

EXISTING CONDITIONS - FLOWS DIRECTED TO EDGEWORTH AVENUE

Time-of-Concentration (Uplands Method)

Flow Classification (Land Use)	Length (m)	Elevation		Slope (%)	Velocity ¹ (m/s)	Time-of- Concentration (min)
		U/S (m)	D/S (m)			
Overland Flow (Sheet Flow to Edgeworth)	15	67.5	67.2	2.0%	0.90	0.3
TOTAL	15	67.5	67.2	2.0%	0.90	10.0

¹ Refer to Uplands Velocity Chart.

*Min 10-minutes.

Existing Catchment Parameters

Catchment ID	Areas (ha)			Runoff Coefficient		%Imperv.
	Total	Hard Surfaces (C=0.90)	Soft Surfaces (C=0.20)	C _{avg}	C _{100yr} ¹	
TOTAL	0.077	0.024	0.053	0.42	0.48	31.2%

¹ Runoff coefficient increases by 25%, up to a maximum value of 1.00, for the 100-year event.

Pre-Development Peak Flows

Catchment ID	Rainfall Intensity (mm/hr) ¹			Peak Flows (L/s)		
	2-year	5-year	100-year	2-year	5-year	100-year
Site Boundary (existing conditions)	76.81	104.19	178.56	6.9	9.3	18.5

¹ Tc is based on Uplands Method.

Notes:

Rainfall Intensity from City of Ottawa Sewer Design Guidelines (Oct. 2012)

$$Q(\text{peak flow}) = 2.78 \times C \times I \times A$$

- 100 year Intensity = $1735.688 / (Tc + 6.014)^{0.820}$

- C is the runoff coefficient

- 5 year Intensity = $998.071 / (Tc + 6.053)^{0.814}$

- I is the rainfall intensity

- 2 year Intensity = $732.951 / (Tc + 6.199)^{0.810}$

- A is the total drainage area

500 and 508 Edgeworth Avenue (121109)
Uplands Velocity Chart

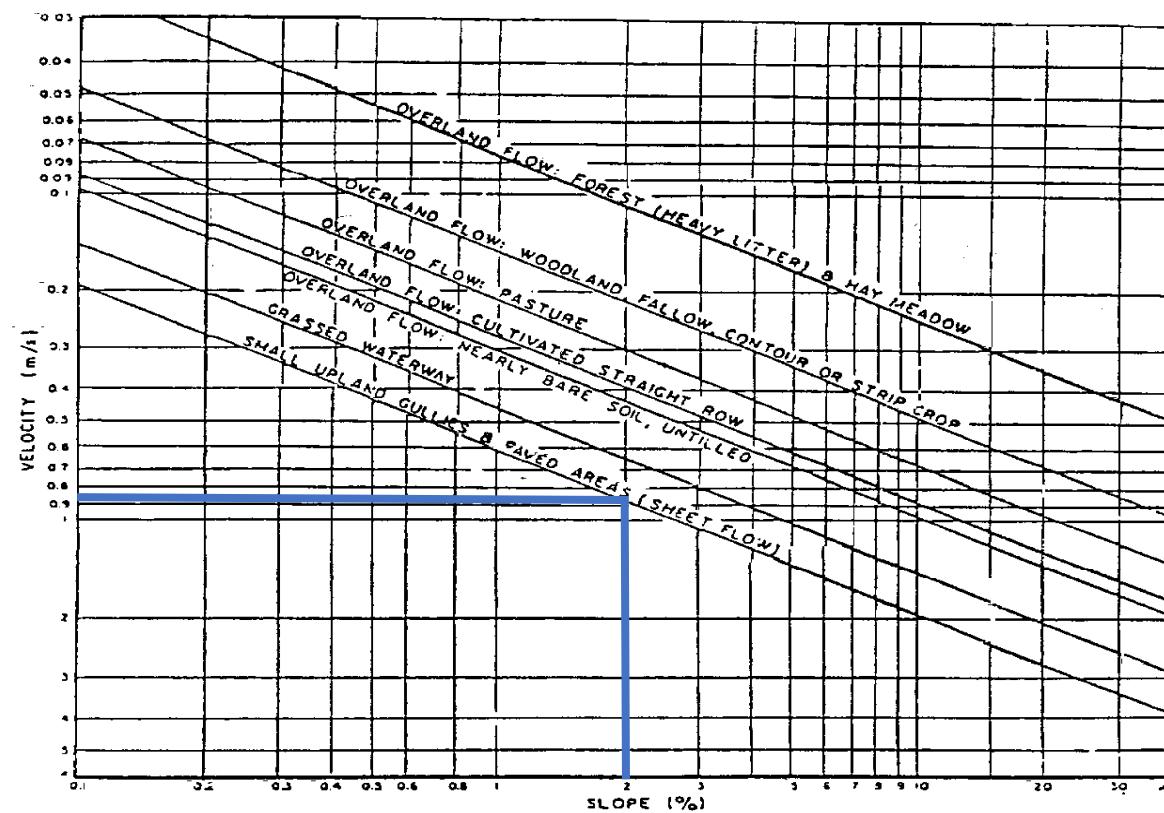


Figure A.5.2: Upland Method for Estimating Time of Concentration
(SCS National Engineering Handbook, 1971)