Summary Energy Performance Report

Facilities included: Willingboro Group
Located in:
Date Generated: 12/22/10

Number of facilities: 8

	Year ending 7/2010
Total Floorspace (sq. ft.)	300,978
Average Rating	N/A
Number of Facilities with a Rating	0
Number of Non-ratable Facilities*	8
Total Site Energy Use (kBtu)	18,619,381
Total Weather Normalized Source Energy Use (kBtu)	33,279,301
Ft.)	110.6
Average Site Energy Intensity (kBtu/Sq. Ft.)	61.9
Total Site Electric Use (kWh)	1,734,916
Total Site Natural Gas Use (Therms)	126,998
Average Actual Annual Source Energy Intensity (kBtu/Sq. Ft.)	109.9

*Non-ratable buildings are defined as buildings that currently are ineligible to receive the ENERGY STAR rating due to its operating characterisitcs and/or building type.

Summary Energy Performance Report

Facilities included: Willingboro Group
Date Generated: 12/22/10

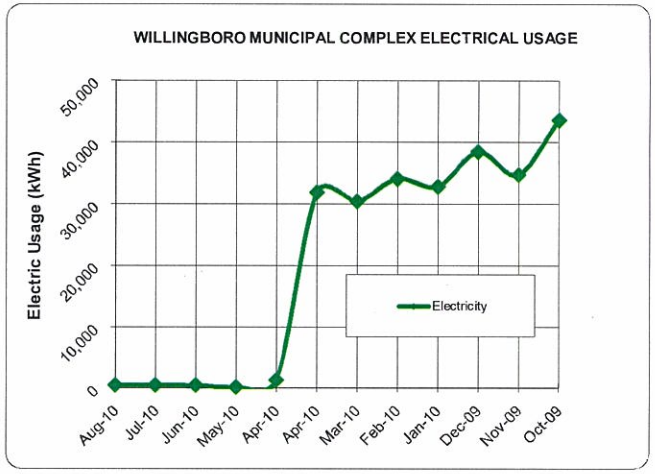
Facility Name	Facility Address	Year ending 7/2010 Facility Floorspace	Year ending 7/2010 Rating	Year ending 7/2010 Average Site Energy Intensity (kBtu/Sq. Ft.)	Year ending 7/2010 Average Weather Normalized Source Energy Intensity (kBtu/Sq. Ft.)	Year ending 7/2010 Site Electric Use (kWh)	Year ending 7/2010 Site Natural Gas Use (Therms)
Willingboro Emergency Squad/ Fire Station #161	398 Charleston Road Willingboro, NJ 08046	7560	N/A	243.4	457.5	209,225	11,262
Willingboro Fire Station #162	201 Sunset Road Willingboro, NJ 08046	7500	N/A	27.6	34.8	6,974	1,830
Willingboro Fire Station #163	603 Beverly Rancocas Road Willingboro, NJ 08046	8344	N/A	44.6	64.8	19,189	3,066
Willingboro Kennedy Center	429 JF Kennedy Way Willingboro, NJ 08046	189950	N/A	56.4	102.8	1,009,368	72,712
Willingboro Municipal Complex	1 Salem Road Willingboro, NJ 08046	31130	N/A	78.8	183	386,779	11,319
Willingboro Public Garage #1	25 Industrial Drive Willingboro, NJ 08046	6004	N/A	105.9	132.7	15,985	5,812
Willingboro Public Garage #2	25 Industrial Drive Willingboro, NJ 08046	5490	N/A	126.5	140	1,584	6,889
Willingboro Public Library	200 Willingboro Way Willingboro, NJ 08046	45000	N/A	37.9	49.5	85,812	14,108

Buildings	Electric -PSEG				Natural Gas - PSEG			
	Account	Annual Consumption	Annual Cost	$ / kWh	Account	Annual Consumption	Annual Cost	$ / Therm
		kWh				Therms		
Willingboro Municipal Complex	65 176 569 01	249,704	$38,469.76	**$0.154**	65 176 569 01	11,299	$13,604.93	**$1.204**
	67 570 806 01	*5,784*	*$987.63*	*$0.171*	NA			
Willingboro Fire Station #161*	66 520 019 18	210,800	$33,167.31	**$0.157**	66 520 019 18	10,596	$12,509.80	**$1.181**
Willingboro Fire Station #162	66 911 178 08	7,026	$2,026.95	**$0.288**	66 911 178 08	1,850	$2,220.23	**$1.200**
Willingboro Fire Station #163	65 405 928 09	19,728	$3,793.38	**$0.192**	65 405 928 09	2,943	$3,483.49	**$1.184**
Kennedy Center	42 006 830 08	1,027,200	$164,241.47	**$0.160**	42 006 830 08	63,948	$69,846.95	**$1.092**
	NA				42 006 830 08	5,413	$4,431.33	**$0.819**
Willingboro Public Library	67 063 721 02	83,261	$16,829.15	**$0.202**	69 267 230 01	14,478	$14,268.25	**$0.986**
Willingboro Public Works Garage #1	65 477 438 02	16,104	$3,280.68	**$0.204**	65 477 438 02	5,578	$6,253.90	**$1.121**
Willingboro Public Works Garage #2	68 666 509 09	1,596	$1,581.88	**$0.991**	68 666 509 09	6,687	$7,797.44	**$1.166**
	TOTAL	**1,621,203**	**$264,378.21**	**$0.163**	**TOTAL**	**122,792**	**$134,046.10**	**$1.092**

Facility Name Municipal Complex
Address 1 Salem Road
Company PSE&G
Account# 65 176 569 01
Meter# 778020686/778010135
Tariff/Rate LVG

Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Cost	$/kWh
Electricity	kWh	7/22/2010	8/20/2010	NA	450	$558.380	$1.241
Electricity	kWh	6/22/2010	7/22/2010	NA	493	$564.660	$1.145
Electricity	kWh	5/21/2010	6/22/2010	NA	439	$559.620	$1.275
Electricity	kWh	4/26/2010	5/21/2010	NA	162	$304.660	$1.881
Electricity	kWh	4/22/2010	4/26/2010	NA	1,280	$288.090	$0.225
Electricity	kWh	3/23/2010	4/22/2010	NA	32,000	$4,846.880	$0.151
Electricity	kWh	2/22/2010	3/23/2010	NA	30,560	$4,590.370	$0.150
Electricity	kWh	1/21/2010	2/22/2010	NA	34,240	$5,080.350	$0.148
Electricity	kWh	12/21/2009	1/21/2010	NA	32,960	$4,920.950	$0.149
Electricity	kWh	11/18/2009	12/21/2009	NA	38,560	$5,533.580	$0.144
Electricity	kWh	10/20/2009	11/18/2009	NA	34,880	$5,134.990	$0.147
Electricity	kWh	9/21/2009	10/20/2009	NA	43,680	$6,087.230	$0.139
		TOTALS/AVERAGE		**NA**	**249,704**	**$38,469.76**	**$0.154**

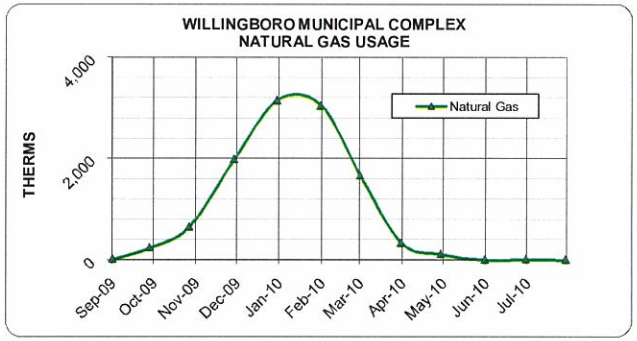
Electricity	kWh	8/19/2009	9/21/2009	NA	49,600	$9,203.540	$0.186
Electricity	kWh	7/21/2009	8/19/2009	NA	51,360	$9,500.550	$0.185
Electricity	kWh	6/18/2009	7/21/2009	NA	55,360	$9,936.310	$0.179
Electricity	kWh	5/22/2009	6/18/2009	NA	47,680	$8,225.930	$0.173



Facility Name Municipal Complex
Address 1 Salem Road
Company PSE&G
Account# 65 176 569 01
Meter# 2806712
Tariff/Rate LVG

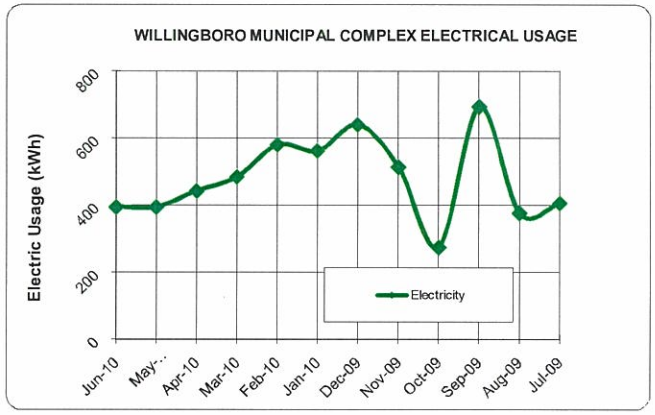
Energy Type	Energy Unit	Start Date	End Date	Demand	Therms	Cost	$/Therm
Natural Gas	Therms	7/22/2010	8/20/2010	NA	08.298	$98.51	$11.872
Natural Gas	Therms	6/22/2010	7/22/2010	NA	16.564	$97.93	$5.912
Natural Gas	Therms	5/21/2010	6/22/2010	NA	10.333	$95.56	$9.248
Natural Gas	Therms	4/22/2010	5/21/2010	NA	118.368	$107.97	$0.912
Natural Gas	Therms	3/23/2010	4/22/2010	NA	343.311	$359.09	$1.046
Natural Gas	Therms	2/22/2010	3/23/2010	NA	1666.618	$2,050.32	$1.230
Natural Gas	Therms	1/21/2010	2/22/2010	NA	3062.231	$3,538.25	$1.155
Natural Gas	Therms	12/21/2009	1/21/2010	NA	3157.618	$3,614.79	$1.145
Natural Gas	Therms	11/18/2009	12/21/2009	NA	1992.906	$2,240.25	$1.124
Natural Gas	Therms	10/20/2009	11/18/2009	NA	658.931	$1,031.45	$1.565
Natural Gas	Therms	9/23/2009	10/20/2009	NA	244.955	$265.05	$1.082
Natural Gas	Therms	8/19/2009	9/23/2009	NA	18.817	$105.76	$5.620
		TOTALS/AVERAGE		**NA**	**11,299**	**$13,604.93**	**$1.204**

Natural Gas	Therms	7/21/2009	8/19/2009	NA	38.567	$120.660	$3.129
Natural Gas	Therms	6/22/2009	7/21/2009	NA	57.330	$135.060	$2.356



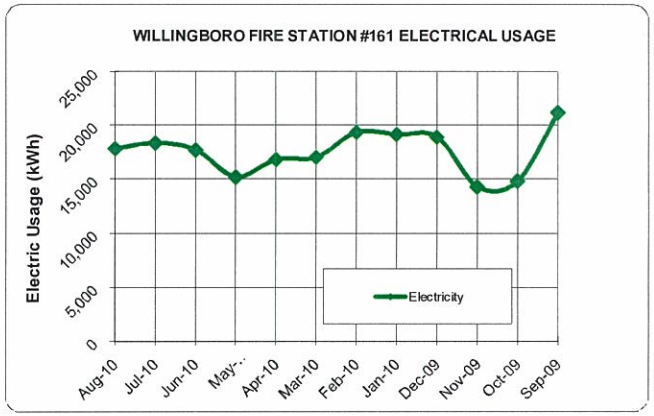
Facility Name Municipal Complex
Address 1 Salem Road
Company PSE&G
Account# 67 570 806 01
Meter# 226002109
Tariff/Rate GLPMD

Energy Type	Energy Unit	Start Date	End Date	Demand	KWH	Cost	$/KWH
Electricity	kWh	5/21/2010	6/22/2010	NA	396	$77.460	$0.196
Electricity	kWh	4/22/2010	5/21/2010	NA	396	$64.880	$0.164
Electricity	kWh	3/23/2010	4/22/2010	NA	444	$71.660	$0.161
Electricity	kWh	2/22/2010	3/23/2010	NA	486	$76.610	$0.158
Electricity	kWh	1/21/2010	2/22/2010	NA	582	$87.870	$0.151
Electricity	kWh	12/22/2009	1/21/2010	NA	564	$85.740	$0.152
Electricity	kWh	11/18/2009	12/22/2009	NA	642	$94.030	$0.146
Electricity	kWh	10/20/2009	11/18/2009	NA	516	$79.270	$0.154
Electricity	kWh	9/23/2009	10/20/2009	NA	276	$53.250	$0.193
Electricity	kWh	8/19/2009	9/23/2009	NA	696	$127.320	$0.183
Electricity	kWh	7/21/2009	8/19/2009	NA	378	$82.710	$0.219
Electricity	kWh	6/18/2009	7/21/2009	NA	408	$86.830	$0.213
		TOTALS/AVERAGE		**NA**	**5,784**	**$987.63**	**$0.171**



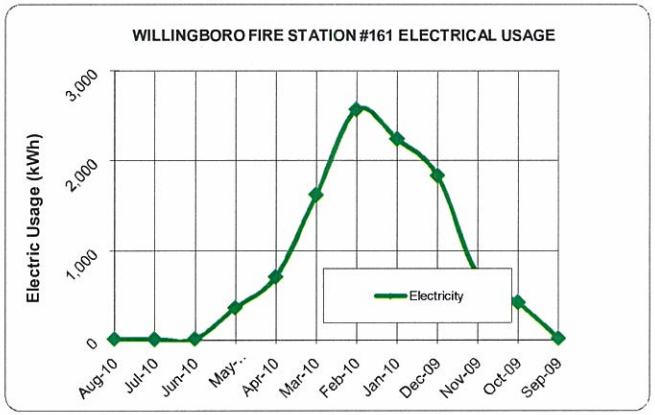
Facility Name Willingboro Emergency Squad / Fire Station #161
Address Charleston Rd & Levitt
Company PSE&G
Account# 66 520 019 18
Meter# 258001841
Tariff/Rate GLPMD

Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Cost	$/kWh
Electricity	kWh	7/22/2010	8/20/2010	NA	17,840	$3,259.71	$0.183
Electricity	kWh	6/16/2010	7/22/2010	NA	18,360	$3,359.73	$0.183
Electricity	kWh	5/17/2010	6/16/2010	NA	17,720	$3,055.22	$0.172
Electricity	kWh	4/17/2010	5/16/2010	NA	15,200	$2,223.23	$0.146
Electricity	kWh	3/17/2010	4/16/2010	NA	16,840	$2,459.22	$0.146
Electricity	kWh	2/17/2010	3/16/2010	NA	17,040	$2,470.68	$0.145
Electricity	kWh	1/17/2010	2/16/2010	NA	19,360	$2,761.37	$0.143
Electricity	kWh	12/17/2009	1/16/2010	NA	19,160	$2,724.20	$0.142
Electricity	kWh	11/17/2009	12/16/2009	NA	18,920	$2,658.96	$0.141
Electricity	kWh	10/20/2009	11/16/2009	NA	14,320	$2,086.93	$0.146
Electricity	kWh	9/23/2009	10/20/2009	NA	14,840	$2,262.93	$0.152
Electricity	kWh	8/19/2009	9/23/2009	NA	21,200	$3,845.13	$0.181
		TOTALS/AVERAGE		**NA**	**210,800**	**$33,167.31**	**$0.157**



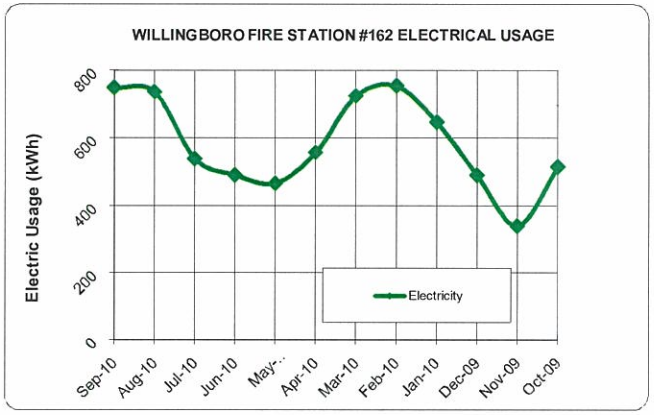
Facility Name Willingboro Emergency Squad / Fire Station #161
Address Charleston Rd & Levitt
Company PSE&G
Account# 66 520 019 18
Meter# 626028627
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand	KWH	Cost	$/KWH
Electricity	kWh	7/23/2010	8/20/2010	NA	17	$11.93	$0.702
Electricity	kWh	6/23/2010	7/22/2010	NA	14	$108.06	$7.719
Electricity	kWh	5/23/2010	6/22/2010	NA	17	$107.38	$6.316
Electricity	kWh	4/23/2010	5/22/2010	NA	367	$380.66	$1.037
Electricity	kWh	3/23/2010	4/22/2010	NA	717	$646.99	$0.902
Electricity	kWh	2/23/2010	3/22/2010	NA	1,625	$1,927.24	$1.186
Electricity	kWh	1/23/2010	2/22/2010	NA	2,573	$2,967.73	$1.153
Electricity	kWh	12/23/2009	1/22/2010	NA	2,244	$2,824.81	$1.259
Electricity	kWh	11/23/2009	12/22/2009	NA	1,841	$2,023.76	$1.099
Electricity	kWh	10/23/2009	11/22/2009	NA	731	$1,010.45	$1.382
Electricity	kWh	9/23/2009	10/22/2009	NA	426	$391.74	$0.920
Electricity	kWh	8/23/2009	9/23/2009	NA	24	$109.05	$4.544
		TOTALS/AVERAGE		**NA**	**10,596**	**$12,509.80**	**$1.181**



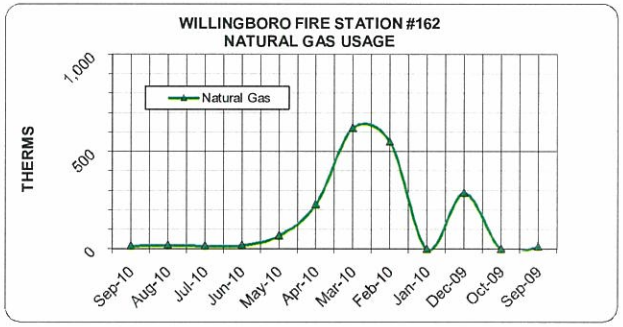
Facility Name Willingboro Emergency Squad / Fire Station #162
Address 207 Sunset Road
Company PSE&G
Account# 66 911 178 08
Meter# 1588465
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Cost	$/kWh
Electricity	kWh	8/6/2010	9/7/2010	NA	750	$234.92	$0.313
Electricity	kWh	7/8/2010	8/6/2010	NA	738	$240.63	$0.326
Electricity	kWh	6/8/2010	7/8/2010	NA	540	$205.24	$0.380
Electricity	kWh	5/8/2010	6/8/2010	NA	492	$192.37	$0.391
Electricity	kWh	4/8/2010	5/8/2010	NA	468	$131.33	$0.281
Electricity	kWh	3/8/2010	4/8/2010	NA	558	$145.40	$0.261
Electricity	kWh	2/8/2010	3/8/2010	NA	726	$165.92	$0.229
Electricity	kWh	1/8/2010	2/8/2010	NA	756	$173.55	$0.230
Electricity	kWh	12/7/2009	1/8/2010	NA	648	$154.22	$0.238
Electricity	kWh	11/4/2009	12/7/2009	NA	492	$131.55	$0.267
Electricity	kWh	10/7/2009	11/4/2009	NA	342	$110.02	$0.322
Electricity	kWh	9/3/2009	10/7/2009	NA	516	$141.80	$0.275
		TOTALS/AVERAGE		**NA**	**7,026**	**$2,026.95**	**$0.288**



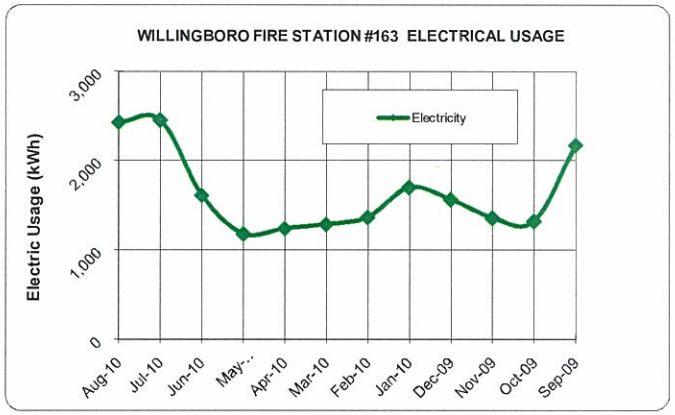
Facility Name Willingboro Emergency Squad / Fire Station #162
Address 207 Sunset Road
Company PSE&G
Account# 67 229 26 206
Meter# 1809740
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand	Therms	Cost	$/Therm
Natural Gas	Therms	8/5/2010	9/7/2010	NA	17	$27.77	$1.634
Natural Gas	Therms	7/8/2010	8/5/2010	NA	20	$31.48	$1.574
Natural Gas	Therms	6/8/2010	7/8/2010	NA	17	$26.81	$1.577
Natural Gas	Therms	5/8/2010	6/7/2010	NA	20	$29.71	$1.486
Natural Gas	Therms	4/8/2010	5/7/2010	NA	70	$76.76	$1.097
Natural Gas	Therms	3/8/2010	4/7/2010	NA	230	$244.87	$1.065
Natural Gas	Therms	2/8/2010	3/7/2010	NA	623	$744.78	$1.195
Natural Gas	Therms	1/8/2010	2/7/2010	NA	552	$695.91	$1.261
Natural Gas	Therms	12/8/2009	1/7/2010	NA	0	$0.00	Flat Rate
Natural Gas	Therms	10/30/2009	12/7/2009	NA	289	$322.08	$1.114
Natural Gas	Therms	9/3/2009	10/30/2009	NA	0	$0.00	Flat Rate
Natural Gas	Therms	8/6/2009	9/3/2009	NA	12	$20.06	$1.672
		TOTALS/AVERAGE		**NA**	**1,850**	**$2,220.23**	**$1.200**



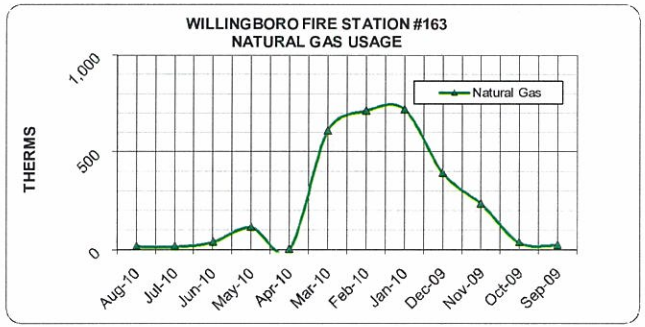
Facility Name Willingboro Emergency Squad / Fire Station #163
Address 163 Beverly Rancocas Road
Company PSE&G
Account# 65 405 928 09
Meter# 67425432
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Cost	$/kWh
Electricity	kWh	7/19/2010	8/17/2010	NA	2,436	$487.08	$0.200
Electricity	kWh	6/17/2010	7/19/2010	NA	2,460	$489.02	$0.199
Electricity	kWh	5/17/2010	6/16/2010	NA	1,614	$352.58	$0.218
Electricity	kWh	4/17/2010	5/16/2010	NA	1,182	$226.71	$0.192
Electricity	kWh	3/17/2010	4/16/2010	NA	1,242	$238.15	$0.192
Electricity	kWh	2/17/2010	3/16/2010	NA	1,290	$243.83	$0.189
Electricity	kWh	1/17/2010	2/16/2010	NA	1,368	$243.79	$0.178
Electricity	kWh	12/17/2009	1/16/2010	NA	1,704	$282.30	$0.166
Electricity	kWh	11/17/2009	12/16/2009	NA	1,566	$261.30	$0.167
Electricity	kWh	10/17/2009	11/16/2009	NA	1,362	$240.77	$0.177
Electricity	kWh	9/17/2009	10/16/2009	NA	1,326	$260.14	$0.196
Electricity	kWh	8/17/2009	9/16/2009	NA	2,178	$467.71	$0.215
		TOTALS/AVERAGE		**NA**	**19,728**	**$3,793.38**	**$0.192**



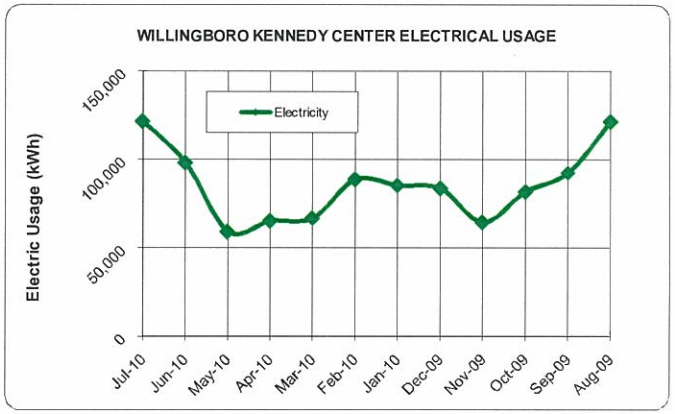
Facility Name Willingboro Emergency Squad / Fire Station #163
Address 163 Beverly Rancocas Road
Company PSE&G
Account# 65 405 928 09
Meter# 1518187
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Cost	$/kWh
Natural Gas	therms	7/19/2010	8/17/2010	NA	20	$31.55	$1.578
Natural Gas	therms	6/17/2010	7/19/2010	NA	19	$29.51	$1.553
Natural Gas	therms	5/17/2010	6/16/2010	NA	43	$53.11	$1.235
Natural Gas	therms	4/17/2010	5/16/2010	NA	117	$124.61	$1.065
Natural Gas	therms	3/17/2010	4/16/2010	NA	5	$15.32	$3.064
Natural Gas	therms	2/17/2010	3/16/2010	NA	611	$720.63	$1.179
Natural Gas	therms	1/17/2010	2/16/2010	NA	713	$881.55	$1.236
Natural Gas	therms	12/17/2009	1/16/2010	NA	720	$866.01	$1.203
Natural Gas	therms	11/17/2009	12/16/2009	NA	392	$427.80	$1.091
Natural Gas	therms	10/17/2009	11/16/2009	NA	237	$256.39	$1.082
Natural Gas	therms	9/17/2009	10/16/2009	NA	40	$44.80	$1.120
Natural Gas	therms	8/17/2009	9/16/2009	NA	26	$32.21	$1.239
		TOTALS/AVERAGE		**NA**	**2,943**	**$3,483.49**	**$1.184**



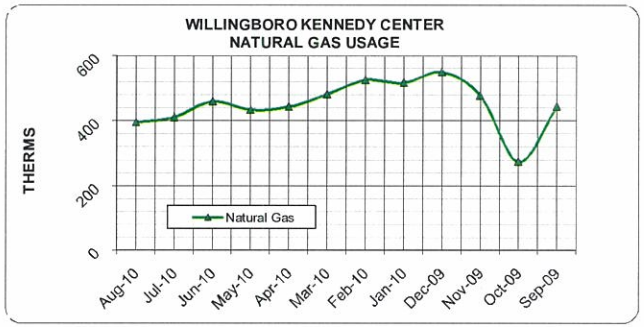
Facility Name Kennedy Center
Address JF Kennedy Way
Company PSE&G
Account# 42 006 830 08
Meter# 778014129
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Cost	$/kWh
Electricity	kWh	6/22/2010	7/22/2010	NA	121,440	$20,772.970	$0.171
Electricity	kWh	5/21/2010	6/22/2010	NA	97,920	$15,802.940	$0.161
Electricity	kWh	6/22/2010	5/21/2010	NA	59,040	$9,358.140	$0.159
Electricity	kWh	5/21/2010	4/22/2010	NA	65,040	$10,009.170	$0.154
Electricity	kWh	4/22/2010	3/23/2010	NA	66,720	$10,219.540	$0.153
Electricity	kWh	3/23/2010	2/22/2010	NA	88,560	$12,632.760	$0.143
Electricity	kWh	2/22/2010	1/21/2010	NA	85,200	$12,302.770	$0.144
Electricity	kWh	1/21/2010	12/21/2009	NA	83,520	$11,890.100	$0.142
Electricity	kWh	12/21/2009	11/18/2009	NA	64,320	$9,756.940	$0.152
Electricity	kWh	11/18/2009	10/20/2009	NA	81,600	$12,620.850	$0.155
Electricity	kWh	10/20/2009	9/21/2009	NA	92,400	$17,302.360	$0.187
Electricity	kWh	9/21/2009	8/19/2009	NA	121,440	$21,572.930	$0.178
		TOTALS/AVERAGE		**NA**	**1,027,200**	**$164,241.47**	**$0.160**
Electricity	kWh	8/19/2009	7/21/2009	NA	112,320	$20,153.830	$0.179
Electricity	kWh	7/21/2009	6/18/2009	NA	82,560	$14,407.140	$0.175



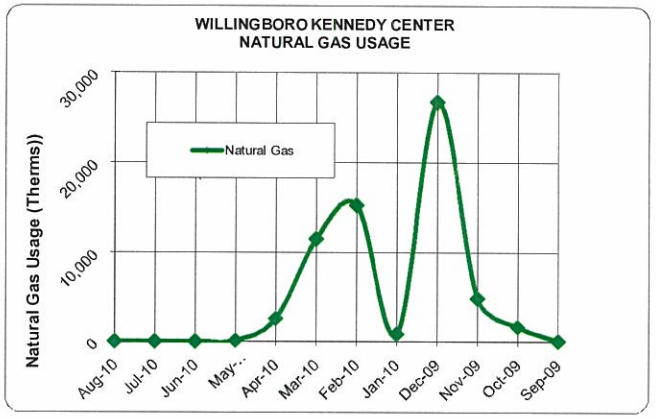
Facility Name Kennedy Center
Address JF Kennedy Way
Company PSE&G
Account# 42 006 830 08
Meter# 2470625
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand	Therms	Cost	$/Therm
Natural Gas	Therms	7/22/2010	8/20/2010	NA	395.211	$141.780	$0.359
Natural Gas	Therms	6/22/2010	7/22/2010	NA	411.005	$143.810	$0.350
Natural Gas	Therms	5/21/2010	6/22/2010	NA	459.797	$154.660	$0.336
Natural Gas	Therms	4/22/2010	5/21/2010	NA	434.014	$146.560	$0.338
Natural Gas	Therms	3/23/2010	4/22/2010	NA	443.183	$440.190	$0.993
Natural Gas	Therms	2/22/2010	3/23/2010	NA	481.676	$526.120	$1.092
Natural Gas	Therms	1/21/2010	2/22/2010	NA	525.398	$604.100	$1.150
Natural Gas	Therms	12/21/2009	1/21/2010	NA	516.626	$591.790	$1.145
Natural Gas	Therms	11/18/2009	12/21/2009	NA	548.696	$567.430	$1.034
Natural Gas	Therms	10/20/2009	11/18/2009	NA	478.089	$475.450	$0.994
Natural Gas	Therms	9/23/2009	10/20/2009	NA	275.183	$257.030	$0.934
Natural Gas	Therms	8/19/2009	9/23/2009	NA	444.293	$382.410	$0.861
		TOTALS/AVERAGE		**NA**	**5,413**	**$4,431.33**	**$0.819**
					439.876	$405.090	$0.921
Natural Gas	Therms	7/21/2009	6/18/2009	NA	482.613	$436.710	$0.905
Natural Gas	Therms	8/19/2009	7/21/2009	NA	518.053	$486.370	$0.939



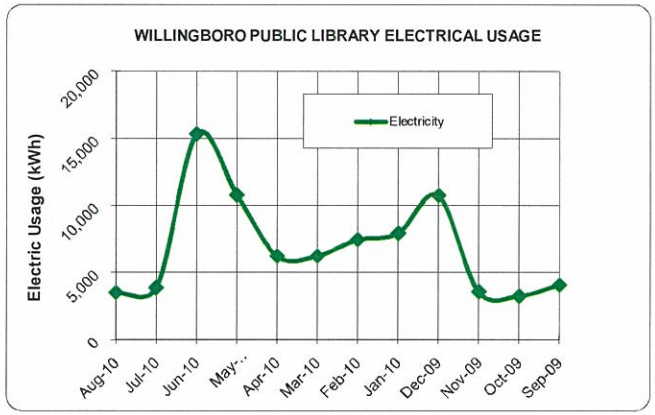
Facility Name Kennedy Center
Address JF Kennedy Way
Company PSE&G
Account# 42 006 830 08
Meter# 2124681
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Cost	$/kWh
Natural Gas	Therms	7/22/2010	8/20/2010	NA	0.000	$97.29	Flat Rate
Natural Gas	Therms	6/22/2010	7/22/2010	NA	0.000	$95.73	Flat Rate
Natural Gas	Therms	5/21/2010	6/22/2010	NA	0.000	$94.37	Flat Rate
Natural Gas	Therms	4/22/2010	5/21/2010	NA	104.351	$175.92	$1.686
Natural Gas	Therms	3/23/2010	4/22/2010	NA	2,604.553	$2,064.98	$0.793
Natural Gas	Therms	2/22/2010	3/23/2010	NA	11,582.808	$12,513.52	$1.080
Natural Gas	Therms	1/21/2010	2/22/2010	NA	15,344.811	$17,236.80	$1.123
Natural Gas	Therms	12/21/2009	1/21/2010	NA	831.771	$3,156.83	$3.795
Natural Gas	Therms	11/18/2009	12/21/2009	NA	26,785.216	$25,902.47	$0.967
Natural Gas	Therms	10/20/2009	11/18/2009	NA	4,937.218	$7,113.94	$1.441
Natural Gas	Therms	9/23/2009	10/20/2009	NA	1,668.871	$1,244.80	$0.746
Natural Gas	Therms	8/19/2009	9/23/2009	NA	88.420	$150.30	$1.700
		TOTALS/AVERAGE		**NA**	**63,948**	**$69,846.95**	**$1.092**



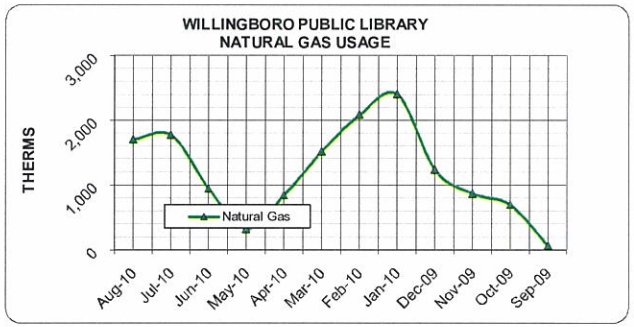
Facility Name Willingboro Public Library
Address ATE 130 & VAN SCIVER PKY
Company PSE&G
Account# 67 063 721 02
Meter# 726017207
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Cost	$/kWh
Electricity	kWh	7/21/2010	8/19/2010	NA	3,523	$1,239.840	$0.352
Electricity	kWh	6/22/2010	7/21/2010	NA	3,873	$1,288.100	$0.333
Electricity	kWh	5/21/2010	6/22/2010	NA	15,367	$2,685.940	$0.175
Electricity	kWh	4/22/2010	5/21/2010	NA	10,826	$1,732.510	$0.160
Electricity	kWh	3/23/2010	4/22/2010	NA	6,253	$1,218.260	$0.195
Electricity	kWh	2/22/2010	3/23/2010	NA	6,259	$1,219.330	$0.195
Electricity	kWh	1/21/2010	2/22/2010	NA	7,479	$1,328.800	$0.178
Electricity	kWh	12/22/2009	1/21/2010	NA	7,949	$1,382.330	$0.174
Electricity	kWh	11/18/2009	12/22/2009	NA	10,785	$1,704.130	$0.158
Electricity	kWh	10/20/2009	11/18/2009	NA	3,594	$868.260	$0.242
Electricity	kWh	9/23/2009	10/20/2009	NA	3,264	$847.220	$0.260
Electricity	kWh	8/19/2009	9/23/2009	NA	4,089	$1,314.430	$0.321
		TOTALS/AVERAGE		**NA**	**83,261**	**$16,829.15**	**$0.202**



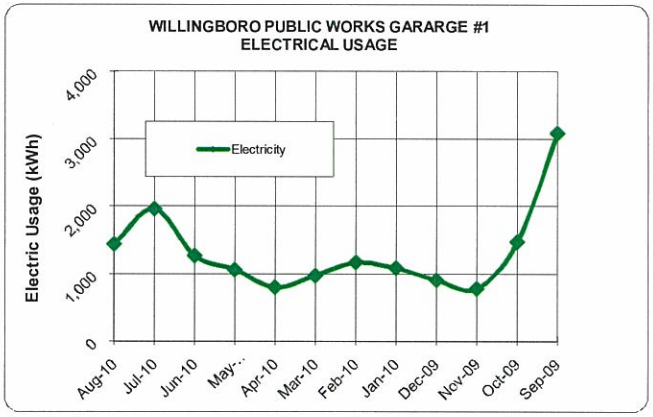
Facility Name Willingboro Public Library
Address 220 Wilingboro Way Ste I UI
Company PSE&G
Account# 69 267 230 01
Meter# 3276243
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand	Therms	Cost	$/therm
Natural Gas	therms	7/19/2010	8/18/2010	NA	1,702	$1,566.43	$0.920
Natural Gas	therms	6/19/2010	7/18/2010	NA	1,771	$1,553.06	$0.877
Natural Gas	therms	5/19/2010	6/18/2010	NA	946	$843.28	$0.891
Natural Gas	therms	4/19/2010	5/18/2010	NA	327	$342.13	$1.046
Natural Gas	therms	3/19/2010	4/18/2010	NA	846	$756.41	$0.894
Natural Gas	therms	2/19/2010	3/18/2010	NA	1,516	$1,670.50	$1.102
Natural Gas	therms	1/19/2010	2/18/2010	NA	2,087	$2,302.96	$1.103
Natural Gas	therms	12/19/2009	1/18/2010	NA	2,404	$2,539.53	$1.056
Natural Gas	therms	11/16/2009	12/18/2009	NA	1,237	$1,227.26	$0.992
Natural Gas	therms	10/16/2009	11/16/2009	NA	875	$858.44	$0.981
Natural Gas	therms	9/17/2009	10/16/2009	NA	698	$563.22	$0.807
Natural Gas	therms	8/17/2009	9/17/2009	NA	69	$45.03	$0.653
		TOTALS/AVERAGE		**NA**	**14,478**	**$14,268.25**	**$0.986**



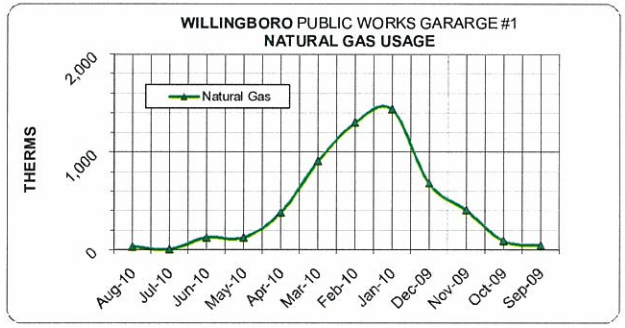
Facility Name Willingboro Public Works Garage #1
Address Industrial Drive Garage
Company PSE&G
Account# 65 477 438 02
Meter# 226005324
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Cost	$/kWh
Electricity	kWh	7/19/2010	8/17/2010	NA	1,446	$137.25	$0.095
Electricity	kWh	6/17/2010	7/19/2010	NA	1,968	$430.23	$0.219
Electricity	kWh	5/17/2010	6/16/2010	NA	1,272	$329.22	$0.259
Electricity	kWh	4/17/2010	5/16/2010	NA	1,068	$209.63	$0.196
Electricity	kWh	3/17/2010	4/16/2010	NA	810	$178.81	$0.221
Electricity	kWh	2/17/2010	3/16/2010	NA	984	$245.20	$0.249
Electricity	kWh	1/17/2010	2/16/2010	NA	1,176	$247.61	$0.211
Electricity	kWh	12/17/2009	1/16/2010	NA	1,092	$230.08	$0.211
Electricity	kWh	11/17/2009	12/16/2009	NA	918	$210.80	$0.230
Electricity	kWh	10/17/2009	11/16/2009	NA	792	$160.12	$0.202
Electricity	kWh	9/17/2009	10/16/2009	NA	1,482	$285.72	$0.193
Electricity	kWh	8/17/2009	9/16/2009	NA	3,096	$616.01	$0.199
		TOTALS/AVERAGE		**NA**	**16,104**	**$3,280.68**	**$0.204**



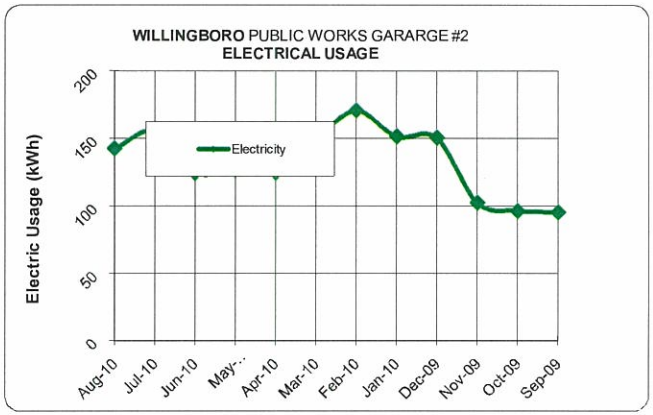
Facility Name Willingboro Public Works Garage #1
Address Industrial Drive Garage
Company PSE&G
Account# 65 477 438 02
Meter# 3306806
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand	Therms	Cost	$/therm
Natural Gas	therms	7/19/2010	8/17/2010	NA	38	$23.26	$0.612
Natural Gas	therms	6/17/2010	7/19/2010	NA	9	$13.34	$1.482
Natural Gas	therms	5/17/2010	6/17/2010	NA	129	$50.82	$0.394
Natural Gas	therms	4/17/2010	5/16/2010	NA	128	$50.66	$0.396
Natural Gas	therms	3/17/2010	4/16/2010	NA	385	$389.41	$1.011
Natural Gas	therms	2/17/2010	3/16/2010	NA	910	$1,067.27	$1.173
Natural Gas	therms	1/17/2010	2/16/2010	NA	1,304	$1,600.67	$1.228
Natural Gas	therms	12/17/2009	1/16/2010	NA	1,437	$1,720.51	$1.197
Natural Gas	therms	11/17/2009	12/16/2009	NA	684	$757.13	$1.107
Natural Gas	therms	10/17/2009	11/16/2009	NA	410	$435.96	$1.063
Natural Gas	therms	9/17/2009	10/16/2009	NA	95	$93.17	$0.981
Natural Gas	therms	8/17/2009	9/16/2009	NA	49	$51.70	$1.055
		TOTALS/AVERAGE		**NA**	**5,578**	**$6,253.90**	**$1.121**



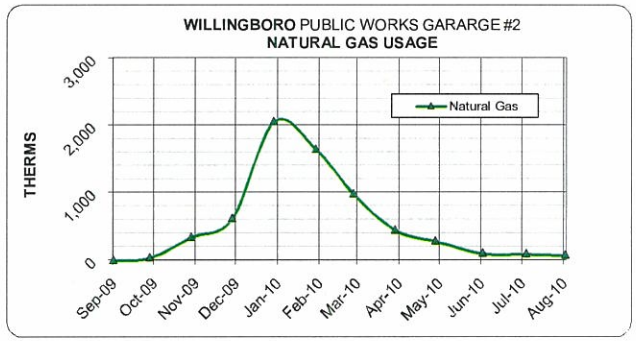
Facility Name Willingboro Public Works Garage #2
Address 25 Industrial Drive
Company PSE&G
Account# 68 666 509 09
Meter# 9195618
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand KW	KWH	Cost	$/kWh
Electricity	kWh	7/19/2010	8/17/2010	NA	143	$33.51	$0.234
Electricity	kWh	6/17/2010	7/19/2010	NA	156	$35.16	$0.225
Electricity	kWh	5/18/2010	6/17/2010	NA	125	$84.49	$0.676
Electricity	kWh	4/17/2010	5/18/2010	NA	127	$142.18	$1.120
Electricity	kWh	3/17/2010	4/16/2010	NA	125	$142.17	$1.137
Electricity	kWh	2/17/2010	3/16/2010	NA	150	$145.10	$0.967
Electricity	kWh	1/17/2010	2/16/2010	NA	171	$148.76	$0.870
Electricity	kWh	12/17/2009	1/16/2010	NA	152	$159.27	$1.048
Electricity	kWh	11/17/2009	12/16/2009	NA	151	$176.40	$1.168
Electricity	kWh	10/17/2009	11/16/2009	NA	103	$170.84	$1.659
Electricity	kWh	9/17/2009	10/16/2009	NA	97	$170.76	$1.760
Electricity	kWh	8/17/2009	9/16/2009	NA	96	$173.24	$1.805
		TOTALS/AVERAGE		**NA**	**1,596**	**$1,581.88**	**$0.991**



Facility Name Willingboro Public Works Garage #2
Address 25 Industrial Drive
Company PSE&G
Account# 68 666 509 09
Meter# 3567522
Tariff/Rate

Energy Type	Energy Unit	Start Date	End Date	Demand	Therms	Cost	$/therm
Natural Gas	therms	7/19/2010	8/17/2010	NA	76	$91.11	$1.199
Natural Gas	therms	6/17/2010	7/19/2010	NA	93	$105.84	$1.138
Natural Gas	therms	5/14/2010	6/17/2010	NA	103	$111.55	$1.083
Natural Gas	therms	4/14/2010	5/13/2010	NA	283	$285.88	$1.010
Natural Gas	therms	3/14/2010	4/13/2010	NA	449	$452.83	$1.009
Natural Gas	therms	2/14/2010	3/13/2010	NA	982	$1,154.81	$1.176
Natural Gas	therms	1/14/2010	2/13/2010	NA	1,648	$2,028.10	$1.231
Natural Gas	therms	12/14/2009	1/13/2010	NA	2,052	$2,454.37	$1.196
Natural Gas	therms	11/14/2009	12/13/2009	NA	616	$686.06	$1.114
Natural Gas	therms	10/14/2009	11/13/2009	NA	345	$370.97	$1.075
Natural Gas	therms	9/16/2009	10/13/2009	NA	40	$45.80	$1.145
Natural Gas	therms	8/14/2009	9/16/2009	NA	0	$10.12	#DIV/0!
		TOTALS/AVERAGE		**NA**	**6,687**	**$7,797.44**	**$1.166**



Dome-Tech, Inc.

ENERGY AUDIT MASTER EQUIPMENT LIST
Willingboro Township, NJ
Municipal Center

AIR HANDLING & OTHER HVAC EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	COOLING TECHNOLOGY	COOLING CAPACITY	HEATING TECHNOLOGY	HEATING CAPACITY	CFM	EFFICIENCY (EER/SEER)	NOTES
RTU	ROOF	FINANCE	3	TRANE	YSC060A3	2007	15	2022	OA/Htg/Clg	DX	5	NATURAL GAS	130 KBTU	1450	13	
RTU	ROOF	INSPECTIONS	1	TRANE	YSC090A3	2007	15	2022	OA/Htg/Clg	DX	7.5	NATURAL GAS	150 KBTU	2900	11.2	
RTU	ROOF	NEW LOBBY	1	MCQUAY	MPS004BGCK10E	2010	15	2025	OA/Htg/Clg	DX	4	NATURAL GAS	81 KBTU	1450	13	
RTU	ROOF	COUNCIL CHAMBERS	1	MCQUAY	MPS010BGCM22E	2010	15	2025	OA/Htg/Clg	DX	10	NATURAL GAS	182 KBTU	3600	11.2	
RTU	ROOF	ADMINISTRATION	1	MCQUAY	MPS006BGCM22E	2010	15	2025	OA/Htg/Clg	DX	6	NATURAL GAS	121 KBTU	2100	11.2	
RTU	ROOF	OFFICES	1	MCQUAY	MPS005BGCM22E	2010	15	2025	OA/Htg/Clg	DX	5	NATURAL GAS	85 KBTU	2000	13	
RTU	ROOF	COURT ROOMS	1	MCQUAY	MPS006BGCM22E	2010	15	2025	OA/Htg/Clg	DX	6	NATURAL GAS	121 KBTU	2100	11.2	

BOILERS, HEATING EQUIPMENT & HOT WATER HEATERS

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY (MBH)		EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	NOTES
B-1	MER	BUILDING HHW	2	HB SMITH	SERIES 28A-5	1998	20	2018	HEATING HOT WATER	CAST IRON SECTIONAL BOILER	1491		70%			
DHW - 1	MER	DOMESTIC HOT WATER	1	AO SMITH	PGCG 50 246	1998	10	2008	BUILDING DOMESTIC HOT WATER	DIRECT FIRED NATURAL GAS DOMESTIC HEATER	50					

CHILLERS, COOLING TOWERS, AIR CONDITIONERS AND OTHER COOLING EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY (TONS)	UOM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	NOTES
C-1	GROUND	BUILDING CHILLED WATER	1	MCQUAY	AGZ100BH12-ER11	2004	20	2024	BUILDING CHILLED WATER	AIR COOLED CHILLER	100		11.00			

COMPRESSORS, PUMPS AND OTHER MOTOR DRIVEN EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	MOTOR HP	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	NOTES
P-1,2	MER	HHW PUMPS	2	MARATHON ELECTRIC	5VE184TTDR4027DJ	2000	20	2020	BUILDING HHW	HHW PUMPS	200 GPM, 46 FT HD	5	STD			
CHW-1,2	MER	CHILLED WATER PUMPS	2	MARATHON ELECTRIC	5VA215ADYV	2000	20	2020	BUILDING CHW	CHW PUMPS	240 GPM, 100 FT HD	5	STD			
DHW - 1	MER	DHW RECIRC	1	TACO	NA	NA	20	2022	RECIRC DHW	RECIRC DHW	NA	1/6	STD			

Dome-Tech, Inc.

ENERGY AUDIT MASTER EQUIPMENT LIST
Willingboro Township, NJ
Kennedy Center

AIR HANDLING & OTHER HVAC EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	COOLING TECHNOLOGY	COOLING CAPACITY	HEATING TECHNOLOGY	HEATING CAPACITY (kBTU)	CFM	EFFICIENCY (EER/SEER)	RELATED ACCESSORIES	CONTROL SYSTEM	RFG TYPE	NOTES
RTU	Roof	Various	8	Rheem	RKKB-A180DM25E	2000	15	2015	OA/Htg/Clg	DX	15	NATURAL GAS	302	5700	8.9			R22	
RTU	Roof	Offices	1	Rheem	RKKB-A120DM15E	2000	15	2015	OA/Htg/Clg	DX	10	NATURAL GAS	200	3600	8.9			R22	
RTU	Roof	Cafeteria	3	Rheem	RKKB-A240DM40E	2000	15	2015	OA/Htg/Clg	DX	20	NATURAL GAS	324	7500	8.3			R22	
RTU	Roof	Gym	2	Rheem	RKKB-A102DL22E	2000	15	2015	OA/Htg/Clg	DX	8.5	NATURAL GAS	182	3200	8.9				
RTU	Roof	Gym	2	Rheem	RKKB-A240DL30E	2000	15	2015	OA/Htg/Clg	DX	20	NATURAL GAS	324	7500	8.3				
RTU	Roof	Classrooms	2	Carrier	48TJF028	2001	15	2016	OA/Htg/Clg	DX	25	NATURAL GAS	291	9000	8.3				
RTU	Roof	Classrooms	1	Carrier	50TJ-016-670QA	2001	15	2016	OA/Htg/Clg	DX	15	ELECTRIC		5700	10.8			R22	
RTU	Roof	Music Rm	1	Lennox	CHA16-953-1Y	1983	15	1998	OA/Htg/Clg	DX	6.5	ELECTRIC		2100	9.1			R22	
RTU	Roof	Classrooms	1	Trane	YCD180B4LAGA	2003	15	2018	OA/Htg/Clg	DX	15	NATURAL GAS	175	5700	11.0			R22	
RTU	Roof	Classrooms	1	Trane	TSC102A4RHA	2003	15	2018	OA/Htg/Clg	DX	8.5	NATURAL GAS	150	3200	13			R22	
EF	Roof		77	Swartwout FiberAire	Various														
AIR INTAKE HOOD	Roof		1							48 x 48 intake hood									
UV	perimeter		23																Unit ventilator openings not used (appear sealed)
	Roof		1	Amerman	ORB330	1976	25	2001		7.5 HP									

BOILERS, HEATING EQUIPMENT & HOT WATER HEATERS

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	CFM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	I=B=R		VALVES	NOTES
Boiler	Basement MER	All	3	Cleaver Brooks	CB180X-150	1965	30	1995	Htg HW	firetube	6275	MBH		dual-fuel burners				large pneumatic 3-way valve	30# output
DHW	Basement MER	All	1	Ruud	G100-75				DOMESTIC WATER HEATER	NG	100	gal							
STORAGE TANK			1	Old Dominion	OC60-192	1965	40	2005	HW storage		2350	gal		piping & valves from GWH					
FTR	Various	Various							dual-pipe htg HW	RADIANT FINNED TUBE HEAT									perimeter, unit ventilators, wall & ceiling convectors, and FPB units

Dome-Tech, Inc.

ENERGY AUDIT MASTER EQUIPMENT LIST
Willingboro Township, NJ
Kennedy Center

CHILLERS, COOLING TOWERS, AIR CONDITIONERS AND OTHER COOLING EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	CFM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	ARI Rated Efficiency kW/Ton	IPLV	RFG TYPE	NOTES
Window AC	Various	Individual rooms	40	Freidrich etal	Various				Space AC	Electric	1.5 - 2.0	ton	8					R22	
Split AC	SENIOR CENTER		3	Mitsubishi	PURY-P120THMU-A				Space AC	DX			8.8					R410	Model # is outside unit
																			poor condition

COMPRESSORS, PUMPS AND OTHER MOTOR DRIVEN EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	MOTOR HP	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM			NOTES
HWP	Basement MER	Boilers	3	Weinman	LG3723	1990	20	2010	Boiler feed	Base-mtd	320 @ 16'	2	81.5					
HWP		All	2						HW supply		320 @ 67'	20						
	Basement MER		1	I-R								7.5						Wagner induction motor
			1	Quincy								(2) 3	86.5					
	Basement MER		1	Onan	30EC				Emergency generator		25 kW							Ford engine

KITCHEN, LAUNDRY AND OTHER EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	UOM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM			NOTES
skylights	Roof		104						skylights									
	Basement MER																	large pneumatic 3-way valve

Dome-Tech, Inc.

ENERGY AUDIT MASTER EQUIPMENT LIST
Willingboro Township, NJ
Library

AIR HANDLING & OTHER HVAC EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	COOLING TECHNOLOGY	COOLING CAPACITY	HEATING TECHNOLOGY	HEATING CAPACITY	CFM	EFFICIENCY (EER/SEER)	RELATED ACCESSORIES	CONTROL SYSTEM	NOTES
AHU-1	Basement MER	Zone	1	Carrier	39THLMXAE	2002	25	2027	OA / CHW / HW	AIR HANDLING UNIT	CHW COIL	*10000*	HHW COIL		*10000*				
AHU-2		Zone	1	Carrier	39MN17A	2002	25	2027	OA / CHW / HW	AIR HANDLING UNIT	CHW COIL	8500	HHW COIL		8500				
AHU-3		Zone	1	Carrier	39MN17A	2002	25	2027	OA / CHW / HW	AIR HANDLING UNIT	CHW COIL	8500	HHW COIL		8500				
EF	Roof		8																

BOILERS, HEATING EQUIPMENT & HOT WATER HEATERS

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	UOM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	I=B=R			NOTES
Absorbtion Chiller	Basement MER	All	1	Broad	BZ30N(k) CH_4	2001	23	2024	HW / CHW	Absorbtion	1700	MBH		Packaged system	Broad touchpad		*260 deg exhaust*		Spectrum Direct-Fired Absorbtion
DWH		All	1	AO Smith	DSE-80/15kw	2002	15	2017	Domestic Water Heater	Electric	80	gal		B&G Circulator					

CHILLERS, COOLING TOWERS, AIR CONDITIONERS AND OTHER COOLING EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	UOM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	ARI Rated Efficiency kW/Ton	IPLV	RFG TYPE	NOTES
See Broad absorbtion chiller / heater data above					*BZ30N(k) CH_4*	*2001*	*23*	*2024*	*HW / CHW*	*Absorbtion*	100	tons		*Packaged system*	*Broad touchpad*				
CT	Roof	All	1	Evapco	AT19-96		20			Cooling Tower	15	HP	91						
Split AC				Samsung	UCC2400C		15				2								

COMPRESSORS, PUMPS AND OTHER MOTOR DRIVEN EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	MOTOR HP	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM				NOTES
HW	Basement MER	All	2	Taco	FE2001E2	2002	20	2022	Hot Water	Base-mtd	120 @ 40'	2	84	PRV	Magnetic Starter				
CHW		All	2	Taco	FE3007E2	2001	20	2021	Chilled Water	Base-mtd	300 @ 30'	5	87.5	PRV	Magnetic Starter				
CW		All	2	Taco	FE	2002	20	2022	Condenser	Base-mtd		2	84	PRV	Magnetic Starter				
CT	Roof	All	1	US Motor	H1188634	2002	20	2022	Cooling Tower	Base-mtd		1	91		Magnetic Starter				

KITCHEN, LAUNDRY AND OTHER EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	UOM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM				NOTES
Thermostats	Various		25	TAC/Trane/etal					Thermostats										Need to check plans for VAV / FPV units
Small dehumidifier	Basement Storage		1						Small dehumidifier										Library, but no dehumidification
Vending Machine			1						Vending Machine										

Dome-Tech, Inc.

ENERGY AUDIT MASTER EQUIPMENT LIST
Willingboro Township, NJ
Public Works #1 & #2

BOILERS, HEATING EQUIPMENT & HOT WATER HEATERS

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	CFM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	I=B=R			NOTES
UH	CEILING	GARAGE BAYS	8	VARIOUS BRANDS	VARIOUS BRANDS	2003	13	2013	BUILDING HEAT	GAS FIRED UNIT HEATERS	173 - 200 kBTU	2550-3700	80%						
DHW	MER	BUILDING HHW	1	BRADFORD WHITE	M1503LN	1995	15	2010			50 gal								
B-1	MER	BUILDING HHW	1	NATIONAL US	209 SERIES	1980	20	2000	NOT IN USE	NATURAL GAS	225 kBTU								

CHILLERS, COOLING TOWERS, AIR CONDITIONERS AND OTHER COOLING EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	CFM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	ARI Rated Efficiency kW/Ton	IPLV	RFG TYPE	NOTES
WINDOW AC UNIT	OFFICE	OFFICE	1	LG	NA	2000	10	2010			1 Ton	800 CFM							

KITCHEN, LAUNDRY AND OTHER EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	UOM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM				NOTES
ICE MACHINE	OFFICE	OFFICE	1																
REFRIGERATOR	OFFICE	OFFICE	1																

Dome-Tech, Inc.

ENERGY AUDIT MASTER EQUIPMENT LIST
Willingboro Township, NJ
Fire Station #161

AIR HANDLING & OTHER HVAC EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	COOLING TECHNOLOGY	COOLING CAPACITY	HEATING TECHNOLOGY	HEATING CAPACITY	CFM	EFFICIENCY (EER/SEER)	NOTES
AHU	Roof		1	Rheem	RKNA-A048JK13E	2002	15	2017	OA/HW/CHW	DX	4	NATURAL GAS		1450	8.9	
AHU	Roof		1	Rheem	RKKA-A085CL13E	2002	15	2017	OA/HW/CHW	DX	7.5	NATURAL GAS		2900	8.9	
AHU	Roof		1	Rheem	RAKA-042JA7	2002	15	2017	OA/HW/CHW	DX	3.5	ELECTRIC		1370	8.9	
SPLIT AC UNIT	Roof		1	Sanyo	CH1222	1994	15	2009	HW/CHW	DX	2	ELECTRIC		1000	8.9	
EF			12													

BOILERS, HEATING EQUIPMENT & HOT WATER HEATERS

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	CFM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	NOTES
Boiler	MER		4	Weil McLain	PFG-8-PIN	1990	20	2010		NG	346	MBH	81			
DHW	MER		1	Bradford White	MI5036EN10	1990	10	2000			50	gal				
UH	MER		6						Unit Heaters							

KITCHEN, LAUNDRY AND OTHER EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	UOM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	NOTES
MISC	OFFICE	OFFICE	3						Residential Refrigerators							

Dome-Tech, Inc.

ENERGY AUDIT MASTER EQUIPMENT LIST
Willingboro Township, NJ
Fire Station #162

AIR HANDLING & OTHER HVAC EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	CFM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM			

BOILERS, HEATING EQUIPMENT & HOT WATER HEATERS

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	CFM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	I=B=R		
Boiler			2	Weil McLain	SFRHJ						421	MBH	81					
GWH			1	Kenmore	153-333-130		15		DHW	40 gal	32	MBH						
UH			2						HW unit heaters									

CHILLERS, COOLING TOWERS, AIR CONDITIONERS AND OTHER COOLING EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	COOLING TECHNOLOGY	COOLING CAPACITY	HEATING TECHNOLOGY	HEATING CAPACITY	CFM	EFFICIENCY (EER/SEER)	RELATED ACCESSORIES	CONTROL SYSTEM	RFG TYPE
Split AC			1	Sanyo	CH222	1994	15	2009	COOLING	DX	2	ton	ELECTRIC	1000	8.5			
Window AC			3	VARIOUS BRANDS	VARIOUS BRANDS		10											

COMPRESSORS, PUMPS AND OTHER MOTOR DRIVEN EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	MOTOR HP	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM			
AIR COMPRESSOR	MER	BUILDING	1						AIR COMPRESSOR									

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Dome-Tech, Inc.

ENERGY AUDIT MASTER EQUIPMENT LIST
Willingboro Township, NJ
Fire Station #163

AIR HANDLING & OTHER HVAC EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	COOLING TECHNOLOGY	COOLING CAPACITY	HEATING TECHNOLOGY	HEATING CAPACITY	CFM	EFFICIENCY (EER/SEER)	RELATED ACCESSORIES	CONTROL SYSTEM		NOTES
RTU	Roof		1	Rheem	RIKA-A048JR	2001	15	2016		DX	4	ELECTRIC	NA	1450	13				

BOILERS, HEATING EQUIPMENT & HOT WATER HEATERS

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	CFM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM	I=B=R			NOTES
Boiler		BUILDING HHW	1	HB Smith	G200	1980	20	2004	NATURAL GAS HOT WATER HEATER										
DWH		BUILDING DHW	1	Rheem	21V30-30F	2003	10	2018	DOMESTIC WATER HEATER	NG									
UH		UNIT HEATER	2						Gas Unit Heaters										

COMPRESSORS, PUMPS AND OTHER MOTOR DRIVEN EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	MOTOR HP	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM				NOTES
Air compressor	MER			Campbell Hausfeld			8		Air compressor		6	HP							

KITCHEN, LAUNDRY AND OTHER EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	CFM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM				NOTES
VENDING	BAY		1						Vending Machine										

Dome-Tech, Inc.

ENERGY AUDIT MASTER EQUIPMENT LIST
Willingboro Township, NJ
Municipal Center

AIR HANDLING & OTHER HVAC EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	COOLING TECHNOLOGY	COOLING CAPACITY	HEATING TECHNOLOGY	HEATING CAPACITY	UOM	EFFICIENCY (EER/SEER)
RTU	ROOF	FINANCE	3	TRANE	YSC060A3	2007	15	2022	OA/Htg/Clg	DX	5	NATURAL GAS	130 KBTU		13
RTU	ROOF	INSPECTIONS	1	TRANE	YSC090A3	2007	15	2022	OA/Htg/Clg	DX	7.5	NATURAL GAS	150 KBTU		11.2
RTU	ROOF	NEW LOBBY	1	MCQUAY	MPS004BGCK10E	2010	15	2025	OA/Htg/Clg	DX	4	NATURAL GAS	81 KBTU		13
RTU	ROOF	COUNCIL CHAMBERS	1	MCQUAY	MPS010BGCM22E	2010	15	2025	OA/Htg/Clg	DX	10	NATURAL GAS	182 KBTU		11.2
RTU	ROOF	ADMINISTRATION	1	MCQUAY	MPS006BGCM22E	2010	15	2025	OA/Htg/Clg	DX	6	NATURAL GAS	121 KBTU		11.2
RTU	ROOF	OFFICES	1	MCQUAY	MPS005BGCM22E	2010	15	2025	OA/Htg/Clg	DX	5	NATURAL GAS	85 KBTU		13
RTU	ROOF	COURT ROOMS	1	MCQUAY	MPS006BGCM22E	2010	15	2025	OA/Htg/Clg	DX	6	NATURAL GAS	121 KBTU		11.2

BOILERS, HEATING EQUIPMENT & HOT WATER HEATERS

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	UOM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM
B-1	MER	BUILDING HHW	2	HB SMITH	SERIES 28A-5	1998	30	2028	HEATING HOT WATER	CAST IRON SECTIONAL BOILER	1491		70%		
DHW - 1	MER	DOMESTIC HOT WATER	1	AO SMITH	PGCG 50 246	1998	12	2010	BUILDING DOMESTIC HOT WATER	DIRECT FIRED NATURAL GAS DOMESTIC HEATER	50				

CHILLERS, COOLING TOWERS, AIR CONDITIONERS AND OTHER COOLING EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	UOM	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM
C-1	GROUND	BUILDING CHILLED WATER	1	MCQUAY	AGZ100BH12-ER11	2004	20	2024	BUILDING CHILLED WATER	AIR COOLED CHILLER	100		11.00		

COMPRESSORS, PUMPS AND OTHER MOTOR DRIVEN EQUIPMENT

TAG # TYPE	LOCATION	AREA SERVED	QTY	MFG	MODEL #	YEAR MADE	SERVICE LIFE	REPLACE YEAR	SERVICE / APPLICATION	TYPE	CAPACITY	MOTOR HP	EFFICIENCY	RELATED ACCESSORIES	CONTROL SYSTEM
P-1,2	MER	HHW PUMPS	2	MARATHON ELECTRIC	5VE184TTDR4027DJ	2000	22	2022	BUILDING HHW	HHW PUMPS	200 GPM, 46 FT HD	5	STD		
CHW-1,2	MER	CHILLED WATER PUMPS	2	MARATHON ELECTRIC	5VA215ADYV	2000	22	2022	BUILDING CHW	CHW PUMPS	240 GPM, 100 FT HD	5	STD		
DHW - 1	MER	DHW RECIRC	1	TACO	NA	NA	22	2022	RECIRC DHW	RECIRC DHW	NA	1/6	STD		

LIGHTING INVENTORY SUMMARY
The Township of Willingboro - Municipal Building
One Salem Road
Willingboro, NJ 08046

EXECUTIVE SUMMARY

ENERGY DATA

Existing Energy Usage (Watts)	45,644
Proposed Energy Usage (Watts)	29,145
Energy Saved (Watts)	16,499
Annual Kilowatt Hours Saved (kWh)	66,464

FINANCIAL DATA

Annual Existing Energy Cost	$	29,577.31
Annual Proposed Energy Cost	$	18,885.96
Annual Energy Savings	$	10,691.35
Additional Energy Savings (Occupancy Sensors)	$	75.82
Total Energy Savings	$	10,767.17
Initial Project Cost	$	19,308.28
Utility Rebate (Based on NJ Smart Start Approval)	$	3,990.00
Project Cost	$	15,318.28

CASH FLOW SUMMARY

Return On Investment (R.O.I.)		70%
Payback (Years)		1.43
10 Year Savings	$	106,913.52
10-Year Cumulative Positive Cash Flow	$	91,595.24

The Township of Willingboro - Municipal Building
One Salem Road
Willingboro, NJ 08046

New Jersey

UTILITY ACCOUNT NUMBER	N/A
BUILDING TYPE	Municipal Building
SQUARE FOOTAGE	31,130

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist. Fix Wts	Foot Candle	Total Fix Wts	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl. Qty.	Repl. Fix Wts	Total Fix Wts	Opr. Hours	Fix Wts Saved	kWh Saved	0.15/kWh	Annual Elec. Savings	Annual Sens. Savings
1	1	Municipal Court		Court Room Chambers	2L 40W BIAX 2X2	12	80		960	Relamp Only 2L PL-L 4P 25w		$ -	12	50	600	4000	360	1440	233.28	$ 233.28	
2	1	Municipal Court		Court Room Chambers	2L 23W Quad CFL	10	46		460	No Measure		$ -	10	23	230	4000	230	920	149.04	$ 149.04	
3	1	Municipal Court		Court Room Chambers	2L 23W Quad CFL	3	46		138	No Measure		$ -	3	23	69	4000	69	276	44.712	$ 44.71	
4	1	Municipal Court		Meeting Room	3L F32T8 2X4	4	96		384	Relamp Only 3L F32T8 25w		$ -	4	75	300	4000	84	336	54.432	$ 54.43	
5	1	Municipal Court		Bath	2L F17T8 2X2	1	34		34	No Measure		$ -	1	34	34	4000	0	0	0	$ -	
6	1	Municipal Court		Closet	2L F17T8 /Wrap	1	34		34	No Measure		$ -	1	34	34	4000	0	0	0	$ -	
7	1	Municipal Court		Corridor	2L F32T8 1X4	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	4000	28	112	18.144	$ 18.14	
8	1	Municipal Court		Corridor	3L F32T8 2X4	10	96		960	Relamp Only 3L F32T8 25w		$ -	10	75	750	4000	210	840	136.08	$ 136.08	
9	1	Municipal Court		Corridor	2L F17T8 2X2	1	34		34	No Measure		$ -	1	34	34	4000	0	0	0	$ -	
10	1	Municipal Court		Mens Room	1L F32T8 1X4	4	32		128	Relamp Only 1L F32T8 25w		$ -	4	25	100	4000	28	112	18.144	$ 18.14	
11	1	Municipal Court		Ladies Room	1L F32T8 1X4	4	32		128	Relamp Only 1L F32T8 25w		$ -	4	25	100	4000	28	112	18.144	$ 18.14	
12	1	Municipal Court		Corridor	2W LED EXIT	3	2		6	No Measure		$ -	3	2	6	4000	0	0	0	$ -	
13	1	Municipal Court	209	Attorney briefing	2L 40W BIAX 2X2	2	80		160	Relamp Only 2L PL-L 4P 25w		$ -	2	50	100	4000	60	240	38.88	$ 38.88	
14	1	Municipal Court	210	Deputy Court Clerk's Office	3L F32T8 2X4	4	96		384	Relamp Only 3L F32T8 25w		$ -	4	75	300	4000	84	336	54.432	$ 54.43	
15	1	Municipal Court	210	Court Records	3L F32T8 2X4	4	96		384	Relamp Only 3L F32T8 25w		$ -	4	75	300	4000	84	336	54.432	$ 54.43	
16	1	Municipal Court	210	Court Clerk	3L F32T8 2X4	3	96		288	Relamp Only 3L F32T8 25w		$ -	3	75	225	4000	63	252	40.824	$ 40.82	
17	1	Municipal Court		Vestibule	26W PL CFL	4	26		104	No Measure		$ -	4	26	104	4000	0	0	0	$ -	
18	1	Municipal		Public Safety Open Area	3L F32T8 2X4	4	96		384	Relamp Only 3L F32T8 25w		$ -	4	75	300	4000	84	336	54.432	$ 54.43	
19	1	Municipal		Office	3L F32T8 2X4	5	96		480	Relamp Only 3L F32T8 25w		$ -	5	75	375	4000	105	420	68.04	$ 68.04	
20	1	Municipal		Office	3L F32T8 2X4	2	96		192	Relamp Only 3L F32T8 25w		$ -	2	75	150	4000	42	168	27.216	$ 27.22	
21	1	Municipal		Sensor Savings	Wall Mount	1			0	O/S WALL	20	$ 20.00	1								$ 29.16
22	1	Municipal		Electrical Room	2L F17T8 /Wrap	1	34		34	No Measure		$ -	1	34	34	4000	0	0	0	$ -	
23	1	Municipal		Office	3L F32T8 2X4	2	96		192	Relamp Only 3L F32T8 25w		$ -	2	75	150	4000	42	168	27.216	$ 27.22	
24	1	Municipal Court	208	Court Liason	3L F32T8 2X4	4	96		384	Relamp Only 3L F32T8 25w		$ -	4	75	300	4000	84	336	54.432	$ 54.43	
25	1	Municipal		Room #1	3L F32T8 2X4	2	96		192	Relamp Only 3L F32T8 25w		$ -	2	75	150	4000	42	168	27.216	$ 27.22	
26	1	Municipal		Room #2	3L F32T8 2X4	2	96		192	Relamp Only 3L F32T8 25w		$ -	2	75	150	4000	42	168	27.216	$ 27.22	
27	1	Municipal		Room #3	3L F32T8 2X4	2	96		192	Relamp Only 3L F32T8 25w		$ -	2	75	150	4000	42	168	27.216	$ 27.22	
28	1	Municipal		Administration	3L F32T8 2X4	6	96		576	Relamp Only 3L F32T8 25w		$ -	6	75	450	4000	126	504	81.648	$ 81.65	
29	1	Municipal		Reception	1L 23W Quad CFL	2	23		46	No Measure		$ -	2	23	46	4000	0	0	0	$ -	
30	1	Municipal		Reception	1L 40W BIAX 1X2	1	40		40	Relamp Only 1L PL-L 4P 25w		$ -	1	25	25	4000	15	60	9.72	$ 9.72	
31	1	Municipal		Office	2L 40W BIAX 2X2	4	80		320	Relamp Only 2L PL-L 4P 25w		$ -	4	50	200	4000	120	480	77.76	$ 77.76	
32	1	Municipal		Office	3L F32T8 2X4	4	96		384	Relamp Only 3L F32T8 25w		$ -	4	75	300	4000	84	336	54.432	$ 54.43	
33	1	Municipal		Corridor	1L 40W BIAX 1X2	11	40		440	Relamp Only 1L PL-L 4P 25w		$ -	11	25	275	4000	165	660	106.92	$ 106.92	
34	1	Municipal		Corridor	1L 23W Quad CFL	16	23		368	No Measure		$ -	16	23	368	4000	0	0	0	$ -	
35	1	Municipal		Corridor	2L 23W Quad CFL	3	46		138	No Measure		$ -	3	23	69	4000	69	276	44.712	$ 44.71	
36	1	Municipal		Mens Room	2L F32T8 1X4	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	4000	14	56	9.072	$ 9.07	
37	1	Municipal		Electrical Room	75A (open)	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
38	1	Municipal		Ladies Room	2L F32T8 1X4	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	4000	14	56	9.072	$ 9.07	
39	1	Municipal	205	Finance (open floor)	3L F32T8 2X4	6	96		576	Relamp Only 3L F32T8 25w		$ -	6	75	450	4000	126	504	81.648	$ 81.65	
40	1	Municipal		Closet	2L F32T8 1X4	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	4000	14	56	9.072	$ 9.07	
41	1	Municipal		Corridor	2L F32T8 1X4	4	64		256	Relamp Only 2L F32T8 25w		$ -	4	50	200	4000	56	224	36.288	$ 36.29	
42	1	Municipal		Office	3L F32T8 2X4	2	96		192	Relamp Only 3L F32T8 25w		$ -	2	75	150	4000	42	168	27.216	$ 27.22	
43	1	Municipal		Office	3L F32T8 2X4	2	96		192	Relamp Only 3L F32T8 25w		$ -	2	75	150	4000	42	168	27.216	$ 27.22	
44	1	Municipal	205	Finance Director	3L F32T8 2X4	2	96		192	Relamp Only 3L F32T8 25w		$ -	2	75	150	4000	42	168	27.216	$ 27.22	
45	1	Municipal		File Room	2L F32T8 1X4	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	4000	14	56	9.072	$ 9.07	
46	1	Municipal		Sensor Savings	Wall Mount	1			0	O/S WALL	20	$ 20.00	1								$ 9.72
47	1	Municipal	204	Clerk's Office Open Area	2L FB32T8 U6 2X2	12	64		768	Relamp Only 2L FB32T8 U6 25w		$ -	12	50	600	4000	168	672	108.864	$ 108.86	
48	1	Municipal		Open Area	2L F32T8 1X4	8	64		512	Relamp Only 2L F32T8 25w		$ -	8	50	400	4000	112	448	72.576	$ 72.58	
49	1	Municipal		Mayor's office	3L F32T8 2X4	4	96		384	Relamp Only 3L F32T8 25w		$ -	4	75	300	4000	84	336	54.432	$ 54.43	
50	1	Municipal		Office	3L F32T8 2X4	4	96		384	Relamp Only 3L F32T8 25w		$ -	4	75	300	4000	84	336	54.432	$ 54.43	
51	1	Municipal		Office	3L F32T8 2X4	4	96		384	Relamp Only 3L F32T8 25w		$ -	4	75	300	4000	84	336	54.432	$ 54.43	
52	1	Municipal		Conference Room	2L FB32T8 U6 2X2	9	64		576	Relamp Only 2L FB32T8 U6 25w		$ -	9	50	450	4000	126	504	81.648	$ 81.65	
53	1	Municipal		Copy Room	2L F32T8 1X4	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	4000	28	112	18.144	$ 18.14	
54	1	Municipal		Kitchen	2L FB32T8 U6 2X2	4	64		256	Relamp Only 2L FB32T8 U6 25w		$ -	4	50	200	4000	56	224	36.288	$ 36.29	
55	1	Municipal		Work Area	3L F32T8 2X4	3	96		288	Relamp Only 3L F32T8 25w		$ -	3	75	225	4000	63	252	40.824	$ 40.82	
56	1	Municipal	203	Secretary Area	2L F32T8 1X4	8	64		512	Relamp Only 2L F32T8 25w		$ -	8	50	400	4000	112	448	72.576	$ 72.58	
57	1	Municipal	203	Inspectors Office	3L F32T8 2X4	2	96		192	Relamp Only 3L F32T8 25w		$ -	2	75	150	4000	42	168	27.216	$ 27.22	

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist. Fix Wts	Foot Candle	Total Fix Wts	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl. Qty.	Repl. Fix Wts	Total Fix Wts	Opr. Hours	Fix Wts Saved	kWh Saved	0.15/kWh	Annual Elec. Savings	Annual Sens. Savings
58	1	Municipal	203	Back Hall	2L F32T8 1X4	4	64		256	Relamp Only 2L F32T8 25w		$ -	4	50	200	4000	56	224	36.288	$ 36.29	
59	1	Municipal	203	Construction Office	3L F32T8 2X4	1	96		96	Relamp Only 3L F32T8 25w		$ -	1	75	75	4000	21	84	13.608	$ 13.61	
60	1	Municipal		Sensor Savings	Wall Mount	1			0	O/S WALL	20	$ 20.00	1								$ 14.58
61	1	Municipal		Office	3L F32T8 2X4	1	96		96	Relamp Only 3L F32T8 25w		$ -	1	75	75	4000	21	84	13.608	$ 13.61	
62	1	Municipal		Sensor Savings	Wall Mount	1			0	O/S WALL	20	$ 20.00	1								$ 14.58
63	1	Municipal	202	Tax Assessor	2L F32T8 1X4	4	64		256	Relamp Only 2L F32T8 25w		$ -	4	50	200	4000	56	224	36.288	$ 36.29	
64	1	Municipal		Tax Assessor Office	3L F32T8 2X4	4	96		384	Relamp Only 3L F32T8 25w		$ -	4	75	300	4000	84	336	54.432	$ 54.43	
65	1	Municipal		Tax Assessor Office	2L F32T8 1X4	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	4000	14	56	9.072	$ 9.07	
66	1	Municipal		Open Area	2L 26W CFL	24	46		1104	No Measure		$ -	24	26	624	4000	480	1920	311.04	$ 311.04	
67	1	Municipal		Open Area	2L F32T8 1X4	4	64		256	Relamp Only 2L F32T8 25w		$ -	4	50	200	4000	56	224	36.288	$ 36.29	
68	1	Municipal	201	Vital Statistics	3L F32T8 2X4	4	96		384	Relamp Only 3L F32T8 25w		$ -	4	75	300	4000	84	336	54.432	$ 54.43	
69	B	Basement		Purchasing Open Area	4L F32T8 2X4	11	128		1408	Relamp Only 4L F32T8 25w		$ -	11	100	1100	4000	308	1232	199.584	$ 199.58	
70	B	Basement		Supply Room	2L FB32T8 U6 2X2	2	64		128	Relamp Only 2L FB32T8 U6 25w		$ -	2	50	100	4000	28	112	18.144	$ 18.14	
71	B	Basement		Supply Room	2L F32T8 1X4 Wrap	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	4000	14	56	9.072	$ 9.07	
72	B	Basement		Mechanical	2L F34T12 1X4 Wrap	1	68		68	Relamp and Reballast 2L F32T8 2	10	$ 10.00	1	50	50	4000	18	72	11.664	$ 11.66	
73	B	Basement		Mens Room	75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
74	B	Basement		IT Room	4L F32T8 2X4	4	128		512	Relamp Only 4L F32T8 25w		$ -	4	100	400	4000	112	448	72.576	$ 72.58	
75	B	Basement		Fax Room	2L F32T8 1X4 Wrap	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	4000	14	56	9.072	$ 9.07	
76	B	Basement		Server Room	4L F32T8 2X4	2	128		256	Relamp Only 4L F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
77	B	Basement		Slop Sink	75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
78	B	Basement		Sensor Savings	Wall Mount	1			0	O/S WALL	20	$ 20.00	1								$ 3.89
79	B	Basement		Back Storage Room	2L F34T12 1X4	5	68		340	Relamp and Reballast 2L F32T8 2	10	$ 50.00	5	50	250	4000	90	360	58.32	$ 58.32	
80	B	Basement		Storage	75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
81	B	Basement		Sensor Savings	Wall Mount	1			0	O/S WALL	20	$ 20.00	1								$ 3.89
82	B	Basement		Storage	2L F34T12 Wrap	1	68		68	Relamp and Reballast 2L F32T8 2	10	$ 10.00	1	50	50	4000	18	72	11.664	$ 11.66	
83	B	Basement		Files	2L FB32T8 U6 2X2	1	64		64	Relamp Only 2L FB32T8 U6 25w		$ -	1	50	50	4000	14	56	9.072	$ 9.07	
84	B	Basement		Storage	4L F34T12 2x4	5	136		680	Retrofit 2L F32T8/Electronic/Refle	40	$ 200.00	5	50	250	4000	430	1720	278.64	$ 278.64	
85	B	Basement		Corridor	4L F32T8 2X4	4	128		512	Relamp Only 4L F32T8 25w		$ -	4	100	400	4000	112	448	72.576	$ 72.58	
86	B	Police Dept		Maintenance	2L F34T12	4	68		272	Relamp and Reballast 2L F32T8 2	10	$ 40.00	4	50	200	4000	72	288	46.656	$ 46.66	
87	B	Police Dept		Maintenance	1L F32T8 1X4	1	32		32	Relamp Only 1L F32T8 25w		$ -	1	25	25	4000	7	28	4.536	$ 4.54	
88	B	Police Dept		Maintenance	60 A Inc	1	60		60	15w Spring CFL		$ -	1	15	15	4000	45	180	29.16	$ 29.16	
89	B	Police Dept		Elevator Lobby	4L F32T8 2X4	3	128		384	Relamp Only 4L F32T8 25w		$ -	3	100	300	4000	84	336	54.432	$ 54.43	
90	B	Police Dept		Records Open Area	4L F32T8 2X4	8	128		1024	Relamp Only 4L F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
91	B	Police Dept		Office	4L F32T8 2X4	2	128		256	Relamp Only 4L F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
92	B	Police Dept		Corridor	4L F32T8 2X4	1	128		128	Relamp Only 4L F32T8 25w		$ -	1	100	100	4000	28	112	18.144	$ 18.14	
93	B	Police Dept		Copy Room	4L F32T8 2X4	2	128		256	Relamp Only 4L F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
94	B	Police Dept		Office	4L F32T8 2X4	2	128		256	Relamp Only 4L F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
95	B	Police Dept		Office	4L F34T12 2x4	2	136		272	Retrofit 2L F32T8/Electronic/Refle	40	$ 80.00	2	50	100	4000	172	688	111.456	$ 111.46	
96	B	Police Dept		Police Office	2L FB32T8 U6 2X2	6	64		384	Relamp Only 2L FB32T8 U6 25w		$ -	6	50	300	4000	84	336	54.432	$ 54.43	
97	B	Police Dept		Ladies Locker	4L F34T12 2x4	2	136		272	Retrofit 2L F32T8/Electronic/Refle	40	$ 80.00	2	50	100	4000	172	688	111.456	$ 111.46	
98	B	Police Dept		Ladies Locker	75A Inc	4	75		300	20w Spring CFL		$ -	4	20	80	4000	220	880	142.56	$ 142.56	
99	B	Police Dept		Detective Open Area	4L F34T12 2x4	21	136		2856	Retrofit 2L F32T8/Electronic/Refle	40	$ 840.00	21	50	1050	4000	1806	7224	1170.288	$ 1,170.29	
100	B	Police Dept		Detective Open Area	2L F34T12	5	68		340	Relamp and Reballast 2L F32T8 2	10	$ 50.00	5	50	250	4000	90	360	58.32	$ 58.32	
101	B	Police Dept		Mechanical	75A Inc	3	75		225	20w Spring CFL		$ -	3	20	60	4000	165	660	106.92	$ 106.92	
102	B	Police Dept		Storage	75A Inc	3	75		225	20w Spring CFL		$ -	3	20	60	4000	165	660	106.92	$ 106.92	
103	B	Police Dept		Meeting Room	4L F32T8 2X4	12	128		1536	Relamp Only 4L F32T8 25w		$ -	12	100	1200	4000	336	1344	217.728	$ 217.73	
104	B	Police Dept		Mechanical	1L 20W CFL	4	20		80	No Measure		$ -	4	20	80	4000	0	0	0	$ -	
105	B	Police Dept		Corridor	4L F32T8 2X4	2	128		256	Relamp Only 4L F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
106	B	Police Dept		Corridor	4L F34T12 2x4	4	136		544	Retrofit 2L F32T8/Electronic/Refle	40	$ 160.00	4	50	200	4000	344	1376	222.912	$ 222.91	
107	B	Police Dept		Corridor	2L F34T12	1	68		68	Relamp and Reballast 2L F32T8 2	10	$ 10.00	1	50	50	4000	18	72	11.664	$ 11.66	
108	B	Police Dept		Corridor	4L F34T12 2x4	2	136		272	Retrofit 2L F32T8/Electronic/Refle	40	$ 80.00	2	50	100	4000	172	688	111.456	$ 111.46	
109	B	Police Dept		Captain's Office	4L F34T12 2x4	2	136		272	Retrofit 2L F32T8/Electronic/Refle	40	$ 80.00	2	50	100	4000	172	688	111.456	$ 111.46	
110	B	Police Dept		Ladies Room	2L F34T12 Wrap	3	68		204	Relamp and Reballast 2L F32T8 2	10	$ 30.00	3	50	150	4000	54	216	34.992	$ 34.99	
111	B	Police Dept		Slop Sink	75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
112	B	Police Dept		Mens Room	2L F34T12 Wrap	2	68		136	Relamp and Reballast 2L F32T8 2	10	$ 20.00	2	50	100	4000	36	144	23.328	$ 23.33	
113	B	Police Dept		Stairwell	4L F34T12 2x4	2	136		272	Retrofit 2L F32T8/Electronic/Refle	40	$ 80.00	2	50	100	4000	172	688	111.456	$ 111.46	
114	B	Police Dept		Stairwell	2L F34T12 Wrap	1	68		68	Relamp and Reballast 2L F32T8 2	10	$ 10.00	1	50	50	4000	18	72	11.664	$ 11.66	
115	B	Police Dept		Crime Prevention Hall	4L F34T12 2x4	2	136		272	Retrofit 2L F32T8/Electronic/Refle	40	$ 80.00	2	50	100	4000	172	688	111.456	$ 111.46	
116	B	Police Dept		Crime Prevention Office	4L F34T12 2x4	2	136		272	Retrofit 2L F32T8/Electronic/Refle	40	$ 80.00	2	50	100	4000	172	688	111.456	$ 111.46	
117	B	Police Dept		Crime Prevention Office	4L F34T12 2x4	2	136		272	Retrofit 2L F32T8/Electronic/Refle	40	$ 80.00	2	50	100	4000	172	688	111.456	$ 111.46	
118	B	Police Dept		Captain's (Corridor)	4L F34T12 2x4	2	136		272	Retrofit 2L F32T8/Electronic/Refle	40	$ 80.00	2	50	100	4000	172	688	111.456	$ 111.46	
119	B	Police Dept		Interogation #1	4L F32T8 2X4	2	128		256	Relamp Only 4L F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
120	B	Police Dept		Interogation #2	4L F32T8 2X4	2	128		256	Relamp Only 4L F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
121	B	Police Dept		Lieutenant's Office	4L F32T8 2X4	2	128		256	Relamp Only 4L F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
122	B	Police Dept		Storage	1L 20W CFL	2	20		40	No Measure		$ -	2	20	40	4000	0	0	0	$ -	
123	B	Police Dept		Police Locker	4L F32T8 2X4	15	128		1920	Relamp Only 4L F32T8 25w		$ -	15	100	1500	4000	420	1680	272.16	$ 272.16	
124	B	Police Dept		Showers	2L F34T12 Wrap	1	68		68	Relamp and Reballast 2L F32T8 2	10	$ 10.00	1	50	50	4000	18	72	11.664	$ 11.66	
125	B	Police Dept		Bath	1L 20W CFL	4	20		80	No Measure		$ -	4	20	80	4000	0	0	0	$ -	

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist. Fix Wts	Foot Candle	Total Fix Wts	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl. Qty.	Repl. Fix Wts	Total Fix Wts	Opr. Hours	Fix Wts Saved	kWh Saved	0.15/kWh	Annual Elec. Savings	Annual Sens. Savings
126	B	Police Dept		Garage	2L F96T12/Ind 1x8	2	150		300	Relamp and Reballast 2L F96T8 5	10	$ 20.00	2	50	100	4000	200	800	129.6	$ 129.60	
127	B	Police Dept		Garage	4L F32T8 96" 1X8	1	128		128	Relamp Only 4L F32T8 25w		$ -	1	100	100	4000	28	112	18.144	$ 18.14	
128	1	Police Dept		Stairwell	4L F34T12 2x4	2	136		272	Retrofit 2L F32T8/Electronic/Refle	40	$ 80.00	2	50	100	4000	172	688	111.456	$ 111.46	
129	1	Police Dept		Front Desk	4L F34T12 2x4	2	136		272	Retrofit 2L F32T8/Electronic/Refle	40	$ 80.00	2	50	100	4000	172	688	111.456	$ 111.46	
130	1	Police Dept		Front Desk	2L F34T12	1	68		68	Relamp and Reballast 2L F32T8 2	10	$ 10.00	1	50	50	4000	18	72	11.664	$ 11.66	
131	1	Police Dept		Patrol Room	4L F34T12 2x4	4	136		544	Retrofit 2L F32T8/Electronic/Refle	40	$ 160.00	4	50	200	4000	344	1376	222.912	$ 222.91	
132	1	Police Dept		Patrol Room	75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
133	1	Police Dept	6	Office	4L F34T12 2x4	4	136		544	Retrofit 2L F32T8/Electronic/Refle	40	$ 160.00	4	50	200	4000	344	1376	222.912	$ 222.91	
134	1	Police Dept		Corridor	4L F20T12 2X2	6	80		480	Relamp and Reballast 4L F17T8	20	$ 120.00	6	68	408	4000	72	288	46.656	$ 46.66	
135	1	Police Dept		Corridor	2L FB34T12 U6 2X2	3	68		204	Relamp and Reballast 2L FB32T8	10	$ 30.00	3	50	150	4000	54	216	34.992	$ 34.99	
136	1	Police Dept		Directors Office	4L F34T12 2x4	4	136		544	Retrofit 2L F32T8/Electronic/Refle	40	$ 160.00	4	50	200	4000	344	1376	222.912	$ 222.91	
137	1	Police Dept		Meeting Room	4L F34T12 2x4	5	136		680	Retrofit 2L F32T8/Electronic/Refle	40	$ 200.00	5	50	250	4000	430	1720	278.64	$ 278.64	
138	1	Police Dept		Captain's Office	4L F34T12 2x4	2	136		272	Retrofit 2L F32T8/Electronic/Refle	40	$ 80.00	2	50	100	4000	172	688	111.456	$ 111.46	
139	1	Police Dept		Juvenile	4L F34T12 2x4	4	136		544	Retrofit 2L F32T8/Electronic/Refle	40	$ 160.00	4	50	200	4000	344	1376	222.912	$ 222.91	
140	1	Police Dept		Juvenile Supply Room	2L F34T12	1	68		68	Relamp and Reballast 2L F32T8 2	10	$ 10.00	1	50	50	4000	18	72	11.664	$ 11.66	
141	1	Police Dept		DVRT Room	2L F34T12	1	68		68	Relamp and Reballast 2L F32T8 2	10	$ 10.00	1	50	50	4000	18	72	11.664	$ 11.66	
142	1	Police Dept		DVRT Office	4L F34T12 2x4	3	136		408	Retrofit 2L F32T8/Electronic/Refle	40	$ 120.00	3	50	150	4000	258	1032	167.184	$ 167.18	
143	1	Police Dept		DVRT Office	2L FB34T12 U6 2X2	2	68		136	Relamp and Reballast 2L FB32T8	10	$ 20.00	2	50	100	4000	36	144	23.328	$ 23.33	
144	1	Police Dept		DVRT (fan lights)	40A Inc	4	40		160	5w CCFL Globe		$ -	4	5	20	4000	140	560	90.72	$ 90.72	
145	1	Police Dept		Office	4L F34T12 2x4	1	136		136	Retrofit 2L F32T8/Electronic/Refle	40	$ 40.00	1	50	50	4000	86	344	55.728	$ 55.73	
146	1	Police Dept		Office	2L FB34T12 U6 2X2	1	68		68	Relamp and Reballast 2L FB32T8	10	$ 10.00	1	50	50	4000	18	72	11.664	$ 11.66	
147	1	Police Dept		Storage	2L FB34T12 U6 2X2	2	68		136	Relamp and Reballast 2L FB32T8	10	$ 20.00	2	50	100	4000	36	144	23.328	$ 23.33	
148	1	Police Dept		Kitchen	2L F34T12 Wrap	2	68		136	Relamp and Reballast 2L F32T8 2	10	$ 20.00	2	50	100	4000	36	144	23.328	$ 23.33	
149	1	Police Dept		Slop Sink	75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
150	1	Police Dept		Bath	2L F34T12 Wrap	1	68		68	Relamp and Reballast 2L F32T8 2	10	$ 10.00	1	50	50	4000	18	72	11.664	$ 11.66	
151	1	Police Dept		Bath	75A Inc	2	75		150	20w Spring CFL		$ -	2	20	40	4000	110	440	71.28	$ 71.28	
152	1	Police Dept		Stairwell	75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
153	1	Police Dept		Stairwell	2L F34T12	2	68		136	Relamp and Reballast 2L F32T8 2	10	$ 20.00	2	50	100	4000	36	144	23.328	$ 23.33	
154	1	Police Dept		Police Booking	4L F34T12 2x4	4	136		544	Retrofit 2L F32T8/Electronic/Refle	40	$ 160.00	4	50	200	4000	344	1376	222.912	$ 222.91	
155	1	Police Dept		Holding Cell Hall	2L FB34T12 U6 2X2	1	68		68	Relamp and Reballast 2L FB32T8	10	$ 10.00	1	50	50	4000	18	72	11.664	$ 11.66	
156	1	Police Dept		Cells	75A Inc	4	75		300	20w Spring CFL		$ -	4	20	80	4000	220	880	142.56	$ 142.56	
157	1	Police Dept		Cells	1L 20W CFL	1	20		20	No Measure		$ -	1	20	20	4000	0	0	0	$ -	
158									0			$ -	0								
									45,644			$ 3,990.00			KW SAVED >>>>		16.50	65996	10691.352	$ 10,691.35	$ 75.82
															29145						

Electric Rate: $0.162

Total Cost Savings $ 10,767.17

Total kWh Savings 66,464.00

Name:	The Township of Willingboro - Municipal Building
Address:	One Salem Road
City, St.	Willingboro, NJ 08046
Contact:	0
Phone:	0

																		NON UNION	
LN #	FL. #	Energy Conservation Measure	Repl. Qty.	qty fxt	Fixture / Ballast	cost fix	qty lmp	Lamp / Sensor	cost lmp	qty ref	Reflector / PowerPack	cost ref	Ballast/Fix. Cost Total	Lamp Cost Total	REFLECT Cost Total	Material Sell Total	Labor Cost	Labor Tot. Cost
1	1	Relamp Only 2L PL-L 4P 25w	12	12		$ -	24	PL-L 4P 25W LAMP	$ 8.00	0		$ -	$ -	$ 192.00	$ -	$ 249.60	$ 12.00	$ 144.00
2	1	No Measure	10	10		$ -	10		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
3	1	No Measure	3	3		$ -	3		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
4	1	Relamp Only 3L F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
5	1	No Measure	1	1		$ -	1		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	1	No Measure	1	1		$ -	1		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
7	1	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
8	1	Relamp Only 3L F32T8 25w	10	10		$ -	30	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 90.00	$ -	$ 117.00	$ 12.00	$ 120.00
9	1	No Measure	1	1		$ -	1		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
10	1	Relamp Only 1L F32T8 25w	4	4		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 48.00
11	1	Relamp Only 1L F32T8 25w	4	4		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 48.00
12	1	No Measure	3	3		$ -	6		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
13	1	Relamp Only 2L PL-L 4P 25w	2	2		$ -	4	PL-L 4P 25W LAMP	$ 8.00	0		$ -	$ -	$ 32.00	$ -	$ 41.60	$ 12.00	$ 24.00
14	1	Relamp Only 3L F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
15	1	Relamp Only 3L F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
16	1	Relamp Only 3L F32T8 25w	3	3		$ -	9	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 27.00	$ -	$ 35.10	$ 12.00	$ 36.00
17	1	No Measure	4	4		$ -	4		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
18	1	Relamp Only 3L F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
19	1	Relamp Only 3L F32T8 25w	5	5		$ -	15	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 45.00	$ -	$ 58.50	$ 12.00	$ 60.00
20	1	Relamp Only 3L F32T8 25w	2	2		$ -	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 18.00	$ -	$ 23.40	$ 12.00	$ 24.00
21	1	O/S WALL	1	1		$ -	1	O/S WALL	$ 55.00	0		$ -	$ -	$ 55.00	$ -	$ 71.50	$ 35.00	$ 35.00
22	1	No Measure	1	1		$ -	2		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
23	1	Relamp Only 3L F32T8 25w	2	2		$ -	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 18.00	$ -	$ 23.40	$ 12.00	$ 24.00
24	1	Relamp Only 3L F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
25	1	Relamp Only 3L F32T8 25w	2	2		$ -	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 18.00	$ -	$ 23.40	$ 12.00	$ 24.00
26	1	Relamp Only 3L F32T8 25w	2	2		$ -	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 18.00	$ -	$ 23.40	$ 12.00	$ 24.00
27	1	Relamp Only 3L F32T8 25w	2	2		$ -	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 18.00	$ -	$ 23.40	$ 12.00	$ 24.00
28	1	Relamp Only 3L F32T8 25w	6	6		$ -	18	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 54.00	$ -	$ 70.20	$ 12.00	$ 72.00
29	1	No Measure	2	2		$ -	4		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
30	1	Relamp Only 1L PL-L 4P 25w	1	1		$ -	1	PL-L 4P 25W LAMP	$ 8.00	0		$ -	$ -	$ 8.00	$ -	$ 10.40	$ 12.00	$ 12.00
31	1	Relamp Only 2L PL-L 4P 25w	4	4		$ -	8	PL-L 4P 25W LAMP	$ 8.00	0		$ -	$ -	$ 64.00	$ -	$ 83.20	$ 12.00	$ 48.00
32	1	Relamp Only 3L F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
33	1	Relamp Only 1L PL-L 4P 25w	11	11		$ -	11	PL-L 4P 25W LAMP	$ 8.00	0		$ -	$ -	$ 88.00	$ -	$ 114.40	$ 12.00	$ 132.00
34	1	No Measure	16	16		$ -	16		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
35	1	No Measure	3	3		$ -	3		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
36	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
37	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
38	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
39	1	Relamp Only 3L F32T8 25w	6	6		$ -	18	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 54.00	$ -	$ 70.20	$ 12.00	$ 72.00
40	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
41	1	Relamp Only 2L F32T8 25w	4	4		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 48.00
42	1	Relamp Only 3L F32T8 25w	2	2		$ -	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 18.00	$ -	$ 23.40	$ 12.00	$ 24.00
43	1	Relamp Only 3L F32T8 25w	2	2		$ -	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 18.00	$ -	$ 23.40	$ 12.00	$ 24.00
44	1	Relamp Only 3L F32T8 25w	2	2		$ -	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 18.00	$ -	$ 23.40	$ 12.00	$ 24.00
45	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
46	1	O/S WALL	1	1		$ -	1	O/S WALL	$ 55.00	0		$ -	$ -	$ 55.00	$ -	$ 71.50	$ 35.00	$ 35.00
47	1	Relamp Only 2L FB32T8 U6 25w	12	12		$ -	24	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ -	$ 144.00	$ -	$ 187.20	$ 12.00	$ 144.00
48	1	Relamp Only 2L F32T8 25w	8	8		$ -	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 48.00	$ -	$ 62.40	$ 12.00	$ 96.00
49	1	Relamp Only 3L F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
50	1	Relamp Only 3L F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
51	1	Relamp Only 3L F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
52	1	Relamp Only 2L FB32T8 U6 25w	9	9		$ -	18	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ -	$ 108.00	$ -	$ 140.40	$ 12.00	$ 108.00
53	1	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
54	1	Relamp Only 2L FB32T8 U6 25w	4	4		$ -	8	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ -	$ 48.00	$ -	$ 62.40	$ 12.00	$ 48.00
55	1	Relamp Only 3L F32T8 25w	3	3		$ -	9	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 27.00	$ -	$ 35.10	$ 12.00	$ 36.00
56	1	Relamp Only 2L F32T8 25w	8	8		$ -	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 48.00	$ -	$ 62.40	$ 12.00	$ 96.00
57	1	Relamp Only 3L F32T8 25w	2	2		$ -	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 18.00	$ -	$ 23.40	$ 12.00	$ 24.00

LN #	FL. #	Energy Conservation Measure	Repl. Qty.	qty fxt	Fixture / Ballast	cost fix	qty lmp	Lamp / Source	cost lmp	qty ref.	Reflector / PowerPack	cost ref	Ballast/Fix. Cost Total	Lamp Cost Total	REFLECT Cost Total	Material Sell Total	Labor Cost	Labor Tot. Cost
58	1	Relamp Only 2L F32T8 25w	4	4		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 48.00
59	1	Relamp Only 3L F32T8 25w	1	1		$ -	3	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 9.00	$ -	$ 11.70	$ 12.00	$ 12.00
60	1	O/S WALL	1	1		$ -	1	O/S WALL	$ 55.00	0		$ -	$ -	$ 55.00	$ -	$ 71.50	$ 35.00	$ 35.00
61	1	Relamp Only 3L F32T8 25w	1	1		$ -	3	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 9.00	$ -	$ 11.70	$ 12.00	$ 12.00
62	1	O/S WALL	1	1		$ -	1	O/S WALL	$ 55.00	0		$ -	$ -	$ 55.00	$ -	$ 71.50	$ 35.00	$ 35.00
63	1	Relamp Only 2L F32T8 25w	4	4		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 48.00
64	1	Relamp Only 3L F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
65	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
66	1	No Measure	24	24		$ -	24		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
67	1	Relamp Only 2L F32T8 25w	4	4		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 48.00
68	1	Relamp Only 3L F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
69	B	Relamp Only 4L F32T8 25w	11	11		$ -	44	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 132.00	$ -	$ 171.60	$ 12.00	$ 132.00
70	B	Relamp Only 2L FB32T8 U6 25w	2	2		$ -	4	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
71	B	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
72	B	Relamp and Reballast 2L F32T8 25w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
73	B	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
74	B	Relamp Only 4L F32T8 25w	4	4		$ -	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 48.00	$ -	$ 62.40	$ 12.00	$ 48.00
75	B	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
76	B	Relamp Only 4L F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
77	B	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
78	B	O/S WALL	1	1		$ -	1	O/S WALL	$ 55.00	0		$ -	$ -	$ 55.00	$ -	$ 71.50	$ 35.00	$ 35.00
79	B	Relamp and Reballast 2L F32T8 25w	5	5	2L ELECTRONIC BALLAST	$ 12.00	10	F32T8 25W LAMP	$ 3.00	0		$ -	$ 60.00	$ 30.00	$ -	$ 117.00	$ 25.00	$ 125.00
80	B	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
81	B	O/S WALL	1	1		$ -	1	O/S WALL	$ 55.00	0		$ -	$ -	$ 55.00	$ -	$ 71.50	$ 35.00	$ 35.00
82	B	Relamp and Reballast 2L F32T8 25w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
83	B	Relamp Only 2L FB32T8 U6 25w	1	1		$ -	2	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 12.00
84	B	Retrofit 2L F32T8/Electronic/Reflector 25w	5	5	2L ELECTRONIC BALLAST	$ 12.00	10	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 60.00	$ 30.00	$ -	$ 117.00	$ 40.00	$ 200.00
85	B	Relamp Only 4L F32T8 25w	4	4		$ -	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 48.00	$ -	$ 62.40	$ 12.00	$ 48.00
86	B	Relamp and Reballast 2L F32T8 25w	4	4	2L ELECTRONIC BALLAST	$ 12.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 48.00	$ 24.00	$ -	$ 93.60	$ 25.00	$ 100.00
87	B	Relamp Only 1L F32T8 25w	1	1		$ -	1	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 3.00	$ -	$ 3.90	$ 12.00	$ 12.00
88	B	15w Spring CFL	1	1		$ -	1	15W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
89	B	Relamp Only 4L F32T8 25w	3	3		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 36.00
90	B	Relamp Only 4L F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
91	B	Relamp Only 4L F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
92	B	Relamp Only 4L F32T8 25w	1	1		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 12.00
93	B	Relamp Only 4L F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
94	B	Relamp Only 4L F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
95	B	Retrofit 2L F32T8/Electronic/Reflector 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 24.00	$ 12.00	$ -	$ 46.80	$ 40.00	$ 80.00
96	B	Relamp Only 2L FB32T8 U6 25w	6	6		$ -	12	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ -	$ 72.00	$ -	$ 93.60	$ 12.00	$ 72.00
97	B	Retrofit 2L F32T8/Electronic/Reflector 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 24.00	$ 12.00	$ -	$ 46.80	$ 40.00	$ 80.00
98	B	20w Spring CFL	4	4		$ -	4	20W CFL	$ 10.00	0		$ -	$ -	$ 40.00	$ -	$ 52.00	$ 10.00	$ 40.00
99	B	Retrofit 2L F32T8/Electronic/Reflector 25w	21	21	2L ELECTRONIC BALLAST	$ 12.00	42	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 252.00	$ 126.00	$ -	$ 491.40	$ 40.00	$ 840.00
100	B	Relamp and Reballast 2L F32T8 25w	5	5	2L ELECTRONIC BALLAST	$ 12.00	10	F32T8 25W LAMP	$ 3.00	0		$ -	$ 60.00	$ 30.00	$ -	$ 117.00	$ 25.00	$ 125.00
101	B	20w Spring CFL	3	3		$ -	3	20W CFL	$ 10.00	0		$ -	$ -	$ 30.00	$ -	$ 39.00	$ 10.00	$ 30.00
102	B	20w Spring CFL	3	3		$ -	3	20W CFL	$ 10.00	0		$ -	$ -	$ 30.00	$ -	$ 39.00	$ 10.00	$ 30.00
103	B	Relamp Only 4L F32T8 25w	12	12		$ -	48	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 144.00	$ -	$ 187.20	$ 12.00	$ 144.00
104	B	No Measure	4	4		$ -	16		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
105	B	Relamp Only 4L F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
106	B	Retrofit 2L F32T8/Electronic/Reflector 25w	4	4	2L ELECTRONIC BALLAST	$ 12.00	8	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 48.00	$ 24.00	$ -	$ 93.60	$ 40.00	$ 160.00
107	B	Relamp and Reballast 2L F32T8 25w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
108	B	Retrofit 2L F32T8/Electronic/Reflector 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 24.00	$ 12.00	$ -	$ 46.80	$ 40.00	$ 80.00
109	B	Retrofit 2L F32T8/Electronic/Reflector 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 24.00	$ 12.00	$ -	$ 46.80	$ 40.00	$ 80.00
110	B	Relamp and Reballast 2L F32T8 25w	3	3	2L ELECTRONIC BALLAST	$ 12.00	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ 36.00	$ 18.00	$ -	$ 70.20	$ 25.00	$ 75.00
111	B	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
112	B	Relamp and Reballast 2L F32T8 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 24.00	$ 12.00	$ -	$ 46.80	$ 25.00	$ 50.00
113	B	Retrofit 2L F32T8/Electronic/Reflector 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 24.00	$ 12.00	$ -	$ 46.80	$ 40.00	$ 80.00
114	B	Relamp and Reballast 2L F32T8 25w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
115	B	Retrofit 2L F32T8/Electronic/Reflector 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 24.00	$ 12.00	$ -	$ 46.80	$ 40.00	$ 80.00
116	B	Retrofit 2L F32T8/Electronic/Reflector 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 24.00	$ 12.00	$ -	$ 46.80	$ 40.00	$ 80.00
117	B	Retrofit 2L F32T8/Electronic/Reflector 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 24.00	$ 12.00	$ -	$ 46.80	$ 40.00	$ 80.00
118	B	Retrofit 2L F32T8/Electronic/Reflector 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 24.00	$ 12.00	$ -	$ 46.80	$ 40.00	$ 80.00
119	B	Relamp Only 4L F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
120	B	Relamp Only 4L F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
121	B	Relamp Only 4L F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
122	B	No Measure	2	2		$ -	2		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
123	B	Relamp Only 4L F32T8 25w	15	15		$ -	60	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 180.00	$ -	$ 234.00	$ 12.00	$ 180.00
124	B	Relamp and Reballast 2L F32T8 25w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
125	B	No Measure	4	4		$ -	8		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -

LN #	FL. #	Energy Conservation Measure	Repl. Qty.	qty fxt	Fixture / Ballast	cost fix	qty lmp	Lamp / Sensor	cost lmp	qty ref.	Reflector / PowerPack	cost ref	Ballast/Fix. Cost Total	Lamp Cost Total	REFLECT Cost Total	Material Sell Total	Labor Cost	Labor Tot. Cost
126	B	Relamp and Reballast 2L F96T8 59w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 24.00	$ 12.00	$ -	$ 46.80	$ 25.00	$ 50.00
127	B	Relamp Only 4L F32T8 25w	1	1		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 12.00
128	1	Retrofit 2L F32T8/Electronic/Reflector 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 24.00	$ 12.00	$ -	$ 46.80	$ 40.00	$ 80.00
129	1	Retrofit 2L F32T8/Electronic/Reflector 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 24.00	$ 12.00	$ -	$ 46.80	$ 40.00	$ 80.00
130	1	Relamp and Reballast 2L F32T8 25w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
131	1	Retrofit 2L F32T8/Electronic/Reflector 25w	4	4	2L ELECTRONIC BALLAST	$ 12.00	8	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 48.00	$ 24.00	$ -	$ 93.60	$ 40.00	$ 160.00
132	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
133	1	Retrofit 2L F32T8/Electronic/Reflector 25w	4	4	2L ELECTRONIC BALLAST	$ 12.00	8	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 48.00	$ 24.00	$ -	$ 93.60	$ 40.00	$ 160.00
134	1	Relamp and Reballast 4L F17T8	6	6	2L ELECTRONIC BALLAST	$ 12.00	24	F17T8 17W LAMP	$ 3.00	0		$ -	$ 72.00	$ 72.00	$ -	$ 187.20	$ 25.00	$ 150.00
135	1	Relamp and Reballast 2L FB32T8 U6 25w	3	3	2L ELECTRONIC BALLAST	$ 12.00	6	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ 36.00	$ 36.00	$ -	$ 93.60	$ 25.00	$ 75.00
136	1	Retrofit 2L F32T8/Electronic/Reflector 25w	4	4	2L ELECTRONIC BALLAST	$ 12.00	8	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 48.00	$ 24.00	$ -	$ 93.60	$ 40.00	$ 160.00
137	1	Retrofit 2L F32T8/Electronic/Reflector 25w	5	5	2L ELECTRONIC BALLAST	$ 12.00	10	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 60.00	$ 30.00	$ -	$ 117.00	$ 40.00	$ 200.00
138	1	Retrofit 2L F32T8/Electronic/Reflector 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 24.00	$ 12.00	$ -	$ 46.80	$ 40.00	$ 80.00
139	1	Retrofit 2L F32T8/Electronic/Reflector 25w	4	4	2L ELECTRONIC BALLAST	$ 12.00	8	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 48.00	$ 24.00	$ -	$ 93.60	$ 40.00	$ 160.00
140	1	Relamp and Reballast 2L F32T8 25w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
141	1	Relamp and Reballast 2L F32T8 25w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
142	1	Retrofit 2L F32T8/Electronic/Reflector 25w	3	3	2L ELECTRONIC BALLAST	$ 12.00	6	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 36.00	$ 18.00	$ -	$ 70.20	$ 40.00	$ 120.00
143	1	Relamp and Reballast 2L FB32T8 U6 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ 24.00	$ 24.00	$ -	$ 62.40	$ 25.00	$ 50.00
144	1	5w CCFL Globe	4	4		$ -	4	5W CCFL GLOBE	$ 10.00	0		$ -	$ -	$ 40.00	$ -	$ 52.00	$ 10.00	$ 40.00
145	1	Retrofit 2L F32T8/Electronic/Reflector 25w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 12.00	$ 6.00	$ -	$ 23.40	$ 40.00	$ 40.00
146	1	Relamp and Reballast 2L FB32T8 U6 25w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ 12.00	$ 12.00	$ -	$ 31.20	$ 25.00	$ 25.00
147	1	Relamp and Reballast 2L FB32T8 U6 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ 24.00	$ 24.00	$ -	$ 62.40	$ 25.00	$ 50.00
148	1	Relamp and Reballast 2L F32T8 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 24.00	$ 12.00	$ -	$ 46.80	$ 25.00	$ 50.00
149	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
150	1	Relamp and Reballast 2L F32T8 25w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
151	1	20w Spring CFL	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
152	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
153	1	Relamp and Reballast 2L F32T8 25w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 24.00	$ 12.00	$ -	$ 46.80	$ 25.00	$ 50.00
154	1	Retrofit 2L F32T8/Electronic/Reflector 25w	4	4	2L ELECTRONIC BALLAST	$ 12.00	8	F32T8 25W LAMP	$ 3.00	0	REFLECTOR KIT	$ 18.00	$ 48.00	$ 24.00	$ -	$ 93.60	$ 40.00	$ 160.00
155	1	Relamp and Reballast 2L FB32T8 U6 25w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ 12.00	$ 12.00	$ -	$ 31.20	$ 25.00	$ 25.00
156	1	20w Spring CFL	4	4		$ -	4	20W CFL	$ 10.00	0		$ -	$ -	$ 40.00	$ -	$ 52.00	$ 10.00	$ 40.00
157	1	No Measure	1	1		$ -	1		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
158	0	0	0	0		$ -	0		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
													$ 1,584.00	$ 4,352.00	$ -	$ 7,716.80	Total	$ 8,501.00
															With Tax	$ 8,256.98	CONT	$ -
																	Equipment	$ -
																	Total Labor:	$ 11,051.30
																	Total project	$ 19,308.28

NEW JERSEY SMART START REBATE	$ 3,990.00

LIGTING INVENTORY SUMMARY
The Township of Willingboro - Library
One Salem Road
Willingboro, NJ 08046

EXECUTIVE SUMMARY

ENERGY DATA

Existing Energy Usage (Watts)		33,936
Proposed Energy Usage (Watts)		27,090
Energy Saved (Watts)		6,846
Annual Kilowatt Hours Saved (kWh)		26,120

FINANCIAL DATA

Annual Existing Energy Cost	$	25,733.09
Annual Proposed Energy Cost	$	20,561.38
Annual Energy Savings	$	5,171.71
Additional Energy Savings (Occupancy Sensors)	$	104.54
Total Energy Savings	$	5,276.24
Initial Project Cost	$	11,896.73
Utility Rebate (Based on NJ Smart Start Approval)	$	80.00
Project Cost	$	11,816.73

CASH FLOW SUMMARY

Return On Investment (R.O.I.)		44%
Payback (Years)		2.28
10 Year Savings	$	51,717.05
10-Year Cumulative Positive Cash Flow	$	39,900.32

The Township of Willingboro - Library
One Salem Road
Willingboro, NJ 08046

New Jersey

UTILITY ACCOUNT NUMBER	N/A
BUILDING TYPE	Public Library
SQUARE FOOTAGE	45,000

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist. Fix Wts.	Foot Candle	Total Fix Wts.	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl. Qty.	Repl. Fix Wts.	Total Fix Wts.	Opr. Hours	Fix Wts Saved	kWh Saved	0.15/kWh	Annual Elec. Savings	Annual Sens. Savings
1	1			Directors Office	3L F32T8	2	96		192	Relamp Only 3L F32T8 25w		$ -	2	75	150	3500	42	147	29.694	$ 29.69	
2	1			Directors Office	20W CFL	2	20		40	No Measure		$ -	2	20	40	3500	0	0	0	$ -	
3	1			Conference Room	5L F32T8	2	160		320	Relamp Only 5L F32T8 25w		$ -	2	125	250	3500	70	245	49.49	$ 49.49	
4	1			Conference Room	20W CFL	2	20		40	No Measure		$ -	2	20	40	3500	0	0	0	$ -	
5	1			Sensor Savings	Wall Mount	1			0	O/S WALL	20	$ 20.00	1								$ 53.03
6	1			Side Room	2LF32T8	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	2500	14	35	7.07	$ 7.07	
7	1			Side Room	2LF32T8	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	2500	14	35	7.07	$ 7.07	
8	1			Assistant Director	2LF32T8	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	3500	28	98	19.796	$ 19.80	
9	1			Sensor Savings	Wall Mount	1			0	O/S WALL	20	$ 20.00	1								$ 21.21
10	1			Staff Lounge	5L F32T8	2	160		320	Relamp Only 5L F32T8 25w		$ -	2	125	250	3500	70	245	49.49	$ 49.49	
11	1			Office	3L F32T8	1	96		96	Relamp Only 3L F32T8 25w		$ -	1	75	75	2500	21	52.5	10.605	$ 10.61	
12	1			Office	2LF32T8	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	2500	14	35	7.07	$ 7.07	
13	1			Storage	2LF32T8	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	2500	14	35	7.07	$ 7.07	
14	1			Bath	1L F17T8	1	17		17	No Measure		$ -	1	17	17	2500	0	0	0	$ -	
15	1			Bath	20W CFL	1	20		20	No Measure		$ -	1	20	20	2500	0	0	0	$ -	
16	1			Bath	1L F17T8	1	17		17	No Measure		$ -	1	17	17	2500	0	0	0	$ -	
17	1			Bath	20W CFL	1	20		20	No Measure		$ -	1	20	20	2500	0	0	0	$ -	
18	1			Bath Room	1L F32T8	1	32		32	Relamp Only 1L F32T8 25w		$ -	1	25	25	2500	7	17.5	3.535	$ 3.54	
19	1			Corridor	26W CFL	9	26		234	No Measure		$ -	9	26	234	4000	0	0	0	$ -	
20	1			Corridor	26W CFL	5	26		130	No Measure		$ -	5	26	130	4000	0	0	0	$ -	
21	1			Office	3L F32T8	2	96		192	Relamp Only 3L F32T8 25w		$ -	2	75	150	2500	42	105	21.21	$ 21.21	
22	1		.	Storage	2L F32T8 1X4	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	2500	28	70	14.14	$ 14.14	
23	1			Fax Room	2L F32T8 1X4	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	2500	14	35	7.07	$ 7.07	
24	1			Main Floor	50W MR-16/FL	19	50		950	No Measure		$ -	19	50	950	4000	0	0	0	$ -	
25	1			Children's Room	2LF32T8	53	64		3392	Relamp Only 2L F32T8 25w		$ -	53	50	2650	4000	742	2968	599.536	$ 599.54	
26	1			Librarian	2LF32T8	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	3500	28	98	19.796	$ 19.80	
27	1			Bath	2L F32T8 1X4	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	2500	14	35	7.07	$ 7.07	
28	1			Bath	2L F32T8 1X4	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	2500	14	35	7.07	$ 7.07	
29	1			Bath	2LF32T8	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	2500	14	35	7.07	$ 7.07	
30	1			Storage	2L F32T8 1X4	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	2500	28	70	14.14	$ 14.14	
31	1			Main floor	20W CFL	4	20		80	No Measure		$ -	4	20	80	4000	0	0	0	$ -	
32	1			Café	20W CFL	8	20		160	No Measure		$ -	8	20	160	3500	0	0	0	$ -	
33	1			Café	20W CFL	3	20		60	No Measure		$ -	3	20	60	3500	0	0	0	$ -	
34	1			Tech Ctr	2LF32T8	6	64		384	Relamp Only 2L F32T8 25w		$ -	6	50	300	3500	84	294	59.388	$ 59.39	
35	1			Young Adult Services	2LF32T8	12	64		768	Relamp Only 2L F32T8 25w		$ -	12	50	600	3500	168	588	118.776	$ 118.78	
36	1			Copy Center	3L F32T8	1	96		96	Relamp Only 3L F32T8 25w		$ -	1	75	75	3500	21	73.5	14.847	$ 14.85	
37	1			Audio/Visual	3L F32T8	1	96		96	Relamp Only 3L F32T8 25w		$ -	1	75	75	3500	21	73.5	14.847	$ 14.85	
38	1			Small Corridor	26W CFL	3	26		78	No Measure		$ -	3	26	78	4000	0	0	0	$ -	
39	1			Local History	2LF32T8	8	64		512	Relamp Only 2L F32T8 25w		$ -	8	50	400	3500	112	392	79.184	$ 79.18	
40	1			Room	2LF32T8	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	2500	14	35	7.07	$ 7.07	
41	1			Office	2LF32T8	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	2500	14	35	7.07	$ 7.07	
42	1		111	Room	2LF32T8	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	2500	14	35	7.07	$ 7.07	
43	1		110	Room	1L F32T8	1	32		32	Relamp Only 1L F32T8 25w		$ -	1	25	25	2500	7	17.5	3.535	$ 3.54	
44	1		109	Room	1L F32T8	1	32		32	Relamp Only 1L F32T8 25w		$ -	1	25	25	2500	7	17.5	3.535	$ 3.54	
45	1			Main (Open Floor)	3L F32T8	35	96		3360	Relamp Only 3L F32T8 25w		$ -	35	75	2625	4000	735	2940	593.88	$ 593.88	
46	1			Main (Open Floor)	2LF32T8	40	64		2560	Relamp Only 2L F32T8 25w		$ -	40	50	2000	4000	560	2240	452.48	$ 452.48	
47	1			Front Entrance	20W CFL	15	20		300	No Measure		$ -	15	20	300	4000	0	0	0	$ -	
48	1			Main (Open Floor)	2L F32T8	66	64		4224	Relamp Only 2L F32T8 25w		$ -	66	50	3300	4000	924	3696	746.592	$ 746.59	
49	1			Main (Open Floor)	3L F32T8	9	96		864	Relamp Only 3L F32T8 25w		$ -	9	75	675	4000	189	756	152.712	$ 152.71	
50	1			Coves	1L F32T8	17	32		544	Relamp Only 1L F32T8 25w		$ -	17	25	425	4000	119	476	96.152	$ 96.15	
51	1			Circulation	1L F32T8	11	32		352	Relamp Only 1L F32T8 25w		$ -	11	25	275	4000	77	308	62.216	$ 62.22	
52	1			Fiction/Admin	1L F32T8	71	32		2272	Relamp Only 1L F32T8 25w		$ -	71	25	1775	4000	497	1988	401.576	$ 401.58	
53	1			Bath meeting wing	26W CFL	4	26		104	No Measure		$ -	4	26	104	2500	0	0	0	$ -	
54	1			End meeting room	3L F32T8	4	96		384	Relamp Only 3L F32T8 25w		$ -	4	75	300	2500	84	210	42.42	$ 42.42	
55	1			Storage	2L F32T8	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	2500	28	70	14.14	$ 14.14	

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist. Fix Wts.	Foot Candle	Total Fix Wts.	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl. Qty.	Repl. Fix Wts.	Total Fix Wts.	Opr. Hours	Fix Wts. Saved	KWh Saved	0.15/kWh	Annual Elec. Savings	Annual Sens. Savings
56	1			Electrical Room	4L F32T8	1	128		128	Relamp Only 4L F32T8 25w		$ -	1	100	100	2500	28	70	14.14	$ 14.14	
57	1			Kitchen	2L F32T8	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	2500	28	70	14.14	$ 14.14	
58	1			Corridor	26W CFL	2	26		52	No Measure		$ -	2	26	52	4000	0	0	0	$ -	
59	1		1	Meeting room	2LF32T8	8	64		512	Relamp Only 2L F32T8 25w		$ -	8	50	400	2500	112	280	56.56	$ 56.56	
60	1			Tech services	3L F32T8	5	96		480	Relamp Only 3L F32T8 25w		$ -	5	75	375	3500	105	367.5	74.235	$ 74.24	
61	1			Side Office	2LF32T8	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	2500	28	70	14.14	$ 14.14	
62	1			Side Office	2LF32T8	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	2500	28	70	14.14	$ 14.14	
63	1			Storage	2LF32T8	6	64		384	Relamp Only 2L F32T8 25w		$ -	6	50	300	2500	84	210	42.42	$ 42.42	
64	1			Server Room	2L F32T8	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	2500	28	70	14.14	$ 14.14	
65	1			Corridor	2LF32T8	5	64		320	Relamp Only 2L F32T8 25w		$ -	5	50	250	4000	70	280	56.56	$ 56.56	
66	1			Corridor	2L F32T8	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	4000	14	56	11.312	$ 11.31	
67	B			Basement Open Area	4L F32T8	33	128		4224	Relamp Only 4L F32T8 25w		$ -	33	100	3300	4000	924	3696	746.592	$ 746.59	
68	B			Exit	4L F32T8	3	128		384	Relamp Only 4L F32T8 25w		$ -	3	100	300	4000	84	336	67.872	$ 67.87	
69	B			Electrical Room	4L F32T8	2	128		256	Relamp Only 4L F32T8 25w		$ -	2	100	200	2500	56	140	28.28	$ 28.28	
70	B			Elevator Room	4L F32T8	1	128		128	Relamp Only 4L F32T8 25w		$ -	1	100	100	2500	28	70	14.14	$ 14.14	
71	B			Elevator Room	2LF32T8	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	2500	14	35	7.07	$ 7.07	
72	B			Boiler	4L F32T8	4	128		512	Relamp Only 4L F32T8 25w		$ -	4	100	400	3500	112	392	79.184	$ 79.18	
73	B			Boiler Hallway	4L F32T8	5	128		640	Relamp Only 4L F32T8 25w		$ -	5	100	500	4000	140	560	113.12	$ 113.12	
74	B			Stairwell	2X13W CFL	2	26		52	No Measure		$ -	2	26	52	8760	0	0	0	$ -	
75	1			Trash Room	2L F32T8 1X4	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	2500	28	70	14.14	$ 14.14	
76	B			Sensor Savings	Wall Mount	1			0	O/S WALL	20	$ 20.00	1								$ 15.15
77	B			Recycling	2L F32T8 1X4	2	64		128	Relamp Only 2L F32T8 25w		$ -	2	50	100	2500	28	70	14.14	$ 14.14	
78	B			Sensor Savings	Wall Mount	1			0	O/S WALL	20	$ 20.00	1								$ 15.15
79	1			Chad's Office	2L F32T8 1X4	1	64		64	Relamp Only 2L F32T8 25w		$ -	1	50	50	3500	14	49	9.898	$ 9.90	
80	1			Supply Room	2X13W CFL	1	26		26	No Measure		$ -	1	26	26	2500	0	0	0	$ -	
81	1			Open Floor (Bay-window end)	26W CFL	10	26		260	No Measure		$ -	10	26	260	4000	0	0	0	$ -	
82									0			$ -	0								
									33,936			$ 80.00			KW SAVED >>>>		6.85	25602.5	5171.705	$ 5,171.71	$ 104.54
				Electric Rate:	$0.202										27090					Total Cost Savings	$ 5,276.24
																				Total kWh Savings	26,120.00

Name:	The Township of Willingboro - Library
Address:	One Salem Road
City, St.	Willingboro, NJ 08046
Contact:	0
Phone:	0

	LN #	FL #	Energy Conservation Measure	Repl. Qty.	qty fixt	Fixture / Ballast	cost fix	qty lmp	Lamp / Sensor	cost lmp	qty ref.	Reflector / PowerPack	cost ref	Ballast/Fix. Cost Total	Lamp Cost Total	REFLECT. Cost Total	Material Sell Total	NON UNION Labor Cost	Labor Tot. Cost
	1	1	Relamp Only 3L F32T8 25w	2	2		$ -	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 18.00	$ -	$ 23.40	$ 12.00	$ 24.00
	2	1	No Measure	2	2		$ -	2		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	3	1	Relamp Only 5L F32T8 25w	2	2		$ -	10	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 30.00	$ -	$ 39.00	$ 12.00	$ 24.00
	4	1	No Measure	2	2		$ -	2		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	5	1	O/S WALL	1	1		$ -	1	O/S WALL	$ 55.00	0		$ -	$ -	$ 55.00	$ -	$ 71.50	$ 35.00	$ 35.00
	6	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	7	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	8	1	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
	9	1	O/S WALL	1	1		$ -	1	O/S WALL	$ 55.00	0		$ -	$ -	$ 55.00	$ -	$ 71.50	$ 35.00	$ 35.00
	10	1	Relamp Only 5L F32T8 25w	2	2		$ -	10	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 30.00	$ -	$ 39.00	$ 12.00	$ 24.00
	11	1	Relamp Only 3L F32T8 25w	1	1		$ -	3	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 9.00	$ -	$ 11.70	$ 12.00	$ 12.00
	12	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	13	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	14	1	No Measure	1	1		$ -	1		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	15	1	No Measure	1	1		$ -	1		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	16	1	No Measure	1	1		$ -	1		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	17	1	No Measure	1	1		$ -	1		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	18	1	Relamp Only 1L F32T8 25w	1	1		$ -	1	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 3.00	$ -	$ 3.90	$ 12.00	$ 12.00
	19	1	No Measure	9	9		$ -	9		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	20	1	No Measure	5	5		$ -	5		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	21	1	Relamp Only 3L F32T8 25w	2	2		$ -	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 18.00	$ -	$ 23.40	$ 12.00	$ 24.00
	22	1	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
	23	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	24	1	No Measure	19	19		$ -	0		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	25	1	Relamp Only 2L F32T8 25w	53	53		$ -	106	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 318.00	$ -	$ 413.40	$ 12.00	$ 636.00
	26	1	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
	27	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	28	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	29	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	30	1	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
	31	1	No Measure	4	4		$ -	4		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	32	1	No Measure	8	8		$ -	8		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	33	1	No Measure	3	3		$ -	3		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	34	1	Relamp Only 2L F32T8 25w	6	6		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 72.00
	35	1	Relamp Only 2L F32T8 25w	12	12		$ -	24	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 72.00	$ -	$ 93.60	$ 12.00	$ 144.00
	36	1	Relamp Only 3L F32T8 25w	1	1		$ -	3	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 9.00	$ -	$ 11.70	$ 12.00	$ 12.00
	37	1	Relamp Only 3L F32T8 25w	1	1		$ -	3	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 9.00	$ -	$ 11.70	$ 12.00	$ 12.00
	38	1	No Measure	3	3		$ -	3		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	39	1	Relamp Only 2L F32T8 25w	8	8		$ -	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 48.00	$ -	$ 62.40	$ 12.00	$ 96.00
	40	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	41	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	42	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	43	1	Relamp Only 1L F32T8 25w	1	1		$ -	1	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 3.00	$ -	$ 3.90	$ 12.00	$ 12.00
	44	1	Relamp Only 1L F32T8 25w	1	1		$ -	1	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 3.00	$ -	$ 3.90	$ 12.00	$ 12.00
	45	1	Relamp Only 3L F32T8 25w	35	35		$ -	105	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 315.00	$ -	$ 409.50	$ 12.00	$ 420.00
	46	1	Relamp Only 2L F32T8 25w	40	40		$ -	80	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 240.00	$ -	$ 312.00	$ 12.00	$ 480.00
	47	1	No Measure	15	15		$ -	15		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	48	1	Relamp Only 2L F32T8 25w	66	66		$ -	132	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 396.00	$ -	$ 514.80	$ 12.00	$ 792.00
	49	1	Relamp Only 3L F32T8 25w	9	9		$ -	27	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 81.00	$ -	$ 105.30	$ 12.00	$ 108.00
	50	1	Relamp Only 1L F32T8 25w	17	17		$ -	17	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 51.00	$ -	$ 66.30	$ 12.00	$ 204.00
	51	1	Relamp Only 1L F32T8 25w	11	11		$ -	11	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 33.00	$ -	$ 42.90	$ 12.00	$ 132.00
	52	1	Relamp Only 1L F32T8 25w	71	71		$ -	71	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 213.00	$ -	$ 276.90	$ 12.00	$ 852.00
	53	1	No Measure	4	4		$ -	4		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	54	1	Relamp Only 3L F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
	55	1	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00

	LN #	FL #	Energy Conservation Measure	Repl. Qty.	qty fixt	Fixture / Ballast	cost fix	qty lmp	Lamp / Sensor	cost lmp	qty ref	Reflector / PowerPack	cost ref	Ballast/Fix Cost Total	Lamp Cost Total	REFLECT Cost Total	Material Sell Total	Labor Cost	Labor Tot Cost
	56	1	Relamp Only 4L F32T8 25w	1	1		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 12.00
	57	1	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
	58	1	No Measure	2	2		$ -	2		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	59	1	Relamp Only 2L F32T8 25w	8	8		$ -	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 48.00	$ -	$ 62.40	$ 12.00	$ 96.00
	60	1	Relamp Only 3L F32T8 25w	5	5		$ -	15	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 45.00	$ -	$ 58.50	$ 12.00	$ 60.00
	61	1	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
	62	1	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
	63	1	Relamp Only 2L F32T8 25w	6	6		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 72.00
	64	1	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
	65	1	Relamp Only 2L F32T8 25w	5	5		$ -	10	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 30.00	$ -	$ 39.00	$ 12.00	$ 60.00
	66	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	67	B	Relamp Only 4L F32T8 25w	33	33		$ -	132	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 396.00	$ -	$ 514.80	$ 12.00	$ 396.00
	68	B	Relamp Only 4L F32T8 25w	3	3		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 36.00
	69	B	Relamp Only 4L F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
	70	B	Relamp Only 4L F32T8 25w	1	1		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 12.00
	71	B	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	72	B	Relamp Only 4L F32T8 25w	4	4		$ -	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 48.00	$ -	$ 62.40	$ 12.00	$ 48.00
	73	B	Relamp Only 4L F32T8 25w	5	5		$ -	20	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 60.00	$ -	$ 78.00	$ 12.00	$ 60.00
	74	B	No Measure	2	2		$ -	0		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	75	1	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
	76	B	O/S WALL	1	1		$ -	4	O/S WALL	$ 55.00	0		$ -	$ -	$ 220.00	$ -	$ 286.00	$ 35.00	$ 35.00
	77	B	Relamp Only 2L F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
	78	B	O/S WALL	1	1		$ -	1	O/S WALL	$ 55.00	0		$ -	$ -	$ 55.00	$ -	$ 71.50	$ 35.00	$ 35.00
	79	1	Relamp Only 2L F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
	80	1	No Measure	1	1		$ -	0		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	81	1	No Measure	10	10		$ -	10		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
	82	0	0	0	0		$ -	0		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
														$ -	$ 3,319.00	$ -	$ 4,314.70	Total	$ 5,600.00
																With Tax	$ 4,616.73	CONT	$ -
																		Equipment	$ -
																		Total Labor:	$ 7,280.00
																		Total project	$ 11,896.73

NEW JERSEY SMART START REBATE	$ 80.00

LIGHTING INVENTORY SUMMARY
The Township of Willingboro - Garage 1
One Salem Road
Willingboro, NJ 08046

EXECUTIVE SUMMARY

ENERGY DATA

Existing Energy Usage (Watts)		3,253
Proposed Energy Usage (Watts)		2,369
Energy Saved (Watts)		884
Annual Kilowatt Hours Saved (kWh)		3,086

FINANCIAL DATA

Annual Existing Energy Cost	$	2,308.42
Annual Proposed Energy Cost	$	1,731.34
Annual Energy Savings	$	577.08
Additional Energy Savings (Occupancy Sensors)	$	-
Total Energy Savings	$	577.08
Initial Project Cost	$	1,755.14
Utility Rebate (Based on NJ Smart Start Approval)	$	220.00
Project Cost	$	1,535.14

CASH FLOW SUMMARY

Return On Investment (R.O.I.)		38%
Payback (Years)		2.66
10 Year Savings	$	5,770.82
10-Year Cumulative Positive Cash Flow	$	4,235.68

The Township of Willingboro - Garage 1
One Salem Road
Willingboro, NJ 08046

New Jersey

UTILITY ACCOUNT NUMBER	N/A
BUILDING TYPE	Public Works Garage 1
SQUARE FOOTAGE	6,004

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist. Fix Wts.	Foot Candle	Total Fix Wts.	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl Qty.	Repl. Fix Wts.	Total Fix Wts.	Opr. Hours	Fix Wts. Saved	kWh Saved	0.15/kWh	Annual Elec. Savings	Annual Sens. Savings
1	1			Tire garage	2L F96T12/STRIP	6	150		900	Relamp and Reballast 2L F96T8/Electronic	10	$ 60.00	6	118	708	4000	192	768	143.616	$ 143.62	
2	1			Tire garage	4L F40T12 2X4	3	136		408	Relamp and Reballast 4L F32T8/Electronic	20	$ 60.00	3	112	336	4000	72	288	53.856	$ 53.86	
3	1			Tire garage (other side)	2L F96T12/STRIP	10	150		1500	Relamp and Reballast 2L F96T8/Electronic	10	$ 100.00	10	118	1180	4000	320	1280	239.36	$ 239.36	
4	1			Bath	20W CFL	2	20		40	No Measure		$ -	2	20	40	2500	0	0	0	$ -	
5	1			Small storage	60A (Fan lights)	3	60		180	15w Spring CFL		$ -	3	15	45	2500	135	337.5	63.1125	$ 63.11	
6	1			Small storage	75A Inc	3	75		225	20w Spring CFL		$ -	3	20	60	2500	165	412.5	77.1375	$ 77.14	
7									0			$ -	0								
									3,253			$ 220.00			KW SAVED >>>>		0.88	3086	577.082	$ 577.08	$ -
															2309					Total Cost Savings	$ 577.08
																				Total kWh Savings	3,086.00

Electric Rate: $0.187

Name:	The Township of Willingboro - Garage 1
Address:	One Salem Road
City, St.	Willingboro, NJ 08046
Contact:	0
Phone:	0

																	NON UNION	
LN #	FL #	Energy Conservation Measure	Repl Qty	qty fxt	Fixture / Ballast	cost fix	qty lmp	Lamp / Source	cost lmp	qty ref	Reflector / PowerPack	cost ref	Ballast/Fix Cost Total	Lamp Cost Total	REFLECT Cost Total	Material Sell Total	Labor Cost	Labor Tot Cost
1	1	Relamp and Reballast 2L F96T8/Electronic	6	6	2L F96T8 ELECTRONIC BALLAST	$ 18.00	12	F96T8 59W LAMP	$ 8.00	0		$ -	$ 108.00	$ 96.00	$ -	$ 265.20	$ 30.00	$ 180.00
2	1	Relamp and Reballast 4L F32T8/Electronic	3	3	4L F32T8 ELECTRONIC BALLAST	$ 15.00	12	F32T8 28W LAMP	$ 2.00	0		$ -	$ 45.00	$ 24.00	$ -	$ 89.70	$ 30.00	$ 90.00
3	1	Relamp and Reballast 2L F96T8/Electronic	10	10	2L F96T8 ELECTRONIC BALLAST	$ 18.00	20	F96T8 59W LAMP	$ 8.00	0		$ -	$ 180.00	$ 160.00	$ -	$ 442.00	$ 30.00	$ 300.00
4	1	No Measure	2	2		$ -	2		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	1	15w Spring CFL	3	3		$ -	3	15W CFL	$ 10.00	0		$ -	$ -	$ 30.00	$ -	$ 39.00	$ 10.00	$ 30.00
6	1	20w Spring CFL	3	3		$ -	3	20W CFL	$ 10.00	0		$ -	$ -	$ 30.00	$ -	$ 39.00	$ 10.00	$ 30.00
7	0	0	0	0		$ -	0		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
													$ 333.00	$ 340.00	$ -	$ 874.90	Total	$ 630.00
															With Tax	$ 936.14	CONT	$ -
																	Equipment	$ -
																	Total Labor:	$ 819.00
																	Total project	$ 1,755.14

NEW JERSEY SMART START REBATE	$ 220.00

LIGHTING INVENTORY SUMMARY
The Township of Willingboro - Garage 2
One Salem Road
Willingboro, NJ 08046

EXECUTIVE SUMMARY

ENERGY DATA

Existing Energy Usage (Watts)		3,908
Proposed Energy Usage (Watts)		2,796
Energy Saved (Watts)		1,112
Annual Kilowatt Hours Saved (kWh)		4,172

FINANCIAL DATA

Annual Existing Energy Cost	$	3,017.93
Annual Proposed Energy Cost	$	2,137.64
Annual Energy Savings	$	880.29
Additional Energy Savings (Occupancy Sensors)	$	-
Total Energy Savings	$	880.29
Initial Project Cost	$	2,578.67
Utility Rebate (Based on NJ Smart Start Approval)	$	370.00
Project Cost	$	2,208.67

CASH FLOW SUMMARY

Return On Investment (R.O.I.)		40%
Payback (Years)		2.51
10 Year Savings	$	8,802.92
10-Year Cumulative Positive Cash Flow	$	6,594.25

The Township of Willingboro - Garage 2
One Salem Road
Willingboro, NJ 08046

New Jersey

UTILITY ACCOUNT NUMBER	N/A
BUILDING TYPE	Public Works Garage 2
SQUARE FOOTAGE	5,490

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist. Fix Wts.	Foot Candle	Total Fix Wts.	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl. Qty.	Repl. Fix Wts.	Total Fix Wts.	Opr. Hours	Fix Wts. Saved	kWh Saved	0.15/kWh	Annual Elec. Savings	Annual Sens. Savings
1	1			Garage #2 (sign shop)	2L F96T12/STRIP	8	150		1200	Relamp and Reballast 2F96T8/Electronic	10	$ 80.00	8	118	944	4000	256	1024	216.064	$ 216.06	
2	1			Garage #2 (sign shop)	2L F96T8/STRIP	2	118		236	No Measure		$ -	2	118	236	4000	0	0	0	$ -	
3	1			Mower shop	2L F96T12/STRIP	3	150		450	Relamp and Reballast 2F96T8/Electronic	10	$ 30.00	3	118	354	4000	96	384	81.024	$ 81.02	
4	1			Mower shop	250/MH	3	288		864	New 4LF32T8 2x4 High Bay	50	$ 150.00	3	112	336	4000	528	2112	445.632	$ 445.63	
5	1			Mower shop	4L F40T12 2X4	2	136		272	Relamp and Reballast 4F32T8/Electronic	20	$ 40.00	2	112	224	4000	48	192	40.512	$ 40.51	
6	1			Lunch room	2L F96T12/STRIP	4	150		600	Relamp and Reballast 2F96T8/Electronic	10	$ 40.00	4	118	472	2500	128	320	67.52	$ 67.52	
7	1			Bath	2L F96T12/STRIP	1	150		150	Relamp and Reballast 2F96T8/Electronic	10	$ 10.00	1	118	118	2500	32	80	16.88	$ 16.88	
8	1			Storage	4L F40T12 2X4	1	136		136	Relamp and Reballast 4F32T8/Electronic	20	$ 20.00	1	112	112	2500	24	60	12.66	$ 12.66	
9									0			$ -	0								
									3,908			$ 370.00			KW SAVED >>>>		1.11	4172	880.292	$ 880.29	$ -
															2796					Total Cost Savings	$ 880.29
																				Total kWh Savings	4,172.00

Electric Rate: $0.211

Name:	The Township of Willingboro - Garage 2
Address:	One Salem Road
City, St.	Willingboro, NJ 08046
Contact:	0
Phone:	0

																	NON UNION	
LN #	FL #	Energy Conservation Measure	Repl Qty	qty fixt	Fixture / Ballast	cost fix	qty imp	Lamp / Sensor	cost imp	qty ref	Reflector / PowerPack	cost ref	Ballast/Fix Cost Total	Lamp Cost Total	REFLECT Cost Total	Material Sell Total	Labor Cost	Labor Tot. Cost
1	1	Relamp and Reballast 2F96T8/Electronic	8	8	2L F96 ELECTRONIC BALLAST	$ 18.00	16	F96T8 59W LAMP	$ 8.00	0		$ -	$ 144.00	$ 128.00	$ -	$ 353.60	$ 30.00	$ 240.00
2	1	No Measure	2	2		$ -	4		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
3	1	Relamp and Reballast 2F96T8/Electronic	3	3	2L F96 ELECTRONIC BALLAST	$ 18.00	6	F96T8 59W LAMP	$ 8.00	0		$ -	$ 54.00	$ 48.00	$ -	$ 132.60	$ 30.00	$ 90.00
4	1	New 4LF32T8 2x4 High Bay	3	3	4L F32 ELECTRONIC BALLAST	$200.00	12	F32T8 28w LAMP	$ 2.00	0		$ -	$ 600.00	$ 24.00	$ -	$ 811.20	$ 30.00	$ 90.00
5	1	Relamp and Reballast 4F32T8/Electronic	2	2	4L F32 ELECTRONIC BALLAST	$ 15.00	8	F32T8 28w LAMP	$ 2.00	0		$ -	$ 30.00	$ 16.00	$ -	$ 59.80	$ 30.00	$ 60.00
6	1	Relamp and Reballast 2F96T8/Electronic	4	4	2L F96 ELECTRONIC BALLAST	$ 18.00	8	F96T8 59W LAMP	$ 8.00	0		$ -	$ 72.00	$ 64.00	$ -	$ 176.80	$ 30.00	$ 120.00
7	1	Relamp and Reballast 2F96T8/Electronic	1	1	2L F96 ELECTRONIC BALLAST	$ 18.00	2	F96T8 59W LAMP	$ 8.00	0		$ -	$ 18.00	$ 16.00	$ -	$ 44.20	$ 30.00	$ 30.00
8	1	Relamp and Reballast 4F32T8/Electronic	1	1	4L F32 ELECTRONIC BALLAST	$ 15.00	4	F32T8 28w LAMP	$ 2.00	0		$ -	$ 15.00	$ 8.00	$ -	$ 29.90	$ 30.00	$ 30.00
9	0	0	0	0		$ -	0		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
													$ 933.00	$ 304.00	$ -	$ 1,608.10	Total	$ 660.00
															With Tax	$ 1,720.67	CONT	$ -
																	Equipment	$ -
																	Total Labor:	$ 858.00
																	Total project	$ 2,578.67

NEW JERSEY SMART START REBATE	$ 370.00

LIGHTING INVENTORY SUMMARY
The Township of Willingboro - Fire Station #161
One Salem Road
Willingboro, NJ 08046

EXECUTIVE SUMMARY

ENERGY DATA

Existing Energy Usage (Watts)		10,626
Proposed Energy Usage (Watts)		6,699
Energy Saved (Watts)		3,927
Annual Kilowatt Hours Saved (kWh)		14,531

FINANCIAL DATA

Annual Existing Energy Cost	$	6,411.82
Annual Proposed Energy Cost	$	4,028.78
Annual Energy Savings	$	2,383.03
Additional Energy Savings (Occupancy Sensors)	$	-
Total Energy Savings	$	2,383.03
Initial Project Cost	$	6,074.67
Utility Rebate (Based on NJ Smart Start Approval)	$	1,650.00
Project Cost	$	4,424.67

CASH FLOW SUMMARY

Return On Investment (R.O.I.)		54%
Payback (Years)		1.86
10 Year Savings	$	23,830.35
10-Year Cumulative Positive Cash Flow	$	19,405.68

The Township of Willingboro - Fire Station #161
One Salem Road
Willingboro, NJ 08046

New Jersey

UTILITY ACCOUNT NUMBER	N/A
BUILDING TYPE	Fire Station #161
SQUARE FOOTAGE	7,560

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist. Fix Wts	Foot Candle	Total Fix Wts	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl. Qty.	Repl. Fix Wts	Total Fix Wts	Opr. Hours	Fix Wts Saved	kWh Saved	0.15/kWh	Annual Elec Savings	Annual Sens Savings
1	1			Garage	4L F40T12/Ind 8'	30	136		4080	Relamp and Reballast 4L F32T8/Electronic 28w	20	$ 600.00	30	112	3360	4000	720	2880	472.32	$ 472.32	
2	1			Garage	75A Inc	6	75		450	20w CFL Spring Lamp		$ -	6	20	120	4000	330	1320	216.48	$ 216.48	
3	1			Bathroom	75A Inc	2	75		150	15w CFL Spring Lamp		$ -	2	15	30	2500	120	300	49.2	$ 49.20	
4	1			Locker room	4L F40T12/Ind 8'	2	136		272	Relamp and Reballast 4L F32T8/Electronic 28w	20	$ 40.00	2	112	224	2500	48	120	19.68	$ 19.68	
5	1			Hose room	4L F40T12/Ind 8'	6	136		816	Relamp and Reballast 4L F32T8/Electronic 28w	20	$ 120.00	6	112	672	2500	144	360	59.04	$ 59.04	
6	1			Hose room	75A Inc	2	75		150	20w CFL Spring Lamp		$ -	2	20	40	2500	110	275	45.1	$ 45.10	
7	1			Member's room	4L F40T12 2X4	11	136		1496	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	30	$ 330.00	11	56	616	2500	880	2200	360.8	$ 360.80	
8	1			Kitchen	15W R30/FL CFL	12	15		180	No Measure		$ -	12	15	180	4000	0	0	0	$ -	
9	1			Slop room	75A Inc	1	75		75	20w CFL Spring Lamp		$ -	1	20	20	2500	55	137.5	22.55	$ 22.55	
10	1			Bathroom	2L F40T12/STRIP	3	68		204	Relamp and Reballast 2L F32T8/Electronic 28w	10	$ 30.00	3	56	168	2500	36	90	14.76	$ 14.76	
11	1			Bathroom	15W CFL	2	15		30	No Measure		$ -	2	15	30	2500	0	0	0	$ -	
12	1			Mens Room	2L F40T12 1X4	2	68		136	Relamp and Reballast 2L F32T8/Electronic 28w	10	$ 20.00	2	56	112	2500	24	60	9.84	$ 9.84	
13	1			Mens Room	20W CFL	2	20		40	No Measure		$ -	2	20	40	2500	0	0	0	$ -	
14	1			Officer's office	4L F40T12 2X4	6	136		816	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	30	$ 180.00	6	56	336	3500	480	1680	275.52	$ 275.52	
15	1			Chief's office	4L F40T12 2X4	3	136		408	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	30	$ 90.00	3	56	168	3500	240	840	137.76	$ 137.76	
16	1			Bunk room	4L F40T12 2X4	3	136		408	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	30	$ 90.00	3	56	168	3500	240	840	137.76	$ 137.76	
17	1			Dispatch	4L F40T12 2X4	4	136		544	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	30	$ 120.00	4	56	224	8760	320	2803.2	459.7248	$ 459.72	
18	1			Garage office	4L F40T12 2X4	1	136		136	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	30	$ 30.00	1	56	56	4000	80	320	52.48	$ 52.48	
19	1			Garage office	75A Inc	1	75		75	20w CFL Spring Lamp		$ -	1	20	20	3500	55	192.5	31.57	$ 31.57	
20	1			Entrance hallway	20W CFL	5	20		100	No Measure		$ -	5	20	100	4000	0	0	0	$ -	
21	1			Supply room	60W Inc	1	60		60	15w CFL Spring Lamp		$ -	1	15	15	2500	45	112.5	18.45	$ 18.45	
22									0			$ -	0								
									10,626			$ 1,650.00			KW SAVED >>>>		3.93	14530.7	2383.0348	$ 2,383.03	$ -

Electric Rate: $0.164

6699

Total Cost Savings $ 2,383.03

Total kWh Savings 14,530.70

Name:	The Township of Willingboro - Fire Station #161
Address:	One Salem Road
City, St.	Willingboro, NJ 08046
Contact:	0
Phone:	0

																	NON UNION	
LN #	FL #	Energy Conservation Measure	Repl Qty	qty fixt	Fixture / Ballast	cost fix	qty lmp	Lamp / Sensor	cost lmp	qty ref	Reflector / PowerPack	cost ref	Ballast/Fix Cost Total	Lamp Cost Total	REFLECT Cost Total	Material Sell Total	Labor Cost	Labor Tot Cost
1	1	Relamp and Reballast 4L F32T8/Electronic 28w	30	30	4L ELECTRONIC BALLAST	$ 15.00	120	F32T8 28W LAMP	$ 2.00	0		$ -	$ 450.00	$ 240.00	$ -	$ 897.00	$ 30.00	$ 900.00
2	1	20w CFL Spring Lamp	6	6		$ -	6	20W CFL	$ 10.00	0		$ -	$ -	$ 60.00	$ -	$ 78.00	$ 10.00	$ 60.00
3	1	15w CFL Spring Lamp	2	2		$ -	2	15W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
4	1	Relamp and Reballast 4L F32T8/Electronic 28w	2	2	4L ELECTRONIC BALLAST	$ 15.00	8	F32T8 28W LAMP	$ 2.00	0		$ -	$ 30.00	$ 16.00	$ -	$ 59.80	$ 30.00	$ 60.00
5	1	Relamp and Reballast 4L F32T8/Electronic 28w	6	6	4L ELECTRONIC BALLAST	$ 15.00	24	F32T8 28W LAMP	$ 2.00	0		$ -	$ 90.00	$ 48.00	$ -	$ 179.40	$ 30.00	$ 180.00
6	1	20w CFL Spring Lamp	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
7	1	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	11	11	2L ELECTRONIC BALLAST	$ 12.00	22	F32T8 28W LAMP	$ 2.00	11	2L REFLECTOR KIT	$ 18.00	$ 132.00	$ 44.00	$ 198.00	$ 486.20	$ 40.00	$ 440.00
8	1	No Measure	12	12		$ -	12		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
9	1	20w CFL Spring Lamp	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
10	1	Relamp and Reballast 2L F32T8/Electronic 28w	3	3	2L ELECTRONIC BALLAST	$ 12.00	6	F32T8 28W LAMP	$ 2.00	0		$ -	$ 36.00	$ 12.00	$ -	$ 62.40	$ 25.00	$ 75.00
11	1	No Measure	2	2		$ -	2		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	1	Relamp and Reballast 2L F32T8/Electronic 28w	2	2	2L ELECTRONIC BALLAST	$ 12.00	4	F32T8 28W LAMP	$ 2.00	0		$ -	$ 24.00	$ 8.00	$ -	$ 41.60	$ 25.00	$ 50.00
13	1	No Measure	2	2		$ -	2		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
14	1	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	6	6	2L ELECTRONIC BALLAST	$ 12.00	12	F32T8 28W LAMP	$ 2.00	6	2L REFLECTOR KIT	$ 18.00	$ 72.00	$ 24.00	$ 108.00	$ 265.20	$ 40.00	$ 240.00
15	1	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	3	3	2L ELECTRONIC BALLAST	$ 12.00	6	F32T8 28W LAMP	$ 2.00	3	2L REFLECTOR KIT	$ 18.00	$ 36.00	$ 12.00	$ 54.00	$ 132.60	$ 40.00	$ 120.00
16	1	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	3	3	2L ELECTRONIC BALLAST	$ 12.00	6	F32T8 28W LAMP	$ 2.00	3	2L REFLECTOR KIT	$ 18.00	$ 36.00	$ 12.00	$ 54.00	$ 132.60	$ 40.00	$ 120.00
17	1	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	4	4	2L ELECTRONIC BALLAST	$ 12.00	8	F32T8 28W LAMP	$ 2.00	4	2L REFLECTOR KIT	$ 18.00	$ 48.00	$ 16.00	$ 72.00	$ 176.80	$ 40.00	$ 160.00
18	1	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	1	1	2L ELECTRONIC BALLAST	$ 12.00	2	F32T8 28W LAMP	$ 2.00	1	2L REFLECTOR KIT	$ 18.00	$ 12.00	$ 4.00	$ 18.00	$ 44.20	$ 40.00	$ 40.00
19	1	20w CFL Spring Lamp	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
20	1	No Measure	5	5		$ -	15		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
21	1	15w CFL Spring Lamp	1	1		$ -	1		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
22	0	0	0	0		$ -	0		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
													$ 966.00	$ 556.00	$ 504.00	$ 2,633.80	Total	$ 2,505.00
															With Tax	$ 2,818.17	CONT	$ -
																	Equipment	$ -
																	Total Labor:	$ 3,256.50
																	Total project	$ 6,074.67

NEW JERSEY SMART START REBATE	$ 1,650.00

LIGHTING INVENTORY SUMMARY
The Township of Willingboro - Fire Station #162
One Salem Road
Willingboro, NJ 08046

EXECUTIVE SUMMARY

ENERGY DATA

Existing Energy Usage (Watts)		4,395
Proposed Energy Usage (Watts)		2,944
Energy Saved (Watts)		1,451
Annual Kilowatt Hours Saved (kWh)		5,451

FINANCIAL DATA

Annual Existing Energy Cost	$	2,383.81
Annual Proposed Energy Cost	$	1,597.31
Annual Energy Savings	$	786.49
Additional Energy Savings (Occupancy Sensors)	$	80.14
Total Energy Savings	$	866.63
Initial Project Cost	$	2,320.28
Utility Rebate (Based on NJ Smart Start Approval)	$	360.00
Project Cost	$	1,960.28

CASH FLOW SUMMARY

Return On Investment (R.O.I.)		40%
Payback (Years)		2.49
10 Year Savings	$	7,864.94
10-Year Cumulative Positive Cash Flow	$	5,904.66

The Township of Willingboro - Fire Station #162
One Salem Road
Willingboro, NJ 08046

New Jersey

UTILITY ACCOUNT NUMBER	N/A
BUILDING TYPE	Fire Station
SQUARE FOOTAGE	8,344

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist. Fix Wts.	Foot Candle	Total Fix Wts	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl Qty	Repl Fix Wts	Total Fix Wts	Opr. Hours	Fix Wts Saved	kWh Saved	0.159/kWh	Annual Elec Savings	Annual Sens. Savings
1	1			Garage	2L F96T12/Ind	10	192		1920	Relamp and Reballast 2F96T8/Electronic	10	$ 100.00	10	118	1180	4000	740	2960	470.64	$ 470.64	
2	1			Garage	2L F40T12/Ind	2	80		160	Relamp and Reballast 2F32T8/Electronic 28w	10	$ 20.00	2	56	112	4000	48	192	30.528	$ 30.53	
3	1			Members Room	4L F40T12 2X4	6	160		960	Relamp and Reballast 4F32T8/Electronic 28w	10	$ 60.00	6	112	672	2500	288	720	114.48	$ 114.48	
4	1			SENSOR SAVINGS	Wall Mount	1			0	O/S WALL	20	$ 20.00	1								$ 80.14
5	1			Room (off garage)	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 28w	20	$ 40.00	2	112	224	2500	96	240	38.16	$ 38.16	
6	1			Ladies Room	2L FB40T12 U6 2X2	2	80		160	Relamp and Reballast 2FB32T8/Electronic U6 28w	10	$ 20.00	2	56	112	2500	48	120	19.08	$ 19.08	
7	1			Mens Room	2L FB40T12 U6 2X2	2	80		160	Relamp and Reballast 2FB32T8/Electronic U6 28w	10	$ 20.00	2	56	112	2500	48	120	19.08	$ 19.08	
8	1			Kitchen	4L F40T12 2X4	4	160		640	Relamp and Reballast 4F32T8/Electronic 28w	20	$ 80.00	4	128	512	4000	128	512	81.408	$ 81.41	
9	1			Closet	75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	1500	55	82.5	13.1175	$ 13.12	
10									0			$ -	0								
									4,395			$ 360.00			KW SAVED >>>>		1.45	4946.5	786.4935	$ 786.49	$ 80.14
															2944					Total Cost Savings	$ 866.63
				Electric Rate:	$0.159															Total kWh Savings	5,450.50

Name:	The Township of Willingboro - Fire Station #162
Address:	One Salem Road
City, St.	Willingboro, NJ 08046
Contact:	0
Phone:	0

																	NON UNION	
LN #	FL #	Energy Conservation Measure	Repl Qty	qty fixt	Fixture / Ballast	cost fix	qty lmp	Lamp / Sensor	cost lmp	qty ref	Reflector / PowerPack	cost ref	Ballast/Fix Cost Total	Lamp Cost Total	REFLECT Cost Total	Material Sell Total	Labor Cost	Labor Tot Cost
1	1	Relamp and Reballast 2F96T8/Electronic	10	10	2L F96T8 ELECTRONIC BALLAST	$ 24.00	20	F96T8 28W LAMP	$ 8.00	0		$ -	$ 240.00	$ 160.00	$ -	$ 520.00	$ 30.00	$ 300.00
2	1	Relamp and Reballast 2F32T8/Electronic 28w	2	2	2L F32T8 ELECTRONIC BALLAST	$ 12.00	4	F32T8 28W LAMP	$ 2.00	0		$ -	$ 24.00	$ 8.00	$ -	$ 41.60	$ 25.00	$ 50.00
3	1	Relamp and Reballast 4F32T8/Electronic 28w	6	6	4L F32T8 ELECTRONIC BALLAST	$ 15.00	24	F32T8 28W LAMP	$ 2.00	0		$ -	$ 90.00	$ 48.00	$ -	$ 179.40	$ 30.00	$ 180.00
4	1	O/S WALL	1	1		$ -	1	O/S WALL	$ 55.00	0		$ -	$ -	$ 55.00	$ -	$ 71.50	$ 35.00	$ 35.00
5	1	Relamp and Reballast 4F32T8/Electronic 28w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 28W LAMP	$ 2.00	0		$ -	$ 30.00	$ 16.00	$ -	$ 59.80	$ 30.00	$ 60.00
6	1	Relamp and Reballast 2FB32T8/Electronic U6 28w	2	2	2L F32T8 ELECTRONIC BALLAST	$ 12.00	4	FB32T8 U6 28W LAMP	$ 6.00	0		$ -	$ 24.00	$ 24.00	$ -	$ 62.40	$ 25.00	$ 50.00
7	1	Relamp and Reballast 2FB32T8/Electronic U6 28w	2	2	2L F32T8 ELECTRONIC BALLAST	$ 12.00	4	FB32T8 U6 28W LAMP	$ 6.00	0		$ -	$ 24.00	$ 24.00	$ -	$ 62.40	$ 25.00	$ 50.00
8	1	Relamp and Reballast 4F32T8/Electronic 28w	4	4	4L F32T8 ELECTRONIC BALLAST	$ 15.00	16	F32T8 28W LAMP	$ 2.00	0		$ -	$ 60.00	$ 32.00	$ -	$ 119.60	$ 30.00	$ 120.00
9	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
10	0	0	0	0		$ -	0		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
													$ 492.00	$ 377.00	$ -	$ 1,129.70	Total	$ 855.00
															With Tax	$ 1,208.78	CONT	$ -
																	Equipment	$ -
																	Total Labor:	$ 1,111.50
																	Total project	$ 2,320.28

NEW JERSEY SMART START REBATE	$ 360.00

LIGHTING INVENTORY SUMMARY
The Township of Willingboro - Fire Station #163
One Salem Road
Willingboro, NJ 08046

EXECUTIVE SUMMARY

ENERGY DATA

Existing Energy Usage (Watts)		2,250
Proposed Energy Usage (Watts)		1,845
Energy Saved (Watts)		405
Annual Kilowatt Hours Saved (kWh)		1,252

FINANCIAL DATA

Annual Existing Energy Cost	$	1,625.41
Annual Proposed Energy Cost	$	1,352.58
Annual Energy Savings	$	272.83
Additional Energy Savings (Occupancy Sensors)	$	-
Total Energy Savings	$	272.83
Initial Project Cost	$	1,895.95
Utility Rebate (Based on NJ Smart Start Approval)	$	425.00
Project Cost	$	1,470.95

CASH FLOW SUMMARY

Return On Investment (R.O.I.)		19%
Payback (Years)		5.39
10 Year Savings	$	2,728.27
10-Year Cumulative Positive Cash Flow	$	1,257.32

The Township of Willingboro - Fire Station #163
One Salem Road
Willingboro, NJ 08046

New Jersey

UTILITY ACCOUNT NUMBER	N/A
BUILDING TYPE	Fire Station #163
SQUARE FOOTAGE	7,500

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist. Fix Wts	Foot Candle	Total Fix Wts	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl. Qty.	Repl. Fix Wts.	Total Fix Wts	Dpr. Hours	Fix Wts Saved	kWh Saved	0.15/kWh	Annual Elec. Savings	Annual Sens. Savings
1	1			Front Entrance	65R30	4	65		260	15w R30 CFL	7	$ 28.00	4	65	260	4000	0	0	0	$ -	
2	1			Mens Room	2L F40T12 Wrap	1	68		68	Relamp and Reballast 2L F32T8/Electronic 28w	10	$ 10.00	1	56	56	2500	12	30	6.54	$ 6.54	
3	1			Ladies Room	2L F40T12 Wrap	1	68		68	Relamp and Reballast 2L F32T8/Electronic 28w	10	$ 10.00	1	56	56	2500	12	30	6.54	$ 6.54	
4	1			Closet	75A Inc	2	75		150	20w Spring CFL		$ -	2	75	150	1500	0	0	0	$ -	
5	1			Office (Locked)	4L F40T12 Wrap	2	68		136	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	30	$ 60.00	2	56	112	3500	24	84	18.312	$ 18.31	
6	S			Stairs	2L F40T12	1	68		68	Relamp and Reballast 2L F32T8/Electronic 28w	10	$ 10.00	1	56	56	4000	12	48	10.464	$ 10.46	
7	2			Sleeping Quarters	4L F40T12 2X4	4	68		272	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	30	$ 120.00	4	56	224	2500	48	120	26.16	$ 26.16	
8	2			Shower	4L F40T12 2X4	1	68		68	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	30	$ 30.00	1	56	56	2500	12	30	6.54	$ 6.54	
9	2			Shower	65R30	1	65		65	15w R30 CFL	7	$ 7.00	1	15	15	2500	50	125	27.25	$ 27.25	
10	1			Garage	2L F40T12 Industrial	14	68		952	Relamp and Reballast 2L F32T8/Electronic 28w	10	$ 140.00	14	56	784	4000	168	672	146.496	$ 146.50	
11	1			Water Tank	75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	1500	55	82.5	17.985	$ 17.99	
12	1			Laundry	2L F40T12 Wrap	1	68		68	Relamp and Reballast 2L F32T8/Electronic 28w	10	$ 10.00	1	56	56	2500	12	30	6.54	$ 6.54	
13									0			$ -	0								
									2,250			$ 425.00			KW SAVED >>>>		0.41	1251.5	272.827	$ 272.83	$ -
															1845					Total Cost Savings	$ 272.83
																				Total kWh Savings	1,251.50

Electric Rate: $0.218

Name:	The Township of Willingboro - Fire Station #163
Address:	One Salem Road
City, St.	Willingboro, NJ 08046
Contact:	0
Phone:	0

	LN #	FL #	Energy Conservation Measure	Repl Qty	qty fixt	Fixture / Ballast	cost fix	qty lmp	Lamp / Sensor	cost lmp	qty ref	Reflector / PowerPack	cost ref	Ballast/Fix Cost Total	Lamp Cost Total	REFLECT Cost Total	Material Sell Total	NON UNION Labor Cost	NON UNION Labor Tot. Cost
	1	1	15w R30 CFL	4	4		$ -	4	15W R30 CFL	$ 10.00	0		$ -	$ -	$ 40.00	$ -	$ 52.00	$ 10.00	$ 40.00
	2	1	Relamp and Reballast 2L F32T8/Electronic 28w	1	1	2L ELECTRIC BALLAST	$ 12.00	2	F32T8 28W LAMP	$ 2.00	0		$ -	$ 12.00	$ 4.00	$ -	$ 20.80	$ 25.00	$ 25.00
	3	1	Relamp and Reballast 2L F32T8/Electronic 28w	1	1	2L ELECTRIC BALLAST	$ 12.00	2	F32T8 28W LAMP	$ 2.00	0		$ -	$ 12.00	$ 4.00	$ -	$ 20.80	$ 25.00	$ 25.00
	4	1	20w Spring CFL	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
	5	1	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	2	2	2L ELECTRIC BALLAST	$ 12.00	4	F32T8 28W LAMP	$ 2.00	2	2L REFLECTOR KIT	$ 18.00	$ 24.00	$ 8.00	$ 36.00	$ 88.40	$ 40.00	$ 80.00
	6	S	Relamp and Reballast 2L F32T8/Electronic 28w	1	1	2L ELECTRIC BALLAST	$ 12.00	2	F32T8 28W LAMP	$ 2.00	0		$ -	$ 12.00	$ 4.00	$ -	$ 20.80	$ 25.00	$ 25.00
	7	2	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	4	4	2L ELECTRIC BALLAST	$ 12.00	8	F32T8 28W LAMP	$ 2.00	4	2L REFLECTOR KIT	$ 18.00	$ 48.00	$ 16.00	$ 72.00	$ 176.80	$ 40.00	$ 160.00
	8	2	Retrofit 2L F32T8/Electronic/Reflector Kit 28w	1	1	2L ELECTRIC BALLAST	$ 12.00	2	F32T8 28W LAMP	$ 2.00	1	2L REFLECTOR KIT	$ 18.00	$ 12.00	$ 4.00	$ 18.00	$ 44.20	$ 40.00	$ 40.00
	9	2	15w R30 CFL	1	1		$ -	1	15W R30 CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
	10	1	Relamp and Reballast 2L F32T8/Electronic 28w	14	14	2L ELECTRIC BALLAST	$ 12.00	28	F32T8 28W LAMP	$ 2.00	0		$ -	$ 168.00	$ 56.00	$ -	$ 291.20	$ 25.00	$ 350.00
	11	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
	12	1	Relamp and Reballast 2L F32T8/Electronic 28w	1	1	2L ELECTRIC BALLAST	$ 12.00	2	F32T8 28W LAMP	$ 2.00	0		$ -	$ 12.00	$ 4.00	$ -	$ 20.80	$ 25.00	$ 25.00
	13	0	0	0	0		$ -	0		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
														$ 300.00	$ 180.00	$ 126.00	$ 787.80	Total	$ 810.00
																With Tax	$ 842.95	CONT	$ -
																		Equipment	$ -
																		Total Labor:	$ 1,053.00
																		Total project	$ 1,895.95

NEW JERSEY SMART START REBATE	$ 425.00

LIGHTING INVENTORY SUMMARY
The Township of Willingboro - Kennedy Center
One Salem Road
Willingboro, NJ 08046

EXECUTIVE SUMMARY

ENERGY DATA

Existing Energy Usage (Watts)		177,609
Proposed Energy Usage (Watts)		123,644
Energy Saved (Watts)		53,965
Annual Kilowatt Hours Saved (kWh)		215,860

FINANCIAL DATA

Annual Existing Energy Cost	$	115,090.63
Annual Proposed Energy Cost	$	80,121.31
Annual Energy Savings	$	34,969.32
Additional Energy Savings (Occupancy Sensors)	$	-
Total Energy Savings	$	34,969.32
Initial Project Cost	$	84,705.13
Utility Rebate (Based on NJ Smart Start Approval)	$	9,534.00
Project Cost	$	75,171.13

CASH FLOW SUMMARY

Return On Investment (R.O.I.)		47%
Payback (Years)		2.15
10 Year Savings	$	349,693.20
10-Year Cumulative Positive Cash Flow	$	274,522.07

The Township of Willingboro - Kennedy Center
One Salem Road
Willingboro, NJ 08046

New Jersey

UTILITY ACCOUNT NUMBER	N/A
BUILDING TYPE	Kennedy Center
SQUARE FOOTAGE	189,950

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist Fix Wts	Foot Candle	Total Fix Wts	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl. Qty.	Repl. Fix Wts	Total Fix Wts	Opr Hours	Fix Wts Saved	kWh Saved	0.15/kWh	Annual Elec Savings	Annual Sens. Savings
118	1			Kitchen Pantry	13W CFL	2	13		26	No Measure		$ -	2	13	26	4000	0	0	0	$ -	
16	2			Panel Room	150W Inc	1	150		150	40w Spring CFL		$ -	1	40	40	4000	110	440	71.28	$ 71.28	
169	1	Auditorium		Auditorium	150W Inc	6	150		900	40w Spring CFL		$ -	6	40	240	4000	660	2640	427.68	$ 427.68	
173	1	Auditorium		Stage	150W Inc	4	150		600	40w Spring CFL		$ -	4	40	160	4000	440	1760	285.12	$ 285.12	
175	1	Auditorium		Storage	150W Inc	3	150		450	40w Spring CFL		$ -	3	40	120	4000	330	1320	213.84	$ 213.84	
59	1			Ladies Room	1L 13W CFL	1	13		13	No Measure		$ -	1	13	13	4000	0	0	0	$ -	
62	1			Mens Room	1L 13W CFL	1	13		13	No Measure		$ -	1	13	13	4000	0	0	0	$ -	
67	1			Bath	1L 60A Inc	2	120		240	20w Spring CFL		$ -	2	20	40	4000	200	800	129.6	$ 129.60	
87	1			Mens Room	1L 60A Inc	2	120		240	20w Spring CFL		$ -	2	20	40	4000	200	800	129.6	$ 129.60	
89	1			Ladies Room	1L 60A Inc	2	60		120	20w Spring CFL		$ -	2	20	40	4000	80	320	51.84	$ 51.84	
90	1			Ladies Room	1L 60A Inc	1	60		60	20w Spring CFL		$ -	1	20	20	4000	40	160	25.92	$ 25.92	
92	1			Traffic Guard	1L 60A Inc	1	60		60	20w Spring CFL		$ -	1	20	20	4000	40	160	25.92	$ 25.92	
93	1			Panel Room	1L 60A Inc	1	60		60	20w Spring CFL		$ -	1	20	20	4000	40	160	25.92	$ 25.92	
109	1			Nurse Lounge	1L 60A Inc	8	60		480	20w Spring CFL		$ -	8	20	160	4000	320	1280	207.36	$ 207.36	
112	1			Kitchen (Bath)	1L 60A Inc	1	60		60	20w Spring CFL		$ -	1	20	20	4000	40	160	25.92	$ 25.92	
113	1			Kitchen (Supply)	1L 60A Inc	2	60		120	20w Spring CFL		$ -	2	20	40	4000	80	320	51.84	$ 51.84	
116	1			Kitchen (Bath)	1L 60A Inc	2	60		120	20w Spring CFL		$ -	2	20	40	4000	80	320	51.84	$ 51.84	
117	1			Kitchen Pantry	1L 60A Inc	1	60		60	20w Spring CFL		$ -	1	20	20	4000	40	160	25.92	$ 25.92	
18	2			Faculty Bath	1L 75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
19	2			Supply Closet	1L 75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
27	2			Panel Room	1L 75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
29	2			Closet	1L 75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
65	1			Electrical Room	1L 75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
68	1			Slop Sink	1L 75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
128	1	Main Office		Corridor	1L 75A Inc	4	75		300	20w Spring CFL		$ -	4	20	80	4000	220	880	142.56	$ 142.56	
130	1	Main Office		Kitchen (Storage)	1L 75A Inc	2	75		150	20w Spring CFL		$ -	2	20	40	4000	110	440	71.28	$ 71.28	
134	1	Main Office		Server Room	1L 75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
149	1	Wellness Center		Locker	1L 75A Inc	2	75		150	20w Spring CFL		$ -	2	20	40	4000	110	440	71.28	$ 71.28	
151	1			Bath	1L 75A Inc	2	75		150	20w Spring CFL		$ -	2	20	40	4000	110	440	71.28	$ 71.28	
152	1			Corridor	1L 75A Inc	2	75		150	20w Spring CFL		$ -	2	20	40	4000	110	440	71.28	$ 71.28	
156	1			Bath	1L 75A Inc	4	75		300	20w Spring CFL		$ -	4	20	80	4000	220	880	142.56	$ 142.56	
159	1			Showers	1L 75A Inc	18	75		1350	20w Spring CFL		$ -	18	20	360	4000	990	3960	641.52	$ 641.52	
161	1			Bath	1L 75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
165	1	Music		Practice Room	1L 75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
166	1	Music		Practice Room	1L 75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
167	1	Music		Practice Room	1L 75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
168	1	Music		Dressing Room	1L 75A Inc	1	75		75	20w Spring CFL		$ -	1	20	20	4000	55	220	35.64	$ 35.64	
172	1	Auditorium		Auditorium	1L 75A Inc	22	75		1650	20w Spring CFL		$ -	22	20	440	4000	1210	4840	784.08	$ 784.08	
176	1	Auditorium		Steps	1L 75A Inc	2	75		150	20w Spring CFL		$ -	2	20	40	4000	110	440	71.28	$ 71.28	
194	1	Art Wing		Boiler Room	1L 75A Inc	5	75		375	20w Spring CFL		$ -	5	20	100	4000	275	1100	178.2	$ 178.20	
203	1	Art Wing		Mens Room	1L 75A Inc	4	75		300	20w Spring CFL		$ -	4	20	80	4000	220	880	142.56	$ 142.56	
195	1	Art Wing		Hallway to Kitchen	2L 13W CFL	1	26		26	No Measure		$ -	1	26	26	4000	0	0	0	$ -	
86	1			Mens Room	2L F32T8	1	64		64	Relamp Only 2F32T8 25w		$ -	1	50	50	4000	14	56	9.072	$ 9.07	
12	2			Corridor	2L F32T8 2X4	15	64		960	Relamp Only 2F32T8 25w		$ -	15	50	750	4000	210	840	136.08	$ 136.08	
26	2			Corridor	2L F32T8 2X4	19	64		1216	Relamp Only 2F32T8 25w		$ -	19	50	950	4000	266	1064	172.368	$ 172.37	
45	2			Corridor	2L F32T8 2X4	14	64		896	Relamp Only 2F32T8 25w		$ -	14	50	700	4000	196	784	127.008	$ 127.01	
64	1			Corridor	2L F32T8 2X4	12	64		768	Relamp Only 2F32T8 25w		$ -	12	50	600	4000	168	672	108.864	$ 108.86	
77	1			Corridor	2L F32T8 2X4	17	64		1088	Relamp Only 2F32T8 25w		$ -	17	50	850	4000	238	952	154.224	$ 154.22	
94	1			Corridor (by cafeteria)	2L F32T8 2X4	19	64		1216	Relamp Only 2F32T8 25w		$ -	19	50	950	4000	266	1064	172.368	$ 172.37	
204	1	Art Wing		Corridor	2L F32T8 2X4	12	64		768	Relamp Only 2F32T8 25w		$ -	12	50	600	4000	168	672	108.864	$ 108.86	
207	1			Corridor	2L F32T8 2X4	69	64		4416	Relamp Only 2F32T8 25w		$ -	69	50	3450	4000	966	3864	625.968	$ 625.97	
208	S			Stairwell A	2L F32T8 2X4	8	64		512	Relamp Only 2F32T8 25w		$ -	8	50	400	4000	112	448	72.576	$ 72.58	
209	S			Stairwell B	2L F32T8 2X4	2	64		128	Relamp Only 2F32T8 25w		$ -	2	50	100	4000	28	112	18.144	$ 18.14	
210	S			Stairwell C	2L F32T8 2X4	2	64		128	Relamp Only 2F32T8 25w		$ -	2	50	100	4000	28	112	18.144	$ 18.14	
211	S			Stairwell D	2L F32T8 2X4	2	64		128	Relamp Only 2F32T8 25w		$ -	2	50	100	4000	28	112	18.144	$ 18.14	
189	1	Art Wing	305	Boxing	2L F32T8 Industrial	26	64		1664	Relamp Only 2F32T8 25w		$ -	26	50	1300	4000	364	1456	235.872	$ 235.87	
190	1	Art Wing		Athletic Room	2L F32T8 Industrial	12	64		768	Relamp Only 2F32T8 25w		$ -	12	50	600	4000	168	672	108.864	$ 108.86	
192	1	Art Wing	308	Room	2L F32T8 Industrial	14	64		896	Relamp Only 2F32T8 25w		$ -	14	50	700	4000	196	784	127.008	$ 127.01	
201	1	Art Wing	306	Mower Garage	2L F32T8 Industrial	38	64		2432	Relamp Only 2F32T8 25w		$ -	38	50	1900	4000	532	2128	344.736	$ 344.74	
181	1	Art Wing	300	Arts-Crafts	2L F32T8 Wrap	2	64		128	Relamp Only 2F32T8 25w		$ -	2	50	100	4000	28	112	18.144	$ 18.14	
185	1	Art Wing	303	Kitchen	2L F32T8 Wrap	4	64		256	Relamp Only 2F32T8 25w		$ -	4	50	200	4000	56	224	36.288	$ 36.29	
193	1	Art Wing		Boiler Room	2L F32T8 Wrap	14	64		896	Relamp Only 2F32T8 25w		$ -	14	50	700	4000	196	784	127.008	$ 127.01	
111	1			Kitchen	2L F40T12	12	80		960	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 120.00	12	50	600	4000	360	1440	233.28	$ 233.28	
115	1			Kitchen (Slop Area)	2L F40T12	1	80		80	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 10.00	1	50	50	4000	30	120	19.44	$ 19.44	
147	1	Wellness Center		Corridor	2L F40T12	2	80		160	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 20.00	2	50	100	4000	60	240	38.88	$ 38.88	
150	1	Wellness Center		Gym	2L F40T12	12	80		960	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 120.00	12	50	600	4000	360	1440	233.28	$ 233.28	
153	1			Main Gym	2L F40T12 Industrial	220	80		17600	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 2,200.00	220	50	11000	4000	6600	26400	4276.8	$ 4,276.80	

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist. Fix Wts	Foot Candle	Total Fix Wts	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl. Qty.	Repl. Fix Wts	Total Fix Wts	Opr. Hours	Fix Wts Saved	kWh Saved	0.15/kWh	Annual Elec. Savings	Annual Sens Savings
155	1			Locker	2L F40T12 Strip	6	80		480	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 60.00	6	50	300	4000	180	720	116.64	$ 116.64	
158	1			Mens Room	2L F40T12 Strip	8	80		640	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 80.00	8	50	400	4000	240	960	155.52	$ 155.52	
154	1			Locker	2L F40T12 Wrap	6	80		480	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 60.00	6	50	300	4000	180	720	116.64	$ 116.64	
157	1			Mens Room	2L F40T12 Wrap	8	80		640	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 80.00	8	50	400	4000	240	960	155.52	$ 155.52	
171	1	Auditorium		Auditorium	2L F40T12 Wrap	4	80		320	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 40.00	4	50	200	4000	120	480	77.76	$ 77.76	
178	1	Auditorium		Audio/Video Storage	2L F40T12 Wrap	1	80		80	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 10.00	1	50	50	4000	30	120	19.44	$ 19.44	
179	1	Auditorium		Storage	2L F40T12 Wrap	2	80		160	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 20.00	2	50	100	4000	60	240	38.88	$ 38.88	
198	1	Art Wing		Slop Sink	2L F40T12 Wrap	1	80		80	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 10.00	1	50	50	4000	30	120	19.44	$ 19.44	
200	1	Art Wing		Supply Closet	2L F40T12 Wrap	1	80		80	Relamp and Reballast 2F32T8/Electronic 25w	10	$ 10.00	1	50	50	4000	30	120	19.44	$ 19.44	
139	1			Maintenance	2L F96T12 Strip	2	192		384	Relamp and Reballast 2F96T8/Electronic 59w	10	$ 20.00	2	118	236	4000	148	592	95.904	$ 95.90	
148	1	Wellness Center		Corridor	2L F96T12 Strip	1	192		192	Relamp and Reballast 2F96T8/Electronic 59w	10	$ 10.00	1	118	118	4000	74	296	47.952	$ 47.95	
170	1	Auditorium		Auditorium	2L F96T12 Strip	6	192		1152	Relamp and Reballast 2F96T8/Electronic 59w	10	$ 60.00	6	118	708	4000	444	1776	287.712	$ 287.71	
144	1	Gym A		Gym A	2L F96T12HO 1X8	16	192		3072	New 4L F32T8/MIRO-4 High Bay 32w	50	$ 800.00	16	128	2048	4000	1024	4096	663.552	$ 663.55	
145	1	Wellness Center		Open Floor	2L F96T12HO 1X8	12	192		2304	New 4L F32T8/MIRO-4 High Bay 32w	50	$ 600.00	12	128	1536	4000	768	3072	497.664	$ 497.66	
162	1	Gym B		Gym	2L F96T12HO 1X8	16	192		3072	New 4L F32T8/MIRO-4 High Bay 32w	50	$ 800.00	16	128	2048	4000	1024	4096	663.552	$ 663.55	
191	1	Art Wing		Small Hall	2L F96T12HO 1X8	1	192		192	New 4L F32T8 8' Wrap 28w	30	$ 30.00	1	112	112	4000	80	320	51.84	$ 51.84	
183	1	Art Wing	302	Kids Area	2L FB32T8 U6 2X2	1	64		64	Relamp Only 2FB32T8 U6 25w		$ -	1	50	50	4000	14	56	9.072	$ 9.07	
85	1			Ladies Room	2L FB40T12 U6 2X2	2	80		160	Relamp and Reballast 2FB32T8/Electronic U6 25	10	$ 20.00	2	50	100	4000	60	240	38.88	$ 38.88	
98	1			Meeting Room	2L FB40T12 U6 2X2	6	80		480	Relamp and Reballast 2FB32T8/Electronic U6 25	10	$ 60.00	6	50	300	4000	180	720	116.64	$ 116.64	
102	1			Meeting Room	2L FB40T12 U6 2X2	2	80		160	Relamp and Reballast 2FB32T8/Electronic U6 25	10	$ 20.00	2	50	100	4000	60	240	38.88	$ 38.88	
142	1			Mens Room	2L FB40T12 U6 2X2	2	80		160	Relamp and Reballast 2FB32T8/Electronic U6 25	10	$ 20.00	2	50	100	4000	60	240	38.88	$ 38.88	
143	1			Ladies Room	2L FB40T12 U6 2X2	2	80		160	Relamp and Reballast 2FB32T8/Electronic U6 25	10	$ 20.00	2	50	100	4000	60	240	38.88	$ 38.88	
14	2			Ladies Room	3L 13W CFL	4	39		156	No Measure		$ -	4	39	156	4000	0	0	0	$ -	
15	2			Mens Room	3L 13W CFL	4	39		156	No Measure		$ -	4	39	156	4000	0	0	0	$ -	
28	2			Bath	3L 13W CFL	1	39		39	No Measure		$ -	1	39	39	4000	0	0	0	$ -	
32	2			Mens Room	3L 13W CFL	3	39		117	No Measure		$ -	3	39	117	4000	0	0	0	$ -	
34	2			Ladies Room	3L 13W CFL	3	39		117	No Measure		$ -	3	39	117	4000	0	0	0	$ -	
114	1			Kitchen (Hall)	3L 13W CFL	3	39		117	No Measure		$ -	3	39	117	4000	0	0	0	$ -	
140	1			Maintenance	3L 13W CFL	1	39		39	No Measure		$ -	1	39	39	4000	0	0	0	$ -	
141	1			Small Hall	3L 13W CFL	1	39		39	No Measure		$ -	1	39	39	4000	0	0	0	$ -	
186	1	Art Wing	304	Keyboard Room	3L F32T8 2X4	20	96		1920	Relamp Only 3F32T8 25w		$ -	20	75	1500	4000	420	1680	272.16	$ 272.16	
196	1	Art Wing	309	(Combined)	3L F32T8 2X4	15	96		1440	Relamp Only 3F32T8 25w		$ -	15	75	1125	4000	315	1260	204.12	$ 204.12	
197	1	Art Wing	310	(Combined)	3L F32T8 2X4	15	96		1440	Relamp Only 3F32T8 25w		$ -	15	75	1125	4000	315	1260	204.12	$ 204.12	
199	1	Art Wing		Mens Room	3L F32T8 2X4	2	96		192	Relamp Only 3F32T8 25w		$ -	2	75	150	4000	42	168	27.216	$ 27.22	
206	1			Corridor	3L F32T8 2X4	4	96		384	Relamp Only 3F32T8 25w		$ -	4	75	300	4000	84	336	54.432	$ 54.43	
1	2		242	Father's + Children'	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
2	2		240	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
3	2		238	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
4	2		236	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
5	2		232	Room	4L F32T8 2X4	9	128		1152	Relamp Only 4F32T8 25w		$ -	9	100	900	4000	252	1008	163.296	$ 163.30	
6	2		230	Room	4L F32T8 2X4	9	128		1152	Relamp Only 4F32T8 25w		$ -	9	100	900	4000	252	1008	163.296	$ 163.30	
7	2		234	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
8	2		228	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
9	2		224	ELS-EFB	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
10	2		226	Room	4L F32T8 2X4	12	128		1536	Relamp Only 4F32T8 25w		$ -	12	100	1200	4000	336	1344	217.728	$ 217.73	
11	2		223	Room	4L F32T8 2X4	3	128		384	Relamp Only 4F32T8 25w		$ -	3	100	300	4000	84	336	54.432	$ 54.43	
13	2		222	Room	4L F32T8 2X4	12	128		1536	Relamp Only 4F32T8 25w		$ -	12	100	1200	4000	336	1344	217.728	$ 217.73	
17	2			Dept Office	4L F32T8 2X4	2	128		256	Relamp Only 4F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
20	2		220	Storage	4L F32T8 2X4	13	128		1664	Relamp Only 4F32T8 25w		$ -	13	100	1300	4000	364	1456	235.872	$ 235.87	
21	2			Chemical Storage	4L F32T8 2X4	5	128		640	Relamp Only 4F32T8 25w		$ -	5	100	500	4000	140	560	90.72	$ 90.72	
22	2		218	Room	4L F32T8 2X4	13	128		1664	Relamp Only 4F32T8 25w		$ -	13	100	1300	4000	364	1456	235.872	$ 235.87	
23	2		216	Room	4L F32T8 2X4	13	128		1664	Relamp Only 4F32T8 25w		$ -	13	100	1300	4000	364	1456	235.872	$ 235.87	
24	2			Side Room	4L F32T8 2X4	6	128		768	Relamp Only 4F32T8 25w		$ -	6	100	600	4000	168	672	108.864	$ 108.86	
25	2		214	Room	4L F32T8 2X4	12	128		1536	Relamp Only 4F32T8 25w		$ -	12	100	1200	4000	336	1344	217.728	$ 217.73	
30	2			Storage	4L F32T8 2X4	2	128		256	Relamp Only 4F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
31	2			Mens Room	4L F32T8 2X4	3	128		384	Relamp Only 4F32T8 25w		$ -	3	100	300	4000	84	336	54.432	$ 54.43	
33	2			Ladies Room	4L F32T8 2X4	3	128		384	Relamp Only 4F32T8 25w		$ -	3	100	300	4000	84	336	54.432	$ 54.43	
35	2		212	Room	4L F32T8 2X4	13	128		1664	Relamp Only 4F32T8 25w		$ -	13	100	1300	4000	364	1456	235.872	$ 235.87	
36	2			Maintenance	4L F32T8 2X4	6	128		768	Relamp Only 4F32T8 25w		$ -	6	100	600	4000	168	672	108.864	$ 108.86	
37	2		210	Room	4L F32T8 2X4	13	128		1664	Relamp Only 4F32T8 25w		$ -	13	100	1300	4000	364	1456	235.872	$ 235.87	
38	2		208	Room	4L F32T8 2X4	13	128		1664	Relamp Only 4F32T8 25w		$ -	13	100	1300	4000	364	1456	235.872	$ 235.87	
39	2		208	Chemical Storage	4L F32T8 2X4	6	128		768	Relamp Only 4F32T8 25w		$ -	6	100	600	4000	168	672	108.864	$ 108.86	
40	2		204	Room	4L F32T8 2X4	13	128		1664	Relamp Only 4F32T8 25w		$ -	13	100	1300	4000	364	1456	235.872	$ 235.87	
41	2		206	Room	4L F32T8 2X4	13	128		1664	Relamp Only 4F32T8 25w		$ -	13	100	1300	4000	364	1456	235.872	$ 235.87	
42	2		202	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
43	2		200	Room	4L F32T8 2X4	13	128		1664	Relamp Only 4F32T8 25w		$ -	13	100	1300	4000	364	1456	235.872	$ 235.87	
44	2		201	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
46	1		100	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
47	1		104	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
48	1			Storage	4L F32T8 2X4	2	128		256	Relamp Only 4F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
49	1		102	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
50	1		106	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
51	1		108	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
52	1		112	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
53	1		110	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
54	1		114	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
55	1		116	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
56	1		118	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	

Line #	Floor #	Section/ Building	ROOM #	Room Description	Existing Fixture Description	Exist. Qty.	Exist. Fix Wts	Foot Candle	Total Fix Wts	Energy Conservation Measure	NJ Rebate Code	NJ Rebate Amount	Repl. Qty.	Repl. Fix Wts	Total Fix Wts	Opr. Hours	Fix Wts Saved	kWh Saved	0.15/kWh	Annual Elec. Savings	Annual Sens. Savings
57	1		120	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
58	1			Ladies Room	4L F32T8 2X4	3	128		384	Relamp Only 4F32T8 25w		$ -	3	100	300	4000	84	336	54.432	$ 54.43	
60	1		122	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
61	1			Mens Room	4L F32T8 2X4	3	128		384	Relamp Only 4F32T8 25w		$ -	3	100	300	4000	84	336	54.432	$ 54.43	
63	1		124	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
66	1			Utility	4L F32T8 2X4	2	128		256	Relamp Only 4F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
69	1		126	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
70	1		128	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
71	1		130	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
72	1		132	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
73	1		134	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
74	1		136	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
75	1		138	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
76	1		140	Room	4L F32T8 2X4	8	128		1024	Relamp Only 4F32T8 25w		$ -	8	100	800	4000	224	896	145.152	$ 145.15	
101	1		2	Meeting Room	4L F32T8 2X4	1	128		128	Relamp Only 4F32T8 25w		$ -	1	100	100	4000	28	112	18.144	$ 18.14	
108	1			Nurse Lounge	4L F32T8 2X4	1	128		128	Relamp Only 4F32T8 25w		$ -	1	100	100	4000	28	112	18.144	$ 18.14	
110	1			Cafeteria	4L F32T8 2X4	48	128		6144	Relamp Only 4F32T8 25w		$ -	48	100	4800	4000	1344	5376	870.912	$ 870.91	
120	1	Bldg Security		Open Area	4L F32T8 2X4	2	128		256	Relamp Only 4F32T8 25w		$ -	2	100	200	4000	56	224	36.288	$ 36.29	
180	1	Art Wing	300	Arts-Crafts	4L F32T8 2X4	21	128		2688	Relamp Only 4F32T8 25w		$ -	21	100	2100	4000	588	2352	381.024	$ 381.02	
182	1	Art Wing	302	Kids Area	4L F32T8 2X4	15	128		1920	Relamp Only 4F32T8 25w		$ -	15	100	1500	4000	420	1680	272.16	$ 272.16	
184	1	Art Wing	302	Kids Area	4L F32T8 2X4	12	128		1536	Relamp Only 4F32T8 25w		$ -	12	100	1200	4000	336	1344	217.728	$ 217.73	
187	1	Art Wing	301	Room	4L F32T8 2X4	20	128		2560	Relamp Only 4F32T8 25w		$ -	20	100	2000	4000	560	2240	362.88	$ 362.88	
205	1			Corridor	4L F32T8 2X4	3	128		384	Relamp Only 4F32T8 25w		$ -	3	100	300	4000	84	336	54.432	$ 54.43	
78	1		5	Room	4L F40T12 2X4	12	160		1920	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 240.00	12	100	1200	4000	720	2880	466.56	$ 466.56	
79	1			Library A	4L F40T12 2X4	24	160		3840	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 480.00	24	100	2400	4000	1440	5760	933.12	$ 933.12	
80	1			Library A	4L F40T12 2X4	31	160		4960	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 620.00	31	100	3100	4000	1860	7440	1205.28	$ 1,205.28	
81	1			Library B	4L F40T12 2X4	12	160		1920	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 240.00	12	100	1200	4000	720	2880	466.56	$ 466.56	
82	1			Kitchen	4L F40T12 2X4	7	160		1120	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 140.00	7	100	700	4000	420	1680	272.16	$ 272.16	
83	1		4	Meeting Room	4L F40T12 2X4	12	160		1920	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 240.00	12	100	1200	4000	720	2880	466.56	$ 466.56	
84	1			Stairwell	4L F40T12 2X4	8	160		1280	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 160.00	8	100	800	4000	480	1920	311.04	$ 311.04	
91	1			Traffic Guard	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
95	1			VA Office	4L F40T12 2X4	1	160		160	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 20.00	1	100	100	4000	60	240	38.88	$ 38.88	
96	1			VA Office	4L F40T12 2X4	4	160		640	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 80.00	4	100	400	4000	240	960	155.52	$ 155.52	
97	1		3	Meeting Room	4L F40T12 2X4	4	160		640	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 80.00	4	100	400	4000	240	960	155.52	$ 155.52	
99	1			Storage	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
100	1			Café	4L F40T12 2X4	16	160		2560	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 320.00	16	100	1600	4000	960	3840	622.08	$ 622.08	
103	1			VA Office	4L F40T12 2X4	6	160		960	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 120.00	6	100	600	4000	360	1440	233.28	$ 233.28	
104	1			VA Office	4L F40T12 2X4	4	160		640	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 80.00	4	100	400	4000	240	960	155.52	$ 155.52	
105	1			Community Affairs	4L F40T12 2X4	7	160		1120	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 140.00	7	100	700	4000	420	1680	272.16	$ 272.16	
106	1			Notary Public	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
107	1			Nurse Lounge	4L F40T12 2X4	1	160		160	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 20.00	1	100	100	4000	60	240	38.88	$ 38.88	
119	1	Bldg Security		Open Area	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
121	1	Bldg Security		Office	4L F40T12 2X4	1	160		160	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 20.00	1	100	100	4000	60	240	38.88	$ 38.88	
122	1	Bldg Security		Office	4L F40T12 2X4	1	160		160	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 20.00	1	100	100	4000	60	240	38.88	$ 38.88	
123	1	Bldg Security		Office	4L F40T12 2X4	1	160		160	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 20.00	1	100	100	4000	60	240	38.88	$ 38.88	
124	1	Main Office		Office	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
125	1	Main Office		Office	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
126	1	Main Office		Office	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
127	1	Main Office		Board Room	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
129	1	Main Office		Kitchen	4L F40T12 2X4	1	160		160	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 20.00	1	100	100	4000	60	240	38.88	$ 38.88	
131	1	Main Office		Copy Room	4L F40T12 2X4	1	160		160	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 20.00	1	100	100	4000	60	240	38.88	$ 38.88	
132	1	Main Office		Office	4L F40T12 2X4	1	160		160	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 20.00	1	100	100	4000	60	240	38.88	$ 38.88	
133	1	Main Office		Office	4L F40T12 2X4	1	160		160	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 20.00	1	100	100	4000	60	240	38.88	$ 38.88	
135	1	Main Office		Office	4L F40T12 2X4	1	160		160	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 20.00	1	100	100	4000	60	240	38.88	$ 38.88	
136	1	Main Office		Office	4L F40T12 2X4	1	160		160	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 20.00	1	100	100	4000	60	240	38.88	$ 38.88	
137	1	Main Office		Executive Office	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
138	1	Main Office		Open Floor	4L F40T12 2X4	7	160		1120	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 140.00	7	100	700	4000	420	1680	272.16	$ 272.16	
146	1	Wellness Center		Office	4L F40T12 2X4	4	160		640	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 80.00	4	100	400	4000	240	960	155.52	$ 155.52	
160	1			Staff Office	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
163	1	Music		Music	4L F40T12 2X4	12	160		1920	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 240.00	12	100	1200	4000	720	2880	466.56	$ 466.56	
164	1	Music		Room	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
174	1	Auditorium		Control Booth	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
177	1	Auditorium	1	Meeting Room	4L F40T12 2X4	4	160		640	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 80.00	4	100	400	4000	240	960	155.52	$ 155.52	
188	1	Art Wing		Ladies Room	4L F40T12 2X4	2	160		320	Relamp and Reballast 4F32T8/Electronic 25w	20	$ 40.00	2	100	200	4000	120	480	77.76	$ 77.76	
88	1			Mens Room	65R30	2	65		130	15w R30 CFL	7	$ 14.00	2	15	30	4000	100	400	64.8	$ 64.80	
202	1	Art Wing		EMT	Locked - No Access				0			$ -	0								
212									0			$ -	0								
									177,609			$ 9,534.00			KW SAVED >>>>		53.97	215860	34969.32	$ 34,969.32	$ -
															123844					Total Cost Savings	$ 34,969.32
																				Total kWh Savings	215,860.00

Electric Rate: $0.162

Name:	The Township of Willingboro - Kennedy Center
Address:	One Salem Road
City, St.	Willingboro, NJ 08046
Contact:	0
Phone:	0

																		NON UNION	
LN #	FL #	Energy Conservation Measure	Repl Qty	qty fix	Fixture / Ballast	cost fix	qty lmp	Lamp / Sensor	cost lmp	qty ref	Reflector / PowerPack	cost ref	Ballast/Fix Cost Total	Lamp Cost Total	REFLECT Cost Total	Material Sell Total	Labor Cost	Labor Tot. Cost
118	1	No Measure	2	2		$ -	2		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
16	2	40w Spring CFL	1	1		$ -	1	40W CFL	$ 12.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 10.00	$ 10.00
169	1	40w Spring CFL	6	6		$ -	6	40W CFL	$ 12.00	0		$ -	$ -	$ 72.00	$ -	$ 93.60	$ 10.00	$ 60.00
173	1	40w Spring CFL	4	4		$ -	4	40W CFL	$ 12.00	0		$ -	$ -	$ 48.00	$ -	$ 62.40	$ 10.00	$ 40.00
175	1	40w Spring CFL	3	3		$ -	3	40W CFL	$ 12.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 10.00	$ 30.00
59	1	No Measure	1	1		$ -	1		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
62	1	No Measure	1	1		$ -	1		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
67	1	20w Spring CFL	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
87	1	20w Spring CFL	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
89	1	20w Spring CFL	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
90	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
92	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
93	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
109	1	20w Spring CFL	8	8		$ -	8	20W CFL	$ 10.00	0		$ -	$ -	$ 80.00	$ -	$ 104.00	$ 10.00	$ 80.00
112	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
113	1	20w Spring CFL	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
116	1	20w Spring CFL	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
117	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
18	2	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
19	2	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
27	2	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
29	2	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
65	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
68	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
128	1	20w Spring CFL	4	4		$ -	4	20W CFL	$ 10.00	0		$ -	$ -	$ 40.00	$ -	$ 52.00	$ 10.00	$ 40.00
130	1	20w Spring CFL	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
134	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
149	1	20w Spring CFL	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
151	1	20w Spring CFL	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
152	1	20w Spring CFL	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
156	1	20w Spring CFL	4	4		$ -	4	20W CFL	$ 10.00	0		$ -	$ -	$ 40.00	$ -	$ 52.00	$ 10.00	$ 40.00
159	1	20w Spring CFL	18	18		$ -	18	20W CFL	$ 10.00	0		$ -	$ -	$ 180.00	$ -	$ 234.00	$ 10.00	$ 180.00
161	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
165	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
166	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
167	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
168	1	20w Spring CFL	1	1		$ -	1	20W CFL	$ 10.00	0		$ -	$ -	$ 10.00	$ -	$ 13.00	$ 10.00	$ 10.00
172	1	20w Spring CFL	22	22		$ -	22	20W CFL	$ 10.00	0		$ -	$ -	$ 220.00	$ -	$ 286.00	$ 10.00	$ 220.00
176	1	20w Spring CFL	2	2		$ -	2	20W CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
194	1	20w Spring CFL	5	5		$ -	5	20W CFL	$ 10.00	0		$ -	$ -	$ 50.00	$ -	$ 65.00	$ 10.00	$ 50.00
203	1	20w Spring CFL	4	4		$ -	4	20W CFL	$ 10.00	0		$ -	$ -	$ 40.00	$ -	$ 52.00	$ 10.00	$ 40.00
195	1	No Measure	1	1		$ -	1		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
86	1	Relamp Only 2F32T8 25w	1	1		$ -	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 6.00	$ -	$ 7.80	$ 12.00	$ 12.00
12	2	Relamp Only 2F32T8 25w	15	15		$ -	30	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 90.00	$ -	$ 117.00	$ 12.00	$ 180.00
26	2	Relamp Only 2F32T8 25w	19	19		$ -	38	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 114.00	$ -	$ 148.20	$ 12.00	$ 228.00
45	2	Relamp Only 2F32T8 25w	14	14		$ -	28	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 84.00	$ -	$ 109.20	$ 12.00	$ 168.00
64	1	Relamp Only 2F32T8 25w	12	12		$ -	24	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 72.00	$ -	$ 93.60	$ 12.00	$ 144.00
77	1	Relamp Only 2F32T8 25w	17	17		$ -	34	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 102.00	$ -	$ 132.60	$ 12.00	$ 204.00
94	1	Relamp Only 2F32T8 25w	19	19		$ -	38	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 114.00	$ -	$ 148.20	$ 12.00	$ 228.00
204	1	Relamp Only 2F32T8 25w	12	12		$ -	24	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 72.00	$ -	$ 93.60	$ 12.00	$ 144.00
207	1	Relamp Only 2F32T8 25w	69	69		$ -	138	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 414.00	$ -	$ 538.20	$ 12.00	$ 828.00
208	S	Relamp Only 2F32T8 25w	8	8		$ -	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 48.00	$ -	$ 62.40	$ 12.00	$ 96.00
209	S	Relamp Only 2F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
210	S	Relamp Only 2F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
211	S	Relamp Only 2F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
189	1	Relamp Only 2F32T8 25w	26	26		$ -	52	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 156.00	$ -	$ 202.80	$ 12.00	$ 312.00
190	1	Relamp Only 2F32T8 25w	12	12		$ -	24	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 72.00	$ -	$ 93.60	$ 12.00	$ 144.00
192	1	Relamp Only 2F32T8 25w	14	14		$ -	28	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 84.00	$ -	$ 109.20	$ 12.00	$ 168.00
201	1	Relamp Only 2F32T8 25w	38	38		$ -	76	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 228.00	$ -	$ 296.40	$ 12.00	$ 456.00
181	1	Relamp Only 2F32T8 25w	2	2		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 24.00
185	1	Relamp Only 2F32T8 25w	4	4		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 48.00
193	1	Relamp Only 2F32T8 25w	14	14		$ -	28	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 84.00	$ -	$ 109.20	$ 12.00	$ 168.00
111	1	Relamp and Reballast 2F32T8/Electronic 25w	12	12	2L F32T8 ELECTRONIC BALLAST	$ 12.00	24	F32T8 25W LAMP	$ 3.00	0		$ -	$ 144.00	$ 72.00	$ -	$ 280.80	$ 25.00	$ 300.00
115	1	Relamp and Reballast 2F32T8/Electronic 25w	1	1	2L F32T8 ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
147	1	Relamp and Reballast 2F32T8/Electronic 25w	2	2	2L F32T8 ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 24.00	$ 12.00	$ -	$ 46.80	$ 25.00	$ 50.00
150	1	Relamp and Reballast 2F32T8/Electronic 25w	12	12	2L F32T8 ELECTRONIC BALLAST	$ 12.00	24	F32T8 25W LAMP	$ 3.00	0		$ -	$ 144.00	$ 72.00	$ -	$ 280.80	$ 25.00	$ 300.00
153	1	Relamp and Reballast 2F32T8/Electronic 25w	220	220	2L F32T8 ELECTRONIC BALLAST	$ 12.00	440	F32T8 25W LAMP	$ 3.00	0		$ -	$ 2,640.00	$ 1,320.00	$ -	$ 5,148.00	$ 25.00	$ 5,500.00

LN #	FL #	Energy Conservation Measure	Repl Qty	qty fxt	Fixture / Ballast	cost fix	qty lmp	Lamp / Sensor	cost lmp	qty ref	Reflector / PowerPack	cost ref	Ballast/Fix Cost Total	Lamp Cost Total	REFLECT Cost Total	Material Sell Total	Labor Cost	Labor Tot. Cost
155	1	Relamp and Reballast 2F32T8/Electronic 25w	6	6	2L F32T8 ELECTRONIC BALLAST	$ 12.00	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ 72.00	$ 36.00	$ -	$ 140.40	$ 25.00	$ 150.00
158	1	Relamp and Reballast 2F32T8/Electronic 25w	8	8	2L F32T8 ELECTRONIC BALLAST	$ 12.00	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ 96.00	$ 48.00	$ -	$ 187.20	$ 25.00	$ 200.00
154	1	Relamp and Reballast 2F32T8/Electronic 25w	6	6	2L F32T8 ELECTRONIC BALLAST	$ 12.00	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ 72.00	$ 36.00	$ -	$ 140.40	$ 25.00	$ 150.00
157	1	Relamp and Reballast 2F32T8/Electronic 25w	8	8	2L F32T8 ELECTRONIC BALLAST	$ 12.00	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ 96.00	$ 48.00	$ -	$ 187.20	$ 25.00	$ 200.00
171	1	Relamp and Reballast 2F32T8/Electronic 25w	4	4	2L F32T8 ELECTRONIC BALLAST	$ 12.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 48.00	$ 24.00	$ -	$ 93.60	$ 25.00	$ 100.00
178	1	Relamp and Reballast 2F32T8/Electronic 25w	1	1	2L F32T8 ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
179	1	Relamp and Reballast 2F32T8/Electronic 25w	2	2	2L F32T8 ELECTRONIC BALLAST	$ 12.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 24.00	$ 12.00	$ -	$ 46.80	$ 25.00	$ 50.00
198	1	Relamp and Reballast 2F32T8/Electronic 25w	1	1	2L F32T8 ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
200	1	Relamp and Reballast 2F32T8/Electronic 25w	1	1	2L F32T8 ELECTRONIC BALLAST	$ 12.00	2	F32T8 25W LAMP	$ 3.00	0		$ -	$ 12.00	$ 6.00	$ -	$ 23.40	$ 25.00	$ 25.00
139	1	Relamp and Reballast 2F96T8/Electronic 59w	2	2	2L F96T8 ELECTRONIC BALLAST	$ 18.00	4	F96T8 59W LAMP	$ 8.00	0		$ -	$ 36.00	$ 32.00	$ -	$ 88.40	$ 30.00	$ 60.00
148	1	Relamp and Reballast 2F96T8/Electronic 59w	1	1	2L F96T8 ELECTRONIC BALLAST	$ 18.00	2	F96T8 59W LAMP	$ 8.00	0		$ -	$ 18.00	$ 16.00	$ -	$ 44.20	$ 30.00	$ 30.00
170	1	Relamp and Reballast 2F96T8/Electronic 59w	6	6	2L F96T8 ELECTRONIC BALLAST	$ 18.00	12	F96T8 59W LAMP	$ 8.00	0		$ -	$ 108.00	$ 96.00	$ -	$ 265.20	$ 30.00	$ 180.00
144	1	New 4L F32T8/MIRO-4 High Bay 32w	16	16	4L F32T8 32W 2X4 HIGH BAY	$200.00	16		$ -	0		$ -	$ 3,200.00	$ -	$ -	$ 4,160.00	$ 125.00	$ 2,000.00
145	1	New 4L F32T8/MIRO-4 High Bay 32w	12	12	4L F32T8 32W 2X4 HIGH BAY	$200.00	12		$ -	0		$ -	$ 2,400.00	$ -	$ -	$ 3,120.00	$ 125.00	$ 1,500.00
162	1	New 4L F32T8/MIRO-4 High Bay 32w	16	16	4L F32T8 32W 2X4 HIGH BAY	$200.00	16		$ -	0		$ -	$ 3,200.00	$ -	$ -	$ 4,160.00	$ 125.00	$ 2,000.00
191	1	New 4L F32T8 8' Wrap 28w	1	1	4L F32T8 28W 1X8 WRAP	$150.00	2		$ -	0		$ -	$ 150.00	$ -	$ -	$ 195.00	$ 100.00	$ 100.00
183	1	Relamp Only 2FB32T8 U6 25w	1	1		$ -	2	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 12.00
85	1	Relamp and Reballast 2FB32T8/Electronic U6 25w	2	2	2L F32T8 ELECTRONIC BALLAST	$ 12.00	4	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ 24.00	$ 24.00	$ -	$ 62.40	$ 25.00	$ 50.00
98	1	Relamp and Reballast 2FB32T8/Electronic U6 25w	6	6	2L F32T8 ELECTRONIC BALLAST	$ 12.00	12	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ 72.00	$ 72.00	$ -	$ 187.20	$ 25.00	$ 150.00
102	1	Relamp and Reballast 2FB32T8/Electronic U6 25w	2	2	2L F32T8 ELECTRONIC BALLAST	$ 12.00	4	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ 24.00	$ 24.00	$ -	$ 62.40	$ 25.00	$ 50.00
142	1	Relamp and Reballast 2FB32T8/Electronic U6 25w	2	2	2L F32T8 ELECTRONIC BALLAST	$ 12.00	4	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ 24.00	$ 24.00	$ -	$ 62.40	$ 25.00	$ 50.00
143	1	Relamp and Reballast 2FB32T8/Electronic U6 25w	2	2	2L F32T8 ELECTRONIC BALLAST	$ 12.00	4	FB32T8 U6 25W LAMP	$ 6.00	0		$ -	$ 24.00	$ 24.00	$ -	$ 62.40	$ 25.00	$ 50.00
14	2	No Measure	4	4		$ -	8		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
15	2	No Measure	4	4		$ -	8		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
28	2	No Measure	1	1		$ -	2		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
32	2	No Measure	3	3		$ -	6		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
34	2	No Measure	3	3		$ -	6		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
114	1	No Measure	3	3		$ -	6		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
140	1	No Measure	1	1		$ -	2		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
141	1	No Measure	1	1		$ -	2		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
186	1	Relamp Only 3F32T8 25w	20	20		$ -	60	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 180.00	$ -	$ 234.00	$ 12.00	$ 240.00
196	1	Relamp Only 3F32T8 25w	15	15		$ -	45	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 135.00	$ -	$ 175.50	$ 12.00	$ 180.00
197	1	Relamp Only 3F32T8 25w	15	15		$ -	45	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 135.00	$ -	$ 175.50	$ 12.00	$ 180.00
199	1	Relamp Only 3F32T8 25w	2	2		$ -	6	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 18.00	$ -	$ 23.40	$ 12.00	$ 24.00
206	1	Relamp Only 3F32T8 25w	4	4		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 48.00
1	2	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
2	2	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
3	2	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
4	2	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
5	2	Relamp Only 4F32T8 25w	9	9		$ -	36	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 108.00	$ -	$ 140.40	$ 12.00	$ 108.00
6	2	Relamp Only 4F32T8 25w	9	9		$ -	36	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 108.00	$ -	$ 140.40	$ 12.00	$ 108.00
7	2	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
8	2	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
9	2	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
10	2	Relamp Only 4F32T8 25w	12	12		$ -	48	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 144.00	$ -	$ 187.20	$ 12.00	$ 144.00
11	2	Relamp Only 4F32T8 25w	3	3		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 36.00
13	2	Relamp Only 4F32T8 25w	12	12		$ -	48	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 144.00	$ -	$ 187.20	$ 12.00	$ 144.00
17	2	Relamp Only 4F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
20	2	Relamp Only 4F32T8 25w	13	13		$ -	52	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 156.00	$ -	$ 202.80	$ 12.00	$ 156.00
21	2	Relamp Only 4F32T8 25w	5	5		$ -	20	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 60.00	$ -	$ 78.00	$ 12.00	$ 60.00
22	2	Relamp Only 4F32T8 25w	13	13		$ -	52	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 156.00	$ -	$ 202.80	$ 12.00	$ 156.00
23	2	Relamp Only 4F32T8 25w	13	13		$ -	52	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 156.00	$ -	$ 202.80	$ 12.00	$ 156.00
24	2	Relamp Only 4F32T8 25w	6	6		$ -	24	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 72.00	$ -	$ 93.60	$ 12.00	$ 72.00
25	2	Relamp Only 4F32T8 25w	12	12		$ -	48	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 144.00	$ -	$ 187.20	$ 12.00	$ 144.00
30	2	Relamp Only 4F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
31	2	Relamp Only 4F32T8 25w	3	3		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 36.00
33	2	Relamp Only 4F32T8 25w	3	3		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 36.00
35	2	Relamp Only 4F32T8 25w	13	13		$ -	52	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 156.00	$ -	$ 202.80	$ 12.00	$ 156.00
36	2	Relamp Only 4F32T8 25w	6	6		$ -	24	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 72.00	$ -	$ 93.60	$ 12.00	$ 72.00
37	2	Relamp Only 4F32T8 25w	13	13		$ -	52	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 156.00	$ -	$ 202.80	$ 12.00	$ 156.00
38	2	Relamp Only 4F32T8 25w	13	13		$ -	52	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 156.00	$ -	$ 202.80	$ 12.00	$ 156.00
39	2	Relamp Only 4F32T8 25w	6	6		$ -	24	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 72.00	$ -	$ 93.60	$ 12.00	$ 72.00
40	2	Relamp Only 4F32T8 25w	13	13		$ -	52	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 156.00	$ -	$ 202.80	$ 12.00	$ 156.00
41	2	Relamp Only 4F32T8 25w	13	13		$ -	52	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 156.00	$ -	$ 202.80	$ 12.00	$ 156.00
42	2	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
43	2	Relamp Only 4F32T8 25w	13	13		$ -	52	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 156.00	$ -	$ 202.80	$ 12.00	$ 156.00
44	2	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
46	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
47	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
48	1	Relamp Only 4F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
49	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
50	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
51	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
52	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
53	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
54	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
55	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
56	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00

LN #	FL #	Energy Conservation Measure	Repl Qty	qty fixt	Fixture / Ballast	cost fix	qty lmp	Lamp / Sensor	cost lmp	qty ref	Reflector / PowerPack	cost ref	Ballast/Fix Cost Total	Lamp Cost Total	REFLECT Cost Total	Material Sell Total	Labor Cost	Labor Tot. Cost
57	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
58	1	Relamp Only 4F32T8 25w	3	3		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 36.00
60	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
61	1	Relamp Only 4F32T8 25w	3	3		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 36.00
63	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
66	1	Relamp Only 4F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
69	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
70	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
71	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
72	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
73	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
74	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
75	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
76	1	Relamp Only 4F32T8 25w	8	8		$ -	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 96.00	$ -	$ 124.80	$ 12.00	$ 96.00
101	1	Relamp Only 4F32T8 25w	1	1		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 12.00
108	1	Relamp Only 4F32T8 25w	1	1		$ -	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 12.00	$ -	$ 15.60	$ 12.00	$ 12.00
110	1	Relamp Only 4F32T8 25w	48	48		$ -	192	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 576.00	$ -	$ 748.80	$ 12.00	$ 576.00
120	1	Relamp Only 4F32T8 25w	2	2		$ -	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 24.00	$ -	$ 31.20	$ 12.00	$ 24.00
180	1	Relamp Only 4F32T8 25w	21	21		$ -	84	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 252.00	$ -	$ 327.60	$ 12.00	$ 252.00
182	1	Relamp Only 4F32T8 25w	15	15		$ -	60	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 180.00	$ -	$ 234.00	$ 12.00	$ 180.00
184	1	Relamp Only 4F32T8 25w	12	12		$ -	48	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 144.00	$ -	$ 187.20	$ 12.00	$ 144.00
187	1	Relamp Only 4F32T8 25w	20	20		$ -	80	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 240.00	$ -	$ 312.00	$ 12.00	$ 240.00
205	1	Relamp Only 4F32T8 25w	3	3		$ -	12	F32T8 25W LAMP	$ 3.00	0		$ -	$ -	$ 36.00	$ -	$ 46.80	$ 12.00	$ 36.00
78	1	Relamp and Reballast 4F32T8/Electronic 25w	12	12	4L F32T8 ELECTRONIC BALLAST	$ 15.00	48	F32T8 25W LAMP	$ 3.00	0		$ -	$ 180.00	$ 144.00	$ -	$ 421.20	$ 30.00	$ 360.00
79	1	Relamp and Reballast 4F32T8/Electronic 25w	24	24	4L F32T8 ELECTRONIC BALLAST	$ 15.00	96	F32T8 25W LAMP	$ 3.00	0		$ -	$ 360.00	$ 288.00	$ -	$ 842.40	$ 30.00	$ 720.00
80	1	Relamp and Reballast 4F32T8/Electronic 25w	31	31	4L F32T8 ELECTRONIC BALLAST	$ 15.00	124	F32T8 25W LAMP	$ 3.00	0		$ -	$ 465.00	$ 372.00	$ -	$ 1,088.10	$ 30.00	$ 930.00
81	1	Relamp and Reballast 4F32T8/Electronic 25w	12	12	4L F32T8 ELECTRONIC BALLAST	$ 15.00	48	F32T8 25W LAMP	$ 3.00	0		$ -	$ 180.00	$ 144.00	$ -	$ 421.20	$ 30.00	$ 360.00
82	1	Relamp and Reballast 4F32T8/Electronic 25w	7	7	4L F32T8 ELECTRONIC BALLAST	$ 15.00	28	F32T8 25W LAMP	$ 3.00	0		$ -	$ 105.00	$ 84.00	$ -	$ 245.70	$ 30.00	$ 210.00
83	1	Relamp and Reballast 4F32T8/Electronic 25w	12	12	4L F32T8 ELECTRONIC BALLAST	$ 15.00	48	F32T8 25W LAMP	$ 3.00	0		$ -	$ 180.00	$ 144.00	$ -	$ 421.20	$ 30.00	$ 360.00
84	1	Relamp and Reballast 4F32T8/Electronic 25w	8	8	4L F32T8 ELECTRONIC BALLAST	$ 15.00	32	F32T8 25W LAMP	$ 3.00	0		$ -	$ 120.00	$ 96.00	$ -	$ 280.80	$ 30.00	$ 240.00
91	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
95	1	Relamp and Reballast 4F32T8/Electronic 25w	1	1	4L F32T8 ELECTRONIC BALLAST	$ 15.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 15.00	$ 12.00	$ -	$ 35.10	$ 30.00	$ 30.00
96	1	Relamp and Reballast 4F32T8/Electronic 25w	4	4	4L F32T8 ELECTRONIC BALLAST	$ 15.00	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ 60.00	$ 48.00	$ -	$ 140.40	$ 30.00	$ 120.00
97	1	Relamp and Reballast 4F32T8/Electronic 25w	4	4	4L F32T8 ELECTRONIC BALLAST	$ 15.00	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ 60.00	$ 48.00	$ -	$ 140.40	$ 30.00	$ 120.00
99	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
100	1	Relamp and Reballast 4F32T8/Electronic 25w	16	16	4L F32T8 ELECTRONIC BALLAST	$ 15.00	64	F32T8 25W LAMP	$ 3.00	0		$ -	$ 240.00	$ 192.00	$ -	$ 561.60	$ 30.00	$ 480.00
103	1	Relamp and Reballast 4F32T8/Electronic 25w	6	6	4L F32T8 ELECTRONIC BALLAST	$ 15.00	24	F32T8 25W LAMP	$ 3.00	0		$ -	$ 90.00	$ 72.00	$ -	$ 210.60	$ 30.00	$ 180.00
104	1	Relamp and Reballast 4F32T8/Electronic 25w	4	4	4L F32T8 ELECTRONIC BALLAST	$ 15.00	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ 60.00	$ 48.00	$ -	$ 140.40	$ 30.00	$ 120.00
105	1	Relamp and Reballast 4F32T8/Electronic 25w	7	7	4L F32T8 ELECTRONIC BALLAST	$ 15.00	28	F32T8 25W LAMP	$ 3.00	0		$ -	$ 105.00	$ 84.00	$ -	$ 245.70	$ 30.00	$ 210.00
106	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
107	1	Relamp and Reballast 4F32T8/Electronic 25w	1	1	4L F32T8 ELECTRONIC BALLAST	$ 15.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 15.00	$ 12.00	$ -	$ 35.10	$ 30.00	$ 30.00
119	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
121	1	Relamp and Reballast 4F32T8/Electronic 25w	1	1	4L F32T8 ELECTRONIC BALLAST	$ 15.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 15.00	$ 12.00	$ -	$ 35.10	$ 30.00	$ 30.00
122	1	Relamp and Reballast 4F32T8/Electronic 25w	1	1	4L F32T8 ELECTRONIC BALLAST	$ 15.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 15.00	$ 12.00	$ -	$ 35.10	$ 30.00	$ 30.00
123	1	Relamp and Reballast 4F32T8/Electronic 25w	1	1	4L F32T8 ELECTRONIC BALLAST	$ 15.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 15.00	$ 12.00	$ -	$ 35.10	$ 30.00	$ 30.00
124	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
125	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
126	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
127	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
129	1	Relamp and Reballast 4F32T8/Electronic 25w	1	1	4L F32T8 ELECTRONIC BALLAST	$ 15.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 15.00	$ 12.00	$ -	$ 35.10	$ 30.00	$ 30.00
131	1	Relamp and Reballast 4F32T8/Electronic 25w	1	1	4L F32T8 ELECTRONIC BALLAST	$ 15.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 15.00	$ 12.00	$ -	$ 35.10	$ 30.00	$ 30.00
132	1	Relamp and Reballast 4F32T8/Electronic 25w	1	1	4L F32T8 ELECTRONIC BALLAST	$ 15.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 15.00	$ 12.00	$ -	$ 35.10	$ 30.00	$ 30.00
133	1	Relamp and Reballast 4F32T8/Electronic 25w	1	1	4L F32T8 ELECTRONIC BALLAST	$ 15.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 15.00	$ 12.00	$ -	$ 35.10	$ 30.00	$ 30.00
135	1	Relamp and Reballast 4F32T8/Electronic 25w	1	1	4L F32T8 ELECTRONIC BALLAST	$ 15.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 15.00	$ 12.00	$ -	$ 35.10	$ 30.00	$ 30.00
136	1	Relamp and Reballast 4F32T8/Electronic 25w	1	1	4L F32T8 ELECTRONIC BALLAST	$ 15.00	4	F32T8 25W LAMP	$ 3.00	0		$ -	$ 15.00	$ 12.00	$ -	$ 35.10	$ 30.00	$ 30.00
137	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
138	1	Relamp and Reballast 4F32T8/Electronic 25w	7	7	4L F32T8 ELECTRONIC BALLAST	$ 15.00	28	F32T8 25W LAMP	$ 3.00	0		$ -	$ 105.00	$ 84.00	$ -	$ 245.70	$ 30.00	$ 210.00
146	1	Relamp and Reballast 4F32T8/Electronic 25w	4	4	4L F32T8 ELECTRONIC BALLAST	$ 15.00	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ 60.00	$ 48.00	$ -	$ 140.40	$ 30.00	$ 120.00
160	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
163	1	Relamp and Reballast 4F32T8/Electronic 25w	12	12	4L F32T8 ELECTRONIC BALLAST	$ 15.00	48	F32T8 25W LAMP	$ 3.00	0		$ -	$ 180.00	$ 144.00	$ -	$ 421.20	$ 30.00	$ 360.00
164	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
174	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
177	1	Relamp and Reballast 4F32T8/Electronic 25w	4	4	4L F32T8 ELECTRONIC BALLAST	$ 15.00	16	F32T8 25W LAMP	$ 3.00	0		$ -	$ 60.00	$ 48.00	$ -	$ 140.40	$ 30.00	$ 120.00
188	1	Relamp and Reballast 4F32T8/Electronic 25w	2	2	4L F32T8 ELECTRONIC BALLAST	$ 15.00	8	F32T8 25W LAMP	$ 3.00	0		$ -	$ 30.00	$ 24.00	$ -	$ 70.20	$ 30.00	$ 60.00
88	1	15w R30 CFL	2	2		$ -	2	15W R3O CFL	$ 10.00	0		$ -	$ -	$ 20.00	$ -	$ 26.00	$ 10.00	$ 20.00
202	1	0	0	0		$ -	0		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
212	0	0	0	0		$ -	0		$ -	0		$ -	$ -	$ -	$ -	$ -	$ -	$ -
													$ 15,853.00	$ 15,044.00	$ -	$ 40,166.10	Total	$ 32,098.00
															With Tax	$ 42,977.73	CONT	$ -
																	Equipment	$ -
																	Total Labor:	$ 41,727.40
																	Total project	$ 84,705.13

NEW JERSEY SMART START REBATE	$ 9,534.00

	Energy Conservation Measures (ECM)	Buildings	Energy Savings			Gross Installation Costs*	Rebates/ Incentive	Avoided Cost	Net Implementation Costs	Annual Energy Cost Savings	Annual Oper. Cost Savings	Total Annual Cost Savings	Simple Pay Back	Internal Rate of Return (IRR)	Measure Life	Lifecycle Savings	CO2 Savings (lbs)
			kWh	kW	Therms												
1	At EOL, upgrade RTU SEER to higher efficiency *	Firehouse #163	10,920	0.09	-420	$7,810	$320	$7,410	$80	$1,800	$0	$1,800	0.0	2250.0%	15	$21,408	1
1	At EOL, upgrade RTU SEER to higher efficiency *	Kennedy Center	107,820	17.85	0	$311,950	$27,660	$277,800	$6,490	$17,500	$0	$17,500	0.4	269.6%	15	$202,424	36
2	At EOL, upgrade Heat pump SEER to higher efficiency	Library	1,010	0.17	0	$2,010	$160	$1,805	$45	$200	$0	$200	0.2	444.4%	15	$2,343	0
2	At EOL, upgrade Heat pump SEER to higher efficiency	Firehouse #162	1,010	0.17	0	$2,010	$160	$1,805	$45	$200	$0	$200	0.2	444.4%	15	$2,343	0
3	Install Computer Management System	Kennedy Center	8,400	0.00	0	$840	$0	$0	$840	$1,360	$0	$1,360	0.6	161.9%	10	$10,761	3
4	Install Vending Machine Management System	Library	1,180	0.02	0	$180	$0	$0	$180	$240	$0	$240	0.8	133.3%	15	$2,685	0
4	Install Vending Machine Management System	Firehouse #161	1,180	0.00	0	$180	$0	$0	$180	$190	$0	$190	0.9	105.6%	15	$2,088	0
4	Install Vending Machine Management System	Firehouse #163	1,180	0.00	0	$180	$0	$0	$180	$260	$0	$260	0.7	144.4%	15	$2,924	0
4	Install Vending Machine Management System	Kennedy Center	1,180	0.00	0	$180	$0	$0	$180	$190	$0	$190	0.9	105.6%	15	$2,088	0
4	Install Vending Machine Management System	Municipal Building	1,180	0.02	0	$180	$0	$0	$180	$190	$0	$190	0.9	105.6%	15	$2,088	0
5	Install Cooling Tower Fan VFDs	Library	12,750	0.00	0	$4,870	$1,800	$0	$3,070	$2,580	$0	$2,580	1.2	84.0%	15	$27,730	4
6	Install Domestic Hot Water Timer	Library	620	0.00	0	$160	$0	$0	$160	$100	$0	$100	1.6	62.5%	15	$1,034	0
7	Upgrade Lighting	Municipal Building	66,460	16.49	0	$19,310	$3,990	$0	$15,320	$10,770	$0	$10,770	1.4	70.0%	10	$76,550	22
7	Upgrade Lighting	Kennedy Center	215,860	53.97	0	$84,705	$9,530	$0	$75,175	$34,970	$0	$34,970	2.1	45.4%	10	$223,126	71
7	Upgrade Lighting	Library	26,120	6.85	0	$11,900	$80	$0	$11,820	$5,280	$0	$5,280	2.2	43.5%	10	$33,219	9
7	Upgrade Lighting	Department of Public Works	3,090	0.89	0	$1,755	$220	$0	$1,535	$580	$0	$580	2.6	36.0%	10	$3,413	1
7	Upgrade Lighting	DPW - Garage #2	4,170	1.11	0	$2,580	$370	$0	$2,210	$880	$0	$880	2.5	38.3%	10	$5,297	1
7	Upgrade Lighting	Firehouse #161	14,530	3.93	0	$6,075	$1,650	$0	$4,425	$2,380	$0	$2,380	1.9	53.0%	10	$15,877	5
7	Upgrade Lighting	Firehouse #162	5,450	1.45	0	$2,320	$360	$0	$1,960	$870	$0	$870	2.3	43.2%	10	$5,461	2
7	Upgrade Lighting	Firehouse #163	1,250	0.41	0	$1,895	$425	$0	$1,470	$270	$0	$270	5.4	12.9%	10	$833	0
8	Upgrade to High Efficiency Condensing Boiler	Firehouse #163	0	0.00	340	$6,020	$300	$4,900	$820	$510	$0	$510	1.6	62.2%	25	$8,061	2
8	Upgrade to High Efficiency Condensing Boiler	Kennedy Center		0.00	10,790	$294,550	$6,000	$257,660	$30,890	$17,280	$0	$17,280	1.8	55.9%	25	$270,009	63
8	Upgrade to High Efficiency Condensing Boiler	Firehouse #161	0	0.00	540	$8,150	$610	$5,380	$2,160	$800	$0	$800	2.7	37.0%	25	$11,771	3
8	Upgrade to High Efficiency Condensing Boiler	Municipal Building	0	0.00	2,510	$151,440	$3,000	$126,850	$21,590	$3,020	$0	$3,020	7.1	13.4%	25	$30,998	15
9	Heat Recovery from Absorption Chiller Exhaust	Library	0	0.00	11,950	$6,660	$0	$0	$6,660	$2,410	$0	$2,410	2.8	35.8%	15	$22,110	70
10	Based on OAT Hot Water Reset Temperatures	Municipal Building	0	0.00	290	$1,080	$0	$0	$1,080	$350	$0	$350	3.1	32.4%	25	$5,015	2
11	Upgrade Window AC Units	Kennedy Center	17,430	2.53	0	$10,000	$0	$0	$10,000	$2,820	$0	$2,820	3.5	25.2%	10	$14,055	6
11	Upgrade Window AC Units	Department of Public Works	380	0.06	0	$250	$0	$0	$250	$70	$0	$70	3.6	25.0%	10	$347	0
11	Upgrade Window AC Units	Firehouse #162	460	0.07	0	$750	$0	$0	$750	$70	$0	$70	10.7	4.5%	15	$86	0
11	Upgrade Window AC Units	Municipal Building	460	0.07	0	$750	$0	$0	$750	$70	$0	$70	10.7	-1.2%	10	-$153	0
12	Install Weatherstripping	Firehouse #162	240	0.00	30	$350	$0	$0	$350	$80	$0	$80	4.4	18.8%	10	$332	0
12	Install Weatherstripping	Municipal Building	950	0.00	105	$1,400	$0	$0	$1,400	$280	$0	$280	5.0	18.4%	15	$1,943	1

TOWNSHIP OF WILLINGBORO - Summary of ECMS by Payback

	Energy Conservation Measures (ECM)	Buildings	Energy Savings			Gross Installation Costs*	Rebates/ Incentive	Avoided Cost	Net Implementation Costs	Annual Energy Cost Savings	Annual Oper. Cost Savings	Total Annual Cost Savings	Simple Pay Back	Internal Rate of Return (IRR)	Measure Life	Lifecycle Savings	CO2 Savings (lbs)
			kWh	kW	Therms												
12	Install Weatherstripping	Kennedy Center	2,380	0.00	260	$3,500	$0	$0	$3,500	$810	$0	$810	4.3	19.1%	10	$3,409	2
12	Install Weatherstripping	Library	480	0.00	50	$1,050	$0	$0	$1,050	$170	$0	$170	6.2	9.9%	10	$400	0
13	Install Energy Star Appliances in the Kitchen	Department of Public Works	6,560	0.53	0	$4,910	$0	$0	$4,910	$1,230	$0	$1,230	4.0	24.1%	15	$9,774	2
13	Install Energy Star Appliances in the Kitchen	Kennedy Center	8,370	0.68	0	$7,410	$0	$0	$7,410	$1,360	$0	$1,360	5.4	16.5%	15	$8,826	3
14	At EOL, upgrade Aging Air Cooled Chiller with High Efficiency Units	Municipal Building	14,945	2.47	0	$184,610	$5,200	$164,610	$14,800	$2,400	$0	$2,400	6.2	13.9%	15	$13,851	5
15	Univent VFDS	Kennedy Center	9,380	0.00	0	$9,740	$0	$0	$9,740	$1,520	$0	$1,520	6.4	14.6%	20	$12,874	3
16	Install Hot Water Pump VFDs	Library	3,080	0.00	0	$3,730	$310	$0	$3,420	$620	$0	$620	5.5	16.2%	15	$3,982	1
16	Install Hot water pump VFDs	Kennedy Center	32,260	0.00	0	$41,890	$110	$0	$41,780	$5,230	$0	$5,230	8.0	11.0%	20	$36,029	11
17	Domestic Hot Water Optimization	Municipal Building	0	0.00	20	$200	$0	$0	$200	$30	$0	$30	6.7	12.4%	15	$158	0
18	Daylight Harvesting	Library	4,190	0.30	0	$7,000	$1,100	$0	$5,900	$850	$0	$850	6.9	7.3%	10	$1,351	1
19	Install Chilled Water Pump VFDs	Library	4,250	0.00	0	$3,940	$775	$0	$3,165	$860	$0	$860	3.7	26.4%	15	$7,102	1
19	Install Chilled Water Pump VFDs	Municipal Building	4,230	0.00	0	$8,520	$775	$0	$7,745	$690	$0	$690	11.2	3.9%	15	$492	1
20	Premium Efficiency Motors	Kennedy Center	2,700	0.38	0	$1,560	$110	$0	$1,450	$440	$0	$440	3.3	30.2%	20	$5,096	1
20	Premium Efficiency Motors	Library	960	0.00	0	$2,250	$270	$0	$1,980	$190	$0	$190	10.4	7.2%	20	$847	0
20	Premium Efficiency Motors	Municipal Building	1,030	0.15	0	$3,510	$110	$0	$3,400	$110	$0	$110	30.9	-3.8%	20	-$1,764	0
21	Install Condenser Water Pump VFDs	Library	1,700	0.00	0	$3,560	$310	$0	$3,250	$340	$0	$340	9.6	6.2%	15	$809	1
22	Replace Unit Heaters with IR Radiant Heaters	Department of Public Works	0	0.00	2,345	$56,770	$2,400	$0	$54,370	$3,890	$0	$3,890	14.0	0.9%	15	-$7,931	14
22	Replace Unit Heaters with IR Radiant Heaters	Firehouse #162	0	0.00	590	$14,190	$600	$0	$13,590	$870	$0	$870	15.6	-0.5%	15	-$3,204	3
23	Install Instaneous Hot Water Heater for Domestic Hot Water	Firehouse #161	0	0.00	25	$1,040	$300	$0	$740	$40	$0	$40	18.5	-2.5%	15	-$262	0
23	Install Instaneous Hot water heater for Domestic Hot Water	Firehouse #162	0	0.00	20	$1,040	$300	$0	$740	$30	$0	$30	24.7	-5.7%	15	-$382	0
25	Demand Control Ventilation	Kennedy Center	27,990	0.00	1,460	$23,400	$0	$0	$23,400	$6,900	$0	$6,900	3.4	28.8%	15	$58,972	18
25	Demand Control Ventilation	Library	14,340	0.00	750	$17,550	$0	$0	$17,550	$4,000	$0	$4,000	4.4	21.6%	15	$30,202	9
25	Demand Control Ventilation	Municipal Building	3,860	0.00	200	$17,550	$0	$0	$17,550	$900	$0	$900	19.5	-3.1%	15	-$6,806	2
26	Temperature Setpoint Optimization	Municipal Building	2,430	0.00	1,760	$2,160	$0	$0	$2,160	$2,500	$0	$2,500	0.9	115.7%	15	$27,685	11
26	Temperature Setpoint Optimization	Kennedy Center	50,290	0.00	0	$70,780	$0	$0	$70,780	$8,100	$0	$8,100	8.7	7.7%	15	$25,917	17
27	Time of Day Optimization	Municipal Building	8,190	0.00	1,100	$2,160	$0	$0	$2,160	$1,330	$0	$1,330	1.6	61.5%	15	$13,717	9
27	Time of Day Optimization	Kennedy Center	62,280	0.00	6,300	$70,780	$0	$0	$70,780	$10,100	$0	$10,100	7.0	11.5%	15	$49,793	57
27	Time of Day Optimization	Library	9,580	0.00	1,340	$22,810	$0	$0	$22,810	$1,935	$0	$1,935	11.8	3.2%	15	$290	11
28	Exhaust Fan TOD Optimization	Municipal Building	2,110	0.00	0	$9,110	$0	$0	$9,110	$340	$0	$340	26.8	-6.5%	15	-$5,051	1
28	Exhaust Fan TOD Optimization	Library	1,810	0.00	0	$10,260	$0	$0	$10,260	$370	$0	$370	27.7	-6.9%	15	-$5,843	1
28	Exhaust Fan TOD Optimization	Kennedy Center	6,100	0.00	0	$90,480	$0	$0	$90,480	$990	$0	$990	91.4	-17.1%	15	-$78,661	2
	Totals	**TOTALS**	**790,775**	**110.7**	**42,355**	**$1,639,950**	**$69,305**	**$848,220**	**$722,425**	**$167,715**	**$0**	**$167,715**	**4.3**	**22%**	**15**	**$1,271,318**	**509**

TOWNSHIP OF WILLINGBORO - Summary of ECMS by Payback

	Energy Conservation Measures (ECM)	Buildings	Energy Savings			Gross Installation Costs*	Rebates/ Incentive	Avoided Cost	Net Implementation Costs	Annual Energy Cost Savings	Annual Oper. Cost Savings	Total Annual Cost Savings	Simple Pay Back	Internal Rate of Return (IRR)	Measure Life	Lifecycle Savings	CO2 Savings (lbs)
			kWh	kW	Therms												
THE ECMS FOR BUILDING MANAGEMENT CONTROLS ARE NOT PART OF THE PRIOR TOTALS. THESE ECMS ARE PRESENTED AS OPTIONS, WHICH CAN BE DONE TOGETHER, OR IN INDIVIDUAL PARTS. THEY DO NOT TOTAL TOGETHER AS THAT WOULD BE DOUBLING UP THE TOTAL NUMBERS.																	
24	Building Management System	Kennedy Center	178,920	0.00	7,760	$1,059,530	$0	$0	$1,059,530	$41,410	$0	$41,410	25.6	-6.0%	15	-$565,180	105
24	Building Management System	Municipal Building	20,810	0.00	3,350	$227,950	$0	$0	$227,950	$7,400	$0	$7,400	30.8	-7.9%	15	-$139,609	26
24	Building Management System	Library	40,810	0.00	2,090	$135,230	$0	$0	$135,230	$11,260	$0	$11,260	12.0	2.9%	15	-$809	26
25	Demand Control Ventilation	Kennedy Center	27,990	0.00	1,460	$23,400	$0	$0	$23,400	$6,900	$0	$6,900	3.4	28.8%	15	$58,972	18
25	Demand Control Ventilation	Library	14,340	0.00	750	$17,550	$0	$0	$17,550	$4,000	$0	$4,000	4.4	21.6%	15	$30,202	9
25	Demand Control Ventilation	Municipal Building	3,860	0.00	200	$17,550	$0	$0	$17,550	$900	$0	$900	19.5	-3.1%	15	-$6,806	2
26	Temperature Setpoint Optimization	Municipal Building	2,430	0.00	1,760	$2,160	$0	$0	$2,160	$2,500	$0	$2,500	0.9	115.7%	15	$27,685	11
26	Temperature Setpoint Optimization	Kennedy Center	50,290	0.00	0	$70,780	$0	$0	$70,780	$8,100	$0	$8,100	8.7	7.7%	15	$25,917	17
27	Time of Day Optimization	Municipal Building	8,190	0.00	1,100	$2,160	$0	$0	$2,160	$1,330	$0	$1,330	1.6	61.5%	15	$13,717	9
27	Time of Day Optimization	Kennedy Center	62,280	0.00	6,300	$70,780	$0	$0	$70,780	$10,100	$0	$10,100	7.0	11.5%	15	$49,793	57
27	Time of Day Optimization	Library	9,581	0.00	1,340	$22,810	$0	$0	$22,810	$1,935	$0	$1,935	11.8	3.2%	15	$290	11
28	Exhaust Fan TOD Optimization	Municipal Building	2,110	0.00	0	$9,110	$0	$0	$9,110	$340	$0	$340	26.8	-6.5%	15	-$5,051	1
28	Exhaust Fan TOD Optimization	Library	1,810	0.00	0	$10,260	$0	$0	$10,260	$370	$0	$370	27.7	-6.9%	15	-$5,843	1
28	Exhaust Fan TOD Optimization	Kennedy Center	6,100	0.00	0	$90,480	$0	$0	$90,480	$990	$0	$990	91.4	-17.1%	15	-$78,661	2
13	Based on OAT Hot Water Reset Temperatures	Municipal Building	0	0.00	290	$1,080	$0	$0	$1,080	$350	$0	$350	3.1	32.4%	25	$5,015	2
11	Install Cooling Tower Fan VFDs	Library	12,750	0.00	0	$4,870	$1,800	$0	$3,070	$2,580	$0	$2,580	1.2	84.0%	15	$27,730	4
17	Install Hot Water Pump VFDs	Library	3,080	0.00	0	$3,730	$310	$0	$3,420	$620	$0	$620	5.5	16.2%	15	$3,982	1
17	Install Hot water pump VFDs	Kennedy Center	32,260	0.00	0	$41,890	$110	$0	$41,780	$5,230	$0	$5,230	8.0	11.0%	20	$36,029	11
18	Install Chilled Water Pump VFDs	Library	4,250	0.00	0	$3,940	$775	$0	$3,165	$860	$0	$860	3.7	26.4%	15	$7,102	1
19	Install Chilled Water Pump VFDs	Municipal Building	4,230	0.00	0	$8,520	$775	$0	$7,745	$690	$0	$690	11.2	3.9%	15	$492	1
21	Install Condenser Water Pump VFDs	Library	1,700	0.00	0	$3,560	$310	$0	$3,250	$340	$0	$340	9.6	6.2%	15	$809	1

Notes:

1. KW - Where Zero (0) values are shown in the table there is no demand reduction for this measure.
2. Rebates- Where Zero (0) values are shown in the table we could not find any rebates of other financial incentives that are currently available for this measure.

ECM# 11 - At EOL, Upgrade Window AC Units w/ High Efficiency Models

Estimated Implementation Costs

REPLACING WINDOW AC UNITS								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Window AC Unit	Unit	1	200	200	50	50	250
	Other Estimated Implementation Costs							-
	TOTAL							**$ 250**

Estimated Savings

SAVINGS FROM REPLACING WINDOW AC UNITS

3. Price of Electricity, $/kWh (blended rate)	$0.187
5. Price of Natural Gas, $/therm	$1.188

	Existing Condition	Proposed System	Savings
Number of Units	1	1	
Capacity per Unit, Tons	2	2	
Total Capacity, Tons	2	2	
Assumed Efficiency, SEER	8.0	10.1	
Total Hours of Normal Operation, hrs	1,021	1,021	
Cooling Load Factor	60%	60%	
Annual Cooling Production, ton-hours	1,225	1,225	
Annual Cooling Load, kBTU	14,702	14,702	
Annual Peak Demand Reduction (kW)	0.3	0.2	0.06
Annual Electrical Consumption, kWh	1,838	1,456	382
Annual Cost and Savings, $	$ 344	$ 272	**$ 71**

1. Assume existing systems runs all year when outside air temperature (OAT) is above 65F from Monday through Friday.
2. Both conditions are simulated with non-programmable thermostats.
3. Load factor calculation represents the percentage of time when the unit operates at full load.
4. It is assumed that the old systems have a 10% derated efficiency of 8 SEER.
5. Assume the new units have an efficiecy of 10.1 EER.
6. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet
7. No rebates or other finanical incentives were available for this measure

ECM# 10 - Lighting Upgrades – Costs & Savings are listed in the Lighting Summary & Inventory

ECM# 13 – Upgrade Kitchen Appliances w/ Energy Star Models

Estimated Implementation Costs

SOLID DOOR COMMERCIAL ICE MACHINE								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Installation and Replacement of Commercial Ice Machine		1		-	50	50	50
2	Energy Star Rated Commercial Ice Machine	See on the right	1	2,360	2,360		-	2,360
	Other Estimated Implementation Costs							-
	TOTAL							**$ 2,410**

Estimated Savings

ENERGY STAR / CEE TIER I - ICE MACHINE			
3. Price of Electricity, $/kWh (blended rate)	$0.187		
5. Price of Natural Gas, $/therm	$1.188		
	Existing Condition	**Proposed System**	**Savings**
Quantity	1	1	
Annual Peak Demand Reduction (kW)	2.4	1.9	0.49
Ice Machine Annual Energy Consumption (kWh)	30,178	24,134	**6,044**
Annual Cost and Savings, $	$ 5,643	$ 4,513	**$ 1,130**

1. This energy savings calculator was developed by the U.S. EPA and U.S. DOE and is provided for estimating purposes only. Actual energy savings may vary based on use and other factors.

2. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet

3. No rebates or other finanical incentives were available for this measure

Estimated Implementation Costs

SOLID DOOR COMMERCIAL REFRIGERATORS								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Installation and Replacement of Solid Door Commercial Refrigerator		1		-	50	50	50
2	Energy Star Rated Commercial Refrigerator	See on the right	1	2,450	2,450		-	2,450
	Other Estimated Implementation Costs							-
	TOTAL							**$ 2,500**

Estimated Savings

ENERGY STAR/ CEE TIER I - REFRIGERATOR/FREEZER UPGRADE				
3. Price of Electricity, $/kWh (blended rate)		$0.187		
5. Price of Natural Gas, $/therm		$1.188		
		Existing Condition	**Proposed System**	**Savings**
Single Door Freezer (24 cu ft)	Total Annual Energy Consumption (kWh)	4,519	4,008	
Quantity		1	1	
Annual Peak Demand Reduction (kW)		0.4	0.3	0.04
Total Annual Energy Savings		4,519	4,008	**511**
Annual Cost and Savings, $		$ 845	$ 749	**$ 100**

1. This energy savings calculator was developed by the U.S. EPA and U.S. DOE and is provided for estimating purposes only. Actual energy savings may vary bas

2. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet

3. No rebates or other finanical incentives were available for this measure

ECM# 22 - Replace Unit Heaters with IR Radiant Heaters

Estimated Implementation Costs

Replace Unit Heaters w/ IR Radiant Heaters								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	IR Radiant Tube Heaters	ea	8	3,500	28,000	1,600	12,800	40,800
2								-
3								-
	Other Estimated Implementation Costs							15,973
	TOTAL							**$ 56,773**
	NJ SmartStart Rebate							**$ 2,400**

Estimated Savings

Unit Heater Replacement				
3. Price of Electricity, $/kWh (blended rate)	$0.147			
5. Price of Natural Gas, $/therm	$1.657			
	Existing Condition	**Proposed System**	**Savings**	
Annual Run Hours	3,470	3,470	**0**	hours
Annual Gas Use (therms)	64,889	62,544	**2,345**	Cost
Annual Cost and Savings, $	$ 107,521	$ 103,635	**$ 3,886**	Savings

1. Existing Condition assumes convective loss/thermal stratification due to large volume areas (high bay/ceiling) and overhead door opening.

ECM# 4 – Install Vending Machine Management System

Estimated Implementation Costs

VENDINGMISERS								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	VendingMisers	EA	1	179	179	-	-	179
	TOTAL							**$ 179**

Estimated Savings

VENDING MACHINE POWER MANAGEMENT SYSTEM				
3. Price of Electricity, $/kWh (blended rate)		$0.164		
5. Price of Natural Gas, $/therm		$1.488		
		Existing Condition	**Proposed System**	**Savings**
Soda Machine Power Consumption		100%	56%	
Run Hours		8,760	8,760	
Annual Peak Demand Reduction (kW)		0.06	0.03	0.02
Annual Energy Consumption (kWh)		2,102	925	1,177
Annual Cost and Savings, $		$ 345	$ 152	**$ 193**
1. Run hours based on fan motors being run 8760 hrs				
2. Sample Calculations Below				
Vending Machine Count	1			
Annual Run-Time Factor	60%			
VendMiser Installation Savings	0			
Soda Machine Pow er Consumption, kw	0.40			
Annual Savings %	56%			
Annual Energy Savings	$193			
Analysis Spreadsheet				
3. No rebates or other finanical incentives w ere available for this measure				
4. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet				

ECM# 10 - Lighting Upgrades – Costs & Savings are listed in the Lighting Summary & Inventory

ECM# 23 – Install Instantaneous Hot Water Heater for Domestic Hot Water

Estimated Implementation Costs

Instantaneous Tankless DHW Heaters								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Installation Tankless Water Heaters *Includes demolition of storage tank, installation of gas, electrical and pipe work.	LS	1	540	540	133	133	673
	Other Estimated Implementation Costs							367
	SUB-TOTAL							673
	NJ Smart Start Rebate							**$ 300**
	TOTAL							**$ 1,040**

Estimated Savings

Instantaneous Hot Water			
3. Price of Electricity, $/kWh (blended rate)	$0.164		
5. Price of Natural Gas, $/therm	$1.488		
	Existing Condition	**Proposed System**	**Savings**
Standby Loss (Btu-hr)	495	0	
Annual Op Cost for Standby Losses	$ 37	0	
Run Hours for Standby Losses	8,760	4,671	
Annual Energy Consumption (THERMS)	25	0	25
Annual Cost and Savings, $	$ 37	$ -	**$ 37**

ECM# 8 - Upgrade to High Efficiency Condensing Boiler

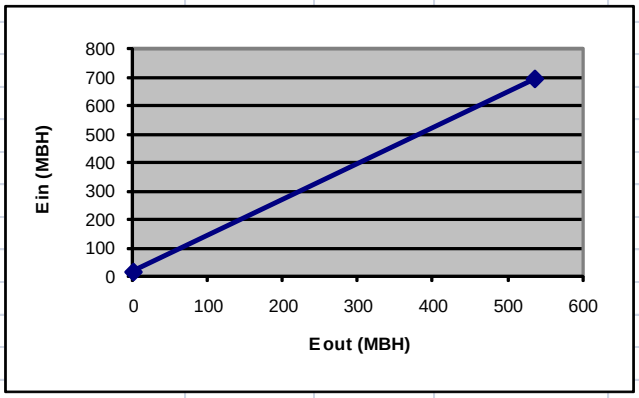
Estimated Implementation Costs

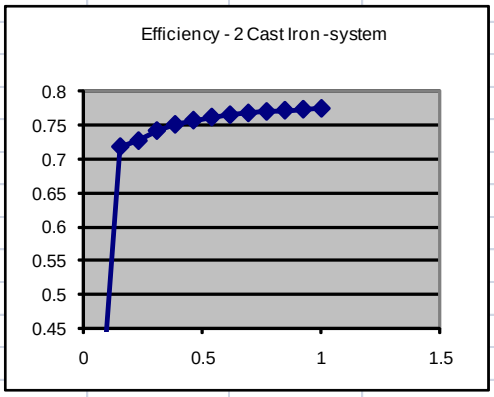
Condensing Boiler									
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL	
				PER UNIT	TOTAL	PER UNIT	TOTAL		
1	350 KBTU High Eff Gas Boiler	ea	1	6,195	6,195	864	864	7,059	
	Other Estimated Implementation Costs							1,094	
	TOTAL							**$**	**8,150**
	AVOIDED COST							**$**	**5,383**
	NJ Smart Start Rebate							**$**	**613**
	Total Incremental Cost							**$**	**2,770**

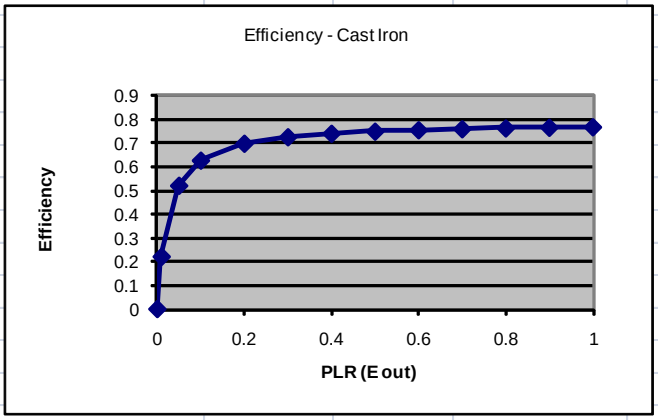
Estimated Savings

SAVINGS FROM HIGH EFFICENCY CONDENSING BOILER						
3. Price of Electricity, $/kWh (blended rate)				$0.164		
5. Price of Natural Gas, $/therm				$1.488		
				Existing Condition	**Proposed System**	**Savings**
Boiler Plant Capacity, kBTU				346	346	
Hours of Operation				4,214	4,214	
Seasonal Efficiency				85%	93%	
Annual Gas Consumption, therms				1,724	1,187	537
Annual Cost and Savings, $				$ 2,566	$ 1,766	**$ 800**
1. Assume the boilers have a temperature reset schedule w here the hot w ater is supplied at 180F/160F w hen it is 0F/40F outside.						
2. Sample Calculation Below						
Single Boiler:						
	Gas Fuel					
Eff 100%	0.80			E out		Ein
E in 100%	346	MBH		0		8.65
E out 100%	277	MBH		276.8		346
SBL (% Ein)	3%					
SBL	8.65	MBH				
Min E out	20%	69.2				
Comb, Eff	83%					
m slope=	1.21875					
INDIVIDUAL BOILER						
			linear realtion			
Eout (Load)	PLR	E in	Efficiency			
0	0%	9	0%			
3	1%	12	23%			
14	5%	26	54%			
28	10%	42	65%			
55	20%	76	73%			
83	30%	110	76%			
235	85%	295	80%			
138	50%	177	78%			
166	60%	211	79%			
194	70%	245	79%			
221	80%	279	80%			
249	90%	312	80%			
277	100%	346	80%			

COMBINED SYSTEM BOILER PART LOAD							
Capacity of each	346						
No. of Boilers	1						
Total Capacity	346						
Avg Load Factor	15%						
		No. of	Load	per boiler	plant	0	Gas
Load	PLR	Boilers	per boiler	E in	E in	Efficiency	Therm
346	100%	1	52	72	72	72%	9
319	92%	1	48	67	67	71%	159
293	85%	1	44	62	62	71%	109
266	77%	1	40	57	57	70%	160
240	69%	1	36	52	52	69%	244
213	62%	1	32	48	48	67%	255
186	54%	1	28	43	43	65%	219
160	46%	1	24	38	38	63%	148
133	38%	1	20	33	33	61%	129
106	31%	1	16	28	28	57%	107
80	23%	1	12	23	23	52%	87
69	15%	1	10	21	21	49%	98
							1,724

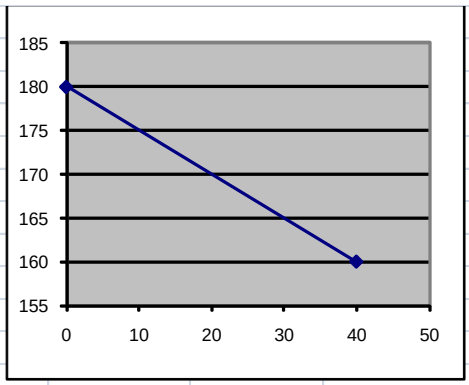






		Fuel Source	Gas	
		# Days perWeek in Ope	7	
Temp		6-9pm	Op Hrs	Plant
Bin		Mon-Sun	M-F	LOAD
0		13	13	100%
15		237	237	92%
20		175	175	85%
25		280	280	77%
30		466	466	69%
35		537	537	62%
40		512	512	54%
45		391	391	46%
50		390	390	38%
55		381	381	31%
60		374	374	23%
65		458	458	15%
0		0	0	8%
0		Total	4214	0%

Max Load	346	MBH					
Condensing Boiler Capacity	346	MBH Each					
# Boilers	1						
Plant Capacity	346						
	RESET SCHEDULE	OA	SWT				
		0	180				
		40	160				
	Reset Slope	-0.5					
	ASSUMPTION						
	OAT	SWT	RWT	Zone Load %	LOAD	Load/Boiler	% Load
	0.85	179.58	159.73	100%	346	346	100%
	5.85	177.08	158.14	92%	319	319	92%
	10.85	174.58	156.55	85%	293	293	85%
	15.85	172.08	154.96	77%	266	266	77%
	20.85	169.58	153.37	69%	240	240	69%
	25.85	167.08	151.78	62%	213	213	62%
	30.85	164.58	150.18	54%	186	186	54%
	35.85	162.08	148.59	46%	160	160	46%
	40.85	159.58	147.00	38%	133	133	38%
	45.85	157.08	145.41	31%	106	106	31%
	50.85	154.58	143.82	23%	80	80	23%
	55.85	152.08	142.23	15%	69	#DIV/0!	#DIV/0!
	60.85	149.58	140.64	8%	69	#DIV/0!	#DIV/0!
	65.85	147.08	139.05	0%	0	0	0
	(1) 346 Boilers		Load Factor	15%	Op Hrs	Gas	
Zone Load	No Boilers	Plant Load %	Eff %	E out	M-F 6-9pm	Therm	
346	1	100%	93%	56	13	7	
319	1	92%	93%	52	237	122	
293	1	85%	93%	47	175	83	
266	1	77%	93%	43	280	120	
240	1	69%	93%	39	466	180	
213	1	62%	93%	34	537	184	
186	1	54%	93%	30	512	154	
160	1	46%	93%	26	391	100	
133	1	38%	93%	21	390	83	
106	1	31%	93%	17	381	65	
80	1	23%	93%	13	374	48	
53	0	#DIV/0!	94%	8	458	39	
27	0	#DIV/0!	96%	4	0	0	
						1,187	



ECM# 2 - At EOL, Upgrade Heat Pump SEER to Higher Efficiency Models

Estimated Implementation Costs

Heat Pump Unit SEER Upgrade								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	2-ton AC Unit	ea	1	1,749	1,749	74	74	1,823
	Other Estimated Implementation Costs							182
	TOTAL GROSS COST							**$ 2,005**
	AVOIDED COST							**$ 1,805**
	New Jersey Smart Start Rebate							**$ 162**
	TOTAL INCREMENTAL COST							**$ 200**

Estimated Savings

Replace aging Split AC Units with higher efficiency units

3. Price of Electricity, $/kWh (blended rate)	$0.159
5. Price of Natural Gas, $/therm	$1.488

	Existing Condition	Proposed System	Savings
Total Tons	2	2	
SEER	13.0	17.0	
Annual Run Hours	574	574	
Annual Peak Demand Reduction (kW)	0.7	0.5	0.17
Annual kWh	4,294	3,284	1,010
Annual Cost and Savings, $	$ 683	$ 522	**$ 200**

1. Cost per kWh and therm prices taken from "# Constants" sheet.
2. Run hours based on bin data and time of day factor.
3. Assumed 2 Ton AC Units thorughout building
4. See Sample Calculations below

Tag	Tons	Run Hrs	Standard SEER Btu / Wh	Hi Eff SEER Btu / Wh	kWh Saved	Annual Savings	Incremental Cost
AC Unit 1	2	2,326	13.0	17.0	1010	$ 161	$ 200
0	0	0	0.0	0.0	0	$ -	$ -
0	0	0	0.0	0.0	0	$ -	$ -
Total	**2**				**1010**	**$ 161**	**$ 200**

5. Coincidence Factor for peak kW reduction taken from United Illuminated Company: 2005 Coincidence Factor Study
6.. ASHRAE 90.1-1989 Referenced for baseline SEER/EER
7. Proposed SEER/EER Ratings taken from Carrier Air Cooled Heat Pumps

ECM# 11 - At EOL, Upgrade Window AC Units w/ High Efficiency Models

Estimated Implementation Costs

REPLACING WINDOW AC UNITS								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Window AC Unit	Unit	3	200	600	50	150	750
	Other Estimated Implementation Costs							-
	TOTAL							**$ 750**

Estimated Savings

SAVINGS FROM REPLACING WINDOW AC UNITS

3. Price of Electricity, $/kWh (blended rate)	$0.159
5. Price of Natural Gas, $/therm	$1.488

	Existing Condition	Proposed System	Savings
Number of Units	3	3	
Capacity per Unit, Tons	0.8	0.8	
Total Capacity, Tons	2	2	
Assumed Efficiency, SEER	8.0	10.1	
Total Hours of Normal Operation, hrs	1,021	1,021	
Cooling Load Factor	60%	60%	
Annual Cooling Production, ton-hours	1,470	1,470	
Annual Cooling Load, kBTU	17,643	17,643	
Annual Peak Demand Reduction (kW)	0.3	0.3	0.07
Annual Electrical Consumption, kWh	2,205	1,747	459
Annual Cost and Savings, $	$ 351	$ 278	**$ 73**

1. Assume existing systems runs all year when outside air temperature (OAT) is above 65F from Monday through Friday.
2. Both conditions are simulated with non-programmable thermostats.
3. Load factor calculation represents the percentage of time when the unit operates at full load.
4. It is assumed that the old systems have a 10% derated efficiency of 8 SEER.
5. Assume the new units have an efficiecy of 10.1 EER.
6. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet
7. No rebates or other finanical incentives were available for this measure

ECM#8 - Lighting Upgrades – Costs & Savings are listed in the Lighting Summary & Inventory

ECM# 12 - Install Weatherstripping

Estimated Implementation Costs

Weatherstripping								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Replace weatherstripping around doors	ea	1	200	200	150	150	350
	TOTAL							**$ 350**

Estimated Savings

SAVINGS FROM WEATHERSTRIPPING DOORS			
3. Price of Electricity, $/kWh (blended rate)	$0.159		
5. Price of Natural Gas, $/therm	$1.488		
	Existing Condition	**Proposed System**	**Savings**
Number of Doors	1	1	
Estimated Infiltration Rate per Door, CFM	106	21	
Annual Cooling Infiltration Hours, OAT > 80F	800	800	
Annual Heating Infiltration Hours, OAT < 55F	500	500	
Annual Cooling Load, kBTU	2,378	476	
Annual Cooling Electrical Consumption, kWh	297	59	238
Annual Heating Load, kBTU	2,573	469	
Annual Heating Natural Gas Consumption, therms	32.16	5.86	26
Annual Cost and Savings, $	$ 95	$ 18	**$ 77**

1. Infiltration rate was calculated according to ASHRAE Fundamentals 2005 Door Leakage Rate Equation F27.12
2. Estimated hours of infiltration was based on all hours below 55F and above 80F for the region.
3. It is assumed that each door has a leakage area of 45 square inches (15 linear feet by 1/4 in). Vestibule doors are
4. A 60% load factor was used when calculating the existing leakage rate.
5. Assume all AHUs have an supply air temperature of 55F in the summer and 80F in the winter.
6. The average outside air temperature above 80F during the year is 86F. The average outside air temperature below
7. Assume the cooling plant has an efficiency of 1.4 kw/ton and the natural gas fired heating units have an efficienc
8. New weatherstripping is assumed to reduce inflitration by 80%.
9. There is no demand reduction for this measure
10. No rebates or other finanical incentives were available for this measure

ECM# 22 - Replace Unit Heaters with IR Radiant Heaters

Estimated Implementation Costs

Replace Unit Heaters w/ IR Radiant Heaters								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	IR Radiant Tube Heaters	ea	2	3,500	7,000	1,600	3,200	10,200
2								-
3								-
	Other Estimated Implementation Costs							3,993
	TOTAL							**$ 14,193**

Estimated Savings

Unit Heater Replacement				
3. Price of Electricity, $/kWh (blended rate)	$0.159			
5. Price of Natural Gas, $/therm	$1.488			
	Existing Condition	**Proposed System**	**Savings**	
Annual Run Hours	3,470	3,470	**0**	hours
Annual Gas Use (therms)	16,222	15,636	**586**	Cost
Annual Cost and Savings, $	$ 24,139	$ 23,266	**$ 872**	Savings

1. Existing Condition assumes convective loss/thermal stratification due to large volume areas (high bay/ceiling) and overhead door opening.

ECM# 23 – Install Instantaneous Hot Water Heater for Domestic Hot Water

Estimated Implementation Costs

Instantaneous Tankless DHW Heaters								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Installation Tankless Water Heaters *Includes demolition of storage tank, installation of gas, electrical and pipe work.	LS	1	540	540	133	133	673
2								-
	Other Estimated Implementation Costs							367
	NJ Smart Start Rebate							**$ 300**
	TOTAL							**$ 1,040**

Estimated Savings

Instantaneous Hot Water			
4. Price of the Demand of Electricity, $/kW/month	$0.000		
5. Price of Natural Gas, $/therm	$1.488		
	Existing Condition	**Proposed System**	**Savings**
Standby Loss (Btu-hr)	451	0	
Annual Op Cost for Standby Losses	$ 33	0	
Run Hours for Standby Losses	8,760	4,671	
Annual Energy Consumption (THERMS)	22	0	22
Annual Cost and Savings, $	$ 33	$ -	**$ 33**

ECM# 1 - At EOL, Upgrade RTU SEER to Higher Efficiency Models

Estimated Implementation Costs

RTU SEER Upgrade + Fuel Switch								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
2	4-ton PRTU w/ Gas Heat & Econ	ea	1	4,475	4,475	795	795	5,270
	Other Estimated Implementation Costs							2,538
	TOTAL GROSS COST							**$ 7,808**
	AVOIDED COST							**$ 7,408**
	New Jersey Smart Start Rebate							**324**
	TOTAL INCREMENTAL COST							**400**

Estimated Savings

Replace aging AHUs with higher efficiency units

3. Price of Electricity, $/kWh (blended rate)	$0.218
5. Price of Natural Gas, $/therm	$1.488

	Existing Condition	Proposed System	Savings
Total Tons	4	4	
SEER	13.0	14.3	
Annual Run Hours	1,163	1,163	
Annual Peak Demand Reduction (kW)	0.7	0.6	0.06
Annual kWh	4,294	3,904	390
Annual Cost and Savings, $	$ 936	$ 851	**$ 100**

1. Cost per kWh and therm prices taken from "# Constants" sheet.
2. Run hours based on bin data and time of day factor.
3. Assumed 10 - 15 Ton RTUs thorughout building
4. See Sample Calculations below

Tag	Tons	Run Hrs	Standard SEER Btu / Wh	Hi Eff SEER Btu / Wh	kWh Saved	Annual Savings	Incremental Cost
Office	4	1,163	13.0	14.3	390	$ 85	$ 400
Total	**4**				**390**	**$ 85**	**$ 400**

Coincidence Factor Study

6.. ASHRAE 90.1-1989 Referenced for baseline SEER/EER

7. Proposed SEER/EER Ratings taken from Lennox Strategos Series

ECM# 4 - At Install Vending Machine Management System

Estimated Implementation Costs

VENDINGMISERS								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	VendingMisers	EA	1	179	179	-	-	179
	TOTAL							**$ 179**

Estimated Savings

VENDING MACHINE POWER MANAGEMENT SYSTEM				
4. Price of the Demand of Electricity, $/kW/month		$0.000		
5. Price of Natural Gas, $/therm		$1.488		
		Existing Condition	**Proposed System**	**Savings**
Soda Machine Power Consumption		100%	56%	
Run Hours		8,760	8,760	
Annual Peak Demand Reduction (kW)		0.06	0.03	0.02
Annual Energy Consumption (kWh)		2,102	925	1,177
Annual Cost and Savings, $		$ 458	$ 202	**$ 257**
1. Run hours based on fan motors being run 8760 hrs				
2. Sample Calculations Below				
Vending Machine Count	1			
Annual Run-Time Factor	60%			
VendMiser Installation Savings	0			
Soda Machine Pow er Consumption, kw	0.40			
Annual Savings %	56%			
Annual Energy Savings	$257			
Analysis Spreadsheet				
3. No rebates or other finanical incentives w ere available for this measure				
4. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet				

ECM# 7 - Lighting Upgrades – Costs & Savings are listed in the Lighting Summary & Inventory

ECM# 8 - Upgrade to High Efficiency Condensing Boiler

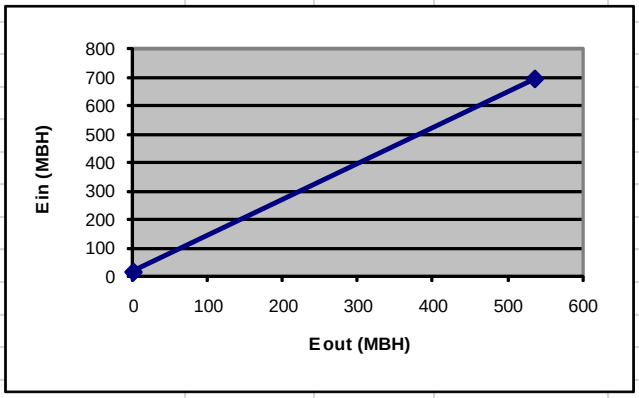
Estimated Implementation Costs

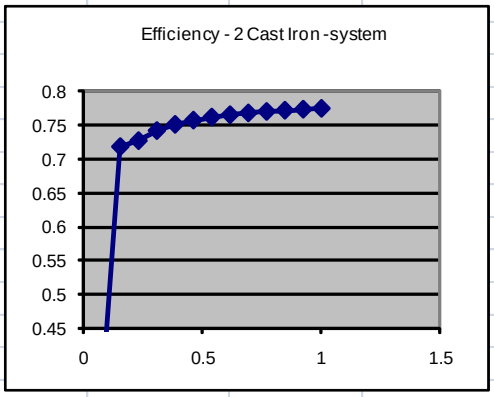
Condensing Boiler								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	200 KBTU High Eff Gas Boiler	ea	1	4,345	4,345	864	864	5,209
	Other Estimated Implementation Costs							807
	TOTAL GROSS COST							**$ 6,016**
	AVOIDED COST							**$ 4,896**
	NJ SmartStart Rebate							**$ 300**
	Total Incremental Cost							**$ 1,120**

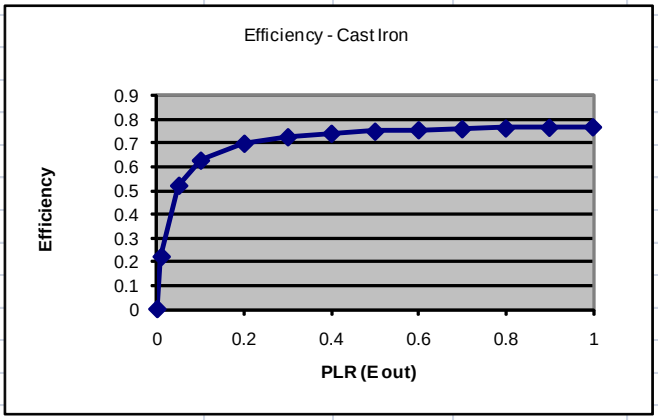
Estimated Savings

SAVINGS FROM HIGH EFFICENCY CONDENSING BOILER						
3. Price of Electricity, $/kWh (blended rate)				$0.218		
5. Price of Natural Gas, $/therm				$1.488		
				Existing Condition	**Proposed System**	**Savings**
Boiler Plant Capacity, kBTU				200	200	
Hours of Operation				4,214	4,214	
Seasonal Efficiency				85%	93%	
Annual Gas Consumption, therms				1,259	915	344
Annual Cost and Savings, $				$ 1,873	$ 1,361	**$ 512**
1. Assume the boilers have a temperature reset schedule where the hot water is supplied at 180F/160F when it is 0F/40F outside.						
2. Sample Calculation Below						
Single Boiler:						
	Gas Fuel					
Eff 100%	0.8			Eout		Ein
E in 100%	200	MBH		0		5
E out 100%	160	MBH		160		200
SBL (% Ein)	3%					
SBL	5	MBH				
Min E out	20%	40				
Comb, Eff	83%					
m slope=	1.21875					
INDIVIDUAL BOILER						
			linear realtion			
Eout (Load)	PLR	E in	Efficiency			
0	0%	5	0%			
2	1%	7	23%			
8	5%	15	54%			
16	10%	25	65%			
32	20%	44	73%			
48	30%	64	76%			
136	85%	171	80%			
80	50%	103	78%			
96	60%	122	79%			
112	70%	142	79%			
128	80%	161	80%			
144	90%	181	80%			
160	100%	200	80%			

COMBINED SYSTEM BOILER PART LOAD							
Capacity of each	200						
No. of Boilers	1						
Total Capacity	200						
Avg Load Factor	20%						
		No. of	Load	per boiler	plant	0	Gas
Load	PLR	Boilers	per boiler	E in	E in	Efficiency	Therm
200	100%	1	40	54	54	74%	7
185	92%	1	37	50	50	74%	119
169	85%	1	34	46	46	73%	81
154	77%	1	31	43	43	72%	119
138	69%	1	28	39	39	71%	181
123	62%	1	25	35	35	70%	188
108	54%	1	22	31	31	69%	160
92	46%	1	18	28	28	67%	108
77	38%	1	15	24	24	65%	93
62	31%	1	12	20	20	62%	76
46	23%	1	9	16	16	57%	61
40	15%	1	8	15	15	54%	68
							1,259

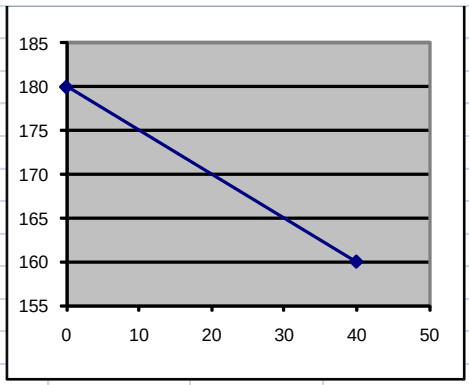






		Fuel Source	Gas	
		# Days perWeek in Ope	7	
Temp		6-9pm	Op Hrs	Plant
Bin		Mon-Sun	M-F	LOAD
0		13	13	100%
15		237	237	92%
20		175	175	85%
25		280	280	77%
30		466	466	69%
35		537	537	62%
40		512	512	54%
45		391	391	46%
50		390	390	38%
55		381	381	31%
60		374	374	23%
65		458	458	15%
0		0	0	8%
0		Total	4214	0%

Max Load	200	MBH					
Condensing Boiler Capacity	200	MBH Each					
# Boilers	1						
Plant Capacity	200						
	RESET SCHEDULE	OA	SWT				
		0	180				
		40	160				
	Reset Slope	-0.5					



	ASSUMPTION						
	OAT	SWT	RWT	Zone Load %	LOAD	Load/Boiler	% Load
	0.85	179.58	159.73	100%	200	200	100%
	5.85	177.08	158.14	92%	185	185	92%
	10.85	174.58	156.55	85%	169	169	85%
	15.85	172.08	154.96	77%	154	154	77%
	20.85	169.58	153.37	69%	138	138	69%
	25.85	167.08	151.78	62%	123	123	62%
	30.85	164.58	150.18	54%	108	108	54%
	35.85	162.08	148.59	46%	92	92	46%
	40.85	159.58	147.00	38%	77	77	38%
	45.85	157.08	145.41	31%	62	62	31%
	50.85	154.58	143.82	23%	46	46	23%
	55.85	152.08	142.23	15%	40	#DIV/0!	#DIV/0!
	60.85	149.58	140.64	8%	40	#DIV/0!	#DIV/0!
	65.85	147.08	139.05	0%	0	0	0
	(1) 200 Boilers		Load Factor	20%	Op Hrs	Gas	
Zone Load	No Boilers	Plant Load %	Eff %	E out	M-F 6-9pm	Therm	
200	1	100%	93%	43	13	6	
185	1	92%	93%	40	237	94	
169	1	85%	93%	36	175	64	
154	1	77%	93%	33	280	93	
138	1	69%	93%	30	466	139	
123	1	62%	93%	26	537	142	
108	1	54%	93%	23	512	118	
92	1	46%	93%	20	391	77	
77	1	38%	93%	16	390	64	
62	1	31%	93%	13	381	50	
46	1	23%	93%	10	374	37	
31	0	#DIV/0!	94%	7	458	30	
15	0	#DIV/0!	96%	3	0	0	
						915	

ECM# 1 - At EOL, Upgrade RTU SEER to Higher Efficiency Units

Estimated Implementation Costs

RTU SEER Upgrade								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	3-ton PRTU w/ Gas Heat & Econ	ea	-	3075	-	690	-	-
2	6-ton PRTU w/ Gas Heat & Econ	ea	1	5,725	5,725	925	925	6,650
3	8.5-ton PRTU w/ Gas Heat & Econ	ea	3	7,150	21,450	970	2,910	24,360
1	10-ton PRTU w/ Gas Heat & Econ	ea	1	9,175	9,175	1,050	1,050	10,225
2	15-ton PRTU w/ Gas Heat & Econ	ea	1	14,400	14,400	1,225	1,225	15,625
6	20-ton PRTU w/ Gas Heat & Econ	ea	5	19,200	96,000	1,450	7,250	103,250
7	25-ton PRTU w/ Gas Heat & Econ	ea	2	23,500	47,000	1,725	3,450	50,450
8	30-ton PRTU w/ Gas Heat & Econ	ea	-	28,300	-	2,050	-	-
	Other Estimated Implementation Costs							101,394
	TOTAL GROSS COST							**$ 311,954**
	AVOIDED COST							**$ 277,804**
	New Jersey Smart Start Rebate							**$ 27,662**
	TOTAL INCREMENTAL COST							**$ 34,150**

Estimated Savings

Replace aging RTUs with higher efficiency units

3. Price of Electricity, $/kWh (blended rate)	$0.162
5. Price of Natural Gas, $/therm	$1.601

	Existing Condition	Proposed System	Savings
Total Tons	342	342	
SEER	10.2	12.4	
Annual Run Hours	1,423	1,423	
Annual Peak Demand Reduction (kW)	95.6	77.7	17.85
Annual kWh	577,038	469,215	107,824
Annual Cost and Savings, $	$ 93,480	$ 76,013	**$ 17,500**

1. Cost per kWh and therm prices taken from "# Constants" sheet.
2. Run hours based on bin data and time of day factor.
3. Assumed 10 - 15 Ton RTUs thorughout building
4. See Sample Calculations below

Tag	Tons	Run Hrs	Standard SEER Btu / Wh	Hi Eff SEER Btu / Wh	kWh Saved	Annual Savings	Incremental Cost
RTU	15	1,423	10.8	12.3	2893	$ 469	$ 1,500
RTU	15	1,423	10.8	12.3	2893	$ 469	$ 1,500
RTU	15	1,423	10.8	12.3	2893	$ 469	$ 1,500
RTU	15	1,423	10.8	12.3	2893	$ 469	$ 1,500
RTU	15	1,423	10.8	12.3	2893	$ 469	$ 1,500
RTU	15	1,423	10.8	12.3	2893	$ 469	$ 1,500
RTU	15	1,423	10.8	12.3	2893	$ 469	$ 1,500
RTU	15	1,423	10.8	12.3	2893	$ 469	$ 1,500
RTU	15	1,423	10.8	12.3	2893	$ 469	$ 1,500
Office RTU	10	1,423	10.1	12.3	3024	$ 490	$ 1,000
Cafeteria RT	20	1,423	9.5	12.6	8846	$ 1,433	$ 2,000
Cafeteria RT	20	1,423	9.5	12.6	8846	$ 1,433	$ 2,000
Cafeteria RT	20	1,423	9.5	12.6	8846	$ 1,433	$ 2,000
Gym RTU	8.5	1,423	10.1	12.3	2571	$ 416	$ 850
Gym RTU	8.5	1,423	10.1	12.3	2571	$ 416	$ 850
Gym RTU	20	1,423	9.5	12.6	8846	$ 1,433	$ 2,000
Gym RTU	20	1,423	9.5	12.6	8846	$ 1,433	$ 2,000
Classroom R	25	1,423	9.5	12.6	11058	$ 1,791	$ 2,500
Classroom R	25	1,423	9.5	12.6	11058	$ 1,791	$ 2,500
Classroom R	15	1,423	10.8	12.3	2893	$ 469	$ 1,500
Music Room	6	1,423	10.1	12.3	1815	$ 294	$ 600
Classroom R	15	1,423	10.8	12.3	2893	$ 469	$ 1,500
Classroom R	8.5	1,423	10.1	12.3	2571	$ 416	$ 850

Coincidence Factor Study
6.. ASHRAE 90.1-1989 Referenced for baseline SEER/EER
7. Proposed SEER/EER Ratings taken from Lennox Strategos Series

ECM# 3 – Install Computer Management Systems

Estimated Implementation Costs

Computer Management System								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Computer Management System	Unit	42	20	840	-	-	840
	Other Estimated Implementation Costs							-
	TOTAL							**$ 840**

Estimated Savings

Install Computer Plug Load Management System			
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.601		
	Existing Condition	**Proposed System**	**Savings**
Number of WS/PCs	42	42	
Annual Electric Savings (kWh)	8,400	0	**8,400**
Annual Cost and Savings, $	$ 1,361		**$ 1,361**
1. Estimated 42 w orkstations			
2. Estimated 200 kWh savings per w orkstation / PC			
3.There is no demand reduction for this measure			
4. No rebates or other finanical incentives w ere available for this measure			

ECM# 11 – Upgrade Window AC units

Estimated Implementation Costs

REPLACING WINDOW AC UNITS								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Window AC Unit	Unit	40	200	8,000	50	2,000	10,000
	Other Estimated Implementation Costs							-
	TOTAL							**$ 10,000**

Estimated Savings

SAVINGS FROM REPLACING WINDOW AC UNITS			
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.601		
	Existing Condition	**Proposed System**	**Savings**
Number of Units	40	40	
Capacity per Unit, Tons	0.8	0.8	
Total Capacity, Tons	32	32	
Assumed Efficiency, SEER	8.0	9.9	
Total Hours of Normal Operation, hrs	5,360	5,360	
Cooling Load Factor	35%	35%	
Annual Cooling Production, ton-hours	60,561	60,561	
Annual Cooling Load, kBTU	726,728	726,728	
Annual Peak Demand Reduction (kW)	13.2	10.7	2.53
Annual Electrical Consumption, kWh	90,841	73,407	17,434
Annual Cost and Savings, $	$ 14,716	$ 11,892	**$ 2,824**
1. Assume existing systems runs all year w hen outside air temperature (OAT) is above 65F from Monday through Friday.			
2. Both conditions are simulated w ith non-programmable thermostats.			
3. Load factor calculation represents the percentage of time w hen the unit operates at full load.			
4. It is assumed that the old systems have a 10% derated efficiency of 8 SEER.			
5. Assume the new units have an efficiecy of 9.9 EER.			
6. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet			
7. No rebates or other finanical incentives w ere available for this measure			

ECM# 4 – Install Vending Machine System

Estimated Implementation Costs

VENDINGMISERS								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	VendingMisers	EA	1	179	179	-	-	179
	TOTAL							**$ 179**

Estimated Savings

VENDING MACHINE POWER MANAGEMENT SYSTEM				
3. Price of Electricity, $/kWh (blended rate)		$0.162		
5. Price of Natural Gas, $/therm		$1.601		
		Existing Condition	**Proposed System**	**Savings**
Soda Machine Power Consumption		100%	56%	
Run Hours		8,760	8,760	
Annual Peak Demand Reduction (kW)		0.06	0.03	0.02
Annual Energy Consumption (kWh)		2,102	925	1,177
Annual Cost and Savings, $		$ 341	$ 150	**$ 191**
1. Run hours based on fan motors being run 8760 hrs				
2. Sample Calculations Below				
Vending Machine Count	1			
Annual Run-Time Factor	60%			
VendMiser Installation Savings	0			
Soda Machine Pow er Consumption, kw	0.40			
Annual Savings %	56%			
Annual Energy Savings	$191			
Analysis Spreadsheet				
3. No rebates or other finanical incentives w ere available for this measure				
4. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet				

ECM# 7 - Lighting Upgrades – Costs & Savings are listed in the Lighting Summary & Inventory

ECM#12 – Install Weatherstripping

Estimated Implementation Costs

Weatherstripping								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Replace weatherstripping around doors	ea	10	200	2,000	150	1,500	3,500
	TOTAL							**$ 3,500**

Estimated Savings

SAVINGS FROM WEATHERSTRIPPING DOORS			
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.601		
	Existing Condition	**Proposed System**	**Savings**
Number of Doors	10	10	
Estimated Infiltration Rate per Door, CFM	106	21	
Annual Cooling Infiltration Hours, OAT > 80F	800	800	
Annual Heating Infiltration Hours, OAT < 55F	500	500	
Annual Cooling Load, kBTU	23,783	4,757	
Annual Cooling Electrical Consumption, kWh	2,973	595	2,378
Annual Heating Load, kBTU	25,727	4,688	
Annual Heating Natural Gas Consumption, therms	321.59	58.60	263
Annual Cost and Savings, $	$ 996	$ 190	**$ 806**
1. Infiltration rate was calculated according to ASHRAE Fundamentals 2005 Door Leakage Rate Equation F27.12			
2. Estimated hours of infiltration was based on all hours below 55F and above 80F for the region.			
3. It is assumed that each door has a leakage area of 45 square inches (15 linear feet by 1/4 in). Vestibule doors ar			
4. A 60% load factor was used when calculating the existing leakage rate.			
5. Assume all AHUs have an supply air temperature of 55F in the summer and 80F in the winter.			
6. The average outside air temperature above 80F during the year is 86F. The average outside air temperature below			
7. Assume the cooling plant has an efficiency of 1.4 kw/ton and the natural gas fired heating units have an efficienc			
8. New weatherstripping is assumed to reduce inflitration by 80%.			
9. There is no demand reduction for this measure			
10. No rebates or other finanical incentives were available for this measure			

ECM#13 – Install Energy Star Appliances in the Kitchen

Estimated Implementation Costs

SOLID DOOR COMMERCIAL ICE MACHINE								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Installation and Replacement of Commercial Ice Machine		1		-	50	50	50
2	Energy Star Rated Commercial Ice Machine	See on the right	1	2,360	2,360		-	2,360
	Other Estimated Implementation Costs							-
	TOTAL							**$ 2,410**

Estimated Savings

ENERGY STAR / CEE TIER I - ICE MACHINE			
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.601		
	Existing Condition	**Proposed System**	**Savings**
Quantity	1	1	
Annual Peak Demand Reduction (kW)	2.4	1.9	0.49
Ice Machine Annual Energy Consumption (kWh)	30,178	24,134	**6,044**
Annual Cost and Savings, $	$ 4,889	$ 3,910	**$ 980**

1. This energy savings calculator was developed by the U.S. EPA and U.S. DOE and is provided for estimating purposes only. Actual energy savings may vary based on use and other factors.

2. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet

3. No rebates or other finanical incentives were available for this measure

Estimated Implementation Costs

SOLID DOOR COMMERCIAL REFRIGERATORS								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Installation and Replacement of Solid Door Commercial Refrigerator		2		-	50	100	100
2	Energy Star Rated Commercial Refrigerator	See on the right	2	2,450	4,900		-	4,900
	Other Estimated Implementation Costs							-
	TOTAL							**$ 5,000**

Estimated Savings

ENERGY STAR/ CEE TIER I - REFRIGERATOR/FREEZER UPGRADE				
3. Price of Electricity, $/kWh (blended rate)		$0.162		
5. Price of Natural Gas, $/therm		$1.601		
		Existing Condition	**Proposed System**	**Savings**
Double Door Refrigerator (44 cu ft)	Total Annual Energy Consumption (kWh)	3,548	2,351	
Quantity		1	1	
Single Door Refrigerator (24 cu ft)	Total Annual Energy Consumption (kWh)	2,102	971	
Quantity		1	1	
Annual Peak Demand Reduction (kW)		0.5	0.3	0.19
Total Annual Energy Savings		5,650	3,322	**2,329**
Annual Cost and Savings, $		$ 915	$ 538	**$ 380**

1. This energy savings calculator was developed by the U.S. EPA and U.S. DOE and is provided for estimating purposes only. Actual energy savings may vary based on use and other factors.

2. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet

3. No rebates or other finanical incentives were available for this measure

ECM#15 – Install Univent VFDs

Estimated Implementation Costs

Unit Vent VFDs								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Fractional HP VFDs	ea	23	350	8,050	-	-	8,050
2					-		-	-
	Other Estimated Implementation Costs							1,691
	TOTAL							**$ 9,741**

Estimated Savings

SAVINGS FROM INSTALLING VFDS ON FCU'S AND/OR UNIVENTS

1. Price of Electricity, $/kWh (blended rate) $0.162

	Existing Condition	Proposed System	Savings
Number of FCUs or Univents	**23**	**23**	
Fan Motor HP	**0.167**	0.167	
Fan Motor Efficiency	**60%**	60%	
Annual Operating Hours	**4,230**	4,230	
Annual Fan kWh	15,054	5,675	**9,380**
Annual Cost and Savings, $	$2,439	$919	**$1,520**

1. Assumes average rated fan volume of 75%
2. Run hours based on bin data and time of day factor.
3..There is no demand reduction for this measure
4. Run hours based on bin hours below 55 DegF (Winter use only).
5. See Sample Calculation Below

Existing Fan Coil Unit Data

Fan Hp at Full Load	0.17
Hp to Kw	0.75
Fan Kw	0.12
Motor Efficiency	0.60
Net Fan Kw with Efficiency	0.07

Constant Fan Speed Motor Annual Operating Cost

Constant Speed	Constant Speed Hours of Operation Profile	Standard AC Motor Kwh	Cost Per Kwh	Annual Operating Cost
1	4230	316	0.16	51

Annual Cost at Constant Speed Fan Operation	51
Annual KWH Savings Fan Coil VSD	9380
Annual Cost Fan Coil VSD Operation	40
Number of Fan Coil Unit VSDs	23
Annual Cost Savings Fan Coil VSD	$ 1,520

Fan Coil VSD Operating Cost

Fan Coil Percent Load/Speed	Fan Coil Part Load Hours	% Run Time As VSD	Fan Coil VSD Kwh	Cost Per Kwh	Annual Operating Cost
100%	362	4%	27	$ 0.16	$ 4.38
90%	1539	18%	80	$ 0.16	$ 13.04
80%	1602	18%	60	$ 0.16	$ 9.70
70%	1774	20%	40	$ 0.16	$ 6.44
60%	1550	18%	23	$ 0.16	$ 3.75
50%	1314	15%	12	$ 0.16	$ 1.91
40%	619	7%	5	$ 0.16	$ 0.75
30%	0	0	0	$ 0.16	$ -
Total	8760	100%	247		$ 39.97

ECM#16 – Install Hot Water Pump VFDs

Estimated Implementation Costs

HHW PUMP VFDs								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	20 HP VFD		1	3,084	3,084	950	950	4,034
2	20 HP Prem Eff Moto		2	1,134	2,268	950	1,900	4,168
3	2 Way Valves on HHW Coils	EA	103	301	31,003	26	2,686	33,689
	NJ Smart Start Incentive							**$ 1,413**
	TOTAL							**$ 41,891**

Estimated Savings

HHW PUMP VFDs						
2. Price of City Water, $/1000 gallons				$4.000		
4. Price of the Demand of Electricity, $/kW/month				$0.000		
5. Price of Natural Gas, $/therm				$1.601		
				Existing Condition	**Proposed System**	**Savings**
Avg Percent Required Power				100%	35%	
Annual Energy Consumption (kWh)				47,334	15,074	**32,260**
Run Hours				4,230	4,230	
						-
Annual Cost and Savings, $				$ 7,668	$ 2,442	**$ 5,230**
1. Assumes average rated fan volume of 75%						
2. Includes replacement of existing motors with premium efficiency (inverter duty) motors						
3. Run hours based on bin data and time of day factor.						
4.There is no demand reduction for this measure						
5. See Sample Calculation below						

Building	HHW Pumps	Motor Nameplate HP	Equivalent Power Draw, kw	Annual Run Hours	Annual Electric Savings, kwh	Annual Electric Savings, $
Kennedy	P 1	20	14.92	4,230	30,767	4,984
	Percent Required Power					
	No Control	VFD	Safety Factor			
	100%	35%	75%			

ECM# 20 – Premium Efficiency Motors

Estimated Implementation Costs

Premium Efficiency Motors								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	20	HP Prem Eff Moto	1	1,134	1,134	158	158	1,292
2								
3								
4								
	SUB-TOTAL							1,292
	TOTAL							**$ 1,564**
	NJ SMARTSTART REBATE							**$ 113**

Estimated Savings

SAVINGS FROM PREMIUM EFFICIENCY MOTORS

3. Price of Electricity, $/kWh (blended rate)	$0.162
5. Price of Natural Gas, $/therm	$1.601

					ESTIMATED RUN TIME		FULL LOAD NOMINAL EFFICIENCY (%)		ELECTRIC CONSUMPTION (kWh)		SAVINGS		NJCE REBATE	Peak Demand Reduction
TAG	**LOCATION**	**SERVICES**	**HP**	**RPM**	**AVG HRS**	**LOAD FACTOR**	**EXISTING**	**PROPOSED**	**EXISTING**	**PROPOSED**	**kWh**	**$**	**$**	**kW**
HW-1	BOILER MER	PERIM HOT WATER	20	1,800	*4,230*	*100%*	*88.6%*	93.0%	56,986	54,290	2,696	$ 437	$ 113	0.4
										TOTAL	**2,696**	**$ 437**	**$ 113**	**0.4**

1. Existing equipment data listed in italics were estimated due to unavailable information.
2. It is assumed that the breakhorse power of all motors is 80% of the nameplate horsepower.
3. Only the major motors were sampled for this calculations.
4. Run hours base on winter bin hours
5. Coincidence Factor for peak kW reduction taken from United Illuminated Company: 2005 Coincidence Factor Study

ECM#24 – Building Management System

Estimated Implementation Costs

BUILDING MANAGEMENT SYSTEM								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	BMS Host Computer, Materials and Labor	ea	1	9,363	9,363		-	9,363
1	DCV - See DCV Below	ea	1	23,400	23,400		-	23,400
2	TOD Optimization - BMS Programming - See TOD Optimization Below	ea	1	5,400	5,400		-	5,400
3	Exhaust Fan TOD - See Exhaust Fan TOD Below	ea	1		-		-	-
4	HHW VFD - See HHW VFD Below	ea	1	41,890	41,890	-	-	41,890
4	Kitchen Exhaust VFD - See Kitchen Exhaust VFD Below	ea	1		-	-	-	-
5	BMS Setup: Install sensors and controllers for RTU's - 6 points per RTU	ea	114	256	29,184	891	101,574	130,758
5	BMS Setup: Install sensors and controllers for Exhaust Fan TOD	ea	77	256	19,712	891	68,607	88,319
5	BMS Setup: Install sensors and controllers for HHW VFD	ea	309	256	79,104	891	275,319	354,423
5	Temperature Setpoint Optimization - BMS Programming - See Temp Setpoint Optimization Below	ea	1	5,400	5,400		-	5,400
	Other Estimated Implementation Costs							400,579
	TOTAL							**$ 1,059,532**

Estimated Savings

BUILDING MANAGEMENT SYSTEM			
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.601		
	Existing Condition	**Proposed System**	**Savings**
Time of Day Optimization - Electric Savings (kWh)	560,508	498,230	**62,279**
Time of Day Optimization - Gas Savings (therms)	56,716	50,414	**6,302**
Temperature Setpoint Optimization - Electric Savings (kWh)	50,288		**50,288**
Demand Control Ventilation - Electric Savings (kWh)	107,227	79,236	**27,991**
Demand Control Ventilation - Gas Savings (therms)	5,589	4,130	**1,459**
Exhaust TOD - Electric Savings (kWh)	15,725	9,622	**6,103**
HHW VFD - Electric Savings (kWh)	47,334	15,074	**32,260**
Annual Energy Consumption (kWh)	781,082	602,161	**178,921**
Annual Energy Consumption (therms)	62,305	54,544	**7,761**
Annual Cost and Savings, $	$ 226,285	$ 184,875	**$ 41,410**
1. Assume existing systems run 24 hrs a day all year when outside air temperature is above 65F.			
2. Assume the proposed systems operate during a 12 hour window every weekday when the outside air temperature (OAT) is above 65F and during unoccupied hours when the OAT is above 75F.			
3. Load factor calculation represents the percentage of time when the units operate at full load during the operation schedule.			
4. It is assumed that all heat pump units run at a combined derated efficieny of 13 EER.			
5.There is no demand reduction for this measure			
6. No rebates or other finanical incentives were available for this measure			

ECM# 25 – Demand Control Ventilation

Estimated Implementation Costs

	Demand Controlled Ventilation							
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	CO2 Sensors & Control Wiring	EA	4	375	1,500	625	2,500	4,000
2	RA / OA Dampers & Actuators	EA (avg)	4	1,250	5,000	750	3,000	8,000
3	Controllers	EA	4	1,500	6,000	600.0	2,400	8,400
4	Electrical Work	EA	4	250	1,000	500.0	2,000	3,000
	Other Estimated Implementation Costs							-
	TOTAL							**$ 23,400**

Estimated Savings

Demand Control Ventilation			
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.601		
	Existing Condition	**Proposed System**	**Savings**
Total (CFM)	46,000	46,000	
Average Cost Per CFM	$2.320	$1.715	
Run Hours	2,160	2,160	
Estimated Electric Use (kWh)	107,227	79,236	**27,991**
Estimated Natural Gas Use (therms)	5,589	4,130	**1,459**
			-
Annual Cost and Savings, $	$ 26,318	$ 19,448	**$ 6,900**

1. Assumes 100% OA using "Recirc AHU Operation" from cost per cfm calcs on "# Constants" sheet; %0A = 100% for bin ranges
2. Assumes 20% OA using "Recirc AHU Operation" from cost per cfm calcs on "# Constants" sheet; % OA = 20% for bin range >
3. Run hours based on bin data and time of day factor.
4. See Sample Calculation below

Unit	Serves	TOD Factor	Total CFM	Current $/CFM1	DCV $/CFM2	Estimated Savings
A240DM40E (3)	Cafeteria	0.247	22500	$ 2.32	$ 1.71	$ 13,628
RKKB-A102DL22E (2)	Gym	0.247	6400	$ 2.32	$ 1.71	$ 3,877
RKKB-A240DL30E (2)	Gym	0.247	15000	$ 2.32	$ 1.71	$ 9,086
CHA16-953-1Y	Music Rm	0.247	2100	$ 2.32	$ 1.71	$ 1,272
Total			46000			$ 27,863

5.There is no demand reduction for this measure
6. No rebates or other finanical incentives w ere available for this measure

ECM# 26 – Temperature Setpoint Optimization

Estimated Implementation Costs

Temperature Setpoint Optimization								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	BMS Programming (assumes incorporated	Hrs	40		-	135	5,400	5,400
	Other Estimated Implementation Costs							-
	TOTAL							**$ 5,400**

Estimated Savings

Set Point Optimization			
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.601		
	Existing Condition	**Proposed System**	**Savings**
Space Cooling Temperature Setting	70-75	75	**$8,100**
Annual Electric Savings, kWh	50,288		**50,288**
Annual Cost and Savings, $			**$ 8,100**
1. Daily run hours are based on 180 days, 9 hour days			
2. Cost per cfm for respective AC unit taken from "# Constants" sheet.			
3. Assumed 20 CFM/Student			
5.There is no demand reduction for this measure			
6. No rebates or other finanical incentives were available for this measure			

ECM# 27 – Time of Day Optimization

Estimated Implementation Costs

TOD Optimization								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	BMS Programming - See Setpoint Opt		40		-	135	5,400	5,400
	TOTAL							**$ 5,400**

Estimated Savings

Time of Day Optimization						
3. Price of Electricity, $/kWh (blended rate)				$0.162		
5. Price of Natural Gas, $/therm				$1.601		
				Existing Condition	**Proposed System**	**Savings**
Annual Run Hours				6,030	5,360	**670**
Annual Electric Use (kWh)				560,508	498,230	**62,279**
Annual Natural Gas Use (therms)				56,716	50,414	**6,302**
Annual Cost and Savings, $				$ 181,605	$ 171,516	**$ 10,089**
1. Daily run hours are reduced from 18.5 hours to 15 hours.						
2. Cost per cfm for respective AC unit taken from "# Constants" sheet.						
3. See Sample Calculations Below						

Unit	Area Served	CFM	Load Factor	Existing TOD Factor	Proposed TOD Factor	Estimated Savings
RKKB-A180DM25E	Various	5700	0.75	0.69	0.61	$759
RKKB-A180DM25E	Various	5700	0.75	0.69	0.61	$759
RKKB-A180DM25E	Various	5700	0.75	0.69	0.61	$759
RKKB-A180DM25E	Various	5700	0.75	0.69	0.61	$759
RKKB-A180DM25E	Various	5700	0.75	0.69	0.61	$759
RKKB-A180DM25E	Various	5700	0.75	0.69	0.61	$759
RKKB-A180DM25E	Various	5700	0.75	0.69	0.61	$759
RKKB-A180DM25E	Various	5700	0.75	0.69	0.61	$759
RKKB-A120DM15E	Office	3600	0.75	0.69	0.61	$479
48TJF028	Classroom	900	0.75	0.69	0.61	$120
48TJF028	Classroom	9000	0.75	0.69	0.61	$1,198
50TJ-016-670QA	Classroom	5700	0.75	0.69	0.61	$759
CHA16-953-1Y	Music Room	2100	0.75	0.69	0.61	$280
YCD180B4LAGA	Classroom	5700	0.75	0.69	0.61	$759
TSC102A4RHA	Classroom	3200	0.75	0.69	0.61	$426

Hours of Operation	On	Off	Hrs/Day	Days/Yr
Existing	6	24	18	335
Proposed	6	22	16	335

3.There is no demand reduction for this measure

4. No rebates or other finanical incentives were available for this measure

ECM# 28 –Exhaust Fan Time of Day Optimization

Estimated Implementation Costs

Exhaust Fan TOD Optimization								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	BMS Programming - See Setpoint Opt		16		-	135	2,160	2,160
	TOTAL							**$ 2,160**

Estimated Savings

Exhaust Fan Time of Day Optimization						
3. Price of Electricity, $/kWh (blended rate)				$0.162		
5. Price of Natural Gas, $/therm				$1.601		
				Existing Condition	**Proposed System**	**Savings**
Annual Run Hours				8,760	5,360	**3,400**
Annual Electric Use (kWh)				15,725	9,622	**6,103**
						-
Annual Cost and Savings, $				$ 2,547	$ 1,559	**$ 989**
1. Daily run hours are reduced from 24 hours to 1 hours.						
2. Assumed Fans are equipped with 1/4 HP Motors						
3. See Sample Calculations Below						

Unit	Area Served	CFM	Load Factor	Existing TOD Factor	Proposed TOD Factor	Estimated Savings
(77) EF's	General Exhaust	9.625	0.25	8760	5360	$ 989

Hours of Operation	On	Off	Hrs/Day	Day/Yr
Existing	0	24	24	365
Proposed	6	22	16	335

3.There is no demand reduction for this measure

4. No rebates or other finanical incentives were available for this measure

ECM# 8 – Upgrade to High Efficiency Condensing Boiler

Estimated Implementation Costs

Condensing Boiler								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	2.0 MBTU High Eff Gas Boiler	ea	3	40,200	120,600	15,000	45,000	165,600
2	Demo Existing Boilers	ls	1	4,000	4,000	12,000	12,000	16,000
3	Fin Tubed Radiation Units	LF	-	14.80	-	8.60	-	-
4	Hydronic Piping 2"	LF	-	6.40	-	7.45	-	-
5	HHW Pumps	ea	1	3,350	3,350	405	405	3,755
6	Electric/Controls	ls	1	10,000	10,000	7,500	7,500	17,500
	Other Estimated Implementation Costs							91,690
	TOTAL GROSS COST							**$ 294,545**
	AVOIDED COST							**$ 257,660**
	NJ SMART START REBATE							**$ 6,000**

Estimated Savings

SAVINGS FROM HIGH EFFICENCY CONDENSING BOILER

1. Price of #2 Fuel Oil, $/gal	$0.000
2. Price of City Water, $/1000 gallons	$4.000
3. Price of Electricity, $/kWh (blended rate)	$0.162
4. Price of the Demand of Electricity, $/kW/month	$0.000
5. Price of Natural Gas, $/therm	$1.601

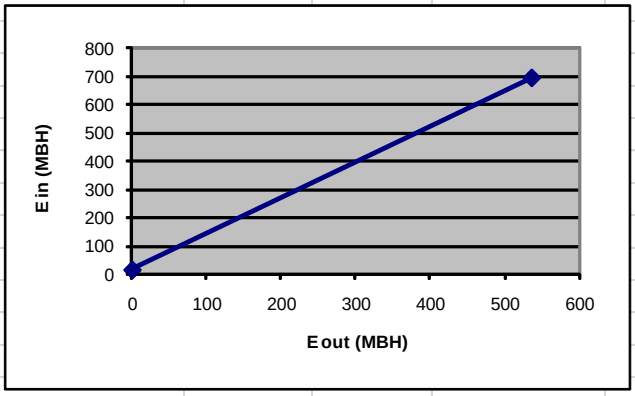
	Existing Condition	Proposed System	Savings
Boiler Plant Capacity, kBTU	6,275	6,275	
Hours of Operation	4,214	4,214	
Seasonal Efficiency	85%	93%	
Annual Gas Consumption, therms	39,490	28,699	10,790
Annual Cost and Savings, $	$ 63,223	$ 45,948	**$ 17,275**

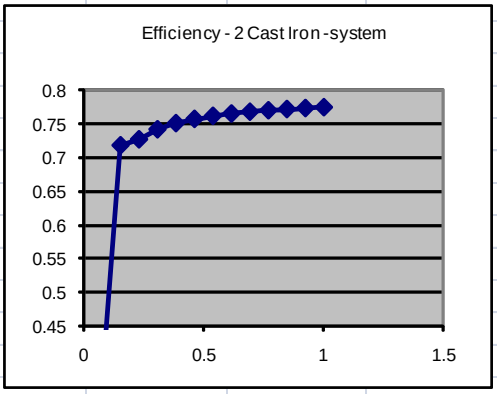
1. Assume the boilers have a temperature reset schedule where the hot water is supplied at 180F/160F when it is 0F/40F outside.
2. Sample Calculation Below

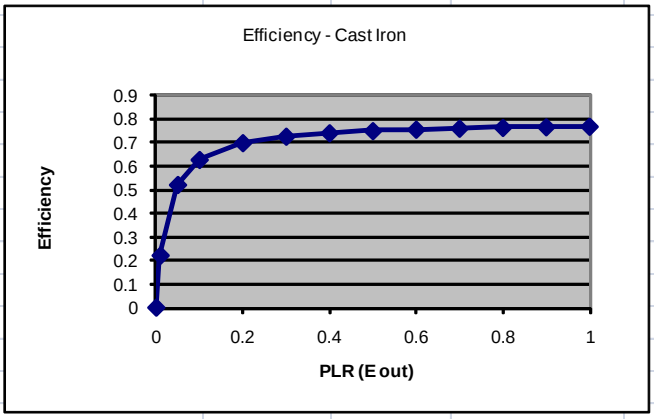
Single Boiler:

	Gas Fuel					
Eff 100%	0.8			E out		Ein
E in 100%	6275	MBH		0		156.875
E out 100%	5020	MBH		5020		6275
SBL (% Ein)	3%					
SBL	156.875	MBH				
Min E out	20%	1255				
Comb, Eff	83%					
m slope=	1.21875					
INDIVIDUAL BOILER						
			linear realtion			
Eout (Load)	PLR	E in	Efficiency			
0	0%	157	0%			
50	1%	218	23%			
251	5%	463	54%			
502	10%	769	65%			
1,004	20%	1,381	73%			
1,506	30%	1,992	76%			
4,267	85%	5,357	80%			
2,510	50%	3,216	78%			
3,012	60%	3,828	79%			
3,514	70%	4,440	79%			
4,016	80%	5,051	80%			
4,518	90%	5,663	80%			
5,020	100%	6,275	80%			

COMBINED SYSTEM BOILER PART LOAD							
Capacity of each	6275						
No. of Boilers	1						
Total Capacity	6275						
Avg Load Factor	20%						
		No. of	Load	per boiler	plant	0	Gas
Load	PLR	Boilers	per boiler	E in	E in	Efficiency	Therm
6,275	100%	1	1,255	1686	1686	74%	219
5,792	92%	1	1,158	1569	1569	74%	3,718
5,310	85%	1	1,062	1451	1451	73%	2,539
4,827	77%	1	965	1333	1333	72%	3,734
4,344	69%	1	869	1216	1216	71%	5,666
3,862	62%	1	772	1098	1098	70%	5,897
3,379	54%	1	676	980	980	69%	5,020
2,896	46%	1	579	863	863	67%	3,374
2,413	38%	1	483	745	745	65%	2,906
1,931	31%	1	386	628	628	62%	2,391
1,448	23%	1	290	510	510	57%	1,907
1,255	15%	1	251	463	463	54%	2,120
							39,490

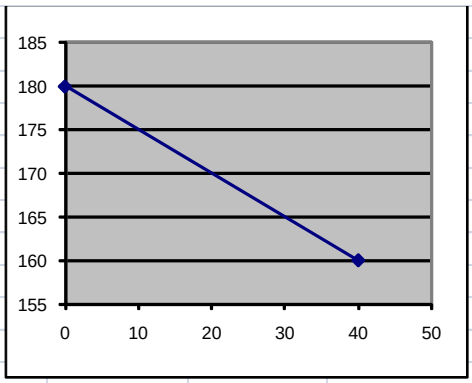






		Fuel Source	Gas	
		# Days perWeek in Ope	7	
	Temp	0	Op Hrs	Plant
	Bin	0	M-F	LOAD
	0	13	13	100%
	15	237	237	92%
	20	175	175	85%
	25	280	280	77%
	30	466	466	69%
	35	537	537	62%
	40	512	512	54%
	45	391	391	46%
	50	390	390	38%
	55	381	381	31%
	60	374	374	23%
	65	458	458	15%
	0	0	0	8%
	0	Total	4214	0%

Max Load	6275	MBH					
Condensing Boiler Capacity	2500	MBH Each					
# Boilers	2						
Plant Capacity	5000						
	RESET SCHEDULE	OA	SWT				
		0	180				
		40	160				
	Reset Slope	-0.5					



	ASSUMPTION						
	OAT	SWT	RWT	Zone Load %	LOAD	Load/Boiler	% Load
	0.85	179.58	159.73	100%	6,275	3,138	126%
	5.85	177.08	158.14	92%	5,792	2,896	116%
	10.85	174.58	156.55	85%	5,310	2,655	106%
	15.85	172.08	154.96	77%	4,827	2,413	97%
	20.85	169.58	153.37	69%	4,344	2,172	87%
	25.85	167.08	151.78	62%	3,862	1,931	77%
	30.85	164.58	150.18	54%	3,379	1,689	68%
	35.85	162.08	148.59	46%	2,896	1,448	58%
	40.85	159.58	147.00	38%	2,413	1,207	48%
	45.85	157.08	145.41	31%	1,931	965	39%
	50.85	154.58	143.82	23%	1,448	724	29%
	55.85	152.08	142.23	15%	965	965	39%
	60.85	149.58	140.64	8%	500	500	20%
	65.85	147.08	139.05	0%	0	0	0
	(2) 2500 Boilers		Load Factor	20%	Op Hrs	Gas	
Zone Load	No Boilers	Plant Load %	Eff %	E out	M-F	Therm	
6,275	2	126%	93%	1,354	13	176	
5,792	2	116%	93%	1,248	237	2,959	
5,310	2	106%	93%	1,143	175	2,000	
4,827	2	97%	93%	1,039	280	2,910	
4,344	2	87%	93%	934	466	4,354	
3,862	2	77%	93%	830	537	4,459	
3,379	2	68%	93%	726	512	3,716	
2,896	2	58%	93%	621	391	2,430	
2,413	2	48%	93%	517	390	2,018	
1,931	2	39%	93%	414	381	1,577	
1,448	2	29%	93%	310	374	1,161	
965	1	39%	94%	205	458	940	
483	1	19%	96%	101	0	0	
						28,699	

ECM# 2 - At EOL, Upgrade Heat Pump SEER to Higher Efficiency Units

Estimated Implementation Costs

HEAT PUMP/SPLIT AC UNIT SEER Upgrade								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	2-ton AC Unit	ea	1	1,749	1,749	74	74	1,823
								1,823
	Other Estimated Implementation Costs							182
	TOTAL GROSS COST							**$ 2,005**
	AVOIDED COST							**$ 1,805**
	New Jersey Smart Start Rebate							**$ 162**
	TOTAL INCREMENTAL COST							**$ 200**

Estimated Savings

Replace aging Heat Pump SEER Unit with higher efficiency units

3. Price of Electricity, $/kWh (blended rate)	$0.202	
5. Price of Natural Gas, $/therm	$1.444	

	Existing Condition	Proposed System	Savings
Total Tons	2	2	
SEER	13.0	17.0	
Annual Run Hours	574	574	
Annual Peak Demand Reduction (kW)	0.7	0.5	0.17
Annual kWh	4,294	3,284	1,010
Annual Cost and Savings, $	$ 867	$ 663	**$ 200**

1. Cost per kWh and therm prices taken from "# Constants" sheet.
2. Run hours based on bin data and time of day factor.
3. Assumed 2 - 3 Ton Heat Pumps thorughout building
4. See Sample Calculations below

Tag	Tons	Run Hrs	Standard SEER Btu / Wh	Hi Eff SEER Btu / Wh	kWh Saved	Annual Savings	Incremental Cost
AC 1	2	2,326	13.0	17.0	1010	$ 204	$ 200
0	0	0	0.0	0.0	0	$ -	$ -
0	0	0	0.0	0.0	0	$ -	$ -
Total	**2**				**1010**	**$ 204**	**$ 200**

5. Coincidence Factor for peak kW reduction taken from United Illuminated Company: 2005 Coincidence Factor Study
6.. ASHRAE 90.1-1989 Referenced for baseline SEER/EER
7. Proposed SEER/EER Ratings taken from Carrier Air Cooled Heat Pumps

ECM# 3 – Install Cooling Tower Fans VFDs

Estimated Implementation Costs

COOLING TOWER VFD								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	15 HP VFD		1	2,078	2,078	950	950	3,028
2	15 HP Prem Eff Moto		1	893	893	950	950	1,843
	TOTAL							**$ 4,870**

Estimated Savings

COOLING TOWER PUMP VFDs						
3. Price of Electricity, $/kWh (blended rate)				$0.202		
5. Price of Natural Gas, $/therm				$1.444		
				Existing Condition	**Proposed System**	**Savings**
Avg Percent Required Power				100%	35%	
Annual Energy Consumption (kWh)				19,622	6,868	**12,754**
Run Hours				4,230	4,230	
						-
Annual Cost and Savings, $				$ 3,964	$ 1,387	**$ 2,580**
1. Assumes average rated fan volume of 75%						
2. Includes replacement of existing motors with premium efficiency (inverter duty) motors						
3. Run hours based on bin data and time of day factor.						
4.There is no demand reduction for this measure						
5. See Sample Calculation below						
Building	HHW Pumps	Motor Nameplate HP	Equivalent Power Draw, kw	Annual Run Hours	Annual Electric Savings, kwh	Annual Electric Savings, $
Library	P 1	15	11.19	2,338	12,754	2,576
	Percent Required Power					
	No Control	VFD	Safety Factor			
	100%	35%	75%			

ECM#4 – Install Vending Machine System

Estimated Implementation Costs

VENDINGMISERS								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	VendingMisers	EA	1	179	179	-	-	179
	TOTAL							**$ 179**

Estimated Savings

VENDING MACHINE POWER MANAGEMENT SYSTEM			
3. Price of Electricity, $/kWh (blended rate)	$0.202		
5. Price of Natural Gas, $/therm	$1.444		
	Existing Condition	**Proposed System**	**Savings**
Soda Machine Power Consumption	100%	56%	
Run Hours	8,760	8,760	
Annual Peak Demand Reduction (kW)	0.06	0.03	0.02
Annual Energy Consumption (kWh)	2,102	925	1,177
Annual Cost and Savings, $	$ 425	$ 187	**$ 238**
1. Run hours based on fan motors being run 8760 hrs			
2. Sample Calculations Below			
Vending Machine Count	1		
Annual Run-Time Factor	60%		
VendMiser Installation Savings	0		
Soda Machine Pow er Consumption, kw	0.40		
Annual Savings %	56%		
Annual Energy Savings	$238		
Analysis Spreadsheet			
3. No rebates or other finanical incentives w ere available for this measure			
4. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet			

ECM#18 – Install Domestic Hot Water Timer

Estimated Implementation Costs

Domestic Hot Water Timer								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Installation of Domestic Hot Water Timer		1	60	60	100	100	160
	TOTAL							**$ 160**

Estimated Savings

DOMESTIC HOT WATER TIMER			
3. Price of Electricity, $/kWh (blended rate)	$0.202		
5. Price of Natural Gas, $/therm	$1.444		
	Existing Condition	**Proposed System**	**Savings**
Annual Electric Standby Losses kWh	747	128	619
Annual Cost and Savings, $	$ 151	$ 26	**$ 125**

ECM# 7 - Lighting Upgrades – Costs & Savings are listed in the Lighting Summary & Inventory

ECM# 9 - Heat Recovery from Absorption Chiller Exhaust

Estimated Implementation Costs

Heat Recovery for Domestic Hot Water								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Installation of Inline Exhaust Fan (Max 500 CFM)	ea	1	1,054	1,054	280	280	1,334
2	Installation of air to water low pressure heat exchanger (Max 64 MBH)	ea	1	3,250	3,250	120	120	3,370
3	Controls Programming	hrs	8		-	100	800	800
	Other Estimated Implementation Costs							1,156
	TOTAL							**$ 6,660**

Estimated Savings

Heat Recovery from Absorbtion Chiller Exhaust

3. Price of Electricity, $/kWh (blended rate)	$0.202	
5. Price of Natural Gas, $/therm	$1.444	

	Existing Condition	Proposed System	Savings
Operating Costs - Domestic Hot Water (Library has electric water heater)			
Total Exhaust Flow (CFM)	75.00	75.00	
Annual Load Hours[1]	8,760	8760.00	
Load Factor	0.5	0.5	
Annual kBTU Savings	46,121		
Maxium kWh Savings	13,517		
Exhaust Fan Usage		2178.32	
Annual Domestic Water Usage (kWh)	11,946		11,946
Annual Cost	$ 2,413		$ 2,413

Notes
1. Annual Load Hours based on 8760 Bin hrs
2. Prices estimates taken from RS Means
3. Assumed 500 CFM Exhaust Fan
4.Heat Exchanger Efficiency 0.8
5. Sample Calculations Below
Exhaust Temperature 260
Domestic Hot Water Temp Return 130

$(1\ Btu/lb_m\ ^oF)\ (8.33\ lb_m/gal)\ q\ (60\ min/h)\ dt$

1.08 q dt **where**

h = heat load (Btu/h) c_p = *1 (Btu/lb $_m$ ^oF) for water* ρ = 8.33 (lb_m/*gal) for water*

q = Air flow rate (CFM/min) dt = temperature difference (^oF)

6.There is no demand reduction for this measure
7. No rebates or other finanical incentives were available for this measure

	Existing Condition	Savings
Annual Domestic Water Usage for Sinks, gal	150,500	
Percentage of Hot Water per Sink Usage	50%	
Annual Hot Water Usage for Sinks, gal	75,250	75,250
Annual Electricity Usage, kWh	11,946	11,946
Annual Cost and Savings, $	$ 2,413	**$ 2,413**

1. Assume the existing faucet flow rate is 2 gpm and each occupants uses the faucet for 1 minute(s) per day. Total occupants per the building is 215.
Reference: Water Use and Conservation, 1st Ed, Table 2.2 pg25, table 2.10 pg77, & table 2.15 pg103, WaterPlow Press,
2. Assume existing gas fired hot water heaters have a thermal efficiency of 0.80.
3. Assume incoming city water temperature is 55F
4. Existing supply setpoint is 120F
5. Assumed 30 Full time and 370 Part Time Visitors FTE = 0.5

ECM#12 – Install Weatherstripping

Estimated Implementation Costs

Weatherstripping								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Replace weatherstripping around doors	ea	3	200	600	150	450	1,050
	TOTAL							**$ 1,050**

Estimated Savings

SAVINGS FROM WEATHERSTRIPPING DOORS

3. Price of Electricity, $/kWh (blended rate)	$0.202		
5. Price of Natural Gas, $/therm	$1.444		
	Existing Condition	**Proposed System**	**Savings**
Number of Doors	2	2	
Estimated Infiltration Rate per Door, CFM	106	21	
Annual Cooling Infiltration Hours, OAT > 80F	800	800	
Annual Heating Infiltration Hours, OAT < 55F	500	500	
Annual Cooling Load, kBTU	4,757	951	
Annual Cooling Electrical Consumption, kWh	595	119	476
Annual Heating Load, kBTU	5,145	938	
Annual Heating Natural Gas Consumption, therms	64.32	11.72	53
Annual Cost and Savings, $	$ 213	$ 41	**$ 172**

1. Infiltration rate was calculated according to ASHRAE Fundamentals 2005 Door Leakage Rate Equation F27.12
2. Estimated hours of infiltration was based on all hours below 55F and above 80F for the region.
3. It is assumed that each door has a leakage area of 45 square inches (15 linear feet by 1/4 in). Vestibule doors are n
4. A 60% load factor was used when calculating the existing leakage rate.
5. Assume all AHUs have an supply air temperature of 55F in the summer and 80F in the winter.
6. The average outside air temperature above 80F during the year is 86F. The average outside air temperature below 5
7. Assume the cooling plant has an efficiency of 1.4 kw/ton and the natural gas fired heating units have an efficiency o
8. New weatherstripping is assumed to reduce inflitration by 80%.
9. There is no demand reduction for this measure
10. No rebates or other finanical incentives were available for this measure

ECM#16 – Install Hot Water Pump VFDs

Estimated Implementation Costs

HHW PUMP VFDs								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	2	HP VFD	1	1,408	1,408	528	528	1,936
2	2	HP Prem Eff Moto	1	284	284	528	528	812
3	2 Way Valves on HHW Coils	EA	3	301	903	26	78	981
4					-		-	-
	Other Estimated Implementation Costs							-
	TOTAL							**$ 3,730**

Estimated Savings

HEATING HOT WATER PUMP VFDs						
3. Price of Electricity, $/kWh (blended rate)				$0.202		
5. Price of Natural Gas, $/therm				$1.444		
				Existing Condition	**Proposed System**	**Savings**
Avg Percent Required Power				100%	35%	
Annual Energy Consumption (kWh)				4,733	1,657	**3,077**
Run Hours				4,230	4,230	
						-
Annual Cost and Savings, $				$ 956	$ 335	**$ 620**
1. Assumes average rated fan volume of 75%						
2. Includes replacement of existing motors with premium efficiency (inverter duty) motors						
3. Run hours based on bin data and time of day factor.						
4.There is no demand reduction for this measure						
5. See Sample Calculation below						
Building	HHW Pumps	Motor Nameplate HP	Equivalent Power Draw, kw	Annual Run Hours	Annual Electric Savings, kwh	Annual Electric Savings, $
Library	P 1	2	1.492	4,230	3,077	621
	Percent Required Power					
	No Control	VFD	Safety Factor			
	100%	35%	75%			

ECM#18 – Daylight Harvesting

Estimated Implementation Costs

Daylight Harvesting								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Control/Sensor Costs	ea	1	128	128		-	128
2	Ballast Costs	ea	1	4,664	4,664		-	4,664
3	Labor	ea	1		-	1,570	1,570	1,570
	Other Estimated Implementation Costs							636
	NJ Smart Start Incentive							**1,100**
	TOTAL							**$ 6,998**

Estimated Savings

DAYLIGHT HARVESTING			
1. Price of Electricity, $/kWh (blended rate)		$0.202	
2. Price of Natural Gas, $/therm		$1.444	
	Existing Condition	**Proposed System**	**Savings**
Lighting Sensor Savings	100%	30%	
Run Hours	5,475	5,475	
Annual Peak Demand Reduction (kW)	2.09	1.46	0.30
Annual Energy Consumption (kWh)	13,972	9,781	4,192
Annual Cost and Savings, $	$ 2,822	$ 1,976	**$ 847**
1. Run hours based Daylight Hours			
2. Coincidence Factor for peak kW reduction taken from International Performance for Measurement and Verification Protocol (IPMVP) Volume 1			

ECM# 19 - Install Chilled Water pump VFDs

Estimated Implementation Costs

CHW PUMP VFDs								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	5 HP VFD		1	1,519	1,519	528	528	2,047
2	5 HP Prem Eff Moto		1	380	380	528	528	908
3	2 Way Valves on CHW Coils	EA	3	301	903	26	78	981
4					-		-	-
	Other Estimated Implementation Costs							-
	TOTAL							**$ 3,940**

Estimated Savings

CHILLED WATER PUMP VFDs						
3. Price of Electricity, $/kWh (blended rate)				$0.202		
5. Price of Natural Gas, $/therm				$1.444		
				Existing Condition	**Proposed System**	**Savings**
Avg Percent Required Power				100%	35%	
Annual Energy Consumption (kWh)				6,541	2,289	**4,251**
Run Hours				4,230	4,230	
						-
Annual Cost and Savings, $				$ 1,321	$ 462	**$ 860**
1. Assumes average rated fan volume of 75%						
2. Includes replacement of existing motors with premium efficiency (inverter duty) motors						
3. Run hours based on bin data and time of day factor.						
4.There is no demand reduction for this measure						
5. See Sample Calculation below						
Building	HHW Pumps	Motor Nameplate HP	Equivalent Power Draw, kw	Annual Run Hours	Annual Electric Savings, kwh	Annual Electric Savings, $
Library	P 1	5	3.73	2,338	4,251	859
	Percent Required Power					
	No Control	VFD	Safety Factor			
	100%	35%	75%			

ECM# 20 – Premium Efficiency Motors

Estimated Implementation Costs

Premium Efficiency Motors								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	2	HP Prem Eff Moto	2	284	568	92	184	752
2	5	HP Prem Eff Moto	1	380	380	92	92	472
3	15	HP Prem Eff Moto	1	893	893	129	129	1,022
	TOTAL							**$ 3,611**
	Total Rebate							**$ 266**

Estimated Savings

SAVINGS FROM PREMIUM EFFICIENCY MOTORS

3. Price of Electricity, $/kWh (blended rate)	$0.202
5. Price of Natural Gas, $/therm	$1.444

					ESTIMATED RUN TIME		FULL LOAD NOMINAL EFFICIENCY (%)		ELECTRIC CONSUMPTION (kWh)		SAVINGS		NJCE REBATE	Peak Demand Reduction
TAG	LOCATION	SERVICES	HP	RPM	AVG HRS	LOAD FACTOR	EXISTING	PROPOSED	EXISTING	PROPOSED	kWh	$	$	kW
HW-1	BOILER MER	Hot Water	2	1,800	4,230	100%	84.0%	86.5%	6,011	5,837	174	$ 35	$ 54	0.0
CHW-2	BOILER MER	Chilled Water	5	1,800	2,388	100%	87.5%	89.5%	8,144	7,962	182	$ 37	$ 54	0.0
CW-1	BOILER MER	Condenser	2	1,800	2,388	100%	84.0%	86.5%	3,393	3,295	98	$ 20	$ 54	0.0
CT-1	Roof	Cooling Tower	15	1,800	2,388	100%	91.0%	93.0%	23,492	22,986	505	$ 102	$ 104	0.1
										TOTAL	959	$ 194	$ 266	0.1

1. Existing equipment data listed in italics were estimated due to unavailable information.
2. It is assumed that the breakhorse power of all motors is 80% of the nameplate horsepower.
3. Only the major motors were sampled for this calculations.
4. Run hours base on winter bin hours
5. Coincidence Factor for peak kW reduction taken from United Illuminated Company: 2005 Coincidence Factor Study

ECM# 21 - Install Condenser Water pump VFDs

Estimated Implementation Costs

CW PUMP VFDs								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	2 HP VFD		1	1,408	1,408	528	528	1,936
2	2 HP Prem Eff Moto		2	284	568	528	1,056	1,624
3								
4					-		-	-
	Other Estimated Implementation Costs							-
	TOTAL							**$ 3,560**

Estimated Savings

CONDENSER WATER PUMP VFDs

3. Price of Electricity, $/kWh (blended rate)	$0.202
5. Price of Natural Gas, $/therm	$1.444

	Existing Condition	Proposed System	Savings
Avg Percent Required Power	100%	35%	
Annual Energy Consumption (kWh)	2,616	916	**1,701**
Run Hours	4,230	4,230	
			-
Annual Cost and Savings, $	$ 528	$ 185	**$ 340**

1. Assumes average rated fan volume of 75%
2. Includes replacement of existing motors with premium efficiency (inverter duty) motors
3. Run hours based on bin data and time of day factor.
4. There is no demand reduction for this measure
5. See Sample Calculation below

Building	HHW Pumps	Motor Nameplate HP	Equivalent Power Draw, kw	Annual Run Hours	Annual Electric Savings, kwh	Annual Electric Savings, $
Library	P 1	2	1.492	2,338	1,701	344

Percent Required Power		
No Control	VFD	Safety Factor
100%	35%	75%

ECM#24 – Building Management System

Estimated Implementation Costs

BUILDING MANAGEMENT SYSTEM								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	BMS Host Computer, Materials and Labor	ea	1	9,363	9,363		-	9,363
1	DCV - See DCV Below	ea	1	17,550	17,550		-	17,550
2	TOD Optimization - BMS Programming - See TOD Optimization Below	ea	1	2,160	2,160		-	2,160
3	Exhaust Fan TOD - See Exhaust Fan TOD Below	ea	1	1,080	1,080		-	1,080
4	HHW VFD - See HHW VFD Below	ea	1	3,730	3,730	-	-	3,730
4	CHW VFD - See CHW VFD Below	ea	1	3,940	3,940	-	-	3,940
4	CW VFD - See CW VFD Below	ea	1	3,560	3,560	-	-	3,560
4	Cooling Tower VFD - See Cooling Tower VFD Below	ea	1	4,870	4,870	-	-	4,870
5	BMS Setup: Install sensors and controllers for AHU's - 6 points per AHU	ea	18	256	4,608	891	16,038	20,646
5	BMS Setup: Install sensors and controllers for Exhaust Fan TOD	ea	8	256	2,048	891	7,128	9,176
5	BMS Setup: Install sensors and controllers for HHW VFD	ea	2	256	512	891	1,782	2,294
5	BMS Setup: Install sensors and controllers for Chilled Water VFD	ea	2	256	512	891	1,782	2,294
5	BMS Setup: Install sensors and controllers for CW VFD	ea	2	256	512	891	1,782	2,294
5	BMS Setup: Install sensors and controllers for Cooling Tower VFD	ea	1	256	256	891	891	1,147
	Other Estimated Implementation Costs							51,127
	TOTAL							**$ 135,231**

Estimated Savings

BUILDING MANAGEMENT SYSTEM			
3. Price of Electricity, $/kWh (blended rate)	$0.202		
5. Price of Natural Gas, $/therm	$1.444		
	Existing Condition	**Proposed System**	**Savings**
Time of Day Optimization - Electric Savings (kWh)	71,860	62,279	**9,581**
Time of Day Optimization - Gas Savings (therms)	15,066	13,725	**1,340**
Demand Control Ventilation - Electric Savings (kWh)	62,938	48,596	**14,342**
Demand Control Ventilation - Gas Savings (therms)	3,280	2,533	**748**
Exhaust TOD - Electric Savings (kWh)	6,480	4,050	**2,430**
HHW VFD - Electric Savings (kWh)	4,733	1,657	**3,077**
CHW VFD - Electric Savings (kWh)	6,541	2,289	**4,251**
CW VFD - Electric Savings (kWh)	2,616	916	**1,701**
CT Fan VFD - Electric Savings (kWh)	19,622	6,868	**12,754**
Annual Energy Consumption (kWh)	174,790	126,654	**40,808**
Annual Energy Consumption (therms)	18,346	16,258	**2,088**
Annual Cost and Savings, $	$ 61,799	$ 49,061	**$ 11,258**
1. Assume existing systems run 24 hrs a day all year when outside air temperature is above 65F.			
2. Assume the proposed systems operate during a 12 hour window every weekday when the outside air temperature (OAT) is above 65F and during unoccupied hours when the OAT is above 75F.			
3. Load factor calculation represents the percentage of time when the units operate at full load during the operation schedule.			
4. It is assumed that all heat pump units run at a combined derated efficieny of 13 EER.			
5.There is no demand reduction for this measure			
6. No rebates or other finanical incentives were available for this measure			

ECM# 25 – Demand Control Ventilation

Estimated Implementation Costs

	Demand Controlled Ventilation							
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	CO2 Sensors & Control Wiring	EA	3	375	1,125	625	1,875	3,000
2	RA / OA Dampers & Actuators	EA (avg)	3	1,250	3,750	750	2,250	6,000
3	Controllers	EA	3	1,500	4,500	600.0	1,800	6,300
4	Electrical Work	EA	3	250	750	500.0	1,500	2,250
	Other Estimated Implementation Costs							-
	TOTAL							**$ 17,550**

Estimated Savings

Demand Control Ventilation			
3. Price of Electricity, $/kWh (blended rate)	$0.202		
5. Price of Natural Gas, $/therm	$1.444		
	Existing Condition	**Proposed System**	**Savings**
Total (CFM)	27,000	27,000	
Average Cost Per CFM	$2.621	$2.024	
Run Hours	2,160	2,160	
Estimated Electric Use (kWh)	62,938	48,596	**14,342**
Estimated Natural Gas Use (therms)	3,280	2,533	**748**
			-
Annual Cost and Savings, $	$ 17,450	$ 13,474	**$ 4,000**

1. Assumes 100% OA using "Recirc AHU Operation" from cost per cfm calcs on "# Constants" sheet; %0A = 100% for bin ranges >70

2. Assumes 20% OA using "Recirc AHU Operation" from cost per cfm calcs on "# Constants" sheet; % OA = 20% for bin range >70

3. Run hours based on bin data and time of day factor.

4. See Sample Calculation below

Unit	Serves	TOD Factor	Total CFM	Current $/CFM1	DCV $/CFM2	Estimated Savings
AHU-1	39THLMXAE	0.247	10000	$ 2.62	$ 2.02	$ 1,473
AHU-2	39MN17A	0.247	8500	$ 2.62	$ 2.02	$ 1,252
AHU-3	39MN17A	0.247	8500	$ 2.62	$ 2.02	$ 1,252
Total			27000			$ 3,976

5.There is no demand reduction for this measure

6. No rebates or other finanical incentives w ere available for this measure

ECM# 27 – Time of Day Optimization

Estimated Implementation Costs

TOD Optimization								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	BMS Programming - See Setpoint Opt		16		-	135	2,160	2,160
	TOTAL							**$ 2,160**

Estimated Savings

Time of Day Optimization						
3. Price of Electricity, $/kWh (blended rate)				$0.202		
5. Price of Natural Gas, $/therm				$1.444		
				Existing Condition	**Proposed System**	**Savings**
Annual Run Hours				2,700	2,340	**360**
Annual Electric Use (kWh)				71,860	62,279	**9,581**
Annual Natural Gas Use (therms)				15,066	13,725	**1,340**
						-
Annual Cost and Savings, $				$ 36,271	$ 34,335	**$ 1,935**
1. Daily run hours are reduced from 18.5 hours to 15 hours.						
2. Cost per cfm for respective AC unit taken from "# Constants" sheet.						
3. See Sample Calculations Below						
Unit	Area Served	CFM	Load Factor	Existing TOD Factor	Proposed TOD Factor	Estimated Savings
RTU	Main Office	2900	0.75	0.31	0.27	$ 717
RTU	Teachers Room	2900	0.75	0.31	0.27	$ 609
Unit Vents 1st Fl	Unit Vents 1st Fl	17600	0.75	0.31	0.27	$ 609
Hours of Operation	On	Off	Hrs/Day			
Existing	5	23.5	18.5			
Proposed	6	21	15			
3.There is no demand reduction for this measure						
4. No rebates or other finanical incentives were available for this measure						

ECM# 28 –Exhaust Fan Time of Day Optimization

Estimated Implementation Costs

Exhaust Fan TOD Optimization								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	BMS Programming - See Setpoint Opt		8		-	135	1,080	1,080
	TOTAL							**$ 1,080**

Estimated Savings

Exhaust Fan Time of Day Optimization						
3. Price of Electricity, $/kWh (blended rate)				$0.202		
5. Price of Natural Gas, $/therm				$1.444		
				Existing Condition	**Proposed System**	**Savings**
Annual Run Hours				4,320	2,700	**1,620**
Annual Electric Use (kWh)				6,480	4,050	**1,813**
						-
Annual Cost and Savings, $				$ 1,309	$ 943	**$ 366**
1. Daily run hours are reduced from 24 hours to 1 hours.						
2. Assumed Fans are equipped with 1/4 HP Motors						
3. See Sample Calculations Below						

Unit	Area Served	CFM	Load Factor	Existing TOD Factor	Proposed TOD Factor	Estimated Savings
EF - 1	General Exhaust	0.25	0.75	4320	2700	$ 46
EF - 2	General Exhaust	0.25	0.75	4320	2700	$ 46
EF - 3	General Exhaust	0.25	0.75	4320	2700	$ 46
EF - 4	General Exhaust	0.25	0.75	4320	2700	$ 46
EF - 5	General Exhaust	0.25	0.75	4320	2700	$ 46
EF - 6	General Exhaust	0.25	0.75	4320	2700	$ 46
EF - 7	General Exhaust	0.25	0.75	4320	2700	$ 46
EF - 8	General Exhaust	0.25	0.75	4320	2700	$ 46
						$ 366

Hours of Operation	On	Off	Hrs/Day
Existing	5	23.5	18.5
Proposed	6	21	15

3.There is no demand reduction for this measure

4. No rebates or other finanical incentives were available for this measure

ECM# 14 - At EOL, Upgrade Aging Air Cooled Chiller with High Efficiency Units

Estimated Implementation Costs

Chiller SEER Upgrade								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Chiller	ea	1	124605	124,605		-	124,605
	Other Estimated Implementation Costs							60,003
	TOTAL GROSS COST							**$ 184,608**
	AVOIDED COST							**$ 164,608**
	New Jersey Smart Start Rebate							**$ 5,200**

Estimated Savings

Replace Aging Air Cooled Chiller with Higher Efficiency units

3. Price of Electricity, $/kWh (blended rate)	$0.162
5. Price of Natural Gas, $/therm	$1.202

	Existing Condition	Proposed System	Savings
Total Tons	100	100	
SEER	9.6	10.7	
Annual Run Hours	1,163	1,163	
Annual Peak Demand Reduction (kW)	24.1	21.6	2.47
Annual kWh	145,375	130,430	14,945
Annual Cost and Savings, $	$ 23,551	$ 21,130	**$ 2,400**

1. Cost per kWh and therm prices taken from "# Constants" sheet.
2. Run hours based on bin data and time of day factor.
3. Assumed 10 - 15 Ton RTUs thorughout building
4. See Sample Calculations below

Tag	Tons	Run Hrs	Standard SEER Btu / Wh	Hi Eff SEER Btu / Wh	kWh Saved	Annual Savings	Incremental Cost
Offices	100	1,163	9.6	10.7	14945	$ 2,421	$ 10,000
Total	**100**				**14945**	**$ 2,421**	**$ 10,000**

5. Coincidence Factor for peak kW reduction taken from United Illuminated Company: 2005 Coincidence Factor Study
6.. ASHRAE 90.1-1989 Referenced for baseline SEER/EER
7. Carrier 30XA vs Carrier 30RB

ECM# 11 - At EOL, Upgrade Window AC Units w/ High Efficiency Models

Estimated Implementation Costs

REPLACING WINDOW AC UNITS								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Window AC Unit	Unit	3	200	600	50	150	750
	Other Estimated Implementation Costs							-
	TOTAL							**$ 750**

Estimated Savings

SAVINGS FROM REPLACING WINDOW AC UNITS			
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.202		
	Existing Condition	**Proposed System**	**Savings**
Number of Units	3	3	
Capacity per Unit, Tons	0.8	0.8	
Total Capacity, Tons	2	2	
Assumed Efficiency, SEER	8.0	10.1	
Total Hours of Normal Operation, hrs	1,021	1,021	
Cooling Load Factor	60%	60%	
Annual Cooling Production, ton-hours	1,470	1,470	
Annual Cooling Load, kBTU	17,643	17,643	
Annual Peak Demand Reduction (kW)	0.3	0.3	0.07
Annual Electrical Consumption, kWh	2,205	1,747	459
Annual Cost and Savings, $	$ 357	$ 283	**$ 74**

1. Assume existing systems runs all year when outside air temperature (OAT) is above 65F from Monday through Friday.
2. Both conditions are simulated with non-programmable thermostats.
3. Load factor calculation represents the percentage of time when the unit operates at full load.
4. It is assumed that the old systems have a 10% derated efficiency of 8 SEER.
5. Assume the new units have an efficiecy of 10.1 EER.
6. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet
7. No rebates or other finanical incentives were available for this measure

ECM# 4 – Install Vending Machine System

Estimated Implementation Costs

VENDINGMISERS								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	VendingMisers	EA	1	179	179	-	-	179
	TOTAL							**$ 179**

Estimated Savings

VENDING MACHINE POWER MANAGEMENT SYSTEM				
3. Price of Electricity, $/kWh (blended rate)		$0.162		
5. Price of Natural Gas, $/therm		$1.202		
		Existing Condition	**Proposed System**	**Savings**
Soda Machine Power Consumption		100%	56%	
Run Hours		8,760	8,760	
Annual Peak Demand Reduction (kW)		0.06	0.03	0.02
Annual Energy Consumption (kWh)		2,102	925	1,177
Annual Cost and Savings, $		$ 341	$ 150	**$ 191**
1. Run hours based on fan motors being run 8760 hrs				
2. Sample Calculations Below				
Vending Machine Count	1			
Annual Run-Time Factor	60%			
VendMiser Installation Savings	0			
Soda Machine Pow er Consumption, kw	0.40			
Annual Savings %	56%			
Annual Energy Savings	$191			
Analysis Spreadsheet				
3. No rebates or other finanical incentives w ere available for this measure				
4. Coincidence Factor for peak kW reduction taken from Maryland Public Utility Commision: Appendix A Measure Analysis Spreadsheet				

ECM#17 – Domestic Hot Water Optimization

Estimated Implementation Costs

Domestic Hot Water Optimization								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Resetting Temperature on Domestic Hot Water Tanks	hr	2	0	-	100	200	200
2	Installation of Gas Domestic Hot Water Tank	ea	-	6,000	-	700	-	-
3	Faucet with Sensor	ea	-	500	-	240	-	-
	Other Estimated Implementation Costs							-
	TOTAL							**$ 200**

Estimated Savings

OPTIMIZE DOMESTIC HOT WATER SYSTEM			
2. Price of City Water, $/1000 gallons	$4.000		
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.202		
	Existing Condition	**Proposed System**	**Savings**
Annual Domestic Water Usage for Sinks, gal	50,000	50,000	
Percentage of Hot Water per Sink Usage	50%	50%	
Annual Hot Water Usage for Sinks, gal	25,000	25,000	-
Annual Gas Usage, therms	193	169	23
Annual Cost and Savings, $	$ 332	$ 303	**$ 28**
1. Assume the existing faucet flow rate is 2 gpm and each occupants uses the faucet for 2 minute(s) per day. Total occupants per the building is 50.			
Reference:Water Use & Conservation, 1st Ed, Table 2.2 p25,Table 2.10 p77,&Table 2.15 p103,WaterPlow Press, 2001			
2. Assume existing gas fired hot water heaters have a thermal efficiency of 0.80.			
3. Assume incoming city water temperature is 55F			
4. Existing supply setpoint is 129F			
5. Proposed supply setpoint is 120F			
6.There is no demand reduction for this measure			
7. No rebates or other finanical incentives were available for this measure			

ECM# 8 - Lighting Upgrades – Costs & Savings are listed in the Lighting Summary & Inventory

ECM# 10 – Based on Outside Air Temperature, Reset Hot Water Temperatures

Estimated Implementation Costs

OAT HHW RESET								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	BMS Programming	hrs	8		-	135	1,080	1,080
2					-		-	-
	Other Estimated Implementation Costs							-
	TOTAL							**$ 1,080**

Estimated Savings

Implement a HHW Supply Water Temperature Setpoint rest program based on outside air temperature.			
2. Price of City Water, $/1000 gallons	$4.000		
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.202		
	Existing Condition	**Proposed System**	**Savings**
HHW Supply Setpoint at 0AT = 0 degrees, degrees	**180**	180	
HHW Supply Setpoint at 0AT = 40 degrees, degrees	180	**160**	
Annual Natural Gas losses (therms)	1,043	752	**291**
Annual Cost and Savings, $	$ 1,254	$ 904	**$ 349**

1 Assumes HHW distribution is primarily made up of 6" and 3/4" piping.
2. Assumes 1" cellular glass fiber insulation with AP-T casing
3 Assumes 75 degree ambient temperature

ECM#12 – Install Weatherstripping

Estimated Implementation Costs

Weatherstripping								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	Replace weatherstripping around doors	ea	4	200	800	150	600	1,400
	TOTAL							**$ 1,400**

Estimated Savings

SAVINGS FROM WEATHERSTRIPPING DOORS			
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.202		
	Existing Condition	**Proposed System**	**Savings**
Number of Doors	4	4	
Estimated Infiltration Rate per Door, CFM	106	21	
Annual Cooling Infiltration Hours, OAT > 80F	800	800	
Annual Heating Infiltration Hours, OAT < 55F	500	500	
Annual Cooling Load, kBTU	9,513	1,903	
Annual Cooling Electrical Consumption, kWh	1,189	238	951
Annual Heating Load, kBTU	10,291	1,875	
Annual Heating Natural Gas Consumption, therms	128.64	23.44	105
Annual Cost and Savings, $	$ 347	$ 67	**$ 281**
1. Infiltration rate was calculated according to ASHRAE Fundamentals 2005 Door Leakage Rate Equation F27.12			
2. Estimated hours of infiltration was based on all hours below 55F and above 80F for the region.			
3. It is assumed that each door has a leakage area of 45 square inches (15 linear feet by 1/4 in). Vestibule doors are n			
4. A 60% load factor was used when calculating the existing leakage rate.			
5. Assume all AHUs have an supply air temperature of 55F in the summer and 80F in the winter.			
6. The average outside air temperature above 80F during the year is 86F. The average outside air temperature below 5			
7. Assume the cooling plant has an efficiency of 1.4 kw/ton and the natural gas fired heating units have an efficiency o			
8. New weatherstripping is assumed to reduce inflitration by 80%.			
9. There is no demand reduction for this measure			
10. No rebates or other finanical incentives were available for this measure			

ECM# 19 - Install Chilled Water pump VFDs

Estimated Implementation Costs

CHW PUMP VFDs								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	5 HP VFD		1	1,519	1,519	528	528	2,047
2	5 HP Prem Eff Moto		1	380	380	528	528	908
3	2 Way Valves on HHW Coils	EA	17	301	5,117	26	443	5,560
	NJ Smart Start Incentive							**$ 829**
	TOTAL							**$ 8,515**

Estimated Savings

CHW PUMP VFDs

2. Price of City Water, $/1000 gallons	$4.000
3. Price of Electricity, $/kWh (blended rate)	$0.162
5. Price of Natural Gas, $/therm	$1.202

	Existing Condition	Proposed System	Savings
Avg Percent Required Power	100%	35%	
Annual Energy Consumption (kWh)	6,507	2,277	**4,230**
Run Hours	2,326	2,326	
			-
Annual Cost and Savings, $	$ 1,054	$ 369	**$ 690**

1. Assumes average rated fan volume of 75%
2. Includes replacement of existing motors with premium efficiency (inverter duty) motors
3. Run hours based on bin data and time of day factor.
4. There is no demand reduction for this measure
5. See Sample Calculation below

Building	CHW Pumps	Motor Nameplate HP	Equivalent Power Draw, kw	Annual Run Hours	Annual Electric Savings, kwh	Annual Electric Savings, $
MUNICIPAL	P 1	5	3.73	2,326	4,230	685

Percent Required Power		
No Control	VFD	Safety Factor
100%	35%	75%

ECM# 20 – Premium Efficiency Motors

Estimated Implementation Costs

VENDINGMISERS								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	VendingMisers	EA	2	179	358	-	-	358
	TOTAL							**$ 358**

Estimated Savings

SAVINGS FROM PREMIUM EFFICIENCY MOTORS

3. Price of Electricity, $/kWh (blended rate)	$0.162
5. Price of Natural Gas, $/therm	$1.202

					ESTIMATED RUN TIME		FULL LOAD NOMINAL EFFICIENCY (%)		ELECTRIC CONSUMPTION (kWh)		SAVINGS		NJCE REBATE	Peak Demand Reduction
TAG	**LOCATION**	**SERVICES**	**HP**	**RPM**	**AVG HRS**	**LOAD FACTOR**	**EXISTING**	**PROPOSED**	**EXISTING**	**PROPOSED**	**kWh**	**$**	**$**	**kW**
P-1,2	MER	HHW PUMPS	5	1,800	*4,230*	*100%*	*85.5%*	89.5%	14,763	14,103	660	$ 107	$ 54	0.1
CHW-1,2	MER	CHILLED WATER PUMPS	5	1,800	*2,388*	*100%*	*85.5%*	89.5%	8,334	7,962	372	$ 60	$ 54	0.1
										TOTAL	**1,032**	**$ 167**	**$ 108**	**0.1**

1. Existing equipment data listed in italics were estimated due to unavailable information.
2. It is assumed that the breakhorse power of all motors is 80% of the nameplate horsepower.
3. Only the major motors were sampled for this calculations.
4. Run hours base on winter bin hours
5. Coincidence Factor for peak kW reduction taken from United Illuminated Company: 2005 Coincidence Factor Study

ECM#24 – Building Management System

Estimated Implementation Costs

BUILDING MANAGEMENT SYSTEM								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	BMS Host Computer, Materials and Labor	ea	1	9,363	9,363		-	9,363
2	DCV - See DCV Below	ea	1	17,550	17,550		-	17,550
3	TOD Optimization - BMS Programming - See TOD Optimization Below	ea	1	2,160	2,160		-	2,160
4	Exhaust Fan TOD - See Exhaust Fan TOD Below	ea	1	1,080	1,080		-	1,080
5	CHW VFD - See HHW VFD Below	ea	1	8,520	8,520	-	-	8,520
6	Temperature Setpoint Optimization - BMS Programming - See Setpoint Optimization Below	ea	1	2,160	2,160		-	2,160
7	BMS Setup: Install sensors and controllers for RTU's - 6 points per RTU	ea	54	256	13,824	891	48,114	61,938
8	BMS Setup: Install sensors and controllers for Exhaust Fan TOD	ea	7	256	1,792	891	6,237	8,029
9	BMS Setup: Install sensors and controllers for CHW VFD	ea	27	256	6,912	891	24,057	30,969
10	Hot Water Reset Programming	ea	1,080					
	Other Estimated Implementation Costs							86,182
	TOTAL							**$ 227,951**

Estimated Savings

BUILDING MANAGEMENT SYSTEM			
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.202		
	Existing Condition	**Proposed System**	**Savings**
Time of Day Optimization - Electric Savings (kWh)	49,116	40,930	**8,186**
Time of Day Optimization - Gas Savings (therms)	9,921	8,818	**1,103**
Temperature Setpoint Optimization - Electric Savings (kWh)	2,427	-	**2,427**
Temperature Setpoint Optimization - Gas Savings (therms)	1,757		**1,757**
Demand Control Ventilation - Electric Savings (kWh)	16,667	12,809	**3,858**
Demand Control Ventilation - Gas Savings (therms)	869	668	**201**
Exhaust TOD - Electric Savings (kWh)	5,634	3,521	**2,113**
CHW VFD - Electric Savings (kWh)	6,507	2,277	**4,230**
Hot Water Reset Based on OAT (therms)	1,043	752	**291**
Annual Energy Consumption (kWh)	80,351	59,538	**20,813**
Annual Energy Consumption (therms)	13,590	10,238	**3,352**
Annual Cost and Savings, $	$ 29,352	$ 21,951	**$ 7,401**
1. Assume existing systems run 24 hrs a day all year when outside air temperature is above 65F.			
2. Assume the proposed systems operate during a 12 hour window weekdays when the outside air temperature (OAT) is above 65F and during unoccupied hours when the OAT is above 75F.			
3. Load factor calculation represents the percentage of time when the units operate at full load during the operation schedule.			
4. It is assumed that all heat pump units run at a combined derated efficieny of 13 EER.			
5.There is no demand reduction for this measure			
6. No rebates or other finanical incentives were available for this measure			

ECM# 25 – Demand Control Ventilation

Estimated Implementation Costs

	Demand Controlled Ventilation							
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	CO2 Sensors & Control Wiring	EA	3	375	1,125	625	1,875	3,000
2	RA / OA Dampers & Actuators	EA (avg)	3	1,250	3,750	750	2,250	6,000
3	Controllers	EA	3	1,500	4,500	600.0	1,800	6,300
4	Electrical Work	EA	3	250	750	500.0	1,500	2,250
	Other Estimated Implementation Costs							-
	TOTAL							**$ 17,550**

Estimated Savings

Demand Control Ventilation			
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.202		
	Existing Condition	**Proposed System**	**Savings**
Total (CFM)	7,150	7,150	
Average Cost Per CFM	$2.124	$1.632	
Run Hours	2,160	2,160	
Estimated Electric Use (kWh)	16,667	12,809	**3,858**
Estimated Natural Gas Use (therms)	869	668	**201**
			-
Annual Cost and Savings, $	$ 3,744	$ 2,878	**$ 900**

1. Assumes 100% OA using "Recirc AHU Operation" from cost per cfm calcs on "# Constants" sheet; %0A = 100% for bin ranges >70
2. Assumes 20% OA using "Recirc AHU Operation" from cost per cfm calcs on "# Constants" sheet; % OA = 20% for bin range >70
3. Run hours based on bin data and time of day factor.
4. See Sample Calculation below

Unit	Serves	TOD Factor	Total CFM	Current $/CFM1	DCV $/CFM2	Estimated Savings
NEW LOBBY	MPS004BGCK10E	0.247	1450	$ 2.12	$ 1.63	$ 713
COUNCIL CHAMBERS	MPS010BGCM22E	0.247	3600	$ 2.12	$ 1.63	$ 1,770
COURT ROOMS	MPS006BGCM22E	0.247	2100	$ 2.12	$ 1.63	$ 1,032
Total			7150			$ 3,515

5.There is no demand reduction for this measure
6. No rebates or other finanical incentives w ere available for this measure

ECM# 26- Temperature Setpoint Optimization

Estimated Implementation Costs

Temperature Setpoint Optimization								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	BMS Programming (assumes incorporated	Hrs	16		-	135	2,160	2,160
	Other Estimated Implementation Costs							-
	TOTAL							**$ 2,160**

Estimated Savings

Set Point Optimization			
3. Price of Electricity, $/kWh (blended rate)	$0.162		
5. Price of Natural Gas, $/therm	$1.202		
	Existing Condition	**Proposed System**	**Savings**
Space Cooling Temperature Setting	70-75	75	**$400**
Space Heating Temperature Setting	70-75	70	**$2,100**
Annual Electric Savings (kWh)	2,427		**2,427**
Annual Natural Gas Savings (therms)	1,757		**1,757**
Annual Cost and Savings, $			**$ 2,500**
1. Daily run hours are based on 180 days, 9 hour days			
2. Cost per cfm for respective AC unit taken from "# Constants" sheet.			
3. Assumed 20 CFM/Student			
5.There is no demand reduction for this measure			
6. No rebates or other finanical incentives were available for this measure			

ECM# 27 – Time of Day Optimization

Estimated Implementation Costs

TOD Optimization								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	BMS Programming - See Setpoint Opt		16		-	135	2,160	2,160
	TOTAL							**$ 2,160**

Estimated Savings

Time of Day Optimization						
3. Price of Electricity, $/kWh (blended rate)				$0.162		
5. Price of Natural Gas, $/therm				$1.202		
				Existing Condition	**Proposed System**	**Savings**
Annual Run Hours				2,160	1,800	**360**
Annual Electric Use (kWh)				49,116	40,930	**8,186**
Annual Natural Gas Use (therms)				9,921	8,818	**1,103**
						-
Annual Cost and Savings, $				$ 19,882	$ 18,556	**$ 1,326**
1. Daily run hours are reduced from 18.5 hours to 15 hours.						
2. Cost per cfm for respective AC unit taken from "# Constants" sheet.						
3. See Sample Calculations Below						
Unit	Area Served	CFM	Load Factor	Existing TOD Factor	Proposed TOD Factor	Estimated Savings
RTU	Main Office	2900	0.75	0.25	0.21	$ 104
RTU	Teachers Room	2900	0.75	0.25	0.21	$ 104
Unit Vents 1st Fl	Unit Vents 1st Fl	17600	0.75	0.25	0.21	$ 104
Hours of Operation	On	Off	Hrs/Day			
Existing	5	23.5	18.5			
Proposed	6	21	15			
3.There is no demand reduction for this measure						
4. No rebates or other finanical incentives were available for this measure						

ECM# 28 –Exhaust Fan Time of Day Optimization

Estimated Implementation Costs

Exhaust Fan TOD Optimization								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	BMS Programming - See Setpoint Opt		8		-	135	1,080	1,080
	TOTAL							**$ 1,080**

Estimated Savings

Exhaust Fan Time of Day Optimization

3. Price of Electricity, $/kWh (blended rate)				$0.162		
5. Price of Natural Gas, $/therm				$1.202		
				Existing Condition	**Proposed System**	**Savings**
Annual Run Hours				4,320	2,700	**1,620**
Annual Electric Use (kWh)				5,634	3,521	**2,113**
						-
Annual Cost and Savings, $				$ 913	$ 570	**$ 342**
1. Daily run hours are reduced from 24 hours to 1 hours.						
2. Assumed Fans are equipped w ith 1/4 HP Motors						
3. See Sample Calculations Below						

Unit	Area Served	CFM	Load Factor	Existing TOD Factor	Proposed TOD Factor	Estimated Savings
EF - 1	General Exhaust	0.333	0.75	4320	2700	$ 49
EF - 2	General Exhaust	0.333	0.75	4320	2700	$ 49
EF - 3	General Exhaust	0.333	0.75	4320	2700	$ 49
EF - 4	General Exhaust	0.333	0.75	4320	2700	$ 49
EF - 5	General Exhaust	0.333	0.75	4320	2700	$ 49
EF - 6	General Exhaust	0.333	0.75	4320	2700	$ 49
EF - 7	General Exhaust	0.333	0.75	4320	2700	$ 49

Hours of Operation	On	Off	Hrs/Day
Existing	5	23.5	18.5
Proposed	6	21	15

3.There is no demand reduction for this measure

4. No rebates or other finanical incentives w ere available for this measure

ECM# 8 - Upgrade to High Efficiency Condensing Boiler

Estimated Implementation Costs

Condensing Boiler								
N/N	DESCRIPTION OF WORK	UNIT	QTY	MATERIAL		LABOR		TOTAL
				PER UNIT	TOTAL	PER UNIT	TOTAL	
1	1.5 MBTU High Eff Gas Boiler	ea	2	29,270	58,540	15,000	30,000	88,540
2	Demo Existing Boilers	ls	1	2,000	2,000	6,000	6,000	8,000
3	Fin Tubed Radiation Units	LF	-	14.80	-	8.60	-	-
4	Hydronic Piping 2"	LF	-	6.40	-	7.45	-	-
5	HHW Pumps	ea	1	3,350	3,350	405	405	3,755
6	Electric/Controls	ls	1	2,000	2,000	2,000	2,000	4,000
	Other Estimated Implementation Costs							47,141
	TOTAL GROSS COST							**$ 151,440**
	AVOIDED COST							**$ 126,846**
	TOTAL INCREMENTAL COST							**$ 24,590**
	NJ SMART START REBATE							**$ 3,000**

Estimated Savings

Replace Cast Iron Boilers with high efficiency modular condensing boilers

Price of Electricity, $/kWh	$0.162
Price of Natural Gas, $/therm	$1.202

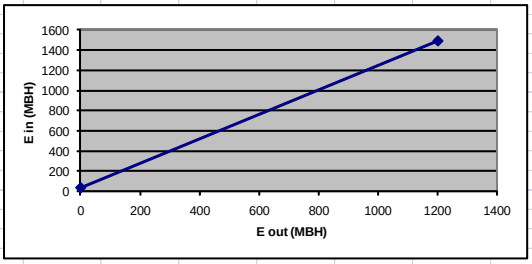
	Existing Condition	Proposed System	Savings
Boiler Plant Capacity, kBTU	2,982	3,000	
Hours of Operation	4,048	4,048	
Seasonal Efficiency	81%	93%	12%
Annual Gas Consumption, therms	7,959	5,444	2,515
Annual Cost and Savings, $	$9,567	$6,544	**$ 3,023**

1. Assume the boilers have a temperature reset schedule where the hot water is supplied at 180F/160F when it is 0F/40F outside.

Calc'd existing load, TH	10,618
Calc'd new load, TH	7,263
Savings, TH	3,355
	32%
Actual Exisiting Load (from bills), TH	7,959
Calc'd savings, %	32%
Adjusted Calc'd savings, TH	2,515

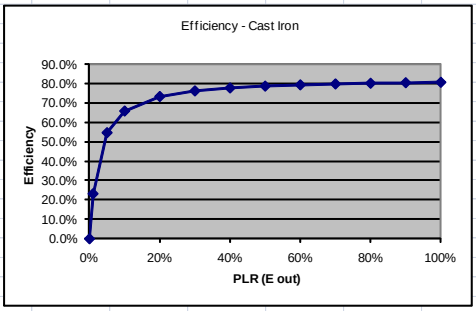
OLD BOILER

Single Boiler:			
	Gas Fuel		
Eff 100%	80.5%		
E in 100%	1491	MBH	
E out 100%	1201	MBH	
SBL (% Ein)	2.5%		
SBL	37.275	MBH	
Min E out	20%	298.2	
Comb, Eff	83%		
m slope=	1.21082696		
Number of Boilers in Plant	2		
Blr Plant Capacity	2982		

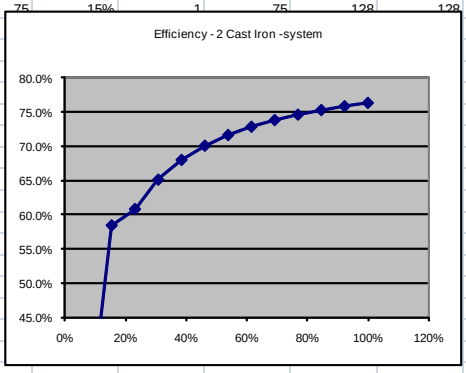


INDIVIDUAL BOILER

Eout (Load)	PLR	E in	linear relation Efficiency
0	0%	37.275	0.0%
12.0060508	1%	51.81225	23.2%
60.030254	5%	109.96125	54.6%
120.060508	10%	182.6475	65.7%
240.121016	20%	328.02	73.2%
360.181524	30%	473.3925	76.1%
480.242032	40%	618.765	77.6%
600.30254	50%	764.1375	78.6%
720.363048	60%	909.51	79.2%
840.423557	70%	1054.8825	79.7%
960.484065	80%	1200.255	80.0%
1080.54457	90%	1345.6275	80.3%
1200.60508	100%	1491	80.5%



		Fuel Source	Gas	COMBINED SYSTEM BOILER PART LOAD									
	# Days perWeek in Operation		7	Capacity of each			1491						
				No. of Boilers run			1						
				Total Capacity			1491						
				Avg Load Factor			25%						
	OP HRS						No. of	Load					
Temp	5:30-4:30pm	Op Hrs	Plant	Load	PLR		Boilers	per boiler	per boiler	plant		Gas	Oil
Bin	Mon-Fri	M-F	LOAD						E in	E in	Efficiency	Therm	Gal
0	39	39	100%	373	100%		1	373	489	489	76.3%	191	-
15	73	73	92%	344	92%		1	344	454	454	75.8%	331	-
20	138	138	85%	315	85%		1	315	419	419	75.2%	578	-
25	225	225	77%	287	77%		1	287	384	384	74.6%	865	-
30	399	399	69%	258	69%		1	258	350	350	73.8%	1,396	-
35	491	491	62%	229	62%		1	229	315	315	72.8%	1,548	-
40	569	569	54%	201	54%		1	201	280	280	71.6%	1,594	-
45	545	545	46%	172	46%		1	172	246	246	70.1%	1,338	-
50	543	543	38%	143	38%		1	143	211	211	68.0%	1,145	-
55	520	520	31%	115	31%		1	115	176	176	65.1%	916	-
60	506	506	23%	86	23%		1	86	141	141	60.8%	716	-
		-	15%	75	15%		1	75	128	128	58.5%	-	-
			8%								0.0%	-	-
	Total	4,048	0%									10,618	-



Seasonal Efficency	29.75
	55.2299393
	103.729294
	167.806888
	294.62
	357.837999
	407.128275
	381.788044
	369.082943
	338.57981
	308.016544
	0
	81%

Modular Condensing Boilers — ASSUMPTION — (1) 3,000 MBH Boilers

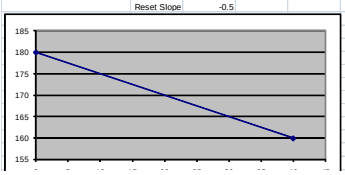
	OAT	SWT	RWT	Zone Load %	LOAD MBH	No Boilers	Eout MBH Last Boiler	% Load Last Boiler	Zone Load	Total Boiler Plant Capacity %	Fully Loaded Blrs Eff %	Fully Loaded Blrs Ein MBH	Part Loaded Blr Eff %	Part Loaded Blr Ein MBH	Total Blr Ein MBH	Overall Eff %	Op Hrs 5:30-4:30pm	Gas Input Therm	Oil Input Gal	Gas Output Therm	Oil Output Gal
100	0	180.00	160.00	100%	373	1	373	14%	373	12%	86.50%	0	88.00%	424	424	88.0%	4	17	-	15	-
92	5	177.50	158.41	92%	344	1	344	13%	344	11%	86.55%	0	88.05%	391	391	88.1%	9	35	-	31	-
85	10	175.00	156.82	85%	315	1	315	12%	315	11%	86.58%	0	88.08%	358	358	88.1%	26	93	-	82	-
77	15	172.50	155.23	77%	287	1	287	11%	287	10%	86.63%	0	88.13%	325	325	88.1%	73	237	-	209	-
69	20	170.00	153.64	69%	258	1	258	10%	258	9%	86.65%	0	88.15%	293	293	88.2%	138	404	-	356	-
62	25	167.50	152.05	62%	229	1	229	9%	229	8%	86.70%	0	88.20%	260	260	88.2%	225	585	-	516	-
54	30	165.00	150.45	54%	201	1	201	8%	201	7%	86.75%	0	88.25%	227	227	88.3%	399	908	-	801	-
46	35	162.50	148.86	46%	172	1	172	7%	172	6%	86.78%	0	88.28%	195	195	88.3%	491	958	-	845	-
38	40	160.00	147.27	38%	143	1	143	6%	143	5%	86.83%	0	88.33%	162	162	88.3%	569	923	-	815	-
31	45	157.50	145.68	31%	115	1	130	5%	115	4%	86.85%	0	88.35%	147	147	78.1%	545	800	-	625	-
23	50	155.00	144.09	23%	86	1	130	5%	86	3%	86.90%	0	88.40%	147	147	58.6%	543	797	-	467	-
15	55	152.50	142.50	15%	57	1	130	5%	57	2%	86.93%	0	88.43%	147	147	39.1%	520	763	-	298	-
8	60	150.00	140.91	8%	32	1	130	5%	29	1%	86.98%	0	88.48%	147	147	19.6%	506	743	-	145	-
																	4,048	7,263	-	5,206	-

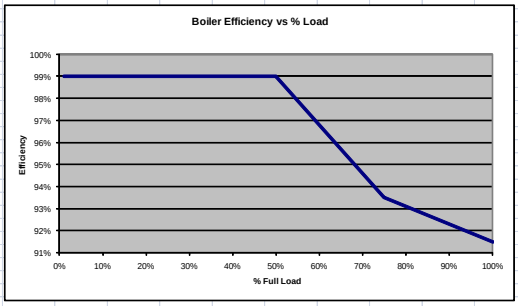
Max Load	1,491	MBH
Condensing Boiler Capacity	3,000	MBH Each
Full Load Efficiency	86.5%	
Boiler E out at full load	2,595	MBH Each
Turndown ratio, XX1	20	5%
# Boilers	1	129.75 MBH @ Lowest turndown (5%)
Plant Capacity	3,000	MBH
Average Load Factor	25%	

Seasonal Efficency: 93%

RESET SCHEDULE		OA	SWT
	Max	0	180
		40	160

Reset Slope: -0.5

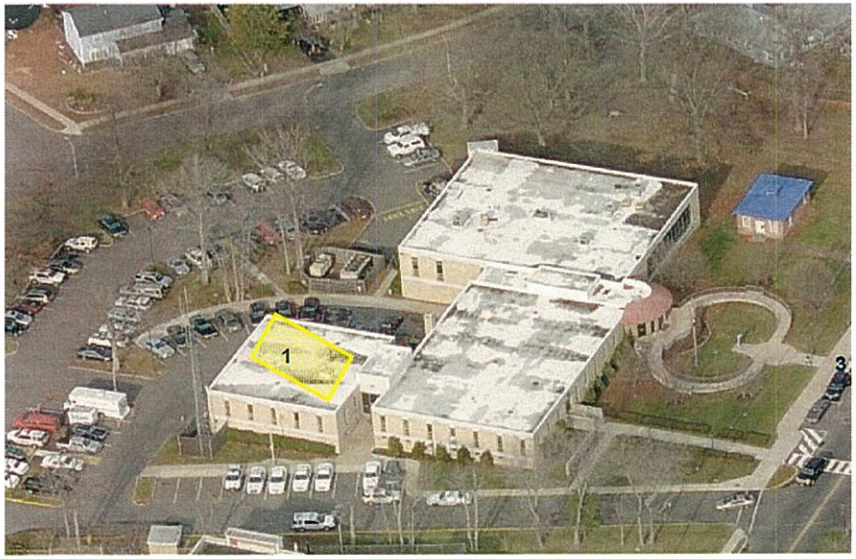




Solar PV System - WILLINGBORO TOWNSHIP _ MUNICPAL BUILDING

Performed By Dome-Tech Energy Advisors

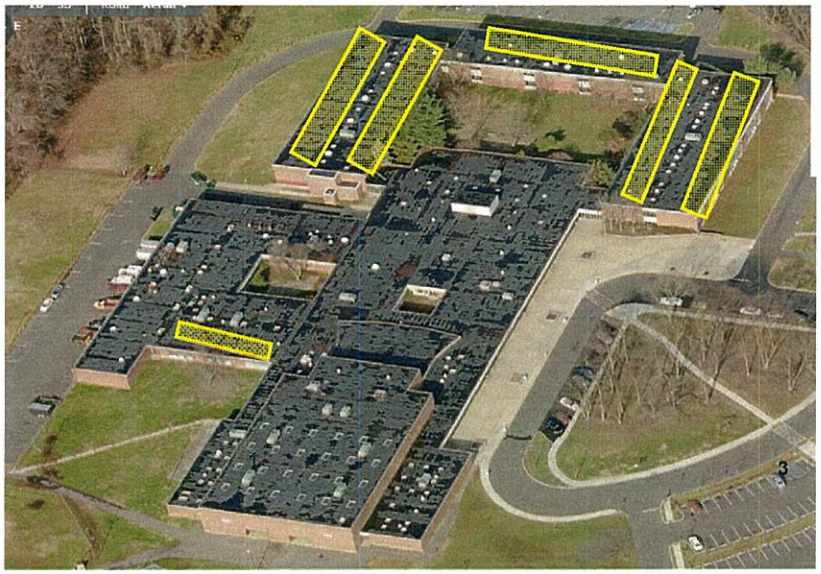
	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	
	N/S	N/S	N/S	N/S	N/S	N/S	
Gross Length, feet	60						
Panel Count (calculated)	17.5	0.0	0.0	0.0	0.0	0.0	
Panel Count (actual)	17	0	0	0	0	0	
	E/W	E/W	E/W	E/W	E/W	E/W	
Gross Length, feet	60						
Panel Count (calculated)	11.7	0.0	0.0	0.0	0.0	0.0	
Panel Count (actual)	11	0	0	0	0	0	
Gross Panel Qty	187	0	0	0	0	0	
Panel Reduction %	70%	75%	70%	70%	70%	0%	
Net Panel Qty	131	0	0	0	0	0	131
							Total
System Capacity, kw	30	0	0	0	0	0	30
Choose Closest City	Newark	Newark	Newark	Newark	Newark	Newark	
Capacity Factor (kwh/kw)	1,054	1,054	1,054	1,054	1,054	1,054	
First Year Expected Production (kWh)	31,733	0	0	0	0	0	31,733



Solar PV System - WILLINGBORO TOWNSHIP KENNEDY CENTER

Performed By Dome-Tech Energy Advisors

	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	
	N/S	N/S	N/S	N/S	N/S	N/S	
Gross Length, feet	88	190	120	33	170	190	
Panel Count (calculated)	25.6	55.4	35.0	9.6	49.5	55.4	
Panel Count (actual)	25	55	34	9	49	55	
	E/W	E/W	E/W	E/W	E/W	E/W	
Gross Length, feet	32	33	33	200	36	35	
Panel Count (calculated)	6.3	6.5	6.5	39.1	7.0	6.8	
Panel Count (actual)	6	6	6	39	7	6	
Gross Panel Qty	150	330	204	351	343	330	
Panel Reduction %	70%	70%	70%	70%	70%	70%	
Net Panel Qty	105	231	143	246	240	231	1,196
							Total
System Capacity, kw	24	53	33	57	55	53	275
Choose Closest City	Newark	Newark	Newark	Newark	Newark	Newark	
Capacity Factor (kwh/kw)	1,054	1,054	1,054	1,054	1,054	1,054	
First Year Expected Production (kWh)	25,454	55,999	34,618	59,563	58,205	55,999	289,837



Solar PV System - WILLINGBORO TOWNSHIP PUBLIC LIBRARY

Performed By Dome-Tech Energy Advisors

	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	
	N/S	N/S	N/S	N/S	N/S	N/S	
Gross Length, feet	70	60					
Panel Count (calculated)	20.4	17.5	0.0	0.0	0.0	0.0	
Panel Count (actual)	20	17	0	0	0	0	
	E/W	E/W	E/W	E/W	E/W	E/W	
Gross Length, feet	200	225					
Panel Count (calculated)	39.1	44.0	0.0	0.0	0.0	0.0	
Panel Count (actual)	39	43	0	0	0	0	
Gross Panel Qty	780	731	0	0	0	0	
Panel Reduction %	70%	70%	70%	70%	70%	0%	
Net Panel Qty	546	512	0	0	0	0	1,058
							Total
System Capacity, kw	126	118	0	0	0	0	243
Choose Closest City	Newark	Newark	Newark	Newark	Newark	Newark	
Capacity Factor (kwh/kw)	1,054	1,054	1,054	1,054	1,054	1,054	
First Year Expected Production (kWh)	132,361	124,046	0	0	0	0	256,408

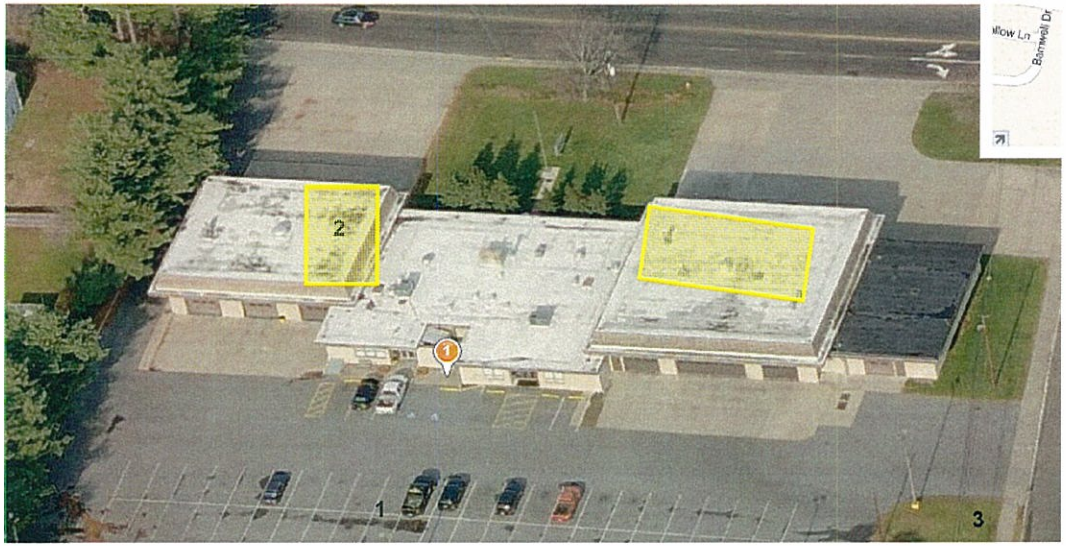


3

Solar PV System - WILLINGBORO TOWNSHIP FIRE STATION #161

Performed By Dome-Tech Energy Advisors

	Section 1 N/S	Section 2 N/S	Section 3 N/S	Section 4 N/S	Section 5 N/S	Section 6 N/S	
Gross Length, feet		55					
Panel Count (calculated)	0.0	16.0	0.0	0.0	0.0	0.0	
Panel Count (actual)	0	16	0	0	0	0	
	E/W	E/W	E/W	E/W	E/W	E/W	
Gross Length, feet		65					
Panel Count (calculated)	0.0	12.7	0.0	0.0	0.0	0.0	
Panel Count (actual)	0	12	0	0	0	0	
Gross Panel Qty	0	192	0	0	0	0	
Panel Reduction %	70%	70%	70%	70%	70%	0%	
Net Panel Qty	0	134	0	0	0	0	134
							Total
System Capacity, kw	0	31	0	0	0	0	31
Choose Closest City	Newark	Newark	Newark	Newark	Newark	Newark	
Capacity Factor (kwh/kw)	1,054	1,054	1,054	1,054	1,054	1,054	
First Year Expected Production (kWh)	0	32,581	0	0	0	0	32,581



Solar PV System - WILLINGBORO TOWNSHIP FIRESTATION #162

Performed By Dome-Tech Energy Advisors

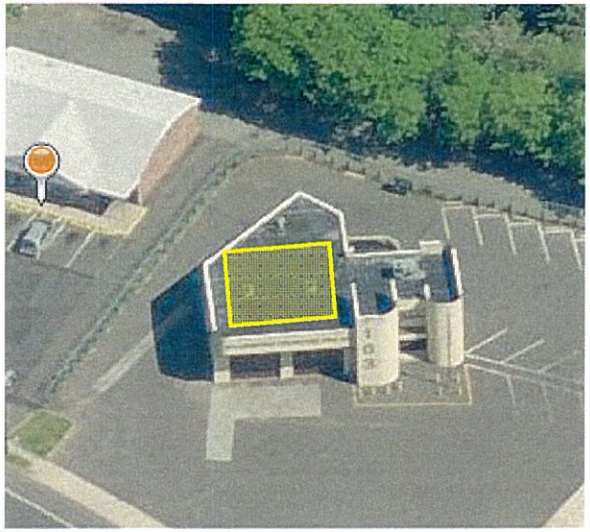
	Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	
	N/S	N/S	N/S	N/S	N/S	N/S	
Gross Length, feet	20						
Panel Count (calculated)	5.8	0.0	0.0	0.0	0.0	0.0	
Panel Count (actual)	5	0	0	0	0	0	
	E/W	E/W	E/W	E/W	E/W	E/W	
Gross Length, feet	40						
Panel Count (calculated)	7.8	0.0	0.0	0.0	0.0	0.0	
Panel Count (actual)	7	0	0	0	0	0	
Gross Panel Qty	35	0	0	0	0	0	
Panel Reduction %	70%	70%	70%	70%	70%	0%	
Net Panel Qty	25	0	0	0	0	0	25
							Total
System Capacity, kw	6	0	0	0	0	0	6
Choose Closest City	Newark	Newark	Newark	Newark	Newark	Newark	
Capacity Factor (kwh/kw)	1,054	1,054	1,054	1,054	1,054	1,054	
First Year Expected Production (kWh)	5,939	0	0	0	0	0	5,939



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	Section 1 N/S	Section 2 N/S	Section 3 N/S	Section 4 N/S	Section 5 N/S	Section 6 N/S	
Gross Length, feet	35						
Panel Count (calculated)	10.2	0.0	0.0	0.0	0.0	0.0	
Panel Count (actual)	10	0	0	0	0	0	
	E/W	E/W	E/W	E/W	E/W	E/W	
Gross Length, feet	35						
Panel Count (calculated)	6.8	0.0	0.0	0.0	0.0	0.0	
Panel Count (actual)	6	0	0	0	0	0	
Gross Panel Qty	60	0	0	0	0	0	
Panel Reduction %	60%	70%	70%	70%	70%	0%	
Net Panel Qty	36	0	0	0	0	0	36
							Total
System Capacity, kw	8	0	0	0	0	0	8
Choose Closest City	Newark	Newark	Newark	Newark	Newark	Newark	
Capacity Factor (kwh/kw)	1,054	1,054	1,054	1,054	1,054	1,054	
First Year Expected Production (kWh)	8,727	0	0	0	0	0	8,727



Solar PV System - WILLINGBORO TOWNSHIP_DEPARTMENT OF PUBLIC WORKS

Performed By Dome-Tech Energy Advisors

	Section 1 N/S	Section 2 N/S	Section 3 N/S	Section 4 N/S	Section 5 N/S	Section 6 N/S	
Gross Length, feet	9	7					
Panel Count (calculated)	2.6	2.0	0.0	0.0	0.0	0.0	
Panel Count (actual)	2	2	0	0	0	0	
	E/W	E/W	E/W	E/W	E/W	E/W	
Gross Length, feet	162	150					
Panel Count (calculated)	31.7	29.3	0.0	0.0	0.0	0.0	
Panel Count (actual)	31	29	0	0	0	0	
Gross Panel Qty	62	58	0	0	0	0	
Panel Reduction %	70%	70%	70%	70%	70%	0%	
Net Panel Qty	43	41	0	0	0	0	84
							Total
System Capacity, kw	10	9	0	0	0	0	19
Choose Closest City	Newark	Newark	Newark	Newark	Newark	Newark	
Capacity Factor (kwh/kw)	1,054	1,054	1,054	1,054	1,054	1,054	
First Year Expected Production (kWh)	10,521	9,842	0	0	0	0	20,363



Wind Analysis - New Providence

Performed By Dome-Tech Energy Advisors

Average Wind Speed	4.6	4.6	5.8
Annual Electric Use, kwh	503,680	503,680	503,680
Electric Cost	$0.15/kWh	$0.15/kWh	$0.15/kWh

Name	Willingboro Township - Municipal Building
Annual Electric Use, kwh	503,680
Electric Cost, kwh	$ 0.152

	Micro	Traditional 5.2 kw	Traditional 50 kw
Number of Units	20	2	1
kW Capacity, per Unit	1 Kw	5.2 Kw	50.0 Kw
kW Capacity, Total	20 Kw	10 Kw	50 Kw
Annual Production Per Unit	742 Kwh	5,857 Kwh	110,472 Kwh
Annual Production Total	14,843 Kwh	11,713 Kwh	110,472 Kwh
Annual Savings	$2,256	$1,780	$16,792
Installed Cost per Unit	$6,500		
Installed Cost per Kw		$6,000	$5,000
Gross Installed Cost	$130,000	$62,400	$250,000
NJ Incentive	$47,498	$37,483	$98,436
Net Installed Cost	$82,502	$24,917	$151,564
Simple PayBack	36.6	14.0	9.0
% Energy Use	2.9%	2.3%	21.9%

Monthly Averaged Wind Speed At 10 m Above The Surface Of The Earth For Terrain Similar To Airports (m/s)

Latitude	Longitude	January	February	March	April	May	June	July	August	September	October	November	December	avg
40.01	-74.53	5.14	5.19	5.28	5.03	4.42	4.09	3.74	3.66	3.88	4.26	4.87	5.1	4.56

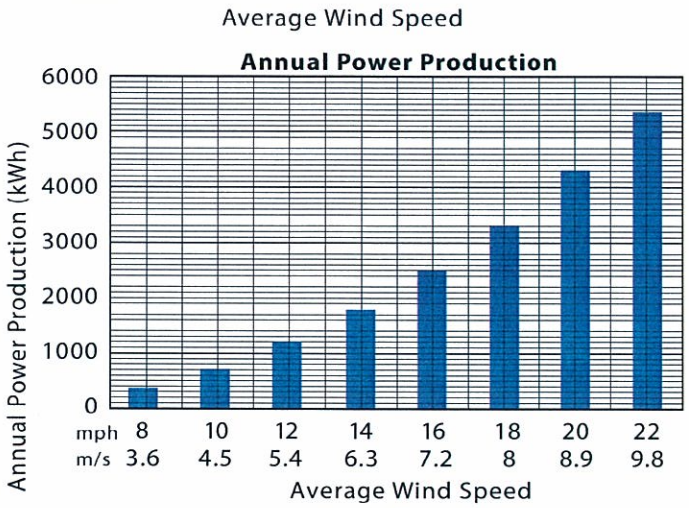
Monthly Averaged Wind Speed At 50 m Above The Surface Of The Earth (m/s)

Latitude	Longitude	January	February	March	April	May	June	July	August	September	October	November	December	avg
40.01	-74.53	6.51	6.57	6.68	6.37	5.59	5.18	4.73	4.63	4.91	5.39	6.17	6.45	5.77

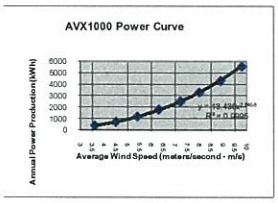
Latitude 40 42 N
Longitude 74 24 W
NASA Surface meteorology and Solar Energy: Data Subset
http://eosweb.larc.nasa.gov/cgi-bin/sse/subset.cgi?email=
UN k_mccarthy@dome-tech.com
PW dometech

http://www.awea.org/smallwind/toolbox/TOOLS/fs_safety.asp

AVX1000 Power Curve



m/s	annual kwh
3.6	390
4.5	710
5.4	1200
6.3	1800
7.2	2500
8	3300
8.9	4300
9.8	5550

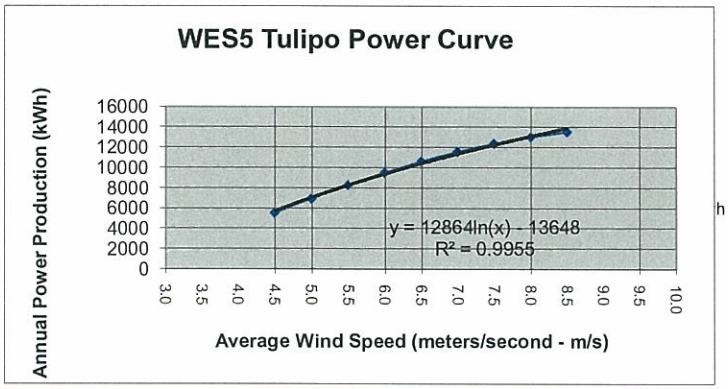


y = 13.436x^2.6458
R2 = 0.9995

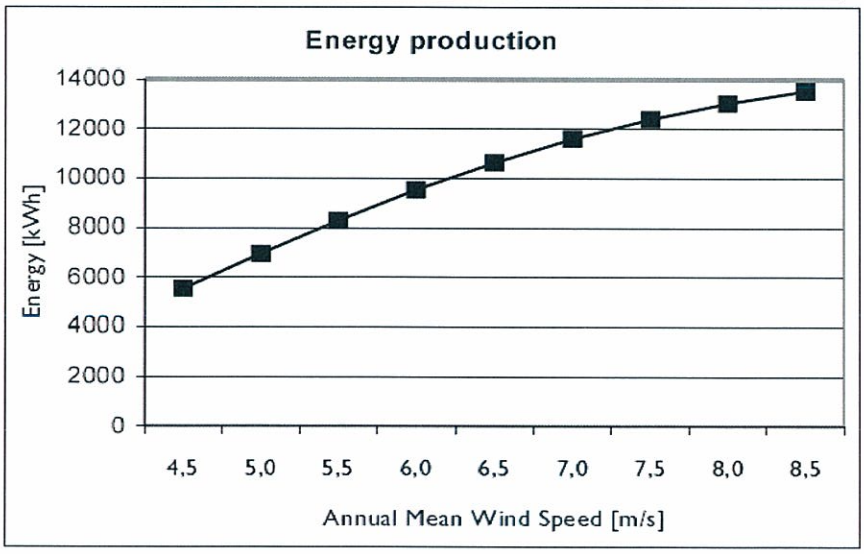
Average Wind Speed 4.6 * Has to be greater than 2.2 m/s
Annual Power Producti 742.2

http://www.prevailingwindpower.com/1000AVX.pdf

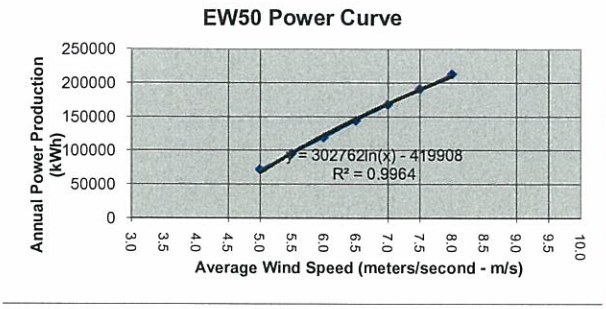
WES5 Tulipo



Wind speed [m/s]	Energy [kWh]
4,5	5541
5,0	6947
5,5	8294
6,0	9534
6,5	10638
7,0	11593
7,5	12391
8,0	13036
8,5	13534



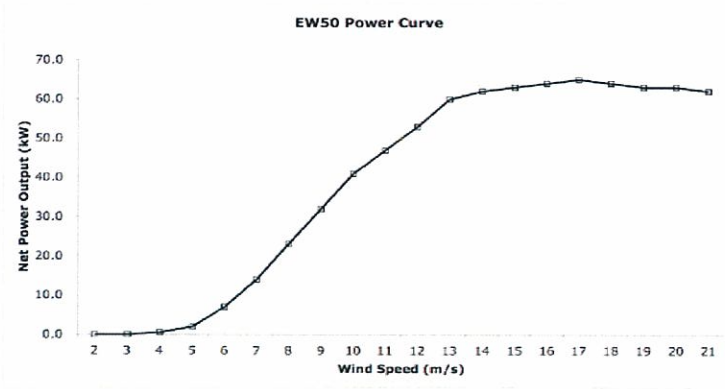
m/s	nnual kwh
5.0	72000
5.5	95000
6.0	119000
6.5	144000
7.0	168000
7.5	191000
8.0	213000



http://www.entegritywind.com/pdfs/EW50-Specs.pdf

EW50 Power Curve, 60hz

Wind Speed (m/s)	Wind Speed (mph)	Power (kW)
2	4.5	0
3	6.7	0
4	8.9	0.5
5	11.2	2.0
6	13.4	7.0
7	15.6	14.0
8	17.9	23.0
9	20.1	32.0
10	22.4	41.0
11	24.6	47.0
12	26.8	53.0
13	29.1	60.0
14	31.3	62.0
15	33.5	63.0
16	35.8	64.0
17	38.0	65.0
18	40.2	64.0
19	42.5	63.0
20	44.7	62.0
21	46.9	61.9



Expected Annual Net Energy Production (AEP)

Average Annual Wind Speed (m/s)	Average Annual Wind Speed (mph)	AEP Sea Level (kWh)
5	11.2	72,000
5.5	12.3	95,000
6	13.4	119,000
6.5	14.5	144,000
7	15.6	168,000
7.5	16.8	191,000
8	17.9	213,000