# **ENERGY SAVINGS IMPROVEMENT PROGRAM**

## **GLOUCESTER TOWNSHIP**



## **ENERGY SAVINGS PLAN**

**FINAL** 

## Prepared by:



520 South Burnt Mill Road Voorhees, New Jersey 08043

February 20, 2012

### TABLE OF CONTENTS

I.	Executive Summary	4
II.	Introduction	7
III.	Energy Audit Results	8
IV.	Historic Energy Consumption and Costs	. 10
V.	Energy Conservation Measures (ECM)	. 11
VI.	Direct Install Program	. 64
VII.	Design and Compliance, Maintenance Impacts, and Risks	. 65
VIII	PJM Demand Response & Curtailable Service Programs	. 66
IX.	ESIP Cash Flow Summary	. 67
X.	Greenhouse Gas Reductions	. 69
XI.	Measurement & Verification	. 71

### Appendix:

- **Appendix A** Project Summary Table
- **Appendix B** Historic Energy Consumption & Cost
- Appendix C Investment Grade Lighting Audit
  - Lighting Upgrade
  - Lighting Controls
  - Occupancy Sensor Study Results
- Appendix D Direct Install Scope of Work

#### REPORT DISCLAIMER

The information contained within this report, including any attachment(s), is intended solely for use by the named addressee(s). If you are not the intended recipient, or a person designated as responsible for delivering such messages to the intended recipient, you are not authorized to disclose, copy, distribute or retain this report, in whole or in part, without written authorization from Concord Engineering Group, Inc., 520 S. Burnt Mill Road, Voorhees, NJ 08043.

This report may contain proprietary, confidential or privileged information. If you have received this report in error, please notify the sender immediately. Thank you for your anticipated cooperation.

## I. Executive Summary

This report presents the outline for an Energy Savings Plan for Gloucester Township. This plan will be used as a basis for the Township to initiate an Energy Savings Improvement Program that will encompass multiple energy conservation projects to be implemented at their facilities with the intent to reduce energy usage and costs at those facilities. Based on initial Energy Audit and further analysis performed for the plan the following energy conservation measures will constitute the improvement program for the Township.

	ENERGY CONSERVATION MEASURES				
ECM NO.	DESCRIPTION	BUILDINGS			
ECM #1	Lighting Upgrade	Library, Recreation, Senior, Academy			
		Hall, Municipal, Public Works,			
		Monroe Pool			
ECM #1A	DI - Lighting Upgrade	Recreation, Academy Hall			
ECM #2	Lighting Controls	Library, Recreation, Academy Hall,			
		Municipal, Public Works			
ECM #3	5-Ton RTU Replacement	Library			
ECM #5	x3 1.5 Ton Split Units	Academy Hall			
ECM #5A	DI - x1 3ton & x1 2 Ton Unit	Academy Hall			
ECM #7	x16 AC Unit Replacement	Municipal			
ECM #8	DI - Split Unit Replacements	Senior			
ECM #9	x2 1000 MBH Boilers	Municipal			
ECM #10	DI - Boiler Replacement	Library			
ECM #11	DI - Furance Replacement	Senior			
ECM #12	DI - Boiler Replacement	Academy Hall			
ECM #13	DI - Fuel Economizer	Library			
ECM #14	DI - Fuel Economizer	Academy Hall			
ECM #15	CRT Monitor Replacement	Library, Public Works, Municipal			
ECM #16	Pool Pump Time Controls	Monroe Pool			
ECM #18	DI - Faucet Aerators	Senior			
ECM #19	DI - Programmable Thermostats	Senior			
ECM #20	DI - High Efficiency Split System	Recreation			
ECM #21	DI - Furnace Replacement	Recreation			

The proposed ECM's yield the following results over a fifteen year project life.

Net		Net	Participant	Benefit-
Project	Utility	Present	Net	Cost
Cost	Savings	Value	Benefit	Ratio
\$506,164	\$55,620	\$139,871.44	\$167,872.92	1.36

Table 1 & 2 ECM Summary below shows the associated utility cost savings and energy savings for each measure. Further analysis of cash flow projections are provided in section VII of this report for the fifteen (15) year term of the ESIP.

**Table 1: Energy Cost Savings Summary** 

TABLE 1: UTILITY COST SAVINGS					
	CM NO. BUILDING DESCRIPTION		ANNUAL I	UTILITY COST	SAVINGS
ECM NO.			ELECTRIC SAVINGS	NATURAL GAS SAVINGS	TOTAL SAVINGS
ECM #1	All Buildings	Lighting Upgrade	\$26,419	\$0	\$26,419
ECM #1A	Recreation, Academy Hall	DI - Lighting Upgrade	\$2,126	\$0	\$2,126
ECM #2	All Buildings	Lighting Controls	\$5,635	\$0	\$5,635
ECM #3	Library	5-Ton RTU Replacement	\$750	\$0	\$750
ECM #4	Recreation	REMOVED	\$0	\$0	\$0
ECM #5	Academy Hall	x3 1.5 Ton Split Units	\$417	\$0	\$417
ECM #5A	Academy Hall	DI - x1 3ton & x1 2 Ton Unit	\$403	\$0	\$403
ECM #6	Public Works	REMOVED	\$0	\$0	\$0
ECM #7	Municipal	x16 AC Unit Replacement	\$9,159	\$0	\$9,159
ECM #8	Senior	DI - Split Unit Replacements	\$1,916	\$0	\$1,916
ECM #9	Municipal	x2 1000 MBH Boilers	\$0	\$3,194	\$3,194
ECM #10	Library	DI - Boiler Replacement	\$0	\$842	\$842
ECM #11	Senior	DI - Furance Replacement	\$0	\$727	\$727
ECM #12	Academy Hall	DI - Boiler Replacement	\$0	\$1,196	\$1,196
ECM #13	Library	DI - Fuel Economizer	\$0	\$263	\$263
ECM #14	Academy Hall	DI - Fuel Economizer	\$0	\$260	\$260
ECM #15	Library, Public Work, Municipal	CRT Monitor Replacement	\$313	\$0	\$313
ECM #16	Monroe Pool	Pool Pump Time Controls	\$1,380	\$0	\$1,380
ECM #17	Monroe Pool	REMOVED	\$0	\$0	\$0
ECM #18	Senior	DI - Faucet Aerators	\$0	\$145	\$145
ECM #19	Senior	DI - Programmable Thermostats	\$0	\$0	\$0
TOTAL			\$48,518	\$6,628	\$55,146

**Table 2: Energy Usage Savings Summary** 

TABLE 2: ENERGY CONSUMPTION SAVINGS					
			ANNUAI	UTILITY RED	OUCTION
ECM NO.	BUILDING	DESCRIPTION	ELECTRIC DEMAND (KW)	ELECTRIC CONS. (KWH)	NATURAL GAS (THERMS)
ECM #1	All Buildings	Lighting Upgrade	50.0	149,976	0
ECM #1A	Recreation, Academy Hall	DI - Lighting Upgrade	6.1	11,811	0
ECM #2	All Buildings	Lighting Controls	11.7	32,693	0
ECM #3	Library	5-Ton RTU Replacement	2.1	4,143	0
ECM #4	Recreation	REMOVED	0.0	0	0
ECM #5	Academy Hall	x3 1.5 Ton Split Units	1.4	2,345	0
ECM #5A	Academy Hall	DI - x1 3ton & x1 2 Ton Unit	1.3	2,262	0
ECM #6	Public Works	REMOVED	0.0	0	0
ECM #7	Municipal	x16 AC Unit Replacement	18.6	55,510	0
ECM #8	Senior	DI - Split Unit Replacements	4.8	8,085	0
ECM #9	Municipal	x2 1000 MBH Boilers	0.0	0	1,879
ECM #10	Library	DI - Boiler Replacement	0.0	0	653
ECM #11	Senior	DI - Furance Replacement	0.0	0	564
ECM #12	Academy Hall	DI - Boiler Replacement	0.0	0	927
ECM #13	Library	DI - Fuel Economizer	0.0	0	204
ECM #14	Academy Hall	DI - Fuel Economizer	0.0	0	202
ECM #15	brary, Public Work, Municip	CRT Monitor Replacement	0.0	1,786	0
ECM #16	Monroe Pool	Pool Pump Time Controls	0.0	6,733	0
ECM #17	Monroe Pool	REMOVED	0.0	0	0
ECM #18	Senior	DI - Faucet Aerators	0.0	0	112
ECM #19	Senior	DI - Programmable Thermostats	0.0	0	0
ECM #20	Recreation	DI - High Efficiency Split System	1.3	2,262	0
ECM #21	Recreation	DI - Furnace Replacement	0.0	0	38
TOTAL			97.4	277,606	4,579

### II. Introduction

The New Jersey State Legislature approved Assembly Bill Number 844 that allows certain local public entities to enter into contracts for up to 15 years for energy conservation or provisions of renewable energy production at buildings owned by such entities. Furthermore, this allows government agencies to make these energy related improvements to their facilities and pay for the costs using the energy savings value that result. The enacted Chapter 4 of the Laws of 2009, the "Energy Savings Improvement Program" (ESIP), provides all government agencies in New Jersey with a flexible tool to improve and reduce energy usage with minimal expenditure of new financial resources. Guidelines for implementation of this program have been provided through the Department of Community Affairs Local Finance Notice 2009-11, and subsequent protocols provided by the Board of Public Utilities Docket No. EO09020128 dated 2/24/2009 for computing energy costs savings.

The first step, (after having completed an Energy Audit) to implementing an Energy Savings Improvement Program is creation of the Energy Savings Plan (ESP). The plan is created to further develop what is outlined in the energy audit report to a more detailed scope of work with more refined cost estimates and energy savings to provide the owner with a cash flow analysis over the life of the contract. The ESP identifies and describes each energy conservation measure that will comprise the ESIP, an estimate of greenhouse gas reductions from the resultant savings, identification of all design and compliance issues, maintenance requirements necessary to ensure continued savings, identification of eligibility for PJM demand response and curtailable service programs, and an assessment of any risks associated with implementation of the plan. The plan is used as a reference document to provide information to the local entity for the purposes of soliciting proposals from qualified Energy Services Companies (ESCO) to implement the project or they can choose to self implement and use the plan to secure funding and move into construction services.

## **III.** Energy Audit Results

The Township of Gloucester had an energy audit performed by Concord Engineering at its Municipal Building, Senior Center, Academy Hall, Public Works Building, Library, Recreation Center, and Monroe Avenue Pool facilities in 2010.

The report was consistent with the Board of Public Utilities Local Government Energy Audit Program guidelines. The audit provided a basic list of energy conservations measures for each facility that ranged from small low/no cost measures to more capital intensive measures. Each of the measures was evaluated and assigned an estimated construction cost and a projected energy savings using industry standard practices and engineering judgment.

The report provided a list of recommendations for each Township building and was considered the base scope of energy conservation measures used to develop this Energy Savings Plan. In addition, information regarding building occupancy, operating hours, and utility data was utilized to for creating the baseline building profile.

The Local Government Energy Audit Reports were used in developing the Energy Savings Plan, but were not included as a direct attachment to this report, however a copy can be obtained from the Township of Gloucester.

**Table 3: Summary of Energy Audit Report Recommendations:** 

ENE	ENERGY AUDIT ECM LIST			
ECM NO.	DESCRIPTION			
	Library			
ECM #1	Lighting Upgrade			
ECM #2	Lighting Controls			
ECM #3	Computor Monitors			
ECM #4	Condensing Boiler			
ECM #5	AC Unit Replacements			
ECM #6	Programmable Thermostats			
	Recreation Center			
ECM #1	Lighting Upgrade			
ECM #2	Lighting Controls			
ECM #3	Split System AC Upgrades			
ECM #4	Energy Recovery Unit Retrofit			
	Senior Community Center			
ECM #1	Lighting Upgrade			
ECM #2	Lighting Controls			
ECM #3	Split AC Unit Upgrades			
ECM #4	Programmable Thermostat			
ECM #5	Condensing Furnace Upgrade			
	Academy Hall			
ECM #1	Lighting Upgrade			
ECM #2	Lighting Controls			
ECM #3	Computer Monitors			
ECM #4	Condensing Boiler			
ECM #5	AC Unit Upgrades			
	Public Works Building			
ECM #1	Lighting Upgrade			
ECM #2	Lighting Controls			
ECM #3	Computer Monitors			
ECM #4	AC Unit Upgrades			
	Municipal Building			
ECM #1	Lighting Upgrade			
ECM #2	Lighting Controls			
ECM #3	Computer Monitors			
ECM #4	AC Unit Replacements			
ECM #5	Boiler Replacement			
707	Monroe Pool			
ECM #1	Lighting Upgrade			
ECM #2	Lighting Controls			
ECM #3	Pool Pump Controls			
ECM #4	Hot Water Heater Replacement			

## IV. Historic Energy Consumption and Costs

The Township facilities are currently delivered electricity from Atlantic City Electric (ACE) and Public Service Electric and Gas (PSEG) under various rate tariffs. Natural Gas is provided by South Jersey Gas (SJG) to all Township facilities. The utility data provided by the Township represents the calendar year from May 2010 to May 2011. Each facility's utility data was tabulated and plotted in graph form and is provided in the **Historic Energy Consumption and Cost Appendix**. The tables below summarize the annual usage and average cost per unit for each facility.

**Table 3: Electric Utility Summary** 

ELECTRIC UTILITY SUMMARY						
FACILITY	UTILITY PROVIDER	ELECTRIC USAGE (KWH)	ELECTRIC COST (\$/KWH)			
Library	PSEG	132,240	\$0.1810			
Recreation Center	ACE	301,000	\$0.1810			
Senior Community Center	PSEG	25,980	\$0.2370			
Academy Hall	PSEG	53,510	\$0.1780			
Municipal Building	PSEG	611,798	\$0.1650			
Public Works Building	ACE	243,360	\$0.1800			
Monroe Pool	PSEG	26,340	\$0.2050			

**Table 4: Natural Gas Utility Summary** 

NATURAL GAS UTILITY SUMMARY						
FACILITY	UTILITY PROVIDER	NATURAL GAS USAGE (THERM)	NATURAL GAS COST (\$/THERM)			
Library	SJG	3,017	\$1.2900			
Recreation Center	SJG	7,163	\$1.7300			
Senior Community Center	SJG	3,212	\$1.2900			
Academy Hall	SJG	2,872	\$1.2900			
Municipal Building	SJG	9,649	\$1.7000			
Public Works Building	SJG	6,897	\$1.7300			
Monroe Pool	SJG	37	\$8.5300			

## V. Energy Conservation Measures (ECM)

### ECM #1: All Buildings – Lighting Upgrade

### **Description:**

Lighting throughout the buildings at Gloucester Township is comprised of a variety of fixture types. Some facilities have a majority of T-12 lamps with magnetic ballasts, such as the Recreation Center & Academy Hall. While in other buildings such as Public Works and Library, the lighting is made up of a mixture of older T-12 fixtures and T-8 fixtures. Finally the Municipal, Police, Senior Center and Monroe Pool is primarily lit with newer T-8 fixtures or compact fluorescent fixtures with electronic ballasts.

This ECM includes replacement of the existing fixtures containing T12 lamps and magnetic ballasts with fixtures containing T8 lamps and electronic ballasts. The new energy efficient, T8 fixtures will provide adequate lighting and will save the owner on electrical costs due to the better performance of the lamp and ballasts. This ECM also includes the replacement of all incandescent lamps to compact fluorescent lamps. The energy usage of an incandescent compared to a compact fluorescent approximately 3 to 4 times greater. In addition to the energy savings, compact fluorescent fixtures burn-hours are 8 to 15 times longer than incandescent fixtures ranging from 6,000 to 15,000 burn-hours compared to incandescent fixtures ranging from 750 to 1000 burn-hours.

The existing and proposed lighting retrofits are shown per space in the **Investment Grade Lighting Audit Appendix** of this analysis.

#### **Description of Scope:**

It is recommended the Township staff consider installing the lighting recommendations at Monroe Pool, Academy Hall, Senior Center, and potentially the Library due to the minimal amount of work to be performed.

### **Preliminary Scope**

- Engineering specifications / documentation of proposed lighting system & controls
- Thorough site survey by HVAC / Electrical Contractor to review existing conditions
- Bid proposals requested from contractors
- Fixtures & Lighting Controls submittals

#### Construction Scope

#### Construction scope includes:

• Remove existing fixtures where replacement fixtures are proposed.

- Install new fixture and electrical connections as required
- Install new fixture retrofit kit where applicable
- Remove existing wall switch for wall mount occupancy sensor locations.
- Install new dual technology occupancy sensor in wall switch electrical box.
- Install ceiling mounted occupancy sensors where indicated on the lighting appendix or where wall mounted occupancy sensor coverage is not adequate.
- Install additional occupancy sensors for additional coverage as needed per the manufacturer's installation instructions.
- Test operation of all new light fixtures.

### **Energy Savings Calculations / Results:**

The energy savings have been tabulated based on occupancy profiles recorded through data loggers. The information includes total burn hours for each space measured as well as total occupied burn hours for each space measured. The total measured burn hours were used to calculate the existing lighting energy. The total measured occupied burn hours were used to calculate the proposed lighting energy. The proposed lighting energy was calculated based on the installation of all proposed fixture retrofits, as well as installation of occupancy sensors for all proposed areas. All areas proposed for a retrofit or sensor installation are shown in the **Investment Grade Lighting Audit Appendix**.

Energy savings calculations are based on the difference between the existing and proposed facility energy use. The following summary is broken down by building:

LIGHTING CALCULATIONS  EXAMPLES  EXA					
EC.	M INPUTS	EXISTING	PROPOSED	SAVINGS	
Building	Parameter	Existing Lighting System	Lighting Upgrade		
Library	(LW/h)	48,747	39,641	9,106	
	Electric Cost (\$)	\$8,823	\$7,175	\$1,648	
Recreation	Electric Consumption	118,006	60,182	57,824	
	Electric Cost (\$)	\$21,359	\$10,893	\$10,466	
Senior	Electric Consumption	11,013	10,680	333	
	Electric Cost (\$)	\$2,610	\$2,531	\$79	
Academy Hall	Electric Consumption	10,660	10,486	174	
	Electric Cost (\$)	\$1,897	\$1,867	\$31	
Municipal	Electric Consumption	208,431	162,107	46,324	
	Electric Cost (\$)	\$34,391	\$26,748	\$7,643	
Public Works	Electric Consumption	155,744	120,847	34,897	
	Electric Cost (\$)	\$28,034	\$21,752	\$6,281	
Monroe Pool	Electric Consumption (LWb)	5,144	3,827	1,317	
	Electric Cost (\$)	\$1,055	\$785	\$270	
	ENERGY SAV	INGS CALCULATI	IONS		
ECM RESULTS		EXISTING	PROPOSED	SAVINGS	
otal Energy (kWh)		557,745	407,770	149,975	
nergy Cost (\$)		\$98,169	\$71,750	\$26,419	

### ECM #1A: Direct Install – Lighting Upgrade

### **Description:**

The Direct Install (DI) program shall include lighting scope for the Recreation Center and Academy Hall. The Lighting Audit Appendix shows the scope of work to be covered by the Direct Install Contractor as well as all remaining scope, at these facilities that will be coordinated and installed in the project bid package as part of ECM #1. In general the DI scope of work covers replacement of all linear fluorescent type fixtures, 13 watt CFL lamp replacements, and some occupancy sensor lighting controls in general areas.

Any Lighting upgrade work excluded under Direct Install for the Recreation Center and Academy Hall has been included in ECM #1.

The existing and proposed lighting retrofits are shown per space in the **Investment Grade Lighting Audit Appendix** of this analysis.

### **Description of Scope:**

Retrofit, Remove, and/or Replace of existing units lighting fixtures to be performed by Direct Install Contractor.

Equipment efficiency levels are stipulated by the NJ Clean Energy Program Direct Install guidelines for this ECM implementation.

### **Energy Savings Calculations / Results:**

The energy savings have been tabulated based on occupancy profiles recorded through data loggers. The information includes total burn hours for each space measured as well as total occupied burn hours for each space measured. The total measured burn hours were used to calculate the existing lighting energy. The total measured occupied burn hours were used to calculate the proposed lighting energy. The proposed lighting energy was calculated based on the installation of all proposed fixture retrofits, as well as installation of occupancy sensors for all proposed areas. All areas proposed for a retrofit or sensor installation are shown in the **Investment Grade Lighting Audit Appendix**.

Energy savings calculations are based on the difference between the existing and proposed facility energy use. The following summary is broken down by building:

DIRECT INSTALL LIGHTING CALCULATIONS						
ECN	I INPUTS	EXISTING	PROPOSED	SAVINGS		
Building	Parameter	Existing Lighting System	Lighting Upgrade			
Recreation	Electric Consumption (kWh)	118,006	110,153	7,853		
	Electric Cost (\$)	\$21,359	\$19,938	\$1,421		
Academy Hall	Electric Consumption (kWh)	10,660	6,702	3,958		
	Electric Cost (\$)	\$1,897	\$1,193	\$705		
	ENERGY SAVIN	IGS CALCULATI	ONS			
ECM RESULTS		EXISTING	PROPOSED	SAVINGS		
Total Energy (kWh)		128,666	116,855	11,811		
Energy Cost (\$)		\$23,257	\$21,131	\$2,126		
COMMENTS:	Hours of operation are based	on logged hours.				

### **ECM #2: Lighting Controls**

### **Description:**

The lighting controls required within these facilities are minimal. The lighting is primarily controlled by manual wall switches. This ECM includes the installation of occupancy sensors for all applicable spaces in the Library, Recreation Center, Academy Hall, Municipal and Public works Building. The lighting is primarily controlled by manual wall switches. This ECM includes the installation of occupancy sensors for all applicable spaces.

This ECM includes replacement of existing wall mounted switches with dual technology wall and remote mounted occupancy sensors. The existing and proposed lighting retrofits and lighting controls are shown per space in the **Investment Grade Lighting Audit Appendix** of this analysis.

### **Description of Scope:**

### **Preliminary Scope**

- Engineering specifications / documentation of proposed lighting system & controls
- Thorough site survey by HVAC / Electrical Contractor to review existing conditions
- Bid proposals requested from contractors
- Fixtures & Lighting Controls submittals

### Construction Scope

#### Construction scope includes:

- Remove existing wall switch for wall mount occupancy sensor locations.
- Install new dual technology occupancy sensor in wall switch electrical box.
- Install ceiling mounted occupancy sensors where indicated on the lighting appendix or where wall mounted occupancy sensor coverage is not adequate.
- Install additional occupancy sensors for additional coverage as needed per the manufacturer's installation instructions.
- Test operation of all new occupancy controls.

#### **Energy Savings Calculations / Results:**

The energy savings have been tabulated based on occupancy profiles recorded through data loggers. The information includes total burn hours for each space measured as well as total occupied burn hours for each space measured. The total measured burn hours were used to calculate the existing lighting energy. The total measured occupied burn hours were used to calculate the proposed lighting energy. The proposed lighting energy was calculated based on the installation of all proposed fixture retrofits, as well as installation of occupancy sensors for all

proposed areas. All areas proposed for a retrofit or sensor installation are shown in the **Investment Grade Lighting Audit Appendix**.

Energy savings calculations are based on the difference between the existing and proposed facility energy use. The following summary is broken down by building:

	LIGHTING	CALCULATIONS		
ECI	M INPUTS	PROPOSED	PROPOSED	SAVINGS
Building	Parameter	Lighting Upgrade	Lighting Controls	
Library	Electric Consumption (kWh)	39,641	38,650	991
	Electric Cost (\$)	\$7,175	\$6,996	\$179
Recreation	Electric Consumption (kWh)	52,329	46,103	6,226
	Electric Cost (\$)	\$9,472	\$8,345	\$1,127
Academy Hall	Electric Consumption (kWh)	6,528	5,760	768
	Electric Cost (\$)	\$1,162	\$1,025	\$137
Municipal	Electric Consumption (kWh)	162,107	145,042	17,065
	Electric Cost (\$)	\$26,748	\$23,932	\$2,816
Public Works	Electric Consumption (kWh)	120,847	113,204	7,643
	Electric Cost (\$)	\$21,752	\$20,377	\$1,376
	ENERGY SAVIN	NGS CALCULATIO	NS	
ECM RESULTS		PROPOSED	PROPOSED	SAVINGS
Total Energy (kWh)		381,452	348,759	32,694
Energy Cost (\$)		\$66,309	\$60,674	\$5,635
COMMENTS:	Lighting Controls Savings base	ed on lighting upgrade	reduction	

### ECM #3: Library - High-Efficiency Rooftop Unit

### **Description:**

The Library meeting room is conditioned by a single Carrier 4-ton cooling only rooftop unit with no economizer controls. The unit is rated at 1700 CFM of supply air, and ARI SEER rating of 8.0.

This ECM includes replacing the Carrier rooftop with York 15 SEER 4-ton cooling only unit with economizer controls. The system will include new outside air dampers and controls to ensure outside air is only provided during occupied periods. This ECM also includes programmable thermostats to provide night setback of 7-8°F during unoccupied periods and will be required to tie into the new energy management system being installed by the Township.

EQUIPMENT INFORMATION			
ECM INPUT	EXISTING		
Unit Tag	AC-2		
Unit Location	Roof		
Service For	Meeting Room		
Unit Type	Packaged AC		
Number of Units	1		
Cooling Capacity, Btu/hr	48,000		
Total Capacity, Tons	4		
Manufacturer	Carrier		
Model Number	48LD005		
Efficiency (S/EER)	8 SEER		

### **Description of Scope:**

#### Preliminary Scope

- Engineering design documentation
- Thorough site survey by HVAC / Electrical Contractor to review existing conditions.
- Bid proposals requested from contractors
- Equipment submittals

### Construction Scope

- Remove existing packaged AC unit.
- Remove associated electric wiring to AC unit, except where reused.
- Modifications to existing supply and return duct connections as required.
- Install proposed air conditioning unit as per the equipment list below including:
  - o Roof curb adaptor as required.
  - o Ductwork connection to new equipment and insulation.

- o One 7-day Programmable Thermostats. As required with new control system.
- Controls integration capability with new energy management system being installed by the Township.
- o Packaged Economizer controls for the rooftop units
- Provide equipment start-up and training.

This ECM includes replacement of one rooftop unit with a high efficiency unit of like size. The equipment list below is the basis of design and represents the efficiency and capacity minimum requirements for this ECM implementation:

IMPLEMENTATION SUMMARY					
ECM INPUT	PROPOSED				
Unit Tag	AC-2				
Unit Location	Roof				
Service For	Meeting Room				
Unit Type	Packaged AC				
Number of Units	1				
Cooling Capacity, Btu/hr	48,000				
Total Capacity, Tons	4				
Manufacturer	York				
Model Number	DEX048A25				
Efficiency (S/EER)	15 SEER				

#### **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the existing efficiency rating and stipulated values in the protocols for operating hours and comparing them to the proposed units' efficiency ratings.

Air Conditioning Upgrade Calculations:

Demand Savings = 
$$(\frac{Btu/h}{1000}) \times (\frac{1}{EER_E} - \frac{1}{EER_P}) \times CF$$

$$Electric \ Savings = (\frac{Btu/h}{1000}) \times (\frac{1}{EER_E} - \frac{1}{EER_P}) \times Full \ Load \ Hours$$

EER = Energy Efficiency Ratio, Existing (E) and Proposed (P)

CF = Coincidence Factor = 0.67

Full Load Hours = Equivalent Full Load Cooling Hours = 1,131 hours

Economizer Controls Calculations:

 $Electric Savings = OTF \times SF \times Capacity / Efficiency$ 

OTF = Operational Testing Factor = 0.8

SF = Savings Factor based on regional temperature bin data = 4,576 for equipment under 5.4 tons and 3,318 otherwise.

Capacity = Equipment Cooling Capacity in Tons

Efficiency = Energy Efficiency Ratio (EER) of equipment

ENERGY SAVINGS CALCULATIONS - UNIT REPLACEMENT							
ECM INPUTS	COOLING CAPACITY, BTU/Hr	ANNUAL COOLING HOURS	EXISTING UNITS (S)EER	NEW UNITS (S)EER	# OF UNITS	ENERGY SAVINGS kWh	DEMAND SAVINGS kW
AC-2	48,000	1,131	8 SEER	15 SEER	1	3,167	1.9
Total					1	3,167	1.9

ENERGY SAVINGS CALCULATIONS - ECONOMIZER CONTROLS							
ECM INPUTS	COOLING CAPACITY, TONS	ANNUAL COOLING HOURS	NEW UNITS (S)EER	ENERGY SAVINGS KWH	DEMAND SAVINGS kW		
AC-2	4.0	4,438	15 SEER	976	0.2		
Total	4.0			976	0.2		

## **ECM #4: Recreation – Ice Rink Unit Replacement**

## **REMOVED**

### ECM #5: Academy Hall – High Efficiency Split Systems

### **Description:**

Academy Hall has three 18,000 Btu/h cooling only Carrier Split Systems with outdoor condensing units and indoor air handling units mounted in the ceiling.

This ECM includes replacing the existing Carrier Split units with Mitsubishi Mr. Slim 14.3 SEER 1.5-ton cooling only mini split system units. The system will include a new outdoor unit and new above the ceiling horizontal unit. This ECM also includes programmable thermostats to provide night setback of 7-8°F during unoccupied periods.

EQUIPMENT INFORMA	TION					
ECM INPUT	EXISTING					
Unit Tag	CU-1	CU-3	CU-6			
Unit Location	Outdoor Side Entrance	Outdoor Side Entrance	Outdoor Courtyard			
Service For	Front Office Space	1st Floor Back Offices	1st Floor			
Unit Type	Split System CU	Split System CU	Split System CU			
Number of Units	1	1	1			
Cooling Capacity, Btu/hr	18,000	18,000	18,000			
Total Capacity, Tons	1.5	1.5	1.5			
Manufacturer	Carrier	Carrier	Carrier			
Model Number	38EH018310DL	BRCS0181BD	38CKC0183330			
Efficiency (S/EER)	8 SEER	10 SEER	10 SEER			

### **Description of Scope:**

#### **Preliminary Scope**

- Engineering design documentation
- Thorough site survey by HVAC / Electrical Contractor to review existing conditions.
- Bid proposals requested from contractors
- Equipment submittals

### Construction Scope

- Remove existing outdoor condensing units.
- Remove existing indoor air handling units in 1<sup>st</sup> Floor ceiling.
- Remove associated electric wiring to AC unit, except where reused.
- Modifications to existing supply and return duct connections as required.
- Install proposed air conditioning unit as per the equipment list below including:
  - o Curb adaptor as required.
  - o Ductwork connection to new equipment and insulation.
  - o One 7-day Programmable Thermostats. As required with new control system.

- Install new refrigerant lines.
- Provide equipment start-up and training.

This ECM includes replacement of three split indoor/outdoor units with a high efficiency unit of like size. The equipment list below is the basis of design and represents the efficiency and capacity minimum requirements for this ECM implementation:

IMPLEMENTATION SU	MMARY					
ECM INPUT	PROPOSED					
Unit Tag	CU-1	CU-3	CU-6			
Unit Location	Outdoor Side Entrance	Outdoor Side Entrance	Outdoor Courtyard			
Service For	Front Office Space	1st Floor Back Offices	1st Floor			
Unit Type	Split System CU	Split System CU	Split System CU			
Number of Units	1	1	1			
Cooling Capacity, Btu/hr	18,000	18,000	18,000			
Total Capacity, Tons	1.5	1.5	1.5			
Manufacturer	Mitsubishi	Mitsubishi	Mitsubishi			
Model Number	PEA-A18AA/PUY-A18	PEA-A18AA/PUY-A18	PEA-A18AA/PUY-A18			
Efficiency (S/EER)	14.3 SEER	14.3 SEER	14.3 SEER			

### **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the existing efficiency rating and stipulated values in the protocols for operating hours and comparing them to the proposed units' efficiency ratings.

Air Conditioning Upgrade Calculations:

Demand Savings = 
$$(\frac{Btu/h}{1000}) \times (\frac{1}{EER_F} - \frac{1}{EER_P}) \times CF$$

$$Electric \ Savings = (\frac{Btu/h}{1000}) \times (\frac{1}{EER_E} - \frac{1}{EER_P}) \times Full \ Load \ Hours$$

EER = Energy Efficiency Ratio, Existing (E) and Proposed (P)

CF = Coincidence Factor = 0.67

Full Load Hours = Equivalent Full Load Cooling Hours = 1,131 hours

<b>ENERGY SAVING</b>	ENERGY SAVINGS CALCULATIONS - UNIT REPLACEMENT						
ECM INPUTS	COOLING CAPACITY,	ANNUAL COOLING	EXISTING UNITS	UNITS	# OF UNITS	ENERGY SAVINGS	DEMAND SAVINGS
CU-1	<b>BTU/Hr</b> 18,000	1,131	(S)EER 8 SEER	(S)EER 14.3 SEER	1	1,121	<b>kW</b> 0.7
CU-3	18,000	1,131	10 SEER	14.3 SEER	1	612	0.4
CU-6	18,000	1,131	10 SEER	14.3 SEER	1	612	0.4
Total					3	2,345	1.4

## ECM #5A: Academy Hall – Direct Install High Efficiency Split Systems

### **Description:**

The Direct Install Program will be replacing two split system air conditioning units based on the scope of work provided by Hutchinson Mechanical on 9/19/2011. The two units being replaced are CU-2 and CU-4.

EQUIPMENT INFORMA					
ECM INPUT	EXISTING				
Unit Tag	CU-2	CU-4			
Unit Location	Outdoor Side Entrance	Outdoor Side Entrance			
Service For	Front Office Space	1st Floor Back Offices			
Unit Type	Split System CU	Split System CU			
Number of Units	1	1			
Cooling Capacity, Btu/hr	24,000	36,000			
Total Capacity, Tons	2.0	3.0			
Manufacturer	Carrier	Carrier			
Model Number	38CKC024	C036X1021G			
Efficiency (S/EER)	8 SEER	10 SEER			

### **Description of Scope:**

Remove and Replace of existing units to be performed by Direct Install Contractor.

This ECM includes replacement of two split indoor/outdoor units with high efficiency units of like size. The equipment list below is the basis of design and represents the efficiency levels stipulated by the NJ Clean Energy Program Direct Install guidelines and capacity requirements for this ECM implementation:

IMPLEMENTATION SU	IMPLEMENTATION SUMMARY					
ECM INPUT	PROPOSED					
Unit Tag	CU-2	CU-4				
Unit Location	Outdoor Side Entrance	Outdoor Side Entrance				
Service For	Front Office Space	1st Floor Back Offices				
Unit Type	Split System CU	Split System CU				
Number of Units	1	1				
Cooling Capacity, Btu/hr	24,000	36,000				
Total Capacity, Tons	2	3				
Manufacturer	N/A	N/A				
Model Number	N/A	N/A				
Efficiency (S/EER)	15 SEER	15 SEER				

### **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the existing efficiency rating and stipulated values in the protocols for operating hours and comparing them to the proposed units' efficiency ratings.

Air Conditioning Upgrade Calculations:

Demand Savings = 
$$(\frac{Btu/h}{1000}) \times (\frac{1}{EER_E} - \frac{1}{EER_P}) \times CF$$

$$Electric Savings = (\frac{Btu/h}{1000}) \times (\frac{1}{EER_E} - \frac{1}{EER_P}) \times Full \ Load \ Hours$$

EER = Energy Efficiency Ratio, Existing (E) and Proposed (P)

Existing efficiency based on Program stipulated values based on unit age and capacity.

CF = Coincidence Factor = 0.67

Full Load Hours = Equivalent Full Load Cooling Hours = 1,131 hours

ENERGY SAVINGS CALCULATIONS - UNIT REPLACEMENT							
ECM INPUTS	COOLING CAPACITY, BTU/Hr	ANNUAL COOLING HOURS	EXISTING UNITS (S)EER	NEW UNITS (S)EER	# OF UNITS	ENERGY SAVINGS kWh	DEMAND SAVINGS kW
CU-2	24,000	1,131	10 SEER	15 SEER	1	905	0.5
CU-4	36,000	1,131	10 SEER	15 SEER	1	1,357	0.8
Total					2	2,262	1.3

# **ECM #6: Public Works – Split Unit Replacements**

**REMOVED** 

### ECM #7: Municipal - High-Efficiency AC Units

### **Description:**

The Municipal Building Annex is cooled via fourteen (14) rooftop air handling units. The HVAC units service offices, corridors, restrooms, and the council room. Heating is supplied by hot water baseboard; additionally electric heating coils are in many of the rooftop units for backup only purposes. The HVAC units serving this space are past their useful life in some instances and in need of replacement.

This ECM would replace the existing rooftop units and split systems on a one for one basis with a more efficient unit. The council room unit will be swapped out with a packaged cooling unit and require removal of the existing condensing units, additional roof support, and any required duct work modifications. The new units will also be fitted with economizer controls and the council unit will also be fitted with CO2 controls.

The combination of these measures over the existing system will provide a vast improvement on electrical energy use. The existing equipment list is as follows:

EXISTING EQUIPMENT	INFORMATION		
Unit Tag	HP-1 (UR)	HP-2 (UR)	HP-3 (UR)
Unit Location	Upper Roof	Upper Roof	Upper Roof
Service For	2nd Floor Offices	2nd Floor Offices	2nd Floor Offices
Unit Type	Packaged AC	Packaged AC	Packaged AC
Number of Units	1	1	1
Cooling Capacity, Btu/hr	30,000	30,000	36,000
Total Capacity, Tons	2.5	2.5	3
Manufacturer	York (Coleman)	York (Coleman)	York (Coleman)
Model Number	DAPB-F030AB	DAPB-F030AB	DAPB-F036AB
Efficiency, (S)EER	10 SEER	10 SEER	10 SEER

EXISTING EQUIPMENT	EXISTING EQUIPMENT INFORMATION							
Unit Tag	HP-4 (UR)	AC-2 (PR)	AC-1 (PR)					
Unit Location	Upper Roof	Police Roof	Police Roof					
Service For	2nd Floor Offices &Corridor	2nd Floor Police Offices	2nd Floor Police Offices					
Unit Type	Packaged AC	Packaged AC/Gas Heat	Packaged AC/Gas Heat					
Number of Units	1	1	1					
Cooling Capacity, Btu/hr	60,000	240,000	150,000					
Total Capacity, Tons	5	20	12.5					
Manufacturer	General Electric	McQuay (Snyder)	ArcoAire (McQuay)					
Model Number	BWC060C300B0	R200D0N401	N/A					
Efficiency, (S)EER	9.4 SEER	9 EER	9 EER					

EXISTING EQUIPMENT	EXISTING EQUIPMENT INFORMATION							
Unit Tag	AC-3 (PR)	HP-7 (FR)	HP-9 (FR)					
Unit Location	Police Roof	Finance Roof	Finance Roof					
Service For	2nd Floor Police Offices	Clerks Office & Finance	Large Open Area Finance					
Service 1 of	2nd 1 loor 1 once offices	Offices	Offices					
Unit Type	Packaged AC/Gas Heat	Packaged AC	Packaged AC					
Number of Units	1	1	1					
Cooling Capacity, Btu/hr	60,000	30,000	36,000					
Total Capacity, Tons	5	2.5	3					
Manufacturer	York	York (Coleman)	York (Coleman)					
Model Number	D6CG060N09925A	DAPB-F030AB	DAPB-F036AB					
Efficiency, (S)EER	9.1 EER	10 SEER	10 SEER					

EXISTING EQUIPMENT INFORMATION						
Unit Tag	HP-10 (FR)	HP-11 (FR) HP-12 (				
Unit Location	Finance Roof	Finance Roof	Finance Roof			
Service For	Perimeter Finance Offices	Corner Finance Offices	Lobby			
Unit Type	Packaged AC	Packaged AC	Packaged AC			
Number of Units	1	1	1			
Cooling Capacity, Btu/hr	30,000	30,000	30,000			
Total Capacity, Tons	2.5	2.5	2.5			
Manufacturer	York (Coleman)	York (Coleman)	York (Coleman)			
Model Number	DAPB-F030AB	DAPB-F030AB	DAPB-F030AB			
Efficiency, (S)EER	10 SEER	10 SEER	10 SEER			

EXISTING EQUIPMENT INFORMATION							
Unit Tag	HP-14 (CR)	R) HP-5 (MR) HP-					
Unit Location	Council Roof	Mayor Roof	Mayor Roof				
Service For	Council Room						
Unit Type	Split System/Outdoor	Packaged AC	Packaged AC				
Number of Units	1	1					
Cooling Capacity, Btu/hr	360,000	30,000	30,000				
Total Capacity, Tons	30	2.5	2.5				
Manufacturer	GE/ Trane	York (Coleman)	York (Coleman)				
Model Number	BRB008/TTA180	DAPB-F030AB	DAPB-F030AB				
Efficiency, (S)EER	9.5 EER	10 SEER	10 SEER				

EXISTING EQUIPMENT INFORMATION				
Unit Tag	HP-13 (MR)			
Unit Location	Mayor Roof			
Service For				
Unit Type	Split System CU/Indoor			
Number of Units	1			
Cooling Capacity, Btu/hr	30,000			
Total Capacity, Tons	2.5			
Manufacturer	GE			
Model Number	N/A / BHW930015860			
Efficiency, (S)EER	9.4 SEER			

### **Description of Scope:**

### Preliminary Scope

- Engineering design documentation
- Thorough site survey by HVAC / Electrical Contractor to review existing conditions.
- Bid proposals requested from contractors
- Equipment submittals

### Construction Scope

- Remove existing packaged AC units and split system AC units.
- Remove associated electric wiring to AC units, except where reused.
- Install new packaged unit for Council Room (HP-14) with CO2 controls and add additional roof supports required for new unit.
- Modifications to existing supply and return duct connections as required.
- Install proposed rooftop units as per the equipment list below including:
  - o Roof curb adaptors as required.
  - o Ductwork connection to new equipment and insulation.
  - o Five 7-day Programmable Thermostats; one per unit. As required with new control system.
  - o Controls integration capability with new energy management system being installed by the Township.
  - o Packaged Economizer controls for the rooftop units
- Provide equipment start-up and training.

The equipment list below is the basis of design and represents the efficiency and capacity minimum requirements for this ECM implementation:

PROPOSED EQUIPMEN	T INFORMATION		
Unit Tag	HP-1 (UR)	HP-2 (UR)	HP-3 (UR)
Unit Location	Upper Roof	Upper Roof	Upper Roof
Service For	2nd Floor Offices	2nd Floor Offices	2nd Floor Offices
Unit Type	Packaged AC	Packaged AC	Packaged AC
Number of Units	1	1	1
Cooling Capacity, Btu/hr	30000	30000	36000
Total Capacity, Tons	2.5	2.5	3
Manufacturer	York	York	York
Model Number	DEX030A06	DEX030A06	DEX036A06
Efficiency, (S)EER	15 SEER	15 SEER	15 SEER

PROPOSED EQUIPMENT INFORMATION						
Unit Tag	HP-4 (UR)	AC-2 (PR)	AC-1 (PR)			
Unit Location	Upper Roof	Police Roof	Police Roof			
Service For	2nd Floor Offices	2nd Floor Police Offices	2nd Floor Police Offices			
Unit Type	Packaged AC	Packaged AC/Gas Heat	Packaged AC/Gas Heat			
Number of Units	1	1	1			
Cooling Capacity, Btu/hr	60000	240000	150000			
Total Capacity, Tons	5	20	12.5			
Manufacturer	York	York	York			
Model Number	DEY060A25	ZJ240S32B2	ZJ150N20E			
Efficiency, (S)EER	14.5 SEER	11.6 EER	12.2 EER			

PROPOSED EQUIPMENT INFORMATION						
Unit Tag	AC-3 (PR)	HP-7 (FR)	HP-9 (FR)			
Unit Location	Police Roof	Finance Roof	Finance Roof			
Service For	2nd Floor Police Offices	Clerks Office & Finance	Large Open Area Finance			
Unit Type	Packaged AC/Gas Heat	Packaged AC	Packaged AC			
Number of Units	1	1	1			
Cooling Capacity, Btu/hr	60000	30000	36000			
Total Capacity, Tons	5	2.5	3			
Manufacturer	York	York	York			
Model Number	ZJ061N13E	DEX030A06	DEX036A06			
Efficiency, (S)EER	12.2 EER	15 SEER	15 SEER			

PROPOSED EQUIPMENT INFORMATION						
Unit Tag	HP-10 (FR)	R) HP-11 (FR) HP-12 (F				
Unit Location	Finance Roof	Finance Roof	Finance Roof			
Service For	Perimeter Finance Offices	Corner Finance Offices	Lobby			
Unit Type	Packaged AC	Packaged AC	Packaged AC			
Number of Units	1	1	1			
Cooling Capacity, Btu/hr	30000	30000	30000			
Total Capacity, Tons	2.5	2.5	2.5			
Manufacturer	York	York	York			
Model Number	DEX030A06	DEX030A06	DEX030A06			
Efficiency, (S)EER	15 SEER	15 SEER	15 SEER			

PROPOSED EQUIPMENT INFORMATION						
Unit Tag	HP-14 (CR)	HP-5 (MR)	HP-6 (MR)			
Unit Location	Council Roof	Mayor Roof	Mayor Roof			
Service For	Council Room	0	0			
Unit Type	Packaged AC	Packaged AC	Packaged AC			
Number of Units	1	1	1			
Cooling Capacity, Btu/hr	360000	30000	30000			
Total Capacity, Tons	30	2.5	2.5			
Manufacturer	York	York	York			
Model Number	ZJ360C00B2	DEX030A06	DEX030A06			
Efficiency, (S)EER	10.4 EER	15 SEER	15 SEER			

PROPOSED EQUIPMENT INFORMATION				
Unit Tag	HP-13 (MR)			
Unit Location	Mayor Roof			
Service For	0			
Unit Type	Split System CU/Indoor			
Number of Units	1			
Cooling Capacity, Btu/hr	30000			
Total Capacity, Tons	2.5			
Manufacturer	York			
Model Number	CZH030 / AVG			
Efficiency, (S)EER	18 SEER			

### **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the existing efficiency rating and stipulated values in the protocols for operating hours and comparing them to the proposed units' efficiency ratings.

Air Conditioning Upgrade Calculations:

Demand Savings = 
$$(\frac{Btu/h}{1000}) \times (\frac{1}{EER_E} - \frac{1}{EER_P}) \times CF$$

$$Electric \, Savings = (\frac{Btu \, / \, h}{1000}) \times (\frac{1}{EER_E} \, - \frac{1}{EER_P}) \times Full \, Load \, Hours$$

EER = Energy Efficiency Ratio, Existing (E) and Proposed (P)

CF = Coincidence Factor = 0.67

Full Load Hours = Equivalent Full Load Cooling Hours = 1,131 hours

Economizer Controls Calculations:

 $Electric Savings = OTF \times SF \times Capacity / Efficiency$ 

OTF = Operational Testing Factor = 0.8

SF = Savings Factor based on regional temperature bin data = 4,576 for equipment under 5.4 tons and 3,318 otherwise.

Capacity = Equipment Cooling Capacity in Tons

Efficiency = Energy Efficiency Ratio (EER) of equipment

ENERGY SAVINGS CALCULATIONS - UNIT REPLACMENT							
ECM INPUTS	COOLING CAPACITY, BTU/Hr	ANNUAL COOLING HOURS	EXISTING UNITS (S)EER	NEW UNITS (S)EER	# OF UNITS	ENERGY SAVINGS kWh	DEMAND SAVINGS kW
HP-1 (UR)	30,000	1,131	10 SEER	15 SEER	1	1,131	0.7
HP-2 (UR)	30,000	1,131	10 SEER	15 SEER	1	1,131	0.7
HP-3 (UR)	36,000	1,131	10 SEER	15 SEER	1	1,357	0.8
HP-4 (UR)	60,000	1,131	9.4 SEER	14.5 SEER	1	2,539	1.5
AC-2 (PR)	240,000	1,131	9 EER	11.6 EER	1	6,760	4.0
AC-1 (PR)	150,000	1,131	9 EER	12.2 EER	1	3,059	1.8
AC-3 (PR)	60,000	1,131	9.1 EER	12.2 EER	1	1,895	1.1
HP-7 (FR)	30,000	1,131	10 SEER	15 SEER	1	1,131	0.7
HP-9 (FR)	36,000	1,131	10 SEER	15 SEER	1	1,357	0.8
HP-10 (FR)	30,000	1,131	10 SEER	15 SEER	1	1,131	0.7
HP-11 (FR)	30,000	1,131	10 SEER	15 SEER	1	1,131	0.7
HP-12 (FR)	30,000	1,131	10 SEER	15 SEER	1	1,131	0.7
HP-14 (CR)	360,000	1,131	9.5 EER	10.4 EER	1	3,709	2.2
HP-5 (MR)	30,000	1,131	10 SEER	15 SEER	1	1,131	0.7
HP-6 (MR)	30,000	1,131	10 SEER	15 SEER	1	1,131	0.7
HP-13 (MR)	30,000	1,131	9.4 SEER	18 SEER	1	1,725	1.0
Total					16	31,449	18.6

ENERGY SAVINGS CALCULATIONS - ECONOMIZER CONTROLS					
ECM INPUTS	COOLING CAPACITY, TONS	ANNUAL COOLING HOURS	NEW UNITS (S)EER	ENERGY SAVINGS KWH	DEMAND SAVINGS kW
HP-1 (UR)	2.5	4,438	15 SEER	610	0.1
HP-2 (UR)	2.5	4,438	15 SEER	610	0.1
HP-3 (UR)	3.0	4,438	15 SEER	732	0.2
HP-4 (UR)	5.0	4,438	14.5 SEER	1,262	0.3
AC-2 (PR)	20.0	4,438	11.6 EER	4,577	1.0
AC-1 (PR)	12.5	4,438	12.2 EER	2,720	0.6
AC-3 (PR)	5.0	4,438	12.2 EER	1,500	0.3
HP-7 (FR)	2.5	4,438	15 SEER	610	0.1
HP-9 (FR)	3.0	4,438	15 SEER	732	0.2
HP-10 (FR)	2.5	4,438	15 SEER	610	0.1
HP-11 (FR)	2.5	4,438	15 SEER	610	0.1
HP-12 (FR)	2.5	4,438	15 SEER	610	0.1
HP-14 (CR)	30.0	4,438	10.4 EER	7,657	1.7
HP-5 (MR)	2.5	4,438	15 SEER	610	0.1
HP-6 (MR)	2.5	4,438	15 SEER	610	0.1
HP-13 (MR)	0.0	0	18 SEER	0	0.0
Total	98.5			24,061	5.4

## ECM #8: Senior – Direct Install Split Unit Replacement

### **Description:**

The Direct Install Program will be replacing three split system air conditioning units based on the scope of work provided by Hutchinson Mechanical on 9/19/2011.

<b>EQUIPMENT INFORMA</b>	TION					
ECM INPUT		EXISTING				
Unit Tag	CU-1	CU-2	CU-3			
Unit Location	Outdoor Side Rear	Outdoor Side Rear	Outdoor Side Rear			
Service For	Interior	Interior	Interior			
Unit Type	Split System CU	Split System CU	Split System CU			
Number of Units	1	1	1			
Cooling Capacity, Btu/hr	60,000	60,000	60,000			
Total Capacity, Tons	5.0	5.0	5.0			
Manufacturer	Carrier	Carrier	Carrier			
Model Number	38ED060306	38ED060306	38ED060306			
Efficiency (S/EER)	9.4 SEER	9.4 SEER	9.4 SEER			

### **Description of Scope:**

Remove and Replace of existing units to be performed by Direct Install Contractor.

This ECM includes replacement of three split indoor/outdoor units with high efficiency units of like size. The equipment list below is the basis of design and represents the efficiency levels stipulated by the NJ Clean Energy Program Direct Install guidelines and capacity requirements for this ECM implementation:

IMPLEMENTATION SUMMARY								
ECM INPUT	PROPOSED							
Unit Tag	CU-1	CU-2	CU-3					
Unit Location	Outdoor Side Rear	Outdoor Side Rear	Outdoor Side Rear					
Service For	Interior	Interior	Interior					
Unit Type	Split System CU	Split System CU	Split System CU					
Number of Units	1	1	1					
Cooling Capacity, Btu/hr	60,000	60,000	60,000					
Total Capacity, Tons	5.0	5.0	5.0					
Manufacturer	N/A	N/A	N/A					
Model Number	N/A	N/A	N/A					
Efficiency (S/EER)	15 SEER	15 SEER	15 SEER					

### **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the existing efficiency rating and stipulated values in the protocols for operating hours and comparing them to the proposed units' efficiency ratings.

Air Conditioning Upgrade Calculations:

Demand Savings = 
$$(\frac{Btu/h}{1000}) \times (\frac{1}{EER_E} - \frac{1}{EER_P}) \times CF$$

$$Electric \ Savings = (\frac{Btu/h}{1000}) \times (\frac{1}{EER_{\scriptscriptstyle F}} - \frac{1}{EER_{\scriptscriptstyle P}}) \times Full \ Load \ Hours$$

EER = Energy Efficiency Ratio, Existing (E) and Proposed (P)

Existing efficiency based on Program stipulated values based on unit age and capacity.

CF = Coincidence Factor = 0.67

Full Load Hours = Equivalent Full Load Cooling Hours = 1,131 hours

ENERGY SAVINGS CALCULATIONS - UNIT REPLACEMENT									
ECM INPUTS	COOLING CAPACITY, BTU/Hr	ANNUAL COOLING HOURS	EXISTING UNITS (S)EER	NEW UNITS (S)EER	# OF UNITS	ENERGY SAVINGS kWh	DEMAND SAVINGS kW		
CU-1	60,000	1,131	9.4 SEER	15 SEER	1	2,695	1.6		
CU-2	60,000	1,131	9.4 SEER	15 SEER	1	2,695	1.6		
CU-3	60,000	1,131	9.4 SEER	15 SEER	1	2,695	1.6		
Total					3	8,085	4.8		

## **ECM #9: Municipal – Boiler Replacement**

#### **Description:**

The Municipal Building is heated via a single natural gas fired Weil McLain hot water boiler located in a basement mechanical room adjacent to the Courtroom. The boiler has a nameplate input rating of 2,049 MBH. Hot Water is circulated via two sets of dedicated hot water pumps, one set circulated heating hot water to the Police side of the building for the northeast and southwest zones of the building, a second set pumps supplies hot water to the Municipal side of the building.

This ECM includes replacement of the existing Weil McLain with two Hydrotherm KN-10 boilers rated at 1,000 MBH input capacity. The boilers will be piped to a common header to service the entire building load and reuse the existing pumping arrangement. The installation will include all necessary additional piping, venting, insulation, and electrical wiring for operation of the new boilers.

### **Description of Scope:**

#### Preliminary Scope

- Engineering design documentation
- Thorough site survey by HVAC / Electrical Contractor to review existing conditions.
- Bid proposals requested from contractors
- Equipment submittals

#### Construction Scope

- Demo and dispose of existing Weil McLain Boiler.
- Reuse existing boiler pad.
- Install two new Hydrotherm KN-10 Boilers with controls.
- Pipe boilers to common header and tie into existing boiler pumps.
- Cap existing boiler flue stack and install new flue and combustion air vent per manufacturers specifications.
- Provide equipment start-up and training.

The equipment list below is the basis of design and represents the efficiency and capacity minimum requirements for this ECM implementation:

ECM IMPLEMENTATION SUMMARY					
ECM INPUTS	EXISTING	PROPOSED			
Quantity	1	2			
Boiler Manufacturer	Weil McLain	HydroTherm			
Model	788	KN-10			
Boiler Fuel	Natural Gas	Natural Gas			
Nameplate Input Rating (MBH)	2049	1000			
Nameplate Output Rating (MBH)	1632	927			
Efficiency	75%	88%			
Total Input Capacity (MBH)	2049	2000			
Total Output Capacity (MBH)	1632	1854			

### **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the existing efficiency rating and utility usage data for the Municipal Building.

Annual Natural Gas Use: 9,649.38 Therms (From 6/3/2010 to 6/3/2011)

Baseline Hot Water Gas Use: 38.43 Therms (Ave from May thru September Gas Use)

1.2743 Therms/day

Existing Heating Natural Gas: 9,649.38 Therms - 465.04 Therms (Annual DHW Load) =

9,184.34 Therms

 $Bldg \ Heat \ Re \ quired = Existing \ Nat \ Gas \ (Therms) \times Heating \ Eff. (\%) \times Fuel \ Heat Value \left(\frac{BTU}{Therm}\right)$ 

$$Proposed Heating Gas Usage = \frac{Bldg Heat Re quired (BTU)}{Heating Eff.(\%) \times Fuel Heat Value \left(\frac{BTU}{Therm}\right)}$$

Energy Cost = Heating Gas Usage(Therms) × Ave Fuel Cost  $\left(\frac{\$}{Therm}\right)$ 

NATURAL GAS LOAD BREAKOUT								
						DHW	DHW	
Previous	Current	Utility				LOAD	Calc	Heating
Read	Read	Use,	HDD		DHW,	Therms	Load,	Load,
Date	Date	Therms	(65F)	Days	Therms	/ Day	Therms	Therms
06/03/10	07/06/10	36.1	6	33.0	36.1	1.0936	36.09	0.00
07/06/10	08/03/10	32.8	2	28.0	32.8	1.1725	32.83	0.00
08/03/10	09/03/10	38.9	2	31.0	38.9	1.2552	38.91	0.00
09/03/10	10/01/10	35.9	23	28.0	35.9	1.2825	35.91	0.00
10/01/10	11/01/10	44.1	228	31.0			39.50	4.58
11/01/10	12/02/10	715.1	496	31.0			39.50	675.60
12/02/10	01/05/11	2,551.5	992	34.0			43.33	2,508.13
01/05/11	02/03/11	2,413.3	1098	29.0			36.95	2,376.31
02/03/11	03/03/11	1,786.0	772	28.0			35.68	1,750.27
03/03/11	04/04/11	1,474.8	641	32.0			40.78	1,433.99
04/04/11	05/03/11	472.4	303	29.0			36.95	435.47
05/03/11	06/03/11	48.6	88	31.0	48.6	1.5677	48.60	0.00
AVERAGE	3				38.4680	1.2743		
TOTAL		9,649.4	4651				465.04	9,184.34

CONDENSING BOILER CALCULATIONS					
ECM INPUTS	EXISTING	PROPOSED	SAVINGS		
ECM INPUTS	Existing Cast Iron	New Condensing			
ECW IN 015	Boilers	Boilers			
Existing Nat Gas (Therms)	9,184	0			
Boiler Efficiency (%)	75%	88%	13%		
Nat Gas Heat Value (BTU/Therm)	100,000	100,000			
Equivalent Building Heat	689	689			
Usage (MMBTUs)	007	087			
Gas Cost (\$/Therm)	1.70	1.70			
ENER	GY SAVINGS CAL	CULATIONS			
ECM RESULTS	EXISTING	PROPOSED	SAVINGS		
Natural Gas Usage (Therms)	9,184	7,828	1,357		
Energy Cost (\$)	\$15,613	\$13,307	\$2,307		
COMMENTS:	Boiler Efficiency Based on age of boiler				

# ECM #10: Library – Boiler Replacement

#### **Description:**

The Direct Install Program will be replacing one 325 MBH natural gas fired hot water boiler based on the scope of work provided by Hutchinson Mechanical on 9/19/2011 at the Library.

#### **Description of Scope:**

Remove and Replace of existing boiler to be performed by Direct Install Contractor. New unit will be based on installation of same size boiler with a minimum efficiency requirement of 93% per Direct Install guidelines.

#### **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the Direct Install stipulated efficiency based on age and type of boiler and using the Protocols heating savings formula.

$$Gas \, Savings = \left(\frac{0.8 \times CAPY_{in} \times HDD_{MOD} \times 24}{\Delta T \times 100,000}\right) \times \left(1 - \frac{AFUE_b}{AFUE_q}\right)$$

PHL = Philadelphia Weather Location

0.8 = Oversize Factor of standard boiler or furnace, equivalent to 25% of capacity

 $AFUE_b = Annual Fuel Utilization Efficiency of the existing boiler$ 

 $AFUE_{a}$  = Annual Fuel Utilization Efficiency of the proposed boiler

 $CAPY_{in} = Capacity of the boiler (Btu/h)$ 

 $HDD_{MOD}$  = Heating Degree Days Modified based on building type

DIRECT INSTALL BOILER/FURNACE CALCULATION				
ECM INPUTS	RESULTS			
Location	PHL			
Building Type	Public Assembly			
Building Type Number	8			
Manufacturer	Weil McLain			
Unit Type	Boiler			
Year Built	1988			
Fuel Type	Gas			
Input Capacity (Btu/hr)	325,000			
Existing Efficiency (%)	77%			
Proposed Efficiency (%)	93%			
Fuel Conversion Factor	100,000			
ΔΤ	50			
$HDD_{mod}$	3042			
Oversize Factor	0.8			
Gas Savings (therms)	653			
Fuel Cost (\$/Unit)	\$1.29			
Cost Savings	\$843			

## ECM #11: Senior – Direct Install Furnace Replacement

### **Description:**

The Direct Install Program will be replacing two 132 MBH natural gas fired furnaces based on the scope of work provided by Hutchinson Mechanical on 9/19/2011 at the Senior Center.

#### **Description of Scope:**

Remove and Replace of existing furnace to be performed by Direct Install Contractor. New unit will be based on installation of same size furnaces with a minimum efficiency requirement of 93% per Direct Install guidelines.

#### **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the Direct Install stipulated efficiency based on age and type of boiler and using the Protocols heating savings formula.

$$Gas \, Savings = \left(\frac{0.8 \times CAPY_{in} \times HDD_{MOD} \times 24}{\Delta T \times 100,000}\right) \times \left(1 - \frac{AFUE_b}{AFUE_q}\right)$$

PHL = Philadelphia Weather Location

0.8 = Oversize Factor of standard boiler or furnace, equivalent to 25% of capacity

 $AFUE_b = Annual Fuel Utilization Efficiency of the existing furnace$ 

AFUE<sub>q</sub> = Annual Fuel Utilization Efficiency of the proposed furnace

 $CAPY_{in} = Capacity of the furnace (Btu/h)$ 

 $HDD_{MOD}$  = Heating Degree Days Modified based on building type

DIRECT INSTALL BOILER/FURNACE CALCULATION				
ECM INPUTS	RESULTS			
Location	PHL			
Building Type	Public Assembly			
Building Type Number	8			
Manufacturer	Carrier			
Unit Type	Furnace			
Year Built	1988			
Fuel Type	Gas			
Input Capacity (Btu/hr)	264,000			
Existing Efficiency (%)	76%			
Proposed Efficiency (%)	93%			
Fuel Conversion Factor	100,000			
ΔΤ	50			
$HDD_{mod}$	3042			
Oversize Factor	0.8			
Gas Savings (therms)	564			
Fuel Cost (\$/Unit)	\$1.29			
Cost Savings	\$727			

# ECM #12: Academy Hall – Direct Install Boiler Replacement

#### **Description:**

The Direct Install Program will be replacing one 450 MBH natural gas fired hot water boiler based on the scope of work provided by Hutchinson Mechanical on 9/19/2011 at Academy Hall, which is utilized by public safety.

#### **Description of Scope:**

Remove and Replace of existing boiler to be performed by Direct Install Contractor. New unit will be based on installation of same size boiler with a minimum efficiency requirement of 93% per Direct Install guidelines.

#### **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the Direct Install stipulated efficiency based on age and type of boiler and using the Protocols heating savings formula.

$$Gas\ Savings = \left(\frac{0.8 \times CAPY_{in} \times HDD_{MOD} \times 24}{\Delta T \times 100,000}\right) \times \left(1 - \frac{AFUE_{b}}{AFUE_{q}}\right)$$

PHL = Philadelphia Weather Location

0.8 = Oversize Factor of standard boiler or furnace, equivalent to 25% of capacity

 $AFUE_b = Annual Fuel Utilization Efficiency of the existing boiler$ 

 $AFUE_{a}$  = Annual Fuel Utilization Efficiency of the proposed boiler

 $CAPY_{in} = Capacity of the boiler (Btu/h)$ 

 $HDD_{MOD}$  = Heating Degree Days Modified based on building type

DIRECT INSTALL BOILER/FURNACE CALCULATION				
ECM INPUTS	RESULTS			
Location	PHL			
Building Type	Public Order/Safety			
Building Type Number	9			
Manufacturer	Weil McLain			
Unit Type	Boiler			
Year Built	1985			
Fuel Type	Gas			
Input Capacity (Btu/hr)	450,000			
Existing Efficiency (%)	70%			
Proposed Efficiency (%)	93%			
Fuel Conversion Factor	100,000			
ΔΤ	50			
$HDD_{mod}$	2169			
Oversize Factor	0.8			
Gas Savings (therms)	927			
Fuel Cost (\$/Unit)	\$1.29			
Cost Savings	\$1,196			

# **ECM #13: Library – Direct Install Fuel Economizer**

#### **Description:**

The Direct Install Program will be installing fuel economizer controls on the gas fired hot water boiler based on the scope of work provided by Hutchinson Mechanical on 9/19/2011 at the Library.

### **Description of Scope:**

Install new fuel use economizer controls on boiler to be performed by Direct Install Contractor. New unit will be based on Intellidyne IntelliCon Controller or equivalent per Direct Install guidelines.

### **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the Direct Install stipulated efficiency based on age and type of boiler and using the Protocols heating savings formula in order to calculation annual usage. The manufacturer suggests a savings of 10% to 20% can be realized for installing the device; however a 5% savings factor was used in order to calculate savings.

$$Gas\ Savings = \left(\frac{0.8 \times CAPY_{in} \times HDD_{MOD} \times 24}{\Delta T \times 100,000}\right) \times \left(\frac{1}{AFUE_q}\right) \times SF$$

PHL = Philadelphia Weather Location

0.8 = Oversize Factor of standard boiler or furnace, equivalent to 25% of capacity

 $AFUE_{a}$  = Annual Fuel Utilization Efficiency of the proposed boiler

 $CAPY_{in} = Capacity of the boiler (Btu/h)$ 

 $HDD_{MOD}$  = Heating Degree Days Modified based on building type

 $\Delta T$  = Design Temperature difference with balance temperature of 65  $^{\circ}F$  and outdoor temperature based on location.

SF = Savings Factor (5%)

DIRECT INSTALL CALCULATION				
ECM INPUTS	RESULTS			
Location	PHL			
Building Type	Public Assembly			
Building Type Number	8			
Unit Type	Boiler			
Year Built	1988			
Fuel Type	Gas			
Input Capacity (Btu/hr)	325,000			
Existing Efficiency (%)	93%			
Fuel Economizer Savings Factor (%)	5%			
Fuel Conversion Factor	100,000			
ΔΤ	50			
$\mathrm{HDD}_{\mathrm{mod}}$	3042			
Oversize Factor	0.8			
Gas Savings (therms)	204			
Fuel Cost (\$/Unit)	\$1.29			
Cost Savings	\$263			

# ECM #14: Academy Hall – Direct Install Fuel Economizer

#### **Description:**

The Direct Install Program will be installing fuel economizer controls on the gas fired hot water boiler based on the scope of work provided by Hutchinson Mechanical on 9/19/2011 at Academy Hall.

#### **Description of Scope:**

Install new fuel use economizer controls on boiler to be performed by Direct Install Contractor. New unit will be based on Intellidyne IntelliCon Controller or equivalent per Direct Install guidelines.

## **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the Direct Install stipulated efficiency based on age and type of boiler and using the Protocols heating savings formula in order to calculation annual usage. The manufacturer suggests a savings of 10% to 20% can be realized for installing the device; however a 5% savings factor was used in order to calculate savings.

$$Gas\ Savings = \left(\frac{0.8 \times CAPY_{in} \times HDD_{MOD} \times 24}{\Delta T \times 100,000}\right) \times \left(\frac{1}{AFUE_q}\right) \times SF$$

PHL = Philadelphia Weather Location

0.8 = Oversize Factor of standard boiler or furnace, equivalent to 25% of capacity

 $AFUE_{a}$  = Annual Fuel Utilization Efficiency of the proposed boiler

 $CAPY_{in} = Capacity of the boiler (Btu/h)$ 

 $HDD_{MOD}$  = Heating Degree Days Modified based on building type

 $\Delta T$  = Design Temperature difference with balance temperature of 65  $^{\circ}F$  and outdoor temperature based on location.

SF = Savings Factor (5%)

DIRECT INSTALL CALCULATION				
ECM INPUTS	RESULTS			
Location	PHL			
Building Type	Public Order/Safety			
Building Type Number	9			
Unit Type	Boiler			
Year Built	1988			
Fuel Type	Gas			
Input Capacity (Btu/hr)	450,000			
Existing Efficiency (%)	93%			
Fuel Economizer Savings Factor (%)	5%			
Fuel Conversion Factor	100,000			
ΔΤ	50			
$HDD_{mod}$	2169			
Oversize Factor	0.8			
Gas Savings (therms)	202			
Fuel Cost (\$/Unit)	\$1.29			
Cost Savings	\$260			

# **ECM #15: All Buildings – CRT Monitor Replacement**

#### **Description:**

The Township still utilizes a small amount of CRT Monitors for use by its staff. These monitors not only utilize more energy in operating mode, but also while being in idle mode. Typical monitors throughout the buildings consisted of 17 inch size monitors.

This ECM will replace all remaining thirteen (13) existing CRT monitors at the Library, Municipal, and DPW buildings with new 17" Dell LCD Model P170S monitors.

#### **Description of Scope:**

- Verify quantity and location of replacement monitors.
- Verify manufacturer and model to be purchased with Township Technical Support personnel.
- Township staff installs new monitors.

#### **Energy Savings Calculations / Results:**

Savings calculations were based on operating occupied hours per week of operating staff, and estimated idle time of monitors per week outside occupied hours. Power consumption data is based on actual monitor characteristics for a Dell CRT Model E773c, and Dell LCD Model P170S.

Energy Savings =  $Qty \times Op \; Hrs \times P_O + Qty \times IdleHrs \times P_I$ 

 $Qty = Quantity \\ Op Hrs = Operating Hours per Year \\ Idle Hrs = Idle Hours per Year \\ P_O = Operating Power Consumption Watts \\ P_I = Idle Power Consumption Watts$ 

# Library:

CRT MONITOR REPLACEMENT CALCULATIONS					
ECM INPUTS	EXISTING	PROPOSED	SAVINGS		
ECM INPUTS	17" CRT	17" LCD			
# of Monitors	8	8			
Power Cons. (W)	71	22	49		
Idle Power Cons. (W)	5	0.56	4.44		
Operating Hrs per Week	40	40			
Operating Weeks per Yr	50	50			
Idle Hrs per Week	128	128			
Idle Weeks per Yr	52	52			
Elec Cost (\$/kWh)	0.181	0.181			
ENE	RGY SAVINGS CAL	CULATIONS			
ECM RESULTS	EXISTING	PROPOSED	SAVINGS		
Electric Usage (kWh)	1,402	382	1,020		
Energy Cost (\$)	\$254	\$69	\$185		
COMMENTS:	Savings Based on Dell 17: CRT Monitor Compared with Dell 17 " LCD Model P170S				

# Municipal

CRT MONIT	OR REPLACEMEN	T CALCULATIONS	S
ECM INPUTS	EXISTING	PROPOSED	SAVINGS
ECM INPUTS	17" CRT	17" LCD	
# of Monitors	5	5	
Power Cons. (W)	71	22	49
Idle Power Cons. (W)	5	0.56	4.44
Operating Hrs per Week	40	40	
Operating Weeks per Yr	50	50	
Idle Hrs per Week	128	128	
Idle Weeks per Yr	52	52	
Elec Cost (\$/kWh)	0.165	0.165	
ENEI	RGY SAVINGS CAL	CULATIONS	
ECM RESULTS	EXISTING	PROPOSED	SAVINGS
Electric Usage (kWh)	876	239	638
Energy Cost (\$)	\$145	\$39	\$105
COMMENTS:	Savings Based on Dell 17: CRT Monitor Compared with Dell 17 " LCD Model P170S		

# Public Works

CRT MONIT	OR REPLACEMEN	T CALCULATIONS	3
ECM INPUTS	EXISTING	PROPOSED	SAVINGS
ECM INPUTS	17" CRT	17" LCD	
# of Monitors	1	1	
Power Cons. (W)	71	22	49
Idle Power Cons. (W)	5	0.56	4.44
Operating Hrs per Week	40	40	
Operating Weeks per Yr	50	50	
Idle Hrs per Week	128	128	
Idle Weeks per Yr	52	52	
Elec Cost (\$/kWh)	0.180	0.180	
ENER	RGY SAVINGS CAL	CULATIONS	
ECM RESULTS	EXISTING	PROPOSED	SAVINGS
Electric Usage (kWh)	175	48	128
Energy Cost (\$)	\$32	\$9	\$23
COMMENTS: Savings Based on Dell 17: CRT Monitor Compared with Dell 17 " LCD Model P170S			

## **ECM #16:** Monroe Pool – Pool Pump Time Controls

#### **Description:**

The Monroe Pool is an outdoor public swimming pool that operated from Memorial Day to Labor Day during the hours of 12 p.m. to 8 p.m. on weekdays, and 11 a.m. to 6 p.m. on weekends; and swimming lessons occurring on Fridays and Saturdays starting at 9 a.m. The pool has two 5 horsepower filtration pumping system that operate 24/7 during summer operating. It is recommended that the pumps be operated off a timer that would shut the pumps down at 9:00 p.m. and start the pumps at 6 a.m. This will provide 3 to 6 hours prior to pool opening of filtration operation.

This ECM would utilize the existing StingL SR500 controllers that are capable of timed control. The controls will be programmed to Timed Start and End per the instruction provided in the SR500 operating manual. In addition the two 5 horsepower motors will be replaced with premium efficiency pump motors. It is expected the Townships Public Works Department's Staff is capable of performing the pool timer programming and motor replacement in order to reduce the costs of this ECM.

#### **Description of Scope:**

#### Construction Scope

- Demo and dispose of existing Marathon 5 HP pump motors.
- Reuse existing pump and mount bracket and order motor frame adapter if necessary.
- Install two new Baldor Model EL3608T 5 horsepower motors rated at 85% efficient, 230 volt single phase, 3500 rpm, and 184T frame.
- Reuse existing electrical wiring to motor and SR500 controller.
- Program SR500 to operate off Timed Start and set start to 06:00 AM and set stop to 09:00 PM.

The equipment list below is the basis of design and represents the efficiency and capacity minimum requirements for this ECM implementation:

ECM IMPLEMENTATION SUMMARY					
ECM INPUTS	EXISTING	PROPOSED			
Quantity	2	2			
Motor Horsepower (HP)	5	5			
Manufacturer	Marathon	Badlor			
Model Number	1D184TCDR7910AR	EL3608T			
Voltage	208-230	230			
Phase-Hertz	Single -60 Hz	Single -60 Hz			
Frame	184TDZ	184T			
Enclosure	ODP	TEFC			
RPM	3,510	3,450			
NEMA Full Load Efficiency	80%	85%			

### **Energy Savings Calculations / Results:**

The energy savings are calculated by using the existing equipment information and operating information.

Assumptions include 24 hour operation per day based on existing controls for a total of 95 days at an 85% load factor.

Energy Use, kWh = 
$$\frac{\text{Pump HP} \times 0.746 \frac{\text{kW}}{\text{HP}} \times \text{Operating Hrs} \times \text{Load Factor}}{\text{Motor Efficiency \%}}$$

Cost Savings = Energy Savings, kWh × Cost of Electricity, 
$$\left(\frac{\$}{\text{kWh}}\right)$$

POOL PUM	IP CONTROL CALC	CULATIONS					
ECM INPUTS	EXISTING	PROPOSED	SAVINGS				
ECM INPUTS	Continuous Operation	Pump Time Clock Control					
Quantity	2	2					
Pump Power (HP)	5	5					
Estimated Load Factor (%)	85%	85%					
Conversion Factor (kW/HP)	0.746	0.746					
Operating Hrs	2,280	1,520	760				
Motor Efficiency	80.0%	85.0%					
Elec Cost (\$/kWh)	\$0.205	\$0.205					
ENERGY	Y SAVINGS CALCUI	LATIONS					
ECM RESULTS	EXISTING	PROPOSED	SAVINGS				
Energy Use (kWh)	18,072	11,339	6,733				
Energy Cost (\$)	\$3,705	\$2,325	\$1,380				
COMMENTS:		Assume 95 Days of Operation Memorial Day to Labor Day. Timeclock will operate pool from 6 AM to 10 PM.					

# ECM #17: Monroe Pool – DHW Conversion to Gas

**REMOVED** 

#### **ECM #18: Senior – Direct Install Faucet Aerators**

#### **Description:**

The Direct Install Program will be installing three faucet aerators (lavatory) based on the scope of work provided by Hutchinson Mechanical on 9/19/2011 at Academy Hall.

#### **Description of Scope:**

Install new faucet aerators to be performed by Direct Install Contractor. New unit will be based on Direct Install guidelines.

## **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the Direct Install protocols for

$$Savings = \frac{(60 \times H \times D \times (F_{base} - F_{eff}) \times 8.33 \times \Delta T \times \frac{1}{Eff}}{C}$$

60 = Conversion from Hours to Minutes

H = Hours per Day of Device Usage (Stipulated by Direct Install Guidelines at 30 minutes for Aerators).

D = Days per Year of Facility Operation

 $F_{\text{base}}$  =Baseline device flow rate (gallons per minute)

 $F_{eff}$  = Low Flow device flow rate (gallons per minute)

8.33 = Heat Content of Water (Btu/gal/°F

 $\Delta T$  = Temperature difference between cold water intake and output

Eff = Efficiency percentage of water heating equipment

C = Conversion Factor from Btu to Therms or kWh (100,000 Btu/Therm; 3,413 Btu/kWh)

DIRECT INSTALL LOW FLOW DEVICES CALCULATION						
ECM INPUTS	RESULTS					
Device Type	Faucet Aerators					
Water Heating Type	Gas					
Quantity	3					
Hours per Day of Device Usage	0.5					
Days per Year of Facity Operation	200					
Baseline Device Flow Rate (gpm)	2.2					
Low Flow Device Flow Rate (gpm)	1					
ΔΤ	50					
Efficiency of Water Heater	80%					
Conversion Factor	100,000					
Heat Content of Water (Btu/gal/°F)	8.33					
Energy Savings (Fuel Unit)	112					
Energy Cost (\$ per Fuel Unit)	\$1.290					
Cost Savings	\$145.07					

# ECM #20: Recreation – Direct Install High Efficiency Split System

#### **Description:**

The Direct Install Program will be replacing one split system air conditioning unit based on the scope of work provided by Hutchinson Mechanical on 10/10/2011. The unit being replaced is CU-1.

#### **Description of Scope:**

Remove and Replace of existing unit to be performed by Direct Install Contractor.

This ECM includes replacement of two split indoor/outdoor units with high efficiency units of like size. The equipment list below is the basis of design and represents the efficiency levels stipulated by the NJ Clean Energy Program Direct Install guidelines and capacity requirements for this ECM implementation:

EQUIPMENT INFORMATION						
ECM INPUT	EXISTING					
Unit Tag	CU-1					
Unit Location	Outdoor Side					
Service For	Office Area					
Unit Type	Split System CU					
Number of Units	1					
Cooling Capacity, Btu/hr	60,000					
Total Capacity, Tons	5.0					
Manufacturer	Lennox					
Model Number	HS19-653V-3Y					
Efficiency (S/EER)	10 SEER					

#### **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the existing efficiency rating and stipulated values in the protocols for operating hours and comparing them to the proposed units' efficiency ratings.

Air Conditioning Upgrade Calculations:

Demand Savings = 
$$(\frac{Btu/h}{1000}) \times (\frac{1}{EER_E} - \frac{1}{EER_P}) \times CF$$

$$Electric \ Savings = (\frac{Btu/h}{1000}) \times (\frac{1}{EER_E} - \frac{1}{EER_P}) \times Full \ Load \ Hours$$

EER = Energy Efficiency Ratio, Existing (E) and Proposed (P)

Existing efficiency based on Program stipulated values based on unit age and capacity.

CF = Coincidence Factor = 0.67

Full Load Hours = Equivalent Full Load Cooling Hours = 1,131 hours

ENERGY SAVINGS CALCULATIONS - UNIT REPLACEMENT								
ECM INPUTS	COOLING CAPACITY, BTU/Hr	ANNUAL COOLING HOURS	EXISTING UNITS (S)EER	NEW UNITS (S)EER	# OF UNITS	ENERGY SAVINGS kWh	DEMAND SAVINGS kW	
CU-1	60,000	1,131	10 SEER	15 SEER	1	2,262	1.3	
Total					1	2,262	1.3	

## ECM #21: Recreation – Direct Install Furnace Replacement

#### **Description:**

The Direct Install Program will be replacing one 100 MBH natural gas fired furnace based on the scope of work provided by Hutchinson Mechanical on 10/10/2011 at the Recreation Center.

#### **Description of Scope:**

Remove and Replace of existing furnace to be performed by Direct Install Contractor. New unit will be based on installation of same size furnaces with a minimum efficiency requirement of 93% per Direct Install guidelines.

#### **Energy Savings Calculations / Results:**

Energy savings calculations are based on New Jersey Board of Public Utilities Protocols to Measure Resource Savings. The energy savings are calculated by using the Direct Install stipulated efficiency based on age and type of boiler and using the Protocols heating savings formula.

$$Gas \ Savings = \left(\frac{0.8 \times CAPY_{in} \times HDD_{MOD} \times 24}{\Delta T \times 100,000}\right) \times \left(1 - \frac{AFUE_{b}}{AFUE_{q}}\right)$$

PHL = Philadelphia Weather Location

0.8 = Oversize Factor of standard boiler or furnace, equivalent to 25% of capacity

 $AFUE_b = Annual Fuel Utilization Efficiency of the existing furnace$ 

AFUE<sub>q</sub> = Annual Fuel Utilization Efficiency of the proposed furnace

 $CAPY_{in} = Capacity of the furnace (Btu/h)$ 

 $HDD_{MOD}$  = Heating Degree Days Modified based on building type

DIRECT INSTALL BOILER/FURNACE CALCULATION					
ECM INPUTS	RESULTS				
Location	PHL				
Building Type	Public Assembly				
Building Type Number	8				
Manufacturer	Lennox				
Unit Type	Furnace				
Year Built	1992				
Fuel Type	Gas				
Input Capacity (Btu/hr)	100,000				
Existing Efficiency (%)	90%				
Proposed Efficiency (%)	93%				
Fuel Conversion Factor	100,000				
ΔΤ	50				
$HDD_{mod}$	3042				
Oversize Factor	0.8				
Gas Savings (therms)	38				
Fuel Cost (\$/Unit)	\$1.73				
Cost Savings	\$65				

# VI. Direct Install Program

The New Jerseys Board of Public Utilities Clean Energy Program currently offers a Direct Install Program for customers whose buildings have a peak demand of less than 100 kilowatts. The program has enlisted specific contractors throughout the state of New Jersey who implement the program in assigned regions. Customers contact the appropriate contractor and a free energy assessment is performed to identify energy upgrades. Once the assessment is completed it provides the customer with a scope of work to be performed, energy savings, project costs, and incentives. The program provides incentives to customers to install energy upgrades by a 60/40 percentage of construction cost split, with 40% of the cost burden on the customer and 60% being covered by the program.

The Township has four buildings that qualify for the Direct Install Program being the Library, Recreation Center, Academy Hall, and Senior Center. The intent is to incorporate the Direct Install Program into the Energy Savings Improvement Program to assist the Township in paying the remaining 40% cost share. The local program provider Hutchinson Mechanical was contacted to provide the required documentation for the program and the scope of work that could be incentivized through the Direct Install Program. Based on the input from Hutchinson the following summarized scope of work can be partially funded through the Direct Install program and thus will be included in with the ESIP. (See **Appendix D** for detailed Direct Install Energy Assessment Reports):

- Library Building
  - o ECM #10 Boiler Replacement
  - o ECM #13 Fuel Economizer Controls
- Recreation Center
  - o ECM #1A Lighting Upgrade
  - o ECM #20 High Efficiency Split System
  - o ECM #21 Furnace Replacement
- Academy Hall
  - ECM #1A Lighting Upgrade
  - o ECM #5A Split System Replacement
  - o ECM #12 Boiler Replacement
  - o ECM #14 Fuel Economizer
- Senior Center
  - o ECM #8 Split System Replacement
  - o ECM #11 Furnace Replacement
  - o ECM #18 Faucet Aerators
  - o ECM #19 Programmable Thermostats

The Direct Install scope of work will be performed by Hutchinson Mechanical based on program guidelines and is intended to begin once the Township gives final approval on the energy savings plan and secures the necessary funding. The remaining energy improvements not included in Direct Install scope of work will be separated out and publicly bid according to ESIP guidelines.

# VII. Design and Compliance, Maintenance Impacts, and Risks

### **Design and Compliance Issues:**

As part of the ESP development Concord Engineering has licensed professional engineers on staff to ensure that all design and compliance issues are encompassed in the Plan and that recommended measures will meet all applicable State of New Jersey Codes.

#### Maintenance Impacts:

The installation of the recommended measures will provide the Township with a reduction in the amount of emergency maintenance required through the installation of new equipment, of which the cost savings were not accounted for due to the difficulty in calculating a specific annual cost benefit. The Township will be required to perform preventative maintenance on all equipment to ensure correction operation and to reach expected equipment life. Based on the recommendations it is foreseen that no additional maintenance will be required beyond their current practices.

#### Risks:

The installation of the recommended measures will provide the Township with new equipment to replace existing equipment nearing and at the end of its useful life, therefore reducing the risk for a near term capital replacement project cost. The measures also present a minimal to no risk in affecting current facility comfort conditions, and will likely improve these conditions through better equipment performance.

# VIII. PJM Demand Response & Curtailable Service Programs

The regional transmission organization PJM oversees the electricity grid in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. PJM currently offers various demand response programs to end users on the grid an opportunity to generate revenue through curtailing electric load in their facility from the grid. There are various levels of commitment that can be accepted by the end user to participate in the program. Three of the most common programs offered by PJM currently are the Emergency Load Response Program, Economic Load Response Program, and Synchronized Reserves Market. The Emergency Response Program allows end-users to receive financial incentives through agreeing to reduce a set amount of electricity consumption during system emergencies on the grid. The Economic Load Response Program allows end users to receive financial incentives for voluntarily reducing electricity consumption during times of high wholesale prices. The Synchronized Reserves Market allows end users to receive financial incentives for reducing electricity consumption on short notice in case of an unexpected emergency event. Each of these programs has stipulations in order participate such as number of events one must participate, amount of load to be curtailed, and response time.

The current Township electric loads and potential load shedding due to energy savings are not substantial enough to provide economic benefit to utilize the PJM programs.

# IX. ESIP Cash Flow Summary

Financing an Energy Savings Improvement Program is based on the principle that the cost of the improvements will be paid through the value of the reduced energy costs. Entities are able to finance these ESIP projects for a period not to exceed fifteen (15) years. The Board of Public Utilities has provided protocols in order to ensure with which to ensure these projects will cash flow within the project term. These protocols provide fixed values for energy cost escalation and discount rate, as well as methods for calculating the Participant Net Benefit, and Cost Benefit ratio. These guidelines are published in Board of Public Utilities Docket No. EO09020128 dated 2/24/2009. The proceeding Table 3 shows the Cash Flow Summary for the Township's Energy Savings Projects pursuant to the protocols guidelines.

The presented project cash flows provide a positive net cash flow annually over the life of the loan. Meaning after payment of all annual project expenses, the Township will be left with additional savings or "In Pocket" dollars annually over the life of ESIP.

(Note: Interest rate subject to change once financing is finalized)

Project Na	ame:	Gl	oucester	То	wnship E	cne	rgy Savi	ngs	Improve	eme	ents						
# of Meau	res Installed:	20															
Proie	ects Costs		_	Incentives			=	Net Project Costs									
	09,641				\$103			1		\$506,164			]				
Flectr	ic Savings		+		Natural G	as S	Savinos		=		Net Utilit	v S:	avinos	•			
	18,927				\$6,6		, a viiigs	1			\$55,			]			
											·						
Mair	ntenance Savin	gs o	or (Costs):		\$(	0											
		Inte	rest Rate:		4.0	)%		]	Perc	ent	Financed:		100	0.0%			
	Electric Es	cala	ntion Rate:		2.2	2%			Γ	)isc	ount Rate:		8.0	)%			
ľ	Natural Gas Es	cala	tion Rate:		2.4	1%											
Term	Additional	]	Energy	Ma	intenance		Total		Interest		Loan		Total		Net	Cu	mulative
Years	Cash Outlay		Savings		Savings		Savings		Expense	I	Principal	P	ayments	C	ash Flow	Ca	ash Flow
0	\$ -											\$	-	\$	-		
1	\$ -	\$	55,620	\$	-	\$	55,620	\$	20,246.56	\$	25,278	\$	45,525	\$	10,095	\$	10,095
2	\$ -	\$	56,857	\$	-	\$	56,857	\$	19,235.42	\$	26,290	\$	45,525	\$	11,332	\$	21,426
3	\$ -	\$	58,121	\$	-	\$	58,121	\$	18,183.84	\$	27,341	\$	45,525	\$	12,596	\$	34,022
4	\$ -	\$	59,414	\$	-	\$	59,414	\$	17,090.20	\$	28,435	\$	45,525	\$	13,889	\$	47,911
5	\$ -	\$	60,735	\$	-	\$	60,735	\$	15,952.81	\$	29,572	\$	45,525	\$	15,210	\$	63,121
6	\$ -	\$	62,086	\$	-	\$	62,086	\$	14,769.92	\$	30,755	\$	45,525	\$	16,561	\$	79,683
7	\$ -	\$	63,467	\$	-	\$	63,467	\$	13,539.72	\$	31,985	\$	45,525	\$	17,942	\$	97,625
8	\$ -	\$	64,879	\$	-	\$	64,879	\$	12,260.31	\$	33,265	\$	45,525	\$	19,354	\$	116,979
9	\$ -	\$	66,322	\$	-	\$	66,322	\$	10,929.73	\$	34,595	\$	45,525	\$	20,797	\$	137,776
10	\$ -	\$	67,797	\$	-	\$	67,797	\$	9,545.92	\$	35,979	\$	45,525	\$	22,272	\$	160,048
11	\$ -	\$	69,305	\$	-	\$	69,305	\$	8,106.76	\$	37,418	\$	45,525	\$	23,780	\$	183,828
12	\$ -	\$	70,847	\$	-	\$	70,847	\$	6,610.03	\$	38,915	\$	45,525	\$	25,322	\$	209,150
13	\$ -	\$	72,423	\$	-	\$	72,423	\$	5,053.43	\$	40,472	\$	45,525	\$	26,898	\$	236,048
14	\$ -	\$	74,034	\$	-	\$	74,034	\$	3,434.57	\$	42,090	\$	45,525	\$	28,509	\$	264,557
15	\$ -	\$	75,681	\$		\$	75,681	\$	1,750.96	\$	43,774	\$	45,525	\$	30,156	\$	294,714
	Totals:	\$	977,588	\$	-	\$	977,588	\$	176,710	\$	506,164	\$	682,874	\$	294,714		
									1								
				Net Present Value (NPV):				\$139,8									
				Participant Net Benefit:				\$167,8	372.9	92							
							Bene	fit-(	Cost Ratio:		1.3	36					

# X. Greenhouse Gas Reductions

An additional goal beyond merely saving energy, is the reduction of greenhouse gas emissions. A reduction in these emissions is important as they have impact on the environment around us. The Carbon Emissions Reductions were calculated based on emissions factor data published by the New Jersey Department of Environmental Protection. These factors show equivalent pounds of Carbon Dioxide per unit of fuel usage based on system average air emissions for July 2003 to present. The following Tables show the emission factors and greenhouse gas emissions reductions for the conservation measures.

**Table 5: NJDEP Emissions Factors** 

EMISSIONS FACTORS							
ENERGY TYPE   CONVERSION FACTOR							
Electricity	1.52	lbs CO <sub>2</sub> / kWh					
Natural Gas	11.7	lbs CO <sub>2</sub> / therm					

Figure 1
Pre & Post Measure Emissions

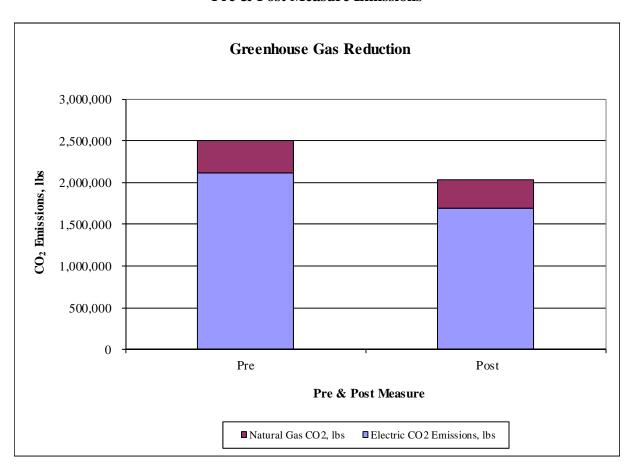


Table 6
Emission Reductions per Measure

Emission Reductions per Measure CO <sub>2</sub> /GREENHOUSE GAS REDUCTION						
ECM NO.	BUILDING	DESCRIPTION	Electric CO2,	Natural Gas CO2, lbs	Total CO2 Emissions, lbs	
ECM #1	All Buildings	Lighting Upgrade	227,963.5	0.0	227,963.5	
ECM #1A	Recreation, Academy Hall	DI - Lighting Upgrade	17,952.7	0.0	17,952.7	
ECM #2	All Buildings	Lighting Controls	49,693.4	0.0	49,693.4	
ECM #3	Library	5-Ton RTU Replacement	6,297.4	0.0	6,297.4	
ECM #4	Recreation	REMOVED	0.0	0.0	0.0	
ECM #5	Academy Hall	x3 1.5 Ton Split Units	3,564.4	0.0	3,564.4	
ECM #5A	Academy Hall	DI - x1 3ton & x1 2 Ton Unit	3,438.2	0.0	3,438.2	
ECM #6	Public Works	REMOVED	0.0	0.0	0.0	
ECM #7	Municipal	x16 AC Unit Replacement	84,375.2 0.0		84,375.2	
ECM #8	Senior	DI - Split Unit Replacements	12,289.2	0.0	12,289.2	
ECM #9	Municipal	x2 1000 MBH Boilers	0.0	21,984.3	21,984.3	
ECM #10	Library	DI - Boiler Replacement	0.0	7,640.1	7,640.1	
ECM #11	Senior	DI - Furance Replacement	0.0	6,598.8	6,598.8	
ECM #12	Academy Hall	DI - Boiler Replacement	0.0	10,845.9	10,845.9	
ECM #13	Library	DI - Fuel Economizer	0.0 2,386.8		2,386.8	
ECM #14	Academy Hall	DI - Fuel Economizer	0.0	2,363.4	2,363.4	
ECM #15	Library, Public Work, Municipal	CRT Monitor Replacement	2,714.7	0.0	2,714.7	
ECM #16	Monroe Pool	Pool Pump Time Controls	10,234.2 0.0		10,234.2	
ECM #17	Monroe Pool	REMOVED	0.0	0.0	0.0	
ECM #18	Senior	DI - Faucet Aerators	0.0	1,310.4	1,310.4	
ECM #19	Senior	DI - Programmable Thermostats	0.0	0.0	0.0	
ECM #20	Recreation	DI - High Efficiency Split System	3,438.2	0.0	3,438.2	
ECM #21	Recreation	DI - Furnace Replacement	0.0	444.6	444.6	
TOTAL			418,523	53,130	471,653	

## XI. Measurement & Verification

The primary purpose of Measurement and Verification (M&V) is to validate performance of energy efficiency upgrades and payments made towards these upgrades. M&V should not be used to derive a precise energy savings for every project, but to assess whether or not the properly installed projects are reasonable close to the projected savings. Careful consideration should be taken in selecting an M&V plan based on risk and cost benefit to the Township for the proposed projects. The U.S. Department of Energy has produced and published Measurement and Verification Guidelines for Federal Energy Projects. These guidelines have been used as a base reference for this report and a full copy of the U.S. DOE guidelines are available at <a href="https://www.eere.energy.gov/femp">www.eere.energy.gov/femp</a>.

The following Table outlines the four most common approaches for Measurement and Verification.

**Table 7: Measurement and Verification Approach** 

MEASUREMENT A	MEASUREMENT AND VERIFICATION APPROACH						
M&V OPTION	M&V OPTION PERFORMANCE & USAGE FACTORS MEASUREMENTS						
Option A – Retrofit Isolation with Key Parameter Measurement	This option is based on a combination of measured and estimated factors when variations in factors are not expected. Measurements are spot or short-term and are taken at the component or system level, both in the baseline and post-installation cases. Measurements should include the key performance parameter(s) which define the energy use of the ECM. Estimated factors are supported by historical or manufacturer's data. Savings are determined by means of engineering calculations of baseline and post-installation energy use based on measured and estimated values.	Direct measurements and estimated values, engineering calculations and/or component or system models often developed through regression analysis Adjustments to models are not typically required.					
Option B – Retrofit Isolation with All Parameter Measurement	This option is based on periodic or continuous measurements of energy use taken at the component or system level when variations in factors are expected. Energy or proxies of energy use are measured continuously. Periodic spot or short-term measurements may suffice when variations in factors are not expected. Savings are determined from analysis of baseline and reporting period energy use or proxies of energy use.	Direct measurements, engineering calculations, and/or component or system models often developed through regression analysis Adjustments to models may be required.					

Option C – Utility Data Analysis	This option is based on long-term, continuous, whole-building utility meter, facility level, or sub-meter energy (or water) data. Savings are determined from analysis of baseline and reporting period energy data. Typically, regression analysis is conducted to correlate with and adjust energy use to independent variables such as weather, but simple comparisons may also be used.	Based on regression analysis of utility meter data to account for factors that drive energy use Adjustments to models are typically required.
Option D – Calibrated Computer Simulation	Computer simulation software is used to model energy performance of a whole-facility (or subfacility). Models must be calibrated with actual hourly or monthly billing data from the facility. Implementation of simulation modeling requires engineering expertise. Inputs to the model include facility characteristics; performance specifications of new and existing equipment or systems; engineering estimates, spot-, short-term, or long-term measurements of system components; and long-term whole-building utility meter data. After the model has been calibrated, savings are determined by comparing a simulation of the baseline with either a simulation of the performance period or actual utility data.	Based on computer simulation model (such as eQUEST or Trane Trace 700) calibrated with whole-building or end-use metered data or both. Adjustments to models are required.

Each of the above approaches can be used for a wide array of energy efficiency upgrades, and each has different costs and complexities associated with it. When selecting an M&V approach the following general rules of thumb can be applied.

### ➤ Option A - Retrofit Isolation with Key Parameter Measurement

- When magnitude of savings is low for the entire project or a portion of the project.
- The risk for not achieving savings is low.

#### **Option B** - Retrofit Isolation with All Parameter Measurement

- For simple equipment replacement projects.
- When energy savings values per individual measure are desired.
- When interactive effects are to be ignored or are estimated using estimating methods that do not involve long term measurements.
- When independent variables that affect energy use are not complex and excessively difficult or expensive to monitor.
- When sub meters already existing that record the energy use of subsystems under consideration.

### > Option C - Utility Data Analysis

- For complex equipment replacement and controls projects.
- When predicted energy savings are in excess of 10 to 20 percent as compared with the record energy use.
- When energy savings per individual measure are not desired.
- When interactive effects are to be included.
- When the independent variables that affect energy use are complex and excessively difficult or expensive to monitor.

### > Option D - Calibrated Computer Simulation

- When new construction projects are involved.
- When energy savings values per measure are desired.
- When Option C tools cannot cost effectively evaluate particular measures or their interactions with the building.
- When complex baseline adjustments are anticipated.

Overall, Measurement and Verification is the key to realizing actual savings from the implementation of any energy conservation measure or renewable energy measure. Combined with a detailed construction management plan, the Owner will be able to benefit fully from the energy and cost savings associated with their commitment to saving energy and reducing greenhouse gases. The proceeding section provides recommended M&V option scopes of work that the commission should consider for each measure.

#### **Measurement & Verification Recommended Scopes of Work:**

Scope 1: (Option A)

Measurement and Verification of this ECM can be provided upon request. Pre and post watt measurements on a sample size of fixtures that will verify the reduction in energy consumption. Post implementation measurement and verification of occupancy sensor operation can be provided through the use of occupancy sensor data loggers to ensure lighting energy savings is achieved and proper operation of occupancy sensors is verified.

#### Scope 2: (Option C)

Measurement and verification of this ECM can be provided on a whole building energy conservation approach with respect to the heating and cooling systems in the building. The recommended M&V plan for this ECM is a comparison based on the annual facility energy use through monitoring of the utility bills. The baseline consists of the utilization of the historical energy usage for these facilities.

Post implementation measurement and verification is recommended through the use of the utility bill normalization and comparing to the baseline. Additionally, this can be achieved through the use of inputting utility data into Energy Star Portfolio Manager for pre and post installation periods to track changes in energy performance.

	MEASUREMENT AND VERIFICATION PLAN						
ECM NO.	DESCRIPTION	OPTION A	OPTION B	OPTION C	OPTION D		
ECM #1	Lighting Upgrade	X					
ECM #1A	DI - Lighting Upgrade	X					
ECM #2	Lighting Controls	X					
ECM #3	5-Ton RTU Replacement			X			
ECM #4	REMOVED			X			
ECM #5	x3 1.5 Ton Split Units			X			
ECM #5A	DI - x1 3ton & x1 2 Ton Unit			X			
ECM #6	REMOVED			X			
ECM #7	x16 AC Unit Replacement			X			
ECM #8	DI - Split Unit Replacements			X			
ECM #9	x2 1000 MBH Boilers			X			
ECM #10	DI - Boiler Replacement			X			
ECM #11	DI - Furance Replacement			X			
ECM #12	DI - Boiler Replacement			X			
ECM #13	DI - Fuel Economizer			X			
ECM #14	DI - Fuel Economizer			X			
ECM #15	CRT Monitor Replacement	X					
ECM #16	Pool Pump Time Controls	X		X			
ECM #17	REMOVED						
ECM #18	DI - Faucet Aerators	X					
ECM #19	DI - Programmable Thermostats			X			
ECM #20	DI - High Efficiency Split System			X			
ECM #21	DI - Furnace Replacement			X			

APPENDIX ESIP

# **APPENDIX A**

PROPOSED I	ENERGY CONSERVATIO	N MEASURES (ECM's)												
			ANNUA	L UTILITY RED	UCTION	ANNUAL	UTILITY COST	SAVINGS						
ECM NO.	BUILDING	DESCRIPTION	ELECTRIC DEMAND (KW)	ELECTRIC CONS. (KWH)	NATURAL GAS (THERMS)	ELECTRIC COST SAVINGS	NATURAL GAS COST SAVINGS	TOTAL COST SAVINGS	PJM REVENUE	MAINT. COST SAVINGS	PROJECT COST	REBATES, INCENTIVES	TOTAL PROJECT COST	SIMPLE PAYBACK (YRS)
ECM #1	All Buildings	Lighting Upgrade	50.0	149,976	0	\$26,419	\$0	\$26,419	\$0	\$0	\$57,942	\$5,240	\$52,702	2.0
	Library		2.6	9,106	0	\$1,648	\$0	\$1,648	\$0	\$0	\$5,349	\$708	\$4,641	2.8
	Recreation		24.1	57,825	0	\$10,466	\$0	\$10,466	\$0	\$0	\$13,170	\$0	\$13,170	1.3
	Senior		0.4	333	0	\$79	\$0	\$79	\$0	\$0	\$860	\$367	\$493	6.2
	Academy Hall		0.8	174	0	\$31	\$0	\$31	\$0	\$0	\$300	\$0	\$300	9.7
	Municipal		13.1	46,324	0	\$7,643	\$0	\$7,643	\$0	\$0	\$21,259	\$1,154	\$20,105	2.6
	Public Works		8.4	34,897	0	\$6,281	\$0	\$6,281	\$0	\$0	\$16,376	\$2,850	\$13,526	2.2
	Monroe Pool		0.6	1,317	0	\$270	\$0	\$270	\$0	\$0	\$628	\$161	\$467	1.7
ECM #1A	Recreation, Academy Hall	DI - Lighting Upgrade	6.1	11,811	0	\$2,126	\$0	\$2,126	\$0	\$0	\$36,004	\$21,602	\$14,402	6.8
	Dibraty.		><		><	><	><	><	> <	><	> <		> <	><
	Recreation		2.8	7,853	0	\$1,421	\$0	\$1,421	\$0	\$0	\$11,431	\$6,859	\$4,572	3.2
	Serrior		><		><	><	><	><	><	><	><		><	><
	Academy Hall		3.4	3,958	0	\$705	\$0	\$705	\$0	\$0	\$24,573	\$14,744	\$9,829	14.0
	Manietpal		><		><	><	><	><	><	><	><	><	><	><
	Public Works		><		><	><	><	><	><	><	><		><	><
	Monroe Pool		><		><	><	><	><	><	><	><		><	><
ECM #2	All Buildings	Lighting Controls	11.7	32,693	0	\$5,635	\$0	\$5,635	\$0	\$0	\$15,235	\$0	\$15,235	2.7
	Library		0.3	991	0	\$179	\$0	\$179	\$0	\$0	\$304	\$0	\$304	1.7
	Recreation		2.6	6,226	0	\$1,127		\$1,127	\$0	\$0	\$4,057	\$200	\$3,857	3.4
	Serrior		><		><	><	><	><	><	><	><	$\supset <$	><	><
	Academy Hall		0.8	768	0	\$137	\$0	\$137	\$0	\$0	\$1,215	\$240	\$975	7.1
	Municipal		5.9	17,065	0	\$2,816	\$0	\$2,816	\$0	\$0	\$7,310	\$1,145	\$6,165	2.2
	Public Works		2.2	7,643		\$1,376	\$0	\$1,376	\$0	\$0	\$2,349	\$395	\$1,954	1.4
	Monroe Pool		><	$\overline{}$	><	><	><	><	$>\!\!<$	$\searrow$	$\overline{}$	$\searrow$	> <	><

PROPOSED	ENERGY CONSERVAT	TION MEASURES (ECM's)												
			ANNUA	L UTILITY RED	UCTION	ANNUAL	UTILITY COS	T SAVINGS					TOTAL	CID ADI T
ECM NO. BUILDING	BUILDING	DESCRIPTION	ELECTRIC DEMAND (KW)	ELECTRIC CONS. (KWH)	NATURAL GAS (THERMS)	ELECTRIC COST SAVINGS	NATURAL GAS COST SAVINGS	TOTAL COST SAVINGS	PJM REVENUE	MAINT. COST SAVINGS	PROJECT COST	REBATES, INCENTIVES	TOTAL PROJECT COST	SIMPLE PAYBACK (YRS)
ECM #3	Library	5-Ton RTU Replacement	2.1	4,143	0	\$750	\$0	\$750			\$14,800	\$368	\$14,432	19.2
ECM #4	Recreation	REMOVED											\$0	
ECM #5	Academy Hall	x3 1.5 Ton Split Units	1.4	2,345	0	\$417	\$0	\$417			\$15,123	\$414	\$14,709	35.2
ECM #5A	Academy Hall	DI - x1 3ton & x1 2 Ton Unit	1.3	2262	0	\$403	0	\$403	\$0	\$0	\$12,627	\$7,576	\$5,051	12.5
ECM #6	Public Works	REMOVED						\$0					\$0	
ECM #7	Municipal	x16 AC Unit Replacement	18.6	55,510	0	\$9,159	\$0	\$9,159			\$262,348	\$5,730	\$256,618	28.0
ECM #8	Senior	DI - Split Unit Replacements	4.8	8,085	0	\$1,916	\$0	\$1,916	\$0	\$0	\$24,414	\$14,648	\$9,766	5.1
ECM #9	Municipal	x2 1000 MBH Boilers	0.0	0	1,879	\$0	\$3,194	\$3,194	\$0	\$0	\$91,540	\$3,500	\$88,040	27.6
ECM #10	Library	DI - Boiler Replacement	0.0	0	653	\$0	\$842	\$842	\$0	\$0	\$20,483	\$12,290	\$8,193	9.7
ECM #11	Senior	DI - Furance Replacement	0.0	0	564	\$0	\$727	\$727	\$0	\$0	\$12,392	\$7,435	\$4,957	6.8
ECM #12	Academy Hall	DI - Boiler Replacement	0.0	0	927	\$0	\$1,196	\$1,196	\$0	\$0	\$24,399	\$14,640	\$9,760	8.2
ECM #13	Library	DI - Fuel Economizer	0.0	0	204	\$0	\$263	\$263	\$0	\$0	\$425	\$255	\$170	0.6
ECM #14	Academy Hall	DI - Fuel Economizer	0.0	0	202	\$0	\$260	\$260	\$0	\$0	\$1,861	\$1,117	\$744	2.9
ECM #15	Library, Public Work, Municipal	CRT Monitor Replacement	0.0	1,786	0	\$313	\$0	\$313	\$0	\$0	\$2,100	\$0	\$2,100	6.7
	Library		0.0	1,020	0	\$185	\$0	\$185	\$0	\$0	\$1,200	\$0	\$1,200	6.5
	Recreation		><	> <	> <	> <	><	><	> <	><	> <	><	> <	><
	Senior		><	> <	><	><	><	><	> <	><	> <	><	><	><
	Academy Hall		><	><	><	><	><	<b>&gt;*</b> <	> <	><	> <	><	> <	><
	Public Works		0.0	128	0	\$23	\$0	\$23	\$0	\$0	\$150	\$0	\$150	6.5
	Monroe Pool		><	><	> <	> <	><	<b>&gt;**</b> <	> <	><	> <	><	> <	><
	Municipal		0.0	638	0	\$105	\$0	\$105	\$0	\$0	\$750	\$0	\$750	7.1
ECM #16	Monroe Pool	Pool Pump Time Controls	0.0	6,733	0	\$1,380	\$0	\$1,380	\$0	\$0	\$3,511	\$0	\$3,511	2.5
ECM #17	Monroe Pool	REMOVED						\$0					\$0	
ECM #18	Senior	DI - Faucet Aerators	0.0	0	112	\$0	\$145	\$145	\$0	\$0	\$197	\$118	\$79	0.5
ECM #19	Senior	DI - Programmable Thermostats						\$0	\$0	\$0	\$668	\$401	\$267	
ECM #20	Recreation	DI - High Efficiency Split System	1.3	2,262	0	\$409	\$0	\$409	\$0	\$0	\$8,138	\$4,883	\$3,255	8.0
ECM #21	Recreation	DI - Furnace Replacement	0.0	0	38	\$0	\$65	\$65	\$0	\$0	\$5,434	\$3,261	\$2,174	33.4
TOTAL		TOTAL	97.4	277,606	4,579	\$48,927	\$6,693	\$55,620			\$609,641	\$103,477	\$506,164	9.1

APPENDIX ESIP

# **APPENDIX B**

#### Academy Hall

## ELECTRIC USAGE SUMMARY

Utility Provider: PSE&G

Rate: GLP

Meter No: 226014030 Account # 65 041 660 05

Third Party Utility N/A TPS Meter / Acct No: N/A

MONTH OF USE	CONSUMPTION KWH	DEMAND KW	TOTAL BILL
Jun-10	6,756	18.2	\$1,203
Jul-10	6,786	19.1	\$1,240
Aug-10	5,958	19.6	\$1,137
Sep-10	5,454	18.8	\$1,092
Oct-10	3,576	12.6	\$585
Nov-10	3,678	14.8	\$600
Dec-10	3,828	12.1	\$607
Jan-11	3,036	10.6	\$514
Feb-11	3,348	10.9	\$580
Mar-11	2,832	8.6	\$505
Apr-11	3,300	13.9	\$572
Jun-11	4,958	0.0	\$888
Totals	53,510	19.6 Max	\$9,521

AVERAGE DEMAND 13.3 KW average AVERAGE RATE \$0.178 \$/kWh

### Academy Hall

# NATURAL GAS USAGE SUMMARY

Utility Provider: South Jersey Gas

Rate: General Service Gas

Meter No: 486378

Point of Delivery ID: 2 06 30 3000 0 0

Third Party Utility Provider: N/A TPS Meter No: N/A

MONTH OF USE	CONSUMPTION (THERMS)	TOTAL BILL
May-10	17.48	\$42.01
Jun-10	16.50	\$41.35
Jul-10	15.39	\$38.06
Aug-10	17.41	\$44.46
Sep-10	46.17	\$78.28
Oct-10	201.93	\$264.80
Nov-10	648.97	\$804.13
Dec-10	705.54	\$868.69
Jan-11	546.28	\$676.39
Feb-11	385.13	\$486.58
Mar-11	204.37	\$268.54
Apr-11	66.76	\$102.16
TOTALS	2,871.93	\$3,715.45

AVERAGE RATE: \$1.29 \$/THERM

## ELECTRIC USAGE SUMMARY

Utility Provider: ACE

Rate: MGS

Meter No: 83431432

Account # 0388 9889 9976

Third Party Utility
TPS Meter / Acct No:

MONTH OF USE	CONSUMPTION KWH	DEMAND KW	TOTAL BILL
Jul-10	18,120	59.2	\$3,700
Aug-10	16,040	59.2	\$3,276
Sep-10	16,720	59.2	\$3,418
Oct-10	14,560	0.0	\$841
Nov-10	22,440	66.4	\$1,133
Dec-10	33,440	63.6	\$1,606
Jan-11	27,640	63.6	\$1,590
Feb-11	20,800	66.0	\$1,283
Mar-11	24,080	65.2	\$1,458
Apr-11	22,960	63.6	\$1,388
May-11	11,720	48.0	\$766
Jun-11	14,840	52.4	\$1,029
Totals	243,360	66.4 Max	\$21,487

AVERAGE DEMAND 55.5 KW average AVERAGE RATE \$0.088 \$/kWh

# NATURAL GAS USAGE SUMMARY

Utility Provider: South Jersey Gas

Rate: Firm Transportation

Meter No: 0536110

Point of Delivery ID: 2 05 37 2930 1 9 Third Party Utility Provider: Woodruff Energy

TPS Meter No: N/A

MONTH OF USE	CONSUMPTION (THERMS)	TOTAL BILL
May-10	214.85	\$372.38
Jun-10	177.33	\$312.51
Jul-10	208.28	\$360.96
Aug-10	155.65	\$281.35
Sep-10	175.45	\$320.90
Oct-10	82.00	\$161.47
Nov-10	1,295.90	\$2,228.34
Dec-10	1,631.23	\$2,793.80
Jan-11	1,379.00	\$2,363.91
Feb-11	975.65	\$1,679.76
Mar-11	601.82	\$1,038.26
Jan-00	0.00	\$0.00
TOTALS	6,897.16	\$11,913.64

#### LIBRARY

## ELECTRIC USAGE SUMMARY

Utility Provider: PSE&G

Rate: GLP

Meter No: 278005298 Account # 66 134 995 01

Third Party Utility N/A TPS Meter / Acct No: N/A

MONTH OF USE	CONSUMPTION KWH	DEMAND KW	TOTAL BILL
Jun-10	14,730	46.2	\$2,768
Jul-10	13,395	48.0	\$2,665
Aug-10	15,795	49.8	\$3,010
Sep-10	12,300	51.6	\$2,643
Oct-10	9,285	42.5	\$1,587
Nov-10	9,345	43.8	\$1,583
Dec-10	7,605	21.3	\$1,288
Jan-11	8,925	24.6	\$1,463
Feb-11	9,570	34.5	\$1,660
Mar-11	9,450	37.8	\$1,654
Apr-11	10,935	37.8	\$1,794
May-11	10,905	36.3	\$1,758
Totals	132,240	51.6 Max	\$23,871

AVERAGE DEMAND 39.5 KW average AVERAGE RATE \$0.181 \$/kWh

#### LIBRARY

# NATURAL GAS USAGE SUMMARY

Utility Provider: South Jersey Gas

Rate: General Service Gas

Meter No: 0199120

Point of Delivery ID: 2 06 30 3002 0 8

Third Party Utility Provider: N/A TPS Meter No: N/A

MONTH OF USE	CONSUMPTION (THERMS)	TOTAL BILL
May-10	11.31	\$34.01
Jun-10	11.34	\$34.66
Jul-10	10.26	\$31.41
Aug-10	12.29	\$37.98
Sep-10	10.26	\$35.29
Oct-10	154.78	\$208.36
Nov-10	867.68	\$1,066.02
Dec-10	951.30	\$1,162.99
Jan-11	413.88	\$517.83
Feb-11	200.27	\$265.22
Mar-11	108.86	\$154.16
Apr-11	264.70	\$339.20
TOTALS	3,016.93	\$3,887.13

AVERAGE RATE: \$1.29 \$/THERM

#### Monroe Pool

### ELECTRIC USAGE SUMMARY

Utility Provider: PSE&G

Rate: LPLS

Meter No: 778005122 Account # 42 009 606 05

Third Party Utility N/A

TPS Meter / Acct No: N/A **DEMAND KW** MONTH OF USE **CONSUMPTION KWH** TOTAL BILL 14.0 Jun-10 \$745 3,756 Jul-10 14.5 8,262 \$1,369 14.6 7,554 \$1,277 Aug-10 4,902 14.8 \$934 Sep-10 390 2.0 Oct-10 \$150 Nov-10 438 4.4 \$164 Dec-10 486 1.7 \$159 2.0 Jan-11 552 \$169 Feb-11 0 2.0 \$105 0 2.0 Mar-11 \$107 0 2.0 \$107 Apr-11 May-11 0 2.0 \$107 14.8 Max **Totals** 26,340 \$5,393

AVERAGE DEMAND

AVERAGE RATE \$0.20

6.3 KW average

**\$0.205** \$/kWh

#### Monroe Pool

# NATURAL GAS USAGE SUMMARY

Utility Provider: South Jersey Gas

Rate: General Service Gas

Meter No: 0469133

Point of Delivery ID: 2 05 31 2550 1 4

Third Party Utility Provider: N/A TPS Meter No: N/A

MONTH OF USE	CONSUMPTION (THERMS)	TOTAL BILL
May-10	2.06	\$21.39
Jun-10	6.19	\$28.61
Jul-10	5.13	\$24.13
Aug-10	5.12	\$26.15
Sep-10	7.18	\$33.98
Oct-10	5.13	\$28.36
Nov-10	5.11	\$30.73
Dec-10	0.00	\$26.19
Jan-11	0.00	\$23.01
Feb-11	0.00	\$22.22
Mar-11	0.00	\$26.19
Apr-11	1.03	\$24.23
TOTALS	36.95	\$315.19

AVERAGE RATE: \$8.53 \$/THERM

#### Municipal Building

## ELECTRIC USAGE SUMMARY

Utility Provider: PSE&G

Rate: LPLS

Meter No: 778005122

Account # 42 009 606 05

Third Party Utility N/A TPS Meter / Acct No: N/A

MONTH OF USE	CONSUMPTION KWH	DEMAND KW	TOTAL BILL
Jun-10	58,600	176.0	\$10,708
Jul-10	70,400	198.0	\$12,601
Aug-10	62,200	190.0	\$11,622
Sep-10	59,000	0.0	\$3,884
Oct-10	49,400	148.0	\$2,204
Nov-10	43,400	128.0	\$2,040
Jan-11	59,000	0.0	\$2,625
Jan-11	33,200	0.0	\$1,417
Feb-11	48,800	0.0	\$1,995
Mar-11	40,200	0.0	\$1,644
Apr-11	46,667	0.0	\$2,173
May-11	40,931	0.0	\$1,906
Totals	611,798	198.0 Max	\$54,818

AVERAGE DEMAND 70.0 KW average AVERAGE RATE \$0.090 \$/kWh

### Municipal Building

# NATURAL GAS USAGE SUMMARY

Utility Provider: South Jersey Gas

Rate: Firm Transportation

Meter No: 0372100

Point of Delivery ID: 2 05 34 2750 0 1

Third Party Utility Provider: N/A TPS Meter No: N/A

MONTH OF USE	CONSUMPTION (THERMS)	TOTAL BILL
Jun-10	36.09	\$80.03
Jul-10	32.83	\$71.54
Aug-10	38.91	\$83.41
Sep-10	35.91	\$80.10
Oct-10	44.08	\$99.46
Nov-10	715.10	\$1,235.94
Dec-10	2,551.46	\$4,189.81
Jan-11	2,413.26	\$4,120.97
Feb-11	1,785.95	\$3,054.95
Mar-11	1,474.77	\$2,505.51
Apr-11	472.42	\$817.48
May-11	48.60	\$106.32
TOTALS	9,649.38	\$16,445.52

AVERAGE RATE: \$1.70 \$/THERM

#### Senior Center

# ELECTRIC USAGE SUMMARY

Utility Provider: PSE&G

Rate: GLP

Meter No: 626 007 783 Account # 66 637 421 08

Third Party Utility
TPS Meter / Acct No:

MONTH OF USE	CONSUMPTION KWH	DEMAND KW	TOTAL BILL
Jul-10	4,254	20.3	\$926
Aug-10	4,338	20.0	\$934
Sep-10	2,976	19.4	\$745
Oct-10	1,470	17.8	\$369
Nov-10	1,092	18.5	\$322
Dec-10	1,374	8.0	\$312
Jan-11	1,464	8.0	\$327
Feb-11	1,338	7.7	\$323
Mar-11	1,176	11.2	\$320
Apr-11	1,344	17.0	\$360
May-11	1,476	18.9	\$380
Jun-11	3,678	20.8	\$846
Totals	25,980	20.8 Max	\$6,164

AVERAGE DEMAND

15.6 KW average

AVERAGE RATE

**\$0.237** \$/kWh

## NATURAL GAS USAGE SUMMARY

**AVERAGE RATE:** 

Utility Provider: South Jersey Gas

Rate: General Service Gas

Meter No: 0147770

Point of Delivery ID: 2 05 34 3489 0 7

Third Party Utility Provider: TPS Meter No:

MONTH OF USE	CONSUMPTION (THERMS)	TOTAL BILL
Jun-10	19.59	\$45.99
Jul-10	13.34	\$34.77
Aug-10	15.36	\$39.28
Sep-10	18.47	\$42.97
Oct-10	70.73	\$109.26
Nov-10	364.90	\$452.48
Dec-10	835.58	\$1,027.61
Jan-11	799.00	\$1,001.82
Feb-11	471.39	\$586.69
Mar-11	464.20	\$581.27
Apr-11	112.97	\$158.28
May-11	26.88	\$56.79
TOTALS	3,212.41	\$4,137.21

\$1.29

\$/THERM

#### Recreation

## ELECTRIC USAGE SUMMARY

Utility Provider: ACE

Rate: Annual General Service Meter No: 57131792 / 11892066 Account # 1143 3009 9994

Third Party Utility N/A TPS Meter / Acct No: N/A

MONTH OF USE	CONSUMPTION KWH	DEMAND KW	TOTAL BILL
Jul-10	42,740	139.8	\$7,544
Aug-10	41,700	140.6	\$7,569
Sep-10	30,040	140.6	\$5,537
Oct-10	18,740	140.6	\$3,459
Nov-10	18,420	140.6	\$3,588
Dec-10	20,300	65.4	\$3,580
Jan-11	19,360	64.4	\$3,438
Feb-11	18,000	65.4	\$3,431
Apr-11	15,900	65.4	\$3,056
Apr-11	15,180	99.2	\$2,996
May-11	23,380	139.8	\$4,311
Jun-11	37,240	162.4	\$5,842
Totals	301,000	162.4 Max	\$54,352

AVERAGE DEMAND 113.7 KW average AVERAGE RATE \$0.181 \$/kWh

#### Recreation

# NATURAL GAS USAGE SUMMARY

Utility Provider: South Jersey Gas

Rate: Firm Transportation

Meter No: 0325952

Point of Delivery ID: 2 05 39 5601 0 0 Third Party Utility Provider: Woodruff Energy

TPS Meter No:

**AVERAGE RATE:** 

MONTH OF USE	CONSUMPTION (THERMS)	TOTAL BILL
Jun-10	0.00	\$0.00
Jul-10	1.03	\$39.92
Aug-10	24.58	\$61.06
Sep-10	8.21	\$34.50
Oct-10	138.38	\$257.95
Nov-10	632.62	\$1,098.05
Dec-10	2,069.50	\$3,541.21
Jan-11	2,026.56	\$3,463.52
Feb-11	1,318.67	\$2,262.23
Mar-11	540.20	\$933.06
Apr-11	392.31	\$683.56
May-11	11.37	\$45.32
TOTALS	7,163.43	\$12,420.38

**\$1.73** 

\$/THERM

APPENDIX ESIP

# **APPENDIX C**

CEG Job #: 1C11039

Project: Academy Hall

27 S. Black Horse Pike

Gloucester Township, NJ Bldg. Sq. Ft. 5,376 Academy Hall

KWH COST: \$0.178

	Lighting Up	ograd	e - G	enera	<u> </u>																			
	G LIGHTING											LIGHTING								SAVING				
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Incentive	Total	kW	kWh/Yr	Yearly	Yearly Simple	In DI Scope (D)
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	(INSTALLED)		Cost	Savings	Savings	\$ Savings	Payback	D. Scope (D)
D127.21	Front Office/ Reception	1040	14	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	1.09	1,135.7	\$202.15	14	3	T8 Lamps w/Electronic Ballast	47	0.66	684.32	\$121.81	\$277.42	\$166.45	\$1,553.55	0.43	451.36	\$80.34	19.34	D
3015	Rest Room	156	1	2	Wall Mnt., Glass Cover, 100w A Lamp	100	0.10	15.6	\$2.78	1	1	26w CFL Lamp	26	0.03	4.056	\$0.72	\$20.00	\$0.00	\$20.00	0.07	11.544	\$2.05	9.73	D
D127.21	Det. Sergeant Office	1040	4	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.31	324.5	\$57.76	4	3	T8 Lamps w/Electronic Ballast	47	0.19	195.52	\$34.80	\$277.42	\$166.45	\$443.87	0.12	128.96	\$22.95	19.34	D
D127.21	Hall	3000	4	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.31	936.0	\$166.61	4	3	T8 Lamps w/Electronic Ballast	47	0.19	564	\$100.39	\$277.42	\$166.45	\$443.87	0.12	372	\$66.22	6.70	D
D127.21	Small Office - 1st Floor	1040	3	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.23	243.4	\$43.32	3	3	T8 Lamps w/Electronic Ballast	47	0.14	146.64	\$26.10	\$277.42	\$166.45	\$332.90	0.09	96.72	\$17.22	19.34	D
D127.21	Storage Room	156	3	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.23	36.5	\$6.50	3	3	T8 Lamps w/Electronic Ballast	47	0.14	21.996	\$3.92	\$277.42	\$166.45	\$332.90	0.09	14.508	\$2.58	128.91	D
D127.21	Lunch Room	1040	10	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.78	811.2	\$144.39	10	3	T8 Lamps w/Electronic Ballast	47	0.47	488.8	\$87.01	\$277.42	\$166.45	\$1,109.68	0.31	322.4	\$57.39	19.34	D
D613	Men's Rest Room	156	1	1	Socket , 100w A19 Lamp	100	0.10	15.6	\$2.78	1	1	(1) 13W CFL Screw In	13	0.01	2.028	\$0.36	\$32.43	\$19.46	\$12.97	0.09	13.572	\$2.42	5.37	D
D613	Women's Rest Room	156	1	1	Socket, 100w A19 Lamp	100	0.10	15.6	\$2.78	1	1	(1) 13W CFL Screw In	13	0.01	2.028	\$0.36	\$32.43	\$19.46	\$12.97	0.09	13.572	\$2.42	5.37	D
D127.21	Hall	3000	2	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.16	468.0	\$83.30	2	3	T8 Lamps w/Electronic Ballast	47	0.09	282	\$50.20	\$277.42	\$166.45	\$221.94	0.06	186	\$33.11	6.70	D
D127.21	Large Office - 1st Floor	1040	6	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.47	486.7	\$86.64	6	3	T8 Lamps w/Electronic Ballast	47	0.28	293.28	\$52.20	\$277.42	\$166.45	\$665.81	0.19	193.44	\$34.43	19.34	D
D127.21	Stairway	3000	2	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.16	468.0	\$83.30	2	3	T8 Lamps w/Electronic Ballast	47	0.09	282	\$50.20	\$277.42	\$166.45	\$221.94	0.06	186	\$33.11	6.70	D
D127.21	Office - 2nd Floor	1040	9	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.70	730.1	\$129.95	9	3	T8 Lamps w/Electronic Ballast	47	0.42	439.92	\$78.31	\$277.42	\$166.45	\$998.71	0.28	290.16	\$51.65	19.34	D
D127.21	Office - 2nd Floor	1040	4	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.31	324.5	\$57.76	4	3	T8 Lamps w/Electronic Ballast	47	0.19	195.52	\$34.80	\$277.42	\$166.45	\$443.87	0.12	128.96	\$22.95	19.34	D
D127.21	Office - 2nd Floor	1040	5	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.39	405.6	\$72.20	5	3	T8 Lamps w/Electronic Ballast	47	0.24	244.4	\$43.50	\$277.42	\$166.45	\$554.84	0.16	161.2	\$28.69	19.34	D
D127.21	2nd Floor Hall	3000	5	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.39	1,170.0	\$208.26	5	3	T8 Lamps w/Electronic Ballast	47	0.24	705	\$125.49	\$277.42	\$166.45	\$554.84	0.16	465	\$82.77	6.70	D
D127.21	Break Room - 2nd Floor	1040	6	2	2x2, 2 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.47	486.7	\$86.64	6	3	T8 Lamps w/Electronic Ballast	47	0.28	293.28	\$52.20	\$277.42	\$166.45	\$665.81	0.19	193.44	\$34.43	19.34	D
D121.11	Rest Room	156	1	2	1x4, 2-Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	78	0.08	12.2	\$2.17	1	2	4' T8 Lamps w/Electronic Ballast	50	0.05	7.8	\$1.39	\$68.70	\$41.22	\$27.48	0.03	4.368	\$0.78	35.34	D
D613	Closet	156	1	1	Socket, 100w A19 Lamp	100	0.10	15.6	\$2.78	1	1	(1) 13W CFL Screw In	13	0.01	2.028	\$0.36	\$32.43	\$19.46	\$12.97	0.09	13.572	\$2.42	5.37	D
D613	Stairway  Office - 3rd  Floor	3000 1040	2	2	Socket , 100w A19 Lamp 1x4, 2-Lamp, 34w T12, Mag. Ballast, Surface Mnt.,	100 78	0.10	300.0 162.2	\$53.40 \$28.88	2	2	(1) 13W CFL Screw In 4' T8 Lamps w/Electronic Ballast	50	0.01	39 104	\$6.94 \$18.51	\$32.43 \$68.70	\$19.46 \$41.22	\$12.97 \$54.96	0.09	261 58.24	\$46.46 \$10.37	5.30	D D

EXISTING	G LIGHTING									PROF	POSED	LIGHTING								SAVING	s			
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.		Watts	Total	kWh/Yr	Yearly	Unit Cost	Incentive	Total	kW	kWh/Yr	Yearly	Yearly Simple	In DI Scope (D)
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	(INSTALLED)		Cost	Savings	Savings	\$ Savings	Payback	. , ,
D613	Mech. Room - 3rd Floor	156	1	1	Socket, 100w A19 Lamp	100	0.10	15.6	\$2.78	1	1	(1) 13W CFL Screw In	13	0.01	2.028	\$0.36	\$32.43	\$19.46	\$12.97	0.09	13.572	\$2.42	5.37	D
D121.11	Com Room - 3rd Floor	1040	1	2	1x4, 2-Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	78	0.08	81.1	\$14.44	1	2	4' T8 Lamps w/Electronic Ballast	50	0.05	52	\$9.26	\$68.70	\$41.22	\$27.48	0.03	29.12	\$5.18	5.30	D
D121.11	Center Office - 3rd Floor	1040	2	2	1x4, 2-Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	78	0.16	162.2	\$28.88	2	2	4' T8 Lamps w/Electronic Ballast	50	0.10	104	\$18.51	\$68.70	\$41.22	\$54.96	0.06	58.24	\$10.37	5.30	D
D121.11	Left Office - 3rd Floor	1040	3	2	1x4, 2-Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	78	0.23	243.4	\$43.32	3	2	4' T8 Lamps w/Electronic Ballast	50	0.15	156	\$27.77	\$68.70	\$41.22	\$82.44	0.08	87.36	\$15.55	5.30	D
D121.11	Office - 3rd Floor	1040	7	2	1x4, 2-Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	78	0.55	567.8	\$101.08	7	2	4' T8 Lamps w/Electronic Ballast	50	0.35	364	\$64.79	\$68.70	\$41.22	\$192.36	0.20	203.84	\$36.28	5.30	D
613	Basement	156	15	1	Socket, 100w A19 Lamp	100	1.50	234.0	\$41.65	15	1	(1) 26w CFL Lamp	26	0.39	60.84	\$10.83	\$20.00	\$0.00	\$300.00	1.11	173.16	\$30.82	9.73	
650	Exterior	4400	10	1	Wall Mnt. Light, 18w CFL Lamp	18	0.18	792.0	\$140.98	10	0	No Change	18	0.18	792	\$140.98	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
	Totals		124	49			9.53	10,660	\$1,897	124	61			5.1	6,528	\$1,162			\$9,369	4.5	4,131	\$735	12.74	

Academy Hall

CEG Job #: 1C11039

Project: Academy Hall

Address: 27 S. Black Horse Pike
Gloucester Township, NJ

Building SF: 5,376

KWH COST: \$0.178

#### **ECM: Lighting Controls**

EXISTIN	G LIGHTING									PROPO	SED I	IGHTING CONTROLS								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Controls	Watts	Total	Reduction	kWh/Yr	Yearly	Unit Cost	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Cont.	Description	Used	kW	(%)	Fixtures	\$ Cost	(INSTALLED)	Cost	Savings	Savings	\$ Savings	Payback
D127.21	Front Office/ Reception	1040	14	2	T8 Lamps w/Electronic Ballast	47	0.66	684.32	\$121.81	14	0	No Change	47	0.66	0%	684.32	\$121.81	\$0.00	\$0.00	0.00	0	\$0.00	0.00
3015	Rest Room	156	1	2	26w CFL Lamp	26	0.03	4.056	\$2.78	1	0	No Change	26	0.03	0%	4.056	\$0.72	\$0.00	\$0.00	0.00	0	\$2.05	0.00
D127.21	Det. Sergeant Office	1040	4	2	T8 Lamps w/Electronic Ballast	47	0.19	195.52	\$57.76	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	47	0.13	30%	136.864	\$24.36	\$75.00	\$75.00	0.06	58.656	\$33.40	2.25
D127.21	Hall	3000	4	2	T8 Lamps w/Electronic Ballast	47	0.19	564	\$166.61	4	0	No Change	47	0.19	0%	564	\$100.39	\$0.00	\$0.00	0.00	0	\$66.22	0.00
D127.21	Small Office - 1st Floor	1040	3	2	T8 Lamps w/Electronic Ballast	47	0.14	146.64	\$43.32	3	1	Dual Technology Occupancy Sensor - Switch Mnt.	47	0.10	30%	102.648	\$18.27	\$75.00	\$75.00	0.04	43.992	\$25.05	2.99
D127.21	Storage Room	156	3	2	T8 Lamps w/Electronic Ballast	47	0.14	21.996	\$6.50	3	1	Dual Technology Occupancy Sensor - Switch Mnt.	47	0.09	35%	14.2974	\$2.54	\$75.00	\$75.00	0.05	7.6986	\$3.95	18.97
D127.21	Lunch Room	1040	10	2	T8 Lamps w/Electronic Ballast	47	0.47	488.8	\$144.39	10	0	No Change	47	0.47	0%	488.8	\$87.01	\$0.00	\$0.00	0.00	0	\$57.39	0.00
D613	Men's Rest Room	156	1	1	(1) 13W CFL Screw In	13	0.01	2.028	\$2.78	1	0	No Change	13	0.01	0%	2.028	\$0.36	\$0.00	\$0.00	0.00	0	\$2.42	0.00
D613	Women's Rest Room	156	1	1	(1) 13W CFL Screw In	13	0.01	2.028	\$2.78	1	0	No Change	13	0.01	0%	2.028	\$0.36	\$0.00	\$0.00	0.00	0	\$2.42	0.00
D127.21	Hall	3000	2	2	T8 Lamps w/Electronic Ballast	47	0.09	282	\$83.30	2	0	No Change	47	0.09	0%	282	\$50.20	\$0.00	\$0.00	0.00	0	\$33.11	0.00
D127.21	Large Office - 1st Floor	1040	6	2	T8 Lamps w/Electronic Ballast	47	0.28	293.28	\$86.64	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	47	0.20	30%	205.296	\$36.54	\$75.00	\$75.00	0.08	87.984	\$50.09	1.50
D127.21	Stairway	3000	2	2	T8 Lamps w/Electronic Ballast	47	0.09	282	\$83.30	2	0	No Change	47	0.09	0%	282	\$50.20	\$0.00	\$0.00	0.00	0	\$33.11	0.00
D127.21	Office - 2nd Floor	1040	9	2	T8 Lamps w/Electronic Ballast	47	0.42	439.92	\$129.95	9	1	Dual Technology Occupancy Sensor - Switch Mnt.	47	0.30	30%	307.944	\$54.81	\$75.00	\$75.00	0.13	131.976	\$75.14	1.00
D127.21	Office - 2nd Floor	1040	4	2	T8 Lamps w/Electronic Ballast	47	0.19	195.52	\$57.76	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	47	0.13	30%	136.864	\$24.36	\$75.00	\$75.00	0.06	58.656	\$33.40	2.25
D127.21	Office - 2nd Floor	1040	5	2	T8 Lamps w/Electronic Ballast	47	0.24	244.4	\$72.20	5	1	Dual Technology Occupancy Sensor - Switch Mnt.	47	0.16	30%	171.08	\$30.45	\$75.00	\$75.00	0.07	73.32	\$41.74	1.80
D127.21	2nd Floor Hall	3000	5	2	T8 Lamps w/Electronic Ballast	47	0.24	705	\$208.26	5	0	No Change	47	0.24	0%	705	\$125.49	\$0.00	\$0.00	0.00	0	\$82.77	0.00
D127.21	Break Room - 2nd Floor	1040	6	2	T8 Lamps w/Electronic Ballast	47	0.28	293.28	\$86.64	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	47	0.20	30%	205.296	\$36.54	\$75.00	\$75.00	0.08	87.984	\$50.09	1.50
D121.11	Rest Room	156	1	2	4' T8 Lamps w/Electronic Ballast	50	0.05	7.8	\$2.17	1	0	No Change	50	0.05	0%	7.8	\$1.39	\$0.00	\$0.00	0.00	0	\$0.78	0.00
D613	Closet	156	1	1	(1) 13W CFL Screw In	13	0.01	2.028	\$2.78	1	0	No Change	13	0.01	0%	2.028	\$0.36	\$0.00	\$0.00	0.00	0	\$2.42	0.00
D613	Stairway	3000	1	1	(1) 13W CFL Screw In	13	0.01	39	\$53.40	1	0	No Change	13	0.01	0%	39	\$6.94	\$0.00	\$0.00	0.00	0	\$46.46	0.00
D121.11	Office - 3rd Floor	1040	2	2	4' T8 Lamps w/Electronic Ballast	50	0.10	104	\$28.88	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	50	0.07	30%	72.8	\$12.96	\$75.00	\$75.00	0.03	31.2	\$15.92	4.71
D613	Mech. Room - 3rd Floor	156	1	1	(1) 13W CFL Screw In	13	0.01	2.028	\$2.78	1	0	No Change	13	0.01	0%	2.028	\$0.36	\$0.00	\$0.00	0.00	0	\$2.42	0.00
D121.11	Com Room - 3rd Floor	1040	1	2	4' T8 Lamps w/Electronic Ballast	50	0.05	52	\$14.44	1	0	No Change	50	0.05	0%	52	\$9.26	\$0.00	\$0.00	0.00	0	\$5.18	0.00
D121.11	Center Office - 3rd Floor	1040	2	2	4' T8 Lamps w/Electronic Ballast	50	0.10	104	\$28.88	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	50	0.07	30%	72.8	\$12.96	\$75.00	\$75.00	0.03	31.2	\$15.92	4.71
D121.11	Left Office - 3rd Floor	1040	3	2	4' T8 Lamps w/Electronic Ballast	50	0.15	156	\$43.32	3	1	Dual Technology Occupancy Sensor - Switch Mnt.	50	0.11	30%	109.2	\$19.44	\$75.00	\$75.00	0.05	46.8	\$23.88	3.14
D121.11	Office - 3rd Floor	1040	7	2	4' T8 Lamps w/Electronic Ballast	50	0.35	364	\$101.08	7	1	Dual Technology Occupancy Sensor - Switch Mnt.	50	0.25	30%	254.8	\$45.35	\$75.00	\$75.00	0.11	109.2	\$55.72	1.35
613	Basement	156	15	1	(1) 26w CFL Lamp	26	0.39	60.84	\$41.65	15	0	No Change	26	0.39	0%	60.84	\$10.83	\$0.00	\$0.00	0.00	0	\$30.82	0.00
650	Exterior	4400	10	1	No Change	18	0.18	792	\$140.98	10	0	No Change	18	0.18	0%	792	\$140.98	\$0.00	\$0.00	0.00	0	\$0.00	0.00
	Totals		124	49			5.1	6,528.5	\$1,817	124	12			4.3		5,759.8	\$1,025.25		\$900	0.78	769	\$792	1.14

CEG Job #: 1C11039 Project: Library

Library KWH COST: \$0.181

**ECM: Lighting Upgrade - General** 

EXISTING	GLIGHTING									PROI	POSED	LIGHTING								SAVIN	IGS		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	(INSTALLED)	Incentive	Cost	Savings	Savings	\$ Savings	Payback
264.21	Book Stacks	3400	62	6	4x4, 6 Lamp, 32w 700 Series T8, Elect. Ballast, Pendant Mnt., Prismatic Lens	172	10.66	36,257.6	\$6,562.63	62	6	Relamp - Sylvania Lamp FO28/841/SS/ECO	148	9.18	31198.4	\$5,646.91	\$42.00	\$620.00	\$2,604.00	1.49	5059.2	\$915.72	2.84
227.21	Periodicals	3400	9	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.59	1,989.0	\$360.01	9	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.44	1499.4	\$271.39	\$30.00	\$0.00	\$270.00	0.14	489.6	\$88.62	3.05
111.14	Utility Room	500	3	1	1x4, 1-Lamp, 34w T12, Mag. Ballast, Surface Mnt., No Lens	48	0.14	72.0	\$13.03	3	1	Reballast & Relamp; Sylvania Lamp FO28/841/SS/ECO	25	0.08	37.5	\$6.79	\$80.00	\$30.00	\$240.00	0.07	34.5	\$6.24	38.43
227.21	Librarian's Office	3120	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	1,216.8	\$220.24	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	917.28	\$166.03	\$30.00	\$0.00	\$180.00	0.10	299.52	\$54.21	3.32
227.21	Office	3120	7	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.46	1,419.6	\$256.95	7	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.34	1070.16	\$193.70	\$30.00	\$0.00	\$210.00	0.11	349.44	\$63.25	3.32
100	Men's Rest Room	3400	1	2	2' Vanity Light, 2-Lamp, 20w T12, Mag. Ballast, Wall Mnt., Glass Lens	42	0.04	142.8	\$25.85	1	2	Reballast & Relamp; 17w T8 Elec. Ballast	33	0.03	112.2	\$20.31	\$60.00	\$10.00	\$60.00	0.01	30.6	\$5.54	10.83
100	Staff Rest Room	3120	1	2	2' Vanity Light, 2-Lamp, 20w T12, Mag. Ballast, Wall Mnt., Glass Lens	42	0.04	131.0	\$23.72	1	2	Reballast & Relamp; 17w T8 Elec. Ballast	33	0.03	102.96	\$18.64	\$60.00	\$10.00	\$60.00	0.01	28.08	\$5.08	11.81
227.21	Staff Lunch Room	2860	7	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.46	1,301.3	\$235.54	7	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.34	980.98	\$177.56	\$30.00	\$0.00	\$210.00	0.11	320.32	\$57.98	3.62
227.21	Meeting Room	2860	18	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	1.17	3,346.2	\$605.66	18	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.88	2522.52	\$456.58	\$30.00	\$0.00	\$540.00	0.29	823.68	\$149.09	3.62
623		1800	4	1	Track Head, 65w BR30	65	0.26	468.0	\$84.71	4	1	Energy Star Rated, 26w CFL Flood Lamp	26	0.10	187.2	\$33.88	\$20.00	\$28.00	\$80.00	0.16	280.8	\$50.82	1.57
560	Lobby	3400	6	1	Recessed Down Light, 26w CFL Lamp	26	0.16	530.4	\$96.00	6	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
560	Vestibule	3400	6	1	Recessed Down Light, 26w CFL Lamp	26	0.16	530.4	\$96.00	6	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Men's Rest Room	3400	3	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.20	663.0	\$120.00	3	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.15	499.8	\$90.46	\$30.00	\$0.00	\$90.00	0.05	163.2	\$29.54	3.05
227.21	Woman's Rest Room	3400	3	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.20	663.0	\$120.00	3	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.15	499.8	\$90.46	\$30.00	\$0.00	\$90.00	0.05	163.2	\$29.54	3.05
211.44	Maintenance Room	500	1	1	1x4, 1 Lamp, 32w T8, Elect. Ballast, Wall MNt., No Lens	32	0.03	16.0	\$2.90	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	12.5	\$2.26	\$7.00	\$10.00	\$7.00	0.01	3.5	\$0.63	11.05
725	Exterior	4400	4	1	150w HPS Wallpack	188	0.75	3,308.8	\$598.89	4	0	No Change	0	0.00	0	\$0.00	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
	Totals		137	29			14.94	48,747	\$8,823	137	27			12.0	39,641	\$7,175	\$479	\$708	\$4,641	2.6	8,046	\$1,456	3.19

#### **ECM: Lighting Controls**

EXISTIN	G LIGHTING									PROPO	SED L	IGHTING CONTROLS								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Controls	Watts	Total	Reduction	kWh/Yr	Yearly	Unit Cost	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Cont.	Description	Used	kW	(%)	Fixtures	\$ Cost	(INSTALLED)	Cost	Savings	Savings	\$ Savings	Payback
264.21	Book Stacks	3400	62	6	Relamp - Sylvania Lamp FO28/841/SS/ECO	148	9.18	31198.4	\$5,646.91	62	0	No Change	148	9.18	0%	31198.4	\$5,646.91	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Periodicals	3400	9	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.44	1499.4	\$271.39	9	0	No Change	49	0.44	0%	1499.4	\$271.39	\$0.00	\$0.00	0.00	0	\$0.00	0.00
111.14	Utility Room	500	3	1	Reballast & Relamp; Sylvania Lamp FO28/841/SS/ECO	25	0.08	37.5	\$6.79	3	0	No Change	25	0.08	0%	37.5	\$6.79	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Librarian's Office	3120	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	917.28	\$166.03	6	0	No Change	49	0.29	0%	917.28	\$166.03	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Office	3120	7	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.34	1070.16	\$193.70	7	1	No Change	49	0.34	0%	1070.16	\$193.70	\$0.00	\$0.00	0.00	0	\$0.00	0.00
100	Men's Rest Room	3400	1	2	Reballast & Relamp; 17w T8 Elec. Ballast	33	0.03	112.2	\$20.31	1	0	No Change	33	0.03	0%	112.2	\$20.31	\$0.00	\$0.00	0.00	0	\$0.00	0.00
100	Staff Rest Room	3120	1	2	Reballast & Relamp; 17w T8 Elec. Ballast	33	0.03	102.96	\$18.64	1	0	No Change	33	0.03	0%	102.96	\$18.64	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Staff Lunch Room	2860	7	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.34	980.98	\$177.56	7	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.17	50%	490.49	\$88.78	\$75.00	\$75.00	0.17	490.49	\$88.78	0.84
227.21	Meeting Room	2860	18	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.88	2522.52	\$456.58	18	0	No Change	49	0.88	0%	2522.52	\$456.58	\$0.00	\$0.00	0.00	0	\$0.00	0.00
623		1800	4	1	Energy Star Rated, 26w CFL Flood Lamp	26	0.10	187.2	\$33.88	4	0	No Change	26	0.10	0%	187.2	\$33.88	\$0.00	\$0.00	0.00	0	\$0.00	0.00
560	Lobby	3400	6	1	No Change	0	0.00	0	\$0.00	6	0	No Change	0	0.00	0%	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
560	Vestibule	3400	6	1	No Change	0	0.00	0	\$0.00	6	0	No Change	0	0.00	0%	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Men's Rest Room	3400	3	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.15	499.8	\$90.46	3	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.07	50%	249.9	\$45.23	\$75.00	\$75.00	0.07	249.9	\$45.23	1.66
227.21	Woman's Rest Room	3400	3	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.15	499.8	\$90.46	3	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.07	50%	249.9	\$45.23	\$75.00	\$75.00	0.07	249.9	\$45.23	1.66
211.44	Maintenance Room	500	1	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.03	12.5	\$2.26	1	0	No Change	25	0.03	0%	12.5	\$2.26	\$0.00	\$0.00	0.00	0	\$0.00	0.00
	Totals		137	29			12.0	39,640.7	\$7,175	137	4			11.7		38,650.4	\$6,995.72		\$225	0.32	990	\$179	1.26

CEG Job #: 1C11039

Project: Municipal Building
1261 Chews Landing Road

Gloucester Township, NJ

Municipal Building KWH COST: \$0.165

ECM: Lighting Upgrade - General

EXISTING	G LIGHTING									PROF	POSED	LIGHTING								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	(INSTALLED)	Incentive	Cost	Savings	Savings	\$ Savings	Payback
227.21	Open Office - 1st Floor	2080	35	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	2.28	4,732.0	\$780.78	35	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	1.72	3567.2	\$588.59	\$30.00	\$0.00	\$1,050.00	0.56	1164.8	\$192.19	5.46
227.21	Counter Area	2080	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	270.4	\$44.62	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	203.84	\$33.63	\$30.00	\$0.00	\$60.00	0.03	66.56	\$10.98	5.46
227.21	Tax Collector	2080	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	540.8	\$89.23	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	\$30.00	\$0.00	\$120.00	0.06	133.12	\$21.96	5.46
227.21	Muni. Assessors Office	2080	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	540.8	\$89.23	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	\$30.00	\$0.00	\$120.00	0.06	133.12	\$21.96	5.46
227.21	Side Office	2080	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	811.2	\$133.85	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	\$30.00	\$0.00	\$180.00	0.10	199.68	\$32.95	5.46
227.21	Side Office	2080	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	811.2	\$133.85	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	\$30.00	\$0.00	\$180.00	0.10	199.68	\$32.95	5.46
227.21	Corner Office	2080	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	811.2	\$133.85	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	\$30.00	\$0.00	\$180.00	0.10	199.68	\$32.95	5.46
227.21	Printer/ Copy	2080	11	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.72	1,487.2	\$245.39	11	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.54	1121.12	\$184.98	\$30.00	\$0.00	\$330.00	0.18	366.08	\$60.40	5.46
237.22	Room	2080	1	3	2x2, 3 Lamp, 31w T8 Ulamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	92	0.09	191.4	\$31.57	1	0	No Change	92	0.09	191.36	\$31.57	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	File Storage/ Break Room	2080	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	811.2	\$133.85	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	\$30.00	\$0.00	\$180.00	0.10	199.68	\$32.95	5.46
227.21	Rear Exit	2600	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	338.0	\$55.77	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	254.8	\$42.04	\$30.00	\$0.00	\$60.00	0.03	83.2	\$13.73	4.37
227.21	Lobby	4400	8	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.52	2,288.0	\$377.52	8	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.39	1724.8	\$284.59	\$30.00	\$0.00	\$240.00	0.13	563.2	\$92.93	2.58
227.21	Men's Rest Room	4225	1	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	274.6	\$45.31	1	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	207.025	\$34.16	\$30.00	\$0.00	\$30.00	0.02	67.6	\$11.15	2.69

EXISTING	G LIGHTING									PROI	POSED	LIGHTING								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	(INSTALLED)	Incentive	Cost	Savings	Savings	\$ Savings	Payback
221.41		4225	4	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	62	0.25	1,047.8	\$172.89	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	845	\$139.43	\$14.00	\$40.00	\$56.00	0.05	202.8	\$33.46	1.67
221.14	Custodial Closet	1200	2	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., No Lens	62	0.12	148.8	\$24.55	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	120	\$19.80	\$14.00	\$20.00	\$28.00	0.02	28.8	\$4.75	5.89
227.21	Woman's Rest Room	4225	1	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	274.6	\$45.31	1	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	207.025	\$34.16	\$30.00	\$0.00	\$30.00	0.02	67.6	\$11.15	2.69
221.41	Room	4225	4	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	62	0.25	1,047.8	\$172.89	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	845	\$139.43	\$14.00	\$40.00	\$56.00	0.05	202.8	\$33.46	1.67
227.21	Corridor	4400	9	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.59	2,574.0	\$424.71	9	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.44	1940.4	\$320.17	\$30.00	\$0.00	\$270.00	0.14	633.6	\$104.54	2.58
227.21	Twp. Clerk	8736	15	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.98	8,517.6	\$1,405.40	15	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.74	6420.96	\$1,059.46	\$30.00	\$0.00	\$450.00	0.24	2096.64	\$345.95	1.30
227.21	Conference/ Lunch Room	2080	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	540.8	\$89.23	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	\$30.00	\$0.00	\$120.00	0.06	133.12	\$21.96	5.46
227.21	File Room	2080	8	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.52	1,081.6	\$178.46	8	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.39	815.36	\$134.53	\$30.00	\$0.00	\$240.00	0.13	266.24	\$43.93	5.46
227.21	Office	2080	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	811.2	\$133.85	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	\$30.00	\$0.00	\$180.00	0.10	199.68	\$32.95	5.46
227.21	Office	2080	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	811.2	\$133.85	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	\$30.00	\$0.00	\$180.00	0.10	199.68	\$32.95	5.46
221.41	Rear Stairwell	4400	4	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	62	0.25	1,091.2	\$180.05	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	880	\$145.20	\$14.00	\$40.00	\$56.00	0.05	211.2	\$34.85	1.61
227.21	Mayor's Office	2080	10	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.65	1,352.0	\$223.08	10	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.49	1019.2	\$168.17	\$30.00	\$0.00	\$300.00	0.16	332.8	\$54.91	5.46
227.21	Mayor's Office	2080	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	811.2	\$133.85	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	\$30.00	\$0.00	\$180.00	0.10	199.68	\$32.95	5.46
227.21	Lunch Room Area	500	3	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.20	97.5	\$16.09	3	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.15	73.5	\$12.13	\$30.00	\$0.00	\$90.00	0.05	24	\$3.96	22.73
221.41	Rest Room	1200	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	62	0.06	74.4	\$12.28	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	60	\$9.90	\$14.00	\$10.00	\$14.00	0.01	14.4	\$2.38	5.89
221.41	Rest Room	1200	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	62	0.06	74.4	\$12.28	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	60	\$9.90	\$14.00	\$10.00	\$14.00	0.01	14.4	\$2.38	5.89

EXISTING	GLIGHTING									PROF	OSED	LIGHTING								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	(INSTALLED)	Incentive	Cost	Savings	Savings	\$ Savings	Payback
227.21	Vital Statistics - Front Office	1900	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	494.0	\$81.51	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	372.4	\$61.45	\$30.00	\$0.00	\$120.00	0.06	121.6	\$20.06	5.98
227.21	Vital Statistics - Rear Office	1900	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	494.0	\$81.51	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	372.4	\$61.45	\$30.00	\$0.00	\$120.00	0.06	121.6	\$20.06	5.98
227.21	Personnel	2080	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	540.8	\$89.23	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	\$30.00	\$0.00	\$120.00	0.06	133.12	\$21.96	5.46
221.14		1200	2	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., No Lens	62	0.12	148.8	\$24.55	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	120	\$19.80	\$14.00	\$20.00	\$28.00	0.02	28.8	\$4.75	5.89
227.21	Personnel Storage	1200	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	156.0	\$25.74	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	117.6	\$19.40	\$30.00	\$0.00	\$60.00	0.03	38.4	\$6.34	9.47
227.21	A110 Storage	1200	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	156.0	\$25.74	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	117.6	\$19.40	\$30.00	\$0.00	\$60.00	0.03	38.4	\$6.34	9.47
227.21	Secure Storage	1200	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	312.0	\$51.48	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	235.2	\$38.81	\$30.00	\$0.00	\$120.00	0.06	76.8	\$12.67	9.47
221.14	A111 Electrical Room	504	6	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., No Lens	62	0.37	187.5	\$30.94	6	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.30	151.2	\$24.95	\$14.00	\$60.00	\$84.00	0.07	36.288	\$5.99	14.03
227.21	A109 Council Room Entry	4400	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	572.0	\$94.38	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	431.2	\$71.15	\$30.00	\$0.00	\$60.00	0.03	140.8	\$23.23	2.58
227.21	A109 Council	1200	46	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	2.99	3,588.0	\$592.02	46	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	2.25	2704.8	\$446.29	\$30.00	\$0.00	\$1,380.00	0.74	883.2	\$145.73	9.47
221.22	Room	4400	6	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.37	1,636.8	\$270.07	6	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.30	1320	\$217.80	\$14.00	\$0.00	\$84.00	0.07	316.8	\$52.27	1.61
227.21	A109-4 Conference Room	600	8	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.52	312.0	\$51.48	8	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.39	235.2	\$38.81	\$30.00	\$0.00	\$240.00	0.13	76.8	\$12.67	18.94
221.14	A109-3 Storage	1200	2	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., No Lens	62	0.12	148.8	\$24.55	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	120	\$19.80	\$14.00	\$20.00	\$28.00	0.02	28.8	\$4.75	5.89
227.21	A109-2 Lunch/ Kitchen	2600	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	338.0	\$55.77	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	254.8	\$42.04	\$30.00	\$0.00	\$60.00	0.03	83.2	\$13.73	4.37
227.21	A200 Professional Standard	2600	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	676.0	\$111.54	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	509.6	\$84.08	\$30.00	\$0.00	\$120.00	0.06	166.4	\$27.46	4.37
221.14	A201 Phone Room	2600	2	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., No Lens	62	0.12	322.4	\$53.20	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	\$14.00	\$20.00	\$28.00	0.02	62.4	\$10.30	2.72

LIGHTING									PROF	OSED	LIGHTING								SAVING	S		
Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	(INSTALLED)	Incentive	Cost	Savings	Savings	\$ Savings	Payback
Construction Office	1850	38	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	2.47	4,569.5	\$753.97	38	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	1.86	3444.7	\$568.38	\$30.00	\$0.00	\$1,140.00	0.61	1124.8	\$185.59	6.14
Corner Office - Lechner	1850	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	481.0	\$79.37	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	362.6	\$59.83	\$30.00	\$0.00	\$120.00	0.06	118.4	\$19.54	6.14
Zoning Office	1850	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	481.0	\$79.37	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	362.6	\$59.83	\$30.00	\$0.00	\$120.00	0.06	118.4	\$19.54	6.14
Side Office	1850	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	481.0	\$79.37	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	362.6	\$59.83	\$30.00	\$0.00	\$120.00	0.06	118.4	\$19.54	6.14
Kitchenette	1850	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	721.5	\$119.05	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	543.9	\$89.74	\$30.00	\$0.00	\$180.00	0.10	177.6	\$29.30	6.14
File Storage	1100	5	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.33	357.5	\$58.99	5	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.25	269.5	\$44.47	\$30.00	\$0.00	\$150.00	0.08	88	\$14.52	10.33
	1100	6	1	6"x4, 1-Lamp, 34w T12, Mag. Ballast, Surface Mnt., White Diffuser	48	0.29	316.8	\$52.27	6	1	Reballast & Relamp; Sylvania Lamp FO28/841/SS/ECO	25	0.15	165	\$27.23	\$80.00	\$60.00	\$480.00	0.14	151.8	\$25.05	19.16
A203 Roof Access	1200	2	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., No Lens	62	0.12	148.8	\$24.55	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	120	\$19.80	\$14.00	\$20.00	\$28.00	0.02	28.8	\$4.75	5.89
Men's Rest Room	4225	2	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	62	0.12	523.9	\$86.44	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	422.5	\$69.71	\$14.00	\$20.00	\$28.00	0.02	101.4	\$16.73	1.67
Woman's Rest Room	4225	2	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	62	0.12	523.9	\$86.44	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	422.5	\$69.71	\$14.00	\$20.00	\$28.00	0.02	101.4	\$16.73	1.67
2nd Floor Hall	4400	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	1,716.0	\$283.14	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	1293.6	\$213.44	\$30.00	\$0.00	\$180.00	0.10	422.4	\$69.70	2.58
2nd Floor Connecting Corridor	4400	8	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.52	2,288.0	\$377.52	8	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.39	1724.8	\$284.59	\$30.00	\$0.00	\$240.00	0.13	563.2	\$92.93	2.58
Police Buile	ding											0					\$0.00					
213 Police Operations Center	8760	8	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.52	4,555.2	\$751.61	8	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.39	3433.92	\$566.60	\$30.00	\$0.00	\$240.00	0.13	1121.28	\$185.01	1.30
2nd Floor Corridor	8760	16	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	1.04	9,110.4	\$1,503.22	16	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.78	6867.84	\$1,133.19	\$30.00	\$0.00	\$480.00	0.26	2242.56	\$370.02	1.30
Men's Rest Room	2600	1	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	169.0	\$27.89	1	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	127.4	\$21.02	\$30.00	\$0.00	\$30.00	0.02	41.6	\$6.86	4.37
Woman's Rest Room	2600	1	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	169.0	\$27.89	1	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	127.4	\$21.02	\$30.00	\$0.00	\$30.00	0.02	41.6	\$6.86	4.37
	Fixture Location  Construction Office  Corner Office - Lechner  Zoning Office  Side Office  Kitchenette  File Storage  A203 Roof Access  Men's Rest Room  Woman's Rest Room  2nd Floor Hall  2nd Floor Connecting Corridor  Police Built  213 Police Operations Center  2nd Floor Corridor  Men's Rest Room	Fixture   Yearly     Location   Usage     Construction   1850     Corner Office   1850     Zoning Office   1850     Side Office   1850     Kitchenette   1850     Kitchenette   1850     File Storage   1100     A203 Roof   Access   1200     Men's Rest Room   4225     Woman's Rest   Room   4225     2nd Floor Connecting   213 Police   700     Corridor   213 Police   8760     2nd Floor Corridor   8760     2nd Floor Corridor   8760     Men's Rest Room   2600     Woman's Rest   2600	Fixture Location         Yearly Usage Fixts         No. Fixts           Construction Office         1850         38           Corner Office Lechner         1850         4           Zoning Office         1850         4           Side Office         1850         4           Kitchenette         1850         6           File Storage         1100         5           Indoor Gaster Storage         1200         2           Men's Rest Room Access         1200         2           Woman's Rest Room Access         4225         2           Woman's Rest Room Access         4225         2           2nd Floor Hall Advo Gaster Storage Corridor         4400         8           2nd Floor Connecting Corridor         4400         8           213 Police Operations Center Corridor         8760         8           2nd Floor Corridor         8760         16           Men's Rest Room Access Rest Room Access Storage Corridor         1	Fixture Location         Yearly Usage Fixts         No. Location Lucimps           Construction Office         1850         38         2           Corner Office - Lechner         1850         4         2           Zoning Office         1850         4         2           Side Office         1850         4         2           Kitchenette         1850         6         2           File Storage         1100         5         2           File Storage         1100         6         1           A203 Roof Access         1200         2         2           Men's Rest Room         4225         2         2           Woman's Rest Room         4225         2         2           2nd Floor Hall         4400         8         2           2nd Floor Cornidor         8760         8         2           2nd Floor Corridor         8760         16         2           Men's Rest Room         2600         1         2           Woman's Rest         2600         1         2	Fixture   Location   Usage   Fixts   Lamps   Type	Fixture   Location   Visage   Fixts   Lamps   Lamps   Fixture   Type   Fixt   Watts	Fixture   Location   Usage   Fixts   Lamps   Fixture   Type   Watts   kW	Fixture   Vearly   No.   No.   Tixture   Type   Watts   Watts   WWhYr   Exture   Construction   1850   38   2   Ts.   Elect. Ballast, Recessed   65   2.47   4.569.5	Fixture   Vearly   No.   Lamps   Fixture   Type   Fixt   Total   kWh'Yr   Yearly   Scost	Fixture   Vearly   No.   No.   Fixture   Fixt   Total   kWhYr   Yearly   No.   Fixture   Stoot   Fixts   Location   Location   1850   38   2   TS.   Elect. Ballast, Recessed   Mnt., Prismatic Lens   Stoot   Stoot	Fixture   Yearty   No.   No.   No.   Camps   Fixture   Fixt   Total   & Whyty   Yearty   No.   No.   Camps   Type   Watts   & W   Fixtures   & Scoat   Fixts   Lamps   Construction   1850   38   2   2   22,2   Lamp, 32w 700 series   Ts. Elect. Ballast, Recessed   Mnt., Prismatic Lens   Corner Office   1850   4   2   2   22,2   Lamp, 32w 700 series   Ts. Elect. Ballast, Recessed   Corner Office   1850   4   2   2   22,2   Lamp, 32w 700 series   Ts. Elect. Ballast, Recessed   Corner Office   1850   4   2   2   2   2   2   2   2   2   2	Fixed   Construction   Constructio	Fixe	Fixed   Variety   Note   Price   Location   Location	Figure   Variety   Varie	File   Variety   Variety   No.   N	Force   Variety   No.   No.   Proce   Variety   No.   Proce   Variety   No.   No.   Process   Variety   No.   No.   No.   No.   Process   Variety   No.   No.   No.   No.   No.   Process   Variety   No.   No.	Five   Variab   No.   No.   Price   Variab   Price   No.   Price   Variab   Price   No.   No.   No.   Receivant   Oas   Oad   No.   No.	Prince   P	Procession   Long   L	Figure   Column   C	Production   10

EXISTING	LIGHTING									PROF	POSED	LIGHTING								SAVING			
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simpl
227.21	Location  217 Conference Room/Offices	Usage 1900	Fixts 25	Lamps 2	Type  2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	Watts 65	kW 1.63	3,087.5	\$ Cost \$509.44	Fixts 25	Lamps 2	Description  Sylvania Lamp FBO30/841XP/6//SS/ECO	Used 49	1.23	2327.5	\$ Cost \$384.04	\$30.00	\$0.00	Cost \$750.00	Savings 0.40	Savings 760	\$ Savings \$125.40	Payback 5.98
227.21	218-219 Office	1600	12	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.78	1,248.0	\$205.92	12	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.59	940.8	\$155.23	\$30.00	\$0.00	\$360.00	0.19	307.2	\$50.69	7.10
227.21	210 Police Records	1600	11	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.72	1,144.0	\$188.76	11	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.54	862.4	\$142.30	\$30.00	\$0.00	\$330.00	0.18	281.6	\$46.46	7.10
227.21	Lt Office	1200	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	312.0	\$51.48	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	235.2	\$38.81	\$30.00	\$0.00	\$120.00	0.06	76.8	\$12.67	9.47
227.21	Office/ Files	2600	10	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.65	1,690.0	\$278.85	10	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.49	1274	\$210.21	\$30.00	\$0.00	\$300.00	0.16	416	\$68.64	4.37
227.21	206 Tech. Services	8760	10	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.65	5,694.0	\$939.51	10	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.49	4292.4	\$708.25	\$30.00	\$0.00	\$300.00	0.16	1401.6	\$231.26	1.30
227.21	Law Library	2600	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	1,014.0	\$167.31	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	764.4	\$126.13	\$30.00	\$0.00	\$180.00	0.10	249.6	\$41.18	4.37
142.21	Storage Closet	1200	1	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	156	0.16	187.2	\$30.89	1	3	3 Lamp , 32w T8, Elect. Ballast, Specular Reflector; retrofit	86	0.09	103.2	\$17.03	\$100.00	\$15.00	\$100.00	0.07	84	\$13.86	7.22
227.21	Kitchenette	2600	1	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	169.0	\$27.89	1	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	127.4	\$21.02	\$30.00	\$0.00	\$30.00	0.02	41.6	\$6.86	4.37
563		8760	8	1	Recessed Down Light, 26w PL Lamp	26	0.21	1,822.1	\$300.64	8	0	No Change	26	0.21	1822.08	\$300.64	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
564	Dispatch -	8760	12	1	Recessed Down Light, 50w MR16 Lamp	50	0.60	5,256.0	\$867.24	12	1	LED MR16 4w Dimmable Lamp	4	0.05	420.48	\$69.38	\$35.00	\$0.00	\$420.00	0.55	4835.52	\$797.86	0.53
142.22	Storage/ Server Room	1200	1	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Parabolic Lens	156	0.16	187.2	\$30.89	1	3	Delamp 1, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO	72	0.07	86.4	\$14.26	\$100.00	\$15.00	\$100.00	0.08	100.8	\$16.63	6.01
227.21	Kitchenette	2100	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	273.0	\$45.05	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	205.8	\$33.96	\$30.00	\$0.00	\$60.00	0.03	67.2	\$11.09	5.41
227.21	Stairway	8760	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	1,138.8	\$187.90	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	858.48	\$141.65	\$30.00	\$0.00	\$60.00	0.03	280.32	\$46.25	1.30
227.21	Police Chief - Front	2600	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	1,014.0	\$167.31	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	764.4	\$126.13	\$30.00	\$0.00	\$180.00	0.10	249.6	\$41.18	4.37
227.21	Police Chief Office	1615	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	629.9	\$103.93	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	474.81	\$78.34	\$30.00	\$0.00	\$180.00	0.10	155.04	\$25.58	7.04
3520	Police Chief Storage	1200	2	2	White Globe Fixture, (2) 100w A Lamps	200	0.40	480.0	\$79.20	2	2	26w CFL Lamp	52	0.10	124.8	\$20.59	\$40.00	\$14.00	\$80.00	0.30	355.2	\$58.61	1.37

EXISTING	G LIGHTING									PROF	POSED	LIGHTING								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
227.21	Location  Deputy Chief	Usage 1615	Fixts 4	Lamps 2	Type  2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed	Watts 65	0.26	Fixtures 419.9	\$ Cost \$69.28	Fixts 4	Lamps 2	Sylvania Lamp	Used 49	0.20	Fixtures 316.54	\$ Cost \$52.23	(INSTALLED) \$30.00	Incentive \$0.00	\$120.00	Savings 0.06	Savings 103.36	\$ Savings \$17.05	Payback 7.04
227.21	205 Grants	2080	10	2	Mnt., Prismatic Lens  2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed	65	0.65	1,352.0	\$223.08	10	2	FBO30/841XP/6//SS/ECO  Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.49	1019.2	\$168.17	\$30.00	\$0.00	\$300.00	0.16	332.8	\$54.91	5.46
227.21	204 Court Clerks	2080	24	2	Mnt., Prismatic Lens  2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	1.56	3,244.8	\$535.39	24	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	1.18	2446.08	\$403.60	\$30.00	\$0.00	\$720.00	0.38	798.72	\$131.79	5.46
227.21	204 Files Area	2080	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	270.4	\$44.62	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	203.84	\$33.63	\$30.00	\$0.00	\$60.00	0.03	66.56	\$10.98	5.46
227.21	204 Corner Office	2080	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	270.4	\$44.62	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	203.84	\$33.63	\$30.00	\$0.00	\$60.00	0.03	66.56	\$10.98	5.46
227.21	204 Storage	1200	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	156.0	\$25.74	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	117.6	\$19.40	\$30.00	\$0.00	\$60.00	0.03	38.4	\$6.34	9.47
227.21	CSI Room	2080	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	540.8	\$89.23	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	\$30.00	\$0.00	\$120.00	0.06	133.12	\$21.96	5.46
227.21	Grants Office #1	2080	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	540.8	\$89.23	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	\$30.00	\$0.00	\$120.00	0.06	133.12	\$21.96	5.46
227.21	Grants Office #2	2080	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	540.8	\$89.23	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	\$30.00	\$0.00	\$120.00	0.06	133.12	\$21.96	5.46
227.21	Clerks Office #1	2080	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	270.4	\$44.62	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	203.84	\$33.63	\$30.00	\$0.00	\$60.00	0.03	66.56	\$10.98	5.46
227.21	Clerks Office #2	2080	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	270.4	\$44.62	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	203.84	\$33.63	\$30.00	\$0.00	\$60.00	0.03	66.56	\$10.98	5.46
211.25	Supplies #207	1200	1	2	1x4, 1 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Acrylic Lens	30	0.03	36.0	\$5.94	1	0	No Change	30	0.03	36	\$5.94	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Woman's Rest Room	3295	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	428.4	\$70.68	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	322.91	\$53.28	\$30.00	\$0.00	\$60.00	0.03	105.44	\$17.40	3.45
227.21	Men's Rest Room	3295	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	428.4	\$70.68	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	322.91	\$53.28	\$30.00	\$0.00	\$60.00	0.03	105.44	\$17.40	3.45
242.21	Park Patrol #202	2080	1	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	107	0.11	222.6	\$36.72	1	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.10	203.84	\$33.63	\$28.00	\$10.00	\$28.00	0.01	18.72	\$3.09	9.07

EXISTING	GLIGHTING									PROI	POSED	LIGHTING								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	(INSTALLED)	Incentive	Cost	Savings	Savings	\$ Savings	Payback
227.21	Holding Cell Hallway	8760	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	1,138.8	\$187.90	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	858.48	\$141.65	\$30.00	\$0.00	\$60.00	0.03	280.32	\$46.25	1.30
3015	Holding Cell #1	8760	1	1	Wall Mnt., Glass Cover, 100w A Lamp	100	0.10	876.0	\$144.54	1	1	26w CFL Lamp	26	0.03	227.76	\$37.58	\$20.00	\$7.00	\$20.00	0.07	648.24	\$106.96	0.19
3015	Holding Cell #2	8760	1	1	Wall Mnt., Glass Cover, 100w A Lamp	100	0.10	876.0	\$144.54	1	1	26w CFL Lamp	26	0.03	227.76	\$37.58	\$20.00	\$7.00	\$20.00	0.07	648.24	\$106.96	0.19
242.21	Radio Room	8760	1	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	107	0.11	937.3	\$154.66	1	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.10	858.48	\$141.65	\$28.00	\$10.00	\$28.00	0.01	78.84	\$13.01	2.15
227.21	Police Entrance	8760	3	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.20	1,708.2	\$281.85	3	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.15	1287.72	\$212.47	\$30.00	\$0.00	\$90.00	0.05	420.48	\$69.38	1.30
142.25		8760	4	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Parabolic Lens	156	0.62	5,466.2	\$901.93	4	3	Delamp 1, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO	72	0.29	2522.88	\$416.28	\$100.00	\$60.00	\$400.00	0.34	2943.36	\$485.65	0.82
227.21	Watch Desk/ Command	8760	12	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.78	6,832.8	\$1,127.41	12	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.59	5150.88	\$849.90	\$30.00	\$0.00	\$360.00	0.19	1681.92	\$277.52	1.30
242.21		8760	2	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	107	0.21	1,874.6	\$309.32	2	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.20	1716.96	\$283.30	\$28.00	\$20.00	\$56.00	0.02	157.68	\$26.02	2.15
227.21	106 Hall	8760	5	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.33	2,847.0	\$469.76	5	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.25	2146.2	\$354.12	\$30.00	\$0.00	\$150.00	0.08	700.8	\$115.63	1.30
227.212	Squad Room	8760	16	2	2x2, 2 Lamp, 31w T8 Ulamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	60	0.96	8,409.6	\$1,387.58	16	0	No Change	60	0.96	8409.6	\$1,387.58	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	122 Booking Fingerprinting	8760	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	1,138.8	\$187.90	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	858.48	\$141.65	\$30.00	\$0.00	\$60.00	0.03	280.32	\$46.25	1.30
227.212	Interview Room	2600	2	2	2x2, 2 Lamp, 31w T8 Ulamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	60	0.12	312.0	\$51.48	2	0	No Change	60	0.12	312	\$51.48	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.212	Office	2600	4	2	2x2, 2 Lamp, 31w T8 Ulamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	60	0.24	624.0	\$102.96	4	0	No Change	60	0.24	624	\$102.96	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Briefing Room	4400	12	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.78	3,432.0	\$566.28	12	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.59	2587.2	\$426.89	\$30.00	\$0.00	\$360.00	0.19	844.8	\$139.39	2.58
613.1	Boiler Room	2600	4	1	Industrial Fixture, 170w A19 Lamp	170	0.68	1,768.0	\$291.72	4	1	(1) 42w CFL Lamp	42	0.17	436.8	\$72.07	\$20.00	\$28.00	\$80.00	0.51	1331.2	\$219.65	0.36
284.21		11248	12	8	4x4, 8 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	214	2.57	28,884.9	\$4,766.00	12	8	Relamp - Sylvania Lamp FO28/841/SS/ECO	192	2.30	25915.39	\$4,276.04	\$56.00	\$120.00	\$672.00	0.26	2969.472	\$489.96	1.37
142.21	Court Room	1248	6	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	156	0.94	1,168.1	\$192.74	6	3	3 Lamp , 32w T8, Elect. Ballast, Specular Reflector; retrofit	86	0.52	643.968	\$106.25	\$100.00	\$90.00	\$600.00	0.42	524.16	\$86.49	6.94

EXISTING	GLIGHTING									PROF	POSED	LIGHTING								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type 2x4, 4 Lamp, 32w 700 Series	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description  Relamp - Sylvania Lamp	Used	kW	Fixtures	\$ Cost	(INSTALLED)	Incentive	Cost	Savings	Savings	\$ Savings	Payback
242.21		1248	2	4	T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	107	0.21	267.1	\$44.07	2	4	FO28/841/SS/ECO	98	0.20	244.608	\$40.36	\$28.00	\$20.00	\$56.00	0.02	22.464	\$3.71	15.11
227.212	Kitchenette	1200	4	2	2x2, 2 Lamp, 31w T8 Ulamp, Elect. Ballast, Recessed Mnt., Prismatic Lens	60	0.24	288.0	\$47.52	4	0	No Change	60	0.24	288	\$47.52	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Detective Offices	4400	16	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	1.04	4,576.0	\$755.04	16	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.78	3449.6	\$569.18	\$30.00	\$0.00	\$480.00	0.26	1126.4	\$185.86	2.58
	Township C	courts											0					\$0.00					
221.11	Evidence Storage	1200	9	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic Lens	62	0.56	669.6	\$110.48	9	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.45	540	\$89.10	\$14.00	\$90.00	\$126.00	0.11	129.6	\$21.38	5.89
142.11	Gun Cleaning Room	2600	1	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	156	0.16	405.6	\$66.92	1	3	Delamp 1, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO	72	0.07	187.2	\$30.89	\$100.00	\$0.00	\$100.00	0.08	218.4	\$36.04	2.78
221.14	Locker Room	2600	9	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., No Lens	62	0.56	1,450.8	\$239.38	9	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.45	1170	\$193.05	\$14.00	\$90.00	\$126.00	0.11	280.8	\$46.33	2.72
3015	Female Changing Room	2600	2	1	Wall Mnt., Glass Cover, 100w A Lamp	100	0.20	520.0	\$85.80	2	1	26w CFL Lamp	26	0.05	135.2	\$22.31	\$20.00	\$14.00	\$40.00	0.15	384.8	\$63.49	0.63
221.11	Lavatory	2600	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic Lens	62	0.06	161.2	\$26.60	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	130	\$21.45	\$14.00	\$10.00	\$14.00	0.01	31.2	\$5.15	2.72
227.21	Court Entrance	1248	1	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	81.1	\$13.38	1	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	61.152	\$10.09	\$30.00	\$0.00	\$30.00	0.02	19.968	\$3.29	9.11
227.21	Court Entrance	1248	1	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	81.1	\$13.38	1	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	61.152	\$10.09	\$30.00	\$0.00	\$30.00	0.02	19.968	\$3.29	9.11
227.21	Deal Room	1248	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	324.5	\$53.54	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	244.608	\$40.36	\$30.00	\$0.00	\$120.00	0.06	79.872	\$13.18	9.11
3015	Court Room IT Closet	1200	2	1	Wall Mnt., Glass Cover, 100w A Lamp	100	0.20	240.0	\$39.60	2	1	26w CFL Lamp	26	0.05	62.4	\$10.30	\$20.00	\$14.00	\$40.00	0.15	177.6	\$29.30	1.37
242.11	Court Room Hall	1248	1	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic Lens	107	0.11	133.5	\$22.03	1	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.10	122.304	\$20.18	\$28.00	\$10.00	\$28.00	0.01	11.232	\$1.85	15.11
227.21	First Floor Corridor	8760	7	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.46	3,985.8	\$657.66	7	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.34	3004.68	\$495.77	\$30.00	\$0.00	\$210.00	0.11	981.12	\$161.88	1.30
211.44	Stairway	8760	3	2	1x4, 1 Lamp, 32w T8, Elect. Ballast, Wall MNt., No Lens	32	0.10	841.0	\$138.76	3	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.08	657	\$108.41	\$7.00	\$30.00	\$21.00	0.02	183.96	\$30.35	0.69
247.211	Garage Hall		3	4	2x2, 4 Lamp, 17w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	68	0.20	0.0	\$0.00	3	0	No Change	68	0.20	0	\$0.00	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
211.44	Garage	2600	4	2	1x4, 1 Lamp, 32w T8, Elect. Ballast, Wall MNt., No Lens	32	0.13	332.8	\$54.91	4	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.10	260	\$42.90	\$7.00	\$40.00	\$28.00	0.03	72.8	\$12.01	2.33

EXISTIN	G LIGHTING									PROF	OSED	LIGHTING								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	(INSTALLED)	Incentive	Cost	Savings	Savings	\$ Savings	Payback
221.41	Garage	2600	4	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Wall Mnt., Prismatic	62	0.25	644.8	\$106.39	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	520	\$85.80	\$14.00	\$40.00	\$56.00	0.05	124.8	\$20.59	2.72
725		4400	16	1	150w HPS Wallpack	188	3.01	13,235.2	\$2,183.81	16	0	No Change	188	3.01	13235.2	\$2,183.81	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
713	Exterior	4400	12	1	100w HPS 1x1 w/Prismatic Lens	125	1.50	6,600.0	\$1,089.00	12	0	No Change	125	1.50	6600	\$1,089.00	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
	Totals		765	279			55.44	208,431	\$34,391	765	252			42.3	162,107	\$26,748		\$1,154	\$21,259	13.1	46,324	\$7,644	2.78

0.165 KWH COST: \$0.165

#### **ECM: Lighting Controls**

EXISTIN	G LIGHTING								PROPO	SED L	IGHTING CONTROLS								SAVING			
CEG	Fixture	Yearly	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Controls	Watts	Total	Reduction	kWh/Yr	Yearly	Unit Cost	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Cont.	Description	Used	kW	(%)	Fixtures	\$ Cost	(INSTALLED)	Cost	Savings	Savings	\$ Savings	Payback
227.21	Open Office - 1st Floor	2080	35	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	1.72	3567.2	\$588.59	35	0	No Change	49	1.72	0%	3567.2	\$588.59	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Counter Area	2080	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	203.84	\$33.63	2	0	No Change	49	0.10	0%	203.84	\$33.63	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Tax Collector	2080	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.13	33%	274.36864	\$45.27	\$75.00	\$75.00	0.06	133.31136	\$22.00	3.41
227.21	Muni. Assessors Office	2080	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.13	33%	273.1456	\$45.07	\$75.00	\$75.00	0.06	134.5344	\$22.20	3.38
227.21	Side Office	2080	6	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.20	33%	409.7184	\$67.60	\$75.00	\$75.00	0.10	201.8016	\$33.30	2.25
227.21	Side Office	2080	6	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.20	33%	409.7184	\$67.60	\$75.00	\$75.00	0.10	201.8016	\$33.30	2.25
227.21	Corner Office	2080	6	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.20	33%	409.7184	\$67.60	\$75.00	\$75.00	0.10	201.8016	\$33.30	2.25
227.21	Printer/ Copy Room	2080	11	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.54	1121.12	\$184.98	11	1	Dual Technology Occupancy Sensor - Remote Mnt.	49	0.27	49%	571.7712	\$94.34	\$160.00	\$160.00	0.26	549.3488	\$90.64	1.77
237.22	0	2080	1	No Change	92	0.09	191.36	\$31.57	1	0	No Change	92	0.09	0%	191.36	\$31.57	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	File Storage/ Break Room	2080	6	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.15	49%	311.8752	\$51.46	\$75.00	\$75.00	0.14	299.6448	\$49.44	1.52
227.21	Rear Exit	2600	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	254.8	\$42.04	2	0	No Change	49	0.10	0%	254.8	\$42.04	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Lobby	4400	8	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.39	1724.8	\$284.59	8	0	No Change	49	0.39	0%	1724.8	\$284.59	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Men's Rest Room	4225	1	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	207.025	\$34.16	1	1	Dual Technology Occupancy	49	0.01	82%	37.2645	\$6.15	\$75.00	\$75.00	0.04	169.7605	\$28.01	0.53
221.41	0	4225	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	845	\$139.43	4		Sensor - Switch Mnt.	50	0.04	82%	152.1	\$25.10	, , , ,	\$0.00	0.16	692.9	\$114.33	
221.14	Custodial Closet	1200	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	120	\$19.80	2	0	No Change	50	0.10	0%	120	\$19.80	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Woman's Rest Room	4225	1	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	207.025	\$34.16	1	1	Dual Technology Occupancy	49	0.01	82%	37.2645	\$6.15	\$75.00	\$75.00	0.04	169.7605	\$28.01	0.53
221.41	0	4225	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	845	\$139.43	4		Sensor - Switch Mnt.	50	0.04	82%	152.1	\$25.10	\$75.00	\$0.00	0.16	692.9	\$114.33	0.55
227.21	Corridor	4400	9	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.44	1940.4	\$320.17	9	0	No Change	49	0.44	0%	1940.4	\$320.17	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Twp. Clerk	8736	15	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.74	6420.96	\$1,059.46	15	1	Dual Technology Occupancy Sensor - Remote Mnt.	49	0.17	77%	1476.8208	\$243.68	\$160.00	\$160.00	0.57	4944.1392	\$815.78	0.20
227.21	Conference/ Lunch Room	2080	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.16	18%	334.2976	\$55.16	\$75.00	\$75.00	0.04	73.3824	\$12.11	6.19
227.21	File Room	2080	8	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.39	815.36	\$134.53	8	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.32	18%	668.5952	\$110.32	\$75.00	\$75.00	0.07	146.7648	\$24.22	3.10

EXISTING	G LIGHTING								PROPO	SED L	IGHTING CONTROLS								SAVING			
CEG Type	Fixture Location	Yearly Usage	No. Fixts	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
227.21	Office	2080	6	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.24	18%	501.4464	\$82.74	\$75.00	\$75.00	0.05	110.0736	\$18.16	4.13
227.21	Office	2080	6	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.24	18%	501.4464	\$82.74	\$75.00	\$75.00	0.05	110.0736	\$18.16	4.13
221.41	Rear Stairwell	4400	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	880	\$145.20	4	0	No Change	50	0.20	0%	880	\$145.20	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Mayor's Office	2080	10	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.49	1019.2	\$168.17	10	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.25	50%	509.6	\$84.08	\$75.00	\$75.00	0.25	509.6	\$84.08	0.89
227.21	Mayor's Office	2080	6	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	611.52	\$100.90	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.15	50%	305.76	\$50.45	\$75.00	\$75.00	0.15	305.76	\$50.45	1.49
227.21	Lunch Room Area	500	3	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.15	73.5	\$12.13	3	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.08	48%	38.22	\$6.31	\$75.00	\$75.00	0.07	35.28	\$5.82	12.88
221.41	Rest Room	1200	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	60	\$9.90	1	0	No Change	50	0.05	0%	60	\$9.90	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41	Rest Room	1200	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	60	\$9.90	1	0	No Change	50	0.05	0%	60	\$9.90	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Vital Statistics - Front Office	1900	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	372.4	\$61.45	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.19	5%	353.78	\$58.37	\$75.00	\$75.00	0.01	18.62	\$3.07	24.41
227.21	Vital Statistics - Rear Office	1900	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	372.4	\$61.45	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.19	5%	353.78	\$58.37	\$75.00	\$75.00	0.01	18.62	\$3.07	24.41
227.21	Personnel	2080	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.16	20%	326.144	\$53.81	\$75.00	\$75.00	0.04	81.536	\$13.45	5.57
221.14	Personnel Storage	1200	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	120	\$19.80	2	0	No Change	50	0.10	0%	120	\$19.80	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	0	1200	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	117.6	\$19.40	2	0	No Change	49	0.10	0%	117.6	\$19.40	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	A110 Storage	1200	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	117.6	\$19.40	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.08	20%	94.08	\$15.52	\$75.00	\$75.00	0.02	23.52	\$3.88	19.33
227.21	Secure Storage	1200	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	235.2	\$38.81	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.16	20%	188.16	\$31.05	\$75.00	\$75.00	0.04	47.04	\$7.76	9.66
221.14	A111 Electrical Room	504	6	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.30	151.2	\$24.95	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	50	0.04	87%	19.656	\$3.24	\$75.00	\$75.00	0.26	131.544	\$21.70	3.46
227.21	A109 Council Room Entry	4400	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	431.2	\$71.15	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.08	20%	344.96	\$56.92	\$75.00	\$75.00	0.02	86.24	\$14.23	5.27
227.21	A109 Council Room	1200	46	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	2.25	2704.8	\$446.29	46	0	No Change	49	2.25	0%	2704.8	\$446.29	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.22	0	4400	6	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.30	1320	\$217.80	6	1	Dual Technology Occupancy Sensor - Remote Mnt.	50	0.24	20%	1056	\$174.24	\$160.00	\$160.00	0.06	264	\$43.56	3.67
227.21	A109-4 Conference Room	600	8	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.39	235.2	\$38.81	8	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.35	11%	209.328	\$34.54	\$75.00	\$75.00	0.04	25.872	\$4.27	17.57
221.14	A109-3 Storage	1200	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	120	\$19.80	2	0	No Change	50	0.10	0%	120	\$19.80	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	A109-2 Lunch/ Kitchen	2600	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	254.8	\$42.04	2	0	No Change	49	0.10	0%	254.8	\$42.04	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	A200 Professional Standard	2600	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	509.6	\$84.08	4	0	No Change	49	0.20	0%	509.6	\$84.08	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.14	A201 Phone Room	2600	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	260	\$42.90	2	3	Dual Technology Occupancy Sensor - Remote Mnt.	50	0.08	20%	208	\$34.32	\$160.00	\$480.00	0.02	52	\$8.58	55.94

EXISTIN	G LIGHTING								PROPO	SED L	IGHTING CONTROLS								SAVINGS	3		
CEG	Fixture	Yearly	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Controls	Watts	Total	Reduction	kWh/Yr	Yearly	Unit Cost	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Туре	Watts	kW	Fixtures	\$ Cost	Fixts	Cont.	Description	Used	kW	(%)	Fixtures	\$ Cost	(INSTALLED)	Cost	Savings	Savings	\$ Savings	Payback
227.21	Construction Office	1850	38	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	1.86	3444.7	\$568.38	38	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	1.49	20%	2755.76	\$454.70	\$75.00	\$75.00	0.37	688.94	\$113.68	0.66
227.21	Corner Office - Lechner	1850	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	362.6	\$59.83	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.16	20%	290.08	\$47.86	\$75.00	\$75.00	0.04	72.52	\$11.97	6.27
227.21	Zoning Office	1850	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	362.6	\$59.83	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.16	20%	290.08	\$47.86	\$75.00	\$75.00	0.04	72.52	\$11.97	6.27
227.21	Side Office	1850	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	362.6	\$59.83	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.16	20%	290.08	\$47.86	\$75.00	\$75.00	0.04	72.52	\$11.97	6.27
227.21	Kitchenette	1850	6	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	543.9	\$89.74	6	1	Dual Technology Occupancy	49	0.24	20%	435.12	\$71.79	\$75.00	\$75.00	0.06	108.78	\$17.95	2.79
227.21	File Storage	1100	5	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.25	269.5	\$44.47	5		Sensor - Switch Mnt.	49	0.20	20%	215.6	\$35.57	\$75.00	\$75.00	0.05	53.9	\$8.89	2.77
111.15	0	1100	6	Reballast & Relamp; Sylvania Lamp FO28/841/SS/ECO	25	0.15	165	\$27.23	6	0	No Change	25	0.15	0%	165	\$27.23	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.14	A203 Roof Access	1200	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	120	\$19.80	2	0	No Change	50	0.10	0%	120	\$19.80	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41	Men's Rest Room	4225	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	422.5	\$69.71	2	0	No Change	50	0.10	0%	422.5	\$69.71	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41	Woman's Rest Room	4225	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	422.5	\$69.71	2	0	No Change	50	0.10	0%	422.5	\$69.71	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	2nd Floor Hall	4400	6	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	1293.6	\$213.44	6	0	No Change	49	0.29	0%	1293.6	\$213.44	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	2nd Floor Connecting Corridor	4400	8	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.39	1724.8	\$284.59	8	0	No Change	49	0.39	0%	1724.8	\$284.59	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Police Building	0	0	0	0	0	0.00	0	\$0.00	0	0	No Change	0	0.00	0%	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	213 Police Operations Center	8760	8	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.39	3433.92	\$566.60	8	0	No Change	49	0.39	0%	3433.92	\$566.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	2nd Floor Corridor	8760	16	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.78	6867.84	\$1,133.19	16	0	No Change	49	0.78	0%	6867.84	\$1,133.19	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Men's Rest Room	2600	1	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	127.4	\$21.02	1	0	Dual Technology Occupancy Sensor - Remote Mnt.	49	0.04	20%	101.92	\$16.82	\$0.00	\$0.00	0.01	25.48	\$4.20	0.00
227.21	Woman's Rest Room	2600	1	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	127.4	\$21.02	1	1	Dual Technology Occupancy Sensor - Remote Mnt.	49	0.04	20%	101.92	\$16.82	\$160.00	\$160.00	0.01	25.48	\$4.20	38.06
227.21	217 Conference Room/Offices	1900	25	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	1.23	2327.5	\$384.04	25	2	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.44	64%	837.9	\$138.25	\$75.00	\$150.00	0.78	1489.6	\$245.78	0.61
227.21	218-219 Office	1600	12	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.59	940.8	\$155.23	12	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.40	32%	639.744	\$105.56	\$75.00	\$75.00	0.19	301.056	\$49.67	1.51
227.21	210 Police Records	1600	11	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.54	862.4	\$142.30	11	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.37	32%	586.432	\$96.76	\$75.00	\$75.00	0.17	275.968	\$45.53	1.65
227.21	Lt Office	1200	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	235.2	\$38.81	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.15	24%	179.928	\$29.69	\$75.00	\$75.00	0.05	55.272	\$9.12	8.22
227.21	Office/ Files	2600	10	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.49	1274	\$210.21	10	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.39	20%	1019.2	\$168.17	\$75.00	\$75.00	0.10	254.8	\$42.04	1.78
227.21	206 Tech. Services	8760	10	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.49	4292.4	\$708.25	10	0	No Change	49	0.49	0%	4292.4	\$708.25	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Law Library	2600	6	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	764.4	\$126.13	6	0	No Change	49	0.29	0%	764.4	\$126.13	\$0.00	\$0.00	0.00	0	\$0.00	0.00

EXISTIN	G LIGHTING								PROPO	SED L	IGHTING CONTROLS								SAVING	S		
CEG	Fixture	Yearly	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Controls	Watts	Total	Reduction	kWh/Yr	Yearly	Unit Cost	Total	kW	kWh/Yr	Yearly	Yearly Simple
142.21	Location  Storage Closet	Usage 1200	Fixts 1	Type 3 Lamp , 32w T8, Elect. Ballast, Specular Reflector; retrofit	Watts 86	0.09	Fixtures 103.2	\$ Cost \$17.03	Fixts 1	Cont.	Description  No Change	Used 86	0.09	0%	Fixtures 103.2	\$ Cost \$17.03	\$0.00	\$0.00	Savings 0.00	Savings 0	\$ Savings \$0.00	Payback 0.00
227.21	Kitchenette	2600	1	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	127.4	\$21.02	1	0	No Change	49	0.05	0%	127.4	\$21.02	\$0.00	\$0.00	0.00	0	\$0.00	0.00
563	Dispatch	8760	8	No Change	26	0.21	1822.08	\$300.64	8	0	No Change	26	0.21	0%	1822.08	\$300.64	\$0.00	\$0.00	0.00	0	\$0.00	0.00
564	0	8760	12	LED MR16 4w Dimmable Lamp	4	0.05	420.48	\$69.38	12	1	Dual Technology Occupancy Sensor - Switch Mnt.	4	0.04	20%	336.384	\$55.50	\$75.00	\$75.00	0.01	84.096	\$13.88	5.41
142.22	Storage/ Server Room	1200	1	Delamp 1, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO	72	0.07	86.4	\$14.26	1	0	No Change	72	0.07	0%	86.4	\$14.26	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Kitchenette	2100	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	205.8	\$33.96	2	0	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.04	60%	82.32	\$13.58	\$0.00	\$0.00	0.06	123.48	\$20.37	0.00
227.21	Stairway	8760	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	858.48	\$141.65	2	0	No Change	49	0.10	0%	858.48	\$141.65	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Police Chief - Front	2600	6	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	764.4	\$126.13	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.24	20%	611.52	\$100.90	\$75.00	\$75.00	0.06	152.88	\$25.23	2.97
227.21	Police Chief Office	1615	6	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	474.81	\$78.34	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.24	20%	379.848	\$62.67	\$75.00	\$75.00	0.06	94.962	\$15.67	4.79
3520	Police Chief Storage	1200	2	26w CFL Lamp	52	0.10	124.8	\$20.59	2	0	No Change	52	0.10	0%	124.8	\$20.59	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Deputy Chief	1615	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	316.54	\$52.23	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.16	20%	253.232	\$41.78	\$75.00	\$75.00	0.04	63.308	\$10.45	7.18
227.21	205 Grants	2080	10	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.49	1019.2	\$168.17	10	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.39	20%	815.36	\$134.53	\$75.00	\$75.00	0.10	203.84	\$33.63	2.23
227.21	204 Court Clerks	2080	24	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	1.18	2446.08	\$403.60	24	2	Dual Technology Occupancy Sensor - Remote Mnt.	49	0.94	20%	1956.864	\$322.88	\$160.00	\$320.00	0.24	489.216	\$80.72	3.96
227.21	204 Files Area	2080	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	203.84	\$33.63	2	0	No Change	49	0.10	0%	203.84	\$33.63	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	204 Corner Office	2080	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	203.84	\$33.63	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.08	20%	163.072	\$26.91	\$75.00	\$75.00	0.02	40.768	\$6.73	11.15
227.21	204 Storage	1200	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	117.6	\$19.40	2	0	No Change	49	0.10	0%	117.6	\$19.40	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	CSI Room	2080	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.16	20%	326.144	\$53.81	\$75.00	\$75.00	0.04	81.536	\$13.45	5.57
227.21	Grants Office #1	2080	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.16	20%	326.144	\$53.81	\$75.00	\$75.00	0.04	81.536	\$13.45	5.57
227.21	Grants Office #2	2080	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	407.68	\$67.27	4	0	No Change	49	0.20	0%	407.68	\$67.27	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Clerks Office #1	2080	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	203.84	\$33.63	2	0	No Change	49	0.10	0%	203.84	\$33.63	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Clerks Office #2	2080	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	203.84	\$33.63	2	0	No Change	49	0.10	0%	203.84	\$33.63	\$0.00	\$0.00	0.00	0	\$0.00	0.00
211.25	Supplies #207	1200	1	No Change	30	0.03	36	\$5.94	1	0	No Change	30	0.03	0%	36	\$5.94	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Woman's Rest Room	3295	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	322.91	\$53.28	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.02	84%	51.6656	\$8.52	\$75.00	\$75.00	0.08	271.2444	\$44.76	1.68
227.21	Men's Rest Room	3295	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	322.91	\$53.28	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.02	84%	51.6656	\$8.52	\$75.00	\$75.00	0.08	271.2444	\$44.76	1.68
242.21	Park Patrol #202	2080	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.10	203.84	\$33.63	1	0	No Change	98	0.10	0%	203.84	\$33.63	\$0.00	\$0.00	0.00	0	\$0.00	0.00

Decomposition   Control	EXISTIN	G LIGHTING								PROPO	SED L	IGHTING CONTROLS								SAVING	S		
Part	CEG				Fixture							Controls								kW			
Part	Type	Location	Usage	Fixts	Туре	Watts	kW	Fixtures	\$ Cost	Fixts	Cont.	Description	Used	kW	(%)	Fixtures	\$ Cost	(INSTALLED)	Cost	Savings	Savings	\$ Savings	Payback
Section   Sect	227.21		8760	2		49	0.10	858.48	\$141.65	2	0	No Change	49	0.10	0%	858.48	\$141.65	\$0.00	\$0.00	0.00	0	\$0.00	0.00
22.1   Part	3015	Holding Cell #1	8760	1	26w CFL Lamp	26	0.03	227.76	\$37.58	1	0		26	0.03	0%	227.76	\$37.58	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Part	3015	Holding Cell #2	8760	1	26w CFL Lamp	26	0.03	227.76	\$37.58	1	0	No Change	26	0.03	0%	227.76	\$37.58	\$0.00	\$0.00	0.00	0	\$0.00	0.00
14.22 Note Name	242.21	Radio Room	8760	1		98	0.10	858.48	\$141.65	1	0	No Change	98	0.10	0%	858.48	\$141.65	\$0.00	\$0.00	0.00	0	\$0.00	0.00
10.22   10.0   1	227.21	Police Entrance	8760	3		49	0.15	1287.72	\$212.47	3	0	No Change	49	0.15	0%	1287.72	\$212.47	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Part	142.25		8760	4	Relamp; (3) Sylvania Lamp	72	0.29	2522.88	\$416.28	4	0	No Change	72	0.29	0%	2522.88	\$416.28	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Process Series   Proc	227.21	0	8760	12	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.59	5150.88	\$849.90	12	0	No Change	49	0.59	0%	5150.88	\$849.90	\$0.00	\$0.00	0.00	0	\$0.00	0.00
27-712   Squar Room	242.21	0	8760	2		98	0.20	1716.96	\$283.30	2	0	No Change	98	0.20	0%	1716.96	\$283.30	\$0.00	\$0.00	0.00	0	\$0.00	0.00
22-21   23-22   23-23   23-2	227.21	106 Hall	8760	5		49	0.25	2146.2	\$354.12	5	0	No Change	49	0.25	0%	2146.2	\$354.12	\$0.00	\$0.00	0.00	0	\$0.00	0.00
PRODUNITATION   PRODUNITATION   PRODUNITATION SECTION   PROPERTY   PRODUNITATION   PRODUNITATION   PROPERTY	227.212	Squad Room	8760	16	No Change	60	0.96	8409.6	\$1,387.58	16	9		60	0.83	14%	7232.256	\$1,193.32	\$75.00	\$675.00	0.13	1177.344	\$194.26	3.47
227.21   Office   2000   4   No Change   60   0.24   0.14   510.256   4   0   No Change   60   0.24   0.15   0.00   0.0		Fingerprinting			FBO30/841XP/6//SS/ECO				**********														
27.21   Birding Room   440   12   Sylvaid Limp   40   0.59   2587.2   \$426.89   12   0   No Charge   40   0.59   0.5   2587.2   \$426.89   \$50.00   0.00																							
Bristing Room   4400   12   BROSSHANN-ROSSERCO   59   1.	227.212	Office	2600	4	No Change	60	0.24	624	\$102.96	4	0	No Change	60	0.24	0%	624	\$102.96	\$0.00	\$0.00	0.00	0	\$0.00	0.00
24-21   Court Room   11248   12   Relamp-Sylvania Lump   192   2.30   25915.392   54.276.04   12   0   No Change   192   2.30   0%   25915.392   54.276.04   50.00   50.00   0.					FBO30/841XP/6//SS/ECO																-		
1422    0   1248   6	613.1	Boiler Room	2600	4	(1) 42w CFL Lamp	42	0.17	436.8	\$72.07	4	0	No Change	42	0.17	0%	436.8	\$72.07	\$0.00	\$0.00	0.00	0	\$0.00	0.00
42-21   0	284.21	Court Room	11248	12		192	2.30	25915.392	\$4,276.04	12	0	No Change	192	2.30	0%	25915.392	\$4,276.04	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.212   Skitchenette   1200   4   No Change   60   0.24   288   547.52   4   0   No Change   60   0.24   0.88   547.52   50.00   50.00   0.00   0   50.00   0.00	142.21	0	1248	6	Ballast, Specular Reflector;	86	0.52	643.968	\$106.25	6	0	No Change	86	0.52	0%	643.968	\$106.25	\$0.00	\$0.00	0.00	0	\$0.00	0.00
27.21   Detective Offices   4400   16   Sylvania Lamp FEOGOS41XP6/SSECO   49   0.78   3449.6   \$569.18   16   0   No Change   49   0.78   0%   3449.6   \$569.18   \$0.00   \$0.00   0.00	242.21	0	1248	2	FO28/841/SS/ECO	98	0.20	244.608	\$40.36	2	0	No Change	98	0.20	0%	244.608	\$40.36	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21   Detective Offices   4400   16   Sylvania Lamp FBO30541XP6/SSECO   49   0.78   3449.6   \$569.18   16   0   No Change   49   0.78   0.6   3449.6   \$569.18   \$0.00   \$0.00   0.	227.212	Kitchenette	1200	4	No Change	60	0.24	288	\$47.52	4	0	No Change	60	0.24	0%	288	\$47.52	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Courts 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	227.21	Detective Offices	4400	16		49	0.78	3449.6	\$569.18	16	0	No Change	49	0.78	0%	3449.6	\$569.18	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.11   Evidence Storage   1200   9   FO28/841/SS/ECO   90   0.45   540   589.10   9   0   No Change   50   0.45   0.4	- o manage	Courts 0 0 0 0 0 0 0 0.00 0 \$0.00 0 No Change													0%	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
142.11   Gun Cleaning Room   2600   1   Relamp; (3) Sylvania Lamp   72   0.07   187.2   \$30.89   1   0   No Change   72   0.07   0%   187.2   \$30.89   \$0.00   \$0.00   0.00   0   \$0.00   0.00   0   \$0.00   0.00   0   \$0.00   0   \$0.00   0   \$0.00   0   \$0.00   0   \$0.00   0   \$0.00   0   \$0.00   0   \$0.00   0   \$0.00   0   \$0.00   0   \$0.00   0   \$0.00   0   \$0.00   0   \$0.00   \$0.00   0   \$0.0	221.11															0	\$0.00	0.00					
221.14   Locker Room   2600   9   FO28/841/SS/ECO   50   0.45   11/0   S193.05   9   0   No Change   30   0.45   0.45   0.45   0.45   0.45   0.05   0.00	142.11	Gun Cleaning Room	2600	1	Relamp; (3) Sylvania Lamp	72	0.07	187.2	\$30.89	1	0	No Change	72	0.07	0%	187.2	\$30.89	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Room   200   2   200 CFF Lamp   20   0.05   13.2   32.31   2   0   No Change   20   0.05   0.05   0.05   0.05   0.00	221.14	Locker Room	2600	9		50	0.45	1170	\$193.05	9	0	No Change	50	0.45	0%	1170	\$193.05	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21 Court Entrance 1248 1 Sylvania Lamp FBO30/841XP/6//SS/ECO 49 0.05 61.152 \$10.09 1 0 No Change 49 0.05 0% 61.152 \$10.09 \$0.00 0.00 0 \$0.00 0.00 0 \$0.00 0.00	3015		2600	2	26w CFL Lamp	26	0.05	135.2	\$22.31	2	0	No Change	26	0.05	0%	135.2	\$22.31	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21 Court Entrance 1248 1 FBO30841XP/6//SS/ECO 49 0.05 61.152 \$10.09 1 0 No Change 49 0.05 0% 61.152 \$10.09 \$0.00 \$0.00 0 \$	221.11	Lavatory	2600	1		50	0.05	130	\$21.45	1	0	No Change	50	0.05	0%	130	\$21.45	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21 Court Entrance 1248 1 FB030/841XP16//SS/ECO 49 0.05 61.152 \$10.09 1 0 No Change 49 0.05 0% 61.152 \$10.09 \$0.00 0.00 0 \$0.00 0.00	227.21	Court Entrance	1248	1		49	0.05	61.152	\$10.09	1	0	No Change	49	0.05	0%	61.152	\$10.09	\$0.00	\$0.00	0.00	0	\$0.00	0.00
		Court Entrance	1248	1		49	0.05	61.152	\$10.09	1	0		49	0.05	0%	61.152	\$10.09	\$0.00	\$0.00	0.00	0	\$0.00	0.00

EXISTIN	G LIGHTING								PROPO	SED L	GHTING CONTROLS								SAVING	S		
CEG	Fixture	Yearly	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Controls	Watts	Total	Reduction	kWh/Yr	Yearly	Unit Cost	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Cont.	Description	Used	kW	(%)	Fixtures	\$ Cost	(INSTALLED)	Cost	Savings	Savings	\$ Savings	Payback
227.21	Deal Room	1248	4	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	244.608	\$40.36	4	0	No Change	49	0.20	0%	244.608	\$40.36	\$0.00	\$0.00	0.00	0	\$0.00	0.00
3015	Court Room IT Closet	1200	2	26w CFL Lamp	26	0.05	62.4	\$10.30	2	0	No Change	26	0.05	0%	62.4	\$10.30	\$0.00	\$0.00	0.00	0	\$0.00	0.00
242.11	Court Room Hall	1248	1	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.10	122.304	\$20.18	1	0	No Change	98	0.10	0%	122.304	\$20.18	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	First Floor Corridor	8760	7	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.34	3004.68	\$495.77	7	0	No Change	49	0.34	0%	3004.68	\$495.77	\$0.00	\$0.00	0.00	0	\$0.00	0.00
211.44	Stairway	8760	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.08	657	\$108.41	3	0	No Change	25	0.08	0%	657	\$108.41	\$0.00	\$0.00	0.00	0	\$0.00	0.00
247.211	Garage Hall	0	3	No Change	68	0.20	0	\$0.00	3	0	No Change	68	0.20	0%	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
211.44	Garage	2600	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	25	0.10	260	\$42.90	4	0	No Change	25	0.10	0%	260	\$42.90	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.41	Garage	2600	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	520	\$85.80	4	0	No Change	50	0.20	0%	520	\$85.80	\$0.00	\$0.00	0.00	0	\$0.00	0.00
725	Exterior	4400	16	No Change	188	3.01	13235.2	\$2,183.81	16	0	No Change	188	3.01	0%	13235.2	\$2,183.81	\$0.00	\$0.00	0.00	0	\$0.00	0.00
713	0	4400	12	No Change	125	1.50	6600	\$1,089.00	12	0	No Change	125	1.50	0%	6600	\$1,089.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
	Totals		765			27.5	77,207.3	\$12,739	765	62			21.8		145,042.6	\$23,932.03		\$5,415	5.86	17,064	\$2,816	1.92

CEG Job #: 1C11039 Project: Pool

Monroe Pool KWH COST: \$0.179

#### ECM #1: Lighting Upgrade - General

	LIGHTING									PROI	POSED	LIGHTING								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	(INSTALLED)	Incentive	Cost	Savings	Savings	\$ Savings	Payback
142.11	Office	1100	1	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	156	0.16	171.6	\$30.72	1	3	Delamp 1, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO	85	0.09	93.5	\$16.74	\$100.00	\$20.00	\$100.00	0.07	78.1	\$13.98	7.15
142.11	Men's Rest	2200	2	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	156	0.31	686.4	\$122.87	2	3	Delamp 1, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO	85	0.17	374	\$66.95	\$100.00	\$40.00	\$200.00	0.14	312.4	\$55.92	3.58
242.11	Room	2200	1	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic Lens	107	0.11	235.4	\$42.14	1	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.10	215.6	\$38.59	\$28.00	\$10.00	\$28.00	0.01	19.8	\$3.54	7.90
142.11	Women's Rest	2200	1	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	156	0.16	343.2	\$61.43	1	3	Delamp 1, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO	85	0.09	187	\$33.47	\$100.00	\$20.00	\$100.00	0.07	156.2	\$27.96	3.58
242.11	Room	2200	3	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic Lens	107	0.32	706.2	\$126.41	3	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.29	646.8	\$115.78	\$28.00	\$30.00	\$84.00	0.03	59.4	\$10.63	7.90
242.11	Snack Stand	2200	2	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic Lens	107	0.21	470.8	\$84.27	2	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.20	431.2	\$77.18	\$28.00	\$20.00	\$56.00	0.02	39.6	\$7.09	7.90
613	Pump Room	2200	2	1	Socket, 100w A19 Lamp	100	0.20	440.0	\$78.76	2	1	(1) 26w CFL Lamp	26	0.05	114.4	\$20.48	\$20.00	\$14.00	\$40.00	0.15	325.6	\$58.28	0.69
619	Exterior	4400	1	1	Ceiling Mount Globe, (1) 100w A19 Lamp	100	0.10	440.0	\$78.76	1	1	(1) 26w CFL Lamp	26	0.03	114.4	\$20.48	\$20.00	\$7.00	\$20.00	0.07	325.6	\$58.28	0.34
710		4400	3	1	100w HPS Flood Light	125	0.38	1,650.0	\$295.35	3	0	No Change	125	0.38	1650	\$295.35	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
ı	Totals		16	27			1.94	5,144	\$921	16	23			1.4	3,827	\$685		\$161.00	\$628	0.6	1,317	\$236	2.66

CEG Job #: 9C10076

Project: Public Works Building 1729 Erial Road Public Works Building

KWH COST: \$0.180

Gloucester Township, NJ

**ECM:** Lighting Upgrade - General

	Lighting	Upgr	ade -	Gen	eral																		
EXISTIN	G LIGHTING				1				1	PROI	POSED	LIGHTING								SAVING	S		
CEG Type	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Lamps	Retro-Unit Description	Watts Used	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	Installed Cost	Total Incentive	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simple Payback
237.22	Front Office	2600	14	3	2x2, 3 Lamp, FT40DL/835/RS 40w CFL, Elect. Ballast, Recessed Mnt., Parabolic Lens	110	1.54	4,004.0	\$720.72	14	0	No Change	110	1.54	4004	\$720.72	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Hall	8736	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	2,271.4	\$408.84	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	1712.256	\$308.21	\$100.00	\$0.00	\$100.00	0.06	559.104	\$100.64	0.99
237.22	Lobby	2600	4	3	2x2, 3 Lamp, FT40DL/835/RS 40w CFL, Elect. Ballast, Recessed Mnt., Parabolic Lens	110	0.44	1,144.0	\$205.92	4	0	No Change	110	0.44	1144	\$205.92	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
563		2600	3	1	Recessed Down Light, 26w PL Lamp	26	0.08	202.8	\$36.50	3	0	No Change	26	0.08	202.8	\$36.50	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
237.22	Vestibule	2600	2	3	2x2, 3 Lamp, FT40DL/835/RS 40w CFL, Elect. Ballast, Recessed Mnt., Parabolic Lens	110	0.22	572.0	\$102.96	2	0	No Change	110	0.22	572	\$102.96	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.34	Mechanical Room	1200	4	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Pendant Mnt., No Lens	62	0.25	297.6	\$53.57	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	240	\$43.20	\$56.00	\$40.00	\$16.00	0.05	57.6	\$10.37	1.54
227.21	Hall	8736	3	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.20	1,703.5	\$306.63	3	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.15	1284.192	\$231.15	\$75.00	\$0.00	\$75.00	0.05	419.328	\$75.48	0.99
237.21	Conference Room	350	6	3	2x2, 3 Lamp, FT40DL/835/RS 40w CFL, Elect. Ballast, Recessed Mnt., Parabolic Lens	110	0.66	231.0	\$41.58	6	0	No Change	110	0.66	231	\$41.58	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
237.21	105 Director's Office	2600	6	3	2x2, 3 Lamp, FT40DL/835/RS 40w CFL, Elect. Ballast, Recessed Mnt., Parabolic Lens	110	0.66	1,716.0	\$308.88	6	0	No Change	110	0.66	1716	\$308.88	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Electrical Room	8736	2	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.13	1,135.7	\$204.42	2	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.10	856.128	\$154.10	\$50.00	\$0.00	\$50.00	0.03	279.552	\$50.32	0.99
227.21	Hall	2348	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	610.5	\$109.89	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	460.208	\$82.84	\$100.00	\$0.00	\$100.00	0.06	150.272	\$27.05	3.70
237.22	Supervisor's Office	1200	8	3	2x2, 3 Lamp, FT40DL/835/RS 40w CFL, Elect. Ballast, Recessed Mnt., Parabolic Lens	110	0.88	1,056.0	\$190.08	8	0	No Change	110	0.88	1056	\$190.08	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	110 Lunch Room	8736	7	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.46	3,974.9	\$715.48	7	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.34	2996.448	\$539.36	\$175.00	\$0.00	\$175.00	0.11	978.432	\$176.12	0.99
227.21	Hall	3000	6	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.39	1,170.0	\$210.60	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	882	\$158.76	\$150.00	\$0.00	\$150.00	0.10	288	\$51.84	2.89
746	M109 Building Maintenance	2600	4	1	250w MH LoBay w/Prismatic Lens	295	1.18	3,068.0	\$552.24	4	3	2x4 54w T5HO 3 Lamp, Prismatic Lens	177	0.71	1840.8	\$331.34	\$880.00	\$200.00	\$680.00	0.47	1227.2	\$220.90	3.08

EXISTING	LIGHTING									PRO	POSED	LIGHTING								SAVING	s		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Installed Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
									· ·							,	mstaneu Cost						
Type	Location	Usage	Fixts	Lamps	Type 1x4, 2 Lamp, 32w T8, Elect.	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	<del>                                     </del>	Incentive	Cost	Savings	Savings	\$ Savings	Payback
221.34	Mezzanine	1200	4	2	Ballast, Pendant Mnt., No Lens	62	0.25	297.6	\$53.57	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	240	\$43.20	\$56.00	\$40.00	\$16.00	0.05	57.6	\$10.37	1.54
221.34	Parts - Under Mezzanine	3640	4	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Pendant Mnt., No Lens	62	0.25	902.7	\$162.49	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	728	\$131.04	\$56.00	\$40.00	\$16.00	0.05	174.72	\$31.45	0.51
227.21	Men's Locker Room	3640	5	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.33	1,183.0	\$212.94	5	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.25	891.8	\$160.52	\$125.00	\$0.00	\$125.00	0.08	291.2	\$52.42	2.38
227.21	Men's Showers	3640	3	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.20	709.8	\$127.76	3	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.15	535.08	\$96.31	\$75.00	\$0.00	\$75.00	0.05	174.72	\$31.45	2.38
227.21	Women's Locker Room & Showers	3640	4	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.26	946.4	\$170.35	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	713.44	\$128.42	\$100.00	\$0.00	\$100.00	0.06	232.96	\$41.93	2.38
746	Tool Storage	2600	6	1	250w MH LoBay w/Prismatic Lens	295	1.77	4,602.0	\$828.36	6	3	2x4 54w T5HO 3 Lamp, Prismatic Lens	177	1.06	2761.2	\$497.02	\$1,320.00	\$300.00	\$1,020.00	0.71	1840.8	\$331.34	3.08
221.34	Mezzanine	2600	6	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Pendant Mnt., No Lens	62	0.37	967.2	\$174.10	6	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.30	780	\$140.40	\$84.00	\$60.00	\$24.00	0.07	187.2	\$33.70	0.71
221.34	Parts - Under Mezzanine	2600	4	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Pendant Mnt., No Lens	62	0.25	644.8	\$116.06	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	520	\$93.60	\$56.00	\$40.00	\$16.00	0.05	124.8	\$22.46	0.71
232.21	Restroom	2600	22	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	86	1.89	4,919.2	\$885.46	22	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	74	1.63	4232.8	\$761.90	\$462.00	\$220.00	\$242.00	0.26	686.4	\$123.55	1.96
746	Vehicle	3000	19	1	250w MH LoBay w/Prismatic Lens	295	5.61	16,815.0	\$3,026.70	19	3	2x4 54w T5HO 3 Lamp, Prismatic Lens	177	3.36	10089	\$1,816.02	\$4,180.00	\$950.00	\$3,230.00	2.24	6726	\$1,210.68	2.67
221.34	Maintenance	3000	6	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Pendant Mnt., No Lens	62	0.37	1,116.0	\$200.88	6	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.30	900	\$162.00	\$84.00	\$60.00	\$24.00	0.07	216	\$38.88	0.62
232.21	M105	3000	1	3	2x4, 3 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	86	0.09	258.0	\$46.44	1	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	74	0.07	222	\$39.96	\$21.00	\$10.00	\$11.00	0.01	36	\$6.48	1.70
227.21	Supervisor's Office	3000	1	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	195.0	\$35.10	1	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	147	\$26.46	\$25.00	\$0.00	\$25.00	0.02	48	\$8.64	2.89
221.34	Compressor Room	3000	2	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Pendant Mnt., No Lens	62	0.12	372.0	\$66.96	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	300	\$54.00	\$28.00	\$20.00	\$8.00	0.02	72	\$12.96	0.62
746		3000	2	1	250w MH LoBay w/Prismatic Lens	295	0.59	1,770.0	\$318.60	2	3	2x4 54w T5HO 3 Lamp, Prismatic Lens	177	0.35	1062	\$191.16	\$440.00	\$100.00	\$340.00	0.24	708	\$127.44	2.67
221.34	Parts Bay	3000	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Pendant Mnt., No Lens	62	0.06	186.0	\$33.48	1	0	Remove Fixture	50	0.05	150	\$27.00	\$14.00	\$10.00	\$4.00	0.01	36.0	\$6.48	0.62
221.45	M103 Janitor	800	1	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Wall Mnt., No Lens	62	0.06	49.6	\$8.93	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	40	\$7.20	\$14.00	\$10.00	\$4.00	0.01	9.6	\$1.73	2.31
227.21	Men's Restroom	2600	1	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.07	169.0	\$30.42	1	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.05	127.4	\$22.93	\$25.00	\$0.00	\$25.00	0.02	41.6	\$7.49	3.34
227.21	Women's Restroom	2600	5	2	2x2, 2 Lamp, 32w 700 series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	65	0.33	845.0	\$152.10	5	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.25	637	\$114.66	\$125.00	\$0.00	\$125.00	0.08	208	\$37.44	3.34
711		4400	4	1	70w HPS Bollards	92	0.37	1,619.2	\$291.46	4	0	No Change	92	0.37	1619.2	\$291.46	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
750	Exterior	4400	19	1	250w HPS Wallpack	295	5.61	24,662.0	\$4,439.16	19	0	No Change	295	5.61	24662	\$4,439.16	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
767	EXICTOR	4400	30	1	400w Probe Start MH "Shoebox" Parking Lot Light	460	13.80	60,720.0	\$10,929.60	30	1	Venture Lighting Optiwave Ballast V90U7421K and 320w MH Lamp	349	10.47	46068	\$8,292.24	\$7,500.00	\$750.00	\$6,750.00	3.33	14652	\$2,637.36	2.56

EXISTING	G LIGHTING									PROF	POSED	LIGHTING								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Installed Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost		Incentive	Cost	Savings	Savings	\$ Savings	Payback
601	Exit Signage	8760	14	2	(2) 7w CFL Exit Sign	16	0.22	1,962.2	\$353.20	14	1	LED Exit Sign	2	0.03	245.28	\$44.15	\$910.00	\$0.00	\$910.00	0.20	1716.96	\$309.05	2.94
Old	Public Works	Building	3										0										
242.11	Lobby	800	2	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic Lens	107	0.21	171.2	\$30.82	2	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.20	156.8	\$28.22	\$56.00	\$20.00	\$36.00	0.02	14.4	\$2.59	13.89
242.11	Hall	800	2	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic Lens	107	0.21	171.2	\$30.82	2	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.20	156.8	\$28.22	\$56.00	\$20.00	\$36.00	0.02	14.4	\$2.59	13.89
3015	Restroom	200	1	1	Wall Mnt., Glass Cover, 100w A Lamp	100	0.10	20.0	\$3.60	1	1	26w CFL Lamp	26	0.03	5.2	\$0.94	\$20.00	\$0.00	\$20.00	0.07	14.8	\$2.66	7.51
242.11	Reception	800	2	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic Lens	107	0.21	171.2	\$30.82	2	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.20	156.8	\$28.22	\$56.00	\$20.00	\$36.00	0.02	14.4	\$2.59	13.89
625	Restroom	200	1	2	Fan/Light Combo (2) 100w A Lamp	200	0.20	40.0	\$7.20	1	2	(1) 18w CFL Lamp	36	0.04	7.2	\$1.30	\$20.00	\$0.00	\$20.00	0.16	32.8	\$5.90	3.39
142.11	Front Office	800	2	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	156	0.31	249.6	\$44.93	2	3	Delamp 1, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO	72	0.14	115.2	\$20.74	\$200.00	\$20.00	\$180.00	0.17	134.4	\$24.19	7.44
551	Utility Room	200	1	1	Recessed Down Light, 100w A Lamp	100	0.10	20.0	\$3.60	1	1	26w CFL Lamp	26	0.03	5.2	\$0.94	\$20.00	\$0.00	\$20.00	0.07	14.8	\$2.66	7.51
242.11	Locker/ Lunch Room	800	6	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Surface Mnt., Prismatic Lens	107	0.64	513.6	\$92.45	6	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	0.59	470.4	\$84.67	\$168.00	\$60.00	\$108.00	0.05	43.2	\$7.78	13.89
142.11	Koom	800	5	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	156	0.78	624.0	\$112.32	5	3	Delamp 1, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO	72	0.36	288	\$51.84	\$500.00	\$50.00	\$450.00	0.42	336	\$60.48	7.44
625	Restroom	200	1	2	Fan/Light Combo (2) 100w A Lamp	200	0.20	40.0	\$7.20	1	2	(1) 18w CFL Lamp	36	0.04	7.2	\$1.30	\$20.00	\$0.00	\$20.00	0.16	32.8	\$5.90	3.39
142.11	Files	800	8	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	156	1.25	998.4	\$179.71	8	3	Delamp 1, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO	72	0.58	460.8	\$82.94	\$800.00	\$80.00	\$720.00	0.67	537.6	\$96.77	7.44
3015	Restroom	200	1	1	Wall Mnt., Glass Cover, 100w A Lamp	100	0.10	20.0	\$3.60	1	1	26w CFL Lamp	26	0.03	5.2	\$0.94	\$20.00	\$0.00	\$20.00	0.07	14.8	\$2.66	7.51
142.11	Garage Bay	1200	8	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Surface Mnt., Prismatic Lens	156	1.25	1,497.6	\$269.57	8	3	Delamp 1, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO	72	0.58	691.2	\$124.42	\$800.00	\$80.00	\$720.00	0.67	806.4	\$145.15	4.96
121.14	Large Garage	1200	1	2	1x4, 2-Lamp, 34w T12, Mag. Ballast, Surface Mnt., No Lens	78	0.08	93.6	\$16.85	1	2	2 Lamp, 32w T8, Elect. Ballast; retrofit	58	0.06	69.6	\$12.53	\$100.00	\$0.00	\$100.00	0.02	24	\$4.32	23.15
128.14	Bays	1200	12	2	8' Channel, 2 Lamp, 75w T12, Mag. Ballast, Surface Mnt., No Lens	142	1.70	2,044.8	\$368.06	12	4	(2) 8' Lamps to (4) 4' Lamps - 28w T8, Elect Ballast; retrofit	96	1.15	1382.4	\$248.83	\$1,200.00	\$0.00	\$1,200.00	0.55	662.4	\$119.23	10.06
	Totals		227	74			40.28	155,744	\$26,479	227	59			31.9	120,847	\$20,992	\$16,376	\$2,850	\$13,526	8.4	30,483	\$5,487	2.47

CEG Job #: 9C10076

Project: Public Works Building
Address: 1729 Erial Road
Gloucester Township, NJ
Building SF:

KWH COST: \$0.180

#### **ECM: Lighting Controls**

	Lighting Con												annun										
	G LIGHTING				-		- ·					IGHTING CONTROLS							- ·	SAVING			
CEG	Fixture Location	Yearly Usage	No. Fixts	No. Lamps	Fixture Type	Fixt Watts	Total kW	kWh/Yr Fixtures	Yearly \$ Cost	No. Fixts	No. Cont.	Controls Description	Watts Used	Total kW	Reduction (%)	kWh/Yr Fixtures	Yearly \$ Cost	Unit Cost (INSTALLED)	Total Cost	kW Savings	kWh/Yr Savings	Yearly \$ Savings	Yearly Simpl Payback
237.22	Front Office	2600	14	0	No Change	110	1.54	4004	\$720.72	14	1	Dual Technology Occupancy Sensor - Remote Mnt.	110	1.31	15%	3403.4	\$612.61	\$160.00	\$160.00	0.23	600.6	\$108.11	1.48
227.21	Hall	8736	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	1712.256	\$308.21	4	1	Dual Technology Occupancy Sensor - Remote Mnt.	49	0.04	82%	308.20608	\$55.48	\$160.00	\$160.00	0.16	1404.04992	\$252.73	0.63
237.22	Lobby	2600	4	0	No Change	110	0.44	1144	\$205.92	4	0	No Change	110	0.44	0%	1144	\$205.92	\$0.00	\$0.00	0.00	0	\$0.00	0.00
563 237.22	0 Vestibule	2600 2600	3	0	No Change No Change	26 110	0.08	202.8 572	\$36.50 \$102.96	3	0	No Change No Change	26 110	0.08	0% 0%	202.8 572	\$36.50 \$102.96	\$0.00 \$0.00	\$0.00 \$0.00	0.00	0	\$0.00 \$0.00	0.00
221.34	Mechanical Room	1200	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	240	\$43.20	4	0	No Change	50	0.20	0%	240	\$43.20	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Hall	8736	3	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.15	1284.192	\$231.15	3	1	Dual Technology Occupancy Sensor - Remote Mnt.	49	0.03	82%	231.15456	\$41.61	\$160.00	\$160.00	0.12	1053.03744	\$189.55	0.84
237.21	Conference Room	350	6	0	No Change	110	0.66	231	\$41.58	6	1	Dual Technology Occupancy Sensor - Switch Mnt.	110	0.30	54%	106.26	\$19.13	\$75.00	\$75.00	0.36	124.74	\$22.45	3.34
237.21	105 Director's Office	2600	6	0	No Change	110	0.66	1716	\$308.88	6	0	No Change	110	0.66	0%	1716	\$308.88	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	21 Electrical Room 8736 2 2 Sylvania Lamp FBO30/841XPI6/ISS/ECO 49 0.10 856.128 \$154.10 2 1 Dual Technology Occupancy Sensor - Remote Mnt. 49 0.02 82% 154.10304 \$27.74 \$160.00 \$160.00 0.08 702.02496 \$126.36 1.27															1.27							
227.21	Electrical Robin   6/30   2   2   FB030/841XP/6//SS/ECO   49   0.10   630.126   5134.10   2   1   Sensor - Remote Mint.   49   0.02   62%   134.10304   321.74   3100.00   3100.00   0.06   702.02490   3120.30															6.96							
237.22	Supervisor's Office	1200	8	0	No Change	110	0.88	1056	\$190.08	8	1	Dual Technology Occupancy Sensor - Remote Mnt.	110	0.69	22%	823.68	\$148.26	\$160.00	\$160.00	0.19	232.32	\$41.82	3.83
227.21	110 Lunch Room	8736	7	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.34	2996.448	\$539.36	7	1	Dual Technology Occupancy Sensor - Remote Mnt.	49	0.06	82%	539.36064	\$97.08	\$160.00	\$160.00	0.28	2457.08736	\$442.28	0.36
227.21	Hall	3000	6	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.29	882	\$158.76	6	0	No Change	49	0.29	0%	882	\$158.76	\$0.00	\$0.00	0.00	0	\$0.00	0.00
746	M109 Building Maintenance	2600	4	3	2x4 54w T5HO 3 Lamp, Prismatic Lens	177	0.71	1840.8	\$331.34	4	0	No Change	177	0.71	0%	1840.8	\$331.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
221.34	Mezzanine	1200	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	240	\$43.20	4	1	Dual Technology Occupancy Sensor - Remote Mnt.	50	0.16	20%	192	\$34.56	\$160.00	\$160.00	0.04	48	\$8.64	18.52
221.34	Parts - Under Mezzanine	3640	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	728	\$131.04	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	50	0.16	20%	582.4	\$104.83	\$75.00	\$75.00	0.04	145.6	\$26.21	2.86
227.21	Men's Locker Room	3640	5	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.25	891.8	\$160.52	5	0	No Change	49	0.25	0%	891.8	\$160.52	\$0.00	\$0.00	0.00	0	\$0.00	0.00
227.21	Men's Showers	3640	3	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.15	535.08	\$96.31	3	1	Dual Technology Occupancy Sensor - Switch Mnt.	49	0.12	20%	428.064	\$77.05	\$75.00	\$75.00	0.03	107.016	\$19.26	3.89
227.21	Women's Locker Room & Showers	3640	4	2	Sylvania Lamp FBO30/841XP/6//SS/ECO	49	0.20	713.44	\$128.42	4	0	No Change	49	0.20	0%	713.44	\$128.42	\$0.00	\$0.00	0.00	0	\$0.00	0.00
746	Tool Storage	2600	6	3	2x4 54w T5HO 3 Lamp, Prismatic Lens	177	1.06	2761.2	\$497.02	6	1	Dual Technology Occupancy Sensor - Remote Mnt.	177	0.85	20%	2208.96	\$397.61	\$160.00	\$160.00	0.21	552.24	\$99.40	1.61
221.34	Mezzanine	2600	6	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.30	780	\$140.40	6	1	Dual Technology Occupancy Sensor - Remote Mnt.	50	0.24	20%	624	\$112.32	\$160.00	\$160.00	0.06	156	\$28.08	5.70
221.34	Parts - Under Mezzanine	2600	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	520	\$93.60	4	0	No Change	50	0.20	0%	520	\$93.60	\$0.00	\$0.00	0.00	0	\$0.00	0.00
232.21	Restroom	2600	22	3	Relamp - Sylvania Lamp FO28/841/SS/ECO	74	1.63	4232.8	\$761.90	22	0	No Change	74	1.63	0%	4232.8	\$761.90	\$0.00	\$0.00	0.00	0	\$0.00	0.00
746	Vehicle Maintenance	3000	19	3	2x4 54w T5HO 3 Lamp, Prismatic Lens	177	3.36	10089	\$1,816.02	19	0	No Change	177	3.36	0%	10089	\$1,816.02	\$0.00	\$0.00	0.00	0	\$0.00	0.00
lic Works		1							,			Lighting Controls											4

Public Works 4 of 5

	EXISTIN	G LIGHTING									PROPO	SED LIC	GHTING CONTROLS								SAVING	S		
1971   1972			Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly				Watts	Total	Reduction	kWh/Yr	Yearly	Unit Cost	Total	kW	kWh/Yr	Yearly	Yearly Simple
March   Marc						Relamp - Sylvania Lamp							-			` '								
Control   Cont																		, , , , , ,						
Property	232.21		3000	1	3		/4	0.07	222	\$39.96	1	0	No Change	/4	0.07	0%	222	\$39.96	\$0.00	\$0.00	0.00	0	\$0.00	0.00
1.   1.   1.   1.   1.   1.   1.   1.	227.21	0	3000	1	2	FBO30/841XP/6//SS/ECO	49	0.05	147	\$26.46	1	0	No Change	49	0.05	0%	147	\$26.46	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Part	221.34	Compressor Room	3000	2	2	FO28/841/SS/ECO	50	0.10	300	\$54.00	2	0	No Change	50	0.10	0%	300	\$54.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
March   Miles   Mile		·				Prismatic Lens																	40.00	
Part	221.34	0	3000	1	0		50	0.05	150	\$27.00	1	0	No Change	50	0.05	0%	150	\$27.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
22-22   March Returned   2500   1   2   Proprint STATES   1   0   March Returned   250   10   10   10   10   10   10   10	221.45	M103 Janitor	800	1	2		50	0.05	40	\$7.20	1	0	No Change	50	0.05	0%	40	\$7.20	\$0.00	\$0.00	0.00	0	\$0.00	0.00
2.1.1	227.21	Men's Restroom	2600	1	2		49	0.05	127.4	\$22.93	1	0	No Change	49	0.05	0%	127.4	\$22.93	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Part	227.21	Women's Restroom	2600	5	2		49	0.25	637	\$114.66	5	0	No Change	49	0.25	0%	637	\$114.66	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Part																								
Part	750	0	4400	19	0	No Change	295	5.61	24662	\$4,439.16	19	0	No Change	295	5.61	0%	24662	\$4,439.16	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Part	767	0	4400	30	1	Ballast V90U7421K and	349	10.47	46068	\$8,292.24	30	0	No Change	349	10.47	0%	46068	\$8,292.24	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Principal Problem Prob	601	Exit Signage	8760	14	1	LED Exit Sign	2	0.03	245.28	\$44.15	14	0	No Change	2	0.03	0%	245.28	\$44.15	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Part   Library   Sept   Color   Progress   Library   System   Librar	Public	0	0	0	0	0	0	0.00	0	\$0.00	0	0	No Change	0	0.00	0%	0	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Processed Section   200   1   1   2600 CFL Lamp   26   0.03   5.2   5.094   1   0   No Change   98   0.00	242.11	Lobby	800	2	4	FO28/841/SS/ECO	98	0.20	156.8	\$28.22	2	0	No Change	98	0.20	0%	156.8	\$28.22	\$0.00	\$0.00	0.00	0	\$0.00	0.00
	242.11					FO28/841/SS/ECO																		
FORSHINSECO   1   2   FORSHINSECO   7   5   5   5   5   5   5   5   5   5	3015	Restroom	200	1	1		26	0.03	5.2	\$0.94	1	0	No Change	26	0.03	0%	5.2	\$0.94	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Hazari   Front Office   Rob   2   3   Delamp I, Reballast & Relamp; (3) Sylvania Lamp FO2884I/SECO   72   0.14   115.2   S20.74   2   0   No Change   72   0.14   0%   115.2   S20.74   S0.00   S0.00   0.0	242.11	Reception	800	2	4		98	0.20	156.8	\$28.22	2	0	No Change	98	0.20	0%	156.8	\$28.22	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Hard   Front Office   Roo   2   3   Relange; (3) Sylvania Lamp   72   0.4   115.2   520.74   2   0   No Change   72   0.14   0.6   115.2   520.74   50.00   50.00   0.00	625	Restroom	200	1	2	(1) 18w CFL Lamp	36	0.04	7.2	\$1.30	1	0	No Change	36	0.04	0%	7.2	\$1.30	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Locker Lunch Room   R	142.11	Front Office	800	2	3	Relamp; (3) Sylvania Lamp	72	0.14	115.2	\$20.74	2	0	No Change	72	0.14	0%	115.2	\$20.74	\$0.00	\$0.00	0.00	0	\$0.00	0.00
142.11	551	Utility Room	200	1	1	26w CFL Lamp	26	0.03	5.2	\$0.94	1	0	No Change	26	0.03	0%	5.2	\$0.94	\$0.00	\$0.00	0.00	0	\$0.00	0.00
142.11   0   800   5   3   Relamp; (3) Sylvania Lamp   72   0.36   288   \$51.84   5   0   No Change   72   0.36   0%   288   \$51.84   \$0.00   \$0.00   0.00   0   \$0.00   0.00   0   \$0.00   0   \$0.00   0.00   0   \$0.00   \$0.00   0   \$0.00   \$0.00   0   \$0.00	242.11		800	6	4		98	0.59	470.4	\$84.67	6	0	No Change	98	0.59	0%	470.4	\$84.67	\$0.00	\$0.00	0.00	0	\$0.00	0.00
142.11   Files   800   8   3   Delamp I, Reballast & Relamp; (3) Sylvania Lamp FO28/84 I/SS/ECO   72   0.58   460.8   \$82.94   8   0   No Change   72   0.58   0%   460.8   \$82.94   \$0.00   \$0.00   0.00	142.11	0	800	5	3	Relamp; (3) Sylvania Lamp	72	0.36	288	\$51.84	5	0	No Change	72	0.36	0%	288	\$51.84	\$0.00	\$0.00	0.00	0	\$0.00	0.00
142.11       Files       800       8       3       Relamp; (3) Sylvania Lamp FO28/841/SS/ECO       72       0.58       460.8       \$82.94       8       0       No Change       72       0.58       0%       460.8       \$82.94       800       0       50.00       50.00       0.00       0       50.00       0.00       0 <td>625</td> <td>Restroom</td> <td>200</td> <td>1</td> <td>2</td> <td>(1) 18w CFL Lamp</td> <td>36</td> <td>0.04</td> <td>7.2</td> <td>\$1.30</td> <td>1</td> <td>0</td> <td>No Change</td> <td>36</td> <td>0.04</td> <td>0%</td> <td>7.2</td> <td>\$1.30</td> <td>\$0.00</td> <td>\$0.00</td> <td>0.00</td> <td>0</td> <td>\$0.00</td> <td>0.00</td>	625	Restroom	200	1	2	(1) 18w CFL Lamp	36	0.04	7.2	\$1.30	1	0	No Change	36	0.04	0%	7.2	\$1.30	\$0.00	\$0.00	0.00	0	\$0.00	0.00
142.11   Garage Bay   1200   8   3   Delamp I, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO   72   0.58   691.2   \$124.42   8   0   No Change   72   0.58   0%   691.2   \$124.42   \$0.00   \$0.00   0.00   0   \$0.00   0.00   0.00   0.00   0.00   0   0	142.11	Files	800	8	3	Relamp; (3) Sylvania Lamp	72	0.58	460.8	\$82.94	8	0	No Change	72	0.58	0%	460.8	\$82.94	\$0.00	\$0.00	0.00	0	\$0.00	0.00
142.11   Garage Bay   1200   8   3   Delamp I, Reballast & Relamp; (3) Sylvania Lamp FO28/841/SS/ECO   72   0.58   691.2   \$124.42   8   0   No Change   72   0.58   0%   691.2   \$124.42   \$0.00   \$0.00   0.00   0   \$0.00   0.00   0.00   0.00   0.00   0   0	3015	Restroom	200	1	1	26w CFL Lamp	26	0.03	5.2	\$0.94	1	0	No Change	26	0.03	0%	5.2	\$0.94	\$0.00	\$0.00	0.00	0	\$0.00	0.00
121.14 Large Garage Bays 1200 1 2 Ballast; retrofit 58 0.06 09.6 \$12.53 1 1 No Change 58 0.06 09.6 \$12.53 \$0.00 0.00 0.00 0 0.00 0 0.00 0.00 0.0						Delamp 1, Reballast & Relamp; (3) Sylvania Lamp																		
128.14 0 1200 12 4 - 28w T8, Elect Ballast; 96 1.15 1382.4 \$248.83 12 2 No Change 96 1.15 0% 1382.4 \$248.83 \$0.00 \$0.00 0.00 0 \$0.00 0.00	121.14	Large Garage Bays	1200	1	2		58	0.06	69.6	\$12.53	1	1	No Change	58	0.06	0%	69.6	\$12.53	\$0.00	\$0.00	0.00	0	\$0.00	0.00
Totals 227 74 34.9 120,847.0 \$21,491 281 13 33.1 113,204.5 \$20,115.45 \$1,740 1.83 7,643 \$1,376 1.26	128.14	0	1200	12	4	- 28w T8, Elect Ballast;	96	1.15	1382.4	\$248.83	12	2	No Change	96	1.15	0%	1382.4	\$248.83	\$0.00	\$0.00	0.00	0	\$0.00	0.00
		Totals		227	74			34.9	120,847.0	\$21,491	281	13			33.1		113,204.5	\$20,115.45		\$1,740	1.83	7,643	\$1,376	1.26

Public Works Lighting Controls 5 of 5

CEG Job #: 1C11039

Project: Recreation Center Recreation Center KWH COST: \$0.181

ECM:	Lighting U	pgrad	le - (	Gen	eral																			
EXISTING	G LIGHTING									PRO	POSED	LIGHTING								SAVING	S			
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Incentive	Total	kW	kWh/Yr	Yearly	Yearly Simple	In Scope (D)
Type	Location	Usage	Fixts	Lamps	Туре	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	(INSTALLED)		Cost	Savings	Savings	\$ Savings	Payback	
1142.21		2340	4	2	1x4, 2-Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.31	730.1	\$132.14	4	2	T8 2 Lamp w/Electronic Ballast & Reflector	55	0.22	514.8	\$93.18	\$68.71	\$80.00	\$274.84	0.09	215.28	\$38.97	7.05	D
121.14	Hockey Rink	2340	10	2	1x4, 2-Lamp, 34w T12, Mag. Ballast, Surface Mnt., No Lens	78	0.78	1,825.2	\$330.36	10	2	2 Lamp, 32w T8, Elect. Ballast; retrofit	58	0.58	1357.2	\$245.65	\$100.00	\$0.00	\$1,000.00	0.20	468	\$84.71	11.81	
771		2340	43	2	400w MH & 250 HPS Indirect Lighting	760	32.68	76,471.2	\$13,841.29	43	6	2x4, 6 Lamp, 32w T8, Elect. Ballast, Lo Bay w/Wire Guard	220	9.46	22136.4	\$4,006.69	\$260.00	\$0.00	\$11,180.00	23.22	54334.8	\$9,834.60	1.14	
1601		8760	6	2	(2) 7w CFL Exit Sign	16	0.10	841.0	\$152.21	6	1	LED Exit Sign	2	0.01	105.12	\$19.03	\$132.46	\$60.00	\$794.76	0.08	735.84	\$133.19	5.97	D
1121.14	Games Storage	3796	8	1	Square, Wall Mntd. Down Light, 75w R30	75	0.60	2,277.6	\$412.25	8	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.21	789.568	\$142.91	\$20.00	\$0.00	\$160.00	0.39	1488.032	\$269.33	0.59	D
1121.14	Electrical Room	2200	8	1	Square, Wall Mntd. Down Light, 75w R30	75	0.60	1,320.0	\$238.92	8	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.21	457.6	\$82.83	\$20.00	\$0.00	\$160.00	0.39	862.4	\$156.09	1.03	D
1132.21	Lobby	2340	6	3	2x4, 3-Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	127	0.76	1,783.1	\$322.74	6	3	T8 3 Lamp w/Electronic Ballast & Reflector	84	0.50	1179.36	\$213.46	\$277.42	\$120.00	\$1,664.52	0.26	603.72	\$109.27	15.23	D
1601		8760	2	2	(2) 7w CFL Exit Sign	16	0.03	280.3	\$50.74	2	1	LED Exit Sign	2	0.00	35.04	\$6.34	\$132.46	\$20.00	\$264.92	0.03	245.28	\$44.40	5.97	D
D142.21	Vestibule	2340	2	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	156	0.31	730.1	\$132.14	2	3	T8 3 Lamp w/Electronic Ballast & Reflector	84	0.17	393.12	\$71.15	\$277.42	\$40.00	\$554.84	0.14	336.96	\$60.99	9.10	D
1601		8760	2	2	(2) 7w CFL Exit Sign	16	0.03	280.3	\$50.74	2	1	LED Exit Sign	2	0.00	35.04	\$6.34	\$132.46	\$20.00	\$264.92	0.03	245.28	\$44.40	5.97	D
1132.21	Business Office/ Reception Area	2080	4	3	2x4, 3-Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	127	0.51	1,056.6	\$191.25	4	3	T8 3 Lamp w/Electronic Ballast & Reflector	84	0.34	698.88	\$126.50	\$277.42	\$80.00	\$1,109.68	0.17	357.76	\$64.75	17.14	D
1142.21	Break Room	2080	2	2	1x4, 2-Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	78	0.16	324.5	\$58.73	2	2	T8 2 Lamp w/Electronic Ballast & Reflector	55	0.11	228.8	\$41.41	\$68.71	\$40.00	\$137.42	0.05	95.68	\$17.32	7.94	D
1132.21	Business Office	2080	4	3	2x4, 3-Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	127	0.51	1,056.6	\$191.25	4	3	T8 3 Lamp w/Electronic Ballast & Reflector	84	0.34	698.88	\$126.50	\$277.42	\$80.00	\$1,109.68	0.17	357.76	\$64.75	17.14	D
550	Business Office	2080	1	1	Recessed Down Light, 50w MH Lamp	70	0.07	145.6	\$26.35	1	1	Bypass ballast. Install socket adapter and 26w CFL Flood Lamp	26	0.03	54.08	\$9.79	\$30.00	\$0.00	\$30.00	0.04	91.52	\$16.57	1.81	
D142.21	Ticket Office	3400	1	4	2x4, 4 Lamp, 34w T12, Mag. Ballast, Recessed Mnt., Prismatic Lens	156	0.16	530.4	\$96.00	1	3	T8 3 Lamp w/Electronic Ballast & Reflector	84	0.08	285.6	\$51.69	\$277.42	\$20.00	\$277.42	0.07	244.8	\$44.31	6.26	D
1122.21	Men's Rest	2340	3	1	Square, Wall Mntd. Down Light, 75w R30	75	0.23	526.5	\$95.30	3	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.08	182.52	\$33.04	\$20.00	\$0.00	\$60.00	0.15	343.98	\$62.26	0.96	D
1121.21	Room	2340	6	1	Square, Wall Mntd. Down Light, 75w R30	75	0.45	1,053.0	\$190.59	6	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.16	365.04	\$66.07	\$20.00	\$0.00	\$120.00	0.29	687.96	\$124.52	0.96	D
1122.21	Women's Rest	2340	3	1	Square, Wall Mntd. Down Light, 75w R30	75	0.23	526.5	\$95.30	3	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.08	182.52	\$33.04	\$20.00	\$0.00	\$60.00	0.15	343.98	\$62.26	0.96	D
1121.21	Room	2340	6	1	Square, Wall Mntd. Down Light, 75w R30	75	0.45	1,053.0	\$190.59	6	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.16	365.04	\$66.07	\$20.00	\$0.00	\$120.00	0.29	687.96	\$124.52	0.96	D
750		4400	6	1	250w HPS Wallpack	295	1.77	7,788.0	\$1,409.63	6	0	No Change	295	1.77	7788	\$1,409.63	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
767	Exterior	4400	6	1	400w Probe Start MH "Shoebox" Parking Lot Light	460	2.76	12,144.0	\$2,198.06	6	1	Venture Lighting Optiwave Ballast V90U7421K and 320w MH Lamp	349	2.09	9213.6	\$1,667.66	\$160.00	\$0.00	\$960.00	0.67	2930.4	\$530.40	1.81	
705	LACIO	4400	2	1	70w MH, Architectural Wall Mnt.	92	0.18	809.6	\$146.54	2	0	No Change	92	0.18	809.6	\$146.54	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
705		4400	11	1	70w MH, Architectural Wall Mnt.	92	1.01	4,452.8	\$805.96	11	0	No Change	92	1.01	4452.8	\$805.96	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00	
	Totals		146	40			44.68	118,006	\$21,359	146	38			17.8	52,329	\$9,471			\$20,303	26.9	65,677	\$11,888	1.71	

Recreation Center KWH COST: \$0.181

#### **ECM: Lighting Controls**

EXISTING	G LIGHTING									PROPO	SED LI	GHTING CONTROLS								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Controls	Watts	Total	Reduction	kWh/Yr	Yearly	Unit Cost	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Cont.	Description	Used	kW	(%)	Fixtures	\$ Cost	(INSTALLED)	Cost	Savings	Savings	\$ Savings	Payback
1142.21		2340	4	2	T8 2 Lamp w/Electronic Ballast & Reflector	55	0.22	514.8	\$93.18	4	0	No Change	55	0.22	0%	514.8	\$93.18	\$0.00	\$0.00	0.00	0	\$0.00	0.00
121.14		2340	10	2	2 Lamp, 32w T8, Elect. Ballast; retrofit	58	0.58	1357.2	\$245.65	10	0	No Change	58	0.58	0%	1357.2	\$245.65	\$0.00	\$0.00	0.00	0	\$0.00	0.00
771	Hockey Rink	2340	43	6	2x4, 6 Lamp, 32w T8, Elect. Ballast, Lo Bay w/Wire Guard	220	9.46	22136.4	\$4,006.69	43	0	Packaged Occupancy Senso Option w/ New Fixture in ECM #1	220	7.57	20%	17709.12	\$3,205.35	\$50.00	\$2,150.00	1.89	4427.28	\$801.34	2.68
1601	F	8760	6	2	LED Exit Sign	2	0.01	105.12	\$19.03	6	0	No Change	2	0.01	0%	105.12	\$19.03	\$0.00	\$0.00	0.00	0	\$0.00	0.00
1121.14	Games Storage	3796	8	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.21	789.568	\$142.91	8	1	Dual Technology Occupancy Sensor - Switch Mnt.	26	0.03	86%	110.53952	\$20.01	\$75.00	\$75.00	0.18	679.02848	\$122.90	0.61
1121.14	Electrical Room	2200	8	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.21	457.6	\$82.83	8	1	Dual Technology Occupancy Sensor - Switch Mnt.	26	0.10	54%	210.496	\$38.10	\$75.00	\$75.00	0.11	247.104	\$44.73	1.68
1132.21	Lobby	2340	6	3	T8 3 Lamp w/Electronic Ballast & Reflector	84	0.50	1179.36	\$213.46	6	0	No Change	84	0.50	0%	1179.36	\$213.46	\$0.00	\$0.00	0.00	0	\$0.00	0.00
1601		8760	2	2	LED Exit Sign	2	0.00	35.04	\$6.34	2	0	No Change	2	0.00	0%	35.04	\$6.34	\$75.00	\$0.00	0.00	0	\$0.00	0.00
D142.21	Vestibule	2340	2	4	T8 3 Lamp w/Electronic Ballast & Reflector	84	0.17	393.12	\$71.15	2	0	No Change	84	0.17	0%	393.12	\$71.15	\$0.00	\$0.00	0.00	0	\$0.00	0.00
1601		8760	2	2	LED Exit Sign	2	0.00	35.04	\$6.34	2	0	No Change	2	0.00	0%	35.04	\$6.34	\$0.00	\$0.00	0.00	0	\$0.00	0.00
1132.21	Business Office/ Reception Area	2080	4	3	T8 3 Lamp w/Electronic Ballast & Reflector	84	0.34	698.88	\$126.50	4	1	Dual Technology Occupancy Sensor - Switch Mnt.	84	0.33	3%	677.9136	\$122.70	\$75.00	\$75.00	0.01	20.9664	\$3.79	19.76
1142.21	Break Room	2080	2	2	T8 2 Lamp w/Electronic Ballast & Reflector	55	0.11	228.8	\$41.41	2	1	Dual Technology Occupancy Sensor - Switch Mnt.	55	0.11	3%	221.936	\$40.17	\$75.00	\$75.00	0.00	6.864	\$1.24	60.37
1132.21		2080	4	3	T8 3 Lamp w/Electronic Ballast & Reflector	84	0.34	698.88	\$126.50	4	1	Install	84	0.33	3%	677.9136	\$122.70	\$75.00	\$75.00	0.01	20.9664	\$3.79	19.76
550	Business Office	2080	1	1	Bypass ballast. Install socke adapter and 26w CFL Flood Lamp	26	0.03	54.08	\$9.79	1	0	No Change	26	0.03	0%	54.08	\$9.79	\$0.00	\$0.00	0.00	0	\$0.00	0.00
D142.21	Ticket Office	3400	1	4	T8 3 Lamp w/Electronic Ballast & Reflector	84	0.08	285.6	\$51.69	1	1	Dual Technology Occupancy Sensor - Remote Mnt.	84	0.07	20%	228.48	\$41.35	\$160.00	\$160.00	0.02	57.12	\$10.34	15.48
1122.21	Men's Rest Room	2340	3	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.08	182.52	\$33.04	3	1	Dual Technology Occupancy	26	0.02	70%	54.756	\$9.91	\$160.00	\$160.00	0.05	127.764	\$23.13	2.31
1121.21	Men's Rest Room	2340	6	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.16	365.04	\$66.07	6		Sensor - Remote Mnt.	26	0.05	70%	109.512	\$19.82	\$100.00	\$0.00	0.11	255.528	\$46.25	2.31
1122.21	Women's Rest	2340	3	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.08	182.52	\$33.04	3	1	Dual Technology Occupancy	26	0.02	70%	54.756	\$9.91	\$160.00	\$160.00	0.05	127.764	\$23.13	2.31
1121.21	Room	2340	6	1	Energy Star Rated, Dimmable 26w CFL Lamp	26	0.16	365.04	\$66.07	6	1	Sensor - Remote Mnt.	26	0.05	70%	109.512	\$19.82	\$100.00	\$0.00	0.11	255.528	\$46.25	2.31
750		4400	6	1	No Change	295	1.77	7788	\$1,409.63	6	0	No Change	295	1.77	0%	7788	\$1,409.63	\$0.00	\$0.00	0.00	0	\$0.00	0.00
767	Exterior	4400	6	1	Venture Lighting Optiwave Ballast V90U7421K and 320w MH Lamp	349	2.09	9213.6	\$1,667.66	6	0	No Change	349	2.09	0%	9213.6	\$1,667.66	\$0.00	\$0.00	0.00	0	\$0.00	0.00
705	ļ	4400	2	1	No Change	92	0.18	809.6	\$146.54	2	0	No Change	92	0.18	0%	809.6	\$146.54	\$0.00	\$0.00	0.00	0	\$0.00	0.00
705	ļ	4400	11	1	No Change	92	1.01	4452.8	\$805.96	11	0	No Change	92	1.01	0%	4452.8	\$805.96	\$0.00	\$0.00	0.00	0	\$0.00	0.00
	Totals		146	40			16.6	52,328.6	\$8,519	133	8			14.0		46,102.7	\$7,392.09		\$3,005	2.55	6,226	\$1,127	2.67

CEG Job #: 1C11039

KWH COST: \$0.237 Project: Senior Center Senior Center

**ECM: Lighting Upgrade - General** 

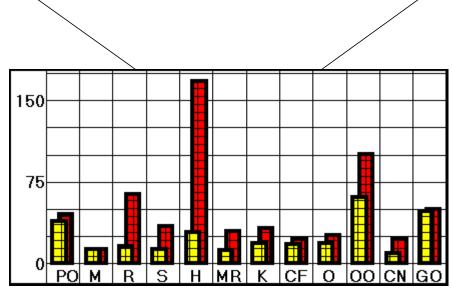
	G LIGHTING	,								PROI	POSED	LIGHTING								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Retro-Unit	Watts	Total	kWh/Yr	Yearly	Unit Cost	Total	Total	kW	kWh/Yr	Yearly	Yearly Simple
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Lamps	Description	Used	kW	Fixtures	\$ Cost	(INSTALLED)	Incentive	Cost	Savings	Savings	\$ Savings	Payback
242.21	Assembly Room	1040	24	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	107	2.57	2,670.7	\$632.96	24	4	Relamp - Sylvania Lamp FO28/841/SS/ECO	98	2.35	2446.08	\$579.72	\$28.00	\$240.00	\$672.00	0.22	224.64	\$53.24	12.62
222.21	Kitchen	520	4	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.25	129.0	\$30.56	4	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.20	104	\$24.65	\$14.00	\$40.00	\$56.00	0.05	24.96	\$5.92	9.47
617	1	120	1	1	Hood Light w/Globe & Cage, 100w A19 Lamp	100	0.10	12.0	\$2.84	1	1	(1) 26w CFL Lamp	26	0.03	3.12	\$0.74	\$20.00	\$7.00	\$20.00	0.07	8.88	\$2.10	9.50
221.44	Utility Room	520	2	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Wall Mnt., No Lens	62	0.12	64.5	\$15.28	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	52	\$12.32	\$14.00	\$20.00	\$28.00	0.02	12.48	\$2.96	9.47
221.21	Men's Rest Room	1040	2	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	129.0	\$30.56	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	104	\$24.65	\$14.00	\$20.00	\$28.00	0.02	24.96	\$5.92	4.73
221.14	Custodial Closet	520	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., No Lens	62	0.06	32.2	\$7.64	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	26	\$6.16	\$14.00	\$10.00	\$14.00	0.01	6.24	\$1.48	9.47
221.21	Women's Rest Room	1040	2	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.12	129.0	\$30.56	2	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.10	104	\$24.65	\$14.00	\$20.00	\$28.00	0.02	24.96	\$5.92	4.73
221.14	Closet	520	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., No Lens	62	0.06	32.2	\$7.64	1	2	Relamp - Sylvania Lamp FO28/841/SS/ECO	50	0.05	26	\$6.16	\$14.00	\$10.00	\$14.00	0.01	6.24	\$1.48	9.47
725	Exterior	4400	7	1	150w HPS Wallpack	188	1.32	5,790.4	\$1,372.32	7	0	No Change	188	1.32	5790.4	\$1,372.32	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
711		4400	5	1	70w HPS Bollards	92	0.46	2,024.0	\$479.69	5	0	No Change	92	0.46	2024	\$479.69	\$0.00	\$0.00	\$0.00	0.00	0	\$0.00	0.00
	Totals		49	19			5.19	11,013	\$2,610	49	17			4.8	10,680	\$2,531		\$367	\$860	0.4	333	\$79	10.89

#### **ECM: Lighting Controls**

EXISTIN	G LIGHTING									PROPO	SED L	IGHTING CONTROLS								SAVING	S		
CEG	Fixture	Yearly	No.	No.	Fixture	Fixt	Total	kWh/Yr	Yearly	No.	No.	Controls	Watts	Total	Reduction	kWh/Yr	Yearly	Unit Cost	Total	kW	kWh/Yr	Yearly	
Type	Location	Usage	Fixts	Lamps	Type	Watts	kW	Fixtures	\$ Cost	Fixts	Cont.	Description	Used	kW	(%)	Fixtures	\$ Cost	(INSTALLED)	Cost	Savings	Savings	\$ Savings	
242.21	Assembly Room	1040	24	4	2x4, 4 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	107	2.568	2670.72	\$632.96	24	1	No Change	107	2.57	0%	2670.72	\$632.96	\$225.00	\$225.00	0.00	0	\$0.00	
222.21	Kitchen	520	4	2	2x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.248	128.96	\$30.56	4	1	No Change	62	0.25	0%	128.96	\$30.56	\$75.00	\$75.00	0.00	0	\$0.00	
617		120	1	1	Hood Light w/Globe & Cage, 100w A19 Lamp	100	0.1	12	\$2.84	1	0	No Change	100	0.10	0%	12	\$2.84	\$0.00	\$0.00	0.00	0	\$0.00	
221.44	Utility Room	520	2	2	1x4, 2 Lamp, 32w 700 Series T8, Elect. Ballast, Wall Mnt., No Lens	62	0.124	64.48	\$15.28	2	0	No Change	62	0.12	0%	64.48	\$15.28	\$0.00	\$0.00	0.00	0	\$0.00	
221.21	Men's Rest Room	1040	2	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Recessed Mnt., Prismatic Lens	62	0.124	128.96	\$30.56	2	0	No Change	62	0.12	0%	128.96	\$30.56	\$75.00	\$0.00	0.00	0	\$0.00	
221.14	Custodial Closet	520	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., No Lens	62	0.062	32.24	\$7.64	1	0	No Change	62	0.06	0%	32.24	\$7.64	\$75.00	\$0.00	0.00	0	\$0.00	
221.21	Women's Rest Room	1040	2	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Recessed	62	0.124	128.96	\$30.56	2	0	No Change	62	0.12	0%	128.96	\$30.56	\$0.00	\$0.00	0.00	0	\$0.00	
221.14	Closet	520	1	2	1x4, 2 Lamp, 32w T8, Elect. Ballast, Surface Mnt., No Lens	62	0.062	32.24	\$7.64	1	0	No Change	62	0.06	0%	32.24	\$7.64	\$160.00	\$0.00	0.00	0	\$0.00	·
725	Exterior	4400	7	1	150w HPS Wallpack	188	1.316	5790.4	\$1,372.32	7	0	No Change	188	1.32	0%	5790.4	\$1,372.32	\$0.00	\$0.00	0.00	0	\$0.00	
711	Exterior	4400	5	1	70w HPS Bollards	92	0.46	2024	\$479.69	5	0	No Change	92	0.46	0%	2024	\$479.69	\$0.00	\$0.00	0.00	0	\$0.00	
	Totals		49	19			5.2	11,013.0	\$2,610	49	2			5.2		11,013.0	\$2,610.07		\$300	0.00	0	\$0	

Area Type Averages
Concord Engineering, Gloucester Township ESIP

Area Type Av	erag	es		No	ormalized	d Weekly	Lights 0	)n	No	ormalized	d Weekly	/ Оссиріє	ed	
Area Type		Qty	Watts	Peak	Off	Shldr 1	Shldr 2	Total	Peak	Off	Shldr 1	Shldr 2	Total	% sav
Private Office	PO	1	40	27.64	17.51	0.00	0.00	45.15	25.02	14.26	0.00	0.00	39.29	12.98%
Meeting Rooms	М	1	32	8.94	4.15	0.00	0.00	13.10	8.94	4.15	0.00	0.00	13.10	0.00%
Restroom	R	4	30	42.42	21.50	0.00	0.00	63.91	13.58	2.26	0.00	0.00	15.84	75.22%
Storage	S	4	33	23.37	11.35	0.00	0.00	34.71	12.57	0.20	0.00	0.00	12.77	63.21%
Hallway	Н	1	40	70.00	98.00	0.00	0.00	168.00	22.10	6.82	0.00	0.00	28.92	82.79%
Mechanical	MB	2	33	24.28	5.50	0.00	0.00	29.77	11.50	0.37	0.00	0.00	11.86	60.16%
Kitchen	K	6	32	26.08	6.35	0.00	0.00	32.43	16.40	2.74	0.00	0.00	19.14	40.98%
Cafeteria	CF	1	32	10.97	11.97	0.00	0.00	22.94	7.49	10.31	0.00	0.00	17.80	22.41%
Office	0	10	33	23.89	2.36	0.00	0.00	26.25	17.68	0.97	0.00	0.00	18.65	28.95%
Open Office	00	4	34	51.04	49.75	0.00	0.00	100.79	40.24	20.97	0.00	0.00	61.20	39.28%
Conference	CN	4	34	22.00	0.41	0.00	0.00	22.41	9.62	0.15	0.00	0.00	9.77	56.40%
General Office	GO	2	33	43.55	6.25	0.00	0.00	49.79	42.24	6.02	0.00	0.00	48.25	3.09%
Building Average for	40 rc	oms	1322	30.27	14.23		0.00	44.50	18.92	4.34		0.00	23.26	47.73%



Hours per Week for each Area Type

### Data Logger Detail for Concord Engineering, Gloucester Township ESIP Page 1 of 1

	All Loggers Listed			Но	urs Instal	led					ı	ights On					Occupied		
Logger	Room Location	Ty	Total	Peak	Off	Shldr 1	Shldr 2	Installed	Removed	Peak	Off	Shldr 1	Shldr 2	Total	Peak	Off	Shldr 1	Shldr 2	Total
EDFC	Academy Hall 2nd Flr Break	K	0.05	0.05	0.00	0.00	0.00	8/22/11 12:29 PM	8/22/11 12:31 PM	0.03	0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.03
EE5A	Academy Hall 2nd Flr Office	0	356.53	150.53	206.00	0.00	0.00	8/22/11 12:29 PM	9/06/11 9:00 AM	15.93	10.00	0.00	0.00	25.93	9.17	0.00	0.00	0.00	9.17
EE1C	Academy Hall 3rd Flr Left Office	0	356.48	150.48	206.00	0.00	0.00	8/22/11 12:32 PM	9/06/11 9:00 AM	28.00	0.00	0.00	0.00	28.00	17.70	0.00	0.00	0.00	17.70
EEB0	Academy Hall Det. Sgt Office	0	356.72	150.72	206.00	0.00	0.00	8/22/11 12:18 PM	9/06/11 9:00 AM	2.93	0.00	0.00	0.00	2.93	1.97	0.00	0.00	0.00	1.97
EEDB	Academy Hall Storage	S	240.12	112.12	128.00	0.00	0.00	8/22/11 12:23 PM	9/01/11 12:29 PM	4.23	0.00	0.00	0.00	4.23	1.23	0.00	0.00	0.00	1.23
F015	Library Circulation Office	GO	356.82	150.82	206.00	0.00	0.00	8/22/11 12:12 PM	9/06/11 9:00 AM	105.63	22.08	0.00	0.00	127.72	102.32	21.30	0.00	0.00	123.62
ED71	Library Lounge	K	356.63	150.63	206.00	0.00	0.00	8/22/11 12:23 PM	9/06/11 9:00 AM	99.42	19.00	0.00	0.00	118.42	43.67	8.87	0.00	0.00	52.53
EDBA	Library Mens Room	R	356.82	150.82	206.00	0.00	0.00	8/22/11 12:12 PM	9/06/11 9:00 AM	113.08	27.33	0.00	0.00	140.42	48.03	10.20	0.00	0.00	58.23
EFF3	Municipal Clerk Licensing Office	0	359.08	153.08	206.00	0.00	0.00	8/22/11 9:56 AM	9/06/11 9:00 AM	82.98	1.47	0.00	0.00	84.45	67.95	1.47	0.00	0.00	69.42
EFE5	Municipal Clerk Office	00	359.22	153.22	206.00	0.00	0.00	8/22/11 9:48 AM	9/06/11 9:00 AM	153.22	206.00	0.00	0.00	359.22	79.58	3.90	0.00	0.00	83.48
EE5C	Municipal Clerk Office	CN	359.07	153.07	206.00	0.00	0.00	8/22/11 9:57 AM	9/06/11 9:00 AM	81.83	0.40	0.00	0.00	82.23	31.07	0.40	0.00	0.00	31.47
EDA3	Municipal Construction File	S	358.62	152.62	206.00	0.00	0.00	8/22/11 10:24 AM	9/06/11 9:00 AM	44.27	0.10	0.00	0.00	44.37	41.17	0.10	0.00	0.00	41.27
EDE8	Municipal Construction Office	0	358.73	152.73	206.00	0.00	0.00	8/22/11 10:17 AM	9/06/11 9:00 AM	76.23	1.47	0.00	0.00	77.70	60.37	1.47	0.00	0.00	61.83
EFEF	Municipal Constuction Offices	K	358.72	152.72	206.00	0.00	0.00	8/22/11 10:18 AM	9/06/11 9:00 AM	73.90	4.37	0.00	0.00	78.27	36.97	2.83	0.00	0.00	39.80
EEE4	Municipal Electrical Room	MB	358.83	152.83	206.00	0.00	0.00	8/22/11 10:11 AM	9/06/11 9:00 AM	10.80	10.00	0.00	0.00	20.80	2.60	0.00	0.00	0.00	2.60
ED69	Municipal Mayor Conference	CN	358.68	152.68	206.00	0.00	0.00	8/22/11 10:20 AM	9/06/11 9:00 AM	21.60	0.00	0.00	0.00	21.60	19.23	0.00	0.00	0.00	19.23
EE56	Municipal Mayors Office	0	359.05	153.05	206.00	0.00	0.00	8/22/11 9:58 AM	9/06/11 9:00 AM	84.35	7.27	0.00	0.00	91.62	40.38	2.30	0.00	0.00	42.68
ED77	Municipal Mayors Office	K	358.95	152.95	206.00	0.00	0.00	8/22/11 10:04 AM	9/06/11 9:00 AM	16.77	0.40	0.00	0.00	17.17	8.53	0.23	0.00	0.00	8.77
EDC3	Municipal Mens Room	R	359.27	153.27	206.00	0.00	0.00	8/22/11 9:45 AM	9/06/11 9:00 AM	93.43	81.12	0.00	0.00	174.55	29.83	1.48	0.00	0.00	31.32
EDB3	Municipal Tax Office Corner	0	359.43	153.43	206.00	0.00	0.00	8/22/11 9:35 AM	9/06/11 9:00 AM	65.50	0.57	0.00	0.00	66.07	43.87	0.57	0.00	0.00	44.43
EFFB	Municipal Tax Office Storage	S	359.40	153.40	206.00	0.00	0.00	8/22/11 9:37 AM	9/06/11 9:00 AM	82.40	9.00	0.00	0.00	91.40	45.33	1.60	0.00	0.00	46.93
EFF4	Municipal Vital Statistics Office	0	358.83	152.83	206.00	0.00	0.00	8/22/11 10:11 AM	9/06/11 9:00 AM	77.02	1.75	0.00	0.00	78.77	74.42	1.75	0.00	0.00	76.17
F008	Police Admin Area Conference	CN	358.10	152.10	206.00	0.00	0.00	8/22/11 10:55 AM	9/06/11 9:00 AM	75.40	2.50	0.00	0.00	77.90	27.92	0.30	0.00	0.00	28.22
EE58	Police Building Chief Office	0	358.32	152.32	206.00	0.00	0.00	8/22/11 10:42 AM	9/06/11 9:00 AM	54.02	13.13	0.00	0.00	67.15	39.98	5.80	0.00	0.00	45.78
EE4C	Police Building Dispatch	K	358.22	152.22	206.00	0.00	0.00	8/22/11 10:48 AM	9/06/11 9:00 AM	42.22	43.97	0.00	0.00	86.18	17.33	16.37	0.00	0.00	33.70
EFEC	Police Building Lt. Office	0	358.40	152.40	206.00	0.00	0.00	8/22/11 10:37 AM	9/06/11 9:00 AM	34.08	13.92	0.00	0.00	48.00	29.82	7.02	0.00	0.00	36.83
EFFA	Police Court Clerks Office	00	358.22	152.22	206.00	0.00	0.00	8/22/11 10:48 AM	9/06/11 9:00 AM	76.85	6.70	0.00	0.00	83.55	76.12	6.40	0.00	0.00	82.52
F010	Police Mens Room	R	358.08	152.08	206.00	0.00	0.00	8/22/11 10:56 AM	9/06/11 9:00 AM	65.97	69.40	0.00	0.00	135.37	15.27	6.57	0.00	0.00	21.83
EF77	Police Squad Room	00	301.22	115.22	186.00	0.00	0.00	8/24/11 7:48 PM	9/06/11 9:00 AM	99.55	164.27	0.00	0.00	263.82	89.32	137.13	0.00	0.00	226.45
F00E	Public Works Conference Room	CN	97.02	57.02	40.00	0.00	0.00	8/22/11 11:44 AM	8/26/11 12:44 PM	4.87	0.10	0.00	0.00	4.97	2.13	0.10	0.00	0.00	2.23
EF5D	Public Works Front Office	00	357.20	151.20	206.00	0.00	0.00	8/22/11 11:49 AM	9/06/11 9:00 AM	82.82	23.65	0.00	0.00	106.47	76.30	14.10	0.00	0.00	90.40
EF58	Public Works Hallway	Н	357.13	151.13	206.00	0.00	0.00	8/22/11 11:53 AM	9/06/11 9:00 AM	151.13	206.00	0.00	0.00	357.13	47.72	14.33	0.00	0.00	62.05
EF59	Public Works Lunch Room	CF	357.02	151.02	206.00	0.00	0.00	8/22/11 12:00 PM	9/06/11 9:00 AM	23.67	25.17	0.00	0.00	48.83	16.17	21.67	0.00	0.00	37.83
EF28	Public Works Supervisors Office	PO	357.10	151.10	206.00	0.00	0.00	8/22/11 11:55 AM	9/06/11 9:00 AM	59.67	36.80	0.00	0.00	96.47	54.02	29.98	0.00	0.00	84.00
EF6C	Recreation Center Buisness	GO	357.58	151.58	206.00	0.00	0.00	8/22/11 11:26 AM	9/06/11 9:00 AM	82.42	4.17	0.00	0.00	86.58	80.08	4.00	0.00	0.00	84.08
EF94	Recreation Center Electrical	MB	357.53	151.53	206.00	0.00	0.00	8/22/11 11:29 AM	9/06/11 9:00 AM	94.38	13.12	0.00	0.00	107.50	47.18	1.55	0.00	0.00	48.73
EEEE	Recreation Center Game	S	357.67	151.67	206.00	0.00	0.00	8/22/11 11:21 AM	9/06/11 9:00 AM	71.32	86.32	0.00	0.00	157.63	21.53	0.00	0.00	0.00	21.53
EE17	Recreation Center Mens Room	R	357.68	151.68	206.00	0.00	0.00	8/22/11 11:20 AM	9/06/11 9:00 AM	95.65	2.90	0.00	0.00	98.55	24.65	0.77	0.00	0.00	25.42
EEE3	Senior Center Kitchen	K	213.73	96.55	117.18	0.00	0.00	8/22/11 9:27 AM	8/31/11 7:10 AM	3.63	7.03	0.00	0.00	10.67	3.60	3.57	0.00	0.00	7.17
EDF4	Senior Center Meeting Room	М	359.40	153.40	206.00	0.00	0.00	8/22/11 9:37 AM	9/06/11 9:00 AM	19.60	8.73	0.00	0.00	28.33	19.60	8.73	0.00	0.00	28.33

### Normalized Data Logger Detail for Concord Engineering, Gloucester Township ESIP Page 1 of 1

	All Loggers Listed		Load	No	rmalized <sup>v</sup>	Weekly H	lours of L	lse	No	rmalized	Weekly	Hours of (	Occupan	су
Logger	Room Location	Ty	Watts	Peak	Off	Shldr 1	Shldr 2	Total	Peak	Off	Shldr 1	Shldr 2	Total	% sav
EDFC	Academy Hall 2nd Flr Break	K	34	46.67	0.00	0.00	0.00	46.67	46.67	0.00	0.00	0.00	46.67	0.00%
EE5A	Academy Hall 2nd Flr Office	0	34	7.41	4.76	0.00	0.00	12.17	4.26	0.00	0.00	0.00	4.26	65.00%
EE1C	Academy Hall 3rd Flr Left Office	0	34	13.02	0.00	0.00	0.00	13.02	8.23	0.00	0.00	0.00	8.23	36.79%
EEB0	Academy Hall Det. Sgt Office	0	34	1.36	0.00	0.00	0.00	1.36	0.91	0.00	0.00	0.00	0.91	33.09%
EEDB	Academy Hall Storage	S	34	2.64	0.00	0.00	0.00	2.64	0.77	0.00	0.00	0.00	0.77	70.83%
F015	Library Circulation Office	GO	32	49.03	10.51	0.00	0.00	59.53	47.49	10.13	0.00	0.00	57.62	3.21%
ED71	Library Lounge	K	32	46.20	9.04	0.00	0.00	55.24	20.29	4.22	0.00	0.00	24.51	55.63%
EDBA	Library Mens Room	R	20	52.49	13.00	0.00	0.00	65.49	22.29	4.85	0.00	0.00	27.15	58.54%
EFF3	Municipal Clerk Licensing Office	0	32	37.95	0.70	0.00	0.00	38.64	31.07	0.70	0.00	0.00	31.77	17.78%
EFE5	Municipal Clerk Office	00	32	70.00	98.00	0.00	0.00	168.00	36.36	1.86	0.00	0.00	38.21	77.26%
EE5C	Municipal Clerk Office	S	32	37.42	0.19	0.00	0.00	37.61	14.21	0.19	0.00	0.00	14.40	61.71%
EDA3	Municipal Construction File	S	32	20.30	0.05	0.00	0.00	20.35	18.88	0.05	0.00	0.00	18.93	6.98%
EDE8	Municipal Construction Office	0	32	34.94	0.70	0.00	0.00	35.64	27.67	0.70	0.00	0.00	28.36	20.43%
EFEF	Municipal Constuction Offices	Κ	32	33.87	2.08	0.00	0.00	35.95	16.94	1.35	0.00	0.00	18.29	49.12%
EEE4	Municipal Electrical Room	MR	32	4.95	4.76	0.00	0.00	9.70	1.19	0.00	0.00	0.00	1.19	87.73%
ED69	Municipal Mayor Conference	S	32	9.90	0.00	0.00	0.00	9.90	8.82	0.00	0.00	0.00	8.82	10.91%
EE56	Municipal Mayors Office	0	32	38.58	3.46	0.00	0.00	42.04	18.47	1.09	0.00	0.00	19.56	53.47%
ED77	Municipal Mayors Office	Κ	32	7.67	0.19	0.00	0.00	7.86	3.91	0.11	0.00	0.00	4.02	48.85%
EDC3	Municipal Mens Room	R	32	42.67	38.59	0.00	0.00	81.26	13.63	0.71	0.00	0.00	14.33	82.37%
EDB3	Municipal Tax Office Corner	0	32	29.88	0.27	0.00	0.00	30.15	20.01	0.27	0.00	0.00	20.28	32.74%
EFFB	Municipal Tax Office Storage	S	32	37.60	4.28	0.00	0.00	41.88	20.69	0.76	0.00	0.00	21.45	48.78%
EFF4	Municipal Vital Statistics Office	0	32	35.27	0.83	0.00	0.00	36.11	34.08	0.83	0.00	0.00	34.92	3.30%
F008	Police Admin Area Conference	CN	32	34.70	1.19	0.00	0.00	35.89	12.85	0.14	0.00	0.00	12.99	63.81%
EE58	Police Building Chief Office	0	32	24.82	6.25	0.00	0.00	31.07	18.38	2.76	0.00	0.00	21.13	31.99%
EE4C	Police Building Dispatch	Κ	32	19.41	20.92	0.00	0.00	40.33	7.97	7.79	0.00	0.00	15.76	60.92%
EFEC	Police Building Lt. Office	0	32	15.66	6.62	0.00	0.00	22.28	13.70	3.34	0.00	0.00	17.03	23.56%
EFFA	Police Court Clerks Office	00	32	35.34	3.19	0.00	0.00	38.53	35.00	3.04	0.00	0.00	38.05	1.25%
F010	Police Mens Room	R	32	30.36	33.02	0.00	0.00	63.38	7.03	3.12	0.00	0.00	10.15	83.99%
EF77	Police Squad Room	00	31	60.48	86.55	0.00	0.00	147.03	54.26	72.25	0.00	0.00	126.52	13.95%
F00E	Public Works Conference Room	CN	40	5.97	0.25	0.00	0.00	6.22	2.62	0.25	0.00	0.00	2.86	54.02%
EF5D	Public Works Front Office	00	40	38.34	11.25	0.00	0.00	49.59	35.32	6.71	0.00	0.00	42.03	15.25%
EF58	Public Works Hallway	Н	40	70.00	98.00	0.00	0.00	168.00	22.10	6.82	0.00	0.00	28.92	82.79%
EF59	Public Works Lunch Room	CF	32	10.97	11.97	0.00	0.00	22.94	7.49	10.31	0.00	0.00	17.80	22.41%
EF28	Public Works Supervisors Office	PO	40	27.64	17.51	0.00	0.00	45.15	25.02	14.26	0.00	0.00	39.29	12.98%
EF6C	Recreation Center Buisness	GO	34	38.06	1.98	0.00	0.00	40.04	36.98	1.90	0.00	0.00	38.88	2.90%
EF94	Recreation Center Electrical	MB	34	43.60	6.24	0.00	0.00	49.84	21.80	0.74	0.00	0.00	22.53	54.80%
EEEE	Recreation Center Game	S	34	32.92	41.06	0.00	0.00	73.98	9.94	0.00	0.00	0.00	9.94	86.56%
EE17	Recreation Center Mens Room	R	34	44.14	1.38	0.00	0.00	45.52	11.38	0.36	0.00	0.00	11.74	74.21%
EEE3	Senior Center Kitchen	Κ	32	2.63	5.88	0.00	0.00	8.52	2.61	2.98	0.00	0.00	5.59	34.39%
EDF4	Senior Center Meeting Room	М	32	8.94	4.15	0.00	0.00	13.10	8.94	4.15	0.00	0.00	13.10	0.00%

### Building Summary Totals for Concord Engineering, Gloucester Township ESIP Page 1 of 1

Building Summ	ary T	otals			Ligh	ts On KV	VHR			Осс	upied KV	VHR	
Area Type		Qty	Watts	Peak	Off	Shldr 1	Shldr 2	Total	Peak	Off	Shldr 1	Shldr 2	Total
Private Office	PO	1	40	1.11	0.70	0.00	0.00	1.81	1.00	0.57	0.00	0.00	1.57
Meeting Rooms	М	1	32	0.29	0.13	0.00	0.00	0.42	0.29	0.13	0.00	0.00	0.42
Restroom	R	4	120	5.09	2.58	0.00	0.00	7.67	1.63	0.27	0.00	0.00	1.90
Storage	S	4	132	3.08	1.50	0.00	0.00	4.58	1.66	0.03	0.00	0.00	1.69
Hallway	Н	1	40	2.80	3.92	0.00	0.00	6.72	0.88	0.27	0.00	0.00	1.16
Mechanical	MB	2	66	1.60	0.36	0.00	0.00	1.96	0.76	0.02	0.00	0.00	0.78
Kitchen	K	6	192	5.01	1.22	0.00	0.00	6.23	3.15	0.53	0.00	0.00	3.67
Cafeteria	CF	1	32	0.35	0.38	0.00	0.00	0.73	0.24	0.33	0.00	0.00	0.57
Office	0	10	330	7.88	0.78	0.00	0.00	8.66	5.83	0.32	0.00	0.00	6.15
Open Office	00	4	136	6.94	6.77	0.00	0.00	13.71	5.47	2.85	0.00	0.00	8.32
Conference	CN	4	136	2.99	0.06	0.00	0.00	3.05	1.31	0.02	0.00	0.00	1.33
General Office	GO	2	66	2.87	0.41	0.00	0.00	3.29	2.79	0.40	0.00	0.00	3.18
Building Totals for	40 rd	oms	1322	40	19		0	59	25	6		0	31

### Academy Hall 2nd Flr Break Room

Area type: Kitchen. Logger: EDFC. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

### **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	0.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normizd Occ per Day
Peak	0.050	14.000	0.033	9.333	0.033	9.333
Off	0.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.050	24.000	0.033	9.333	0.033	9.333

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	14.000	0.000	0.000	0.000	0.000
Off	0.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	24.000	0.000	0.000	0.000	0.000

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	14.000	0.000	0.000	0.000	0.000
Off	0.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	24.000	0.000	0.000	0.000	0.000

Thu				Normlzd		Normlzd
	Total Log Time	Hours /Dav	Logged Lites On	Lites On per Dav	Logged Occ	Occiper Day
Peak	0.000				0.000	
Off	0.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	24.000	0.000	0.000	0.000	0.000

Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	14.000	0.000	0.000	0.000	0.000
Off	0.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	24.000	0.000	0.000	0.000	0.000

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	0.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	24.000	0.000	0.000	0.000	0.000

	L	.ogged Total	s	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On Occupied		% Savings
Peak	0.033	0.033	0.050	46.667	46.667	0.0%
Off	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	0.033	0.033	0.050	46.667	46.667	0.0%

	Sı	ın	Me	on	Tu	ie	W	ed	Th	ıu	Fi	ri	Sa	at
	LO	Осс												
Peak	0.000	0.000	9.333	9.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Off Peak	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	9.333	9.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$\overline{}$														$\overline{}$

		Logged Totals		Normalized	Normalized W	eekly Totals				
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings			
Peak	0.033	0.033	0.050		46.667	46.667	0.0%			
Off Peak	0.000	0.000	0.000		0.000	0.000	0.0%			
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%			
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%			
Total	0.033	0.033	0.050		46.667	46.667	0.0%			

### Academy Hall 2nd Flr Office

Area type: Office. Logger: EE5A. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

## Energy Analysis

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon				Normlzd		Normlzd
	Total Log Time	Hours /Day	Logged Lites On	Lites On per Day	Logged Occ	Occiper Day
Peak	37.517	14.000	9.517	3.551	3.150	1.175
Off	22.017	10.000	2.017	0.916	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	59.533	24.000	11.533	4.467	3.150	1.175

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	1.050	0.507	0.783	0.378
Off	27.983	10.000	7.983	2.853	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	9.033	3.359	0.783	0.378

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	5.367	2.683	5.233	2.617
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	5.367	2.683	5.233	2.617

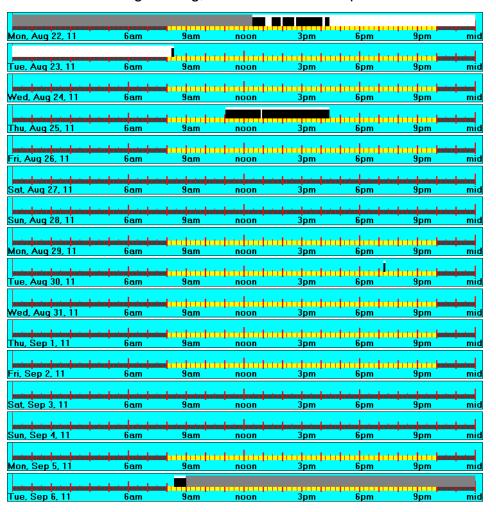
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Sat				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	0cc	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48 000	24 000	0.000	0.000	0.000	0.000

	L	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	15.933	9.167	150.533	7.409	4.263	42.5%
Off	10.000	0.000	206.000	4.757	0.000	100.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	25.933	9.167	356.533	12.166	4.263	65.0%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	ıu	Fi	ri	Sa	at
	LO	Осс												
Peak	0.000	0.000	3.551	1.175	0.507	0.378	0.000	0.000	2.683	2.617	0.000	0.000	0.000	0.000
Off Peak	0.000	0.000	0.916	0.000	2.853	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	4.467	1.175	3.359	0.378	0.000	0.000	2.683	2.617	0.000	0.000	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	15.933	9.167	150.533		7.409	4.263	42.5%
Off Peak	10.000	0.000	206.000		4.757	0.000	100.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	25.933	9.167	356.533		12.166	4.263	65.0%



### Academy Hall 3rd Flr Left Office

Area type: Office. Logger: EE1C. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

## **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	37.467	14.000	3.267	1.221	1.933	0.722
Off	22.017	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	59.483	24.000	3.267	1.221	1.933	0.722

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	3.733	1.801	3.300	1.592
Off	27.983	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	3.733	1.801	3.300	1.592

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	11.833	5.917	7.033	3.517
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	11.833	5.917	7.033	3.517

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	9.167	4.583	5.433	2.717
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	9.167	4.583	5.433	2.717

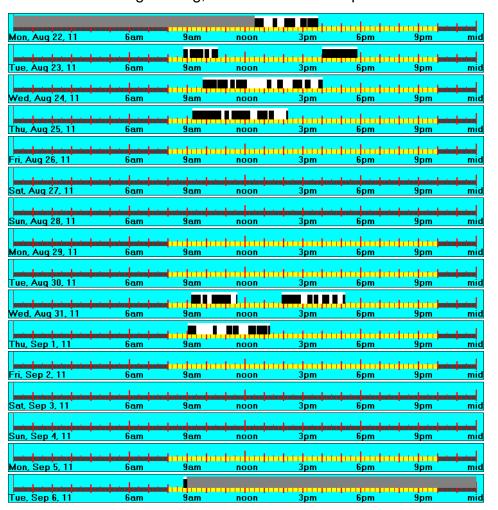
Fri	Total Log	Hours	Logged	Normlzd Lites On	Logged	Normlzd Occ per
	Time	/Day	Lites On	per Day	0cc	Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Lites On Occupied	
Peak	28.000	17.700	150.483	13.025	8.233	36.8%
Off	0.000	0.000	206.000	0.000	0.000	0.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	28.000	17.700	356.483	13.025	8.233	36.8%

	Su	ın	Mo	n	Tu	ie	W	ed	TH	nu	Fi	i.	Sa	at
	LO	Осс	LO	Осс	LO	Occ	LO	Осс	LO	Осс	LO	Осс	LO	Осс
Peak	0.000	0.000	1.221	0.722	1.801	1.592	5.917	3.517	4.583	2.717	0.000	0.000	0.000	0.000
Off Peak	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	1.221	0.722	1.801	1.592	5.917	3.517	4.583	2.717	0.000	0.000	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	28.000	17.700	150.483		13.025	8.233	36.8%
Off Peak	0.000	0.000	206.000		0.000	0.000	0.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	28.000	17.700	356.483		13.025	8.233	36.8%



### Academy Hall Det. Sgt Office

Area type: Office. Logger: EEB0. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

## **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	37.700	14.000	0.033	0.012	0.033	0.012
Off	22.017	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	59.717	24.000	0.033	0.012	0.033	0.012

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	2.733	1.319	1.767	0.852
Off	27.983	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	2.733	1.319	1.767	0.852

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.167	0.083	0.167	0.083
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.167	0.083	0.167	0.083

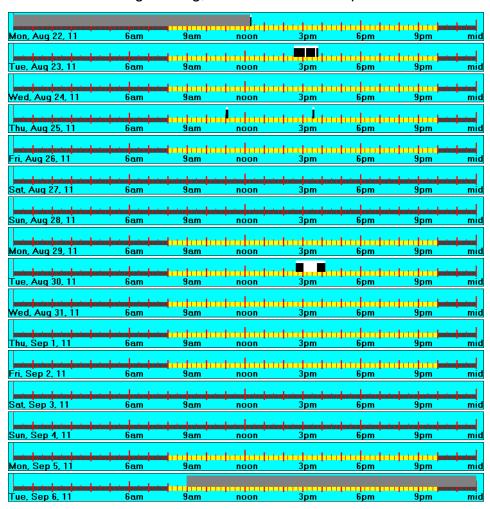
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Sat				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	0cc	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48 000	24 000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz		
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	2.933	1.967	150.717	1.362	0.913	33.0%
Off	0.000	0.000	206.000	0.000	0.000	0.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	2.933	1.967	356.717	1.362	0.913	33.0%

	Su	ın	Mo	on	Tu	ie	W	þ	TH	u	Fi	i.	Sa	at
	LO	Осс												
Peak	0.000	0.000	0.012	0.012	1.319	0.852	0.000	0.000	0.083	0.083	0.000	0.000	0.000	0.000
Off Peak	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	0.012	0.012	1.319	0.852	0.000	0.000	0.083	0.083	0.000	0.000	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	2.933	1.967	150.717		1.362	0.913	33.0%
Off Peak	0.000	0.000	206.000		0.000	0.000	0.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	2.933	1.967	356.717		1.362	0.913	33.0%



### Academy Hall Storage

Area type: Storage. Logger: EEDB. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

### **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	24.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	24.000	24.000	0.000	0.000	0.000	0.000

Normlzd	1	Normlzd	1	11	Total Log	Mon
Occ per Day	Logged Occ	Lites On per Day	Logged Lites On	Hours /Day	Time	
0.059	0.100	0.059	0.100	14.000	23.617	Peak
0.000	0.000	0.000	0.000	10.000	12.017	Off
0.000	0.000	0.000	0.000	0.000	0.000	Sh 1
0.000	0.000	0.000	0.000	0.000	0.000	Sh 2
0.059	0.100	0.059	0.100	24.000	35.633	Total
_	0.000	0.000	0.000	0.000	0.000	Sh 2

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	4.033	2.017	1.033	0.517
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	4.033	2.017	1.033	0.517

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	18.500	14.000	0.100	0.076	0.100	0.076
Off	17.983	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	36.483	24.000	0.100	0.076	0.100	0.076

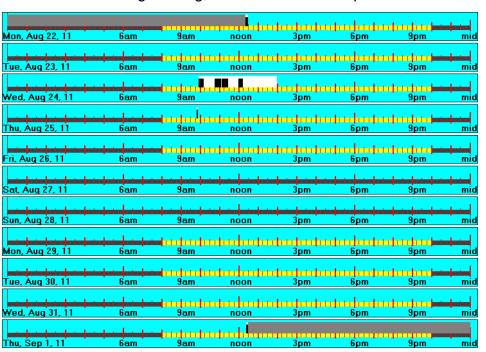
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	14.000	14.000	0.000	0.000	0.000	0.000
Off	10.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	24.000	24.000	0.000	0.000	0.000	0.000

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	24.000	24.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	24.000	24.000	0.000	0.000	0.000	0.000

	L	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	4.233	1.233	112.117	2.643	0.770	70.9%
Off	0.000	0.000	128.000	0.000	0.000	0.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	4.233	1.233	240.117	2.643	0.770	70.9%

	Su	ın	Me	on	Τι	ie	W	ed	Th	ıu	F	ri	Sa	at
	LO	Осс												
Peak	0.000	0.000	0.059	0.059	0.000	0.000	2.017	0.517	0.076	0.076	0.000	0.000	0.000	0.000
Off Peak	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	0.059	0.059	0.000	0.000	2.017	0.517	0.076	0.076	0.000	0.000	0.000	0.000
														$\overline{}$

		Logged Totals		Normalized	Normalized W	eekly Totals					
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings				
Peak	4.233	1.233	112.117		2.643	0.770	70.9%				
Off Peak	0.000	0.000	128.000		0.000	0.000	0.0%				
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%				
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%				
Total	4.233	1.233	240.117		2.643	0.770	70.9%				



### **Library Circulation Office**

Area type: General Office. Logger: F015. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

## **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	37.800	14.000	21.700	8.037	20.367	7.543
Off	22.017	10.000	1.017	0.462	0.917	0.416
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	59.817	24.000	22.717	8.499	21.283	7.960

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	18.883	9.111	18.517	8.934
Off	27.983	10.000	3.083	1.102	2.717	0.971
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	21.967	10.213	21.233	9.905

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	24.067	12.033	23.667	11.833
Off	20.000	10.000	1.067	0.533	1.067	0.533
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	25.133	12.567	24.733	12.367

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	24.917	12.458	23.700	11.850
Off	20.000	10.000	1.450	0.725	1.400	0.700
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	26.367	13.183	25.100	12.550

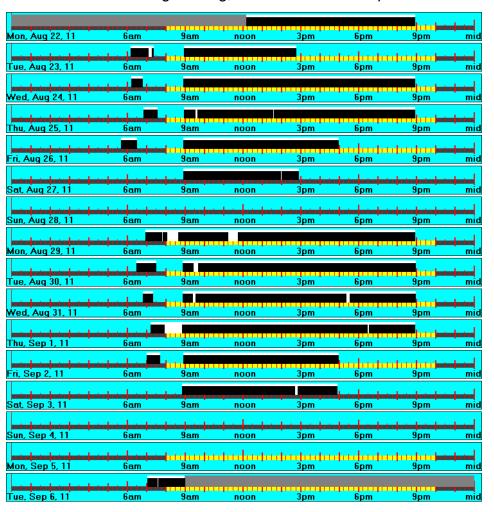
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	16.067	8.033	16.067	8.033
Off	20.000	10.000	1.467	0.733	1.433	0.717
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	17.533	8.767	17.500	8.750

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	14.000	7.000	13.767	6.883
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	14.000	7.000	13.767	6.883

	L	.ogged Total:	3	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	105.633	102.317	150.817	49.029	47.489	3.1%
Off	22.083	21.300	206.000	10.506	10.133	3.5%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	127.717	123.617	356.817	59.534	57.622	3.2%

	Su	ın	Mo	n	Tu	ie	W	ed	TH	nu	Fi	i.	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс
Peak	0.000	0.000	8.037	7.543	9.111	8.934	12.033	11.833	12.458	11.850	8.033	8.033	0.000	0.000
Off Peak	0.000	0.000	0.462	0.416	1.102	0.971	0.533	0.533	0.725	0.700	0.733	0.717	7.000	6.883
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	8.499	7.960	10.213	9.905	12.567	12.367	13.183	12.550	8.767	8.750	7.000	6.883

		Logged Totals		Normalized .	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	105.633	102.317	150.817		49.029	47.489	3.1%
Off Peak	22.083	21.300	206.000		10.506	10.133	3.5%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	127.717	123.617	356.817		59.534	57.622	3.2%



### **Library Lounge**

Area type: Kitchen. Logger: ED71. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# Energy Analysis Data by Day of Week

Sun	Total Log	Hours	Logged	Normlzd Lites On	Logged	Normlzd Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normizd Occ per Day
Peak	37.617	14.000	20.867	7.766	8.300	3.089
Off	22.017	10.000	0.867	0.394	0.200	0.091
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	59.633	24.000	21.733	8.160	8.500	3.180

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	19.450	9.384	7.700	3.715
Off	27.983	10.000	3.233	1.155	0.667	0.238
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	22.683	10.540	8.367	3.953

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	20.133	10.067	10.167	5.083
Off	20.000	10.000	1.200	0.600	0.400	0.200
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	21.333	10.667	10.567	5.283

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	23.533	11.767	10.833	5.417
Off	20.000	10.000	0.533	0.267	0.233	0.117
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	24.067	12.033	11.067	5.533

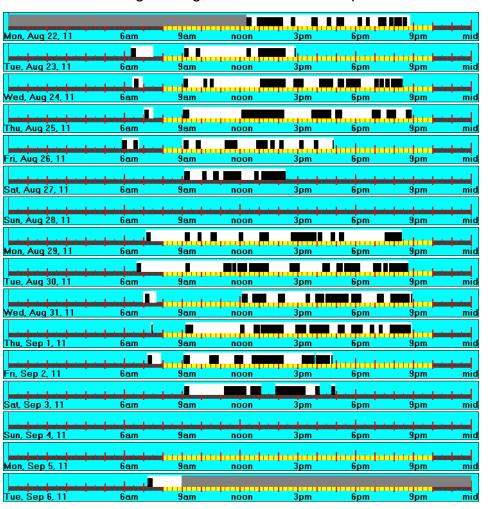
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	15.433	7.717	6.667	3.333
Off	20.000	10.000	1.567	0.783	0.633	0.317
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	17.000	8.500	7.300	3.650

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	11.600	5.800	6.733	3.367
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	11.600	5.800	6.733	3.367

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	99.417	43.667	150.633	46.199	20.292	56.1%
Off	19.000	8.867	206.000	9.039	4.218	53.3%
Sh 1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	118.417	52.533	356.633	55.238	24.510	55.6%

	Su	ın	Mo	n	Tu	ie	W	ed	TH	u	Fi	ri	S	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ	LO	Осс	LO	Осс
Peak	0.000	0.000	7.766	3.089	9.384	3.715	10.067	5.083	11.767	5.417	7.717	3.333	0.000	0.000
Off Peak	0.000	0.000	0.394	0.091	1.155	0.238	0.600	0.200	0.267	0.117	0.783	0.317	5.800	3.367
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	8.160	3.180	10.540	3.953	10.667	5.283	12.033	5.533	8.500	3.650	5.800	3.367

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	99.417	43.667	150.633		46.199	20.292	56.1%
Off Peak	19.000	8.867	206.000		9.039	4.218	53.3%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	118.417	52.533	356.633		55.238	24.510	55.6%



### Library Mens Room

Area type: Restroom. Logger: EDBA. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

## Energy Analysis

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	37.800	14.000	22.000	8.148	9.633	3.568
Off	22.017	10.000	1.033	0.469	0.367	0.167
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	59.817	24.000	23.033	8.617	10.000	3.734

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	20.883	10.076	8.867	4.278
Off	27.983	10.000	4.133	1.477	1.500	0.536
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	25.017	11.553	10.367	4.814

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	26.033	13.017	9.933	4.967
Off	20.000	10.000	2.833	1.417	0.900	0.450
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	28.867	14.433	10.833	5.417

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	26.100	13.050	11.667	5.833
Off	20.000	10.000	1.867	0.933	0.833	0.417
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	27.967	13.983	12.500	6.250

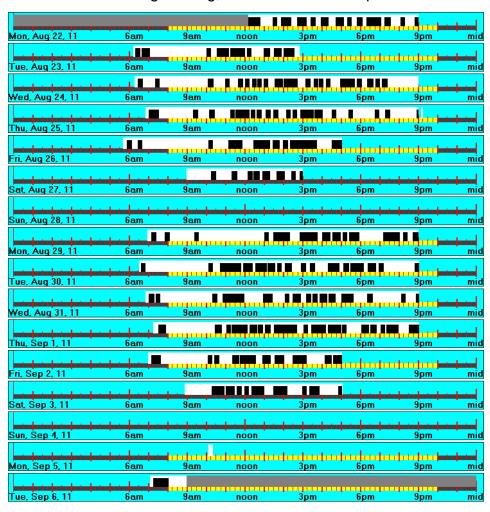
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	18.067	9.033	7.933	3.967
Off	20.000	10.000	3.300	1.650	0.900	0.450
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	21.367	10.683	8.833	4.417

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	14.167	7.083	5.700	2.850
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	14.167	7.083	5.700	2.850

	l	.ogged Total:	S	Normaliz		
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	113.083	48.033	150.817	52.486	22.294	57.5%
Off	27.333	10.200	206.000	13.003	4.852	62.7%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	140.417	58.233	356.817	65.490	27.147	58.5%

	Su	ın	Mo	on	Tu	ie	W	þ	TH	u	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ	LO	Осс	LO	Occ
Peak	0.000	0.000	8.148	3.568	10.076	4.278	13.017	4.967	13.050	5.833	9.033	3.967	0.000	0.000
Off Peak	0.000	0.000	0.469	0.167	1.477	0.536	1.417	0.450	0.933	0.417	1.650	0.450	7.083	2.850
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	8.617	3.734	11.553	4.814	14.433	5.417	13.983	6.250	10.683	4.417	7.083	2.850

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	113.083	48.033	150.817		52.486	22.294	57.5%
Off Peak	27.333	10.200	206.000		13.003	4.852	62.7%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	140.417	58.233	356.817		65.490	27.147	58.5%



### Municipal Clerk Licensing Office

Area type: Office. Logger: EFF3. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

## **Energy Analysis**

Data by Day of Week

Sun	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	40.067	14.000	21.100	7.373	14.433	5.043
Off	22.017	10.000	0.067	0.030	0.067	0.030
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	62.083	24.000	21.167	7.403	14.500	5.074

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	20.717	9.995	17.183	8.291
Off	27.983	10.000	0.567	0.203	0.567	0.203
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	21.283	10.198	17.750	8.493

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	19.467	9.733	17.100	8.550
Off	20.000	10.000	0.333	0.167	0.333	0.167
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	19.800	9.900	17.433	8.717

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	19.600	9.800	17.467	8.733
Off	20.000	10.000	0.500	0.250	0.500	0.250
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	20.100	10.050	17.967	8.983

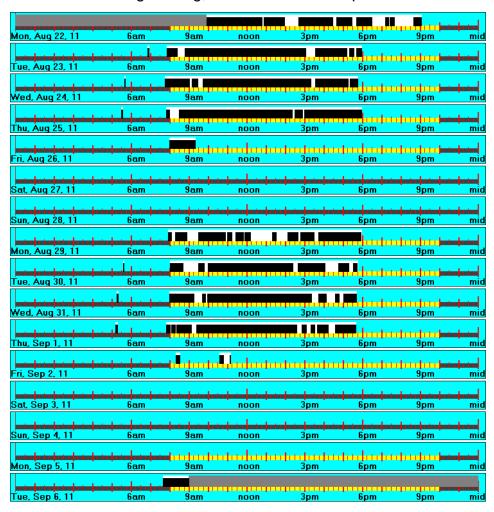
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	2.100	1.050	1.767	0.883
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	2.100	1.050	1.767	0.883

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz		
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	82.983	67.950	153.083	37.946	31.071	18.1%
Off	1.467	1.467	206.000	0.698	0.698	0.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	84.450	69.417	359.083	38.643	31.769	17.8%

	Su	ın	Mo	n	Tu	ie	W	ed	TH	u	Fi	i.	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс
Peak	0.000	0.000	7.373	5.043	9.995	8.291	9.733	8.550	9.800	8.733	1.050	0.883	0.000	0.000
Off Peak	0.000	0.000	0.030	0.030	0.203	0.203	0.167	0.167	0.250	0.250	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	7.403	5.074	10.198	8.493	9.900	8.717	10.050	8.983	1.050	0.883	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	82.983	67.950	153.083		37.946	31.071	18.1%
Off Peak	1.467	1.467	206.000		0.698	0.698	0.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	84.450	69.417	359.083		38.643	31.769	17.8%



### Municipal Clerk Office

Area type: Open Office. Logger: EFE5. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

### **Energy Analysis** Data by Day of Week

0.000

0.000

		ata k	Jy D	^ y_
ogged tes On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day	N
0.000	0.000	0.000	0.000	Р
48.000	24.000	0.567	0.283	0

0.000

0.000

0.567

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	40.200	14.000	40.200	14.000	17.767	6.187
Off	22.017	10.000	22.017	10.000	0.233	0.108
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	62.217	24.000	62.217	24.000	18.000	6.293

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	29.017	14.000	20.717	9.995
Off	27.983	10.000	27.983	10.000	1.400	0.500
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	57.000	24.000	22.117	10.496

0.000

0.000

48.000

0.000

0.000

24.000

Total Log

Time 0.000

48.000

0.000

0.000

48.000

Hours

/Day

0.000

24.000

0.000

0.000

24.000

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	28.000	14.000	20.033	10.017
Off	20.000	10.000	20.000	10.000	0.833	0.417
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	48.000	24.000	20.867	10.433

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	28.000	14.000	19.900	9.950
Off	20.000	10.000	20.000	10.000	0.867	0.433
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	48.000	24.000	20.767	10.383

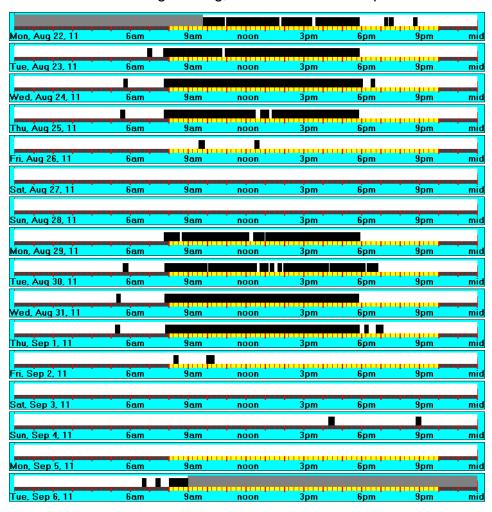
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	28.000	14.000	1.167	0.583
Off	20.000	10.000	20.000	10.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	48.000	24.000	1.167	0.583

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	48.000	24.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	48.000	24.000	0.000	0.000

	l	.ogged Total	\$	Normaliz		
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	153.217	79.583	153.217	70.000	36.359	48.1%
Off	206.000	3.900	206.000	98.000	1.855	98.1%
Sh 1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	359.217	83.483	359.217	168.000	38.215	77.3%

	Su	ın	Mo	on	Tu	ie ei	W	ed	TH	nu	F	i.	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ
Peak	0.000	0.000	14.000	6.187	14.000	9.995	14.000	10.017	14.000	9.950	14.000	0.583	0.000	0.000
Off Peak	24.000	0.283	10.000	0.106	10.000	0.500	10.000	0.417	10.000	0.433	10.000	0.000	24.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	24.000	0.283	24.000	6.293	24.000	10.496	24.000	10.433	24.000	10.383	24.000	0.583	24.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	153.217	79.583	153.217		70.000	36.359	48.1%
Off Peak	206.000	3.900	206.000		98.000	1.855	98.1%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	359.217	83.483	359.217		168.000	38.215	77.3%



### Municipal Clerk Office Conference

Area type: Conference. Logger: EE5C. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

## Energy Analysis

Data by Day of Weel	Data	by	Day	of	Weel
---------------------	------	----	-----	----	------

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.033	0.017	0.033	0.017
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.033	0.017	0.033	0.017

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	40.050	14.000	20.650	7.218	6.700	2.342
Off	22.017	10.000	0.033	0.015	0.033	0.015
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	62.067	24.000	20.683	7.234	6.733	2.357

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	20.583	9.931	6.567	3.168
Off	27.983	10.000	0.133	0.048	0.133	0.048
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	20.717	9.979	6.700	3.216

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	19.633	9.817	8.833	4.417
Off	20.000	10.000	0.133	0.067	0.133	0.067
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	19.767	9.883	8.967	4.483

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	20.800	10.400	8.800	4.400
Off	20.000	10.000	0.067	0.033	0.067	0.033
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	20.867	10.433	8.867	4.433

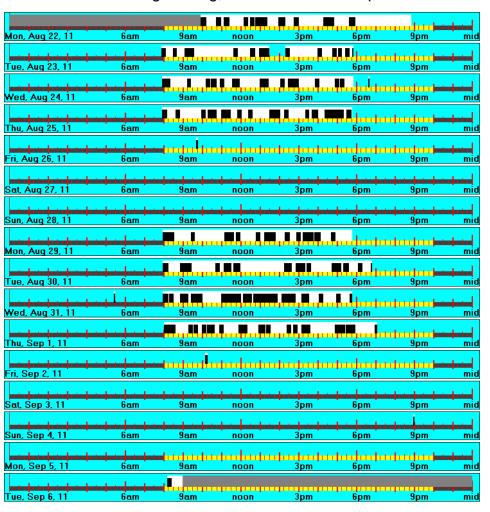
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.167	0.083	0.167	0.083
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.167	0.083	0.167	0.083

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	\$	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Lites On Occupied	
Peak	81.833	31.067	153.067	37.424	14.207	62.0%
Off	0.400	0.400	206.000	0.190	0.190	0.0%
Sh 1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	82.233	31.467	359.067	37.614	14.398	61.7%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	ıu	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс
Peak	0.000	0.000	7.218	2.342	9.931	3.168	9.817	4.417	10.400	4.400	0.083	0.083	0.000	0.000
Off Peak	0.017	0.017	0.015	0.015	0.048	0.048	0.067	0.067	0.033	0.033	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.017	0.017	7.234	2.357	9.979	3.216	9.883	4.483	10.433	4.433	0.083	0.083	0.000	0.000

		Logged Totals		Normalized	Normalized W		
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	81.833	31.067	153.067		37.424	14.207	62.0%
Off Peak	0.400	0.400	206.000		0.190	0.190	0.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	82.233	31.467	359.067		37.614	14.398	61.7%



### Municipal Construction File Storage

Area type: Storage. Logger: EDA3. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

## **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	39.600	14.000	15.233	5.386	13.567	4.796
Off	22.017	10.000	0.067	0.030	0.067	0.030
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.617	24.000	15.300	5.416	13.633	4.827

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	9.033	4.358	8.767	4.230
Off	27.983	10.000	0.033	0.012	0.033	0.012
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	9.067	4.370	8.800	4.242

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	15.867	7.933	15.333	7.667
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	15.867	7.933	15.333	7.667

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	4.133	2.067	3,500	1.750
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	4.133	2.067	3.500	1.750

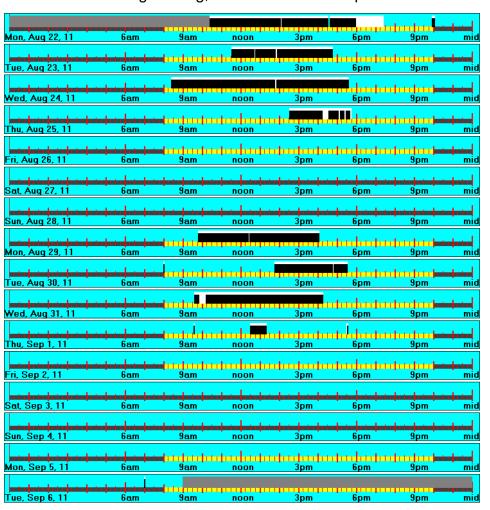
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	\$	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	44.267	41.167	152.617	20.304	18.882	7.0%
Off	0.100	0.100	206.000	0.048	0.048	0.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	44.367	41.267	358.617	20.351	18.929	7.0%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	ıu	Fi	ri	Sa	at
	LO	Осс												
Peak	0.000	0.000	5.386	4.796	4.358	4.230	7.933	7.667	2.067	1.750	0.000	0.000	0.000	0.000
Off Peak	0.000	0.000	0.030	0.030	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	5.416	4.827	4.370	4.242	7.933	7.667	2.067	1.750	0.000	0.000	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	44.267	41.167	152.617		20.304	18.882	7.0%
Off Peak	0.100	0.100	206.000		0.048	0.048	0.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	44.367	41.267	358.617		20.351	18.929	7.0%



### Municipal Construction Office Lechner

Area type: Office. Logger: EDE8. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

## Energy Analysis

Data b	y Day of	Week
--------	----------	------

otal Log Time 0.000	Hours /Day 0.000	Logged Lites On 0.000	Lites On per Day 0.000	Logged Occ	Occiper Day
0.000					
	0.000	0.000	0.000	0.000	
		0.000	0.000	0.000	0.000
48.000	24.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
48.000	24.000	0.000	0.000	0.000	0.000
	0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000

Mon				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	39.717	14.000	11.717	4.130	7.417	2.614
Off	22.017	10.000	0.550	0.250	0.550	0.250
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.733	24.000	12.267	4.380	7.967	2.864

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	22.983	11.089	18.750	9.047
Off	27.983	10.000	0.417	0.149	0.417	0.149
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	23.400	11.238	19.167	9.195

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	24.300	12.150	19.667	9.833
Off	20.000	10.000	0.467	0.233	0.467	0.233
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	24.767	12.383	20.133	10.067

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	17.233	8.617	14.533	7.267
Off	20.000	10.000	0.033	0.017	0.033	0.017
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	17.267	8.633	14.567	7.283

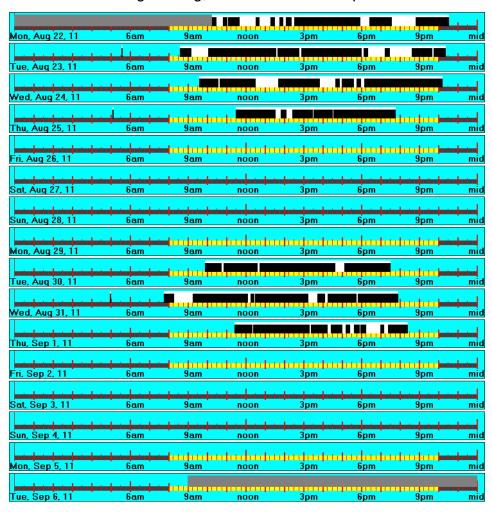
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normizd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	\$	Normaliz		
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	76.233	60.367	152.733	34.939	27.667	20.8%
Off	1.467	1.467	206.000	0.698	0.698	0.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	77.700	61.833	358.733	35.637	28.365	20.4%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	u	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ
Peak	0.000	0.000	4.130	2.614	11.089	9.047	12.150	9.833	8.617	7.267	0.000	0.000	0.000	0.000
Off Peak	0.000	0.000	0.250	0.250	0.149	0.149	0.233	0.233	0.017	0.017	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	4.380	2.864	11.238	9.195	12.383	10.067	8.633	7.283	0.000	0.000	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	76.233	60.367	152.733		34.939	27.667	20.8%
Off Peak	1.467	1.467	206.000		0.698	0.698	0.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	77.700	61.833	358.733		35.637	28.365	20.4%



### Municipal Constuction Offices Kittchenette

Area type: Kitchen. Logger: EFEF. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

## Energy Analysis

Data by Day of Weel	Data	by	Day	of	Weel
---------------------	------	----	-----	----	------

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.233	0.117	0.233	0.117
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.233	0.117	0.233	0.117

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	39.700	14.000	16.500	5.819	7.700	2.715
Off	22.017	10.000	0.033	0.015	0.033	0.015
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.717	24.000	16.533	5.834	7.733	2.731

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	20.200	9.746	9.567	4.616
Off	27.983	10.000	2.667	0.953	1.633	0.584
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	22.867	10.699	11.200	5.199

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	18.650	9.325	9.983	4.992
Off	20.000	10.000	1.217	0.608	0.717	0.358
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	19.867	9.933	10.700	5.350

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	18.317	9.158	9.517	4.758
Off	20.000	10.000	0.217	0.108	0.217	0.108
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	18.533	9.267	9.733	4.867

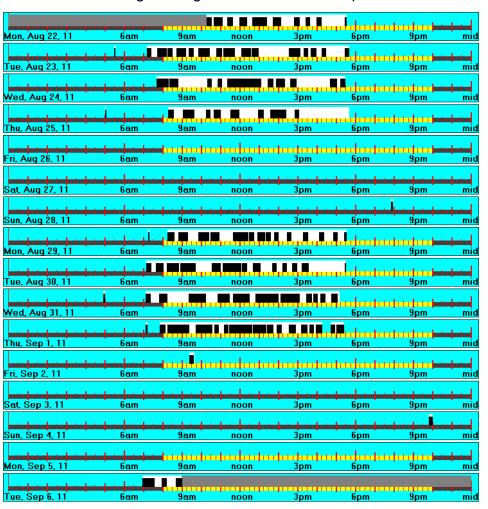
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.233	0.117	0.200	0.100
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.233	0.117	0.200	0.100

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	73.900	36.967	152.717	33.873	16.944	50.0%
Off	4.367	2.833	206.000	2.077	1.348	35.1%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	78.267	39.800	358.717	35.951	18.292	49.1%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	ıu	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс
Peak	0.000	0.000	5.819	2.715	9.746	4.616	9.325	4.992	9.158	4.758	0.117	0.100	0.000	0.000
Off Peak	0.117	0.117	0.015	0.015	0.953	0.584	0.608	0.358	0.108	0.108	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.117	0.117	5.834	2.731	10.699	5.199	9.933	5.350	9.267	4.867	0.117	0.100	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	73.900	36.967	152.717		33.873	16.944	50.0%
Off Peak	4.367	2.833	206.000		2.077	1.348	35.1%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	78.267	39.800	358.717		35.951	18.292	49.1%



### Municipal Electrical Room

Area type: Mechanical. Logger: EEE4. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

### **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	39.817	14.000	1.900	0.668	1.533	0.539
Off	22.017	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.833	24.000	1.900	0.668	1.533	0.539

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	7.317	3.530	0.300	0.145
Off	27.983	10.000	2.017	0.721	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	9.333	4.251	0.300	0.145

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	1.350	0.675	0.533	0.267
Off	20.000	10.000	7.983	3.992	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	9.333	4.667	0.533	0.267

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.200	0.100	0.200	0.100
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.200	0.100	0.200	0.100

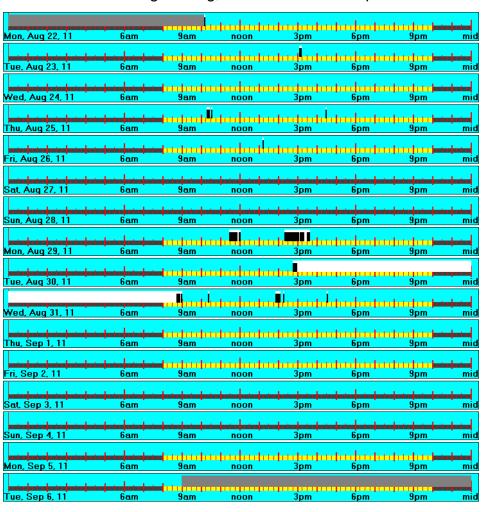
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.033	0.017	0.033	0.017
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.033	0.017	0.033	0.017

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	10.800	2.600	152.833	4.947	1.191	75.9%
Off	10.000	0.000	206.000	4.757	0.000	100.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	20.800	2.600	358.833	9.704	1.191	87.7%

	Su	ın	Mo	on	Tu	ie	W	þ	Th	u	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ	LO	Осс	LO	Осс
Peak	0.000	0.000	0.668	0.539	3.530	0.145	0.675	0.267	0.100	0.100	0.017	0.017	0.000	0.000
Off Peak	0.000	0.000	0.000	0.000	0.721	0.000	3.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	0.668	0.539	4.251	0.145	4.667	0.267	0.100	0.100	0.017	0.017	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	10.800	2.600	152.833		4.947	1.191	75.9%
Off Peak	10.000	0.000	206.000		4.757	0.000	100.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	20.800	2.600	358.833		9.704	1.191	87.7%



### Municipal Mayor Conference Room

Area type: Conference. Logger: ED69. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

### **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	39.667	14.000	3.167	1.118	3.167	1.118
Off	22.017	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.683	24.000	3.167	1.118	3.167	1.118

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	6.667	3.217	6.067	2.927
Off	27.983	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	6.667	3.217	6.067	2.927

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	7.167	3.583	6.600	3.300
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	7.167	3.583	6.600	3.300

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	4.600	2.300	3.400	1.700
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	4.600	2.300	3.400	1.700

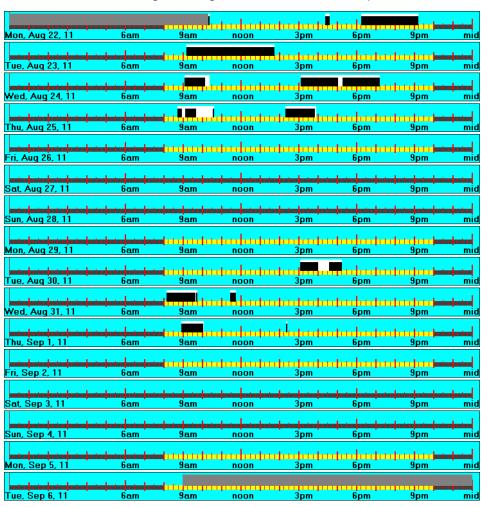
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Dav	Logged Occ	Normlzd Occ per Dav
Peak	28.000				0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On Occupied		% Savings
Peak	21.600	19.233	152.683	9.903	8.818	11.0%
Off	0.000	0.000	206.000	0.000	0.000	0.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	21.600	19.233	358.683	9.903	8.818	11.0%

	Su	ın	Mo	n	Tu	ie	W	ed	TH	u	Fi	i.	Sa	at
	LO	Осс												
Peak	0.000	0.000	1.118	1.118	3.217	2.927	3.583	3.300	2.300	1.700	0.000	0.000	0.000	0.000
Off Peak	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	1.118	1.118	3.217	2.927	3.583	3.300	2.300	1.700	0.000	0.000	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	21.600	19.233	152.683		9.903	8.818	11.0%
Off Peak	0.000	0.000	206.000		0.000	0.000	0.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	21.600	19.233	358.683		9.903	8.818	11.0%



### Municipal Mayors Office

Area type: Office. Logger: EE56. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

## **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	6.733	3.367	1.800	0.900
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	6.733	3.367	1.800	0.900

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	40.033	14.000	19.033	6.656	6.333	2.215
Off	22.017	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	62.050	24.000	19.033	6.656	6.333	2.215

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	20.083	9.690	9.750	4.704
Off	27.983	10.000	0.267	0.095	0.233	0.083
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	20.350	9.785	9.983	4.788

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	23.133	11.567	14.133	7.067
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	23.133	11.567	14.133	7.067

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	20.367	10.183	8.500	4.250
Off	20.000	10.000	0.267	0.133	0.267	0.133
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	20.633	10.317	8.767	4.383

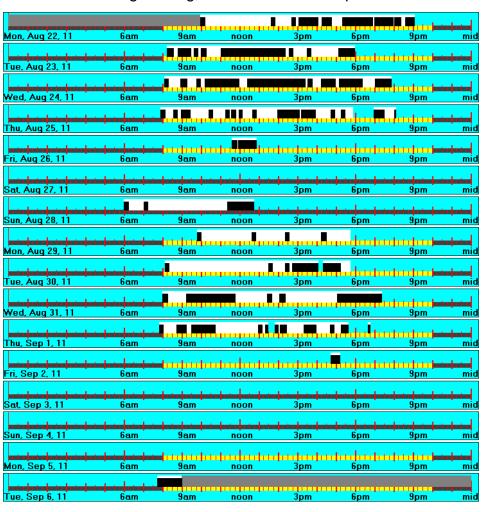
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	1.733	0.867	1.667	0.833
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	1.733	0.867	1.667	0.833

Sat				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	40 000	24 000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz		
	Lites On	Occupied	Logged	Lites On	% Savings	
Peak	84.350	40.383	153.050	38.579	18.470	52.1%
Off	7.267	2.300	206.000	3.457	1.094	68.3%
Sh 1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	91.617	42.683	359.050	42.036	19.564	53.5%

	Su	ın	Mo	n	Tu	ie	W	þ	TH	u	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс
Peak	0.000	0.000	6.656	2.215	9.690	4.704	11.567	7.067	10.183	4.250	0.867	0.833	0.000	0.000
Off Peak	3.367	0.900	0.000	0.000	0.095	0.083	0.000	0.000	0.133	0.133	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	3.367	0.900	6.656	2.215	9.785	4.788	11.567	7.067	10.317	4.383	0.867	0.833	0.000	0.000

	Logged Totals			Normalized	Normalized Weekly Totals		
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	84.350	40.383	153.050	^^^^	38.579	18.470	52.1%
Off Peak	7.267	2.300	206.000		3.457	1.094	68.3%
Sh1	0.000	0.000	0.000		0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	91.617	42.683	359.050		42.036	19.564	53.5%



## Municipal Mayors Office Kitchenette

Area type: Kitchen. Logger: ED77. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	39.933	14.000	7.367	2.583	3.067	1.075
Off	22.017	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.950	24.000	7.367	2.583	3.067	1.075

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	2.167	1.045	1.533	0.740
Off	27.983	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	2.167	1.045	1.533	0.740

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.167	0.083	0.167	0.083
Off	20.000	10.000	0.033	0.017	0.033	0.017
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.200	0.100	0.200	0.100

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	6.933	3.467	3.633	1.817
Off	20.000	10.000	0.367	0.183	0.200	0.100
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	7.300	3.650	3.833	1.917

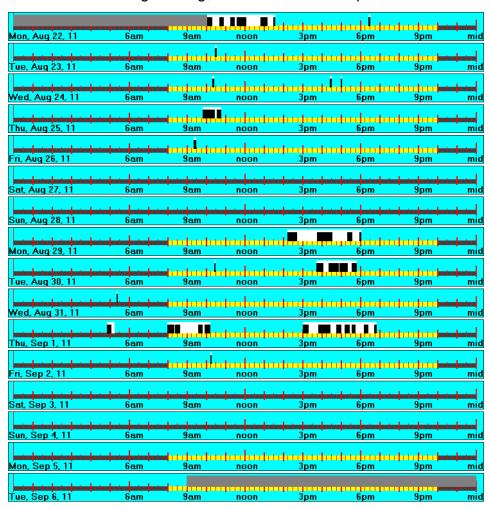
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.133	0.067	0.133	0.067
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.133	0.067	0.133	0.067

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	16.767	8.533	152.950	7.674	3.905	49.1%
Off	0.400	0.233	206.000	0.190	0.111	41.7%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	17.167	8.767	358.950	7.864	4.016	48.9%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	u	Fi	i.	Sa	at
	LO	Осс												
Peak	0.000	0.000	2.583	1.075	1.045	0.740	0.083	0.083	3.467	1.817	0.067	0.067	0.000	0.000
Off Peak	0.000	0.000	0.000	0.000	0.000	0.000	0.017	0.017	0.183	0.100	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	2.583	1.075	1.045	0.740	0.100	0.100	3.650	1.917	0.067	0.067	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	16.767	8.533	152.950		7.674	3.905	49.1%
Off Peak	0.400	0.233	206.000		0.190	0.111	41.7%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	17.167	8.767	358.950		7.864	4.016	48.9%



## Municipal Mens Room

Area type: Restroom. Logger: EDC3. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# Energy Analysis Data by Day of Week

Sun	Total Log	Hours	Logged	Normlzd Lites On	Logged	Normlzd Occ per
	Time	/Day	Lites On	per Day	0cc	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	16.683	8.342	0.633	0.317
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	16.683	8.342	0.633	0.317

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normizd Occ per Day
Peak	40.250	14.000	20.900	7.270	7.900	2.748
Off	22.017	10.000	7.200	3.270	0.067	0.030
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	62.267	24.000	28.100	10.540	7.967	2.778

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	21.267	10.261	9.383	4.527
Off	27.983	10.000	13.117	4.687	0.367	0.131
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	34.383	14.948	9.750	4.658

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	21.600	10.800	5.900	2.950
Off	20.000	10.000	17.500	8.750	0.033	0.017
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	39.100	19.550	5.933	2.967

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	19.283	9.642	5.100	2.550
Off	20.000	10.000	17.983	8.992	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	37.267	18.633	5.100	2.550

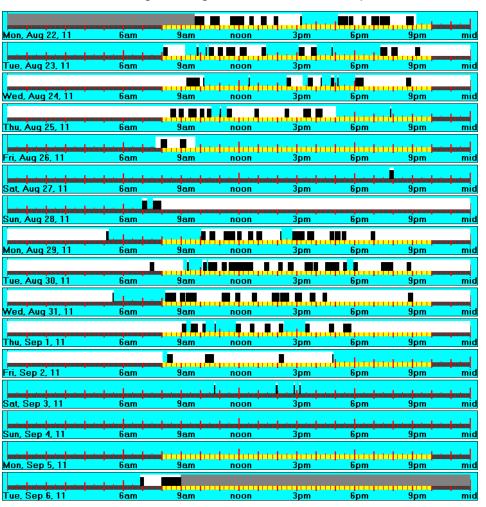
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	10.383	5.192	1.550	0.775
Off	20.000	10.000	8.267	4.133	0.017	0.008
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	18.650	9.325	1.567	0.783

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.367	0.183	0.367	0.183
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.367	0.183	0.367	0.183

	l	.ogged Total	\$	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	93.433	29.833	153.267	42.673	13.625	68.1%
Off	81.117	1.483	206.000	38.589	0.706	98.2%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	174.550	31.317	359.267	81.262	14.331	82.4%

	Su	3	Mo	on	Tu	ie	W	þ	Th	u	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ
Peak	0.000	0.000	7.270	2.748	10.261	4.527	10.800	2.950	9.642	2.550	5.192	0.775	0.000	0.000
Off Peak	8.342	0.317	3.270	0.030	4.687	0.131	8.750	0.017	8.992	0.000	4.133	0.008	0.183	0.183
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	8.342	0.317	10.540	2.778	14.948	4.658	19.550	2.967	18.633	2.550	9.325	0.783	0.183	0.183

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	93.433	29.833	153.267		42.673	13.625	68.1%
Off Peak	81.117	1.483	206.000		38.589	0.706	98.2%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	174.550	31.317	359.267		81.262	14.331	82.4%



## Municipal Tax Office Corner Office

Area type: Office. Logger: EDB3. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# Energy Analysis

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normizd Occ per Day
Peak	40.417	14.000	13.050	4.520	3.483	1.207
Off	22.017	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	62.433	24.000	13.050	4.520	3.483	1.207

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normizd Occ per Day
Peak	29.017	14.000	20.183	9.738	14.783	7.133
Off	27.983	10.000	0.167	0.060	0.167	0.060
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	20.350	9.798	14.950	7.192

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	18.600	9.300	16.933	8.467
Off	20.000	10.000	0.233	0.117	0.233	0.117
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	18.833	9.417	17.167	8.583

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	12.733	6.367	7.733	3.867
Off	20.000	10.000	0.167	0.083	0.167	0.083
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	12.900	6.450	7.900	3.950

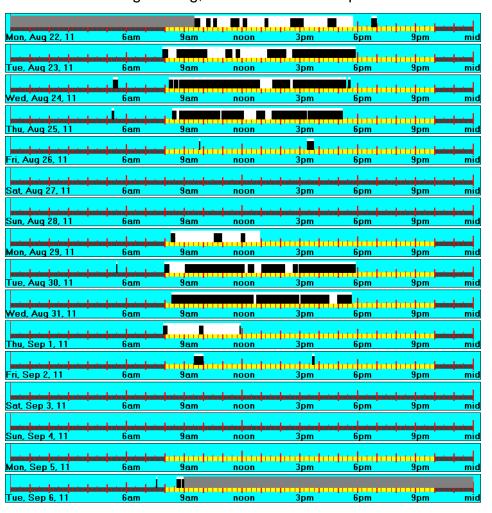
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.933	0.467	0.933	0.467
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.933	0.467	0.933	0.467

Sat				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	40 000	24 000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	65.500	43.867	153.433	29.883	20.013	33.0%
Off	0.567	0.567	206.000	0.270	0.270	0.0%
Sh 1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	66.067	44.433	359.433	30.152	20.283	32.7%

	Su	ın	Mo	n	Tu	ie	W	ed	TH	u	Fi	i.	Sa	at
	LO	Осс	LO	Осс	LO	Occ	LO	Осс	LO	Occ	LO	Осс	LO	Осс
Peak	0.000	0.000	4.520	1.207	9.738	7.133	9.300	8.467	6.367	3.867	0.467	0.467	0.000	0.000
Off Peak	0.000	0.000	0.000	0.000	0.060	0.060	0.117	0.117	0.083	0.083	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	4.520	1.207	9.798	7.192	9.417	8.583	6.450	3.950	0.467	0.467	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	65.500	43.867	153.433		29.883	20.013	33.0%
Off Peak	0.567	0.567	206.000		0.270	0.270	0.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	66.067	44.433	359.433		30.152	20.283	32.7%



## Municipal Tax Office Storage

Area type: Storage. Logger: EFFB. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# Energy Analysis Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	40.383	14.000	17.950	6.223	10.950	3.796
Off	22.017	10.000	0.400	0.182	0.300	0.136
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	62.400	24.000	18.350	6.405	11.250	3.932

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	24.850	11.990	12.517	6.039
Off	27.983	10.000	2.617	0.935	0.567	0.203
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	27.467	12.925	13.083	6.242

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	19.500	9.750	12.367	6.183
Off	20.000	10.000	5.817	2.908	0.567	0.283
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	25.317	12.658	12.933	6.467

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	18.767	9.383	8.700	4.350
Off	20.000	10.000	0.167	0.083	0.167	0.083
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	18.933	9.467	8.867	4.433

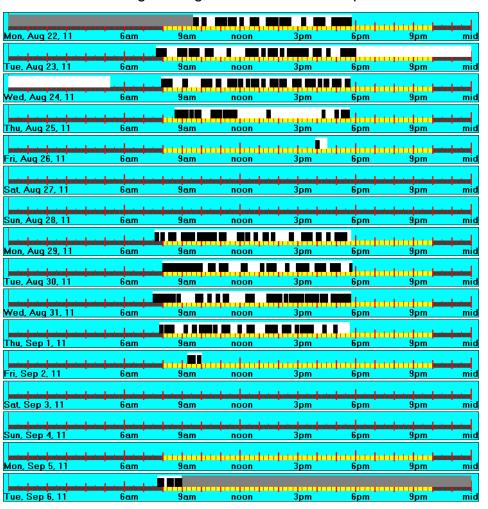
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	1.333	0.667	0.800	0.400
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	1.333	0.667	0.800	0.400

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz		
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	82.400	45.333	153,400	37.601	20.687	45.0%
Off	9.000	1.600	206.000	4.282	0.761	82.2%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	91.400	46.933	359.400	41.883	21.448	48.8%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	u	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ	LO	Осс	LO	Occ
Peak	0.000	0.000	6.223	3.796	11.990	6.039	9.750	6.183	9.383	4.350	0.667	0.400	0.000	0.000
Off Peak	0.000	0.000	0.182	0.136	0.935	0.203	2.908	0.283	0.083	0.083	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	6.405	3.932	12.925	6.242	12.658	6.467	9.467	4.433	0.667	0.400	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	82.400	45.333	153.400		37.601	20.687	45.0%
Off Peak	9.000	1.600	206.000		4.282	0.761	82.2%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	91.400	46.933	359.400		41.883	21.448	48.8%



## Municipal Vital Statistics Office

Area type: Office. Logger: EFF4. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	0cc	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	39.817	14.000	17.200	6.048	17.100	6.013
Off	22.017	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.833	24.000	17.200	6.048	17.100	6.013

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	21.400	10.325	21.367	10.309
Off	27.983	10.000	1.633	0.584	1.633	0.584
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	23.033	10.909	23.000	10.893

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	19.450	9.725	17.883	8.942
Off	20.000	10.000	0.117	0.058	0.117	0.058
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	19.567	9.783	18.000	9.000

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	18.967	9.483	18.067	9.033
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	18.967	9.483	18.067	9.033

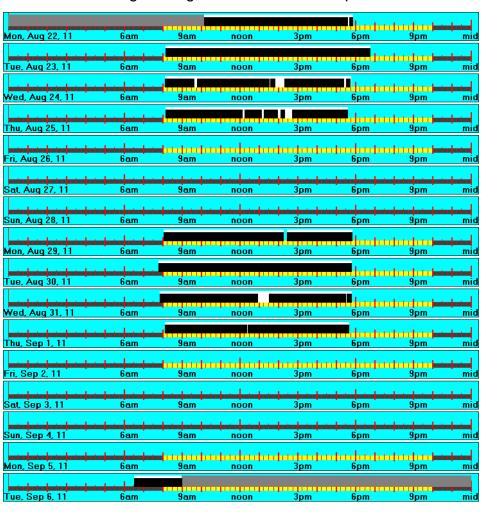
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	77.017	74.417	152.833	35.275	34.084	3.4%
Off	1.750	1.750	206.000	0.833	0.833	0.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	78.767	76.167	358.833	36.107	34.916	3.3%

	Su	ın	Mo	n	Tu	ie	We	ed	TH	u	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ	LO	Осс	LO	Occ
Peak	0.000	0.000	6.048	6.013	10.325	10.309	9.725	8.942	9.483	9.033	0.000	0.000	0.000	0.000
Off Peak	0.000	0.000	0.000	0.000	0.584	0.584	0.058	0.058	0.000	0.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	6.048	6.013	10.909	10.893	9.783	9.000	9.483	9.033	0.000	0.000	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	77.017	74.417	152.833		35.275	34.084	3.4%
Off Peak	1.750	1.750	206.000		0.833	0.833	0.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	78.767	76.167	358.833		36.107	34.916	3.3%



#### Police Admin Area Conference Room

Area type: Conference. Logger: F008. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# Energy Analysis

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	2.500	1.250	0.300	0.150
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	2.500	1.250	0.300	0.150

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	39.083	14.000	7.483	2.681	2.750	0.985
Off	22.017	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.100	24.000	7.483	2.681	2.750	0.985

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	22.817	11.009	8.433	4.069
Off	27.983	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	22.817	11.009	8.433	4.069

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	23.133	11.567	8.200	4.100
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	23.133	11.567	8.200	4.100

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	20.633	10.317	7.867	3.933
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	20.633	10.317	7.867	3.933

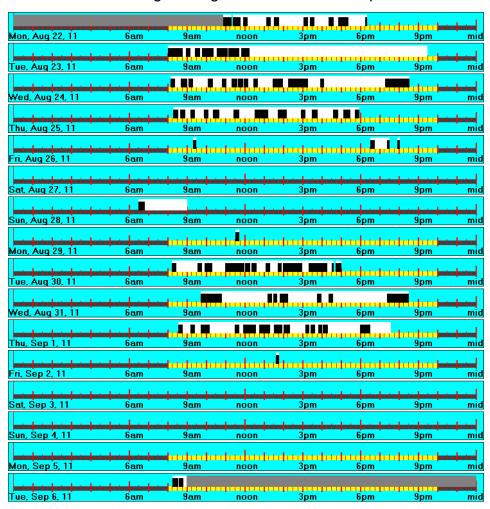
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	1.333	0.667	0.667	0.333
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	1.333	0.667	0.667	0.333

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	75.400	27.917	152.100	34.701	12.848	63.0%
Off	2.500	0.300	206.000	1.189	0.143	88.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	77.900	28.217	358.100	35.890	12.991	63.8%

	Su	ın	Mo	n	Tu	ie	W	ed	TH	u	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ
Peak	0.000	0.000	2.681	0.985	11.009	4.069	11.567	4.100	10.317	3.933	0.667	0.333	0.000	0.000
Off Peak	1.250	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	1.250	0.150	2.681	0.985	11.009	4.069	11.567	4.100	10.317	3.933	0.667	0.333	0.000	0.000

		Logged Totals		Normalized	Normalized W		
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	75.400	27.917	152.100		34.701	12.848	63.0%
Off Peak	2.500	0.300	206.000		1.189	0.143	88.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	77.900	28.217	358.100		35.890	12.991	63.8%



# Police Building Chief Office

Area type: Office. Logger: EE58. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	9.900	4.950	3.167	1.583
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	9.900	4.950	3.167	1.583

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	39.300	14.000	12.267	4.370	8.367	2.980
Off	22.017	10.000	0.633	0.288	0.433	0.197
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.317	24.000	12.900	4.657	8.800	3.177

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	12.550	6.055	7.617	3.675
Off	27.983	10.000	2.033	0.727	1.633	0.584
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	14.583	6.782	9.250	4.259

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	9.267	4.633	9.200	4.600
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	9.267	4.633	9.200	4.600

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	16.667	8.333	14.067	7.033
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	16.667	8.333	14.067	7.033

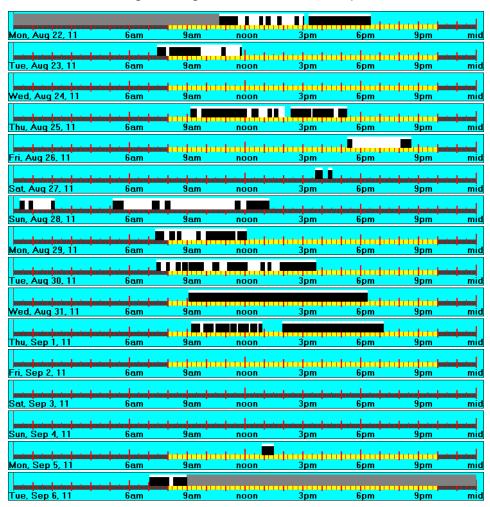
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	3.267	1.633	0.733	0.367
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	3.267	1.633	0.733	0.367

Sat				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	0cc	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.567	0.283	0.567	0.283
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48 000	24 000	0 567	0.283	0.567	0.283

	L	.ogged Total:	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	54.017	39.983	152.317	24.824	18.375	26.0%
Off	13.133	5.800	206.000	6.248	2.759	55.8%
Sh 1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	67.150	45.783	358.317	31.072	21.134	32.0%

	Su	ın	Mo	on	Tu	ie	We	ed	TH	ıu	Fi	i	S	at
	LO	Осс												
Peak	0.000	0.000	4.370	2.980	6.055	3.675	4.633	4.600	8.333	7.033	1.633	0.367	0.000	0.000
Off Peak	4.950	1.583	0.288	0.197	0.727	0.584	0.000	0.000	0.000	0.000	0.000	0.000	0.283	0.283
Sh1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	4.950	1.583	4.657	3.177	6.782	4.259	4.633	4.600	8.333	7.033	1.633	0.367	0.283	0.283

		Logged Totals		Normalized	Normalized W		
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	54.017	39.983	152.317		24.824	18.375	26.0%
Off Peak	13.133	5.800	206.000		6.248	2.759	55.8%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	67.150	45.783	358.317		31.072	21.134	32.0%



## Police Building Dispatch Kitchenette

Area type: Kitchen. Logger: EE4C. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

#### **Energy Analysis** Data by Day of Week

ט	ala i	Ју Ба	ау О
Normlzd		Normlzd	Mon
Lites On	Logged	Occ per	
per Day	Occ	Day	
0.000	0.000	0.000	D 1

Sun				Normizd		Normizd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	10.567	5.283	6.667	3.333
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	10.567	5.283	6.667	3.333

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	39.200	14.000	8.433	3.012	2.900	1.036
Off	22.017	10.000	1.750	0.795	0.917	0.416
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.217	24.000	10.183	3.807	3.817	1.452

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	2.650	1.279	0.933	0.450
Off	27.983	10.000	13.950	4.985	2.817	1.007
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	16.600	6.264	3.750	1.457

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	2.517	1.258	1.550	0.775
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	2.517	1.258	1.550	0.775

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	4.600	2.300	1.033	0.517
Off	20.000	10.000	1.383	0.692	0.750	0.375
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	5.983	2.992	1.783	0.892

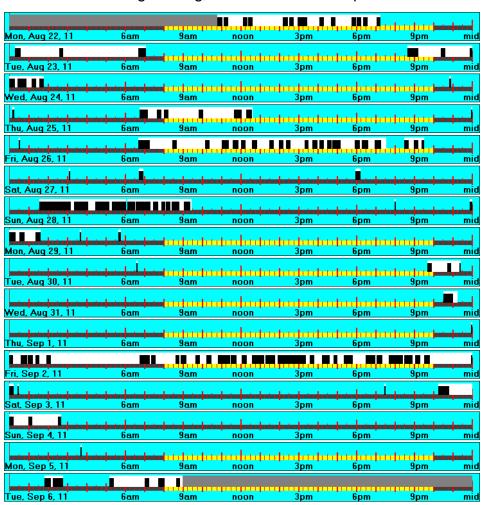
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	26.533	13.267	12.467	6.233
Off	20.000	10.000	11.333	5.667	2.400	1.200
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	37.867	18.933	14.867	7.433

Sat				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	0cc	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	2.467	1.233	1.267	0.633
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48 000	24 000	2.467	1 233	1 267	0.633

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	42.217	17.333	152.217	19.414	7.971	58.9%
Off	43.967	16.367	206.000	20.916	7.786	62.8%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	86.183	33.700	358.217	40.330	15.757	60.9%

	Su	ın	Mo	on	Tu	ie	We	ed	TH	u	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ	LO	Осс	LO	Occ
Peak	0.000	0.000	3.012	1.036	1.279	0.450	0.000	0.000	2.300	0.517	13.267	6.233	0.000	0.000
Off Peak	5.283	3.333	0.795	0.416	4.985	1.007	1.258	0.775	0.692	0.375	5.667	1.200	1.233	0.633
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	5.283	3.333	3.807	1.452	6.264	1.457	1.258	0.775	2.992	0.892	18.933	7.433	1.233	0.633

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	42.217	17.333	152.217		19.414	7.971	58.9%
Off Peak	43.967	16.367	206.000		20.916	7.786	62.8%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	86.183	33.700	358.217		40.330	15.757	60.9%



# Police Building Lt. Office

Area type: Office. Logger: EFEC. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

Data by Day of Week

Sun	Total Log	Hours	Logged	Normlzd Lites On	Logged	Normlzd Occ per
	Time	/Day	Lites On	per Day	0cc	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	10.133	5.067	3.967	1.983
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	10.133	5.067	3.967	1.983

Mon	Total Log	Hours	Logged	Normlzd Lites On	Logged	Normlzd Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	39.383	14.000	13.483	4.793	13.483	4.793
Off	22.017	10.000	1.050	0.477	1.050	0.477
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.400	24.000	14.533	5.270	14.533	5.270

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	7.033	3.393	3.400	1.640
Off	27.983	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	7.033	3.393	3.400	1.640

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	9.100	4.550	9.100	4.550
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	9.100	4.550	9.100	4.550

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	2.067	1.033	2.033	1.017
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	2.067	1.033	2.033	1.017

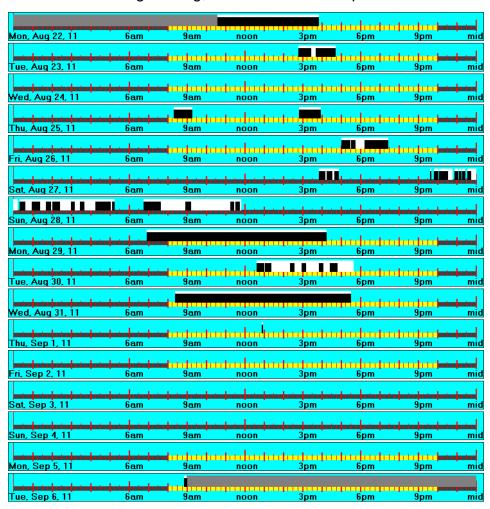
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	2.400	1.200	1.800	0.900
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	2.400	1.200	1.800	0.900

Sat				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	0cc	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	2.733	1.367	2.000	1.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48 000	24 000	2 733	1 367	2 000	1 000

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	34.083	29.817	152.400	15.655	13.695	12.5%
Off	13.917	7.017	206.000	6.621	3.338	49.6%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	48.000	36.833	358.400	22.276	17.033	23.5%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	u	Fi	ri	S	at
	LO	Осс	LO	Occ										
Peak	0.000	0.000	4.793	4.793	3.393	1.640	4.550	4.550	1.033	1.017	1.200	0.900	0.000	0.000
Off Peak	5.067	1.983	0.477	0.477	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.367	1.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	5.067	1.983	5.270	5.270	3.393	1.640	4.550	4.550	1.033	1.017	1.200	0.900	1.367	1.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	34.083	29.817	152.400		15.655	13.695	12.5%
Off Peak	13.917	7.017	206.000		6.621	3.338	49.6%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	48.000	36.833	358.400		22.276	17.033	23.5%



#### Police Court Clerks Office

Area type: Open Office. Logger: EFFA. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.100	0.050	0.100	0.050
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.100	0.050	0.100	0.050

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	39.200	14.000	16.600	5.929	16.433	5.869
Off	22.017	10.000	0.767	0.348	0.733	0.333
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.217	24.000	17.367	6.277	17.167	6.202

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	21.483	10.365	21.183	10.221
Off	27.983	10.000	2.367	0.846	2.267	0.810
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	23.850	11.211	23.450	11.031

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	19.367	9.683	19.267	9.633
Off	20.000	10.000	1.933	0.967	1.800	0.900
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	21.300	10.650	21.067	10.533

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	19.400	9.700	19.233	9.617
Off	20.000	10.000	1.533	0.767	1.500	0.750
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	20.933	10.467	20.733	10.367

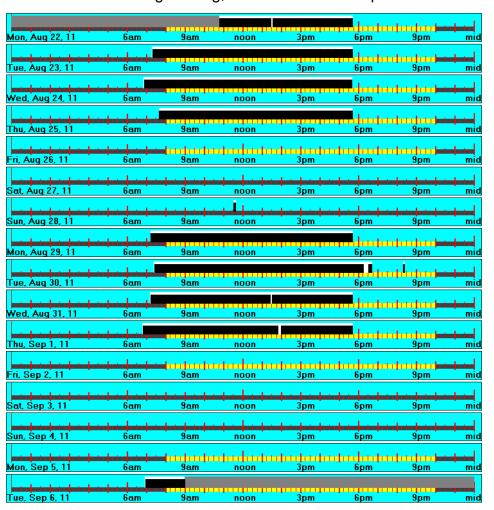
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	76.850	76.117	152.217	35.341	35.004	1.0%
Off	6.700	6.400	206.000	3.187	3.045	4.5%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	83.550	82.517	358.217	38.528	38.048	1.2%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	nu	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс
Peak	0.000	0.000	5.929	5.869	10.365	10.221	9.683	9.633	9.700	9.617	0.000	0.000	0.000	0.000
Off Peak	0.050	0.050	0.348	0.333	0.846	0.810	0.967	0.900	0.767	0.750	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.050	0.050	6.277	6.202	11.211	11.031	10.650	10.533	10.467	10.367	0.000	0.000	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	76.850	76.117	152.217		35.341	35.004	1.0%
Off Peak	6.700	6.400	206.000		3.187	3.045	4.5%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	83.550	82.517	358.217		38.528	38.048	1.2%



#### Police Mens Room

Area type: Restroom. Logger: F010. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# Energy Analysis Data by Day of Week

Sun	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	6.317	3.158	2.250	1.125
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	6.317	3.158	2.250	1.125

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	39.067	14.000	14.833	5.316	3.400	1.218
Off	22.017	10.000	8.417	3.823	0.483	0.220
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	61.083	24.000	23.250	9.139	3.883	1.438

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	12.433	5.999	4.467	2.155
Off	27.983	10.000	2.283	0.816	0.267	0.095
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	14.717	6.815	4.733	2.250

We	ed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Pea	ak	28.000	14.000	8.133	4.067	2.633	1.317
Off		20.000	10.000	8.517	4.258	0.300	0.150
Sh	1	0.000	0.000	0.000	0.000	0.000	0.000
Shi	2	0.000	0.000	0.000	0.000	0.000	0.000
	Total	48.000	24.000	16.650	8.325	2.933	1.467

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	17.400	8.700	3.333	1.667
Off	20.000	10.000	10.417	5.208	0.667	0.333
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	27.817	13.908	4.000	2.000

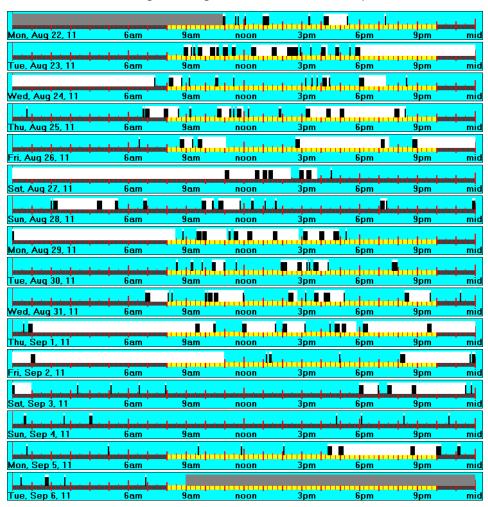
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	13.167	6.583	1.433	0.717
Off	20.000	10.000	11.950	5.975	0.417	0.208
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	25.117	12.558	1.850	0.925

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	21.500	10.750	2.183	1.092
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	21.500	10.750	2.183	1.092

	l	.ogged Total	S	Normaliz	ed Totals		
	Lites On	Occupied	Logged	Lites On	Lites On Occupied		
Peak	65.967	15.267	152.083	30.363	7.027	76.9%	
Off	69.400	6.567	206.000	33.016	3.124	90.5%	
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%	
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%	
Total	135.367	21.833	358.083	63.378	10.151	84.0%	

	Su	ın	Mo	on	Tu	ie	W	ed	TH	u	Fi	ri	S	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ
Peak	0.000	0.000	5.316	1.218	5.999	2.155	4.067	1.317	8.700	1.667	6.583	0.717	0.000	0.000
Off Peak	3.158	1.125	3.823	0.220	0.816	0.095	4.258	0.150	5.208	0.333	5.975	0.208	10.750	1.092
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	3.158	1.125	9.139	1.438	6.815	2.250	8.325	1.467	13.908	2.000	12.558	0.925	10.750	1.092

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied Logged		by Day	Lites On	Occupied	% Savings
Peak	65.967	15.267	152.083		30.363	7.027	76.9%
Off Peak	69.400	6.567	206.000		33.016	3.124	90.5%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	135.367	21.833	358.083		63.378	10.151	84.0%



# Police Squad Room

Area type: Open Office. Logger: EF77. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# Energy Analysis Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	37.750	18.875	28.167	14.083
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	37.750	18.875	28.167	14.083

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normizd Occ per Day
Peak	28.000	14.000	22.333	11.167	19.733	9.867
Off	20.000	10.000	18.467	9.233	17.117	8.558
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	40.800	20.400	36.850	18.425

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	15.017	14.000	13.650	12.726	12.850	11.980
Off	17.983	10.000	17.983	10.000	15.617	8.684
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	33.000	24.000	31.633	22.726	28.467	20.664

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	16.200	14.000	14.533	12.560	12.400	10.716
Off	12.017	10.000	11.650	9.695	11.517	9.584
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	28.217	24.000	26.183	22.255	23.917	20.300

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	26.133	13.067	24.200	12.100
Off	20.000	10.000	18.233	9.117	13.733	6.867
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	44.367	22.183	37.933	18.967

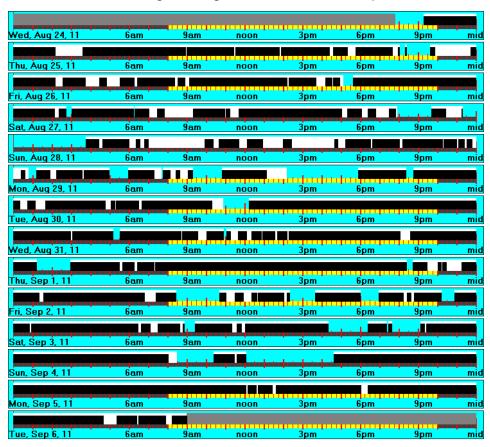
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	22.900	11.450	20.133	10.067
Off	20.000	10.000	19.300	9.650	16.467	8.233
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	42.200	21.100	36.600	18.300

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	40.883	20.442	34.517	17.258
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	40.883	20.442	34.517	17.258

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Lites On Occupied	
Peak	99.550	89.317	115.217	60.482	54.264	10.3%
Off	164.267	137.133	186.000	86.549	72.253	16.5%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	263.817	226.450	301.217	147.031	126.518	14.0%

	Su	3	Me	on	Tu	ie ei	W	ed	TH	nu	F	ri	S	at
	LO	Осс												
Peak	0.000	0.000	11.167	9.867	12.726	11.980	12.560	10.716	13.067	12.100	11.450	10.067	0.000	0.000
Off Peak	18.875	14.083	9.233	8.558	10.000	8.684	9.695	9.584	9.117	6.867	9.650	8.233	20.442	17.258
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	18.875	14.083	20.400	18.425	22.726	20.664	22.255	20.300	22.183	18.967	21.100	18.300	20.442	17.258

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	99.550	89.317	115.217		60.482	54.264	10.3%
Off Peak	164.267	137.133	186.000		86.549	72.253	16.5%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	263.817	226.450	301.217		147.031	126.518	14.0%



## Public Works Conference Room

Area type: Conference. Logger: F00E. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	0.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	24.000	0.000	0.000	0.000	0.000

Mon				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	10.267	14.000	0.067	0.091	0.067	0.091
Off	2.017	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	12.283	24.000	0.067	0.091	0.067	0.091

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	14.000	14.000	0.000	0.000	0.000	0.000
Off	10.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	24.000	24.000	0.000	0.000	0.000	0.000

	Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
l	Peak	14.000	14.000	1.800	1.800	1.233	1.233
	Off	10.000	10.000	0.000	0.000	0.000	0.000
	Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
	Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
	Total	24.000	24.000	1.800	1.800	1.233	1.233

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	14.000	14.000	2.900	2.900	0.733	0.733
Off	10.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	24.000	24.000	2.900	2.900	0.733	0.733

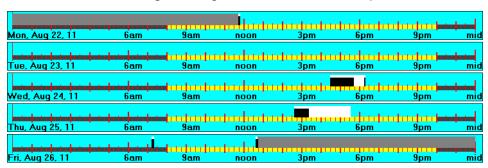
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	4.750	14.000	0.100	0.295	0.100	0.295
Off	7.983	10.000	0.100	0.125	0.100	0.125
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	12.733	24.000	0.200	0.420	0.200	0.420

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	0.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz		
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	4.867	2.133	57.017	5.975	2.619	56.2%
Off	0.100	0.100	40.000	0.245	0.245	0.0%
Sh 1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	4.967	2.233	97.017	6.220	2.864	54.0%

	Sun		Mon		Tue		Wed		Thu		Fri		Sat	
	LO	Осс	LO	Occ										
Peak	0.000	0.000	0.091	0.091	0.000	0.000	1.800	1.233	2.900	0.733	0.295	0.295	0.000	0.000
Off Peak	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.125	0.125	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	0.091	0.091	0.000	0.000	1.800	1.233	2.900	0.733	0.420	0.420	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	4.867	2.133	57.017		5.975	2.619	56.2%
Off Peak	0.100	0.100	40.000		0.245	0.245	0.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	4.967	2.233	97.017		6.220	2.864	54.0%



#### **Public Works Front Office**

Area type: Open Office. Logger: EF5D. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	1.767	0.883	1.600	0.800
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	1.767	0.883	1.600	0.800

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	38.183	14.000	15.417	5.653	14.100	5.170
Off	22.017	10.000	1.883	0.855	1.067	0.484
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	60.200	24.000	17.300	6.508	15.167	5.654

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	20.250	9.770	18.767	9.055
Off	27.983	10.000	9.550	3.413	4.700	1.680
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	29.800	13.183	23.467	10.734

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	19.967	9.983	19.167	9.583
Off	20.000	10.000	4.467	2.233	2.833	1.417
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	24.433	12.217	22.000	11.000

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	19.367	9.683	18.633	9.317
Off	20.000	10.000	3.900	1.950	2.533	1.267
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	23.267	11.633	21.167	10.583

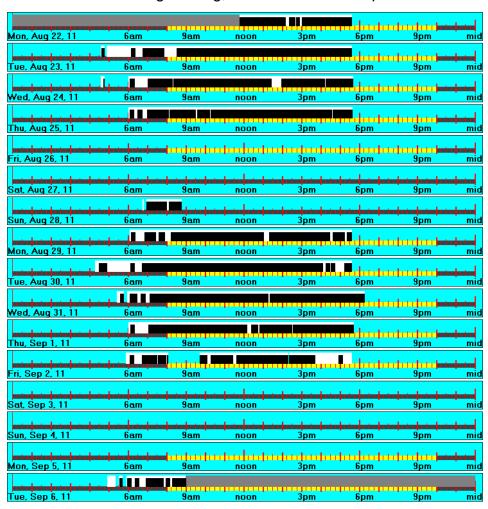
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	7.817	3.908	5.633	2.817
Off	20.000	10.000	2.083	1.042	1.367	0.683
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	9.900	4.950	7.000	3.500

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	82.817	76.300	151.200	38.341	35.324	7.9%
Off	23.650	14.100	206.000	11.251	6.708	40.4%
Sh 1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	106.467	90.400	357.200	49.592	42.032	15.2%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	nu	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ
Peak	0.000	0.000	5.653	5.170	9.770	9.055	9.983	9.583	9.683	9.317	3.908	2.817	0.000	0.000
Off Peak	0.883	0.800	0.855	0.484	3.413	1.680	2.233	1.417	1.950	1.267	1.042	0.683	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.883	0.800	6.508	5.654	13.183	10.734	12.217	11.000	11.633	10.583	4.950	3.500	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	82.817	76.300	151.200		38.341	35.324	7.9%
Off Peak	23.650	14.100	206.000		11.251	6.708	40.4%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	106.467	90.400	357.200		49.592	42.032	15.2%



## **Public Works Hallway**

Area type: Hallway. Logger: EF58. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# Energy Analysis

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	48.000	24.000	4.267	2.133
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	48.000	24.000	4.267	2.133

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	38.117	14.000	38.117	14.000	7.967	2.926
Off	22.017	10.000	22.017	10.000	0.867	0.394
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	60.133	24.000	60.133	24.000	8.833	3.320

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	29.017	14.000	11.883	5.733
Off	27.983	10.000	27.983	10.000	3.033	1.084
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	57.000	24.000	14.917	6.817

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Dav	Logged Occ	Normlzd Occ per Dav
Peak	28.000	14.000			12.683	
Off	20.000	10.000	20.000	10.000	1.950	0.975
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	48.000	24.000	14.633	7.317

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	28.000	14.000	11.617	5.808
Off	20.000	10.000	20.000	10.000	1.850	0.925
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	48.000	24.000	13.467	6.733

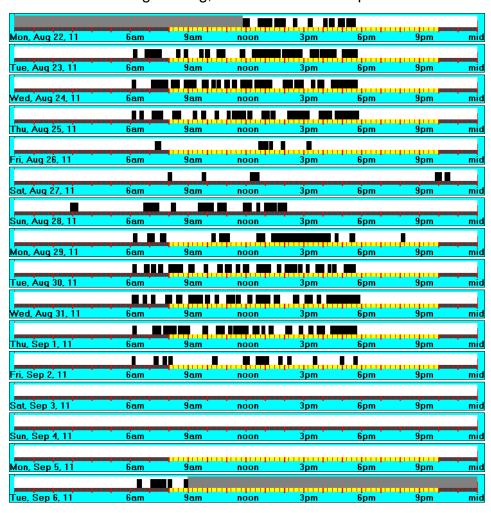
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	28.000	14.000	3.567	1.783
Off	20.000	10.000	20.000	10.000	0.900	0.450
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	48.000	24.000	4.467	2.233

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	48.000	24.000	1.467	0.733
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	48.000	24.000	1.467	0.733

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	151.133	47.717	151.133	70.000	22.101	68.4%
Off	206.000	14.333	206.000	98.000	6.819	93.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	357.133	62.050	357.133	168.000	28.920	82.8%

	Su	ın	Mo	n	Tu	ie	We	þ	Th	u	Fi	i.	S	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ	LO	Осс	LO	Осс
Peak	0.000	0.000	14.000	2.926	14.000	5.733	14.000	6.342	14.000	5.808	14.000	1.783	0.000	0.000
Off Peak	24.000	2.133	10.000	0.394	10.000	1.084	10.000	0.975	10.000	0.925	10.000	0.450	24.000	0.733
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	24.000	2.133	24.000	3.320	24.000	6.817	24.000	7.317	24.000	6.733	24.000	2.233	24.000	0.733

		Logged Totals		Normalized .	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	151.133	47.717	151.133		70.000	22.101	68.4%
Off Peak	206.000	14.333	206.000		98.000	6.819	93.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	357.133	62.050	357.133		168.000	28.920	82.8%



#### **Public Works Lunch Room**

Area type: Cafeteria. Logger: EF59. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	5.233	2.617	3.267	1.633
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	5.233	2.617	3.267	1.633

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	38.000	14.000	2.800	1.032	0.833	0.307
Off	22.017	10.000	1.867	0.848	1.667	0.757
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	60.017	24.000	4.667	1.879	2.500	1.064

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	1.400	0.675	1.033	0.499
Off	27.983	10.000	6.000	2.144	5.600	2.001
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	7.400	2.820	6.633	2.500

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	10.233	5.117	7.467	3.733
Off	20.000	10.000	4.067	2.033	3.833	1.917
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	14.300	7.150	11.300	5.650

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	7.800	3.900	5.533	2.767
Off	20.000	10.000	3.233	1.617	3.133	1.567
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	11.033	5.517	8.667	4.333

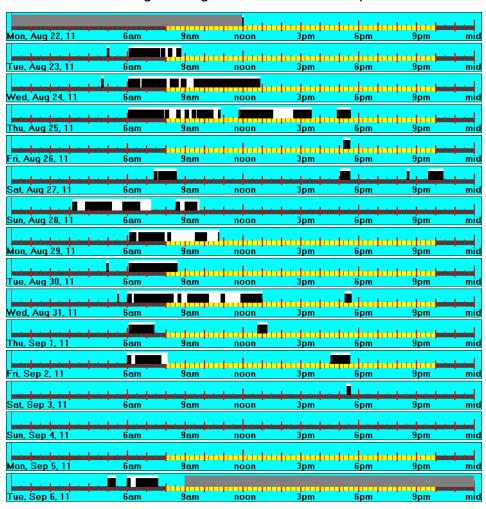
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	1.433	0.717	1.300	0.650
Off	20.000	10.000	2.000	1.000	1.533	0.767
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	3.433	1.717	2.833	1.417

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	2.767	1.383	2.633	1.317
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	2.767	1.383	2.633	1.317

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	23.667	16.167	151.017	10.970	7.494	31.7%
Off	25.167	21.667	206.000	11.972	10.307	13.9%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	48.833	37.833	357.017	22.943	17.801	22.4%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	ıu	Fi	i.	Sa	at
	LO	Осс												
Peak	0.000	0.000	1.032	0.307	0.675	0.499	5.117	3.733	3.900	2.767	0.717	0.650	0.000	0.000
Off Peak	2.617	1.633	0.848	0.757	2.144	2.001	2.033	1.917	1.617	1.567	1.000	0.767	1.383	1.317
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	2.617	1.633	1.879	1.064	2.820	2.500	7.150	5.650	5.517	4.333	1.717	1.417	1.383	1.317

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	23.667	16.167	151.017		10.970	7.494	31.7%
Off Peak	25.167	21.667	206.000		11.972	10.307	13.9%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	48.833	37.833	357.017		22.943	17.801	22.4%



## Public Works Supervisors Office

Area type: Private Office. Logger: EF28. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# Energy Analysis Data by Day of Week

Sun	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	11.233	5.617	7.967	3.983
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	11.233	5.617	7.967	3.983

	/Day	Lites On	per Day	Occ	Occiper Day
38.083	14.000	5.183	1.905	4.683	1.722
22.017	10.000	1.983	0.901	1.850	0.840
0.000	0.000	0.000	0.000	0.000	0.000
0.000	0.000	0.000	0.000	0.000	0.000
in 100	24.000	7.167	2.806	6.533	2.562
	0.000	0.000 0.000 0.000 0.000	0.000 0.000 0.000 0.000 0.000 0.000	0.000         0.000         0.000         0.000           0.000         0.000         0.000         0.000	0.000         0.000         0.000         0.000         0.000           0.000         0.000         0.000         0.000         0.000

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	16.250	7.840	14.150	6.827
Off	27.983	10.000	6.817	2.436	6.150	2.198
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	23.067	10.276	20.300	9.025

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	18.400	9.200	16.350	8.175
Off	20.000	10.000	4.167	2.083	4.083	2.042
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	22.567	11.283	20.433	10.217

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	17.000	8.500	16.000	8.000
Off	20.000	10.000	4.100	2.050	3.967	1.983
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	21.100	10.550	19.967	9.983

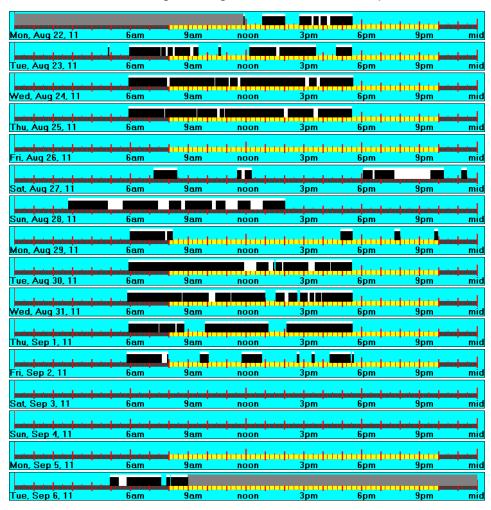
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	2.833	1.417	2.833	1.417
Off	20.000	10.000	2.133	1.067	1.833	0.917
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	4.967	2.483	4.667	2.333

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	6.367	3.183	4.133	2.067
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	6.367	3.183	4.133	2.067

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	% Savings	
Peak	59.667	54.017	151.100	27.642	25.024	9.5%
Off	36.800	29.983	206.000	17.507	14.264	18.5%
Sh 1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	96.467	84.000	357.100	45.149	39.288	13.0%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	ıu	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс
Peak	0.000	0.000	1.905	1.722	7.840	6.827	9.200	8.175	8.500	8.000	1.417	1.417	0.000	0.000
Off Peak	5.617	3.983	0.901	0.840	2.436	2.198	2.083	2.042	2.050	1.983	1.067	0.917	3.183	2.067
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	5.617	3.983	2.806	2.562	10.276	9.025	11.283	10.217	10.550	9.983	2.483	2.333	3.183	2.067

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	59.667	54.017	151.100		27.642	25.024	9.5%
Off Peak	36.800	29.983	206.000		17.507	14.264	18.5%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	96.467	84.000	357.100		45.149	39.288	13.0%



#### Recreation Center Buisness Office

Area type: General Office. Logger: EF6C. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	38.567	14.000	16.467	5.978	16.467	5.978
Off	22.017	10.000	0.083	0.038	0.083	0.038
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	60.583	24.000	16.550	6.015	16.550	6.015

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	22.400	10.808	22.200	10.711
Off	27.983	10.000	1.633	0.584	1.467	0.524
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	24.033	11.391	23.667	11.235

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	22.100	11.050	19.967	9.983
Off	20.000	10.000	0.033	0.017	0.033	0.017
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	22.133	11.067	20.000	10.000

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	21.450	10.725	21.450	10.725
Off	20.000	10.000	0.250	0.125	0.250	0.125
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	21.700	10.850	21.700	10.850

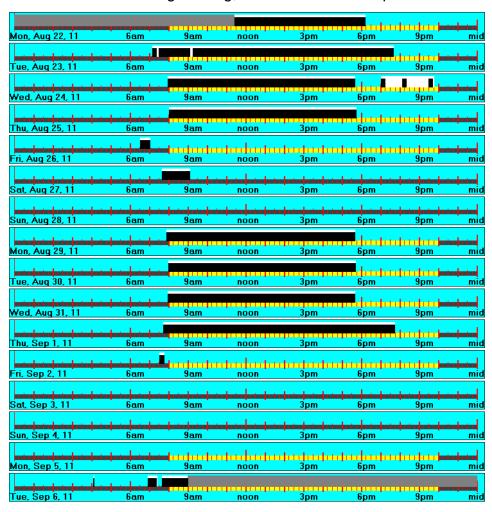
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normizd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.733	0.367	0.733	0.367
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.733	0.367	0.733	0.367

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	1.433	0.717	1.433	0.717
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	1.433	0.717	1.433	0.717

	L	.ogged Total:	S	Normaliz		
	Lites On	Occupied	Logged	Lites On Occupied		% Savings
Peak	82.417	80.083	151.583	38.059	36.982	2.8%
Off	4.167	4.000	206.000	1.982	1.903	4.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	86.583	84.083	357.583	40.042	38.885	2.9%

	Su	ın	Mo	on	Tu	1e	W	ed	TH	ıu	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс
Peak	0.000	0.000	5.978	5.978	10.808	10.711	11.050	9.983	10.725	10.725	0.000	0.000	0.000	0.000
Off Peak	0.000	0.000	0.038	0.038	0.584	0.524	0.017	0.017	0.125	0.125	0.367	0.367	0.717	0.717
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	6.015	6.015	11.391	11.235	11.067	10.000	10.850	10.850	0.367	0.367	0.717	0.717

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	82.417	80.083	151.583		38.059	36.982	2.8%
Off Peak	4.167	4.000	206.000		1.982	1.903	4.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	86.583	84.083	357.583		40.042	38.885	2.9%



#### Recreation Center Electrical Room

Area type: Mechanical. Logger: EF94. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# Energy Analysis Data by Day of Week

Sun	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	38.517	14.000	20.383	7.409	6.333	2.302
Off	22.017	10.000	2.017	0.916	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	60.533	24.000	22.400	8.325	6.333	2.302

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	18.583	8.966	5.650	2.726
Off	27.983	10.000	9.517	3.401	0.850	0.304
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	28.100	12.367	6.500	3.030

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	20.633	10.317	12.633	6.317
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	20.633	10.317	12.633	6.317

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	17.183	8.592	12.617	6.308
Off	20.000	10.000	0.117	0.058	0.117	0.058
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	17.300	8.650	12.733	6.367

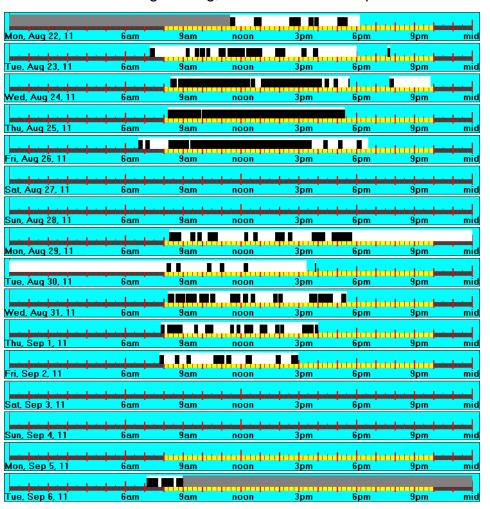
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	17.600	8.800	9.950	4.975
Off	20.000	10.000	1.467	0.733	0.583	0.292
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	19.067	9.533	10.533	5.267

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	94.383	47.183	151.533	43.600	21.796	50.0%
Off	13.117	1.550	206.000	6.240	0.737	88.2%
Sh 1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	107.500	48.733	357.533	49.840	22.533	54.8%

	Su	ın	Mo	n	Tu	ie	We	þ	Th	u	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ	LO	Осс	LO	Осс
Peak	0.000	0.000	7.409	2.302	8.966	2.726	10.317	6.317	8.592	6.308	8.800	4.975	0.000	0.000
Off Peak	0.000	0.000	0.916	0.000	3.401	0.304	0.000	0.000	0.058	0.058	0.733	0.292	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	8.325	2.302	12.367	3.030	10.317	6.317	8.650	6.367	9.533	5.267	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	94.383	47.183	151.533		43.600	21.796	50.0%
Off Peak	13.117	1.550	206.000		6.240	0.737	88.2%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	107.500	48.733	357.533		49.840	22.533	54.8%



## Recreation Center Game Storage

Area type: Storage. Logger: EEEE. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	0cc	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	24.000	12.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	24.000	12.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	38.650	14.000	9.817	3.556	5.867	2.125
Off	22.017	10.000	7.983	3.626	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	60.667	24.000	17.800	7.182	5.867	2.125

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	11.533	5.565	6.900	3.329
Off	27.983	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	11.533	5.565	6.900	3.329

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	16.450	8.225	6.833	3.417
Off	20.000	10.000	2.017	1.008	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	18.467	9.233	6.833	3.417

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	10.050	5.025	1.267	0.633
Off	20.000	10.000	7.983	3.992	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	18.033	9.017	1.267	0.633

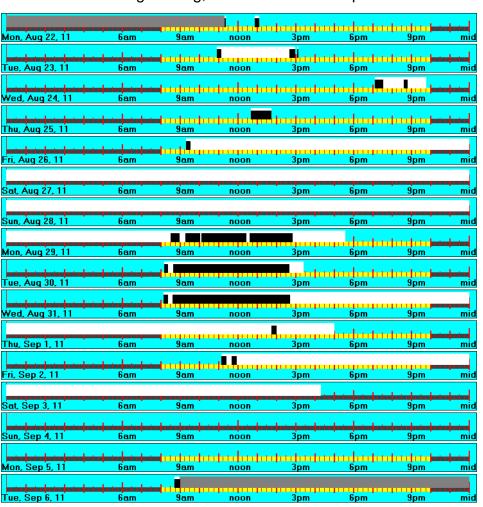
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	23.467	11.733	0.667	0.333
Off	20.000	10.000	4.033	2.017	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	27.500	13.750	0.667	0.333

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	40.300	20.150	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	40.300	20.150	0.000	0.000

	L	.ogged Total:	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	71.317	21.533	151.667	32.915	9.938	69.8%
Off	86.317	0.000	206.000	41.063	0.000	100.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	157.633	21.533	357.667	73.979	9.938	86.6%

	Su	ın	Mo	on	Tu	ie	We	ed	TH	u	F	ri	S	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ
Peak	0.000	0.000	3.556	2.125	5.565	3.329	8.225	3.417	5.025	0.633	11.733	0.333	0.000	0.000
Off Peak	12.000	0.000	3.626	0.000	0.000	0.000	1.008	0.000	3.992	0.000	2.017	0.000	20.150	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	12.000	0.000	7.182	2.125	5.565	3.329	9.233	3.417	9.017	0.633	13.750	0.333	20.150	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	71.317	21.533	151.667		32.915	9.938	69.8%
Off Peak	86.317	0.000	206.000		41.063	0.000	100.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	157.633	21.533	357.667		73.979	9.938	86.6%



#### Recreation Center Mens Room

Area type: Restroom. Logger: EE17. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

Data by Day of Week

Sun	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normizd Occ per Day
Peak	38.667	14.000	16.167	5.853	4.167	1.509
Off	22.017	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	60.683	24.000	16.167	5.853	4.167	1.509

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	20.550	9.915	4.483	2.163
Off	27.983	10.000	1.333	0.476	0.367	0.131
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	21.883	10.391	4.850	2.294

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	20.367	10.183	5.633	2.817
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	20.367	10.183	5.633	2.817

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	21.033	10.517	5.933	2.967
Off	20.000	10.000	0.133	0.067	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	21.167	10.583	5.933	2.967

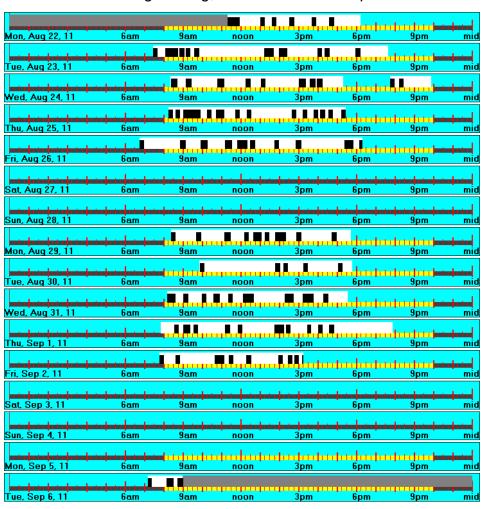
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	17.533	8.767	4.433	2.217
Off	20.000	10.000	1.433	0.717	0.400	0.200
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	18.967	9.483	4.833	2.417

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

	l	.ogged Total	\$	Normaliz		
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	95.650	24.650	151.683	44.141	11.376	74.2%
Off	2.900	0.767	206.000	1.380	0.365	73.6%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	98.550	25.417	357.683	45.521	11.740	74.2%

	Su	ın	Mo	n	Tu	ie	We	þ	TH	u	Fi	ri	Sa	at
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO	Occ
Peak	0.000	0.000	5.853	1.509	9.915	2.163	10.183	2.817	10.517	2.967	8.767	2.217	0.000	0.000
Off Peak	0.000	0.000	0.000	0.000	0.476	0.131	0.000	0.000	0.067	0.000	0.717	0.200	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	5.853	1.509	10.391	2.294	10.183	2.817	10.583	2.967	9.483	2.417	0.000	0.000

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	95.650	24.650	151.683		44.141	11.376	74.2%
Off Peak	2.900	0.767	206.000		1.380	0.365	73.6%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	98.550	25.417	357.683		45.521	11.740	74.2%



#### Senior Center Kitchen

Area type: Kitchen. Logger: EEE3. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

#### Data by Day of Week

Sun				Normlzd		Normlzd
	Total Log	Hours	Logged	Lites On	Logged	Occ per
	Time	/Day	Lites On	per Day	Occ	Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	24.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh2	0.000	0.000	0.000	0.000	0.000	0.000
Total	24.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	26.550	14.000	0.200	0.105	0.200	0.105
Off	12.017	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	38.567	24.000	0.200	0.105	0.200	0.105

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	14.000	14.000	3.367	3.367	3.333	3.333
Off	17.167	10.000	0.067	0.039	0.067	0.039
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	31.167	24.000	3.433	3.406	3.400	3.372

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	14.000			0.067	0.067	0.067
Off	10.000	10.000	0.100	0.100	0.100	0.100
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	24.000	24.000	0.167	0.167	0.167	0.167

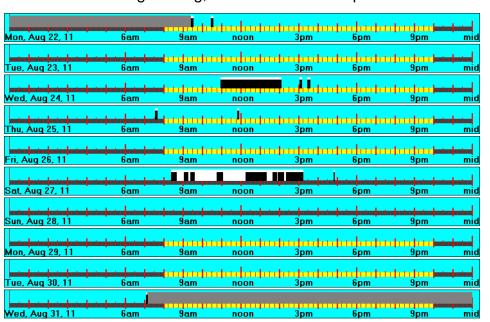
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	14.000	14.000	0.000	0.000	0.000	0.000
Off	10.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	24.000	24.000	0.000	0.000	0.000	0.000

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	24.000	24.000	6.867	6.867	3.400	3.400
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	24.000	24.000	6.867	6.867	3.400	3.400

	l	.ogged Total	s	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	3.633	3.600	96.550	2.634	2.610	0.9%
Off	7.033	3.567	117.183	5.882	2.983	49.3%
Sh 1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	10.667	7.167	213.733	8.516	5.593	34.3%

	Su	ın	Mo	on	Tu	ie	W	ed	TH	ıu	Fi	i.	Sa	at
	LO	Осс	LO	Occ										
Peak	0.000	0.000	0.105	0.105	0.000	0.000	3.367	3.333	0.067	0.067	0.000	0.000	0.000	0.000
Off Peak	0.000	0.000	0.000	0.000	0.000	0.000	0.039	0.039	0.100	0.100	0.000	0.000	6.867	3.400
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	0.105	0.105	0.000	0.000	3.406	3.372	0.167	0.167	0.000	0.000	6.867	3.400

		Logged Totals		Normalized	Normalized W	eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	3.633	3.600	96.550		2.634	2.610	0.9%
Off Peak	7.033	3.567	117.183		5.882	2.983	49.3%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	10.667	7.167	213.733		8.516	5.593	34.3%



## Senior Center Meeting Room

Area type: Meeting Rooms. Logger: EDF4. Time delay 10 minutes. Concord Engineering, Gloucester Township ESIP

# **Energy Analysis**

Data by Day of Week

Sun	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Mon	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	40.383	14.000	3.133	1.086	3.133	1.086
Off	22.017	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	62.400	24.000	3.133	1.086	3.133	1.086

Tue	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	29.017	14.000	4.433	2.139	4.433	2.139
Off	27.983	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	57.000	24.000	4.433	2.139	4.433	2.139

Wed	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	9.467	4.733	9.467	4.733
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	9.467	4.733	9.467	4.733

Thu	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	2.567	1.283	2.567	1.283
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	2.567	1.283	2.567	1.283

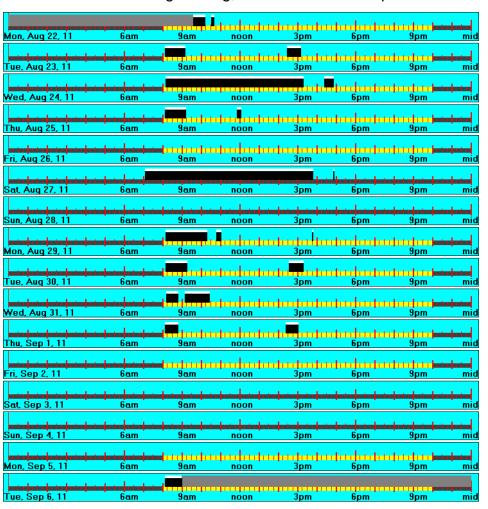
Fri	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	28.000	14.000	0.000	0.000	0.000	0.000
Off	20.000	10.000	0.000	0.000	0.000	0.000
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	0.000	0.000	0.000	0.000

Sat	Total Log Time	Hours /Day	Logged Lites On	Normlzd Lites On per Day	Logged Occ	Normlzd Occ per Day
Peak	0.000	0.000	0.000	0.000	0.000	0.000
Off	48.000	24.000	8.733	4.367	8.733	4.367
Sh1	0.000	0.000	0.000	0.000	0.000	0.000
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000
Total	48.000	24.000	8.733	4.367	8.733	4.367

	l	.ogged Total	S	Normaliz	ed Totals	
	Lites On	Occupied	Logged	Lites On	Occupied	% Savings
Peak	19.600	19.600	153,400	8.944	8.944	0.0%
Off	8.733	8.733	206.000	4.155	4.155	0.0%
Sh1	0.000	0.000	0.000	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000	0.000	0.000	0.0%
Total	28.333	28.333	359.400	13.099	13.099	0.0%

	Su	ın	Mo	n	Tu	ie	W	ed	TH	u	Fi	i.	Sat		
	LO	Осс	LO	Осс	LO	Осс	LO	Осс	LO Occ		LO	Осс	LO	Осс	
Peak	0.000	0.000	1.086	1.086	2.139	2.139	4.733	4.733	1.283	1.283	0.000	0.000	0.000	0.000	
Off Peak	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	4.367	4.367	
Sh 1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Sh 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Total	0.000	0.000	1.086	1.086	2.139	2.139	4.733	4.733	1.283	1.283	0.000	0.000	4.367	4.367	

		Logged Totals		Normalized	Normalized W	/eekly Totals	
	Lites On	Occupied	Logged	by Day	Lites On	Occupied	% Savings
Peak	19.600	19.600	153.400		8.944	8.944	0.0%
Off Peak	8.733	8.733	206.000		4.155	4.155	0.0%
Sh1	0.000	0.000	0.000	^^^^	0.000	0.000	0.0%
Sh 2	0.000	0.000	0.000		0.000	0.000	0.0%
Total	28.333	28.333	359.400		13.099	13.099	0.0%



APPENDIX ESIP

#### APPENDIX D



#### New Jersey Office of Clean Energy Direct Install Program Energy Assessment Tool



General Project Inform	ation										
Participating Customer:	(-	Bloucester Townshi	in					Facility Type:		Oth	ner
Contractor / Project #:		hinson	۲					Total Facility S	aua		101
Facility Name:	1100	DWP Old/Office						Avg Weekly H	-		
Street Address:		1729 Erial Rd								Employees:	
City / Zip Code:	Blac	kwood		08012						onstructed:	
· · · · · · · · · · · · · · · · · · ·	roject receive EE			Υ						x Exempt?:	Υ
ELECTRIC UTILITY INFORI	•	, i					GA	S UTILITY IN	FOI	RMATION	
Electric Provider:	Atlantic C	City Electric						Gas Provider:		<select gas<="" th=""><th>s Provider&gt;</th></select>	s Provider>
Service Class:		neral Service						Service Class:			
Account #:		389 9976						Account #:			
Billing Per	riod Start Date:	05/26/11						Billing Pe	riod	Start Date:	
<u> </u>	eriod End Date:	06/27/11						•		d End Date:	
Billing Period kWh		14,840					3illi	ng Period Therm		-	
_	iod Total Cost:	\$ 1,029.40						-		Total Cost:	
_	+ Fees on Bill:	\$ 82.69								ees on Bill:	
Project Summary											
Electric - Average	e Cost (\$/kWh):	\$0.064						Gas - Average	Cos	t (\$/Therm):	\$0.00
					_				_		<u>.</u>
		kWh Saved per		Annual Southern	<u>T(</u>	otal Measure	la a	Estimated		tal Cost to	Simple
Lighting M	easures Total:	Year	Φ	Savings 040.50	ı.	Cost		centive Amount	_	<u>Customer</u>	Payback (Yrs)
Motors & VFD M		12,736	\$	812.50	\$	10,375.57	\$	6,225.34	\$	4,150.23	5.11
HVAC Electric M		-	\$	-	\$	-	\$	-	\$	-	-
Refrigeration M		-	\$	-	\$	-	\$	-	\$	-	-
_		-	_		-	-	_	-	_	4.450.00	
TOTAL ELECTRIC	MEASURES:	12,736	\$	812.50	\$	10,375.57	\$	6,225.34	\$	4,150.23	5.11
	_	Therms /yr.									
TOTAL GAS	MEASURES:	-	\$	-	\$		\$	-	\$	-	-
		Gallons/yr.									
TOTAL OIL	MEASURES:		\$		\$		\$		\$	_	
			Ψ	-	Ψ		Ψ	-	Ψ	-	
	Oil Gallons/yr.	Gas Therms/yr.									
CONVERSION MEASURES:	-	-	\$		\$		\$	-	\$	-	-
(OIL TO GAS)		Gallons/yr.									
TOTAL PROPANE	MEASURES:		\$		\$		\$	-	\$		-
			E								
СОМІ	BINED PROJE	ECT TOTALS:	\$	812.50	\$	10,375.57	\$	6,225.34	\$	4,150.23	5.11
								PROJI	ECT	TRC TEST:	1.69
Projected Energy Savings F Measure Category	Per			llar Savings e Category	Pe	r		Estimated I		uction in Tot	al Energy
								400.00	,		
Lighting		Lighting				100.0%	0	\			



# DIRECT INSTALL PROGRAM PARTICIPATION AGREEMENT SCOPE OF WORK ATTACHMENT

"Parties":					
Participating Custo	omer*:	GI	oucester Township		
Participating Cont	ractor*:		Hutchinson		
Facility Name*:		DWF	Old/Office		
Facility Address:		1729 Erial Rd	Blackwood,	NJ	08012
_	Street		City		Zip
*as listed on Application					

When fully signed and upon receipt of the project funding approval letter, this Scope of Work Attachment ("Attachment") shall become part of the Direct Install Program Participation Agreement ("Participation Agreement") previously executed by the Parties in connection with the installation of energy efficiency retrofit Measures to be performed by the Participating Contractor (or "Contractor") at the above listed Facility. This Attachment, together with the Participation Agreement and funding letter, shall constitute the full Agreement between the Parties. Terms capitalized herein are defined in the Participation Agreement.

The Participating Customer (or "Customer") agrees to have Contractor perform retrofit work in connection with the Measures listed on page 2 of this form (attached) once this agreement is reviewed and approved for funding by the Market Manager (TRC). Until that time, it is simply a description of the recommended measures for the defined project. Once official approval for funding is received in writing from TRC, this defined project can move ahead. At that time, in consideration of the Contractor's performance of such work, Customer agrees to pay Contractor based on the measure costs listed below under Customer Unit Cost for the number of completed units for each Measure upon receipt of invoice; provided the Contractor may collect a deposit from Customer prior to performing such work, in which case the final invoice shall be net of such deposit. Customer and Contractor understand that conditions discovered during installation may require that some measures identified in the energy assessment cannot be installed, or some areas may require additional measures/quantities to be installed. Should conditions in the field dictate that the Estimated Program Total Cost shown on page 2 increase by more than 10%, Contractor must obtain both Market Manager and Customer written approval in the form of an amended Scope of Work Attachment before proceeding with such additional work.

By signing below, the Parties agree the above listed Measures shall be installed by the Contractor. The Customer shall pay the Contractor as described herein following Completion and Acceptance of Measures. Customer certifies that he/she has the authority to contract for retrofit work in the Facility in connection with the Measures listed and, if the Customer does not own the Facility, the Owner has granted permission to Customer for performance of such work.

Participating Customer	Date	Participating Contractor	Date

Page 2
Scope of Work

The work to be performed by the Participating Contractor in connection with the Project shall be comprised of the below listed Measures in the estimated quantities listed:

	Quantity Total Estimated				į	<u>Estimated</u>	
	To Be	<u> </u>	<u>Measure</u>	<u>C</u>	ustomer		Incentive
Measure Description / Location	Installed		Cost	<u>T</u>	otal Cost		<u>Amount</u>
4 LAMP T5 HIGH BAY HO FIXTURE / BAY AREA	18	\$	6,659.92	\$	2,663.97	\$	3,995.95
4' T8 4-lamp with EB / BAY AREA	1	\$	85.67	\$	34.27	\$	51.40
4' T8 2-lamp with EB / BAY AREA	1	\$	68.71	\$	27.48	\$	41.23
CF 13-1L SCREW IN CFL / BATHROOM	2	\$	64.85	\$	25.94	\$	38.91
4' T8 4-lamp with EB / FILE ROOM	8	\$	685.35	\$	274.14	\$	411.21
CF 13-1L SCREW IN CFL / BATHROOM	3	\$	97.28	\$	38.91	\$	58.37
4' T8 2-lamp with EB / KITCHEN	1	\$	68.71	\$	27.48	\$	41.23
4' T8 4-lamp with EB / HALLWAY	6	\$	514.01	\$	205.60	\$	308.41
CF 13-1L SCREW IN CFL / SIDE FILE AREA	2	\$	64.85	\$	25.94	\$	38.91
CF 13-1L SCREW IN CFL / BATHROOM / MENS	2	\$	64.85	\$	25.94	\$	38.91
CF 13-1L SCREW IN CFL / BATHROOM / WOMENS	2	\$	64.85	\$	25.94	\$	38.91
4' T8 4-lamp with EB / OFFICE 1	2	\$	171.34	\$	68.53	\$	102.80
4' T8 4-lamp with EB / OFFICE 2	2	\$	171.34	\$	68.53	\$	102.80
4' T8 2-lamp with EB / HALL CAFETERIA	11	\$	755.80	\$	302.32	\$	453.48
CF 13-1L SCREW IN CFL / BATHROOM	1	\$	32.43	\$	12.97	\$	19.46
4' T8 4-lamp with EB / OLD MAINTENCE GARAGE	6	\$	634.30	\$	253.72	\$	380.58
4' T8 4-lamp with EB / BACK STORAGE AREA	2	\$	171.34	\$	68.53	\$	102.80
TOTALS**		\$	10,375.57	\$	4,150.23	\$	6,225.34

<sup>\*\*</sup>Maximum incentive amount per project is \$50,000. Measures that would qualify the project for funding through the American Recovery and Reinvestment Act (ARRA), are highlighted above with an 'A'. If any "ARRA measures" are included then the total incentive amount for all measures will be paid with ARRA funds, otherwise the total incentive amount will come from NJ Clean Energy funds.



#### New Jersey Office of Clean Energy Direct Install Program Energy Assessment Tool



General Project Inform	nation										
Participating Customer:		Gloucester Twp						Facility Type:		Otl	ner
Contractor / Project #:	Hutc	hinson						Total Facility S	aua		101
Facility Name:	1100	Library	<u> </u>					Avg Weekly H	-	_	
Street Address:	15 3	South Blackhorse F	Pike							Employees:	
City / Zip Code:	Turne	ersville		08012						onstructed:	
	roject receive El	CBG funding?:		Υ						x Exempt?:	Y
ELECTRIC UTILITY INFORI	MATION	-			,		<u>GA</u>	S UTILITY IN	FOI	RMATION	
Electric Provider:	PS	E&G	]					Gas Provider:		South Je	rsey Gas
Service Class:	G	iLP						Service Class:		General	Service
Account #:	69 443	3 149 08						Account #:		2 06 30	3002 0 8
Billing Pe	riod Start Date:	05/27/11						Billing Pe	riod	Start Date:	04/27/11
Billing Pe	eriod End Date:	06/28/11						Billing P	erio	d End Date:	05/25/11
Billing Period kWh	n Consumption:	15,510					Billir	ng Period Thern	ı Co	nsumption:	265
Billing Per	riod Total Cost:	\$ 2,859.05						Billing Pe	riod	Total Cost:	\$ 339.20
Total Taxes	+ Fees on Bill:	\$ 138.28						Total Taxes	s + F	ees on Bill:	\$ 22.22
During to One											
Project Summary	. 0 ( /0/134/13 )							<b>0 A</b>	•	( (A/TI )	
Electric - Average	e Cost (\$/kWh):	\$0.175						Gas - Average	Cos	t (\$/1herm):	\$1.20
		kWh Saved per		Annual	т	tal Measure		Estimated	та	tal Cost to	Simple
		Year		Savings	10	Cost	Inc	entive Amount	_	Customer	Payback (Yrs)
Lighting M	leasures Total:	-	\$	-	\$		\$		\$	_	-
Motors & VFD M		_	\$	_	\$		\$	-	\$	_	_
HVAC Electric M	leasures Total:	-	\$	_	\$	_	\$	-	\$		_
Refrigeration M	leasures Total:	-	\$	-	\$	-	\$	-	\$	-	-
TOTAL ELECTRIC	MEASURES:		\$		\$		\$		\$		-
		Therms /yr.					<u>'</u>		•		
TOTAL GAS	MEASURES:	4,374	\$	5,238.08	\$	20,908.21	\$	12.544.93	\$	8,363.29	1.60
			φ	3,230.00	φ	20,500.21	Ψ	12,344.33	Ψ	0,303.29	1.00
		Gallons/yr.								-	
IOTAL OIL	MEASURES:	-	\$	-	\$	-	\$	•	\$	-	-
	Oil Gallons/yr.	Gas Therms/yr.									
CONVERSION MEASURES:	-	-	\$		\$		\$		\$		-
(OIL TO GAS)		Gallons/yr.									
TOTAL PROPANE	MEASURES:		\$		\$		\$		\$		
			_		•				_		
СОМІ	BINED PROJE	ECT TOTALS:	\$	5,238.08	\$	20,908.21	\$	12,544.93	\$	8,363.29	1.60
								PRO.II	FCT	TRC TEST:	12.30
											12.00
Projected Energy Savings F	Per			lar Savings	Per			Estimated I	Red	uction in Tot	tal Energy
Measure Category		Mea	sure	Category					Cor	nsumption	
											58.5%
Gas				Gas							



# DIRECT INSTALL PROGRAM PARTICIPATION AGREEMENT SCOPE OF WORK ATTACHMENT

"Parties":					
Participating Custo	omer*:	Glo	ucester Twp		
Participating Cont	ractor*:	ŀ	lutchinson		
Facility Name*:	•	Libr	ary		
Facility Address:	15 Sou	ıth Blackhorse Pike	Turnersville,	NJ	08012
_	Street		City		Zip
*as listed on Application					

When fully signed and upon receipt of the project funding approval letter, this Scope of Work Attachment ("Attachment") shall become part of the Direct Install Program Participation Agreement ("Participation Agreement") previously executed by the Parties in connection with the installation of energy efficiency retrofit Measures to be performed by the Participating Contractor (or "Contractor") at the above listed Facility. This Attachment, together with the Participation Agreement and funding letter, shall constitute the full Agreement between the Parties. Terms capitalized herein are defined in the Participation Agreement.

The Participating Customer (or "Customer") agrees to have Contractor perform retrofit work in connection with the Measures listed on page 2 of this form (attached) once this agreement is reviewed and approved for funding by the Market Manager (TRC). Until that time, it is simply a description of the recommended measures for the defined project. Once official approval for funding is received in writing from TRC, this defined project can move ahead. At that time, in consideration of the Contractor's performance of such work, Customer agrees to pay Contractor based on the measure costs listed below under Customer Unit Cost for the number of completed units for each Measure upon receipt of invoice; provided the Contractor may collect a deposit from Customer prior to performing such work, in which case the final invoice shall be net of such deposit. Customer and Contractor understand that conditions discovered during installation may require that some measures identified in the energy assessment cannot be installed, or some areas may require additional measures/quantities to be installed. Should conditions in the field dictate that the Estimated Program Total Cost shown on page 2 increase by more than 10%, Contractor must obtain both Market Manager and Customer written approval in the form of an amended Scope of Work Attachment before proceeding with such additional work.

By signing below, the Parties agree the above listed Measures shall be installed by the Contractor. The Customer shall pay the Contractor as described herein following Completion and Acceptance of Measures. Customer certifies that he/she has the authority to contract for retrofit work in the Facility in connection with the Measures listed and, if the Customer does not own the Facility, the Owner has granted permission to Customer for performance of such work.

Participating Customer	Date	Participating Contractor	Date

# Page 2 Scope of Work

The work to be performed by the Participating Contractor in connection with the Project shall be comprised of the below listed Measures in the estimated quantities listed:

	Quantity	<u>Total</u>	<u>Estimated</u>	<u>_</u>	Estimated
	To Be	<u>Measure</u>	Customer		Incentive
Measure Description / Location	Installed	<u>Cost</u>	Total Cos	<u>t</u>	<u>Amount</u>
Gas-Fired Boiler / Boiler Room	1	\$ 20,482.74	\$ 8,193	.10	\$ 12,289.64
Electronic Fuel-Use Economizers (for Hot Water Heat) / Boiler Room	1	\$ 425.48	\$ 170	.19	\$ 255.29
TOTALS**		\$ 20,908.21	\$ 8,363	.29	\$ 12,544.93

<sup>\*\*</sup>Maximum incentive amount per project is \$50,000. Measures that would qualify the project for funding through the American Recovery and Reinvestment Act (ARRA), are highlighted above with an 'A'. If any "ARRA measures" are included then the total incentive amount for all measures will be paid with ARRA funds, otherwise the total incentive amount will come from NJ Clean Energy funds.



#### New Jersey Office of Clean Energy Direct Install Program Energy Assessment Tool



General Project Inform	nation_										
Participating Customer:	G	Gloucester Townshi	ip		Ī			Facility Type:		Oth	ner
Contractor / Project #:	Hutc	hinson	İ					Total Facility S	qua	re Footage:	
Facility Name:		Recreation Center						Avg Weekly H	-		
Street Address:		80 Broad Acres								Employees:	
City / Zip Code:	Blac	kwood		08012				Ye	ar C	onstructed:	
	roject receive El	CBG funding?:		Υ					Та	x Exempt?:	Υ
ELECTRIC UTILITY INFORI	MATION	·					<u>G</u>	S UTILITY IN	FO	RMATION	
Electric Provider:	Atlantic C	City Electric						Gas Provider:		South Jer	sey Gas
Service Class:	Annual Ge	neral Service						Service Class:		General	
Account #:		009 9994						Account #:		2 05 39 5	
Billing Pe	riod Start Date:	05/06/11						Billing Pe	rioc	Start Date:	06/06/11
	eriod End Date:	06/07/11	İ					•		d End Date:	07/06/11
Billing Period kWI		23,380				ı	3illi	ng Period Therm		-	9
_	riod Total Cost:	\$ 4,310.70						~		Total Cost:	\$ 39.50
_	Total Taxes + Fees on Bill: \$ 227.									ees on Bill:	\$ 23.81
Total Tano		<b>4</b> 22.11.0	l.					1000.100			<b>4</b> 20.01
Project Summary											
Electric - Average	e Cost (\$/kWh):	\$0.175	Ī					Gas - Average	Cos	t (\$/Therm):	\$1.68
J	,, ,	ŢOI.I.O						ŭ		·· / L	<b>VIIIC</b>
		kWh Saved per		Annual	Т	otal Measure		Estimated	To	otal Cost to	Simple
		Year		Savings	_	Cost	Inc	entive Amount		Customer	Payback (Yrs)
Lighting M	leasures Total:	184,553	\$	32,231.57	\$	11,431.04	\$	6,858.62	\$	4,572.42	0.14
Motors & VFD M	leasures Total:	-	\$	-	\$		\$	-	\$	-	-
HVAC Electric M	leasures Total:	2,695	\$	470.70	\$	8,137.92	\$	4,882.75	\$	3,255.17	6.92
Refrigeration M	leasures Total:	-	\$		\$		\$	-	\$	_	_
TOTAL ELECTRIC	: MEASURES:	187,248	\$	32,702.27	\$	19,568.96	\$	11,741.38	\$	7,827.58	0.24
101/12 222011110		•	Ψ	OZ, I OZ.ZI	Ψ	10,000.00	Ψ	11,141.00	Ψ	1,021.00	U.L.T
		Therms /yr.									
TOTAL GAS	MEASURES:	153	\$	256.40	\$	5,434.29	\$	3,260.57	\$	2,173.71	8.48
		Gallons/yr.									
TOTAL OIL	MEASURES:		\$		\$		\$	_	\$		_
			Ψ		Ψ		Ψ		Ψ		
	Oil Gallons/yr.	Gas Therms/yr.									
CONVERSION MEASURES:	-	-	\$	-	\$	-	\$	-	\$	-	-
(OIL TO GAS)		Gallons/yr.									
TOTAL PROPANE	MEASURES:	-	\$		\$	-	\$	-	\$		-
					_						
COM	BINED PROJI	ECT TOTALS:	\$	32,958.67	\$	25,003.24	\$	15,001.95	\$	10,001.30	0.30
		•						PROJI	ECT	TRC TEST:	16.20
			_		_						
Projected Energy Savings F Measure Category	Projected Energy Savings Per Projected Measure Category Meas							Estimated I		uction in Tot	al Energy
									001	iisuiiiptioii	
HVA€ <sub>as</sub>				HV <b>@.@</b> s							74.504
											71.5%
				4							
Lighting	Lighting										
			-								



# DIRECT INSTALL PROGRAM PARTICIPATION AGREEMENT SCOPE OF WORK ATTACHMENT

"Parties":					
Participating Cust	omer*:	Glo	oucester Township		
Participating Cont	tractor*:		Hutchinson		
Facility Name*:		Recrea	ation Center		
Facility Address:	8	80 Broad Acres	Blackwood,	NJ	08012
_	Street		City		Zip
*as listed on Application					

When fully signed and upon receipt of the project funding approval letter, this Scope of Work Attachment ("Attachment") shall become part of the Direct Install Program Participation Agreement ("Participation Agreement") previously executed by the Parties in connection with the installation of energy efficiency retrofit Measures to be performed by the Participating Contractor (or "Contractor") at the above listed Facility. This Attachment, together with the Participation Agreement and funding letter, shall constitute the full Agreement between the Parties. Terms capitalized herein are defined in the Participation Agreement.

The Participating Customer (or "Customer") agrees to have Contractor perform retrofit work in connection with the Measures listed on page 2 of this form (attached) once this agreement is reviewed and approved for funding by the Market Manager (TRC). Until that time, it is simply a description of the recommended measures for the defined project. Once official approval for funding is received in writing from TRC, this defined project can move ahead. At that time, in consideration of the Contractor's performance of such work, Customer agrees to pay Contractor based on the measure costs listed below under Customer Unit Cost for the number of completed units for each Measure upon receipt of invoice; provided the Contractor may collect a deposit from Customer prior to performing such work, in which case the final invoice shall be net of such deposit. Customer and Contractor understand that conditions discovered during installation may require that some measures identified in the energy assessment cannot be installed, or some areas may require additional measures/quantities to be installed. Should conditions in the field dictate that the Estimated Program Total Cost shown on page 2 increase by more than 10%, Contractor must obtain both Market Manager and Customer written approval in the form of an amended Scope of Work Attachment before proceeding with such additional work.

By signing below, the Parties agree the above listed Measures shall be installed by the Contractor. The Customer shall pay the Contractor as described herein following Completion and Acceptance of Measures. Customer certifies that he/she has the authority to contract for retrofit work in the Facility in connection with the Measures listed and, if the Customer does not own the Facility, the Owner has granted permission to Customer for performance of such work.

Participating Customer	Date	Participating Contractor	Date

Page 2
Scope of Work

The work to be performed by the Participating Contractor in connection with the Project shall be comprised of the below listed Measures in the estimated quantities listed:

	Quantity Total		<u>Estimated</u>		<u>Estimated</u>	
	To Be Measure		Customer		Incentive	
Measure Description / Location	Installed		<u>Cost</u>	Total Cost		<u>Amount</u>
T8 3-lamp fixture with EB & reflector / LOBBY	2	\$	554.84	\$ 221.94	\$	332.90
T8 3-lamp fixture with EB & reflector / 2ND LOBBY	6	\$	1,664.52	\$ 665.81	\$	998.71
T8 3-lamp fixture with EB & reflector / MENS ROOM	3	\$	832.26	\$ 332.90	\$	499.36
4' T8 2-lamp with EB / MENS ROOM	6	\$	412.25	\$ 164.90	\$	247.35
T8 3-lamp fixture with EB & reflector / WOMENS ROOM	3	\$	832.26	\$ 332.90	\$	499.36
4' T8 2-lamp with EB / WOMENS ROOM	6	\$	412.25	\$ 164.90	\$	247.35
4' T8 2-lamp with EB / JANITORIAL CLOSET	1	\$	68.71	\$ 27.48	\$	41.23
T8 3-lamp fixture with EB & reflector / OFFICE WITH SODA MACHINE	1	\$	277.42	\$ 110.97	\$	166.45
T8 3-lamp fixture with EB & reflector / ALL OFFICES	10	\$	2,774.20	\$ 1,109.68	\$	1,664.52
4' T8 2-lamp with EB / ELECTRICAL ROOM	9	\$	618.38	\$ 247.35	\$	371.03
T8 3-lamp fixture with EB & reflector / GYM ENTRANCE AREA	4	\$	1,109.68	\$ 443.87	\$	665.81
4' T8 2-lamp with EB / STORAGE AREA	8	\$	549.67	\$ 219.87	\$	329.80
LED EXIT Sign w/ Batt. Backup / EXIT SIGNS	10	\$	1,324.59	\$ 529.84	\$	794.76
5-Ton Electric Split System A/C / rear of Building	1	\$	8,137.92	\$ 3,255.17	\$	4,882.75
Gas-Fired Furnace / Storage Room	1	\$	5,434.29	\$ 2,173.71	\$	3,260.57
TOTALS**		\$	25,003.24	\$ 10,001.30	\$	15,001.95

<sup>\*\*</sup>Maximum incentive amount per project is \$50,000. Measures that would qualify the project for funding through the American Recovery and Reinvestment Act (ARRA), are highlighted above with an 'A'. If any "ARRA measures" are included then the total incentive amount for all measures will be paid with ARRA funds, otherwise the total incentive amount will come from NJ Clean Energy funds.



#### New Jersey Office of Clean Energy Direct Install Program Energy Assessment Tool



General Project Inform	nation_										
Participating Customer:	G	Gloucester Townshi	р		Ī			Facility Type:		Oth	ner
Contractor / Project #:	Hutc	hinson						Total Facility S	gua	re Footage:	
Facility Name:		Academy Hall				Avg Weekly Hrs of O					
Street Address:	27	7 S. Blackhorse Pik	е		# of Full-Time Em						
City / Zip Code:	Turne	ersville		08012				Ye	ar C	onstructed:	
Will the p	roject receive El	CBG funding?:		Υ					Ta	x Exempt?:	Y
ELECTRIC UTILITY INFORI	MATION						GΑ	S UTILITY IN	FO	RMATION	
Electric Provider:	PS	E&G						Gas Provider:		South Je	rsey Gas
Service Class:	G	SLV						Service Class:		General	
Account #:	69 438	3 189 02						Account #:		2 06 30 3	3000 0 0
Billing Pe	riod Start Date:	04/28/11						Billing Pe	rioc	Start Date:	04/27/11
Billing Pe	eriod End Date:	06/28/11						Billing P	erio	d End Date:	05/25/11
Billing Period kWl	n Consumption:	10,080				ı	3illi	ng Period Thern	ı Co	nsumption:	67
Billing Per	riod Total Cost:	\$ 1,804.60						•		Total Cost:	\$ 118.91
Total Taxes	+ Fees on Bill:	\$ 95.67						Total Taxes	s + F	ees on Bill:	\$ 22.22
Project Summary											
Electric - Average	Cost (\$/kWh)	\$0.170	ı					Gas - Average	Cos	t (\$/Therm). I	\$1.45
Electric - Average	ο οσε (φ/κννιή).	\$0.170						Ous - Average	003	ι (ψ/ riieriii).	\$1.45
		kWh Saved per		Annual	Т	otal Measure		Estimated	To	otal Cost to	Simple
		Year		Savings	-	Cost	Inc	entive Amount	_	Customer	Payback (Yrs)
Lighting M	leasures Total:	5,397	\$	915.06	\$	24,573.00	\$	14,743.80	\$	9,829.20	10.74
Motors & VFD M	leasures Total:	-	\$	-	\$		\$	-	\$	-	-
HVAC Electric M	leasures Total:	2,430	\$	411.97	\$	12,626.79	\$	7,576.08	\$	5,050.72	12.26
Refrigeration M	leasures Total:	-	\$	-	\$	-	\$	-	\$	-	-
TOTAL ELECTRIC	MEASURES:	7,827	\$	1,327.04	\$	37,199.79	\$	22,319.88	\$	14,879.92	11.21
		,	•	,	_	, , , , ,	•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<u>'</u>	,	
TOTAL CAS	MEASURES:	Therms /yr.							_		
TOTAL GAS	WIEASUNES.	5,857	\$	8,482.14	\$	26,260.36	\$	15,756.21	\$	10,504.14	1.24
		Gallons/yr.									
TOTAL OIL	MEASURES:	-	\$		\$		\$	-	\$	-	-
	Oil Gallons/vr	Gas Therms/yr.									
CONVERSION ME ACURES.	On Gunonsiyi.	<u>Gus memsiyi.</u>	•		•		ė		•		
CONVERSION MEASURES: (OIL TO GAS)	-		\$		\$	-	\$		\$		
		Gallons/yr.								-	
TOTAL PROPANE	MEASURES:	-	\$		\$		\$	-	\$	-	-
COM	BINED PROJE	ECT TOTALS:	\$	9,809.18	\$	63,460.15	\$	38,076.09	\$	25,384.06	2.59
				,		,					
								PROJ	ECT	TRC TEST:	2.32
Projected Energy Savings F	Per			llar Savings	Pe	er		Estimated I	Red	uction in To	al Energy
Measure Category		Meas	sur	e Category						nsumption	3,
				مالفات ا	_	HVAC					
LightingAC			_	Lighting	3						
											62.3%
/ / / / / / / / / / / / / / / / / / /											
Gas			Gas								
			-								



# DIRECT INSTALL PROGRAM PARTICIPATION AGREEMENT SCOPE OF WORK ATTACHMENT

"Parties":					
Participating Custo	omer*:	Glou	cester Township		
Participating Cont	ractor*:		Hutchinson		
Facility Name*:		Acade	emy Hall		
Facility Address:	27 S	. Blackhorse Pike	Turnersville,	NJ	08012
_	Street		City		Zip
*as listed on Application					

When fully signed and upon receipt of the project funding approval letter, this Scope of Work Attachment ("Attachment") shall become part of the Direct Install Program Participation Agreement ("Participation Agreement") previously executed by the Parties in connection with the installation of energy efficiency retrofit Measures to be performed by the Participating Contractor (or "Contractor") at the above listed Facility. This Attachment, together with the Participation Agreement and funding letter, shall constitute the full Agreement between the Parties. Terms capitalized herein are defined in the Participation Agreement.

The Participating Customer (or "Customer") agrees to have Contractor perform retrofit work in connection with the Measures listed on page 2 of this form (attached) once this agreement is reviewed and approved for funding by the Market Manager (TRC). Until that time, it is simply a description of the recommended measures for the defined project. Once official approval for funding is received in writing from TRC, this defined project can move ahead. At that time, in consideration of the Contractor's performance of such work, Customer agrees to pay Contractor based on the measure costs listed below under Customer Unit Cost for the number of completed units for each Measure upon receipt of invoice; provided the Contractor may collect a deposit from Customer prior to performing such work, in which case the final invoice shall be net of such deposit. Customer and Contractor understand that conditions discovered during installation may require that some measures identified in the energy assessment cannot be installed, or some areas may require additional measures/quantities to be installed. Should conditions in the field dictate that the Estimated Program Total Cost shown on page 2 increase by more than 10%, Contractor must obtain both Market Manager and Customer written approval in the form of an amended Scope of Work Attachment before proceeding with such additional work.

By signing below, the Parties agree the above listed Measures shall be installed by the Contractor. The Customer shall pay the Contractor as described herein following Completion and Acceptance of Measures. Customer certifies that he/she has the authority to contract for retrofit work in the Facility in connection with the Measures listed and, if the Customer does not own the Facility, the Owner has granted permission to Customer for performance of such work.

Participating Customer	Date	Participating Contractor	Date

Page 2
Scope of Work

The work to be performed by the Participating Contractor in connection with the Project shall be comprised of the below listed Measures in the estimated quantities listed:

	Quantity Total		<u>Estimated</u>		<u>Estimated</u>	
	To Be Measure		Customer		Incentive	
Measure Description / Location	Installed		<u>Cost</u>	<u>Total</u>	Cost	<u>Amount</u>
T8 3-lamp fixture with EB & reflector / MAIN OFFICE AREA	14	\$	3,883.88	\$	1,553.55	\$ 2,330.33
CF 13-1L SCREW IN CFL / BATHROOM	2	\$	64.85	\$	25.94	\$ 38.91
T8 3-lamp fixture with EB & reflector / LOBBY TO STAIRS	2	\$	554.84	\$	221.94	\$ 332.90
T8 3-lamp fixture with EB & reflector / ENTIRE 1ST FLOOR OFFICE AREA	31	\$	8,600.03	\$	3,440.01	\$ 5,160.02
CF 13-1L SCREW IN CFL / BATHROOMS	2	\$	64.85	\$	25.94	\$ 38.91
T8 3-lamp fixture with EB & reflector / STAIRWELL	1	\$	277.42	\$	110.97	\$ 166.45
T8 3-lamp fixture with EB & reflector / ENTIRE 2ND FLOOR OFFICE AREA	32	\$	8,877.45	\$	3,550.98	\$ 5,326.47
CF 13-1L SCREW IN CFL / BATHROOM	1	\$	32.43	\$	12.97	\$ 19.46
CF 13-1L SCREW IN CFL / CLOSET	1	\$	32.43	\$	12.97	\$ 19.46
CF 13-1L SCREW IN CFL / STAIRWELL DOWN	5	\$	162.13	\$	64.85	\$ 97.28
CF 13-1L SCREW IN CFL / STAIRWELL UP	1	\$	32.43	\$	12.97	\$ 19.46
LED EXIT Sign w/ Batt. Backup / EXIT SIGNS OVERALL	7	\$	927.22	\$	370.89	\$ 556.33
4' T8 2-lamp with EB / 3RD FLOOR OVERALL AREA	15	\$	1,030.63	\$	412.25	\$ 618.38
CF 13-1L SCREW IN CFL / MECHANICAL ROOM	1	\$	32.43	\$	12.97	\$ 19.46
3-Ton Electric Split System A/C / Rear Building	1	\$	6,916.69	\$	2,766.68	\$ 4,150.02
2-Ton Electric Split System A/C / Rear Building	1	\$	5,710.10	\$	2,284.04	\$ 3,426.06
Gas-Fired Boiler / Boiler Room	1	\$	24,399.40	\$	9,759.76	\$ 14,639.64
Electronic Fuel-Use Economizers (for Hot Water Heat) / Boiler Room	1	\$	1,860.95	\$	744.38	\$ 1,116.57
TOTALS**		\$	63,460.15	\$ 2	5,384.06	\$ 38,076.09

<sup>\*\*</sup>Maximum incentive amount per project is \$50,000. Measures that would qualify the project for funding through the American Recovery and Reinvestment Act (ARRA), are highlighted above with an 'A'. If any "ARRA measures" are included then the total incentive amount for all measures will be paid with ARRA funds, otherwise the total incentive amount will come from NJ Clean Energy funds.



#### New Jersey Office of Clean Energy Direct Install Program Energy Assessment Tool



General Project Inform	ation										
Participating Customer:	G	Gloucester Townsh	ip					Facility Type:		Oth	ner
Contractor / Project #:	Hutc	hinson	İ					Total Facility S	qua	re Footage:	
Facility Name:	Senior Center							Avg Weekly Hı		-	
Street Address:	1261 Chews landing Ro					# of Full-Time Emplo					
City / Zip Code:	Turne	ersville		08012				Yea	ar C	onstructed:	
Will the pr	roject receive El	CBG funding?:		Υ					Та	x Exempt?:	Y
ELECTRIC UTILITY INFORM	<u>MATION</u>						GAS	S UTILITY IN	FOI	RMATION	
Electric Provider:	PS	E&G					(	Gas Provider:		South Je	rsey Gas
Service Class:	LF	PLS					5	Service Class:		General	
Account #:	69 441	714 06						Account #:		2 05 34 3	3489 0 7
Billing Per	riod Start Date:	05/25/11						Billing Pe	riod	Start Date:	06/03/11
Billing Pe	eriod End Date:	06/24/11						Billing P	erio	d End Date:	07/06/11
Billing Period kWh	Consumption:	3,678				Ī	Billin	g Period Therm	ı Co	nsumption:	20
Billing Per	iod Total Cost:	\$ 846.21						Billing Pe	riod	Total Cost:	\$ 106.59
Total Taxes	+ Fees on Bill:	\$ 36.07						Total Taxes	+ F	ees on Bill:	\$ 26.19
Project Summary  Electric - Average	e Cost (\$/kWh):	\$0.220						Gas - Average	Cos	t (\$/Therm):	\$4.08
		kWh Saved per Year		Annual Savings	<u>To</u>	tal Measure Cost		Estimated entive Amount	_	tal Cost to Customer	Simple Payback (Yrs)
Lighting M	easures Total:		\$	-	\$		\$	-	\$	-	-
Motors & VFD M	easures Total:	-	\$	-	\$	-	\$	-	\$	-	-
HVAC Electric M	easures Total:	11,601	\$	2,555.38	\$	24,610.70	\$	14,766.42	\$	9,844.28	3.85
Refrigeration M	easures Total:	-	\$	-	\$	-	\$	-	\$	-	-
TOTAL ELECTRIC	MEASURES:	11,601	\$	2,555.38	\$	24,610.70	\$	14,766.42	\$	9,844.28	3.85
		Therms /yr.						·			
TOTAL GAS	MEASURES:	1,224	\$	4,989.02	\$	13,060.01	\$	7,836.00	\$	5,224.00	1.05
	•	Gallons/yr.									
TOTAL OIL	MEASURES:		\$		\$		\$		\$		-
	Oil Gallons/yr.	Gas Therms/yr.	, T		,		, ·		,		
CONVERSION MEASURES:	-	-	\$		\$		\$		\$	-	-
(OIL TO GAS)		Gallons/yr.									
TOTAL PROPANE	MEASURES:	-	\$	-	\$		\$	-	\$	-	-
СОМЕ	BINED PROJ	ECT TOTALS:	\$	7,544.40	\$	37,670.71	\$	22,602.42	\$	15,068.28	2.00
								PROJI	ECT	TRC TEST:	2.59
Projected Energy Savings P Measure Category	Per Per			llar Savings Category	Per	•				uction in Tot sumption	al Energy
								99.9%	, 0		
HVAC		Gas			HV	VAC				\	



# DIRECT INSTALL PROGRAM PARTICIPATION AGREEMENT SCOPE OF WORK ATTACHMENT

"Parties":					
Participating Custo	omer*:	Glouc	ester Township		
Participating Cont	ractor*:	H	lutchinson		
Facility Name*:		Senior	Center		
Facility Address:	1261 Chews	s landing Road	Turnersville,	NJ	08012
_	Street		City		Zip
*as listed on Application					

When fully signed and upon receipt of the project funding approval letter, this Scope of Work Attachment ("Attachment") shall become part of the Direct Install Program Participation Agreement ("Participation Agreement") previously executed by the Parties in connection with the installation of energy efficiency retrofit Measures to be performed by the Participating Contractor (or "Contractor") at the above listed Facility. This Attachment, together with the Participation Agreement and funding letter, shall constitute the full Agreement between the Parties. Terms capitalized herein are defined in the Participation Agreement.

The Participating Customer (or "Customer") agrees to have Contractor perform retrofit work in connection with the Measures listed on page 2 of this form (attached) once this agreement is reviewed and approved for funding by the Market Manager (TRC). Until that time, it is simply a description of the recommended measures for the defined project. Once official approval for funding is received in writing from TRC, this defined project can move ahead. At that time, in consideration of the Contractor's performance of such work, Customer agrees to pay Contractor based on the measure costs listed below under Customer Unit Cost for the number of completed units for each Measure upon receipt of invoice; provided the Contractor may collect a deposit from Customer prior to performing such work, in which case the final invoice shall be net of such deposit. Customer and Contractor understand that conditions discovered during installation may require that some measures identified in the energy assessment cannot be installed, or some areas may require additional measures/quantities to be installed. Should conditions in the field dictate that the Estimated Program Total Cost shown on page 2 increase by more than 10%, Contractor must obtain both Market Manager and Customer written approval in the form of an amended Scope of Work Attachment before proceeding with such additional work.

By signing below, the Parties agree the above listed Measures shall be installed by the Contractor. The Customer shall pay the Contractor as described herein following Completion and Acceptance of Measures. Customer certifies that he/she has the authority to contract for retrofit work in the Facility in connection with the Measures listed and, if the Customer does not own the Facility, the Owner has granted permission to Customer for performance of such work.

Participating Customer	Date	Participating Contractor	Date

# Page 2 Scope of Work

The work to be performed by the Participating Contractor in connection with the Project shall be comprised of the below listed Measures in the estimated quantities listed:

	Quantity	<u>Total</u>		<u>Estimated</u>			<u>Estimated</u>						
	To Be		<u>Measure</u>		<u>Measure</u>		<u>Measure</u>		<u>Measure</u>		Customer		Incentive
Measure Description / Location	Installed		<u>Cost</u>		Total Cost		<u>Amount</u>						
5-Ton Electric Split System A/C / Rear Bldg	1	\$	8,137.92	\$	3,255.17	\$	4,882.75						
5-Ton Electric Split System A/C / Rear Bldg	1	\$	8,137.92	\$	3,255.17	\$	4,882.75						
5-Ton Electric Split System A/C / Rear Bldg	1	\$	8,137.92	\$	3,255.17	\$	4,882.75						
Faucet Aerators (lavatory) / Throughout	3	\$	196.94	\$	78.78	\$	118.17						
Gas-Fired Furnace / Heater Room	1	\$	6,196.19	\$	2,478.48	\$	3,717.71						
Gas-Fired Furnace / Heater Room	1	\$	6,196.19	\$	2,478.48	\$	3,717.71						
Programmable Thermostats / Throughout	3	\$	667.63	\$	267.05	\$	400.58						
TOTALS**		\$	37,670.71	\$	15,068.28	\$	22,602.42						

<sup>\*\*</sup>Maximum incentive amount per project is \$50,000. Measures that would qualify the project for funding through the American Recovery and Reinvestment Act (ARRA), are highlighted above with an 'A'. If any "ARRA measures" are included then the total incentive amount for all measures will be paid with ARRA funds, otherwise the total incentive amount will come from NJ Clean Energy funds.