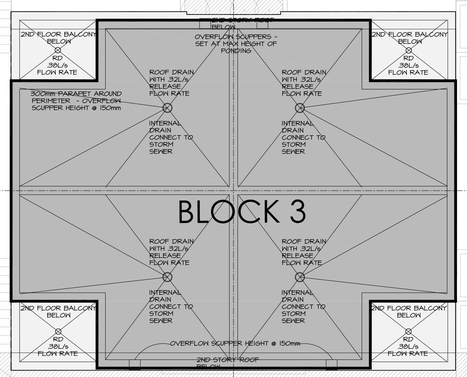
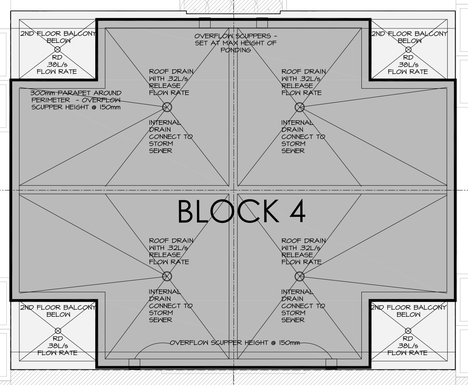
CLIFTON ROAD

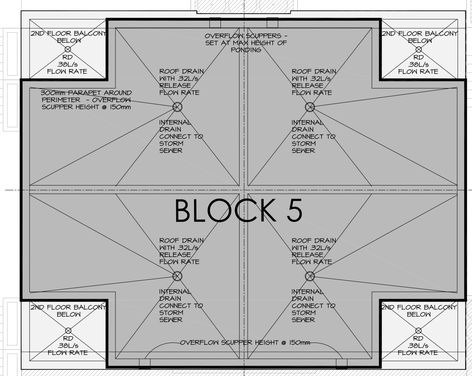












ANDREW MCCREIGHT
MANAGER (A), DEVELOPMENT REVIEW CENTRAL
PLANNING, REAL ESTATE & ECONOMIC DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

APPROVED
By Andrew McCreight at 8:09 am, Mar 02, 2023

STORMWATER MANAGEMENT – RETENTION CALCULATIONS - 100 YEAR EVENT

Sub-Area	Total Area (m^2)	Available Storage Area (m^2)	Catchbasin/ Roof Drain Elevation (m)	Maximum Ponding Elevation (m)	r_{max}	V_{max} (m^3)	V_{stor} (m^3)	V_{acc} (m^3)	Y_{stor} (m)	$Elev_{stor}$ (m)	A_{stor} (m^2)	Q (L/s)	Drawdown Time (min)	Comments
A1.1 to A1.4	42	35	100.00	100.15	3.15	1.8	1.3	1.3	0.13	100.13	30	0.32	85	RD1.1 to RD1.4 (closed)
A1.5 to A1.8	7	0	100.00	100.00	3.00	0.0	0.0	0.0	0.00	100.00	0	0.33	0	RD1.5 to RD1.8 (free flow)
A2.1 to A2.6	42	35	100.00	100.15	3.15	1.8	1.3	1.3	0.13	100.13	30	0.32	85	RD2.1 to RD2.6 (closed)
A2.7 to A2.12	7	0	100.00	100.00	3.00	0.0	0.0	0.0	0.00	100.00	0	0.33	0	RD2.7 to RD2.12 (free flow)
A3.1 to A3.4	42	35	100.00	100.15	3.15	1.8	1.3	1.3	0.13	100.13	30	0.32	85	RD3.1 to RD3.4 (closed)
A3.5 to A3.8	8	0	100.00	100.00	3.00	0.0	0.0	0.0	0.00	100.00	0	0.38	0	RD3.5 to RD3.8 (free flow)
A4.1 to A4.4	42	35	100.00	100.15	3.15	1.8	1.3	1.3	0.13	100.13	30	0.32	85	RD4.1 to RD4.4 (closed)
A4.5 to A4.8	8	0	100.00	100.00	3.00	0.0	0.0	0.0	0.00	100.00	0	0.38	0	RD4.5 to RD4.8 (free flow)
A5.1 to A5.4	42	35	100.00	100.15	3.15	1.8	1.3	1.3	0.13	100.13	30	0.32	85	RD5.1 to RD5.4 (closed)
A5.5 to A5.8	8	0	100.00	100.00	3.00	0.0	0.0	0.0	0.00	100.00	0	0.38	0	RD5.5 to RD5.8 (free flow)
A6.1 to A6.7	42	35	100.00	100.15	3.15	1.8	1.3	1.3	0.13	100.13	30	0.32	85	RD6.1 to RD6.7 (closed)
A6.8 to A6.14	7	0	100.00	100.00	3.00	0.0	0.0	0.0	0.00	100.00	0	0.33	0	RD6.8 to RD6.14 (free flow)

DEFINITIONS OF ABBREVIATIONS USED IN CALCULATION TABLE:

NC = Area is not controlled (unattenuated)
Available Area = Area of water accumulated in sub-area at Max. Elev.
Catchbasin Elev. = Elevation of roof drain inlet (top of grate).
Max. Elev. = Maximum elevation of water that may be accumulated within sub-area.
r_{max} = Maximum depth of water that may be accumulated within the sub-area.
V_{max} = Maximum volume of water (capacity) that may be accumulated within the sub-area.
V_{stor} = Volume of water generated by rainfall.
V_{acc} = Total volume of water accumulated within the sub-area in the event of a specific rainfall.
Y_{stor} = Depth of water generated by rainfall.
$Elev_{stor}$ = Elevation of water generated by rainfall.
A_{stor} = Area of water generated by rainfall.
Q = Release flow rate.
Drawdown Time = Time required for the total volume of water accumulated within sub-area to subside.

STORMWATER MANAGEMENT – RETENTION CALCULATIONS - 5 YEAR EVENT

Sub-Area	Total Area (m^2)	Available Storage Area (m^2)	Catchbasin/ Roof Drain Elevation (m)	Maximum Ponding Elevation (m)	Y_{max} (m)	V_{max} (m^3)	V_{stor} (m^3)	V_{acc} (m^3)	Y_{stor} (m)	$Elev_{stor}$ (m)	A_{stor} (m^2)	Q (L/s)	Drawdown Time (min)	Comments
A1.1 to A1.4	42	35	100.00	100.15	0.15	1.8	0.6	0.6	0.06	100.06	20	0.32	29	RD1.1 to RD1.4 (closed)
A1.5 to A1.8	7	0	100.00	100.00	0.00	0.0	0.0	0.0	0.00	100.00	0	0.33	0	RD1.5 to RD1.8 (free flow)
A2.1 to A2.6	42	35	100.00	100.15	0.15	1.8	0.6	0.6	0.06	100.06	20	0.32	29	RD2.1 to RD2.6 (closed)
A2.7 to A2.12	7	0	100.00	100.00	0.00	0.0	0.0	0.0	0.00	100.00	0	0.33	0	RD2.7 to RD2.12 (free flow)
A3.1 to A3.4	42	35	100.00	100.15	0.15	1.8	0.6	0.6	0.06	100.06	20	0.32	29	RD3.1 to RD3.4 (closed)
A3.5 to A3.8	8	0	100.00	100.00	0.00	0.0	0.0	0.0	0.00	100.00	0	0.38	0	RD3.5 to RD3.8 (free flow)
A4.1 to A4.4	42	35	100.00	100.15	0.15	1.8	0.6	0.6	0.06	100.06	20	0.32	29	RD4.1 to RD4.4 (closed)
A4.5 to A4.8	8	0	100.00	100.00	0.00	0.0	0.0	0.0	0.00	100.00	0	0.38	0	RD4.5 to RD4.8 (free flow)
A5.1 to A5.4	42	35	100.00	100.15	0.15	1.8	0.6	0.6	0.06	100.06	20	0.32	29	RD5.1 to RD5.4 (closed)
A5.5 to A5.8	8	0	100.00	100.00	0.00	0.0	0.0	0.0	0.00	100.00	0	0.38	0	RD5.5 to RD5.8 (free flow)
A6.1 to A6.7	42	35	100.00	100.15	0.15	1.8	0.6	0.6	0.06	100.06	20	0.32	29	RD6.1 to RD6.7 (closed)
A6.8 to A6.14	7	0	100.00	100.00	0.00	0.0	0.0	0.0	0.00	100.00	0	0.33	0	RD6.8 to RD6.14 (free flow)

no.	date	revision
1	2021-07-05	ISSUED AS PART OF SPC SUBMISSION #2

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HOBIN ARCHITECTURE

project title
CLIFTON TOWNS
CLIFTON ROAD, OTTAWA, ONTARIO

drawing title
SITE ROOF DRAINAGE PLAN

drawn	date	scale
HL	JULY 2021	1:00

project 2030

drawing no. RD-1

revision no.

ONTARIO ASSOCIATION OF ARCHITECTS
LARRY J. HOBIN LICENCE 3049

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