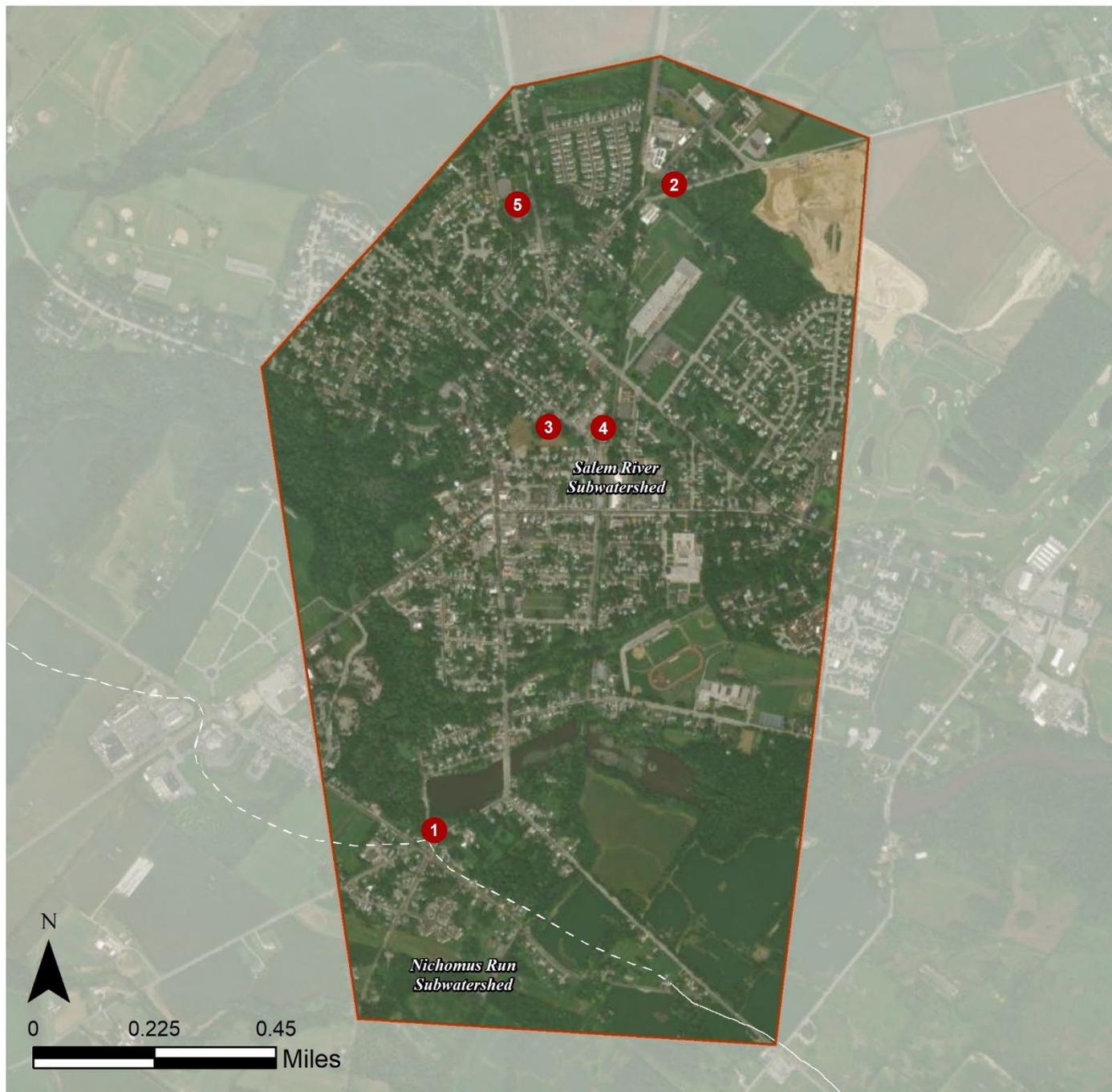


WOODSTOWN BOROUGH: GREEN INFRASTRUCTURE SITES



SITES WITHIN THE SALEM RIVER SUBWATERSHED

1. Delaware Valley Medical Career Institute
2. Morning Star Baptist Church
3. St. Luke's Episcopal Church
4. Woodstown Physical Therapy
5. Woodstown Presbyterian Church

DELAWARE VALLEY MEDICAL CAREER INSTITUTE



Subwatershed: Salem River
Site Area: 60,120 sq. ft.
Address: 1 Mill Street
Woodstown, NJ 08098
Block and Lot: Block 42, Lot 2



A rain garden can be installed on the south side of the building near two downspouts that can be led into the rain garden to capture, treat, and infiltrate the stormwater runoff from the rooftop. A downspout planter box can be placed on the east side of building, and a disconnected downspout can be led into the planter box to capture and treat the stormwater from the rooftop. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
39	23,680	1.1	12.0	108.7	0.018	0.65

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.027	4	1,940	0.07	255	\$1,275
Planter box	n/a	1	n/a	n/a	1 (box)	\$1,000

GREEN INFRASTRUCTURE RECOMMENDATIONS



**Delaware Valley Medical
Career Institute**

-  bioretention system
-  planter box
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



MORNING STAR BAPTIST CHURCH



Subwatershed: Salem River

Site Area: 33,255 sq. ft.

Address: 410 Eldridges Hill Road
Woodstown, NJ 08098

Block and Lot: Block 14, Lots 6 - 8



A rain garden can be installed on the east side of the building to capture, treat, and infiltrate the stormwater from the rooftop. Parking spaces on the west side of the building can be replaced with pervious pavement. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
43	14,390	0.7	7.3	66.1	0.011	0.39

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.031	5	2,240	0.08	300	\$1,500
Pervious pavement	0.105	18	7,610	0.29	720	\$1,800

GREEN INFRASTRUCTURE RECOMMENDATIONS



Morning Star Baptist Church

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



ST LUKE'S EPISCOPAL CHURCH



Subwatershed: Salem River

Site Area: 77,900 sq. ft.

Address: 37 East Grant Street
Woodstown, NJ 08098

Block and Lot: Block 20, Lots 14 & 15

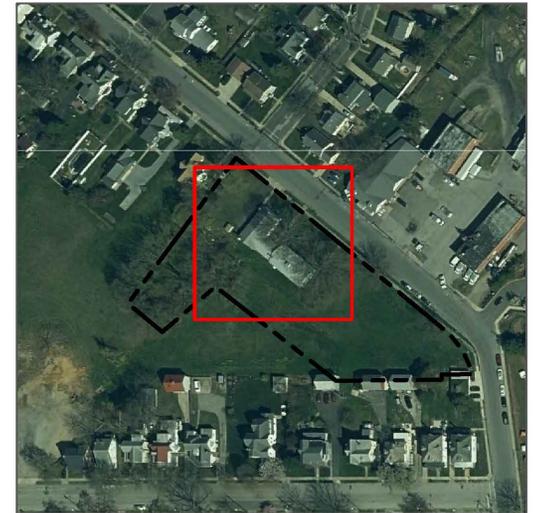


A rain garden can be installed at the northwest corner of the building to capture, treat, and infiltrate the stormwater runoff from the rooftop. Two downspouts on the north side of the building can be led to the rain garden. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
14	11,290	0.5	5.7	51.8	0.009	0.31

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.020	3	1,410	0.05	190	\$950

GREEN INFRASTRUCTURE RECOMMENDATIONS



St Luke's Episcopal Church

-  bioretention system
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



WOODSTOWN PHYSICAL THERAPY



Subwatershed: Salem River

Site Area: 31,200 sq. ft.

Address: 84 East Grant Street
Woodstown, NJ 08098

Block and Lot: Block 18, Lot 32

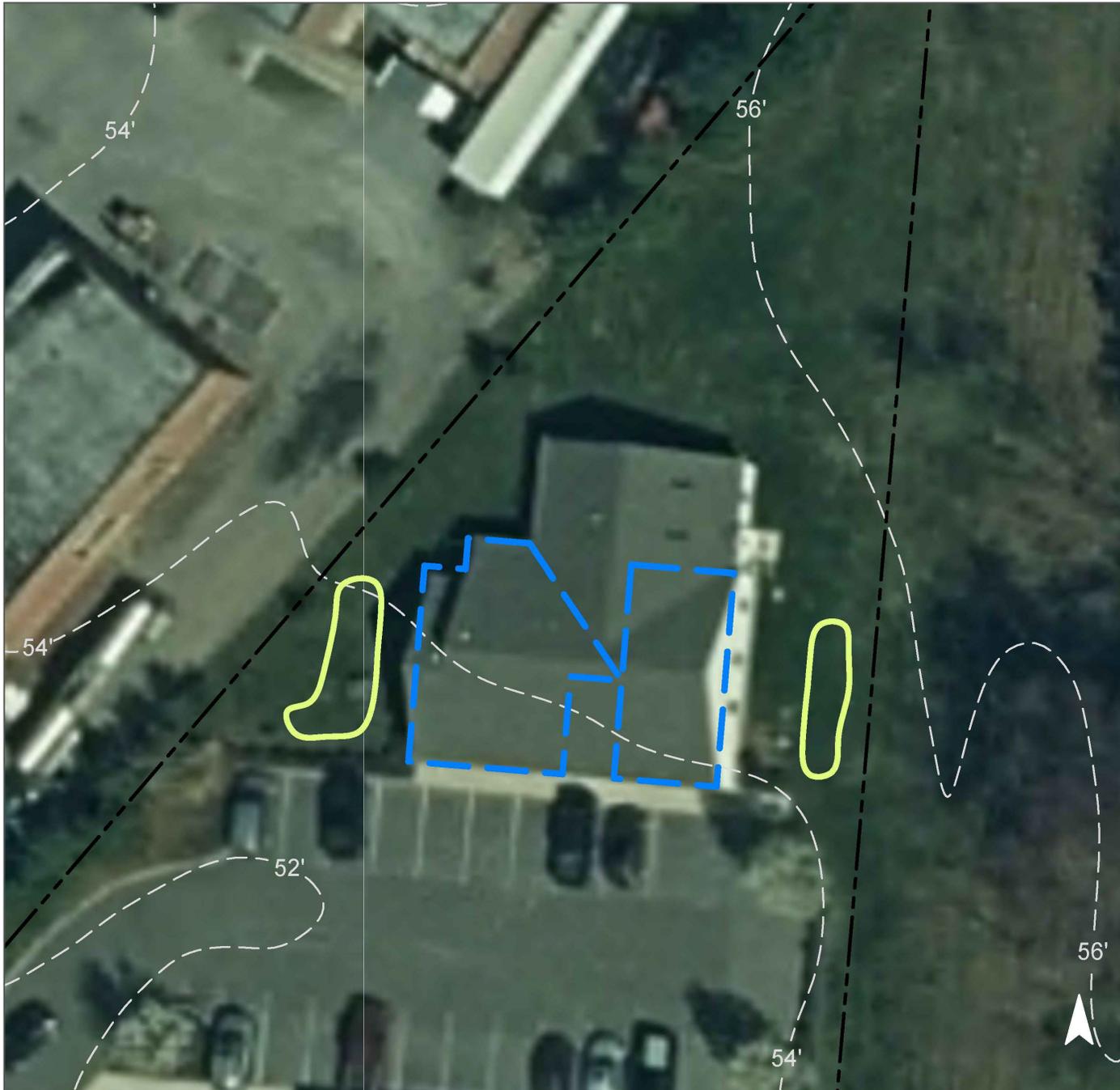


A rain garden can be installed on the east side of the building where multiple downspouts are connected together to one outlet where the rain garden can be placed to capture, treat, and infiltrate the stormwater from the rooftop. Another rain garden can be installed on the west side of the building next to a downspout. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
54	16,800	0.8	8.5	77.1	0.013	0.46

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention systems	0.055	9	3,960	0.15	530	\$2,650

GREEN INFRASTRUCTURE RECOMMENDATIONS



Woodstown Physical Therapy

-  bioretention system
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



WOODSTOWN PRESBYTERIAN CHURCH



Subwatershed: Salem River

Site Area: 161,900 sq. ft.

Address: 46 Auburn Street
Woodstown, NJ 08098

Block and Lot: Block 11, Lot 2

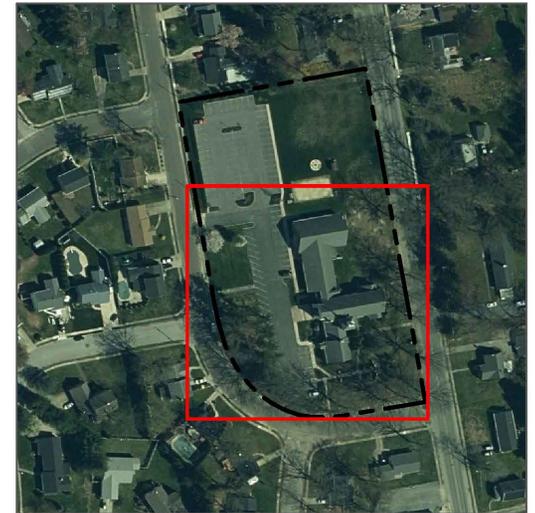


A rain garden can be installed on the east side of the building where multiple downspouts are connected to one outlet to capture, treat, and infiltrate the stormwater runoff from the rooftop. A strip of parking spaces at the northeast corner of the parking lot can be replaced with pervious pavement to capture, treat, and infiltrate the stormwater runoff from the parking lot. A preliminary soil assessment suggests that more soil testing would be required before determining the soil's suitability for green infrastructure.

Impervious Cover		Existing Loads from Impervious Cover (lbs/yr)			Runoff Volume from Impervious Cover (Mgal)	
%	sq. ft.	TP	TN	TSS	For the 1.25" Water Quality Storm	For an Annual Rainfall of 44"
49	78,860	3.8	39.8	362.1	0.061	2.16

Recommended Green Infrastructure Practices	Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Maximum Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cu. ft./second)	Estimated Size (sq. ft.)	Estimated Cost
Bioretention system	0.123	21	8,890	0.33	1,180	\$5,900
Pervious pavement	0.158	26	11,410	0.43	1,080	\$27,000

GREEN INFRASTRUCTURE RECOMMENDATIONS



Woodstown Presbyterian Church

-  bioretention system
-  pervious pavement
-  drainage area
-  property line
-  2015 Aerial: NJOIT, OGIS



Summary of Existing Conditions

Subwatershed/Site Name/Total Site Info/GI Practice	Area (ac)	Area (SF)	Block	Lot	I.C. %	I.C. Area (ac)	I.C. Area (SF)	Existing Annual Loads (Commercial)			Runoff Volumes from I.C.		Runoff Volumes from I.C.	
								TP (lb/yr)	TN (lb/yr)	TSS (lb/yr)	Water Quality Storm (1.25" over 2-hours)	Annual	Water Quality Storm (1.25" over 2-hours)	Annual
											(cu.ft.)	(cu.ft.)	(Mgal)	(Mgal)
Salem River Sites	8.36	364,375				3.33	145,020	7.0	73.2	665.8	15,106	531,740	0.113	3.98
1 Delaware Valley Medical Career Institute Total Site Info	1.38	60,120	42	2	39	0.54	23,680	1.1	12.0	108.7	2,467	86,827	0.018	0.65
2 Morning Star Baptist Church Total Site Info	0.76	33,255	14	6, 7, 8	43	0.33	14,390	0.7	7.3	66.1	1,499	52,763	0.011	0.39
3 St Luke's Episcopal Church Total Site Info	1.79	77,900	20	14, 15	14	0.26	11,290	0.5	5.7	51.8	1,176	41,397	0.009	0.31
4 Woodstown Physical Therapy Total Site Info	0.72	31,200	18	32	54	0.39	16,800	0.8	8.5	77.1	1,750	61,600	0.013	0.46
5 Woodstown Presbyterian Church Total Site Info	3.72	161,900	11	2	49	1.81	78,860	3.8	39.8	362.1	8,215	289,153	0.061	2.16

Summary of Proposed Green Infrastructure Practices

Subwatershed/Site Name/Total Site Info/GI Practice	Potential Management Area		Recharge Potential (Mgal/yr)	TSS Removal Potential (lbs/yr)	Max Volume Reduction Potential (gal/storm)	Peak Discharge Reduction Potential (cfs)	Size of BMP	Unit Cost (\$/unit)	Unit	Total Cost (\$)	I.C. Treated %
	Area (SF)	Area (ac)									
Salem River Sites	20,065	0.46	0.517	87	37,460	1.40				\$58,275	14%
1 Delaware Valley Medical Career Institute											
Bioretention system	1,025	0.02	0.027	4	1,940	0.07	255	\$5	SF	\$1,275	4%
Planter box	210	0.00	n/a	1	n/a	n/a	1	\$1,000	box	\$1,000	1%
Total Site Info	1,235	0.03	0.027	5	1,940	0.07				\$2,275	5%
2 Morning Star Baptist Church											
Bioretention system	1,190	0.03	0.031	5	2,240	0.08	300	\$5	SF	\$1,500	8%
Pervious pavement	4,030	0.09	0.105	18	7,610	0.29	720	\$25	SF	\$18,000	28%
Total Site Info	5,220	0.12	0.136	23	9,850	0.37				\$19,500	36%
3 St Luke's Episcopal Church											
Bioretention system	750	0.02	0.020	3	1,410	0.05	190	\$5	SF	\$950	7%
Total Site Info	750	0.02	0.020	3	1,410	0.05				\$950	7%
4 Woodstown Physical Therapy											
Bioretention systems	2,100	0.05	0.055	9	3,960	0.15	530	\$5	SF	\$2,650	13%
Total Site Info	2,100	0.05	0.055	9	3,960	0.15				\$2,650	13%
5 Woodstown Presbyterian Church											
Bioretention system	4,710	0.11	0.123	21	8,890	0.33	1,180	\$5	SF	\$5,900	6%
Pervious pavement	6,050	0.14	0.158	26	11,410	0.43	1,080	\$25	SF	\$27,000	8%
Total Site Info	10,760	0.25	0.280	47	20,300	0.76				\$32,900	14%