

# Stormwater Detention Calculations

## I. GENERAL SITE DATA

A. Contributing Watershed: A= **0.06030762** acres  
or 2,627 SF

### B. Existing Site Conditions

Existing Roof:	<b>744</b> SF	C=	<b>0.95</b>
Existing Pavement:	<b>1,150</b> SF	C=	<b>0.95</b>
Lawn/Rain Garden Area:	<b>733</b> SF	C=	<b>0.15</b>

### C. Proposed Average Coefficient of Imperviousness (C)

Existing Building Footprint:	744	x	0.95	=	706.8	
Existing Pavement:	1,150	x	0.95	=	1092.5	
Lawn/Rain Garden Area	733	x	0.15	=	<u>109.95</u>	
					1,909	/ 2627
						<b>0.73</b>

(Soils: FOX < 4% slope, Type B)

### D. Allowable Outflow (Qa) (for detention sizing- 100 yr. Storm event)

Qa=.15 cfs x 0.06030762 acres = 0.0090461 cfs

## III FIRST FLUSH COMPUTATIONS(.5 " over site) (to satisfy Washtenaw County Drain Commissioner's req.)

V= 1815.0 x **0.060307622** x 0.73 = **79.5520833 cu.ft.**

## V VOLUME CALCULATIONS:

Elevation	Surface Area	(Surface Area + Surface Area) x Depth 2	Accum. Volume
<b>792.00</b> bottom el (0")	<b>3</b> SF		
		10 CF	10 CF
<b>792.25</b> bottom el (0")	<b>74</b> SF	28 CF	38 CF
<b>792.50</b> top el (3")	<b>153</b> SF	43 CF	81 CF
<b>792.75</b> limit of disturbance (6")	<b>189</b> SF		