COUNTY OF ESSEX

ECONOMIC DEVELOPMENT CENTER

50 South Clinton Street, East Orange, NJ 07018

LOCAL GOVERNMENT ENERGY AUDIT PROGRAM FOR NEW JERSEY BOARD OF PUBLIC UTILITIES

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REPORT DISCLAIMER

This audit was conducted in accordance with the standards developed by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) for a Level II audit. Cost and savings calculations for a given measure were estimated to within ±20%, and are based on data obtained from the owner, data obtained during site observations, professional experience, historical data, and standard engineering practice. Cost data does not include soft costs such as engineering fees, legal fees, project management fees, financing, etc.

A thorough walkthrough of the building was performed, which included gathering nameplate information and operating parameters for all accessible equipment and lighting systems. Unless otherwise stated, model, efficiency, and capacity information included in this report were collected directly from equipment nameplates and /or from documentation provided by the owner during the site visit. Typical operation and scheduling information was obtained from interviewing staff and spot measurements taken in the field.

List of Common Energy Audit Abbreviations

- A/C Air Conditioning
- AHS Air Handling Unit
- BMS Building Management System
- Btu British thermal unit
- CDW Condenser Water
- CFM Cubic feet per minute
- CHW Chilled Water
- DCV Demand Control Ventilation
- DDC Direct Digital Control
- DHW Domestic Hot Water
- DX Direct Expansion
- EER Energy Efficiency Ratio
- EF Exhaust Fan
- EUI Energy Use Intensity
- Gal Gallon
- GPD Gallons per day
- GPF Gallons Per Flush
- GPH Gallons per hour
- GPM Gallons per minute
- GPS Gallons per second
- HHW Heating Hot Water
- HID High Intensity Discharge
- HP Horsepower
- HRU Heat Recovery Unit
- HVAC Heating, Ventilation, Air Conditioning
- HX Heat Exchanger
- kbtu/mbtu One thousand (1,000) Btu
- kW Kilowatt (1,000 watts)
- kWh Kilowatt-hours
- LED Light Emitting Diode
- mbh Thousand Btu per hour
- mmbtu One million (1,000,000) Btu
- OCC Occupancy Sensor
- PSI Pounds per square inch
- RTU Rooftop Unit
- SBC System Benefits Charge
- SF Square foot
- UH Unit Heater
- V Volts
- VAV Variable Air Volume
- VSD Variable Speed Drive
- W Watt

1.0 EXECUTIVE SUMMARY

This report summarizes the energy audit performed by CHA for the Economic Development Center in connection with the New Jersey Board of Public Utilities (NJBPU) Local Government Energy Audit (LGEA) Program. The purpose of this report is to identify energy savings opportunities associated with major energy consumers and inefficient practices. Low-cost and nocost are also identified during the study. This report details the results of the energy audit conducted for the building listed below:

Building Name	Address	Square Feet	Construction Date
Economic Development Center	50 South Clinton Street, East Orange, NJ 07018	113,750	1962

The potential total annual energy and cost savings for the recommended energy conservation measures (ECM) identified in the survey are shown below:

Building Name	Electric Savings (kWh)	NG Savings (therms)	Total Savings (\$)	Payback (years)
Economic Development Center	486,670	13,241	89,623	11.4

The annual savings for each individual measure are dependent on that measure alone, there are no interactive effects calculated. There are three options shown for Lighting ECM savings; only one option can be chosen. Incentives shown (if any) are based only on the SmartStart Incentive Program. Other NJBPU or local utility incentives may also be available/ applicable and are discussed in Section 6.0.

Each measure recommended by CHA typically has a stand-alone simple payback period of 15 years or less. However, if the owner choses to pursue an Energy Savings Improvement Plan (ESIP), high payback measures could be bundled with lower payback measures which ultimately can result in a payback which is favorable for an ESIP project to proceed. Occasionally, we will recommend an ECM that has a longer payback period, based on the need to replace that piece(s) of equipment due to its age, such as a boiler for example.

The following table provides a detailed summary of each ECM for the building surveyed, including costs, savings, SmartStart incentives and payback.

Summary of Energy Conservation Measures

ECM#	Energy Conservation Measure	Est. Costs (\$)	Est. Savings (\$/year)	Payback w/o Incentive	Potential Incentive (\$)*	Payback w/ Incentive	Recommended
1	Insulate Cavity behind Wall Panels	182,206	3,187	57.2	0	57.2	Υ
2	Install Window Film	197,600	9,494	20.8	0	20.8	Υ
3	Install Condensing Boilers	150,246	2,514	59.8	2,000	59.0	Υ
4	Install VFDs on Hot Water Pumps	19,441	2,184	8.9	1,500	8.2	Υ
5	Retro-commission DDC Controls	39,427	36,732	1.1	0	1.1	Υ
L1**	Lighting Replacements	413,998	32,314	12.8	5,050	12.7	N
L2**	Lighting Controls	19,751	7,245	2.7	3,080	2.3	N
L3	Lighting Replacements with Controls	433,748	35,427	12.2	8,130	12.0	Υ
	Total**	1,022,668	89,623	11.4	11,630	11.3	
	Total (Recommended)	1,022,668	89,623	11.4	11,630	11.3	

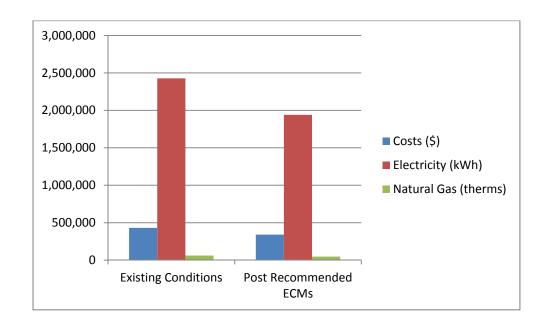
The alternative energy measure Solar PV Electricity Generation is not recommended due to the fact that there is insufficient available roof space for the PV panels.

^{*} Incentive shown is per the New Jersey SmartStart Program.

** These ECMs are not included in the Total, as they are alternate measures not recommended.

If Essex County implements the recommended ECMs, energy savings would be as follows:

	Existing Conditions	Post Recommended ECMs	Percent Savings
Costs (\$)	431,012	341,389	21%
Electricity (kWh)	2,427,211	1,940,541	20%
Natural Gas (therms)	61,577	48,336	22%
Site EUI (kbtu/SF/Yr)	126.9	100.7	



2.0 BUILDING INFORMATION AND EXISTING CONDITIONS

The following is a summary of building information related to HVAC, plumbing, building envelope, lighting, kitchen equipment and domestic hot water systems as observed during CHAs site visit. See appendix B for detailed information on mechanical equipment, including capacities, model numbers and age. See appendix F for some representative photos of some of the existing conditions observed while onsite.

Building Name: Economic Development Center

Address: 50 South Clinton Street, East Orange, NJ 07018

Gross Floor Area: 113,750 Square Feet **Number of Floors:** 5 and a basement **Year Built:** 1962, renovated in 2004



Description of Spaces: Social security, welfare, unemployment offices, conference rooms, training rooms, storage rooms, network room, toilet rooms and restrooms.

Description of Occupancy: There are approximately 300 employees, and at any given time there are approximately 150 members of the public within the building.

Number of Computers: The building has approximately 300 desktop and laptop computers. **Building Usage:** Hours of operation for the Economic Development Center are 6:30 am to 9:30 pm Monday through Friday.

Building Envelope

Construction Materials: The Economic Development Center is a steel framed building with exterior walls of aluminum spandrel glass and aluminum panel exterior skin without insulation. Interior walls are constructed of metal studs with sheetrock finish, except for elevator core chases which are CMW.

Roof: The roof is flat and surfaced with a rolled asphalt sheeting over rigid insulation and metal decking, and appears to be in good condition. No roof associated ECMs are considered.

Windows The building has aluminum framed tinted single pane windows. These windows are non-operable and are integral to the exterior wall system. No ECMs are included for window replacement, due to the potentially high cost to replace the wall/window system.

Exterior Doors: Exterior doors throughout the building are aluminum framed with full length safety glass, and solid metal doors for employee use only. There is a vestibule at each public entrance. Sweeps and seals are in good condition. No additional ECMs are evaluated for exterior doors.

Heating Ventilation & Air Conditioning (HVAC) Systems

Heating: Two Weil McLain 1188 series cast iron sectional hot water boilers having Webster gas burners, maximum capacity 3392 MBH and minimum capacity 1696 MBH, provide heat to the building. The boilers were installed in 2010. One Boiler has damaged sections that are scheduled to be repaired in the fall of 2014; the second boiler appears to be in good condition. The boilers supply heating hot water to roof mounted air handling units and perimeter finned tube radiation via a primary/ secondary pumping system. Secondary pumps are 25HP, 91.7% efficient and are constant flow. A pair of older Hydrotherm gas boilers are also available as a back-up heat source. These boilers are estimated to be vintage 1980s.

Five Mammoth packaged rooftop air handling units provide heating, cooling and ventilation to the entire building, one for each floor. The units were installed in 2010 and are in excellent condition. The units are equipped with supply fans (VFD controlled), return fans (VFD controlled), DX cooling systems and hot water heating coils (supplied from the boilers). Each unit has 1,600 MBH of heating capacity. The conditioned air is distributed to each floor via ducted distribution systems to variable air volume (VAV) boxes. The VAV boxes do not have re-heat coils.

Each floor has perimeter hydronic finned tube radiation for supplemental heating, supplied by the boilers.

The basement is served by three smaller air handling units each outfitted with hot water coils. and DX cooling coils. The cooling condensing units are located at grade.

Cooling: The building is 100% cooled using the five (5) Mammoth packaged rooftop air handling units which provide conditioned air to each floor (one Mammoth unit serves each floor). The cooling is provided by direct expansion cooling systems, and each Mammoth has 80 tons of capacity. The three smaller air handling units that serve the basement are each outfitted with DX cooling coils, with condensers located outside at grade. Altogether the building utilizes approximately 400 tons of cooling.

Ventilation: Ventilation air is provided to the interior of the building by the five (5) Mammmoth rooftop units and three (3) basement air handling units described above. In general, building ventilation is adequate and no associated ECMs are included.

Exhaust: The facility utilizes exhaust fans of various sizes located on the roof to exhaust air from restrooms and storage areas, and provide general pressure relief.

Controls Systems

The building has a Siemens Appogy (SBT) digital control system that controls the VAV box operation and finned tube radiation operation only. The 5 new rooftop units are not connected to the SBT system. These units are manually controlled by the building operators and by time clocks. One unit is left to operated 24/7 while the other four are turned off after 9:30 pm. Temperatures in the building are maintained between 72 and 75 F heating and cooling during occupied times. It was reported that many of the employees have complained about being too cold in the summer presumably as a result of the VAV boxes not having re-heat coils. Many employees have electric heaters in their spaces to provide heating during the summer as a result. Space temperature setpoints can be adjusted +/-2 F by the occupants. There is no computer gateway provided in this building for county maintenance personnel to operate the system, so Siemens is contracted to provide all controls related adjustments/ repairs. An ECM is included to recommission the controls and add the RTUs to the building automation system (BAS).

Domestic Hot Water Systems

Domestic hot water is provided to lavatory sinks by three (3) new (2014) A.O. Smith tank type gas fired water heaters. Domestic hot water is only used for handwashing. As these units are new, no ECMs related to the DHW are considered.

Kitchen Equipment

The building once had a kitchen, cooking facilities, and a full cafeteria, however these are now abandoned. There is a break room with residential microwaves, refrigerators and other electrical appliances located on each floor. No ECMs were included for kitchen equipment.

Plug Load

The Economic Development Center building has computers, copiers, residential appliances (microwave, refrigerator), printers, and portable heaters which contribute to the plug load in the building. By implementing other ECMs, plug load from the portable heaters may be reduced.

Plumbing Systems

Toilet fixtures have been upgraded to lower flow fixtures, with 1.0 GPF for urinals, 1.8 GPF for water closets, and 2.2 GPM for metering type spring-loaded lavatory faucets. Toilet rooms do not have high flow fixtures, and no ECMs evaluating these fixtures is evaluated.

Lighting Systems

Lighting is primarily T-8 32watt fluorescent lamps mounted in a variety of different fixtures. Recessed CFL lamps are used corridors and in the lobby. All light fixtures are switched. Exterior lighting consists of wall mounted 400watt HPS spotlights. Parking lot lighting is provided by PSEG.

Three lighting ECMs have been included which include adding occupancy sensors to the existing lighting, replacement of the T-8 lighting with LED lighting and a third ECM that evaluates the effect of occupancy sensors used with the LED lighting upgrades.

3.0 UTILITIES

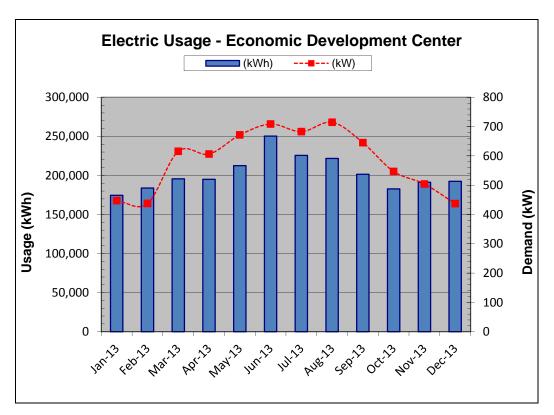
Utilities used by the building are delivered and supplied by the following utility companies:

	Electric	Natural Gas
Deliverer	PSE&G	PSE&G
Supplier	PSE&G	PSE&G

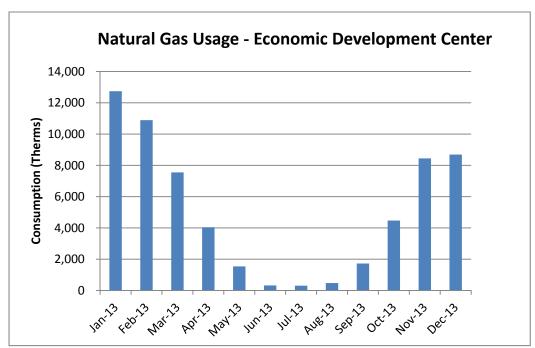
For the 12-month period ending in December 2013, the utilities usages and costs for the building were as follows:

Electric						
Annual Consumption	2,427,211	kWh/yr.				
Annual Cost	379,136	\$				
Blended Unit Rate	0.156	\$/kWh				
Supply Rate	0.146	\$/kWh				
Demand Rate	3.53	\$/kW				
Peak Demand	715.0	kW				
N	Natural Gas					
Annual Usage	61,227	Therms/yr.				
Annual Cost	51,876	\$				
Rate	0.847	\$/therm				
Water						
Annual Consumption 1,346 gallons/yr.						
Annual Cost	7,484	\$				
Rate	5.560	\$/gallon				

Blended Rate: Average rate charged determined by the annual cost / annual usage
Supply Rate: Actual rate charged for electricity usage in kWh (based on most recent electric bill)
Demand Rate: Rate charged for actual electrical demand in kW (based on most recent electric bill)



The electrical usage for this building is fairly constant, with increased usage in the summer months for air conditioning. Summer peaks occur during the maximum cooling season. The peaks during winter months which could be caused by electric heaters.



The natural gas usage is mostly driven by space heating in the winter months with a tailoff of usage during the summer months. The building does not have major kitchen use and at least half of domestic hot water is generated by electric water heaters. See Appendix A for utility analysis.

Under New Jersey's energy deregulation law, the supply portion of the electric (or natural gas) bill is separated from the delivery portion. The supply portion is open to competition, and customers can shop around for the best price for their energy suppliers. The electric and natural gas distribution utilities will still deliver the gas/ electric supplies through their wires and pipes – and respond to emergencies, should they arise – regardless of where those supplies are purchased. Purchasing the energy supplies from a company other than your electric or gas utility is purely an economic decision; it has no impact on the reliability or safety of the service.

Comp	Recommended to			
Utility	Units	Shop for Third		
-		Rate		Party Supplier?
Electricity	\$/kWh	\$0.16	\$0.13	Υ
Natural Gas	\$/Therm	\$0.85	\$0.96	N

^{*} Per U.S. Energy Information Administration (2013 data - Electricity and Natural Gas, 2012 data - Fuel Oil)

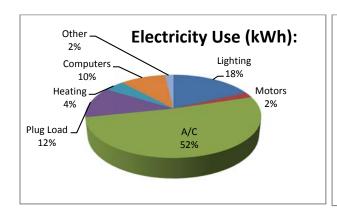
Additional information on selecting a third party energy supplier is available here:

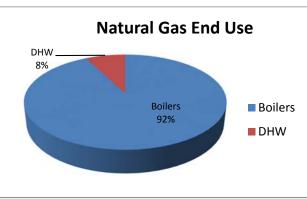
http://www.state.nj.us/bpu/commercial/shopping.html.

See Appendix A for a list of third-party energy suppliers licensed by the Board of Public Utilities to sell within the building's service area.

The charts below represent estimated utility end-use utility profiles for the building. The values used within the charts were estimated from a review of the utility analysis and the energy savings calculations.

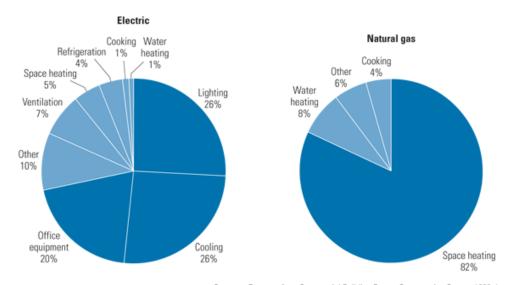
Site End-Use Utility Profile





Most of the electricity consumed by municipal buildings is used to for lighting, cooling, and plug loads such as computers and copiers; most of the natural gas is used for space heating. Each building's energy profile is different, and the following charts represent typical utility profiles for commercial buildings per U.S. Department of Energy.

Typical End-Use Utility Profile for Commercial Buildings



Courtesy: E SOURCE; from Commercial Building Energy Consumption Survey, 1999 data

4.0 BENCHMARKING

The EPA Portfolio Manager benchmarking tool provides a site and source Energy Use Intensity (EUI), as well as an Energy Star performance rating for qualifying building types. The EUIs are provided in kBtu/ft²/year, and the performance rating represents how energy efficient a building is on a scale of 1 to 100, with 100 being the most efficient. In order for a building to receive and Energy Star label, the energy benchmark rating must be at least 75. As energy use decreases from implementation of the proposed measures, the Energy Star rating will increase.

The site EUI is the amount of heat and electricity consumed by a building as reflected in utility bills. Site energy may be delivered to a facility in the form of primary energy, which is raw fuel burned to create heat or electricity, such as natural gas or oil; or as secondary energy, which is the product created from a raw fuel such as electricity or district steam. To provide an equitable comparison for different buildings with varying proportions of primary and secondary energy consumption, Portfolio Manager uses the convention of source EUIs. The source energy also accounts for losses incurred in production, storage, transmission, and delivery of energy to the site, which provide an equivalent measure for various types of buildings with differing energy sources. The results of the benchmarking are contained in the table below.

Building	Site EUI kBtu/ft²/yr	Source EUI Btu/ft²/yr	Energy Star Rating (1-100)
Economic Development Center	238.4	506.7	27

The building has a below average Energy Star Rating Score (50 being the median score). It is likely that one of the largest contributing factors to the low Energy Star Rating is the inadequate insulation in the panelized window/wall system. By implementing the measures discussed in this report, it is expected that the EUI can be reduced and the Energy Star Rating increased.

5.0 ENERGY CONSERVATION MEASURES

The following types of energy savings opportunities are identified in this section of the report:

- Energy conservation measures (ECMs) are energy savings recommendations that typically require a financial investment. For these areas of opportunity, CHA prepared detailed calculations, as summarized in this section and in Appendix C. In general, additional savings may exist from reductions in maintenance activities associated with new equipment or better controls; however for conservatism, maintenance savings are not accounted for in this report; instead the only savings which are reported are those derived directly from reductions in energy which can be tracked by the utility bills.
- Operational and Maintenance measures (O&M) consist of low- or no-cost operational opportunities, which if implemented would have positive impacts on overall building operation, comfort levels, and/or energy usage. There are no estimated savings, costs or paybacks associated with the O&M measures included as part of this study.

Energy savings were quantified in the form of:

- electrical usage (kWh=Kilowatt-hour),
- electrical demand (kW=kilowatts),
- natural gas (therms=100,000 Btu),
- propane gas (gallons=91,650 Btu),
- fuel oil (gallons =138,700 Btu), and
- water (kgal=1,000 gallons).

These recommendations are influenced by the time period that it takes for a proposed project to "break even" referred to as "Simple Payback". Simple payback is calculated by dividing the estimated cost of implementing the ECM by the energy cost savings (in dollars) of that ECM.

Another financial indicator of the performance of a particular ECM is the Return on Investment or ROI, which represents the benefit (annual savings over the life of a project) of an investment divided by the cost of the investment. The result is expressed as a percentage or ratio.

Two other financial analyses included in this report are Internal Rate of Return (IRR) and Net Present Value (NPV). Internal Rate of Return is the discount rate at which the present value of a project costs equals the present value of the project savings. Net Present Value is the difference between present value of an investment's future net cash flows and the initial investment. If the NPV equals "0", the project would equate to investing the same amount of dollars at the desired rate. NPV is sometimes referred to as Net Present Worth. These values are provided in the Summary Tab in Appendix C.

5.1 ECM-1 Insulate Cavity behind Wall Panels

The building exterior walls are constructed of aluminum framed window and aluminum panels. Building personnel as well as investigations during the site visit confirmed that exterior walls, behind the solid panels, are lacking any kind if insulation. In fact heating pipes have frozen and burst on cold days. Significant energy loss from heat transfer due to conduction and air infiltration occurs between the building façade and its surroundings. An assessment has been made which considers the installation of insulation behind the wall panels.

The calculation uses bin weather data estimate the occupied and unoccupied bin hours. This is converted to existing energy for the occupied and unoccupied cases using the existing wall U-factor and the heating and cooling temperature. The two are summed together to create the annual utility usage for the baseline. The same steps are done to calculate the proposed utility usage. The difference in heating losses through the wall results in annual heating natural gas and cooling electricity savings.

The implementation cost and savings related to this ECM are presented in Appendix C and summarized as follows:

ECM-1 Insulate Cavity behind Wall Panels

Budgetary Cost		Annua	l Utility Savings		ROI	Potential Incentive*	Payback (without	Payback (with		
	EI	ectricity	Natural Gas	Total		incentive	incentive)	incentive)		
\$	kW	kWh	Therms	\$	%	\$	Years	Years		
182,206	0	10,793	1,775	3,187	(0.6)	0	57.2	57.2		

^{*} Does not qualify for Incentive from the New Jersey SmartStart Program. See section 6.0 for other incentive opportunities

This measure is recommended.

5.2 ECM-2 Install Window Film

As an alternative to window replacement, this measure considers installing reflective window film on the windows as a method for reducing solar heat gain. Although not a solution for heat loss and/or infiltration issues, window film can reduce incoming solar radiation by up to 60%. Reduction of solar heat gain will result in a reduced cooling load, thus providing a savings in summertime energy consumption.

The materials involved in this measure have an expected life of 10 years, according to the manufacturer. The implementation cost and savings related to this ECM are presented in Appendix C and summarized below:

ECM-2 Install 3M Window Film onto Windows

Budgetary Cost		Annua	l Utility Savings	ings Dotantial			I ROLL (without I (with		
	EI	ectricity	Natural Gas	Total		incentive	incentive)	incentive)	
\$	kW	kWh	Therms	\$		\$	Years	Years	
197,600	0	60,856	0	9,494	(0.3)	0	20.8	20.8	

This measure is recommended.

5.3 ECM-3 Install a High Efficiency Condensing Boiler

A pair of vintage 1980's Hydrotherm boilers provide back-up heat for the building. It is recommended that these boilers be replaced by one high efficiency condensing boiler piped into the existing hydronic piping. New modulating condensing gas boilers are available that operate at a minimal efficiency of 88%, and can operate as high as 96%, depending upon the outdoor air temperature. The new boilers could then function as the primary heating boilers, with the older Weil McLain boilers used as back-up for when additional heat is needed on the coldest days.

To implement this ECM, some localized piping and wiring would be needed. New dedicated boiler venting would also need to be installed either through the roof or sidewall. It is possible that asbestos abatement may need to be performed prior to any work and the cost for this is not included in the payback analysis.

The implementation cost and savings related to this ECM are presented in Appendix C and summarized below:

ECM-3 Install a High Efficiency Condensing Boiler

Budgetary Cost		Annua	l Utility Savings		ROI	Potential Incentive*	Payback (without	Payback (with
	EI	ectricity	Natural Gas	Total		incentive	incentive)	incentive)
\$	kW	kWh	Therms	\$		\$	Years	Years
150,246	2.0	0	2,969	2,514	(0.7)	2,000	59.8	59.0

^{*} Incentive shown is per the New Jersey SmartStart Program. See section 6.0 for other incentive opportunities.

This measure is recommended.

5.4 ECM-4 Install VFDs on Hot Water Pumps

The existing 25.0 HP secondary base mounted B&G hot water pumps serving the building are not controlled by variable frequency drives (VFDs). Ideally pumps are perfectly selected to match the needs of a system operating a maximum capacity. Most times 1) pumps are over-sized somewhat for safety, and 2) the system is operating at less than full heating capacity. VFDs allow pumps to run at slower RPMs to better meet the needs of the system and in the process, energy is saved.

To implement this ECM, the existing motors would be removed and new motors and VFDs installed in their place. Piping and wiring modifications would be needed.

The order of magnitude implementation costs and savings related to these ECMs are detailed in Appendix H and summarized below:

ECM-4 Install VFDs on Hot Water Pumps

Budgetary Cost		Annua	l Utility Savings		ROI	Potential Incentive*	Payback (without	Payback (with	
Cost	Ele	ctricity	Natural Gas	Total		incentive	incentive)	incentive)	
\$	kW	kWh	Therms	\$	%	\$	Years	Years	
19,441	24.0	7,984	0	2,184	0.2	1,500	8.9	8.2	

^{*} Does not qualify for Incentive from the New Jersey SmartStart Program. See section 6.0 for other incentive opportunities.

This measure is recommended.

5.5 ECM-5 Retro-Commission Existing DDC Controls

The building is equipped with a Siemans Apogy (SBT) DDC controls system. As observed during the site visit, however, only the VAV boxes and finned tube radiation are controlled by this system. This ECM reviews the incorporation of the five (5) rooftop units into the Siemans DDC system.

Commissioning is the process of verifying that systems are designed, installed, functionally tested, and capable of being operated and maintained according to the owner's operational needs. Retro-commissioning is the same systematic process applied to existing buildings.

Both controls and components of the heating and cooling systems present saving opportunities during the retro-commissioning process. The DDC system and controls within a building play a crucial role in providing a comfortable building environment. Over time, temperature sensors or thermostats may drift out of synch. Poorly calibrated sensors can increase heating and cooling loads and lead to occupant discomfort. The following procedure is recommended:

- Calibrate the indoor and outdoor building sensors. Calibration of room thermostats, duct thermostats, humidistats, and pressure and temperature sensors should be in accordance with the original design specifications. Calibrating these controls may require specialized skills or equipment and may require outside expertise.
- Inspect damper and valve controls to verify proper functioning. Dampers should also be examined for proper opening and closing. Stiff dampers can cause improper modulation of the amount of outside air being used in the supply airstream. In some cases, dampers may be wired in a single position or disconnected, violating minimum outside air requirements.
- Review building operating schedules. HVAC controls must be adjusted to heat
 and cool the building properly during occupied hours. Occupancy schedules can
 change frequently over the life of a building, and control schedules should be
 adjusted accordingly. When the building is unoccupied, the temperature should
 be set back to save heating or cooling energy; however, minimal heating and
 cooling may be required when the building is unoccupied. In cold climates, for
 example, heating may be needed to keep water pipes from freezing.

The implementation cost and savings related to this ECM are presented in Appendix C and summarized below:

ECM-5 Retro- commission existing DDC Controls

Budgetary Cost		Annua	l Utility Savings		ROI	Potential Incentive*	Payback (without	Payback (with incentive)	
Cost	EI	ectricity	Natural Gas	Total		incentive	incentive)		
\$	kW kWh		Therms	\$		\$	Years	Years	
39,427	0 189,322		8,498	36,732	13.0	0	1.1	1.1	

^{*} Does not qualify for Incentive from the New Jersey SmartStart Program. See section 6.0 for other incentive opportunities.

This measure is recommended.

5.6.1 ECM-L1 Lighting Replacement / Upgrades

The lighting within the Economic Development Center offices consists of 2x4 and 2x2 recessed and ceiling mounted troffers having 32W T8 fluorescent lamps with prismatic lenses. Several areas also contain recessed cans outfitted with compact fluorescent lamps. The Council Chambers also contains CFLs inside decorative wall mounted sconces, as well as PAR track lighting. T-12 lamps are found in storage areas and stairwells, and a few compact fluorescent and incandescent bulbs were noted. A combination of occupancy sensors and wall switches control the interior lighting.

Overall energy consumption can be reduced by replacing inefficient bulbs and linear fluorescent bulbs with more efficient LED technology. To compute the annual savings for this ECM, the energy consumption of the current lighting fixtures was established and compared to the proposed fixture power requirement with the same annual hours of operation. The difference between the existing and proposed annual energy consumption was the energy savings. These calculations are based on 1 to 1 replacements of the fixtures, and do not take into account lumen output requirements for a given space. A more comprehensive engineering study should be performed to determine correct lighting levels.

Supporting calculations, including assumptions for lighting hours and annual energy usage for each fixture, are provided in Appendix C and summarized below:

ECM-L1 Lighting Replacement / Upgrades

Budgetary Cost		Annua	l Utility Savings		ROI	Potential Incentive*	Payback (without	Payback (with incentive)	
Cost	Ele	ctricity	Natural Gas	Total		incentive	incentive)		
\$	kW kWh		Therms	\$		\$	Years	Years	
413,998	998 85.9 196,398		0	32,314	(0.2)	5,050	12.8	12.7	

^{*} LED retrofits must go through the "custom" measures incentive option under New Jersey SmartStart Program. There are no "prescriptive" incentives for LED retrofits. Projects must achieve a minimum of 75,000 kWh annual savings to qualify for "custom" incentives. See section 6.0 for other incentive opportunities

This measure is not recommended in lieu of ECM L3.

5.6.2 ECM-L2 Install Lighting Controls (Occupancy Sensors)

Presently, interior lighting fixtures are controlled by a combination of wall mounted switches and occupancy sensors. Review of the comprehensive lighting survey determined that lighting in some areas could benefit from installation of occupancy sensors to turn off lights when they are unoccupied.

This measure recommends installing occupancy sensors for the current lighting system. Using a process similar to that utilized in Section 5.7.1, the energy savings for this measure was calculated by applying the known fixture wattages in the space to the estimated existing and proposed times of operation for each fixture.

The implementation cost and savings related to this ECM are presented in Appendix C and summarized below:

ECM-L2 Install Lighting Controls (Occupancy Sensors)

Budgetary Cost		Annua	l Utility Savings		ROI	Potential Incentive*	Payback (without	Payback (with incentive)	
Cost	EI	ectricity	Natural Gas	Total		incentive	incentive)		
\$	s kW kWh		Therms	\$		\$	Years	Years	
19,751	19,751 0 49,626		0	7,245	2.9	3,080	2.7	2.3	

^{*} Incentive shown is per the New Jersey SmartStart Program. See section 6.0 for other incentive opportunities.

This measure is not recommended in lieu of ECM L3.

5.6.3 ECM-L3 Lighting Replacements with Controls (Occupancy Sensors)

This measure is a combination of ECM-L1 and ECM-L2; recommending replace/upgrade the current lighting fixtures to more efficient ones and installing occupancy sensors on the new lights. Interactive effects of the higher efficiency lights and occupancy sensors lead the energy and cost savings for this measure to not be cumulative or equivalent to the sum of replacing the lighting fixtures alone and installing occupancy sensors without the lighting upgrade. The implementation cost and savings related to this ECM are presented in Appendix C and summarized below:

ECM-L3 Lighting Replacements with Controls (Occupancy Sensors)

			<u> </u>				. , ,				
	Budgetary Cost		Annua	l Utility Savings		ROI	Potential Incentive*	Payback (without	Payback (with incentive)		
	Cost	Ele	ctricity	Natural Gas	Total		incentive	incentive)			
	\$	kW kWh		Therms	\$		\$	Years	Years		
	433,748	85.9 217,715		0	35,427	(0.1)	8,130	12.2	12.0		

^{*} LED retrofits must go through the "custom" measures incentive option under New Jersey SmartStart Program. There are no "prescriptive" incentives for LED retrofits. Projects must achieve a minimum of 75,000 kWh annual savings to qualify for "custom" incentives. See section 6.0 for other incentive opportunities

This measure is recommended.

5.7 Additional O&M Opportunities

This list of operations and maintenance (O&M) - type measures represent low-cost or nocost opportunities, which if implemented will have a positive impact on the overall building operations, comfort and/or energy consumption. The recommended O&M measures for this building are as follows:

- Set computers monitors to turn off and computers to sleep mode when not in use
- Purchase ENERGY STAR® label Appliances
- Disconnect unnecessary or unused small appliances and electronics when not in use to reduce phantom loads
- Train staff to turn off lights when rooms are unoccupied
- Develop an Energy Master Plan to measure and track energy performance

6.0 PROJECT INCENTIVES

6.1 Incentives Overview

The following sections give detailed information on available incentive programs including New Jersey Smart Start, Direct Install, New Jersey Pay for Performance (P4P) and Energy Savings Improvement Plan (ESIP). If Essex County wishes to and is eligible to participate in the Energy Savings Improvement Plan (ESIP) program and/or the Pay for Performance Incentive Program (P4P), it cannot participate in either the Smart Start or Direct Install Programs. Refer to Appendix D for more information on the Smart Start program.

6.1.1 New Jersey Smart Start Program

For this energy audit, The New Jersey Smart Start Incentives are used in the energy savings calculations, where applicable. This program is intended for medium and large energy users and provides incentives for:

- Electric Chillers
- Gas Chillers
- Gas Heating
- Unitary HVAC
- Ground Source Heat Pumps
- Variable frequency Drives/ motors
- Refrigeration
- Prescriptive and performance lighting and lighting controls

The equipment is procured using a typical bid-build method, installed and paid for and then the incentives are reimbursed to the owner.

Refer to Appendix D for more information on the Smart Start program.

6.1.2 Direct Install Program

The Direct Install Program applies to smaller facilities that have a peak electrical demand of 200 kW or less in any of the previous 12 months. Buildings must be located in New Jersey and served by one of the state's public, regulated electric utility companies.

Direct Install is funded through New Jersey's Clean Energy Program and is designed to provide capital for building energy upgrade projects to fast track implementation. The program will pay up to 70% of the costs for lighting, HVAC, motors, refrigeration, and other equipment upgrades with higher efficiency alternatives. If a building is eligible for this funding, the Direct Install Program can reduce the implementation cost of energy conservation projects.

The Direct Install program has specific HVAC equipment and lighting requirements and is generally applicable only to smaller package HVAC units, small boilers and lighting retrofits.

The program pays a maximum amount of \$75,000 per building, and up to \$250,000 per customer per year. Installations must be completed by an approved Direct Install

participating contractor, a list of which can be found on the New Jersey Clean Energy Website. Contractors will coordinate with the applicant to arrange installation of recommended measures identified in a previous energy assessment, such as this energy audit. The incentive is reimbursed to the Owner upon successful replacement and payment of the equipment.

The building does not qualify for this program because its electrical demand is greater than the maximum peak electrical demand of 200 kW for the last 12 month period.

Refer to Appendix D for more information on this program.

6.1.3 New Jersey Pay For Performance Program (P4P)

This building may be eligible for incentives from the New Jersey Office of Clean Energy. The most significant incentives are available from the New Jersey Pay for Performance (P4P) Program. The P4P program is designed to offset the cost of energy conservation projects for facilities that pay the Societal Benefits Charge (SBC) and whose demand (kW) in any of the preceding 12 months exceeds 100 kW. This demand minimum has been waived for buildings owned by local governments or municipalities and non-profit organizations and *is not applicable to public schools*. Facilities that meet this criterion must also achieve a minimum performance target of 15% energy reduction by using the EPA Portfolio Manager benchmarking tool before and after implementation of the measure(s). Additionally, the overall return on investment (ROI) must exceed 10%. If the participant is a municipal electric company customer, and a customer of a regulated gas New Jersey Utility, only gas measures will be eligible under the Program. Available incentives are as follows:

Incentive #1: Energy Reduction Plan – This incentive is designed to offset the cost of services associated with the development of the Energy Reduction Plan (ERP). The ERP must include a detailed energy audit of the desired ECMs, energy savings calculations (using building modeling software) and inputting of all utility bills into the EPA Portfolio Manager website.

Incentive Amount: \$0.10/SFMinimum incentive: \$5,000

Maximum Incentive: \$50,000 or 50% of Facility annual energy cost

The standard incentive pays \$0.10 per square foot, up to a maximum of \$50,000, not to exceed 50% of facility annual energy cost, paid after approval of application. For building audits funded by the New Jersey Board of Public Utilities, which receive an initial 75% incentive toward performance of the energy audit, facilities are only eligible for an additional \$0.05 per square foot, up to a maximum of \$25,000, rather than the standard incentive noted above. The ERP must be completed by a Certified Energy Manager (CEM) and submitted along with the project application.

Incentive #2: Installation of Recommended Measures – This incentive is based on projected energy savings as determined in Incentive #1 (Minimum 15% savings must be achieved), and is paid upon successful installation of recommended measures.

Electric

- Base incentive based on 15% savings: \$0.09/ per projected kWh saved.
- For each % over 15% add: \$0.005 per projected kWh saved.
- Maximum incentive: \$0.11/ kWh per projected kWh saved.

Gas

- Base incentive based on 15% savings: \$0.90/ per projected Therm saved.
- For each % over 15% add: \$0.05 per projected Therm saved.
- Maximum incentive: \$1.25 per projected Therm saved.

Incentive cap: 25% of total project cost

Incentive #3: Post-Construction Benchmarking Report – This incentive is paid after acceptance of a report proving energy savings over one year utilizing the Environmental Protection Agency (EPA) Portfolio Manager benchmarking tool.

Electric

- Base incentive based on 15% savings: \$0.09/ per projected kWh saved.
- For each % over 15% add: \$0.005 per projected kWh saved.
- Maximum incentive: \$0.11/ kWh per projected kWh saved.

Gas

- Base incentive based on 15% savings: \$0.90/ per projected Therm saved.
- For each % over 15% add: \$0.05 per projected Therm saved.
- Maximum incentive: \$1.25 per projected Therm saved.

Combining Incentives #2 and #3 will provide a total of \$0.18/kWh and \$1.8/therm not to exceed 50% of total project cost. Additional Incentives for #2 and #3 are increased by \$0.005/kWh and \$0.05/therm for each percentage increase above the 15% minimum target to 20%, calculated with the EPA Portfolio Manager benchmarking tool, not to exceed 50% of total project cost.

For the purpose of demonstrating the eligibility of the ECM's to meet the minimum savings requirement of 15% annual savings and 10% ROI for the Pay for Performance Program, all ECM's identified in this report have been included in the incentive calculations. The results for the building are shown in Appendix C, with more detailed program information in Appendix D.

6.1.4 Energy Savings Improvement Plan

The Energy Savings Improvement Program (ESIP) allows government agencies to make energy related improvements to their facilities and pay for the costs using the value of energy savings that result from the improvements. Under the recently enacted Chapter 4 of the Laws of 2009 (the law), the 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.

ESIP allows local units to use "energy savings obligations" (ESO) to pay for the capital costs of energy improvements to their facilities. ESIP loans have a maximum loan term of 15 year. ESOs are not considered "new general obligation debt" of a local unit and do not count against debt limits or require voter approval. They may be issued as refunding bonds or leases. Savings generated from the installation of energy conservation measures pay

the principal of and interest on the bonds; for that reason, the debt service created by the ESOs is not paid from the debt service fund, but is paid from the general fund.

For local governments interested in pursuing an ESIP, the first step is to perform an energy audit. Pursuing a Local Government Energy Audit through New Jersey's Clean Energy Program is a valuable first step to the ESIP approach. The "Local Finance Notice" outlines how local governments can develop and implement an ESIP for their facilities. The ESIP can be prepared internally if the entity has qualified staff. If not, the ESIP must be implemented by an independent contractor and not by the energy savings company producing the Energy Reduction Plan.

The ESIP approach may not be appropriate for all energy conservation and energy efficiency improvements. Local units should carefully consider all alternatives to develop an approach that best meets their needs. Refer to Appendix D for more information on this program.

6.1.5 Renewable Energy Incentive Program

The Renewable Energy Incentive Program (REIP) is part of New Jersey's efforts to reach its Energy Master Plan goals of striving to use 30 percent of electricity from renewable sources by 2020.

Incentives for sustainable bio-power projects and for energy storage projects are currently under development, with competitive solicitations for each of those technologies expected to begin in the first quarter of 2014. The wind program is currently on hold.

New solar projects are no longer eligible for REIP incentives, but can register for Solar Renewable Energy Certificates (SRECs) through the SREC Registration Program (SRP).

7.0 ALTERNATIVE ENERGY SCREENING EVALUATION

7.1 Solar

7.1.1 Photovoltaic Rooftop Solar Power Generation

The building was evaluated for the potential to install rooftop photovoltaic (PV) solar panels for power generation. However due to the extensive rooftop equipment on this building and the minimal available space, a solar PV system of sufficient capacity was determined to be not feasible.

7.1.2 Solar Thermal Hot Water Generation

Active solar thermal systems use solar collectors to gather the sun's energy to heat a fluid. An absorber in the collector (usually black colored piping) converts the sun's energy into heat. The heat is transferred to circulating water, antifreeze, or air for immediate use or is storage for later utilization. Applications for active solar thermal energy include supplementing domestic hot water, heating swimming pools, space heating or preheating air in residential and commercial buildings.

A standard solar hot water system is typically composed of solar collectors, heat storage vessel, piping, circulators, and controls. Systems are typically integrated to work alongside a conventional heating system that provides heat when solar resources are not sufficient. The solar collectors are usually placed on the roof of the building, oriented south, and tilted at the same angle as the site's latitude, to maximize the amount of solar radiation collected on a yearly basis.

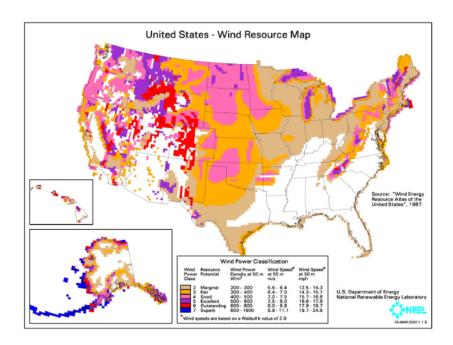
Several options exist for using active solar thermal systems for space heating. The most common method is called a passive solar hot water system involves using glazed collectors to heat a liquid held in a storage tank (similar to an active solar hot water system described above which requires pumping). The most practical system would transfer the heat from the panels to thermal storage tanks and then use the pre-heated water for domestic hot water production. DHW is presently produced by natural gas fired water heaters and, therefore, this measure would offer natural gas utility savings. Unfortunately, the amount of domestic hot water that is currently used by this building is very small. Installing a solar domestic hot water system is not recommended due to the limited amount of domestic hot water presently consumed by the building.

This measure is not recommended due to the relatively low domestic hot water usage.

7.2 Wind Powered Turbines

Wind power is the conversion of kinetic energy from wind into mechanical power that is used to drive a generator which creates electricity by means of a wind turbine. A wind turbine consists of rotor and blades connected to a gearbox and generator that are mounted onto a tower. Newer wind turbines also use advanced technology to generate electricity at a variety of frequencies depending on the wind speed, convert it to DC and then back to AC before sending it to the grid. Wind turbines range from 50 – 750 kW for utility scale turbines down to below 50 kW for residential use. On a scale of 1 (the lowest) to 7 (the highest), Class 3 and above (wind speeds of 13 mph or greater) are generally

considered "good wind resource" according to the Wind Energy Development Programmatic EIS Information Center hosted by the Bureau of Land Management. According to the map below, published by NREL, Newark, NJ is classified as Class 1 at 50m, meaning the city would not be a good candidate for wind power.



This measure is not recommended due to the location of the building.

7.3 Combined Heat and Power Plant

Combined heat and power (CHP), cogeneration, is self-production of electricity on-site with beneficial recovery of the heat byproduct from the electrical generator. Common CHP equipment includes reciprocating engine-driven, micro turbines, steam turbines, and fuel cells. Typical CHP customers include industrial, commercial, institutional, educational institutions, and multifamily residential facilities. CHP systems that are commercially viable at the present time are sized approximately 50 kW and above, with numerous options in blocks grouped around 300 kW, 800 kW, 1,200 kW and larger. Typically, CHP systems are used to produce a portion of the electricity needed by a facility some or all of the time, with the balance of electric needs satisfied by purchase from the grid.

Any proposed CHP project will need to consider many factors, such as existing system load, use of thermal energy produced, system size, natural gas fuel availability, and proposed plant location. The building has sufficient need for electrical generation and the ability to use most of the thermal byproduct during the winter; however thermal usage during the summer months does not exist. Thermal energy produced by the CHP plant in the warmer months will be wasted. An absorption chiller could be installed to utilize the heat to produce chilled water; however, there is no chilled water distribution system in the building. CHP is not recommended due to the building's limited summer thermal demand.

This measure is not recommended due to the absence of year-round thermal loads which are needed for efficiency CHP operation.

7.4 Demand Response Curtailment

Presently, electricity is delivered by PSE&G, which receives the electricity from regional power grid RFC. PSE&G is the regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of 13 states and the District of Columbia including the State of New Jersey.

Utility Curtailment is an agreement with the utility provider's regional transmission organization and an approved Curtailment Service Provider (CSP) to shed electrical load by either turning major equipment off or energizing all or part of a facility utilizing an emergency generator; therefore, reducing the electrical demand on the utility grid. This program is to benefit the utility company during high demand periods and utility provider offers incentives to the CSP to participate in this program. Enrolling in the program will require program participants to drop electrical load or turn on emergency generators during high electrical demand conditions or during emergencies. Part of the program also will require that program participants reduce their required load or run emergency generators with notice to test the system.

A pre-approved CSP will require a minimum of 100 kW of load reduction to participate in any curtailment program. From January 2013 through December 2013 the following table summarizes the electricity load profile for the building.

Building Electric Load Profile

			Onsite	
Peak Demand	Min Demand	Avg Demand	Generation	Eligible? Y/N
kW	kW	kW	Y/N	Y/N
715	437	585	N	Υ

This measure is not recommended for further review because the building usage does not lend itself to load sharing.

8.0 CONCLUSIONS & RECOMMENDATIONS

The following section summarizes the LGEA energy audit conducted by CHA for Building Name.

The following projects should be considered for implementation:

- Install Window Film
- Insulate Wall Cavity
- Add Boiler
- Install VFDs on Pumps
- Retrocommissioning and Controls Modifications
- Lighting Replacements with Controls (Occupancy Sensors)

The potential annual energy and cost savings for the recommended ECMs are shown in the following table.

Electric Savings (kWh)	Natural Gas Savings (therms)	Total Savings (\$)	Payback (years)	
486,670	13,241	89,623	11.4	

If the recommended ECMs are implemented, energy savings would be as follows:

	Existing Conditions	Post Recommended ECMs	Percent Savings
Costs (\$)	431,012	341,389	21%
Electricity (kWh)	2,427,211	1,940,541	20%
Natural Gas (therms)	61,577	48,336	22%
Site EUI (kbtu/SF/Yr)	126.9	100.7	

Next Steps: This energy audit has identified several areas of potential energy savings. Essex County can use this information to pursue incentives offered by the NJBPU's NJ Clean Energy Program.



Essex County Economic Development Center

Annual Utilities

12-month Summary

El	ectric	
Annual Usage	2,427,211	kWh/yr
Annual Cost	379,136	\$
Blended Rate	0.156	\$/kWh
Consumption Rate	0.146	\$/kWh
Demand Rate	3.53	\$/kW
Peak Demand	715.0	kW
Min. Demand	437.1	kW
Avg. Demand	585.0	kW
Natı	ıral Gas	
Annual Usage	61,227	Therms/yr
Annual Cost	51,876	\$
Rate	0.847	\$/Therm
W	ater	
Annual Usage	1,346	gallons/yr
Annual Cost	7,484	\$
Rate	5.560	\$/gallon

Essex County Economic Development Center

Utility Bills: Account Numbers

Account Number	<u>Building</u>	<u>Location</u>	Type No	<u>otes</u>
4200958708	Economic Development Center	50 South Clinton Street, East Orange, NJ 07018	Electricity	
PG000009446358527148	Economic Development Center	50 South Clinton Street, East Orange, NJ 07018	Natural Gas	
999-897-993	Economic Development Center	50 South Clinton Street, East Orange, NJ 07018	Water	

Essex County Economic Development Center

For Service at: 50 South Clinton Street, East Orange, NJ 07018

Account No.: 4200958708 Delivery -PSE&G Meter No.: 778015043 Supplier -N/A

Electric Service

_			ı	Provider Charges		Usage (kWh) vs. Demand (kW) Charges		Unit Costs		
	Consumption	Demand	Delivery	Supplier	Total	Consumption	Demand	Blended Rate	Consumption	Demand
Month	(kWh)	(kW)	(\$)	(\$)	(\$)	(\$)	(\$)	(\$/kWh)	(\$/kWh)	(\$/kW)
January-13	174,529	447.40	7,096.63	18,325.55	25,422.18	23,836.42	1,585.76	0.15	0.14	3.54
February-13	183,862	437.80	7,133.57	19,305.51	26,439.08	24,887.34	1,551.74	0.14	0.14	3.54
March-13	195,651	615.90	8,098.73	20,543.36	28,642.09	26,459.09	2,183.00	0.15	0.14	3.54
April-13	195,059	606.50	8,048.62	20,481.20	28,529.82	26,380.14	2,149.68	0.15	0.14	3.54
May-13	212,498	671.70	14,628.71	22,312.29	36,941.00	34,560.22	2,380.78	0.17	0.16	3.54
June-13	250,370	708.80	16,458.15	26,288.85	42,747.00	40,234.73	2,512.27	0.17	0.16	3.54
July-13	225,605	683.00	15,397.93	23,688.53	39,086.46	36,665.63	2,420.83	0.17	0.16	3.54
August-13	221,759	715.00	15,664.54	23,284.70	38,949.24	36,415.04	2,534.20	0.18	0.16	3.54
September-13	201,526	645.30	8,632.17	21,160.23	29,792.40	27,542.50	2,249.90	0.15	0.14	3.49
October-13	182,700	547.00	7,687.81	19,183.50	26,871.31	24,964.14	1,907.17	0.15	0.14	3.49
November-13	191,216	504.20	7,773.11	20,077.68	27,850.79	26,092.85	1,757.94	0.15	0.14	3.49
December-13	192,436	437.10	7,659.01	20,205.78	27,864.79	26,329.31	1,535.48	0.14	0.14	3.51
Total (All)	2,427,211	715.00	\$124,278.98	\$254,857.16	\$379,136.14	\$354,367.39	\$24,768.75	\$0.16	\$0.15	\$3.53
Total (last 12-months)	2,427,211	715.00	\$124,278.98	\$254,857.16	\$379,136.14	\$354,367.39	\$24,768.75	\$0.16	\$0.15	\$3.53
Notes	1	2	3	4	5	6	7	8	9	10

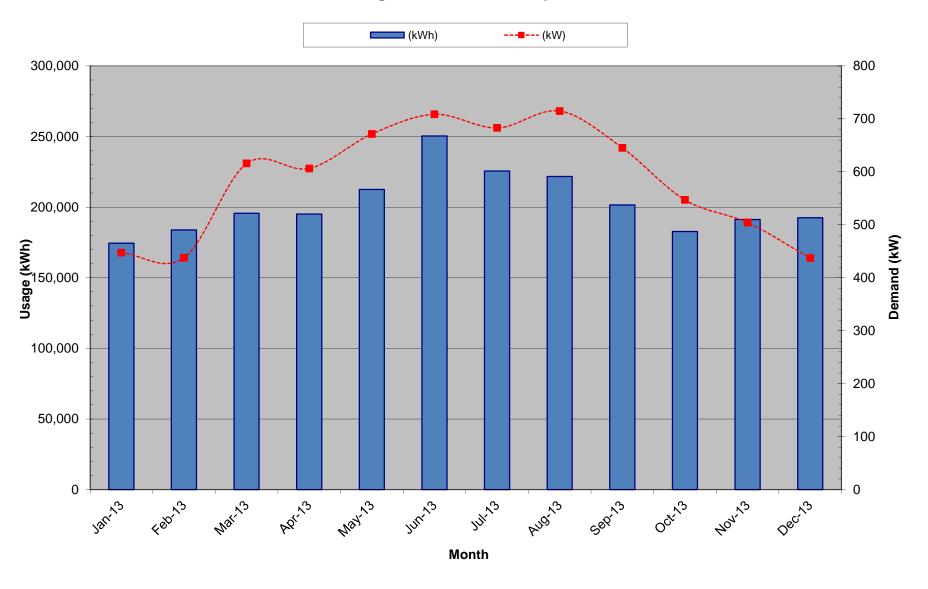
- 1.) Number of kWh of electric energy used per month
- Number of kW of power measured
 Bectric charges from Delivery provider
- 4.) Electric charges from Supply provider
 5.) Total charges (Delivery + Supplier)

- Charges based on the number of kWh of electric energy used
 Arranges based on the number of kW of power measured
 Arranges (\$) / Consumption (kWh)
 Consumption Charges (\$) / Consumption (kWh)

- 10.) Demand Charges (\$) / Demand (kW)

\$0.105 /kWh Estimated supply rate due to missing data

Electric Usage - Economic Development Center



Essex County

Economic Development Center

For Service at: 50 South Clinton Street, East Orange, NJ 07018

Account No.: PG000009446358527148

Meter No:

Natural Gas Service Delivery - PSE&G

Supplier - Hess Corp.

		Charges			Unit Costs							
Month	Consumption (Therms)		Delivery (ఫ)		Supply (\$)	Total (\$)		elivery Therm)		upply Therm)	(\$/	Total Therm)
January-13	12,742	\$	4,302.14	\$	6,893.19	\$ 11,195.33	\$	0.338	\$	0.541	\$	0.879
February-13	10,890	\$	3,940.55	\$	5,891.46	\$ 9,832.01	\$	0.362	\$	0.541	\$	0.903
March-13	7,554	\$	942.41	\$	4,086.58	\$ 5,028.99	\$	0.125	\$	0.541	\$	0.666
April-13	4,045	\$	568.73	\$	2,188.17	\$ 2,756.90	\$	0.141	\$	0.541	\$	0.682
May-13	1,543	\$	304.77	\$	834.62	\$ 1,139.39	\$	0.198	\$	0.541	\$	0.739
June-13	326	\$	151.10	\$	176.55	\$ 327.65	\$	0.463	\$	0.541	\$	1.004
July-13	311	\$	148.83	\$	168.02	\$ 316.85	\$	0.479	\$	0.541	\$	1.020
August-13	478	\$	172.88	\$	258.61	\$ 431.49	\$	0.362	\$	0.541	\$	0.903
September-13	1,724	\$	310.96	\$	932.66	\$ 1,243.62	\$	0.180	\$	0.541	\$	0.721
October-13	4,474	\$	1,978.73	\$	2,420.65	\$ 4,399.38	\$	0.442	\$	0.541	\$	0.983
November-13	8,447	\$	2,932.11	\$	4,569.60	\$ 7,501.71	\$	0.347	\$	0.541	\$	0.888
December-13	8,694	\$	2,999.30	\$	4,703.61	\$ 7,702.91	\$	0.345	\$	0.541	\$	0.886
Total	61,227					\$ 51,876.23					\$	0.847

PSE&G ELECTRIC SERVICE TERRITORY Last Updated: 12/11/14

$*\underline{CUSTOMER\ CLASS} - R - RESIDENTIAL\ C - COMMERCIAL\ I - INDUSTRIAL$

Supplier	Telephone	*Customer
**	& Web Site	Class
Abest Power & Gas of NJ,	(888)987-6937	R/C/I
LLC	, ,	
202 Smith Street		
Perth Amboy, NJ 08861	www.AbestPower.com	ACTIVE
AEP Energy, Inc. f/k/a	(866) 258-3782	R/C/I
BlueStar Energy Services		
309 Fellowship Road, Fl. 2	www.aepenergy.com	ACTIVE
Mount Laurel, NJ 08054		
Alpha Gas and Electric,	(855) 553-6374	R/C
LLC		A COTTAIN
641 5 th Street	www.alphagasandelectric.com	ACTIVE
Lakewood, NJ 08701	277 202 1201	7.0
Ambit Northeast, LLC d/b/a	877-282-6284	R/C
Ambit Energy		
103 Carnegie Center Suite 300		ACTIVE
Princeton, NJ 08540	www.ambitenergy.com	ACTIVE
American Powernet	(877) 977-2636	C/I
Management, LP	(877) 977-2030	C/1
437 North Grove St.	www.americanpowernet.com	
Berlin, NJ 08009	······································	ACTIVE
Amerigreen Energy, Inc.	888-559-4567	R/C
333Sylvan Avenue		
Englewood Cliffs, NJ 07632	www.amerigreen.com	ACTIVE
AP Gas & Electric, (NJ)	(855) 544-4895	R/C/I
LLC	, ,	
10 North Park Place, Suite 420	www.apgellc.com	ACTIVE
Morristown, NJ 07960		
Astral Energy LLC	(888)850-1872	R/C/I
16 Tyson Place		
Bergenfield, NJ 07621	www.AstralEnergyLLC.com	ACTIVE
Barclays Capital Services,	(800) 526-7000	C
Inc.		
70 Hudson Street		ACTIVE
Jersey City, NJ 07302-4585	www.barclays.com	
BBPC, LLC d/b/a Great	(888) 651-4121	C
Eastern Energy		

116 Village Blvd. Suite 200		
Princeton, NJ 08540		ACTIVE
	www.greateasternenergy.com	
Berkshire Energy Partners,	(610) 255-5070	C/I
LLC		
9 Berkshire Road		ACTIVE
Landenberg, PA 19350 Attn: Dana A. LeSage, P.E.	www.berkshireenergypartners.com	
Blue Pilot Energy, LLC	(800) 451-6356	R/C
197 State Rte. 18 South	(800) 431-0330	R/C
Ste. 3000		
East Brunswick, NJ 08816	www.bluepilotenergy.com	ACTIVE
Brick Standard, LLC	(201)706-8101	C/I
235 Hudson Street Suite 1	, í	
Hoboken, NJ 07030	www.standardalternative.com	ACTIVE
CCES LLC dba Clean	(877) 933-2453	R/C
Currents Energy Services		
566 Terhune Street		A CONTRACT
Teaneck, NJ 07666	www.cleancurrents.com	ACTIVE
Champion Energy Services, LLC	(888) 653-0093	R/C/I
1200 Route 22		ACTIVE
Bridgewater, NJ 08807	www.championenergyservices.com	ACTIVE
Choice Energy, LLC	(888) 565-4490	R/C
4257 US Highway 9, Suite 6C	(000) 202 1.150	
Freehold, NJ 07728	www.4choiceenergy.com	ACTIVE
Clearview Electric, Inc.	(888) CLR-VIEW	R/C/I
1744 Lexington Avenue	(800) 746- 4702	
Pennsauken, NJ 08110	www.clearviewenergy.com	ACTIVE
Commerce Energy, Inc.	1-866-587-8674	R/C
7 Cedar Terrace		
Ramsey, NJ 07446	www.commerceenergy.com	ACTIVE
Community Energy Inc.	(866)946-3123	R/C/I
51 Sandbrook Headquarters		
Road		
Stockton, NJ 08559	<u>www.communityenergyinc.com</u>	ACTIVE
ConEdison Solutions	(888) 665-0955	C/I
Cherry Tree Corporate Center		
535 State Highway Suite 180		ACTIVE
Cherry Hill, NJ 08002	www.conedsolutions.com	HOTTVE
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ConocoPhillips Company	(800) 646-4427	C/I
224 Strawbridge Drive	(600) 616 1127	
Suite 107		ACTIVE
Moorestown, NJ 08057	www.conocophillips.com	
Constellation NewEnergy,	(888) 635-0827	R/C/I
Inc.	(000) 033 0021	N/C/1
900A Lake Street, Suite 2	www.constellation.com	ACTIVE
Ramsey, NJ 07446		11011,2
Constellation Energy	(877) 997-9995	R
900A Lake Street, Suite 2	(811) 331-3333	I A
Ramsey, NJ 07446	www.constellation.com	ACTIVE
Ramsey, NJ 07440	www.constenation.com	ACTIVE
Credit Suisse, (USA) Inc.	(212) 538-3124	C
700 College Road East		
Princeton, NJ 08450	www.creditsuisse.com	ACTIVE
Direct Energy Business, LLC	(888) 925-9115	R
120 Wood Avenue, Suite 611		
Iselin, NJ 08830	http://www.business.directenergy.com/	ACTIVE
Direct Energy Business	(800) 437-7872	C/I
Marketing, LLC (fka Hess	(800) 437-7872	C/1
Energy Marketing)		
1 Hess Plaza		
Woodbridge, NJ 07095	http://www.business.directenergy.com/	ACTIVE
Direct Energy Services, LLC	(888) 925-9115	R
120 Wood Avenue, Suite 611	(000) 723-7113	ı K
Iselin, NJ 08830	www.directenergy.com	ACTIVE
Direct Energy Small	(888) 464-4377	C/I
Business, LLC (fka Hess		
Small Business Services,		
LLC) One Hess Plaza		
Woodbridge, NJ 07095	http://www.business.directenergy.com/	ACTIVE
Discount Energy Group,	(800) 282-3331	R/C
LLC		
811 Church Road, Suite 149		ACTIVE
Cherry Hill, New Jersey 08002	www.discountenergygroup.com	ACIIVE
	www.discountenergygroup.com	0.7
DTE Energy Supply, Inc.	(877) 332-2450	C/I
One Gateway Center,		
Suite 2600	www.dtogweely.com	ACTIVE
Newark, NJ 07102	www.dtesupply.com	

Energy.me Midwest LLC	(855) 243-7270	R/C/I
90 Washington Blvd	, , ,	
Bedminster, NJ 07921	www.energy.me	ACTIVE
Energy Plus Holdings LLC	(877) 866-9193	R/C
309 Fellowship Road		
East Gate Center, Suite 200		A CURINUE
Mt. Laurel, NJ 08054	www.energypluscompany.com	ACTIVE
Ethical Electric Benefit Co.	(888) 444-9452	R/C
d/b/a Ethical Electric		
100 Overlook Center, 2 nd Fl. Princeton, NJ 08540	www.ethicalelectric.com	ACTIVE
Energy Service Providers,	(866) 568-0290	R/C
Inc., d/b/a New Jersey Gas &	(800) 308-0290	N/C
Electric Electric		
1 Bridge Plaza fl. 2		
Fort Lee, NJ 07024	www.njgande.com	ACTIVE
FirstEnergy Solutions	(866) 625-7318	C/I
150 West State Street	c	A CONTRACT
Trenton, NJ 08608	www.fes.com	ACTIVE
Gateway Energy Services	(866)348-4193	R/C
Corp. 120 Wood Avenue Suite 611		
Iselin, NJ 08830	www.directenergybusiness.com	ACTIVE
GDF SUEZ Energy Resources NA, Inc.	(866) 999-8374	C/I
333 Thornall Street		
Sixth Floor		
Edison, NJ 08837	www.gdfsuezenergyresources.com	ACTIVE
GDF Suez Retail Energy	1-866-252-0078	R/C/I
Solutions LLC d/b/a THINK		
ENERGY 333 Thornall St. Sixth Floor		A COUNTE
Edison, NJ 08819	www.mythinkenergy.com	ACTIVE
Glacial Energy of New	(888) 452-2425	C/I
Jersey, Inc.	(333) 132 2123	
21 Pine Street, Suite 237		
Rockaway, NJ 07866	www.glacialenergy.com	ACTIVE
Global Energy Marketing	(800) 542-0778	R/C/I
LLC		
129 Wentz Avenue	1.1.1	ACTIVE
Springfield, NJ 07081	www.globalp.com	

Green Mountain Energy	(866) 767-5818	C/I
Company 211 Carnegie Center Drive	www.greenmountain.com/commercial-	
Princeton, NJ 08540	home	ACTIVE
Harborside Energy LLC	(877) 940-3835	R/C
101 Hudson Street	(011) 740-3033	I NC
Suite 2100		
Jersey City, NJ 07302	www.harborsideenergynj.com	ACTIVE
Hess Corporation	(800) 437-7872	C/I
1 Hess Plaza Woodbridge, NJ 07095	www.hess.com	ACTIVE
HIKO Energy, LLC	(888) 264-4908	R/C/I
655 Suffern Road	` '	
Teaneck, NJ 07666	www.hikoenergy.com	ACTIVE
Hudson Energy Services,	(877) Hudson 9	С
LLC		
7 Cedar Street Ramsey, New Jersey 07446	www.hudsonenergyservices.com	ACTIVE
		R/C
IDT Energy, Inc. 550 Broad Street	(877) 887-6866	R/C
Newark, NJ 07102	www.idtenergy.com	ACTIVE
Independence Energy	(877) 235-6708	R/C
Group, LLC		A CONTACT
211 Carnegie Center Princeton, NJ 08540	www.chooseindependence.com	ACTIVE
Inspire Energy Holdings	(866) 403-2620	R/C/I
LLC	(800) 403-2020	K /C/1
923 Haddonfield Road		
3rd Fl. Building B2	www.inspireenergy.com	
Cherry Hill, NJ 08002	(999) 797 944	~ -
Integrys Energy Services,	(800) 536-0151	C/I
Inc. 33 Wood Ave, South, Suite		
610		ACTIVE
Iselin, NJ 08830	www.integrysenergy.com	
Jsynergy, LLC	(516) 331-2020	R/C/I
445 Central Ave. Suite 204	Jaynaraylla aam	ACTIVE
Cedarhurst, NY 11516	Jsynergyllc.com	
Kuehne Chemical Company, Inc.	(973) 589-0700	I
86 North Hackensack Avenue		
South Kearney, NJ 07032	kuehnechemical@comcast.net	

Liberty Power Delaware,	(866) 769-3799	C/I
LLC 1973 Highway 34, Suite 211 Wall, NJ 07719	www.libertypowercorp.com	ACTIVE
Liberty Power Holdings,	(866) 769-3799	R/C/I
LLC 1973 Highway 34, Suite 211 Wall, NJ 07719	www.libertypowercorp.com	ACTIVE
Linde Energy Services	(800) 247-2644	C/I
575 Mountain Avenue Murray Hill, NJ 07974	www.linde.com	ACTIVE
Marathon Power LLC	(888) 779-7255	R/C/I
302 Main Street Paterson, NJ 07505	www.mecny.com	ACTIVE
MP2 Energy NJ, LLC	(877) 238-5343	R/C/I
111 River Street, Suite 1204 Hoboken, NJ 07030	www.mp2energy.com	ACTIVE
Natures Current, LLC	(215) 464-6000	R/C/I
95 Fairmount Avenue Philadelphia, Pennsylvania		ACTIVE
19123	www.naturescurrent.com	II OII V
MPower Energy NJ LLC	(877) 286-7693	R/C/I
One University Plaza, Suite 507 Hackensack, NJ 07601	www.mpowerenergy.com	ACTIVE
NATGASCO, Inc. (Supreme	(800) 840-4427	R/C/I
Energy, Inc.) 532 Freeman St.		A CITINIE
Orange, NJ 07050 New Jersey Gas & Electric	www.supremeenergyinc.com (866) 568-0290	ACTIVE R/C/
10 North Park Place Suite 420	(800) 308-0290	K/C/
Morristown, NJ 07960	www.njgande.com	ACTIVE
NextEra Energy Services New Jersey, LLC 651 Jernee Mill Road	(877) 528-2890 Commercial (800) 882-1276 Residential	R/C/I
Sayreville, NJ 08872	www.nexteraenergyservices.com	ACTIVE
Noble Americas Energy Solutions	(877) 273-6772	C/I
The Mac-Cali Building 581 Main Street, 8th Floor Woodbridge, NJ 07095	www.noblesolutions.com	ACTIVE

Nordic Energy Services,	(877) 808-1027	R/C/I
LLC 50 Tice Boulevard, Suite 340 Woodcliff Lake, NJ 07677	www.nordiceenergy.us.com	ACTIVE
North American Power and Gas, LLC	(888) 313-9086	R/C/I
222 Ridgedale Avenue Cedar Knolls, NJ 07927	www.napower.com	ACTIVE
North Eastern States, Inc. d/b/a Entrust Energy 90 Washington Valley Road	(888) 535-6340	R/C/I
Bedminster, NJ 07921	www.entrustenergy.com	ACTIVE
Oasis Power, LLC d/b/a Oasis Energy	(800)324-3046	R/C
11152 Westheimer, Suite 901 Houston, TX 77042	www.oasisenergy.com	ACTIVE
Palmco Power NJ, LLC One Greentree Centre 10,000 Lincoln Drive East, Suite 201	(877) 726-5862	R/C/I
Marlton, NJ 08053	www.PalmcoEnergy.com	ACTIVE
Park Power, LLC 1200 South Church St. Suite 23	(856) 778-0079	R/C/I
Mount Laurel, NJ 08054	www.parkpower.com	ACTIVE
Plymouth Rock Energy, LLC	(855) 32-POWER (76937)	R/C/I
338 Maitland Avenue Teaneck, NJ 07666	www.plymouthenergy.com	ACTIVE
Power Management Co., LLC b/b/a PMC Lightsavers Limited Liability Company 1600 Moseley Road	(585) 249-1360	СЛ
Victor, NY 14564	www.powermanagementco.com	ACTIVE
PPL Energy Plus, LLC 811 Church Road	(800) 281-2000	C/I
Cherry Hill, NJ 08002	www.pplenergyplus.com	ACTIVE
PPL EnergyPlus Retail, LLC 788 Shrewsbury Avenue, Suite	(732) 741-0505 – 2000	C/I
220		ACTIVE
Tinton Falls, NJ 07724	www.pplenergyplus.com	
Progressive Energy Consulting, LLC	(917) 837-7400	R/C/I

PO Box 4582	Progressivenrg@optionline.net	ACTIVE
Wayne, New Jersey 07474 Prospect Resources, Inc.	(847) 673-1959	С
208 W. State Street		
Trenton, NJ 08608-1002	www.prospectresources.com	ACTIVE
Public Power & Utility of	(888) 354-4415	R/C/I
New Jersey, LLC		
One International Blvd, Suite 400	www.ppandu.com	ACTIVE
Mahwah, NJ 07495	www.ppandu.com	ACTIVE
Reliant Energy	(877) 297-3795	R/C/I
211 Carnegie Center	(877) 297-3780	
Princeton, NJ 08540	www.reliant.com	ACTIVE
ResCom Energy LLC	(888) 238-4041	R/C/I
18C Wave Crest Ave.	,	
Winfield Park, NJ 07036	http://rescomenergy.com	ACTIVE
Residents Energy, LLC	(888) 828-7374	R/C
550 Broad Street		
Newark, NJ 07102	www.residentsenergy.com	
Respond Power LLC	(877) 973-7763	R/C/I
1001 East Lawn Drive		
Teaneck, NJ 07666	www.majorenergy.com	ACTIVE
Save on Energy, LLC	1 (877)-658-3183	R/C
1101 Red Ventures Drive		
Fort Mill, SC 29707	www.saveonenergy.com	
SFE Energy	1 (877) 316-6344	R/C/I
One Gateway Center		
Suite 2600	www.sfeenergy.com	ACTIVE
Newark, NJ 07012 S.J. Energy Partners, Inc.	(200) 505 0556	C
208 White Horse Pike, Suite 4	(800) 695-0666	
Barrington, NJ 08007	www.sjnaturalgas.com	ACTIVE
SmartEnergy Holdings, LLC	(800) 443-4440	R/C/I
100 Overlook Center	(333)	
2nd Floor		
Princeton, NJ NJ 08540		
United States of America	www.smartenergy.com	ACTIVE
South Jersey Energy	(800) 266-6020	R/C/I
Company 1 South Jersey Plaza, Route 54		ACTIVE
Folsom, NJ 08037	www.southjerseyenergy.com	ACIIVE

Spark Energy Gas, LP/	(713)600-2600	R/C/I
Spark Energy Gas, E17	(713)000 2000	K/C/I
2105 City West Blvd.		
Suite 100		
Houston, TX 77042	<u>www.sparkenergy.com</u>	ACTIVE
Sperian Energy Corp.	(888) 682-8082	R/C/I
1200 Route 22 East, Suite		
2000		ACTIVE
Bridgewater, NJ 08807	www.sperianenergy.com	
Starion Energy PA Inc.	(800) 600-3040	R/C/I
101 Warburton Avenue		
Hawthorne, NJ 07506	www.starionenergy.com	ACTIVE
Stream Energy New Jersey,	(877) 369-8150	R/C
LLC		
309 Fellowship Rd., Suite 200	www.streamenergy.net	ACTIVE
Mt. Laurel, NJ 08054		
Summit Energy Services,	1 (800) 90-SUMMIT	C/I
Inc.		
10350 Ormsby Park Place		
Suite 400		
Louisville, KY 40223	<u>www.summitenergy.com</u>	ACTIVE
Texas Retail Energy LLC	(866) 532-0761	C/I
Park 80 West Plaza II, Suite		
200		
Saddle Brook, NJ 07663	Taylogustailanamay	ACTIVE
Attn: Chris Hendrix	Texasretailenergy.com	C/T
TransCanada Power	(877) MEGAWAT	C/I
Marketing Ltd. 190 Middlesex Essex		
Turnpike, Suite 200		
Iselin, NJ 08830	www.transcanada.com/powermarketing	ACTIVE
TriEagle Energy, LP	(877) 933-2453	R/C/I
90 Washington Valley Rd	(011) 333-2433	K/C/I
Bedminster, NJ 07921	www.trieagleenergy.com	ACTIVE
UGI Energy Services, Inc.	(800) 427-8545	C/I
dba UGI Energy Link		
224 Strawbridge Drive		
Suite 107 Moorestown, NJ 08057	www.ugienergylink.com	ACTIVE
, , , , , , , , , , , , , , , , , , ,		
Verde Energy USA, Inc. 2001 Route 46	(800) 388-3862	R/C
Waterview Plaza Suite 301		
Parsippany, NJ 07054	www.lowcostpower.com	ACTIVE
1 arsippany, 113 07004	www.iowcostpowcr.com	11011VE

Viridian Energy	(866) 663-2508	R/C/I
2001 Route 46, Waterview		
Plaza		
Suite 310		
Parsippany, NJ 07054	www.viridian.com	ACTIVE
XOOM Energy New Jersey,	(888) 997-8979	R/C/I
LLC		
744 Broad Street. 16 th Floor		
Newark, NJ 07102	www.xoomenergy.com	ACTIVE
YEP Energy	(855) 363-7736	R/C/I
89 Headquarters Plaza North		
#1463		
Morristown, NJ 07960	www.yepenergyNJ.com	ACTIVE
Your Energy Holdings, LLC	(855) 732-2493	R/C/I
One International Boulevard		
Suite 400		
Mahwah, NJ 07495-0400	www.thisisyourenergy.com	ACTIVE

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PSE&G ELECTRIC SERVICE TERRITORY Last Updated: 12/11/14

$*\underline{CUSTOMER\ CLASS} - R - RESIDENTIAL\ C - COMMERCIAL\ I - INDUSTRIAL$

Supplier	Telephone	*Customer
**	& Web Site	Class
Abest Power & Gas of NJ,	(888)987-6937	R/C/I
LLC	, ,	
202 Smith Street		
Perth Amboy, NJ 08861	www.AbestPower.com	ACTIVE
AEP Energy, Inc. f/k/a	(866) 258-3782	R/C/I
BlueStar Energy Services		
309 Fellowship Road, Fl. 2	www.aepenergy.com	ACTIVE
Mount Laurel, NJ 08054		
Alpha Gas and Electric,	(855) 553-6374	R/C
LLC		A COTTANT
641 5 th Street	www.alphagasandelectric.com	ACTIVE
Lakewood, NJ 08701	277 202 1201	7.0
Ambit Northeast, LLC d/b/a	877-282-6284	R/C
Ambit Energy		
103 Carnegie Center Suite 300		ACTIVE
Princeton, NJ 08540	www.ambitenergy.com	ACTIVE
American Powernet	(877) 977-2636	C/I
Management, LP	(877) 977-2030	C/1
437 North Grove St.	www.americanpowernet.com	
Berlin, NJ 08009	······································	ACTIVE
Amerigreen Energy, Inc.	888-559-4567	R/C
333Sylvan Avenue		
Englewood Cliffs, NJ 07632	www.amerigreen.com	ACTIVE
AP Gas & Electric, (NJ)	(855) 544-4895	R/C/I
LLC	, ,	
10 North Park Place, Suite 420	www.apgellc.com	ACTIVE
Morristown, NJ 07960		
Astral Energy LLC	(888)850-1872	R/C/I
16 Tyson Place		
Bergenfield, NJ 07621	www.AstralEnergyLLC.com	ACTIVE
Barclays Capital Services,	(800) 526-7000	C
Inc.		
70 Hudson Street		ACTIVE
Jersey City, NJ 07302-4585	www.barclays.com	
BBPC, LLC d/b/a Great	(888) 651-4121	C
Eastern Energy		

116 Village Blvd. Suite 200		
Princeton, NJ 08540		ACTIVE
	www.greateasternenergy.com	
Berkshire Energy Partners,	(610) 255-5070	C/I
LLC		
9 Berkshire Road		ACTIVE
Landenberg, PA 19350 Attn: Dana A. LeSage, P.E.	www.berkshireenergypartners.com	
Blue Pilot Energy, LLC	(800) 451-6356	R/C
197 State Rte. 18 South	(800) 431-0330	R/C
Ste. 3000		
East Brunswick, NJ 08816	www.bluepilotenergy.com	ACTIVE
Brick Standard, LLC	(201)706-8101	C/I
235 Hudson Street Suite 1	, í	
Hoboken, NJ 07030	www.standardalternative.com	ACTIVE
CCES LLC dba Clean	(877) 933-2453	R/C
Currents Energy Services		
566 Terhune Street		A CONTRACT
Teaneck, NJ 07666	www.cleancurrents.com	ACTIVE
Champion Energy Services, LLC	(888) 653-0093	R/C/I
1200 Route 22		ACTIVE
Bridgewater, NJ 08807	www.championenergyservices.com	ACTIVE
Choice Energy, LLC	(888) 565-4490	R/C
4257 US Highway 9, Suite 6C	(000) 202 1.150	
Freehold, NJ 07728	www.4choiceenergy.com	ACTIVE
Clearview Electric, Inc.	(888) CLR-VIEW	R/C/I
1744 Lexington Avenue	(800) 746- 4702	
Pennsauken, NJ 08110	www.clearviewenergy.com	ACTIVE
Commerce Energy, Inc.	1-866-587-8674	R/C
7 Cedar Terrace		
Ramsey, NJ 07446	www.commerceenergy.com	ACTIVE
Community Energy Inc.	(866)946-3123	R/C/I
51 Sandbrook Headquarters		
Road		
Stockton, NJ 08559	<u>www.communityenergyinc.com</u>	ACTIVE
ConEdison Solutions	(888) 665-0955	C/I
Cherry Tree Corporate Center		
535 State Highway Suite 180		ACTIVE
Cherry Hill, NJ 08002	www.conedsolutions.com	HOTTVE
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ConocoPhillips Company	(800) 646-4427	C/I
224 Strawbridge Drive	(600) 616 1127	
Suite 107		ACTIVE
Moorestown, NJ 08057	www.conocophillips.com	
Constellation NewEnergy,	(888) 635-0827	R/C/I
Inc.	(000) 033 0021	N/C/1
900A Lake Street, Suite 2	www.constellation.com	ACTIVE
Ramsey, NJ 07446		11011,2
Constellation Energy	(877) 997-9995	R
900A Lake Street, Suite 2	(811) 331-3333	I A
Ramsey, NJ 07446	www.constellation.com	ACTIVE
Ramsey, NJ 07440	www.constenation.com	ACTIVE
Credit Suisse, (USA) Inc.	(212) 538-3124	C
700 College Road East		
Princeton, NJ 08450	www.creditsuisse.com	ACTIVE
Direct Energy Business, LLC	(888) 925-9115	R
120 Wood Avenue, Suite 611		
Iselin, NJ 08830	http://www.business.directenergy.com/	ACTIVE
Direct Energy Business	(800) 437-7872	C/I
Marketing, LLC (fka Hess	(800) 437-7872	C/1
Energy Marketing)		
1 Hess Plaza		
Woodbridge, NJ 07095	http://www.business.directenergy.com/	ACTIVE
Direct Energy Services, LLC	(888) 925-9115	R
120 Wood Avenue, Suite 611	(000) 723-7113	ı K
Iselin, NJ 08830	www.directenergy.com	ACTIVE
Direct Energy Small	(888) 464-4377	C/I
Business, LLC (fka Hess		
Small Business Services,		
LLC) One Hess Plaza		
Woodbridge, NJ 07095	http://www.business.directenergy.com/	ACTIVE
Discount Energy Group,	(800) 282-3331	R/C
LLC		
811 Church Road, Suite 149		ACTIVE
Cherry Hill, New Jersey 08002	www.discountenergygroup.com	ACIIVE
	www.discountenergygroup.com	0.7
DTE Energy Supply, Inc.	(877) 332-2450	C/I
One Gateway Center,		
Suite 2600	www.dtogweely.com	ACTIVE
Newark, NJ 07102	www.dtesupply.com	

Energy.me Midwest LLC	(855) 243-7270	R/C/I		
90 Washington Blvd	, , ,			
Bedminster, NJ 07921	www.energy.me	ACTIVE		
Energy Plus Holdings LLC	(877) 866-9193	R/C		
309 Fellowship Road				
East Gate Center, Suite 200		A CURINUE		
Mt. Laurel, NJ 08054	www.energypluscompany.com	ACTIVE		
Ethical Electric Benefit Co.	(888) 444-9452	R/C		
d/b/a Ethical Electric				
100 Overlook Center, 2 nd Fl. Princeton, NJ 08540	www.ethicalelectric.com	ACTIVE		
Energy Service Providers,	(866) 568-0290	R/C		
Inc., d/b/a New Jersey Gas &	(800) 308-0290	N/C		
Electric Electric				
1 Bridge Plaza fl. 2				
Fort Lee, NJ 07024	www.njgande.com	ACTIVE		
FirstEnergy Solutions	(866) 625-7318	C/I		
150 West State Street	c	A CONTRACT		
Trenton, NJ 08608	www.fes.com	ACTIVE		
Gateway Energy Services	(866)348-4193	R/C		
Corp. 120 Wood Avenue Suite 611				
Iselin, NJ 08830	www.directenergybusiness.com	ACTIVE		
GDF SUEZ Energy Resources NA, Inc.	(866) 999-8374	C/I		
333 Thornall Street				
Sixth Floor				
Edison, NJ 08837	www.gdfsuezenergyresources.com	ACTIVE		
GDF Suez Retail Energy	1-866-252-0078	R/C/I		
Solutions LLC d/b/a THINK				
ENERGY 333 Thornall St. Sixth Floor		A COUNTE		
Edison, NJ 08819	www.mythinkenergy.com	ACTIVE		
Glacial Energy of New	(888) 452-2425	C/I		
Jersey, Inc.	(333) 132 2123			
21 Pine Street, Suite 237				
Rockaway, NJ 07866	www.glacialenergy.com	ACTIVE		
Global Energy Marketing	(800) 542-0778	R/C/I		
LLC				
129 Wentz Avenue	1.1.1	ACTIVE		
Springfield, NJ 07081	www.globalp.com			

Green Mountain Energy	(866) 767-5818	C/I
Company 211 Carnegie Center Drive	www.greenmountain.com/commercial-	
Princeton, NJ 08540	home	ACTIVE
Harborside Energy LLC	(877) 940-3835	R/C
101 Hudson Street	(011) 740-3033	I NC
Suite 2100		
Jersey City, NJ 07302	www.harborsideenergynj.com	ACTIVE
Hess Corporation	(800) 437-7872	C/I
1 Hess Plaza Woodbridge, NJ 07095	www.hess.com	ACTIVE
HIKO Energy, LLC	(888) 264-4908	R/C/I
655 Suffern Road	` '	
Teaneck, NJ 07666	www.hikoenergy.com	ACTIVE
Hudson Energy Services,	(877) Hudson 9	С
LLC		
7 Cedar Street Ramsey, New Jersey 07446	www.hudsonenergyservices.com	ACTIVE
		R/C
IDT Energy, Inc. 550 Broad Street	(877) 887-6866	R/C
Newark, NJ 07102	www.idtenergy.com	ACTIVE
Independence Energy	(877) 235-6708	R/C
Group, LLC		A CONTACT
211 Carnegie Center Princeton, NJ 08540	www.chooseindependence.com	ACTIVE
Inspire Energy Holdings	(866) 403-2620	R/C/I
LLC	(800) 403-2020	K /C/1
923 Haddonfield Road		
3rd Fl. Building B2	www.inspireenergy.com	
Cherry Hill, NJ 08002	(999) 797 944	~ -
Integrys Energy Services,	(800) 536-0151	C/I
Inc. 33 Wood Ave, South, Suite		
610		ACTIVE
Iselin, NJ 08830	www.integrysenergy.com	
Jsynergy, LLC	(516) 331-2020	R/C/I
445 Central Ave. Suite 204	Jaynaraylla aam	ACTIVE
Cedarhurst, NY 11516	Jsynergyllc.com	
Kuehne Chemical Company, Inc.	(973) 589-0700	I
86 North Hackensack Avenue		
South Kearney, NJ 07032	kuehnechemical@comcast.net	

Liberty Power Delaware,	(866) 769-3799	C/I
LLC 1973 Highway 34, Suite 211 Wall, NJ 07719	www.libertypowercorp.com	ACTIVE
Liberty Power Holdings,	(866) 769-3799	R/C/I
LLC 1973 Highway 34, Suite 211 Wall, NJ 07719	www.libertypowercorp.com	ACTIVE
Linde Energy Services	(800) 247-2644	C/I
575 Mountain Avenue Murray Hill, NJ 07974	www.linde.com	ACTIVE
Marathon Power LLC	(888) 779-7255	R/C/I
302 Main Street Paterson, NJ 07505	www.mecny.com	ACTIVE
MP2 Energy NJ, LLC	(877) 238-5343	R/C/I
111 River Street, Suite 1204 Hoboken, NJ 07030	www.mp2energy.com	ACTIVE
Natures Current, LLC	(215) 464-6000	R/C/I
95 Fairmount Avenue Philadelphia, Pennsylvania		ACTIVE
19123	www.naturescurrent.com	
MPower Energy NJ LLC	(877) 286-7693	R/C/I
One University Plaza, Suite 507 Hackensack, NJ 07601	www.mpowerenergy.com	ACTIVE
NATGASCO, Inc. (Supreme	(800) 840-4427	R/C/I
Energy, Inc.) 532 Freeman St. Orange, NJ 07050		ACTIVE
New Jersey Gas & Electric	www.supremeenergyinc.com (866) 568-0290	R/C/
10 North Park Place Suite 420	(000) 300 0270	II. Ci
Morristown, NJ 07960	www.njgande.com	ACTIVE
NextEra Energy Services New Jersey, LLC 651 Jernee Mill Road	(877) 528-2890 Commercial (800) 882-1276 Residential	R/C/I
Sayreville, NJ 08872	www.nexteraenergyservices.com	ACTIVE
Noble Americas Energy	(877) 273-6772	C/I
Solutions The Man Coli Building		
The Mac-Cali Building 581 Main Street, 8th Floor Woodbridge, NJ 07095	www.noblesolutions.com	ACTIVE

Nordic Energy Services,	(877) 808-1027	R/C/I
LLC 50 Tice Boulevard, Suite 340 Woodcliff Lake, NJ 07677	www.nordiceenergy.us.com	ACTIVE
North American Power and Gas, LLC	(888) 313-9086	R/C/I
222 Ridgedale Avenue Cedar Knolls, NJ 07927	www.napower.com	ACTIVE
North Eastern States, Inc. d/b/a Entrust Energy 90 Washington Valley Road	(888) 535-6340	R/C/I
Bedminster, NJ 07921	www.entrustenergy.com	ACTIVE
Oasis Power, LLC d/b/a Oasis Energy	(800)324-3046	R/C
11152 Westheimer, Suite 901 Houston, TX 77042	www.oasisenergy.com	ACTIVE
Palmco Power NJ, LLC One Greentree Centre 10,000 Lincoln Drive East, Suite 201	(877) 726-5862	R/C/I
Marlton, NJ 08053	www.PalmcoEnergy.com	ACTIVE
Park Power, LLC 1200 South Church St. Suite 23	(856) 778-0079	R/C/I
Mount Laurel, NJ 08054	www.parkpower.com	ACTIVE
Plymouth Rock Energy, LLC	(855) 32-POWER (76937)	R/C/I
338 Maitland Avenue Teaneck, NJ 07666	www.plymouthenergy.com	ACTIVE
Power Management Co., LLC b/b/a PMC Lightsavers Limited Liability Company 1600 Moseley Road	(585) 249-1360	СЛ
Victor, NY 14564	www.powermanagementco.com	ACTIVE
PPL Energy Plus, LLC 811 Church Road	(800) 281-2000	C/I
Cherry Hill, NJ 08002	www.pplenergyplus.com	ACTIVE
PPL EnergyPlus Retail, LLC 788 Shrewsbury Avenue, Suite	(732) 741-0505 – 2000	C/I
220		ACTIVE
Tinton Falls, NJ 07724	www.pplenergyplus.com	
Progressive Energy Consulting, LLC	(917) 837-7400	R/C/I

PO Box 4582	Progressivenrg@optionline.net	ACTIVE				
Wayne, New Jersey 07474 Prospect Resources, Inc.	(847) 673-1959	С				
208 W. State Street						
Trenton, NJ 08608-1002	www.prospectresources.com	ACTIVE				
Public Power & Utility of	(888) 354-4415	R/C/I				
New Jersey, LLC						
One International Blvd, Suite 400	www.ppandu.com	ACTIVE				
Mahwah, NJ 07495	www.ppandu.com	ACTIVE				
Reliant Energy	(877) 297-3795	R/C/I				
211 Carnegie Center	(877) 297-3780					
Princeton, NJ 08540	www.reliant.com	ACTIVE				
ResCom Energy LLC	(888) 238-4041	R/C/I				
18C Wave Crest Ave.	,					
Winfield Park, NJ 07036	http://rescomenergy.com	ACTIVE				
Residents Energy, LLC	(888) 828-7374	R/C				
550 Broad Street						
Newark, NJ 07102	www.residentsenergy.com					
Respond Power LLC	(877) 973-7763	R/C/I				
1001 East Lawn Drive						
Teaneck, NJ 07666	www.majorenergy.com	ACTIVE				
Save on Energy, LLC	1 (877)-658-3183	R/C				
1101 Red Ventures Drive						
Fort Mill, SC 29707	www.saveonenergy.com					
SFE Energy	1 (877) 316-6344	R/C/I				
One Gateway Center						
Suite 2600	www.sfeenergy.com	ACTIVE				
Newark, NJ 07012 S.J. Energy Partners, Inc.	(200) 505 0556	C				
208 White Horse Pike, Suite 4	(800) 695-0666					
Barrington, NJ 08007	www.sjnaturalgas.com	ACTIVE				
SmartEnergy Holdings, LLC	(800) 443-4440	R/C/I				
100 Overlook Center	(333)					
2nd Floor						
Princeton, NJ NJ 08540						
United States of America	www.smartenergy.com	ACTIVE				
South Jersey Energy	(800) 266-6020	R/C/I				
Company 1 South Jersey Plaza, Route 54		ACTIVE				
Folsom, NJ 08037	www.southjerseyenergy.com	ACIIVE				

Spark Energy Gas, LP/	(713)600-2600	R/C/I					
Spark Energy Gas, E17	(713)000 2000	K/C/I					
2105 City West Blvd.							
Suite 100							
Houston, TX 77042	<u>www.sparkenergy.com</u>	ACTIVE					
Sperian Energy Corp.	(888) 682-8082	R/C/I					
1200 Route 22 East, Suite							
2000		ACTIVE					
Bridgewater, NJ 08807	www.sperianenergy.com						
Starion Energy PA Inc.	(800) 600-3040	R/C/I					
101 Warburton Avenue							
Hawthorne, NJ 07506	www.starionenergy.com	ACTIVE					
Stream Energy New Jersey,	(877) 369-8150	R/C					
LLC							
309 Fellowship Rd., Suite 200	www.streamenergy.net	ACTIVE					
Mt. Laurel, NJ 08054							
Summit Energy Services,	1 (800) 90-SUMMIT	C/I					
Inc.							
10350 Ormsby Park Place							
Suite 400							
Louisville, KY 40223	<u>www.summitenergy.com</u>	ACTIVE					
Texas Retail Energy LLC	(866) 532-0761	C/I					
Park 80 West Plaza II, Suite							
200							
Saddle Brook, NJ 07663	Taylogustailanamay	ACTIVE					
Attn: Chris Hendrix	Texasretailenergy.com	C/T					
TransCanada Power	(877) MEGAWAT	C/I					
Marketing Ltd. 190 Middlesex Essex							
Turnpike, Suite 200							
Iselin, NJ 08830	www.transcanada.com/powermarketing	ACTIVE					
TriEagle Energy, LP	(877) 933-2453	R/C/I					
90 Washington Valley Rd	(011) 333-2433	K/C/I					
Bedminster, NJ 07921	www.trieagleenergy.com	ACTIVE					
UGI Energy Services, Inc.	(800) 427-8545	C/I					
dba UGI Energy Link							
224 Strawbridge Drive							
Suite 107 Moorestown, NJ 08057	www.ugienergylink.com	ACTIVE					
, , , , , , , , , , , , , , , , , , ,							
Verde Energy USA, Inc. 2001 Route 46	(800) 388-3862	R/C					
Waterview Plaza Suite 301							
Parsippany, NJ 07054	www.lowcostpower.com	ACTIVE					
1 arsippany, 113 07004	www.iowcostpower.com ACTIVE						

Viridian Energy	(866) 663-2508	R/C/I
2001 Route 46, Waterview		
Plaza		
Suite 310		
Parsippany, NJ 07054	www.viridian.com	ACTIVE
XOOM Energy New Jersey,	(888) 997-8979	R/C/I
LLC		
744 Broad Street. 16 th Floor		
Newark, NJ 07102	www.xoomenergy.com	ACTIVE
YEP Energy	(855) 363-7736	R/C/I
89 Headquarters Plaza North		
#1463		
Morristown, NJ 07960	www.yepenergyNJ.com	ACTIVE
Your Energy Holdings, LLC	(855) 732-2493	R/C/I
One International Boulevard		
Suite 400		
Mahwah, NJ 07495-0400	www.thisisyourenergy.com	ACTIVE

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Essex County CHA Project# 29412 Economic Development Center

Description	QTY	Manufacturer Name	Model No.	Serial No.	Equipment Type / Utility	Capacity/Size	Efficiency	Location	Areas/Equipment Served	Date Installed	Remaining Useful Life (years)	Other Info.
B-1, 2	2	Weil McLain	1188 series	N/A	Hot water Boiler	N/A	80%	Boiler Room	Building	N/A	~10	
B-3, 4	2	Hydro-therm	MR-1800B	MNL-2656	Hot water Boiler	1,440 MBH	80%	Boiler Room	Building	N/A	N/A	
Burner	2	Webster	JB2G-15-EP170-M25-IRI	U67359A-01-10-02	Nat. Gas Burner	1696-3392 MBH		Boiler Room	Building		N/A	
HWP-1, 2	2	Marathon Electr / B&G	2VD 284TT0P4026C8L	N/A	Hot water pump	25 HP	91.7%	Boiler Room	Building	N/A	N/A	
HWP-3, 4	2	Armstrong	4001322-083	3406	Hot water pump	5 HP		Boiler Room	Building	N/A	N/A	
RTU-1	1	Mammoth	N/A	320291-0104	Packaged RTU	80 tons	N/A	Roof	1st floor	N/A	N/A	
RTU-2	1	Mammoth	N/A	320291-0104	Packaged RTU	80 tons	N/A	Roof	2nd floor	N/A	N/A	
RTU-3	1	Mammoth	N/A	320291-0104	Packaged RTU	80 tons	N/A	Roof	3rd floor	N/A	N/A	
RTU-4	1	Mammoth	N/A	320291-0104	Packaged RTU	80 tons	N/A	Roof	4th floor	N/A	N/A	
RTU-5	1	Mammoth	N/A	320291-0104	Packaged RTU	80 tons	N/A	Roof	5th floor	N/A	N/A	
DHW-1	3	A.O.Smith	BTR 200 118	1034M0D1380	Dom. Hot Water Htr	199,000 BTUH	80%	Boiler Room	Building	2010	11	
CU-1	1	Carrier	38AKS044	2401F91150	Condensing unit	3 tons	N/A	Outside on pad	Old Café	N/A	N/A	
CU-2	1	Carrier	38AKS016	1701F78682	Condensing unit	3 tons	N/A	Outside on pad	Basement	N/A	N/A	

\$0.146 \$3.53 \$/kW

		i									
			No. of		EXISTING COND	Watts per				Retrofit Control	
	Area Description	Usage	Fixtures	Standard Fixture Code	Fixture Code	Fixture	kW/Space	Exist Control	Annual Hours Annual	kvvn	
Field Code	Unique description of the location - Room number/Room	Describe Usage Type	No. of	Lighting Fixture Code	Code from Table of Standard Fixture	Value from Table of	(Watts/Fixt) * (Fixt	Pre-inst. control	Estimated (kW/space annual hours for (Annual H		Notes
Code	name: Floor number (if applicable)	using Operating Hours	fixtures before the		Wattages	Standard	No.)	device	the usage group	ours) device	
			retrofit			Fixture			the usage group		
						Wattages					
274LED	Corridor Lighting: 5th Floor	Hallways	9	CFQ/18/2 RC	CFQ18/2	45	0.41	Breaker	2280	923 None	
168 35LED	Corridor Lighting: 5th Floor	Hallways	3	W 40 C F 2 (MAG)	F42SS F43ILL/2	94	0.28	Breaker	2280	643 None	
40LED	Conference Room: 5th Floor Closet: 5th Floor	Conference Linen/Utility/Wet/Janitor/Electrical	10	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	90 60	0.90 0.12	SW SW	1200 1000	1,080 OCC 120 None	
35LED	Tax Board: 5th Floor	Conference	11	T 32 R F 3 (ELE)	F43ILL/2	90	0.12	SW		1,188 OCC	
35LED	Kitchen: 5th Floor	Kitchen	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW		1,350 None	
35LED	Storage - Room 5213: 5th Floor	Linen/Utility/Wet/Janitor/Electrical	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	1000	180 None	
40LED	Staff WR: 5th Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	OCC	1000	60 None	
35LED	Office: 5th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864 OCC	
35LED	Office - Room 5211: 5th Floor	Offices	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW		1,080 OCC	
168 35LED	Corridor Lighting: 5th Floor Corridor Lighting: 5th Floor	Hallways Hallways	3	W 40 C F 2 (MAG) T 32 R F 3 (ELE)	F42SS F43ILL/2	94 90	0.28	Breaker Breaker	2280 2280	643 None 205 None	
35LED	Room 5212: 5th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864 OCC	
40LED	Men's Room: 5th Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	OCC	1000	60 None	
35LED	Tax Room: 5th Floor	Conference	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.54	SW	1200	648 OCC	
168	Corridor Lighting: 5th Floor	Hallways	3	W 40 C F 2 (MAG)	F42SS	94	0.28	SW	2280	643 None	
35LED	Corridor Lighting: 5th Floor	Hallways	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2280	410 None	-
35LED 35LED	File Storage - Room 5205: 5th Floor	Storage Areas Hallways	4	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.36 0.36	SW Breaker	1000 2280	360 None 821 None	
35LED 35LED	Corridor Lighting: 5th Floor Corridor Lighting: 5th Floor	Hallways Hallways	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	Breaker		1,847 None	
35LED	Corridor Lighting: 5th Floor	Hallways	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	Breaker	2280	1,847 None	
35LED	Courtroom: 5th Floor	Multi Purpose/Court	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	520	421 None	
35LED	Classroom - Room 5312: 5th Floor	Classrooms	12	T 32 R F 3 (ELE)	F43ILL/2	90	1.08	SW	2400	2,592 OCC	
35LED	Corridor Lighting: 5th Floor	Hallways	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	Breaker		1,847 None	
35LED	Staff MTR: 5th Floor	Restroom w/ OCC	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	OCC	1000	180 None	
35LED	Room 5313: 5th Floor	Offices	14	T 32 R F 3 (ELE)	F43ILL/2	90	1.26	SW		3,024 OCC	
40LED 35LED	Toilet Room - Room 5313: 5th Floor Room 5304: 5th Floor	Restroom w/ OCC Offices	6	T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	60 90	0.06 0.54	OCC SW	1000 2400	60 None 1,296 OCC	
35LED	Room 5311: 5th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432 OCC	
35LED	Room 5310: 5th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432 OCC	
35LED	Staff WTR: 5th Floor	Restroom w/ OCC	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	OCC	1000	180 None	
35LED	Room 5305: 5th Floor	Offices	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW		1,944 OCC	
35LED	Room 5306: 5th Floor	Offices	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW		1,944 OCC	
35LED 35LED	Room 5307: 5th Floor Room 5308: 5th Floor	Offices Offices	9 5	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.81 0.45	SW SW		1,944 OCC 1,080 OCC	
35LED	Kitchen - Room 5309: 5th Floor	Kitchen	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW		1,080 OCC None	
168	Closet: 5th Floor	Linen/Utility/Wet/Janitor/Electrical	2	W 40 C F 2 (MAG)	F42SS	94	0.19	SW	1000	188 None	
61LED	Closet: 5th Floor	Linen/Utility/Wet/Janitor/Electrical	2	T 34 R F 3 (MAG)	F43EE	115	0.23	SW	1000	230 None	
40LED	Room 5417: 5th Floor	Offices	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	2400	144 OCC	
35LED	Director's Office: 5th Floor	Offices	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.72	SW		1,728 OCC	
35LED	Conference Room: 5th Floor	Conference	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	1200	324 OCC	
168 35LED	Corridor Director's Office: 5th Floor Office: 5th Floor	Hallways Offices	10 4	W 40 C F 2 (MAG) T 32 R F 3 (ELE)	F42SS F43ILL/2	94 90	0.94 0.36	Breaker SW	2280 2400	2,143 None 864 OCC	
40LED	Staff MTR: 5th Floor	Conference	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1200	72 OCC	
35LED	Room 5405: 5th Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648 OCC	
35LED	Room 5406: 5th Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648 OCC	
35LED	Storage - Room 5412: 5th Floor	Storage Areas	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	1000	180 None	
35LED	Room 5415: 5th Floor	Offices	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW	2400	1,080 OCC	
35LED 35LED	Room 5413: 5th Floor Room 5408: 5th Floor	Offices Offices	2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.09 0.18	SW SW	2400 2400	216 OCC 432 OCC	
35LED	Copy Room - Room 5414: 5th Floor	Copy Room	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2125	191 None	
35LED	Staff WTR: 5th Floor	Restroom w/ OCC	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90 None	
35LED	Room 5409: 5th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	864 OCC	
35LED	Kitchen: 5th Floor	Kitchen	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	3000	810 None	
35LED	Room 5410: 5th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432 OCC	
35LED	Room 5407: 5th Floor Room 5407: 5th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432 OCC	
61LED 40LED	Closet: 4th Floor	Offices Linen/Utility/Wet/Janitor/Electrical	δ 1	T 34 R F 3 (MAG) T 32 R F 2 (ELE)	F43EE F42LL	115 60	0.92 0.06	SW SW	2400 1000	2,208 OCC 60 None	
40LED	Closet: 4th Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL F42LL	60	0.06	SW	1000	60 None	
40LED	Closet: 4th Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60 None	
40LED	Men's Room: 4th Floor	Restroom w/ OCC	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	1000	180 None	
40LED	Ladies' Room: 4th Floor	Restroom w/ OCC	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	1000	180 None	
35LED	Room 4400: 4th Floor	Offices	70	T 32 R F 3 (ELE)	F43ILL/2	90	6.30	SW		5,120 OCC	
35LED	Room 4414: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW SW	2400	432 OCC	
168 35LED	Room 4400: 4th Floor Room 4411: 4th Floor	Offices Offices	42	W 40 C F 2 (MAG) T 32 R F 3 (ELE)	F42SS F43ILL/2	94 90	3.95 0.36	SW	2400 2400	9,475 OCC 864 OCC	
35LED	Room 4411: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400	432 OCC	
35LED	Room 4413: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432 OCC	
61LED	Room 4413: 4th Floor	Offices	2	T 34 R F 3 (MAG)	F43EE	115	0.23	SW	2400	552 OCC	
	Staff TR: 4th Floor	Restroom w/ OCC	2	W 40 C F 2 (MAG)	F42SS	94	0.19	SW	1000	188 None	<u> </u>
168 168	Staff TR: 4th Floor	Restroom w/ OCC		W 40 C F 2 (MAG)	F42SS	94	0.09	SW	1000	94 None	

2/24/2015 Page 1, Existing

\$0.146 \$3.53 \$/kW

Existing Lighting & Audit input											
ĺ			No. of	<u> </u>	EXISTING CONDI	TIONS Watts per		<u> </u>		Retrofit	
	Area Description	Usage	Fixtures	Standard Fixture Code	Fixture Code	Fixture	kW/Space	Exist Control	Annual Hours Annual kWh	Control	
Field Code	Unique description of the location - Room number/Room name: Floor number (if applicable)	Describe Usage Type using Operating Hours	No. of fixtures before the retrofit	Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fixt) * (Fixt No.)	Pre-inst. control device	Estimated (kW/space) * annual hours for the usage group	Retrofit control device	Notes
35LED	Reception: 4th Floor	General Common	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	2912 2,359	None	
168	Reception: 4th Floor	General Common	4	W 40 C F 2 (MAG)	F42SS	94	0.38	SW	2912 1,095	None	
35LED 168	Room 4102: 4th Floor	Offices	9	T 32 R F 3 (ELE) W 40 C F 2 (MAG)	F43ILL/2 F42SS	90	0.81	SW	2400 1,944	000	
168	Room 4102: 4th Floor Room 4103: 4th Floor	Offices Offices	3	W 40 C F 2 (MAG) W 40 C F 2 (MAG)	F42SS	94 94	0.28 0.28	SW SW	2400 677 2400 677	000	
35LED	Room 4103: 4th Floor	Offices	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.17	SW	2400 2,808	OCC	
35LED	Economic Growth: 4th Floor	Conference	25	T 32 R F 3 (ELE)	F43ILL/2	90	2.25	SW	1200 2,700	OCC	
168	Economic Growth: 4th Floor Room 4205: 4th Floor	Conference	8	W 40 C F 2 (MAG)	F42SS	94	0.75	SW	1200 902	000	
35LED 35LED	Room 4205: 4th Floor Room 4206: 4th Floor	Offices Offices	4	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.36 0.36	SW SW	2400 864 2400 864	00C	
35LED	Room 4207: 4th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400 864	OCC	
35LED	Room 4208: 4th Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400 864	OCC	
35LED	Room 4209: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
168 35LED	Room 4210: 4th Floor Room 4210: 4th Floor	Offices Offices	4	W 40 C F 2 (MAG) T 32 R F 3 (ELE)	F42SS F43ILL/2	94 90	0.38	SW SW	2400 902 2400 864	000	
35LED	Closet 4201: 4th Floor	Linen/Utility/Wet/Janitor/Electrical	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	1000 180	None	
168	Staff MTR: 4th Floor	Restroom w/ OCC	1	W 40 C F 2 (MAG)	F42SS	94	0.09	SW	1000 94	None	
168	Staff WTR: 4th Floor	Restroom w/ OCC	1	W 40 C F 2 (MAG)	F42SS	94	0.09	SW	1000 94	None	
168 35LED	Child Health: 4th Floor Child Health: 4th Floor	Offices Offices	15 24	W 40 C F 2 (MAG) T 32 R F 3 (ELE)	F42SS F43ILL/2	94 90	1.41 2.16	SW SW	2400 3,384 2400 5,184	000	
35LED	Room 4305: 4th Floor	Offices	24	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 5,184	000	
35LED	Room 4306: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
35LED	Room 4307: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
35LED	Room 4308: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	000	
35LED 35LED	Room 4309: 4th Floor Room 4310: 4th Floor	Offices Offices	3 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.27 0.18	SW SW	2400 648 2400 432	000	
35LED	Room 4311: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
35LED	Room 4312: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
35LED	Room 4313: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
35LED 35LED	Room 4314: 4th Floor Room 4315: 4th Floor	Offices Offices	4	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.18 0.36	SW SW	2400 432 2400 864	000	
35LED	Room 4318: 4th Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400 664	000	
35LED	Room 4316: 4th Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400 648	OCC	
35LED	Staff TR: 4th Floor	Restroom w/ OCC	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000 90	None	
35LED	Staff TR: 4th Floor	Restroom w/ OCC	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000 90	None	
35LED 35LED	Room 4321: 4th Floor Room 4301: 4th Floor	Offices Offices	4	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.36 0.36	SW SW	2400 864 2400 864	000	
274LED	Corridor Lighting: 4th Floor	Hallways	13	CFQ/18/2 RC	CFQ18/2	45	0.59	Breaker	2280 1,334	None	
35LED	Corridor Lighting: 4th Floor	Hallways	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	Breaker	2280 205	None	
35LED	Room 3104: 3rd Floor	Offices	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.72	SW	2400 1,728	000	
35LED 35LED	3MP - Room 3104: 3rd Floor Classroom #2: 3rd Floor	Offices Classrooms	6	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.36 0.54	SW SW	2400 864 2400 1,296	000	
35LED	Classroom #1: 3rd Floor	Classrooms	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.54	SW	2400 1,296	OCC	
35LED	Room 3104 : 3rd Floor	Offices	21	T 32 R F 3 (ELE)	F43ILL/2	90	1.89	SW	2400 4,536	OCC	
168	Room 3104: 3rd Floor	Offices	1	W 40 C F 2 (MAG)	F42SS	94	0.09	SW	2400 226	OCC	
35LED 35LED	Staff TR: 3rd Floor Bus Cards: 3rd Floor	Restroom w/ OCC General Common	1 28	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.09 2.52	SW SW	1000 90 2912 7.338	None None	
168	Bus Cards: 3rd Floor Bus Cards: 3rd Floor	General Common	10	W 40 C F 2 (MAG)	F43ILL/2 F42SS	90	0.94	SW	2912 7,336	None	
35LED	Room 3234: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
35LED	Room 3235: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	000	
35LED 35LED	Room 3236: 3rd Floor Room 3237: 3rd Floor	Offices Offices	2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.18 0.18	SW SW	2400 432 2400 432	000	
35LED	Room 3237: 3rd Floor Room 3238: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	000	
35LED	Room 3239: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
35LED	Room 3240: 3rd Floor	Offices	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW	2400 1,080	OCC	
35LED	Kitchen: 3rd Floor	Kitchen	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	3000 540	None	
35LED 35LED	Room 3212: 3rd Floor Room 3211: 3rd Floor	Offices Offices	2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.18 0.18	SW SW	2400 432 2400 432	00C	
35LED	Room 3210: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
35LED	Room 3214: 3rd Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400 648	OCC	
35LED	Room 3209: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
35LED 35LED	Staff TR: 3rd Floor Room 3213: 3rd Floor	Restroom w/ OCC Offices	1 5	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.09 0.45	SW SW	1000 90 2400 1,080	None OCC	
168	Corridor Lighting: 3rd Floor	Hallways	16	W 40 C F 2 (MAG)	F43ILL/2 F42SS	90	1.50	Breaker	2280 3,429	None	
35LED	Room 3208: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
35LED	Room 3207: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
40LED	WTR: 3rd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000 60	None	
40LED 35LED	MTR: 3rd Floor Room 3206: 3rd Floor	Restroom w/ OCC Offices	2	T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	60 90	0.06 0.18	SW SW	1000 60 2400 432	None OCC	
UULLU		O111003		· · · · · · · · · · · · · · · · · · ·	I TOILL/Z	30	5.10				
35LED	Room 3205: 3rd Floor	Offices	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW	2400 1,080	OCC	

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\$0.146 \$3.53 \$/kW

					EXISTING C	ONDITIONS						
			No. of		EXISTINGS	Watts per					Retrofit	
	Area Description	Usage	Fixtures	Standard Fixture Code	Fixture Code	Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh	Control	
Field	Unique description of the location - Room number/Room	Describe Usage Type	No. of	Lighting Fixture Code	Code from Table of Standard Fix	ture Value from	(Watts/Fixt) * (Fixt	Pre-inst. control	Estimated	(kW/space) *	Retrofit control	Notes
Code	name: Floor number (if applicable)	using Operating Hours	fixtures		Wattages	Table of	No.)	device	annual hours for	(Annual Hours)	device	
			before the			Standard			the usage group			
			retrofit			Fixture						
051 ED	Danie 2000: 2nd Floor	045	4	T 00 D F 0 (FLF)	E4011 L /O	Wattages	0.00	OW	0.400	040	000	
35LED 40LED	Room 3203: 3rd Floor WTR: 3rd Floor	Offices Restroom w/ OCC	1	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	90	0.09 0.06	SW OCC	2400 1000	216 60	OCC None	
35LED	Reception: 3rd Floor	General Common	1	T 32 R F 3 (ELE)	F42LL F43ILL/2	90	0.00	SW	2912	262	None	
35LED	Reception: 3rd Floor	General Common	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2912	524	None	
274LED	Reception: 3rd Floor	General Common	1	CFQ/18/2 RC	CFQ18/2	45	0.05	SW	2912	131	None	
22	Lobby: 3rd Floor	General Common	5	1T 34 R F 4 (MAG)	F44EE	144	0.72	SW	2912	2,097	None	
35LED	Corridor Lighting: 3rd Floor	Hallways	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	Breaker	2280	410	None	
274LED	Corridor Lighting: 3rd Floor	Hallways	15	CFQ/18/2 RC	CFQ18/2	45	0.68	Breaker	2280	1,539	None	
274LED	Lobby: 3rd Floor	General Common	7	CFQ/18/2 RC	CFQ18/2	45	0.32	SW	2912	917	None	
35LED	Closet: 3rd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Closet: 3rd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED 35LED	Closet: 3rd Floor Closet: 3rd Floor	Linen/Utility/Wet/Janitor/Electrical Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.09 0.09	SW SW	1000 1000	90 90	None None	
40LED	WTR: 3rd Floor	Restroom w/ OCC	3	T 32 R F 2 (ELE)	F43ILL/2 F42LL	60	0.09	SW	1000	180	None	
40LED	MTR: 3rd Floor	Restroom w/ OCC	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	1000	180	None	
274LED	Corridor Lighting: 3rd Floor	Hallways	5	CFQ/18/2 RC	CFQ18/2	45	0.23	SW	2280	513	None	
35LED	Closet: 3rd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Room 3101: 3rd Floor	Offices	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	2400	1,944	OCC	
35LED	Closet - Room 3101: 3rd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000	90	None	
35LED	Kitchen: 3rd Floor	Kitchen	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	3000	1,080	None	
61LED	Room 3103: 3rd Floor	Offices	2	T 34 R F 3 (MAG)	F43EE	115	0.23	SW	2400	552	OCC	
61LED	Room 3102: 3rd Floor	Offices	2	T 34 R F 3 (MAG)	F43EE	115	0.23	SW	2400	552	OCC	
168	Corridor Lighting: 3rd Floor	Hallways	10	W 40 C F 2 (MAG)	F42SS	94	0.94	Breaker	2280	2,143	None	
35LED	Room 3312: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3311: 3rd Floor	Offices Offices	2	T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.18	SW	2400 2400	432	000	
35LED 40LED	Room 3310: 3rd Floor WTR: 3rd Floor	Restroom w/ OCC	3	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	90	0.27 0.06	SW SW	1000	648 60	OCC None	
35LED	Room 3309: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F42LL F43ILL/2	90	0.06	SW	2400	432	OCC	
35LED	Room 3308: 3rd Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	648	OCC	
35LED	Room 3307: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3300: 3rd Floor	Offices	86	T 32 R F 3 (ELE)	F43ILL/2	90	7.74	SW	2400	18,576	OCC	
168	Room 3300: 3rd Floor	Offices	3	W 40 C F 2 (MAG)	F42SS	94	0.28	SW	2400	677	OCC	
40LED	TR: 3rd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	TR: 3rd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Room 3317: 3rd Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Room 3318: 3rd Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	OCC	
35LED	Room 3319: 3rd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 3320: 3rd Floor	Offices	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	SW	2400	1,080	OCC	
35LED 35LED	Corridor Lighting: 2nd Floor	Hallways	4	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.36	Breaker	2280	821	None	
40LED	Corridor Lighting: 2nd Floor Closet: 2nd Floor	Hallways Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.18 0.06	Breaker SW	2280 1000	410 60	None None	
40LED	Closet: 2nd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	Closet: 2nd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	Closet: 2nd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	MTR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
40LED	WTR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Room 2065: 2nd Floor	Offices	11	T 32 R F 3 (ELE)	F43ILL/2	90	0.99	SW	2400	2,376	OCC	
35LED	Unemployment Office: 2nd Floor	Offices	111	T 32 R F 3 (ELE)	F43ILL/2	90	9.99	SW	2400	23,976	OCC	
40LED	Staff TR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Corridor Lighting: 2nd Floor	Hallways	7	T 32 R F 3 (ELE)	F43ILL/2	90	0.63	Breaker	2280	1,436	None	
35LED	Room 2138: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	000	
35LED 35LED	Room 2139: 2nd Floor Room 2140: 2nd Floor	Offices Offices	2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.18 0.18	SW SW	2400 2400	432 432	OCC OCC	
35LED 35LED	Room 2140: 2nd Floor Room 2141: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Kitchen: 2nd Floor	Kitchen	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	3000	2,430	None	
35LED	Corridor Lighting: 2nd Floor	Hallways	5	T 32 R F 3 (ELE)	F43ILL/2	90	0.45	Breaker	2280	1,026	None	
40LED	WTR: 2nd Floor	Restroom w/ OCC	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	1000	120	None	
35LED	Room 2142: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	None	
35LED	Room 2143: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	None	
40LED	MTR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000	60	None	
35LED	Room 2144: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 2145: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Room 2146: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	000	
35LED	Room 2147: 2nd Floor	Offices	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.27	SW	2400	648	000	
35LED	Room 2148: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
35LED	Reception - Room 2102: 2nd Floor	General Common	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.72	SW	2912	2,097	None	
35LED 35LED	Room 2149: 2nd Floor Room 2150: 2nd Floor	Offices Offices	2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.18 0.18	SW SW	2400 2400	432 432	OCC	
JULED		Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
351 FD												
35LED 35LED	Room 2151: 2nd Floor Room 2152: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	

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	nting & Audit input						53 \$/KVV				
ı			No. of		EXISTING CONDI	TIONS Watts per		<u> </u>		Retrofit	
	Area Description	Usage	Fixtures	Standard Fixture Code	Fixture Code	Fixture	kW/Space	Exist Control	Annual Hours Annual kWh	Control	
Field Code	Unique description of the location - Room number/Room name: Floor number (if applicable)	Describe Usage Type using Operating Hours	No. of fixtures before the retrofit	Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of Standard Fixture Wattages	(Watts/Fixt) * (Fixt No.)	Pre-inst. control device	Estimated (kW/space) * R annual hours for (Annual Hours) the usage group	etrofit control device	Notes
35LED	Room 2153: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
35LED	Room 2154: 2nd Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
40LED 35LED	MTR: 2nd Floor Room 2104: 2nd Floor	Restroom w/ OCC Offices	1 8	T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	60 90	0.06 0.72	SW SW	1000 60 2400 1,728	None OCC	
35LED	Computer Room: 2nd Floor	Linen/Utility/Wet/Janitor/Electrical	50	T 32 R F 3 (ELE)	F43ILL/2	90	4.50	SW	1000 4,500	None	
35LED	Room 2024: 2nd Floor	Offices	15	T 32 R F 3 (ELE)	F43ILL/2	90	1.35	SW	2400 3,240	OCC	
35LED	Closet: 2nd Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000 90	None	
35LED 35LED	Room 2072: 2nd Floor Room 2071: 2nd Floor	Offices Offices	3	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.27	SW SW	2400 648 2400 864	000	
40LED	TR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000 60	None	
35LED	Room 2070: 2nd Floor	Offices	9	T 32 R F 3 (ELE)	F43ILL/2	90	0.81	SW	2400 1,944	OCC	
35LED 35LED	Room 2069: 2nd Floor Room 2067: 2nd Floor	Offices Offices	15 12	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	1.35 1.08	SW SW	2400 3,240 2400 2,592	000	
40LED	TR: 2nd Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F43LL	60	0.06	SW	1000 60	None	
35LED	Office: 1st Floor	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400 864	OCC	
35LED	Office: 1st Floor	Offices	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.54	SW	2400 1,296	OCC	
35LED 168	Office: 1st Floor Welfare Office: 1st Floor	Offices Offices	1 22	T 32 R F 3 (ELE) W 40 C F 2 (MAG)	F43ILL/2 F42SS	90 94	0.09 2.07	SW SW	2400 216 2400 4,963	000	
35LED	Welfare Office: 1st Floor	Offices	97	T 32 R F 3 (ELE)	F43ILL/2	90	8.73	SW	2400 20,952	OCC	
274LED	Records Office: 1st Floor	Offices	4	CFQ/18/2 RC	CFQ18/2	45	0.18	SW	2400 432	OCC	
35LED	Records Office: 1st Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	000	
35LED 35LED	Room 1411: 1st Floor Room 1412: 1st Floor	Offices Offices	1	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.18 0.09	SW SW	2400 432 2400 216	000	
35LED	Room 1410: 1st Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
35LED	Room 1409: 1st Floor	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400 432	OCC	
40LED 40LED	WTR: 1st Floor MTR: 1st Floor	Restroom w/ OCC Restroom w/ OCC	1	T 32 R F 2 (ELE) T 32 R F 2 (ELE)	F42LL F42LL	60 60	0.06 0.06	SW SW	1000 60 1000 60	None None	
35LED	Café: 1st Floor	Cafeteria	8	T 32 R F 2 (ELE)	F42LL F43ILL/2	90	0.06	SW	1600 1,152	OCC	
40LED	WTR: 1st Floor	Restroom w/ OCC	3	T 32 R F 2 (ELE)	F42LL	60	0.18	SW	1000 180	None	
274LED	Corridor Lighting: 1st Floor	Hallways	7	CFQ/18/2 RC	CFQ18/2	45	0.32	Breaker	2280 718	None	
40LED	MTR: 1st Floor Closet: 1st Floor	Restroom w/ OCC Linen/Utility/Wet/Janitor/Electrical	3	T 32 R F 2 (ELE) T 32 R F 2 (ELE)	F42LL F42LL	60 60	0.18	SW SW	1000 180 1000 60	None None	
40LED	Closet: 1st Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000 60	None	
22	Lobby: 1st Floor	General Common	1	1T 34 R F 4 (MAG)	F44EE	144	0.14	SW	2912 419	None	
274LED	Bus Card: 1st Floor	General Common	3	CFQ/18/2 RC	CFQ18/2	45	0.14	SW	2912 393	None	
35LED 22	Bus Card: 1st Floor Lobby: 1st Floor	General Common General Common	2 15	T 32 R F 3 (ELE) 1T 34 R F 4 (MAG)	F43ILL/2 F44EE	90 144	0.18 2.16	SW SW	2912 524 2912 6,290	None None	-
274LED	Lobby: 1st Floor	General Common	28	CFQ/18/2 RC	CFQ18/2	45	1.26	SW	2912 3,669	None	
22	Vestibule: 1st Floor	General Common	2	1T 34 R F 4 (MAG)	F44EE	144	0.29	SW	2912 839	None	
35LED 40LED	Waiting Area: 1st Floor TR: 1st Floor	Waiting/Family/Play Restroom w/ OCC	17	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	90 60	1.53 0.06	SW SW	3000 4,590 1000 60	None None	
40LED	TR: 1st Floor	Restroom w/ OCC	2	T 32 R F 2 (ELE)	F42LL F42LL	60	0.06	SW	1000 60	None	
40LED	TR: 1st Floor	Restroom w/ OCC	2	T 32 R F 2 (ELE)	F42LL	60	0.12	SW	1000 120	None	
40LED	TR: 1st Floor	Restroom w/ OCC	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000 60	None	
35LED 35LED	Reception: 1st Floor Welfare Office: 1st Floor	General Common Offices	40	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.36 3.60	SW SW	2912 1,048 2400 8,640	None OCC	-
168	Welfare Office: 1st Floor	Offices	14	W 40 C F 2 (MAG)	F42SS	94	1.32	SW	2400 3,158	000	
35LED	Welfare Office: 1st Floor	Offices	6	T 32 R F 3 (ELE)	F43ILL/2	90	0.54	SW	2400 1,296	OCC	
35LED 40LED	Room 1109: 1st Floor TR: 1st Floor	Offices Restroom w/ OCC	2	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	90 60	0.18 0.06	SW SW	2400 432 1000 60	OCC None	
274LED	Vestibule: 1st Floor	General Common	2	CFQ/18/2 RC	CFQ18/2	45	0.09	SW	2912 262	None	
40LED	Closet: 1st Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000 60	None	
40LED	Closet: 1st Floor	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 2 (ELE)	F42LL	60	0.06	SW	1000 60	None	
80 168	Stairs: 1st Floor Old Kitchen: Basement	Stairway Kitchen	15 20	SP 36 R CF 1 W 40 C F 2 (MAG)	CFT36/1 F42SS	51 94	0.77 1.88	SW SW	3200 2,448 3000 5,640	None None	
35LED	Old Kitchen: Basement	Kitchen	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	3000 270	None	-
168	Old Kitchen: Basement	Kitchen	20	W 40 C F 2 (MAG)	F42SS	94	1.88	SW	3000 5,640	None	
168 168	Old Kitchen: Basement Lobby: Basement	Kitchen General Common	10	W 40 C F 2 (MAG) W 40 C F 2 (MAG)	F42SS F42SS	94 94	0.38	SW SW	3000 1,128 2912 2,737	None None	
35LED	Corridor Lighting: Basement	Hallways	4	T 32 R F 3 (ELE)	F4255	90	0.94	Breaker	2280 821	None	
35LED	Switch Room : Basement	Linen/Utility/Wet/Janitor/Electrical	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	1000 90	None	
35LED	Server Room: Basement	Linen/Utility/Wet/Janitor/Electrical	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.72	SW	1000 720	None	
35LED 35LED	Office: Basement Cleaning Room: Basement	Offices Linen/Utility/Wet/Janitor/Electrical	3 10	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.27 0.90	SW SW	2400 648 1000 900	OCC None	
35LED	Office: Basement	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400 864	OCC	
35LED	Lock Shop: Basement	Linen/Utility/Wet/Janitor/Electrical	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	1000 180	None	
35LED	??	Offices	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.36	SW	2400 864	OCC	
35LED 168	Corridor Lighting: Basement Files: Basement	Hallways Storage Areas	8 10	T 32 R F 3 (ELE) W 40 C F 2 (MAG)	F43ILL/2 F42SS	90 94	0.72 0.94	Breaker SW	2280 1,642 1000 940	None None	
168	Files: Basement	Storage Areas	8	W 40 C F 2 (MAG)	F42SS	94	0.75	SW	1000 752	None	
35LED	DWI Office: Basement	Offices	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.17	SW	2400 2,808	OCC	

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\$0.146 \$3.53 \$/kW

					EXISTING CONDI	TIONS					Retrofit	
			No. of			Watts per					Control	
	Area Description	Usage	Fixtures	Standard Fixture Code	Fixture Code	Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh	Control	
Field	Unique description of the location - Room number/Room	Describe Usage Type	No. of	Lighting Fixture Code	Code from Table of Standard Fixture	Value from	(Watts/Fixt) * (Fixt	Pre-inst. control	Estimated	(kW/space) *	Retrofit control	Notes
Code	name: Floor number (if applicable)	using Operating Hours	fixtures		Wattages	Table of	No.)	device	annual hours for	(Annual Hours)	device	
			before the			Standard			the usage group			
			retrofit			Fixture						
						Wattages						
35LED	DWI Office: Basement	Offices	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.09	SW	2400	216		
35LED	DWI Office: Basement	Offices	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.18	SW	2400	432	OCC	
274LED	DWI Office: Basement	Offices	11	CFQ/18/2 RC	CFQ18/2	45	0.50	SW	2400	1,188	OCC	
168	DWI Office: Basement	Offices	2	W 40 C F 2 (MAG)	F42SS	94	0.19	SW	2400	451	OCC	
168	Room LL10: Basement	Offices	2	W 40 C F 2 (MAG)	F42SS	94	0.19	SW	2400	451	OCC	
168	Electrical Room: Basement	Linen/Utility/Wet/Janitor/Electrical	4	W 40 C F 2 (MAG)	F42SS	94	0.38	SW	1000	376	None	
168	Pump Room: Basement	Mechanical Room	1	W 40 C F 2 (MAG)	F42SS	94	0.09	SW	1000	94	None	
40LED	Boiler Room: Basement	Boiler Room	10	T 32 R F 2 (ELE)	F42LL	60	0.60	SW	1820	1,092	None	
40LED	Elevator: Basement	Stairway	6	T 32 R F 2 (ELE)	F42LL	60	0.36	SW	3200	1,152	None	
168	Corridor Lighting: Basement	Hallways	1	W 40 C F 2 (MAG)	F42SS	94	0.09	Breaker	2280	214	None	
215	Exterior Lighting	Outdoor Lighting	4	High Bay MH 350	MHPS/SCWA/350/1	400	1.60	SW	4368	6,989	None	
	Total		1,768				155.43			355,999		

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								RETROFIT CO							S ANALYSIS	Simple Payback	ck
Area Description	No. of Fixtures Standard Fixture Code	Watts per Fixture Code Fixture	kW/Space	Exist Control	Annual Hours Annual kWh	Number of Fixtures	Standard Fixture Code	Fixture Code	Watts per Fixture	kW/Space	Retrofit Control Annual Hours		al kWh aved Annual kW Saved	Annual \$ Saved	NJ Smart St Retrofit Cost Lighting Incer		Sim
Unique description of the location - Room number/Room name: Floor number (if applicable)		2T Code from Table of Standard Value from Codess. Floor 2 Fixture Wattages Table of	(Watts/Fixt) * (F	ixt Pre-inst.	Estimated daily (kW/space) * hours for the (Annual Hours)		"Lighting Fixture Code" Example 2T 40 R F(U) = 2'x2' Troff 40 w	Code from Table of Standard Fixture	Value from Table of	(Watts/Fixt) * (Number of	Retrofit control Estimated device annual hours		Annual (Original Annual Retrofit kW) - (Retrofit		Cost for Prescriptive renovations to Lighting	Length of time for renovations	
	lamps U shape	Standard Fixture			usage group		Recess. Floor 2 lamps U shape	Wattages	Standard Fixture	Fixtures)	for the usage group	Hours) Annual	kWh) Annual kW)	,,,	lighting system Measures	cost to be recovered	be
Corridor Lighting: 5th Floo	9 CFQ/18/2 RC	Wattages CFQ18/2 45	0.4	Breaker	2280 92	3 9	6BLMWLED	6BLMWLED	Wattages	0.1	Breaker 2,280	267	657 0.3	\$ 108.07	\$ 1,458.00 \$0	13.5	4
Corridor Lighting: 5th Floo Conference Room: 5th Floo	3 W 40 C F 2 (MAG) 10 T 32 R F 3 (FL F)	F42SS 94 F43ILI/2 90	0.3	Breaker			W 28 C F 2 T 59 R LED	F42SSILL RTI FD38	48	0.1 0.4	Breaker 2,280 SW 1,200	328 456	315 0.1 624 0.5	\$ 51.78 \$ 113.13	\$ 810.00 \$0 \$ 2,362.50 \$0	15.6 20.9	_
Closet: 5th Floor	2 T 32 R F 2 (ELE)	F42LL 60	0.1	SW	1000 12	0 2	T 38 R LED	RTLED38	38	0.1	SW 1,000	76	44 0.0	\$ 8.29	\$ 472.50 \$100	57.0	#
Tax Board: 5th Floo Kitchen: 5th Floor	11 T 32 R F 3 (ELE) 5 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	1.0 0.5	SW	1200 1,18 3000 1,35	5 5	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.4 0.2	SW 1,200 SW 3,000	502 570	686 0.6 780 0.3	\$ 124.44 \$ 124.89	\$ 1,181.25 \$0	20.9 9.5	\pm
Storage - Room 5213: 5th Floo Staff WR: 5th Floor	2 T 32 R F 3 (ELE) 1 T 32 R F 2 (ELE)	F43ILL/2 90 F42LL 60	0.2	SW	1000 18 1000 6	10 2 10 1	T 59 R LED T 38 R LED	RTLED38 RTLED38	38	0.1	SW 1,000 OCC 1,000	76 38	104 0.1 22 0.0	\$ 19.59 \$ 4.14	\$ 472.50 \$0 \$ 236.25 \$50	24.1 57.0	_
Office: 5th Floor Office - Room 5211: 5th Floor	4 T 32 R F 3 (ELE) 5 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.4	SW	2400 86 2400 1,08	64 4 10 5	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.2	SW 2,400 SW 2,400	365 456	499 0.2 624 0.3	\$ 81.69 \$ 102.12	\$ 945.00 \$0 \$ 1,181.25 \$0	11.6 11.6	_
Corridor Lighting: 5th Floo Corridor Lighting: 5th Floo	3 W 40 C F 2 (MAG) 1 T 32 R F 3 (ELE)	F42SS 94 F43ILL/2 90	0.3 0.1	Breaker Breaker	2280 64 2280 20	3 3	W 28 C F 2 T 59 R LED	F42SSILL RTLED38	48 38	0.1 0.0	Breaker 2,280 Breaker 2,280	328 87	315 0.1 119 0.1	\$ 51.78 \$ 19.51	\$ 810.00 \$0 \$ 236.25 \$0	15.6 12.1	-
Room 5212: 5th Floo Men's Room: 5th Floo	4 T 32 R F 3 (ELE) 1 T 32 R F 2 (ELE)	F43ILL/2 90 F42LL 60	0.4	SW	2400 86 1000 6	64 4 60 1	T 59 R LED T 38 R LED	RTLED38 RTLED38	38	0.2	SW 2,400 OCC 1,000	365 38	499 0.2	\$ 81.69 \$ 4.14	\$ 945.00 \$0 \$ 236.25 \$50	11.6 57.0	4-
Tax Room: 5th Floo Corridor Lighting: 5th Floo	6 T 32 R F 3 (ELE) 3 W 40 C F 2 (MAG)	F43ILL/2 90 F42SS 94	0.5	SW SW	1200 64	8 6	T 59 R LED W 28 C F 2	RTLED38 F42SSILL	38	0.2	SW 1,200 SW 2,280	274 328	22 0.0 374 0.3 315 0.1	\$ 67.88 \$ 51.78	\$ 1,417.50 \$0 \$ 810.00 \$0	20.9 15.6	4
Corridor Lighting: 5th Floo File Storage - Room 5205: 5th Floo	2 T 32 R F 3 (ELE) 4 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2	SW	2280 41	0 2	T 59 R LED T 59 R LED	RTLED38	38	0.1	SW 2,280 SW 1,000	173	237 0.1	\$ 39.02	\$ 472.50 \$0 \$ 945.00 \$0	12.1 24.1	
Corridor Lighting: 5th Floo Corridor Lighting: 5th Floo	4 T32 R F 3 (ELE) 9 T32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.4	Breaker Breaker	2280 82 2280 1,84		T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.2	Breaker 2,280	347	208 0.2 474 0.2 1,067 0.5	\$ 78.05 \$ 175.61	\$ 945.00 \$0	12.1 12.1	1
Corridor Lighting: 5th Floo Courtroom: 5th Floo	9 T 32 R F 3 (ELE) 9 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.8	Breaker SW	2280 1,84 520 42	7 9	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.3	Breaker 2,280 Breaker 2,280 SW 520	780 780	1,067 0.5 1,067 0.5 243 0.5	\$ 175.61 \$ 55.36	\$ 2,126.25 \$0 \$ 2,126.25 \$0 \$ 2,126.25 \$0	12.1 12.1 38.4	
Classroom - Room 5312: 5th Floo	12 T 32 R F 3 (ELE)	F43ILL/2 90	1.1	SW	2400 2,59	12 12	T 59 R LED	RTLED38	38	0.5	SW 2,400	1,094	1,498 0.6	\$ 245.08	\$ 2,835.00 \$0	11.6	
Corridor Lighting: 5th Floo Staff MTR: 5th Floor	9 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.8	Breaker OCC	2280 1,84 1000 18	0 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.3	Breaker 2,280 OCC 1,000	780 76	1,067 0.5 104 0.1	\$ 175.61 \$ 19.59	\$ 2,126.25 \$0 \$ 472.50 \$0	12.1 24.1	
Room 5313: 5th Floo Toilet Room - Room 5313: 5th Floo	14 T 32 R F 3 (ELE) 1 T 32 R F 2 (ELE)	F43ILL/2 90 F42LL 60	1.3 0.1	SW	2400 3,02 1000 6	14 14 14 14 14 14 14 14 14 14 14 14 14 1	T 59 R LED T 38 R LED	RTLED38 RTLED38	38	0.5	SW 2,400 OCC 1,000	1,277 38	1,747 0.7 22 0.0	\$ 285.93 \$ 4.14	\$ 3,307.50 \$0 \$ 236.25 \$50	11.6 57.0	-
Room 5304: 5th Floo Room 5311: 5th Floo	6 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.5	SW	2400 1,29 2400 43	6 6 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.2	SW 2,400 SW 2,400	547 182	749 0.3 250 0.1	\$ 122.54 \$ 40.85	\$ 1,417.50 \$0 \$ 472.50 \$0	11.6 11.6	_
Room 5310: 5th Floo Staff WTR: 5th Floor	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2	SW	2400 43 1000 18		T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1	SW 2,400 OCC 1,000	182 76	250 0.1 104 0.1	\$ 40.85 \$ 19.59	\$ 472.50 \$0 \$ 472.50 \$0	11.6 24.1	-
Room 5305: 5th Floo Room 5306: 5th Floo	9 T 32 R F 3 (ELE) 9 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.8	SW SW	2400 1,94 2400 1,94		T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.3	SW 2,400 SW 2,400	821 821	1,123 0.5 1,123 0.5	\$ 183.81 \$ 183.81	\$ 2,126.25 \$0	11.6 11.6	\mp
Room 5307: 5th Floo Room 5308: 5th Floo	9 T 32 R F 3 (ELE) 5 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.8 0.5	SW	2400 1,94 2400 1,08	14 9	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.3 0.2	SW 2,400 SW 2,400	821 456	1,123 0.5 624 0.3	\$ 183.81 \$ 102.12	\$ 2,126.25 \$0 \$ 1,181.25 \$0	11.6 11.6	#
Kitchen - Room 5309: 5th Floo Closet: 5th Floor	4 T 32 R F 3 (ELE) 2 W 40 C F 2 (MAG)	F43ILL/2 90 F43ILL/2 90 F42SS 94	0.4 0.2	SW SW	3000 1,08 1000 18	0 4	T 59 R LED W 28 C F 2	RTLED38 RTLED38 F42SSILL	38	0.2	SW 3,000 SW 1,000	456 96	624 0.3 624 0.2 92 0.1	\$ 99.91 \$ 17.33	\$ 945.00 \$0 \$ 540.00 \$0	9.5 31.2	#
Closet: 5th Floor	2 T 34 R F 3 (MAG)	F43EE 115	0.2	SW	1000 23	0 2	T 59 R LED	RTLED38 RTLED38	38	0.1	SW 1,000	76	154 0.2	\$ 29.01	\$ 472.50 \$100	16.3	1
Room 5417: 5th Floo Director's Office: 5th Floo Conference Room, 5th Floo	1 T 32 R F 2 (ELE) 8 T 32 R F 3 (ELE)	F42LL 60 F43LL/2 90	0.1	SW	2400 1,72		T 38 R LED T 59 R LED	RTLED38	38	0.0	SW 2,400 SW 2,400	730	53 0.0 998 0.4	\$ 8.64 \$ 163.39	\$ 1,890.00 \$0	27.3 11.6	\pm
Conference Room: 5th Floo Corridor Director's Office: 5th Floo	3 T 32 R F 3 (ELE) 10 W 40 C F 2 (MAG)	F43ILL/2 90 F42SS 94	0.3	SW Breaker	1200 32 2280 2,14	3 10	T 59 R LED W 28 C F 2	RTLED38 F42SSILL	38 48	0.1 0.5	SW 1,200 Breaker 2,280	137 1,094	187 0.2 1,049 0.5	\$ 33.94 \$ 172.61	\$ 2,700.00 \$0	20.9 15.6	\pm
Office: 5th Floor Staff MTR: 5th Floor	4 T 32 R F 3 (ELE) 1 T 32 R F 2 (ELE)	F43ILL/2 90 F42LL 60	0.4	SW		2 1	T 59 R LED T 38 R LED	RTLED38 RTLED38	38	0.2	SW 2,400 SW 1,200	365 46	499 0.2 26 0.0	\$ 81.69 \$ 4.79	\$ 945.00 \$0 \$ 236.25 \$50	11.6 49.4	+
Room 5405: 5th Floo Room 5406: 5th Floo	3 T 32 R F 3 (ELE) 3 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.3	SW		8 3 8 3	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1 0.1	SW 2,400 SW 2,400	274 274	374 0.2 374 0.2 104 0.1	\$ 61.27 \$ 61.27	\$ 708.75 \$0 \$ 708.75 \$0	11.6 11.6	_
Storage - Room 5412: 5th Floo Room 5415: 5th Floo	2 T 32 R F 3 (ELE) 5 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2	SW	1000 18	0 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1	SW 1,000 SW 2,400	76 456	104 0.1 624 0.3 125 0.1	\$ 19.59 \$ 102.12	\$ 472.50 \$0 \$ 1,181.25 \$0	24.1 11.6	+
Room 5413: 5th Floo Room 5408: 5th Floo	1 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.1	SW	2400 21		T 59 R LED T 59 R LED	RTLED38	38	0.0	SW 2,400 SW 2,400	91 182		\$ 20.42 \$ 40.85	\$ 236.25 \$0 \$ 472.50 \$0	11.6 11.6	-
Copy Room - Room 5414: 5th Floo Staff WTR: 5th Floor	1 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.1	SW	2125 19	1 1	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.0	SW 2,125 SW 1,000	81	250 0.1 111 0.1 52 0.1	\$ 18.34 \$ 9.79	\$ 236.25 \$0	12.9	
Room 5409: 5th Floo Kitchen: 5th Flooi	4 T 32 R F 3 (ELE) 3 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.4	SW		0 1 4 4	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.2	SW 2,400 SW 3,000	365 342	52 0.1 499 0.2 468 0.2	\$ 81.69 \$ 74.94	\$ 945.00 \$0 \$ 708.75 \$0	24.1 11.6 9.5	1
Room 5410: 5th Floo Room 5407: 5th Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (FLF)	F43ILL/2 90 F43ILL/2 90	0.2	SW	2400 43 2400 43	2 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1	SW 2,400 SW 2,400	182	250 0.1	\$ 40.85 \$ 40.85	\$ 472.50 \$0 \$ 472.50 \$0	11.6 11.6	#
Room 5407: 5th Floo	8 T 34 R F 3 (MAG) 1 T 32 R F 2 (ELE)	F43EE 115 F42LL 60	0.9	SW	2400 2,20		T 59 R LED T 38 R LED	RTLED38	38	0.3	SW 2,400 SW 1,000	730	1,478 0.6	\$ 241.94 \$ 4.14	\$ 1,890.00 \$400 \$ 236.25 \$50	7.8 57.0	#
Closet: 4th Floor	1 T 32 R F 2 (ELE)	F42LL 60	0.1	SW	1000 6	0 1	T 38 R LED	RTLED38 RTLED38	38	0.0	SW 1,000	38	22 0.0 22 0.0	\$ 4.14	\$ 236.25 \$50	57.0	1
Closet: 4th Flooi Men's Room: 4th Floo	1 T 32 R F 2 (ELE) 3 T 32 R F 2 (ELE)	F42LL 60 F42LL 60	0.1	SW	1000 6 1000 18	10 3	T 38 R LED T 38 R LED	RTLED38	38	0.0	SW 1,000 SW 1,000	38 114	22 0.0 66 0.1	\$ 4.14 \$ 12.43		57.0 57.0	
Ladies' Room: 4th Floo Room 4400: 4th Floo	3 T 32 R F 2 (ELE) 70 T 32 R F 3 (ELE)	F42LL 60 F43ILL/2 90	6.3	SW	1000 18 2400 15,12		T 38 R LED T 59 R LED	RTLED38 RTLED38	38	2.7	SW 1,000 SW 2,400	6,384	8,736 3.6	\$ 12.43 \$ 1,429.65		57.0 11.6	
Room 4414: 4th Floo Room 4400: 4th Floo	2 T 32 R F 3 (ELE) 42 W 40 C F 2 (MAG)	F43ILL/2 90 F42SS 94	0.2 3.9	SW	2400 43 2400 9,47	5 42	T 59 R LED W 28 C F 2	RTLED38 F42SSILL	38 48	0.1 2.0	SW 2,400 SW 2,400	182 4,838	250 0.1 4,637 1.9	\$ 40.85 \$ 758.81	\$ 11,340.00 \$0	11.6 14.9	_
Room 4411: 4th Floo Room 4412: 4th Floo	4 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.4	SW	2400 86 2400 43	i4 4 i2 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.2	SW 2,400 SW 2,400	365 182	499 0.2 250 0.1	\$ 81.69 \$ 40.85	\$ 945.00 \$0 \$ 472.50 \$0	11.6 11.6	+
Room 4413: 4th Floo Room 4413: 4th Floo	2 T 32 R F 3 (ELE) 2 T 34 R F 3 (MAG)	F43ILL/2 90 F43EE 115	0.2	SW	2400 43 2400 55		T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1 0.1	SW 2,400 SW 2,400	182 182	250 0.1 370 0.2	\$ 40.85 \$ 60.49	\$ 472.50 \$0 \$ 472.50 \$100	11.6 7.8	+
Staff TR: 4th Floor Staff TR: 4th Floor	2 W 40 C F 2 (MAG) 1 W 40 C F 2 (MAG)	F42SS 94 F42SS 94	0.2 0.1	SW		8 2 14 1	W 28 C F 2 W 28 C F 2	F42SSILL F42SSILL	48 48	0.1 0.0	SW 1,000 SW 1,000	96 48	92 0.1	\$ 17.33 \$ 8.66	\$ 540.00 \$0 \$ 270.00 \$0	31.2 31.2	
Reception: 4th Floo Reception: 4th Floo	9 T 32 R F 3 (ELE) 4 W 40 C F 2 (MAG)	F43ILL/2 90 F42SS 94	0.8	SW	2912 2,35 2912 1,09		W 28 C F 2 T 59 R LED W 28 C F 2	RTLED38 F42SSILL	38 48	0.3	SW 2,912 SW 2,912	996 559	46 0.0 1,363 0.5 536 0.2	\$ 218.80 \$ 86.02	\$ 2,126.25 \$0	31.2 9.7 12.6	-
Room 4102: 4th Floo Room 4102: 4th Floo	9 T 32 R F 3 (ELE) 3 W 40 C F 2 (MAG)	F43ILL/2 90 F42SS 94	0.8	SW	2400 1,94 2400 67	14 9	T 59 R LED W 28 C F 2	RTLED38 F42SSILL	38	0.3	SW 2,400 SW 2,400	821 346	1,123 0.5 331 0.1	\$ 183.81 \$ 54.20	\$ 2,126.25 \$0 \$ 810.00 \$0	11.6 14.9	4
Room 4103: 4th Floo Room 4103: 4th Floo	3 W 40 C F 2 (MAG) 13 T 32 R F 3 (ELE)	F42SS 94	0.3	SW	2400 67	7 3	W 28 C F 2 T 59 R LED	F42SSILL RTLED38	48	0.1	SW 2,400	346 1.186	331 0.1	\$ 54.20	\$ 810.00 \$0	14.9 11.6	
Economic Growth: 4th Floo	13 1 32 R F 3 (ELE) 25 T 32 R F 3 (ELE) 8 W 40 C F 2 (MAG)	F43ILL/2 90 F43ILL/2 90 F42SS 94	1.2 2.3 0.8	SW SW	2400 2,80 1200 2,70 1200 90	10 25	T 59 R LED W 28 C F 2	RTLED38 RTLED38	38	0.5 1.0 0.4	SW 2,400 SW 1,200 SW 1,200	1,140	1,622 0.7 1,560 1.3 442 0.4	\$ 265.51 \$ 282.83 \$ 80.06	\$ 5,906.25 \$0	20.9	#
Room 4205: 4th Floo	8 W 40 C F 2 (MAG) 4 T 32 R F 3 (ELE) 4 T 32 R F 3 (FL F)	F42SS 94 F43ILL/2 90 F43IL1/2 90	0.8	SW	2400 86	4 4	W 28 C F 2 T 59 R LED T 59 R LED	RTLED38	38	0.2	SW 2,400	365	499 0.2	\$ 80.06 \$ 81.69 \$ 81.69		11.6	#
Room 4206: 4th Floo Room 4207: 4th Floo	4 T 32 R F 3 (ELE)	F43ILL/2 90	0.4	SW		14 4 14 4 14 4	T 59 R LED	RTLED38	38	0.2	SW 2,400	365	499 0.2 499 0.2 499 0.2	\$ 81.69 \$ 81.69 \$ 81.69		11.6 11.6	\pm
Room 4208: 4th Floo Room 4209: 4th Floo	4 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.4	SW		2 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.2	SW 2,400 SW 2,400 SW 2,400	365 182	499 0.2 250 0.1 442 0.2	\$ 81.69 \$ 40.85 \$ 72.27		11.6 11.6	\pm
Room 4210: 4th Floo Room 4210: 4th Floo	4 W 40 C F 2 (MAG) 4 T 32 R F 3 (ELE)	F42SS 94 F43ILL/2 90	0.4	SW		12 4 64 4 10 2	W 28 C F 2 T 59 R LED	F42SSILL RTLED38	48 38	0.2 0.2	SW 2,400	461 365	499 0.2	\$ 81.69	\$ 945.00 \$0	14.9 11.6	\pm
Closet 4201: 4th Floor Staff MTR: 4th Floor	2 T 32 R F 3 (ELE) 1 W 40 C F 2 (MAG)	F43ILL/2 90 F42SS 94	0.2 0.1	SW SW	1000 9	1 1	T 59 R LED W 28 C F 2	RTLED38 F42SSILL	38 48	0.1 0.0	SW 1,000 SW 1,000	76 48	104 0.1 46 0.0	\$ 19.59 \$ 8.66	\$ 472.50 \$0 \$ 270.00 \$0	24.1 31.2	
Staff WTR: 4th Floor Child Health: 4th Floo	1 W 40 C F 2 (MAG) 15 W 40 C F 2 (MAG)	F42SS 94 F42SS 94	0.1 1.4	SW SW	2400 3,38	14 1 14 15	W 28 C F 2 W 28 C F 2	F42SSILL F42SSILL	48 48	0.0	SW 1,000 SW 2,400	48 1,728	46 0.0 1,656 0.7	\$ 8.66 \$ 271.00	\$ 4,050.00 \$0	31.2 14.9	+
Child Health: 4th Floo Room 4305: 4th Floo	24 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	2.2 0.2	SW	2400 5,18 2400 43	14 24	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.9 0.1	SW 2,400 SW 2,400	2,189 182	2,995 1.2 250 0.1	\$ 490.16 \$ 40.85	\$ 5,670.00 \$0 \$ 472.50 \$0	11.6 11.6	+
Room 4306: 4th Floo Room 4307: 4th Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2 0.2	SW	2400 43 2400 43	2 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	SW 2,400 SW 2,400	182 182	250 0.1 250 0.1	\$ 40.85 \$ 40.85	\$ 472.50 \$0 \$ 472.50 \$0	11.6 11.6	#
Room 4308: 4th Floo Room 4309: 4th Floo	2 T 32 R F 3 (ELE) 3 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2	SW			T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1	SW 2,400 SW 2,400	182	250 0.1 250 0.1 374 0.2	\$ 40.85 \$ 61.27		11.6 11.6	#
Room 4310: 4th Floo Room 4311: 4th Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2	SW	2400 43	2 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1	SW 2,400 SW 2,400	182	250 0.1	\$ 40.85	\$ 472.50 \$0	11.6 11.6	\pm
Room 4311: 4th Floo Room 4312: 4th Floo Room 4313: 4th Floo	2 T 32 R F 3 (ELE)	F43ILL/2 90	0.2	SW	2400 43	2 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38	38	0.1	SW 2,400	182	250 0.1 250 0.1	\$ 40.85 \$ 40.85	\$ 472.50 \$0	11.6	\pm
Room 4314: 4th Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2	SW		12 2	T 59 R LED	RTLED38 RTLED38	38	0.1	SW 2,400 SW 2,400	182	250 0.1 250 0.1	\$ 40.85 \$ 40.85	\$ 472.50 \$0 \$ 472.50 \$0	11.6 11.6	1
Room 4315: 4th Floo Room 4318: 4th Floo	4 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.4	SW	2400 86 2400 43	i4 4 i2 2 i8 3	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.2	SW 2,400 SW 2,400	365 182	499 0.2 250 0.1 374 0.2	\$ 81.69 \$ 40.85	\$ 945.00 \$0 \$ 472.50 \$0	11.6 11.6	\pm
Room 4316: 4th Floo Staff TR: 4th Floor	3 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.3 0.1	SW SW	1000 9	10 1	T 59 R LED T 59 R LED		38 38	0.1 0.0	SW 2,400 SW 1,000	274 38	52 0.1	\$ 61.27 \$ 9.79	\$ 236.25 \$0	11.6 24.1	+
Staff TR: 4th Floor Room 4321: 4th Floo	1 T 32 R F 3 (ELE) 4 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.1 0.4	SW SW	1000 9 2400 86	1 4 4	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.0	SW 1,000 SW 2,400	38 365	52 0.1 499 0.2	\$ 9.79 \$ 81.69	\$ 236.25 \$0 \$ 945.00 \$0	24.1 11.6	\pm
Room 4301: 4th Floo Corridor Lighting: 4th Floo	4 T 32 R F 3 (ELE) 13 CFQ/18/2 RC	F43ILL/2 90	0.4	SW Breaker	2400 86 2280 1,33	4 4	T 59 R LED 6BLMWLED	RTLED38 6BLMWLED	38 13	0.2 0.2	SW 2,400 Breaker 2,280	365 385	499 0.2 948 0.4	\$ 81.69 \$ 156.10	\$ 945.00 \$0	11.6 13.5	$-\mathbf{I}$
Corridor Lighting: 4th Floo Room 3104: 3rd Floo	1 T32 R F 3 (ELE) 8 T32 R F 3 (ELE)	CFQ18/2 45 F43ILL/2 90 F43ILL/2 90	0.1 0.7	Breaker SW	2280 20 2400 1,72	15 1	T 59 R LED T 59 R LED		38	0.0	Breaker 2,280 SW 2,400	87	119 0.1 998 0.4	\$ 19.51 \$ 163.39	\$ 236.25 \$0	12.1 11.6	4
3MP - Room 3104: 3rd Floo Classroom #2: 3rd Floo	4 T32 R F3 (ELE) 6 T32 R F3 (ELE)	F43ILL/2 90 F43ILL/2 90 F43ILL/2 90	0.4	SW	2400 1,72 2400 86 2400 1,29	4 4	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.3 0.2 0.2	SW 2,400 SW 2,400 SW 2,400	365 547	499 0.2 749 0.3	\$ 81.69 \$ 122.54	\$ 945.00 \$0	11.6	#
Classroom #1: 3rd Floo	6 T 32 R F 3 (ELE)	F43ILL/2 90	0.5	SW	2400 1,29	6 6	T 59 R LED	RTLED38	38	0.2	SW 2,400	547 547	749 0.3	\$ 122.54	\$ 1,417.50 \$0	11.6	\pm
Room 3104 : 3rd Floo Room 3104: 3rd Floo	21 T 32 R F 3 (ELE) 1 W 40 C F 2 (MAG)	F43ILL/2 90 F42SS 94	1.9 0.1	SW	2400 4,53 2400 22		T 59 R LED W 28 C F 2 T 59 R LED		38 48	0.8	SW 2,400 SW 2,400	1,915 115	2,621 1.1 110 0.0	\$ 428.89 \$ 18.07	\$ 4,961.25 \$0 \$ 270.00 \$0	11.6 14.9	\pm
	1 T 32 R F 3 (ELE)	F43ILL/2 90	0.1	SW				RTLED38	38	0.0	SW 1,000	38	52 0.1	\$ 9.79		24.1	+
Staff TR: 3rd Floor Bus Cards: 3rd Floor Bus Cards: 3rd Floor	28 T 32 R F 3 (ELE) 10 W 40 C F 2 (MAG)	F43ILL/2 90 F42SS 94	2.5	SW	2912 7,33 2912 2,73		T 59 R LED W 28 C F 2	RTLED38 F42SSILI	38	1.1 0.5	SW 2,912 SW 2,912	3,098	4,240 1.5 1,340 0.5	\$ 680.70 \$ 215.06	\$ 6,615.00 \$0 \$ 2.700.00 \$0	9.7 12.6	-

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			EXISTING CONDITIONS					RETROFIT	CONDITIONS						COST & SAVING		Simple Pa	yback
	Area Description	No. of Fixtures Standard Fixture Code	Fixture Code Fixture	kW/Space Exist 0				Fixture Code	Watts per Fixture	kW/Space	Retrofit Control	Annual Hours		Annual kW Saved Annual kW Saved		Retrofit Cost Lig	NJ Smart Start With Continue Incent	ive Simple Pa
d Code	Unique description of the location - Room number/Room name: Floor number (if applicable)	h No. of fixtures "Lighting Fixture Code" Example before the retrofit 40 R F(U) = 2'x2' Troff 40 w Recess. Floo lamps U shape	2T Code from Table of Standard Value from Table of Standard Standard	(Watts/Fixt) * (Fixt Pre-inst control		No. of fixtures after the retrofit	er "Lighting Fixture Code" Example 2T 40 R F(U) = 2'x2' Troff 40 w Recess. Floor 2 lamps U shape	Code from Table of Standard Fixture Wattages	Value from Table of Standard	(Watts/Fixt) * (Number of Fixtures)		Estimated annual hours for the usage	(kW/space) * (Annual Hours)	(Original Annual kWh) - (Retrofit Annual kWh) (Original Annual kW) - (Retrofit Annual kWh)	(kWh Saved) * (\$/kWh)		escriptive Length of ghting for renova cost to be	tions renovations
		lamps o snape	Fixture Wattages		usage group		Necess. Floor 2 lamps o shape	Wattages	Fixture Wattages	i ixtures)		group	ilouis)	Alliudi Kiri)		ingituing system line	recovered	De leco
LED LED	Room 3237: 3rd Floo Room 3238: 3rd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2 S' 0.2 S'	V 2400 4 V 2400 4	32 2 32 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	SW SW	2,400 2,400	182 182	250 0.1 250 0.1	\$ 40.85 \$ 40.85	\$ 472.50 \$0 \$ 472.50 \$0	11.6 11.6	i 11.6
.ED		2 T 32 R F 3 (ELE) 5 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2 S' 0.5 S'	V 2400 4 V 2400 1,0	32 2 80 5	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.2	SW SW	2,400 2,400	182 456	250 0.1 624 0.3	\$ 40.85 \$ 102.12	\$ 472.50 \$0 \$ 1,181.25 \$0	11.6 11.6	11.6
.ED	Room 3212: 3rd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2 S' 0.2 S'	V 2400 4	40 2 32 2	T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.1 0.1	SW SW	3,000 2,400	228 182	312 0.1 250 0.1	\$ 49.96 \$ 40.85	\$ 472.50 \$0 \$ 472.50 \$0	9.5 11.6	i 11.6
.ED .ED	Room 3210: 3rd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE) 3 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90 F43ILL/2 90	0.2 S' 0.2 S' 0.3 S'	V 2400 4	32 2 32 2 48 3	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.1 0.1 0.1	SW SW SW	2,400 2,400 2,400	182	250 0.1 250 0.1 374 0.2	\$ 40.85 \$ 40.85 \$ 61.27	\$ 472.50 \$0 \$ 472.50 \$0 \$ 708.75 \$0	11.6 11.6 11.6	11.6
ED ED	Room 3209: 3rd Floo	2 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.3 S 0.2 S' 0.1 S'	V 2400 4	32 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1	SW	2,400	182	250 0.1 52 0.1	\$ 40.85 \$ 9.79	\$ 472.50 \$0 \$ 236.25 \$0	11.6	11.6
LED 68	Room 3213: 3rd Floo Corridor Lighting: 3rd Floo	5 T 32 R F 3 (ELE) 16 W 40 C F 2 (MAG)	F43ILL/2 90 F42SS 94	0.5 S' 1.5 Bre	V 2400 1,0	80 5 29 16	T 59 R LED W 28 C F 2	RTLED38 F42SSILL	38 48	0.2	SW Breaker	2,400 2,280	456 1,751		\$ 102.12 \$ 276.18	\$ 1,181.25 \$0 \$ 4,320.00 \$0	11.6	11.6
.ED .ED	Room 3208: 3rd Floo Room 3207: 3rd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2 S' 0.2 S'	V 2400 4	32 2 32 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	SW SW	2,400 2,400	182 182	250 0.1 250 0.1	\$ 40.85 \$ 40.85	\$ 472.50 \$0	11.6 11.6	11.6
ED ED	MTR: 3rd Floor	1 T 32 R F 2 (ELE) 1 T 32 R F 2 (ELE) 2 T 32 R F 3 (ELE)	F42LL 60 F42LL 60	0.1 S' 0.1 S'	V 1000	60 1	T 38 R LED T 38 R LED	RTLED38 RTLED38	38	0.0	SW SW	1,000	38	22 0.0 22 0.0	\$ 4.14 \$ 4.14		0 57.0	44.9
ED ED	Room 3205: 3rd Floo	2 T 32 R F 3 (ELE) 5 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90 F43ILL/2 90	0.2 S' 0.5 S' 0.1 S'	V 2400 1,0	32 2 80 5	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.1	SW SW SW	2,400 2,400 3,000	182 456	250 0.1 624 0.3 156 0.1	\$ 40.85 \$ 102.12 \$ 24.98	\$ 472.50 \$0 \$ 1,181.25 \$0 \$ 236.25 \$0	11.6 11.6 9.5	11.6
ED ED	Room 3203: 3rd Floo	1 T32 R F3 (ELE) 1 T32 R F2 (ELE)	F43ILL/2 90 F42LL 60	0.1 Si 0.1 Oc	V 2400 2	16 1 60 1	T 59 R LED T 38 R LED	RTLED38 RTLED38	38	0.0	SW	2,400 1,000	91		\$ 20.42 \$ 4.14	\$ 236.25 \$0	11.6	i 11.0
ED ED	Reception: 3rd Floo Reception: 3rd Floo	1 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.1 S' 0.2 S'	V 2912 2	62 1 24 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.0 0.1	SW SW	2,912 2,912	111 221	151 0.1 303 0.1	\$ 24.31 \$ 48.62	\$ 236.25 \$0 \$ 472.50 \$0	9.7 9.7	9.7 9.7
.ED	Lobby: 3rd Floor	1 CFQ/18/2 RC 5 1T 34 R F 4 (MAG)	CFQ18/2 45 F44EE 144	0.0 S' 0.7 S'	V 2912 2,0		6BLMWLED 1T 28 R F 4	6BLMWLED F44SSILL	13 96	0.0 0.5	SW SW	2,912 2,912	38 1,398	93 0.0 699 0.2	\$ 14.96 \$ 112.20	\$ 708.75 \$0	10.8	6.3
ED .ED	Corridor Lighting: 3rd Floo	2 T 32 R F 3 (ELE) 15 CFQ/18/2 RC 7 CFQ/18/2 RC	F43ILL/2 90 CFQ18/2 45 CFQ18/2 45	0.2 Bre 0.7 Bre 0.3 S	ker 2280 4 ker 2280 1,5 V 2912 9		T 59 R LED 6BLMWLED 6BLMWLED	RTLED38 6BLMWLED 6BLMWLED	38 13	0.1	Breaker Breaker SW	2,280 2,280 2,912	173 445	237 0.1 1,094 0.5 652 0.2	\$ 39.02 \$ 180.12 \$ 104.72	\$ 472.50 \$0 \$ 2,430.00 \$0 \$ 1,134.00 \$0	12.1 13.5 10.8	13.5
.ED .ED	Closet: 3rd Floor	1 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.3 S' 0.1 S' 0.1 S'	V 1000	90 1	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.0	SW SW	1,000 1,000	38	52 0.1 52 0.1	\$ 9.79 \$ 9.79	\$ 236.25 \$0	24.1 24.1	24.1
ED ED		1 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.1 Si	V 1000	90 1	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.0	SW SW	1,000	38	52 0.1 52 0.1	\$ 9.79 \$ 9.79	\$ 236.25 \$0	24.1 24.1	24.1
.ED	WTR: 3rd Floor MTR: 3rd Floor	3 T 32 R F 2 (ELE) 3 T 32 R F 2 (ELE)	F42LL 60 F42LL 60	0.2 S' 0.2 S'	V 1000 1 V 1000 1	80 3 80 3	T 38 R LED T 38 R LED	RTLED38 RTLED38	38 38	0.1 0.1	SW SW	1,000 1,000	114 114		\$ 12.43 \$ 12.43	\$ 708.75 \$1 \$ 708.75 \$1	50 57.0 50 57.0	44.9
LED .ED	Closet: 3rd Floor	5 CFQ/18/2 RC 1 T 32 R F 3 (ELE)	CFQ18/2 45 F43ILL/2 90	0.2 S' 0.1 S'	V 2280 5 V 1000	13 5 90 1	6BLMWLED T 59 R LED	6BLMWLED RTLED38	13 38	0.1	SW SW	2,280 1,000	148 38	365 0.2 52 0.1	\$ 60.04 \$ 9.79	\$ 810.00 \$0 \$ 236.25 \$0	13.5 24.1	13.5
ED ED	Closet - Room 3101: 3rd Floo	9 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE) 4 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90 F43ILL/2 90	0.8 S' 0.1 S' 0.4 S'	V 1000	90 1	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.3 0.0 0.2	SW SW SW	2,400 1,000 3,000	821 38 456	52 0.1	\$ 183.81 \$ 9.79 \$ 99.91	\$ 236.25 \$0	11.6 24.1 9.5	24.1
.ED .ED	Room 3103: 3rd Floo Room 3102: 3rd Floo	4 1 32 R F 3 (ELE) 2 T 34 R F 3 (MAG) 2 T 34 R F 3 (MAG)	F43ED 90 F43EE 115 F43EE 115	0.4 S' 0.2 S' 0.2 S'	V 2400 5	52 2 52 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38	0.2 0.1 0.1	SW SW	2,400 2,400	182 182	370 0.2	\$ 60.49 \$ 60.49	\$ 472.50 \$1	00 7.8	6.2
8 ED	Corridor Lighting: 3rd Floo Room 3312: 3rd Floo	10 W 40 C F 2 (MAG) 2 T 32 R F 3 (ELE)	F42SS 94 F43ILL/2 90	0.9 Bre 0.2 S'	ker 2280 2,1 V 2400 4	43 10 32 2	W 28 C F 2 T 59 R LED	F42SSILL RTLED38	48 38	0.5 0.1	Breaker SW	2,280 2,400	1,094 182	370 0.2 1,049 0.5 250 0.1 250 0.1	\$ 172.61 \$ 40.85	\$ 2,700.00 \$0 \$ 472.50 \$0	15.6 11.6	15.6
ED ED	Room 3310: 3rd Floo	2 T 32 R F 3 (ELE) 3 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2 S' 0.3 S'	V 2400 6	32 2 48 3	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	SW SW	2,400 2,400	182 274	374 0.2	\$ 40.85 \$ 61.27	\$ 472.50 \$0 \$ 708.75 \$0	11.6	11.
D D		1 T 32 R F 2 (ELE) 2 T 32 R F 3 (ELE)	F42LL 60 F43ILL/2 90	0.1 S' 0.2 S'	V 2400 4	60 1 32 2	T 38 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.0	SW	1,000 2,400	38 182	22 0.0 250 0.1 374 0.2	\$ 4.14 \$ 40.85	\$ 472.50 \$0	11.6	11.
D D	Room 3307: 3rd Floo	3 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE) 86 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90 F43ILL/2 90	0.3 S' 0.2 S' 7.7 S'	V 2400 4	48 3 32 2 76 86	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.1 0.1 3.3	SW SW SW	2,400 2,400 2,400	274 182 7.843	250 0.1 10,733 4.5	\$ 61.27 \$ 40.85 \$ 1,756.42	\$ 708.75 \$0 \$ 472.50 \$0 \$ 20,317.50 \$0	11.6 11.6 11.6	i 11.
D	Room 3300: 3rd Floo	3 W 40 C F 2 (MAG) 1 T 32 R F 2 (ELE)	F42SS 94 F42LL 60	0.3 S' 0.1 S'	V 2400 6		W 28 C F 2 T 38 R LED	F42SSILL RTLED38	48	0.1 0.0	SW SW	2,400	346	331 0.1 22 0.0	\$ 54.20 \$ 4.14	\$ 810.00 \$0 \$ 236.25 \$5	14.9	14.
D D	TR: 3rd Floor Room 3317: 3rd Floo	1 T 32 R F 2 (ELE) 3 T 32 R F 3 (ELE)	F42LL 60 F43ILL/2 90	0.1 S' 0.3 S'	V 1000 V 2400 6	60 1 48 3	T 38 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.0 0.1	SW SW	1,000 2,400	38 274	22 0.0 374 0.2	\$ 4.14 \$ 61.27	\$ 236.25 \$5 \$ 708.75 \$0	0 57.0 11.6	44. i 11.
D D	Room 3319: 3rd Floo	3 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.3 S' 0.2 S'	V 2400 4	48 3 32 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	SW SW	2,400 2,400	274 182	250 0.1	\$ 61.27 \$ 40.85	\$ 472.50 \$0	11.6 11.6	11.
D D	Corridor Lighting: 2nd Floo	5 T 32 R F 3 (ELE) 4 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90 F43ILL/2 90	0.5 S' 0.4 Bre 0.2 Bre	ker 2280 8	80 5 21 4 10 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.2 0.2 0.1	SW Breaker Breaker	2,400 2,280 2,280	456 347 173	624 0.3 474 0.2 237 0.1	\$ 102.12 \$ 78.05 \$ 39.02		11.6 12.1 12.1	12.
ED ED	Closet: 2nd Floor	1 T 32 R F 2 (ELE) 1 T 32 R F 2 (ELE)	F42LL 60 F42LL 60	0.1 Si 0.1 Si	V 1000	60 1 60 1	T 38 R LED T 38 R LED	RTLED38 RTLED38	38	0.0	SW	1,000	38	22 0.0 22 0.0	\$ 4.14 \$ 4.14	\$ 236.25 \$5	0 57.0	44.5
ED ED	Closet: 2nd Floor Closet: 2nd Floor	1 T 32 R F 2 (ELE) 1 T 32 R F 2 (ELE)	F42LL 60 F42LL 60	0.1 S' 0.1 S'	V 1000	60 1 60 1	T 38 R LED T 38 R LED	RTLED38 RTLED38	38 38	0.0	SW SW	1,000 1,000	38 38	22 0.0	\$ 4.14 \$ 4.14	\$ 236.25 \$5 \$ 236.25 \$5	0 57.0 0 57.0	44.
ED ED		1 T 32 R F 2 (ELE) 1 T 32 R F 2 (ELE)	F42LL 60 F42LL 60	0.1 S' 0.1 S'	V 1000	60 1 60 1	T 38 R LED T 38 R LED	RTLED38 RTLED38	38 38	0.0	SW SW	1,000 1,000	38 38	22 0.0 22 0.0 22 0.0	\$ 4.14 \$ 4.14	\$ 236.25 \$5	0 57.0	44.
ED ED	Unemployment Office: 2nd Floo	11 T 32 R F 3 (ELE) 111 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90 F42LL 60	1.0 S' 10.0 S' 0.1 S'	V 2400 23,9		T 59 R LED T 59 R LED T 38 R LED	RTLED38 RTLED38 RTLED38	38	0.4 4.2	SW	2,400 2,400	1,003	13,853 5.8	\$ 224.66 \$ 2,267.01	\$ 26,223.75 \$0	11.6	11.
ED ED	Corridor Lighting: 2nd Floo	1 T32 R F 2 (ELE) 7 T32 R F 3 (ELE) 2 T32 R F 3 (ELF)	F42LL 60 F43ILL/2 90 F43ILL/2 90	0.1 S' 0.6 Bre 0.2 S'	ker 2280 1,4		T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.0 0.3	SW Breaker SW	1,000 2,280 2,400	606 182	22 0.0 830 0.4 250 0.1	\$ 4.14 \$ 136.59 \$ 40.85		0 57.0 12.1	12.1
ED ED	Room 2139: 2nd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2 S'	V 2400 4	32 2 32 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1	SW	2,400	182	250 0.1	\$ 40.85 \$ 40.85	\$ 472.50 \$0 \$ 472.50 \$0	11.6	11.6
ED ED	Room 2141: 2nd Floo Kitchen: 2nd Floor	2 T 32 R F 3 (ELE) 9 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2 S' 0.8 S'	V 3000 2,4	32 2 30 9	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.3	SW SW	2,400 3,000	182 1,026		\$ 40.85 \$ 224.81		11.6 9.5	9.5
ED ED	WTR: 2nd Floor	5 T 32 R F 3 (ELE) 2 T 32 R F 2 (ELE)	F43ILL/2 90 F42LL 60	0.5 Bre 0.1 S'	V 1000 1	20 2	T 59 R LED T 38 R LED	RTLED38 RTLED38	38	0.2	Breaker SW	2,280 1,000	433 76	44 0.0	\$ 97.56 \$ 8.29	\$ 1,181.25 \$0 \$ 472.50 \$1	12.1 00 57.0	44.9
D D	Room 2143: 2nd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE) 1 T 32 R F 2 (ELE)	F43ILL/2 90 F43ILL/2 90 F42LL 60	0.2 S' 0.2 S' 0.1 S'	V 2400 4	32 2 32 2	T 59 R LED T 59 R LED T 38 R LED	RTLED38 RTLED38 RTLED38	38	0.1 0.1 0.0	SW SW SW	2,400 2,400 1,000	182 182	250 0.1	\$ 40.85 \$ 40.85 \$ 4.14	\$ 472.50 \$0	11.6 11.6 0 57.0	11.
D D	Room 2144: 2nd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2 Si	V 2400 4	32 2 32 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1 0.1	SW	2,400 2,400	182		\$ 40.85 \$ 40.85	\$ 472.50 \$0	11.6	i 11.0
D D	Room 2146: 2nd Floo Room 2147: 2nd Floo	2 T 32 R F 3 (ELE) 3 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2 S' 0.3 S'	V 2400 4 V 2400 6	32 2 48 3	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1 0.1	SW SW	2,400 2,400	182 274	250 0.1 374 0.2	\$ 40.85 \$ 61.27	\$ 472.50 \$0 \$ 708.75 \$0	11.6 11.6	11.
D D		2 T 32 R F 3 (ELE) 8 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90 F43ILL/2 90	0.2 S' 0.7 S'	V 2912 2,0		T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.1	SW SW SW	2,400 2,912	182 885	1,211 0.4	\$ 40.85 \$ 194.48	\$ 1,890.00 \$0	9.7	9.7
D	Room 2150: 2nd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90 F43ILL/2 90	0.2 S' 0.2 S' 0.2 S'	V 2400 4	32 2 32 2 32 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.1 0.1 0.1	SW SW	2,400 2,400 2,400	182 182 182	250 0.1	\$ 40.85 \$ 40.85 \$ 40.85	\$ 472.50 \$0	11.6 11.6 11.6	11.
D D		2 T 32 R F 3 (ELE) 1 T 32 R F 2 (ELE)	F43ILL/2 90 F42LL 60	0.2 Si 0.1 Si	V 2400 4	32 2 60 1	T 59 R LED T 38 R LED	RTLED38 RTLED38	38	0.1	SW SW	2,400 1,000	182	250 0.1 250 0.1 22 0.0	\$ 40.85 \$ 4.14	\$ 472.50 \$0	11.6	11.
D D	Room 2153: 2nd Floo Room 2154: 2nd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2 S' 0.2 S'	V 2400 4 V 2400 4	32 2 32 2	T 59 R LED T 59 R LED	RTLED38	38 38	0.1 0.1	SW SW	2,400 2,400	182 182	250 0.1 250 0.1	\$ 40.85 \$ 40.85	\$ 472.50 \$0 \$ 472.50 \$0	11.6	11.
D	Room 2104: 2nd Floo	1 T 32 R F 2 (ELE) 8 T 32 R F 3 (ELE)	F42LL 60 F43lLL/2 90	0.1 S' 0.7 S'	V 2400 1,7		T 38 R LED T 59 R LED	RTLED38	38	0.0	SW	1,000 2,400	38 730	22 0.0 998 0.4	\$ 4.14 \$ 163.39	\$ 1,890.00 \$0	11.6	11.
D D	Room 2024: 2nd Floo	50 T 32 R F 3 (ELE) 15 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90 F43ILL/2 90	4.5 S' 1.4 S' 0.1 S'	V 2400 3,2		T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	1.9 0.6 0.0	SW SW SW	1,000 2,400 1,000	1,900	1,872 0.8	\$ 489.74 \$ 306.35 \$ 9.79	\$ 3,543.75 \$0	24.1 11.6 24.1	i 11.
D D	Room 2072: 2nd Floo	3 T 32 R F 3 (ELE) 4 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.3 Si 0.4 Si	V 2400 6	48 3 64 4	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.0 0.1 0.2	SW SW	2,400 2,400	38 274 365		\$ 61.27 \$ 81.69	\$ 708.75 \$0	11.6	11
D D	TR: 2nd Floor Room 2070: 2nd Floo	1 T 32 R F 2 (ELE) 9 T 32 R F 3 (ELE)	F42LL 60 F43ILL/2 90	0.1 S' 0.8 S'	V 1000 V 2400 1,9	60 1 44 9	T 38 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.0	SW	1,000 2,400	38 821	22 0.0 1,123 0.5	\$ 4.14 \$ 183.81	\$ 236.25 \$5 \$ 2,126.25 \$0	0 57.0	44
5	Room 2069: 2nd Floo Room 2067: 2nd Floo	15 T 32 R F 3 (ELE) 12 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	1.4 S' 1.1 S'	V 2400 3,2 V 2400 2,5	40 15	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.6 0.5	SW SW	2,400 2,400	1,368 1,094	1,872 0.8 1,498 0.6	\$ 306.35 \$ 245.08	\$ 3,543.75 \$0 \$ 2,835.00 \$0	11.6 11.6	11
D D	Office: 1st Floor	1 T 32 R F 2 (ELE) 4 T 32 R F 3 (ELE)	F42LL 60 F43ILL/2 90	0.1 S' 0.4 S'	V 2400 8	60 1 64 4	T 38 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.0	SW SW	1,000 2,400	38 365		\$ 4.14 \$ 81.69	\$ 945.00 \$0	11.6	11
)	Office: 1st Floor	6 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE) 22 W 40 C F 2 (MAG)	F43ILL/2 90 F43ILL/2 90 F42SS 94	0.5 S' 0.1 S' 2.1 S'	V 2400 2	16 1	T 59 R LED T 59 R LED W 28 C F 2	RTLED38 RTLED38 F42SSILL	38 38 48	0.2 0.0 1.1	SW SW SW	2,400 2,400 2,400	547 91 2.534	125 0.1	\$ 122.54 \$ 20.42 \$ 397.47	\$ 236.25 \$0	11.6 11.6 14.9	11
D D	Welfare Office: 1st Floor Records Office: 1st Floor	97 T 32 R F 3 (ELE) 4 CFO/18/2 RC	F43ILL/2 90	8.7 S' 0.2 S'	V 2400 20,9	52 97	W 28 C F 2 T 59 R LED 6BLMWLED	RTLED38 6BLMWLED	38	3.7 0.1	SW SW	2,400 2,400 2,400	2,534 8,846 125	12,106 5.0	\$ 1,981.08 \$ 50.27		14.s 11.6 12.9	i 11
D D	Records Office: 1st Floor Room 1411: 1st Floor	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.2 S' 0.2 S'	V 2400 4 V 2400 4	32 2 32 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	SW SW	2,400 2,400	182 182	250 0.1	\$ 40.85 \$ 40.85	\$ 472.50 \$0 \$ 472.50 \$0	11.6 11.6	11
D D		1 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 90 F43ILL/2 90	0.1 Si 0.2 Si	V 2400 4	16 1 32 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.0 0.1	SW SW	2,400 2,400	91 182		\$ 20.42 \$ 40.85		11.6	i 11.
ED ED	WTR: 1st Floor	2 T 32 R F 3 (ELE) 1 T 32 R F 2 (ELE)	F43ILL/2 90 F42LL 60	0.2 S' 0.1 S'	V 1000	32 2 60 1	T 59 R LED T 38 R LED	RTLED38 RTLED38 RTLED38	38 38	0.1	SW SW	2,400 1,000 1,000	182 38	22 0.0	\$ 40.85 \$ 4.14	\$ 236.25 \$5		44.
ED ED	Café: 1st Floor	1 T 32 R F 2 (ELE) 8 T 32 R F 3 (ELE) 3 T 32 R F 2 (ELE)	F42LL 60 F43ILL/2 90 F42LL 60	0.1 S' 0.7 S' 0.2 S'	V 1600 1,1	60 1 52 8 80 3	T 38 R LED T 59 R LED T 38 R LED	RTLED38 RTLED38 RTLED38	38 38	0.0 0.3 0.1	SW SW SW	1,000 1,600 1,000	38 486 114	666 0.4	\$ 4.14 \$ 114.80 \$ 12.43	\$ 1,890.00 \$0	16.5	16.5
ED		7 CFO/18/2 RC 3 T 32 R F 2 (ELE)	CFQ18/2 45 F42LL 60	0.3 Bre	ker 2280 7	18 7 80 3	6BLMWLED T 38 R LED	6BLMWLED RTLED38	13	0.1 0.1	Breaker SW	2,280 1,000	207	511 0.2	\$ 84.05 \$ 12.43		13.5	i 13.5

				EXISTING COI	NDITIONS							RETROFIT	CONDITIONS							COST & SAVIN	GS ANALYSIS		_
				- Existino del	Watts per							NE INGILI	Watts per		Retrofit			Annual kWh		COOT & CATIN	NJ Smart Start	Simple Payback	k
	Area Description	No. of Fixtures	Standard Fixture Code	Fixture Code	Fixture	kW/Space	Exist Contro	Annual Hours	Annual kWh	Number of Fix	ures Standard Fixture Code	Fixture Code	Fixture		Control	Annual Hours	s Annual kWh	Saved	Annual kW Save	d Annual \$ Saved			Simple Paybac
Code Ur	nique description of the location - Room number/Room			Code from Table of Standard		(Watts/Fixt) * (Fixt		Estimated daily	(kW/space) *		after "Lighting Fixture Code" Example	Code from Table of	Value from	(Watts/Fixt) *		rol Estimated	(kW/space) *	(Original Annual			Cost for Prescriptive	Length of time	
	name: Floor number (if applicable)	before the retrofit 40 R F		2 Fixture Wattages	Table of	No.)	control device	e hours for the	(Annual Hours)	the retrofit	2T 40 R F(U) = 2'x2' Troff 40 w	Standard Fixture	Table of	(Number of	device	annual hours	(Annual	kWh) - (Retrofit	kW) - (Retrofit	(\$/kWh)	renovations to Lighting	for renovations	
		lamps	s U shape		Standard Fixture			usage group			Recess. Floor 2 lamps U shape	Wattages	Standard Fixture	Fixtures)		for the usage	Hours)	Annual kWh)	Annual kW)		lighting system Measures	cost to be recovered	be recovered
					Wattages								Wattages			group						recovered	/
D	Closet: 1st Floor		R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	\$ 4.14		57.0	44.9
D	Closet: 1st Floor		R F 2 (ELE)	F42LL F44EE	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38		0.0	\$ 4.14		57.0	44.9
D	Lobby: 1st Floor Bus Card: 1st Floor		R F 4 (MAG) 18/2 RC	CFQ18/2	144 45	0.1	SW	2912 2912	419		1T 28 R F 4 6BI MWI FD	F44SSILL 6BLMWLED	96	0.1	SW	2,912 2,912	280		0.0	\$ 22.44 \$ 44.88		6.3	6.3
5	Bus Card: 1st Floor		R F 3 (ELE)	F43ILL/2	90	0.2	SW	2912	524		T 59 R LED	RTLED38	38	0.1	SW	2,912	221	303	0.1	\$ 48.62		9.7	9.7
	Lobby: 1st Floor		R F 4 (MAG)	F44EE	144	2.2	SW	2912	6,290	15	1T 28 R F 4	F44SSILL	96	1.4	SW	2,912	4,193			\$ 336.61		6.3	6.3
ED	Lobby: 1st Floor		18/2 RC	CFQ18/2	45	1.3	SW	2912	3,669		6BLMWLED	6BLMWLED	13	0.4	SW	2,912	1,060			\$ 418.89		10.8	10.8
D	Vestibule: 1st Floor Waiting Area: 1st Floor		R F 4 (MAG) R F 3 (ELE)	F44EE F43ILL/2	144 90	0.3	SW	2912 3000	839 4,590		1T 28 R F 4 T 59 R LED	F44SSILL RTLED38	96	0.2	SW	2,912 3,000	1,938	2,652	0.1	\$ 44.88 \$ 424.64		6.3 9.5	6.3 9.5
D	TR: 1st Floor		R F 2 (ELE)	F43LU2	60	0.1	SW	1000	4,390	1	T 38 R LED	RTLED38	38	0.0	SW	1.000	1,936		0.0	\$ 424.04		57.0	44.9
D	TR: 1st Floor	2 T 32 F	R F 2 (ELE)	F42LL	60	0.1	SW	1000	120		T 38 R LED	RTLED38	38	0.1	SW	1,000	76	44	0.0	\$ 8.29	\$ 472.50 \$100	57.0	44.9
D	TR: 1st Floor		R F 2 (ELE)	F42LL	60	0.1	SW	1000	120	2	T 38 R LED	RTLED38	38	0.1	SW	1,000	76	44	0.0	\$ 8.29		57.0	44.9
D	TR: 1st Floor		R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	\$ 4.14	·	57.0	44.9
D D	Reception: 1st Floor Welfare Office: 1st Floor		R F 3 (ELE) R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.4 3.6	SW	2912 2400	1,048		T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.2 1.5	SW	2,912 2,400	3.648	606 4,992		\$ 97.24 \$ 816.94		9.7 11.6	9.7 11.6
_	Welfare Office: 1st Floor		C F 2 (MAG)	F42SS	94	1.3	SW	2400	3.158		W 28 C F 2	F42SSILL		0.7	SW	2,400	1,613	1.546		\$ 252.94		14.9	14.9
D	Welfare Office: 1st Floor		R F 3 (ELE)	F43ILL/2	90	0.5	SW	2400	1,296		T 59 R LED	RTLED38	38	0.2	SW	2,400	547	749	0.3	\$ 122.54		11.6	11.6
)	Room 1109: 1st Floor		R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432		T 59 R LED	RTLED38	38	0.1	SW	2,400	182		0.1	\$ 40.85		11.6	11.6
)	TR: 1st Floor Vestibule: 1st Floor		R F 2 (ELE)	F42LL CFQ18/2	60	0.1	SW	1000	60		T 38 R LED 6BI MWI FD	RTLED38		0.0	SW	1,000	38		0.0	\$ 4.14		57.0	44.9
	Vestibule: 1st Flooi Closet: 1st Flooi		18/2 RC R F 2 (ELE)	F42LL	45 60	0.1	SW	2912 1000	262	2	T 38 R LED	6BLMWLED RTLED38	13	0.0	SW	2,912 1,000	76			\$ 29.92 \$ 4.14		10.8 57.0	10.8 44.9
)	Closet: 1st Floor		R F 2 (ELE)	F42LL	60	0.1	SW	1000	60	1	T 38 R LED	RTLED38	38	0.0	SW	1,000	38	22	0.0	\$ 4.14		57.0	44.9
	Stairs: 1st Floor		BR CF 1	CFT36/1	51	0.8	SW	3200	2,448	15	SP 36 R CF 1	CFT36/1	51	0.8	SW	3,200	2,448		0.0	\$ -	\$ - \$0		#DIV/0!
	Old Kitchen: Basemen		C F 2 (MAG)	F42SS	94	1.9	SW	3000	5,640	20	W 28 C F 2	F42SSILL	48	1.0	SW	3,000	2,880	2,760		\$ 441.93	φ 0,100.00 φ0	12.2	12.2
)	Old Kitchen: Basemen		R F 3 (ELE)	F43ILL/2	90	0.1	SW	3000	270	1	T 59 R LED	RTLED38	38	0.0	SW	3,000	114		0.1	\$ 24.98		9.5	9.5
-	Old Kitchen: Basemeni Old Kitchen: Basemeni		C F 2 (MAG) C F 2 (MAG)	F42SS F42SS	94 94	1.9	SW	3000 3000	5,640		W 28 C F 2 W 28 C F 2	F42SSILL F42SSILL	48	1.0	SW	3,000	2,880	2,760		\$ 441.93 \$ 88.39		12.2	12.2 12.2
_	Lobby: Basemen		C F 2 (MAG)	F42SS	94	0.4	SW	2912	2,737		W 28 C F 2	F42SSILL F42SSILL	48	0.2	SW	2,912	1 398	552 1,340		\$ 215.06		12.2 12.6	12.2
D	Corridor Lighting: Basemen		R F 3 (ELE)	F43ILL/2	90	0.4	Breaker	2280	821	4	T 59 R LED	RTLED38	38	0.2	Breaker	2,280	347		0.2	\$ 78.05		12.1	12.1
)	Switch Room : Basemen		R F 3 (ELE)	F43ILL/2	90	0.1	SW	1000	90	1	T 59 R LED	RTLED38	38	0.0	SW	1,000	38	52	0.1	\$ 9.79		24.1	24.1
D	Server Room: Basemen		R F 3 (ELE)	F43ILL/2	90	0.7	SW	1000	720		T 59 R LED	RTLED38		0.3	SW	1,000	304		0.4	\$ 78.36		24.1	24.1
D D	Office: Basement Cleaning Room: Basemen		R F 3 (ELE) R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.3	SW	2400 1000	648		T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1 0.4	SW	2,400 1,000	274		0.2	\$ 61.27 \$ 97.95		11.6 24.1	11.6 24.1
D	Office: Basement		R F 3 (FLF)	F43ILL/2	90	0.9	SW	2400	864		T 59 R LED	RTLED38	38	0.4	SW	2,400	365		0.5	\$ 81.69		11.6	11.6
D	Lock Shop: Basemen		R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180		T 59 R LED	RTLED38	38	0.1	SW	1,000	76		0.1	\$ 19.59		24.1	24.1
)	??		R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864		T 59 R LED	RTLED38	38	0.2	SW	2,400	365		0.2	\$ 81.69		11.6	11.6
D	Corridor Lighting: Basemen		R F 3 (ELE)	F43ILL/2	90	0.7	Breaker	2280	1,642	8	T 59 R LED	RTLED38	38	0.3	Breaker	2,280	693	948	0.4	\$ 156.10		12.1	12.1
	Files: Basement		C F 2 (MAG) C F 2 (MAG)	F42SS F42SS	94 94	0.9	SW	1000	940		W 28 C F 2 W 28 C F 2	F42SSILL F42SSILL	48	0.5	SW	1,000	480			\$ 86.65 \$ 69.32		31.2 31.2	31.2 31.2
)	DWI Office: Basement		R F 3 (ELE)	F43ILL/2	90	1.2	SW	2400	752 2.808	13	T 59 R LED	RTLED38	38	0.4	SW	2.400	1.186	1.622	0.4	\$ 265.51		11.6	11.6
	DWI Office: Basement		R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216		T 59 R LED	RTLED38	38	0.0	SW	2,400	91	125	0.1	\$ 20.42		11.6	11.6
	DWI Office: Basement		R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432	2	T 59 R LED	RTLED38	38	0.1	SW	2,400	182	250	0.1	\$ 40.85	\$ 472.50 \$0	11.6	11.6
	DWI Office: Basement		18/2 RC	CFQ18/2	45	0.5	SW	2400	1,188		6BLMWLED	6BLMWLED	13	0.1	SW	2,400	343		0.4	\$ 138.25		12.9	12.9
	DWI Office: Basement Room LL10: Basemen		C F 2 (MAG) C F 2 (MAG)	F42SS F42SS	94 94	0.2	SW	2400 2400	451 451	2	W 28 C F 2 W 28 C F 2	F42SSILL F42SSILL	48	0.1	SW	2,400 2,400	230		0.1	\$ 36.13 \$ 36.13		14.9 14.9	14.9 14.9
1	Electrical Room; Basemen		C F 2 (MAG)	F42SS	94	0.4	SW	1000	376	4	W 28 C F 2	F42SSILL	48	0.1	SW	1.000	192		0.1	\$ 34.66		31.2	31.2
	Pump Room: Basemen		C F 2 (MAG)	F42SS	94	0.1	SW	1000	94		W 28 C F 2	F42SSILL		0.0	SW	1,000	48		0.0	\$ 8.66		31.2	31.2
	Boiler Room: Basemen		R F 2 (ELE)	F42LL	60	0.6	SW	1820	1,092		T 38 R LED	RTLED38		0.4	SW	1,820	692		0.2	\$ 67.78		34.9	27.5
	Elevator: Basemen		R F 2 (ELE)	F42LL	60	0.4	SW	3200	1,152		T 38 R LED	RTLED38	38	0.2	SW	3,200	730		0.1	\$ 67.26		21.1	16.6
	Corridor Lighting: Basemen Exterior Lighting		C F 2 (MAG) Bay MH 350	F42SS MHPS/SCWA/350/1	94 400	0.1	Breaker	2280 4368	6.989	1 4	W 28 C F 2 F48T5/HO	F42SSILL F44GHL	48	0.0	Breaker	2,280 4,368	109		0.0	\$ 17.26 \$ 451.58		15.6 4.2	15.6 3.3
Tota		1.768	Day MIT 300	WILL S/SCVVA/SSU/1	400	155.4	SW	4300	355.999	1.768	14013/110	F44GFIL	11,691		SVV	+,300	159,601		0.1	\$32,314	\$413.998 \$5.050	4.2	3.3
.010	er.	1,700		-		135.4	•	-	000,000	1,700			11,001	03.3	-	-		nd Savings	55.5	85.9	\$3.640	1	+
																		h Savings		196,398	\$28,674		1

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Part	ECM-L2 Install Occupancy Sensors		EXISTING CONDI	TIONS						RETROFIT	CONDITIONS							COST & SAVINGS	ANALYSIS			
Column C				Watts per																		
Column									"Lighting Fixture Code" Example						_							ole Payback th of time for
Column	name: Floor number (if applicable)	before the retrofit	Fixture Wattages		No.)	control device		the retrofit					device		(Annual Hours)						enovations renovati	ations cost to recovered
The second column 1				Fixture Wattages										group						reco		
The state of the	168 Corridor Lighting: 5th Floo	9 CFQ/18/2 RC 3 W 40 C F 2 (MAG)	CFQ18/2 F42SS	45 94	0.3	Breaker	2280 643	3.0	W 40 C F 2 (MAG)	F42SS	45 94	0.4			643.0	0.0	0.0 \$	\$0.00 \$ \$0.00 \$	60.00 60.00	\$0.00 \$0.00	#[#DIV/0! #DIV/0!
The content of the	40LED Closet: 5th Floor	2 T 32 R F 2 (ELE)	F42LL	90 60	0.1	SW	1000 120	0.0 2	T 32 R F 2 (ELE)	F42LL	90 60	0.9	OCC None	1000	900.0	0.0	0.0 \$	\$0.00	0.00	\$20.00 \$0.00	#[4.1 #DIV/0!
The second sec	35LED Kitchen: 5th Floor	5 T 32 R F 3 (ELE)	F43ILL/2	90	0.5	SW	3000 1,350	0.0 5	T 32 R F 3 (ELE)	F43ILL/2	90	0.5				0.0	0.0 \$	\$0.00	00.00	\$0.00	#[3.7 #DIV/0! #DIV/0!
The second column	40LED Staff WR: 5th Floor	1 T 32 R F 2 (ELE)	F42LL	60	0.1	OCC	1000 60	0.0 1	T 32 R F 2 (ELE)	F42LL	60			1000	60.0	0.0	0.0 \$	\$0.00	60.00	\$0.00	#[#DIV/0! #DIV/0! 4.1
The second column 1	35LED Office - Room 5211: 5th Floor	5 T 32 R F 3 (ELE)	F43ILL/2	90		SW	2400 1,080	0.0 5	T 32 R F 3 (ELE)	F43ILL/2	90		OCC	1900	855.0	225.0	0.0 \$			\$20.00 \$0.00	3.9	3.3 #DIV/0!
March Marc	35LED Corridor Lighting: 5th Floo 35LED Room 5212: 5th Floo	1 T 32 R F 3 (ELE)	F43ILL/2	90 90		Breaker	2280 205	5.2 1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	None OCC	2280 1900	205.2 684.0	0.0	0.0 S	\$0.00 \$ \$26.28 \$	60.00 6128.25	\$0.00 \$20.00	#[#DIV/0! 4.1
	35LED Tax Room: 5th Floo	1 T 32 R F 2 (ELE) 6 T 32 R F 3 (ELE)	F42LL F43ILL/2				1000 60 1200 648		T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	60 90		None OCC	1000 1000	60.0 540.0	0.0 108.0	0.0 \$ 0.0 \$	\$0.00 \$ \$15.77 \$	60.00 6128.25	\$0.00 \$20.00	8.1	#DIV/0! 6.9
The content of the	35LED Corridor Lighting: 5th Floo	2 T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2280 410	0.4 2	T 32 R F 3 (ELE)	F43ILL/2	94 90	0.2	None	2280	410.4	0.0	0.0 \$ 0.0 \$	\$0.00	0.00		#[#DIV/0! #DIV/0!
The content of the	35LED Corridor Lighting: 5th Floo	4 T 32 R F 3 (ELE)	F43ILL/2		0.4	Breaker	2280 820	0.8 4	T 32 R F 3 (ELE)	F43ILL/2		0.4	None	2280	820.8	0.0		\$0.00	0.00		#[#DIV/0! #DIV/0!
The second column	35LED Corridor Lighting: 5th Floo	9 T 32 R F 3 (ELE)	F43ILL/2	90	0.8	Breaker	2280 1,846	6.8 9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	None	2280	1,846.8	0.0		\$0.00	0.00		#[#DIV/0! #DIV/0! #DIV/0!
The control of the	35LED Classroom - Room 5312: 5th Floo	12 T 32 R F 3 (ELE)	F43ILL/2	90	1.1	SW	2400 2,592	2.0 12	T 32 R F 3 (ELE)	F43ILL/2	90	1.1	OCC	1800	1,944.0	648.0	0.0	94.61 \$	128.25	\$20.00	1.4	1.1 #DIV/0!
### Company of the co	35LED Staff MTR: 5th Floor	2 T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1000 180	0.0 2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None		180.0	0.0	0.0 \$ 0.0 \$	50.00 \$ 591.98 \$	0.00 128.25		#[#DIV/0! 1.2
The content of the	35LED Room 5304: 5th Floo	6 T 32 R F 3 (ELE)	F42LL F43ILL/2				1000 60 2400 1,296	0.0 1	T 32 R F 3 (ELE)	F42LL F43ILL/2	60 90		None OCC	1000 1900		0.0 270.0		\$0.00 \$ \$39.42 \$	60.00 6128.25	\$0.00 \$20.00	3.3	#DIV/0! 2.7
The content of the	35LED Room 5310: 5th Floo	2 T 32 R F 3 (ELE)	F43ILL/2	90 90	0.2 0.2	SW	2400 433 2400 433	2.0 2	T 32 R F 3 (ELE)	F43ILL/2	90 90	0.2 0.2	OCC	1900	342.0	90.0	0.0 \$ 0.0 \$	\$13.14 \$	128.25	\$20.00 \$20.00	9.8	8.2 8.2
The content of the	35LED Room 5305: 5th Floo	9 T 32 R F 3 (ELE)	F43ILL/2	90	0.8	SW	1000 180 2400 1,94	0.0 2 1.0 9	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	None OCC	1000	1,539.0		U.O \$	\$0.00 \$ \$59.13 \$	60.00 6128.25	\$U.00 \$20.00	#[#DIV/0! 1.8
The	35LED Room 5307: 5th Floo	9 T 32 R F 3 (ELE)	F43ILL/2	90	0.8		2400 1,944	1.0 9	T 32 R F 3 (ELE)	F43ILL/2	90	0.8	000	1900 1900	1,539.0		0.0	\$59.13	128.25			1.8 1.8 3.3
The contract 1	35LED Kitchen - Room 5309: 5th Floo	4 T 32 R F 3 (ELE)	F43ILL/2	90 94	0.4	SW SW	3000 1,080	0.0 4	T 32 R F 3 (ELE)	F43ILL/2	90 94	0.4	None None	3000 1000		0.0	0.0 \$			\$0.00 \$0.00	#[#DIV/0! #DIV/0!
Column C	61LED Closet: 5th Floor	2 T 34 R F 3 (MAG)	F43EE	115	0.2	SW	1000 230	0.0 2	T 34 R F 3 (MAG)	F43EE	115 60	0.2		1000	230.0	0.0	0.0 \$ 0.0 \$			\$0.00 \$20.00	#[#DIV/0! 24.7
The content of the	35LED Director's Office: 5th Floor 35LED Conference Room: 5th Floo	8 T 32 R F 3 (ELE) 3 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.7	SW	2400 1,728 1200 324	1.0 3	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.7	OCC	1900 1000	270.0	360.0 54.0	0.0 \$	\$52.56 \$	128.25	\$20.00 \$20.00	2.4 16.3	2.1 13.7
Column	168 Corridor Director's Office: 5th Floo 35LED Office: 5th Floor	4 T 32 R F 3 (ELE)	F43ILL/2	94 90	0.4	SW	2400 864		T 32 R F 3 (ELE)	F43ILL/2	94 90		None OCC	2280 1900	2,143.2 684.0	0.0 180.0	0.0 \$ 0.0 \$	\$0.00 \$ \$26.28 \$	0.00 128.25	\$0.00 \$20.00	4.9	#DIV/0! 4.1
The content of the	35LED Room 5405: 5th Floo	3 T 32 R F 3 (ELE)	F43ILL/2	60 90	0.3	SW	2400 648		T 32 R F 3 (ELE)	F43ILL/2	60 90	0.3	000	1000	60.0 513.0	12.0	0.0 \$	\$19.71	128.25	\$20.00 \$20.00	6.5	61.8 5.5
The control of the	35LED Storage - Room 5412: 5th Floo	2 T 32 R F 3 (ELE)	F43ILL/2				1000 180	0.0 2	T 32 R F 3 (ELE)	F43ILL/2	90		None	1000	180.0	0.0	0.0	0.00 \$	60.00	\$20.00	#[5.5 #DIV/0! 3.3
Section Sect	35LED Room 5413: 5th Floo	1 T 32 R F 3 (ELE)	F43ILL/2	90			2400 216	3.0 1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	000		171.0 342.0		0.0	6.57 \$	128.25		19.5	16.5 8.2
The color of the	35LED Copy Room - Room 5414: 5th Floo	1 T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2125 19		T 32 R F 3 (ELE)	F43ILL/2	90	0.1		2125 1000	191.3	0.0	0.0 \$ 0.0 \$			\$0.00 \$0.00	#[#DIV/0! #DIV/0!
March	35LED Room 5409: 5th Floo		F43ILL/2 F43ILL/2	90 90					T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90		OCC	1900 3000		180.0 0.0	0.0 \$ 0.0 \$			\$20.00 \$0.00		4.1 #DIV/0!
March	35LED Room 5407: 5th Floo	2 T 32 R F 3 (ELE)	F43ILL/2	90			2400 432	2.0 2	T 32 R F 3 (ELE)	F43ILL/2	- 00		00C	1900 1900				\$13.14	128.25		9.8	8.2 8.2
The contract 1 1 1 1 1 1 1 1 1	40LED Closet: 4th Floor	1 T 32 R F 2 (ELE)	F42LL		0.1	SW	1000 60	0.0 1	T 32 R F 2 (ELE)	F42LL		0.1		1000	60.0	460.0	0.0	\$0.00	0.00	\$0.00	#[1.6 #DIV/0!
March Marc	40LED Closet: 4th Floor	1 T 32 R F 2 (ELE)	F42LL	60		SW	1000 60	0.0 1	T 32 R F 2 (ELE)	F42LL	60		None	1000	60.0	0.0		\$0.00	0.00		#[#DIV/0! #DIV/0! #DIV/0!
March Property P	40LED Ladies' Room: 4th Floo	3 T 32 R F 2 (ELE)	F42LL			SW	1000 180	0.0 3	T 32 R F 2 (ELE)	F42LL				1000	180.0	0.0 3,150.0		\$0.00	0.00		#[#DIV/0! 0.2
March Start Property Prop	168 Room 4400: 4th Floo	2 T 32 R F 3 (ELE) 42 W 40 C F 2 (MAG)	F43ILL/2 F42SS	90 94			2400 432 2400 9,475	2.0 2 5.2 42	T 32 R F 3 (ELE) W 40 C F 2 (MAG)	F43ILL/2 F42SS	90 94	0.2 3.9	000 000	1900 1900	342.0 7,501.2	90.0 1,974.0			128.25 128.25	\$20.00 \$20.00	9.8 0.4	8.2 0.4
Column C	35LED Room 4412: 4th Floo	2 T 32 R F 3 (ELE)	F43ILL/2	90 90	0.2	SW	2400 432	2.0 2	T 32 R F 3 (ELE)	F43ILL/2	90 90	0.2	00C	1900	342.0	90.0	0.0	\$13.14	128.25		9.8	4.1 8.2
March Marc	61LED Room 4413: 4th Floo	2 T 34 R F 3 (MAG)	F43EE	115		SW	2400 552	2.0 2	T 34 R F 3 (MAG)	F43EE	115			1900	437.0			\$16.79	128.25		7.6	8.2 6.4
Manuscript Man	168 Staff TR: 4th Floor	1 W 40 C F 2 (MAG)	F42SS	94	0.2	SW	1000 94	1.0	W 40 C F 2 (MAG) W 40 C F 2 (MAG)	F42SS	94 94	0.2	None	1000	94.0	0.0	0.0 \$	50.00 \$ 50.00 \$	0.00 0.00	\$0.00 \$0.00	#[#DIV/0! #DIV/0! #DIV/0!
Mont	168 Reception: 4th Floo	4 W 40 C F 2 (MAG)	F42SS	94	0.4	SW	2912 1,094	1.9 4	W 40 C F 2 (MAG)	F42SS	94	0.4			1,094.9	0.0	0.0 \$	\$0.00 \$ \$0.00 \$	0.00 3128 25	\$0.00	#0	#DIV/0! 1.8
March Secretar S	168 Room 4102: 4th Floo	3 W 40 C F 2 (MAG)	F42SS	94 94	0.3	SW	2400 676	3.8	W 40 C F 2 (MAG)	F42SS	94 94	0.3	OCC	1900 1900	535.8		0.0 \$ 0.0 \$	\$20.59 \$	128.25	\$20.00 \$20.00		5.3
Mathematics	35LED Room 4103: 4th Floo		F43ILL/2	90 90	1.2	SW SW	2400 2,800	3.0 13	T 32 R F 3 (ELE)	F43ILL/2	90 90	1.2 2.3	OCC	1900 1000	2,223.0 2,250.0		0.0	\$85.41	128.25	\$20.00 \$20.00	1.5	1.3
Mail Sport Off Off Off Off Off Off Off Off Off Of	35LED Room 4205: 4th Floo	4 T 32 R F 3 (ELE)	F43ILL/2	94 90		SW	1200 902 2400 864				94 90		00C	1000 1900		150.4 180.0	0.0 \$			\$20.00 \$20.00	5.8	4.9
	35LED Room 4207: 4th Floo	4 T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400 864	1.0 4	T 32 R F 3 (ELE)	F43ILL/2	90 90	0.4	000	1900	684.0	180.0	0.0	\$26.28 \$	128.25	\$20.00 \$20.00	4.9	4.1
No. 021 of Fig. 4 Fig. Fig. 5 Fig.	35LED Room 4209: 4th Floo	2 T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400 433	2.0 2	T 32 R F 3 (ELE)	F43ILL/2	90 94	0.2	000	1900	342.0	90.0	0.0 \$	\$13.14	128.25	\$20.00 \$20.00	9.8	4.1 8.2 3.9
Mail Sept 1775	35LED Room 4210: 4th Floo 35LED Closet 4201: 4th Floor	4 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.4	SW	2400 864 1000 180	1.0 4	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.4	OCC None	1900	684.0		0.0 \$	\$26.28 \$ \$0.00 \$	5128.25 50.00	\$20.00 \$0.00	4.9 #E	4.1 #DIV/0!
19	168 Staff MTR: 4th Floor 168 Staff WTR: 4th Floor	1 W 40 C F 2 (MAG) 1 W 40 C F 2 (MAG)	F42SS F42SS		0.1 0.1	SW SW	1000 94 1000 94	i.0 1	W 40 C F 2 (MAG) W 40 C F 2 (MAG)	F42SS F42SS		0.1	None		94.0	0.0	0.0 \$ 0.0 \$	\$0.00 \$ \$0.00 \$	0.00 0.00	\$0.00 \$0.00	#0	#DIV/0! #DIV/0!
Section Property	35LED Child Health: 4th Floo	15 W 40 C F 2 (MAG) 24 T 32 R F 3 (ELE)	F42SS F43ILL/2	90	2.2	SW	2400 5,184	i.0 15 i.0 24	W 40 C F 2 (MAG) T 32 R F 3 (ELE)	F43ILL/2	94 90	2.2	00C	1900	4,104.0		0.0	\$102.93 \$ \$157.68 \$	128.25 128.25	\$20.00 \$20.00	1.2 0.8	0.7
Section Sect	35LED Room 4306: 4th Floo	2 T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400 432	2.0 2	T 32 R F 3 (ELE)	F43ILL/2		0.2		1900	342.0		0.0	\$13.14	128.25		9.8	8.2 8.2
Section Sect	35LED Room 4308: 4th Floo	2 T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400 432	2.0 2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	OCC	1900	342.0	90.0	0.0	\$13.14	128.25	\$20.00	9.8	8.2 8.2 5.5
SALED Room 4312-40 FRom 1512-40 FROM 1513-40 FROM 1512-40 FROM 151	35LED Room 4310: 4th Floo	2 T 32 R F 3 (ELE)	F43ILL/2		0.2	SW	2400 432	2.0 2	T 32 R F 3 (ELE)	F43ILL/2	90 90		OCC	1900	342.0	90.0	0.0	\$13.14	128.25	\$20.00	9.8	8.2 8.2
35LED Room 4315: 4h Floo 2 T 32 R F 3 (ELE) F 43LL/2 90 0.2 SW 2400 4320 47 32 R F 3 (ELE) F 43LL/2 90 0.4 50.6 50.0	35LED Room 4312: 4th Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2		0.2	SW	2400 432	2.0 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2	90 90			1900	342.0	90.0	0.0	\$13.14	128.25	\$20.00	9.8	8.2 8.2
35LED Room 4316: 4h Floor 3 T32 R F 3 (ELE) F43LL/2 90 0.3 SW 2400 648.0 3 T32 R F 3 (ELE) F43LL/2 90 0.1 None 1000 91.0 0.0 91.0 91.0 0.0 91	35LED Room 4314: 4th Floo 35LED Room 4315: 4th Floo	2 T 32 R F 3 (ELE) 4 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2	SW	2400 432 2400 864	2.0 2 4.0 4	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2		0.2	OCC	1900 1900	342.0 684.0	90.0	0.0 \$	\$13.14 \$ \$26.28 \$	128.25 128.25	\$20.00 \$20.00	9.8 4.9	8.2 4.1
SLED Room 4301:4 MF Roo 4 T32 R F 3 (ELE) F43ILL/2 90 0.4 SW 2400 884.0 4 T32 R F 3 (ELE) F43ILL/2 90 0.4 OCC 1900 884.0 180.0 0.0 \$26.28 \$128.25 \$20.00 4.9	35LED Room 4318: 4th Floo 35LED Room 4316: 4th Floo	3 T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400 432 2400 648	2.0 2 3.0 3	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2	90 90	0.3	OCC	1900	342.0 513.0	90.0 135.0	0.0 \$ 0.0 \$	\$13.14 \$ \$19.71 \$	5128.25 5128.25		6.5	8.2 5.5
Section Sect		1 T 32 R F 3 (ELE)	F43ILL/2	90	0.1					F43ILL/2	90	0.1	None None	1000 1000	90.0	0.0	0.0 \$ 0.0 \$			\$0.00 \$0.00	#[#DIV/0! #DIV/0!
See Day Section Sect	35LED Room 4301: 4th Floo	4 T 32 R F 3 (ELE)	F43ILL/2		0.4				T 32 R F 3 (ELE)	F43ILL/2	90 90	0.4	000		684.0						4.9	4.1 4.1 #DIV/OI
35LED 3MP - Room 3104: 3rd Floo 4 T32 R F 3 (ELE) F43ILL/2 90 0.4 SW 2400 884.0 4 T32 R F 3 (ELE) F43ILL/2 90 0.5 SC2.8 S128.25 S20.00 4.9 S15.8 S128.25 S20.00 S15.	35LED Corridor Lighting: 4th Floo	1 T 32 R F 3 (ELE)			0.1	Breaker	2280 205	5.2 1	T 32 R F 3 (ELE)	F43ILL/2	90 an		None	2280	205.2	0.0	0.0 \$	\$0.00	50.00	\$0.00 \$0.00 \$20.00	#[#DIV/0! #DIV/0! 2.1
3SLED Classroom #1: 3rd Floo 6 T 32 R F 3 (ELE) F43ILL/2 90 0.5 SW 2400 1.286.0 6 T 32 R F 3 (ELE) F43ILL/2 90 0.5 OCC 1800 972.0 324.0 0.0 \$47.30 \$128.25 \$20.00 2.7 \$152 R F 3 (ELE) F43ILL/2 90 1.9 OCC 1800 1.9 SW 2400 4.586.0 2.1 T 32 R F 3 (ELE) F43ILL/2 90 1.9 OCC 1800 1.9	35LED 3MP - Room 3104: 3rd Floo	4 T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400 864	1.0 4	T 32 R F 3 (ELE)	F43ILL/2	90 90		OCC	1900 1900 1800	684.0	180.0		\$26.28	128.25	\$20.00 \$20.00	4.9	4.1
168 Room 3104: 3rd Floo 1 W 40 CF 2 (MAG) F42SS 94 0.1 SW 2400 225.6 1 W 40 CF 2 (MAG) F52SS 94 0.1 OCC 1900 178.6 47.0 0.0 58.68 5128.25 520.00 18.7 SB.0 58.6 5128.75 52.0	35LED Classroom #1: 3rd Floo 35LED Room 3104 : 3rd Floo	6 T 32 R F 3 (ELE) 21 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.5	SW	2400 1,296	3.0 6 3.0 21	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2	90	0.5	OCC	1800 1900	972.0	324.0	0.0	\$47.30 \$	128.25	\$20.00 \$20.00	2.7	2.3
35LED Bus Cardis: 3rd Floor 28 T 32 R F 3 (ELE) F43ILL/2 90 2.5 SW 2912 7.338.2 28 T 32 R F 3 (ELE) F43ILL/2 90 2.5 None 2912 7.338.2 0.0 0.0 \$0.00	168 Room 3104: 3rd Floo 35LED Staff TR: 3rd Floor	1 W 40 C F 2 (MAG) 1 T 32 R F 3 (ELE)	F42SS F43ILL/2	94 90	0.1	0,,	2400 225 1000 90	5.6 1 0.0 1	W 40 C F 2 (MAG) T 32 R F 3 (ELE)	F42SS F43ILL/2	94 90	0.1 0.1		1900 1000	178.6 90.0	47.0 0.0	0.0 \$ 0.0 \$	\$0.00	0.00	\$20.00 \$0.00	18.7 #E	15.8 #DIV/0!
NOOTH 36-74 STEELE F431LL/2 90 0.2 SW 2400 432.0 2 T32 R F3 (ELE) F431LL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00 9.8	168 Bus Cards: 3rd Floor	10 W 40 C F 2 (MAG)	F42SS	90 94	2.5 0.9	SW	2912 7,338 2912 2,733	3.2 28 7.3 10	W 40 C F 2 (MAG)	F42SS	90 94	2.5 0.9		2912 2912	7,338.2 2,737.3	0.0	0.0 \$ 0.0 \$	\$0.00	0.00	\$0.00 \$0.00		#DIV/0! #DIV/0!
35LED Room 3236: 3rd Floo 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 SW 2400 432.0 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00 9.8 35LED Room 3236: 3rd Floo 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00 9.8 35LED Room 3236: 3rd Floo 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00 9.8 35LED Room 3236: 3rd Floo 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00 9.8 35LED Room 3236: 3rd Floo 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00 9.8 35LED ROOM 3236: 3rd Floo 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00 9.8 35LED ROOM 3236: 3rd Floo 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00 9.8 35LED ROOM 3236: 3rd Floo 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00 9.8 35LED ROOM 3236: 3rd Floo 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00 9.8 35LED ROOM 3236: 3rd Floo 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00 9.8 35LED ROOM 3236: 3rd Floo 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00 9.8 35LED ROOM 3236: 3rd Floo 2 T32 R F 3 (ELE) F43ILL/2 90 0.2 OCC 1900 342.0 90.0 0.0 \$13.14 \$128.25 \$20.00	35LED Room 3235: 3rd Floo	2 T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400 433 2400 433	2.0 2	T 32 R F 3 (ELE)	F43ILL/2	90		OCC			90.0		\$13.14	128.25		9.8	8.2 8.2

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	Í		EXISTING CONDIT	TIONS						RETROFIT	CONDITIONS					(COST & SAVINGS A	ANALYSIS		
				Watts per							Watts per		Retrofit		Annual kWh				NJ Smart Start Simple Payback Lighting With Out	*
	Area Description If the location - Room number/Room	No. of Fixtures Standard Fixture Code No. of fixtures Lighting Fixture Code	Fixture Code Code from Table of Standard	Fixture Value from	kW/Space E (Watts/Fixt) * (Fixt Pro	xist Control Annu e-inst. Estima	ted annual (kW/space) *	Number of Fixtures No. of fixtures after	Standard Fixture Code "Lighting Fixture Code" Example	Fixture Code Code from Table of	Fixture Value from	kW/Space (Watts/Fixt) *		nual Hours Annual kWh mated (kW/space) *	Saved (Original Annual			Retrofit Cost ost for	Incentive Incentive Length of time	Simple Payback Length of time for
name: Floo	or number (if applicable)	before the retrofit	Fixture Wattages	Table of Standard	No.) co	ntrol device hours to usage			2T 40 R F(U) = 2'x2' Troff 40 w Recess. Floor 2 lamps U shape	Standard Fixture Wattages	Table of Standard	(Number of Fixtures)		ual hours (Annual Hours	kWh) - (Retrofit Annual kWh)	kW) - (Retrofit Annual kW)		novations to ghting system	for renovations cost to be	renovations cost to be recovered
				Fixture Wattages							Fixture Wattages		grou	ир			Ĭ	,	recovered	
	om 3237: 3rd Floo om 3238: 3rd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 0.2	SW :	2400 432 2400 432		T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 0.2	000	1900 342.0 1900 342.0	90.0 90.0			128.25 128.25	\$20.00 9.8 \$20.00 9.8	8.2 8.2
35LED Room	om 3239: 3rd Floo om 3240: 3rd Floo	2 T 32 R F 3 (ELE) 5 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 0.5	SW	2400 432 2400 1,080	.0 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 0.5	00C	1900 342.0 1900 855.0	90.0 225.0		13.14 \$1:	128.25 128.25	\$20.00 9.8 \$20.00 3.9	8.2 3.3
	Gitchen: 3rd Floor om 3212: 3rd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 0.2	SW SW	3000 540 2400 432	1.0 2 1.0 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 0.2	None OCC	3000 540.0 1900 342.0	0.0 90.0	0.0 \$0 0.0 \$1	0.00 \$0. 13.14 \$1:).00 128.25	\$0.00 \$20.00 9.8	#DIV/0! 8.2
35LED Room	om 3211: 3rd Floo om 3210: 3rd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 0.2	SW :	2400 432 2400 432	2.0 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 0.2	00C	1900 342.0 1900 342.0	90.0		13.14 \$1: 13.14 \$1:	128.25 128.25	\$20.00 9.8 \$20.00 9.8	8.2 8.2
35LED Room	om 3214: 3rd Floo om 3209: 3rd Floo	3 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.3 0.2		2400 648 2400 432		T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.3 0.2	000 000	1900 513.0 1900 342.0	135.0 90.0			128.25 128.25	\$20.00 6.5 \$20.00 9.8	5.5 8.2
35LED Roo	staff TR: 3rd Floor om 3213: 3rd Floo	1 T 32 R F 3 (ELE) 5 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.1 0.5	SW :	1000 90 2400 1,080	1.0 5	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.1 0.5	None OCC	1000 90.0 1900 855.0	0.0 225.0			128.25	\$0.00 \$20.00 3.9	#DIV/0! 3.3
35LED Room	dor Lighting: 3rd Floo om 3208: 3rd Floo	16 W 40 C F 2 (MAG) 2 T 32 R F 3 (ELE)	F42SS F43ILL/2	94 90	1.5 0.2		2280 3,429 2400 432 2400 432	2.0	W 40 C F 2 (MAG) T 32 R F 3 (ELE)	F42SS F43ILL/2	94 90	1.5 0.2	None OCC	2280 3,429.1 1900 342.0	90.0	0.0 \$1	13.14 \$1:).00 128.25	\$0.00 \$20.00 9.8 \$20.00 9.8	#DIV/0! 8.2
40LED V	om 3207: 3rd Floo WTR: 3rd Floor	2 T 32 R F 3 (ELE) 1 T 32 R F 2 (ELE)	F43ILL/2 F42LL	90 60	0.2		1000 60	1.0 2	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	90 60	0.2 0.1	OCC None	1900 342.0 1000 60.0	90.0	0.0 \$1		128.25	\$20.00 9.8 \$0.00	8.2 #DIV/0!
35LED Room	MTR: 3rd Floor om 3206: 3rd Floo	1 T 32 R F 2 (ELE) 2 T 32 R F 3 (ELE)	F42LL F43ILL/2	60 90	0.1	SW :	1000 60 2400 432	1.0 2	T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	60 90	0.1	None OCC	1000 60.0 1900 342.0 1900 855.0	90.0	0.0 \$0	0.00 \$0 13.14 \$1).00 128.25	\$0.00 \$20.00 9.8 \$20.00 3.9	#DIV/0! 8.2
35LED Kit	om 3205: 3rd Floo (itchen: 3rd Floor	5 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE) 1 T 32 R F 3 (FLF)	F43ILL/2 F43ILL/2	90	0.5	SW :	2400 1,080 3000 270		T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.5 0.1	None	1900 855.0 3000 270.0	225.0	0.0 \$3	0.00 \$0	128.25	0.00	3.3 #DIV/0!
40LED V	om 3203: 3rd Floo WTR: 3rd Floor eception: 3rd Floo	1 T 32 R F 2 (ELE)	F43ILL/2 F42LL	60	0.1		2400 216 1000 60	1.0 1	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	60	0.1	None	1900 171.0 1000 60.0	0.0	0.0 \$6	0.00 \$0	128.25	\$20.00 19.5 \$0.00	16.5 #DIV/0!
35LED Rec	eception: 3rd Floo	1 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.1		2912 262 2912 524	.1 1	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.1	None None	2912 262.1 2912 524.2	0.0	0.0 \$0		0.00	\$0.00 \$0.00	#DIV/0! #DIV/0!
22 Lo	eception: 3rd Floo Lobby: 3rd Floo dor Lighting: 3rd Floo	1 CFQ/18/2 RC 5 1T 34 R F 4 (MAG) 2 T 32 R F 3 (ELE)	CFQ18/2 F44EE	144	0.0	SW :	2912 131 2912 2,096 2280 410		CFQ/18/2 RC 1T 34 R F 4 (MAG) T 32 R F 3 (ELE)	CFQ18/2 F44EE	144	0.0	None None	2912 131.0 2912 2,096.6	0.0	0.0 \$0		0.00	60.00 60.00	#DIV/0! #DIV/0! #DIV/0!
274LED Corrido 274LED Lo	dor Lighting: 3rd Floo Lobby: 3rd Floo	15 CFQ/18/2 RC 7 CFQ/18/2 RC	F43ILL/2 CFQ18/2 CFQ18/2	45 45	0.7		2280 1,539 2912 917	1.0 15	CFQ/18/2 RC CFQ/18/2 RC	F43ILL/2 CFQ18/2 CFQ18/2	45 45	0.7	None None None	2280 410.4 2280 1,539.0 2912 917.3	0.0	0.0 \$0	0.00 \$0	0.00	50.00 50.00	#DIV/0! #DIV/0!
35LED C	Closet: 3rd Floor Closet: 3rd Floor	1 T32 R F 3 (ELE) 1 T32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.1 0.1	SW	1000 90	.0 1	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.1	None None	1000 90.0 1000 90.0	0.0	0.0 \$0	0.00 \$0	0.00	50.00 50.00	#DIV/0! #DIV/0!
35LED C	Closet: 3rd Floor Closet: 3rd Floor	1 T32 R F 3 (ELE) 1 T32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.1	SW	1000 90 1000 90	1.0 1	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.1	None None	1000 90.0 1000 90.0	0.0	0.0 \$0	0.00 \$0 0.00 \$n	0.00	\$0.00 \$0.00	#DIV/0! #DIV/0!
40LED V 40LED N	WTR: 3rd Floor MTR: 3rd Floor	3 T 32 R F 2 (ELE) 3 T 32 R F 2 (ELE)	F42LL F42LL	60 60	0.2	SW	1000 180 1000 180		T 32 R F 2 (ELE) T 32 R F 2 (ELE)	F42LL F42LL	60 60	0.2	None None	1000 180.0 1000 180.0	0.0	0.0 \$0 0.0 \$0		0.00	\$0.00 \$0.00	#DIV/0! #DIV/0!
274LED Corrido 35LED C	dor Lighting: 3rd Floo Closet: 3rd Floor	5 CFQ/18/2 RC 1 T 32 R F 3 (ELE)	CFQ18/2 F43ILL/2	45 90	0.2 0.1	SW :	2280 513 1000 90		CFQ/18/2 RC T 32 R F 3 (ELE)	CFQ18/2 F43ILL/2	45 90	0.2 0.1	None None	2280 513.0 1000 90.0	0.0	0.0 \$0	0.00 \$0	0.00	\$0.00 \$0.00	#DIV/0! #DIV/0!
35LED Root 35LED Closet -	om 3101: 3rd Floo - Room 3101: 3rd Floo	9 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.8 0.1	SW	2400 1,944 1000 90	.0 1	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.8 0.1	OCC None	1900 1,539.0 1000 90.0	405.0 0.0	0.0 \$0	0.00 \$0	0.00	\$20.00 2.2 \$0.00	1.8 #DIV/0!
61LED Room	Kitchen: 3rd Floor om 3103: 3rd Floo	4 T 32 R F 3 (ELE) 2 T 34 R F 3 (MAG)	F43ILL/2 F43EE	90 115	0.4 0.2	SW	3000 1,080 2400 552	2.0	T 32 R F 3 (ELE) T 34 R F 3 (MAG)	F43ILL/2 F43EE	90 115	0.4 0.2	None OCC	3000 1,080.0 1900 437.0	0.0 115.0	0.0 \$1	16.79 \$1:	128.25	\$0.00 \$20.00 7.6	#DIV/0! 6.4
168 Corrido	om 3102: 3rd Floo dor Lighting: 3rd Floo	2 T 34 R F 3 (MAG) 10 W 40 C F 2 (MAG)	F43EE F42SS	115 94	0.2 0.9	Breaker	2400 552 2280 2,143	1.2 10	T 34 R F 3 (MAG) W 40 C F 2 (MAG)	F43EE F42SS	115 94	0.2 0.9	OCC None	1900 437.0 2280 2,143.2	115.0 0.0	0.0 \$0	0.00 \$0	128.25	\$20.00 7.6 \$0.00	6.4 #DIV/0!
35LED Room	om 3312: 3rd Floo om 3311: 3rd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2	SW :	2400 432 2400 432	2.0 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.2	000 000	1900 342.0 1900 342.0	90.0 90.0	0.0 \$1	13.14 \$1:	128.25	\$20.00 9.8 \$20.00 9.8	8.2 8.2
40LED V	om 3310: 3rd Floo WTR: 3rd Floor om 3309: 3rd Floo	3 T 32 R F 3 (ELE) 1 T 32 R F 2 (ELE)	F43ILL/2 F42LL	90 60	0.3	SW		.0 1	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	90 60	0.3	None	1900 513.0 1000 60.0	135.0	0.0 \$0	0.00 \$0	128.25	\$20.00 6.5 \$0.00	5.5 #DIV/0!
35LED Room	om 3308: 3rd Floo om 3307: 3rd Floo	2 T 32 R F 3 (ELE) 3 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.2	SW :	2400 432 2400 648	3.0	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.2	000	1900 342.0 1900 513.0	135.0	0.0 \$1	19.71 \$1:	128.25 128.25	\$20.00 9.8 \$20.00 6.5	8.2 5.5
35LED Roo	om 3300: 3rd Floo om 3300: 3rd Floo om 3300: 3rd Floo	86 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 7.7	SW :	2400 432 2400 18,576	6.0 86	T 32 R F 3 (ELE) T 32 R F 3 (ELE) W 40 C F 2 (MAG)	F43ILL/2 F43ILL/2	90	7.7 0.3	000	1900 342.0 1900 14,706.0 1900 535.8	90.0 3,870.0 141.0	0.0 \$5	565.02 \$1:	128.25 128.25	\$20.00 9.8 \$20.00 0.2	8.2 0.2
40LED	TR: 3rd Floor TR: 3rd Floor	3 W 40 C F 2 (MAG) 1 T 32 R F 2 (ELE) 1 T 32 R F 2 (ELE)	F42SS F42LL F42LL	94 60	0.3 0.1 0.1	SW	2400 676 1000 60 1000 60	.0 1	T 32 R F 2 (ELE) T 32 R F 2 (ELE)	F42SS F42LL F42LL	60	0.3	None None	1000 535.8 1000 60.0 1000 60.0	0.0		0.00 \$0	128.25	\$20.00 6.2 \$0.00	5.3 #DIV/0! #DIV/0!
35LED Roo	om 3317: 3rd Floo om 3318: 3rd Floo	3 T 32 R F 3 (ELE) 3 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.3	SW :	2400 648 2400 648		T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.3	000	1900 513.0 1900 513.0	135.0 135.0	0.0 \$1	19.71 \$1:	128.25 128.25	\$20.00 6.5 \$20.00 6.5	5.5
35LED Room	om 3319: 3rd Floo om 3320: 3rd Floo	2 T 32 R F 3 (ELE) 5 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.2	SW	2400 432 2400 1,080	2.0	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.2	OCC	1900 342.0 1900 855.0	90.0	0.0 \$1 0.0 \$3	13.14 \$1:	28.25 128.25	\$20.00 9.8 \$20.00 3.9	8.2
35LED Corrido	dor Lighting: 2nd Floo	4 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.4 0.2		2280 820 2280 410		T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.4	None None	2280 820.8 2280 410.4	0.0	0.0 \$0	0.00 \$0.00	0.00	\$0.00 \$0.00	#DIV/0! #DIV/0!
	dor Lighting: 2nd Floo Closet: 2nd Flooi Closet: 2nd Flooi	1 T 32 R F 2 (ELE) 1 T 32 R F 2 (ELE)	F42LL F42LL	60 60	0.1 0.1		1000 60 1000 60	1.0 1	T 32 R F 2 (ELE) T 32 R F 2 (ELE)	F42LL F42LL	60 60	0.1 0.1	None None	1000 60.0 1000 60.0	0.0	0.0 \$0	0.00 \$0	0.00	50.00 50.00	#DIV/0! #DIV/0!
40LED CI	Closet: 2nd Flooi Closet: 2nd Flooi	1 T 32 R F 2 (ELE) 1 T 32 R F 2 (ELE)	F42LL F42LL	60 60	0.1 0.1	SW	1000 60 1000 60	i.0 1	T 32 R F 2 (ELE) T 32 R F 2 (ELE)	F42LL F42LL	60 60	0.1 0.1	None None	1000 60.0 1000 60.0	0.0	0.0 \$0	0.00 \$0.00	0.00	\$0.00 \$0.00	#DIV/0! #DIV/0!
40LED W	MTR: 2nd Floor WTR: 2nd Floor	1 T 32 R F 2 (ELE) 1 T 32 R F 2 (ELE)	F42LL F42LL	60 60	0.1 0.1	SW	1000 60 1000 60	1.0 1	T 32 R F 2 (ELE) T 32 R F 2 (ELE)	F42LL F42LL	60 60	0.1 0.1	None None	1000 60.0 1000 60.0	0.0	0.0 \$0 0.0 \$0	0.00 \$0	0.00	\$0.00 \$0.00	#DIV/0! #DIV/0!
35LED Unemploy	om 2065: 2nd Floo oyment Office: 2nd Floo	11 T 32 R F 3 (ELE) 111 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	1.0	SW	2400 2,376 2400 23,976		T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	1.0	000	1900 1,881.0 1900 18,981.0	495.0 4,995.0	0.0 \$7 0.0 \$7		128.25 128.25	\$20.00 1.8 \$20.00 0.2	1.5 0.1
35LED Corrido	taff TR: 2nd Floor dor Lighting: 2nd Floo	1 T32 R F 2 (ELE) 7 T32 R F 3 (ELE) 2 T32 R F 3 (FLF)	F42LL F43ILL/2 F43ILL/2	90	0.1	Breaker :	1000 60 2280 1,436		T 32 R F 2 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	90	0.1	None None	1000 60.0 2280 1,436.4	0.0	0.0 \$0	4.0	0.00	\$0.00 \$0.00	#DIV/0! #DIV/0!
35LED Room	om 2138: 2nd Floo om 2139: 2nd Floo om 2140: 2nd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	90 90	0.2	SW :	2400 432 2400 432 2400 432	.0 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	90	0.2	000	1900 342.0 1900 342.0 1900 342.0	90.0	0.0 \$1	13.14 \$1:	128.25 128.25 128.25	\$20.00 9.8 \$20.00 9.8 \$20.00 9.8	8.2 8.2 8.2
35LED Room	om 2141: 2nd Floo (itchen: 2nd Floor	2 T 32 R F 3 (ELE) 9 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.2 0.2 0.8	SW :	2400 432 2400 432 3000 2,430	2.0	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.2 0.2 0.8	OCC None	1900 342.0 1900 342.0 3000 2,430.0	90.0		13.14 \$1:	128.25	\$20.00 9.8 \$20.00 9.8	8.2 #DIV/0!
	dor Lighting: 2nd Floo WTR: 2nd Floor	5 T 32 R F 3 (ELE) 2 T 32 R F 2 (ELE)	F43ILL/2 F42LL	90	0.5 0.1	Breaker	2280 1,026 1000 120	5.0	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	90	0.5 0.1		2280 1,026.0 1000 120.0	0.0	0.0 \$0	0.00 \$0	0.00	50.00 50.00	#DIV/0! #DIV/0!
35LED Room	om 2142: 2nd Floo om 2143: 2nd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2	SW	2400 432 2400 432	2.0 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.2	None None	2400 432.0 2400 432.0	0.0	0.0 \$0	0.00 \$0	0.00	50.00 50.00	#DIV/0! #DIV/0!
35LED Room	MTR: 2nd Floor om 2144: 2nd Floo	1 T 32 R F 2 (ELE) 2 T 32 R F 3 (ELE)	F42LL F43ILL/2	60 90	0.1 0.2	SW SW	1000 60 2400 432	1.0 1	T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	60 90	0.1 0.2	None OCC	1000 60.0 1900 342.0	0.0 90.0	0.0 \$0 0.0 \$1	0.00 \$0 13.14 \$1		\$0.00 \$20.00 9.8	#DIV/0! 8.2
35LED Roor 35LED Roor	om 2145: 2nd Floo om 2146: 2nd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 0.2	SW :	2400 432 2400 432	1.0 2 1.0 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 0.2	00C	1900 342.0 1900 342.0	90.0 90.0	0.0 \$1	13.14 \$1:		\$20.00 9.8 \$20.00 9.8	8.2 8.2
35LED Roor 35LED Roor	om 2147: 2nd Floo om 2148: 2nd Floo	3 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.3 0.2	SW :	2400 648 2400 432	1.0 3	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.3 0.2	000 000	1900 513.0 1900 342.0	135.0 90.0		19.71 \$1:	128.25	\$20.00 6.5 \$20.00 9.8	5.5 8.2
35LED Room	n - Room 2102: 2nd Floo om 2149: 2nd Floo	8 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.7	SW :	2912 2,096 2400 432	.0 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.7	OCC	2912 2,096.6 1900 342.0	90.0		13.14 \$1:		\$0.00 \$20.00 9.8	#DIV/0! 8.2
35LED Room	om 2150: 2nd Floo om 2151: 2nd Floo	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	90 90	0.2 0.2 0.2		2400 432 2400 432 2400 432		T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	90 90	0.2	000 000	1900 342.0 1900 342.0 1900 342.0	90.0	0.0 \$1	13.14 \$1:	128.25	\$20.00 9.8 \$20.00 9.8 \$20.00 9.8	8.2 8.2 8.2
40LED W	om 2152: 2nd Floo WTR: 2nd Floor om 2153: 2nd Floo	2 T 32 R F 3 (ELE) 1 T 32 R F 2 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F42LL F43ILL/2	90 60	0.2 0.1 0.2	SW	2400 432 1000 60 2400 432	.0 2 .0 1 .0 2	T 32 R F 3 (ELE) T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F42LL F43ILL/2	90 60	0.2 0.1 0.2	None OCC		90.0	0.0 \$0	0.00 \$0	128.25 0.00 128.25	\$20.00 9.8 \$0.00 \$20.00 9.8	8.2 #DIV/0! 8.2
35LED Room	om 2153: 2nd Floo om 2154: 2nd Floo MTR: 2nd Floor	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE) 1 T 32 R F 2 (ELE)	F43ILL/2 F43ILL/2 F42LL	90 90 60	0.2 0.2 0.1	SW :	2400 432 2400 432 1000 60		T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F43ILL/2 F42LL	90	0.2 0.2	OCC OCC None	1900 342.0 1900 342.0 1000 60.0	90.0	0.0 \$1	13.14 \$1:	128.25 128.25	\$20.00 9.8 \$20.00 9.8 \$0.00	8.2 8.2 #DIV/0!
35LED Room	om 2104: 2nd Floo outer Room: 2nd Floo	8 T 32 R F 3 (ELE) 50 T 32 R F 3 (ELE)	F42LL F43ILL/2 F43ILL/2	90	0.1 0.7 4.5	SW	2400 1,728 1000 4,500	8 0.0	T 32 R F 2 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 gn	0.1 0.7 4.5	OCC None	1900 1,368.0 1000 4,500.0	360.0	0.0 \$5			\$0.00 \$20.00 \$0.00	#DIV/0! 2.1 #DIV/0!
35LED Room	om 2024: 2nd Floo Closet: 2nd Floo	15 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	1.4	SW :	2400 3,240 1000 90		T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	1.4	OCC None	1900 4,500.0 1900 2,565.0 1000 90.0	675.0 0.0	0.0 \$9	98.55 \$1: 0.00 \$0	128.25	\$20.00 \$20.00 \$0.00	#DIV/0! 1.1 #DIV/0!
35LED Roor 35LED Roor	om 2072: 2nd Floo om 2071: 2nd Floo	3 T32 R F 3 (ELE) 4 T32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.3	SW :	2400 648		T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.3	OCC	1900 513.0 1900 684.0	135.0 180.0	0.0 \$1		128.25 128.25	\$20.00 6.5 \$20.00 4.9	5.5 4.1
40LED Roor	TR: 2nd Floor om 2070: 2nd Floo	1 T 32 R F 2 (ELE) 9 T 32 R F 3 (ELE)	F42LL F43ILL/2	90	0.1		1000 60	i.0 1	T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	90	0.1	None OCC	1000 60.0 1900 1,539.0	0.0 405.0	0.0 \$0	0.00 \$0. 59.13 \$1:).00 128.25	0.00	#DIV/0! 1.8
35LED Roor 35LED Roor	om 2069: 2nd Floo om 2067: 2nd Floo	15 T 32 R F 3 (ELE) 12 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	1.4	SW	2400 3,240 2400 2,592	1.0 15 1.0 12	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	1.4	OCC	1900 2,565.0 1900 2,052.0	675.0 540.0		98.55 \$1:	128.25 128.25	\$20.00 2.2 \$20.00 1.3 \$20.00 1.6	1.1 1.4
35LED O	TR: 2nd Floor Office: 1st Floor	1 T 32 R F 2 (ELE) 4 T 32 R F 3 (ELE)	F42LL F43ILL/2	60 90	0.1 0.4	SW :	1000 60 2400 864	.0 4	T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	60 90	0.1 0.4	None OCC	1000 60.0 1900 684.0	0.0 180.0	0.0 \$0 0.0 \$2).00 128.25	\$0.00 \$20.00 4.9	#DIV/0! 4.1
35LED O	Office: 1st Floor Office: 1st Floor	6 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.5 0.1	SW	2400 1,296 2400 216	i.0 1	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.5 0.1	OCC OCC	1900 1,026.0 1900 171.0	270.0 45.0	0.0 \$3 0.0 \$6	5.57 \$1:	128.25 128.25	\$20.00 3.3 \$20.00 19.5	2.7 16.5
35LED Welfa	fare Office: 1st Floor fare Office: 1st Floor	22 W 40 C F 2 (MAG) 97 T 32 R F 3 (ELE)	F42SS F43ILL/2	94 90	2.1 8.7	SW :	2400 4,963 2400 20,952	2.0 97	W 40 C F 2 (MAG) T 32 R F 3 (ELE)	F42SS F43ILL/2	94 90	2.1 8.7	00C	1900 3,929.2 1900 16,587.0	1,034.0 4,365.0		37.29 \$1:	128.25 128.25	\$20.00 0.8 \$20.00 0.2	0.7
35LED Recor	ords Office: 1st Floor ords Office: 1st Floor om 1411: 1st Floor	4 CFQ/18/2 RC 2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	CFQ18/2 F43ILL/2 F43ILL/2	45 90	0.2	SW :	2400 432 2400 432 2400 432	2.0	CFQ/18/2 RC T 32 R F 3 (ELE) T 32 R F 3 (ELE)	CFQ18/2 F43ILL/2 F43ILL/2	45 90	0.2	000	1900 342.0 1900 342.0 1900 342.0	90.0		13.14 \$1:	128.25 128.25 128.25	\$20.00 9.8 \$20.00 9.8 \$20.00 9.8	8.2 8.2
35LED Roo	om 1411: 1st Floor om 1412: 1st Floor om 1410: 1st Floor	2 T 32 R F 3 (ELE) 1 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	90	0.2 0.1 0.2	SW :	2400 432 2400 216 2400 432		T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	90	0.2	000 000	1900 171.0	90.0 45.0 90.0	0.0 \$6	5.57 \$1:	128.25	20.00 19.5	8.2 16.5 8.2
35LED Roo	iom 1410: 1st Flooi iom 1409: 1st Flooi WTR: 1st Floor	2 T 32 R F 3 (ELE) 2 T 32 R F 3 (ELE) 1 T 32 R F 2 (ELE)	F43ILL/2 F43ILL/2 F42LL	90 90 60	0.2 0.2 0.1	SW	2400 432 2400 432 1000 60	1.0 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F43ILL/2 F42LL	90 90 60	0.2 0.2 0.1	OCC OCC None	1900 342.0	90.0	0.0 \$1	13.14 \$1:	128.25	\$20.00 9.8 \$20.00 9.8 \$0.00	8.2 8.2 #DIV/0!
40LED N	MTR: 1st Floor Café: 1st Floor	1 T 32 R F 2 (ELE) 1 T 32 R F 2 (ELE) 8 T 32 R F 3 (ELE)	F42LL F42LL F43ILL/2	60	0.1 0.1 0.7	SW	1000 60 1000 1,152	.0 1	T 32 R F 2 (ELE) T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F42LL F43ILL/2	60 90	0.1 0.1 0.7	None OCC	1000 60.0 1000 60.0 1200 864.0	0.0 0.0 288.0	0.0 \$0	0.00 \$0		\$0.00 \$0.00 \$20.00 3.1	#DIV/0! #DIV/0! 2.6
40LED V	WTR: 1st Floor dor Lighting: 1st Floo	3 T32 R F 2 (ELE) 7 CFQ/18/2 RC	F42LL	60 45	0.7	SW	1000 180	1.0 3	T 32 R F 2 (ELE)	F42LL CFQ18/2	60 45	0.2	None None	1000 180.0	0.0	0.0 \$0	0.00 \$0	0.00	50.00 50.00	#DIV/0! #DIV/0!
40LED Comide	MTR: 1st Floor	3 T 32 R F 2 (ELE)	CFQ18/2 F42LL	60	0.3	SW	2280 718 1000 180	.0 3	CFQ/18/2 RC T 32 R F 2 (ELE)	F42LL	60	0.2	None	2280 718.2 1000 180.0	0.0		0.00 \$0		50.00	#DIV/0!

CHA Project No.29142	
FOM LO Install Occurrence Constant	

ECM-L2 Insta	II Occupancy Sensors																							
				EXISTING COND	ITIONS							RETROFIT	CONDITIONS							COST & SAVING	GS ANALYSIS			
				EXISTING CONE								KEIKOIII	CONDITIONS							OGG: G GAVIIIG	OO AITAL I OIO	NJ Smart Start	Simple Payback	
					Watts per								Watts per		Retrofit			Annual kWh				Lighting	With Out	
	Area Description	No. of Fixtures	Standard Fixture Code	Fixture Code	Fixture	kW/Space			Annual kWh		tandard Fixture Code	Fixture Code	Fixture	kW/Space	Control	Annual Hours		Saved	Annual kW Save		Hotront Goot	Incentive	Incentive	Simple Payback
Field Code	Unique description of the location - Room number/Room name: Floor number (if applicable)	No. of fixtures before the retrofit	Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of	(Watts/Fixt) * (Fixt Pre-inst.	Estimated annual (kW hours for the (An	V/space) * nnual Hours)	No. of fixtures after "Lighting I the retrofit 2T 40 R F(L	Fixture Code" Example J) = 2'x2' Troff 40 w	Code from Table of Standard Fixture	Value from Table of	(Watts/Fixt) * (Number of	Retrofit contro device	annual hours	(kW/space) *	(Original Annual kWh) - (Retrofit	(Original Annual kW) - (Retrofit	(kW Saved) * (\$/kWh)	Cost for renovations to		Length of time for renovations	Length of time for renovations cost to
	name. Floor number (ii applicable)	before the retroit		Fixture Wattages	Standard	NO.)	Control device	usage group	iliuai nours)		oor 2 lamps U shape	Wattages	Standard	Fixtures)	device	for the usage	(Allitual Hours)		Annual kW)	(\$/K¥¥II)	lighting system		cost to be	be recovered
					Fixture			uouge group		1100000111	ooi z iampo o onapo	ratagoo	Fixture	i ixtarco,		group		Annual Kirny	Aimuu Kii)		inginizing dyotom		recovered	De recevered
					Wattages								Wattages											
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0			F42LL	60	0.1	None		60.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED 22	Closet: 1st Floor Lobby: 1st Floor	1	T 32 R F 2 (ELE) 1T 34 R F 4 (MAG)	F42LL F44EE	60 144	0.1	SW	1000 2912	60.0 419.3	1 T 32 R F 2 (F42LL F44EE	60 144	0.1	None	1000 2912	60.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0! #DIV/0!
274LED	Bus Card: 1st Floor	3	CFQ/18/2 RC	CFQ18/2	45	0.1	SW	2912	393.1	3 CFQ/18/2 R		CFQ18/2	45	0.1	None None	2912		0.0	0.0	\$0.00	\$0.00	\$0.00	+	#DIV/0!
35LED	Bus Card: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2912	524.2	2 T 32 R F 3 (F43ILL/2	90	0.2	None		524.2	0.0	0.0	\$0.00	\$0.00	\$0.00	1	#DIV/0!
22	Lobby: 1st Floor	15	1T 34 R F 4 (MAG)	F44EE	144	2.2	SW	2912	6,289.9			F44EE	144	2.2	None	2912		0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
274LED	Lobby: 1st Floor	28	CFQ/18/2 RC	CFQ18/2	45	1.3	SW	2912	3,669.1	28 CFQ/18/2 R		CFQ18/2	45	1.3	None	2912	3,669.1	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
22	Vestibule: 1st Floor	2	1T 34 R F 4 (MAG)	F44EE	144	0.3	SW	2912	838.7	2 1T 34 R F 4		F44EE	144	0.3	None	2912	838.7	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
35LED 40LED	Waiting Area: 1st Floor TR: 1st Floor	1/	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	90	1.5	SW	3000 1000	4,590.0 60.0	17 T 32 R F 3 (F43ILL/2 F42LL	90	1.5 0.1	None None	3000 1000	4,590.0	0.0	0.0	\$0.00	\$0.00	\$0.00	+	#DIV/0! #DIV/0!
40LED	TR: 1st Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120.0	2 T32RF2		F42LL	60	0.1	None	1000	120.0	0.0	0.0	\$0.00	\$0.00	\$0.00	+	#DIV/0!
40LED	TR: 1st Floor	2	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	120.0	2 T 32 R F 2 ((ELE)	F42LL	60	0.1	None	1000	120.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0			F42LL	60	0.1	None	1000	60.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
35LED	Reception: 1st Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2912	1,048.3			F43ILL/2	90	0.4	None			0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
35LED 168	Welfare Office: 1st Floor Welfare Office: 1st Floor	40	T 32 R F 3 (ELE) W 40 C F 2 (MAG)	F43ILL/2 F42SS	90	3.6	SW	2400 2400	8,640.0			F43ILL/2 F42SS	90 94	3.6	occ	1900 1900	6,840.0 2,500.4	1,800.0	0.0	\$262.80 \$96.07	\$128.25	\$20.00 \$20.00	0.5	0.4
35LED	Welfare Office: 1st Floor	6	T 32 R F 3 (ELE)	F4255 F43ILL/2	90	1.3 0.5	SW	2400	3,158.4 1,296.0	14 W 40 C F 2 6 T 32 R F 3 (F43ILL/2	90	0.5	OCC	1900	1,026.0	658.0 270.0	0.0	\$39.42	\$128.25 \$128.25	\$20.00	3.3	2.7
35LED	Room 1109: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400	432.0			F43ILL/2	90	0.2	000	1900	342.0	90.0	0.0	\$13.14	\$128.25	\$20.00	9.8	8.2
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0			F42LL	60	0.1	None			0.0	0.0	\$0.00	\$0.00	\$0.00	1	#DIV/0!
274LED	Vestibule: 1st Floor	2	CFQ/18/2 RC	CFQ18/2	45	0.1	SW	2912	262.1			CFQ18/2	45	0.1	None			0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	60.0	1 T 32 R F 2 (F42LL	60	0.1	None			0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Closet: 1st Floor Stairs: 1st Floor	1 15	T 32 R F 2 (ELE) SP 36 R CF 1	F42LL CFT36/1	60 51	0.1	SW	1000				F42LL	60 51	0.1	None	1000	60.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0! #DIV/0!
80 168	Old Kitchen: Basement	20	W 40 C F 2 (MAG)	F42SS	94	0.8 1.9	SW	3200 3000	2,448.0 5.640.0			CFT36/1 F42SS	94	0.8 1.9	None None		5,640.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
35LED	Old Kitchen: Basemen	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	3000	270.0	1 T 32 R F 3 (F43ILL/2	90	0.1	None	3000	270.0	0.0	0.0	\$0.00	\$0.00	\$0.00	1	#DIV/0!
168	Old Kitchen: Basement	20	W 40 C F 2 (MAG)	F42SS	94	1.9	SW	3000	5,640.0	20 W 40 C F 2	(MAG)	F42SS	94	1.9	None	3000	5,640.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
168	Old Kitchen: Basemeni	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	3000	1,128.0	4 W 40 C F 2		F42SS	94	0.4	None		1,128.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
168	Lobby: Basemen	10	W 40 C F 2 (MAG)	F42SS	94	0.9	SW	2912	2,737.3			F42SS	94	0.9	None		2,737.3	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
35LED 35LED	Corridor Lighting: Basemen Switch Room : Basemen	4	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.4	Breaker	2280 1000	820.8			F43ILL/2 F43ILL/2	90	0.4	None	2280 1000	820.8	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0! #DIV/0!
35LED	Server Room: Basemen	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	1000	90.0 720.0	8 T32 R F 3		F43ILL/2	90	0.7	None None	1000	720.0	0.0	0.0	\$0.00	\$0.00	\$0.00	+	#DIV/0!
35LED	Office: Basement	3	T 32 R F 3 (ELE)	F43ILL/2	90	0.3	SW	2400	648.0	3 T 32 R F 3		F43ILL/2	90	0.3	OCC	1900	513.0	135.0	0.0	\$19.71	\$128.25	\$20.00	6.5	5.5
35LED	Cleaning Room: Basemen	10	T 32 R F 3 (ELE)	F43ILL/2	90	0.9	SW	1000	900.0	10 T 32 R F 3 ((ELE)	F43ILL/2	90	0.9	None	1000	900.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
35LED	Office: Basement	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2400	864.0	4 T 32 R F 3 (F43ILL/2	90	0.4	OCC	1900	684.0	180.0	0.0	\$26.28	\$128.25	\$20.00	4.9	4.1
35LED	Lock Shop: Basemen	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	1000	180.0	Z TOLIKTO		F43ILL/2	90	0.2	None	1000		0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
35LED 35LED	Corridor Lighting: Raseman	4	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.4	SW Breaker	2400 2280	864.0 1.641.6	4 T 32 R F 3 (F43ILL/2 F43ILL/2	90	0.4	None	1900 2280	684.0	180.0	0.0	\$26.28	\$128.25	\$20.00	4.9	4.1 #DIV/0!
168	Corridor Lighting: Basemen Files: Basement	10	W 40 C F 2 (MAG)	F43ILD2 F42SS	94	0.9	SW	1000	940.0			F42SS	94	0.9	None		940.0	0.0	0.0	\$0.00	\$0.00	\$0.00	+	#DIV/0!
168	Files: Basement	8	W 40 C F 2 (MAG)	F42SS	94	0.8	SW	1000	752.0	8 W 40 C F 2	(MAG)	F42SS	94	0.8	None		752.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
35LED	DWI Office: Basement	13	T 32 R F 3 (ELE)	F43ILL/2	90	1.2	SW	2400	2,808.0			F43ILL/2	90	1.2	OCC	1900	2,223.0	585.0	0.0	\$85.41	\$128.25	\$20.00	1.5	1.3
35LED	DWI Office: Basement	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	216.0	1 T 32 R F 3 (F43ILL/2	90	0.1	OCC	1900	171.0	45.0	0.0	\$6.57	\$128.25	\$20.00	19.5	16.5
35LED 274LED	DWI Office: Basement DWI Office: Basement	2	T 32 R F 3 (ELE)	F43ILL/2 CFQ18/2	90 45	0.2	SW	2400 2400	432.0 1.188.0	2 T 32 R F 3 (11 CFQ/18/2 R		F43ILL/2 CFQ18/2	90 45	0.2	000	1900 1900	342.0 940.5	90.0	0.0	\$13.14	\$128.25 \$128.25	\$20.00	9.8	8.2
168	DWI Office: Basement	2	CFQ/18/2 RC W 40 C F 2 (MAG)	CFQ18/2 F42SS	45 94	0.5	SW	2400	1,188.0	11 CFQ/18/2 R 2 W 40 C F 2		F42SS	45 94	0.5	000	1900	940.5 357.2	247.5 94.0	0.0	\$36.14	\$128.25 \$128.25	\$20.00	9.3	7.9
168	Room LL10: Basemen	2	W 40 C F 2 (MAG)	F42SS	94	0.2	SW	2400	451.2	2 W 40 C F 2		F42SS	94	0.2	OCC	1900	357.2	94.0	0.0	\$13.72	\$128.25	\$20.00	9.3	7.9
168	Electrical Room: Basemen	4	W 40 C F 2 (MAG)	F42SS	94	0.4	SW	1000	376.0			F42SS	94	0.4	None		376.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
168	Pump Room: Basemen	1	W 40 C F 2 (MAG)	F42SS	94	0.1	SW	1000	94.0			F42SS	94	0.1	None	1000		0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Boiler Room: Basemen	10	T 32 R F 2 (ELE)	F42LL	60	0.6	SW	1820	1,092.0	10 T 32 R F 2 (F42LL	60	0.6	None		1,092.0	0.0	0.0	\$0.00	\$0.00	\$0.00		#DIV/0!
40LED	Elevator: Basemen	6	T 32 R F 2 (ELE)	F42LL F42SS	60	0.4	SW	3200	1,152.0			F42LL F42SS	60 94	0.4	None	3200	1,152.0	0.0	0.0	\$0.00	\$0.00	\$0.00 \$0.00	+	#DIV/0! #DIV/0!
168 215	Corridor Lighting: Basemen Exterior Lighting	1 4	W 40 C F 2 (MAG) High Bay MH 350	H42SS MHPS/SCWA/350/1	94 400	1.6	Breaker SW	2280 4368	214.3 6.988.8			MHPS/SCWA/350/1	400	1.6	None None	2280 4368	214.3	0.0	0.0	\$0.00	\$0.00	\$0.00	+	#DIV/0! #DIV/0!
	otal	1,768		G.CC+7, CCO/1		155.4	<u> </u>		355998.7	1768.0		0,000,000,1		155.4		-1000	0,000.0	49625.9	0.0	7245.4	19750.5	3080.0	1	#D1170.
<u> </u>		, ,	•		•										•	•		nd Savings		0.0	\$0		†	
																		Savings		49,626	\$7,245			
																	Tota	l Savings			\$7,245		2.7	2.3

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		No. of Fixtures	Standard Fixture Code	Fixture Code	Watts per							Watts per								NJ Smart Start	Simple Payback	
	escription of the location - Room number/Room		Standard Fixture Code											Retrofit			Annual kWh			Lighting	With Out	
			hting Fixture Code	Code from Table of Standard	Fixture falue from		Exist Control Annual Hour- re-inst. Estimated daily	(kW/space) *		res Standard Fixture Code fter Lighting Fixture Code	Fixture Code Code from Table of	Value from	kW/Space (Watts/Fixt) *	Control Retrofit contr	ol Estimated	(kW/space) *	(Original Annual (Original Annual	(kWh Saved) * Cost	Retrofit Cost t for	Incentive Prescriptive	Incentive ength of time	Simple Payback Length of time for
	name: Floor number (if applicable)	pefore the retrofit		5	able of standard sture	No.)	ontrol device hours for the usage group	(Annual Hours)	the retrofit		Standard Fixture Wattages	Table of Standard Fixture	(Number of Fixtures)	device	annual hours for the usage	(Annual Hours)	kWh) - (Retrofit Annual kWh) KW) - (Retrofit Annual kW)		ting system	Lighting Measures	or renovations cost to be ecovered	renovations cost to be recovered
274LED	Corridor Lighting: 5th Floo	9 CF0	Q/18/2 RC	V	Vattages 45	0.4	Breaker 22	80 923	9	6BLMWLED	6BLMWLED	Wattages 13	0.1	None	2,28	30 267	657 0.3	\$ 108.07 \$	1,458.00	\$ -	13.5	13.5
168 35LED	Corridor Lighting: 5th Floo Corridor Lighting: 5th Floo Conference Room: 5th Floo	10 T 32	Q/18/2 RC 40 C F 2 (MAG) 2 R F 3 (ELE)	CFQ18/2 F42SS F43ILL/2	94 90	0.3 0.9	SW 12	923 180 643 1,080	3 10	W 28 C F 2 T 59 R LED	F42SSILL RTLED38	48 38	0.1 0.4	None OCC	2,28	30 328 30 380	315 0.1 700 0.5	\$ 51.78 \$ \$ 124.23 \$	810.00 2,490.75	\$ - \$ 20	15.6 20.0	15.6 19.9
40LED 35LED 35LED	Closet: 5th Floor Tax Board: 5th Floor Kitchen: 5th Floor	11 T 32	2 R F 2 (ELE) 2 R F 3 (ELE) 2 R F 3 (ELE)	F42LL F43ILL/2 F43ILL/2	90 90	0.1 1.0 0.5	SW 12	100 120 100 1,188 100 1,350	2 11	T 38 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38		0.1 0.4 0.2	None OCC	1,00 1,00 3,00	00 76 00 418 00 570	44 0.0 770 0.6	\$ 8.29 \$ \$ 136.65 \$ \$ 124.89 \$	472.50 2,727.00 1,181.25	\$ 100 \$ 20	57.0 20.0	44.9 19.8
35LED 35LED 40LED	Storage - Room 5213: 5th Floo Staff WR: 5th Floor	2 T 32	2 R F 3 (ELE) 2 R F 3 (ELE) 2 R F 2 (ELE)	F43ILU2 F43ILL/2 F42LL	90 90 60	0.2	SW 30 SW 10 OCC 10	180	2	T 59 R LED T 59 R LED T 38 R I FD	RTLED38 RTLED38 RTLED38	38 38 38	0.2 0.1 0.0	None None None	1,00	00 76	780 0.3 104 0.1 22 0.0	\$ 19.59 \$ \$ 4.14 \$	472.50 236.25	\$ - \$ 50	9.5 24.1 57.0	9.5 24.1 44.9
35LED 35LED	Office: 5th Floor Office - Room 5211: 5th Floor	4 T 32 5 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.4		000 60 000 864 000 1,080 880 643	4 5	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38 38	0.2	OCC	1,90	00 289 00 361	575 0.2 719 0.3	\$ 92.79 \$ \$ 115.99 \$	1,073.25 1,309.50	\$ 20 \$ 20	11.6 11.3	11.4 11.1
168 35LED	Corridor Lighting: 5th Floo Corridor Lighting: 5th Floo Room 5212: 5th Floo	1 T 32	40 C F 2 (MAG) 2 R F 3 (ELE)	F42SS F43ILL/2	94 90	0.3 0.1		80 643 80 205 00 864	3 1	W 28 C F 2 T 59 R LED	F42SSILL RTLED38	48 38	0.1	None None	2,28 2,28	30 328 30 87	315 0.1 119 0.1	\$ 51.78 \$ \$ 19.51 \$	810.00 236.25	\$ - \$ -	15.6 12.1	15.6 12.1
35LED 40LED 35LED	Men's Room: 5th Floo Tax Room: 5th Floo	1 T 32	2 R F 3 (ELE) 2 R F 2 (ELE) 2 R F 3 (ELE)	F43ILL/2 F42LL F43ILL/2	60 90	0.4 0.1 0.5	OCC 10	000 864 000 60 000 648	1 6	T 59 R LED T 38 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38 38	0.2 0.0 0.2	None	1,00	00 289 00 38 00 228	575 0.2 22 0.0 420 0.3	\$ 92.79 \$ \$ 4.14 \$ \$ 74.54 \$	1,073.25 236.25 1,545.75	\$ 20 \$ 50 \$ 20	11.6 57.0 20.7	11.4 44.9 20.5
168 35LED	Corridor Lighting: 5th Floo Corridor Lighting: 5th Floo	3 W 4 2 T 32	40 C F 2 (MAG) 2 R F 3 (ELE)	F42SS F43ILL/2	94 90	0.3	SW 22 SW 22	80 643 80 410	3 2	W 28 C F 2 T 59 R LED	F42SSILL RTLED38	48 38	0.1 0.1	None None	2,28	30 328		\$ 51.78 \$ \$ 39.02 \$	810.00 472.50	\$ - \$ -	15.6 12.1	15.6 12.1
35LED 35LED	File Storage - Room 5205: 5th Floo Corridor Lighting: 5th Floo	4 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90 90	0.4	SW 10 Breaker 22	100 360 180 821	4	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.2 0.2	None None	1,00 2,28	30 347	208 0.2 474 0.2	\$ 39.18 \$ \$ 78.05 \$	945.00 945.00	\$ - \$ -	24.1 12.1	24.1 12.1
35LED 35LED 35LED	Corridor Lighting: 5th Floo Corridor Lighting: 5th Floo Courtroom: 5th Floo	9 T 32	2 R F 3 (ELE) 2 R F 3 (ELE) 2 R F 3 (FLF)	F43ILL/2 F43ILL/2 F43ILL/2	90 90		Breaker 22	1,847 1,847 1,847 1,20 1,20	9	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38 38	0.3 0.3 0.3	None None None	2,28 2,28		1,067 0.5 1,067 0.5 243 0.5	\$ 175.61 \$ \$ 175.61 \$ \$ 55.36 \$	2,126.25 2,126.25 2,126.25	\$ - \$ -	12.1 12.1 38.4	12.1 12.1 38.4
35LED 35LED	Classroom - Room 5312: 5th Floo Corridor Lighting: 5th Floo Staff MTR: 5th Floor	12 T 32 9 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	1.1	SW 24 Breaker 22	100 2,592 1,847	12 9	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.5 0.3	OCC None	1,80 2,28	00 821	1,771 0.6 1.067 0.5	\$ 285.03 \$ \$ 175.61 \$	2,963.25 2,126.25	\$ 20 \$ -	10.4	10.3 12.1
35LED 35LED	Room 5313: 5th Floo	14 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90 60	0.2 1.3	SW 24	000 180 000 3,024	2 14	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.5	None OCC	1,00	1,011	104 0.1 2,013 0.7	\$ 19.59 \$ \$ 324.77 \$	472.50 3,435.75	\$ - \$ 20	24.1 10.6	24.1 10.5
40LED 35LED 35LED	Toilet Room - Room 5313: 5th Floo Room 5304: 5th Floo Room 5311: 5th Floo	6 T 32	2 R F 2 (ELE) 2 R F 3 (ELE) 2 R F 3 (ELE)	F42LL F43ILL/2 F43ILL/2	90	0.1 0.5	SW 24	000 60 000 1,296 000 432	6	T 38 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38 38	0.0 0.2	None OCC	1,00 1,90	00 38 00 433 00 144		\$ 4.14 \$ \$ 139.19 \$ \$ 46.40 \$	236.25 1,545.75 600.75	\$ 50 \$ 20 \$ 20	57.0 11.1 12.9	44.9 11.0 12.5
35LED 35LED	Room 5310: 5th Floo Staff WTR: 5th Floor	2 T 32 2 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2	SW 24 OCC 10	00 432 00 180	2 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	OCC None	1,90	144	288 0.1 104 0.1	\$ 46.40 \$ \$ 19.59 \$	600.75 472.50	\$ 20 \$ -	12.9 24.1	12.5 12.5 24.1
35LED 35LED	Room 5305: 5th Floo Room 5306: 5th Floo	9 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.8	SW 24 SW 24	1,944 100 1,944	9	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.3 0.3	000 000	1,90 1,90	00 650 00 650	1,294 0.5 1,294 0.5	\$ 208.78 \$ \$ 208.78 \$	2,254.50 2,254.50	\$ 20 \$ 20	10.8 10.8	10.7 10.7
35LED 35LED 35LED	Room 5307: 5th Floo Room 5308: 5th Floo Kitchen - Room 5309: 5th Floo	5 T 32	2 R F 3 (ELE) 2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	90 90	0.8 0.5 0.4	SW 24 SW 30	1,944 100 1,080 100 1,080	9 5	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38 38	0.3 0.2 0.2	OCC OCC None	1,90	00 650 00 361 00 456	1,294 0.5 719 0.3 624 0.2	\$ 208.78 \$ \$ 115.99 \$ \$ 99.91 \$	2,254.50 1,309.50 945.00	\$ 20 \$ 20 \$	10.8 11.3 9.5	10.7 11.1 9.5
168 61LED	Closet: 5th Floor Closet: 5th Floor	2 W 4 2 T 34	40 C F 2 (MAG) 4 R F 3 (MAG)	F42SS F43EE	94 115	0.2	SW 10 SW 10	100 188 100 230	2 2	W 28 C F 2 T 59 R LED	F42SSILL RTLED38	38 48 38 38	0.1 0.1	None None	1,00	00 96	624 0.2 92 0.1 154 0.2	\$ 99.91 \$ \$ 17.33 \$ \$ 29.01 \$	945.00 540.00 472.50	\$ - \$ 100	9.5 31.2 16.3	31.2 12.8
40LED 35LED	Room 5417: 5th Floo Director's Office: 5th Floor	8 T 32	2 R F 2 (ELE) 2 R F 3 (ELE) 2 R F 3 (ELE)	F42LL F43ILL/2 F43ILL/2	60 90	0.1 0.7	SW 24 SW 24 SW 12	100 144 100 1,728 100 324	1 8	T 38 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.0	000 000	1,90 1,90	00 72 00 578	72 0.0 1,150 0.4	\$ 11.41 \$ \$ 185.58 \$	364.50 2,018.25	\$ 70 \$ 20	31.9 10.9	25.8 10.8
35LED 168 35LED	Conference Room: 5th Floo Corridor Director's Office: 5th Floo Office: 5th Floor	10 W 4	2 R F 3 (ELE) 40 C F 2 (MAG) 2 R F 3 (ELE)	F43ILU2 F42SS F43ILU2	90 94	0.3 0.9 0.4		80 2,143 00 864	10	T 59 R LED W 28 C F 2 T 59 R LED	RTLED38 F42SSILL RTLED38	38 48 38	0.1 0.5	None	2,28	00 114 30 1,094	210 0.2 1,049 0.5 575 0.2	\$ 37.27 \$ \$ 172.61 \$ \$ 92.79 \$	837.00 2,700.00 1,073.25	\$ 20 \$ -	22.5 15.6 11.6	21.9 15.6 11.4
40LED 35LED	Staff MTR: 5th Floor Room 5405: 5th Floo	1 T 33	2 R F 2 (ELE) 2 R F 3 (ELE)	F42LL F43ILL/2	60 90	0.1		00 72 00 648	1 3	T 38 R LED T 59 R LED	RTLED38 RTLED38	38 38 38	0.0 0.1	OCC	1,00	00 38	34 0.0 431 0.2	\$ 5.90 \$ \$ 69.59 \$	364.50 837.00	\$ 70 \$ 20	61.8	49.9 11.7
35LED 35LED	Room 5406: 5th Floo Storage - Room 5412: 5th Floo	2 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.3 0.2	SW 24 SW 10	00 648 00 180	3 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1 0.1	OCC None	1,90 1,00	00 217 00 76	431 0.2	\$ 69.59 \$ \$ 19.59 \$	837.00 472.50	\$ 20 \$ -	12.0 12.0 24.1	11.7 24.1
35LED 35LED 35LED	Room 5415: 5th Floo Room 5413: 5th Floo Room 5408: 5th Floo	1 T 32	2 R F 3 (ELE) 2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	90 90	0.5 0.1 0.2	SW 24 SW 24 SW 24	1,080 100 216 100 432	5	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38 38	0.2	000 000	1,90	00 361 00 72 00 144	144 0.1	\$ 115.99 \$ \$ 23.20 \$ \$ 46.40 \$	1,309.50 364.50 600.75	\$ 20 \$ 20	11.3 15.7 12.9	11.1 14.9 12.5
35LED 35LED	Copy Room - Room 5414: 5th Floo Staff WTR: 5th Floor	1 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.1 0.1		25 191 00 90	1 1	T 59 R LED T 59 R LED	RTLED38	38	0.0	None None	2,12		111 0.1 52 0.1	\$ 18.34 \$ \$ 9.79 \$	236.25 236.25	\$ - \$ -	12.9 24.1	12.9 24.1
35LED 35LED	Room 5409: 5th Floo Kitchen: 5th Floo	3 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.4 0.3	SW 30	000 864 000 810	4 3	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.2 0.1	OCC None	1,90 3,00	289 00 342	575 0.2 468 0.2	\$ 92.79 \$ \$ 74.94 \$	1,073.25 708.75	\$ 20 \$ -	11.6 9.5	11.4 9.5
35LED 35LED 61LED	Room 5410: 5th Floo Room 5407: 5th Floo Room 5407: 5th Floo	2 T 32	2 R F 3 (ELE) 2 R F 3 (ELE) 4 R F 3 (MAG)	F43ILL/2 F43ILL/2 F43EE	90 90 115	0.2 0.2 0.9	SW 24	00 432 00 432 00 2,208	2 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.1 0.1 0.3	000 000	1,90	00 144 00 144 00 578	288 0.1	\$ 46.40 \$ \$ 46.40 \$ \$ 264.13 \$	600.75 600.75 2,018.25	\$ 20 \$ 20 \$ 420	12.9 12.9 7.6	12.5 12.5 6.1
40LED 40LED	Closet: 4th Floor	1 T 32	2 R F 2 (ELE) 2 R F 2 (ELE)	F42LL F42LL	60 60	0.1	SW 10	00 2,208 00 60 00 60	1	T 38 R LED T 38 R LED	RTLED38 RTLED38	38 38	0.0	None None	1,00	00 38	1,630 0.6 22 0.0 22 0.0	\$ 4.14 \$ \$ 4.14 \$	236.25 236.25	\$ 50 \$ 50	57.0 57.0	44.9 44.9
40LED 40LED	Closet: 4th Floo Men's Room: 4th Floo	3 T 32	2 R F 2 (ELE) 2 R F 2 (ELE)	F42LL F42LL	60 60	0.1 0.2	SW 10	000 60 000 180	1 3	T 38 R LED T 38 R LED	RTLED38 RTLED38	38	0.0 0.1	None None	1,00	00 114	22 0.0 66 0.1	\$ 4.14 \$ \$ 12.43 \$	236.25 708.75	\$ 50 \$ 150	57.0 57.0	44.9 44.9
40LED 35LED 35LED	Ladies' Room: 4th Floo Room 4400: 4th Floo Room 4414: 4th Floo	70 T 32	2 R F 2 (ELE) 2 R F 3 (ELE) 2 R F 3 (ELE)	F42LL F43ILL/2 F43ILL/2	60 90	0.2 6.3 0.2	SW 24	180 100 15,120 100 432	70 2	T 38 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38 38	0.1 2.7 0.1	None OCC	1,00	00 114 00 5,054 00 144	10,066 3.6	\$ 12.43 \$ \$ 1,623.83 \$ \$ 46.40 \$	708.75 16,665.75 600.75	\$ 150 \$ 20	57.0 10.3	44.9 10.3 12.5
168 35LED	Room 4400: 4th Floo Room 4411: 4th Floo	42 W 4 4 T 32	40 C F 2 (MAG) 2 R F 3 (ELE)	F42SS F43ILL/2	94 90	3.9 0.4	SW 24	00 9,475 00 864	42 4	W 28 C F 2 T 59 R LED	F42SSILL RTLED38	48 38 38	2.0	OCC	1,90	00 3,830 00 289		\$ 905.98 \$ \$ 92.79 \$	11,468.25 1,073.25	\$ 20 \$ 20	12.9 12.7 11.6	12.6
35LED	Room 4412: 4th Floo Room 4413: 4th Floo Room 4413: 4th Floo	2 T 32	2 R F 3 (ELE) 2 R F 3 (ELE) 4 R F 3 (MAG)	F43ILL/2 F43ILL/2 F43EE	90 90	0.2	SW 24	00 432 00 432 00 552	2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38 38	0.1	00C 00C	1,90	00 144 00 144	288 0.1	\$ 46.40 \$ \$ 46.40 \$ \$ 66.03 \$	600.75 600.75 600.75	\$ 20 \$ 20	12.9 12.9	11.4 12.5 12.5
61LED 168 168	Staff TR: 4th Floor Staff TR: 4th Floor	2 W 4	40 C F 2 (MAG)	F43EE F42SS F42SS	115 94 94	0.2 0.2	SW 10	000 552 000 188 000 94	2 2	W 28 C F 2 W 28 C F 2	RTLED38 F42SSILL F42SSILL	48 48	0.1 0.1	None None	1,00	00 144 00 96 00 48	92 0.1 46 0.0	\$ 66.03 \$ \$ 17.33 \$ \$ 8.66 \$	540.00 270.00	\$ 120 \$ -	9.1 31.2 31.2	7.3 31.2 31.2
168 35LED 168 35LED	Reception: 4th Floo Reception: 4th Floo	4 W 4	40 C F 2 (MAG) 2 R F 3 (ELE) 40 C F 2 (MAG)	F43ILL/2 F42SS	90 94	0.8	SW 29		9	T 59 R LED W 28 C F 2 T 59 R LED	RTLED38 F42SSILL	38 48 38	0.3	None None	2,91 2,91	12 996 12 559	1,363 0.5 536 0.2 1,294 0.5	\$ 218.80 \$ \$ 86.02 \$	2,126.25 1,080.00	\$ - \$ -	9.7 12.6 10.8	9.7 12.6 10.7
35LED 168 168	Room 4102: 4th Floo Room 4102: 4th Floo Room 4103: 4th Floo	3 W 4	2 R F 3 (ELE) 40 C F 2 (MAG) 40 C F 2 (MAG)	F43ILL/2 F42SS F42SS	90 94	0.8	SW 24 SW 24	100 677	9 3	T 59 R LED W 28 C F 2 W 28 C F 2	RTLED38 F42SSILL F42SSILL	38 48 48	0.3	000 000	1,90	00 650 00 274 00 274	1,294 0.5 403 0.1 403 0.1	\$ 208.78 \$ \$ 64.71 \$ \$ 64.71 \$	2,254.50 938.25 938.25	\$ 20 \$ 20	10.8 14.5 14.5	10.7 14.2 14.2
35LED 35LED	Room 4103: 4th Floo Economic Growth: 4th Floo	13 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	1.2		2,808	13 25	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1 0.5 1.0	OCC	1,90	00 939	1,869 0.7	\$ 301.57 \$ \$ 310.57 \$	3,199.50 6.034.50	\$ 20 \$ 20	10.6 19.4	10.5 19.4
168 35LED	Economic Growth: 4th Floo Room 4205: 4th Floo		40 C F 2 (MAG) 2 R F 3 (ELE)	F42SS F43ILL/2	94 90	0.8 0.4	SW 12 SW 24	902 100 864	8 4	W 28 C F 2 T 59 R LED	F42SSILL RTLED38	48 38	0.4 0.2	00C	1,00 1,90	00 384 00 289	518 0.4 575 0.2	\$ 91.27 \$ \$ 92.79 \$	2,288.25 1,073.25	\$ 20 \$ 20	25.1 11.6	24.9 11.4
35LED 35LED	Room 4206: 4th Floo Room 4207: 4th Floo Room 4208: 4th Floo	4 T 32	2 R F 3 (ELE) 2 R F 3 (ELE) 2 R F 3 (FLF)	F43ILL/2 F43ILL/2 F43ILL/2	90 90 90	0.4 0.4 0.4	SW 24 SW 24 SW 24	000 864 000 864 000 864	4 4	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38	0.2	000	1,90	00 289 00 289	575 0.2	\$ 92.79 \$ \$ 92.79 \$	1,073.25 1,073.25 1,073.25	\$ 20 \$ 20	11.6 11.6 11.6	11.4 11.4 11.4
35LED 35LED 168	Room 4209: 4th Floo Room 4210: 4th Floo	2 T 32	2 R F 3 (ELE) 40 C F 2 (MAG)	F43ILL/2 F42SS	90 90 94	0.2	SW 24	432	2 4	T 59 R LED W 28 C F 2	RTLED38 RTLED38 F42SSILL RTLED38	38	0.2 0.1 0.2	OCC	1,90	00 289 00 144 00 365	288 0.1	\$ 92.79 \$ \$ 46.40 \$ \$ 86.28 \$	600.75 1,208.25	\$ 20 \$ 20	12.9 14.0	12.5 13.8
35LED 35LED	Room 4210: 4th Floo Closet 4201: 4th Floor	2 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.4	SW 24 SW 10	902 100 864 100 180 100 94	4 2	T 59 R LED T 59 R LED	RTLED38	38	0.2 0.1	OCC None	1,90 1,00	00 289 00 76	538 0.2 575 0.2 104 0.1 46 0.0	\$ 92.79 \$ \$ 19.59 \$	1,073.25 472.50	\$ 20 \$ -	11.6 24.1	11.4 24.1
168 168 168	Staff MTR: 4th Floor Staff WTR: 4th Floor Child Health: 4th Floo	1 W 4	40 C F 2 (MAG) 40 C F 2 (MAG) 40 C F 2 (MAG)	F42SS F42SS F42SS	94 94 94	0.1 0.1 1.4	SW 10	00 94 00 94 00 3,384	1 1 15	W 28 C F 2 W 28 C F 2 W 28 C F 2	F42SSILL F42SSILL F42SSILL	48 48	0.0 0.0 0.7	None None OCC	1,00 1,00 1,90	00 48 00 48 00 1,368	46 0.0	\$ 8.66 \$ \$ 8.66 \$ \$ 323.56 \$	270.00 270.00 4,178.25	\$ - \$ -	31.2 31.2 12.9	31.2 31.2 12.9
35LED 35LED	Child Health: 4th Floo Room 4305: 4th Floo	24 T 32 2 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	2.2 0.2	SW 24 SW 24	00 5,184 00 432	24	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.9 0.1	OCC	1,90	1,733 00 144	3,451 1.2	\$ 556.74 \$ \$ 46.40 \$	5,798.25 600.75	\$ 20 \$ 20	10.4 12.9	10.4 12.5
35LED 35LED	Room 4306: 4th Floo Room 4307: 4th Floo	2 T 32 2 T 32	2 R F 3 (ELE) 2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90 90	0.2	SW 24	432 400 432	2 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	000 000	1,90 1,90	00 144	288 0.1	\$ 46.40 \$ \$ 46.40 \$	600.75 600.75	\$ 20 \$ 20	12.9 12.9	12.5 12.5
35LED 35LED 35LED	Room 4308: 4th Floo Room 4309: 4th Floo Room 4310: 4th Floo	3 T 32	2 R F 3 (ELE) 2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	90 90 90		SW 24 SW 24 SW 24	00 432 00 648 00 432	3 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.1 0.1 0.1	000 000	1,90 1,90	00 144 00 217 00 144	288 0.1 431 0.2 288 0.1	\$ 46.40 \$ \$ 69.59 \$ \$ 46.40 \$	600.75 837.00 600.75	\$ 20 \$ 20 \$ 20	12.9 12.0 12.9	12.5 11.7 12.5
35LED 35LED	Room 4311: 4th Floo Room 4312: 4th Floo	2 T 32 2 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 0.2	SW 24 SW 24	00 432 00 432	2 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	000	1,90 1,90	00 144	288 0.1 288 0.1	\$ 46.40 \$ \$ 46.40 \$	600.75 600.75	\$ 20 \$ 20	12.9 12.9	12.5 12.5
35LED 35LED	Room 4313: 4th Floo Room 4314: 4th Floo Room 4315: 4th Floo	2 T 32	2 R F 3 (ELE) 2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILU2 F43ILU2 F43ILU2	90 90 90	0.2	SW 24	00 432 00 432 00 864	2 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38	0.1 0.1	000 000	1,90	00 144	288 0.1	\$ 46.40 \$ \$ 46.40 \$	600.75 600.75	\$ 20 \$ 20 \$ 20	12.9 12.9 11.6	12.5 12.5 11.4
35LED 35LED 35LED	Room 4318: 4th Floo Room 4316: 4th Floo	2 T 32 3 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90		SW 24 SW 24	00 432 00 648	2 3	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.2 0.1 0.1	000 000	1,90	00 289 00 144 00 217	288 0.1 431 0.2	\$ 92.79 \$ \$ 46.40 \$ \$ 69.59 \$	1,073.25 600.75 837.00	\$ 20 \$ 20	12.9 12.0	11.4 12.5 11.7
35LED 35LED	Staff TR: 4th Floor Staff TR: 4th Floor	1 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.1 0.1	SW 10 SW 10	90 100 90	1	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.0 0.0	None None	1,00 1,00	00 38 00 38	52 0.1 52 0.1	\$ 9.79 \$ \$ 9.79 \$	236.25 236.25	\$ - \$ -	24.1 24.1	24.1 24.1
35LED 35LED 274LED	Room 4321: 4th Floo Room 4301: 4th Floo Corridor Lighting: 4th Floo	4 T 32	2 R F 3 (ELE) 2 R F 3 (ELE) Q/18/2 RC	F43ILL/2 F43ILL/2 CFQ18/2	90 90 45	0.4 0.4 0.6		000 864 000 864 800 1 334	4 4	T 59 R LED T 59 R LED 6BLMWLED	RTLED38 RTLED38 6BLMWLED	38 38 13	0.2 0.2	OCC OCC None	1,90	00 289 00 289 30 385	575 0.2	\$ 92.79 \$ \$ 92.79 \$ \$ 156.10 \$	1,073.25 1,073.25 2,106.00		11.6 11.6 13.5	11.4 11.4 13.5
35LED 35LED	Corridor Lighting: 4th Floo Room 3104: 3rd Floo	1 T 32 8 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.1 0.7	Breaker 22 SW 24	1,334 180 205 100 1,728 100 864	1 1 8	T 59 R LED T 59 R LED	RTLED38	38	0.2 0.0 0.3	None None OCC	2,28 2,28 1,90	30 385 30 87 00 578	948 0.4 119 0.1 1,150 0.4	\$ 19.51 \$ \$ 185.58 \$	236.25 2,018.25	\$ - \$ 20	12.1 10.9	12.1 10.8
35LED 35LED	3MP - Room 3104: 3rd Floo Classroom #2: 3rd Floo	6 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.4 0.5	SW 24	1,296	4	T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38 38	0.2 0.2	OCC	1,90 1,80	00 289 00 410	575 0.2 886 0.3	\$ 92.79 \$ \$ 142.51 \$	1,073.25 1,545.75	\$ 20 \$ 20	11.6 10.8	11.4 10.7
35LED 35LED	Classroom #1: 3rd Floo Room 3104 : 3rd Floo Room 3104: 3rd Floo	21 T 32	2 R F 3 (ELE) 2 R F 3 (ELE) 40 C F 2 (MAG)	F43ILL/2 F43ILL/2 F42SS	90 90	0.5 1.9	SW 24 SW 24 SW 24	1,296 100 4,536 100 226	6 21	T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38 RTLED38	38 38 38 38	0.2	0CC	1,80	00 410 00 1,516		\$ 142.51 \$ \$ 487.15 \$	1,545.75 5,089.50 398.25	\$ 20 \$ 20	10.8 10.4	10.7 10.4
168 35LED 35LED 168	Staff TR: 3rd Floor Bus Cards: 3rd Floor	1 T 32 28 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90	0.1 2.5	SW 10 SW 29	90 112 7,338	1 28	W 28 C F 2 T 59 R LED T 59 R LED	F42SSILL RTLED38 RTLED38	38	0.0 0.0 1.1	None None	1,00	00 38 12 3,098	134 0.0 52 0.1 4,240 1.5 1,340 0.5	\$ 21.57 \$ \$ 9.79 \$ \$ 680.70 \$	236.25 6,615.00 2,700.00	\$ - \$ -	18.5 24.1 9.7	17.5 24.1 9.7
35LED	Bus Cards: 3rd Floor Room 3234: 3rd Floo	10 W 4 2 T 32	40 C F 2 (MAG) 2 R F 3 (ELE)	F42SS F43ILL/2	94 90	0.9 0.2	SW 29 SW 24	112 2,737 100 432	10	W 28 C F 2 T 59 R LED	F42SSILL RTLED38 RTLED38	48 38 38	0.5 0.1	None OCC	2,91 1,90	12 1,398 00 144		\$ 215.06 \$ \$ 46.40 \$	600.75	\$ 20	9.7 12.6 12.9 12.9	12.6 12.5 12.5
35LED 35LED	Room 3235: 3rd Floo Room 3236: 3rd Floo	2 T 32 2 T 32	2 R F 3 (ELE) 2 R F 3 (ELE)	F43ILL/2 F43ILL/2	90 90	0.2 0.2	SW 24 SW 24	00 432 00 432	2 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	OCC	1,90 1,90	00 144 00 144	288 0.1 288 0.1 288 0.1	\$ 46.40 \$ \$ 46.40 \$	600.75 600.75	\$ 20 \$ 20	12.9 12.9	12.5 12.5

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			EXISTING CONDIT							RETROFIT	CONDITIONS	.	B-1- C			Annual Cata	COST & SA	VINGS ANALYSIS	NJ Smart	Start Simple Page 1	ayback
Area Description	No. of Fixtures		Fixture Code	Watts per Fixture	kW/Space		Annual Hours Annual kWh			Fixture Code	Watts per Fixture		Retrofit Control		rs Annual kWh					ive Incenti	ntive Simple
Inique description of the location - Room nur name: Floor number (if applicable)		Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of Standard	(Watts/Fixt) * (Fixt No.)		Estimated daily hours for the usage group (kW/space) * (Annual Hours)		r Lighting Fixture Code	Code from Table of Standard Fixture Wattages	Value from Table of Standard	(Watts/Fixt) * (Number of Fixtures)	Retrofit contro device	Estimated annual hours for the usage		(Original Annual kWh) - (Retrofit Annual kWh) (Original Annual kW) - (Retrofit Annual kW)		Cost for renovations to lighting system		for renova-	rations renovation
				Fixture Wattages							Fixture Wattages			group						recovered	d
Room 3237: 3rd Floo Room 3238: 3rd Floo	2 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.2	SW	2400	432 2 432 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	OCC	1,90	00 144	288 0.1	\$ 46.	40 \$ 6	600.75 \$ 600.75 \$	20 12.9 20 12.9	.9 1
Room 3239: 3rd Floo Room 3240: 3rd Floo Kitchen: 3rd Floor	5	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	9	0 0.2 0 0.5 0 0.2	SW SW	2400 1,	432 2 080 5 540 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38 38	0.1 0.2 0.1	OCC OCC None	1,90 1,90 3,00	00 144 00 361 00 228	719 0.3	\$ 115.	99 \$ 1,3	600.75 \$ 309.50 \$ 472.50 \$	20 12.9 20 11.3	.3 1
Room 3212: 3rd Floo Room 3211: 3rd Floo	2 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.2	SW SW SW	2400	432 2 432 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1	OCC	1,90	00 144	288 0.1	\$ 46.	40 \$ 6	600.75 \$ 600.75 \$	- 9.5 20 12.9 20 12.9	.9 1
Room 3210: 3rd Floo Room 3214: 3rd Floo	2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.2	SW	2400	432 2 648 3	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38 38	0.1	OCC	1,90	00 144	288 0.1	\$ 46.	40 \$ 6	600.75 \$ 837.00 \$	20 12.9 20 12.0	.9 1
Room 3209: 3rd Floo Staff TR: 3rd Floor	2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.2 0 0.1	SW	2400	432 2 90 1	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1	OCC None	1,90	144		\$ 46.	40 \$ 6	600.75 \$ 236.25 \$	20 12.9	.9 1
Room 3213: 3rd Floo Corridor Lighting: 3rd Floo	5 16	T 32 R F 3 (ELE) W 40 C F 2 (MAG)	F43ILL/2 F42SS	9	0 0.5 4 1.5	SW Breaker	2280 3,	080 5 429 16	T 59 R LED W 28 C F 2	RTLED38 F42SSILL	38 48	0.2 0.8	OCC None	1,90 2,28		719 0.3 1,678 0.7	\$ 115. \$ 276.	18 \$ 4,3	309.50 \$ 320.00 \$	20 11.3 - 15.6	.6
Room 3208: 3rd Floo Room 3207: 3rd Floo WTR: 3rd Floor	2 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F43ILL/2 F4211	9	0 0.2 0 0.2	SW SW	2400	432 2 432 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	OCC	1,90	00 144 00 144	288 0.1	\$ 46.	.40 \$ 6	600.75 \$ 600.75 \$	20 12.9 20 12.9	.9
MTR: 3rd Floor MTR: 3rd Floor Room 3206: 3rd Floo	1	T 32 R F 2 (ELE) T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F42LL F43ILL/2	6	0 0.1 0 0.1 0 0.2	SW SW	1000	60 1 60 1	T 38 R LED T 38 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38	0.0	None None	1,00	00 38 00 38	3 22 0.0 3 22 0.0	\$ 4.	.14 \$ 2	236.25 \$ 236.25 \$	50 57.0 50 57.0	.0
Room 3205: 3rd Floo Kitchen: 3rd Floor	5	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.5	SW	2400 1,	432 2 080 5 270 1	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38 38	0.2	OCC None	1,90	361	719 0.3	\$ 115.	99 \$ 1,3	600.75 \$ 309.50 \$ 236.25 \$	20 12.9 20 11.3 - 9.5	.3
Room 3203: 3rd Floo WTR: 3rd Floor	1	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	9	0 0.1	SW		216 1	T 59 R LED T 38 R LED	RTLED38 RTLED38	38	0.0	OCC None	1,90	72	2 144 0.1 3 22 0.0	\$ 23.	20 \$ 3	364.50 \$ 236.25 \$	20 15.7 50 57.0	.7
Reception: 3rd Floo Reception: 3rd Floo	1 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.1 0.2	SW		262 1 524 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.0 0.1	None None	2,9° 2,9°	12 221	303 0.1	\$ 24. \$ 48.	31 \$ 2 62 \$ 4	236.25 \$ 472.50 \$	- 9.7 - 9.7	
Reception: 3rd Floo Lobby: 3rd Floo	5	CFQ/18/2 RC 1T 34 R F 4 (MAG)	CFQ18/2 F44EE	14	5 0.0 4 0.7	SW	2912 2,	131 1 097 5	6BLMWLED 1T 28 R F 4	6BLMWLED F44SSILL	13 96	0.0 0.5	None None	2,9° 2,9°			\$ 112.	20 \$ 7	162.00 \$ 708.75 \$	- 10.8 - 6.3	3
Corridor Lighting: 3rd Floo Corridor Lighting: 3rd Floo Lobby: 3rd Floo	15	T 32 R F 3 (ELE) CFQ/18/2 RC CFQ/18/2 RC	F43ILL/2 CFQ18/2 CFQ18/2	9	0 0.2 5 0.7	Breaker Breaker SW	2280 1,	410 2 539 15 917 7	T 59 R LED 6BLMWLED 6BLMWLED	RTLED38 6BLMWLED 6BLMWLED	38 13 13	0.1 0.2 0.1	None None None	2,28 2,28 2,9°	30 445	1,094 0.5	\$ 39. \$ 180. \$ 104.	12 \$ 2,4	472.50 \$ 430.00 \$ 134.00 \$	- 12.1 - 13.5 - 10.8	.5
Closet: 3rd Floor Closet: 3rd Floor Closet: 3rd Floor	1	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	5 0.3 0 0.1	SW SW	1000 1000	90 1	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.0	None None	1,00	00 38	52 0.2 52 0.1 52 0.1	\$ 9.	79 \$ 2	236.25 \$ 236.25 \$	- 24.1 - 24.1	.1
Closet: 3rd Floor Closet: 3rd Floor	1	T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.1	SW		90 1	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.0	None None	1,00	00 38		\$ 9.	79 \$ 2	236.25 \$ 236.25 \$	- 24.1 - 24.1	.1
WTR: 3rd Floor MTR: 3rd Floor	3 3	T 32 R F 2 (ELE) T 32 R F 2 (ELE)	F42LL F42LL	6	0 0.2	SW	1000 1000	180 3 180 3	T 38 R LED T 38 R LED	RTLED38 RTLED38	38 38	0.1 0.1	None None	1,00	00 114	66 0.1 66 0.1	\$ 12. \$ 12.	43 \$ 7 43 \$ 7	708.75 \$ 708.75 \$	150 57.0 150 57.0	.0
Corridor Lighting: 3rd Floo Closet: 3rd Floor	5 1	CFQ/18/2 RC T 32 R F 3 (ELE)	CFQ18/2 F43ILL/2	4 9	5 0.2 0 0.1	SW SW SW		513 5 90 1 944 9	6BLMWLED T 59 R LED	6BLMWLED RTLED38	13 38 38	0.1 0.0	None None	2,28	00 38	52 0.1	\$ 60. \$ 9. \$ 208.	04 \$ 8 79 \$ 2	810.00 \$ 236.25 \$ 254.50 \$	- 13.5 - 24.1 20 10.8	
Room 3101: 3rd Floo Closet - Room 3101: 3rd Floo	9	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.8	SW	1000	90 1	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.3	OCC None	1,90	00 650	52 0.1	\$ 9.	79 \$ 2	236.25 \$	- 24.1	.1
Kitchen: 3rd Floor Room 3103: 3rd Floo	2	T 32 R F 3 (ELE) T 34 R F 3 (MAG) T 34 R F 3 (MAG)	F43ILL/2 F43EE F43EE	9i 11:	0 0.4 5 0.2	SW SW SW	2400	080 4 552 2 552 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38 38	0.2	None OCC	3,00 1,90	00 456 00 144 00 144	408 0.2		.03 \$ 6	945.00 \$ 600.75 \$ 600.75 \$	- 9.5 120 9.1 120 9.1	1
Room 3102: 3rd Floo Corridor Lighting: 3rd Floo Room 3312: 3rd Floo	10	W 40 C F 2 (MAG) T 32 R F 3 (ELE)	F43EE F42SS F43ILL/2	9.	5 0.2 4 0.9 0 0.2	Breaker SW	2280 2,	143 10 432 2	W 28 C F 2 T 59 R LED	F42SSILL RTLED38	48 38	0.1 0.5 0.1	None	2,28		1,049 0.5	\$ 172.	61 \$ 2,7	700.00 \$ 600.75 \$	- 15.6 20 12.9	.6
Room 3311: 3rd Floo Room 3310: 3rd Floo	2	T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.2	SW	2400	432 2 648 3	T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.1	OCC	1,90	00 144	288 0.1	\$ 46.	.40 \$ €	600.75 \$ 837.00 \$	20 12.9	.9
WTR: 3rd Floor Room 3309: 3rd Floo	1 2	T 32 R F 3 (ELE) T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	6	0 0.1 0 0.2	SW SW SW	1000 2400	60 1 432 2	T 38 R LED T 59 R LED	RTLED38 RTLED38	38 38 38	0.0	None OCC	1,00		22 0.0	\$ 4.	14 \$ 2	236.25 \$ 600.75 \$ 837.00 \$	20 12.0 50 57.0 20 12.9	
Room 3308: 3rd Floo Room 3307: 3rd Floo	3 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.3 0.2	SW SW	2400	648 3 432 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38 38	0.1 0.1	OCC	1,90 1,90	00 217 00 144	288 0.1	\$ 46.	40 \$ 6	600.75 \$	20 12.0 20 12.9 20 10.2	.0
Room 3300: 3rd Floo Room 3300: 3rd Floo	86 3	T 32 R F 3 (ELE) W 40 C F 2 (MAG)	F43ILL/2 F42SS	9	0 7.7 4 0.3	SW SW	2400	576 86 677 3	T 59 R LED W 28 C F 2	RTLED38 F42SSILL	48	3.3 0.1	OCC	1,90 1,90	00 6,209 00 274		\$ 1,994 \$ 64	71 \$ 9	445.75 \$ 938.25 \$	20 14.5	.5
TR: 3rd Floor TR: 3rd Floor	1	T 32 R F 2 (ELE) T 32 R F 2 (ELE)	F42LL F42LL	6	0 0.1	SW		60 1	T 38 R LED T 38 R LED	RTLED38 RTLED38	38	0.0	None None	1,00	00 38	3 22 0.0 3 22 0.0	\$ 4.	.14 \$ 2	236.25 \$ 236.25 \$	50 57.0 50 57.0	.0
Room 3317: 3rd Floo Room 3318: 3rd Floo Room 3319: 3rd Floo	3 3	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	9	0 0.3	SW SW SW		648 3 648 3	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38	0.1 0.1	000	1,90	00 217	431 0.2 431 0.2	\$ 69.	.59 \$ 8	837.00 \$ 837.00 \$	20 12.0 20 12.0	
Room 3320: 3rd Floo Corridor Lighting: 2nd Floo	5 4	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.5	SW Breaker	2400 1,	432 2 080 5 821 4	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38 38	0.2	OCC None	1,90	361	719 0.3	\$ 46. \$ 115. \$ 78.	99 \$ 1,3	600.75 \$ 309.50 \$ 945.00 \$	20 12.9 20 11.3 - 12.1	
Corridor Lighting: 2nd Floo Closet: 2nd Floor	2	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	9	0 0.2 0 0.1	Breaker SW	2280 1000	410 2 60 1	T 59 R LED T 38 R LED	RTLED38 RTLED38	38 38	0.1 0.0	None None	2,28	30 173	7 474 0.2 3 237 0.1 3 22 0.0	\$ 39.	.02 \$ 4	472.50 \$ 236.25 \$	- 12.1 50 57.0	.1
Closet: 2nd Floor Closet: 2nd Floor	1 1	T 32 R F 2 (ELE) T 32 R F 2 (ELE)	F42LL F42LL	6	0 0.1 0 0.1	SW	1000 1000	60 1 60 1	T 38 R LED T 38 R LED	RTLED38 RTLED38	38 38	0.0	None None	1,00	00 38	3 22 0.0 3 22 0.0		.14 \$ 2	236.25 \$ 236.25 \$	50 57.0 50 57.0	
Closet: 2nd Floor MTR: 2nd Floor WTR: 2nd Floor	1	T 32 R F 2 (ELE) T 32 R F 2 (ELE) T 32 R F 2 (ELE)	F42LL F42LL F42LL	6	0 0.1	SW SW	1000 1000 1000	60 1	T 38 R LED T 38 R LED	RTLED38 RTLED38	38	0.0	None None	1,00	00 38	3 22 0.0 3 22 0.0	\$ 4.	14 \$ 2 14 \$ 2	236.25 \$ 236.25 \$	50 57.0 50 57.0	.0
Room 2065: 2nd Floo	11	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 1.0	SW SW	2400 2,	376 11 076 111	T 38 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38	0.0 0.4 4.2	None OCC	1,00	00 38 00 794 00 8,014		\$ 255.		236.25 \$ 727.00 \$	50 57.0 20 10.7	
Unemployment Office: 2nd Floo Staff TR: 2nd Floor Corridor Lighting: 2nd Floo	1 7	T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	6	0 0.1	SW Breaker	1000	976 111 60 1 436 7	T 38 R LED T 59 R LED	RTLED38 RTLED38	38 38 38	0.0	None None	1,00	00 38	22 0.0	\$ 2,574. \$ 4. \$ 136.	.14 \$ 2	352.00 \$ 236.25 \$ 653.75 \$	20 10.2 50 57.0 - 12.1	<u>5</u>
Room 2138: 2nd Floo Room 2139: 2nd Floo	2 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.2 0 0.2	SW	2400	432 2 432 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	OCC	1,90 1,90	00 144	288 0.1	\$ 46. \$ 46.	.40 \$ 6	600.75 \$ 600.75 \$	20 12.9 20 12.9	9
Room 2140: 2nd Floo Room 2141: 2nd Floo	2 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.2 0.2	SW SW	2400	432 2 432 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	00C	1,90 1,90	00 144 00 144	288 0.1	\$ 46. \$ 46.	40 \$ 6 40 \$ 6	600.75 \$ 600.75 \$	20 12.9 20 12.9	.9
Kitchen: 2nd Floor Corridor Lighting: 2nd Floor WTR: 2nd Floor	5	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 2 (FLF)	F43ILL/2 F43ILL/2 F4211	9	0 0.8	SW Breaker SW		430 9 026 5	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.3 0.2	None None	3,00 2,28	30 433	593 0.3	\$ 224. \$ 97.		126.25 \$ 181.25 \$	- 9.5 - 12.1	.1
Room 2142: 2nd Floo	2 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (FLF)	F42LL F43ILL/2 F43IL1/2	9	0 0.1 0.2	SW		120 2 432 2	T 38 R LED T 59 R LED T 50 R LED	RTLED38 RTLED38 RTLED38	38 38	0.1	None None	1,00 2,40		6 44 0.0 2 250 0.1 2 250 0.1	\$ 40.	29 \$ 4 85 \$ 4	472.50 \$ 472.50 \$	100 57.0 - 11.6	6
MTR: 2nd Floor Room 2144: 2nd Floo	1 2	T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	6	0 0.1	SW	1000 2400	60 1 432 2	T 38 R LED T 59 R LED	RTLED38 RTLED38	38	0.0	None OCC	1,00	00 38	3 22 0.0 288 0.1		14 \$ 2 40 \$ 6	236.25 \$ 600.75 \$	50 57.0 20 12.9) 9
Room 2145: 2nd Floo Room 2146: 2nd Floo	2 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.2 0 0.2	SW	2400 2400	432 2 432 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	OCC	1,90	00 144	288 0.1 288 0.1			600.75 \$ 600.75 \$	20 12.9 20 12.9	
Room 2147: 2nd Floo Room 2148: 2nd Floo	3 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.3 0.2	SW SW		648 3 432 2	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.1 0.1	00C	1,90 1,90	00 217 00 144	431 0.2 288 0.1			837.00 \$ 600.75 \$	20 12.0 20 12.9	
Reception - Room 2102: 2nd Floo Room 2149: 2nd Floo Room 2150: 2nd Floo	8 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	9	0 0.7	SW SW SW	2400	097 8 432 2 432 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38	0.3 0.1	None OCC	2,91	12 885 00 144 00 144	288 0.1	\$ 194. \$ 46. \$ 46	40 \$ 6	890.00 \$ 600.75 \$ 600.75 \$	- 9.7 20 12.9	.9
Room 2150: 2nd Floo Room 2151: 2nd Floo Room 2152: 2nd Floo	2 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILI/2 F43ILI/2 F43ILI/2	9	0 0.2 0 0.2 0 0.2	SW SW	2400	432 2 432 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38 38	0.1	000	1,90	00 144	288 0.1	\$ 46.	.40 \$ E	600.75 \$ 600.75 \$	20 12.9 20 12.9 20 12.9	
WTR: 2nd Floor Room 2153: 2nd Floo	1 2	T 32 R F 2 (ELE) T 32 R F 3 (ELE)	F42LL F43ILL/2	6	0 0.1	SW	1000	60 1 432 2	T 38 R LED T 59 R LED	RTLED38	38	0.0	None OCC	1,00					236.25 \$ 600.75 \$	50 57.0 20 12.9	
Room 2154: 2nd Floo MTR: 2nd Floor	2	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	9	0 0.2 0 0.1	SW	2400 1000	432 2 60 1	T 59 R LED T 38 R LED	RTLED38 RTLED38 RTLED38	38 38 38	0.1 0.0	OCC None	1,90	00 144	288 0.1	\$ 46. \$ 4.	40 \$ 6 14 \$ 2	600.75 \$ 236.25 \$	20 12.9 50 57.0	.9
Room 2104: 2nd Floo Computer Room: 2nd Floo	8 50	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.7 0 4.5	SW SW SW	1000 4,	728 8 500 50	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38	0.3 1.9	OCC None	1,90 1,00	578 00 1,900	2,600 2.6	\$ 185. \$ 489.	74 \$ 11,8	018.25 \$ 812.50 \$	20 10.9 - 24.1 20 10.6	
Room 2024: 2nd Floo Closet: 2nd Floor	15	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	9	0 1.4	SW SW		240 15 90 1 648 3	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38 38 38	0.6	OCC None	1,90	00 1,083 00 38 00 217	3 2,157 0.8 52 0.1 431 0.2	\$ 347. \$ 9.		672.00 \$ 236.25 \$ 837.00 \$	20 10.6 - 24.1 20 12.0	.1
Room 2072: 2nd Floo Room 2071: 2nd Floo TR: 2nd Floor	4	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILU2 F43ILL/2 F42LL	9	0 0.3 0 0.4 0 0.1	SW SW	2400	864 4 60 1	T 59 R LED T 59 R LED T 38 R LED	RTLED38 RTLED38	38 38	0.1	OCC None	1,90	289			79 \$ 1,0 14 \$ 2	073.25 \$ 236.25 \$	20 12.0 20 11.6 50 57.0	8
Room 2070: 2nd Floo Room 2069: 2nd Floo	9	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.8	SW SW	2400 1, 2400 3,	944 9 240 15	T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.0 0.3 0.6	000	1,90	00 650 00 1,083	1,294 0.5 3 2,157 0.8	\$ 208. \$ 347.	78 \$ 2,2 96 \$ 3,6	254.50 \$ 672.00 \$	20 10.8 20 10.6	.8
Room 2067: 2nd Floo TR: 2nd Floor	12	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	9	0 1.1 0 0.1	SW SW SW	2400 2, 1000	592 12 60 1	T 59 R LED T 38 R LED T 59 R LED	RTLED38 RTLED38	38	0.5	OCC None	1,90	00 866 00 38	1,726 0.6	\$ 278. \$ 4.	37 \$ 2,9	963.25 \$	20 10.6 50 57.0	.6
Office: 1st Floor Office: 1st Floor	4	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2	9	0 0.4 0 0.5	SW	2400 2400 1,	864 4 296 6	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38 38 38	0.2	OCC	1,90 1,90	00 289 00 433	3 22 0.0 575 0.2 8 863 0.3 2 144 0.1	\$ 92 \$ 139 \$ 23	79 \$ 1,0 19 \$ 1,5	236.25 \$ 073.25 \$ 545.75 \$	20 11.6	.6
Office: 1st Floor Welfare Office: 1st Floor	1 22	T 32 R F 3 (ELE) W 40 C F 2 (MAG)	F43ILL/2 F42SS	9	0 0.1 4 2.1	SW SW	2400	216 1 963 22 952 97	T 59 R LED W 28 C F 2 T 59 R LED	RTLED38 F42SSILL RTLED38	38 48 38	0.0 1.1	OCC	1,90 1,90	00 72 00 2,006	2,957 1.0	\$ 474.	20 \$ 3	364.50 \$ 068.25 \$	20 15.7 20 12.8 20 10.2	
Welfare Office: 1st Floor Records Office: 1st Floor	97	T 32 R F 3 (ELE) CFQ/18/2 RC	F43ILL/2 CFQ18/2	9	0 8.7 5 0.2	SW SW	2400	432 4	6BLMWLED	6BLMWLED	13	3.7 0.1	OCC	1,90	7,003 00 99 00 144		\$ 2,250 \$ 54 \$ 46		044.50 \$ 776.25 \$	20 14.4	.4
Records Office: 1st Floor Room 1411: 1st Floor Room 1412: 1st Floor	2 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	9	0 0.2 0 0.2	SW SW SW	2400	432 2 432 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38 RTLED38	38 38 38	0.1	000	1,90	00 144	288 0.1	\$ 46.	.40 \$ €	600.75 \$ 600.75 \$	20 12.9 20 12.9 20 15.7	9
Room 1412: 1st Flooi Room 1410: 1st Flooi Room 1409: 1st Flooi	2 2	T 32 R F 3 (ELE) T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2 F43ILL/2 F43ILL/2	9	0 0.1 0 0.2 0 0.2	SW SW	2400 2400 2400	432 2 432 2	T 59 R LED T 59 R LED T 59 R LED	RTLED38 RTLED38	38	0.0 0.1 0.1	000	1,90	00 144		\$ 46.	.40 \$ E	364.50 \$ 600.75 \$ 600.75 \$	20 12.9	.9
WTR: 1st Floor MTR: 1st Floor	1 1	T 32 R F 2 (ELE) T 32 R F 2 (ELE)	F42LL F42LL	6	0 0.1	SW	1000	60 1	T 38 R LED	RTLED38 RTLED38	38 38 38	0.0	None None	1,00	00 38	22 0.0	\$ 4.	14 \$ 2 14 \$ 2	600.75 \$ 236.25 \$ 236.25 \$	20 12.9 50 57.0 50 57.0	
Café: 1st Floor WTR: 1st Floor	8 3	T 32 R F 3 (ELE) T 32 R F 2 (ELE)	F43ILL/2 F42LL	9	0 0.7	SW SW	1600 1, 1000	60 1 152 8 180 3	T 38 R LED T 59 R LED T 38 R LED	RTLED38 RTLED38	38 38 38	0.3 0.1	OCC None	1,20 1,00	365		\$ 4. \$ 132. \$ 12.	.43 \$ 7	236.25 \$ 018.25 \$ 708.75 \$	50 57.0 20 15.2 150 57.0	2
Corridor Lighting: 1st Floo MTR: 1st Floor	7	CFQ/18/2 RC T 32 R F 2 (ELE)	CFQ18/2 F42LL	4	5 0.3 0 0.2	Breaker SW	2280 1000	718 7 180 3	6BLMWLED T 38 R LED	6BLMWLED RTLED38	13 38	0.1 0.1	None None	2,28	30 207 00 114	66 0.1 511 0.2 66 0.1	\$ 84.	.05 \$ 1,1	134.00 \$ 708.75 \$	- 13.5 150 57.0	5

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	EXISTING CONDITIONS										RETROFIT (CONDITIONS							COST & SAVIN	NGS ANALYSIS				
				Existint cons	,,,,o,,,o							NE INCITIO	00.101110110							0001 0 0 0 1 1 1	100 ALLAE I GIO	NJ Smart Start	Simple Payback	
					Watts per								Watts per		Retrofit			Annual kWh				Lighting	With Out	
	Area Description	No. of Fixtures	Standard Fixture Code	Fixture Code	Fixture	kW/Space	Exist Control	Annual Hours	Annual kWh	Number of Fixture	Standard Fixture Code	Fixture Code	Fixture	kW/Space	Control	Annual Hour	s Annual kWh	Saved	Annual kW Saved	Annual \$ Saved	Retrofit Cost	Incentive	Incentive	Simple Payback
ield Code	Unique description of the location - Room number/Room		Lighting Fixture Code	Code from Table of Standard	Value from	(Watts/Fixt) * (Fixt		Estimated daily	(kW/space) *		Lighting Fixture Code	Code from Table of	Value from	(Watts/Fixt) *	Retrofit contro		(kW/space) *	(Original Annual	(Original Annual		Cost for		Length of time	Length of time for
	name: Floor number (if applicable)	before the retrofit		Fixture Wattages	Table of	No.)	control device	hours for the	(Annual Hours)	the retrofit		Standard Fixture	Table of	(Number of	device	annual hours			kW) - (Retrofit	(\$/kWh)	renovations to		for renovations	renovations cost to
					Standard Fixture			usage group				Wattages	Standard Fixture	Fixtures)		for the usage	Hours)	Annual kWh)	Annual kW)		lighting system		cost to be recovered	be recovered
					Wattages								Wattages			group						,	acovered	
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000		0 1	T 38 R LED	RTLED38	38	0.0	None	1,00	0 38	22	0.0	\$ 4.14	\$ 236.25	S 50	57.0	44.9
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	6	0 1	T 38 R LED	RTLED38	38	0.0	None	1,00		22	0.0	\$ 4.14			57.0	44.9
22	Lobby: 1st Floor	1	1T 34 R F 4 (MAG)	F44EE	14-	4 0.1	SW	2912		9 1	1T 28 R F 4	F44SSILL	96	0.1	None	2,91		140		\$ 22.44			6.3	6.3
274LED	Bus Card: 1st Floor	3	CFQ/18/2 RC	CFQ18/2	4	5 0.1	SW	2912	39		6BLMWLED	6BLMWLED	13	0.0	None	2,91		280		\$ 44.88			10.8	10.8
35LED	Bus Card: 1st Floor	2	T 32 R F 3 (ELE)	F43ILL/2		0.2	SW	2912		4 2	T 59 R LED	RTLED38	38	0.1	None	2,91			0.1	\$ 48.62			9.7	9.7
22	Lobby: 1st Floor	15 28	1T 34 R F 4 (MAG) CFQ/18/2 RC	F44EE CFQ18/2	14-	4 2.2	SW	2912			1T 28 R F 4 6BI MWI FD	F44SSILL 6BLMWLED	96	1.4	None	2,91				\$ 336.61			6.3	6.3
274LED 22	Vestibule: 1st Floor	28	1T 34 R F 4 (MAG)	F44EE	14	1.0	SW	2912			1T 28 R F 4	F44SSILL	96	0.4	None None	2,91				\$ 418.89 \$ 44.88			10.8 6.3	10.8
35LED	Waiting Area: 1st Floor	17	T 32 R F 3 (ELE)	F43LL/2		0.5	SW	3000			T 59 R LED	RTLED38	38	0.6	None	3,00				\$ 424.64			9.5	9.5
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60		SW	1000		0 1	T 38 R LED	RTLED38	38	0.0	None	1.00			0.0	\$ 4.14			57.0	44.9
40LED	TR: 1st Floor	2	T 32 R F 2 (ELE)	F42LL		0.1	SW	1000			T 38 R LED	RTLED38	38	0.1	None	1,00			0.0	\$ 8.29				44.9
40LED	TR: 1st Floor	2	T 32 R F 2 (ELE)	F42LL		0.1	SW	1000	12	0 2	T 38 R LED	RTLED38	38	0.1	None	1,00	0 76	44	0.0	\$ 8.29	\$ 472.50	\$ 100	57.0	44.9
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000		0 1	T 38 R LED	RTLED38	38	0.0	None	1,00			0.0	\$ 4.14			01.0	44.9
35LED	Reception: 1st Floor	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	SW	2912	1,04		T 59 R LED	RTLED38	38	0.2	None	2,91		606	0.2	\$ 97.24	\$ 945.00		9.7	9.7
35LED 168	Welfare Office: 1st Floor Welfare Office: 1st Floor	40	T 32 R F 3 (ELE) W 40 C F 2 (MAG)	F43ILL/2 F42SS	90	0 3.6	SW	2400	8,64		T 59 R LED	RTLED38 F42SSILI	38	1.5	000	1,90	0 2,888			\$ 927.90			10.3	10.3
168 35LED	Welfare Office: 1st Floor Welfare Office: 1st Floor	14	T 32 R F 3 (ELE)	F4255	94	0.5	SW	2400	1,29		W 28 C F 2 T 59 R LED	RTLED38	48 38	0.7	OCC	1,90	0 1,277	1,882	0.6	\$ 301.99 \$ 139.19	\$ 3,908.25 \$ 1,545.75		12.9	12.9 11.0
35LED	Room 1109: 1st Floor	2	T 32 R F 3 (ELE)	F43ILU2	90	0.5	SW	2400	43		T 59 R LED	RTLED38	38	0.2	OCC	1,90	0 144	288		\$ 46.40	\$ 600.75		12.9	12.5
40LED	TR: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000		0 1	T 38 R I FD	RTLED38	38	0.0	None	1.00		200	0.0	\$ 4.14			57.0	44.9
274LED	Vestibule: 1st Floor	2	CFQ/18/2 RC	CFQ18/2	45	5 0.1	SW	2912	26	2 2	6BLMWLED	6BLMWLED	13	0.0	None	2,91	2 76	186	0.1	\$ 29.92	\$ 324.00		10.8	10.8
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000	6	0 1	T 38 R LED	RTLED38	38	0.0	None	1,00	0 38	22	0.0	\$ 4.14	\$ 236.25	\$ 50	57.0	44.9
40LED	Closet: 1st Floor	1	T 32 R F 2 (ELE)	F42LL	60	0.1	SW	1000			T 38 R LED	RTLED38	38	0.0	None	1,00	0 38	22	0.0	\$ 4.14	\$ 236.25	\$ 50	57.0	44.9
80	Stairs: 1st Floor	15	SP 36 R CF 1	CFT36/1	5	1 0.8	SW	3200	2,44		SP 36 R CF 1	CFT36/1	51	0.8	None	3,20			0.0	\$ -	\$ -	\$ -		
168	Old Kitchen: Basement	20	W 40 C F 2 (MAG)	F42SS	94	4 1.9	SW	3000			W 28 C F 2	F42SSILL	48	1.0	None	3,00				\$ 441.93			12.2	12.2
35LED	Old Kitchen: Basemeni Old Kitchen: Basemeni	1 00	T 32 R F 3 (ELE)	F43ILL/2 F42SS	90	0 0.1	SW	3000			T 59 R LED	RTLED38	38	0.0	None	3,00				\$ 24.98 \$ 441.93			9.5	9.5
168 168	Old Kitchen: Basemeni	20	W 40 C F 2 (MAG) W 40 C F 2 (MAG)	F42SS	94	4 1.9 4 0.4	SW	3000			W 28 C F 2 W 28 C F 2	F42SSILL F42SSILL	48 48	1.0	None None	3,00				\$ 88.39			12.2 12.2	12.2 12.2
168	Lobby: Basemen	10	W 40 C F 2 (MAG)	F42SS	9	4 0.9	SW	2912			W 28 C F 2	F42SSILL	48	0.5	None	2.91				\$ 215.06			12.6	12.6
35LED	Corridor Lighting: Basemen	4	T 32 R F 3 (ELE)	F43ILL/2	90	0.4	Breaker	2280			T 59 R LED	RTLED38	38	0.2	None	2,28		474		\$ 78.05			12.1	12.1
35LED	Switch Room : Basemen	1	T 32 R F 3 (ELE)	F43ILL/2	90		SW	1000	9	0 1	T 59 R LED	RTLED38	38	0.0	None	1,00		52	0.1	\$ 9.79		\$ -	24.1	24.1
35LED	Server Room: Basemen	8	T 32 R F 3 (ELE)	F43ILL/2	90	0.7	SW	1000	72	0 8	T 59 R LED	RTLED38	38	0.3	None	1,00	0 304			\$ 78.36	\$ 1,890.00	\$ -	24.1	24.1
35LED	Office: Basement	3	T 32 R F 3 (ELE)	F43ILL/2		0.3	SW	2400	64		T 59 R LED	RTLED38	38	0.1	OCC	1,90	217	431	0.2	\$ 69.59	\$ 837.00		12.0	11.7
35LED	Cleaning Room: Basemen	10	T 32 R F 3 (ELE)	F43ILL/2	90	0.9	SW	1000		0 10	T 59 R LED	RTLED38	38	0.4	None				0.5	\$ 97.95			24.1	24.1
35LED	Office: Basement	4	T 32 R F 3 (ELE)	F43ILL/2	90	0 0.4	SW	2400	86		T 59 R LED	RTLED38	38	0.2	occ	1,90	0 289	575		\$ 92.79	\$ 1,073.25		11.6	11.4
35LED	Lock Shop: Basemen	2	T 32 R F 3 (ELE) T 32 R F 3 (ELE)	F43ILL/2	90	0 0.2	SW	1000	18		T 59 R LED T 59 R LED	RTLED38	38	0.1	None	1,00	76	104	0.1	\$ 19.59			24.1	24.1
35LED 35LED	Corridor Lighting: Baseman	4	T 32 R F 3 (ELE)	F43ILI/2 F43ILI/2	90	0.4	Breaker	2400	1.64		T 59 R LED T 59 R LED	RTLED38 RTLED38	38 38	0.2	None	1,90 2,28	289	575	0.2	\$ 92.79 \$ 156.10	\$ 1,073.25 \$ 1,890.00		11.6 12.1	11.4
168	Corridor Lighting: Basemen Files: Basement	10	W 40 C F 2 (MAG)	F43ILU2 F42SS	90	4 0.9	SW	1000	94		W 28 C F 2	F42SSILL	48	0.5	None	1.00			0.5	\$ 156.10			31.2	31.2
168	Files: Basement	8	W 40 C F 2 (MAG)	F42SS	94	4 0.8	SW	1000	75	2 8	W 28 C F 2	F42SSILL	48	0.4	None	1.00		368		\$ 69.32	\$ 2,160.00		31.2	31.2
35LED	DWI Office: Basement	13	T 32 R F 3 (ELE)	F43ILL/2	90	0 1.2	SW	2400	2,80	8 13	T 59 R LED	RTLED38	38	0.5	OCC	1,90	0 939			\$ 301.57	\$ 3,199.50		10.6	10.5
35LED	DWI Office: Basement	1	T 32 R F 3 (ELE)	F43ILL/2	90	0.1	SW	2400	21		T 59 R LED	RTLED38	38	0.0	OCC	1,90	72	144		\$ 23.20	\$ 364.50		15.7	14.9
35LED	DWI Office: Basement	2	T 32 R F 3 (ELE)	F43ILL/2	90	0.2	SW	2400			T 59 R LED	RTLED38	38	0.1	OCC	1,90	0 144			\$ 46.40			12.9	12.5
274LED	DWI Office: Basement	11	CFQ/18/2 RC	CFQ18/2	45	5 0.5	SW	2400			6BLMWLED	6BLMWLED	13	0.1	OCC	1,90	0 272		0.4	\$ 148.69			12.8	12.7
168 168	DWI Office: Basement Room LL10: Basemen	2	W 40 C F 2 (MAG) W 40 C F 2 (MAG)	F42SS F42SS	94	4 0.2	SW	2400 2400			W 28 C F 2 W 28 C F 2	F42SSILL F42SSILL	48	0.1	000	1,90	0 182	269		\$ 43.14 \$ 43.14			15.5 15.5	15.0 15.0
168	Electrical Room: Basemen	2	W 40 C F 2 (MAG) W 40 C F 2 (MAG)	F42SS F42SS	94	4 0.2 4 0.4	SW	1000		6 4	W 28 C F 2 W 28 C F 2	F42SSILL F42SSILL	48	0.1	None	1,90	102			\$ 43.14 \$ 34.66			15.5 31.2	15.0 31.2
168	Pump Room: Basemen	1	W 40 C F 2 (MAG)	F4255 F42SS	94		SW	1000		4 1	W 28 C F 2	F42SSILL	48	0.2	None	1,00			0.0	\$ 34.66			31.2	31.2
40LED	Boiler Room: Basemen	10	T 32 R F 2 (ELE)	F42LL		0.6	SW	1820	,		T 38 R LED	RTLED38	38	0.4	None	1.82			0.2	\$ 67.78			34.9	27.5
40LED	Elevator: Basemen	6	T 32 R F 2 (ELE)	F42LL	60	0.4	SW	3200	1,15	2 6	T 38 R LED	RTLED38	38	0.2	None	3,20	0 730		0.1	\$ 67.26			21.1	16.6
168	Corridor Lighting: Basemen	1	W 40 C F 2 (MAG)	F42SS	94	4 0.1	Breaker	2280		4 1	W 28 C F 2	F42SSILL	48	0.0	None	2,28		105	0.0	\$ 17.26		\$ -	15.6	15.6
215	Exterior Lighting	4	High Bay MH 350	MHPS/SCWA/350/1	400		SW	4368	0,30		F48T5/HO	F44GHL	234	0.9	None	4,36		2,900		\$ 451.58	.,		4.2	3.3
S 1	otal	1,768				155.4			355,999	1,768				69.5			138,283		85.9	35,427	433,748	\$8,130		
s		·	·		·	·				·		·						and Savings		85.9	\$3,640			
S																		h Savings		217,715	\$31,786		'	
S																	Tot	al Savings	1	ı	\$35,427		12.2	12.0

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CHA Project Number: 29142

Utility C	Costs	Yearly Usage	Metric Ton Carbon Dioxide Equivalent	Building Area	Ar	nual Utility Cos	st
\$ 0.156	\$/kWh blended		0.000420205	113,750	Electric	Natural Gas	Fuel Oil
\$ 0.146	\$/kWh supply	2,427,211	0.000420205		\$ 379,136	\$ 51,876	
\$ 3.53	\$/kW	715.0	0	•			
\$ 0.85	\$/Therm	61,577	0.00533471				

Rate of Discount (used for NPV) 3.0%

		Econ	omic De	velopn	nent Cer	nter																
Recommend	·	Item		Savings				Cost	Simple	Life	Equivalent CO ₂	NJ Smart Start	Direct Install	Payback w/	Simple Projected Lifetime Savings				ROI	NPV	IRR	
Y or N			kW	kWh	therms	No. 2 Oil gal Water kgal	\$		Payback	Expectancy	(Metric tons)	Incentives	Eligible (Y/N)	Incentives	kW	kWh	therms	kgal/yr	\$		1	1
Υ	ECM-1	Insulate Wall Cavity behind Wall Panels	0.0	10,793	1,775	0 0	3,187	\$ 182,206	57.2	25.0	14.0		N	57.2	0.0	269,822	44,363	0	\$ 79,667	(0.6)	(\$126,716)	-5.6%
Υ	ECM-2	Install Window Film	0.0	60,856	0	0 0	9,494	\$ 197,600	20.8	15.0	25.6		N	20.8	0.0	912,842	0	0	\$ 142,403	(0.3)	(\$84,267)	-3.8%
Υ	ECM-3	Install Condensing Boilers	0.0	0	2,969	0 0	2,514	\$ 150,246	59.8	20.0	15.8	\$ 2,000	N	59.0	0.0	0	59,371	0	\$ 50,287	(0.7)	(\$110,838)	-8.6%
Υ	ECM-4	Install VFDs on Hot Water Pumps	24.0	7,984	0	0 0	2,184	\$ 19,441	8.9	10.0	3.4	\$ 1,500	N	8.2	240.5	79,835	0	0	\$ 22,641	0.2	\$692	3.7%
Υ	ECM-5	Retro-Commission DDC Controls	0.0	189,322	8,498	0 0	36,732	\$ 39,427	1.1	15.0	124.9		N	0.0	0.0	2,839,837	127,464	0	\$ 550,977	13.0	\$399,075	93.2%
N	ECM-L1	Lighting Replacements / Upgrades	85.9	196,398	0	0 0	32,314	\$ 413,998	12.8	10.0	82.5	\$ 5,050	N	12.7	859.0	1,963,980	0	0	\$ 342,768	(0.2)	(\$133,303)	-4.1%
N	ECM-L2	Install Lighting Controls (Add Occupancy Sensors)	0.0	49,626	0	0 0	7,245	\$ 19,751	2.7	10.0	20.9	\$ 3,080	N	2.3	0.0	496,260	0	0	\$ 77,417	2.9	\$45,130	42.2%
Υ	ECM-L3	Lighting Replacements with Controls (Occupancy Sensors)	85.9	217,715	0	0 0	35,427	\$ 433,748	12.2	10.0	91.5	\$ 8,130	N	12.0	859.0	2,177,150	0	0	\$ 376,023	(0.1)	(\$123,419)	-3.2%
Total (Not Including ECMs L1, L2)			109.9	486,670	13,241	0 0	\$ 89,538	\$ 1,022,668	11.4	10.6	305	\$ 13,630		11.3	1,099	6,279,487	231,198	-	\$ 1,221,998	0.2	(\$245,263)	-2.1%
Recommended Measures (highlighted green above)			109.9	486,670	13,241	0 0	\$ 89,538	\$ 1,022,668	11.4	10.6	275	\$ 11,630	0	11.3	1,099	6,279,487	231,198	-	\$ 1,221,998	0.2	(\$247,263)	-2.2%
		% of Existing	15%	20.05%	21.50%	0 0																

		City:	Newark, NJ				
	Occupied H	ours/Week	70	70	70	70	50
			Building	Auditorium	Gymnasium	Library	Classrooms
	Enthalpy		Operating	Occupied	Occupied	Occupied	Occupied
Temp	h (Btu/lb)	Bin Hours	Hours	Hours	Hours	Hours	Hours
102.5							
97.5	35.4	6	3	3	3	3	2
92.5	37.4	31	13	13	13	13	9
87.5	35.0	131	55	55	55	55	39
82.5	33.0	500	208	208	208	208	149
77.5	31.5	620	258	258	258	258	185
72.5	29.9	664	277	277	277	277	198
67.5	27.2	854	356	356	356	356	254
62.5	24.0	927	386	386	386	386	276
57.5	20.3	600	250	250	250	250	179
52.5	18.2	730	304	304	304	304	217
47.5	16.0	491	205	205	205	205	146
42.5	14.5	656	273	273	273	273	195
37.5	12.5	1,023	426	426	426	426	304
32.5	10.5	734	306	306	306	306	218
27.5	8.7	334	139	139	139	139	99
22.5	7.0	252	105	105	105	105	75
17.5	5.4	125	52	52	52	52	37
12.5	3.7	47	20	20	20	20	14
7.5	2.1	34	14	14	14	14	10
2.5	1.3	1	0	0	0	0	0
-2.5							
-7.5							

Multipliers	
Material:	1.027
Labor:	1.246
Equipment:	1.124
•	•

Heating System Efficiency	80%
Cooling Eff (kW/ton)	1.2

He	Heating						
Hours	4,427	Hrs					
Weighted Avg	40	F					
Avg	28	F					

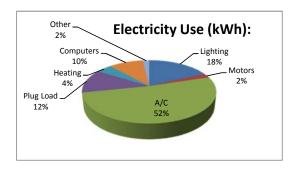
		_
Co	oling	
Hours	4,333	Hrs
Weighted Avg	68	F
		_

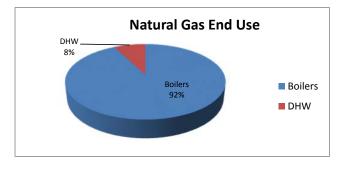
CHA Project Number: 29142 Economic Development Center

	Utility End Use Analysis												
Electric	ity Use (kWh):	Notes/Comments:											
2,427,211	Total	Based on utility analysis											
436,000	Lighting	From Lighting Calculations											
53,000	Motors	Estimated											
1,250,000	A/C	Estimated											
295,000	Plug Load	Estimated											
107,000	Heating	Estimated											
240,000	Computers	Estimated											
46,211	Other	Remaining											
Natural Ga	ıs Use (Therms):	Notes/Comments:											
61,577	Total	Based on utility analysis											
- ,-	Boilers	Therms/SF x Square Feet Served											
5,075	DHW	Based on utility analysis											
0	Kitchen	Based on utility analysis											

17.96%
2.18%
51.50%
12.15%
4.41%
9.89%
1.90%
100.00%

0.082417136 0





CHA Project Number: 29142 **Economic Development Center**

ECM-1 Insulate Wall Cavity

Existing: wall insulation is minimal, assumed to be R-13 . Proposed: Install 2" rigid styrofoam insulation behind all exterior metal wall panels

Area of exterior wall 40,320 SF Existing Infiltration Factor Proposed Infiltration Facto Existing U Value 0.06 cfm/SF 0.02 cfm/SF 0.076 Btuh/SF/°F Proposed U Value 0.053 Btuh/SF/°F

1.2 kW/ton Cooling System Efficiency Ex Occupied Clng Temp.
Ex Unoccupied Clng Temp.
Cooling Occ Enthalpy Setpoi
Cooling Unocc Enthalpy Setr 74 *F 74 *F 74 *F 27.5 Btu/lb 27.5 Btu/lb

Heating System Efficiency Heating On Point
Ex Occupied Htg Temp.
Ex Unoccupied Htg Temp. Cooling Electricity Heating NG Cost

80% 55 *F 72 *F 72 *F 0.156 \$/kWh 0.85 \$/Therm

					EXISTING LOADS PROF			ED LOADS	COOLING	ENERGY	HEATING	HEATING ENERGY	
					Occupied	Unoccupied	Occupied	Unoccupied					
Avg Ext Wall Temp. Bins °F	Avg Outdoor Air Enthalpy	Existing Equipment Bin Hours	Occupied Equipment Bin Hours	Unoccupied Equipment Bin Hours	Infiltration & Heat Load BTUH	Infiltration & Heat Load BTUH	Infiltration & Heat Load BTUH		Existing Cooling Energy kWh	Proposed Cooling Energy kWh	Existing Heating Energy Therms	Proposed Heating Energy Therms	
Α		В	С	D	E	F	G	Н	I	J	K	L	
117.5	35.4	6	3	4	-219,379	-219,379	-120,950	-120,950	132	73	0	0	
112.5	37.4	31	13	18	-225,773	-225,773	-117,584	-117,584	700	365	0	0	
107.5	35.0	131	55	76	-184,137	-184,137	-98,208	-98,208	2412	1287	0	0	
102.5	33.0	500	208	292	-147,721	-147,721	-80,573	-80,573	7386	4029	0	0	
97.5	31.5	620	258	362	-116,078	-116,078	-64,528	-64,528	7197	4001	0	0	
92.5	29.9	664	277	387	-82,882	-82,882	-47,966	-47,966	5503	3185	0	0	
87.5	27.2	854	356	498	-37,940	-37,940	-27,488	-27,488	3240	2348	0	0	
82.5	24.0	927	386	541	12,124	12,124	-5,303	-5,303	0	492	140	0	
77.5	20.3	600	250	350	68,199	68,199	18,885	18,885	0	0	511	142	
72.5	18.2	730	304	426	0	0	0	0	0	0	0	0	
67.5	16.0	491	205	286	0	0	0	0	0	0	0	0	
62.5	14.5	656	273	383	0	0	0	0	0	0	0	0	
57.5	12.5	1,023	426	597	0	0	0	0	0	0	0	0	
52.5	10.5	734	306	428	110,703	110,703	58,339	58,339	0	0	1,016	535	
47.5	8.7	334	139	195	139,088	139,088	73,298	73,298	0	0	581	306	
42.5	7.0	252	105	147	167,473	167,473	88,256	88,256	0	0	528	278	
37.5	5.4	125	52	73	195,858	195,858	103,215	103,215	0	0	306	161	
32.5	3.7	47	20	27	224,244	,	118,174	- /	0	0	132	69	
27.5	2.1	34	14	20	252,629	252,629	133,133	133,133	0	0	107	57	
22.5	1.3	1	0	1	281,014	281,014	148,091	148,091	0	0	4	2	
TOTALS		8,760	3,650	5,110					26570	15777	3,325	1,550	

Existing Wall Infiltration Existing Wall Heat Transfer Proposed Wall Infiltration **Proposed Wall Heat Transfer** 2,419 cfm 3,064 Btuh/°F 806 cfm 2,121 Btuh/°F Savings 1,775 Therms 10,793 kWh 1,684 3,187

CHA Project Number: 29142 Economic Development Center

ECM-1 Insulate Wall Cavity - Cost

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

Description	QTY	UNIT	UNIT COSTS		SUBTOTAL COSTS			TOTAL COST	REMARKS	
			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.	TOTAL COST	KLWAKKS
						\$ -	\$ -		\$ -	
2" rigid styrofoam board insulation	40,320	SF	\$ 0.800	\$ 1.000	\$ 0.130	\$ 33,224	\$ 50,400	\$ 5,871	\$ 89,494	Vendor quote
exterior wall panel access	40,320	SF		\$ 1.000	\$ 0.130	\$ -	\$ 50,400	\$ 5,871	\$ 56,271	Engineeing estimate
						\$ -	\$ -	\$ -	\$ -	

Note: Cost estimates are for energy savings calculations only, do not use for procurement

\$ 145,765	Subtotal
\$ 36,441	25% Contingency
\$ 182,206	Total

Essex County CHA Project Number: 29142 Economic Development Center

ECM-2: Window Film

Existing: Clear glazing has high solar gain requiring additional cooling Proposed: Install window film to reduce solar heat gain and therefore reduce cooling load

Linear Feet of window Edge	15,120.0	LF	Cooling System Efficiency	1.2	kW/ton
Area of window glass	15,120.0	SF	Ex Occupied Clng Temp.	74	*F
Existing Infiltration Factor	0.00	cfm/LF	Ex Unoccupied Clng Temp.	85	*F
Proposed Infiltration Factor	0.00	cfm/LF	Cooling Occ Enthalpy Setpoi	27.5	Btu/lb
Existing U Value	0.00	Btuh/SF/°F	Cooling Unocc Enthalpy Setp	27.5	Btu/lb
Proposed U Value	0.00	Btuh/SF/°F			

Average Transmitted Solar Radiation (Btu/ft2/day) for Double Glazing, Uncertaint	ty +/-9% *

Months	Horizontal Unshaded	North Unshaded	North Shaded	East Unshaded	East Shaded	South Unshaded	South Shaded	West Unshaded	West Shaded	Averages	Total Btu/Windows per Day	BTUH daily average	Cooling Energy per Year (kWh)
January	390	130	120	280	250	730	710	280	250	349	5,275,200	219800	0
February	590	180	160	320	340	800	730	380	340	427	6,451,200	268800	0
March	860	240	210	520	450	770	600	520	450	513	7,761,600	323400	0
April **	1120	310	270	650	550	650	430	630	530	571	8,635,200	359800	6476.4
May	1300	370	320	700	590	550	370	690	580	608	9,189,600	382900	28487.8
June	1400	410	360	740	610	510	370	730	610	638	9,643,200	401800	28929.6
July	1380	400	350	740	620	530	380	730	610	638	9,643,200	401800	29893.9
August	1230	340	300	690	580	620	400	670	560	599	9,055,200	377300	28071.1
September	980	270	240	580	500	740	530	570	490	544	8,232,000	343000	24696.0
October **	700	200	180	450	400	820	720	440	380	477	7,207,200	300300	5585.6
November	430	140	130	300	260	700	670	280	250	351	5,308,800	221200	0
December	320	120	100	230	210	650	630	230	200	299	4,519,200	188300	0

Heating System Efficiency Heating On Temp. Ex Occupied Htg Temp. Ex Unoccupied Htg Temp. Electricity

0% 55 *F 72 *F 72 *F \$ 0.156 \$/kWh

				Effectiveness of Window Film: 40%					Savings	0	Therms	\$
										60,856	kWh	\$
_												\$
Window ID	Location	Quantity	Width (ft)	Height (ft)	Linear Feet (LF)	Area (SF)	Infiltration Rate (CFM/LF)	U Value (Btuh/SF/°F)	Infiltration (CFM)	Heat Transfer (Btuh/°F)		
1	building	840	3	6	15120.0	15120.0	0.2	0.8	3024.0	12096.0		
Total		840	6	12	15,120.0	15,120.0	0.20	0.80	3024.0	12096.0		

Notes

^{*} Data provided for Latitude: 40.78*N Longitude: 73.97*W Elevation: 187 feet, New York City, NY
** Solar heat gain is conservatively reduced by 75% in these months to offset days that require heating

Essex County CHA Project Number: 29142 Economic Development Center

ECM-2 Window Film - Cost

Description	QTY	UNIT	l	INIT COST	S	SUBT	OTAL COS	TS	TOTAL	REMARKS
Description	QIT	UNIT	MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.	COST	REIVIARNS
Window Film Installation	15,120	sq.ft	\$ 8.00	\$ 1.00	\$ -	\$ 120,960	\$15,120	\$ -	\$ 136,080	Vendor Est per SF

*Cost estimated are for Energy Savings only- do not use for procurement

\$ 136,080	Subtotal
\$ 13,608	10% Contingency
\$ 29,938	20% Contractor O&P
\$ 17,963	10% Engineering Fees
\$ 197,600	Total

CHA Project Number: 29142 Economic Development Center

ECM-3: Boiler Replacement

Description: This ECM evaluates the replacement of one existing hot water boiler with a high efficiency condensing gas boiler. The existing boiler efficiency is 80% (per NJBPU protocols) and the proposed boiler efficiency is 90% (average seasonal efficiency). Electrical power consumption due to pumps is considered to be the same for both the proposed system and the baseline system. The new boilerwould be the primary heat source and operate during

<u>Item</u>		Value	<u>Units</u>	Formula/Comments				
Baseline Fuel Cost	\$	0.85	/ Therm	Natural Gas				
Baseline Fuel Cost			/ Gal	No. 2 Oil				
FORMULA CONSTANTS								
Oversize Factor		0.8						
Hours per Day		24						
Design Outdoor Temp		14	F					
Infrared Conversion Factor		1.0		1.0 if Boiler, 0.8 if Infrared Heater				
EXISTING								
Capacity		2,000,000	btu/hr					
Heating Combustion Efficiency		80%						
Heating Degree-Day		2,783	Degree-day					
Design Temperature Difference		75	F					
Fuel Conversion		100,000	btu/therm					
		PROF	POSED					
Capacity		2,000,000	btu/hr					
Efficiency		96%		Operates in shoulder months only				
		SAV	'INGS					
Fuel Savings		2,969	Therms	NJ Protocols Calculation				
Fuel Cost Savings	\$	2,514						

Savings calculation formulas are taken from NJ Protocols document for Occupancy Controlled Thermostats

Algorithms

Gas Savings (Therms)

$$= \frac{OF \times ((CAPY_{Bi} \times EFF_Q) - (CAPY_{Qi} \times EFF_B \times ICF)) \times HDD_{mod} \times 24}{\Delta T \times HC_{fuel} \times EFF_B \times ICF \times EFF_Q}$$

Definition of Variables

OF = Oversize factor of standard boiler or furnace (OF=0.8)

 $CAPY_{Bi}$ = Total input capacity of the baseline furnace, boiler or heater in Btu/hour

CAPY_{Qi} = Total input capacity of the qualifying furnace, boiler or heater in Btu/hour

 $HDD_{mod} = HDD$ by zone and building type

24 = Hours/Day

 ΔT = design temperature difference

 HC_{fuel} = Conversion from Btu to therms of gas or gallons of oil or propane (100,000 btu/therm; 138,700 btu/gal of #2 oil; 92,000 btu/gal of propane)

EFF_O = Efficiency of qualifying heater(s) (AFUE %)

EFF_B = Efficiency of baseline heaters (AFUE %)

ICF = Infrared Compensation Factor (ICF = 0.8 for IR Heaters, 1.0 for furnaces/boilers)²

Furnaces and Boilers

Component	Туре	Value	Source
$AFUE_q$	Variable		Application
$AFUE_b$	Fixed	Furnaces: 78%	EPACT Standard
		Boilers: 80%	for furnaces and
		Infrared: 78%	boilers
CAPYin	Variable		Application
ΔΤ	Variable	See Table Below	1
HDD_{mod}	Fixed	See Table Below	1

Sources:

- KEMA, Smartstart Program Protocol Review. 2009.
 http://www.spaceray.com/1_space-ray_faqs.php

Adjusted Heating Degree Days by Building Type

Building Type	Heating Energy Density (kBtu/sf)	Degree Day Adjustment Factor	Atlantic City (HDD)	Newark (HDD)	Philadelphia (HDD)	Monticello (HDD)
Education	29.5	0.55	2792	2783	2655	3886
Food Sales	35.6	0.66	3369	3359	3204	4689
Food Service	39.0	0.73	3691	3680	3510	5137
Health Care	53.6	1.00	5073	5057	4824	7060
Lodging	15.0	0.28	1420	1415	1350	1976
Retail	29.3	0.55	2773	2764	2637	3859
Office	28.1	0.52	2660	2651	2529	3701
Public Assembly	33.8	0.63	3199	3189	3042	4452
Public Order/Safety	24.1	0.45	2281	2274	2169	3174
Religious Worship	29.1	0.54	2754	2745	2619	3833
Service	47.8	0.89	4524	4510	4302	6296
Warehouse/Storage	20.2	0.38	1912	1906	1818	2661

Heating Degree Days and Outdoor Design Temperature by Zone

Weather Station	HDD	Outdoor Design Temperature (F)
Atlantic City	5073	13
Newark	5057	14
Philadelphia, PA	4824	15
Monticello, NY	7060	8

CHA Project Number: 29142 Economic Development Center

ECM-3: Boiler Replacement -	Cost
-----------------------------	------

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

Description	QTY UNIT		ı	JNIT COSTS		SUB	STOTAL CO	STS	TOTAL COST	DEMARKS
Description	QII	OINIT	MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.	TOTAL COST	REWARKS
Aerco BMK2000 w/ condensate	1	EA	\$ 32,000	\$ 12,000		\$ 32,864	\$ 14,952	\$ 1,000	\$ 48,816	Vendor Estimate
Flue Installation	1	LS	\$ 25,000.0	\$ 25,000.00		\$ 25,675	\$ 31,150	\$ -	\$ 56,825	Vendor Estimate
controls	1	EA	\$ 1,000.0	\$ 1,500.00		\$ 1,027	\$ 1,869	\$ -	\$ 2,896	RS Means 2012
Miscellaneous Electrical	1	LS	\$ 1,500	\$ 1,500		\$ 1,541	\$ 1,869	\$ -	\$ 3,410	RS Means 2012
Miscellaneous HW Piping	1	LS	\$ 5,000	\$ 2,500		\$ 5,135	\$ 3,115	\$ -	\$ 8,250	RS Means 2012
						\$ -	\$ -	\$ -	\$ -	
						\$ -	\$ -	\$ -	\$ -	
						\$ -	\$ -	\$ -	\$ -	
						\$ -	\$ -	\$ -	\$ -	
						\$ -	\$ -	\$ -	\$ -	

^{**}Cost Estimates are for Energy Savings calculations only, do not use for procurement

\$ 150,246	
\$ 30,049	25% Contingency
\$ 120,197	Subtotal

CHA Project Number: 29142 Economic Development Center

ECM-4: Install High Efficiency Motors & Variable Speed Drives

Description: This ECM evaluates the energy (electrical) savings associated with replacing existing 25 HP heating pumps motors with high efficiency motors (based on ASHRAE 2010 NEMA ratings) and adding variable frequency drives to control motor speed based on actual load verses constant volume / constant flow. Pumps operate in a lead/ lag fashion, therefore run hours are 50% for each pump.

Variable Inputs

Electric Rate \$0.146 \$/kWh
Demand Rate \$3.53 \$/kW

	MOTOR SCHEDULE						Savings Factor Existing Motor Energy Proposed Motor En				otor Energy							
Motor ID	Motor Type	Qty	НР	Total HP	Upgrade Motor	Load Factor	Existing Motor Eff.	New Motor Eff.	Annual Hours	Demand Savings Factor	Energy Savings Factor	Demand Energy (kW)	Electrical Energy (kWh)	Demand Energy (kW)		Peak Demand Savings (kW)	Ene Savi	inual ergy vings Wh)
HWP-1,2	HW	2	25.0	50.0	N	0.75	91.7%	93.6%	2,213		0.240	30.5	67,503	6.5	59,520	24.0		7,983.5
	•													•	Total:	24.0	7	7,983.5
																\$ 1,019	\$	1,166
																	\$	2,184

Savings calculation formulas are taken from NJ Protocols document for VFDs

CHA Project Number: 29142 Economic Development Center

ECM-4: Install Variable Speed Drives - Cost

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.00

Description	QTY	UNIT	U	JNIT COST	S	SUE	TOTAL CO	STS	TOTAL	REMARKS
Description	3	OINII	MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.	COST	REMARKS
						\$ -	\$ -	\$ -	\$ -	
VFDs for Hot Water Pumps	2	ea	\$ 4,016	\$ 1,024		\$ 8,249	\$ 2,551	\$ -	\$ 10,801	RS Means 2012
Motors -25 HP	2	ea	\$ 1,286	\$ 141		\$ 2,642	\$ 351	\$ -	\$ 2,993	RS Means 2012
Electrical - misc.	2	ls	\$ 250	\$ 500		\$ 514	\$ 1,246	\$ -	\$ 1,760	RS Means 2012
						\$ -	\$ -	\$ -	\$ -	
						\$ -	\$ -	\$ -	\$ -	

^{**}Cost Estimates are for Energy Savings calculations only, do not use for procurement

\$ 15,553	Subtotal
\$ 3,888	25% Contingency
\$ 19,441	Total

CHA Project Number: 29142 Economic Development Center

ECM-5: Re-Commission Building Controls System

Summary:

The existing controls system consists of a Siemens Apogy DDC system for VAVs, while (5) new RTUs are not part of the BAS. This ECM reviews adding the (5) RTUs to the DDC system and re-commissioning the entire controls system.

Building Information: 113,750 Sq Footage	\$0.16 \$ \$0.85 \$	s/kWh Blended s/Therm
EXISTING CONDITIONS		
Existing Facility Total Electric usage	2,427,211	kWh
Existing Facility Total Gas usage	61,577	Therms
Existing Facility Cooling Electric usage	1,262,150	kWh ¹
Existing Facility Heating Natural Gas usage	56650.84	Therms ²
PROPOSED CONDITIONS		
Proposed Facility Cooling Electric Savings	189,322	kWh
Proposed Facility Natural Gas Savings	8497.626	Therms
SAVINGS		
Retro-Commissioning Electric Savings	189,322	kWh
Retro-Commissioning Natural Gas Savings	8,498	Therms

Assumptions

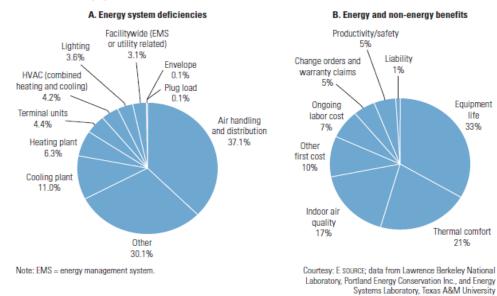
Total cost savings

- 1 52% of facility total electricity dedicated to Cooling based on Building Utility Analysis
- 2 92% of facility total natural gas dedicated to Heating based on Building Utility Analysis
- 3 15% Typical Savings associated with Retro-Commissioning of controls based on EPA Energy Star Report (CH 5 Retrocommissioning)

36,732

Figure 5.2: Retrocommissioning results

Building energy system deficiencies: A recent study of retrocommissioning revealed a wide variety of problems—those related to the overall HVAC system were the most common type (A). Energy and non-energy benefits: Retrocommissioning provided both energy and non-energy benefits—the most common of these, noted in one-third of the buildings surveyed, was the extension of equipment life (B).



Essex County CHA Project Number: 29142 Economic Development Center

Multipliers	
Material:	1.03
Labor:	1.25
Equipment:	1.12

ECM-5: Re-Commission Building Controls System - Cost

Description	QTY UNIT		OTV	OTV	OTV	OTV	OTV	OTV	LINIT	L	INIT COST	S	SUB	TOTAL CO	STS	TOTAL	REMARKS
Description			MAT.	LABOR	EQUIP.	MAT.	LABOR	EQUIP.	COST	KLWAKKS							
									\$ -								
Controls and Sensors Retro-Commissioning	113750	SF	\$ 0.27	INC	INC	\$ 31,542	INC	INC	\$ 31,542	EPA Estimate							
						\$ -	\$ -	\$ -	\$ -								

^{**}Cost Estimates are for Energy Savings calculations only, do not use for procurement

\$31,542	Subtotal
\$ 7,885	25% Contingency
\$ 39,427	Total

CHA Project Number: 29142 Economic Development Center

New Jersey Pay For Performance Incentive Program

Note: The following calculation is based on the New Jersey Pay For Performance Incentive Program per April, 2012. Building must have a minimum average electric demand of 100 kW. This minimum is waived for buildings owned by local governements or non-profit organizations.

At a minimum, all recommended measures were used for this calculation. To qualify for P4P incentives, the following P4P requirements must be met:

- At least 15% source energy savings
- No more than 50% savings from lighting measures
- Scope includes more than one measure
- Project has at least a 10% internal rate of return
- At least 50% of the source energy savings must come from investor-owned electricity and/or natural gas (note: exemption for fuel conversions)

Total Building Area (Square Feet)	113,750
Is this audit funded by NJ BPU (Y/N)	Yes

Incentive #	ŧ1	
Audit is funded by NJ BPU	\$0.05	\$/sqft

Board of Public Utilites (BPU)

	Annual Utilities		
	kWh	Therms	
Existing Cost (from utility)	\$379,136	\$51,876	
Existing Usage (from utility)	2,427,211 61,577		
Proposed Savings	486,670 13,241		
Existing Total MMBtus	14,442		
Proposed Savings MMBtus	2,985		
% Energy Reduction	20.7%		
Proposed Annual Savings	\$89	9,538	

	Min (Savings = 15%)		Increase (Savings > 15%)		Max Ince	ntive		Achieved Incentive
	\$/kWh	\$/therm	\$/kWh	\$/therm	\$/kWh	\$/therm	\$/kWh	\$/therm
Incentive #2	\$0.09	\$0.90	\$0.005	\$0.05	\$0.11	\$1.25	\$0.11	\$1.18
Incentive #3	\$0.09	\$0.90	\$0.005	\$0.05	\$0.11	\$1.25	\$0.11	\$1.18

		Incentives	3
	Elec	Gas	Total
			\$5,688
Incentive #1	\$0	\$0	\$5,688
Incentive #2	\$53,534	\$15,670	\$69,204
Incentive #3	\$53,534	\$15,670	\$69,204
Total All Incentives	\$107,067	\$31,340	\$144,095

Total Project Cost	\$1,022,668

		Allowable Incentive
% Incentives #1 of Utility Cost*	1.3%	\$5,688
% Incentives #2 of Project Cost*	6.8%	\$69,204
% Incentives #3 of Project Cost**	6.8%	\$69,204
Total Eligible Incentives***	\$144,095	
Project Cost w/ Incentives	\$87	78,573

Project Payba	ok (voore)
w/o Incentives	w/ Incentives
11.4	9.8

^{*} Maximum allowable incentive is 50% of annual utility cost if not funded by NJ BPU, and %25 if it is.

Maximum allowable amount of Incentive #3 is 25% of total project cost.

Maximum allowable amount of Incentive #2 & #3 is \$1 million per gas account and \$1 million per electric account; maximum 2 million per project

^{**} Maximum allowable amount of Incentive #2 is 25% of total project cost.

^{***} Maximum allowable amount of Incentive #1 is \$50,000 if not funded by NJ BPU, and \$25,000 if it is.

APPENDIX D

New Jersey Board of Public Utilities Incentives

- i. Smart Start
- ii. Direct Install
- iii. Pay for Performance (P4P)
- iv. Energy Savings Improvement Plan (ESIP)

I. SMART START



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NJ SmartStart Buildings

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With New Jersey SmartStart Buildings ...

... A smart start now means better performance later! Whether you're starting a commer industrial project from the ground up, renovating existing space, or upgrading equipmenunique opportunities to upgrade the energy efficiency of the project.

Special Notice

Enhanced incentives are available for NJ SmartStart Building upgrades in buildings im-Hurricane Sandy. Eligible projects receive an additional 50% and new incentives have added for high efficiency food service equipment.

Visit the Sandy web page for details and important links.

New Jersey SmartStart Buildings can provide a range of support — at no cost to you substantial energy savings, both now and for the future. Learn more about:

> **Project Categories Custom Measures**

Incentives for Qualifying Equipment and Projects

Program Terms and Conditions

Find a Trade Ally

Please note: pre-approval is required for almost all energy efficiency incentives. I you must submit an application form (and applicable worksheets) and receive an approv from the program before any equipment is installed (click here for complete Terms and (Upon receipt of an approval letter, you may proceed to install the equipment listed on yo approved application. Equipment installed prior to the date of the approval letter is not e an incentive. Any customer and/or agent who purchases equipment prior to the rec incentive approval letter does so at his/her own risk.

Getting Started

Submit your project application form as soon as you know you will be doing a constructive or replacing/adding equipment.

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Apply for pre-approval by submitting an application for the type of equipment you have c install. The application should be accompanied by a related worksheet, where applicable manufacturer's specification sheet (refer to the specific program requirements on the ba application for specs needed for your project) for the equipment you are planning to inst (Program representatives will review your application package and approve it, reject it, advise you of upgrades in equipment that will save energy costs and/or increase your in

Support for Custom Energy-Efficiency Measures

Custom measures allows program participants the opportunity to receive an incentive fo energy-efficiency measures that are not on the prescriptive equipment Incentive list, but project/facility specific.

Incentives for Qualifying Equipment and Projects

Financial incentives are available for large and small projects. These incentives offset so maybe even all! — of the added cost to purchase qualifying energy-efficient equipment, provides significant long-term energy savings. Ranges of incentives are available for quequipment (depending on type, size, and efficiency) in several categories.

Find out more about equipment incentives

For specific details on equipment requirements and financial incentives, including ince equipment not listed here, contact a program representative. Fiscal year financial incent be limited to a maximum of \$500,000 per customer utility account and are available as fi permits.

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Equipment Incentives

Special Notice

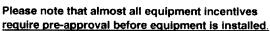
Enhanced incentives are available for NJ SmartStart Building upgrades in buildings imp Hurricane Sandy. Eligible projects receive an additional 50% and new incentives have added for high efficiency food service equipment.

Visit the Sandy web page for details and important links.

More reasons for a smart start on your next project!

New Jersey SmartStart Buildings provides financial incentives for qualifying equipment. These incentives were developed to help our customers offset some of the added cost to purchase qualifying energy-efficient equipment, which provides significant long-term energy savings. A wide range of incentives are available for qualifying equipment (depending on type, size and efficiency).

Listed below are the types of qualifying equipment and ranges of incentives. For details on equipment requirements and full listings of incentives, refer to the online application forms.



(click for exceptions) To start the pre-approval process,

submit an Equipment Application, and appropriate Equipment Worksheets, for the type (types of equipment you are planning to install along with equipment specification sheets (refer to the specific program requirements on the back of the application for specificatic needed for your project) and a current utility bill(s).

In order to be eligible to receive financial incentives under this Program, Applicants mus receive electric and/or gas service from one of the regulated electric and/or gas utilities is the State of New Jersey. They are: Atlantic City Electric, Jersey Central Power & Light, Rockland Electric Company, New Jersey Natural Gas, Elizabethtown Gas, PSE&G, and South Jersey Gas.

Electric Chillers

Water-cooled chillers (\$12 - \$170 per ton) Air-cooled chillers (\$8 - \$52 per ton)

Gas Cooling

Gas absorption chillers (\$185-\$450 per ton) Gas Engine-Driven Chillers (Calculated through Custom Measure F **PAST PROGRAMS**

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Desiccant Systems (\$1.00 per cfm - gas or electric)

Electric Unitary HVAC

Unitary AC and split systems (\$73 - \$92 per ton)
Air-to-air heat pumps (\$73 - \$92 per ton)
Water-source heat pumps (\$81 per ton)
Packaged terminal AC & HP (\$65 per ton)
Central DX AC Systems (\$40 - \$72 per ton)
Dual Enthalpy Economizer Controls (\$250)
Occupancy Controlled Thermostats (\$75 each)
A/C Economizing Controls (\$85 - \$170 each)

Ground Source Heat Pumps

Closed Loop (\$450-750 per ton)

Gas Heating

Gas-fired boilers < 300 MBH (\$300 per unit)
Gas-fired boilers ≥ 300 MBH - 1500 MBH (\$1.75 per MBH)
Gas-fired boilers ≥ 1500 MBH - ≤ 4000 MBH (\$1.00 per MBH)
Gas-fired boilers > 4000 MBH (Calculated through Custom Measure
Gas furnaces (\$300-\$400 per unit)
Gas infrared heaters - indoor only (\$300 - \$500 per unit)
Boiler economizing controls (\$1,200 - \$2,700 per unit)

Variable Frequency Drives

Variable air volume (\$65 - \$155 per hp)
Chilled-water pumps (\$60 per hp)
Compressors (\$5,250 to \$12,500 per drive)

Natural Gas Water Heating

Gas water heaters ≤ 50 gallons (\$50 per unit)
Gas-fired water heaters > 50 gallons (\$1.00 - \$2.00 per MBH)
Tankless water heaters replacing a free standing water heater > 82
energy factor (\$300 per heater)

Gas-fired booster water heaters (\$17 - \$35 per MBH)

Premium Motors

Three-phase motors (\$45 - \$700 per motor) (Incentive was discor effective March 1, 2013 except for buildings impacted by Hurric Sandy. Approved applications will have the standard timeframyear from the program commitment date to complete the instal

Refrigerator/Freezer Case Premium Efficiency Motors (ECM)

Fractional (< 1 HP) Electronic Commutated Motors (ECM) (\$40 per for replacement of existing shaded-pole motor in refrigerated/freeze

Prescriptive Lighting

New Linear Fluorescent

T-12, HID and Incandescent to T-5 and T-8 (\$25 - \$200 pt fixture) (Note: T12 replacements are only available for buildings impacted by Hurricane Sandy)

New Induction (\$70 per replaced HID fixture)

New LED

Screw-in/Plug-in (\$10 - \$20 per lamp)

Refrigerator/Freezer Case (\$30 - \$65 per fixture)

Outdoor pole/arm/wall-mounted luminaires (\$100 - \$175 p fixture)

Display case (\$30 per case)

Shelf-mounted display and task (\$15 per linear foot)

Wall-wash, desk, recessed (\$20 - \$35 per fixture)

Parking garage luminaires (\$100 per fixture)

Track or Mono-Point directional (\$50 per fixture)

Stairwell and Passageway luminaires (\$40 per fixture)

High-Bay, Low-Bay (\$150 per fixture)

Bollard (\$50 per fixture)

luminaires for Ambient Lighting of Interior Commercial Spa

Linear panels (\$50 per fixture)

Fuel pump canopy (\$100 per fixture)

LED retrofit kits (custom measures)

New Pulse-Start Metal Hallide (\$25 per fixture)

Linear Fluorescent Retrofit (\$10 - \$20 per fixture)

Induction Retrofit (\$50 per retrofitted HID fixture)

New Construction/Complete Renovation (performance-based)

Note: Incentives for T-12 to T-5 and T-8 lamps with electronic ballast in facilities (\$10 per fixture, 1-4 lamps) and T-5/T-8 high bay fixtures (\$16 per fixture) were discontinued effective March 1, 2013 for T-12 retrofits replacements except for buildings impacted by Hurricane Sandy, Appro applications will have the standard timeframe of one year from the proc commitment date to complete the installation

Lighting Controls

Occupancy Sensors

Wall mounted (\$20 per control)

Remote mounted (\$35 per control)

Daylight dimmers (\$25 per fixture controlled, \$50 per fixture office applications only)

Occupancy controlled hi-low fluorescent controls (\$25 per controlled)

HID or Fluorescent Hi-Bay Controls

Occupancy hi-low (\$35 per fixture controlled)

Daylight dimming (\$45 per fixture controlled)

Refrigeration

Covers and Doors

Energy-Efficient doors for open refrigerated doors/covers

Aluminum Night Curtains for open refrigerated cases (\$3.5 linear foot)

Controls

Door Heater Control (\$50 per control)

Electric Defrost Control (\$50 per control)

Evaporator Fan Control (\$75 per control)

Novelty Cooler Shutoff (\$50 per control)

Food Service Equipment

Cooking

Combination Electric Oven/Steamer (\$1,000 per oven)

Combination Gas Oven/Steamer (\$750 per oven)

Electric Convection Oven (\$350 per oven)

Gas Convection Oven (\$500 per oven)

Gas Rack Oven (\$1,000 single, \$2,000 double)

Gas Conveyor Oven (\$500 small deck, \$750 large deck)

Electric Fryer (\$200 per vat)

Gas Fryer (\$749 per vat)

Electric Large Vat Fryer (\$200 per vat)

Gas Large Vat Fryer (\$500 per vat)

Electric Griddle (\$300 per griddle)

Gas Griddle (\$125 per griddle)

Electric Steam Cooker (\$1,250 per steamer)

Gas Steam Cooker (\$2,000 per steamer)

Holding

Full Size Insulated Cabinets (\$300 per cabinet)

Three Quarter Size Insulated Cabinets (\$250 per cabinet)

Half Size Insulated Cabinets (\$200 per cabinet)

Cooling

Glass Door Refrigerators (\$75 - \$150 per unit)

Solid Door Refrigerators (\$50 - \$200 per unit)

Glass Door Freezers (\$200 - \$1,000 per unit)

Solid Door Freezers (\$100 - \$600 per unit)

Ice Machines (\$50 - \$500 per unit)

Cleaning

Dishwashers (\$400 - \$1,500 per unit)

Other Equipment Incentives*

Performance Lighting (\$1.00 per watt per square foot below prograi incentive threshold, currently 5% more energy efficient than ASHRA 2007 for New Construction only.)

Custom electric and gas equipment incentives (not prescriptive)

*Equipment incentives are calculated based on type, efficiency, size, and apand are evaluated on a case-by-case basis. Contact us for details.

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EDA PROGRAMS

SBC CREDIT PROGRAM



Let us pay up to 70% of your energy efficiency upgrade.

Sometimes, the biggest challenge to improving energy efficiency is knowing where to and how to get through the process. Created specifically for existing small to medium facilities, Direct Install is a turnkey solution that makes it easy and affordable to upgrahigh efficiency equipment. Direct Install is designed to cut your facility's energy costs replacing lighting, HVAC and other outdated operational equipment with energy efficient alternatives. The program pays up to 70% of retrofit costs, dramatically improving yo payback on the project. There is a \$125,000 incentive cap on each project.

ELIGIBILITY



Existing small to mid-sized commercial and industrial fawith a peak electric demand that did not exceed 200 k any of the preceding 12 months are eligible to participa Direct Install. Applicants will submit the last 12 months electric utility bills indicating that they are below the deithreshold and have occupied the building during that till Buildings must be located in New Jersey and served by the state's public, regulated electric or natural gas utility companies.

SYSTEMS & EQUIPMENT ADDRESSED BY THE PROGRAM

Lighting
Heating, Cooling & Ventilation (HVAC)
Refrigeration

Motors

Natural Gas

Variable Frequency Drives



Measures eligible for Direct Install are limited to specific equipment categories, types capacities. Boilers may not exceed 500,000 Btuh and furnaces may not exceed 140,

III. PAY FOR PERFORMANCE (P4P)



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Pay for Performance - Existing Buildings

Download program applications and incentive forms.

The Greater the Savings, the Greater Your Incentives

Take a comprehensive, whole-building approach to saving energy in your existing facilities earn incentives that are directly linked to your savings. Pay for Performance relies on a

COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT

HURRICANE SANDY

PROGRAMS

NJ SMARTSTART BUILDINGS

PAY FOR PERFORMANCE

EXISTING BUILDINGS

PARTICIPATION STEPS

APPLICATIONS AND FORMS

APPROVED PARTNERS

NEW CONSTRUCTION

FAQS

BECOME A PARTNER

COMBINED HEAT & POWER AND FUEL CELLS

LOCAL GOVERNMENT ENERGY **AUDIT**

LARGE ENERGY USERS PROGRAM

ENERGY SAVINGS IMPROVEMENT PROGRAM

DIRECT INSTALL

ENERGY BENCHMARKING



program partners who provide technical services under direct you. Acting as your energy expert, your partner will develop ε reduction plan for each project with a whole-building technica component of a traditional energy audit, a financial plan for fu energy efficient measures and a construction schedule for ins

Eligibility

Existing commercial, industrial and institutional buildings with demand over 100 kW for any of the preceding twelve months to participate including hotels and casinos, large office buildir family buildings, supermarkets, manufacturing facilities, schoshopping malls and restaurants. Buildings that fall into the fol customer classes are not required to meet the 100 kW demai

to participate in the program: hospitals, public colleges and universities, 501(c)(3) non-p affordable multifamily housing, and local governmental entities. Your energy reduction p define a comprehensive package of measures capable of reducing the existing energy consumption of your building by 15% or more.

Exceptions to the 15% threshold requirement may be made for certain industrial, manufwater treatment and datacenter building types whose annual energy consumption is her weighted on process loads. Details are available in the high energy intensity section of t

ENERGY STAR Portfolio Manager

Pay for Performance takes advantage of the ENERGY STAR Program with Portfolio Manager, EPA's interactive tool that allows facility managers to track and evaluate energy and water consumption across all of their buildings. The tool provides the opportunity to load in the characteristics and energy usage of your buildings and determine an energy performance benchmark score. You can then assess energy management goals over time, identify strategic opportunities for savings, and receive EPA recognition for superior energy performance



This rating system assesses building performance by tracking and scoring energy use in facilities and comparing it to similar buildings. That can be a big help in locating opportui cost-justified energy efficiency upgrades. And, based on our findings, you may be invited participate in the Building Performance with ENERGY STAR initiative and receive specirecognition as an industry leader in energy efficiency.

Incentives

OIL, PROPANE & MUNICIPAL ELECTRIC CUSTOMERS

EDA PROGRAMS

SBC CREDIT PROGRAM

PAST PROGRAMS

TOOLS AND RESOURCES

PROGRAM UPDATES

CONTACT US

Pay for Performance incentives are awarded upon the satisfactory completion of three p milestones:

Incentive #1 - Submittal of complete energy reduction plan prepared by an app program partner - Contingent on moving forward, incentives will be between \$5 \$50,000 based on approximately \$.10 per square foot, not to exceed 50% of the annual energy expense.

Incentive #2 - Installation of recommended measures - Incentives are based on the projected level of electricity and natural gas savings resulting from the installation of comprehensive energy-efficiency measures.

Incentive #3 - Completion of Post-Construction Benchmarking Report - A completed report verifying energy reductions based on one year of post-

implementation results. Incentives for electricity and natural gas savings will be based on actual savings, provided that the minimum performance threshold of savings has been achieved.

A detailed Incentive Structure document is available on the applications and form

Steps to Participation

Click here for a step-by-step description of the program.

Home | Residential | Commercial & Industrial | Renewable Energy
About Us | Press Room | Library | FAQs | Calendar | Newsletters | Contact Us | Site





PAY FOR PERFORMANCE APPLICATION FORM

July 1, 2014 - June 30, 2015

Utility Serving Applicant:	☐ Atlantic City Electric	☐ Jersey (Central Power 8	Z Light	□ PSE&G
☐ New Jersey Natural Gas	□ Elizabethtown Gas	□ Rocklan	d Electric Co.		☐ South Jersey Gas
☐ Other Electric Service Prov	rider (please specify):				
Other Fuel Provider:	경영 : 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		_ 🗆 Other (Plea	ise specify):	
Instructions					
1. Read the program material to determine proj. 2. Read the Participation Agreement and sign v. 3. Fill out all applicable spaces on this form. 4. Provide a copy of the customer's company v. 5. Provide the most recent consecutive 12 mont project for all accounts, organized in chronol account. Utilize Utility Tool for applications.	where indicated. V-9 form. th period of utility bills for the logical order and separated by	and/or site con 7. Partner must s the Market Ma Approval of this Scope of work is	ditions. ubmit the application p mager – see back of th Application is not an	package via e-ma is form. approval of the approval of the	or unusual circumstances il, mail or fax DIRECTLY to project's scope of work. Energy Reduction Plan. See tion.
Customer/Owner In	formation (paymer	nt will be m	ade to entity	entered	nere)
Company Name			Project Contact/Title		
Company Address	anna a transitation de la company des company de la compan	City		State	Zip
Phone/Fax	E-mail		Federal ID/	SSN	and the second s
Partner Information	1				
Company Name			Project Contact/Title	•	
Company Address		City		State	Zip
Phone	Fax	E-mail		J.,	
Project Information					
Project Name		:		-	
Building Address		City		State	Zip
Utility Account Number(s): Electric * Note: Please use the back of this page for additional u	tility accounts if quantity exceeds space allotme		as		· .
Annual Peak kW Demand	Building Type			Number of	f Buildings
Size of Building(s) (gross sq/ft)		Direct, Ma	ster or Sub Metered		
Funding		100000000	e suit se le constitue de la c		
Check the box if an Energy Saving agencies to pay for energy related i	improvements using the value of	f the resulting en	ergy savings.		
Do you expect to receive funding Utility Program #1 – Utility:		_			specify below:
Utility Program #2 – Utility:					
Federal Program #1 - Organization	on:	Prog	ram Name:		
Federal Program #2 - Organization	on:	Prog	ram Name:		
Other Program - Organization: _	er en	Prog	gram Name:		

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Complete this application form and send it directly to the Commercial/Industrial Market Manager by e-mail, mail or fax.

New Jersey's Clean Energy Program c/o TRC Energy Services-P4P 900 Route 9 North, Suite 404 • Woodbridge, NJ 07095

Phone: 866-657-6278 • Fax: 732-855-0422 E-mail: P4P@NJCleanEnergy.com

Visit our website: NJCleanEnergy.com/P4P

Pay For Performance-Existing Buildings

Participation Agreement

Definitions:

ADMINISTRATOR - New Jersey Board of Public Utilities (NJBPU)

APPLICATION PROCESS - The Program pays incentives in phases upon satisfactory completion of each of three Program milestones - approval of a complete Energy Reduction Plan, installation of all recommended measures per the Energy Reduction Plan, completion of Post-Construction Benchmarking Report (for incentive amounts, please refer to Incentive Amounts). In order to be eligible for Program Incentives, a Participating Customer or an agent authorized by a Customer, must submit to the Market Manager a properly completed application package application form, Participating Customer's company W-9, twelve consecutive months of the project's utility bills and executed Participation Agreement. All components of the application package must be filled out completely, truthfully and accurately. This application package must be received on or before June 30, 2015 in order to be eligible for the Fiscal Year 2015 Incentives. The Market Manager will review the application package to determine if the project is eligible for a Program Incentive. When approved, the Participating Customer will receive an approval letter from their Case Manager with the estimated authorized first incentive amount and the date by which the Energy Reduction Plan must be submitted. Upon receipt of the approval letter, the Participating Customer and Partner may proceed with work on the Energy Reduction Plan. The Market Manager or agent thereof reserves the right to conduct a pre-inspection of the facility prior to the installation of equipment. This will be done prior to the issuance of the Energy Reduction Plan approval letter. Approval of this Application is not an approval of the project's scope of work. Scope of work is only approved upon approval of the Energy Reduction Plan. See application and program guidelines for more information

CHANGES TO THE PROGRAM – The Program and Participation Agreements may be changed by the Market Manager at any time without notice. Approved applications, however, will be processed to completion under the agreements in effect at the time of the Market Manager's approval.

ELIGIBILITY - Program Incentives are available to existing commercial, industrial and certain multifamily buildings with peak kilowatt demand usage of more than 100 kW in any of the most recent preceding twelve months of utility bills and a customer of the New Jersey Utilities. Market Manager has the discretion to approve applications that fall below the 100 kW minimum by no more than 10%. If the Participant is a municipal electric company customer, and a customer of an investor-owned gas New Jersey Utility, only gas measures will be eligible for incentives under the Program. Similarly, if the Participant is an oil/propane customer and a customer of an investor-owned electric New Jersey Utility, only electricity measures will be eligible for incentives under the Program.

Equipment procured by participating Customer through another program offered by the New Jersey Utilities, as applicable, is not eligible for incentives through this Program. Customers who, from July 1, 2013 — June 30, 2014, have not contributed to the Societal benefits Change of the applicable New Jersey Utility may not be eligible for incentives offered through this program.

ENDORSEMENT – The Market Manager and Administrator do not endorse, support or recommend any particular manufacturer, product or system design in promoting this Program.

ENERGY-EFFICIENT MEASURES – Any device eligible to receive a Program Incentive payment through the New Jersey's Clean Energy Commercial and Industrial Program. The total package of measures as presented in the Energy Reduction Plan must have at least a 10% internal rate of return (IRR).

ENERGY REDUCTION PLAN – A document created by the Participating Customer's selected Partner that defines several key aspects of the project including (but not limited to) existing conditions as a result of a whole-building technical analysis, benchmarking summaries, recommended measures, financing plan and implementation schedule.

ENERGY REDUCTION PLAN APPROVAL - After application approval, the Participating Customer and Partner must work together to finalize and submit an Energy Reduction Plan which incorporates a work scope that will achieve the minimum 15% reduction in source energy performance target in accordance with the Program rules and policies along with the Benchmarking Tool, modeling software file, a copy of the executed Partner and Participating Customer contract, an original copy of the executed Installation Agreement and a Request for Incentive #1 Payment form. All components of the submittal package must be filled out completely, truthfully and accurately. The Market Manager, agents thereof and/or the selected Partner must be provided reasonable access to the Participating Customer's facility, staff, tenants and/or others necessary to develop an Energy Reduction Plan that will achieve the minimum 15% performance target as well as the necessary utility billing data as dictated by the Program. The Energy Reduction Plan submittal package will be reviewed and must be approved by the Market Manager prior to payment of Incentive #1. Upon approval of the submittal package, the Customer will receive an Incentive #1 approval letter indicating the date by which all measures in the Energy Reduction Plan must be installed (no later than twelve months following the Energy Reduction Plan submittal approval date).

INCENTIVE AMOUNTS - Incentive #1 - \$0.10 per square foot of the project with a maximum amount of \$50,000 and minimum of \$5,000, not to exceed 50% of the project's annual energy cost and contingent on installation of measures in the Energy Reduction Plan and receipt of a signed Installation Agreement. If installation does not commence within the required timeframe, Incentive #1 may be required to be returned to the program. In the event the project is cancelled and Incentive #1 is not returned, the project may reapply to the program in the future but another Incentive #1 will not be paid. Incentive #2 - 50% of the total performance-based incentive (combination of Incentives #2 and #3) calculated per Program's incentive structure; Incentive #3 remaining amount based on the realized energy savings of the project. For customers that have successfully participated in the Local Government Energy Audit Program, Incentive #1 will be reduced by 50% to \$0.05 per square foot up to \$25,000. Actual Incentive #1 paid shall not be higher than 5% over the committed amount. Actual Incentive #2 paid shall not be higher than the committed amount, unless the Energy Reduction Plan has been resubmitted due to changes in the work scope. Actual Incentive #3 paid shall be higher or lower than the committed amount based on actual energy savings but shall not be greater than program Incentive Caps

The Market Manager will provide incentives according to those described in this section or as modified upon notice to Participating Customer. All incentive payments are paid directly to the Participating Customer or the Participating Customer's designed as indicated on the application form. The Program is not bound to pay any incentive unless the submittal package associated with the incentive payment is approved by the Market Manager who reserves the sole discretion of approving or disapproving the submittal packages.

INCENTIVE CAP – Program Incentives #2 and #3 will be capped not to exceed 50% of the total actual project cost. Incentive #1 will be capped not to exceed 50% of the project's annual energy cost. The Market Manager reserves the right to limit the amount of the Program Incentives (Incentive #1, #2 and #3) to \$1M per gas and electric account (limited to \$2M per project) in a program year. Campus style facilities, which are mastered-metered, are subject to the annual incentive cap of \$1 million per gas and electric account. The Participating Customer will also be subject to an annual Entity Cap of \$4M (Definition of an Entity can be found in the Board Order Docket No. EO07030203).

INSTALLATION AGREEMENT – The Participating Customer must submit an executed Installation Agreement as part of the Request for Incentive #1 Form. By executing the Installation Agreement, the Customer agrees to install all of the measures in the Energy Reduction Plan, which are estimated to result in meeting or exceeding the minimum 15% performance target. The Customer agrees to the performance-based incentives (Incentives #2 & #3) as indicated in the document which are based on the results of the Energy Reduction Plan. Implementation of the measures must commence in the time period twelve months following the approval date of the Energy Reduction Plan. Failure to complete the installation of the measures in the Energy Reduction Plan may result in the repayment of Incentive #1. In the event the project is cancelled and Incentive #1 is not returned, the project may reapply to the program in the future but another Incentive #1 will not be paid.

LIMITATION OF LIABILITY – By virtue of participating in this Program, Participating Customers agree to waive any and all claims or damages against TRC Energy Services, the Market Manager, and the Administrator, except the receipt of the Program Incentive. Participating Customers agree that the Market Manager's and Administrator's liability, in connection with this Program, is limited to paying the Program Incentive specified. Under no circumstances shall the Market Manager, its representatives, or subcontractors, or the Administrator be liable for any lost profits, special, punitive, consequential or incidental damages or for any other damages or claims connected with or resulting from participation in this Program. Further, any liability attributed to the Market Manager under this Program shall be individual, and not joint and/or several.

The Market Manager's review and approval of the Energy Reduction Plan cannot be construed to be a determination as to performance, applicability, dollar savings, energy savings, or any other aspect of the proposed project. The Market Manager and Administrator offer no guarantee or warranty of performance of the project's equipment or system. The participant assumes full responsibility and liability for the installation of all equipment, including but not limited to design, specification, all permits, installation, maintenance, performance and financing. By participating in the program and accepting incentive dollars, you agree to hold harmless the Market Manager and Administrator and their respective staffs with respect to the Project

MARKET MANAGER – TRC Energy Services is responsible for managing the New Jersey Clean Energy Commercial & Industrial Programs.

MEASUREMENT & VERIFICATION APPROVAL – Twelve months subsequent to the Incentive #2 Payment Submittal package submission date, measurement and verification of the projected energy reduction will be conducted by the Participating Customer's Partner using the project's post-installation utility data (supplied by the Customer). The Participating Customer must work with their Partner to submit the Incentive #3 Payment Submittal, consisting of the Post-Construction Benchmarking Pay For Performance-Existing Buildings Report, Benchmarking Tool, and Request for Incentive #3 form. All components of the submittal package must be filled out

completely, truthfully and accurately. Upon review of the submittal package (by the Market Manager or agent thereof), the remaining 50% of the total performance-based incentive (Incentives #2 & #3) will be released to the Participating Customer. If the Post-Construction Benchmarking Report indicates that the project did not meet the minimum performance target, the post-installation completion period may be extended to up to twenty-four months subsequent to the Incentive Payment #2 package submission date. Upon approval of the submittal package, the Customer will receive an Incentive #3 Submittal approval letter indicating successful completion of the program.

NEW JERSEY UTILITIES - The investor-owned electric and/or gas utilities in the State of New Jersey. They are: Atlantic City Electric, Jersey Central Power & Light, Rockland Electric Company, New Jersey Natural Gas, Elizabethtown Gas, PSE&G, and South Jersey Gas.

PARTICIPATING CUSTOMERS - Those non-residential electric and/or gas service customers of the New Jersey Utilities who participate in this Program.

PARTICIPATING CUSTOMER'S CERTIFICATION – Participating Customer agrees that all information is true and that he/she has conformed to all of the Program and equipment requirements per the Program Guidelines. Participating Customer certifies that he/she purchased and installed the equipment listed in the Energy Reduction Plan at their defined New Jersey project location.

PARTNER—An approved professional who provides technical building performance services to Participating Customers, acting as their "energy efficiency expert". Participating Customers are required to hire an approved Pay for Performance Partner to develop the Energy Reduction Plan and facilitate installation of the recommended package of Energy-Efficient Measures. Participants are required to enter into a contractual agreement with a selected Partner which outlines the set of minimum services the Partner will provide to the Participating Customer throughout the life of the project. It is strongly recommended that Participating Customers perform due diligence in selecting a Pay for Performance Partner. Fees charged by the Partner are not regulated by the Program and could vary between Partners.

PERFORMANCE-BASED INCENTIVES – The combination of Incentives #2 and #3, which are based on the projected and actual energy reduction performance of the project.

PERFORMANCE TARGET – A minimum of a 15% annual source energy savings performance target must be achieved in order to participate. The performance target is based on reducing the total energy consumption for the facility. No more than 50% of the total source energy savings may be derived from lighting measures. The total energy savings may not come from a single measure. A 4% performance target may be offered to customers whose annual energy consumption is heavily weighted to manufacturing and process loads. This approach will be reviewed on a case-by-case basis and must be pre-approved by the Market Manager. In order to be considered, the project must involve: A manufacturing facility, including such industries as plastics and packaging, chemicals, petrochemicals, including such industries as plastics and packaging, chemicals, petrochemicals, unctals, paper and pulp, transportation, biotechnology, pharmaceutical, food and beverage, mining and mineral processing, general manufacturing, equipment manufacturers and data centers; and manufacturing and/or process-related loads, including data center consumption, consume 50% or more of total facility energy consumption. No more than 50% of the total source energy savings may be derived from non-investor owned utilities or fuels.

POST-INSTALLATION APPROVAL – After the complete installation of all measures in the Energy Reduction Plan, the Customer and their Partner must finalize and submit the Incentive #2 Payment Submittal, consisting of the Installation Report, invoices, and Request for Incentive #2 Payment form. All components of the submittal package must be filled out completely, truthfully and accurately. Upon review of the submittal package and verification of the complete installation of all measures in the Energy Reduction Plan (via inspection by the Market Manager or agent thereof), 50% of the total performancebased incentive (Incentives #2 & #3) will be released to the Participating Customer. Upon approval of the submittal package, the Customer will receive an Incentive #2 approval letter indicating the date by which the post-installation Measurement & Verification phase began and will end (twelve months in length).

The Market Manager reserves the right to verify sales transactions and to have reasonable access to Participating Customer's facility to inspect both pre-existing products or equipment (if applicable) and the Energy-Efficient Measures installed under this Program, either prior to issuing incentives or at a later time. Energy-Efficient Measures must be installed in buildings located within the service territory of one of the New Jersey Utilities (as defined by the Program) as designated on the Participating Customer's Pay for Performance application. Program Incentives are available for qualified Energy-Efficient Measures as listed and described in the Program Guidelines. The Participating Customer must ultimately own the equipment, either through an up-front purchase or at the end of a short-term lease.

PRE-INSTALLED MEASURES - An Energy Reduction Plan must be approved by the program and an approval letter sent to the customer in order for incentives to be committed. Upon receipt of an Energy Reduction Plan, all project facilities must be preinspected. Measures installed prior to pre-inspection of the facility shall not be included as part of the ERP scope of work and will not be eligible for incentives. Measure installation undertaken prior to ERP approval, but after pre-inspection, is done at the customer's own risk. In the event that an Energy Reduction Plan is rejected by the program, the customer will not receive any incentives.

PRODUCT INSTALLATION OR EQUIPMENT INSTALLATION – Installation of the Energy-Efficient Measures.

Projects with a contract threshold of \$15,444 are required to pay no less than prevailing wage rare to workers employed in the performance of any construction undertaken in connection with Board of Public Utilities financial assistance, or undertaken to fulfill any condition of receiving Board of Public Utilities financial assistance, including the performance of any contract to construct, renovate or otherwise prepare a facility, the operations of which are necessary for the receipt of Board of Public Utilities financial assistance. By submitting an application, or accepting program incentives, applicant agrees to adhere to New Jersey Prevailing Wage requirements, as applicable.

PROGRAM – New Jersey's Clean Energy Pay for Performance Program offered herein by the New Jersey Board of Public Utilities pursuant to state regulatory approval under the New Jersey Electric Discount and Energy Competition Act, NJSA 48:3-49, et seq.

PROGRAM GUIDELINES - See Pay for Performance Program Guidelines available from your Partner.

PROGRAM INCENTIVES – Refers to the amount or level of incentive that the Program provides to participating customers pursuant to the Program offered herein (see the description under "Incentive Amount" heading).

PROGRAM OFFER – The Program covers products purchased and/or services rendered on or after July 1, 2014. Program Incentives are available to non-residential retail electric and/or gas service customers of the New Jersey Utilities.

PROJECT – A commercial, industrial or multifamily existing building with peak demand in excess of 100 kW in any of the most recent preceding twelve months of electric usage. Multifamily building(s) must be four (4) stories or greater or three (3) stories and under having central heating, cooling, or metering serving more than one building. The 100 kW requirement is waived for the following customer classes: hospitals, non-profits (as defined by section 501(c)(3) of the luternal Revenue Code), public colleges and universities, local government entities, including K-12 schools, and affordable multifamily customers (defined as low income, subsidized, HUD, etc.)

TAX CLEARANCE CERTIFICATION – Businesses must apply for and receive a Tax Clearance Certificate from the New Jersey Division of Taxation before they can receive any incentive, grant or other financial assistance from the Program.

TAX LIABILITY – The Market Manager will not be responsible for any tax liability that may be imposed on any Participating Customer as a result of the payment of Program Incentives. All Participating Customers must supply their federal tax identification number or social security number on the application form in addition to providing a copy of their W-9 form as part of the application package in order to receive a Program Incentive.

TERMINATION – New Jersey's Clean Energy Program reserves the right to extend, modify (this includes modification of Program Incentive levels) or terminate this Program without prior or further notice.

WARRANTIES – THE MARKET MANAGER AND ADMINISTRATOR DO NOT WARRANT THE PERFORMANCE OF INSTALLED EQUIPMENT, AND/OR SERVICES RENDERED AS PART OF THIS PROGRAM, EITHER EXPRESSLY OR IMPLICITY. NO WARRANTIES OR REPRESENTATIONS OF ANY KIND, WHETHER STATUTORY, EXPRESSED, OR IMPLIED, INCLUDING, WITHOUT LIMITATIONS, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE REGARDING EQUIPMENT OR SERVICES PROVIDED BY A MANUFACTURER OR VENDOR. CONTACT YOUR VENDOR/ SERVICES PROVIDES FOR DETAILS REGARDING PERFORMANCE AND WARRANTIES.

ACKNOWLEDGEMENT – I have read, understood and am in compliance with all rules and regulations concerning this incentive program. I certify that all information provided is correct to the best of my knowledge, and I give the Market Manager permission to share my records with the New Jersey Board of Public Utilities, and contractors it selects to manage, coordinate or evaluate the Pay For Performance Program, including the release of electric and natural gas utility billing information, as well as make available to the public non-sensitive information. I allow reasonable access to my property to inspect the installation and performance of the technologies and installations that are eligible for incentives under the guidelines of New Jersey's Clean Energy Program. This arrangement supersedes all other communications and representations.

CUSTOMER'S	SIGNATURE
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PARTNER SIGNATURE

By signing, I certify that I have read, understand and agree to the Participation Agreement listed above.

IV. ENERGY SAVINGS IMPROVEMENT PLAN (ESIP)



Your Power to Save

At Home, for Business, and for the Future

About Us | Press Room | Library

HOME

RESIDENTIAL

COMMERCIAL, INDUSTRIAL AND L€CAL GOVERNMENT





COMMERCIAL, INDUSTRIAL AND LOCAL GOVERNMENT

HURRICANE SANDY

PROGRAMS

NJ SMARTSTART BUILDINGS

PAY FOR PERFORMANCE

COMBINED HEAT & POWER AND FUEL CELLS

LOCAL GOVERNMENT ENERGY AUDIT

LARGE ENERGY USERS PROGRAM

ENERGY SAVINGS IMPROVEMENT PROGRAM

DIRECT INSTALL

ENERGY BENCHMARKING

OIL, PROPANE & MUNICIPAL **ELECTRIC CUSTOMERS**

EDA PROGRAMS

SBC CREDIT PROGRAM

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CONTACT US

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Energy Savings Improvement Program

A new State law allows government agencies to make energy related improvements to t facilities and pay for the costs using the value of energy savings that result from the imp Under Chapter 4 of the Laws of 2009 (the law), the "Energy Savings Improvement Program" (ESIP), provides all government agencies in New Jersey with a flexible tool to and reduce energy usage with minimal expenditure of new financial resources.

This Local Finance Notice outlines how local governments can develop and implement a their facilities. Below are two sample RFPs:

> Local Government School Districts (K-12)

All RFPs must be submitted to the Board for approval at ESIP@bpu.state.nj.us.

The Board also adopted protocols to measure energy savings:

Measuring Energy Savings Procedures for Implementation

The ESIP approach may not be appropriate for all energy conservation and energy effic improvements. Local units should carefully consider all alternatives to develop an approbest meets their needs. Local units considering an ESIP should carefully review the Loc Notice, the law, and consult with qualified professionals to determine how they should a task.

The NJ Board of Public Utilities sponsored Sustainable Jersey in the creation of an ESIF Guidebook that explains how to implement the program. The guidebook also includes ca of successful projects and a list of helpful resources.

FIRST STEP - ENERGY AUDIT

For local governments interested in pursuing an ESIP, the first step is to perform an ene as prescribed in P.L.2012 c.55.

ENERGY REDUCTION PLANS

If you have an ESIP plan that needs to be submitted to the Board of Public Utilities, plea to ESIP@bpu.state.nj.us. Please limit the file size to 3MB (or break it into smaller files).

Frankford Township School District

Northern Hunterdon-Voorhees Regional High School

Manalapan Township (180 MB - Right Click, Save As)

BPU RULES

- 1. Public Entity must decide if they will use an ESCO or DIY method or Hybrid thereof prior to issuing the RFP and the RFP must state the intended method. A change in the project procurement model after the RFP closing date will be cause for immediate rejection and disqualification of potential Clean Energy program incentives.
- 2. RFP procedures shall be adhered to as per the legislation, including the use of BPU approved forms. Any alteration of the forms, without prior approval from the BPU shall be grounds for rejection.
- 3. RFP must include copy of an audit (ASHRAE Level II w/Level III for lighting) and audit must be prepared by a firm classified by DPMC in the 036 discipline.
- 4. All firms, including professional services, whether using ESCO or DIY model, must be DPMC classified.
- 5. If an Architect is engaged by the public entity, the architectural fees are the responsibility of the public entity and must be paid directly to the firm. These fees may be included in the energy cost savings analysis and payback.
 - ESCO's may contract directly with an architectural firm, in which case the architectural firm serves as a subcontractor to the ESCO and the project related service costs may be included within the project's economic model.
- 6. Public entity shall conduct pre-bid meetings and site visits per existing statutes.
 - In the interest of open public bidding transparency, it is a requirement of the BPU that all proposers must attend the pre-proposal bid meeting.
- 7. There shall be no negative cash flow in any year of the program. section 7 (1)(a)
 - "the energy savings resulting from the program will be sufficient to cover the cost of the program's energy conservation measures."
- 8. SREC values are not permitted to be used in the energy cost savings calculations.
- 9. Capital cost avoidance values are not to be used in the energy savings calculations.
- 10. Operational and Maintenance (O&M) cost savings may be permitted in the cost savings calculations, but only with supporting documentation.
- 11. Blended utility rates shall not be permitted. Use the actual utility tariff or local contracted rates if there is a third party supplier.
 - For the RFP proposals, the public entity shall define the utility rates in the RFP

- 12. Contracted third party utility rates may only be used for the term of the contract (5 yr. maximum) Subsequent years are to be projected at the utility tariff rates plus the annual BPU escalation rates.
- 13. Public entity shall conduct M&V (measurement and verification) at the one (1) year operational date and shall provide a copy of the M&V report to the Board of Public Utilities.
 - For the RFP proposals, the ESCO shall provide the cost for the one (1) year M&V only. For comparative purposes, the one year M&V pricing shall be indicated on the proposal Form VI, under the "Annual Service Costs" column. Additional M&V costs are at the discretion of the local unit and are not to be included in the proposal.
- 14. The decisions made by BPU staff regarding compliance or other issues that arise in connection with the RFP procurement process shall be considered a final decision of the BPU. Any appeal will need to be through the New Jersey Superior Court, Appellate Division.
- 15. For the RFP proposals only, Demand Response (DR) revenues claimed by ESCO's can only be projected for a maximum period of three (3) years. DR revenue projections beyond three years will not be permitted. DR revenues must be included and presented under the "Energy Rebates/Incentives" column of FORM VI.
- 16. ESCO "fees" proposed during the RFP phase of the project cannot increase post-award. ESCO's are required to maintain the fee percentages through final contract negotiations and construction of the Board approved Energy Savings Plan
- 17. Public Bid openings shall be held on the due date of the proposal submissions. The public entity shall announce the name of the bidder and the total dollar amount. After award of a contract, all proposals received will be made available by the owner for public inspection
- 18. Rejection of bids by the public entity shall be conducted in accordance with the appropriate sections of the applicable legislation, as stated in Title 40A:11-13.2. Additionally all proposals must be returned to the respective ESCO's upon rejection.
- 19. Field changes that exceed 5% of the project cost require BPU approval.
- 20. Energy Savings Plans (ESP) that is dependent upon incentives from the Clean Energy Program must review the current program requirements, at the time of application, for each incentive to insure eligibility. If any program incentive is denied, resubmission of all ESIP related forms will be necessary to remain ESIP qualified.





1: Economic Development Center from South Clinton Street



2: Hot Water Boiler



3: Outdoor condensing units



4: Aerial view of rooftop equipment





ENERGY STAR[®] Statement of Energy Performance

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Economic Development Center

Primary Property Function: Office Gross Floor Area (ft²): 113,750

Built: 1962

ENERGY STAR® Score¹

For Year Ending: December 31, 2013 Date Generated: October 29, 2014

1. The ENERGY STAR score is a 1-100 assessment of a building's energy efficiency as compared with similar buildings nationwide, adjusting for climate and business activity.

Property & Contact Information			
Property Address Economic Development Center 50 South Clinton Street East Orange, New Jersey 07018	Property Owner	Primary Contact	
Property ID : 4198773			
Energy Consumption and Energy U	se Intensity (FLII)	_	
Site EUI 126.6 kBtu/ft² Annual Energy by Fu Electric - Grid (kBtu) Natural Gas (kBtu) Source EUI 285.1 kBtu/ft²	8,281,644 (58%)	National Median Comparison National Median Site EUI (kBtu/ft²) National Median Source EUI (kBtu/ft²) % Diff from National Median Source EUI Annual Emissions Greenhouse Gas Emissions (Metric Tons CO2e/year)	99.1 223.1 28% 1,434
Signature & Stamp of Verifyin (Name) verify that		n is true and correct to the best of my knowledg	je.
Signature:	_Date:		
Licensed Professional			
()			

Professional Engineer Stamp (if applicable)