Summary

Site	Project Name	Project Title	Storm Type
Pre-Development	3103	Coral Sophia	avg-annual
Post-Development	3103 Coral Sophia Proposed	Coral Sophia Proposed	avg-annual

Water Balance Comparison

Site	Site Area	Site Rainfall In (mm) (m^3)	Site Infiltration (mm) (m^3)	Site Evapotranspiration (mm) (m^3)	External Outflow (mm) (m^3)	Rainfall Reduction (mm) (%)
Pre-Development Total	0.37 ha	944.70 mm 3,514.28 m^3	56.76 mm 211.15 m^3	263.08 mm 978.66 m^3	626.34 mm 2,330.00 m^3	318.36 mm 33.70 %
Post-Development Total	0.37 ha	944.70 mm 3,523.73 m^3	111.31 mm 415.20 m^3	195.60 mm 729.61 m^3	638.07 mm 2,380.00 m^3	306.63 mm 32.46 %
Difference	**0.00 ha**	**0.00 mm** **9.45 m^3**	**54.55 mm** **204.05 m^3**	**-67.48 mm** **-249.05 m^3**	**11.73 mm** **50.00 m^3**	**-11.73 mm** **-1.24 %**
Difference	**0.27 %**	**0.00 %**	**96.11 %**	**-25.65 %**	**1.87 %**	**-3.68 %**

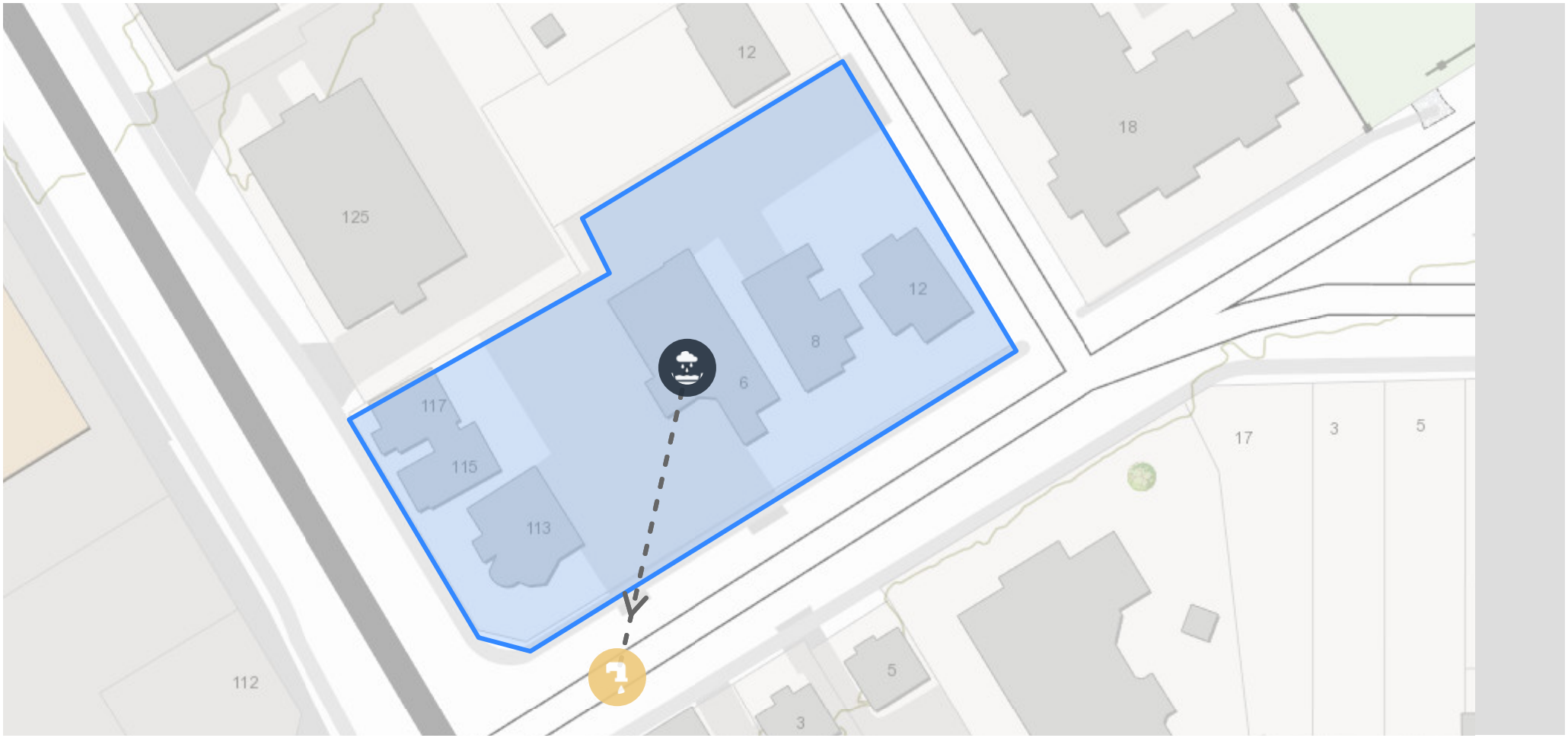
Water Balance | Pre-Development

Catchment	Site Area	Site Rainfall In (mm) (m^3)	Site Infiltration (mm) (m^3)	Site Evapotranspiration (mm) (m^3)	External Outflow (mm) (m^3)	Rainfall Reduction (mm) (%)
1	0.37 ha	944.70 mm 3,514.28 m^3	56.76 mm 211.15 m^3	263.08 mm 978.66 m^3	626.34 mm 2,330.00 m^3	318.36 mm 33.70 %
TOTAL	**0.37 ha**	**944.70 mm** **3,514.28 m^3**	**56.76 mm** **211.15 m^3**	**263.08 mm** **978.66 m^3**	**626.34 mm** **2,330.00 m^3**	**318.36 mm** **33.70 %**

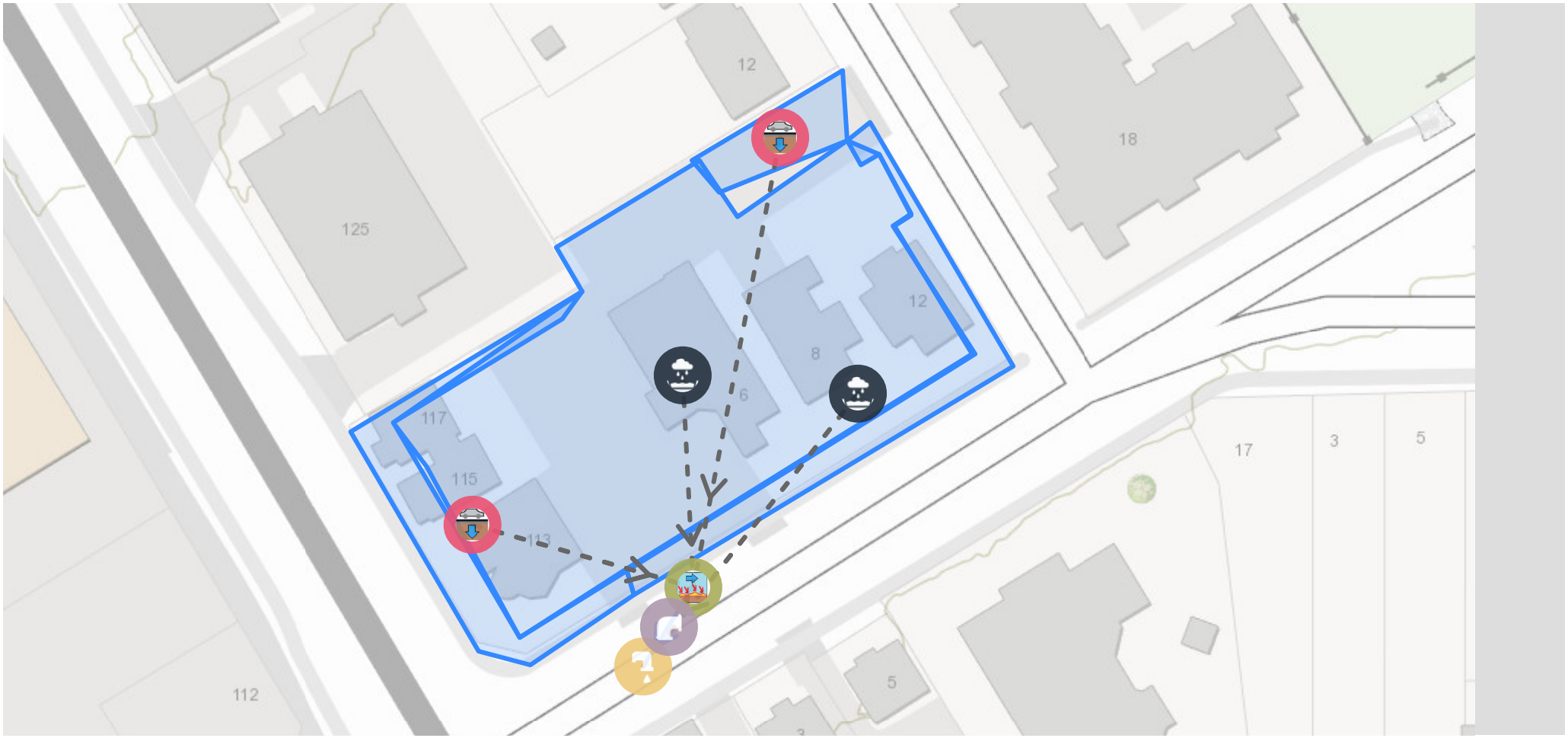
Water Balance | Post-Development

Catchment	Site Area	Site Rainfall In (mm) (m^3)	Site Infiltration (mm) (m^3)	Site Evapotranspiration (mm) (m^3)	External Outflow (mm) (m^3)	Rainfall Reduction (mm) (%)
1	0.37 ha	944.70 mm 3,523.73 m^3	111.31 mm 415.20 m^3	195.60 mm 729.61 m^3	638.07 mm 2,380.00 m^3	306.63 mm 32.46 %
TOTAL	**0.37 ha**	**944.70 mm** **3,523.73 m^3**	**111.31 mm** **415.20 m^3**	**195.60 mm** **729.61 m^3**	**638.07 mm** **2,380.00 m^3**	**306.63 mm** **32.46 %**

Map | Pre-Development



Map | Post-Development



LID Summary | Post-Development

Element	Type	LID Area	Drawdown Time	Effective Impervious to Pervious Ratio	FLOW	TSS	TP
					Flow In (m^3)	Load In (kg)	Load In (kg)
					Flow Out (m^3)	Load Out (kg)	Load Out (kg)
					Actual Reduction (%)	Actual Reduction (%)	Actual Reduction (%)
Filter	Sorbitive-Media				2,220.000 m^3	25.463 kg	0.221 kg
					2,220.000 m^3	3.819 kg	0.124 kg
					0.000 %	85.000 %	43.900 %
Per pave#1	Perm-Pavement	0.035 ha	20.000 hrs	1.000	330.645 m^3	23.905 kg	0.073 kg
					110.000 m^3	1.988 kg	0.010 kg
					66.732 %	91.683 %	86.693 %
Perm Pave #2	Perm-Pavement	0.016 ha	20.000 hrs	1.000	151.152 m^3	10.918 kg	0.033 kg
					10.000 m^3	0.181 kg	0.001 kg
					93.384 %	98.346 %	97.354 %

Loading Summary TSS | Pre Development

Catchment	Total Catchment TSS Removal	Peak Outflow	Generated Total Flow (m^3) Average Concentration (mg/l) Total Load (kg)	Outgoing Total Flow (m^3) Average Concentration (mg/l) Total Load (kg)
Catchment 1	0.000 %	0.047 m^3/s	2,330.000 m^3 55.643 mg/l 129.649 kg	2,327.000 m^3 55.715 mg/l 129.649 kg
Total	**0.000 %**	**0.047 m^3/s**	**2,330.000 m^3** **55.643 mg/l** **129.649 kg**	**2,327.000 m^3** **55.715 mg/l** **129.649 kg**

Loading Summary TSS | Post Development

Catchment	Total Catchment TSS Removal	Peak Outflow	Generated Total Flow (m^3) Average Concentration (mg/l) Total Load (kg)	Outgoing Total Flow (m^3) Average Concentration (mg/l) Total Load (kg)
Catchment 1	80.675 %	0.049 m^3/s	2,751.797 m^3 24.458 mg/l 67.305 kg	2,384.000 m^3 5.456 mg/l 13.007 kg
Total	**80.675 %**	**0.049 m^3/s**	**2,751.797 m^3** **24.458 mg/l** **67.305 kg**	**2,384.000 m^3** **5.456 mg/l** **13.007 kg**

Loading Summary TP | Pre Development

Catchment	Total Catchment TP Removal	Peak Outflow	Generated Total Flow (m^3) Average Concentration (mg/l) Total Load (kg)	Outgoing Total Flow (m^3) Average Concentration (mg/l) Total Load (kg)
Catchment 1	0.000 %	0.047 m^3/s	2,330.000 m^3 0.190 mg/l 0.442 kg	2,327.000 m^3 0.190 mg/l 0.442 kg
Total	**0.000 %**	**0.047 m^3/s**	**2,330.000 m^3** **0.190 mg/l** **0.442 kg**	**2,327.000 m^3** **0.190 mg/l** **0.442 kg**

Loading Summary TP | Post Development

Catchment	Total Catchment TP Removal	Peak Outflow	Generated Total Flow (m^3) Average Concentration (mg/l) Total Load (kg)	Outgoing Total Flow (m^3) Average Concentration (mg/l) Total Load (kg)
Catchment 1	54.500 %	0.049 m^3/s	2,751.797 m^3 0.129 mg/l 0.354 kg	2,384.000 m^3 0.068 mg/l 0.161 kg
Total	**54.500 %**	**0.049 m^3/s**	**2,751.797 m^3** **0.129 mg/l** **0.354 kg**	**2,384.000 m^3** **0.068 mg/l** **0.161 kg**

Peak Flow | Pre-Development

Catchment	Element	Description	Peak outflow
1	Sophia Street Storm Pre-Development Site	MAXIMUM FLOW at PEAK RUNOFF FLOW from	0.047 m^3/s 0.05 m^3/s

Peak Flow | Post-Development

Catchment	Element	Description	Peak outflow
1	Sophia Street Storm	MAXIMUM FLOW at	0.049 m^3/s
	Filter	MAXIMUM LATERAL INFLOW at	0.045 m^3/s
	Storm Outfall	MAXIMUM FLOW in	0.045 m^3/s
	Per pave#1	PEAK RUNOFF FLOW from	0.00 m^3/s
	Building, Dog Patch, Loading Bay	PEAK RUNOFF FLOW from	0.04 m^3/s
	East & South Landscaped Area	PEAK RUNOFF FLOW from	0.00 m^3/s
	Perm Pave #2	PEAK RUNOFF FLOW from	0.00 m^3/s

Loading TSS | Pre Development

TSS - Catchment 1

Name	LID Type (removal)	Peak Outflow	Incoming Total Flow (m^3) Concentration (mg/l) Total Load (kg)	Outgoing Total Flow (m^3) Concentration (mg/l) Total Load (kg)
Pre-Development Site	0 %	0.05 m^3/s	3,514.284 m^3 55.643 mg/l 195.547 kg	2,330.000 m^3 55.643 mg/l 129.649 kg
Sophia Street Storm	0 %	0.047 m^3/s	2,327.000 m^3 55.715 mg/l 129.649 kg	2,327.000 m^3 55.715 mg/l 129.649 kg

Loading TSS | Post Development

TSS - Catchment 1

Name	LID Type (removal)	Peak Outflow	Incoming Total Flow (m^3) Concentration (mg/l) Total Load (kg)	Outgoing Total Flow (m^3) Concentration (mg/l) Total Load (kg)
Building, Dog Patch, Loading Bay	0 %	0.04 m^3/s	2,692.395 m^3 11.040 mg/l 29.724 kg	2,110.000 m^3 11.040 mg/l 23.294 kg
East & South Landscaped Area	0 %	0 m^3/s	349.539 m^3 57.420 mg/l 20.071 kg	160.000 m^3 57.420 mg/l 9.187 kg
Per pave#1	75 %	0 m^3/s	330.645 m^3 72.297 mg/l 23.905 kg	110.000 m^3 18.074 mg/l 1.988 kg
Perm Pave #2	75 %	0 m^3/s	151.152 m^3 72.234 mg/l 10.918 kg	10.000 m^3 18.059 mg/l 0.181 kg
Filter	85 %	0.045 m^3/s	2,220.000 m^3	2,220.000 m^3

			11.470 mg/l 25.463 kg	1.720 mg/l 3.819 kg
Storm Outfall	0 %	0.045 m^3/s	2,220.000 m^3 1.720 mg/l 3.819 kg	2,220.000 m^3 1.720 mg/l 3.819 kg
Sophia Street Storm	0 %	0.049 m^3/s	2,384.000 m^3 5.456 mg/l 13.007 kg	2,384.000 m^3 5.456 mg/l 13.007 kg

Loading TP | Pre Development

TP - Catchment 1

Name	LID Type	Peak Outflow	Incoming Total Flow (m^3) Concentration (mg/l) Total Load (kg)	Outgoing Total Flow (m^3) Concentration (mg/l) Total Load (kg)
Pre-Development Site	0 %	0.05 m^3/s	3,514.284 m^3 0.190 mg/l 0.666 kg	2,330.000 m^3 0.190 mg/l 0.442 kg
Sophia Street Storm	0 %	0.047 m^3/s	2,327.000 m^3 0.190 mg/l 0.442 kg	2,327.000 m^3 0.190 mg/l 0.442 kg

Loading TP | Post Development

TP - Catchment 1

Name	LID Type	Peak Outflow	Incoming Total Flow (m^3) Concentration (mg/l) Total Load (kg)	Outgoing Total Flow (m^3) Concentration (mg/l) Total Load (kg)
Building, Dog Patch, Loading Bay	0 %	0.04 m^3/s	2,692.395 m^3 0.100 mg/l 0.268 kg	2,110.000 m^3 0.100 mg/l 0.210 kg
East & South Landscaped Area	0 %	0 m^3/s	349.539 m^3 0.233 mg/l 0.082 kg	160.000 m^3 0.233 mg/l 0.037 kg
Per pave#1	60 %	0 m^3/s	330.645 m^3 0.222 mg/l 0.073 kg	110.000 m^3 0.089 mg/l 0.010 kg
Perm Pave #2	60 %	0 m^3/s	151.152 m^3 0.222 mg/l 0.033 kg	10.000 m^3 0.089 mg/l 0.001 kg
Filter	43.9 %	0.045 m^3/s	2,220.000 m^3	2,220.000 m^3

			0.099 mg/l 0.221 kg	0.056 mg/l 0.124 kg
Storm Outfall	0 %	0.045 m^3/s	2,220.000 m^3 0.056 mg/l 0.124 kg	2,220.000 m^3 0.056 mg/l 0.124 kg
Sophia Street Storm	0 %	0.049 m^3/s	2,384.000 m^3 0.068 mg/l 0.161 kg	2,384.000 m^3 0.068 mg/l 0.161 kg

Detailed Report Parameters | Pre Development

Sophia Street Storm

Field	Value
Name	Sophia Street Storm
Catchment	1
Outfall Elevation (m)	232.9

Pre-Development Site

Field	Value
Subcatchment name	Pre-Development Site
Catchment	1
Total AREA (HA)	0.372
Impervious area (HA)	0.197346
Roof area (HA)	0.0888708
Landscaped area (HA)	0
Row Crop area (HA)	0
Open Space / Parkland area (HA)	0.0857832
Forest area (HA)	0
Wetland area (HA)	0

Other area (HA)	0
Manning's n for impervious areas	0.01
Manning's n for pervious areas	0.1
Depression storage for impervious areas (mm)	2
Depression storage for pervious areas (mm)	2.54
Weighted Curve Number	76

Detailed Report Parameters | Post Development

Sophia Street Storm

Field	Value
Name	Sophia Street Storm
Catchment	1
Outfall Elevation (m)	232.9

Filter

Field	Value
Name	Filter
Junction Type	sorbitive-media
Catchment	1
Invert Elevation (m)	233
Depth to Surface (m)	1.5

Storm Outfall

Field	Value
Name	Storm Outfall
Catchment	1
Upstream Node	Filter

Downstream Node	Sophia-Street-Storm
Length (m)	14
Manning's Roughness	0.013
Upstream Invert (m)	233
Downstream Invert (m)	232.9
Pipe Diameter (m)	0.3

Per pave#1

Field	Value
Name	Per pave#1
LID type	perm-pavement
Catchment	1
Outlet (name)	5
% Imperv	100
Width (m)	4
Paved surface (HA)	0.025165000000000007
Roof (HA)	0
Landscaped Area (HA)	0
Row Crop (HA)	0
Open Space/Parkland (HA)	0.009835000000000002
Forest (HA)	0

Wetland (HA)	0
(HA)	0
Berm Height (mm)	0
Surface Slope (%)	2.5
Thickness (mm)	500
Void Ratio	0.4
Impervious Surface Fraction	0.9
Permeability (mm/hr)	10
Clogging Factor	0
Soil	
Porosity (Fraction)	0.5
Field Capacity (Fraction)	0.3
Wilting Point (Fraction)	0.1
Conductivity (mm/hr)	10
Conductivity Slope (Dimensionless)	45
Suction Head (mm)	200
Seepage Rate (mm/hr)	10
Flow Coefficient	1
Flow Exponent	1
Offset Height (mm)	0
Mannings Roughness	

Building, Dog Patch, Loading Bay

Field	Value
Subcatchment name	Building, Dog Patch, Loading Bay
Catchment	1
Total AREA (HA)	0.285
Impervious area (HA)	0.011399999999999999
Roof area (HA)	0.26333999999999996
Landscaped area (HA)	0
Row Crop area (HA)	0
Open Space / Parkland area (HA)	0.01026
Forest area (HA)	0
Wetland area (HA)	0
Other area (HA)	0
Manning's n for impervious areas	0.01
Manning's n for pervious areas	0.1
Depression storage for impervious areas (mm)	2
Depression storage for pervious areas (mm)	2.54
Weighted Curve Number	76

East & South Landscaped Area

Field	Value

Subcatchment name	East & South Landscaped Area
Catchment	1
Total AREA (HA)	0.037
Impervious area (HA)	0.01628
Roof area (HA)	0
Landscaped area (HA)	0
Row Crop area (HA)	0
Open Space / Parkland area (HA)	0.02442
Forest area (HA)	0
Wetland area (HA)	0
Other area (HA)	0
Manning's n for impervious areas	0.01
Manning's n for pervious areas	0.1
Depression storage for impervious areas (mm)	2
Depression storage for pervious areas (mm)	2.54
Weighted Curve Number	76

Perm Pave #2

Field	Value
Name	Perm Pave #2
LID type	perm-pavement

Catchment	1
Outlet (name)	5
% Imperv	100
Width (m)	100
Paved surface (HA)	0.011488
Roof (HA)	0
Landscaped Area (HA)	0
Row Crop (HA)	0
Open Space/Parkland (HA)	0.0045119999999999995
Forest (HA)	0
Wetland (HA)	0
(HA)	0
Berm Height (mm)	0
Surface Slope (%)	1
Thickness (mm)	500
Void Ratio	0.4
Impervious Surface Fraction	0.9
Permeability (mm/hr)	10
Clogging Factor	0
Soil	
Porosity (Fraction)	0.5

Field Capacity (Fraction)	0.3
Wilting Point (Fraction)	0.1
Conductivity (mm/hr)	10
Conductivity Slope (Dimensionless)	45
Suction Head (mm)	200
Seepage Rate (mm/hr)	10
Flow Coefficient	1
Flow Exponent	1
Offset Height (mm)	50
Mannings Roughness	